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TECHNICAL MANUAL

MICRO INVERTER PACKAGED AIR-CONDITIONERS

Triple type FDT140VNATVG 140VSATVG

Triple type FDE140VNATVG

140VSATVG

(Split system, air to air heat pump type)

CEILING CASSETTE-4 WAY TYPE

Single type	rwiii type
FDT100VNAVG	FDT100VNAPVG
100VSAVG	100VSAPVG
125VNAVG	125VNAPVG
125VSAVG	125VSAPVG
140VNAVG	140VNAPVG
140VSAVG	140VSAPVG

CEILING CASSETTE-4 WAY COMPACT TYPE

Twin type	Triple type
FDTC100VNAPVF	FDTC140VNATVF
100VSAPVF	140VSATVF
125VNAPVF	
125VSAPVF	

CEILING SUSPENDED TYPE

Single type	Twin type
FDE100VNAVG	FDE100VNAPVG
100VSAVG	100VSAPVG
125VNAVG	125VNAPVG
125VSAVG	125VSAPVG
140VNAVG	140VNAPVG
140VSAVG	140VSAPVG

DUCT CONNECTED-LOW/MIDDLE STATIC PRESSURE TYPE Single type Twin type Triple type FDUM100VNAVF2 FDUM100VNAPVF FDUM140VNATVF

Single type	Twin type	Triple type
FDUM100VNAVF2	FDUM100VNAPVF	FDUM140VNATVF
100VSAVF2	100VSAPVF	140VSATVF
125VNAVF	125VNAPVF	
125VSAVF	125VSAPVF	
140VNAVF	140VNAPVF1	
1/0VSAVE	1/0VSADVE1	

DUCT CONNECTED-HIGH STATIC PRESSURE TYPE

Single type
FDU100VNAVF2
100VSAVF2
125VNAVF
125VSAVF
140VNAVF
140VSAVF

FLOOR STANDING TYPE

I EUUII UIAIIDIIIU	
Single type	Twin type
FDF100VNAVD2	FDF140VNAPVD1
100VSAVD2	140VSAPVD1
125VNAVD	
125VSAVD	
140VNAVD	
140VSAVD	

WALL MOUNTED TYPE

Single type
SRK100VNAZR
100VSAZR

Twin type SRK100VNAPZSX 100VSAPZSX 125VNAPZSX 125VSAPZSX

Triple type SRK140VNATZSX 140VSATZSX

V Multi System

maiti Oy	JECIII	
(OUTDOOR UNIT)	(INDOOR UNIT)	
FDC100VNA	FDT50VG	FDE50VG
100VSA	60VG	60VG
125VNA	71VG	71VG
125VSA		
140VNA		
140VSA		

MITSUBISHI HEAVY INDUSTRIES THERMAL SYSTEMS, LTD.

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1. MICRO INVERTER PACKAGED AIR-CONDITIONERS

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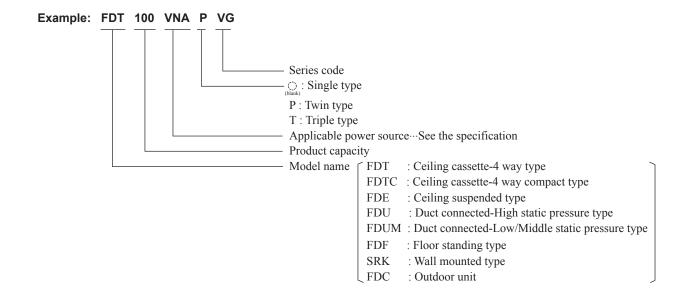
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How to read the model name



1.1 SPECIFICATIONS

(1) Ceiling cassette-4 way type (FDT)

(a) Single type

			Model	FDT10	0VNAVG		
Item				Indoor unit FDT100VG	Outdoor unit FDC100VNA		
ower sour	се				/, 50Hz / 220V, 60Hz		
Nominal cooling capacity (range)			kW	10.0 [4.0(Min	.) ~ 11.2(Max.)]		
	Nominal heating capacity	(range)	kW	11.2 [4.0(Min	.) ~ 12.5(Max.)]		
	D	Cooling		2.73			
	Power consumption	Heating	kW	2	.64		
	Max power consumption		i i	6	.40		
		Cooling		13.2	/ 13.8		
	Running current	Heating	A		/ 13.5		
	Inrush current, max currer		''		24		
Operation	macri carrent, max carre	Cooling			90		
data	Power factor	Heating	% -		39		
	EER	Cooling			.66		
	COP	Heating	-		.26		
	COP			4	.20		
	Sound power level	Cooling		63	70		
		Heating	.B(A)				
	Sound pressure level	Cooling	dB(A)	P-Hi: 48 Hi: 39 Me: 37 Lo: 31	54		
	·	Heating			56		
	Silent mode sound pressu	ure level		-	50/44 (Normal/Silent)		
Exterior din	nensions (Height × Width ×	Depth)	mm	Unit 298 × 840 × 840	845 × 970 × 370		
-Atomor ulli		Doparij		Panel 35 × 950 × 950	0-0 / 010 / 010		
Exterior app	pearance			Plaster white	Stucco white		
Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent		
Net weight			kg	UNIT 25 PANEL 5	80		
	or type & Q'ty			_	RMT5126MCE3×1		
Compressor motor (Starting method)			kW	_	Direct line start		
Refrigerant oil (Amount, type)			Q.	_	0.9 M-MA68		
Refrigerant (Type, amount, pre-charge length)			kg	B410A 3 8kg in outdoor unit (Incl.	the amount for the piping of : 30m)		
Heat exchanger			ING	Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
			<u> </u>	coansion valve			
Refrigerant control Fan type & Q'ty				Turbo fan ×1			
			W	140 < Direct line start >	Propeller fan ×1		
-an motor ((Starting method)	lo "	VV	140 < Direct line start >	86 < Direct line start >		
Air flow		Cooling	m³/min	P-Hi: 37 Hi: 26 Me: 23 Lo: 17	75		
		Heating	_		73		
	xternal static pressure		Pa	0	-		
Outside air				Possible	_		
	ality / Quantity			Pocket plastic net ×1(Washable)	_		
	oration absorber			Rubber sleeve (for fan motor) Rubber sleeve (for co			
Electric hea	ater		W	– 20 (Crankcase heater)			
Operation	Remote control			(Option) Wired: RC-EX3, RC-E5,	RCH-E3 Wireless: RCN-T-5AW-E2		
	Room temperature contro	ol		Thermostat	by electronics		
control	Operation display						
				Overload protection	ction for fan motor		
Safety equi	pments			Frost protec	tion thermostat		
o . , o qui	r				estat for fan motor temperature protection		
	Refrigerant piping size (C).D.)	mm -		φ 9.52(3/8")×0.8 Ο/U φ 9.52 (3/8")		
	0 11 0 (0 15.88(5/8")×1.0 φ 15.88 (5/8")		
	Connecting method			Flare piping	Flare piping		
nstallation	Attached length of piping		m	_			
lata	Insulation for piping				Liquid & Gas lines)		
	Refrigerant line (one way)		m		c.50m		
	Vertical height diff. between O.	.U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
	Drain hose			Hose connectable with VP25 (O.D.32) Hole size ϕ 20 × 3pcs			
Drain pump, max lift height			mm	Built-in drain pump , 850			
Recommended breaker size		Α	1 1 7	_			
	ked rotor ampere)		Α	ŗ.	5.0		
	cting wires Size × Core nu	mber	-,		ble) / Termainal block (Screw fixing type)		
P number	wiroo 0120 x 0016 110			IPX0	IP24		
	ccessories			Mounting kit, Drain hose	——————————————————————————————————————		
Option part				Mounting Rt., Drain 11056	<u> </u>		
	s data are magazired at the	a falle!.	000-1141		The pipe length is 7.5m		

Notes (1)

(1) The data are	e measured at t	the following co		The pipe length is 7.5m.	
Item	Indoor air to	Indoor air temperature		temperature	Standards
Operation DB		WB	DB	WB	Standards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1909191-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

 (4) Select the breaker size according to the own national standard.

 (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	FDT100	OVSAVG	
Item				Indoor unit FDT100VG	Outdoor unit FDC100VSA	
Power sour	ce			3 Phase, 380-415V	, 50Hz / 380V, 60Hz	
	Nominal cooling capacity	(range)	kW	10.0 [4.0(Min.)	· ~ 11.2(Max.)]	
	Nominal heating capacity	(range)	kW	11.2 [4.0(Min.)	→ 12.5(Max.)]	
	Dawer consumption	Cooling		2.	73	
	Power consumption	Heating	kW	2.	63	
	Max power consumption		1 [10	.20	
		Cooling		4.2	4.4	
	Running current	Heating	A	4.1 /	4.3	
0 !!	Inrush current, max currer	nt	1 [5,	15	
Operation		Cooling	0,	9	4	
data	Power factor	Heating	%		3	
	EER	Cooling			66	
ı	COP	Heating	1 1		26	
		Cooling				
	Sound power level	Heating	1 1	63	70	
		Cooling	dB(A)		54	
	Sound pressure level	Heating		P-Hi:48 Hi:39 Me:37 Lo:31	56	
	Silent mode sound pressu		{		50/44 (Normal/Silent)	
	Tolietii iilode soulid piessu	iie ievei			JU/44 (NOTHIAL/SHELL)	
Exterior din	nensions (Height × Width ×	Depth)	mm	Unit 298 × 840 × 840	845 × 970 × 370	
		- '		Panel 35 × 950 × 950	0,	
Exterior app				Plaster white	Stucco white	
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	UNIT 25 PANEL 5	82	
Compressor type & Q'ty				_	RMT5126MCE4×1	
Compressor motor (Starting method)			kW	-	Direct line start	
Refrigerant oil (Amount, type)			Q	_	0.9 M-MA68	
Refrigerant (Type, amount, pre-charge length)			kg	R410A 3.8kg in outdoor unit (Incl. t	the amount for the piping of : 30m)	
Heat excha	inger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant control				Electronic ex	pansion valve	
Fan type &	Q'ty			Turbo fan ×1	Propeller fan ×1	
Fan motor	(Starting method)		W	140 < Direct line start >	86 < Direct line start >	
	,	Cooling	3, ,		75	
Air flow		Heating	m³/min	P-Hi: 37 Hi: 26 Me: 23 Lo: 17	73	
Available ex	xternal static pressure	<u> </u>	Pa	0	_	
Outside air				Possible	_	
	uality / Quantity			Pocket plastic net ×1(Washable)	_	
	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric hea			W		20 (Crankcase heater)	
LIECTIIC HEE	Remote control			(Option) Wired: RC-EX3, RC-E5, RCH-E3 Wireless: RCN-T-5AW-E2		
Operation	Room temperature contro	i	 		by electronics	
control	Operation display	1		memostat t		
	Toberation display			Overland	tion for for motor	
					tion for fan motor ion thermostat	
Safety equi	pments			Internal thermos	stat for fan motor	
				Abnormal discharge t	temperature protection	
	Defrieswent sining of 10	D \		Liquid line: I/U ϕ 9.52 (3/8") Pipe	φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8")	
	Refrigerant piping size (O	.D.)	mm		15.88(5/8")×1.0	
	Connecting method			Flare piping	Flare piping	
Installation	Attached length of piping		m	_		
data	Insulation for piping			Necessary (both L	Liquid & Gas lines)	
	Refrigerant line (one way)	lenath	m	, ·	.50m	
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
	Drain hose			Hose connectable with VP25 (O.D.32)	Hole size $\phi 20 \times 3pcs$	
Drain nose Drain pump, max lift height			mm	Built-in drain pump, 850		
				1 1 /	<u> </u>	
Recommended breaker size			A			
	ked rotor ampere)		Α		.0	
	cting wires Size x Core nur	mber		, ,	ole) / Termainal block (Screw fixing type)	
IP number				IPX0	IP24	
Standard a				Mounting kit, Drain hose	_	
Option part					<u></u>	
Notes (1) Th	he data are measured at the	fallandaa	a a maditio		The pine length is 7.5m	

The	nine	length	is	7.5m

Item	Indoor air t	emperature	perature Outdoor air temperature		Ctandarda
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

			Model	FDT125	5VNAVG			
Item				Indoor unit FDT125VG	Outdoor unit FDC125VNA			
Power sour	ce				, 50Hz / 220V, 60Hz			
	Nominal cooling capacity	(range)	kW	12.5 [5.0(Min.)) ~ 14.0(Max.)]			
	Nominal heating capacity	(range)	kW	14.0 [4.0(Min.)) ~ 16.0(Max.)]			
	Danier and the second	Cooling		4.	05			
	Power consumption	Heating	kW	3.	74			
	Max power consumption		i i	6.	40			
		Cooling		18.7	/ 19.6			
	Running current	Heating	A	17.5 / 18.3				
O	Inrush current, max curren	it	i i	5,	24			
Operation	B ()	Cooling	0/	9)4			
data	Power factor	Heating	%	9	03			
	EER	Cooling		3.	09			
	COP	Heating	1	3.	74			
	0	Cooling		C4	74			
	Sound power level	Heating	1	64	71			
		Cooling	dB(A)	D.I. 40 II. 44 M. 00 I. 00	55			
	Sound pressure level	Heating	1 `	P-Hi: 49 Hi: 41 Me: 39 Lo: 32	57			
	Silent mode sound pressu	re level		_	51/45 (Normal/Silent)			
E		D 11)		Unit 298 × 840 × 840	045 070 070			
Exterior dim	nensions (Height × Width ×	Depth)	mm	Panel 35 × 950 × 950	845 × 970 × 370			
Exterior app	pearance			Plaster white	Stucco white			
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent			
Net weight	,		kg	UNIT 25 PANEL 5	80			
	r type & Q'ty		g	_	RMT5126MCE3×1			
Compressor motor (Starting method)			kW		Direct line start			
Refrigerant oil (Amount, type)			Q.		0.9 M-MA68			
Refrigerant (Type, amount, pre-charge length)			kg	R410A 3.8kg in outdoor unit (Incl. t	the amount for the piping of : 30m)			
Heat excha	()		g	Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant control					pansion valve			
Fan type &				Turbo fan ×1	Propeller fan ×1			
	Starting method)		W	140 < Direct line start >	86 < Direct line start >			
,	3	Cooling	3		75			
Air flow		Heating	m³/min	P-Hi:38 Hi:28 Me:25 Lo:18	73			
Available ex	ternal static pressure	<u> </u>	Pa	0	_			
Outside air				Possible	_			
Air filter, Qu	ality / Quantity			Pocket plastic net ×1(Washable)	_			
	pration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)			
Electric hea	ter		W	_	20 (Crankcase heater)			
0 !:	Remote control			(Option) Wired: RC-EX3, RC-E5, RCH-E3 Wireless: RCN-T-5AW-E2				
Operation	Room temperature control			Thermostat by electronics				
control	Operation display			-				
Safety equip	pments			Frost protect	ction for fan motor ion thermostat stat for fan motor			
					temperature protection φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8")			
	Refrigerant piping size (O. Connecting method	.U.)	mm	Gas line: ϕ 15.88 (5/8") ϕ	15.88(5/8")×1.0			
Installation	Attached length of piping		m	Flare piping	Flare piping _			
data	Insulation for piping		111	Necessary (both I	 _iquid & Gas lines)			
uaia	Refrigerant line (one way)	length	m		.50m			
	Vertical height diff. between O.U		m m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
	Drain hose	J. and 1.U.	111	Hose connectable with VP25 (O.D.32)	Hole size $\phi 20 \times 3pcs$			
Drain pump, max lift height		mm	Built-in drain pump, 850					
Recommended breaker size			A		<u>-</u> -			
L.R.A. (Locked rotor ampere)		A		.0				
	ting wires Size × Core nur	mher	_ ^		ble) / Termainal block (Screw fixing type)			
IP number	ring wires joize x ooie nui	11001		Ψ 1.6Hill1 × 3 cores (including earth car.	IP24			
Standard ad	coesories			Mounting kit, Drain hose				
Option part		,		Mounting Kit, Drain nose	<u> </u>			
Spacin part	~							

Item	Indoor air t	emperature Outdoor air temperature		temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1000101-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to (a) Select the breaker size according to the own national standard.
 (b) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	FDT125	SVSAVG			
Item				Indoor unit FDT125VG	Outdoor unit FDC125VSA			
Power sour	ce			3 Phase, 380-415V	50Hz / 380V, 60Hz			
	Nominal cooling capacity	(range)	kW	12.5 [5.0(Min.)	~ 14.0(Max.)]			
	Nominal heating capacity	(range)	kW	14.0 [4.0(Min.)	~ 16.0(Max.)]			
	Device consumption	Cooling		4.	05			
	Power consumption	Heating	kW	3.	74			
	Max power consumption		ĺ	10	.20			
		Cooling		6.2	6.5			
	Running current	Heating	Α	5.7 / 6.0				
	Inrush current, max curren			5,	15			
Operation		Cooling		94,	95			
data	Power factor	Heating	%		5			
	EER	Cooling			09			
	COP	Heating			74			
		Cooling						
	Sound power level	Heating		64	71			
		Cooling	dB(A)		55			
	Sound pressure level	Heating		P-Hi:49 Hi:41 Me:39 Lo:32	57			
	Silent mode sound pressu		}		51/45 (Normal/Silent)			
	Silent mode sound pressu	ie ievei		Unit 298 × 840 × 840	31/43 (Normal/Silent)			
Exterior din	nensions (Height × Width ×	Depth)	mm	Panel 35 × 950 × 950	845 × 970 × 370			
Fustoui - :: -				Plaster white	Chungl.tt -			
Exterior app					Stucco white			
(Munsell co	olor)			(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent			
Net weight			kg	UNIT 25 PANEL 5	82			
	Compressor type & Q'ty				RMT5126MCE4×1			
Compressor motor (Starting method)			kW		Direct line start			
Refrigerant oil (Amount, type)			l	_	0.9 M-MA68			
Refrigerant (Type, amount, pre-charge length)			kg		he amount for the piping of : 30m)			
Heat exchanger				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant					pansion valve			
Fan type &				Turbo fan ×1	Propeller fan ×1			
Fan motor ((Starting method)		W	140 < Direct line start >	86 < Direct line start >			
Air flow		Cooling	m³/min	P-Hi:38 Hi:28 Me:25 Lo:18	75			
All HOW		Heating	111 /111111	1-111.30 TII.20 We.23 Lo.10	73			
Available ex	xternal static pressure		Pa	0	_			
Outside air	intake			Possible	_			
Air filter, Qu	ıality / Quantity			Pocket plastic net ×1(Washable)	_			
Shock & vib	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)			
Electric hea	ater		W	-	20 (Crankcase heater)			
Operation	Remote control			(Option) Wired: RC-EX3, RC-E5, RCH-E3 Wireless: RCN-T-5AW-E2				
control	Room temperature control				by electronics			
CONTROL	Operation display			-	-			
Safety equi	pments			Frost protect Internal thermo	tion for fan motor ion thermostat stat for fan motor temperature protection			
	Refrigerant piping size (O	.D.)	mm -	Liquid line: I/U φ 9.52 (3/8") Pipe Gas line: φ 15.88 (5/8") φ				
	Connecting method			Flare piping	Flare piping			
Installation	Attached length of piping		m	—a	— —			
data	Insulation for piping			Necessary (both L	iquid & Gas lines)			
uuu	Refrigerant line (one way)	lenath	m		.50m			
	Vertical height diff. between O.I		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
	Drain hose	J. W. W. 1.U.	-111	Hose connectable with VP25 (O.D.32)	Hole size ϕ 20 × 3pcs			
Drain pump, max lift height			mm	Built-in drain pump, 850	- Γιοίε size ψ20 x 3μcs			
Recommended breaker size			A	Duitt-iii diaiii puilip , 000	<u>-</u>			
L.R.A. (Locked rotor ampere)			-	.0				
	cting wires Size × Core nur	nhor	А		ole) / Termainal block (Screw fixing type)			
	ung wires joize x Core nur	IIDEI		φ 1.6mm × 3 cores (including earth car.	, , , , , , , , , , , , , , , , , , , ,			
IP number Standard a	ooooorioo			Mounting kit, Drain hose	IP24			
				<u> </u>	_			
Option part	.5				-			

The	pipe	length	is	7.5m

Item	Indoor air t	Indoor air temperature Outdoor air temperature		Ctandarda	
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to (a) Solution level indicates the value in an allectroic chamber. Burning operation these values are solutions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

			Model	FDT140	VNAVG		
Item				Indoor unit FDT140VG	Outdoor unit FDC140VNA		
Power sour	ce			1 Phase, 220-240V	50Hz / 220V, 60Hz		
	Nominal cooling capacity	y (range)	kW	13.6 [5.0(Min.)	~ 14.5(Max.)]		
Nominal heating capacity (range)			kW	15.5 [4.0(Min.)	~ 16.5(Max.)]		
	D	Cooling		4.84			
	Power consumption	Heating	kW	4.	43		
	Max power consumption		1	6.	40		
		Cooling		21.7	/ 22.7		
	Running current	Heating	A	19.7	20.5		
ļ	Inrush current, max curre				24		
Operation	,	Cooling		-	7		
data	Power factor	Heating	% -		8		
	EER	Cooling			81		
	COP	Heating	1		50		
		Cooling					
	Sound power level	Heating		64	73		
		Cooling	dB(A)		57		
	Sound pressure level	Heating	GD() ()	P-Hi: 49 Hi: 42 Me: 39 Lo: 33	59		
	Silent mode sound press		-		53/47 (Normal/Silent)		
	Johann Hiddo Sound press	2010 10101		Unit 298 × 840 × 840	1 (Normal/Olienty		
Exterior dim	ensions (Height × Width :	× Depth)	mm	Panel 35 × 950 × 950	845 × 970 × 370		
Exterior apr	nogrango			Plaster white	Stucco white		
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent		
`	olor)		Lon	, ,	, , ,		
Net weight	1 0 011		kg	UNIT 25 PANEL 5	80		
	Compressor type & Q'ty		114/	_	RMT5126MCE3×1		
Compressor motor (Starting method)		kW		Direct line start			
Refrigerant oil (Amount, type)			l		0.9 M-MA68		
Refrigerant (Type, amount, pre-charge length)		kg	R410A 3.8kg in outdoor unit (Incl. t	11 3 /			
Heat exchanger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant control					pansion valve		
Fan type & Q'ty				Turbo fan ×1	Propeller fan ×1		
Fan motor (Starting method)		W	140 < Direct line start >	86 < Direct line start >		
Air flow		Cooling	m³/min	P-Hi:38 Hi:29 Me:26 Lo:19	75		
/ ur now		Heating	111 / 1111111	1 111.00 111.23 Mic.20 20.13	73		
Available ex	ternal static pressure		Pa	0	_		
Outside air	intake			Possible	_		
	ality / Quantity			Pocket plastic net ×1(Washable)	_		
Shock & vib	ration absorber			Rubber sleeve (for fan motor) Rubber sleeve (for compr			
Electric hea	ter		W	 20 (Crankcase heater) 			
Operation	Remote control			(Option) Wired: RC-EX3, RC-E5,	RCH-E3 Wireless : RCN-T-5AW-E2		
control	Room temperature contr	ol		Thermostat b	by electronics		
COLLIGI	Operation display			-	_		
				Overload protect	tion for fan motor		
Safety equip	oments				ion thermostat		
					stat for fan motor temperature protection		
				Liquid line: I/U ϕ 9.52 (3/8") Pipe	· · · · · · · · · · · · · · · · · · ·		
	Refrigerant piping size (O.D.)	mm -		φ9.52(3/6)×0.6		
	Connecting method						
Inetallation	Connecting method	~	m	Flare piping —	Flare piping		
	Installation Attached length of piping		m		 Liquid & Gas lines)		
data Insulation for piping		100	, , , , , , , , , , , , , , , , , , ,				
	Refrigerant line (one way	,,	m		.50m		
	Vertical height diff. between (J.U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
Drain hose		ma /==	Hose connectable with VP25 (O.D.32)	Hole size φ20 × 3pcs			
	, max lift height		mm	Built-in drain pump , 850	_		
	ded breaker size		A		_		
	(ed rotor ampere)		Α		.0		
	ting wires Size × Core n	umber			ole) / Termainal block (Screw fixing type)		
IP number				IPX0	IP24		
Standard ad				Mounting kit, Drain hose	_		
Option part				<u> </u>			
Notes (1) Th	o data are measured at th	ممانييناما مم			The pipe length is 7.5m		

				7.5
ıne	pipe	length	IS	7.5m.

Item	Indoor air t	emperature	Outdoor air temperature		Standards	
Operation	DB	WB	DB	WB	Standards	
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1	
Heating	20°C	_	7°C	6°C	1303131-11	

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	FDT140	VSAVG
Item				Indoor unit FDT140VG	Outdoor unit FDC140VSA
Power source	ce			3 Phase, 380-415V,	50Hz / 380V, 60Hz
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)	~ 14.5(Max.)]
	Nominal heating capacity	(range)	kW	15.5 [4.0(Min.)	~ 16.5(Max.)]
	Dawer consumption	Cooling		4.8	34
	Power consumption	Heating	kW	4.4	43
	Max power consumption		i i	10.	20
		Cooling		7.4 /	7.8
	Running current	Heating	A	7.0 /	7.4
	Inrush current, max curren			5,	15
Operation		Cooling		9	
data	Power factor	Heating	%	9	
	EER	Cooling		2.8	
	COP	Heating	1 1	3.5	
		Cooling			
	Sound power level	Heating		64	73
		Cooling	dB(A)		57
	Sound pressure level	Heating	(ab(/ i)	P-Hi: 49 Hi: 42 Me: 39 Lo: 33	59
	Silent mode sound pressu				53/47 (Normal/Silent)
	Jonath mode sound pressu	10 10 4 01		Unit 298 × 840 × 840	,
Exterior dim	nensions (Height × Width ×	Depth)	mm	Panel 35 × 950 × 950	$845 \times 970 \times 370$
Exterior one				Plaster white	Stucco white
Exterior app (Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent
`	olor)		l	UNIT 25 PANEL 5	82
Net weight			kg	UNIT 25 PAINEL 5	-
Compressor type & Q'ty			1-147	<u>-</u>	RMT5126MCE4×1
Compressor motor (Starting method)		kW		Direct line start	
Refrigerant oil (Amount, type)		Q.	— D440A 0 0les is settle securit //set 1	0.9 M-MA68	
	Refrigerant (Type, amount, pre-charge length)		kg	R410A 3.8kg in outdoor unit (Incl. t	
Heat exchanger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
	Refrigerant control			Electronic exp	
Fan type &			W	Turbo fan ×1 140 < Direct line start >	Propeller fan ×1
Fan motor (Starting method)	01:	VV	140 < Direct line start >	86 < Direct line start >
Air flow		Cooling	m³/min	P-Hi:38 Hi:29 Me:26 Lo:19	75
		Heating			73
	ternal static pressure		Pa	0	_
Outside air				Possible	_
	ality / Quantity			Pocket plastic net ×1(Washable)	— — — — — — — — — — — — — — — — — — —
	ration absorber			Rubber sleeve (for fan motor) Rubber sleeve (for compre	
Electric hea			W		20 (Crankcase heater)
Operation	Remote control			(Option) Wired: RC-EX3, RC-E5,	
control	Room temperature control			Thermostat b	y electronics
<u> </u>	Operation display				-
				Overload protec	tion for fan motor ion thermostat
Safety equip	pments			Internal thermos	stat for fan motor
					emperature protection
		-		Liquid line: I/U φ 6.35 (1/4") φ 9.52(3/8")x	<u> </u>
	Refrigerant piping size (O.	.U.)	mm	Gas line: I/U ϕ 12.7 (1/2") ϕ 12.7(1/2")x0	
	Connecting method			Flare piping	Flare piping
Installation	Attached length of piping		m	— —	——————————————————————————————————————
data	Insulation for piping			Necessary (both L	iguid & Gas lines)
	Refrigerant line (one way)	lenath	m	Max.	
	Vertical height diff. between O.U		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)
Drain hose			Hose connectable with VP25 (O.D.32)	Hole size $\phi 20 \times 3pcs$	
Drain pump, max lift height		mm	Built-in drain pump, 850	— — — — — — — — — — — — — — — — — — —	
	ded breaker size		A	- Built-iii draiii puilip , 000	
	ked rotor ampere)		A	5.	
	ting wires Size × Core nur	mher	^		le) / Termainal block (Screw fixing type)
IP number	ring wires joize x ooie hui	11001		Ψ 1.6Hill1 × 3 cores (including earth cab	IP24
Standard ac	ccessories			Mounting kit, Drain hose	- LT
Option parts				Modifiling Kit, Draill Hose	<u> </u>
Option part	J				

The	nine	length	is	7.5m

Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(b) Twin type

			Model	FDT100V	NAPVG
tem				Indoor unit FDT50VG (2 units)	Outdoor unit FDC100VNA
ower source	ce			1 Phase, 220-240V,	50Hz / 220V, 60Hz
	Nominal cooling capacit	y (range)	kW	10.0 [4.0(Min.)	~ 11.2(Max.)]
	Nominal heating capacit	y (range)	kW	11.2 [4.0(Min.)	~ 12.5(Max.)]
	D	Cooling		2.8	32
	Power consumption	Heating	kW	2.9	90
	Max power consumption			6,4	
		Cooling		12.4 /	
	Running current	Heating	A	12.7 /	
	Inrush current, max curr		^ -	5,	
Operation	midsir current, max curr	1		99	
lata	Power factor	Cooling	% -		
	FED	Heating		99	
	EER	Cooling	<u> </u>	3.5	
	COP	Heating		3.8	36
	Sound power level	Cooling		54	70
		Heating			
	Sound pressure level	Cooling	dB(A)	P-Hi:38 Hi:33 Me:30 Lo:27	54
	·	Heating	L	. 111.00 111.00 IVIG.00 LO.21	56
	Silent mode sound press	sure level		_	50 / 44 (Normal / Silent)
vtorios di	ongiona (Haiaht \\III-	v Donth)	manne	Unit 236 × 840 × 840	945 2 070 970
vieuor aim	ensions (Height × Width	x Deptn)	mm	Panel 35 × 950 × 950	845 × 970 × 370
xterior app	pearance			Plaster white	Stucco white
Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent
let weight	,		kg	UNIT 19 PANEL 5	80
	r type & Q'ty		Ng	ONIT 13 TANLES	RMT5126MCE3×1
			kW	_	Direct line start
Compressor motor (Starting method)			_		
Refrigerant oil (Amount, type)		e	—	0.9 M-MA68	
	(Type, amount, pre-charg	ge length)	kg	R410A 3.8kg (Pre-charged up to the	
leat exchar				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing
Refrigerant				Electronic exp	
an type & 0				Turbo fan ×1	Propeller fan ×1
an motor (Starting method)		W	50 < Direct line start >	86 < Direct line start >
ir flow		Cooling	m³/min	D.16.00 16.16 Mo.12 Lo.10	75
ar now		Heating	111 /111111	P-Hi: 20 Hi: 16 Me: 13 Lo: 10	73
vailable ex	ternal static pressure		Pa	0	_
utside air i	intake			Possible	_
ir filter. Qu	ality / Quantity			Pocket plastic net ×1 (Washable) —	
	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)
lectric hea	i i		W		20 (Crankcase heater)
	Remote control	-	**	(Option) wired: RC-EX3, RC-E5, I	
peration	Room temperature control	rol		Thermostat b	
ontrol		101	 	memostat b	y electrorites
	Operation display		-		-
				Overload protect	tion for fan motor on thermostat
afety equip	oments			Internal thermos	on thermostat stat for fan motor
					emperature protection
	5 (Liquid line: I/U φ 6.35 (1/4") ② φ 9.52(3/8")	
	Refrigerant piping size (O.D.)	mm	Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7(1/2")x0	
	Connecting method			Flare piping	Flare piping
stallation	Attached length of pipin	n	m	–	
ata	Insulation for piping	9	111	 Necessary (both L	iquid & Gas lines)
aid	Refrigerant line (one wa	v/ longth			
		,, 	m	Max.	
	Vertical height diff. between O.U. and I.U.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)
	Drain hose			Hose connectable with VP25 (O.D.32)	Hole size φ 20 x 3pcs
Drain pump, max lift height		mm	Built-in drain pump , 850	_	
ecommen	ded breaker size		Α	_	
.R.A. (Lock	red rotor ampere)		Α	5.	0
nterconnec	ting wires Size x Core n	umber		ϕ 1.6mm × 3 cores (Including earth cab	le) / Termainal block (Screw fixing type)
number				IPX0	IP24
tandard ac	cessories			Mounting kit, Drain hose	_
tandard ac				Mounting kit, Drain hose	

Notes (1)

(1) The data are	measured at t	ne following co	maitions.		rne pipe iengtn is 7.5m.
Item	Indoor air to	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1003131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDT100	VSAPVG
Item				Indoor unit FDT50VG (2 units)	Outdoor unit FDC100VSA
Power sour	ce			3 Phase, 380-415V,	50Hz / 380V, 60Hz
	Nominal cooling capacity	(range)	kW	10.0 [4.0(Min.)	~ 11.2(Max.)]
	Nominal heating capacity (range)		kW	11.2 [4.0(Min.)	∼ 12.5(Max.)]
	Coolin			2.	82
	Power consumption	Heating	kW	2.	.9
	Max power consumption] [10	0.2
	D	Cooling		4.1 /	4.4
	Running current	Heating	A	4.3 /	4.5
0 !:	Inrush current, max currer	nt	1 1	5,	15
Operation		Cooling		99 /	97
data	Power factor	Heating	%	97 /	
	EER	Cooling			55
	COP	Heating	1		86
		Cooling			
	Sound power level	Heating	1	54	70
		Cooling	dB(A)		54
	Sound pressure level	Heating	ab()	P-Hi:38 Hi:33 Me:30 Lo:27	56
	Silent mode sound pressu		1 1	_	50 / 44 (Normal / Silent)
	Tourist Hiodo Soulid Presst	410 10 V G1		Unit 236 × 840 × 840	,
Exterior din	nensions (Height × Width ×	Depth)	mm	Panel 35 × 950 × 950	845 × 970 × 370
Furtari - :: -				Plaster white	Chungl-th-
Exterior app (Munsell co				Plaster white (6.8Y8.9/0.2) near equivalent	Stucco white (4.2Y7.5/1.1) near equivalent
					, , ,
Net weight			kg	UNIT 19 PANEL 5	82
	Compressor type & Q'ty			_	RMT5126MCE4×1
Compressor motor (Starting method)		kW	-	Direct line start	
Refrigerant oil (Amount, type)		l		0.9 M-MA68	
Refrigerant (Type, amount, pre-charge length)		kg	R410A 3.8kg (Pre-charged up to the		
Heat exchanger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant control				pansion valve	
Fan type &				Turbo fan ×1	Propeller fan ×1
Fan motor ((Starting method)		W	50 < Direct line start >	86 < Direct line start >
Air flow		Cooling	m³/min	P-Hi:20 Hi:16 Me:13 Lo:10	75
		Heating			73
	xternal static pressure		Pa	0	_
Outside air				Possible	_
	ıality / Quantity			Pocket plastic net ×1 (Washable)	_
Shock & vib	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)
Electric hea	ater		W	_	20 (Crankcase heater)
Operation	Remote control			(Option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-T-5AW-E2	
control	Room temperature contro	ol		Thermostat b	by electronics
CONTROL	Operation display			-	_
					tion for fan motor
Safety equi	pments			Frost protect	ion thermostat stat for fan motor
, ,					temperature protection
				Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52(3/8")	
	Refrigerant piping size (C).D.)	mm	Gas line: I/U ϕ 6.35 (1/4") $\bigcirc \phi$ 9.52(3/8")	
	Connecting method				
Inotaliatio -	Connecting method		pn	Flare piping	Flare piping
Installation	Attached length of piping		m	— Necessary (both L	iquid 9 Cas lines)
data	Insulation for piping	\ l====!!	_	, , , , , , , , , , , , , , , , , , ,	,
	Refrigerant line (one way)		m	Max.	
Vertical height diff. between O.U. and I.U.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
Drain hose			Hose connectable with VP25 (O.D.32)	Hole size ϕ 20 x 3pcs	
Drain pump, max lift height		mm	Built-in drain pump , 850	_	
	ided breaker size		Α	-	
	ked rotor ampere)		Α	5.	
	cting wires Size × Core nu	mber		, ,	ple) / Termainal block (Screw fixing type)
IP number				IPX0	IP24
Standard a				Mounting kit, Drain hose	_
Option part	S				_
Notes (1) Th	ne data are measured at the	e following	conditio	ns.	Γhe pipe length is 7.5m.

Item	Indoor air t	emperature	Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDT125	VNAPVG		
Item				Indoor unit FDT60VG (2 units)	Outdoor unit FDC125VNA		
Power source	ce				, 50Hz / 220V, 60Hz		
	Nominal cooling capacity	y (range)	kW	12.5 [5.0(Min.)	~ 14.0(Max.)]		
Nominal heating capacity (range)		kW	14.0 [4.0(Min.)	~ 16.0(Max.)]			
	Power consumption	Cooling		3.79			
	Power consumption	Heating	kW	3.	31		
	Max power consumption	1		6.	40		
	Dt	Cooling		16.6	/ 17.4		
	Running current	Heating	A	14.5	/ 15.2		
	Inrush current, max curre	ent	İ	5,	24		
Operation		Cooling		-	9		
data	Power factor	Heating	%		9		
	EER	Cooling		3.	30		
	COP	Heating			23		
		Cooling					
	Sound power level	Heating		60	71		
		Cooling	dB(A)		55		
	Sound pressure level	Heating	ab, i,	P-Hi: 44 Hi: 34 Me: 32 Lo: 28	57		
	Silent mode sound press		-		51 / 45 (Normal / Silent)		
				Unit 236 × 840 × 840	,		
Exterior dim	ensions (Height × Width :	× Depth)	mm	Panel 35 × 950 × 950	845 × 970 × 370		
Exterior app	nearance			Plaster white	Stucco white		
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent		
Net weight	noi)		l.a	UNIT 21 PANEL 5	80		
	rtuno 9 Oltu		kg	UNIT 21 PAINEL 5	RMT5126MCE3×1		
	Compressor type & Q'ty Compressor motor (Starting method)		kW				
Refrigerant oil (Amount, type)				Direct line start 0.9 M-MA68			
		Q Isa	D410A 2 Oka (Dro. observed up to the	e piping length of 30m) Outdoor unit			
Refrigerant (Type, amount, pre-charge length)		kg	<u> </u>	11 0 0 /			
Heat exchanger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant control					pansion valve		
Fan type & 0			14/	Turbo fan ×1	Propeller fan ×1		
Fan motor (Starting method)	10 "	W	50 < Direct line start >	86 < Direct line start >		
Air flow		Cooling	m³/min	P-Hi: 26 Hi: 17 Me: 14 Lo: 11	75		
A :1.1.1	1 1 1 2	Heating			73		
	ternal static pressure		Pa	0	_		
Outside air i				Possible	_		
	ality / Quantity			Pocket plastic net ×1 (Washable)			
	ration absorber			Rubber sleeve (for fan motor) Rubber sleeve (for compre			
Electric hea			W				
Operation	Remote control						
control	Room temperature contr	Ol		Thermostat b	by electronics		
	Operation display			-	-		
				Overload protect	tion for fan motor ion thermostat		
Safety equip	oments			Internal thermos	stat for fan motor		
					temperature protection		
				Liquid line: I/U φ 6.35 (1/4") ② φ 9.52 (3/8")			
	Refrigerant piping size (U.D.)	mm	Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0			
	Connecting method			Flare piping	Flare piping		
Installation	Attached length of piping	7	m	——————————————————————————————————————			
data				Necessary (both I	Liquid & Gas lines)		
Refrigerant line (one way) length Vertical height diff. between O.U. and I.U. Drain hose		m	, ·	.50m			
			m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
			Hose connectable with VP25 (O.D.32)	Hole size ϕ 20 x 3pcs			
Drain nose Drain pump, max lift height			mm	Built-in drain pump, 850			
	ded breaker size		A		<u>-</u> -		
	ked rotor ampere)		A		.0		
	ting wires Size × Core n	ımher	- ^		.u ble) / Termainal block (Screw fixing type)		
IP number	ung wires joize x Core ni	umber		φ 1.6mm × 3 cores (including earth car. IPX0	IP24		
Standard ac	consorios	-		Mounting kit, Drain hose	IP24 —		
				Mounting Kit, Drain nose	<u> </u>		
Option parts	o data are measured at th				Fho pine length is 7.5m		

Item	Indoor air t	Indoor air temperature		temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDT125	VSAPVG	
Item			Model	Indoor unit FDT60VG (2 units)	Outdoor unit FDC125VSA	
Power sour	rce				50Hz / 380V, 60Hz	
	Nominal cooling capacity	(range)	kW	12.5 [5.0(Min.)		
	Nominal heating capacity	<u> </u>	kW	14.0 [4.0(Min.)		
	Cooling				79	
	Power consumption Heating		kW	3.	31	
	Max power consumption		1		.20	
		Cooling		5.5	75.8	
	Running current	Heating	Α	4.9	/5.1	
	Inrush current, max curren			5,	15	
	Operation				9	
data	Power factor	Heating	%	98 /	/ 99	
	EER	Cooling			30	
	COP	Heating	1	4.:	23	
	0 1 1	Cooling		00	74	
	Sound power level	Heating		60	71	
		Cooling	dB(A)		55	
	Sound pressure level	Heating	```	P-Hi: 44 Hi: 34 Me: 32 Lo: 28	57	
	Silent mode sound pressu	re level		_	51 / 45 (Normal / Silent)	
				Unit 236 × 840 × 840		
Exterior din	nensions (Height × Width ×	Depth)	mm	Panel 35 × 950 × 950	845 × 970 × 370	
Exterior app	nearance			Plaster white	Stucco white	
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	UNIT 21 PANEL 5	82	
Compressor type & Q'ty			Ng	——————————————————————————————————————	RMT5126MCE4×1	
Compressor motor (Starting method)			kW	_	Direct line start	
Refrigerant oil (Amount, type)			e e	_	0.9 M-MA68	
	(Type, amount, pre-charge	lenath)	kg	R410A 3 8kg (Pre-charged up to the	e piping length of 30m) Outdoor unit	
Heat excha		iorigarij	ı.ıg	Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant					pansion valve	
Fan type &				Turbo fan ×1	Propeller fan ×1	
	(Starting method)		W	50 < Direct line start >	86 < Direct line start >	
	(Ottai tii ig i i oti i oti)	Cooling			75	
Air flow		Heating	m³/min	P-Hi: 26 Hi: 17 Me: 14 Lo: 11	73	
Available ex	xternal static pressure	riodaling	Pa	0	_	
Outside air				Possible	_	
	uality / Quantity			Pocket plastic net ×1 (Washable)	_	
	bration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric hea	-i		W	_	20 (Crankcase heater)	
	Remote control			(Option) wired: RC-EX3, RC-E5,		
Operation	Room temperature control			Thermostat by electronics		
control	Operation display			-	-	
				Overload protect	tion for fan motor ion thermostat	
Safety equi	ipments			Internal thermos	stat for fan motor	
				Abnormal discharge t	temperature protection	
	Refrigerant piping size (O.	.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52 (3/8") Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0		
	Connecting method			Flare piping	Flare piping	
Installation Attached length of piping data Insulation for piping		m	— 	— — — — — — — — — — — — — — — — — — —		
			Necessary (both L	Liquid & Gas lines)		
	Refrigerant line (one way)	lenath	m	, ,	.50m	
Vertical height diff. between O.U. and I.U.			m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
Drain hose			Hose connectable with VP25 (O.D.32)	Hole size ϕ 20 x 3pcs		
Drain pump, max lift height			mm	Built-in drain pump , 850	——————————————————————————————————————	
	nded breaker size		A			
	ked rotor ampere)		A		.0	
	cting wires Size × Core nur	nber			ble) / Termainal block (Screw fixing type)	
IP number	Carried Cize × Core Hui			IPX0	IP24	
Standard a	ccessories			Mounting kit, Drain hose	——————————————————————————————————————	
Option part				-		
L CONTRACT	- -					

The	pipe	length	is	7.5m.

Item	Indoor air temperature		ure Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDT140	VNAPVG		
Item				Indoor unit FDT71VG (2 units) Outdoor unit FDC140VNA			
Power sour	rce			1 Phase, 220-240V, 50Hz / 220V, 60Hz			
	Nominal cooling capacity	(range)	kW		~ 14.5(Max.)]		
	Nominal heating capacity	(range)	kW	15.5 [4.0(Min.)			
	Cooling			4.	22		
	Power consumption Heating		kW	3.	29		
	Max power consumption		i i	6.	40		
		Cooling		18.5	/ 19.4		
	Running current	Heating	A	14.4	/ 15.1		
	Inrush current, max curren			5,	24		
Operation	,	Cooling		-	9		
data	Power factor	Heating	%		9		
	EER	Cooling			22		
	COP	Heating	1 1	4.			
		Cooling					
	Sound power level	Heating	i i	62	73		
		Cooling	dB(A)		57		
	Sound pressure level	Heating	ab()	P-Hi: 46 Hi: 35 Me: 34 Lo: 29	59		
	Silent mode sound pressu				53 / 47 (Normal / Silent)		
	· · · · · · · · · · · · · · · · · · ·			Unit 236 × 840 × 840	,		
Exterior din	nensions (Height × Width ×	Depth)	mm	Panel 35 × 950 × 950	845 × 970 × 370		
Exterior ap	nogranco			Plaster white	Stucco white		
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent		
Net weight			ka	UNIT 21 PANEL 5	80		
			kg	UNIT 21 PANEL 5	RMT5126MCE3×1		
Compressor type & Q'ty Compressor motor (Starting method)			kW		Direct line start		
	oil (Amount, type)				0.9 M-MA68		
		lonath)	Q Iso	D410A 2 0kg (Dro obergod up to the			
	(Type, amount, pre-charge	e length)	kg	<u> </u>	e piping length of 30m) Outdoor unit		
Heat excha				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant					pansion valve		
Fan type &	(Starting method)		W	Turbo fan ×1 50 < Direct line start >	Propeller fan ×1		
ran motor ((Starting method)	Caalina	VV	50 < Direct line start >	86 < Direct line start >		
Air flow		Cooling	m³/min	P-Hi: 28 Hi: 18 Me: 15 Lo: 12	75		
A ! - - -		Heating	D-	0	73 —		
	xternal static pressure		Pa	0 Possible			
Outside air					_		
	uality / Quantity			Pocket plastic net ×1 (Washable)	Dubbandan (fan aranga)		
	bration absorber		101	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hea			W	— — — — — — — — — — — — — — — — — — —	20 (Crankcase heater)		
Operation	Remote control			(Option) wired : RC-EX3, RC-E5, RCH-E3 wireless : RCN-T-5AW-E2 Thermostat by electronics			
control	Room temperature contro	I		I nermostat by electronics			
	Operation display				-		
				Overload protection for fan motor Frost protection thermostat			
Safety equi	ipments				stat for fan motor		
					temperature protection		
	5 (5 \		Liquid line: I/U φ 9.52 (3/8") ② φ 9.52 (3/8")	x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8")		
	Refrigerant piping size (O	.U.)	mm	Gas line: I/U ϕ 15.88 (5/8") ② ϕ 15.88 (5/8") >			
	Connecting method			Flare piping	Flare piping		
Installation			m	——————————————————————————————————————	_		
data Insulation for piping			Necessary (both L	Liquid & Gas lines)			
	Refrigerant line (one way)	length	m	, ·	.50m		
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
	Drain hose			Hose connectable with VP25 (O.D.32)	Hole size ϕ 20 x 3pcs		
Drain pump, max lift height			mm	Built-in drain pump, 850	—		
	nded breaker size		A	1 17			
	ked rotor ampere)		A		.0		
$\overline{}$	cting wires Size × Core nur	mher	^		ole) / Termainal block (Screw fixing type)		
IP number	ouring willog OIZE x OOIE Hul	11001		Ψ 1.6Him × 3 cores (including earth car.	IP24		
Standard a	ccessories			Mounting kit, Drain hose	IF24 		
Option part				Mounting Rt., Drain 11056	<u>-</u> -		
	ho data are measured at the				The pipe length is 7.5m		

Item	Indoor air t	Indoor air temperature		temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDT140	VSAPVG
Item				Indoor unit FDT71VG (2 units)	Outdoor unit FDC140VSA
Power sour	rce			3 Phase, 380-415V,	
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)	·
	Nominal heating capacity	(range)	kW	15.5 [4.0(Min.)	~ 16.5(Max.)]
	. Cooling			4.:	22
	Power consumption Heating		kW	3.5	29
	Max power consumption	<u> </u>	1 1		.20
		Cooling		6.2	6.5
	Running current	Heating	Α	4.8 /	/ 5.1
	Inrush current, max curren		''		15
Operation	,	Cooling			7 99
data	Power factor	Heating	%		798
	EER	Cooling			22
	COP	Heating	1	4.	
		Cooling			
	Sound power level	Heating		62	73
		Cooling	dB(A)		57
	Sound pressure level	Heating	ub(A)	P-Hi: 46 Hi: 35 Me: 34 Lo: 29	59
	Silent mode sound process				
	Silent mode sound pressu	ie ievei		Unit 236 × 840 × 840	53 / 47 (Normal / Silent)
Exterior din	nensions (Height × Width ×	Depth)	mm		845 × 970 × 370
				Panel 35 × 950 × 950	0,
Exterior app				Plaster white	Stucco white
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent
Net weight			kg	UNIT 21 PANEL 5	82
Compressor type & Q'ty				-	RMT5126MCE4×1
Compressor motor (Starting method)			kW	_	Direct line start
	oil (Amount, type)		Q	_	0.9 M-MA68
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg (Pre-charged up to the	piping length of 30m) Outdoor unit
Heat excha				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing
Refrigerant	control			Electronic exp	pansion valve
Fan type &	Q'ty			Turbo fan ×1	Propeller fan ×1
Fan motor ((Starting method)		W	50 < Direct line start >	86 < Direct line start >
Air flow		Cooling	m³/min	D. I.G. 20 I.G. 10 Mo. 15 Lo. 10	75
Air now		Heating	111 /1111111	P-Hi: 28 Hi: 18 Me: 15 Lo: 12	73
Available ex	xternal static pressure		Pa	0	_
Outside air	intake			Possible	_
Air filter, Qu	uality / Quantity			Pocket plastic net ×1 (Washable)	_
Shock & vik	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)
Electric hea	ater		W	_	20 (Crankcase heater)
0	Remote control			(Option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-T-5AW-E2	
Operation	Room temperature control			Thermostat by electronics	
control	Operation display			-	<u>-</u>
	, , , , ,			Overload protec	tion for fan motor
Safety equi	nments			Frost protect	ion thermostat
Carety equi	pricito				stat for fan motor
					temperature protection
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U ϕ 9.52 (3/8") ② ϕ 9.52 (3/8")	
				Gas line: I/U φ 15.88 (5/8") ② φ 15.88 (5/8") ×	
Connecting method			Flare piping	Flare piping	
Installation Attached length of piping		m	<u> </u>		
data Insulation for piping			Necessary (both L		
	Refrigerant line (one way)		m		.50m
Vertical height diff. between O.U. and I.U.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
Drain hose			Hose connectable with VP25 (O.D.32)	Hole size ϕ 20 x 3pcs	
	o, max lift height	,	mm	Built-in drain pump, 850	_
Recommended breaker size			Α	-	_
	ked rotor ampere)		Α		.0
	cting wires Size × Core nur	nber			ple) / Termainal block (Screw fixing type)
IP number				IPX0	IP24
Standard a				Mounting kit, Drain hose	_
Option part	is			-	-
N (4) T					

The pipe length is 7.5m

Item	Indoor air t	emperature Outdoor air temperature		temperature	Ctandarda
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

(c) Triple type

			Model	FDT140VNATVG			
ltem				Indoor unit FDT50VG (3 units) Outdoor unit FDC140VNA			
Power sour	ce			1 Phase, 220-240V,	50Hz / 220V, 60Hz		
	Nominal cooling capacit	y (range)	kW	13.6 [5.0(Min.)	·		
	Nominal heating capacit	y (range)	kW	15.5 [4.0(Min.)	~ 16.5(Max.)]		
	Cooling Cooling			4.2			
	Power consumption	Heating	kW	3.2	29		
	Max power consumption			6.4	10		
	Б	Cooling		18.5 /	19.4		
	Running current	Heating	Α	14.4 /	15.1		
O	Inrush current, max current	ent		5,	24		
Operation	D ()	Cooling	0/	99	9		
data	Power factor	Heating	%	99	9		
	EER	Cooling		3.2	22		
	COP	Heating		4.7	71		
	0	Cooling		5.4	70		
	Sound power level	Heating	l l	54	73		
		Cooling	dB(A)	D.I.I. 00 III. 00 II. 07	57		
	Sound pressure level	Heating	`	P-Hi: 38 Hi: 33 Me: 30 Lo: 27	59		
	Silent mode sound press			_	53 / 47 (Normal / Silent)		
Total Control of				Unit 236 × 840 × 840	,		
exterior dim	nensions (Height × Width	× Depth)	mm	Panel 35 × 950 × 950	845 × 970 × 370		
Exterior app	pearance			Plaster white	Stucco white		
Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent		
Net weight	- /		kg	UNIT 19 PANEL 5	80		
	r type & Q'ty		ı.ıg	-	RMT5126MCE3×1		
Compressor motor (Starting method)			kW	_	Direct line start		
	oil (Amount, type)	'	Q.	_	0.9 M-MA68		
Refrigerant (Type, amount, pre-charge length)			kg	R410A 3.8kg (Pre-charged up to the			
Heat exchanger			I Ng	Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant				Electronic exp			
an type &				Turbo fan ×1	Propeller fan ×1		
	Starting method)		W	50 < Direct line start >	86 < Direct line start >		
arr motor (otarting motriou)	Cooling		CO \ Direct into start >	75		
Air flow		Heating	m³/min	P-Hi: 20 Hi: 16 Me: 13 Lo: 10			
Available ex	ternal static pressure	rioding	Pa	0			
Outside air			١.۵	Possible			
	ality / Quantity			Pocket plastic net ×1 (Washable)			
	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hea	i i		W	– 20 (Crankcase heater)			
	Remote control			(Option) wired : RC-EX3, RC-E5, R			
Operation	Room temperature conti	rol		Thermostat b			
control	Operation display	101		Thermostat b	-		
	Operation display			Overlead protect	tion for fan motor		
) _ f _ ii					on thermostat		
Safety equip	oments			Internal thermos	stat for fan motor		
					emperature protection		
	Refrigerant piping size (O D .)	mm -	Liquid line: I/U φ 6.35 (1/4") ② φ 9.52 (3/8")			
	" ' ' ' '	<u> </u>		Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0			
	Connecting method			Flare piping	Flare piping		
nstallation	Attached length of piping	g	m	_			
data	Insulation for piping			Necessary (both L			
	Refrigerant line (one wa		m	Max.			
	Vertical height diff. between 0	O.U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
Drain hose			Hose connectable with VP25 (O.D.32)	Hole size ϕ 20 x 3pcs			
Drain pump, max lift height			mm	Built-in drain pump, 850	_		
Recommen	ded breaker size		Α	-	-		
.R.A. (Lock	ked rotor ampere)		Α	5.	0		
nterconnec	ting wires Size × Core n	umber		ϕ 1.6mm × 3 cores (Including earth cab	le) / Termainal block (Screw fixing type)		
P number				IPX0	IP24		
Standard ad	ccessories			Mounting kit, Drain hose	-		
Option part	S				-		
	ne data are measured at t	he following	conditio	ns T	he pipe length is 7.5m.		

	The pipe length is 7.5m.
ature	Standards
/B	Standards

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7℃	6°C	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (a) Sound rever indicates the value in an anechoic chamber. During operation these values are somewhat higher due to amb
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
 (7) Branching pipe set "DIS-TB1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDT140\	VSATVG	
Item				Indoor unit FDT50VG (3 units)	Outdoor unit FDC140VSA	
Power sour	ce			3 Phase, 380-415V,	50Hz / 380V, 60Hz	
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)	~ 14.5(Max.)]	
	Nominal heating capacity (range)		kW	15.5 [4.0(Min.)	~ 16.5(Max.)]	
	Power consumption	Cooling		4.2	22	
	Power consumption Heating		kW	3.2	29	
	Max power consumption			10.	20	
	Rupping current Cooling			6.2 /	6.5	
	Running current	Heating	Α	4.8 /	5.1	
0	Inrush current, max currer	nt		5,	15	
Operation	D ()	Cooling	0/	98 /	99	
data	Power factor	Heating	%	99 /	98	
	EER	Cooling		3.2	22	
	COP	Heating	İ	4.7	71	
		Cooling				
	Sound power level	Heating		54	73	
		Cooling	dB(A)		57	
	Sound pressure level	Heating	(7	P-Hi: 38 Hi: 33 Me: 30 Lo: 27	59	
	Silent mode sound pressu			_	53 / 47 (Normal / Silent)	
	'			Unit 236 × 840 × 840	,	
Exterior din	nensions (Height × Width ×	Depth)	mm	Panel 35 × 950 × 950	845 × 970 × 370	
Exterior app	nearance			Plaster white	Stucco white	
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	UNIT 19 PANEL 5	82	
	r type & Q'ty		Rg	ONIT 13 TANLE 3	RMT5126MCE4×1	
Compressor motor (Starting method)			kW		Direct line start	
Refrigerant oil (Amount, type)			e e	<u>_</u>	0.9 M-MA68	
	(Type, amount, pre-charge	lenath)	kg	R410A 3.8kg (Pre-charged up to the		
Heat excha	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	iengin)	Rg	Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant				Electronic exp		
Fan type &				Turbo fan ×1	Propeller fan ×1	
	Starting method)		W	50 < Direct line start >	86 < Direct line start >	
i all motor (Starting metriou)	Cooling		50 < Direct line start >	75	
Air flow		Heating	m³/min	P-Hi:20 Hi:16 Me:13 Lo:10	73	
Available ov	rternal static pressure	rieating	Pa	0		
Outside air			га	Possible		
	intake iality / Quantity			Pocket plastic net ×1 (Washable)		
	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric hea	i		W	— 20 (Crankcase heater)		
Electric flea	Remote control		VV	(Option) wired : RC-EX3, RC-E5, R		
Operation	Room temperature contro	1		Thermostat b		
control	Operation display	!		memostat b	y electronics	
	Operation display			O	- 	
				Overload protect	tion for fan motor on thermostat	
Safety equip	pments			Internal thermostat for fan motor		
			<u> </u>		emperature protection	
	Pofrigoront pining sin- / O	D)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52 (3/8")	x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8")	
	Refrigerant piping size (O	.U.)	mm	Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0		
	Connecting method			Flare piping	Flare piping	
Installation	Attached length of piping		m		_	
data	Insulation for piping			Necessary (both L	iquid & Gas lines)	
	Refrigerant line (one way)	length	m	Max.	50m	
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
Drain hose				Hose connectable with VP25 (O.D.32)	Hole size φ20 x 3pcs	
Drain pump, max lift height			mm	Built-in drain pump, 850	_	
Recommended breaker size			Α			
	ked rotor ampere)		Α	5.		
	ting wires Size × Core nur	mber	-	ϕ 1.6mm × 3 cores (Including earth cab		
IP number	5 12 1.20 00.0 Hui			IPX0	IP24	
Standard ad	ccessories			Mounting kit, Drain hose	-	
Option part				-		
	ne data are measured at the				he pipe length is 7.5m.	

Item	Indoor air t	Indoor air temperature		temperature	Standards
Operation DB		WB	DB WB	Standards	
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
 (7) Branching pipe set "DIS-TB1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

(2) Ceiling cassette-4 way compact type (FDTC)

(a) Twin type

			Model	FDTC100	VNAPVF		
Item				Indoor unit FDTC50VF (2 units)	Outdoor unit FDC100VNA		
Power source	ce			1 Phase, 220-240V,	50Hz / 220V, 60Hz		
	Nominal cooling capacity	y (range)	kW	10.0 [4.0(Min.)	~ 11.2(Max.)]		
	Nominal heating capacity (range) Power consumption Cooling		kW	11.2 [4.0(Min.) ~ 12.5(Max.)]			
				3.4	48		
	Power consumption	Heating	kW	3.0	37		
	Max power consumption	1		6.4	40		
Running current Cooling Heating		Cooling		15.3 /	16.0		
		Α	14.8 /	15.5			
0	Inrush current, max curre	ent		5,	25		
Operation	D ()	Cooling	0,	9	9		
data	Power factor	Heating	%	9	9		
	EER	Cooling		2.1	87		
	COP	Heating	İ	3.:	32		
		Cooling		00	70		
	Sound power level	Heating		60	70		
		Cooling	dB(A)	P-Hi: 47 Hi: 42 Me: 36 Lo: 30	54		
	Sound pressure level	Heating	()	P-Hi: 47 Hi: 42 Me: 36 Lo: 32	56		
	Silent mode sound press			_	50 / 44 (Normal / Silent)		
	•			Unit 248 × 570 × 570	,		
Exterior dim	nensions (Height × Width >	< Depth)	mm	Panel 35 × 700 × 700	$845 \times 970 \times 370$		
Extorior and				Plaster white	Stucco white		
Exterior app (Munsell co		ļ		(6.8Y8.9/0.2) near equivalent	Stucco white (4.2Y7.5/1.1) near equivalent		
`	лог <i>)</i>		le-	, , , , , , , , , , , , , , , , , , , ,	, , , ,		
Net weight			kg	UNIT 15 PANEL 3.5	80		
	r type & Q'ty			_	RMT5126MCE3×1		
	r motor (Starting method)		kW	_	Direct line start		
	oil (Amount, type)		l		0.9 M-MA68		
	(Type, amount, pre-charg	e length)	kg	R410A 3.8kg (Pre-charged up to the	7		
Heat exchai				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant				Electronic ex			
Fan type &				Turbo fan ×1	Propeller fan ×1		
Fan motor (Starting method)		W	33 < Direct line start >	86 < Direct line start >		
Air flow		Cooling	m³/min	P-Hi:13.5 Hi:11.5 Me:9 Lo:7	75		
All llow		Heating	111 /111111	P-Hi: 13.5 Hi: 11.5 Me: 9 Lo: 8	73		
Available ex	cternal static pressure		Pa	0	ı		
Outside air	intake			Not possible	_		
Air filter, Qu	ality / Quantity			Pocket plastic net ×1 (Washable)	_		
Shock & vib	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hea	ter		W	0	20 (Crankcase heater)		
0	Remote control			(Option) wired: RC-EX3, RC-E5, R	CH-E3 wireless : RCN-TC-24W-E2		
Operation	Room temperature contr	ol		Thermostat b	by electronics		
control	Operation display			-	-		
				Overload protect	tion for fan motor		
Safety equip	nmente	ļ		Frost protect	ion thermostat		
Salety equip	Silients	ļ			stat for fan motor		
					temperature protection		
	Refrigerant piping size ((O.D.)	mm	Liquid line: I/U φ 6.35 (1/4") ② φ 9.52 (3/8")			
		,		Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0	0.8 ① φ 15.88 (5/8") x1.0 O/U φ 15.88 (5/8")		
	Connecting method			Flare piping	Flare piping		
Installation	Attached length of piping]	m	_	-		
data Insulation for piping Refrigerant line (one way) length				Necessary (both L	iquid & Gas lines)		
		m	Max.	.50m			
Vertical height diff. between O.U. and I.U.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
Drain hose			Hose connectable with VP20 (O.D.26)	Hole size ϕ 20 x 3pcs			
Drain pump, max lift height		mm	Built-in drain pump	-			
Recommended breaker size		Α	-	-			
	ked rotor ampere)		Α	5.	.0		
	ting wires Size × Core nu	umber			ole) / Termainal block (Screw fixing type)		
IP number				IPX0	IP24		
Standard ac	cessories			Mounting kit, Drain hose	_		
Option parts				TC-OAS-E,			
	ne data are measured at th	ne following	conditio		The pipe length is 7.5m.		

Notes (1

(1) The data are	measured at t	the following co	onditions.		The pipe length is 7.5m.
Item	Indoor air to	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (a) Sound level indicates the value in an affection chamber. During operation these values are somewhat higher due to any (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDTC100	OVSAPVF			
Item				Indoor unit FDTC50VF (2 units) Outdoor unit FDC100VSA				
Power source	ce			,	, 50Hz / 380V, 60Hz			
	Nominal cooling capacity	/ (range)	kW	10.0 [4.0(Min.)) ∼ 11.2(Max.)]			
	Nominal heating capacity		kW	11.2 [4.0(Min.) ~ 12.5(Max.)]				
Power consumption Cooling Heating Max power consumption Running current Cooling Heating		Cooling		3.	48			
		Heating	kW	3.	37			
				10	.20			
			5.1 /	/ 5.4				
	Inrush current may current		Α	4.9	/ 5.2			
Operation	Inrush current, max curre	ent		5,	15			
data	n Cooling		%	9	8			
data	Power factor	Heating	% [99 ,	/ 98			
	EER	Cooling		2.	87			
	COP	Heating	1 [3.	32			
		Cooling		20	70			
	Sound power level	Heating	1	60	70			
		Cooling	dB(A)	P-Hi: 47 Hi: 42 Me: 36 Lo: 30	54			
	Sound pressure level	Heating	1 ` ′ [P-Hi: 47 Hi: 42 Me: 36 Lo: 32	56			
	Silent mode sound press		1	_	50 / 44 (Normal / Silent)			
F				Unit 248 × 570 × 570	, ,			
Exterior dim	nensions (Height × Width >	(Depth)	mm	Panel 35 × 700 × 700	845 × 970 × 370			
Exterior app	pearance			Plaster white	Stucco white			
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent			
Net weight			kg	UNIT 15 PANEL 3.5	82			
	r type & Q'ty		ı.ıg	-	RMT5126MCE4×1			
	Compressor motor (Starting method)		kW		Direct line start			
	oil (Amount, type)		Q	_	0.9 M-MA68			
	(Type, amount, pre-charg	e lenath)	kg	R410A 3.8kg (Pre-charged up to the	e piping length of 30m) Outdoor unit			
Heat exchar		<u> </u>	1.19	Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant				<u> </u>	pansion valve			
Fan type & 0				Turbo fan ×1	Propeller fan ×1			
	Starting method)		w	33 < Direct line start >	86 < Direct line start >			
,	<u> </u>	Cooling		P-Hi: 13.5 Hi: 11.5 Me: 9 Lo: 7	75			
Air flow		Heating	m³/min	P-Hi: 13.5 Hi: 11.5 Me: 9 Lo: 8	73			
Available ex	ternal static pressure	Trioding	Pa	0	_			
Outside air i			Ι α	Not possible	_			
	ality / Quantity			Pocket plastic net ×1 (Washable)	_			
	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)			
Electric hear	· · · · · · · · · · · · · · · · · · ·		w	0	20 (Crankcase heater)			
	Remote control				CH-E3 wireless : RCN-TC-24W-E2			
Operation	Room temperature contro				by electronics			
control	Operation display			-	-			
	Toporanon alopias			Overload protect	tion for fan motor			
Safety equip	amanta			Frost protect	ion thermostat			
Salety equip	Jillenis				stat for fan motor			
	T				temperature protection			
	Refrigerant piping size ((O.D.)	mm -	Liquid line: I/U \(\phi 6.35 \) (1/4") ② \(\phi 9.52 \) (3/8")				
					0.8 ① ϕ 15.88 (5/8") x1.0 O/U ϕ 15.88 (5/8")			
	Connecting method			Flare piping	Flare piping			
Installation Attached length of piping		m						
data Insulation for piping				_iquid & Gas lines)				
Refrigerant line (one way) length		m		.50m				
Vertical height diff. between O.U. and I.U.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)				
Drain hose				Hose connectable with VP20 (O.D.26)	Hole size ϕ 20 x 3pcs			
Drain pump, max lift height			mm	Built-in drain pump	_			
Recommended breaker size			Α		_			
L.R.A. (Lock	ked rotor ampere)		Α		.0			
Interconnec	ting wires Size × Core nu	ımber		ϕ 1.6mm $ imes$ 3 cores (Including earth cab	ple) / Termainal block (Screw fixing type)			
IP number			I	IPX0	IP24			
Standard ac	cessories			Mounting kit, Drain hose	_			
Option parts	3			TC-OAS-E,	TC-OAD-E			
Notes (1) Th	ne data are measured at th	ne following	conditio	ns.	The pipe length is 7.5m.			

Item	Indoor air t	Indoor air temperature		temperature	0, 1, 1
Operation	DB WB		DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDTC125	VNAPVF	
Item				Indoor unit FDTC60VF (2 units)	Outdoor unit FDC125VNA	
Power sour	ce			1 Phase, 220-240V,	50Hz / 220V, 60Hz	
	Nominal cooling capacity	(range)	kW	12.5 [5.0(Min.)		
	Nominal heating capacity	(range)	kW	14.0 [4.0(Min.)	∼ 16.0(Max.)]	
Power consumption		Cooling		5.4	47	
	1 Ower Consumption	Heating	kW	4.5	55	
Max power consumption Running current Cooling				6.4	40	
			24.0 /	25.0		
Heating			Α	20.0 /	20.9	
Operation	Inrush current, max currer	nt		5,	25	
data	Power factor	Cooling	%	9	9	
uala	Power lactor	Heating	%	9	9	
	EER	Cooling		2.2	29	
	COP	Heating		3.0	08	
	C	Cooling		00	74	
	Sound power level	Heating	l l	60	71	
		Cooling	dB(A)	P-Hi: 47 Hi: 46 Me: 39 Lo: 30	55	
	Sound pressure level	Heating	l `´[P-Hi: 47 Hi: 46 Me: 39 Lo: 32	57	
	Silent mode sound pressu			_	51 / 45 (Normal / Silent)	
	· · · · · ·			Unit 248 × 570 × 570	,	
Exterior din	nensions (Height × Width ×	Depth)	mm	Panel 35 × 700 × 700	845 × 970 × 370	
Exterior ap	pearance			Plaster white	Stucco white	
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	UNIT 15 PANEL 3.5	80	
			Ng	ONIT 13 TAINEE 0.5	RMT5126MCE3×1	
Compressor type & Q'ty Compressor motor (Starting method)			kW		Direct line start	
Refrigerant oil (Amount, type)			e e		0.9 M-MA68	
	(Type, amount, pre-charge	longth)	_	P410A 2 9kg (Pro pharged up to the	e piping length of 30m) Outdoor unit	
		e lengtin)	kg	<u> </u>	11 0 0 /	
Heat excha				Louver fin & inner grooved tubing Electronic exi	Straight fin & inner grooved tubing	
Refrigerant						
Fan type &			14/	Turbo fan ×1	Propeller fan ×1	
Fan motor	(Starting method)	lo "	W	33 < Direct line start >	86 < Direct line start >	
Air flow		Cooling	m³/min	P-Hi: 13.5 Hi: 13.5 Me: 10 Lo: 7	75	
		Heating		P-Hi: 13.5 Hi: 13.5 Me: 10 Lo: 8	73	
	xternal static pressure		Pa	0	-	
Outside air				Not possible		
	uality / Quantity			Pocket plastic net ×1 (Washable)		
	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric hea			W	0 20 (Crankcase heater)		
Operation	Remote control			(Option) wired: RC-EX3, RC-E5, R		
control	Room temperature contro	ol.		Thermostat b	by electronics	
	Operation display				-	
				Overload protec	tion for fan motor ion thermostat	
Safety equi	pments			Internal thermos	stat for fan motor	
					emperature protection	
				Liquid line: I/U φ 6.35 (1/4") ② φ 9.52 (3/8")	x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8")	
	Refrigerant piping size (O	י.ט.)	mm	Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x(
	Connecting method			Flare piping	Flare piping	
Installation	Attached length of piping		m	_	_	
data Insulation for piping Refrigerant line (one way) length				Necessary (both L	iquid & Gas lines)	
		m	Max.	· · · · · · · · · · · · · · · · · · ·		
Vertical height diff. between O.U. and I.U.			m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
Drain hose			<u> </u>	Hose connectable with VP20 (O.D.26) Hole size ϕ 20 x 3pcs		
Drain pump, max lift height			mm	Built-in drain pump	— —	
Recommended breaker size			A	- Bank in aram pamp		
	ked rotor ampere)		A	5.		
	cting wires Size × Core nu	mher	^		ole) / Termainal block (Screw fixing type)	
IP number	oung wires poize x core nu	IIIDEI		φ τ.δητη × 3 cores (including earth cab	IP24	
Standard a	conservice			Mounting kit, Drain hose	Ir24	
Option part				Mounting kit, Drain nose TC-OAS-E,	TC OAD E	
	he data are measured at the				The pipe length is 7.5m.	
NOTES (1) II	na nata ara maaciirad at tha	DUIMOUNT	conditio	ne	I DO DIDO IGNATA IS / 5M	

Item	Indoor air t	Indoor air temperature		temperature	0
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDTC125	SVSAPVF		
Item				Indoor unit FDTC60VF (2 units)	Outdoor unit FDC125VSA		
Power sour	ce			3 Phase, 380-415V,	50Hz / 380V, 60Hz		
	Nominal cooling capacity	/ (range)	kW	12.5 [5.0(Min.)	~ 14.0(Max.)]		
	Nominal heating capacity	y (range)	kW	14.0 [4.0(Min.)	~ 16.0(Max.)]		
Power consumption		Cooling		5.47			
	rower consumption	Heating		4.5	55		
	Max power consumption			10.	20		
Running current Cooling Heating		Cooling		8.0 / 8.4			
		Α	6.7 /	7.0			
Operation	Inrush current, max curre	ent		5,	15		
data	Power factor	Cooling	%	9	9		
uaia	rowel lactor	Heating	70	9	9		
	EER	Cooling		2.2	29		
	COP	Heating		3.0	08		
	Sound power level	Cooling		60	71		
	Souria power lever	Heating		00	<i>r</i> 1		
	Sound pressure level	Cooling	dB(A)	P-Hi: 47 Hi: 46 Me: 39 Lo: 30	55		
	Souria pressure level	Heating		P-Hi: 47 Hi: 46 Me: 39 Lo: 32	57		
	Silent mode sound press	sure level		_	51 / 45 (Normal / Silent)		
Exterior dim	ensions (Height × Width >	/ Denth)	mm	Unit 248 × 570 × 570	845 × 970 × 370		
LAIGHUI UIII	ieriaiona (rieigni x vvidin)	- Debiii)	111(11	Panel 35 × 700 × 700	040 × 3/0 × 3/0		
Exterior app	earance			Plaster white	Stucco white		
(Munsell co	olor)			(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent		
Net weight			kg	UNIT 15 PANEL 3.5	82		
Compresso	r type & Q'ty			_	RMT5126MCE4×1		
Compressor motor (Starting method)			kW	_	Direct line start		
Refrigerant	oil (Amount, type)		l	_	0.9 M-MA68		
Refrigerant	(Type, amount, pre-charg	e length)	kg	R410A 3.8kg (Pre-charged up to the	piping length of 30m) Outdoor unit		
Heat exchai	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant	control			Electronic exp	pansion valve		
Fan type &	Q'ty			Turbo fan ×1	Propeller fan ×1		
Fan motor (Starting method)		W	33 < Direct line start >	86 < Direct line start >		
A: (I		Cooling	3, .	P-Hi: 13.5 Hi: 13.5 Me: 10 Lo: 7	75		
Air flow		Heating	m³/min	P-Hi:13.5 Hi:13.5 Me:10 Lo:8	73		
Available ex	ternal static pressure		Pa	0	_		
Outside air	ntake			Not possible	_		
Air filter, Qu	ality / Quantity	,		Pocket plastic net ×1 (Washable)	_		
Shock & vib	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hea	ter		W	0 20 (Crankcase heater)			
Onevetion	Remote control			(Option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-TC-24W-E2			
Operation	Room temperature contr	ol		Thermostat b	y electronics		
control	Operation display	,		_	=		
Safety equi	oments			Frost protecti Internal thermos	tion for fan motor on thermostat stat for fan motor emperature protection		
	Refrigerant piping size (O.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52 (3/8") Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0	x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8")		
	Connecting method			Flare piping	Flare piping		
Installation	Attached length of piping	r	m	—	— — — — — — — — — — — — — — — — — — —		
data Insulation for piping Insulation for piping Refrigerant line (one way) length Vertical height diff. between O.U. and I.U.				Necessary (both L	iguid & Gas lines)		
		m	Max.	,			
		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
Drain hose				Hose connectable with VP20 (O.D.26)	Hole size ϕ 20 x 3pcs		
Drain pump, max lift height			mm	Built-in drain pump	——————————————————————————————————————		
	ded breaker size		A				
	ked rotor ampere)		A	5.	0		
	ting wires Size × Core no	ımher			le) / Termainal block (Screw fixing type)		
IP number	ung wires joize x cole ill	uiiiDCi		φ τ.διτίπι x 3 cores (including earth cab	IP24		
Standard ad	cessories			Mounting kit, Drain hose	- II 24		
Option part				TC-OAS-E,	TC-OAD-F		
	e data are measured at the				The pine length is 7.5m		

Item	Indoor air t	Indoor air temperature		temperature	0
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

(b) Triple type

			Model	FDTC140	VNATVF	
Item				Indoor unit FDTC50VF (3 units)	Outdoor unit FDC140VNA	
Power source	ce			1 Phase, 220-240V,	50Hz / 220V, 60Hz	
	Nominal cooling capacit	y (range)	kW	13.6 [5.0(Min.)	~ 14.5(Max.)]	
	Nominal heating capacity (range)		kW	15.5 [4.0(Min.)	~ 16.5(Max.)]	
	Power consumption Cooling Heating			5.4	5	
			kW	4.6	64	
	Max power consumption	n		6.4	0	
	Dunning gurrant	Cooling		23.9 /	25.0	
	Running current	Heating	A	20.4 /	21.3	
	Inrush current, max curr	ent		5,	25	
Operation	D ()	Cooling	0/	99)	
data	Power factor	Heating	%	99)	
	EER	Cooling		2.5	50	
	COP	Heating		3.3	34	
		Cooling				
	Sound power level	Heating		60	73	
		Cooling	dB(A)	P-Hi: 47 Hi: 42 Me: 36 Lo: 30	57	
	Sound pressure level	Heating	()	P-Hi: 47 Hi: 42 Me: 36 Lo: 32	59	
	Silent mode sound pres			_	53 / 47 (Normal / Silent)	
				Unit 248 × 570 × 570	,	
exterior dim	ensions (Height × Width	× Depth)	mm	Panel 35 × 700 × 700	845 × 970 × 370	
Exterior app	nearance			Plaster white	Stucco white	
Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight	, ioi ,		ka	UNIT 15 PANEL 3.5	80	
	r type & Q'ty		kg	UNIT 15 FAINEL 3.5	RMT5126MCE3×1	
	r motor (Starting method)		kW	_	Direct line start	
)		_		
	oil (Amount, type)		Q l	—	0.9 M-MA68	
	(Type, amount, pre-charge	ge iengtn)	kg	R410A 3.8kg (Pre-charged up to the		
leat exchar				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant				Electronic exp		
an type & 0			141	Turbo fan ×1	Propeller fan ×1	
an motor (Starting method)	10 "	W	33 < Direct line start >	86 < Direct line start >	
Air flow		Cooling	m³/min	P-Hi: 13.5 Hi: 11.5 Me: 9 Lo: 7	75	
		Heating		P-Hi: 13.5 Hi: 11.5 Me: 9 Lo: 8	73	
	ternal static pressure		Pa	0	<u> </u>	
Outside air i				Not possible	<u> </u>	
	ality / Quantity			Pocket plastic net ×1 (Washable)		
	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric hea			W	0 20 (Crankcase heater)		
Operation	Remote control			(Option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-TC-24W-E2		
ontrol	Room temperature cont	rol		Thermostat by	y electronics	
	Operation display			-	•	
Safety equip	oments			Overload protect Frost protecti Internal thermos Abnormal discharge t	on thermostat tat for fan motor	
	Refrigerant piping size (O.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52 (3/8") : Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0.	x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8")	
	Connecting method			Flare piping	Flare piping	
nstallation	Attached length of pipin	a	m	— — — — — — — — — — — — — — — — — — —	—	
data Insulation for piping Refrigerant line (one way) length Vertical height diff. between O.U. and I.U.		<i>3</i>		Necessary (both L	iquid & Gas lines)	
		m	Max.	, ,		
		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
Drain hose			Hose connectable with VP20 (O.D.26) Hole size ϕ 20 x 3pcs			
Drain pump, max lift height			mm	Built-in drain pump	- Ποιε size ψ 20 x 3pcs	
Recommended breaker size		A	Built-iii draiii puilip			
	sed rotor ampere)		\rightarrow			
		umbor	Α			
	ting wires Size × Core n	uiliber		φ 1.6mm × 3 cores (Including earth cabl	7 3 21 7	
number				IPX0 Mounting kit, Drain hose	IP24	
+00dc-d				MOUTHING KIL UTAIN NOSA		
Standard ac Option parts				TC-OAS-E,	TC OAD E	

Notes (1) The data are measured at the following conditions

Item

Operation

Cooling

measured at i	the following co	mailions.		The pipe length is 7.5m.
Indoor air t	emperature Outdoor air temperature			Standards
DB	WB	DB	WB	Standards
27°C	19°C	35°C	24°C	ISOE151 T1

ISO5151-T1

- 20°C 6°C Heating
- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (4) Select the breaker size according to the own hational standard.

 (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.

 (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.

 (7) Branching pipe set "DIS-TA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDTC140	OVSATVF	
Item				Indoor unit FDTC50VF (3 units)	Outdoor unit FDC140VSA	
Power source	ce			3 Phase, 380-415V,	50Hz / 380V, 60Hz	
	Nominal cooling capacity	y (range)	kW	13.6 [5.0(Min.)	~ 14.5(Max.)]	
	Nominal heating capacit	y (range)	kW	15.5 [4.0(Min.)	~ 16.5(Max.)]	
	Power consumption	Cooling		5.4	45	
	Power consumption	Heating	kW	4.6	64	
	Max power consumption	1	1 [10.	20	
Running current Cooling Heating		Cooling		8.0 /	8.4	
		A	6.8 /	7.1		
	Inrush current, max curre		i t	5,		
Operation	,	Cooling		98 /		
data	Power factor	Heating	% -	98 /		
	EER	Cooling		2.5		
	COP	Heating	i h	3.3		
		Cooling				
	Sound power level	Heating		60	73	
		Cooling	dB(A)	P-Hi: 47 Hi: 42 Me: 36 Lo: 30	57	
	Sound pressure level	Heating	45(4)	P-Hi: 47 Hi: 42 Me: 36 Lo: 30	59	
	Cilent made cound proce		 	F-HI.47 HI.42 WE.30 LO.32		
	Silent mode sound press	sure level		- Linit 040 570 570	53 / 47 (Normal / Silent)	
Exterior dim	ensions (Height × Width	× Depth)	mm	Unit 248 × 570 × 570	845 × 970 × 370	
				Panel 35 × 700 × 700		
Exterior app				Plaster white	Stucco white	
(Munsell co	lor)			(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	UNIT 15 PANEL 3.5	82	
Compressor type & Q'ty				_	RMT5126MCE4×1	
Compressor motor (Starting method)			kW	_	Direct line start	
	oil (Amount, type)		l	_	0.9 M-MA68	
Refrigerant	(Type, amount, pre-charge	je length)	kg	R410A 3.8kg (Pre-charged up to the	piping length of 30m) Outdoor unit	
Heat exchar	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant	control			Electronic exp	pansion valve	
Fan type & 0	Q'ty			Turbo fan ×1	Propeller fan ×1	
Fan motor (Starting method)		W	33 < Direct line start >	86 < Direct line start >	
A: (I		Cooling	m³/min	P-Hi: 13.5 Hi: 11.5 Me: 9 Lo: 7	75	
Air flow		Heating	1 m /min	P-Hi: 13.5 Hi: 11.5 Me: 9 Lo: 8	73	
Available ex	ternal static pressure		Pa	0	_	
Outside air i	ntake			Not possible	_	
Air filter, Qua	ality / Quantity			Pocket plastic net ×1 (Washable)	_	
Shock & vib	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric hea	ter		W	0 20 (Crankcase heate		
0 .:	Remote control			(Option) wired : RC-EX3, RC-E5, R		
Operation	Room temperature contr	ol		Thermostat b		
control	Operation display			-	-	
Safety equip	oments			Internal thermos	tion for fan motor on thermostat stat for fan motor emperature protection	
	Refrigerant piping size (O.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52 (3/8") Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0		
	Connecting method			Flare piping	Flare piping	
Installation	Attached length of piping	7	m	_	_	
data Insulation for piping Refrigerant line (one way) length Vertical height diff. between O.U. and I.U.			Necessary (both L	iguid & Gas lines)		
		m	Max.	· · · · · · · · · · · · · · · · · · ·		
		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
Drain hose			Hose connectable with VP20 (O.D.26)	Hole size ϕ 20 x 3pcs		
Drain pump, max lift height		mm	Built-in drain pump	——————————————————————————————————————		
	ded breaker size		A	Built-iii draiii puilip		
	ed rotor ampere)		A			
		ımbor	A			
Interconnecting wires Size × Core number			ϕ 1.6mm × 3 cores (Including earth cab	, , , ,		
	IP number			IPX0 IP24		
IP number				-	IP24	
				IPX0 Mounting kit, Drain hose TC-OAS-E,	-	

Item	Indoor air t	door air temperature Outdoor air temperature		Standards	
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
 (7) Branching pipe set "DIS-TA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

(3) Ceiling suspended type (FDE)

(a) Single type

			Model	FDE100	VNAVG	
Item				Indoor unit FDE100VG	Outdoor unit FDC100VNA	
Power sour	ce			1 Phase, 220-240V,	50Hz / 220V, 60Hz	
	Nominal cooling capacity ((range)	kW	10.0 [4.0(Min.)		
	Nominal heating capacity	(range)	kW	11.2 [4.0(Min.) ~ 12.5(Max.)]		
		Cooling		2.1	85	
	Power consumption	Heating	kW	2.	70	
	Max power consumption	<u> </u>		6		
	Cooling			13.8	14.4	
	Running current Heating		A	13.2		
	Inrush current, max curren		''		24	
Operation		Cooling		<u>·</u>	0	
lata	Power factor	Heating	% -	8		
	EER	Cooling		3.		
	COP	Heating	-	4.		
	901	Cooling		٦.		
	Sound power level			64	70	
		Heating	4B(V) -		ΕΛ	
	Sound pressure level	Cooling	dB(A)	P-Hi: 48 Hi: 43 Me: 38 Lo: 34	54 56	
	Cilont mode saved are	Heating				
"vehanic :: -l"	Silent mode sound pressu		100 15-	— 050 :: 1 600 - 600	50/44 (Normal/Silent)	
	nensions (Height × Width ×	peptn)	mm	250 × 1,620 × 690	845 × 970 × 370	
Exterior app				Plaster white	Stucco white	
Munsell co	pior)		<u> </u>	(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Vet weight			kg	43	80	
	r type & Q'ty			_	RMT5126MCE3×1	
	r motor (Starting method)		kW	_	Direct line start	
Refrigerant	oil (Amount, type)		l	_	0.9 M-MA68	
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t	he amount for the piping of : 30m)	
Heat exchanger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant control			Electronic ex	pansion valve		
Fan type & Q'ty			Centrifugal fan ×4	Propeller fan ×1		
Fan motor (Starting method)			W	80 < Direct line start >	86 < Direct line start >	
		Cooling	3, ,	D.I.I. 00 III 00 IA 04 I 40 5	75	
Air flow		Heating	m³/min	P-Hi: 32 Hi: 26 Me: 21 Lo: 16.5	73	
Available ex	ternal static pressure		Pa	0	_	
Outside air i				Not possible	_	
Air filter. Qu	ality / Quantity			Pocket plastic net ×2(Washable)	_	
	pration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
lectric hea			W	0	20 (Crankcase heater)	
	Remote control			(Option) Wired: RC-EX3,RC-E		
Operation	Room temperature control			Thermostat b	·	
control	Operation display			-	-	
	oporation diopiay			Internal thormos	stat for fan motor	
) - t - t ·					ion thermostat	
Safety equip	pments			Internal thermos	stat for fan motor	
					emperature protection	
	Refrigerant piping size (O.	D)	mm	Liquid line: I/U φ 9.52 (3/8") Pipe (
	Tremigerant piping size (O.	.U. j	''''	Gas line: ϕ 15.88 (5/8") ϕ	15.88(5/8")×1.0 φ 15.88 (5/8")	
	Connecting method			Flare piping	Flare piping	
				_	<u> </u>	
nstallation	Attached length of piping		m	Necessary (both Liquid & Gas lines)		
	Attached length of piping Insulation for piping		III		iquid & Gas lines)	
		length	m	Necessary (both L	iquid & Gas lines) 50m	
	Insulation for piping			Necessary (both L		
	Insulation for piping Refrigerant line (one way)		m	Necessary (both L Max	50m	
data	Insulation for piping Refrigerant line (one way) Vertical height diff. between O.U Drain hose		m	Necessary (both L Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20 (O.D.26)	50m Max.15m (Outdoor unit is lower)	
data Orain pump	Insulation for piping Refrigerant line (one way) Vertical height diff. between O.U Drain hose o, max lift height		m m	Necessary (both L Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20 (O.D.26)	50m Max.15m (Outdoor unit is lower) Hole size φ20 × 3pcs —	
Drain pump Recommen	Insulation for piping Refrigerant line (one way) Vertical height diff. between O.L Drain hose p, max lift height ded breaker size		m m m	Necessary (both L Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20 (O.D.26)	50m Max.15m (Outdoor unit is lower) Hole size φ 20 × 3pcs -	
Drain pump Recommen L.R.A. (Lock	Insulation for piping Refrigerant line (one way) Vertical height diff. between O.L Drain hose o, max lift height ded breaker size ked rotor ampere)	J. and I.U.	m m	Necessary (both L Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20 (O.D.26) — 5.	50m Max.15m (Outdoor unit is lower) Hole size φ 20 × 3pcs — - 0	
Drain pump Recommen R.A. (Lock nterconnec	Insulation for piping Refrigerant line (one way) Vertical height diff. between O.L Drain hose p, max lift height ded breaker size	J. and I.U.	m m m	Necessary (both L Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20 (O.D.26) — 5. \$\phi\$ 1.6mm \times 3 cores (Including earth cab.)	50m Max.15m (Outdoor unit is lower) Hole size φ20 × 3pcs 0 Jee / Termainal block (Screw fixing type)	
Drain pump Recommen R.A. (Lock nterconnec P number	Insulation for piping Refrigerant line (one way) Vertical height diff. between O.L Drain hose p, max lift height ded breaker size ked rotor ampere) ting wires Size × Core nur	J. and I.U.	m m m	Necessary (both L Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20 (O.D.26) — 5. \$\phi\$ 1.6mm \times 3 cores (Including earth cability)	50m Max.15m (Outdoor unit is lower) Hole size φ20 × 3pcs	
Drain pump Recommen R.A. (Lock nterconnec	Insulation for piping Refrigerant line (one way) Vertical height diff. between O.L Drain hose p, max lift height ded breaker size ked rotor ampere) sting wires Size × Core nur	J. and I.U.	m m m	Necessary (both L Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20 (O.D.26) — 5. \$\phi\$ 1.6mm \times 3 cores (Including earth cab.)	50m Max.15m (Outdoor unit is lower) Hole size φ20 × 3pcs — 0 le) / Termainal block (Screw fixing type)	

(1) The data are	illeasured at i	ine following co	The pipe length is 7.5iii.		
Item	Indoor air t	air temperature Outdoor air temperature		temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	FDE100	OVSAVG
Item				Indoor unit FDE100VG	Outdoor unit FDC100VSA
Power source	ce				, 50Hz / 380V, 60Hz
	Nominal cooling capacity	(range)	kW	10.0 [4.0(Min.)	
	Nominal heating capacity (range)		kW	11.2 [4.0(Min.)	→ 12.5(Max.)]
	Cooling				85
	Power consumption	Heating	kW	2.	70
	Max power consumption	<u> </u>	1		.20
	Cooling			4.5	/ 4.8
	Running current	Heating	A	4.3	/ 4.5
	Inrush current, max curren		1		15
Operation	,	Cooling			/ 90
data	Power factor	Heating	% -	9	
	EER	Cooling		3.	
	COP	Heating	1		15
		Cooling		т.	
	Sound power level	Heating	1	64	70
		Cooling	dB(A)		54
	Sound pressure level	Heating	ub(A)	P-Hi: 48 Hi: 43 Me: 38 Lo: 34	56
	Silent mode sound pressu		 		50/44 (Normal/Silent)
	ensions (Height × Width ×		mm		845 × 970 × 370
		Depth)	mm	•	
Exterior app				Plaster white (6.8Y8.9/0.2) near equivalent	Stucco white
	ior)			, ,	(4.2Y7.5/1.1) near equivalent
Net weight			kg	43	82
	type & Q'ty		1114	_	RMT5126MCE4×1
	motor (Starting method)		kW	_	Direct line start
	oil (Amount, type)		l	_	0.9 M-MA68
	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t	· · · · · · · · · · · · · · · · · · ·
Heat exchanger				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing
Refrigerant control				pansion valve	
Fan type & Q'ty			Centrifugal fan ×4	Propeller fan ×1	
Fan motor (S	Starting method)		W	80 < Direct line start >	86 < Direct line start >
Air flow		Cooling	m³/min	P-Hi: 32 Hi: 26 Me: 21 Lo: 16.5	75
		Heating			73
	ternal static pressure		Pa	0 –	
Outside air i				Not possible	_
	ality / Quantity			Pocket plastic net ×2(Washable)	_
	ration absorber			Rubber sleeve (for fan motor) Rubber sleeve (for compre	
Electric heat			W	0	20 (Crankcase heater)
Operation	Remote control			(Option) Wired: RC-EX3,RC-E5	
control	Room temperature control			Thermostat b	by electronics
COTILIO	Operation display			-	-
					stat for fan motor
Safety equip	oments				ion thermostat stat for fan motor
					temperature protection
				Liquid line: I/U ϕ 9.52 (3/8") Pipe	
	Refrigerant piping size (O.	.D.)	mm -		15.88(5/8")×1.0 φ15.88 (5/8")
	Connecting method			Flare piping	Flare piping
Installation	Attached length of piping		m	– iaie piping	— Figure piping
data	Insulation for piping			Necessary (both L	iguid & Gas lines)
Jaila	Refrigerant line (one way)	length	m	,	.50m
	Vertical height diff. between O.U		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)
	Drain hose	J. and 1.U.	111	Hose connectable with VP20 (O.D.26)	Hole size $\phi 20 \times 3pcs$
		mm	- 1036 COTHECTADIE WILLT VF20 (O.D.20)	i iole size φzu x σμυς	
Drain pump, max lift height		mm A	_	<u> </u>	
Recommended breaker size L.R.A. (Locked rotor ampere)					
		nhor	Α		.0
	ting wires Size × Core nur	innei			ole) / Termainal block (Screw fixing type)
IP number Standard ac				IPX0 Mounting kit, Drain hose	IP24
				iviounting kit, Drain nose	_
Option parts		f-11- '		<u>-</u>	
Notes (1) Ih	e data are measured at the	tollowing	condition	is.	The pipe length is 7.5m.

o (1) The data an	c measured at	are ronowing oc	The pipe length is 7.5m.		
Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

			Model	FDE125	VNAVG		
Item				Indoor unit FDE125VG	Outdoor unit FDC125VNA		
Power sour	ce			1 Phase, 220-240V,	50Hz / 220V, 60Hz		
	Nominal cooling capacity (range) Nominal heating capacity (range)		kW	12.5 [5.0(Min.)	~ 14.0(Max.)]		
			kW	14.0 [4.0(Min.)	~ 16.0(Max.)]		
	Power consumption	Cooling		4.45			
	Power consumption	Heating	kW	3.	74		
	Max power consumption			6.	40		
	Running current Cooling			20.3	/ 21.3		
	Luming current	Heating	A	17.5	/ 18.3		
Operation	Inrush current, max curren	t		5,			
data	Power factor	Cooling	%		5		
data		Heating	,,,	9			
	EER	Cooling		2.1			
I	COP	Heating		3.	74		
	Sound power level	Cooling Heating		64	71		
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 48 Hi: 45 Me: 40 Lo: 35	55 57		
l	Silent mode sound pressu		1	_	51/45 (Normal/Silent)		
Exterior din	nensions (Height × Width ×		mm	250 × 1,620 × 690	845 × 970 × 370		
Exterior app		-1/		Plaster white	Stucco white		
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent		
Net weight	,		kg	43	80		
	or type & Q'ty			<u>-</u>	RMT5126MCE3×1		
	or motor (Starting method)		kW	_	Direct line start		
	oil (Amount, type)		Q.	_	0.9 M-MA68		
	(Type, amount, pre-charge	lenath)	kg	R410A 3.8kg in outdoor unit (Incl. t	he amount for the piping of : 30m)		
Heat excha	(71 / /1 0			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant control			<u> </u>	pansion valve			
Fan type & Q'ty			Centrifugal fan ×4	Propeller fan ×1			
Fan motor ((Starting method)		W	80 < Direct line start >	86 < Direct line start >		
Air flow		Cooling Heating	m³/min	P-Hi:32 Hi:29 Me:23 Lo:17	75 73		
Available ex	kternal static pressure	rrouting	Pa	0	_		
Outside air				Not possible	_		
	ality / Quantity			Pocket plastic net ×2(Washable)	_		
	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hea			W	0	20 (Crankcase heater)		
	Remote control			(Option) Wired: RC-EX3,RC-E5	5,RCH-E3 Wireless : RCN-E-E2		
Operation	Room temperature contro			Thermostat b	by electronics		
control	Operation display			-	=		
Safety equi	pments			Frost protect Internal thermos	stat for fan motor ion thermostat stat for fan motor temperature protection		
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U φ 9.52 (3/8") Pipe (
ı	Connecting method		 	Flare piping	Flare piping		
Installation	Attached length of piping		m	–			
data	Insulation for piping		'''	Necessary (both L	iguid & Gas lines)		
uaiu	Refrigerant line (one way)	length	m	Max.			
	Vertical height diff. between O.I		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
	Drain hose			Hose connectable with VP20 (O.D.26)	Hole size ϕ 20 × 3pcs		
Drain pump	n, max lift height		mm	——————————————————————————————————————	— — — — — — — — — — — — — — — — — — —		
	ided breaker size		A		<u> </u>		
	ked rotor ampere)		A	5.			
	cting wires Size × Core nur	nber			ole) / Termainal block (Screw fixing type)		
IP number				IPX0	IP24		
Standard a	ccessories			Mounting kit, Drain hose			
Option part					<u> </u>		
	ne data are measured at the	following	condition	20	The nine length is 7.5m		

The pipe length is 7.5m.

Item	Indoor air t	emperature	Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.(5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

PFA004Z024<u></u>

			Model	FDE125	SVSAVG		
Item				Indoor unit FDE125VG	Outdoor unit FDC125VSA		
Power sour	rce				50Hz / 380V, 60Hz		
	Nominal cooling capacity	(range)	kW	12.5 [5.0(Min.)	~ 14.0(Max.)]		
	Nominal heating capacity	(range)	kW	14.0 [4.0(Min.) ~ 16.0(Max.)]			
	Power consumption Cooling			4.4	45		
	Power consumption	Heating	kW	3.	74		
	Max power consumption			10.	.20		
	Running current Cooling			6.9	7.3		
	Harring Carrent	Heating	A	5.9 /	/ 6.2		
Operation	Inrush current, max currer	nt		5,	15		
data	Power factor	Cooling	%	9	3		
	1 Ower factor	Heating	70	91 /	/ 92		
	EER	Cooling		2.8			
	COP	Heating		3.	74		
	Sound power level	Cooling		64	71		
	Country power level	Heating					
	Sound pressure level	Cooling	dB(A)	P-Hi: 48 Hi: 45 Me: 40 Lo: 35	55		
		Heating			57		
	Silent mode sound pressu			-	51/45 (Normal/Silent)		
	nensions (Height × Width ×	Depth)	mm	250 × 1,620 × 690	845 × 970 × 370		
Exterior app				Plaster white	Stucco white		
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent		
Net weight			kg	43	82		
	or type & Q'ty			_	RMT5126MCE4×1		
	or motor (Starting method)		kW	_	Direct line start		
	oil (Amount, type)		l		0.9 M-MA68		
	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t			
Heat excha				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant					pansion valve		
Fan type &			10/	Centrifugal fan ×4	Propeller fan ×1		
Fan motor ((Starting method)	IO 11	W	80 < Direct line start >	86 < Direct line start >		
Air flow		Cooling	m³/min	P-Hi: 32 Hi: 29 Me: 23 Lo: 17	75		
Available ex	sternal static pressure	Heating	Pa	0	73 —		
Outside air	xternal static pressure		Pa	Not possible			
	uality / Quantity			Pocket plastic net ×2(Washable)	_		
	bration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hea			W	0	20 (Crankcase heater)		
	Remote control		**	(Option) Wired: RC-EX3,RC-E5			
Operation	Room temperature contro	ĺ		Thermostat b	·		
control	Operation display	•		-	-		
Safety equi	, ,			Frost protect Internal thermos	stat for fan motor ion thermostat stat for fan motor iemperature protection		
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U φ 9.52 (3/8") Pipe (φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8")		
	Connecting method			Gas line: ϕ 15.88 (5/8") ϕ Flare piping	15.88(5/8")×1.0		
Installation	Connecting method		m	riare pipilig _	Flare piping —		
data	0 11 0		m	— Necessary (both L	iguid & Gas linos)		
uala	Insulation for piping Refrigerant line (one way)	length	m	* '	.50m		
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
	Drain hose	o. and 1.0.	111	Hose connectable with VP20 (O.D.26)	Hole size $\phi 20 \times 3pcs$		
Drain numr			mm	- With VF20 (O.D.20)	— Γιοίε size φ20 x 3pcs		
Drain pump, max lift height Recommended breaker size		A		<u> </u>			
	ked rotor ampere)		A		.0		
	cting wires Size × Core nu	mher	A		ole) / Termainal block (Screw fixing type)		
IP number	oung wires poize x core nui	IIDEI		φ τ.οπιπ x 3 cores (including earth cab	IP24		
Standard a	ccessories			Mounting kit, Drain hose			
Option part				-			
	ha data ava maaayyad at tha	£ = 11 =		-	The nine length is 7 Em		

	The pip	e ierigii	11 18 7.5111.
Cto	- dordo		
Stai	ndards		

· /		0		11 0	
Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

			Model	FDE140	VNAVG	
Item				Indoor unit FDE140VG	Outdoor unit FDC140VNA	
Power source	ce			1 Phase, 220-240V,		
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)	<u> </u>	
	Nominal heating capacity (range)		kW	15.5 [4.0(Min.)		
	Cooling			5.21		
	Power consumption	Heating	kW	4.		
	Max power consumption	riodanig	```'	6.4		
	Cooling			22.9 /		
	Running current Heating		A	19.4 /		
	Inrush current, max curre		^`	5,		
Operation	Illiasi caren, max care	Cooling		9		
data	Power factor	Heating	%	9		
	EER	Cooling		2.0		
	COP	Heating	}	3.9		
	COP			J.:		
	Sound power level	Cooling Heating		65	73	
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 49 Hi: 45 Me: 40 Lo: 36	57 59	
	Silent mode sound pressu			_	53/47 (Normal/Silent)	
Exterior dim	ensions (Height × Width ×		mm	250 × 1,620 × 690	845 × 970 × 370	
Exterior app		2001		Plaster white	Stucco white	
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	43	80	
	r type & Q'ty		Ng	-	RMT5126MCE3×1	
	r motor (Starting method)		kW		Direct line start	
	oil (Amount, type)		e l	<u> </u>	0.9 M-MA68	
		\ longth\	-	R410A 3.8kg in outdoor unit (Incl. t	0.0	
Refrigerant (Type, amount, pre-charge length)		e length)	kg	Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Heat exchanger			Electronic exp	· · · · · · · · · · · · · · · · · · ·		
Refrigerant control			Centrifugal fan ×4	Propeller fan ×1		
Fan type & Q'ty Fan motor (Starting method)		w	90 < Direct line start >	86 < Direct line start >		
T all motor (Starting metrica)	Cooling		30 \ Direct line start >	75	
Air flow		Heating	m³/min	P-Hi:34 Hi:29 Me:23 Lo:18	73	
Available ov	ternal static pressure	ricating	Pa	0	_	
Outside air			га	Not possible		
	ality / Quantity			Pocket plastic net ×2(Washable)	<u> </u>	
	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric hea			w	` ,	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
Electric flea	Remote control		VV	0 20 (Crankcase heater) (Option) Wired: RC-EX3,RC-E5,RCH-E3 Wireless: RCN-E-E2		
Operation		.1				
control	Room temperature contro)I		Thermostat b	by electronics	
	Operation display					
Safety equip	oments			Frost protecti Internal thermos	stat for fan motor on thermostat stat for fan motor emperature protection	
	Refrigerant piping size (C).D.)	mm	Liquid line: I/U φ 9.52 (3/8") Pipe α	• •	
	Connecting method			1 - () 1		
Installation	Connecting method		m	Flare piping	Flare piping	
	Attached length of piping		m	Nananan : /bth- 1	iguid ⁸ Coo lines)	
data	Insulation for piping	longth	n=	Necessary (both L		
	Refrigerant line (one way) Vertical height diff. between O.		m	Max. Max.50m (Outdoor unit is higher)		
	Drain hose	o. and I.U.	m	Hose connectable with VP20 (O.D.26)	Max.15m (Outdoor unit is lower) Hole size $\phi 20 \times 3pcs$	
Drain numn			mm	- 1036 COTHECTADIE WILL VF20 (O.D.20)	Hole size φ20 x spcs	
Drain pump, max lift height		mm A				
Recommended breaker size L.R.A. (Locked rotor ampere)		A				
			Α	5.		
	ting wires Size × Core nu	niber		· · · · · · · · · · · · · · · · · · ·	le) / Termainal block (Screw fixing type)	
IP number	acception .			IPX0	IP24 —	
Standard ad				Mounting kit, Drain hose		
Option parts		6.00		<u>_</u>		
Notes (1) Ih	e data are measured at the	e following	conditio	ns.	The pipe length is 7.5m.	

(1) The data are	incasarca at i	inc rollowing oc	The pipe length is 7.5m.								
Item	Indoor air t	emperature	Outdoor air	temperature	Standards						
Operation	DB	WB	DB	WB	Standards						
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1						
Heating	20°C	_	7°C	6°C	1303131-11						
	2) This air-conditioner is manufactured and tested in conformity with the ISO. 3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to										

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	FDE140	OVSAVG			
Item				Indoor unit FDE140VG	Outdoor unit FDC140VSA			
Power sou	rce			3 Phase, 380-415V	, 50Hz / 380V, 60Hz			
Nominal cooling capacity (range)		kW	13.6 [5.0(Min.)	~ 14.5(Max.)]				
	Nominal heating capacity (range)		kW	15.5 [4.0(Min.)) ∼ 16.5(Max.)]			
	Power consumption	Cooling		5.	21			
	- Ower consumption	Heating	kW	4.	42			
	Max power consumption			10	.20			
	Running current	Cooling] [8.0 / 8.4				
	Heating		Α		/ 7.2			
Operation	Inrush current, max curre	nt		·	15			
data	Power factor Cooling		%		4			
	Heating		,,,	94 / 93				
	EER	Cooling		2.61				
	COP	Heating		3.	51			
	Sound power level	Cooling Heating		65	73			
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 49 Hi: 45 Me: 40 Lo: 36	57 59			
ı	Silent mode sound pressu		1 1	_	53/47 (Normal/Silent)			
Exterior dir	mensions (Height × Width >		mm	250 × 1,620 × 690	845 × 970 × 370			
Exterior ap	<u> </u>	. ,		Plaster white	Stucco white			
(Munsell c	color)			(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent			
Net weight	i i		kg	43	82			
Compresso	or type & Q'ty			-	RMT5126MCE4×1			
Compresso	or motor (Starting method)		kW	-	Direct line start			
Refrigerant	t oil (Amount, type)		l	-	0.9 M-MA68			
Refrigerant	t (Type, amount, pre-charg	e length)	kg	R410A 3.8kg in outdoor unit (Incl.	the amount for the piping of : 30m)			
Heat excha	anger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant	t control			Electronic ex	pansion valve			
Fan type &	Q'ty			Centrifugal fan ×4	Propeller fan ×1			
Fan motor	(Stating method)		W	90 < Direct line start >	86 < Direct line start >			
Air flow		Cooling Heating	m³/min	P-Hi: 34 Hi: 29 Me: 23 Lo: 18	75 73			
Available e	external static pressure		Pa	0	_			
Outside air	r intake			Not possible	_			
Air filter, Qu	uality / Quantity			Pocket plastic net ×2 (Washable)	_			
Shock & vi	bration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)			
Electric hea	ater		W	0	20 (Crankcase heater)			
0	Remote control			(Option) Wired: RC-EX3,RC-ES	5,RCH-E3 Wireless : RCN-E-E2			
Operation control	Room temperature contro	ol		Thermostat by electronics				
COITLIOI	Operation display				-			
Safety equ	ipments			Frost protecti Internal thermos	stat for fan motor on thermostat stat for fan motor emperature protection			
	Refrigerant piping size (C).D.)	mm	Liquid line: I/U φ 9.52 (3/8") Pipe				
	Connecting method			Flare piping	Flare piping			
Installation			m	— Subm.A	——————————————————————————————————————			
data	Insulation for piping			Necessary (both L	Liquid & Gas lines)			
uuu	Refrigerant line (one way)) length	m		.50m			
	Vertical height diff. between O		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
	Drain hose			Hose connectable with VP20 (O.D.26)	Hole size $\phi 20 \times 3pcs$			
Drain pump, max lift height		mm	_	_				
Recommended breaker size		Α	-	_				
L.R.A. (Locked rotor ampere)		Α	5	.0				
	cting wires Size × Core nu	ımber			ole)/ Termainal block (Screw fixing type)			
IP number				IPX0 IP24				
Standard accessories				Mounting kit, Drain hose	_			
Option par	ts			9 1	_			

The pipe length is 7.5m.

Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(b) Twin type

			Model	FDE100\	VNAPVG				
Item			_	Indoor unit FDE50VG (2 units) Outdoor unit FDC100VNA					
Power source	ce			1 Phase, 220-240V,					
	Nominal cooling capacit	y (range)	kW	10.0 [4.0(Min.)	· · · · · · · · · · · · · · · · · · ·				
	Nominal heating capacity (range)		kW	11.2 [4.0(Min.)	, ,,,				
		Cooling			12				
	Power consumption	Heating	kW	2.9	99				
	Max power consumption	n J			40				
		Cooling			14.3				
	Running current Heating		A		13.7				
	Inrush current, max current			5, 24					
Operation	Cooling			9	9				
data	Power factor Heating		% -	9	9				
	EER Cooling			3.21					
	COP	Heating			75				
		Cooling							
	Sound power level	Heating		60	70				
		Cooling	dB(A)	D.III. 40 III. 00 11 - 51 - 51	54				
	Sound pressure level	Heating		P-Hi: 46 Hi: 38 Me: 36 Lo: 31	56				
	Silent mode sound press			_	50 / 44 (Normal / Silent)				
Exterior dim	ensions (Height × Width		mm	210 × 1,070 × 690	845 × 970 × 370				
Exterior app		-17		Plaster white	Stucco white				
Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent				
Net weight			kg	28	80				
	r type & Q'ty		ING	_	RMT5126MCE3×1				
	r motor (Starting method)	1	kW	_	Direct line start				
	oil (Amount, type)	<u>'</u>	Q.	_	0.9 M-MA68				
	(Type, amount, pre-chard	no longth)	kg	P410A 3 8kg (Pro charged up to the	e piping length of 30m) Outdoor unit				
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	ge lengtin	Ng	Louver fin & inner grooved tubing	Straight fin & inner grooved tubing				
Heat exchanger Refrigerant control			·	pansion valve					
Fan type & (Centrifugal fan ×2	Propeller fan ×1				
an type a f	Starting method)		W	30 < Direct line start >	86 < Direct line start >				
an motor (Starting metriod)	Cooling	**	50 \ Direct line start >	75				
Air flow Heating		m³/min	P-Hi:13 Hi:10 Me:9 Lo:7	73					
Available ev	ternal static pressure	rreating	Pa	0					
Outside air			Ια	Not possible					
	ality / Quantity			Pocket plastic net ×2(Washable)	<u> </u>				
	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)				
Electric hea			W	0	20 (Crankcase heater)				
_iectific fiea	Remote control		VV						
Operation	Room temperature conti	rol		(Option) wired : RC-EX3, RC-E5, RCH-E3 wireless : RCN-E-E2 Thermostat by electronics					
control	Operation display	101		memostat t	-				
	Operation display		 	Internal therma	stat for fan motor				
					ion thermostat				
Safety equip	oments			Internal thermostat for fan motor					
					emperature protection				
	Refrigerant piping size (O D)	mm -	Liquid line: I/U φ 6.35 (1/4") ② φ 9.52 (3/8")	x0.8 ① ϕ 9.52 (3/8") x0.8 O/U ϕ 9.52 (3/8"				
		J.D. j		Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0					
	Connecting method			Flare piping	Flare piping				
nstallation	Attached length of piping	g	m	-	_				
data	Insulation for piping			Necessary (both L	iquid & Gas lines)				
	Refrigerant line (one wa		m	Max.	.50m				
	Vertical height diff. between	O.U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)				
	Drain hose			Hose connectable with VP20 (O.D.26) Hole size ϕ 20 × 3pcs					
Drain pump, max lift height		mm							
Recommended breaker size		Α	-						
L.R.A. (Locked rotor ampere)		Α	5.	0					
Interconnecting wires Size × Core number			ϕ 1.6mm × 3 cores (Including earth cab	ole) / Termainal block (Screw fixing type)					
IP number			IPX0	IP24					
Standard accessories				Mounting kit, Drain hose –					
Stariuaru at				- '					
Option parts	5			-	-				

6	(1) The data are	e measured at t	the following co	The pipe length is 7.5m.		
	Item	Indoor air t	emperature	perature Outdoor air temper		Standards
	Operation	DB	WB	DB	WB	Standards
	Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
	Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
- (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDE100 ¹	/SAPVG				
Item				Indoor unit FDE50VG (2 units)	Outdoor unit FDC100VSA				
Power source				3 Phase, 380-415V,					
	Nominal cooling capacity	(range)	kW	10.0 [4.0(Min.)	,				
	Nominal heating capacity		kW	11.2 [4.0(Min.)					
		Cooling		3.					
	Power consumption	Heating	kW	2.9	2.99				
	Max power consumption	1		10.					
		Cooling		4.6 / 4.8					
	Running current	Heating	Α	4.4 /	4.6				
	Inrush current, max curren			5, 15					
Operation	Cooling		0,1	98 /					
data	Power factor Heating		%	98 /	99				
	EER Cooling			3.3	21				
	COP	Heating	1	3.	75				
	0	Cooling		00	70				
	Sound power level	Heating		60	70				
	Cound property level	Cooling	dB(A)	D.15.46.15.00 M00 101	54				
	Sound pressure level	Heating]	P-Hi: 46 Hi: 38 Me: 36 Lo: 31	56				
	Silent mode sound pressu				50 / 44 (Normal / Silent)				
Exterior dim	nensions (Height × Width ×	Depth)	mm	210 × 1,070 × 690	845 × 970 × 370				
Exterior app				Plaster white	Stucco white				
(Munsell co	olor)		<u> </u>	(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent				
Net weight			kg	28	82				
Compresso	r type & Q'ty			_	RMT5126MCE4×1				
Compresso	r motor (Starting method)		kW	_	Direct line start				
Refrigerant	oil (Amount, type)		Q	_	0.9 M-MA68				
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg (Pre-charged up to the	piping length of 30m) Outdoor unit				
Heat exchanger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing					
Refrigerant	control			Electronic exp	pansion valve				
Fan type & 0				Centrifugal fan ×2	Propeller fan ×1				
Fan motor (Starting method)		W	30 < Direct line start >	86 < Direct line start >				
Air flow		Cooling	m³/min	P-Hi:13 Hi:10 Me:9 Lo:7	75				
		Heating	111 /111111	F-III. 13 III. 10 Me. 9 LO.7	73				
Available ex	ternal static pressure		Pa	0	<u> </u>				
Outside air i				Not possible	-				
	ality / Quantity			Pocket plastic net ×2 (Washable)	-				
	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)				
Electric hea	ter		W	0	20 (Crankcase heater)				
Operation	Remote control			(Option) wired: RC-EX3,RC-E5					
control	Room temperature control			Thermostat by electronics					
00111101	Operation display				-				
Safety equip	pments			Internal thermostat for fan motor Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection					
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52 (3/8") Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0	x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8")				
	Connecting method			Flare piping	Flare piping				
Installation	Attached length of piping		m	– I late pipilig	– naio piping				
data	Insulation for piping			Necessary (both L	iquid & Gas lines)				
	Refrigerant line (one way)	lenath	m	Max.					
	Vertical height diff. between O.I	U. and I.U	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)				
	Drain hose			Hose connectable with VP20 (O.D.26) Hole size ϕ 20 × 3pcs					
Drain pump, max lift height		mm	_	——————————————————————————————————————					
Recommended breaker size		Α	-	-					
L.R.A. (Locked rotor ampere)		Α	5.	0					
Interconnecting wires Size × Core number					le) / Termainal block (Screw fixing type)				
IP number	J			IPX0	IP24				
Standard accessories				Mounting kit, Drain hose	-				
Option parts	-			<u> </u>	-				
	ne data are measured at the	following	conditio	ns 1	The pipe length is 7.5m.				

- ()					
Item	Indoor air t	emperature	Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together. (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDE125\	/NAPVG	
Item				Indoor unit FDE60VG (2 units)	Outdoor unit FDC125VNA	
Power sour	ce			1 Phase, 220-240V,	50Hz / 220V, 60Hz	
	Nominal cooling capacity (range)	kW	12.5 [5.0(Min.)	~ 14.0(Max.)]	
	Nominal heating capacity	(range)	kW	14.0 [4.0(Min.)	~ 16.0(Max.)]	
	Danier and a second	Cooling		4.	16	
	Power consumption	Heating	kW	3.9	54	
	Max power consumption		1 [6.4	40	
	B : .	Cooling		18.3 /	['] 19.1	
	Running current	Heating	A	15.6 /	16.3	
0	Inrush current, max current			5,	24	
Operation	Cooling		0/	9	9	
data	Power factor	Heating	%	9	9	
	EER	Cooling		3.0	00	
	COP	Heating		3.9	95	
	Sound power level	Cooling		60	71	
	Sound power level	Heating		80	71	
	Sound pressure level	Cooling	dB(A)	P-Hi: 47 Hi: 41 Me: 37 Lo: 32	55	
	Sourid pressure level	Heating		F-111.47 111.41 Me.37 LO.32	57	
	Silent mode sound pressu	re level		_	51 / 45 (Normal / Silent)	
Exterior din	nensions (Height × Width × I	Depth)	mm	210 × 1,320 × 690	845 × 970 × 370	
Exterior app				Plaster white	Stucco white	
(Munsell co	olor)			(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	33	80	
	or type & Q'ty			_	RMT5126MCE3×1	
	or motor (Starting method)		kW	_	Direct line start	
Refrigerant	oil (Amount, type)		l	— 0.9 M-MA68		
	(Type, amount, pre-charge	length)	kg	R410A 3.8kg (Pre-charged up to the piping length of 30m) Outdoor uni		
Heat excha				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant	-			Electronic exp		
Fan type &				Centrifugal fan ×4	Propeller fan ×1	
Fan motor (Starting method)			W	50 < Direct line start >	86 < Direct line start >	
Air flow		Cooling	m³/min	P-Hi:20 Hi:16 Me:13 Lo:10	75	
		Heating			73	
	xternal static pressure		Pa	0	_	
Outside air				Not possible	-	
	uality / Quantity			Pocket plastic net ×2 (Washable)	-	
	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric hea			W	0	20 (Crankcase heater)	
Operation	Remote control			(Option) wired : RC-EX3, RC-E5		
control	Room temperature control			Thermostat b	by electronics	
	Operation display				-	
					stat for fan motor ion thermostat	
Safety equi	pments				stat for fan motor	
					emperature protection	
	Refrigerant piping size (O.	D)	mm	Liquid line: I/U φ 6.35 (1/4") ② φ 9.52 (3/8")		
	, , ,	. j	111111	Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0		
	Connecting method			Flare piping	Flare piping	
Installation	Attached length of piping		m	_	_	
data	Insulation for piping			Necessary (both L		
	Refrigerant line (one way)		m	Max.		
	Vertical height diff. between O.U. and I.U.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
Drain hose				Hose connectable with VP20 (O.D.26) Hole size $\phi 20 \times 3pcs$		
Drain pump, max lift height			mm			
Recommended breaker size			A	_		
L.R.A. (Locked rotor ampere)			Α	5.		
Interconnecting wires Size × Core number					le) / Termainal block (Screw fixing type)	
IP number				IPX0 IP24		
Standard accessories				Mounting kit, Drain hose –		
Option part					-	
Notes (1) Th	he data are measured at the	tollowing	conditio	ns. 1	he pipe length is 7.5m.	

()										
Item	Indoor air t	emperature	Outdoor air	temperature	Standards					
Operation	DB	WB	DB	WB	Standards					
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1					
Heating	20°C	_	7°C	6°C	1303131-11					

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
- (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDE125	VSAPVG		
Item				Indoor unit FDE60VG (2 units)	Outdoor unit FDC125VSA		
Power sour	ce			3 Phase, 380-415V,	50Hz / 380V, 60Hz		
	Nominal cooling capacity	(range)	kW	12.5 [5.0(Min.)	~ 14.0(Max.)]		
	Nominal heating capacity	(range)	kW	14.0 [4.0(Min.)	~ 16.0(Max.)]		
		Cooling		4.	16		
	Power consumption	Heating	kW	3.	54		
	Max power consumption		ĺ	10.	.20		
		Cooling		6.1	6.4		
	Running current	Heating	A	5.2			
	Inrush current, max curre		i i	5.	15		
Operation	,	Cooling		98 /	/ 99		
data	Power factor	Heating	%	9			
	EER	Cooling		3.00			
	COP	Heating	i i	3.9			
		Cooling					
	Sound power level	Heating	i	60	71		
		Cooling	dB(A)		55		
	Sound pressure level	Heating	1 4500	P-Hi: 47 Hi: 41 Me: 37 Lo: 32	57		
	Silent mode sound pressi		i i		51 / 45 (Normal / Silent)		
Exterior dim	nensions (Height × Width ×		mm	210 × 1,320 × 690	845 × 970 × 370		
Exterior app		Dopan	111111	Plaster white	Stucco white		
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent		
Net weight	noi)		ka	33	82		
	r type & Q'ty		kg		RMT5126MCE4×1		
	r motor (Starting method)		kW		Direct line start		
					0.9 M-MA68		
	oil (Amount, type)	- 1	ℓ kg		0.0		
	Refrigerant (Type, amount, pre-charge length)				e piping length of 30m) Outdoor unit		
Heat exchanger Refrigerant control				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
0				Electronic ex			
Fan type & Q'ty Fan motor (Starting method)			W	Centrifugal fan ×4	Propeller fan ×1		
ran motor (Starting method)	01:	VV	50 < Direct line start >	86 < Direct line start >		
Air flow		Cooling	m³/min	P-Hi: 20 Hi: 16 Me: 13 Lo: 10	75		
A! - - -		Heating	D-	0	73		
	ternal static pressure		Pa	0	_		
Outside air				Not possible	-		
	ality / Quantity			Pocket plastic net ×2 (Washable)			
	ration absorber		144	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hea			W	0 20 (Crankcase heater) (Option) wired : RC-EX3, RC-E5, RCH-E3 wireless : RCN-E-E2			
Operation	Remote control						
control	Room temperature contro	DI		I hermostat b	by electronics		
	Operation display			-	-		
					stat for fan motor		
Safety equip	oments			Frost protection thermostat Internal thermostat for fan motor			
					emperature protection		
	Defidence de la companya de la compa	20.		Liquid line: I/U φ 6.35 (1/4") ② φ 9.52 (3/8")	x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8")		
	Refrigerant piping size (C	J.U.)	mm	Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0			
	Connecting method			Flare piping	Flare piping		
Installation	Attached length of piping		m	_	_		
data	Insulation for piping			Necessary (both L	iquid & Gas lines)		
Refrigerant line (one way) length		m	* :	.50m			
Vertical height diff. between O.U. and I.U.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
Drain hose			Hose connectable with VP20 (O.D.26) Hole size ϕ 20 × 3pcs				
Drain pump, max lift height			mm	_	<u>-</u>		
Recommended breaker size			Α	-	-		
L.R.A. (Locked rotor ampere)			Α		.0		
	ting wires Size × Core nu	ımber			ole) / Termainal block (Screw fixing type)		
IP number	J 1 - 120 00.0110			IPX0	IP24		
Standard ac	ccessories			Mounting kit, Drain hose	_		
Option parts					<u> </u>		
	e data are measured at th	e following	conditio	ns.	The pipe length is 7.5m.		
· (· / · · ·				- '	- p p		

(1) The data are	, measured at	are removing ec	maitions.		The pipe length is 7.011.
Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	peration DB		DB WB		Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C		7°C	6°C	1503131-11

- 7°C (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

6°C

- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDE140\	/NAPVG	
Item				Indoor unit FDE71VG (2 units)	Outdoor unit FDC140VNA	
Power sour	ce			1 Phase, 220-240V,	50Hz / 220V, 60Hz	
Nominal cooling capacity (range)			kW	13.6 [5.0(Min.)	~ 14.5(Max.)]	
	Nominal heating capacity	(range)	kW	15.5 [4.0(Min.)	~ 16.5(Max.)]	
	Power consumption	Cooling	İ	4.	74	
	Power consumption	Heating	kW	4.:	21	
	Max power consumption] [6.4	40	
	Dunning surrent	Cooling		20.8 /	21.8	
	Running current	Heating	Α	18.5 /	19.3	
Operation	Inrush current, max curren	t	1 [5,	24	
data	Power factor	Cooling	%	9	9	
uaia	Power lactor	Heating] % [9	9	
	EER	Cooling		2.5	87	
	COP	Heating] [3.	68	
	Sound power level	Cooling		60	73	
	Sound power level	Heating	1 1	60	73	
	C	Cooling	dB(A)	D. I.E. 47 I.E. 44 May 07 I.a. 00	57	
	Sound pressure level	Heating	1 1	P-Hi: 47 Hi: 41 Me: 37 Lo: 32	59	
	Silent mode sound pressu	re level] [_	53 / 47 (Normal / Silent)	
Exterior din	nensions (Height × Width ×	Depth)	mm	210 × 1,320 × 690	845 × 970 × 370	
Exterior app	pearance			Plaster white	Stucco white	
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	33	80	
Compresso	or type & Q'ty		Ĭ	_	RMT5126MCE3×1	
	or motor (Starting method)		kW	_	Direct line start	
	oil (Amount, type)		Q	_	0.9 M-MA68	
	(Type, amount, pre-charge	lenath)	kg	R410A 3.8kg (Pre-charged up to the	e piping length of 30m) Outdoor unit	
Heat excha	3.21			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant				ŭ ŭ	pansion valve	
Fan type & Q'ty				Centrifugal fan ×4	Propeller fan ×1	
	(Starting method)		W	50 < Direct line start >	86 < Direct line start >	
	()	Cooling	2		75	
Air flow		Heating	m³/min	P-Hi: 20 Hi: 16 Me: 13 Lo: 10	73	
Available ex	xternal static pressure	<u> </u>	Pa	0		
Outside air				Not possible —		
	uality / Quantity			Pocket plastic net ×2 (Washable)	-	
	oration absorber			Rubber sleeve (for fan motor) Rubber sleeve (for compre		
Electric hea			W	0 20 (Crankcase heater)		
	Remote control			(Option) wired : RC-EX3, RC-E5, RCH-E3 wireless : RCN-E-E2		
Operation	Room temperature control			Thermostat by electronics		
control	Operation display			-	-	
	1-1			Internal thermos	stat for fan motor	
Safety equi	ipments				ion thermostat	
caloty equi	,				stat for fan motor emperature protection	
				Liquid line: I/U ϕ 9.52 (3/8") ② ϕ 9.52 (3/8")		
	Refrigerant piping size (O.	.D.)	mm	Gas line: I/U ϕ 15.88 (5/8") ② ϕ 15.88 (5/8")		
	Connecting method					
Inetallation	Connecting method		m	Flare piping —	Flare piping	
Installation	Attached length of piping		m		iguid & Gas linos)	
data Insulation for piping		longth		Necessary (both L		
Refrigerant line (one way) length Vertical height diff. between O.U. and I.U.		m		.50m Max 15m (Outdoor unit is lower)		
		m	Max.50m (Outdoor unit is higher) Hose connectable with VP20 (O.D.26)	Max.15m (Outdoor unit is lower) Hole size $\phi 20 \times 3$ pcs		
Drain hose			mm	Hose connectable with VP20 (O.D.26)	⊓ule size φzu x spcs	
Drain pump, max lift height			mm A	-	-	
Recommended breaker size L.R.A. (Locked rotor ampere)			A			
			Α	5.		
	cting wires Size × Core nur	nper			ole) / Termainal block (Screw fixing type)	
IP number				IPX0	IP24	
Standard a				Mounting kit, Drain hose	_	
Option part					-	
Notes (1) Th	he data are measured at the	tollowing	conditio	ns.	The pipe length is 7.5m.	

- ()	<u>(1) </u>										
Item	Indoor air t	emperature Outdoor air temperature		temperature	Standards						
Operation	DB	WB	DB	WB	Staridards						
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1						
Heating	20°C	_	7°C	6°C	1303131-11						

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.(6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
- (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDF140	VSAPVG		
Item				Indoor unit FDE71VG (2 units)	Outdoor unit FDC140VSA		
Power sour	rce				50Hz / 380V, 60Hz		
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)			
	Nominal heating capacity		kW	15.5 [4.0(Min.)	. /2		
		Cooling			74		
	Power consumption	Heating	kW				
	Max power consumption	1	1		.20		
		Cooling			77.3		
	Running current	Heating	l a l		76.5		
	Inrush current, max curren		1		15		
Operation	,	Cooling			9		
data	Power factor	Heating	%		8		
	EER	Cooling		2.			
	COP	Heating	1 1		68		
		Cooling					
	Sound power level	Heating	1 1	60	73		
		Cooling	dB(A)		57		
	Sound pressure level	Heating	UD(A)	P-Hi: 47 Hi: 41 Me: 37 Lo: 32	59		
	Silent mode sound pressu		1 1		53 / 47 (Normal / Silent)		
Exterior dia	nensions (Height × Width ×		mm	210 × 1,320 × 690	845 × 970 × 370		
		pehili)	mm	,			
Exterior app				Plaster white	Stucco white		
(Munsell co			 . 	(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent		
Net weight			kg	33	82		
	or type & Q'ty				RMT5126MCE4×1		
	or motor (Starting method)		kW	_	Direct line start		
	oil (Amount, type)		l		0.9 M-MA68		
	(Type, amount, pre-charge	length)	kg	R410A 3.8kg (Pre-charged up to the			
Heat excha				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant control					pansion valve		
Fan type & Q'ty				Centrifugal fan ×4	Propeller fan ×1		
Fan motor ((Starting method)		W	50 < Direct line start >	86 < Direct line start >		
Air flow		Cooling	m³/min	P-Hi: 20 Hi: 16 Me: 13 Lo: 10	75		
		Heating			73		
	xternal static pressure		Pa	0	_		
Outside air				Not possible	-		
	uality / Quantity			Pocket plastic net ×2 (Washable)	<u> </u>		
	oration absorber			Rubber sleeve (for fan motor) Rubber sleeve (for compres			
Electric hea	ater		W	0 20 (Crankcase heater)			
Operation	Remote control			(Option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-E-E2			
control	Room temperature contro	l		Thermostat by electronics			
CONTROL	Operation display			-	_		
					stat for fan motor		
Safety equi	ipments				ion thermostat stat for fan motor		
					temperature protection		
				Liquid line: I/U ϕ 9.52 (3/8") ② ϕ 9.52 (3/8")	<u> </u>		
	Refrigerant piping size (O	.D.)	mm	Gas line: I/U ϕ 15.88 (5/8") 2 ϕ 15.88 (5/8") \times			
	Connecting method			Flare piping	Flare piping		
Installation			m	—	- Lare piping		
data	Attached length of piping Insulation for piping		m	Necessary (both L	iquid & Gae lines)		
		m	, ,	.50m			
Refrigerant line (one way) length Vertical height diff. between O.U. and I.U.			Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
Drain hose		m	Hose connectable with VP20 (O.D.26)	Hole size $\phi 20 \times 3pcs$			
			mm	1 105e COTHECTABLE WITH VP20 (O.D.26)	поје ѕіде фили зрсѕ		
Drain pump, max lift height			mm ^		_		
Recommended breaker size			A		-		
	L.R.A. (Locked rotor ampere)				.0		
	cting wires Size × Core nur	nper			ole) / Termainal block (Screw fixing type)		
IP number				IPX0	IP24		
Standard a				Mounting kit, Drain hose	_		
Option part				-	-		
Notes (1) Th	he data are measured at the	following	conditio	ns.	Γhe pipe length is 7.5m.		

- ()					
Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

(c) Triple type

			Model	FDE140\	VNATVG	
Item				Indoor unit FDE50VG (3 units)	Outdoor unit FDC140VNA	
Power source	ce			1 Phase, 220-240V,		
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)		
	Nominal heating capacity		kW	15.5 [4.0(Min.)		
		Cooling		4.74		
İ	Power consumption	Heating	kW	4.2	21	
	Max power consumption			6.4	40	
ļ	Dunning augent	Cooling		20.8 /	21.8	
l	Running current	Heating	Α	18.5 /	19.3	
Operation	Inrush current, max curren	it		5,	24	
Operation	Power factor	Cooling	%	9	9	
data	Fower factor	Heating	70	9	9	
ļ	EER	Cooling		2.8	37	
I	COP	Heating		3.0	68	
	Sound power level	Cooling Heating		60	73	
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 46 Hi: 38 Me: 36 Lo: 31	57 59	
	Silent mode sound pressu			_	53 / 47 (Normal / Silent)	
	ensions (Height × Width ×		mm	210 × 1,070 × 690	845 × 970 × 370	
Exterior app		-117		Plaster white	Stucco white	
(Munsell co				(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight	,		kg	28	80	
	r type & Q'ty		9	_	RMT5126MCE3×1	
	r motor (Starting method)		kW	_	Direct line start	
	oil (Amount, type)		Q.	_	0.9 M-MA68	
	(Type, amount, pre-charge	lenath)	kg	R410A 3.8kg (Pre-charged up to the		
Heat exchar			9	Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant of				Electronic ext		
an type & (Centrifugal fan ×2	Propeller fan ×1	
	Starting method)		W	30 < Direct line start >	86 < Direct line start >	
Air flow	,	Cooling Heating	m³/min	P-Hi:13 Hi:10 Me:9 Lo:7	75 73	
Available ev	ternal static pressure	ricating	Pa	0		
Outside air i			- ι α	Not possible	_	
	ality / Quantity			Pocket plastic net ×2 (Washable)	_	
	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric heat			W	0	20 (Crankcase heater)	
	Remote control			(Option) wired : RC-EX3, RC-E5	, ,	
Operation	Room temperature control	İ		Thermostat b	•	
control	Operation display			e.modiat s	y	
Safety equip	, , , , , , , , , , , , , , , , , , , ,			Frost protecti Internal thermos	stat for fan motor ion thermostat stat for fan motor emperature protection	
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52(3/8") Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7(1/2")x0		
	Connecting method			Flare piping	Flare piping	
nstallation	Attached length of piping		m	_	_	
data	Insulation for piping			Necessary (both L	iquid & Gas lines)	
ļ	Refrigerant line (one way)	length	m	Max.	50m	
Vertical height diff. between O.U. and I.U.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
Drain hose			Hose connectable with VP20 (O.D.26)	Hole size φ20 x 3pcs		
Drain pump, max lift height		mm	_	-		
		Α	=			
.R.A. (Lock	red rotor ampere)		Α	5.	0	
nterconnec	ting wires Size × Core nur	nber		ϕ 1.6mm × 3 cores (Including earth cab	le) / Termainal block (Screw fixing type)	
P number				IPX0	IP24	
Standard ac	ccessories			Mounting kit, Drain hose	-	
Option parts	3			-	-	
Notes (1) Th	e data are measured at the	following	conditio	ns.	he pipe length is 7.5m.	

Notes (1) The data are measured at the following conditions.

The	pipe	lenath	is	7.5m.

0 (1) 1110 00		oaoaroa ar c	are removing ec			ine pipe ienganie i ieni
	Item	Indoor air te	emperature	Outdoor air	temperature	Standards
Operation	n	DB	WB	DB	WB	Staridards
Coolir	ng	27°C	19℃	35°C	24°C	ISO5151-T1
Heatir	ng	20°C	ı	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
- (7) Branching pipe set "DIS-TA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDE140	VSATVG	
Item				Indoor unit FDE50VG (3 units)	Outdoor unit FDC140VSA	
Power sour	ce			3 Phase, 380-415V,	50Hz / 380V, 60Hz	
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)	. /2	
	Nominal heating capacity (range)		kW	15.5 [4.0(Min.)	. /2	
	Power consumption	Cooling		4.74		
		Heating	kW	4.21 10.20		
	Max power consumption					
	Running current	Cooling		6.9 /		
	Invited attended to according	Heating	Α	6.2 / 5.		
Operation	Inrush current, max currer				-	
data	Power factor	Cooling Heating	%	9		
	EER	Cooling		2.6		
	COP	Heating	 	3.6		
		Cooling				
	Sound power level	Heating		60	73	
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 46 Hi: 38 Me: 36 Lo: 31	57 59	
	Silent mode sound pressu			_	53 / 47 (Normal / Silent)	
Exterior dim	nensions (Height × Width ×		mm	210 × 1,070 × 690	845 × 970 × 370	
Exterior app	pearance			Plaster white	Stucco white	
(Munsell co	olor)			(6.8Y8.9/0.2) near equivalent	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	28	82	
	r type & Q'ty			_	RMT5126MCE4×1	
Compresso	r motor (Starting method)		kW	_	Direct line start	
Refrigerant	oil (Amount, type)		Q	_	0.9 M-MA68	
Refrigerant (Type, amount, pre-charge length)			kg	R410A 3.8kg (Pre-charged up to the		
Heat excha				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant				Electronic exp		
Fan type &			147	Centrifugal fan ×2	Propeller fan ×1	
Fan motor (Starting method)	lo "	W	30 < Direct line start >	86 < Direct line start >	
Air flow		Cooling Heating	m³/min	P-Hi:13 Hi:10 Me:9 Lo:7	75 73	
Available ex	ternal static pressure		Pa	0	_	
Outside air	intake			Not possible	ı	
Air filter, Qu	ality / Quantity			Pocket plastic net ×2 (Washable)	-	
Shock & vib	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric hea			W	0 20 (Crankcase heater)		
Operation	Remote control			(Option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-E-E2		
control	Room temperature contro			Thermostat by electronics		
	Operation display				-	
Safety equip	pments			Frost protecti Internal thermos	stat for fan motor Ion thermostat stat for fan motor emperature protection	
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52 (3/8") Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7 (1/2") x0	x0.8 ① φ 9.52 (3/8") x0.8 O/U φ 9.52 (3/8")	
	Connecting method			Gas line: 1/0 φ 12.7 (1/2")	1.8 (1/φ 15.88 (5/8") X1.0 O/O φ 15.88 (5/8") Flare piping	
Installation	Attached length of piping		m		——————————————————————————————————————	
data Insulation for piping			Necessary (both L	iquid & Gas lines)		
Refrigerant line (one way) length Vertical height diff. between O.U. and I.U.		m	Max.			
		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
Drain hose			Hose connectable with VP20 (O.D.26)	Hole size $\phi 20 \times 3pcs$		
Drain pump, max lift height			mm	_	-	
Recommended breaker size			Α	-		
	ked rotor ampere)		Α	5.		
	ting wires Size x Core nur	mber		· · · · · · · · · · · · · · · · · · ·	le) / Termainal block (Screw fixing type)	
IP number				IPX0	IP24	
Standard ad				Mounting kit, Drain hose	_	
Option parts		£-11- '			- 	
Notes (1) The data are measured at the following conditions The pipe length is 7.5m						

()			1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1			
Item	Indoor air t	Indoor air temperature Outo		Indoor air temperature Outdoor air temperature		Standards
Operation	eration DB		DB	WB	Standards	
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1	
Heating	20°C	_	7°C	6°C	1303131-11	

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.

 (7) Branching pipe set "DIS-TA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

(4) Duct connected-High static pressure type (FDU) Single type

			Model	FDU100	VNAVF2		
Item				Indoor unit FDU100VF2 Outdoor unit FDC100VNA			
Power source	ce				, 50Hz / 220V, 60Hz		
	Nominal cooling capacity		kW	10.0 [4.0(Min.)) ∼ 11.2(Max.)]		
	Nominal heating capacity		kW	11.2 [4.0(Min.)			
	consumption Power	Cooling		2.8			
		Heating	kW	2.7			
	Max power consumption	1		6.4			
	Running current	Cooling	,	13.6 /			
		Heating	Α	13.3 /			
Operation	Inrush current, max currer	1			26		
data	Power factor	Cooling	%	9			
I	FED	Heating		9			
	EER COP	Cooling		3.			
	COP	Heating		4.0	03		
	Sound power level	Cooling Heating		65	70		
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 44 Hi: 38 Me: 36 Lo: 30	54 56		
	Silent mode sound pressu			_	50/44 (Normal/Silent)		
Exterior dim	nensions (Height × Width ×		mm	280 × 1,370 × 740	845 × 970 × 370		
Exterior app	<u> </u>	-11			Stucco white		
(Munsell co				_	(4.2Y7.5/1.1) near equivalent		
Net weight	,		kg	54	80		
Compresso	r type & Q'ty			_	RMT5126MCE3×1		
	r motor (Starting method)		kW	_	Direct line start		
Refrigerant	oil (Amount, type)		Q	_	0.9 M-MA68		
Refrigerant (Type, amount, pre-charge length)		length)	kg	R410A 3.8kg in outdoor unit (Incl.	the amount for the piping of : 30m)		
Heat exchar				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant	control			Electronic ex	pansion valve		
Fan type & 0				Centrifugal fan ×3	Propeller fan ×1		
Fan motor (Stating method)		W	100 + 130 < Direct line start >	86 < Direct line start >		
Air flow		Cooling Heating	m³/min	P-Hi:36 Hi:28 Me:25 Lo:19			
Available ex	ternal static pressure		Pa	Standard: 60 Max: 200	0		
Outside air i	<u> </u>			Possible	_		
Air filter, Qu	ality / Quantity			Procure locally	_		
Shock & vib	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hear	ter		W	– 20 (Crankcase heater)			
Operation	Remote control			(Option) Wired :RC-EX3, RC-E5,	RCH-E3 Wireless : RCN-KIT4-E2		
Operation control	Room temperature contro	ol		Thermostat by electronics			
COILLOI	Operation display			<u>-</u>	_		
Safety equip	pments			Frost protecti Internal thermos	tion for fan motor on thermostat stat for fan motor emperature protection		
	Refrigerant piping size (C).D.)	mm	Liquid line: I.U. φ 9.52 (3/8") Pipe	φ 9.52(3/8")×0.8 O.U. φ 9.52 (3/8")		
		,			15.88(5/8")×1.0		
	Connecting method			Flare piping	Flare piping		
	Attached length of piping		m				
data	Insulation for piping	lanat-			Liquid & Gas lines)		
	Refrigerant line (one way) Vertical height diff. between O		m	Max.50m (Outdoor unit is higher)	.50m Max.15m (Outdoor unit is lower)		
		.u. and i.u.	m	Hose connectable VP25 (I.D.25, O.D.32)	,		
Drain hose			mm	, , ,	Hole size ϕ 20 × 3pcs		
			mm ^	Built-in drain pump,600	_		
	ked rotor ampere)		A				
Interconnec		umber	_ ^		ole)/ Termainal block(Screw fixing type)		
IP number	ung wires Size x Core ii	uiiibei		φ 1.6mm × 3 cores (including earth cab	IP24		
Standard ac	coesories			Mounting kit, Drain hose	11724		
Option parts				Mounting Rt., Drain 11056			
	o data are magazired at the				The pipe length is 7.5m		

Notes (1) The data are measured at the following conditions.

. ,		•				
Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	60Pa	ISO5151-T1
Heating	20°C		7°C	6°C	Julia	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an aneohoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) Select the breaker size according to various to a confidence of the conformation of t

- (5) When wireless remote controller is used, fan is 3 speed setting (Hi-Me-Lo) only.
 (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
 (7) The factory E.S.P. setting is set within the range of 80 150 Pa.lf SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 200 Pa.(For RC-EX3 and RC-E5 only)

			Model	FDU100	DVSAVF2
Item				Indoor unit FDU100VF2	Outdoor unit FDC100VSA
Power sour				·	⁷ , 50Hz / 380V, 60Hz
	Nominal cooling capacity	` 	kW) ~ 11.2(Max.)]
	Nominal heating capacity	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	kW) ~ 12.5(Max.)]
	Power consumption	Cooling	ļ ļ		84
		Heating	kW		78
	Max power consumption	lo "			.20
	Running current	Cooling	,		/ 4.6
	Invision accurate many accurate	Heating	Α		/ 4.5 17
Operation	Inrush current, max curren				/ 94
data	Power factor	Cooling Heating	%		/ 94 / 94
	EER Cooling				52
	COP	Heating	 		03
		Cooling			
	Sound power level	Heating		65	70
		Cooling	dB(A)		54
	Sound pressure level	Heating	"20,"	P-Hi: 44 Hi: 38 Me: 36 Lo: 30	56
	Silent mode sound pressur		1 1	_	50/44 (Normal/Silent)
Exterior dim	nensions (Height × Width ×		mm	280 × 1,370 × 740	845 × 970 × 370
Exterior app	<u> </u>			,	Stucco white
(Munsell co				_	(4.2Y7.5/1.1) near equivalent
Net weight			kg	54	82
Compresso	r type & Q'ty			_	RMT5126MCE4×1
Compresso	r motor (Starting method)		kW	_	Direct line start
Refrigerant	oil (Amount, type)		Q.	_	0.9 M-MA68
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl.	the amount for the piping of : 30m)
Heat excha	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing
Refrigerant	control			Electronic ex	pansion valve
Fan type &				Centrifugal fan ×3	Propeller fan ×1
Fan motor (Stating method)		W	100 + 130 < Direct line start >	86 < Direct line start >
Air flow		Cooling	m³/min	P-Hi: 36 Hi: 28 Me: 25 Lo: 19	75
		Heating			73
	ternal static pressure		Pa	Standard: 60 Max: 200	0
Outside air				Possible	_
	ality / Quantity			Procure locally	
	ration absorber		14/	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)
Electric hea	1		W	— — — — — — — — — — — — — — — — — — —	20 (Crankcase heater)
Operation	Remote control Room temperature control	1			RCH-E3 Wireless : RCN-KIT4-E2
control	Operation display	<u> </u>		mermostati	by electronics
	Operation display			Overland protect	tion for fan motor
					on thermostat
Safety equip	oments				stat for fan motor
				<u>~</u>	emperature protection
	Refrigerant piping size (O	.D.)	mm		φ 9.52(3/8")×0.8 O.U. φ 9.52 (3/8")
	0 11 0 1	/		. , , ,	15.88(5/8")×1.0
	Connecting method			Flare piping	Flare piping
	Attached length of piping		m	— N // // //	
data	Insulation for piping Refrigerant line (one way)	longth		, ,	Liquid & Gas lines)
	- 7/		m		.50m
	Vertical height diff. between O.	o. and i.U.	m	Max.50m (Outdoor unit is higher) Hose connectable VP25 (I.D.25, O.D.32)	Max.15m (Outdoor unit is lower) Hole size φ 20 × 3pcs
Drain numn	Drain hose		mm	Built-in drain pump,600	Πυίε δίζε φ ζύ x δρύs
Drain pump, max lift height Recommended breaker size			mm A	ם שוונ-ווו עומוח פעוווף,סטט	<u> </u>
	ked rotor ampere)		A	- -	
Interconnec	<u>i </u>	umher	^		ble) / Termainal block (Screw fixing type)
IP number	ung wires DIZE x DUIE III	uiiibel		Ψ 1.6Hill1 × 3 cores (including earth car.	IP24
Standard ad	ccessories			Mounting kit, Drain hose	——————————————————————————————————————
Option part				<u> </u>	<u>-</u>
- p pare	-				

. ()		5				111111111111111111111111111111111111111
Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19℃	35°C	24°C	60Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	oura	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote controller is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 150 Pa.lf SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 200 Pa.(For RC-EX3 and RC-E5 only)

			Model	FDU12	5VNAVF		
Item				Indoor unit FDU125VF	Outdoor unit FDC125VNA		
Power sour				·	⁷ , 50Hz / 220V, 60Hz		
	Nominal cooling capacity	<u> </u>	kW	E 1) ~ 14.0(Max.)]		
	Nominal heating capacity	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	kW) ~ 16.0(Max.)]		
	Power consumption	Cooling	ļ ļ	4.36			
		Heating	kW	W 3.69 6.40			
	Max power consumption	0 "					
	Running current	Cooling	,		/ 21.3		
	Inruch ourrent may ourren	Heating	Α		<u>/ 18.7</u> 26		
Operation	Inrush current, max current			·	26 93		
data	Power factor	Cooling Heating	%		90		
	EER Cooling				87		
	COP	Heating	1 1		79		
		Cooling					
	Sound power level	Heating		67	71		
		Cooling	dB(A)		55		
	Sound pressure level	Heating	` ` /	P-Hi: 45 Hi: 40 Me 34 Lo: 29	57		
	Silent mode sound pressu		1 1	_	51/45 (Normal/Silent)		
Exterior dim	nensions (Height × Width ×		mm	280 × 1,370 × 740	845 × 970 × 370		
Exterior app	<u> </u>				Stucco white		
(Munsell co				_	(4.2Y7.5/1.1) near equivalent		
Net weight			kg	54	80		
Compresso	r type & Q'ty			_	RMT5126MCE3×1		
Compresso	r motor (Starting method)		kW	_	Direct line start		
Refrigerant	oil (Amount, type)		l	_	0.9 M-MA68		
Refrigerant	(Type, amount, pre-charge	length)	kg		the amount for the piping of : 30m)		
Heat excha	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant				Electronic ex	pansion valve		
Fan type &				Centrifugal fan ×3	Propeller fan ×1		
Fan motor (Stating method)		W	100 + 200 < Direct line start >	86 < Direct line start >		
Air flow		Cooling	m³/min	P-Hi: 39 Hi: 32 Me: 26 Lo: 20	75		
		Heating			73		
	ternal static pressure		Pa	Standard: 60 Max: 200	0		
Outside air				Possible	_		
	ality / Quantity			Procure locally	— — — — — — — — — — — — — — — — — — —		
Electric hea	ration absorber		W	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor) 20 (Crankcase heater)		
Electric nea	Remote control		VV	(Option) Wired :PC EV2 PC E5	RCH-E3 Wireless : RCN-KIT4-E2		
Operation	Room temperature control	i			by electronics		
control	Operation display			memostari	–		
Safety equi	, , , , , , , , , , , , , , , , , , , ,			Frost protecti Internal thermos	tion for fan motor on thermostat stat for fan motor		
					emperature protection φ 9.52(3/8")×0.8 Ο.U. φ 9.52 (3/8")		
	Refrigerant piping size (O	.D.)	mm	Gas line: φ 15.88 (5/8") φ	15.88(5/8")×1.0		
	Connecting method			Flare piping	Flare piping		
	Attached length of piping		m	— NI // III	-		
data	Insulation for piping Refrigerant line (one way)	longth		, · · · · · · · · · · · · · · · · · · ·	Liquid & Gas lines)		
	Vertical height diff. between O.		m		.50m Max 15m (Outdoor unit is lower)		
	Drain hose	o. and i.U.	m	Max.50m (Outdoor unit is higher) Hose connectable VP25 (I.D.25, O.D.32)	Max.15m (Outdoor unit is lower) Hole size φ 20 × 3pcs		
Drain pump, max lift height			mm	Built-in drain pump,600			
Recommended breaker size			A	- Built in Grain pump,000			
	ked rotor ampere)		A	5			
Interconnec	<u>i </u>	umber			ble) / Termainal block (Screw fixing type)		
IP number	g			IPX0	IP24		
Standard ad	ccessories			Mounting kit, Drain hose	_		
Option part				<u> </u>			
Option parts —							

` '		0				1 1 0
Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	60Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	oura	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote controller is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 150 Pa.lf SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 200 Pa.(For RC-EX3 and RC-E5 only)

			Model	FDU12	5VSAVF		
Item				Indoor unit FDU125VF	Outdoor unit FDC125VSA		
Power sour				· · · · · · · · · · · · · · · · · · ·	, 50Hz / 380V, 60Hz		
	Nominal cooling capacity		kW) ~ 14.0(Max.)]		
	Nominal heating capacity	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	kW) ~ 16.0(Max.)]		
	Power consumption	Cooling	ļ ļ		36		
	Heating			XW 3.69			
	Max power consumption	0 "		10.20 6.8 / 7.2			
	Running current	Cooling	,				
	Inruch ourrent may ourren	Heating	Α		/ 6.2 17		
Operation	Inrush current, max curren				/ 92		
data	Power factor	Cooling Heating	%		7 92 90		
	EER	Cooling			87		
	COP	Heating	} }		79		
		Cooling					
	Sound power level	Heating		67	71		
		Cooling	dB(A)		55		
	Sound pressure level	Heating	` ` '	P-Hi: 45 Hi: 40 Me: 34 Lo: 29	57		
	Silent mode sound pressu		1 1	_	51/45 (Normal/Silent)		
Exterior dim	nensions (Height × Width ×	Depth)	mm	280 × 1,370 × 740	845 × 970 × 370		
Exterior app					Stucco white		
(Munsell co	olor)			_	(4.2Y7.5/1.1) near equivalent		
Net weight			kg	54	82		
Compresso	r type & Q'ty			_	RMT5126MCE4×1		
Compresso	r motor (Starting method)		kW	_	Direct line start		
Refrigerant	oil (Amount, type)		l	_	0.9 M-MA68		
Refrigerant	(Type, amount, pre-charge	length)	kg		the amount for the piping of : 30m)		
Heat exchai	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant				Electronic ex	pansion valve		
Fan type &				Centrifugal fan ×3	Propeller fan ×1		
Fan motor (Stating method)		W	100 + 200 < Direct line start >	86 < Direct line start >		
Air flow		Cooling	m³/min	P-Hi: 39 Hi: 32 Me: 26 Lo: 20	75		
		Heating			73		
	ternal static pressure		Pa	Standard: 60 Max: 200	0		
Outside air				Possible	_		
	ality / Quantity			Procure locally	— — — — — — — — — — — — — — — — — — —		
Electric hea	ration absorber		W	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor) 20 (Crankcase heater)		
Electric flea	Remote control		VV	(Option) Wired : DC EV3 DC E5	RCH-E3 Wireless : RCN-KIT4-E2		
Operation	Room temperature control	i			by electronics		
control	Operation display			memostat t	–		
Safety equip	, , , , , , , , , , , , , , , , , , , ,			Frost protecti	tion for fan motor		
, , ,,,,,,					stat for fan motor emperature protection		
	Refrigerant piping size (O	.D.)	mm		φ 9.52(3/8")×0.8 O.U. φ 9.52 (3/8") 15.88(5/8")×1.0 φ 15.88 (5/8")		
	Connecting method			Flare piping	Flare piping		
Installation	Attached length of piping		m	_			
data	Insulation for piping			Necessary (both I	Liquid & Gas lines)		
	Refrigerant line (one way)	length	m		.50m		
	Vertical height diff. between O.	U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
	Drain hose			Hose connectable VP25 (I.D.25, O.D.32)	Hole size ϕ 20 × 3pcs		
	, max lift height		mm	Built-in drain pump,600	_		
Recommended breaker size			Α	-	_		
	ked rotor ampere)		Α		/5		
Interconnec	ting wires Size × Core nu	umber			ole) / Termainal block (Screw fixing type)		
IP number		-		IPX0	IP24		
Standard ad				Mounting kit, Drain hose	_		
Option parts	S			<u> </u>	_		

,		5				
Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Staridards
Cooling	27°C	19°C	35°C	24°C	60Pa	ISO5151-T1
Heating	20°C		7°C	6°C) oura	1909191-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.

- (5) When wireless remote controller is used, fan is 3 speed setting (Hi-Me-Lo) only.
 (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
 (7) The factory E.S.P. setting is set within the range of 80 150 Pa.lf SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa.(For RC-EX3 and RC-E5 only)

			Model	FDU14	OVNAVF		
Item				Indoor unit FDU140VF	Outdoor unit FDC140VNA		
Power sour					, 50Hz / 220V, 60Hz		
	Nominal cooling capacity	<u> </u>	kW		\sim 14.5(Max.)]		
	Nominal heating capacity	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	kW) ~ 16.5(Max.)]		
	Power consumption	Cooling	ļ ļ	4.93			
		Heating	kW		21		
	Max power consumption	T			40		
	Running current	Cooling			/ 23.8		
		Heating	Α		/ 21.3		
Operation	Inrush current, max current			· · · · · · · · · · · · · · · · · · ·	27		
data	Power factor	Cooling	%		94		
	FED	Heating			70		
	EER Cooling				76		
	COP	Heating		3.	68 I		
	Sound power level	Cooling		70	73		
		Heating	4B(V)		F7		
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 47 Hi: 40 Me: 35 Lo: 30	57 59		
	Silent mode sound pressu		} }		59 53/47 (Normal/Silent)		
Exterior dim	nensions (Height × Width ×		mm		845 × 970 × 370		
	<u> </u>	Depth)	mm	280 × 1,370 × 740	Stucco white		
Exterior app				_			
Net weight	olor)		lea.	54	(4.2Y7.5/1.1) near equivalent		
	r type & Q'ty		kg		RMT5126MCE3×1		
	r motor (Starting method)		kW				
		-		_	Direct line start		
	oil (Amount, type)	lonath)	l l	D410A 2 Ske in authory unit (Incl.	0.9 M-MA68		
Heat excha	(Type, amount, pre-charge	lengin)	kg	Louver fin & inner grooved tubing	the amount for the piping of : 30m) Straight fin & inner grooved tubing		
				<u> </u>	pansion valve		
Refrigerant Fan type &				Centrifugal fan ×3	Propeller fan ×1		
	Stating method)		W	100 + 200 < Direct line start >	86 < Direct line start >		
ran motor (Stating method)	Cooling	1		75		
Air flow		Heating	m³/min	P-Hi: 48 Hi: 35 Me: 28 Lo: 22	73		
Available ev	ternal static pressure	ricating	Pa	Standard: 60 Max: 200	0		
Outside air			га	Possible	_		
	ality / Quantity			Procure locally	_		
	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hea			W	——————————————————————————————————————	20 (Crankcase heater)		
_1001101164	Remote control			(Ontion) Wired :RC-EX3_RC-E5	RCH-E3 Wireless : RCN-KIT4-E2		
Operation	Room temperature control	i i			by electronics		
control	Operation display	•		- mormostat i	_		
Safety equi	, , , , , , , , , , , , , , , , , , , ,			Frost protecti Internal thermos	tion for fan motor on thermostat stat for fan motor emperature protection		
	Refrigerant piping size (O	.D.)	mm		φ 9.52(3/8")×0.8 O.U. φ 9.52 (3/8") 15.88(5/8")×1.0 φ 15.88 (5/8")		
	Connecting method			Flare piping	Flare piping		
Installation	Attached length of piping		m	— — — — — — — — — — — — — — — — — — —	— — — — — — — — — — — — — — — — — — —		
data	Insulation for piping	-		Necessary (both I	Liquid & Gas lines)		
	Refrigerant line (one way)	length	m	, , , , , , , , , , , , , , , , , , ,	.50m		
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
	Drain hose			Hose connectable VP25 (I.D.25, O.D.32)	Hole size $\phi 20 \times 3pcs$		
Drain pump	, max lift height		mm	Built-in drain pump,600			
Recommended breaker size			Α		<u> </u>		
	ked rotor ampere)		A	5	/5		
Interconnec	<u>_</u>	ımber	/ /		ble) / Termainal block (Screw fixing type)		
IP number	10120 × 0016 110			IPX0	IP24		
Standard ad	ccessories			Mounting kit, Drain hose	_		
Option part				<u> </u>			
- p-:: p-air ti	Option parts —						

. ,		0				1 1 0
Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	60Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	oura	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote controller is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 150 Pa.lf SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 200 Pa.(For RC-EX3 and RC-E5 only)

			Model	FDU14	OVSAVF		
Item				Indoor unit FDU140VF	Outdoor unit FDC140VSA		
Power sour	ce			3 Phase, 380-415V	, 50Hz / 380V, 60Hz		
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)) ∼ 14.5(Max.)]		
	Nominal heating capacity	(range)	kW	15.5 [4.0(Min.)) ∼ 16.5(Max.)]		
	Power consumption Cooling			4.	93		
	Tower consumption	Heating	kW	4.21			
	Max power consumption			10	.20		
	Running current	Cooling			/ 8.2		
		Heating	Α		/ 7.1		
Operation	Inrush current, max current				18		
data	Power factor	Cooling	%	91			
		Heating	,,,		/ 90		
	EER	Cooling			76		
	СОР	Heating		3.	68		
	Sound power level	Cooling Heating		70	73		
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 47 Hi: 40 Me: 35 Lo: 30	57 59		
	Silent mode sound pressu		1 1	_	53/47 (Normal/Silent)		
Exterior dim	nensions (Height × Width ×		mm	280 × 1,370 × 740	845 × 970 × 370		
Exterior app		. ,		·	Stucco white		
(Munsell co	olor)			_	(4.2Y7.5/1.1) near equivalent		
Net weight			kg	54	82		
Compresso	r type & Q'ty			_	RMT5126MCE4×1		
Compresso	r motor (Starting method)		kW	_	Direct line start		
	oil (Amount, type)		l	_	0.9 M-MA68		
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl.	the amount for the piping of : 30m)		
Heat exchai	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant	control			Electronic ex	pansion valve		
Fan type &	Q'ty			Centrifugal fan ×3	Propeller fan ×1		
Fan motor (Stating method)		W	100 + 200 < Direct line start >	86 < Direct line start >		
Air flow		Cooling Heating	m³/min	P-Hi: 48 Hi: 35 Me: 28 Lo: 22	75 73		
Available ex	ternal static pressure		Pa	Standard: 60 Max: 200	0		
Outside air				Possible	_		
Air filter, Qu	ality / Quantity			Procure locally	_		
Shock & vib	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hea	ter		W	_	20 (Crankcase heater)		
0	Remote control			(Option) Wired :RC-EX3, RC-E5,	RCH-E3 Wireless : RCN-KIT4-E2		
Operation control	Room temperature control			Thermostat b	by electronics		
CONTROL	Operation display			-	_		
Safety equi	pments			Frost protecti Internal thermos	tion for fan motor on thermostat stat for fan motor emperature protection		
	Refrigerant piping size (O	.D.)	mm	Liquid line: I.U. φ 9.52 (3/8") Pipe Gas line: φ 15.88 (5/8") φ	φ 9.52(3/8")×0.8 O.U. φ 9.52 (3/8") 15.88(5/8")×1.0 φ 15.88 (5/8")		
	Connecting method			Flare piping	Flare piping		
Installation	Attached length of piping		m	- uno piping	– I iaic piping		
data	Insulation for piping			Necessary (both I	 _iquid & Gas lines)		
	Refrigerant line (one way)	lenath	m	2 .	.50m		
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
	Drain hose	C. u.i.u i.U.		Hose connectable VP25 (I.D.25, O.D.32)	Hole size $\phi 20 \times 3pcs$		
Drain pump, max lift height			mm	Built-in drain pump,600	— — — — — — — — — — — — — — — — — — —		
	ded breaker size		A		<u>-</u>		
	ked rotor ampere)		A	5.	/5		
Interconnec		ımber	'		ble) / Termainal block (Screw fixing type)		
IP number				IPX0	IP24		
Standard ad	ccessories			Mounting kit, Drain hose	_		
Option parts				<u> </u>	 		
Notes (1) Th					The pine length is 7 Fm		

` '		0				1 1 0
Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	60Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	oura	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote controller is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (7) The factory E.S.P. setting is set within the range of 80 150 Pa.lf SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 200 Pa.(For RC-EX3 and RC-E5 only)

(5) Duct connected-Low/Middle static pressure type (FDUM)

(a) Single type

			Model	FDUM10	OVNAVF2	
ltem				Indoor unit FDUM100VF2	Outdoor unit FDC100VNA	
Power source	, , , , , , , , , , , , , , , , , , , ,			1 Phase, 220-240V,		
	Nominal cooling capacity (kW	10.0 [4.0(Min.)	72	
	Nominal heating capacity (range)		kW	11.2 [4.0(Min.)	72	
	Power consumption	Cooling	ļ ļ	2.84		
		Heating	kW	2.78 6.40		
	Max power consumption	0 "				
	Running current	Cooling		13.6 /		
	Invited attract may attract	Heating +	A	13.3 / 5,		
Operation	Inrush current, max current					
data	Power factor	Cooling Heating	%	91 91		
	EER	Cooling		3.9		
	COP	Heating	 	4.		
		Cooling			50	
	Sound power level	Heating		65	70	
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 44 Hi: 38 Me: 36 Lo: 30	54 56	
	Silent mode sound pressu			_	50/44 (Normal/Silent)	
xterior dim	ensions (Height × Width ×		mm	280 × 1,370 × 740	845 × 970 × 370	
Exterior app		-11			Stucco white	
Munsell co				-	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	54	80	
Compressor	r type & Q'ty			_	RMT5126MCE3×1	
	r motor (Starting method)		kW	_	Direct line start	
	oil (Amount, type)		Q	_	0.9 M-MA68	
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t	the amount for the piping of : 30m)	
leat exchar	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant o	control			Electronic ex	pansion valve	
an type & 0	Q'ty			Centrifugal fan ×3	Propeller fan ×1	
an motor (Stating method)		W	100 + 130 < Direct line start >	86 < Direct line start >	
Air flow		Cooling Heating	m³/min	P-Hi: 36 Hi: 28 Me: 25 Lo: 19	75 73	
Available ex	ternal static pressure	riodanig	Pa	Standard: 60 Max: 100	_	
Outside air i				Possible	_	
	ality / Quantity			Procure locally	_	
	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
lectric hea			W	_	20 (Crankcase heater)	
	Remote control			(Option) Wired: RC-EX3,RC-E5,		
Operation	Room temperature control			Thermostat b		
control	Operation display			-	-	
Safety equip	oments			Overload protect Frost protecti Internal thermos Abnormal discharge t	on thermostat tat for fan motor	
	Refrigerant piping size (O.	.D.)	mm	Liquid line: I/U φ 9.52 (3/8") Pipe α	φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8")	
					15.88(5/8")×1.0	
	Connecting method			Flare piping	Flare piping	
	Attached length of piping		m	— NI (1. 1)	—	
lata	Insulation for piping	longth		Necessary (both L	,	
	Refrigerant line (one way)		m	Max. Max.50m (Outdoor unit is higher)		
	Vertical height diff. between O.U. and Drain hose		m	Hose connectable with VP25(O.D.32)	Max.15m (Outdoor unit is lower)	
			mm	Built-in drain pump, 600	Hole size φ 20 × 3pcs	
Drain pump, max lift height Recommended breaker size			mm A	built-iii uraiii puriip , 600		
L.R.A. (Locked rotor ampere)						
nterconnec		ımher	A	ϕ 1.6mm × 3 cores (Including earth cab		
number	ung wires Size x Core nu	ui i iDel		φ r.omm × 3 cores (including earth cab	IP24	
Standard ac	ressories			Mounting kit, Drain hose		
Option parts				UM-F		
	ne data are measured at the	following	oonditio		The nine length is 7.5m	

Notes (1) The data are measured at the following conditions.

The pipe length is	7.5m	

_	(.) aata a	me pipe ionginie mem					
	Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
	Operation	DB	WB	DB	WB	of indoor unit	Staridards
	Cooling	27°C	19°C 35°C 2		24°C	60Pa	ISO5151-T1
	Heating	20°C	_	7°C	6°C	oura	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

			Model	FDUM10	0VSAVF2			
Item				Indoor unit FDUM100VF2	Outdoor unit FDC100VSA			
Power sour				3 Phase, 380-415V,				
	Nominal cooling capacity	<u> </u>	kW	10.0 [4.0(Min.)				
	Nominal heating capacity	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	kW	11.2 [4.0(Min.)	72			
	Power consumption	Cooling	l	2.84				
		Heating	kW	2.				
	Max power consumption	0 "			.20			
	Running current	Cooling	,	4.4 / 4.6 4.3 / 4.5				
	Inrush current, max current		Α		7 4.5 17			
Operation				<u> </u>	/ 94			
data	Power factor	Cooling Heating	%		/ 94 / 94			
	EER	Cooling		3.9				
	COP	Heating	}	4.				
		Cooling						
	Sound power level	Heating		65	70			
		Cooling	dB(A)		54			
	Sound pressure level	Heating	""	P-Hi: 44 Hi: 38 Me: 36 Lo: 30	56			
	Silent mode sound pressu		1 1	_	50/44 (Normal/Silent)			
Exterior dim	nensions (Height × Width ×		mm	280 × 1,370 × 740	845 × 970 × 370			
Exterior app	<u> </u>			,	Stucco white			
(Munsell co				_	(4.2Y7.5/1.1) near equivalent			
Net weight			kg	54	82			
Compresso	r type & Q'ty			_	RMT5126MCE4×1			
Compresso	r motor (Starting method)		kW	-	Direct line start			
Refrigerant oil (Amount, type)			l	-	0.9 M-MA68			
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl.	the amount for the piping of : 30m)			
Heat excha	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant				Electronic ex	pansion valve			
Fan type &				Centrifugal fan ×3	Propeller fan ×1			
Fan motor (Starting method)		W	100 + 130 < Direct line start >	86 < Direct line start >			
Air flow		Cooling	m³/min	P-Hi:36 Hi:28 Me:25 Lo:19	75			
		Heating			73			
	ternal static pressure		Pa	Standard: 60 Max: 100	-			
Outside air				Possible	_			
	ality / Quantity			Procure locally				
	ration absorber	-	141	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)			
Electric hea	1		W	(Ontion) Willed - DO EVO DO E5	20 (Crankcase heater)			
Operation	Remote control Room temperature control	i		(Option) Wired: RC-EX3,RC-E5,				
control	Operation display	1		mermostat c	by electronics			
	Operation display			Overload protect	ion for fan motor			
Cofoticia	am anta				on thermostat			
Safety equip	oments				tat for fan motor			
				Abnormal discharge to	· · · · · · · · · · · · · · · · · · ·			
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U φ 9.52 (3/8") Pipe α				
	0 11 0 1				15.88(5/8")×1.0			
	Connecting method			Flare piping	Flare piping			
	Attached length of piping		m	Nonconn : /ltl-	iquid ⁹ Coo linea)			
data	Insulation for piping Refrigerant line (one way)	longth	m	Necessary (both L	.iquid & Gas lines) .50m			
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)				
		u. and i.U.	m	Hose connectable with VP25(O.D.32)	Max.15m (Outdoor unit is lower) Hole size $\phi 20 \times 3pcs$			
Drain numn	Drain hose		mm	Built-in drain pump, 600	-			
	Orain pump, max lift height Recommended breaker size		mm A	Duit-iii draiii purrip , 600				
	R.A. (Locked rotor ampere)				0			
	<u>i </u>	ımher	Α		le)/ Termainal block (Screw fixing type)			
IP number	sterconnecting wires Size × Core number			Ψ 1.6Him × 3 cores (including earth cab	IP24			
Standard ad	ccessories			Mounting kit, Drain hose	— —			
Option part				UM-F				
Sparen part	-			Olvi-i				

()		5				
Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	60Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	oura	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

			Model	FDUM12	25VNAVF				
Item				Indoor unit FDUM125VF	Outdoor unit FDC125VNA				
Power source				1 Phase, 220-240V,					
	Nominal cooling capacity	<u> </u>	kW	12.5 [5.0(Min.)	, /2				
	Nominal heating capacity	` ' ' 	kW	14.0 [4.0(Min.)	72				
	Power consumption	Cooling	ļ ļ	4.:					
		Heating	kW	3.					
	Max power consumption	0 "		6.					
	Running current	Cooling	,	20.3 / 21.3 17.8 / 18.7					
	Inrush current, max curren	Heating	Α		26				
Operation	Cooling			<u> </u>					
data	Power factor	Heating	%	93 90					
	EER	Cooling		2.					
	COP	Heating	} }	3.					
		Cooling		· I					
	Sound power level	Heating		67	71				
		Cooling	dB(A)		55				
	Sound pressure level	Heating		P-Hi: 45 Hi: 40 Me: 34 Lo: 29	57				
	Silent mode sound pressu			_	51/45 (Normal/Silent)				
Exterior dim	nensions (Height × Width ×		mm	280 × 1,370 × 740	845 × 970 × 370				
Exterior app	<u> </u>				Stucco white				
(Munsell co				_	(4.2Y7.5/1.1) near equivalent				
Net weight			kg	54	80				
Compresso	r type & Q'ty			-	RMT5126MCE3×1				
Compresso	r motor (Starting method)		kW	_	Direct line start				
Refrigerant oil (Amount, type)			l	-	0.9 M-MA68				
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t					
Heat exchar	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing				
Refrigerant				Electronic ex	pansion valve				
Fan type &				Centrifugal fan ×3	Propeller fan ×1				
Fan motor (Stating method)		W	100 + 200 < Direct line start >	86 < Direct line start >				
Air flow		Cooling	m³/min	P-Hi:39 Hi:32 Me:26 Lo:20	75				
		Heating			73				
	ternal static pressure		Pa	Standard: 60 Max: 100	-				
Outside air				Possible	_				
	ality / Quantity			Procure locally	— Dubbanalana (fanananana)				
Electric hea	ration absorber		W	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor) 20 (Crankcase heater)				
Electric nea	Remote control		VV	(Option) Wired: RC-EX3,RC-E5,	,				
Operation	Room temperature control	i		· · · · · · · · · · · · · · · · · · ·	by electronics				
control	Operation display			memostat t	-				
	, , , , , , , , , , , , , , , , , , , ,				ion for fan motor on thermostat				
Safety equip	oments			Internal thermos Abnormal discharge to	tat for fan motor emperature protection				
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U φ 9.52 (3/8") Pipe α Gas line: φ 15.88 (5/8") φ	φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") 15.88(5/8")×1.0 φ 15.88 (5/8")				
	Connecting method			Flare piping	Flare piping				
Installation	Attached length of piping		m	<u> </u>	-				
data	Insulation for piping			Necessary (both L	iquid & Gas lines)				
	Refrigerant line (one way)	length	m		.50m				
	Vertical height diff. between O.	U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)				
	Drain hose			Hose connectable with VP25(O.D.32)	Hole size $\phi 20 \times 3pcs$				
	, max lift height		mm	Built-in drain pump , 600	-				
	Recommended breaker size		A A		_				
	R.A. (Locked rotor ampere)				.0				
Interconnec	ting wires Size × Core nu	umber			le)/ Termainal block (Screw fixing type)				
IP number				IPX0	IP24				
Standard ac				Mounting kit, Drain hose	-				
Option parts	S			UM-F	·L3EF				

` '		0				1 1 0
Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	60Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	oura	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

			Model	FDUM12	25VSAVF			
Item				Indoor unit FDUM125VF	Outdoor unit FDC125VSA			
Power sour					50Hz / 380V, 60Hz			
	Nominal cooling capacity		kW	12.5 [5.0(Min.)	72			
	Nominal heating capacity	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	kW	14.0 [4.0(Min.)	72			
	Power consumption	Cooling	l -		36			
		Heating	kW	3.				
	Max power consumption	0 "			.20			
	Running current	Cooling	,	6.8 / 7.2 5.9 / 6.2				
	Invision comment many commen	Heating	A	5.9				
Operation	Inrush current, max curren			93 /				
data	Power factor Cooling Heating		% -	937				
ı	EER Cooling			2.				
ı	COP	Heating	}	3.				
ı		Cooling						
ı	Sound power level	Heating		67	71			
1		Cooling	dB(A)		55			
1	Sound pressure level	Heating	1 ` 1	P-Hi: 45 Hi: 40 Me: 34 Lo: 29	57			
	Silent mode sound pressu	re level	1 [_	51/45 (Normal/Silent)			
Exterior din	nensions (Height × Width ×	Depth)	mm	280 × 1,370 × 740	845 × 970 × 370			
Exterior app	pearance	-		_	Stucco white			
(Munsell co	olor)			_	(4.2Y7.5/1.1) near equivalent			
Net weight			kg	54	82			
	or type & Q'ty			_	RMT5126MCE4×1			
	or motor (Starting method)	_	kW	_	Direct line start			
	oil (Amount, type)		Q	_	0.9 M-MA68			
	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl.				
Heat excha				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant				Electronic ex				
Fan type &				Centrifugal fan ×3	Propeller fan ×1			
Fan motor ((Starting method)		W	100 + 200 < Direct line start >	86 < Direct line start >			
Air flow		Cooling	m³/min	P-Hi: 39 Hi: 32 Me: 26 Lo: 20	75			
		Heating		01 1 1 00 14 100	73			
	xternal static pressure		Pa	Standard: 60 Max: 100				
Outside air				Possible				
	ality / Quantity			Procure locally	Dubbar alasya (far asmanasar)			
Electric hea	oration absorber		w	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor) 20 (Crankcase heater)			
Electric flea	Remote control		VV	(Ontion) Wired : BC EV2 BC E5	RCH-E3 Wireless : RCN-KIT4-E2			
Operation	Room temperature control	İ			by electronics			
control	Operation display			memostat t	-			
	Toporation display			Overload protect	ion for fan motor			
Safety equi	nments			Frost protection	on thermostat			
outory oqui	priorito			Internal thermos Abnormal discharge te	tat for fan motor			
				Liquid line: I/U ϕ 9.52 (3/8") Pipe				
	Refrigerant piping size (O	.D.)	mm -		^{φ 9.52} (3/6)×0.6			
	Connecting method			Flare piping	Flare piping			
Installation	Attached length of piping		m	i iaie pipilig	- iaie pipilig			
data	Insulation for piping			Necessary (both L	iquid & Gas lines)			
	Refrigerant line (one way)	lenath	m		50m			
	Vertical height diff, between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
	Drain hose			Hose connectable with VP25(O.D.32)	Hole size ϕ 20 × 3pcs			
Drain pump	Orain pump, max lift height		mm	Built-in drain pump , 600	<u> </u>			
	Recommended breaker size		Α	-	_			
	.R.A. (Locked rotor ampere)		Α	5.	.0			
	nterconnecting wires Size × Core number				le) / Termainal block (Screw fixing type)			
IP number	<u> </u>			IPX0	IP24			
Standard a	ccessories			Mounting kit, Drain hose	_			
Option part	S			UM-F	L3EF			
- p - p - m								

` '					11 0	
Item	Indoor air t	emperature	Outdoor air temperature		External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C 35°C		24°C	60Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	60Pa	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz. (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

			Model	FDUM14	OVNAVF			
Item				Indoor unit FDUM140VF	Outdoor unit FDC140VNA			
Power sour				1 Phase, 220-240V				
	Nominal cooling capacity	<u> </u>	kW	13.6 [5.0(Min.)	, /2			
	Nominal heating capacity	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	kW	15.5 [4.0(Min.)	72			
	Power consumption	Cooling	l		93			
		Heating	kW	4.21				
	Max power consumption	0 "		6.				
	Running current	Cooling	,	22.8 / 23.8 20.3 / 21.3				
	Invision accurate many accurate	Heating	A		27 27			
Operation	Inrush current, max current			·	4			
data	Power factor Coolin		%		0			
	EER	Heating Cooling		2.				
	COP	Heating		3.				
	COF	Cooling		3.	00			
	Sound power level	Heating		70	73			
		Cooling	dB(A)		57			
	Sound pressure level	Heating	4200	P-Hi: 47 Hi: 40 Me: 35 Lo: 30	59			
	Silent mode sound pressu			_	53/47 (Normal/Silent)			
Exterior dim	nensions (Height × Width ×		mm	280 × 1,370 × 740	845 × 970 × 370			
Exterior app	<u> </u>	-1- /		,	Stucco white			
(Munsell co				_	(4.2Y7.5/1.1) near equivalent			
Net weight	,		kg	54	80			
Compresso	r type & Q'ty			_	RMT5126MCE3×1			
Compressor motor (Starting method)			kW	_	Direct line start			
Refrigerant oil (Amount, type)			Q	_	0.9 M-MA68			
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl.	the amount for the piping of : 30m)			
Heat exchai	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant	control			Electronic ex	pansion valve			
Fan type &				Centrifugal fan ×3	Propeller fan ×1			
Fan motor (Stating method)		W	100 + 200 < Direct line start >	86 < Direct line start >			
Air flow		Cooling	m³/min	P-Hi: 48 Hi: 35 Me: 28 Lo: 22	75			
		Heating			73			
	ternal static pressure		Pa	Standard: 60 Max: 100	-			
Outside air				Possible	-			
	ality / Quantity			Procure locally				
	ration absorber		10/	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)			
Electric hea	1		W	- C .: W	20 (Crankcase heater)			
Operation	Remote control			(Option) Wired: RC-EX3,RC-E5,				
control	Room temperature control Operation display			mermostat t	by electronics			
	Operation display			Overland protect	ion for fan mater			
					ion for fan motor on thermostat			
Safety equip	oments			Internal thermos	tat for fan motor			
				Abnormal discharge to	· · · · · · · · · · · · · · · · · · ·			
	Refrigerant piping size (O	.D.)	mm -	Liquid line: I/U φ 9.52 (3/8") Pipe				
	0 11 0 1				15.88(5/8")×1.0			
	Connecting method			Flare piping	Flare piping			
	Attached length of piping		m					
data	Insulation for piping	1		Necessary (both L	,			
	Refrigerant line (one way)		m		.50m			
	Vertical height diff. between O.	U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
Drain	Drain hose		mm	Hose connectable with VP25(O.D.32)	Hole size φ20 x 3pcs			
	Orain pump, max lift height		mm ^	Built-in drain pump , 600				
	Recommended breaker size		A		 .0			
	R.A. (Locked rotor ampere)				.u le)/ Termainal block (Screw fixing type)			
IP number	terconnecting wires Size × Core number			φ 1.6mm × 3 cores (including earth cab	IP24			
Standard ad	ccessories			Mounting kit, Drain hose	1F24 —			
Option part				UM-F				
option part				Olvi-i	LULI			

. ()		5				
Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19℃	35°C	24°C	60Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	OUFa	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

			Model	FDUM14	10VSAVF			
Item				Indoor unit FDUM140VF	Outdoor unit FDC140VSA			
Power sour					, 50Hz / 380V, 60Hz			
	Nominal cooling capacity	<u> </u>	kW	13.6 [5.0(Min.)				
	Nominal heating capacity	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	kW	15.5 [4.0(Min.)				
	Power consumption	Cooling	ļ ļ		93			
		Heating	kW	4.				
	Max power consumption	0 "			.20			
	Running current	Cooling	,	7.8 / 8.2 6.8 / 7.1				
	Invision accurate many accurate	Heating	Α		18			
Operation	Inrush current, max current			·	10 11			
data	Power factor	Cooling Heating	%		/ 90			
	EER	Cooling			7 90 76			
	COP	Heating	 	3.				
		Cooling						
	Sound power level	Heating	1 1	70	73			
		Cooling	dB(A)		57			
	Sound pressure level	Heating	1 ' '	P-Hi: 47 Hi: 40 Me: 35 Lo: 30	59			
	Silent mode sound pressu		1 1	_	53/47 (Normal/Silent)			
Exterior dim	nensions (Height × Width ×	Depth)	mm	280 × 1,370 × 740	845 × 970 × 370			
Exterior app	pearance				Stucco white			
(Munsell co	olor)			_	(4.2Y7.5/1.1) near equivalent			
Net weight			kg	54	82			
Compresso	r type & Q'ty			-	RMT5126MCE4×1			
Compresso	r motor (Starting method)		kW	_	Direct line start			
Refrigerant	oil (Amount, type)		l	_	0.9 M-MA68			
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t	the amount for the piping of : 30m)			
Heat excha	nger			Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant	control			Electronic ex	pansion valve			
Fan type &				Centrifugal fan ×3	Propeller fan ×1			
Fan motor (Starting method)		W	100 + 200 < Direct line start >	86 < Direct line start >			
Air flow		Cooling	m³/min	P-Hi: 48 Hi: 35 Me: 28 Lo: 22	75			
		Heating			73			
	ternal static pressure		Pa	Standard: 60 Max: 100				
Outside air				Possible	_			
	ality / Quantity			Procure locally	— — — — — — — — — — — — — — — — — — —			
Electric hea	ration absorber		W	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor) 20 (Crankcase heater)			
Electric flea	Remote control		VV	(Ontion) Wired : BC EV2 BC E5	RCH-E3 Wireless : RCN-KIT4-E2			
Operation	Room temperature control	i			by electronics			
control	Operation display			memostat t	-			
Safety equip	, , , , , , , , , , , , , , , , , , , ,			Frost protecti Internal thermos	tion for fan motor on thermostat tat for fan motor			
	Refrigerant piping size (O	D)	mm	Liquid line: I/U φ 9.52 (3/8") Pipe	, , , , , , , , , , , , , , , , , , , ,			
	0 11 0 1				15.88(5/8")×1.0			
	Connecting method			Flare piping	Flare piping			
	Attached length of piping		m	— NI // // //	invid 9 Cas lines			
data	Insulation for piping Refrigerant line (one way)	longth	p=	Necessary (both L				
	- 7/		m	Max.50m (Outdoor unit is higher)	.50m Max 15m (Outdoor unit is lower)			
	Vertical height diff. between O. Drain hose	o. and i.U.	m	Hose connectable with VP25(O.D.32)	Max.15m (Outdoor unit is lower) Hole size ϕ 20 × 3pcs			
Drain numn			mm	Built-in drain pump, 600	-			
	Orain pump, max lift height Recommended breaker size		mm A	Duit-iii uraiii puriip , 600	<u>–</u> -			
	ked rotor ampere)		A		.0			
Interconnec	<u>i </u>	ımher	^		ole)/ Termainal block(Screw fixing type)			
IP number	ung wires Size x Core fit	unibel		φ r.emm × 3 cores (including earth cab	IP24			
Standard ad	ccessories			Mounting kit, Drain hose	IF24 —			
Option part				UM-F				
Sparen part	-			OIVI-I				

` '		0				11 0
Item	n Indoor air temperature Outdoor air temperature		External static pressure	Standarda		
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C 35°C 24°C		24°C	60Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	buPa	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.
- (6) Static pressure of option air filter "UM-FL3EF" is 5Pa initially.
- (7) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

(b) Twin type

(,			Model	FDUM100	OVNAPVF
Item			model	Indoor unit FDUM50VF (2 units)	Outdoor unit FDC100VNA
Power source	ce			1 Phase, 220-240V,	, 50Hz / 220V, 60Hz
	Nominal cooling capacity (range)	kW	10.0 [4.0(Min.)	→ 11.2(Max.)]
	Nominal heating capacity (range)		kW	11.2 [4.0(Min.)	, /2
	Power consumption Cooling			3.2	
	Heating		kW	3.2	
	Max power consumption			6.4	
	Running current Cooling			14.6 /	
		Heating	Α	14.4 /	
Operation	Inrush current, max curren			5,	
data	Power factor	Cooling	%	9	
	EER	Heating			
	COP	Cooling Heating		3.0	
	СОР	Cooling		3.4	49
	Sound power level	Heating		60	70
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 37 Hi: 32 Me: 29 Lo: 26	54 56
	Silent mode sound pressu	re level		_	50 / 44 (Normal / Silent)
Exterior dim	nensions (Height × Width ×	Depth)	mm	280 × 750 × 635	845 × 970 × 370
Exterior app				_	Stucco white
(Munsell co	olor)			_	(4.2Y7.5/1.1) near equivalent
Net weight			kg	29	80
	r type & Q'ty			_	RMT5126MCE3×1
	r motor (Starting method)		kW	_	Direct line start
	oil (Amount, type)		l	_	0.9 M-MA68
	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t	
Heat exchar				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing
Refrigerant					pansion valve
Fan type & 0				Centrifugal fan ×1	Propeller fan ×1
Fan motor (Stating method)		W	100 < Direct line start >	86 < Direct line start >
Air flow		Cooling Heating	m³/min	P-Hi:13 Hi:10 Me:9 Lo:8	75 73
Available ex	ternal static pressure		Pa	Standard: 35 Max: 100	_
Outside air i	intake			Possible	_
Air filter, Qu	ality / Quantity			Procure locally	_
	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)
Electric hea			W	_	20 (Crankcase heater)
Operation	Remote control			(Option) wired: RC-EX3,RC-E5,	
control	Room temperature control			Thermostat b	by electronics
	Operation display			Overload protect	- ion for fan motor
Safety equip	pments			Frost protection Internal thermos Abnormal discharge to	tat for fan motor
	Refrigerant piping size (O.	.D.)	mm	Liquid line: I/U φ 6.35 (1/4") ② φ 9.52(3/8") Gas line: I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0)x0.8 ① ϕ 9.52(3/8")x0.8 O/U ϕ 9.52 (3/8")
	Connecting method			Gas line: I/O φ 12.7 (1/2") ② φ 12.7(1/2")x0 Flare piping	0.8 (1) φ 15.88(5/8")Χ1.0 Ο/Ο φ 15.88 (5/8") Flare piping
Installation	Attached length of piping		m		
data	Insulation for piping			Necessary (both L	iquid & Gas lines)
	Refrigerant line (one way)		m	Max.	.50m
	Vertical height diff. between O.	U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)
	Drain hose			Hose connectable with VP25(O.D.32)	Hole size ϕ 20 x 3pcs
Drain pump, max lift height		mm	Built-in drain pump , 600	<u> </u>	
Recommended breaker size			Α	_	
L.R.A. (Locked rotor ampere)			Α	5.	
Interconnec	cting wires Size × Core nu	ımber		ϕ 1.6mm × 3 cores (Including earth cab	, 0 31 7
IP number				IPX0	IP24
Standard ac				Mounting kit, Drain hose	_
Option parts	S			UM-F	
					The pine length is 7 Em

Notes (1) The data are measured at the following conditions.

Item	Indoor air t	emperature	Outdoor air temperature		External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	35Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	35Pa	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

 (8) Static pressure of optional air filter "UM-FL1EF" is 5Pa initially.

 (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

			Model	FDUM10	0VSAPVF			
Item				Indoor unit FDUM50VF (2 units)	Outdoor unit FDC100VSA			
Power sour	· · · · · · · · · · · · · · · · · · ·			3 Phase, 380-415V,				
	Nominal cooling capacity		kW	10.0 [4.0(Min.)				
	Nominal heating capacity (range) Power consumption Cooling		kW	11.2 [4.0(Min.)	· · · · · ·			
				3.25				
	May navier consumption Heating		kW	3.21 10.20				
	Max power consumption							
	Running current Cooling Heating		Α	4.8 / 5.1				
	Inrush current, max curren		^	4.8 / 5.0 5. 17				
Operation	,	Cooling		5, 17 98/97				
data	Power factor	Heating	%	97 /				
	EER	Cooling		3.				
ĺ	COP	Heating		3.				
		Cooling						
	Sound power level	Heating		60	70			
		Cooling	dB(A)	D.I. 07.11 00.11 00.1	54			
	Sound pressure level	Heating	`	P-Hi: 37 Hi: 32 Me: 29 Lo: 26	56			
	Silent mode sound pressu	re level		-	50 / 44 (Normal / Silent)			
Exterior din	nensions (Height × Width ×	Depth)	mm	280 × 750 × 635	845 × 970 × 370			
Exterior app	pearance				Stucco white			
(Munsell co	olor)			_	(4.2Y7.5/1.1) near equivalent			
Net weight			kg	29	82			
	r type & Q'ty			_	RMT5126MCE4×1			
Compresso	r motor (Starting method)		kW	_	Direct line start			
Refrigerant	oil (Amount, type)		l	_	0.9 M-MA68			
	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t				
Heat excha				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant				Electronic ex				
Fan type &				Centrifugal fan ×1	Propeller fan ×1			
Fan motor (Stating method)	,	W	100 < Direct line start >	86 < Direct line start >			
Air flow		Cooling Heating	m³/min	P-Hi:13 Hi:10 Me:9 Lo:8	75 73			
Available ex	ternal static pressure		Pa	Standard: 35 Max: 100	-			
Outside air	intake			Possible	_			
Air filter, Qu	ality / Quantity			Procure locally	_			
Shock & vib	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)			
Electric hea	·		W	_	20 (Crankcase heater)			
Operation	Remote control			(Option) wired: RC-EX3,RC-E5,				
control	Room temperature control			Thermostat b	by electronics			
	Operation display			_	-			
Safety equi	pments			Overload protect Frost protecti Internal thermos Abnormal discharge t	on thermostat tat for fan motor			
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52(3/8") Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7(1/2")x0	x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8")			
	Connecting method			Flare piping	6 (1) φ 15.66(5/6)x1.0 O/O φ 15.66 (5/6) Flare piping			
Installation	Attached length of piping		m		— — —			
data Insulation for piping			Necessary (both L	iquid & Gas lines)				
	Refrigerant line (one way)	length	m		.50m			
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
Drain hose			Hose connectable with VP25(O.D.32)	Hole size ϕ 20 x 3pcs				
Drain pump, max lift height		mm	Built-in drain pump , 600	- ·				
Recommended breaker size		Α	-	-				
L.R.A. (Locked rotor ampere)			А	5.	-			
Interconnec	cting wires Size × Core nu	umber		ϕ 1.6mm × 3 cores (Including earth cab	le)/ Termainal block (Screw fixing type)			
IP number				IPX0	IP24			
Standard ad	ccessories			Mounting kit, Drain hose				
Option part				UM-F				
Notes (1) The data are measured at the following of				·	The pine length is 7 Em			

Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	35Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	SSPA	1303151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

 (8) Static pressure of optional air filter "UM-FL1EF" is 5Pa initially.

- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

			Model	FDUM12					
Item				Indoor unit FDUM60VF (2 units)	Outdoor unit FDC125VNA				
Power sour	1			1 Phase, 220-240V,	·				
	Nominal cooling capacity		kW	12.5 [5.0(Min.)					
	Nominal heating capacity		kW	14.0 [4.0(Min.)	. /2				
	Power consumption Cooling			4.1					
	May payor capaumation Heating		kW		3.75 6.40				
	Max power consumption								
	Running current Cooling Heating		Α	20.3 / 21.2 16.8 / 17.6					
	Inrush current, max curren		^	5, 26					
Operation	,	Cooling		9					
data	Power factor	Heating	%	9					
	EER	Cooling			76				
	COP	Heating			73				
	Sound power level	Cooling		60	71				
	Cound programs lovel	Heating Cooling	dB(A)	P-Hi:36 Hi:31 Me:28 Lo:25	55				
	Sound pressure level	Heating		P-HI:36 HI:31 WE:28 LO:25	57				
	Silent mode sound pressu	re level		_	51 / 45 (Normal / Silent)				
Exterior din	mensions (Height × Width ×	Depth)	mm	280 × 950 × 635	845 × 970 × 370				
Exterior app	•			_	Stucco white				
(Munsell co					(4.2Y7.5/1.1)near equivalent				
Net weight			kg	34	80				
	or type & Q'ty		kW	_	RMT5126MCE3×1				
	Compressor motor (Starting method)			_	Direct line start				
	oil (Amount, type)	I 4I-\	l	— D440A 0 00 ii (II	0.9 M-MA68				
	(Type, amount, pre-charge	iengtn)	kg	R410A 3.8kg in outdoor unit (Incl.	Straight fin & inner grooved tubing				
Heat exchanger Refrigerant control				Louver fin & inner grooved tubing	pansion valve				
Fan type &				Centrifugal fan ×2	Propeller fan ×1				
	(Stating method)		W	130 < Direct line start >	86 < Direct line start >				
Air flow	(Otating motiloa)	Cooling	m³/min	P-Hi: 20 Hi: 15 Me: 13 Lo: 10	75				
	xternal static pressure	Heating	Pa	Standard : 35 Max : 100	73				
Outside air	· · · · · · · · · · · · · · · · · · ·		ıα	Possible	_				
	uality / Quantity			Procure locally	_				
	bration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)				
Electric hea			W	– 20 (Crankcase heater)					
0	Remote control			(Option) wired: RC-EX3,RC-E5,	RCH-E3 wireless : RCN-KIT4-E2				
Operation control	Room temperature control			Thermostat b	by electronics				
COLLIO	Operation display			_	_				
Safety equi	ipments			Overload protect Frost protecti Internal thermos Abnormal discharge t	on thermostat tat for fan motor				
	Refrigerant piping size (O.	.D.)	mm	Liquid line: I/U φ 6.35 (1/4") ② φ 9.52(3/8"):	x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8")				
	Connecting method	- ,		Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7(1/2")x0 Flare piping	.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8") Flare piping				
Installation			m	_	_				
data Insulation for piping			Necessary (both L	iquid & Gas lines)					
	Refrigerant line (one way)		m		.50m				
	Vertical height diff. between O.	U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)				
Drain hose			Hose connectable with VP25(O.D.32)	Hole size ϕ 20 x 3pcs					
Drain pump, max lift height		mm	Built-in drain pump , 600	_					
Recommended breaker size			Α						
L.R.A. (Locked rotor ampere)			Α		.0				
Interconnec	cting wires Size × Core nu	umber		, ,	ole)/ Termainal block (Screw fixing type)				
	IP number Standard accessories			IPX0	IP24				
				Mounting kit, Drain hose					
Option part	is The data are managered at the	. f = 11 =!. = =		UM-F	The pine length is 7.5m				

Item	Indoor air t	emperature	Outdoor air temperature		External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	35Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	35Pa	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

 (8) Static pressure of optional air filter "UM-FL2EF" is 5Pa initially.

 (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)



				FDUM12	5VSAPVF				
Item			Model	Indoor unit FDUM60VF (2 units)	Outdoor unit FDC125VSA				
Power source					, 50Hz / 380V, 60Hz				
	Nominal cooling capacity	(range)	kW	12.5 [5.0(Min.)	~ 14.0(Max.)]				
	Nominal heating capacity	(range)	kW	14.0 [4.0(Min.)	~ 16.0(Max.)]				
	Power consumption Cooling]		53				
	Heating		kW		75				
	Max power consumption	T -			10.20				
	Running current Cooling			6.7 / 7.1					
		Heating	Α		⁷ 5.9				
Operation	Inrush current, max curren	1			17				
data	Power factor	Cooling	%		797				
	FED	Heating			7				
	EER	Cooling			76 72				
	COP	Heating		3.	73				
	Sound power level	Cooling Heating		60	71				
	Sound pressure level	Cooling Heating	dB(A)	P-Hi:36 Hi:31 Me:28 Lo:25	55 57				
	Silent mode sound pressu				51 / 45 (Normal / Silent)				
	nensions (Height × Width ×	Depth)	mm	280 × 950 × 635	845 × 970 × 370				
Exterior app				_	Stucco white				
(Munsell co	olor)				(4.2Y7.5/1.1) near equivalent				
Net weight			kg	34	82				
	r type & Q'ty				RMT5126MCE4×1				
Compressor motor (Starting method)			kW		Direct line start				
Refrigerant oil (Amount, type)			l		0.9 M-MA68				
Refrigerant (Type, amount, pre-charge length)			kg	<u> </u>	the amount for the piping of : 30m)				
Heat exchanger				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing				
Refrigerant control					pansion valve				
Fan type &			161	Centrifugal fan ×2	Propeller fan ×1				
ran motor (Stating method)	Caalin	W	130 < Direct line start >	86 < Direct line start >				
Air flow		Cooling Heating	m³/min	P-Hi:20 Hi:15 Me:13 Lo:10	75 73				
	ternal static pressure		Pa	Standard: 35 Max: 100					
Outside air	i i			Possible					
	ality / Quantity			Procure locally	_				
	ration absorber		16:	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)				
Electric hea			W	-	20 (Crankcase heater)				
Operation	Remote control				RCH-E3 wireless : RCN-KIT4-E2				
control	Room temperature contro	l		I hermostat b	by electronics				
Safety equip	Operation display			Frost protecti Internal thermos	- ion for fan motor on thermostat tat for fan motor				
				Abnormal discharge to Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52(3/8"):	emperature protection x0.8 ① ϕ 9.52(3/8")x0.8 O/U ϕ 9.52 (3/8")				
	Refrigerant piping size (O Connecting method	.D.)	mm	Gas line: I/U φ 12.7 (1/2") ② φ 12.7(1/2")x0 Flare piping					
Inetallation			m	i iaie pipilig	ι ιαιε μιμιιιί				
Installation data Attached length of piping Insulation for piping Refrigerant line (one way) length		m	— Necessary (both L	iquid & Gas lines)					
		m		.50m					
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)				
Drain hose		J. 4114 1.U.		Hose connectable with VP25(O.D.32)	Hole size ϕ 20 x 3pcs				
Drain pump, max lift height		mm	Built-in drain pump, 600	— — — — — — — — — — — — — — — — — — —					
Recommended breaker size		A							
L.R.A. (Locked rotor ampere)			A	5	.0				
Interconnecting wires Size × Core number					ble)/ Termainal block (Screw fixing type)				
IP number				IPX0	IP24				
	Standard accessories			Mounting kit, Drain hose	-				
Option parts					L2EF				
	Notes (1) The data are measured at the following conditions The pine length is 7.5m								

Item	Indoor air t	emperature	Outdoor air temperature		External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	35Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	35Pa	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

 (8) Static pressure of optional air filter "UM-FL2EF" is 5Pa initially.

- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

			Model	FDUM140	VNAPVF1			
Item				Indoor unit FDUM71VF1 (2 units)	Outdoor unit FDC140VNA			
Power source					, 50Hz / 220V, 60Hz			
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)) ~ 14.5(Max.)]			
	Nominal heating capacity	(range)	kW	15.5 [4.0(Min.)) ~ 16.5(Max.)]			
		Cooling		5.02				
	Power consumption Heating		kW	4.	20			
	Max power consumption		ĺ	6.	40			
	Cooling			22.5 / 23.5				
	Running current	Heating	A	18.8	/ 19.7			
	Inrush current, max currer	nt	i i	5,	27			
Operation		Cooling	0,1	9	7			
data	Power factor	Heating	%	9	7			
	EER	Cooling		2.	71			
	COP	Heating	1 1		69			
		Cooling						
	Sound power level	Heating		65	73			
		Cooling	dB(A)		57			
	Sound pressure level	Heating	""	P-Hi: 38 Hi: 33 Me: 29 Lo: 25	59			
	Silent mode sound pressu			_	53 / 47 (Normal / Silent)			
Exterior dim	nensions (Height × Width ×		mm	280 × 950 × 635	845 × 970 × 370			
Exterior apr		Бери	111111	200 × 930 × 000	Stucco white			
(Munsell co				_	(4.2Y7.5/1.1) near equivalent			
Net weight	5101)	-	lea.	34	80			
	or type & Q'ty		kg	34	RMT5126MCE3×1			
			1-14/					
	r motor (Starting method)		kW	_	Direct line start			
	oil (Amount, type)		_ l		0.9 M-MA68			
	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl.				
Heat excha				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant					pansion valve			
Fan type &				Centrifugal fan ×2	Propeller fan ×1			
Fan motor ((Stating method)		W	130 < Direct line start >	86 < Direct line start >			
Air flow		Cooling	m³/min	P-Hi: 24 Hi: 19 Me: 15 Lo: 10	75			
		Heating			73			
	kternal static pressure		Pa	Standard: 35 Max: 100	_			
Outside air				Possible	-			
	ality / Quantity			Procure locally	-			
Shock & vib	oration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)			
Electric hea	iter		W	– 20 (Crankcase heater)				
Operation	Remote control			(Option) wired: RC-EX3,RC-E5,	RCH-E3 wireless: RCN-KIT4-E2			
control	Room temperature contro	l		Thermostat b	by electronics			
CONTROL	Operation display			-	=			
				Overload protect	tion for fan motor on thermostat			
Safety equi	pments				tat for fan motor			
					emperature protection			
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U ϕ 9.52 (3/8") ② ϕ 9.52(3/8") Gas line: I/U ϕ 15.88 (5/8") ② ϕ 15.88(5/8")x				
	Connecting method			Flare piping	Flare piping			
Installation			m		- I als piping			
Installation Attached length of piping Insulation for piping Refrigerant line (one way) length Vertical height diff. between O.U. and I.U.		111	Necessary (both I	iguid & Gas lines)				
		m		.50m				
		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)				
Drain hose		111	Hose connectable with VP25(O.D.32)	Hole size ϕ 20 x 3pcs				
Drain pump, max lift height			mm	· /	Hole size φ zo x spcs			
			mm ^	Built-in drain pump , 600				
Recommended breaker size			A					
L.R.A. (Locked rotor ampere) Interconnecting wires Size × Core number			Α		.0			
	curing wires Size × Core n	urnber		, ,	ole)/ Termainal block (Screw fixing type)			
IP number				IPX0	IP24			
Standard ad				Mounting kit, Drain hose	_			
Option part					FL2EF			
Notes (1) Th	he data are measured at the	e following	conditio	ns.	The pipe length is 7.5m.			

Item	Indoor air t	emperature	Outdoor air temperature		External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	35Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	35Pa	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

 (8) Static pressure of optional air filter "UM-FL2EF" is 5Pa initially.

 (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)



Mo				FDUM140	DVSAPVF1			
Item			Model	Indoor unit FDUM71VF1 (2 units)	Outdoor unit FDC140VSA			
Power source					, 50Hz / 380V, 60Hz			
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)) ∼ 14.5(Max.)]			
	Nominal heating capacity (range)		kW	15.5 [4.0(Min.)				
	Power consumption Cooling]		02			
	Heating		kW		20			
	Max power consumption	1-			.20			
	Running current Cooling			7.5 / 7.9				
		Heating	Α		/ 6.6			
Operation	Inrush current, max currer	1		5, 18				
data	Power factor	Cooling	%		7			
		Heating			/ 97			
	EER	Cooling		2.				
	СОР	Heating		3.	69			
	Sound power level	Cooling Heating		65	73			
	Sound pressure level	Cooling Heating	dB(A)	P-Hi:38 Hi:33 Me:29 Lo:25	57 59			
	Silent mode sound pressu	ire level	<u> </u>		53 / 47 (Normal / Silent)			
Exterior dim	nensions (Height × Width ×	Depth)	mm	280 × 950 × 635	845 × 970 × 370			
Exterior app	pearance			_	Stucco white			
(Munsell co	olor)				(4.2Y7.5/1.1) near equivalent			
Net weight			kg	34	82			
	r type & Q'ty			-	RMT5126MCE4×1			
Compressor motor (Starting method)			kW	_	Direct line start			
	oil (Amount, type)		l	_	0.9 M-MA68			
Refrigerant (Type, amount, pre-charge length)			kg	<u> </u>	the amount for the piping of : 30m)			
Heat exchanger				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant					pansion valve			
Fan type &			L	Centrifugal fan ×2	Propeller fan ×1			
Fan motor (Stating method)	To "	W	130 < Direct line start >	86 < Direct line start >			
Air flow		Cooling Heating	m³/min	P-Hi: 24 Hi: 19 Me: 15 Lo: 10	75 73			
	ternal static pressure		Pa	Standard: 35 Max: 100	_			
Outside air				Possible	-			
	ality / Quantity			Procure locally	-			
	ration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)			
Electric hea	·		W	-	20 (Crankcase heater)			
Operation	Remote control				RCH-E3 wireless : RCN-KIT4-E2			
control	Room temperature contro	<u> </u>		Thermostat b	by electronics			
-	Operation display				_			
Safety equip	pments			Frost protecti Internal thermos	tion for fan motor on thermostat istat for fan motor emperature protection			
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U φ 9.52 (3/8") ② φ 9.52(3/8"). Gas line: I/U φ 15.88 (5/8") ② φ 15.88(5/8")x	x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8")			
	Connecting method			Flare piping	Flare piping			
Installation	Attached length of piping		m	——————————————————————————————————————	— — — —			
data Insulation for piping Refrigerant line (one way) length			Necessary (both I	iquid & Gas lines)				
		m	* :	.50m				
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
Drain hose			Hose connectable with VP25(O.D.32)	Hole size ϕ 20 x 3pcs				
Drain pump, max lift height		mm	Built-in drain pump , 600	—				
Recommended breaker size		Α	-	_				
L.R.A. (Locked rotor ampere)			Α	5	.0			
Interconnecting wires Size × Core number					ole)/ Termainal block (Screw fixing type)			
IP number				IPX0	IP24			
Standard ac	ccessories			Mounting kit, Drain hose	_			
Option part				•	FL2EF			
Notes (1) The data are measured at the following conditions The pipe length is 7.5m								

Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	35Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	35Pa	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.

 (7) Branching pipe set "DIS-WA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

 (8) Static pressure of optional air filter "UM-FL2EF" is 5Pa initially.

- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

(c) Triple type

Model				FDUM140VNATVF				
ltem				Indoor unit FDUM50VF (3 units)	Outdoor unit FDC140VNA			
Power source	ce			1 Phase, 220-240V	50Hz / 220V, 60Hz			
	Nominal cooling capaci	ty (range)	kW	13.6 [5.0(Min.)	~ 14.5(Max.)]			
	Nominal heating capacity (range)		kW	15.5 [4.0(Min.)	~ 16.5(Max.)]			
		Cooling		5.				
	Power consumption	Heating	kW		20			
	Max power consumptio		····	6.				
	max ponor concampas	Cooling		22.5				
	Running current	Heating	A	18.8				
	Inrush current, max curr		^ -		27			
Operation	musii current, max cun							
data	Power factor	Cooling	% -					
		Heating		9				
	EER	Cooling	<u> </u>	2.				
	COP	Heating		3.	69			
	Sound power level	Cooling		60	73			
	Souria power level	Heating			7.0			
	Carrad avassiva laval	Cooling	dB(A)	D 11: 27 11: 20 Ma : 20 La : 26	57			
	Sound pressure level	Heating		P-Hi: 37 Hi: 32 Me: 29 Lo: 26	59			
	Silent mode sound pres		1	_	53 / 47 (Normal / Silent)			
Exterior dim	nensions (Height × Width		mm	280 × 750 × 635	845 × 970 × 370			
Exterior app	<u>_</u>	12 /			Stucco white			
Munsell co				_	(4.2Y7.5/1.1) near equivalent			
Net weight	,,,,		kc	29	80			
	r type & Q'ty		kg					
			114/		RMT5126MCE3×1			
	r motor (Starting method)	kW		Direct line start			
	oil (Amount, type)		l	_	0.9 M-MA68			
	(Type, amount, pre-char	ge length)	kg	R410A 3.8kg in outdoor unit (Incl. t				
Heat exchanger				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant control				Electronic ex	pansion valve			
Fan type & 0	Q'ty			Centrifugal fan ×1	Propeller fan ×1			
Fan motor (Stating method)		W	100 < Direct line start >	86 < Direct line start >			
,	<u> </u>	Cooling	2		75			
Air flow		Heating	m³/min	P-Hi:13 Hi:10 Me:9 Lo:8	73			
Available ex	ternal static pressure	1	Pa	Standard: 35 Max: 100	<u>-</u>			
Outside air i	<u>'</u>			Possible	_			
	ality / Quantity			Procure locally				
	oration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)			
			14/					
Electric hea			W					
Operation	Remote control							
control	Room temperature cont	rol		Thermostat b	y electronics			
	Operation display				-			
				Overload protect	ion for fan motor			
Safety equip	oments			Frost protecti Internal thermos	on thermostat			
					tat for fan motor emperature protection			
				Liquid line: I/U \(\phi \) 6.35 (1/4") \(\Q \phi \) 9.52(3/8"):				
	Refrigerant piping size (O.D.)	mm -	Gas line: I/U ϕ 12.7 (1/2") ② ϕ 2.7(1/2")x0.				
	0							
	Connecting method			Flare piping	Flare piping			
	Attached length of pipir	ng	m	-				
data	Insulation for piping			Necessary (both L	· /			
	Refrigerant line (one wa	<u>,, </u>	m	Max				
	Vertical height diff. between	O.U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
	Drain hose			Hose connectable with VP25(O.D.32)	Hole size φ 20 x 3pcs			
Drain pump, max lift height		mm	Built-in drain pump , 600	-				
	ded breaker size		Α		_			
	ked rotor ampere)		A	5	n			
Interconnec		numbor	/ /		ble)/ Termainal block (Screw fixing type)			
	ung wires Size x Core	number		φ 1.6mm × 3 cores (including earth cal				
IP number				-	IP24			
Stand								
Standard ac				Mounting kit, Drain hose UM-F	<u> </u>			

Notes (1) The data are measured at the following conditions.

The	nine	length	is	7.5m
	P.P -			

Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	35Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	35Pa	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together. (7) Branching pipe set "DIS-TA1G" x1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U (8) Static pressure of optional air filter "UM-FL1EF" is 5Pa initially. (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

				FDUM14	0VSATVF
Item				Indoor unit FDUM50VF (3 units)	Outdoor unit FDC140VSA
Power source				3 Phase, 380-415V,	,
	Nominal cooling capacity		kW	13.6 [5.0(Min.)	
	Nominal heating capacity		kW	15.5 [4.0(Min.)	. /2
	Power consumption Cooling			5.0	
	·	Heating	kW	4.:	
	Max power consumption			10.	
	Running current Cooling			7.5	
		Heating	Α	6.2	
Operation	Inrush current, max curren			<u> </u>	18
data	Power factor	Cooling	%		7
		Heating		98 /	
	EER	Cooling		2.	
	COP	Heating		3.1	69
	Sound power level	Cooling Heating		60	73
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 37 Hi: 32 Me: 29 Lo: 26	57 59
	Silent mode sound pressu		1	_	53 / 47 (Normal / Silent)
Exterior dim	nensions (Height × Width ×		mm	280 × 750 × 635	845 × 970 × 370
Exterior app					Stucco white
(Munsell co	olor)			_	(4.2Y7.5/1.1) near equivalent
Net weight			kg	29	82
Compresso	r type & Q'ty			_	RMT5126MCE4×1
Compresso	r motor (Starting method)		kW	_	Direct line start
Refrigerant	oil (Amount, type)		Q	_	0.9 M-MA68
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t	he amount for the piping of : 30m)
Heat excha				Louver fin & inner grooved tubing	Straight fin & inner grooved tubing
Refrigerant	Refrigerant control			Electronic ex	pansion valve
Fan type &	Q'ty			Centrifugal fan ×1	Propeller fan ×1
Fan motor (Stating method)		W	100 < Direct line start >	86 < Direct line start >
Air flow		Cooling Heating	m³/min	P-Hi:13 Hi:10 Me:9 Lo:8	75 73
Available ex	ternal static pressure	1	Pa	Standard: 35 Max: 100	——————————————————————————————————————
Outside air				Possible	_
	ality / Quantity			Procure locally	_
	pration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)
Electric hea			W	_	20 (Crankcase heater)
	Remote control			(Option) wired: RC-EX3,RC-E5,	RCH-E3 wireless : RCN-KIT4-E2
Operation	Room temperature control			Thermostat b	y electronics
control	Operation display			-	<u>-</u>
Safety equip	pments			Overload protect Frost protecti Internal thermos Abnormal discharge te	on thermostat
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52(3/8"): Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7(1/2")x0	x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8")
	Connecting method			Flare piping	Flare piping
Installation	Attached length of piping		m		— A bibinia
data Insulation for piping			Necessary (both L	iquid & Gas lines)	
	Refrigerant line (one way)	length	m		50m
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)
Drain hose			Hose connectable with VP25(O.D.32)	Hole size ϕ 20 x 3pcs	
Drain pump, max lift height		mm	Built-in drain pump , 600	<u></u>	
Recommended breaker size		Α	- Dank in drain parity , 000		
L.R.A. (Locked rotor ampere)			Α	5.	.0
Interconnec		umber			ble)/ Termainal block (Screw fixing type)
IP number	J D.L.O O 010 110			IPX0	IP24
Standard ad	ccessories			Mounting kit, Drain hose	_
Option parts				UM-F	
Notes (1) The date are many used at the following conditions.					

Item	Indoor air t	emperature	Outdoor air	temperature	External static pressure	Standards
Operation	DB	WB	DB	WB	of indoor unit	Standards
Cooling	27°C	19°C	35°C	24°C	35Pa	ISO5151-T1
Heating	20°C	_	7°C	6°C	35Pa	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
- (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.

 (7) Branching pipe set "DIS-TA1G"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

 (8) Static pressure of optional air filter "UM-FL1EF" is 5Pa initially.

- (9) The external static pressure setting can be changed to 10-100Pa. (For RC-EX3 and RC-E5 only)

(6) Floor standing type (FDF)

(a) Single type

	Single type		Model	FDF100	VNAVD2	
Item			Wiodei	Indoor unit FDF100VD2	Outdoor unit FDC100VNA	
Power source	ce			1 Phase, 220-240V	, 50Hz / 220V, 60Hz	
	Nominal cooling capacity ((range)	kW	10.0 [4.0(Min.) ~ 11.2(Max.)]	
	Nominal heating capacity (range)		kW) ∼ 12.5(Max.)]	
	Power consumption	Cooling			12	
		Heating	kW	2.94		
	Max power consumption			6.40		
	Running current	Cooling			/ 15.9	
		Heating	Α		/ 15.2	
Operation	Inrush current, max curren			<u> </u>	24	
data	Power factor	Cooling	%		39	
	FED	Heating			38	
	COP	Cooling			<u>21</u> 81	
	COP	Heating		3.	81 	
	Sound power level	Cooling Heating		65	70	
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 54 Hi: 50 Me: 48 Lo: 44	54 56	
	Silent mode sound pressu	re level	İ	_	50/44 (Normal/Silent)	
xterior dim	ensions (Height × Width ×	Depth)	mm	1,850 × 600 × 320	845 × 970 × 370	
Exterior app	pearance			Ceramic white	Stucco white	
Munsell co	olor)			(N8.0) near equivalent	(4.2Y7.5/1.1) near equivalent	
let weight			kg	52	80	
	r type & Q'ty			_	RMT5126MCE3×1	
Compressor	r motor (Starting method)		kW	_	Direct line start	
Refrigerant	oil (Amount, type)		Q	_	0.9 M-MA68	
Refrigerant (Type, amount, pre-charge length)		length)	kg	R410A 3.8kg in outdoor unit (Incl.	the amount for the piping of : 30m)	
Heat exchanger				Louver fine & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant (Electronic ex	pansion valve	
an type & 0				Centrifugal fan ×1	Propeller fan ×1	
an motor (Starting method)		W	157 < Direct line start >	86 < Direct line start >	
Air flow		Cooling Heating	m³/min	P-Hi:29 Hi:26 Me:23 Lo:19	75 73	
Available ex	ternal static pressure		Pa	0	_	
Outside air i	intake			Not possible	_	
Air filter, Qu	ality / Quantity			Plastic net ×1(Washable)	_	
Shock & vib	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
Electric hea	ter		W	-	20 (Crankcase heater)	
Operation	Remote control			, ,	ss : RCN-KIT4-E2 (Option)	
control	Room temperature control			Thermostat I	by electronics	
	Operation display				_	
Safety equip	oments			Frost protect Internal thermos	tion for fan motor ion thermostat stat for fan motor emperature protection	
	Refrigerant piping size (O.	.D.)	mm	Liquid line: I/U ϕ 9.52 (3/8") Pipe	φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") 15.88(5/8")×1.0 φ 15.88 (5/8")	
	Connecting method			Flare piping	Flare piping	
nstallation	Attached length of piping		m	–	– i iai o piping	
data	Insulation for piping				Liquid & Gas lines)	
	Refrigerant line (one way)	lenath	m		:.50m	
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
	Drain hose			Hose connectable with VP20	Hole size $\phi 20 \times 3pcs$	
Drain pump, max lift height		mm	—	— — — — — — — — — — — — — — — — — — —		
	ded breaker size		A			
	ked rotor ampere)		A		5.0	
	ting wires Size × Core nu	mber			ole)/ Termainal block (Screw fixing type)	
P number	WII 00 OIZO × OOI 0 IIU			IPX0	IP24	
Standard ac	ccessories			Mounting kit	-	
Option parts						
	ne data are measured at the	fallaudaa	L Conditio		The nine length is 7 5m	

Notes (1) The data are measured at the following conditions.

The pipe	lenath	is	7.5m

()		5			1,1,1,1,3
Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.
- (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	FDF100	VSAVD2			
Item			model	Indoor unit FDF100VD2	Outdoor unit FDC100VSA			
Power sour	ce				, 50Hz / 380V, 60Hz			
	Nominal cooling capacity	(range)	kW	·) ~ 11.2(Max.)]			
	Nominal heating capacity		kW) ~ 12.5(Max.)]			
		Cooling			12			
	Power consumption	Heating	kW	2.	94			
	Max power consumption		1		.20			
	Cooling				/ 5.3			
	Running current Heating		A		/5.0			
	Inrush current, max curre		'		15			
Operation		Cooling		-	/ 89			
data	Power factor	Heating	%		/ 89			
	EER	Cooling						
	COP	Heating	1	3.21 3.81				
		Cooling						
	Sound power level	Heating		65	70			
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 54 Hi: 50 Me: 48 Lo: 44	54 56			
	Silent mode sound pressi		{		50/44 (Normal/Silent)			
Estaday dia	nensions (Height × Width ×		100.000	1.850 × 600 × 320	845 × 970 × 370			
		Depth)	mm	Ceramic white				
Exterior app					Stucco white			
(Munsell co				(N8.0) near equivalent	(4.2Y7.5/1.1) near equivalent			
Net weight			kg	52	82			
	or type & Q'ty		1344	-	RMT5126MCE4×1			
	or motor (Starting method)		kW	-	Direct line start			
	oil (Amount, type)		l l		0.9 M-MA68			
	(Type, amount, pre-charge	e length)	kg	• ,	the amount for the piping of : 30m)			
Heat exchanger				Louver fine & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant					pansion valve			
Fan type &				Centrifugal fan ×1	Propeller fan ×1			
Fan motor ((Stating method)	1	W	157 < Direct line start >	86 < Direct line start >			
Air flow		Cooling Heating	m³/min	P-Hi: 29 Hi: 26 Me: 23 Lo: 19	75 73			
Available ex	xternal static pressure	1	Pa	0	_			
Outside air				Not possible	_			
	ality / Quantity			Plastic net × 1 (Washable)	_			
	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)			
Electric hea			W	— 20 (Crankcase heater)				
	Remote control		''	RC-E5 (Installed) / Wireled	ss : RCN-KIT4-E2 (Option)			
Operation	Room temperature control			7 /	by electronics			
control	Operation display			-	=			
Safety equi				Frost protecti Internal thermos Abnormal discharge t	tion for fan motor on thermostat stat for fan motor emperature protection			
	Refrigerant piping size (C).D.)	mm	. , , , ,	φ 9.52(3/8")×0.8 Ο/U φ 9.52 (3/8")			
	Connecting method	-		. , , ,	15.88(5/8")×1.0 φ 15.88 (5/8") Flare piping			
				Flare piping	Fiare piping			
Installation	Attached length of piping		m		iguid ⁹ Can linas)			
data	Insulation for piping	\			_iquid & Gas lines)			
Refrigerant line (one way) length Vertical height diff. between O.U. and I.U.		m		.50m				
		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)				
Drain hose				Hose connectable with VP20	Hole size ϕ 20 × 3pcs			
Drain pump, max lift height			mm	_	_			
Recommended breaker size			A	-				
L.R.A. (Locked rotor ampere)			Α		.0			
Interconnec	cting wires Size × Core r	umber			ole)/ Termainal block (Screw fixing type)			
IP number				IPX0	IP24			
Standard ad				Mounting kit	_			
Option part	Option parts —							
Notes (1) Th	lotes (1) The data are measured at the following conditions. The pipe length is 7.5m.							

Item	Indoor air t	emperature	Outdoor air	temperature	Ctandarda	
Operation	DB	WB	DB	WB	Standards	
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1	
Heating	20°C	_	7°C	6°C	1505151-11	

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
 (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

				FDF125	SVNAVD		
Item				Indoor unit FDF125VD	Outdoor unit FDC125VNA		
Power sour	ce			1 Phase, 220-240V	, 50Hz / 220V, 60Hz		
	Nominal cooling capacity	(range)	kW	12.5 [5.0(Min.)) ∼ 13.0(Max.)]		
	Nominal heating capacity	(range)	kW	14.0 [4.0 (Min.) ~ 16.0 (Max.)]			
	Power consumption	Cooling		4.	65		
	Heating		kW	4.	14		
	Max power consumption			6.	40		
	Running current	Cooling			/ 22.3		
	Training current	Heating	A		/ 20.2		
Operation	Inrush current, max curren	t		•	24		
data	Power factor	Cooling	%		5		
aata		Heating	/ 0		3		
	EER	Cooling			69		
	COP	Heating		3.	38		
	Sound power level	Cooling Heating		73	71		
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 54 Hi: 50 Me: 48 Lo: 44	55 57		
	Silent mode sound pressu		1 1	_	51/45 (Normal/Silent)		
Exterior dim	nensions (Height × Width ×		mm	1,850 × 600 × 320	845 × 970 × 370		
Exterior app		/		Ceramic white	Stucco white		
(Munsell co				(N8.0) near equivalent	(4.2Y7.5/1.1) near equivalent		
Net weight			kg	52	80		
Compresso	r type & Q'ty		Ĭ	_	RMT5126MCE3×1		
Compresso	r motor (Starting method)		kW	_	Direct line start		
	oil (Amount, type)		Q	_	0.9 M-MA68		
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t	the amount for the piping of : 30m)		
Heat excha	nger			Louver fine & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant	control			Electronic ex	pansion valve		
Fan type &	Q'ty			Centrifugal fan ×1	Propeller fan ×1		
Fan motor (Stating method)		W	157 < Direct line start >	86 < Direct line start >		
Air flow		Cooling Heating	m³/min	P-Hi:29 Hi:26 Me:23 Lo:19	75 73		
Available ex	ternal static pressure		Pa	0	_		
Outside air	<u> </u>			Not possible	_		
Air filter, Qu	ality / Quantity			Plastic net ×1 (Washable)	_		
Shock & vib	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Electric hea	ter		W	– 20 (Crankcase heater)			
0	Remote control			RC-E5 (Installed) / Wireles	ss : RCN-KIT4-E2 (Option)		
Operation control	Room temperature contro			Thermostat b	by electronics		
CONTROL	Operation display			-	- -		
Safety equi	pments			Frost protecti Internal thermos	tion for fan motor on thermostat stat for fan motor emperature protection		
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U φ 9.52 (3/8") Pipe Gas line: φ 15.88 (5/8") φ	φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") 15.88(5/8")×1.0 φ 15.88 (5/8")		
	Connecting method			Flare piping	Flare piping		
Installation	Attached length of piping		m	— A-b3	— 		
data	Insulation for piping			Necessary (both I	Liquid & Gas lines)		
	Refrigerant line (one way)	length	m		.50m		
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
Drain hose				Hose connectable with VP20	Hole size $\phi 20 \times 3pcs$		
Drain pump, max lift height		mm	_	-			
Recommended breaker size			Α	-	_		
L.R.A. (Locked rotor ampere)			Α	5	.0		
Interconnec		umber			le) / Termainal block (Screw fixing type)		
IP number				IPX0	IP24		
Standard ad	ccessories			Mounting kit	_		
Option parts				-	_		
					The pine length is 7 Em		

The pipe length is 7.5m.

		_			· · · · · · · · · · · · · · · · · · ·
Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1000101-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
 (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

PGA000Z812A

Ower Source Nominal cooling capacity (range) WW 12.5 (5.0Min) 14.0 (Max.) Power consumption Heating WW 12.5 (5.0Min) 14.0 (Max.) Power consumption Heating WW 14.0 (4.0Min) 16.0Max.) Power consumption Heating WW 14.0 (4.0Min) 16.0Max.) Power consumption Heating WW 14.0 (4.0Min) 16.0Max.) Running current Pooling Heating A 6.5 / 6.8 Running current Heating A 6.5 / 6.8 Power factor Heating Gooling Heating Gooling Gooling Heating A 6.5 / 6.8 Power factor Heating Gooling Heating Gooling Gooling Heating Gooling Gooling Gooling Gooling Heating Gooling Go				Model		VSAVD		
Nominal cooling capacity (range) Nominal relating capacity (range) Nominal heating capacity (range)	Item							
Nominal heating capacity (range) WW 14.0 (4.0/Min.) ~ 16.0/Max.)	Power sour				· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		
Power consumption Reating Max power consumption Reating Max power consumption Reating Running current Reating A 6.5 / 6.8 Running current Reating A 6.5 / 6.8 Running current Reating A 6.5 / 6.8 Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Reating Power factor Power factor Reating Power factor		0 1 1	<u> </u>			, ,,		
Power Consumption Heating Heat		Nominal heating capacity	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	kW		14.0 [4.0(Min.) ~ 16.0(Max.)]		
Heating Max power consumption 10.20 10		Power consumption	Cooling		4.	65		
Running current Cooling Heating A 6,5 / 6,8		1 ower consumption	Heating	kW _				
Hunning current Heating A 6.5 / 6.8		Max power consumption						
		Bunning current						
Power factor Cooling Heating COP Heating COP Heating COP Heating COP Heating COP Heating COP Heating COP Heating COP C		Turining current	Heating	Α _	6.5	/ 6.8		
Power factor	Operation	Inrush current, max curren	nt		5,	15		
Fleating Fleating	data			% L	9	3		
COP	data	1 Ower factor	Heating	70	9	2		
Sound power level Cooling Heating Sound pressure level Heating Sound pressure level Heating Sound pressure level Heating Silent mode sound pressure level mm 1,850 × 600 × 320 345 × 970 × 370 Sterior dimensions (Helght × Width × Depth) mm 1,850 × 600 × 320 345 × 970 × 370 Sterior appearance Ceramic white Stucco white (N8.0) near equivalent (4.2Y7,5/1.1) near equivalent (1.2Y7,5/1.1) near equivalent			Cooling					
Sound pressure level Heating Sound pressure level Cooling Heating Sound pressure level Cooling Heating Silent mode sound pressure level Strucco white Stru		COP	Heating		3.	38		
Sound pressure level Heating Gooling Silent mode sound pressure level Heating Silent mode sound pressure level Heating Silent mode sound pressure level Heating Silent mode sound pressure level Heating Silent mode sound pressure level Heating Silent mode sound pressure level The state of a present level Silent mode sound pressure level The state of a present level Silent mode sound pressure level The state of a present level Silent mode sound pressure level The state of the state of a present level Silent mode sound pressure level The state of the state of		Sound power level			73	71		
Sound pressure level		Courte power level	Heating		70	, ,		
Silent mode sound pressure level 1,850 × 600 × 320		Sound pressure level		dB(A)	P-Hi:54 Hi:50 Me:48 Lo:44			
		<u> </u>		l L	. 111.04 111.00 IVIG.40 LO.44	-		
Ceramic white Stucco white (NB.0) near equivalent (4.2Y7.5/1.1) near equivalent (4.2					_	,		
Munsell color			Depth)	mm	·			
Let weight								
Compressor type & City	`	olor)				` ' '		
Compressor motor (Starting method) kW	Net weight			kg	52	-		
Particular of the properties Particular of the properties					_	RMT5126MCE4×1		
Lover fine & in outdoor unit (Incl. the amount for the piping of : 30m)	Compresso	or motor (Starting method)		kW	_	Direct line start		
Louver fine & inner grooved tubing Straight fin & inner grooved tubing Electronic expansion valve	Refrigerant	oil (Amount, type)		l	_	0.9 M-MA68		
Electronic expansion valve Contrigual fan ×1 Propeller fan ×1	Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t	the amount for the piping of : 30m)		
an type & O'ty an motor (Stating method) w	Heat excha	inger			Louver fine & inner grooved tubing	Straight fin & inner grooved tubing		
an motor (Stating method) ir flow Cooling Heating Heating	Refrigerant	control			Electronic ex	pansion valve		
Cooling Heating P-Hi : 29 Hi : 26 Me : 23 Lo : 19 75					Centrifugal fan ×1			
P-HI: 29 HI: 26 Me: 23 Lo: 19 73	Fan motor ((Stating method)		W	157 < Direct line start >	86 < Direct line start >		
Valiable external static pressure Valiable external static pressure Pa 0	Air flow		Cooling	m ³ /min	P Hi · 20 Hi · 26 Mo · 23 Lo · 10	75		
Not possible		Heating		111 /111111	F-111.29 111.20 We.25 LO.19	73		
ir filter, Quality / Quantity hock & vibration absorber Rubber sleeve (for fan motor) Rubber sleeve (for compressor)	Available ex	xternal static pressure		Pa	0	_		
Remote control Rubber sleeve (for fan motor) Rubber sleeve (for compressor)					Not possible	П		
Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Remote control Refrigerant by electronics Refrigerant piping size (O.D.) Refrigerant piping size (O.D.) Refrigerant piping size (O.D.) Refrigerant piping size (O.D.) Refrigerant piping size (O.D.) Refrigerant piping size (O.D.) Refrigerant line (one way) length	Air filter, Qu	ıality / Quantity			Plastic net ×1 (Washable)	_		
Remote control Room temperature room temperature control Room temperature room temperatur	Shock & vib	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)		
Room temperature control Operation display	Electric hea	ater		W	_	,		
Actached length of piping ments Refrigerant line (one way) length Refrigerant line (one way) lengt	Operation	Remote control						
Operation display		Room temperature contro	l		Thermostat b	by electronics		
Frost protection thermostat Internal thermostat for fan motor Abnormal discharge temperature protection Refrigerant piping size (O.D.) mm	00111101	Operation display			-	_		
Internal thermostat for fan motor Abnormal discharge temperature protection Refrigerant piping size (O.D.) Refrigerant piping size (O.D.) Installation Insta					Overload protect	tion for fan motor		
Abnormal discharge temperature protection Refrigerant piping size (O.D.) mm Liquid line: I/U \(\phi 9.52 \) (3/8") \(\phi p \) \(\phi 9.52 \) (3/8") \(\phi 0.8 \) \(\phi V \) \(\phi 9.52 \) (3/8") \(\phi 0.8 \) \(\phi V \) \(\phi 9.52 \) (3/8") \(\phi 0.8 \) \(\phi V \) \(\phi 0.52 \) (3/8") \(\phi 0.8 \) \(\phi V \) \(\phi 0.58 \) (5/8") \(\phi 15.88 \) \(\phi 15.88 \) (5/8") \(\phi 15.88 \) \(\phi 15.88 \) (5/8") \(\phi 15.88 \	Safety equi	pments						
Refrigerant piping size (O.D.) mm Gas line: \$\phi 15.88 (5/8") \phi 15.88 (5/8") \times 15.88 (5/8") \time								
Refrigerant piping size (O.D.) mm Gas line: \$\phi 15.88 (5/8") \phi 15.88 (5/8") \times 15.88 (5/8") \time					<u>&</u>	_ ' _ '		
Connecting method Attached length of piping Insulation for piping Refrigerant line (one way) length Wertical height diff. between O.U. and I.U. Drain hose Irrain pump, max lift height Veccommended breaker size R.A. (Locked rotor ampere) Prumber Insulation for piping Refrigerant line (one way) length Max.50m Max.50m Max.50m Max.50m Max.15m (Outdoor unit is lower) Hose connectable with VP20 Hole size \$\phi 20 \times 3pcs A R.A. (Locked rotor ampere) A Size × Core number IPX0 IP24 Mounting kit IP4		Refrigerant piping size (O	.D.)	mm	. , , , ,	, , , , , , , , , , , , , , , , , , , ,		
Attached length of piping m — Necessary (both Liquid & Gas lines) Refrigerant line (one way) length m Max.50m Vertical height diff. between 0.U. and I.U. m Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is lower) Drain hose Hose connectable with VP20 Hole size \$\phi 20 \times 3pcs Vertical height m Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is lower) Hose connectable with VP20 Hole size \$\phi 20 \times 3pcs Vertical height m — — — — — — — — — — — — — — — — — —		Connecting method			, , , , ,	, , , , , , , , , , , , , , , , , , , ,		
Insulation for piping Refrigerant line (one way) length Vertical height diff. between 0.U. and I.U. Drain hose Hose connectable with VP20 Hose connectable with VP20 Hole size φ 20 × 3pcs Frain pump, max lift height Hose connectable with VP20 Frai	Installation		-	m	• • •	— bibing		
Refrigerant line (one way) length	data	0 11 0				Liquid & Gas lines)		
Vertical height diff. between 0.U. and I.U. m Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is lower) Drain hose Hose connectable with VP20 Hole size φ 20 x 3pcs Brain pump, max lift height — — Becommended breaker size A — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lift height — — Brain pump, max lif		110	length	m		· · · · · · · · · · · · · · · · · · ·		
Drain hose Hose connectable with VP20 Hole size φ 20 x 3pcs Prain pump, max lift height mm — Recommended breaker size A — R.A. (Locked rotor ampere) A 5.0 Acterconnecting wires Size x Core number φ 1.6 mm x 3 cores (Including earth cable) / Termainal block (Screw fixing type) P number IPX0 IP24 tandard accessories Mounting kit — Option parts —								
rain pump, max lift height mm — — ——————————————————————————————				<u> </u>				
A — .R.A. (Locked rotor ampere) A beterconnecting wires Size × Core number P number Properties tandard accessories Mounting kit Poption parts —	Drain pump		-	mm	_	•		
A 5.0 Anterconnecting wires Size × Core number φ 1.6 mm × 3 cores (Including earth cable) / Termainal block (Screw fixing type) P number tandard accessories IPX0 IP24 Anterconnecting wires Mounting kit —			-					
terconnecting wires Size × Core number					5	.0		
P number IPX0 IP24 tandard accessories Mounting kit — uption parts —			umber					
tandard accessories Mounting kit – Option parts –	IP number	J 10120 × 0016 110			· · · · · · · · · · · · · · · · · · ·	,		
option parts —		ccessories						
					-	<u> </u>		
			following	condition	s.	The pipe length is 7.5m.		

_	(1) The data are	mododiod di i	no ionownig oc	martiono.		The pipe length is 7.5m.
	Item	Indoor air t	emperature	Outdoor air	temperature	Standards
	Operation	DB	WB	DB	WB	Standards
	Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
	Heating	20°C	_	7°C	6°C	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- (4) Select the breaker size according to the own national standard.(5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
- (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

Hom			Model		VNAVD	
Item				Indoor unit FDF140VD	Outdoor unit FDC140VNA	
Power source	,	, ,		1 Phase, 220-240V,	*	
l	Nominal cooling capacity		kW	13.0 [5.0(Min.)	72	
ļ	Nominal heating capacity	` '	kW	15.5 [4.0(Min.)	72	
l	Power consumption	Cooling			02	
		Heating	kW	4.9		
	Max power consumption				40	
	Running current	Cooling		22.6		
l	Training current	Heating	Α	22.3	/ 23.4	
)maration	Inrush current, max curren	it		5,	24	
Operation lata	Power factor	Cooling	%	9	7	
ala	Power factor	Heating	%	9	7	
[EER	Cooling		2.	59	
	COP	Heating		3.	11	
		Cooling				
	Sound power level	Heating		73	73	
1		Cooling	dB(A)		57	
	Sound pressure level	Heating	3500	P-Hi: 54 Hi: 50 Me: 48 Lo: 44	59	
	Silent mode sound pressu		\vdash	_	53/47 (Normal/Silent)	
vtarior dim	rensions (Height × Width ×		mm	1,850 × 600 × 320	845 × 970 × 370	
		Debiii)	111111	· ·	Stucco white	
xterior app				Ceramic white		
Munsell co	pior)			(N8.0) near equivalent	(4.2Y7.5/1.1) near equivalent	
let weight			kg	52	80	
	r type & Q'ty			-	RMT5126MCE3×1	
	r motor (Starting method)		kW	_	Direct line start	
	oil (Amount, type)		Q	_	0.9 M-MA68	
efrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t	the amount for the piping of : 30m)	
eat exchar	nger			Louver fine & inner grooved tubing	Straight fin & inner grooved tubing	
efrigerant o	control			Electronic ex	pansion valve	
an type & C	Q'ty			Centrifugal fan ×1	Propeller fan ×1	
an motor (S	Stating method)		W	157 < Direct line start >	86 < Direct line start >	
`	,	Cooling	3, ,	D.I.I. 00 III. 00 IA. 00 I	75	
ir flow		Heating	m³/min	P-Hi: 29 Hi: 26 Me: 23 Lo: 19	73	
vailable ex	ternal static pressure		Pa	0	_	
utside air i				Not possible —		
	ality / Quantity			Plastic net ×1 (Washable)	_	
	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)	
lectric heat			W	_	20 (Crankcase heater)	
TOUTO TICAL	Remote control		**	RC-E5 (Installed) / Wireles	,	
peration						
			+	Thermostat b	ny diadritritos	
Control Operation display						
control				Overload protection for fan motor		
				Overload protecti	ion for fan motor on thermostat	
Safety equip				Frost protection	ion for fan motor on thermostat tat for fan motor	
				Frost protection	on thermostat tat for fan motor	
	oments			Frost protection Internal thermos	on thermostat tat for fan motor emperature protection	
		.D.)	mm —	Frost protection Internal thermos Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe ϕ	on thermostat tat for fan motor emperature protection	
	oments	.D.)	mm —	Frost protection and the protection of the prot	on thermostat tat for fan motor emperature protection ϕ 9.52(3/8")×0.8 O/U ϕ 9.52 (3/8")	
afety equip	Properties Refrigerant piping size (O	.D.)		Frost protection Internal thermos Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe ϕ	on thermostat tat for fan motor emperature protection φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") 15.88(5/8")×1.0 φ 15.88 (5/8")	
afety equip	Refrigerant piping size (O Connecting method Attached length of piping	.D.)	mm —	Frost protectic Internal thermost Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe Gas line: ϕ 15.88 (5/8") ϕ Flare piping	on thermostat tat for fan motor emperature protection φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") 15.88(5/8")×1.0 φ 15.88 (5/8") Flare piping —	
afety equip	Refrigerant piping size (O Connecting method Attached length of piping Insulation for piping	,	m	Frost protectic Internal thermoses Abnormal discharge to Liquid line: $I/U \phi 9.52 (3/8")$ Pipe Gas line: $\phi 15.88 (5/8") \phi$ Flare piping — Necessary (both L	on thermostat tat for fan motor emperature protection $\phi 9.52(3/8")\times 0.8 \text{ O/U } \phi 9.52 (3/8") \\ 15.88(5/8")\times 1.0 \qquad \phi 15.88 (5/8") \\ \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad $	
afety equip	Refrigerant piping size (O Connecting method Attached length of piping Insulation for piping Refrigerant line (one way)	length	m m	Frost protectic Internal thermoses Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe of Gas line: ϕ 15.88 (5/8") ϕ Flare piping - Necessary (both L	on thermostat tat for fan motor emperature protection $\phi 9.52(3/8")\times0.8 \text{ O/U} \ \phi 9.52(3/8")\times1.0 \qquad \phi 15.88(5/8") \\ \hline Flare piping \\ \hline$	
afety equip	Refrigerant piping size (O Connecting method Attached length of piping Insulation for piping Refrigerant line (one way) Vertical height diff. between O.	length	m	Frost protection Internal thermose Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe Gas line: ϕ 15.88 (5/8") ϕ Flare piping — Necessary (both L Max. Max.50m (Outdoor unit is higher)	on thermostat tat for fan motor emperature protection $\phi 9.52(3/8")\times 0.8 \text{O/U} \ \phi 9.52(3/8") \\ 15.88(5/8")\times 1.0 \phi 15.88(5/8") \\ \hline \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad$	
afety equip	Refrigerant piping size (O Connecting method Attached length of piping Insulation for piping Refrigerant line (one way) Vertical height diff. between O. Drain hose	length	m m m	Frost protectic Internal thermoses Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe of Gas line: ϕ 15.88 (5/8") ϕ Flare piping - Necessary (both L	on thermostat tat for fan motor emperature protection $\phi 9.52(3/8")\times 0.8 \text{ O/U} \ \phi 9.52\ (3/8")}$ $15.88(5/8")\times 1.0 \qquad \phi 15.88\ (5/8")$ Flare piping $-$ $\text{Liquid & Gas lines)}$ $.50m$ $\text{Max.15m (Outdoor unit is lower)}$ $\text{Hole size } \phi 20 \times 3 \text{pcs}$	
nstallation ata	Refrigerant piping size (O Connecting method Attached length of piping Insulation for piping Refrigerant line (one way) Vertical height diff. between O. Drain hose , max lift height	length	m m m	Frost protection Internal thermose Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe Gas line: ϕ 15.88 (5/8") ϕ Flare piping — Necessary (both L Max. Max.50m (Outdoor unit is higher)	on thermostat tat for fan motor emperature protection $\phi 9.52(3/8")\times 0.8 \text{O/U} \ \phi 9.52(3/8") \\ 15.88(5/8")\times 1.0 \phi 15.88(5/8") \\ \hline \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad$	
afety equip	Refrigerant piping size (O Connecting method Attached length of piping Insulation for piping Refrigerant line (one way) Vertical height diff. between O. Drain hose , max lift height ded breaker size	length	m m m A	Frost protectic Internal thermos Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe Gas line: ϕ 15.88 (5/8") ϕ Flare piping Necessary (both L Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20	on thermostat tat for fan motor emperature protection \$\phi 9.52(3/8") \times 0.8 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
afety equip	Refrigerant piping size (O Connecting method Attached length of piping Insulation for piping Refrigerant line (one way) Vertical height diff. between O. Drain hose , max lift height ded breaker size sed rotor ampere)	length U. and I.U.	m m m	Frost protectic Internal thermos Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe Gas line: ϕ 15.88 (5/8") ϕ Flare piping	on thermostat tat for fan motor emperature protection \$\phi 9.52(3/8") \times 0.8 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
nstallation lata Prain pump, Recommend R.A. (Lock	Refrigerant piping size (O Connecting method Attached length of piping Insulation for piping Refrigerant line (one way) Vertical height diff. between O. Drain hose , max lift height ded breaker size sed rotor ampere)	length U. and I.U.	m m m A	Frost protectic Internal thermos Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe Gas line: ϕ 15.88 (5/8") ϕ Flare piping Necessary (both L Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20 ϕ 1.6 mm × 3 cores (Including earth cab	on thermostat tat for fan motor emperature protection \$\phi 9.52(3/8") \times 0.8 \ \ \ \ O/U \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
nstallation lata Prain pump, Recommence J.R.A. (Lock hterconnect number	Refrigerant piping size (O Connecting method Attached length of piping Insulation for piping Refrigerant line (one way) Vertical height diff. between O. Drain hose , max lift height ded breaker size ted rotor ampere) ting wires Size × Core no	length U. and I.U.	m m m A	Frost protection Internal thermose Abnormal discharge to Abnormal discharge to Liquid line: I/U \(\phi \) 9.52 (3/8") Pipe Gas line: \(\phi \) 15.88 (5/8") \(\phi \) Flare piping \(- \) Necessary (both L) Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20 \(- \)	on thermostat tat for fan motor emperature protection \$\phi 9.52(3/8") \times 0.8 \ \ \ \ O/U \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
afety equip	Refrigerant piping size (O Connecting method Attached length of piping Insulation for piping Refrigerant line (one way) Vertical height diff. between O. Drain hose , max lift height ded breaker size ted rotor ampere) ting wires Size × Core nuccessories	length U. and I.U.	m m m A	Frost protectic Internal thermos Abnormal discharge to Liquid line: I/U ϕ 9.52 (3/8") Pipe Gas line: ϕ 15.88 (5/8") ϕ Flare piping Necessary (both L Max. Max.50m (Outdoor unit is higher) Hose connectable with VP20 ϕ 1.6 mm × 3 cores (Including earth cab	on thermostat tat for fan motor emperature protection \$\phi 9.52(3/8") \times 0.8 \ \ \ \ O/U \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	

Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
 (6) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	FDF140	VSAVD			
Item				Indoor unit FDF140VD	Outdoor unit FDC140VSA			
Power source	ce				, 50Hz / 380V, 60Hz			
	Nominal cooling capacity (range)	kW	13.6 [5.0(Min.)) ~ 14.5(Max.)]			
	Nominal heating capacity		kW	15.5 [4.0(Min.)				
		Cooling			42			
	Power consumption	Heating	kW	4.	98			
	Max power consumption				.20			
		Cooling		8.3 / 8.8				
	Running current Heating		A	7.7	/ 8.1			
	Inrush current, max current			5,	15			
Operation	Cooling		0/		4			
data	Power factor	Heating	% -	9	3			
	EER	Cooling		2.	51			
	COP	Heating		3.	11			
	C	Cooling		70	70			
	Sound power level	Heating		73	73			
	Cound programs lavel	Cooling	dB(A)	D Hi : 54 Hi : 50 Ma : 49 La : 44	57			
	Sound pressure level	Heating		P-Hi: 54 Hi: 50 Me: 48 Lo: 44	59			
	Silent mode sound pressu	re level		_	53/47 (Normal/Silent)			
xterior dim	nensions (Height × Width ×	Depth)	mm	1,850 × 600 × 320	845 × 970 × 370			
Exterior app				Ceramic white	Stucco white			
Munsell co	olor)			(N8.0) near equivalent	(4.2Y7.5/1.1) near equivalent			
let weight			kg	52	82			
Compresso	r type & Q'ty			_	RMT5126MCE4×1			
Compressor	r motor (Starting method)		kW	_	Direct line start			
Refrigerant	oil (Amount, type)		Q	_	0.9 M-MA68			
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (Incl. t	the amount for the piping of : 30m)			
leat exchar	nger			Louver fine & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant	control			Electronic ex	pansion valve			
an type & 0	Q'ty			Centrifugal fan ×1	Propeller fan ×1			
an motor (Stating method)		W	157 < Direct line start >	86 < Direct line start >			
Air flow		Cooling	m³/min	P-Hi: 29 Hi: 26 Me: 23 Lo: 19	75			
All HOW	Heating			F-HI. 29 HI. 20 We. 23 LO. 19	73			
Available ex	ternal static pressure		Pa	0	_			
Dutside air i	intake			Not possible —				
Air filter, Qu	ality / Quantity			Plastic net ×1 (Washable)	-			
Shock & vib	ration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)			
Electric heat	ter		W	_	20 (Crankcase heater)			
Operation	Remote control			RC-E5 (Installed) / Wireles	ss : RCN-KIT4-E2 (Option)			
control	Room temperature control			Thermostat b	by electronics			
	Operation display			<u> </u>				
					tion for fan motor			
Safety equip	oments				on thermostat stat for fan motor			
					emperature protection			
				Liquid line: I/U ϕ 9.52 (3/8") Pipe				
	Refrigerant piping size (O.	D.)	mm –	, , , , ,	15.88(5/8")×1.0 φ 15.88 (5/8")			
	Connecting method			Flare piping	Flare piping			
nstallation	Attached length of piping		m	— 	—			
data	Insulation for piping			Necessary (both L	Liquid & Gas lines)			
	Refrigerant line (one way)	length	m		.50m			
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
	Drain hose			Hose connectable with VP20	Hole size $\phi 20 \times 3pcs$			
	Drain pump, max lift height			_	— — — — — — — — — — — — — — — — — — —			
Orain pump								
	, max lift height		mm A	-	_			
Recommend	, max lift height ded breaker size		Α	<u> </u>				
Recommend L.R.A. (Lock	, max lift height ded breaker size ked rotor ampere)	ımber			- .0 le) / Termainal block (Screw fixing type)			
Recommend L.R.A. (Lock Interconnec	, max lift height ded breaker size ked rotor ampere)	ımber	Α	ϕ 1.6 mm $ imes$ 3 cores (Including earth cab	le) / Termainal block (Screw fixing type)			
Recommend L.R.A. (Lock Interconnect IP number	, max lift height ded breaker size ked rotor ampere) tting wires Size × Core nu	umber	Α	ϕ 1.6 mm $ imes$ 3 cores (Including earth cab IPX0				
Recommend	, max lift height ded breaker size ked rotor ampere) ting wires Size × Core nu	ımber	Α	ϕ 1.6 mm $ imes$ 3 cores (Including earth cab	le) / Termainal block (Screw fixing type) IP24			

Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
 (6) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(b) Twin type

	b) I will type		Model	FDF140V	/NAPVD1			
Item			Model	Indoor unit FDF71VD1 (2 units)	Outdoor unit FDC140VNA			
Power sour	ce				, 50Hz / 220V, 60Hz			
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)	∼ 14.5(Max.)]			
	Nominal heating capacity	(range)	kW	15.5 [4.0(Min.)	∼ 16.5(Max.)]			
	Power consumption	Cooling			15			
	·	Heating	kW	4.:				
	Max power consumption				40			
	Running current	Cooling] [22.9				
	Heating		Α		/ 20.2			
Operation	Inrush current, max current			·	24			
data	Power factor Cooling		%		8			
dutu		Heating	/*	98				
	EER	Cooling		2.64				
	COP	Heating		3.56				
	Sound power level	Cooling Heating		61	73			
	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 42 Hi: 39 Me: 35 Lo: 33	57 59			
	Silent mode sound pressu			_	53 / 47 (Normal / Silent)			
Exterior din	nensions (Height × Width ×		mm	1,850 × 600 × 320	845 × 970 × 370			
Exterior app				Ceramic white	Stucco white			
(Munsell co				(N8.0) near equivalent	(4.2Y7.5/1.1) near equivalent			
Net weight			kg	49	80			
Compresso	or type & Q'ty		Ŭ	_	RMT5126MCE3×1			
	or motor (Starting method)		kW	_	Direct line start			
	oil (Amount, type)		e	_	0.9 M-MA68			
	(Type, amount, pre-charge	length)	kg	R410A 3.8kg(Pre-charged up to the	e piping length of 30m)Outdoor unit			
Heat excha	inger		Ŭ	Louver fine & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant	control				pansion valve			
Fan type &	Q'ty			Centrifugal fan ×1	Propeller fan ×1			
Fan motor ((Stating method)		W	157 < Direct line start >				
Air flow		Cooling Heating	m³/min	P-Hi:18 Hi:16 Me:14 Lo:12	75 73			
Available ex	xternal static pressure	1.100119	Pa	0				
Outside air				Not possible	_			
	iality / Quantity			Plastic net ×1(Washable)	_			
	oration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)			
Electric hea			W	_	20 (Crankcase heater)			
	Remote control			RC-E5 (Installed) / wireles				
Operation	Room temperature control			, ,	by electronics			
control	Operation display			-	_			
Safety equi	pments			Frost protection	ion for fan motor on thermostat tat for fan motor emperature protection			
	Refrigerant piping size (O.	.D.)	mm	Liquid line: I/U φ 9.52 (3/8") ② φ 9.52(3/8"): Gas line: I/U φ 15.88 (5/8") ② φ 15.88(5/8")x				
	Connecting method			Flare piping	Flare piping			
Installation	Attached length of piping		m	— -	—			
data	Insulation for piping			Necessary (both L	Liquid & Gas lines)			
	Refrigerant line (one way)	length	m	Max				
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)			
	Drain hose			Hose connectable with VP20	Hole size ϕ 20 x 3pcs			
Drain pump	, max lift height		mm	-	-			
	ided breaker size		Α	-	=			
	ked rotor ampere)		Α	5	.0			
Interconnec		ımber		ϕ 1.6mm × 3 cores (Including earth cal	ole)/ Termainal block (Screw fixing type)			
IP number				IPX0	IP24			
Standard ad	ccessories			Mounting kit	_			
Option parts				-	_			
Notes (1) The data are measured at the following				ne -	The pipe length is 7.5m.			

Notes (1) The data are measured at the following conditions.

. ,			•			
	Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operat	ion	DB	WB	DB	WB	Staridards
Coc	ling	27°C	19℃	35°C	24°C	ISO5151-T1
Hea	iting	20°C	_	7°C	6°C	1909191-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
 (6) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
- (7) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (8) Branching pipe set "DIS-WA1"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

			Model	FDF140V	SAPVD1			
Item			Model	Indoor unit FDF71VD1 (2 units) Outdoor unit FDC140VSA				
Power sour	ce			3 Phase, 380-415V,	50Hz / 380V, 60Hz			
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)	~ 14.5(Max.)]			
	Nominal heating capacity	(range)	kW	15.5 [4.0(Min.)				
		Cooling		5.				
	Power consumption	Heating	kW	4.:				
	Max power consumption		1 1	10.	.20			
		Cooling		7.6 / 8.0				
	Running current Heating		A	6.4	6.8			
	Inrush current, max current		1 1	5,				
Operation	,	Cooling	0,1	9				
data	Power factor	Heating	%	98 / 97				
	EER	Cooling		2.0	64			
	COP	Heating	1 1	3.5	56			
		Cooling						
	Sound power level	Heating	1	61	73			
		Cooling	dB(A)		57			
	Sound pressure level Heatin		1 ` ′	P-Hi: 42 Hi: 39 Me: 35 Lo: 33	59			
	Silent mode sound pressure level		1	_	53 / 47 (Normal / Silent)			
Exterior din	nensions (Height × Width ×		mm	1.850 × 600 × 320	845 × 970 × 370			
Exterior app		. /		Ceramic white	Stucco white			
(Munsell co				(N8.0) near equivalent	(4.2Y7.5/1.1) near equivalent			
Net weight			kg	49	82			
	or type & Q'ty	-	ıg		RMT5126MCE4×1			
	or motor (Starting method)		kW	_	Direct line start			
	oil (Amount, type)		Q.	_	0.9 M-MA68			
	(Type, amount, pre-charge	lenath)	kg	R410A 3.8kg(Pre-charged up to the				
Heat excha		iongin	ı ng	Louver fine & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant	<u> </u>			Electronic ex	<u> </u>			
Fan type &				Centrifugal fan ×1	Propeller fan ×1			
	(Stating method)		W	157 < Direct line start >	86 < Direct line start >			
,	(Otating motilod)	Cooling			75			
Air flow		Heating	m³/min	P-Hi:18 Hi:16 Me:14 Lo:12	73			
Available ex	xternal static pressure	rioding	Pa	0	_			
Outside air	·			Not possible				
	ality / Quantity			Plastic net ×1(Washable)	_			
	oration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)			
Electric hea			W	—	20 (Crankcase heater)			
	Remote control		- * *	RC-E5 (Installed) / wireles				
Operation	Room temperature control	l		Thermostat by electronics				
control	Operation display	-		-	-			
Safety equi				Overload protect Frost protecti Internal thermos	on thermostat tat for fan motor			
				Abnormal discharge to	• •			
	Refrigerant piping size (O.	.D.)	mm	Liquid line: I/U \(\phi 9.52 \) (3/8") \(\hat{2} \phi 9.52 \) (3/8");				
		•		Gas line: I/U φ 15.88 (5/8") ② φ 15.88(5/8")x				
L4-0 0	Connecting method		<u></u>	Flare piping	Flare piping			
			m		iguid 9 Cas lines)			
data	Insulation for piping Refrigerant line (one way)	longth	p	Necessary (both L	· /			
	Vertical height diff. between O.		m		50m Max 15m (Outdoor unit is lower)			
	Drain hose	o. and i.U.	m	Max.50m (Outdoor unit is higher) Hose connectable with VP20	Max.15m (Outdoor unit is lower) Hole size φ 20 x 3pcs			
Drain numa	n max lift height		mm	HOSE CONNECTABLE WITH VP20	поје ѕіде ф до х эрсѕ			
	<u>/</u>		mm ^	-	-			
	ided breaker size ked rotor ampere)		A					
		ımher	Α	4.1 6mm v. 2 cores (Including corth och	-			
Interconnec	cting wires Size × Core nu	urnber		, , , , , , , , , , , , , , , , , , , ,	ole)/ Termainal block (Screw fixing type)			
IP number				IPX0	IP24			
Standard ad				Mounting kit				
Option part	S ho data are measured at the	fallowi			ho pipo longth is 7.5m			

		_			· · · · · · ·
Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1909191-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) When wireless remote control is used, fan is 3 speed setting (Hi-Me-Lo) only.
 (6) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
- (7) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (8) Branching pipe set "DIS-WA1"×1(Option). ①: Pipe of O/U-Branch, ②: Pipe of Branch-I/U

(7) Wall mounted type (SRK)

(a) Single type

			Model	SRK100	OVNAZR
Item				Indoor unit SRK100ZR-S	Outdoor unit FDC100VNA
Power source				1 Phase, 220-240V	
	Nominal cooling capacity	/ (range)	kW	10.0 [4.0(Min.)	~ 11.2(Max.)]
	Nominal heating capacity	/ (range)	kW	11.2 [4.0(Min.)	∼ 12.5(Max.)]
	Power consumption	Cooling		3.	19
	Power consumption	Heating	kW	2.	78
	Max power consumption			6.	40
	Cooling			14.3 ,	/ 14.9
	Running current Heating		Α	12.5	/ 13.0
0 !:	Inrush current, max curre	ent	[5,	24
Operation data	Danier factor	Cooling	%	9	7
uaia	Power factor	Heating	% [9	7
	EER	Cooling		3.	13
	COP	Heating	[4.	03
	0	Cooling		60	70
	Sound power level	Heating	1	63	70
		Cooling	dB(A)	Hi: 48 Me: 45 Lo: 40 ULo: 27	54
	Sound pressure level	Heating	1 ` 1	Hi: 48 Me: 43 Lo: 38 ULo: 30	56
	Silent mode sound pressure level			_	50/44 (Normal/Silent)
Exterior dim	nensions (Height × Width >		mm	339 × 1,197 × 262	845 × 970 × 370
Exterior app		/		Fine snow	Stucco white
(Munsell co				(8.0Y 9.3/0.1) near equivalent	(4.2Y7.5/1.1) near equivalent
Net weight			kg	16.5	80
	r type & Q'ty		ı.ıg	-	RMT5126MCE3×1
	r motor (Starting method)		kW	_	Direct line start
	oil (Amount, type)		Q.	_	0.9 M-MA68
	(Type, amount, pre-charg	e lenath)	kg	R410A 3 8kg (Pre-charged up to the	e piping length of 30m) Outdoor unit
leat exchai	171 / /1 0	c longin)	I Ng	Tangential fan × 1	Straight fin & inner grooved tubing
Refrigerant				56 × 1 < Dire	
an type & 0				Hi: 24.5 Me: 21.3 Lo: 17.6 ULo: 10.4	Propeller fan ×1
	Starting method)		W	Hi: 27.5 Me: 23.2 Lo: 19.1 ULo: 13.6	86 < Direct line start >
all illotor (Starting metriod)	Cooling	i i	0	75
Air flow		Heating	m³/min	Not possible	73
Available ov	ternal static pressure	rieating	Pa	Polypropylene net (Washable) × 2	0
Outside air			га	71 17 1	
				Rubber sleeve (for fan motor)	<u> </u>
	ality / Quantity pration absorber			Dubbay alasya (far fan matar)	Dubbar alague (for compressor)
Electric hea			W	Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)
ectric nea			VV	- (0 1') W' DO FYO DO FF	20 (Crankcase heater)
Operation	Remote control				RCH-E3 Interface kit : SC-BIKN2-E
control	Room temperature contro	01			by electronics
	Operation display			RUN: Green, TIMER	· · · · · · · · · · · · · · · · · · ·
					tat for fan motor
Safety equip	oments			The state of the s	on thermostat
				Abnormal discharge to	emperature protection
	Defrieswent sistem six (4	201		Liquid line: I/U ϕ 9.52 (3/8") ϕ 9	9.52(3/8")×0.8 O/U φ 9.52 (3/8")
	Refrigerant piping size (0	J.U.)	mm	Gas line: I/U φ 15.88 (5/8") ② φ 1	
	Connecting method			Flare piping	Flare piping
nstallation	Attached length of piping	1	m	_	_
data	Insulation for piping			Necessary (both L	iquid & Gas lines)
	Refrigerant line (one way	/) length	m		.50m
	Vertical height diff. between C		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)
	Drain hose			Hose connectable with VP16	Hole size $\phi 20 \times 3pcs$
Orain pump	, max lift height		mm	_	—
	ded breaker size		Α		
	ked rotor ampere)		A	5	0
nterconnec		number	_ ^ \		ble) / Termainal block (Screw fixing type)
P number	ung wires poize x colle i	IGITIDEI		φ r.onim × 3 cores (including earth cal.	IP24
Standard ac				Mounting kit, Clean filter	
Option parts				Wounting Kit, Olean litter	
<u> </u>	s ne data are measured at th	o followis -	00001:4:-	-	The pine length in 7.5m
votes (I) In	e uata are measured at th	ie ioliowing	COHOLLIO	115.	Γhe pipe length is 7.5m.

(1) THE data are	illeasureu at t	ne ionowing co	The pipe length is 7.5iii.		
Item	Indoor air t	Indoor air temperature		temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1803131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to
- (4) Select the breaker size according to the own national standard.
- (5) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	SRK100	VSAZR			
Item			Model	Indoor unit SRK100ZR-S	Outdoor unit FDC100VSA			
Power source			3 Phase, 380-415V,					
Nominal cooling capacity (range)		kW	10.0 [4.0(Min.) ~ 11.2(Max.)]					
	Nominal heating capacity		kW	11.2 [4.0(Min.) ~ 12.5(Max.)]				
		Cooling		3.	· · · · · · ·			
	Power consumption Heating		kW	2.7	78			
	Max power consumption			10.	20			
Operation data	Running current Cooling			4.8 /	75.1			
	nurining current	Heating	Α	4.2 / 4.4				
	Inrush current, max curren	t		5, 15				
	Power factor Cooling		%	96 / 95				
		Heating	/0	9				
	EER	Cooling		3.				
	COP	Heating		4.	03			
	Sound power level	Cooling Heating		63	70			
	Cound pressure level	Cooling	dB(A)	Hi: 48 Me: 45 Lo: 40 ULo: 27	54			
	Sound pressure level	Heating	[Hi: 48 Me: 43 Lo: 38 ULo: 30	56			
	Silent mode sound pressu			_	50/44 (Normal/Silent)			
Exterior din	nensions (Height × Width ×	Depth)	mm	339 × 1,197 × 262	845 × 970 × 370			
Exterior app		-		Fine snow	Stucco white			
(Munsell co	olor)			(8.0Y 9.3/0.1) near equivalent	(4.2Y7.5/1.1) near equivalent			
Net weight			kg	16.5	82			
	r type & Q'ty			_	RMT5126MCE4×1			
Compresso	r motor (Starting method)		kW	_	Direct line start			
Refrigerant	oil (Amount, type)		Q	_	0.9 M-MA68			
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg (Pre-charged up to the				
Heat exchai	nger			Louver fins & inner grooved tubing	Straight fin & inner grooved tubing			
Refrigerant control				Electronic exp	pansion valve			
Fan type &				Tangential fan × 1 Propeller fan × 1				
Fan motor ((Starting method)		W	56 × 1 < Direct line start >	86 < Direct line start >			
Air flow		Cooling	m³/min	Hi: 24.5 Me: 21.3 Lo: 17.6 ULo: 10.4	75			
		Heating		Hi: 27.5 Me: 23.2 Lo: 19.1 ULo: 13.6	73			
	kternal static pressure		Pa	0	0			
Outside air				Not possible				
	ality / Quantity			Polypropylene net (Washable) × 2	-			
	oration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for compressor)			
Electric heater		W	_ 20 (Crankcase heater)					
Operation	Remote control			(Option) Wired: RC-EX3, RC-E5, RCH-E3 Interface kit: SC-BIKN2-E				
control	Room temperature contro			Thermostat by electronics RUN: Green, TIMER: Yellow, ECO: Blue				
	Operation display				, , , , , , , , , , , , , , , , , , ,			
				Internal thermos				
Safety equip	pments			Frost protection				
				Abnormal discharge te				
Installation data	Refrigerant piping size (O.	.D.)	mm	Liquid line: I/U φ 9.52 (3/8") φ 9.52 (3/8")×0.8 O/U φ 9.52 (3/8") Gas line: I/U φ 15.88 (5/8") ② φ 15.88 (5/8")×1.0 O/U φ 15.88 (5/8")				
	Connecting method			, ,	5.88 (5/8")×1.0 0/0 φ 15.88 (5/8") Flare piping			
	Attached length of piping		m	Flare piping	i iaie pipiliy			
	Insulation for piping		111	Necessary (both Liquid & Gas lines)				
	Refrigerant line (one way)	lenath	m	Max.50m				
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is I				
	Drain hose			Hose connectable with VP16 Hole size ϕ 20 × 3pcs				
Drain pump, max lift height		mm	- Tiole size φ20 x 3pcs					
Recommended breaker size		A						
L.R.A. (Locked rotor ampere)		A	5.0					
Interconnecting wires Size × Core number			-,	ϕ 1.6 mm × 3 cores (Including earth cable) / Termainal block (Screw fixing type				
IP number	g 111100 0120 x 0016 110			φ 1.6 IIIII × 3 cores (including earth cable) / Termainal block (Screw fixing t				
Standard accessories			Mounting kit, Clean filter –					
Option parts				—				
	ne data are measured at the	following	conditio	ns T	he pipe length is 7.5m.			

` '			11 0		
Item	Indoor air t	emperature	Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

 (4) Select the breaker size according to the own national standard.

 (5) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(b) Twin type

	b) I will type		Model	SRK100V	NAPZSX				
Item				Indoor unit SRK50ZSX-S (2 units)	Outdoor unit FDC100VNA				
Power source				1 Phase, 220-240V,	· · · · · · · · · · · · · · · · · · ·				
	Nominal cooling capacity (range)		kW	10.0 [4.0(Min.) ~ 11.2(Max.)]					
	Nominal heating capacity	(range)	kW	11.2 [4.0(Min.) ~ 12.5(Max.)]					
	Power consumption	Cooling	l L	2.8					
	Heating		kW	2.6					
	Max power consumption			6.4					
Operation data	Running current Cooling		L	12.7 /					
	Heating		A L	11.5 /					
	Inrush current, max current			5, 24					
	Power factor	Cooling	%	9					
		Heating	/*	9					
	EER Cooling		ļ <u>L</u>	3.4					
	COP Heating			4.2	29				
	Sound power level	Cooling		59	70				
	Country power lover	Heating	L	62					
	Sound pressure level	Cooling	dB(A)	Hi: 44 Me: 39 Lo: 31 ULo: 22	54				
	·	Heating		Hi: 46 Me: 41 Lo: 33 ULo: 23	56				
	Silent mode sound pressu			_	50 / 44 (Normal / Silent)				
	nensions (Height × Width × I	Depth)	mm	305 × 920 × 220	845 × 970 × 370				
Exterior app				Fine snow	Stucco white				
(Munsell co	olor)			Munsell: (8.0Y 9.3/0.1), RAL: 9003	(4.2Y7.5/1.1) near equivalent				
Net weight			kg	13	80				
	or type & Q'ty			_	RMT5126MCE3×1				
	r motor (Starting method)		kW	_	Direct line start				
Refrigerant	oil (Amount, type)		l	_	0.9 M-MA68				
	(Type, amount, pre-charge	length)	kg	R410A 3.8kg(Pre-charged up to the piping length of 30m)Outdoor unit					
Heat excha	nger			Louver fins & inner grooved tubing	Straight fin & inner grooved tubing				
Refrigerant				Electronic exp					
Fan type &				Tangential fan × 1 Propeller fan × 1					
Fan motor ((Stating method)		W	42 × 1 < Direct line start >	86 < Direct line start >				
Air flow		Cooling	m³/min	Hi: 14.3 Me: 12.4 Lo: 7.8 ULo: 5.4	75				
		Heating		Hi: 17.3 Me: 14.3 Lo: 9.8 ULo: 6.2	73				
	kternal static pressure		Pa	0	0				
Outside air				Not possible	-				
Air filter, Quality / Quantity			Polypropylene net (Washable) × 2	-					
Shock & vibration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)					
Electric hea	1		W	_ 20(Crankcase heater)					
Operation	Remote control			(Option) wired: RC-EX3, RC-E5, RCH-E3 Interface kit: SC-BIKN2-E					
control	Room temperature control			Thermostat b					
	Operation display			RUN: Green, TIMER	: Yellow, ECO: Blue				
Safety equipments			Internal thermostat for fan motor Frost protection thermostat Abnormal discharge temperature protection						
Installation data	Refrigerant piping size (O.	.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52(3/8")×0.8 ① ϕ 9.52(3/8")×0.8 O/U ϕ 9.5: Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7(1/2")×0.8 ① ϕ 15.88(5/8")×1.0 O/U ϕ 15.8					
	Connecting method			Flare piping	Flare piping				
	Attached length of piping		m	——————————————————————————————————————	——————————————————————————————————————				
	Insulation for piping			Necessary (both Liquid & Gas lines)					
	Refrigerant line (one way)	length	m	Max.50m					
	Vertical height diff. between O.I		m	Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is lo					
	Drain hose			Hose connectable with VP16 Hole size ϕ 20 × 3pcs					
Drain pump, max lift height		mm	— — — — — — — — — — — — — — — — — — —						
Recommended breaker size		Α							
L.R.A. (Locked rotor ampere)		A	5.0						
Interconnec		ımber	<u> </u>		ole)/ Termainal block (Screw fixing type)				
IP number			IPX0 IP24						
Standard accessories			Mounting kit, Clean filter -						
Option parts				_ /	_				
	he data are measured at the	following	condition	ne T	he pipe length is 7.5m.				

Notes (1) The data are measured at the following conditions.

		_			
Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1003131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1"×1(Option). ①: Pipe of O/U-Branc, ②: Pipe of Branch-I/U

			Model	SRK100V	SAPZSX	
Item			Wiodei	Indoor unit SRK50ZSX-S (2 units)	Outdoor unit FDC100VSA	
Power sour	ce			3 Phase, 380-415V,		
	Nominal cooling capacity	(range)	kW	10.0 [4.0(Min.)	~ 11.2(Max.)]	
	Nominal heating capacity	(range)	kW	11.2 [4.0(Min.)	~ 12.5(Max.)]	
	D ::	Cooling		2.8	39	
	Power consumption	Heating	kW	2.0	31	
	Max power consumption			10.	20	
		Cooling		4.2 /	4.5	
	Running current	Heating	Α	3.8 /	4.0	
	Inrush current, max currer			5,	15	
Operation		Cooling	0.4	99 /	98	
data	Power factor	Heating	% -	9	9	
	EER	Cooling		3	46	
	COP	Heating		4.5	29	
1		Cooling		59		
	Sound power level	Heating		62	70	
1		Cooling	dB(A)	Hi: 44 Me: 39 Lo: 31 ULo: 22	54	
	Sound pressure level	Heating	1 `	Hi: 46 Me: 41 Lo: 33 ULo: 23	56	
	Silent mode sound pressu			_	50 / 44 (Normal / Silent)	
Exterior din	nensions (Height × Width ×		mm	305 × 920 × 220	845 × 970 × 370	
Exterior app		. /		Fine snow	Stucco white	
(Munsell co				Munsell: (8.0Y 9.3/0.1), RAL: 9003	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	13	82	
	or type & Q'ty		9	_	RMT5126MCE4×1	
	or motor (Starting method)		kW	_	Direct line start	
	oil (Amount, type)		e l	_	0.9 M-MA68	
	(Type, amount, pre-charge	lenath)	kg	R410Δ 3 8kg/Pre-charged up to the	e piping length of 30m)Outdoor unit	
Heat excha		ichigan	I Ng	Louver fins & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant				Electronic ex		
Fan type &				Tangential fan × 1	Propeller fan ×1	
	(Stating method)		W	42 × 1 < Direct line start >	86 < Direct line start >	
T dil motor (otating method)	Cooling		Hi : 14.3 Me : 12.4 Lo : 7.8 ULo: 5.4	75	
Air flow		Heating	m³/min	Hi : 17.3 Me : 12.4 Lo : 7.6 GLo: 5.4 Hi : 17.3 Me : 14.3 Lo : 9.8 ULo: 6.2	73	
Available ex	kternal static pressure	ricating	Pa	0	0	
Outside air		-	ıα	Not possible		
	ality / Quantity			Polypropylene net (Washable) × 2		
	oration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)	
Electric hea		-	W	— — —	20(Crankcase heater)	
	Remote control		- **	(Ontion) wired : BC-EX3 BC-E5 F	RCH-E3 Interface kit : SC-BIKN2-E	
Operation	Room temperature contro	ı		Thermostat by electronics		
control	Operation display	•		RUN: Green, TIMER	•	
	Toperation display			,		
Cofoty coul	nmonto				tat for fan motor	
Safety equi	pments			Frost protection Abnormal discharge to		
					' '	
	Refrigerant piping size (O	.D.)	mm -	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52(3/8")		
		,		Gas line: I/U φ 12.7 (1/2") ② φ 12.7(1/2")×0	- / / / /	
	Connecting method			Flare piping	Flare piping	
	Attached length of piping		m	_		
data	Insulation for piping			Necessary (both L		
	Refrigerant line (one way)		m	Max.		
	Vertical height diff. between O.	U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
Drain hose			Hose connectable with VP16	Hole size <i>ϕ</i> 20 × 3pcs		
	, max lift height		mm	_		
	ded breaker size		А		-	
,	ked rotor ampere)		А	5.		
Interconnec	cting wires Size × Core n	umber		, , , , , , , , , , , , , , , , , , ,	ole)/ Termainal block (Screw fixing type)	
IP number				IPX0	IP24	
Standard a	ccessories			Mounting kit, Clean filter		
Option part	S			_	-	
Notes (1) Ti	ho data are measured at the	following	a a malitia r		he nine length in 7 Fm	

		_			· · · · · · · · · · · · · · · · · · ·
Item	Indoor air temperature		Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1805151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1"×1(Option). ①: Pipe of O/U-Branc, ②: Pipe of Branch-I/U

			Model	SRK125V	/NAPZSX	
Item			Model	Indoor unit SRK60ZSX-S (2 units)	Outdoor unit FDC125VNA	
Power sour	rce				50Hz / 220V, 60Hz	
	Nominal cooling capacity	(range)	kW	12.5 [5.0(Min.)	*	
	Nominal heating capacity	<u> </u>	kW	14.0 [4.0(Min.)	~ 16.0(Max.)]	
		Cooling			65	
	Power consumption	Heating	kW	3.	58	
	Max power consumption	J J		6.		
	·	Cooling		20.0		
	Running current	Heating	A	15.7		
	Inrush current, max curren		''	5,		
Operation		Cooling		9		
data	Power factor	Heating	% -	9		
	EER	Cooling		2.0		
	COP	Heating		3.91		
		Cooling		62		
	Sound power level	Heating		63	71	
		Cooling	dB(A)	Hi: 46 Me: 41 Lo: 33 ULo: 22	55	
	Sound pressure level	Heating	""	Hi: 46 Me: 42 Lo: 34 ULo: 23	57	
	Silent mode sound pressu		1	_	51 / 45 (Normal / Silent)	
Exterior din	mensions (Height × Width ×		mm	305 × 920 × 220	845 × 970 × 370	
Exterior ap		В СРП)		Fine snow	Stucco white	
(Munsell co				Munsell: (8.0Y 9.3/0.1), RAL: 9003	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	13	80	
			Ny	— IO	RMT5126MCE3×1	
Compressor type & Q'ty Compressor motor (Starting method)			kW		Direct line start	
	t oil (Amount, type)		_	_	0.9 M-MA68	
	t (Type, amount, pre-charge	lonath)	l l	R410A 3.8kg(Pre-charged up to the		
		length)	kg	Louver fins & inner grooved tubing	11 0 0 /	
Heat exchanger				<u> </u>	Straight fin & inner grooved tubing pansion valve	
Refrigerant control						
Fan type & Q'ty			w	Tangential fan × 1 42 × 1 < Direct line start >	Propeller fan ×1	
Fan motor (Stating method)		VV		86 < Direct line start >		
Air flow		Cooling	m³/min	Hi: 16.3 Me: 13.4 Lo: 8.9 ULo: 5.4	75 73	
Available e	vternel etetic preserve	Heating	Pa	Hi: 17.8 Me: 13.7 Lo: 10.9 ULo: 6.2	0	
	xternal static pressure		Pa			
Outside air				Not possible	-	
	uality / Quantity			Polypropylene net (Washable) × 2	— Dubbandan (fan aranan)	
	bration absorber		10/	Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)	
Electric hea			W	- 20(Crankcase heater)		
Operation	Remote control	<u> </u>		(Option) wired: RC-EX3, RC-E5, RCH-E3 Interface kit: SC-BIKN2-E		
control	Room temperature control Operation display	!		Thermostat by electronics		
	Operation display			RUN: Green, TIMER: Yellow, ECO: Blue		
Safety equi	ipments			Internal thermos Frost protecti Abnormal discharge te	on thermostat	
	D-file-series (0	D.)		Liquid line: I/U φ 6.35 (1/4") ② φ 9.52(3/8"):	x0.8 ① φ 9.52(3/8")x0.8 O/U φ 9.52 (3/8")	
	Refrigerant piping size (O	.U.)	mm	Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7(1/2")x0	.8 ① φ 15.88(5/8")x1.0 O/U φ 15.88 (5/8")	
	Connecting method			Flare piping	Flare piping	
Installation			m	-		
data	Insulation for piping			Necessary (both L		
	Refrigerant line (one way)		m		.50m	
	Vertical height diff. between O.	U. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
Drain hose			Hose connectable with VP16	Hole size ϕ 20 x 3pcs		
	p, max lift height		mm	_	-	
	nded breaker size		Α	-		
	ked rotor ampere)		Α	5.		
	cting wires Size × Core nu	umber		` ` •	ole)/ Termainal block (Screw fixing type)	
IP number				IPX0	IP24	
Standard a	ccessories			Mounting kit, Clean filter		
Option part				_	_	
Notos (1) T	he data are magazired at the	falloudos	oonditio		ho nino longth is 7 5m	

		_			· · · · -
Item	Indoor air temperature		Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1"×1(Option). ①: Pipe of O/U-Branc, ②: Pipe of Branch-I/U

			Model	SRK125V	/SAPZSX		
Item			Model	Indoor unit SRK60ZSX-S (2 units)	Outdoor unit FDC125VSA		
Power sour	rce			3 Phase, 380-415V,	50Hz / 380V, 60Hz		
	Nominal cooling capacity	(range)	kW	12.5 [5.0(Min.)	~ 14.0(Max.)]		
	Nominal heating capacity	<u> </u>	kW	14.0 [4.0(Min.)	. 72		
		Cooling		4.6			
	Power consumption	Heating	kW	3.5			
	Max power consumption	, <u>J</u>		10.			
		Cooling		6.7 /			
	Running current	Heating	A	5.2 /			
	Inrush current, max currer	<u> </u>	'	5,			
Operation		Cooling		98 /			
data	Power factor	Heating	% -	9	9		
	EER	Cooling		2.6			
	COP	Heating		3.9			
		Cooling		62			
	Sound power level	Heating		63	71		
		Cooling	dB(A)	Hi : 46 Me : 41 Lo : 33 ULo: 22	55		
	Sound pressure level	Heating	()	Hi : 46 Me : 42 Lo : 34 ULo: 23	57		
	Silent mode sound pressu			_	51 / 45 (Normal / Silent)		
Exterior din	nensions (Height × Width ×		mm	305 × 920 × 220	845 × 970 × 370		
Exterior app	<u>_</u>	Борин		Fine snow	Stucco white		
(Munsell co				Munsell: (8.0Y 9.3/0.1), RAL: 9003	(4.2Y7.5/1.1) near equivalent		
Net weight			kg	13	82		
	or type & Q'ty		ING	_	RMT5126MCE4×1		
Compressor motor (Starting method)			kW	_	Direct line start		
	oil (Amount, type)	;	e l	_	0.9 M-MA68		
	(Type, amount, pre-charge	(length)	kg	R410A 3 8kg/Pre-charged up to the	e piping length of 30m)Outdoor unit		
Heat excha		iengin)	Ng	Louver fins & inner grooved tubing	Straight fin & inner grooved tubing		
Refrigerant control				Electronic exp			
Fan type &				Tangential fan × 1	Propeller fan ×1		
	(Stating method)	·	W	42 × 1 < Direct line start >	86 < Direct line start >		
		Cooling		Hi : 16.3 Me : 13.4 Lo : 8.9 ULo: 5.4	75		
Air flow		Heating	m³/min	Hi : 17.8 Me : 13.7 Lo : 10.9 ULo: 6.2	73		
Available ev	xternal static pressure	ricating	Pa	0	0		
Outside air			- 1 α	Not possible	-		
	uality / Quantity			Polypropylene net (Washable) × 2			
	oration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)		
Electric hea			W	—	20(Crankcase heater)		
	Remote control			(Option) wired: RC-EX3, RC-E5, RCH-E3 Interface kit: SC-BIKN2-E			
Operation	Room temperature contro	ı		Thermostat by electronics			
control	Operation display	•		RUN: Green, TIMER: Yellow, ECO: Blue			
	Toporation alopiay			,			
Safety equi	inmonte			Internal thermos Frost protection	tat for fan motor		
Salety equi	prilents			Abnormal discharge te			
				9	' '		
	Refrigerant piping size (O	.D.)	mm -	Liquid line: I/U \(\phi \) 6.35 (1/4") \(\text{2} \phi \) 9.52(3/8")>			
	<u> </u>			Gas line: I/U φ 12.7 (1/2") ② φ 12.7(1/2")×0			
	Connecting method			Flare piping	Flare piping		
			m				
data	Insulation for piping	1		Necessary (both L			
	Refrigerant line (one way)		m	Max.			
	Vertical height diff. between O.	.u. and I.U.	m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)		
Drain hose				Hose connectable with VP16	Hole size φ 20 × 3pcs		
	o, max lift height		mm	_			
	nded breaker size		A		-		
,	ked rotor ampere)		Α	5.			
Interconnec	cting wires Size × Core n	umber			ole)/ Termainal block (Screw fixing type)		
IP number				IPX0	IP24		
Standard a				Mounting kit, Clean filter	-		
Option part							
Notes (1) Ti	he data are measured at the	a fallowing		T	ha nina lanath ia 7 Em		

		_			· · · · · · · · · · · · · · · · · · ·
Item	Indoor air temperature		Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1805151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is two indoor units are combined and run together.
 (7) Branching pipe set "DIS-WA1"×1(Option). ①: Pipe of O/U-Branc, ②: Pipe of Branch-I/U



(c) Triple type

			Model	SRK140V	/NATZSX	
Item			Wiodei	Indoor unit SRK50ZSX-S (3 units)	Outdoor unit FDC140VNA	
Power sour	rce			1 Phase, 220-240V,	50Hz / 220V, 60Hz	
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)	~ 14.5(Max.)]	
	Nominal heating capacity (range)		kW	15.5 [4.0(Min.)	72	
		Cooling		4.6	` /2	
	Power consumption	Heating	kW	3.7	74	
	Max power consumption			6.4	40	
		Cooling		20.3 /		
	Running current Heating		A	16.4	17.2	
	Inrush current, max curren		1	5,		
Operation		Cooling	0.4	99		
data	Power factor	Heating	%	9	9	
	EER	Cooling		2.9	94	
	COP	Heating		4.	14	
		Cooling		59		
	Sound power level	Heating		62	73	
		Cooling	dB(A)	Hi: 44 Me: 39 Lo: 31 ULo: 22	57	
	Sound pressure level	Heating	1 ` ′	Hi: 46 Me: 41 Lo: 33 ULo: 23	59	
	Silent mode sound pressu		1	_	53 / 47 (Normal / Silent)	
Exterior din	nensions (Height × Width ×		mm	305 × 920 × 220	845 × 970 × 370	
Exterior ap		/		Fine snow	Stucco white	
(Munsell co				Munsell: (8.0Y 9.3/0.1), RAL: 9003	(4.2Y7.5/1.1) near equivalent	
Net weight			kg	13	80	
	or type & Q'ty		1.5	_	RMT5126MCE3×1	
	or motor (Starting method)		kW	_	Direct line start	
	oil (Amount, type)		Q.	_	0.9 M-MA68	
	(Type, amount, pre-charge	lenath)	kg	R410A 3.8kg(Pre-charged up to the		
Heat excha			- 13	Louver fins & inner grooved tubing	Straight fin & inner grooved tubing	
Refrigerant control				Electronic ex	<u> </u>	
Fan type & Q'ty				Tangential fan × 1	Propeller fan ×1	
Fan motor (Stating method)		W	42 × 1 < Direct line start >	86 < Direct line start >		
	,	Cooling	3, ,	Hi: 14.3 Me: 12.4 Lo: 7.8 ULo: 5.4	75	
Air flow		Heating	m³/min	Hi: 17.3 Me: 14.3 Lo: 9.8 ULo: 6.2	73	
Available ex	xternal static pressure		Pa	0	0	
Outside air	intake			Not possible	_	
Air filter, Qu	uality / Quantity			Polypropylene net (Washable) × 2	_	
Shock & vik	oration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)	
Electric hea	ater		W	– 20(Crankcase heater		
o ''	Remote control			(Option) wired: RC-EX3, RC-E5, F	RCH-E3 Interface kit : SC-BIKN2-E	
Operation	Room temperature control			Thermostat b	y electronics	
control	Operation display			RUN: Green, TIMER	: Yellow, ECO: Blue	
Safety equi	ipments			Internal thermos Frost protectic Abnormal discharge te	on thermostat	
	Refrigerant piping size (O	.D.)	mm	Liquid line: I/U ϕ 6.35 (1/4") ② ϕ 9.52(3/8") Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7(1/2")×0	×0.8 ① φ 9.52(3/8")×0.8 O/U φ 9.52 (3/8") 0.8 ① φ 15.88(5/8")×1.0 O/U φ 15.88 (5/8")	
	Connecting method			Flare piping	Flare piping	
Installation			m	_	-	
data	Insulation for piping			Necessary (both L	iguid & Gas lines)	
	Refrigerant line (one way)	length	m		50m	
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)	
Drain hose			Hose connectable with VP16	Hole size φ 20 × 3pcs		
Drain pump, max lift height			mm	-	-	
	nded breaker size		Α		<u> </u>	
	ked rotor ampere)		A	5.		
	cting wires Size × Core nu	ımber			ble)/ Termainal block (Screw fixing type)	
P number	. 5 12 0 0.010 110			IPX0	IP24	
	ccessories			Mounting kit, Clean filter		
Option part				-		
	he data are measured at the	fallanda			he nine length is 7 5m	

Notes (1) The data are measured at the following conditions.

		_			· · · · -
Item	Indoor air temperature		Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 230V50Hz or 220V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
 (7) Branching pipe set "DIS-TA1"×1(Option). ①: Pipe of O/U-Branc, ②: Pipe of Branch-I/U



			Model	SRK140\	/SATZSX
Item			ouo.	Indoor unit SRK50ZSX-S (3 units)	Outdoor unit FDC140VSA
Power sour	ce			3 Phase, 380-415V,	50Hz / 380V, 60Hz
	Nominal cooling capacity	(range)	kW	13.6 [5.0(Min.)	~ 14.5(Max.)]
	Nominal heating capacity	(range)	kW	15.5 [4.0(Min.)	~ 16.5(Max.)]
	D ::	Cooling		4.:	26
	Power consumption	Heating	kW	3.	74
	Max power consumption			10.	.20
		Cooling		6.8	7.1
	Running current Heating		A	5.5	75.8
	Inrush current, max currer		ĺ	5,	15
Operation		Cooling		98 /	
data	Power factor	Heating	% -	9	8
1	EER	Cooling		2.9	94
	COP	Heating		4.	14
		Cooling		59	
	Sound power level	Heating		62	73
		Cooling	dB(A)	Hi: 44 Me: 39 Lo: 31 ULo: 22	57
	Sound pressure level	Heating	1 ` ′	Hi: 46 Me: 41 Lo: 33 ULo: 23	59
1	Silent mode sound pressu			_	53 / 47 (Normal / Silent)
Exterior din	nensions (Height × Width ×		mm	305 × 920 × 220	845 × 970 × 370
Exterior app		. /		Fine snow	Stucco white
(Munsell co				Munsell: (8.0Y 9.3/0.1), RAL: 9003	(4.2Y7.5/1.1) near equivalent
Net weight	,		kg	13	82
	or type & Q'ty		9	_	RMT5126MCE4×1
	or motor (Starting method)		kW	_	Direct line start
	oil (Amount, type)		e e	_	0.9 M-MA68
	(Type, amount, pre-charge	lenath)	kg	R410A 3.8kg(Pre-charged up to the	
Heat excha		iengin)	- Kg	Louver fins & inner grooved tubing	Straight fin & inner grooved tubing
Refrigerant control				Electronic ex	<u> </u>
Fan type &				Tangential fan × 1	Propeller fan × 1
Fan motor (Stating method)			W	42 × 1 < Direct line start >	86 < Direct line start >
T all Thotor (Clating method)	Cooling		Hi : 14.3 Me : 12.4 Lo : 7.8 ULo: 5.4	75
Air flow		Heating	m³/min	Hi : 17.3 Me : 12.4 Lo : 7.6 GLo: 5.4	73
Available ex	kternal static pressure	ricating	Pa	0	0
Outside air		-	ια	Not possible	
	iality / Quantity			Polypropylene net (Washable) × 2	<u>_</u> _
	oration absorber			Rubber sleeve(for fan motor)	Rubber sleeve(for compressor)
Electric hea			W	nubbei sieeve(ioi lait motor)	20(Crankcase heater)
LIECTIC HEA	Remote control		VV	(Option) wired : RC-EX3, RC-E5 , F	
Operation	Room temperature contro	i		Thermostat b	
control	Operation display	!			: Yellow, ECO: Blue
	Operation display			Internal thermos	•
Safety equi	pments			Frost protection	
	Definement winter and 10	D.)	100/2-2	Liquid line: I/U φ 6.35 (1/4") ② φ 9.52(3/8")	<u> </u>
	Refrigerant piping size (O Connecting method	.u.)	mm	Gas line: I/U ϕ 12.7 (1/2") ② ϕ 12.7(1/2")×0	
Installation			m	Flare piping	ι ιαισ μιμιιιί
data	Insulation for piping		m	— Necessary (both L	iquid & Gas lines)
Gala	Refrigerant line (one way)	lenath	m		50m
			m	Max.50m (Outdoor unit is higher)	Max.15m (Outdoor unit is lower)
Vertical height diff. between O.U. and I.U. Drain hose		- '''	Hose connectable with VP16	Hole size ϕ 20 × 3pcs	
Drain nose Drain pump, max lift height		mm	- WILL VE TO	- Ιοίο δίζο ψ ζυ χ όμοδ	
	ded breaker size				-
	ked rotor ampere)		A	5.	
Interconnec		umber	A		ble)/ Termainal block (Screw fixing type)
	ung wires Size x Core n	uniber		φ 1.6mm × 3 cores (including earth cat	, , , , , , , , , , , , , , , , , , , ,
IP number Standard a	coccorios			Mounting kit, Clean filter	IP24
				Mounting kit, Clean litter	
Option part	S ho data are measured at the	f II .			he pine length is 7.5m

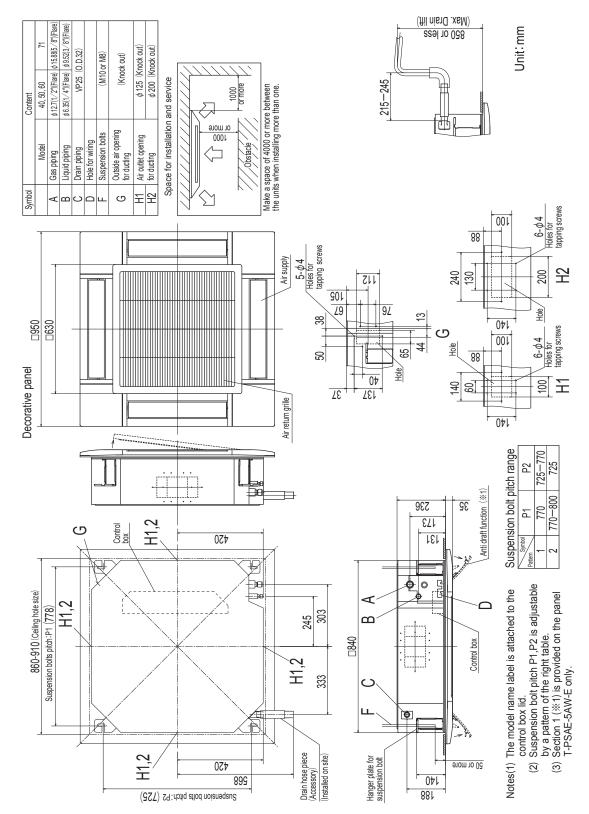
		_			· · · · · · · · · · · · · · · · · · ·
Item	Indoor air temperature		Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1805151-11

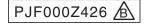
- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

- (4) Select the breaker size according to the own national standard.
 (5) The operation data indicate when the air-conditioner is operated at 400V50Hz or 380V60Hz.
 (6) Indoor unit specifications for one unit. Capacity and operation data is three indoor units are combined and run together.
 (7) Branching pipe set "DIS-TA1"x1(Option). ①: Pipe of O/U-Branc ②: Pipe of Branch-I/U

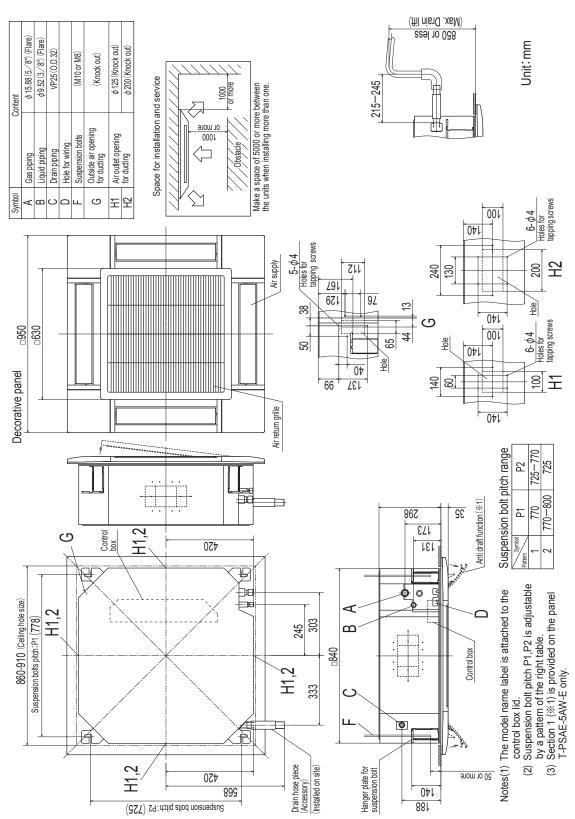
1.2 EXTERIOR DIMENSIONS

- (1) Indoor units
 - (a) Ceiling cassette-4 way type (FDT) Models FDT50VG, 60VG, 71VG

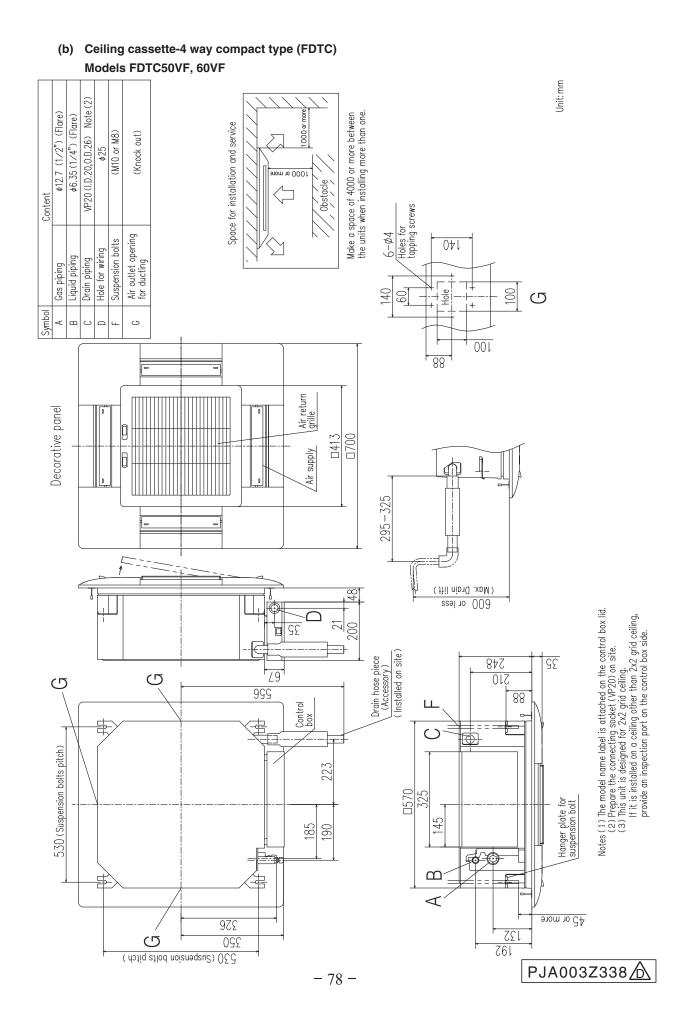


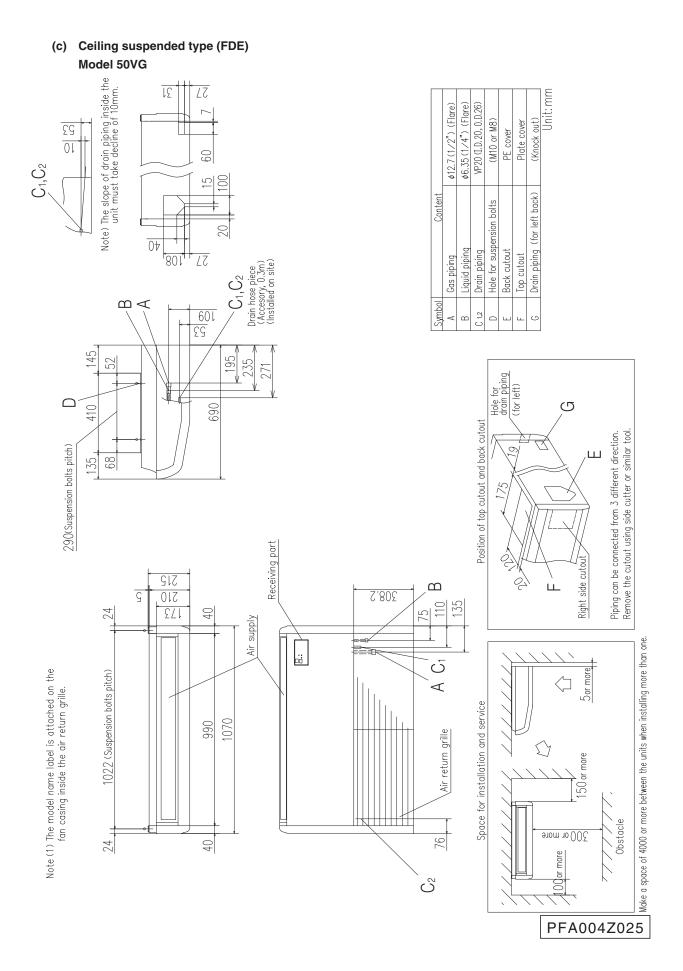


Models FDT100VG, 125VG, 140VG

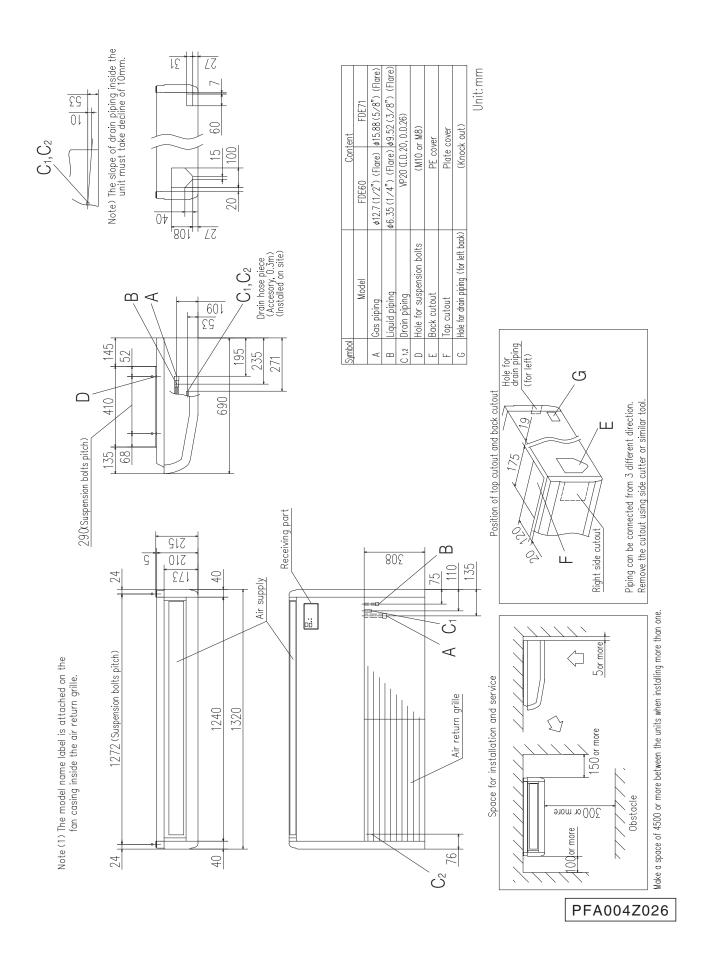


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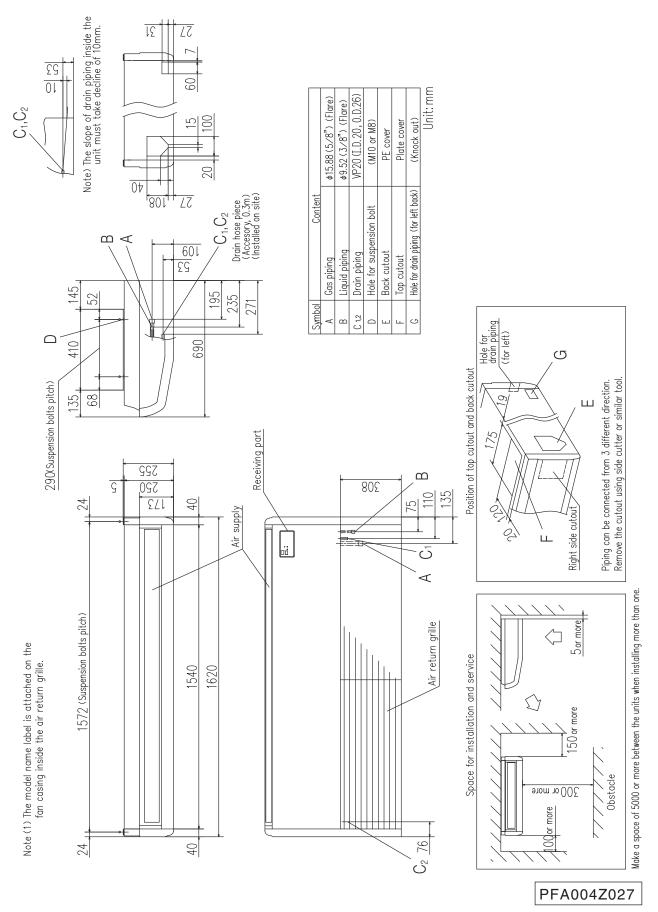




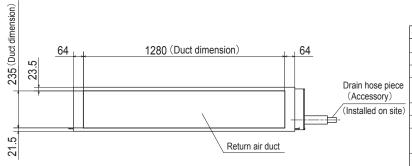
Models FDE60VG, 71VG



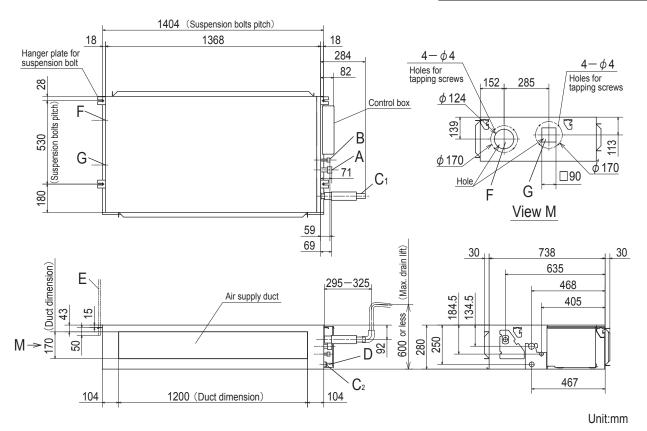
Models FDE100VG, 125VG, 140VG



(d) Duct connected-High static pressure type (FDU) Models FDU100VF2, 125VF, 140VF

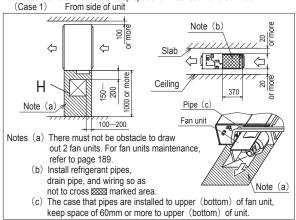


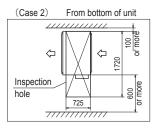
Symbol		Content		
Α	Gas piping	φ 15.88 (5/8") (Flare)		
В	Liquid piping	ϕ 9.52 (3/8") (Flare)		
C ₁	Drain piping	VP25 (I.D.25,O.D.32)		
C ₂	Drain piping	VP20 (I.D.20,O.D.26)		
U2	(Gravity drainage)	VF ZU (1.D.ZU,O.D.ZU)		
D	Hole for wiring			
Е	Suspension bolts	(M10)		
F	Outside air opening	(Knock out)		
Г	for ducting	(Kilock out)		
G	Air outlet opening	(Knock out)		
G	for ducting	(MITOUR OUL)		
Н	Inspection hole	(450X450)		



Space for installation and service

Select either of two cases to keep space for installation and services.

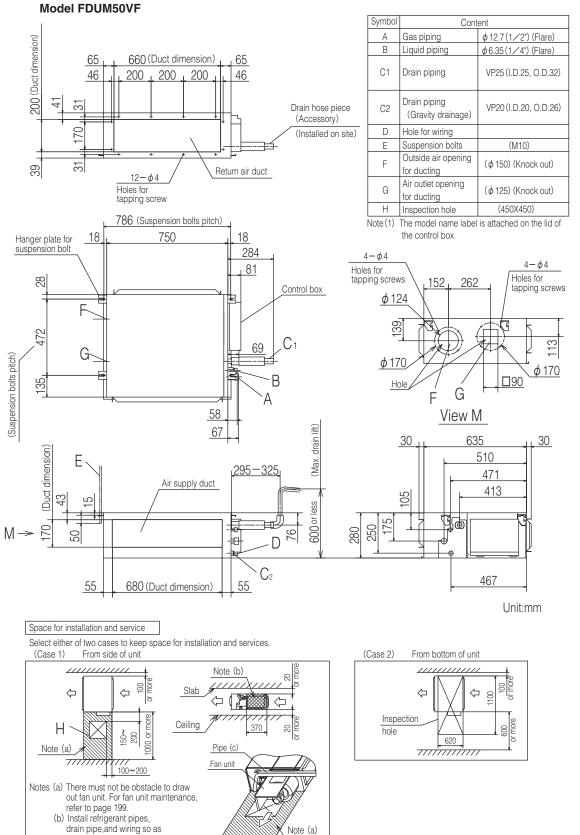




Notes (1) The model name label is attached on the lid of the control box.

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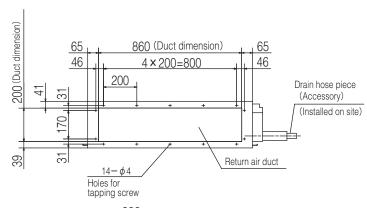
(e) Duct connected-Low / Middle static pressure type (FDUM)



not to cross ₩ marked area.

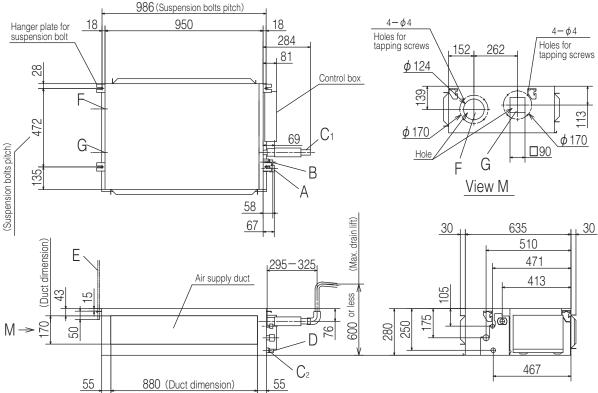
(c) The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper (bottom) of unit.

Model FDUM60VF



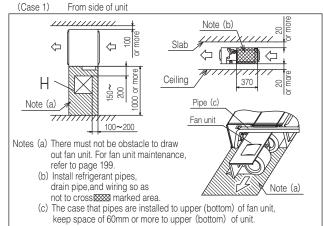
Symbol		Content		
Α	Gas piping	φ 12.7 (1/2") (Flare)		
В	Liquid piping	φ6.35 (1/4") (Flare)		
C1	Drain piping	VP25 (I.D.25, O.D.32)		
C2 Drain piping (Gravity drainage)		VP20 (I.D.20, O.D.26)		
D	Hole for wiring			
Е	Suspension bolts	(M10)		
F	Outside air opening for ducting	(φ150) (Knock out)		
G	Air outlet opening for ducting	(φ125) (Knock out)		
Н	Inspection hole	(450X450)		

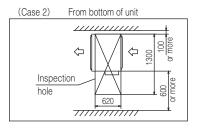
Note (1) The model name label is attached on the lid of the control box.

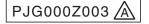


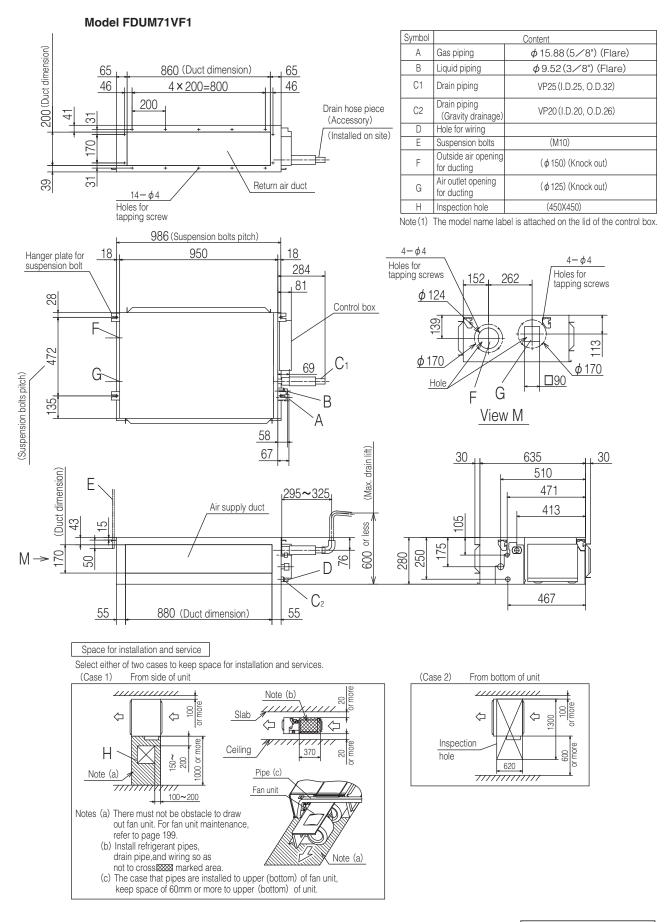
Space for installation and service

Select either of two cases to keep space for installation and services.

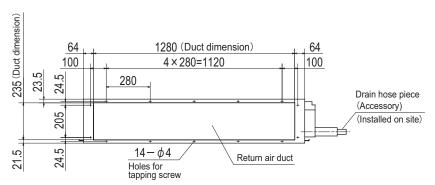




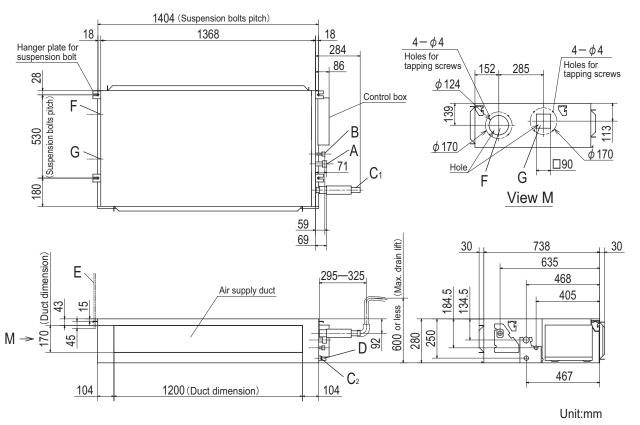




Models FDUM100VF2, 125VF, 140VF

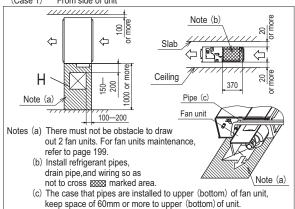


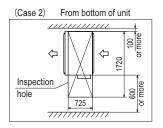
Symbol	Cor	ntent
A	Gas piping	φ 15.88 (5 / 8") (Flare)
В	Liquid piping	φ 9.52 (3 / 8") (Flare)
C ₁	Drain piping	VP25 (I.D.25,O.D.32)
C ₂	Drain piping (Gravity drainage)	VP20 (I.D.20,O.D.26)
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(φ 150) (Knock out)
G	Air outlet opening for ducting	(φ125) (Knock out)
Н	Inspection hole	(450X450)



Space for installation and service

Select either of two cases to keep space for installation and services. (Case 1) From side of unit

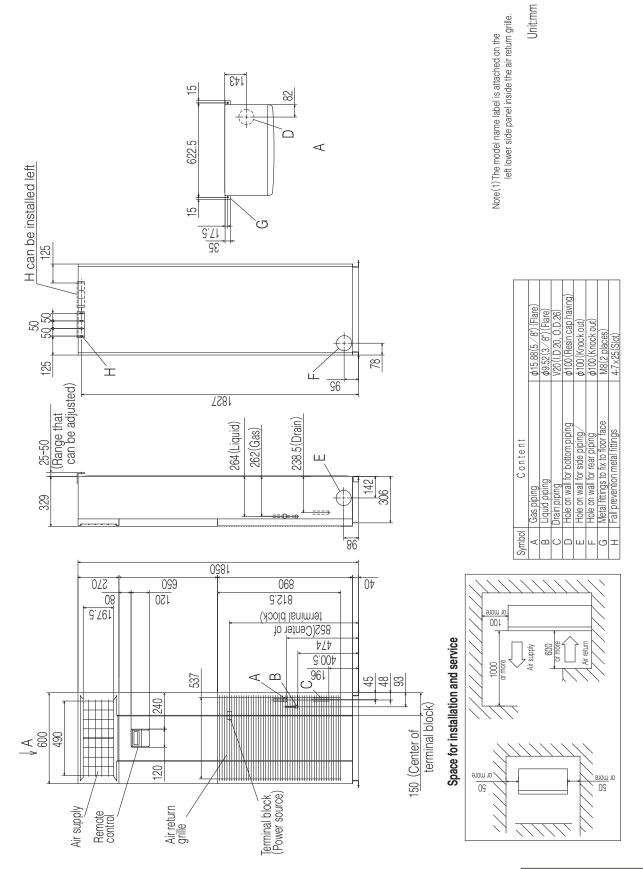




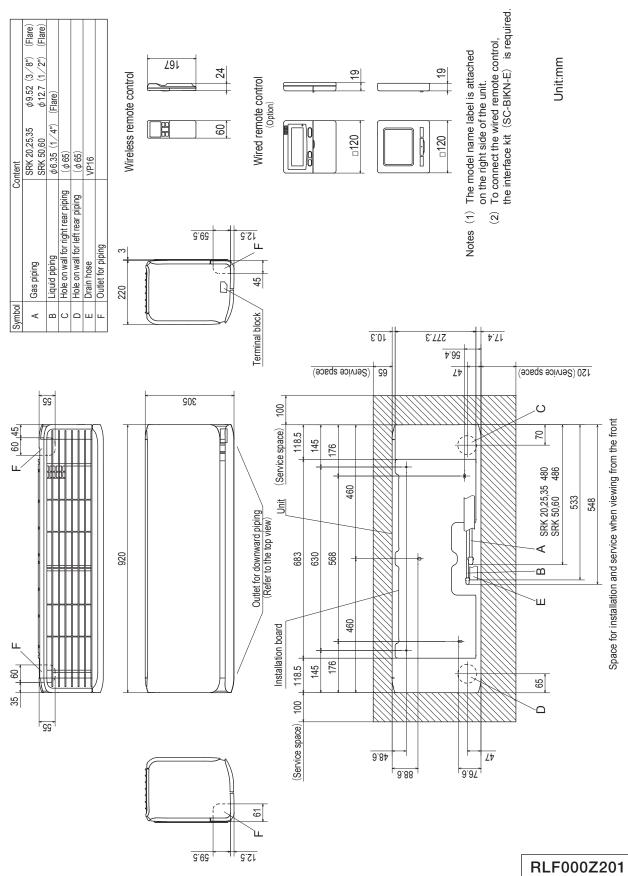
Note (1) The model name label is attached on the lid of the control box.

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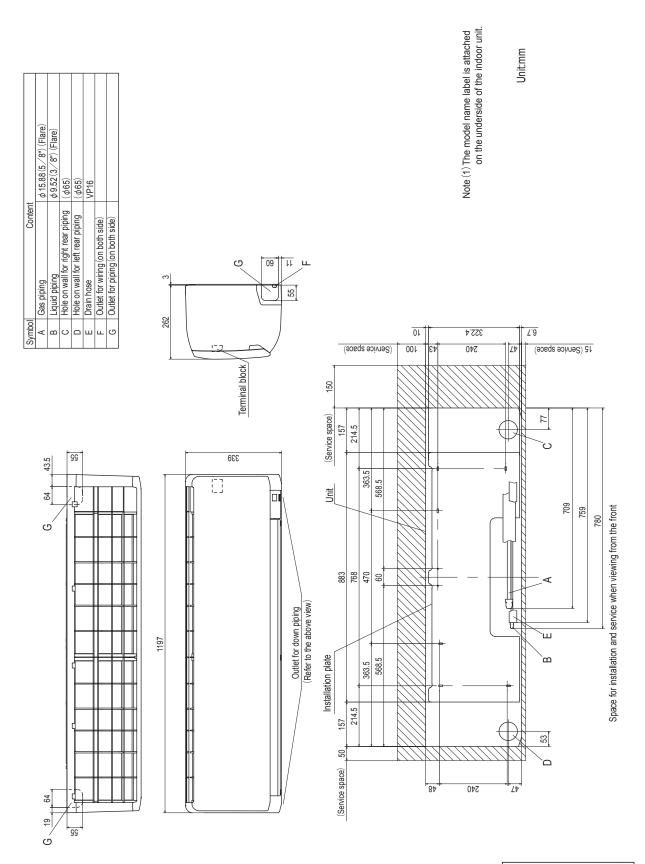
(f) Floor standing type (FDF) Models FDF71VD1, 100VD2, 125VD, 140VD



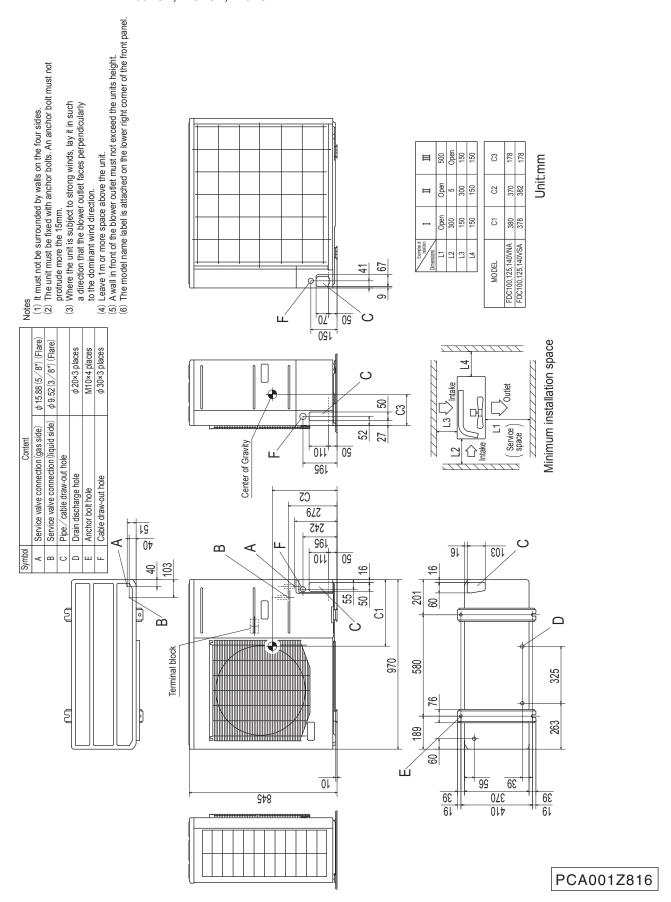
(g) Wall mounted type (SRK) Models SRK50ZSX-S, 60ZSX-S



Model SRK100ZR-S



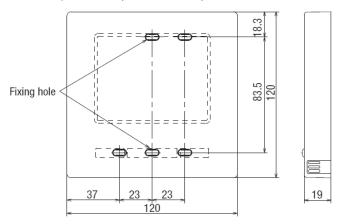
(2) Outdoor units Models FDC100VNA, 125VNA, 140VNA 100VSA, 125VSA, 140VSA



(3) Remote control (Option parts)

(a) Wired remote control Model RC-EX3

Dimensions (Viewed from front)



Exterior appearance	Pearl white
(Munsell color)	(N8.5) near equivalent

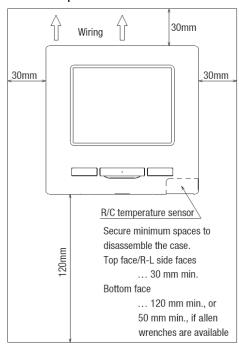
Cautions for selecting installation place

- (1) Installation surface must be flat and sufficiently strong. R/C case must not be deformed.
- (2) Where the R/C can detect room temperatures accurately This is a must when detecting room temperatures with the temperature sensor of R/C.
 - · Install the R/C where it can detect the average temperature in the room.
 - · Install the R/C sufficiently separated from a heat source.
 - · Install the R/C where it will not be influenced by the turbulence of air when the door is opened or closed.

Select a place where the R/C is not exposed to direct sunlight or blown by winds from the air-conditioner or temperatures on the wall surface will not deviate largely from indoor air temperatures.

(3) When using the panel provided with the automatic filter elevating function, select a place where the movement of grill can be seen easily.

Installation space



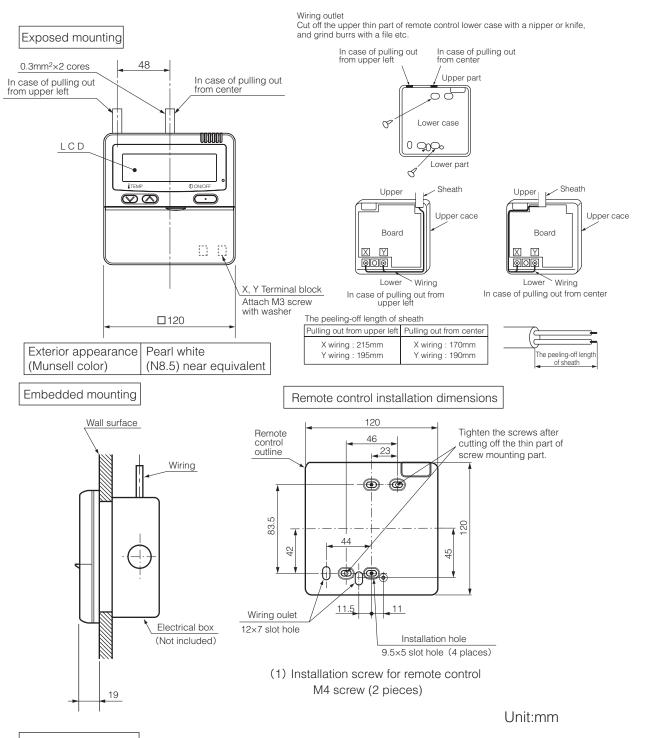
R/C cable: $0.3 \text{mm}^2 \times 2 \text{ cores}$

When the cable length is longer than 100 m, the max size for wires used in the R/C case is $0.5~\mathrm{mm}^2$. Connect them to wires of larger size near the outside of R/C. When wires are connected, take measures to prevent water, etc. from entering inside.

< 200 m	0.5 mm ² x 2 cores
< 300 m	0.75 mm ² x 2 cores
< 400 m	1.25 mm ² x 2 cores
< 600 m	2.0 mm ² x 2 cores

Adapted to **RoHS** directive

Model RC-E5



Wiring specifications

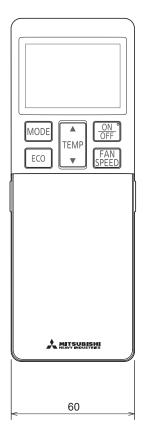
(1) If the prolongation is over 100m, change to the size below. But, wiring in the remote control case should be under 0.5mm². Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

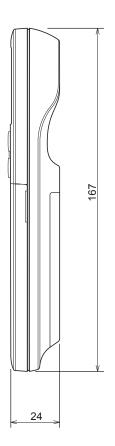
Length	Wiring thickness
100 to 200m	0.5mm ² ×2 cores
Under 300m	0.75mm ² ×2 cores
Under 400m	1.25mm ² ×2 cores
Under 600m	2.0mm ² ×2 cores

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(b) Wireless remote control RCN-E2 (Option parts) (Except FDF & SRK serles)

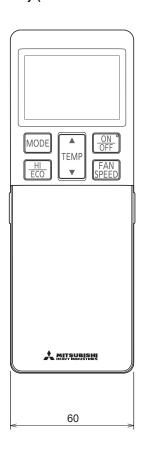
Unit: mm

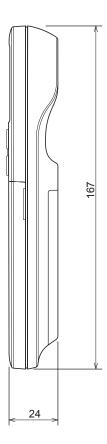




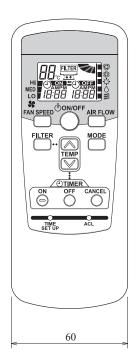
SRK series only (Standard accessory)

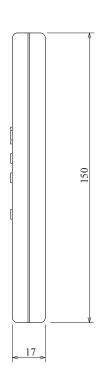






RCN-E1R (Option parts) (FDF series only)





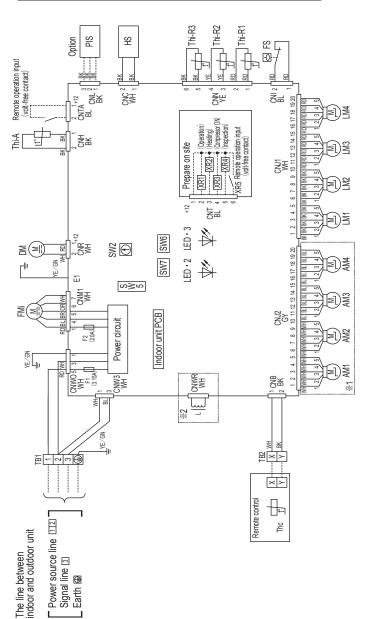
Unit: mm

1.3 ELECTRICAL WIRING

- (1) Indoor units
 - (a) Ceiling cassette-4 way type (FDT)
 Models FDT50VG, 60VG, 71VG, 100VG, 125VG, 140VG

Meaing of marks	rks
Item	Description
AM1-4	Anti draft motor
CNB-Z	Connector
DM	Drain motor
F1,2	Fuse
FMi	Fan motor
FS	Float switch
모	Humidity sensor
_	Reactor
LED·2	Indication lamp (Green-Nomal operation)
LED·3	Indication lamp (Red-Inspection)
LM1-4	Louver motor
PIS	Motion sensor
SW2	Remote control communication address
SW5	Plural units Master / Slave setting
SW6	Model capacity setting
SW7-1	Operation check,drain motor test run
TB1	Terminal block (Power source)(□ mark)
TB2	Terminal block (Signal line)(□ mark)
Thc	Thermistor (Remote control)
Thi-A	Thermistor (Return air)
Thi-R1,2,3	Thermistor (Heat exchanger)

Color marks Mark Colo BK Black BL Blue BR Brown OR Orange	Color Color Ick Ie Ie In In In In In In In In In In In In In	Mark WH YE GY YE/GN	Color White Yellow Gray Yellow/Green
7			



Notes 1. ------ indicates wining on site.

2. See the wiring diagram of outside unit about the line between inside unit and outside unit.

3. Use twin core cord (0.3mm²) at remote control line. See spec sheet of remote control in case that the total length is more than 100m.

4. Do not put remote control line alongside power source line.

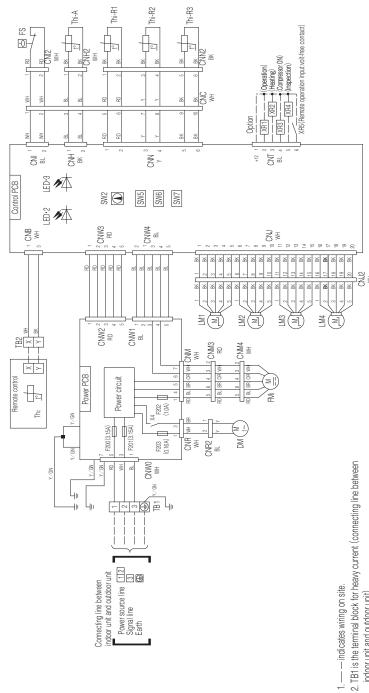
5. Section 1 (※1) is provided on the panel T-PSAE-5AW-E only.

6. Section 2 (※2) is provided on the models 100,125 only.

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(b) Ceiling cassette-4 way compact type (FDTC) Models FDTC50VF, 60VF

Meaning of marks	arks					Color Marks
CNB~Z	Connector	LED-3	Indication lamp (Red-Inspection)	TB1	Terminal block (Power source)	Mark Color
DM	Drain motor	LM1~4	Louver motor		(mark)	BK Black
F200~203	Fuse	SW2	Remote control communication	TB2	Terminal block (Signal line) (□mark)	BL Blue
- MH	Fan motor		address	Thc	Thermistor(Remote control)	BR Brown
FS	Float switch	SW5	Plural units Master / Slave setting	Thi-A	Thermistor (Return air)	OR Orange
LED•2	Indication lamp	SW6	Model capacity setting	Thi-R1,2,3	Thermistor(Heat exchanger)	RD Red
	(Green-Normal operation)	SW7-1	Operation check, Drain motor test run	X/	Relay for DM	WH White
				mark	Closed-end connector	Y Yellow
						Y/GN Yellow/Green
			Bemola control	Control PCB	acc	
			X X X X X X X X X X X X X X X X X X X		SA LA MALLA	
		NB)	The following the state of the	LED•2		
			į	*	WH WH	
	⊣ □ 「		Y GN L DOWNER PCB		BK 2 BL 4 BL 2 BK	Thi-A
Conn	=				ZUND)	
opui.	indoor unit and outdoor unit Power source line [112]	RO 5 F200(3.15A)	Power circuit 6 6 80 80	SW2	2 RO 6 RO 2 BK 12	Thi-R1
υш	Signal line 3 (3 Earth	BL 1 F201(3.15A)	CNW11 BL 2 BL 2	SW5	3 Y 7 Y 3 BK	



Notes 1.———indicates wiring on site. PJA003Z340<u></u>

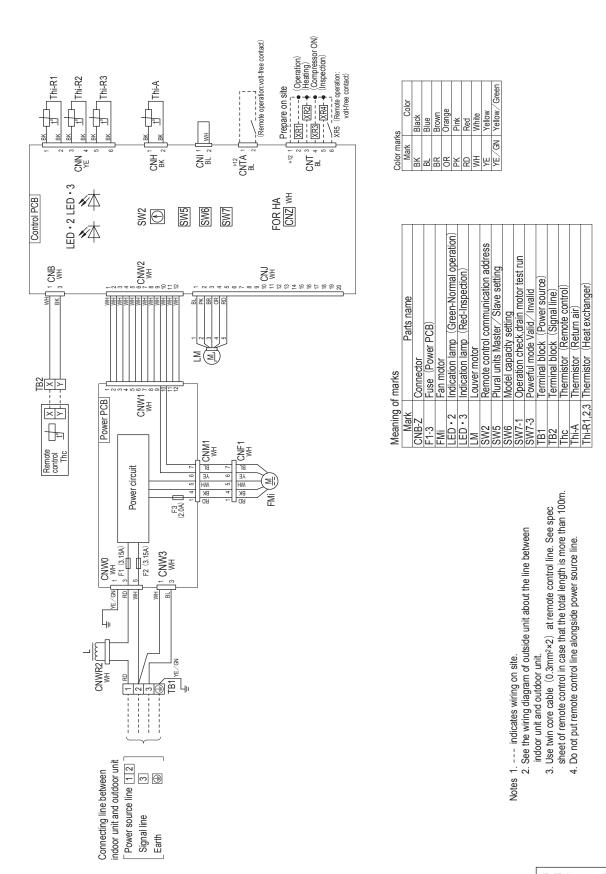
and TB2 is the terminal block for weak current (remote control).

3. See the wiring diagram of outside unit about the line between inside unit and outside unit.

indoor unit and outdoor unit),

4. Use twin core cable (0.3mm $^2\mathrm{x}\,2)$ at remote control line. 5. Do not put remote control line alongside power source line.

(c) Ceiling suspended type (FDE) Models FDE50VG, 60VG, 71VG, 100VG, 125VG, 140VG



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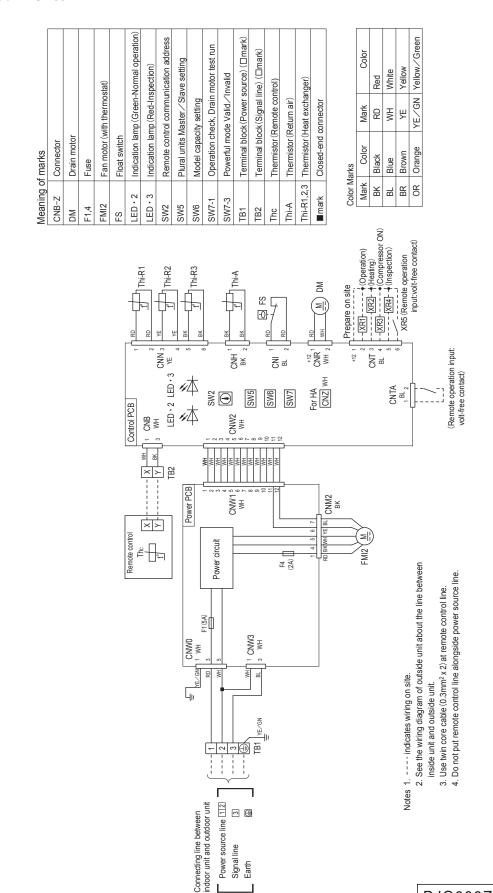
(d) Duct connected-High static pressure type (FDU) Models FDU100VF2, 125VF, 140VF

FDU	J10	0VI	-2 ,	12	5VI	=, 1	40 '	۷F																
				stat)			Indication lamp (Green-Normal operation)	spection)	Remote control communication address	ive setting		Operation check, Drain motor test run	nvalid	source) (\square mark)	line) (\square mark)	ntrol)		anger)			Color	Red		√ellow/Green
				Fan motor (with thermostat)			mp (Green-	Indication lamp (Red-Inspection)	trol commur	Plural units Master / Slave setting	city setting	heck, Drain ı	Powerful mode Valid ∕ Invalid	Terminal block (Power source)	Terminal block (Signal line)	Thermistor (Remote control)	Thermistor (Return air)	Thermistor (Heat exchanger)		_	Mark	8	WH	YE/GN
marks	Connector	Drain motor	Fuse	Fan motor	Float switch	Reactor	Indication la	Indication la	Remote cor	Plural units	Model capacity setting	Operation c	Powerful mo	Terminal blo	Terminal blo	Thermistor	Thermistor				Color	Black	Blue	Yellow
Meaning of marks	CNB-Z	DM	F1,3,4	FMi1,2	FS	_	LED·2	LED · 3	SW2	SW5	SW6	SW7-1	SW7-3	TB1	TB2	Thc	Thi-A	Thi-R1,2,3		Color marks				∀ Ε
						Remote control PCB 1 PCD	₽ -	TB2 LED:2 LED:3 CNN 3		CNWO CONTRICTOR CONTRI	unit (1	roe line (12)	WH 7 WH 7 WH 6 WH 2 BK L	TB1 re/gn	SW6 CNI 1 SW6 CNI 1 SW6	$\begin{bmatrix} F_3 \\ (2a) \end{bmatrix} \begin{bmatrix} F_4 \\ (2a) \end{bmatrix} \begin{bmatrix} F_4 \\ (2a) \end{bmatrix}$		1 4 5 6 7 1 4 5 6 7 CNR 1 80 BK/WHYE BL ANNA RO BK/WHYE BK/WH	CNMZ WH	Prepare on site	$FMIJ\left(\frac{M}{m}\right)$ $FMIZ\left(\frac{M}{m}\right)$ $FMIZ\left(\frac{M}$	$BL + \frac{1}{4} + \frac{1}{1 - XR_3 } \frac{1}{4} = \frac{1}{4} (Onderssor ON)$	CNTA 6 1	Notes 1 indicates wiring on site. 2. See the wiring diagram of outside unit about the line between inside unit and outside unit and outside unit. 3. Use twin core cord (0.3mm²×2) at remote control line. 4. Do not put remote control line alongside power source line.
										ŏ.	.≘ •			•									L	

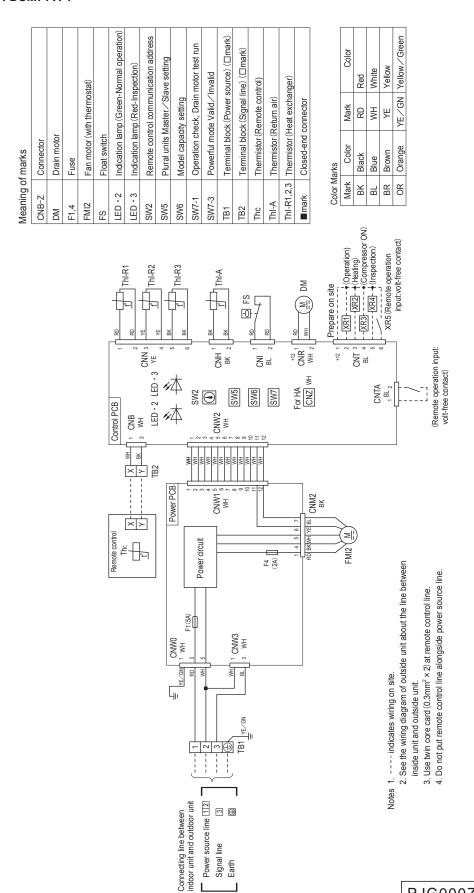
(e) Duct connected-Low / Middle static pressure type (FDUM) Model FDUM50VF

Meaning of marks	CNB~Z Connector	DM Drain motor	F1~3 Fuse	FM1 Fan motor (with thermostat)	FS Float switch	L Reactor	Thi-R1 LED · 2 Indication lamp (Green-Normal operation)	LED · 3 Indication lamp (Red-Inspection)	SW2 Remote control communication address	Thi-R3 SW5 Plural units Master / Slave setting	SW6 Model capacity setting	SW7-1 Operation check, Drain motor test run	Thi-A SW7-3 Powerful mode Valid / Invalid	☐ FS Terminal block (Power source) (□mark)		Thc Thermistor (Remote control)	Thi-A Thermistor (Return air)	Thi-R1,2,3 Thermistor (Heat exchanger)	mark Closed-end connector	Prepare on site Color Marks	-XRT	or ON) BK Black RD	BL Blue WH	BR Brown YE	Input;Volt-free contact) OR Orange YE/GN Yellow/Green			
							X WH 1 CNB 2	THIS WHI	1	FOWER PCB	2 WH 1 SW2	3 WH 3 WH 3 WH	HW 5	SWS	WH 10 SW6 CNI 1	SW7	÷	For HA CNR 1 RD			÷	S B	CNTA 6 8L 6		}	Dameta marafini inut*		
						Remote control			1 = = GIMINO	WH CNWO	it	ce line [12]		TB1 YE/GN)——	F3 (2A)		1 4 5 6 7			FW1					Notes 1 indicates wiring on site.	See the wiring diagram of outside unit about the line between inside unit and outside unit.	3. Use twin core cable (0.3mm²x2) at remote control line.

Model FDUM60VF



Model FDUM71VF1



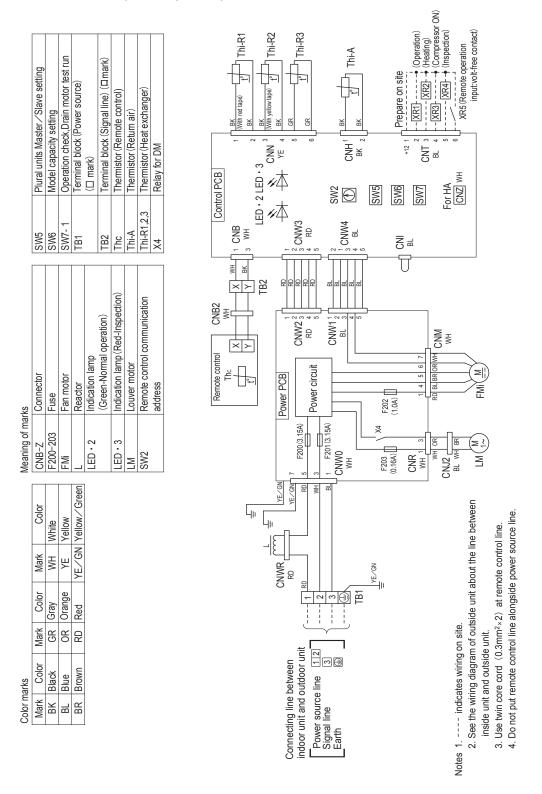
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Models FDUM100VF2, 125VF, 140VF

Meaning of marks	CNB-Z Connector	DM Drain motor	F1,3,4 Fuse	FMi1,2 Fan motor (with thermostat)	FS Float switch	L Reactor	LED • 2 Indication lamp (Green-Normal operation)	LED • 3 Indication lamp (Red-Inspection)	SW2 Remote control communication address	SW5 Plural units Master / Slave setting	SW6 Model capacity setting	SW7-1 Operation check, Drain motor test run	SW7-3 Powerful mode Valid / Invalid	TB1 Terminal block (Power source) (□mark)	TB2 Terminal block (Signal line) (□mark)	Thc Thermistor (Remote control)	Thi-A Thermistor (Return air)	Thi-R1,2,3 Thermistor (Heat exchanger)	■mark Closed-end connector	Color marks	Mark Color Mark Color	BK Black	BL Blue WH White	BR Brown YE Yellow	OR Orange YE/GN Yellow/Green			
						Remote control PCB 1 PCB	£ .	CNN3 CNN3 CNN3 CNN3 CNN3 CNN3 CNN3 CNN3	A CALL CALL CALL CALL CALL CALL CALL CA	= LOWWU = COWN	unit C1 SW2	roe line 1121	MH 7 HW	TB1_YEZ/GN	SW6 SW1	3 3 4 (2A)	F P P C C C C C C C C C C C C C C C C C		CNM1 CNM2 WH BK	Prepare on site	FMil M FMil M FMil M FMil M FMil M FMil M FMil M FMil M FMil M FMil M FMil M FMIL M FM)	ب د د	了	inputvolt-free contact)	Notes 1 indicates wiring on site. 2. See the wiring diagram of outside unit about the line between	inside unit and outside unit. (Remote operation input: 3. Use twin core cord (0.3mm² \times 2) at remote control line.	4. Do not put remote control line alongside power source line.
										-																D I	200	\wedge

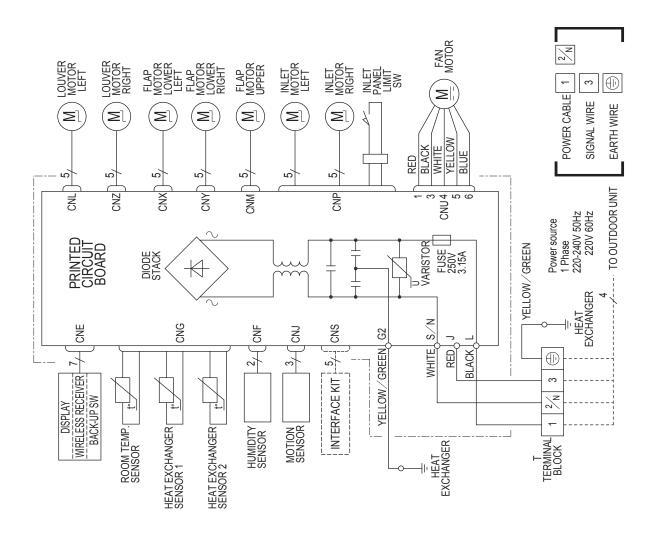
(f) Floor standing type (FDF) Models FDF71VD1, 100VD2, 125VD, 140VD



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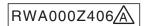
(g) Wall mounted type (SRK) Models SRK50ZSX-S, 60ZSX-S

Description	Connector											
Item	CNE	CNF	CNG	CNJ	CNL	CNM	CNP	CNS	CNU	CNX	CN≺	CNZ



Model SRK100ZR-S

Meaning of marks	Description	Connector		Flap motor	Room temp. sensor Heat exchanger sensor	Humidity sensor	Ulode stack Fuse	Terminal block	Varistor	Color marks Mark Color			Y/G Yellow/Green
Meaning	Item	CNE CNF CNM CNM	CNU	SM1	Th1 Th21.2	Th3	Σ S	ДВ	\alpha			Power source 1 Phase 220-240V 50Hz	TO OUTDOOR UNIT POWER CABLE 1 2/N SIGNAL WIRE 3
		$ \begin{array}{c} \text{CNX} \\ 5 \\ \end{array} $ $ \begin{array}{c} $	CNM 5, M SM1				•			CNU ₄ WH	9 BF	Power s	1 TO TO TO TO TO TO TO TO TO TO TO TO TO
		DISPLAY WIRELESS RECEIVER BACK-UP SW Th1 ### CNE PRINTED CIRCUIT BOARD	Th2 ₁ CNG DS	Th22	The state of the s		INTERFACE KIT 1-3/-1 CNS		φ	WH S/N	EXCHANGER BK L L 250V		



(2) Outdoor unit Models FDC100VNA, 125VNA, 140VNA

Meaning of marks	ıarks
ПЕМ	DESCRIPTION
CH	Crankcase heater
CM	Compressor motor
CN	Connector
CT1	Current sensor
품	Drain pan heater
EEVC	Expansion valve for cooling
EEVH	Expansion valve for heating
ட	Fuse
FM1	Fan motor
IPM	Intelligent power module
LED1	Indication lamp (GREEN)
LED2	Indication lamp (RED)
L1,2	Reactor
SW1	Switch
SW3,5,7	Local setting switch
TB	Terminal block
THo-A	Thermistor (Outdoor air temp.)
THo-D	Thermistor (Discharge pipe temp.)
THo-R1,R2	Thermistor (Heat exchanger temp.)
TH0-S	Thermistor (Suction pipe temp.)
20S	Solenoid valve for 4 way valve
52X1	Auxilliary relay
52X3	Auxiliary relay
52X11	Auxilliary relay (for 20S)
52X14	Auxiliary relay (for CH)
52X15	Auxilliary relay (for DH)
63H1	High pressure switch
Color marks	

alc own											
ingli picasure	arks	Color	Black	Blue	Brown	Green	Orange	Red	White	Yellow	Yellow/Green
5	Color marks	Mark	BK	BL	BR	GN	OR	RD	WH	γ	Y/GN

	TB TO INDOOR UNIT POWER CABLE [] SIGNAL WIRE []	PCB7	PCB1	Company Comp	Local setting switch SW3,5,7 (Set up at shipment OFF)
Power source 1 Phase 220-240V 50Hz / 1 Phase 220V 60Hz		WOOB WATER A STATE OF THE STAT			Power cable, indoor-outdoor connecting wires

			de constitución de constitució	
Indoor-outdoor wire size x number	Earth wire size (mm)	SW3-1	Defrost control change	The defrosting operation interval becomes shorter by turning ON this switch. This switch should be turned ON in the area where outside temperature becomes below
				the freezing point.
Ø1.6mm x 3	Ø1.6	SW3-2	Snow guard fan control	When this switch is turned ON, the outdoor unit fan will run for 10 seconds in every 10 minutes, when outdoor temperature falls to 3°C on lower and the compressor is not
				running when the unit is used in a very snowy country, set this switch to ON.
Indoor-outdoor wire size x number	Earth wire size			Method of trial operation Trial operation can be performed by using
				© Compressor will be in the operation when
		SW3-3,4	SW3-3,4 Trial operation	SW3-3 is ON.
Ø1 6mm x 3	016			when SW3-4 is OFF, and heating trial
2	2			operation when SW3-4 is ON
				④Be sure to turn OFF SW3-3 after the trial operation is finished.
iters. For units with heaters, refer ndoor unit.	heaters, refer	SW5-2	High height difference operation control	Set this switch to ON when outdoor unit is installed at a position higher than indoor unit by 30m or more.
. over current should be chosen	d be chosen	SW7-2	Defrost control change	Set this switch to ON when managing unit operation by remote control connected
r plastic conduit is used with no	sed with no		•	external equipment.
2%. For an installation falling ions. Adapt it to the regulation	ion falling regulation	SW7-3	Lower noise silent mode	Upper limit of compressor speed and fan speed becomes lower in silent mode.

Power cable length (m)

Power cable size (mm²)

MAX over current (A)

**At the connection with the duct type indoor unit.

5.5

20

5.5

100 125 140

27

Power cable length (m)

Power cable size (mm²)

MAX over current (A)

100 125

 The specifications shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the indoor unit. Switchgear of Circuit breaker capacity which is calculated from MAX. over current should be chosen
along the regulations in each country. • The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables conduit and a voitage drop is 2%. For an installation falling
outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.

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Models FDC100VSA, 125VSA, 140VSA

Meaning of marks	g of n	narks
ITEM	_	DESCRIPTION
ᆼ		Crankcase heater
CM		Compressor motor
S		Connector
H		Drain pan heater
EEVC		Expansion valve for cooling
EEVH		Expansion valve for heating
ட		Fuse
FM1		Fan motor
IPM		Intelligent power module
		Reactor
LED1		Indication lamp (GREEN)
LED2		Indication lamp (RED)
SW1		Switch
SW3,5,7		Local setting switch
TB		Terminal block
THo-A		Thermistor (Outdoor air temp.)
THO-D		Thermistor (Discharge pipe temp.)
THo-R1,R2	,R2	Thermistor (Heat exchanger temp.)
THO-S		Thermistor (Suction pipe temp.)
20S		Solenoid valve for 4 way valve
52X1		Auxilliary relay
52X2		Auxiliary relay
52X6		Auxiliary relay (for FM1)
52X11		Auxilliary relay (for 20S)
52X14		Auxilliary relay (for CH)
52X15		Auxilliary relay (for DH)
63H1		High pressure switch
Color marks	arks	
Mark	Color	
ì	ī	

ırks	Color	Black	Blue	Brown	Green	Orange	Red	White	Yellow	Yellow/Green
Color marks	Mark	BK	BL	BR	N9	OR	RD	MM	>	Y/GN

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100 HWW 100 HW	EZULI EZULI
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∠ w	TO INDOOR UNIT POWER CABLE[] [] SIGNAL WIRE[]

Power source 3 Phase 380-415V 50Hz

up at shipment OFF)	The defrosting operation interval becomes shorter by turning ON this switch.	where outside temperature becomes below the freezing point.	When this switch is turned ON, the outdoor	minutes, when outdoor temperature falls to 3°C or lower and the compressor is not	running when the unit is used in a very snowy country, set this switch to ON.	Method of trial operation	Trial operation can be performed by using SW3-3,4.	©Compressor will be in the operation when SW3-3 is ON.	Cooling trial operation will be performed when SW3-4 is OFF, and heating trial	operation when SW3-4 is ON	(4) Be sure to turn OFF SW3-3 after the trial operation is finished.	Set this switch to ON when outdoor unit is	installed at a position higher than indoor unit by 30m or more.	Set this switch to ON when managing unit	operation by remote control connected	external equipment.	Upper limit of compressor speed and fan speed becomes lower in silent mode.
Local setting switch SW3,5,7 (Set up at shipment OFF)	Control of control	Defrost control change		Snow guard fan control				i i i i i i i i i i i i i i i i i i i	iiai opelalioi			High height difference	operation control		Defrost control change		Lower noise silent mode
Local setti		1-5W5-1		SW3-2			SW3-3,4 Trial operation						SW5-2		SW7-2		SW7-3
,		Earth wire size			9. 5.		Farth wire size	(mm)		318	9	notes of	heaters, refer SW		ld be chosen S1		tion talling regulation

Indoor-outdoor wire size x number

r cable length (m)

Power

Power cable size (mm²)

MAX over current (A)

Model

100

**At the connection with the duct type indoor unit.

Indoor-outdoor wire size x number

r cable length (m)

Power

Power cable size (mm²)

Model MAX over current (A)

Power cable, indoor-outdoor connecting wires

Ø1.6mm x 3

46

3.5

15

100 140

heaters refer	aters For units with	38 for units without he	the above table are	4 140 18 38 38 2 The specifications shown in the above table are for units with heaters. For units with heaters refer	140 The sp
		38		18	140
Ø1.6	Ø1.6mm x 3	0+	3.5	1.7	125
		Ç		17	001

- to the installation instructions or the construction instructions of the indoor unit.

 Switchgear of Circuit breaker capacity which is calculated from MAX, over current should be calong the regulations in each country.

 The cable specifications are based on the assumption that a metal or plastic conduit is used a more than three cables contained in a conduit and a voltage drop is 2%. For an installation fa outside of these conditions, please follow the internal cabling regulations. Adapt it to the regul in effect in each country.

1.4 NOISE LEVEL

Notes(1) The data are based on the following conditions

Ambient air temperature: Indoor unit 27°CWB. Outdoor unit 35°CDB.

- (2) The data in the chart are measured in an anechoic room
- (3) The noise levels measured in the field are usually higher than the data because of reflection.

Model FDT60VG

20

Model FDT125VG

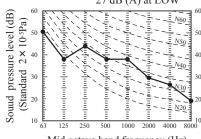
Unit 1.5m Mike (in front & below unit)

(1) Indoor units

(a) Ceiling cassette-4 way (FDT)

Model FDT50VG

Noise level 38 dB (A) at P-HIGH 33 dB (A) at HIGH 30 dB (A) at MEDIUM 27 dB (A) at LOW



Mid octave band frequency (Hz)

Measured based on JIS B 8616

Mike position as right

Model FDT71VG

Noise level 44 dB (A) at P-HIGH Noise level 46 dB (A) at P-HIGH 34 dB (A) at HIGH 35 dB (A) at HIGH 32 dB (A) at MEDIUM 34 dB (A) at MEDIUM 28 dB (A) at LOW 29 dB (A) at LOW 10-5Pa) × ×

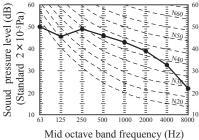
Mid octave band frequency (Hz)

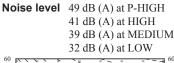
pressure level (dB) (Standard Sound

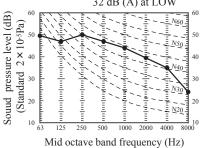
Mid octave band frequency (Hz)

Model FDT100VG

Noise level 48 dB (A) at P-HIGH 39 dB (A) at HIGH 37 dB (A) at MEDIUM 31 dB (A) at LOW

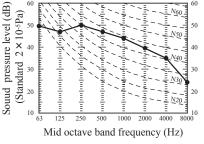






Model FDT140VG

Noise level 49 dB (A) at P-HIGH 42 dB (A) at HIGH 39 dB (A) at MEDIUM 33 dB (A) at LOW



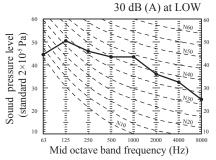
(b) Ceiling cassette-4 way compact type (FDTC)

Measured based on JIS B 8616 Mike position as right



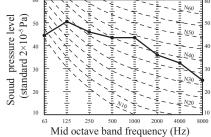
Model FDTC50VF

Cooling noise level 47 dB (A) at P-HIGH 42 dB (A) at HIGH 36 dB (A) at MEDIUM



Heating noise level 47 dB (A) at P-HIGH 42 dB (A) at HIGH

36 dB (A) at MEDIUM 32 dB (A) at LOW



Model FDTC60VF

Cooling noise level 47 dB (A) at P-HIGH 46 dB (A) at HIGH 39 dB (A) at MEDIUM 30 dB (A) at LOW Sound pressure level (standard 2×10^{-5} Pa)

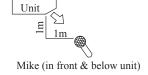
Mid octave band frequency (Hz)

Heating noise level 47 dB (A) at P-HIGH 46 dB (A) at HIGH 39 dB (A) at MEDIUM 32 dB (A) at LOW Sound pressure level (standard 2×10^{-5} Pa) Mid octave band frequency (Hz)

(c) Ceiling suspended type (FDE)

Measured based on JIS B 8616 Mike position as right

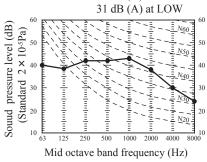
41 dB (A) at HIGH

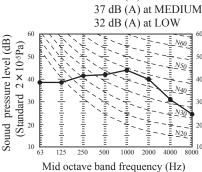


Model FDE100VG

Model FDE50VG

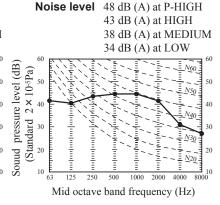
Noise level 46 dB (A) at P-HIGH 38 dB (A) at HIGH 36 dB (A) at MEDIUM 31 dB (A) at LOW



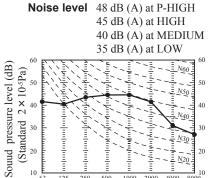


Noise level 47 dB (A) at P-HIGH

Models FDE60VG, 71VG



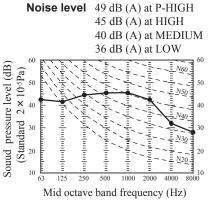
Model FDE125VG

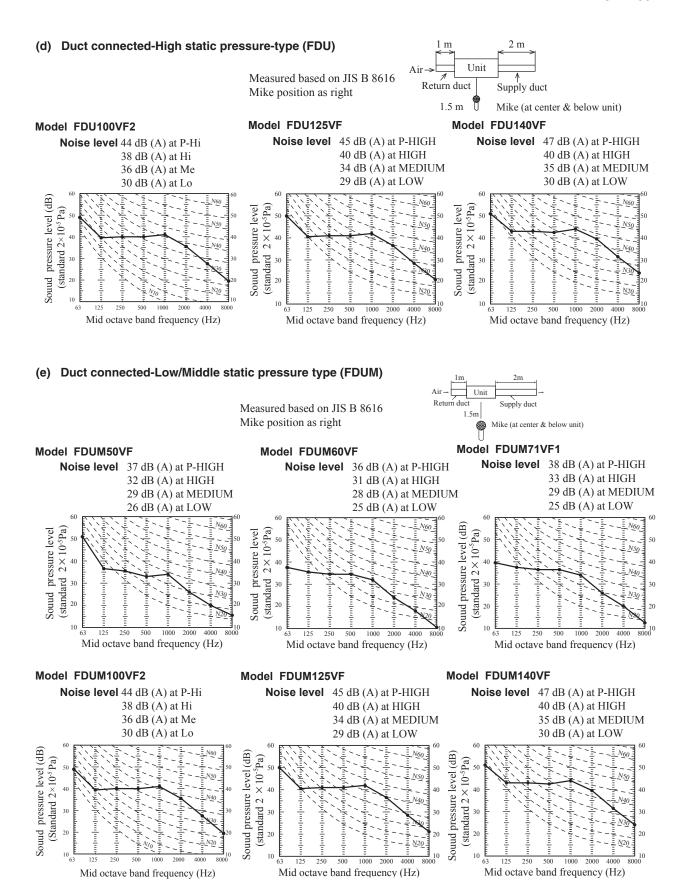


Mid octave band frequency (Hz)

2000

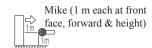
Model FDE140VG

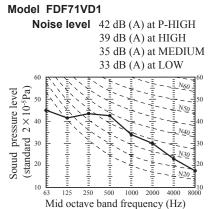




(f) Floor standing type (FDF)

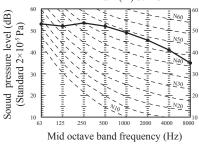
Measured based on JIS B 8616 Mike position as right





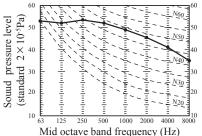
Model FDF100VD2

Noise level 54 dB (A) at P-HIGH 50 dB (A) at HIGH 48 dB (A) at MEDIUM 44 dB (A) at LOW



Models FDF125VD, 140VD

Noise level 54 dB (A) at P-HIGH 50 dB (A) at HIGH 48 dB (A) at MEDIUM 44 dB (A) at LOW

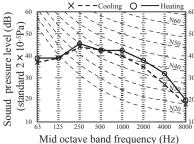


(g) Wall mounted type (SRK)

Measured based on JIS C 9612 Mike position as right

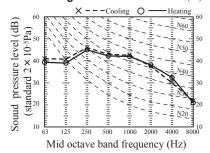


Model SRK50ZSX-S Cooling noise level Hi : 44 dB (A) Heating noise level Hi : 46 dB (A)



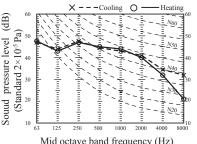
Model SRK60ZSX-S

Cooling noise level Hi: 46 dB (A) Heating noise level Hi: 46 dB (A)



Model SRK100ZR-S

Cooling noise level $\rm Hi:48~dB~(A)$ Heating noise level $\rm Hi:48~dB~(A)$



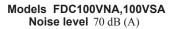
(2) Outdoor units

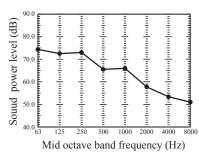
Measured based on JIS B 8616

Mike position: at highest noise level in position as mentioned below

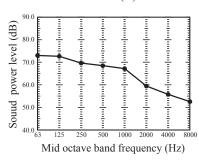
Distance from front side 1m Height 1m

(a) Sound power level

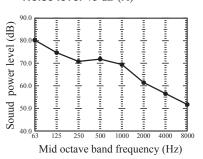




Models FDC125VNA,125VSA Noise level 71 dB (A)

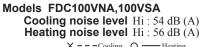


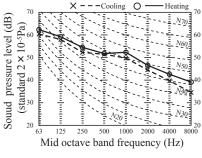
Models FDC140VNA,140VSA Noise level 73 dB (A)



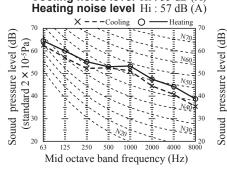
(b) Sound pressure level

(i) Rating mode

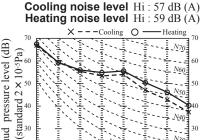




Models FDC125VNA,125VSA Cooling noise level Hi: 55 dB (A)



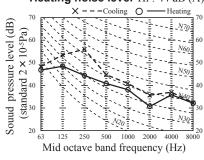
Models FDC140VNA,140VSA



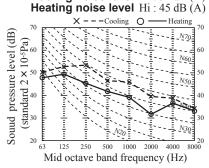
63 125 250 500 1000 2000 4000 800 Mid octave band frequency (Hz)

(ii) Silent mode

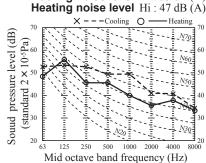
Models FDC100VNA,100VSA
Cooling noise level Hi: 50 dB (A)
Heating noise level Hi: 44 dB (A)



Models FDC125VNA,125VSA Cooling noise level Hi: 51 dB (A)



Models FDC140VNA,140VSA Cooling noise level Hi: 53 dB (A)



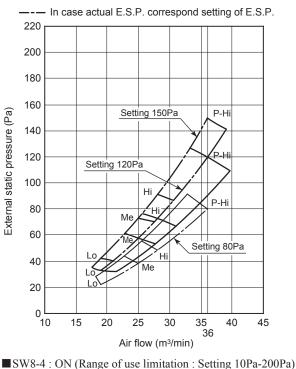
1.5 CHARACTERISTICS OF FAN

- (1) Duct connected-High static static pressure type (FDU)
 - · Characteristic FAN (1) shows air flow vs. External Static Pressure (E.S.P.) range where settings of E.S.P. are maximum E.S.P. (SW8-4 OFF : 150Pa, SW8-4 ON: 200Pa), rated E.S.P., and minimum E.S.P. (SW8-4 OFF: 80Pa, SW8-4 ON: 10Pa)
 - · Characteristic FAN (2) shows air flow vs E.S.P. curve when set fan tap is set P-Hi with each setting of E.S.P. by remote control.
 - External Static Pressure (E.S.P.) can be set by wired remote control.
 - · You can set required E.S.P. by wired remote control which calculate it with the set air flow rate and pressure loss of the duct connected.

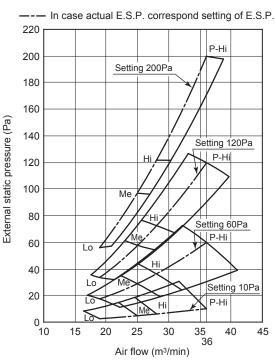
Model FDU100VF2

■ SW8-4 : OFF (Range of use limitation : Setting 80Pa-150Pa)

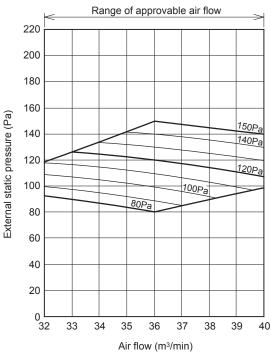
Characteristic FAN (1)



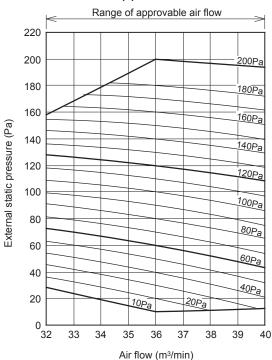
Characteristic FAN (1)



Characteristic FAN (2)



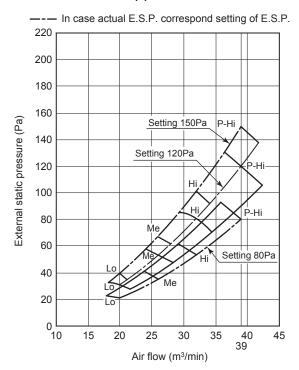
Characteristic FAN (2)



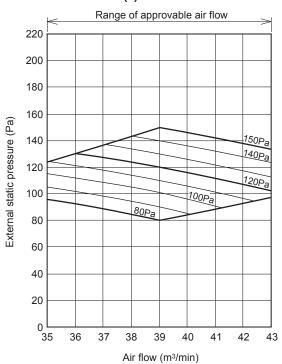
Model FDU125VF

■SW8-4 : OFF (Range of use limitation : Setting 80Pa-150Pa)

Characteristic FAN (1)

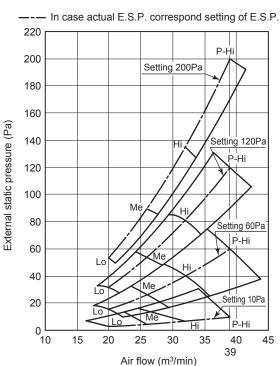


Characteristic FAN (2)

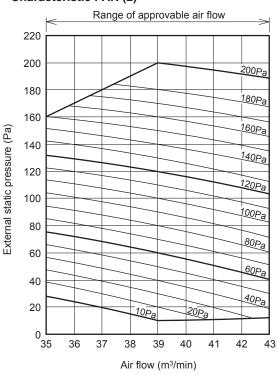


■SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



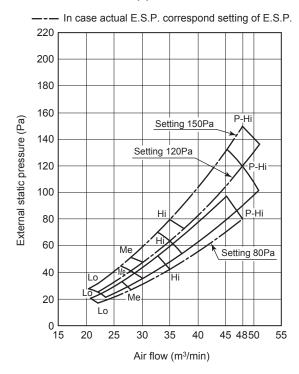
Characteristic FAN (2)



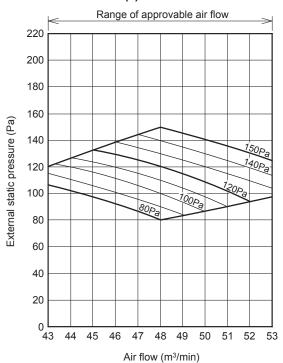
Model FDU140VF

■SW8-4 : OFF (Range of use limitation : Setting 80Pa-150Pa)

Characteristic FAN (1)

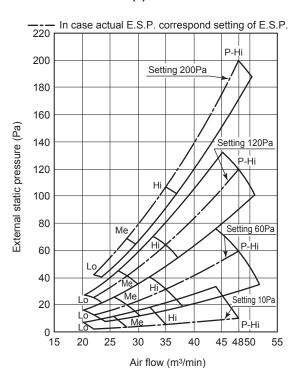


Characteristic FAN (2)

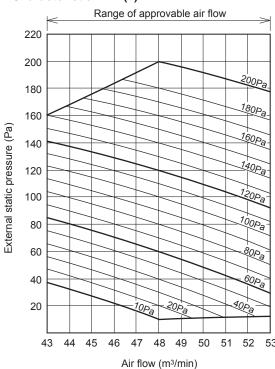


■SW8-4 : ON (Range of use limitation : Setting 10Pa-200Pa)

Characteristic FAN (1)



Characteristic FAN (2)



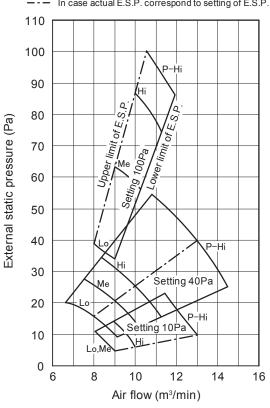
(2) Duct connected-Low / Middle static pressure type (FDUM)

- · Characteristic FAN (1) shows air flow vs. External Static Pressure (E.S.P.) range where settings of E.S.P. are maximum E.S.P. (100Pa), rated E.S.P., and minimum E.S.P. (10Pa)
- · Characteristic FAN (2) shows air flow vs E.S.P. curve when set fan tap is set P-Hi with each setting of E.S.P by remote control.
- External Static Pressure (E.S.P.) can be set by wired remote control.
- · You can set required E.S.P. by wired remote control which calculate it with the set air flow rate and pressure loss of the duct connected.

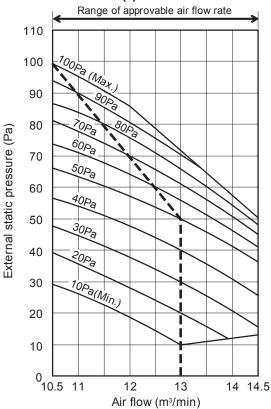
Model FDUM50VF

Characteristic FAN(1)

--- In case actual E.S.P. correspond to setting of E.S.P.

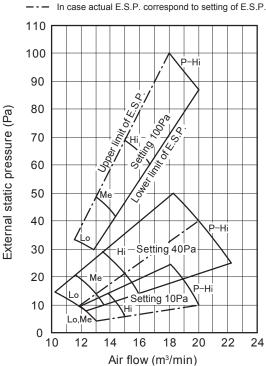


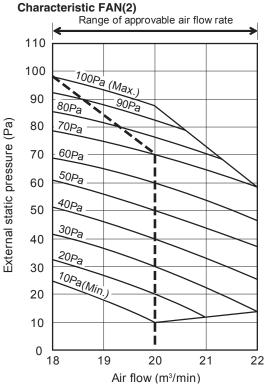
Characteristic FAN(2)



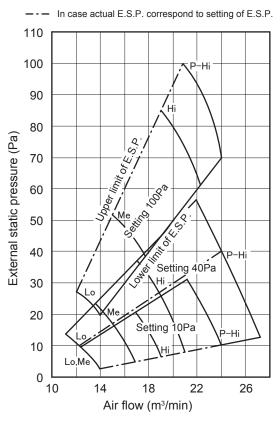
Model FDUM60VF

Characteristic FAN(1)

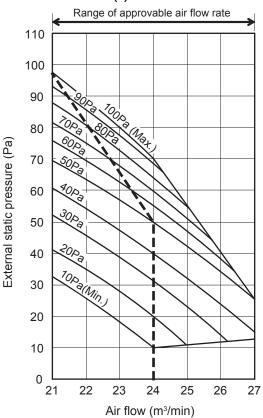




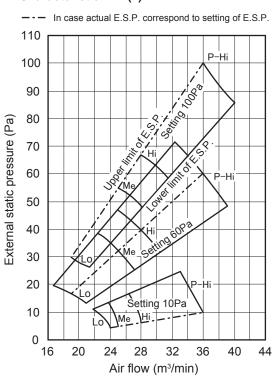
Model FDUM71VF1 Characteristic FAN(1)



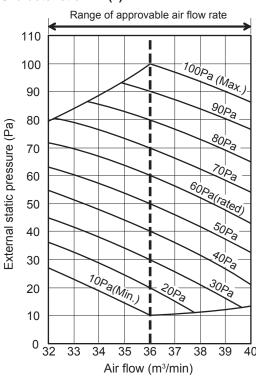
Characteristic FAN(2)



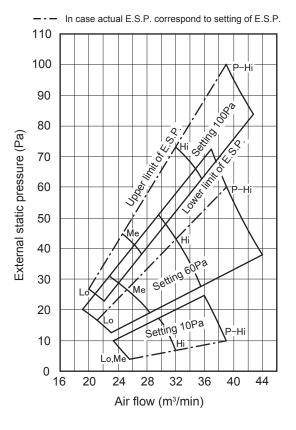
Model FDUM100VF2 Characteristic FAN(1)



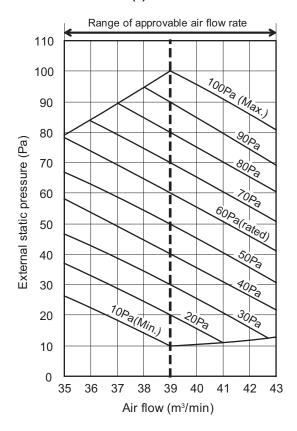
Characteristic FAN(2)



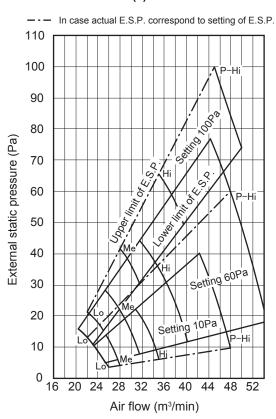
Model FDUM125VF Characteristic FAN(1)



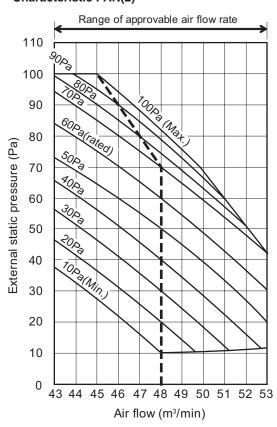
Characteristic FAN(2)



Model FDUM140VF Characteristic FAN(1)



Characteristic FAN(2)



1.6 TEMPERATURE AND VELOCITY DISTRIBUTION

Indoor temperature

Cooling 27°CDB / 19°CWB

Heating 20°CDB

Note: These figures represent the typical main range of temperature and velocity distribution at the center of air outlet within the published conditions.

In the actual installation, they may differ from the typical figures under the influence of air temperature conditions, ceiling height, operation conditions and obstacles.

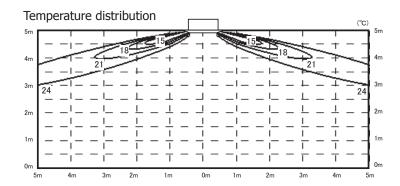
(1) Ceiling cassette-4 way type (FDT)

Model FDT50VG

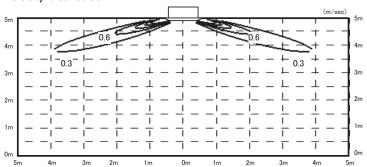
Cooling Air flow: P-Hi

Louver position





Velocity distribution

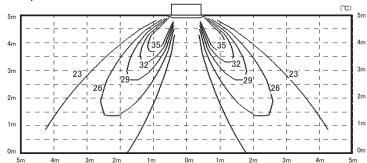


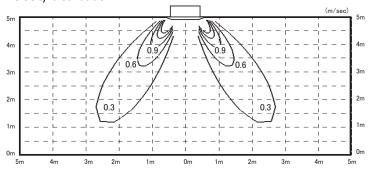
Heating Air flow: P-Hi

Louver position



Temperature distribution

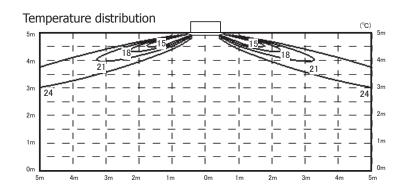




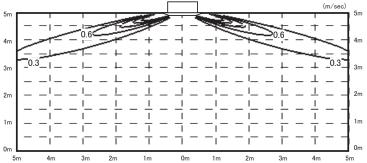
Models FDT60VG, 71VG Cooling Air flow: P-Hi

Louver position





Velocity distribution

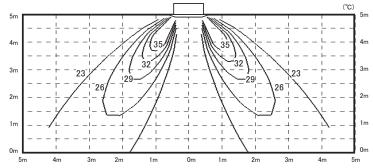


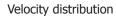
Heating Air flow: P-Hi

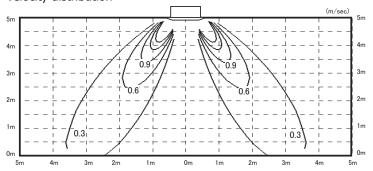
Louver position



Temperature distribution





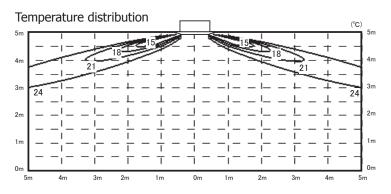


Models FDT100VG, 125VG, 140VG

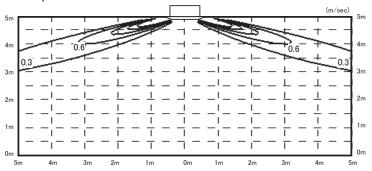
Cooling Air flow: P-Hi

Louver position





Velocity distribution

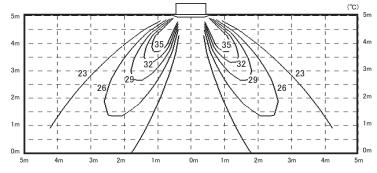


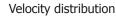
Heating Air flow: P-Hi

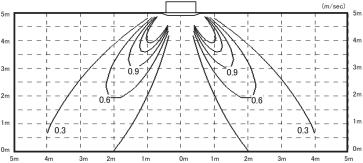
Louver position



Temperature distribution





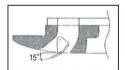


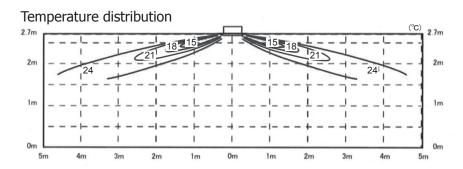
(2) Ceiling cassett-4 way compact type (FDTC)

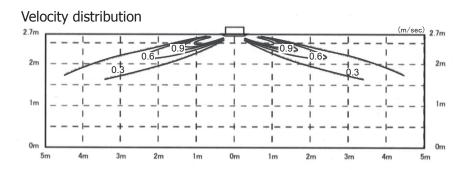
Models FDTC50VF, 60VF

Cooling Air flow: P-Hi

Louver position

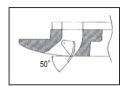


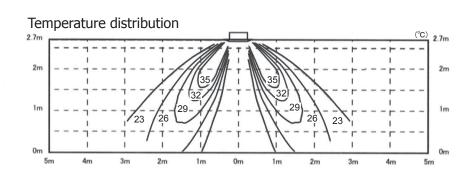


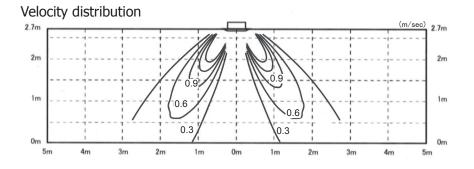


Heating Air flow: P-Hi

Louver position







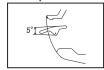
ISD09407

(3) Ceiling suspended type (FDE)

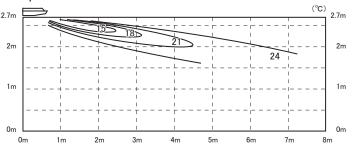
Model FDE50VG

Cooling Air flow: P-Hi

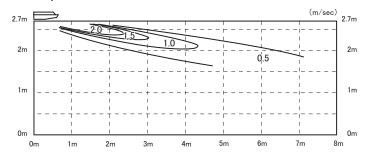
Louver position



Temperature distribution

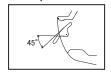


Velocity distribution

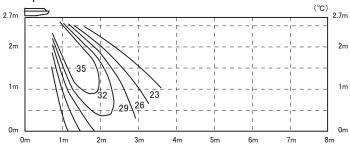


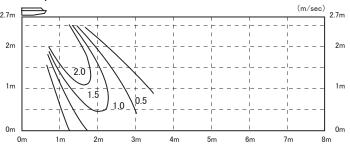
Heating Air flow: P-Hi

Louver position



Temperature distribution





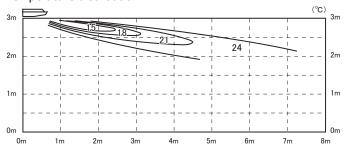
Models FDE60, 71VG

Cooling Air flow: P-Hi

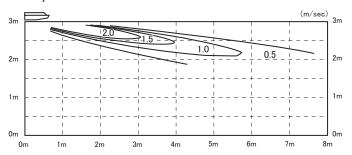
Louver position



Temperature distribution

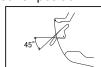


Velocity distribution

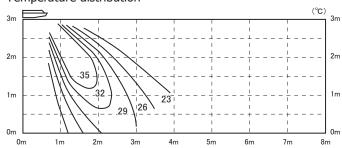


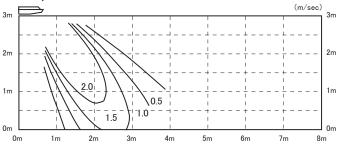
Heating Air flow: P-Hi

Louver position



Temperature distribution



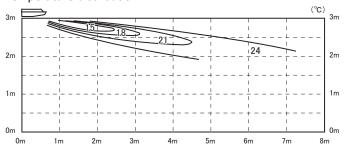


Models FDE100, 125VG Cooling Air flow: P-Hi

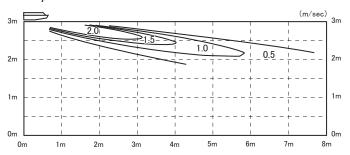
Louver position



Temperature distribution

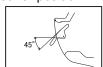


Velocity distribution

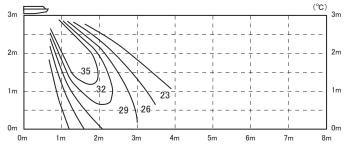


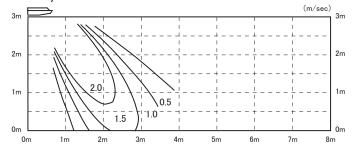
Heating Air flow: P-Hi

Louver position



Temperature distribution





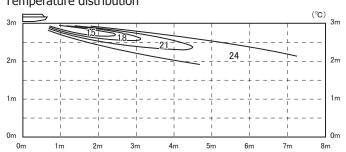
Model FDE140VG

Cooling Air flow: P-Hi

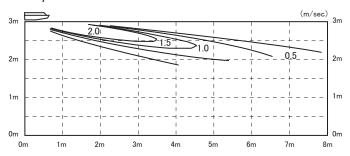
Louver position



Temperature distribution



Velocity distribution

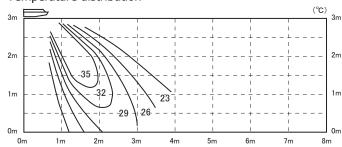


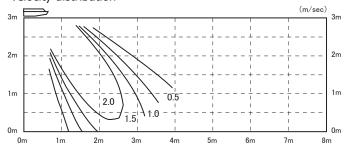
Heating Air flow: P-Hi

Louver position



Temperature distribution

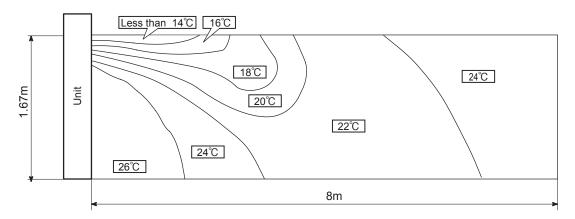




(4) Floor standing type (FDF)

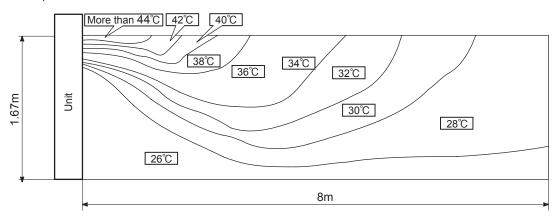
Models FDF71VD1, 100VD2, 125VD, 140VD Cooling Air flow:Hi (Louver position:Horizontal)

Temperature distribution



Heating Air flow:Hi (Louver position:Horizontal)

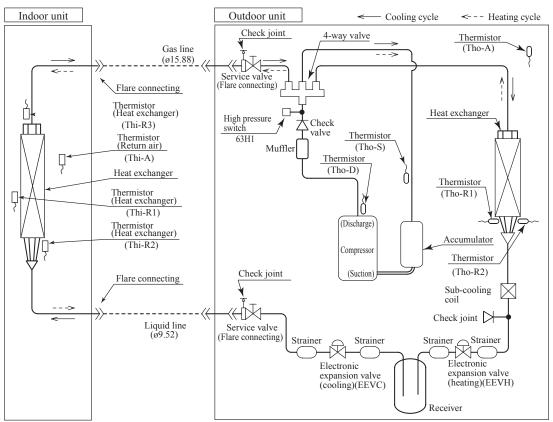
Temperature distribution



1.7 PIPING SYSTEM

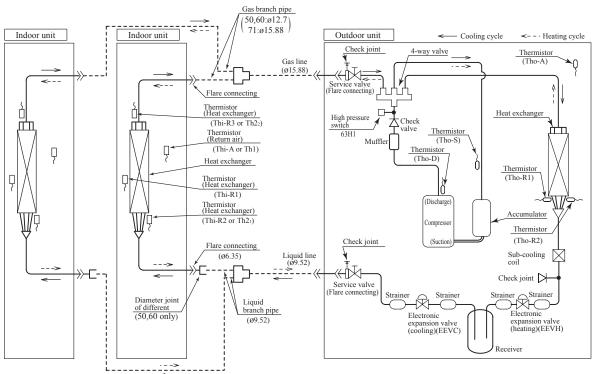
(1) Single type

Models 100, 125, 140

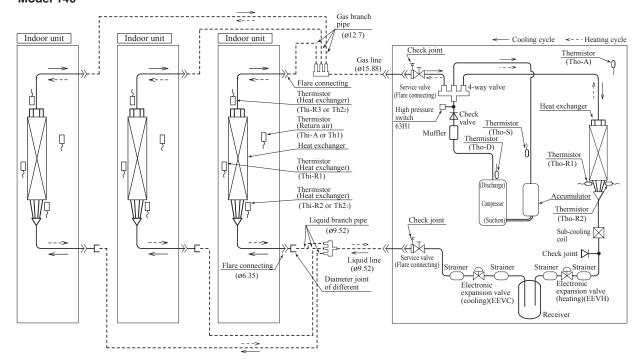


(2) Twin type

Models 100, 125, 140



(3) Triple type Model 140



Preset point of the protective devices

Parts name	Mark	Equipped unit	100, 125, 140 model
Thermistor (for protection over- loading in heating)	Thi-R (TH1)	Indoor unit	OFF 63°C (OFF 16°C) ON 56°C (ON 17°C)
Thermistor (for frost prevention)	Thi-R (TH1)		OFF 63°C (OFF 8°C ON 56°C (ON 2.5°C)
Thermistor (for protection high pressure in cooling.)	Tho-R	Outdoor unit	OFF 51°C ON 65°C
Thermistor (for detecting dis- charge pipe temp.)	Tho-D	Outdoor unit	OFF 115°C ON 85°C
High pressure switch (for protection)	63H1	Outdoor unit	OFF 4.15MPa ON 3.15MPa

Note (1) Values in () are for the SRK models.

1.8 RANGE OF USAGE & LIMITATIONS

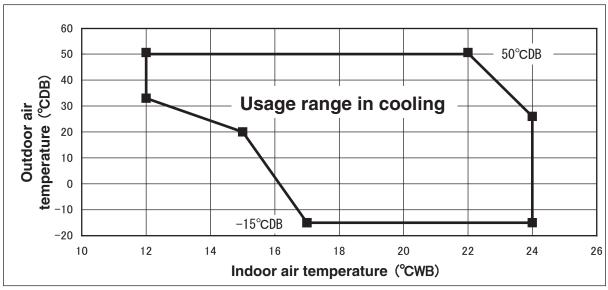
0		See next page.							
Operating temperature ran	ge	When used below -5°C, install a snow hood (option).							
Recommendable area to ir	nstall	Considering to get sufficient heating capacity, the area where the averaged lowest ambient air temperature in day time during winter is above 0°C, and it has no accumulation of snow.							
Installation site		The limitations of installation space are shown in the page for exterior dimensions. Install the indoor unit at least 2.5m higher than the floor surface.							
Temperature and humidity indoor unit in the ceiling (N	conditions surrounding the ote 2)	Model FDE Dew point temperature : 23°C or less, relative hummdity : 80% or less Other models Dew point temperature : 28°C or less, relative hummdity : 80% or less							
Limitations on unit and pipi	ing installation	See pages 132 and 133							
Compressor	Cycle Time	7 minutes or more (from OFF to OFF) or (from ON to ON)							
ON-OFF cycling	Stop Time	3 minutes or more							
	Voltage range	Rating ±10%							
Power source	Voltage drop at start-up	Min.85% of rating							
	Phase-to-phase imbalance	3% or less							

Note 1. Do not install the unit in places which:

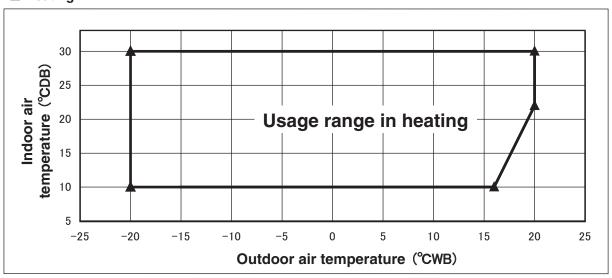
- 1) Flammable gas may leak.
- 2) Carbon fiber, metal particles, powder, etc. are floating.
- 3) Cosmetic or special sprays are used frequently.
- 4) Exposed to oil splashes or steam (e.g. kitchen and machine plant).
- 5) Exposed to sea breeze (e.g. coastal area) or calcium chloride (e.g. snow melting agent).
- 6) Exposed to ammonia substance (e.g. organic fertilizer).
- 7) Matters affecting devices, such as sulfuric gas, chlorine gas, acid, alkali, etc. may generate or accumulate.
- 8) Chimney smoke is hanging.
- 9) Sucking the exhaust gas from heat exchanger.
- 10) Adjacent to equipment generating electromagnetic waves or high frequency waves.
- 11) There is light beams that affect the receiving device of indoor unit in case of the wireless specification.
- 12) Snow falls heavily.
- 13) At an elevation of 1000 meters or higher.
- 14) On mobile machine (e.g. vehicle, ship, etc.)
- 15) Splashed with water to indoor unit (e.g. laundry room).
- 16) Indoor units of twin and triple specifications separately in a room with partition.
- Note 2. If ambient temperature and humidity exceed the above conditions, add polyurethane foam insulation (10mm or thicker) on the outer plate of indoor unit.
- Note 3. Both gas and liquid pipes need to be coverd with 20mm or thicker heat insulation materials at the place where humidity exceeds 70%.

Operating temperature range

■ Cooling



■ Heating



Decline in cooling and heating capacity or operation stop may occur when the outdoor unit is installed in places where natural wind can increase or decrease its design air flow rate.

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"CAUTION" Cooling operation under low outdoor air temperature conditions

PAC models can be operated in cooling mode at low outdoor air temperature condition within above temperature range. However in case of severely low temperature conditions if the following precaution is not observed, it may not be operated in spite of operable temperature range mentioned above and cooling capacity may not be established under certain conditions.

[Precaution]

In case of severely low temperature condition

- 1) Install the outdoor unit at the place where strong wind cannot blow directly into the outdoor unit.
- 2) If there is no installation place where can prevent strong wind from directly blowing into the outdoor unit, mount the flex flow adapter (prepared as option part) or like such devices onto the outdoor unit in order to divert the strong wind.

[Reason]

Under the low outdoor air temperature conditions of -5°C or lower, the outdoor fan is controlled at lower or lowest speed by outdoor fan control, but if strong wind directly blow into the outdoor unit, the outdoor heat exchanger temperature will drop more.

This makes high and low pressures to drop as well. This low pressure drop makes the indoor heat exchanger temperature to drop and will activate anti-frost control at indoor heat exchanger at frequent intervals, that cooling operation may not be established for any given time.

Limitation on unit and piping installation - single, twin.	tion - single,twin.			
Descriptions	Model for outdoor units	Dimensional limitations		Marks appearing in the drawing
			Single type	Twin type
One-way pipe length	100V · 125V · 140V	≥ 50m	٦	L+L1+L2
Main pipe length	100V · 125V · 140V	≥ 50m		L
One-way pipe length after the first branching point 100V · 125V · 140V	100V · 125V · 140V	≤ 30m		L1, L2
Difference of pipe length after the first branching point	oint	≤ 10m		L1-L2 L2-L1
Total pipe length after the second branching point		≤ 15m		
Elevation difference between indoor and outdoor	When the outdoor unit is positioned higher 125V · 140V	≤ 30m (≤50m) *	3	
units	When the outdoor unit is positioned lower 125V · 140V	≤ 15m	C	E
Elevation difference among indoor units		≤ 0.5m		Ч
Single type Indoor unit Notes Notes (1) A riser pipe must be part of the main. A branching pipe set should be installed horizontally at a point as close to an indo (2) Reduce refrigerant amount by according to table below from factory charge when Model for outdoor units Indov 125V · 140V -1.0kg (3) In case of the outdoor unit is positioned higher, dimensional limitation change from	Single type Indoor unit Notes A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible. A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible. (2) Reduce refrigerant amount by according to table below from factory charge when refrigerant piping is shorter than 3m. Model for outdoor units I 100V · 125V · 140V	indoor unit as possible. refrigerant piping is shorter than 3m.	Twin type Model for Branch piping outdoor units set(option) 100V · 125V · 140V DIS-WA1G	=

Limitation on unit and piping installation - triple.	ıtion - triple.				
Triple type		-		Marks appearing in the drawing	
(in case of 140V) Descriptions	One-way pipe length difference from the first branching p Model for outdoor units	the first branching point to the indoor unit Dimensional limitations	< 3m Triple type A		≥ 3m Triple type B
One-way pipe length	140V		L+L1+L2+L3	<u> </u>	L+La+L1+L2+L3 %1
Main pipe length	140V	≥ 50m	٦		٦
Piping length between the first branching point and the second branching point One-way pipe length between the first branching point and indoor units One-way pipe length from the first branching point to indoor units through the second branch Piping length difference from the first branching point to indoor unit One-way pipe length difference from the second branching point to indoor unit Elevation difference between indoor and outdoor units When the outdoor unit is positioned Elevation difference among indoor units	second branching point and indoor units door units through the second branching point indoor unit indoor unit ing point to indoor unit When the outdoor unit is positioned higher When the outdoor unit is positioned lower	≤ 5m ≤ 30m ≤ 27m < 2m < 3m ≤ 3m ≤ 10m ≤ 10m ≤ 50m ≤ 50m ≤ 50m ≤ 50m ≤ 50m ≤ 50m	L1, L2, L3 L1-L2, L1-L3, L2-L3 H h1, h2, h3	L1- (L1- (L1-	La %1 La+L2 , La+L3 %1 (La+L2) L1- (La+L3) %1 L2-L3,L3-L2 H h1, h2, h3
Triple type A Notes (1) A riser pipe must be part of the main. A branching pipe set should be installed horizor (2) Reduce refrigerant amount by 1.0kg from the fa (3) In case of the outdoor unit is positioned higher.	Triple type A Triple type B Herst Branch A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible. (3) In case of the outdoor unit is positioned higher, dimensional limitation change from 30m to 50m by changing SW5-2 of outdoor unit control PCB to ON. (* mark)	First Branch changing SW5-2 of outdoor uni	Second Branch Triple type Model for outdoor units 140V Tunit control PCB to ON. (* mark)	#1 Install the in becomes the plant of the pilong within 10m. Dis-TA1G Dis-Vision Dis-Vis	**1 Install the indoor units so that L + L1 becomes the longest one-way pipe. Keep the pipe length difference between L1 and (La+L2) or (La+L3) within 10m. Branch piping set(option) ipe

1.9 SELECTION CHART

Correct the cooling and heating capacity in accordance with the operating conditions. The net cooling and heating capacity can be obtained in the following way.

Net capacity = Capacity shown in the capacity tables (1.9.1) × Correction factors shown in the table (1.9.2) (1.9.3) (1.9.4).

Caution: In case that the cooling operation during low outdoor air temperature below -5°C is expected, install the outdoor unit where it is not influenced by natural wind. Otherwise protection control by low pressure will be activated much more frequently and it will cause insufficient capacity or breakdown of the compressor in worst case.

1.9.1 Capacity tables

(1) Ceiling cassette-4 way type (FDT)

(a) Single type

Model FDT100VSAVG

Cooling mode

Model FDT100VNAVG Indoor unit FDT100VG Outdoor unit FDC100VNA Cooling mode

Indoor unit FDT100VG

(kW) Heating mode:HC

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Outdoor									empera								H
air temp.	_	CDB		CDB		CDB		CDB		CDB		CDB		CDB		CDB	Į Į
	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °C	CWB	22 °	CWB	24 °	CWB	IJL
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	П
11					8.12	7.73	8.59	8.42	8.82	8.38	9.07	8.30	9.56	8.84	10.06	8.65	
13					8.50	7.87	9.00	8.59	9.26	8.51	9.52	8.43	10.06	8.97	10.60	8.78	П
15					8.88	8.01	9.42	8.73	9.69	8.65	9.98	8.57	10.56	9.11	11.14	8.91	П
17					9.26	8.15	9.84	8.87	10.12	8.79	10.43	8.71	11.05	9.24	11.67	9.04	П
19					9.46	8.22	10.05	8.94	10.34	8.86	10.65	8.77	11.29	9.31	11.92	9.10	П
21					9.65	8.29	10.25	9.01	10.56	8.93	10.88	8.84	11.52	9.37	12.16	9.16	П
23					9.65	8.29	10.28	9.02	10.59	8.94	10.91	8.85	11.56	9.38	12.21	9.17	П
25			8.93	8.50	9.64	8.29	10.31	9.03	10.62	8.95	10.95	8.87	11.61	9.40	12.27	9.19	П
27			8.86	8.47	9.64	8.29	10.34	9.04	10.65	8.96	10.96	8.87	11.57	9.39			П
29			8.80	8.45	9.50	8.23	10.17	8.98	10.49	8.91	10.81	8.82	11.45	9.35			П
31			8.73	8.42	9.35	8.18	9.99	8.92	10.32	8.85	10.66	8.78	11.32	9.32			П
33	8.22	7.79	8.58	8.36	9.21	8.13	9.82	8.87	10.16	8.80	10.51	8.73	11.19	9.28			П
35	8.05	7.72	8.44	8.27	9.06	8.07	9.64	8.81	10.00	8.75	10.36	8.68	11.07	9.25			П
37	7.92	7.66	8.30	8.13	8.91	8.02	9.46	8.75	9.79	8.68	10.13	8.61	10.80	9.17			П
39	7.78	7.60	8.16	8.00	8.75	7.96	9.28	8.69	9.59	8.62	9.90	8.55	10.53	9.10			П
41	7.64	7.49	8.02	7.86	8.60	7.90	9.09	8.62	9.38	8.55	9.68	8.48	10.26	9.03			11
43	7.50	7.35	7.88	7.72	8.45	7.85	8.91	8.56	9.18	8.49	9.45	8.41	9.99	8.96			11
46	7.33	7.18	7.67	7.52	8.22	7.77	8.58	8.41	8.83	8.38	9.07	8.30	9.57	8.84			11
50	7.09	6.95	7.39	7.24	7.91	7.66	8.19	8.03	8.35	8.18	8.51	8.14	8.83	8.65			11

Out	door		Indoor	air temp	perature	:
air te	emp.			°CDB		
°CDB	°CWB	16	18	20	22	24
-19.8	-20	6.82	6.79	6.77	6.75	6.72
-17.7	-18	7.16	7.14	7.10	7.08	7.04
-15.7	-16	7.50	7.46	7.44	7.40	7.37
-13.5	-14	7.86	7.83	7.79	7.76	7.72
-11.5	-12	8.23	8.19	8.15	8.12	8.08
-9.5	-10	8.58	8.55	8.50	8.47	8.42
-7.5	-8	8.93	8.89	8.85	8.80	8.75
-5.5	-6	9.05	9.00	8.97	8.91	8.86
-3.0	-4	9.17	9.12	9.07	9.03	8.97
-1.0	-2	9.29	9.23	9.19	9.13	9.07
1.0	0	9.40	9.34	9.29	9.23	9.18
2.0	1	9.45	9.39	9.34	9.28	9.22
3.0	2	9.82	9.77	9.71	9.67	9.63
5.0	4	10.21	10.15	10.09	10.08	10.07
7.0	6	11.33	11.27	11.20	11.22	11.23
9.0	8	11.78	11.71	11.64	11.62	11.59
11.5	10	12.23	12.16	12.09	12.02	11.94
13.5	12	12.91	12.83	12.75	12.65	12.60
15.5	14	13.59	13.50	13.42	13.29	13.26
16.5	16	13.93	13.84	13.75	13.61	13.59
	Г	,				_

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(kW)

(kW) Heating mode:HC

00011119	,	-														(,	Hour						()
0.44							Indo	oor air t	empera	ture							Out	door		Indoor	air temp	erature	,
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	emp.			°CDB		
un tomp.	12 °C	CWB	14 °	CWB	16 °0	CWB	18 °0	CWB	19 °C	CWB	20 °C	CWB	22 °	CWB	24 °0	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	7.73	8.59	8.42	8.82	8.38	9.07	8.30	9.56	8.84	10.06	8.65	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	7.87	9.00	8.59	9.26	8.51	9.52	8.43	10.06	8.97	10.60	8.78	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	8.01	9.42	8.73	9.69	8.65	9.98	8.57	10.56	9.11	11.14	8.91	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	8.15	9.84	8.87	10.12	8.79	10.43	8.71	11.05	9.24	11.67	9.04	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	8.22	10.05	8.94	10.34	8.86	10.65	8.77	11.29	9.31	11.92	9.10	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	8.29	10.25	9.01	10.56	8.93	10.88	8.84	11.52	9.37	12.16	9.16	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	8.29	10.28	9.02	10.59	8.94	10.91	8.85	11.56	9.38	12.21	9.17	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	8.50	9.64	8.29	10.31	9.03	10.62	8.95	10.95	8.87	11.61	9.40	12.27	9.19	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	8.47	9.64	8.29	10.34	9.04	10.65	8.96	10.96	8.87	11.57	9.39			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	8.45	9.50	8.23	10.17	8.98	10.49	8.91	10.81	8.82	11.45	9.35			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	8.42	9.35	8.18	9.99	8.92	10.32	8.85	10.66	8.78	11.32	9.32			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	7.79	8.58	8.36	9.21	8.13	9.82	8.87	10.16	8.80	10.51	8.73	11.19	9.28			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	7.72	8.44	8.27	9.06	8.07	9.64	8.81	10.00	8.75	10.36	8.68	11.07	9.25			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	7.66	8.30	8.13	8.91	8.02	9.46	8.75	9.79	8.68	10.13	8.61	10.80	9.17			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	7.60	8.16	8.00	8.75	7.96	9.28	8.69	9.59	8.62	9.90	8.55	10.53	9.10			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	7.49	8.02	7.86	8.60	7.90	9.09	8.62	9.38	8.55	9.68	8.48	10.26	9.03			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	7.35	7.88	7.72	8.45	7.85	8.91	8.56	9.18	8.49	9.45	8.41	9.99	8.96			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	7.18	7.67	7.52	8.22	7.77	8.58	8.41	8.83	8.38	9.07	8.30	9.57	8.84			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.95	7.39	7.24	7.91	7.66	8.19	8.03	8.35	8.18	8.51	8.14	8.83	8.65			16.5	16	13.93	13.84	13.75	13.61	13.59

Outdoor unit FDC100VSA

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows Notes (1) These data show average status.

(3) Symbols are as follows TC: Total cooling capacity (kW) SHC: Sensible heat capacity (kW) HC: Heating capacity (kW)

Model FDT125VNAVG Indoor unit FDT125VG Outdoor unit FDC125VNA (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Indoor air temperature Outdoor Outdoo air temp 18 °CDB 21 °CDB 23 °CDB 26 °CDB 27 °CDB 28 °CDB 31 °CDB 33 °CDE air temr 12 °CWR 14 °CWR 20 °CWB 22 °CWB 16 °CWB 18 °CWB 19 °CWB 24 °CWB CDB °CWI 16 18 24 20 22 °CDB TC SHC TC TC SHC TC SHC 19.8 -20 7.67 7.65 SHC TC SHC TC SHC TC SHC SHC TC 7.77 7.73 7.70 8.75 10.74 9.49 1.34 9.32 9.65 -18 8.16 8.13 8.11 8.06 8.03 13 10.63 8.94 11.26 9.68 11.57 9.59 11.91 9.51 12.58 10.05 13.25 9.83 15.7 -16 8.57 8.53 8.50 8 46 8 42 8.86 15 11.10 9.13 11.78 9.87 12.11 9.78 12.47 9.69 13.20 10.23 13.92 10.01 13.5 -14 9.02 8.98 8.94 8.90 17 11.58 9.32 12.29 10.06 12.65 9.97 13.04 9.88 13.82 10.42 10.20 11.5 -12 9.46 9.37 9.33 9.28 19 11.82 9 42 12 56 10.16 12.92 10.06 13.32 9.98 14.11 10.51 14 90 10.29 -9.5 -10 9.90 9 84 9.80 9.76 9.70 21 12.06 9.51 12.82 10.25 13.19 10.16 13.60 10.07 14.40 10.60 15.20 10.37 -7.5 -8 10.32 10.28 10.23 10.17 10.12 23 -5.5 10.50 10.45 10.39 10.28 12.06 9.51 12.85 10.26 13.23 10.17 13.64 10.09 14.45 10.62 15.27 10.39 -6 10.33 25 11 16 971 12 06 9.51 12 89 10.28 13 27 10 19 13 68 10 10 1451 10 64 15 34 1041 -3.0 -4 10 66 10.61 10.55 10 49 10 43 11.08 10.29 10.58 27 9.68 12.05 9.51 12.92 13.31 10.20 13.69 10.10 14.47 10.62 1.0 10.82 10.77 10.71 10.65 -2 13.11 29 11.00 11.87 9.44 12.71 10.21 10.13 10.04 14.31 10.57 1.0 10.99 10.93 10.87 10.80 10.73 9.64 13.51 11.01 10.94 31 10.92 961 11 69 9.36 12 49 10 13 12 90 10.06 13 32 9 98 14 15 10.52 2.0 11.07 10.88 10.81 33 10.27 8.95 10.72 9.52 11.51 9.29 12.27 10.05 12.70 9.99 13.13 9.91 13.99 10.48 3.0 2 11.92 11.85 11.78 11.73 11.68 35 10.07 8 86 10.55 9.45 11.33 9.22 12 06 9.97 9.91 12.94 9.85 13.83 10.43 5.0 4 12.76 12.69 12.61 12.60 12 58 12.50 8.78 10.38 11.83 13.50 10.33 14.16 14.08 14.00 14.02 14.04 37 9.90 9.37 11.13 9.14 9.89 12.24 9.82 12.66 9.75 7.0 6 39 9.72 8.70 9.29 10.94 9.06 11.60 9.80 11.99 9.74 12.38 9.66 13.16 10.22 9.0 14.72 14.64 14.56 14.52 14.49 41 9 55 8.62 10.02 9.22 10 75 8 99 11.37 9.72 11.73 9.65 12.09 9 56 12 82 10.12 11.5 10 15.28 15.20 15.11 15.02 14.93 43 12 15.75 9.38 8.54 10.56 8.91 11.14 9.64 11.47 9.56 9.47 12.48 10.02 13.5 16.13 16.04 15.94 15.82 9.85 9.15 11.81 46 8.46 9.53 10.28 8.80 10.88 9.54 11.12 9.44 11.28 9.86 15.5 14 16.98 16.88 16.77 16.62 16.58 9.21 9.01 9.30 11.96 50 7.43 7.28 7.63 7.48 8.25 8.03 8.67 8.50 8.78 8.60 8.80 8.52 9.05 8.87 16.5 16 17.41 17.30 17.19 17.02 16.99

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FDT125VSAVG Model Indoor unit FDT125VG Outdoor unit FDC125VSA (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Indoor air temperature Outdoo air temp 33 °CDB 18 °CDB 21 °CDB 23 °CDB 27 °CDB 28 °CDB 31 °CDB CDB 26 °CDB air temr 16 °CWB 18 °CWB 19 °CWB 24 °CWB 24 12 °CWB 14 °CWB 20 °CWB 22 °CWB CDB CWI 16 18 20 22 CDB TC SHC TC SHC TC SHC TC SHC TC SHC TC SHC TC SHC TC SHC 19.8 -20 7.77 7.73 7.70 7.67 7.65 8.75 10.74 9.49 11.03 9.41 11.34 9.32 11.96 9.86 2.57 9.65 17.7 8.16 8.13 8.06 8.03 11 10.15 -18 8.11 13 10.63 8.94 9.68 9.59 11.91 9.51 10.05 3.25 9.83 15.7 -16 8.57 8.53 8.50 8.42 15 11.10 9.13 11.78 9.87 12.11 9.78 12.47 9.69 13.20 10.23 13.92 10.01 13.5 -14 9.02 8.98 8.94 8.90 8.86 17 11.58 9.32 12.29 10.06 12.65 9.97 13.04 9.88 13.82 10.42 14.59 11.5 9.46 9.41 9.37 9.33 9.28 10.20 -12 19 11.82 9.42 12.56 10.16 12.92 10.06 13.32 9.98 14.11 10.51 14.90 10.29 -9.5 -10 9.90 9.84 9.80 9.76 9.70 21 12.06 9.51 12.82 10.25 13.19 10.16 13.60 10.07 14.40 10.60 15.20 10.37 -7.5 -8 10.32 10.28 10.23 10.17 10.12 23 12.06 9.51 12.85 10.26 13.23 10.17 13.64 10.09 14.45 10.62 5.27 -5.5 -6 10.50 10.45 10.39 10.33 10.28 10.39 25 11.16 9.71 12.06 9.51 12.89 10.28 13.27 10.19 13.68 10.10 14.51 10.64 15.34 10.41 -3.0 -4 10.66 10.61 10.55 10.49 10.43 -1.0 -2 10.82 10.77 27 11.08 9.68 12.05 9.51 12.92 10.29 13.31 10.20 13.69 10.10 14.47 10.62 10.71 10.65 10.58 10.73 29 11.00 9.64 11.87 9.44 12.71 10.21 13.11 10.13 13.51 10.04 14.31 10.57 1.0 10.99 10.93 10.87 10.80 31 10.92 9.61 11 69 9.36 12.49 10.13 12.90 10.06 13.32 9 98 14.15 10.52 20 1 11 07 11 01 10.94 10.88 10.81 10.48 11.68 33 10.72 9.52 11.51 9.29 12.70 9.99 13.99 3.0 11.92 11.85 11.78 11.73 10.27 8.95 12.27 10.05 13.13 9.91 2 11.33 10.43 12.58 35 10.07 10.55 9.45 9.22 12.06 9.97 12.50 9.91 12.94 9.85 13.83 5.0 12.76 12.69 12.61 12.60 37 7.0 14.08 14.00 14.02 14.04 9.90 8.78 10.38 9.37 11.13 9.14 11.83 9.89 12.24 9.82 12.66 9.75 13.50 10.33 6 14.16

> 12.38 9.66

> 12.09 9.56

> 11.81 9.47

11.28 9.30

8.80 8 52 13.16 10.22

12.82 10.12

12.48 10.02

1.96 9.86

9.05 8 87

7 28 Notes (1) These data show average status

39

41

43

46

50

9.72 8.70

9.55 8.62 10.02 9.22 10.75 8.99 11.37 9.72 11.73 9.65

9.38 8.54 9.85 9.15 10.56 8.91 11.14 9.64 11.47 9.56

9.21 8.46 9.53 9.01 10.28 8.80 10.88

7 43

epending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

9.80

11.99

11.12 9.44

In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency. Capacities are based on the following conditions.

7 63 7 48 8.25 8 03 8.67 8 50 8.78 8.60

9.29 10.94 9.06

Corresponding refrigerant piping length: 7.5m

Level difference of Zero. Symbols are as follows TC: Total cooling capacity (kW) SHC: Sensible heat capacity (kW) HC : Heating capacity (kW)

PJF000Z451

15.11 15.02

15.94 15.82 15.75

17.19 17.02

14.49

14 93

16.58

16.99

14.72 14.64 14.56

16.13 16.04

15.28 15.20

17.41 17.30

11.5 10

13.5 12

15.5 14 16.98 16.88 16.77 16.62

16.5 16 Model FDT140VNAVG Indoor unit FDT140VG Outdoor unit FDC140VNA (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Indoor air temperature Outdoor Outdoo air temp 18 °CDB 21 °CDB 23 °CDB 26 °CDB 27 °CDB 28 °CDB 31 °CDB 33 °CDB °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWB 20 °CWB 22 °CWB 24 °CWB °CDB °CWE 16 18 20 22 24 °CDB TC SHC TC SHC TC SHC TC SHC TC SHC TC SHC TC SHC TC SHC -19.8 -20 7.94 7.91 7.88 7.85 7.82 11 11.05 9.13 11.68 9.86 12.00 9.77 12.34 9.68 13.01 10.21 13.68 9.99 -17.7 -18 8.44 8.41 8.37 8.34 8.30 13 11.56 9.34 12.25 10.07 12.59 9.98 12.95 9.89 13.69 10.42 14.42 10.20 -15.7 -16 8.94 8.90 8.86 8.82 8.79 -13.5 9.41 9.37 9.33 15 -14 9.50 9.46 12.07 9.55 12.81 10.29 13.18 10.19 13.57 10.10 14.36 10.63 15.14 10.40 17 12.59 9.76 13.38 10.50 13.77 10.40 10.32 15.04 10.85 5.87 10.61 -11.5 -12 10.07 10.02 9.98 9.93 9.88 14.19 19 12.86 9.87 13.66 10.61 14.07 10.51 14.49 10.42 15.35 10.95 6.20 10.70 -9.5 -10 10.64 10.59 10.54 10.49 10.44 21 9.98 14.36 10.62 14.79 15.66 11.05 -7.5 -8 11.21 | 11.15 | 11.10 | 11.04 10.99 13.12 13.95 10.72 10.53 16.53 10.80 13.12 9.98 14.40 10.64 14.84 11.51 11.45 11.39 11.33 23 13.99 10.73 15.73 11.07 16.61 10.82 -5.5 -6 11.27 25 12.14 10.17 13.11 9.98 14.02 10.75 14.44 10.65 14.89 10.56 15.79 11.09 16.69 10.85 -3.0 -4 11.80 11.74 11.68 11.62 11.55 11.98 11.84 27 12.06 10.14 13.11 9.98 14.06 10.76 14.48 10.67 14.90 10.57 15.74 11.07 -1.0 -2 12.11 12.05 11.91 12.28 11.97 10.59 10.49 11.01 12.42 12.35 12.13 29 10.10 12.91 13.82 10.67 14.26 14.70 15.56 1.0 0 12.20 31 11 88 10.06 12 72 9.81 13 59 10.58 14 04 10.50 14 49 10 42 15 40 10.96 20 1 12 58 12 50 12 43 12 35 12 28 33 11.18 9.41 11.67 9.96 12.52 9.73 13.36 10.49 13.82 10.43 14.29 10.35 15.22 10.91 3.0 2 13.35 13.27 13.20 13.13 13.08 35 10.96 9.30 11.48 9.88 12.32 9.65 13.11 10.40 13.60 10.34 14.09 10.28 15.05 10.85 5.0 4 14.12 | 14.05 | 13.96 | 13.95 | 13.93 15.50 15.55 11.29 7.0 15.68 15.59 15.52 37 10.76 9.21 9.79 12.11 9.56 12.87 10.31 13.32 10.24 13.77 10.17 14.69 10.74 6 39 10.58 9.12 11.10 9.71 11.91 9.48 12.62 10.21 13.05 10.14 13.46 10.06 14.32 10.62 9.0 8 16.30 16.21 16.11 16.07 16.03 41 10.39 9.03 10.91 9.63 11.70 9.39 12.37 10.12 12.76 10.04 13.16 9.96 13.95 10.50 11.5 10 16.91 16.83 16.73 16.63 16.53 13.5 12 17.86 17.76 17.52 17.44 43 9.54 12.48 10.39 17.65 10.21 8.95 10.71 11.49 9.31 12.11 10.02 9.94 12.85 9.85 13.58 10.47 9.44 11.13 14 46 10.03 9.17 11.73 12.10 12.27 9.66 10.22 15.5 18.80 | 18.69 | 18.57 | 18.40 | 18.36 50 7.61 7.45 7.88 7.72 8.35 8.09 8.75 8.58 8.97 8.75 8.98 8.60 9.33 9.14 16.5 16 19.28 19.15 19.03 18.84 18.81

PJF000Z451

(kW)

Model FDT140VSAVG Indoor unit FDT140VG Outdoor unit FDC140VSA (kW) Heating mode:HC Cooling mode

Cooming	illou	0														(1444)	ricati	ing inc	de.i i				(17.0.0
							Indo	oor air t	empera	iture							Ou	tdoor		Indoor	air temp	perature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	temp.			°CDB		
an tomp.	12 °C	CWB	14 °0	CWB	16 °	CWB	18 °C	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °(CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	9.13	11.68	9.86	12.00	9.77	12.34	9.68	13.01	10.21	13.68	9.99	-17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	9.34	12.25	10.07	12.59	9.98	12.95	9.89	13.69	10.42	14.42	10.20	-15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	9.55	12.81	10.29	13.18	10.19	13.57	10.10	14.36	10.63	15.14	10.40	-13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	9.76	13.38	10.50	13.77	10.40	14.19	10.32	15.04	10.85	15.87	10.61	-11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	9.87	13.66	10.61	14.07	10.51	14.49	10.42	15.35	10.95	16.20	10.70	-9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	9.98	13.95	10.72	14.36	10.62	14.79	10.53	15.66	11.05	16.53	10.80	-7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	9.98	13.99	10.73	14.40	10.64	14.84	10.55	15.73	11.07	16.61	10.82	-5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	10.17	13.11	9.98	14.02	10.75	14.44	10.65	14.89	10.56	15.79	11.09	16.69	10.85	-3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	10.14	13.11	9.98	14.06	10.76	14.48	10.67	14.90	10.57	15.74	11.07			-1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	10.10	12.91	9.89	13.82	10.67	14.26	10.59	14.70	10.49	15.56	11.01			1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	10.06	12.72	9.81	13.59	10.58	14.04	10.50	14.49	10.42	15.40	10.96			2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	9.41	11.67	9.96	12.52	9.73	13.36	10.49	13.82	10.43	14.29	10.35	15.22	10.91			3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	9.30	11.48	9.88	12.32	9.65	13.11	10.40	13.60	10.34	14.09	10.28	15.05	10.85			5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	9.21	11.29	9.79	12.11	9.56	12.87	10.31	13.32	10.24	13.77	10.17	14.69	10.74			7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	9.12	11.10	9.71	11.91	9.48	12.62	10.21	13.05	10.14	13.46	10.06	14.32	10.62			9.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	9.03	10.91	9.63	11.70	9.39	12.37	10.12	12.76	10.04	13.16	9.96	13.95	10.50			11.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	8.95	10.71	9.54	11.49	9.31	12.11	10.02	12.48	9.94	12.85	9.85	13.58	10.39			13.5	12	17.86	17.76	17.65	17.52	17.44
46	10.03	8.86	10.47	9.44	11.13	9.17	11.73	9.88	12.10	9.81	12.27	9.66	13.01	10.22			15.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.09	8.75	8.58	8.97	8.75	8.98	8.60	9.33	9.14			16.5	16	19.28	19.15	19.03	18.84	18.81

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions. Corresponding refrigerant piping length: 7.5m Level difference of Zero.

(3) Symbols are as follows TC: Total cooling capacity (kW) SHC: Sensible heat capacity (kW) HC: Heating capacity (kW)

(b) Twin type

Model FDT100VNAPVG Indoor unit FDT50VG (2 units) Outdoor unit FDC100VNA Cooling mode (kW) Heating mode:HC (kW) Indoor air temperature Indoor air temperature Outdoo Outdoo 18 °CDB 21 °CDB 23 °CDB 26 °CDB 27 °CDB 28 °CDB 31 °CDB 33 °CDB °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWB 20 °CWB 22 °CWB 24 °CWB CDB °CWE 16 20 24 18 22 °CDB SHC TC SHC TC SHC TC SHC TC SHC TC SHC TC SHC TC SHC 19.8 -20 6.82 6.79 6.75 6.72 11 8.12 7.81 8.59 8.42 8.82 8.47 9.07 8.37 9.56 8.93 10.06 8.70 -17.7-18 7.16 7.14 7.10 7.08 7.04 13 7.44 7.93 8.68 9.26 8.59 9.52 8.48 10.06 9.04 10.60 -15.7 -16 7.50 7.46 7.37 8.50 9.00 8.80 15 8 88 8.05 9.42 8.81 9.69 8.70 9.98 8.60 10.56 9.15 11.14 8.91 -13.5 -14 7.86 7.83 7.79 7.76 7.72 8.08 17 9.26 8.18 9.84 8.93 10.12 8.82 10.43 8.72 11.05 9.26 11.67 9.01 -11.5-12 8.23 8.19 8.15 8.12 19 9.46 8.24 10.05 8.99 10.34 8.88 10.65 8.77 11.29 9.32 11.92 9.06 -9.5 -10 8.58 8.55 8.50 8.47 8.42 21 9 65 8.30 10.25 9.05 10.56 8 94 10.88 8.83 11.52 9.37 12.16 9.11 -8 8.93 8.89 8.85 8.80 8.75 23 9.65 10.59 -5.5 -6 9.00 8.97 8.91 8.86 8.30 10.28 9.06 8.95 10.91 8.84 11.56 9.38 12.21 9.12 9.05 25 8.93 9.64 8.30 9.07 8.96 10.95 8.85 11.61 9.39 12.27 -3.0 -4 9.17 9.12 9.03 8.97 8.58 10.31 10.62 9.13 9.07 27 8.86 8.55 9.64 8.30 10.34 9.08 10.65 8.97 10.96 8.86 11.57 9.38 -1.0 -2 9.29 9.23 9.19 9.13 9.07 29 8.80 8.53 9.50 8.25 10.17 9.03 10.49 8.92 10.81 8.82 11.45 9.35 1.0 0 9.40 9.34 9.29 9.23 9.18 10.32 31 8.73 8.50 9.35 8.21 9.99 8.97 10.66 8.78 11.32 9.32 2.0 9.45 9.39 9.34 9.28 9.22 2 9.77 33 8.22 7.85 8.58 8.41 9.21 8.16 9.82 8.92 10.16 8.83 10.51 8.74 11.19 9.29 3.0 9.82 9.71 9.67 9.63 35 8.05 7.78 8.44 8.27 9.06 8.11 9.64 8.87 10.00 8.79 10.36 8.70 11.07 9.27 5.0 4 10.21 10.15 10.09 10.08 10.07 37 7.92 7.73 8.30 8.13 8.91 8.06 9.46 8.82 9.79 8.73 10.13 8.64 10.80 9.20 7.0 6 11.33 11.27 11.20 11.22 11.23 39 7.78 7.62 8.16 8.00 8.75 8.01 9.28 8.77 9.59 8.68 9.90 8.58 10.53 9.14 9.0 8 11.78 11.71 11.64 11.62 11.59 7.64 7.49 7.86 8.60 7.96 8.71 9.38 8.62 9.68 8.52 10.26 9.08 11.5 10 12.23 12.16 12.09 12.02 11.94 8.02 9.09 43 7.50 7.35 7.88 7.72 8.45 7.91 8.91 8.66 9.18 8.56 9.45 8.46 9.99 9.02 13.5 12 12.91 12.83 12.75 12.65 12.60 15.5 14 13.59 13.50 13.42 13.29 13.26 46 7.33 7.18 7.67 7.52 8.22 7.84 8.58 8.41 8.83 8.47 9.07 8.37 9.57 8.93 50 7.09 6.95 7.39 7.24 7.91 7.74 8.19 8.03 8.35 8.23 8.83 8.65 16.5 16 13.93 | 13.84 | 13.75 | 13.61 | 13.59 8.18 8.51 PJF000Z451

Model FDT100VSAPVG Indoor unit FDT50VG (2 units) Outdoor unit FDC100VSA Cooling mode

(kW) Heating mode:HC

(kW)

Coomi	j illou	е														(KVV)	пеаш	ig illo	ue.n	,			(KVV)
							Inde	oor air t	empera	ture							Out	door		Indoor	air temp	erature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air te	emp.			°CDB		
un temp.	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °C	CWB	24 °0	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	7.81	8.59	8.42	8.82	8.47	9.07	8.37	9.56	8.93	10.06	8.70	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	7.93	9.00	8.68	9.26	8.59	9.52	8.48	10.06	9.04	10.60	8.80	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	8.05	9.42	8.81	9.69	8.70	9.98	8.60	10.56	9.15	11.14	8.91	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	8.18	9.84	8.93	10.12	8.82	10.43	8.72	11.05	9.26	11.67	9.01	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	8.24	10.05	8.99	10.34	8.88	10.65	8.77	11.29	9.32	11.92	9.06	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	8.30	10.25	9.05	10.56	8.94	10.88	8.83	11.52	9.37	12.16	9.11	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	8.30	10.28	9.06	10.59	8.95	10.91	8.84	11.56	9.38	12.21	9.12	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	8.58	9.64	8.30	10.31	9.07	10.62	8.96	10.95	8.85	11.61	9.39	12.27	9.13	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	8.55	9.64	8.30	10.34	9.08	10.65	8.97	10.96	8.86	11.57	9.38			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	8.53	9.50	8.25	10.17	9.03	10.49	8.92	10.81	8.82	11.45	9.35			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	8.50	9.35	8.21	9.99	8.97	10.32	8.88	10.66	8.78	11.32	9.32			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	7.85	8.58	8.41	9.21	8.16	9.82	8.92	10.16	8.83	10.51	8.74	11.19	9.29			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	7.78	8.44	8.27	9.06	8.11	9.64	8.87	10.00	8.79	10.36	8.70	11.07	9.27			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	7.73	8.30	8.13	8.91	8.06	9.46	8.82	9.79	8.73	10.13	8.64	10.80	9.20			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	7.62	8.16	8.00	8.75	8.01	9.28	8.77	9.59	8.68	9.90	8.58	10.53	9.14			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	7.49	8.02	7.86	8.60	7.96	9.09	8.71	9.38	8.62	9.68	8.52	10.26	9.08			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	7.35	7.88	7.72	8.45	7.91	8.91	8.66	9.18	8.56	9.45	8.46	9.99	9.02			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	7.18	7.67	7.52	8.22	7.84	8.58	8.41	8.83	8.47	9.07	8.37	9.57	8.93			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.95	7.39	7.24	7.91	7.74	8.19	8.03	8.35	8.18	8.51	8.23	8.83	8.65			16.5	16	13.93	13.84	13.75	13.61	13.59

Notes (1) These data show average status

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.

Capacities are based on the following conditions. Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows TC: Total cooling capacity (kW) SHC: Sensible heat capacity (kW) HC: Heating capacity (kW)

Model Cooling			NAPV	G	Indoor	unit	FDT6	0VG (2 units	s)	Outdo	or unit	FD(C125V	/NA	(kW)	Heat	ng mo	de·H(2			(kW)
Cooming	illoa						Inde	oor air t	empera	tura						(1000)		tdoor			air temp	erature	` ′
Outdoor	18 °	CDB	21 °	CDB	23 °	CDB		CDB		CDB	28 °	CDB	31 °	CDB	33 °	CDB		temp.		maoor	°CDB	orataro	
air temp.		CWB		CWB	16 °C			CWB		CWB	20 °		22 °C			CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	9.95	10.74	10.53	11.03	10.81	11.34	11.04	11.96	11.72	12.57	11.54	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	10.40	11.26	11.03	11.57	11.30	11.91	11.19	12.58	11.95	13.25	11.68	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	10.56	11.78	11.54	12.11	11.46	12.47	11.34	13.20	12.10	13.92	11.82	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	10.73	12.29	11.74	12.65	11.62	13.04	11.50	13.82	12.25	14.59	11.97	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	10.81	12.56	11.82	12.92	11.70	13.32	11.58	14.11	12.33	14.90	12.04	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	10.89	12.82	11.90	13.19	11.78	13.60	11.66	14.40	12.40	15.20	12.10	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	10.89	12.85	11.91	13.23	11.79	13.64	11.67	14.45	12.41	15.27	12.12	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	10.94	12.06	10.89	12.89	11.92	13.27	11.80	13.68	11.68	14.51	12.43	15.34	12.13	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	10.86	12.05	10.89	12.92	11.93	13.31	11.81	13.69	11.68	14.47	12.42			-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	10.78	11.87	10.83	12.71	11.87	13.11	11.75	13.51	11.63	14.31	12.38			1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	10.70	11.69	10.76	12.49	11.80	12.90	11.69	13.32	11.58	14.15	12.34			2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	10.06	10.72	10.51	11.51	10.70	12.27	11.73	12.70	11.63	13.13	11.53	13.99	12.30			3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	9.87	10.55	10.34	11.33	10.64	12.06	11.66	12.50	11.57	12.94	11.47	13.83	12.26			5.0	4	12.76	12.69	12.61	12.60	12.58
37	9.90	9.70	10.38	10.17	11.13	10.57	11.83	11.59	12.24	11.50	12.66	11.40	13.50	12.17			7.0	6	14.16	14.08	14.00	14.02	14.04
39	9.72	9.53	10.20	10.00	10.94	10.51	11.60	11.37	11.99	11.42	12.38	11.32	13.16	12.09			9.0	8	14.72	14.64	14.56	14.52	14.49
41	9.55	9.36	10.02	9.82	10.75	10.44	11.37	11.14	11.73	11.35	12.09	11.24	12.82	12.01			11.5	10	15.28	15.20	15.11	15.02	14.93
43	9.38	9.19	9.85	9.65	10.56	10.35	11.14	10.92	11.47	11.24	11.81	11.16	12.48	11.93			13.5	12	16.13	16.04	15.94	15.82	15.75
46	9.21	9.03	9.53	9.34	10.28	10.07	10.88	10.66	11.12	10.90	11.28	11.02	11.96	11.72			15.5	14	16.98	16.88	16.77	16.62	16.58
50	7.43	7.28	7.63	7.48	8.25	8.09	8.67	8.50	8.78	8.60	8.80	8.62	9.05	8.87			16.5	16	17.41	17.30	17.19	17.02	16.99

PJF000Z451

Model Cooling		125V 9	SAPV	G	Indoor	unit	FDT6	ovg (2 units	s)	Outdo	or unit	: FD	C125\	/SA	(kW)	Heati	ng mo	de:H0				(kW)
							Indo	oor air t	empera	iture							Out	door		Indoor	air temp	erature	:
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	emp.			°CDB		
an temp.	12 °C	CWB	14 °C	CWB	16 °	CWB	18 °C	CWB	19 °	CWB	20 °	CWB	22 °C	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	9.95	10.74	10.53	11.03	10.81	11.34	11.04	11.96	11.72	12.57	11.54	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	10.40	11.26	11.03	11.57	11.30	11.91	11.19	12.58	11.95	13.25	11.68	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	10.56	11.78	11.54	12.11	11.46	12.47	11.34	13.20	12.10	13.92	11.82	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	10.73	12.29	11.74	12.65	11.62	13.04	11.50	13.82	12.25	14.59	11.97	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	10.81	12.56	11.82	12.92	11.70	13.32	11.58	14.11	12.33	14.90	12.04	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	10.89	12.82	11.90	13.19	11.78	13.60	11.66	14.40	12.40	15.20	12.10	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	10.89	12.85	11.91	13.23	11.79	13.64	11.67	14.45	12.41	15.27	12.12	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	10.94	12.06	10.89	12.89	11.92	13.27	11.80	13.68	11.68	14.51	12.43	15.34	12.13	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	10.86	12.05	10.89	12.92	11.93	13.31	11.81	13.69	11.68	14.47	12.42			-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	10.78	11.87	10.83	12.71	11.87	13.11	11.75	13.51	11.63	14.31	12.38			1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	10.70	11.69	10.76	12.49	11.80	12.90	11.69	13.32	11.58	14.15	12.34			2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	10.06	10.72	10.51	11.51	10.70	12.27	11.73	12.70	11.63	13.13	11.53	13.99	12.30			3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	9.87	10.55	10.34	11.33	10.64	12.06	11.66	12.50	11.57	12.94	11.47	13.83	12.26			5.0	4	12.76	12.69	12.61	12.60	12.58
37	9.90	9.70	10.38	10.17	11.13	10.57	11.83	11.59	12.24	11.50	12.66	11.40	13.50	12.17			7.0	6	14.16	14.08	14.00	14.02	14.04
39	9.72	9.53	10.20	10.00	10.94	10.51	11.60	11.37	11.99	11.42	12.38	11.32	13.16	12.09			9.0	8	14.72	14.64	14.56	14.52	14.49
41	9.55	9.36	10.02	9.82	10.75	10.44	11.37	11.14	11.73	11.35	12.09	11.24	12.82	12.01			11.5	10	15.28	15.20	15.11	15.02	14.93
43	9.38	9.19	9.85	9.65	10.56	10.35	11.14	10.92	11.47	11.24	11.81	11.16	12.48	11.93			13.5	12	16.13	16.04	15.94	15.82	15.75
46	9.21	9.03	9.53	9.34	10.28	10.07	10.88	10.66	11.12	10.90	11.28	11.02	11.96	11.72			15.5	14	16.98	16.88	16.77	16.62	16.58
50	7.43	7.28	7.63	7.48	8.25	8.09	8.67	8.50	8.78	8.60	8.80	8.62	9.05	8.87			16.5	16	17.41	17.30	17.19	17.02	16.99

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

Model Cooling			NAPV	G	Indoor	unit	FDT7	1VG (2 units	s)	Outdo	or unit	: FD	C140V	/NA	(kW)	Heati	na mo	de:H0)			(kW)
	IIIou						Inde	oor air t	empera	ture						()		door		Indoor :	air temr	erature	` ′
Outdoor	18 °	CDB	21 °	CDB	23 °	CDB		CDB		CDB	28 °	CDB	31 °	CDB	33 °	CDB		emp.			°CDB	70141414	-
air temp.	12 °C	CWB	14 °	CWB	16 °C	CWB	18 °C	CWB	19 °C	CWB	20 °C	CWB	22 °C	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	10.82	11.68	11.44	12.00	11.76	12.34	12.09	13.01	12.75	13.68	12.67	-17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	11.33	12.25	12.00	12.59	12.34	12.95	12.27	13.69	13.11	14.42	12.84	-15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	11.57	12.81	12.56	13.18	12.57	13.57	12.45	14.36	13.28	15.14	13.00	-13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	11.76	13.38	12.87	13.77	12.75	14.19	12.63	15.04	13.46	15.87	13.17	-11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	11.85	13.66	12.96	14.07	12.84	14.49	12.72	15.35	13.54	16.20	13.25	-9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	11.95	13.95	13.05	14.36	12.93	14.79	12.81	15.66	13.62	16.53	13.33	-7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	11.95	13.99	13.06	14.40	12.94	14.84	12.82	15.73	13.64	16.61	13.34	-5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	11.90	13.11	11.94	14.02	13.07	14.44	12.95	14.89	12.84	15.79	13.66	16.69	13.36	-3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	11.81	13.11	11.94	14.06	13.09	14.48	12.97	14.90	12.84	15.74	13.64			-1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	11.73	12.91	11.87	13.82	13.01	14.26	12.90	14.70	12.78	15.56	13.60			1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	11.64	12.72	11.80	13.59	12.93	14.04	12.83	14.49	12.72	15.40	13.55			2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	10.96	11.67	11.43	12.52	11.73	13.36	12.86	13.82	12.76	14.29	12.66	15.22	13.51			3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	10.74	11.48	11.25	12.32	11.66	13.11	12.78	13.60	12.70	14.09	12.60	15.05	13.46			5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	10.55	11.29	11.06	12.11	11.59	12.87	12.61	13.32	12.61	13.77	12.51	14.69	13.37			7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	10.37	11.10	10.88	11.91	11.51	12.62	12.37	13.05	12.53	13.46	12.42	14.32	13.27			9.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	10.19	10.91	10.69	11.70	11.44	12.37	12.12	12.76	12.44	13.16	12.33	13.95	13.18			11.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	10.01	10.71	10.50	11.49	11.26	12.11	11.87	12.48	12.23	12.85	12.24	13.58	13.08			13.5	12	17.86	17.76		17.52	17.44
46	10.03	9.82	10.47	10.26	11.13	10.91	11.73	11.49	12.10	11.86	12.27	12.02	13.01	12.75			15.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			16.5	16	19.28	19.15	19.03	18.84	18.81

PJF000Z451

							Indo	oor air t	empera	ture							Out	door		Indoor	air tem	erature	
Outdoor	18 °	CDB	21 °	CDB	23 °	CDB		CDB		CDB	28 °	CDB	31 °	CDB	33 °	CDB		emp.			°CDB		
air temp.	12 °C	CWB	14 °(CWB	16 °	CWB	18 °0	CWB	19 °	CWB	20 °C	CWB	22 °(CWB	24 °(CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	10.82	11.68	11.44	12.00	11.76	12.34	12.09	13.01	12.75	13.68	12.67	-17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	11.33	12.25	12.00	12.59	12.34	12.95	12.27	13.69	13.11	14.42	12.84	-15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	11.57	12.81	12.56	13.18	12.57	13.57	12.45	14.36	13.28	15.14	13.00	-13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	11.76	13.38	12.87	13.77	12.75	14.19	12.63	15.04	13.46	15.87	13.17	-11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	11.85	13.66	12.96	14.07	12.84	14.49	12.72	15.35	13.54	16.20	13.25	-9.5	-10	10.64	10.59	10.54	10.49	10.4
21					13.12	11.95	13.95	13.05	14.36	12.93	14.79	12.81	15.66	13.62	16.53	13.33	-7.5	-8	11.21	11.15	11.10	11.04	10.9
23					13.12	11.95	13.99	13.06	14.40	12.94	14.84	12.82	15.73	13.64	16.61	13.34	-5.5	-6	11.51	11.45	11.39	11.33	11.2
25			12.14	11.90	13.11	11.94	14.02	13.07	14.44	12.95	14.89	12.84	15.79	13.66	16.69	13.36	-3.0	-4	11.80	11.74	11.68	11.62	11.5
27			12.06	11.81	13.11	11.94	14.06	13.09	14.48	12.97	14.90	12.84	15.74	13.64			-1.0	-2	12.11	12.05	11.98	11.91	11.8
29			11.97	11.73	12.91	11.87	13.82	13.01	14.26	12.90	14.70	12.78	15.56	13.60			1.0	0	12.42	12.35	12.28	12.20	12.1
31			11.88	11.64	12.72	11.80	13.59	12.93	14.04	12.83	14.49	12.72	15.40	13.55			2.0	1	12.58	12.50	12.43	12.35	12.2
33	11.18	10.96	11.67	11.43	12.52	11.73	13.36	12.86	13.82	12.76	14.29	12.66	15.22	13.51			3.0	2	13.35	13.27	13.20	13.13	13.0
35	10.96	10.74	11.48	11.25	12.32	11.66	13.11	12.78	13.60	12.70	14.09	12.60	15.05	13.46			5.0	4	14.12	14.05	13.96	13.95	13.9
37	10.76	10.55	11.29	11.06	12.11	11.59	12.87	12.61	13.32	12.61	13.77	12.51	14.69	13.37			7.0	6	15.68	15.59	15.50	15.52	15.5
39	10.58	10.37	11.10	10.88	11.91	11.51	12.62	12.37	13.05	12.53	13.46	12.42	14.32	13.27			9.0	8	16.30	16.21	16.11	16.07	16.0
41	10.39	10.19	10.91	10.69	11.70	11.44	12.37	12.12	12.76	12.44	13.16	12.33	13.95	13.18			11.5	10	16.91	16.83	16.73	16.63	16.5
43	10.21	10.01	10.71	10.50	11.49	11.26	12.11	11.87	12.48	12.23	12.85	12.24	13.58	13.08			13.5	12	17.86	17.76	17.65	17.52	17.4
46	10.03	9.82	10.47	10.26	11.13	10.91	11.73	11.49	12.10	11.86	12.27	12.02	13.01	12.75			15.5	14		18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			16.5	16	19.28	19.15	19.03	18.84	18.8
	Depend These	ing on t	the syst ow the c	em cont	trol, the	operatio	n frequ	ency of	a comp	peration ressor i	s fixed.	(Cooling	g only)						PJF	000)Z4	51	A
(2)	In the land Capacit Corresponding Level de Symbol TC: To SHC: SHC: He	ies are conding ifferences are as tal cooli ensible	based or refriger e of Zer follows ing capa heat cap	n the for rant pip o. acity (kV pacity (kV	llowing ing leng V)	conditio	ns.	ature is	0°C DB	or less,	the com	pressor	operate	es at ma	aximum	frequen	cy.						

(c) Triple type

46

50

10.03 9.82

7.61

7.45

10.47 10.26

7.88 7.72 11.13 10.91

8.35 8.19 8.75 8.58

11.73 11.49 12.10 11.86

> 8.97 8.79

FDT140VNATVG Indoor unit FDT50VG (3 units) Outdoor unit FDC140VNA Model (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Outdoor Indoor air temperature Outdoo 18 °CDB 21 °CDB 23 °CDB 28 °CDB 31 °CDB 33 °CDB air temp 27 °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWB 20 °CWB 22 °CWB 24 °CWB °CDB °CWE 16 18 20 22 24 °CDB -19.8 -20 7.94 7.91 7.88 7.82 TC SHC TC SHC TC SHC SHC TC SHC TC SHC TC TC SHC 7.85 TC SHC 11.05 11.68 11.44 11.76 12.34 13.68 8.34 8.30 10.82 12.00 12.09 13.01 12.75 12.79 -18 8.44 8.41 8.37 13 11.56 11.33 12.25 12.00 12.59 12.34 12.95 12.39 13.69 13.25 14.42 12.92 -15.7 -16 8.94 8.90 8.86 8.82 8.79 15 12.07 11.68 12.81 12.56 13.18 12.69 13.57 12.54 14.36 13.40 15.14 13.06 -13.5 -14 9.50 9.46 9.41 9.37 9.33 17 12.59 11.84 13.38 12.99 13.77 12.84 14.19 12.70 15.04 13.55 15.87 13.20 -11.5 -12 10.07 10.02 9.98 9.93 9.88 19 -9.5 10.59 10.54 10.49 10.44 11.93 -10 10.64 12.86 13.66 13.07 14.07 12.93 14.49 12.78 15.35 13.61 16.20 13.26 21 13.12 12.01 13.95 13.16 14.36 14.79 12.85 15.66 13.68 16.53 -7.5 -8 11.21 11.15 11.10 11.04 10.99 13.01 13.32 23 13.12 12.01 13.99 13.17 14.40 13.02 14.84 12.87 15.73 13.70 16.61 13.34 -5.5 -6 11.51 11.45 11.39 11.33 11.27 -3.0 11.68 25 12.14 11.90 13.11 12.01 14.02 14.44 13.03 14.89 12.88 15.79 13.71 16.69 13.35 -4 11.80 11.74 11.62 11.55 13.18 13.11 14.06 14.48 14.90 11.98 11.84 27 12.06 11.81 12.01 13.19 13.04 12.88 15.74 13.70 12.11 12.05 11.91 29 11.97 11.73 12.91 11.94 13.82 13.12 14.26 12.98 14.70 12.83 15.56 13.66 1.0 0 12.42 12.35 12 28 12.20 12.13 31 11.88 11.64 12.72 11.88 13.59 13.05 14.04 12.92 14.49 12.78 15.40 13.63 2.0 12.58 12.50 12.43 12.35 12.28 1 11.43 12.99 13.82 12.86 13.59 13.35 13.20 13.08 33 11.18 11.67 12.52 11.82 13.36 14.29 12.72 15.22 3.0 13.27 13.13 35 4 10.96 10 74 11 48 11.25 12 32 11.75 13 11 12 85 13.60 12.80 14 09 12 67 15.05 13 55 5.0 14.12 14 05 13 96 13 95 13 93 37 10.76 10.55 11.29 11.06 12.11 11.69 12.87 12.61 13.32 12.72 13.77 12.59 14.69 13.47 7.0 6 15.68 15.59 15.50 15.52 15.55 39 10.58 10.37 11.10 10.88 11.91 11.62 12.62 12.37 13.05 12.65 13.46 12.52 14.32 13.39 9.0 16.30 16.21 16.11 16.07 16.03 41 11 70 11 46 12 44 11.5 10 16 63 16.53 10.39 10 19 10.91 10.69 12 37 12 12 12 76 1251 13 16 13 95 13 31 16 91 16.83 16 73 43 10.21 10.01 0.71 10.50 11.49 11.26 12.11 11.87 12.48 12.23 12.85 12.37 13.58 13.23 13.5 12 17.86 17.76 17.65 17.52 17.44

> 12.27 12.02

8.98 8.80 9.33 9.14

13.01 12.75

> 19.03 PJF000Z451

18.84 18.81

19.28 19.15

15.5 14 18.80 18.69 18.57 18.40 18.36

16.5 16

Model Cooling			SATV	G I	Indoor	unit	FDT5	0VG (3 units	s)	Outdo	or unit	FD(C140V	'SA	(kW)	Н	eatir	ng mo	de:H0				(kW)
							Indo	oor air te	empera	ture							Г	Outo	door		Indoor	air temp	erature	
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	ı	air te	emp.			°CDB		
all tomp.	12 °C	CWB	14 °C	CWB	16 °0	CWB	18 °0	CWB	19 °C	CWB	20 °C	CWB	22 °C	CWB	24 °	CWB	°(DB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-1	9.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	10.82	11.68	11.44	12.00	11.76	12.34	12.09	13.01	12.75	13.68	12.79	-1	7.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	11.33	12.25	12.00	12.59	12.34	12.95	12.39	13.69	13.25	14.42	12.92	-1	5.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	11.68	12.81	12.56	13.18	12.69	13.57	12.54	14.36	13.40	15.14	13.06	-1	3.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	11.84	13.38	12.99	13.77	12.84	14.19	12.70	15.04	13.55	15.87	13.20	-1	1.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	11.93	13.66	13.07	14.07	12.93	14.49	12.78	15.35	13.61	16.20	13.26	-	9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	12.01	13.95	13.16	14.36	13.01	14.79	12.85	15.66	13.68	16.53	13.32	Ŀ	7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	12.01	13.99	13.17	14.40	13.02	14.84	12.87	15.73	13.70	16.61	13.34	Ŀ	5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	11.90	13.11	12.01	14.02	13.18	14.44	13.03	14.89	12.88	15.79	13.71	16.69	13.35	Ŀ	3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	11.81	13.11	12.01	14.06	13.19	14.48	13.04	14.90	12.88	15.74	13.70			Ŀ	1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	11.73	12.91	11.94	13.82	13.12	14.26	12.98	14.70	12.83	15.56	13.66			Ŀ	1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	11.64	12.72	11.88	13.59	13.05	14.04	12.92	14.49	12.78	15.40	13.63			Ŀ	2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	10.96	11.67	11.43	12.52	11.82	13.36	12.99	13.82	12.86	14.29	12.72	15.22	13.59				3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	10.74	11.48	11.25	12.32	11.75	13.11	12.85	13.60	12.80	14.09	12.67	15.05	13.55				5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	10.55	11.29	11.06	12.11	11.69	12.87	12.61	13.32	12.72	13.77	12.59	14.69	13.47				7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	10.37	11.10	10.88	11.91	11.62	12.62	12.37	13.05	12.65	13.46	12.52	14.32	13.39			9	9.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	10.19	10.91	10.69	11.70	11.46	12.37	12.12	12.76	12.51	13.16	12.44	13.95	13.31			1	1.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	10.01	10.71	10.50	11.49	11.26	12.11	11.87	12.48	12.23	12.85	12.37	13.58	13.23			1	3.5	12	17.86	17.76	17.65	17.52	17.44
46	10.03	9.82	10.47	10.26	11.13	10.91	11.73	11.49	12.10	11.86	12.27	12.02	13.01	12.75			1	5.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			1	6.5	16	19.28	19.15	19.03	18.84	18.81

Notes (1) These data show average status

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions

Corresponding refrigerant piping length: 7.5m Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW) SHC: Sensible heat capacity (kW) HC: Heating capacity (kW)

(2) Ceiling cassette-4 way compact type (FDTC) (a) Twin type

Model FDTC100VNAPVF Outdoor unit FDC100VNA Indoor unit FDT50VF (2 units) Cooling mode

(kW) Heating mode:HC

(kW)

							Indo	oor air t	empera	ture							Oı	tdoor		Indoor	air temr	erature	
Outdoor	18 °	CDB	21 °	CDB	23 °	CDB	26 °		27 °		28 °	CDB	31 °	CDB	33 °	CDB		temp.			°CDB		-
air temp.	12 °(CWB	14 °	CWB	16 °C	CWB	18 °C	CWB	19 °C	CWB	20 °C	CWB	22 °	CWB	24 °C	CWB	°CDE	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	6.48	8.59	6.95	8.82	6.90	9.07	6.85	9.56	7.20	10.06	7.07	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	6.64	9.00	7.12	9.26	7.08	9.52	7.02	10.06	7.38	10.60	7.25	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	6.81	9.42	7.30	9.69	7.25	9.98	7.20	10.56	7.55	11.14	7.42	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	6.99	9.84	7.48	10.12	7.42	10.43	7.38	11.05	7.73	11.67	7.60	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.08	10.05	7.57	10.34	7.51	10.65	7.46	11.29	7.82	11.92	7.68	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.17	10.25	7.65	10.56	7.60	10.88	7.56	11.52	7.90	12.16	7.77	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.17	10.28	7.66	10.59	7.62	10.91	7.57	11.56	7.92	12.21	7.78	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.25	9.64	7.16	10.31	7.68	10.62	7.63	10.95	7.58	11.61	7.94	12.27	7.80	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.21	9.64	7.16	10.34	7.69	10.65	7.64	10.96	7.59	11.57	7.92			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.18	9.50	7.10	10.17	7.62	10.49	7.58	10.81	7.53	11.45	7.88			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.15	9.35	7.03	9.99	7.54	10.32	7.51	10.66	7.47	11.32	7.83			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	6.72	8.58	7.08	9.21	6.96	9.82	7.47	10.16	7.44	10.51	7.41	11.19	7.78			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	6.63	8.44	7.01	9.06	6.90	9.64	7.39	10.00	7.37	10.36	7.35	11.07	7.74			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	6.57	8.30	6.94	8.91	6.83	9.46	7.32	9.79	7.29	10.13	7.26	10.80	7.64			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.49	8.16	6.87	8.75	6.76	9.28	7.24	9.59	7.21	9.90	7.17	10.53	7.54			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.42	8.02	6.81	8.60	6.69	9.09	7.16	9.38	7.12	9.68	7.08	10.26	7.45			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.35	7.88	6.74	8.45	6.62	8.91	7.09	9.18	7.04	9.45	7.00	9.99	7.35			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.26	7.67	6.64	8.22	6.52	8.58	6.95	8.83	6.91	9.07	6.85	9.57	7.20			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.14	7.39	6.51	7.91	6.38	8.19	6.79	8.35	6.72	8.51	6.64	8.83	6.95			16.5	16	13.93	13.84	13.75	13.61	13.59

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24 6.72

6.75 7.08 7.04 7.40 7.37 7.76 7.72 8.08 8.12 8.47 8.42

8.80 8.75

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9.03 8.97

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9.28 9.22

9.67 9.63 10.08 10.07 11.22 11.23 11.62 11.59 12.02 11.94 12.65 12.60 13.29 13.26 13.61 13.59

Model FDTC100VSAPVF Indoor unit FDT50VF (2 units) Outdoor unit FDC100VSA (kW) (kW) Heating mode:HC Cooling mode perature

0.11							Inde	oor air t	empera	ture							Ou	tdoor		Indoor	air temp
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air	temp.			°CDB
	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °C	CWB	22 °	CWB	24 °	CWB	°CDE	°CWB	16	18	20
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77
11					8.12	6.48	8.59	6.95	8.82	6.90	9.07	6.85	9.56	7.20	10.06	7.07	-17.7	-18	7.16	7.14	7.10
13					8.50	6.64	9.00	7.12	9.26	7.08	9.52	7.02	10.06	7.38	10.60	7.25	-15.7	-16	7.50	7.46	7.44
15					8.88	6.81	9.42	7.30	9.69	7.25	9.98	7.20	10.56	7.55	11.14	7.42	-13.5	-14	7.86	7.83	7.79
17					9.26	6.99	9.84	7.48	10.12	7.42	10.43	7.38	11.05	7.73	11.67	7.60	-11.5	-12	8.23	8.19	8.15
19					9.46	7.08	10.05	7.57	10.34	7.51	10.65	7.46	11.29	7.82	11.92	7.68	-9.5	-10	8.58	8.55	8.50
21					9.65	7.17	10.25	7.65	10.56	7.60	10.88	7.56	11.52	7.90	12.16	7.77	-7.5	-8	8.93	8.89	8.85
23					9.65	7.17	10.28	7.66	10.59	7.62	10.91	7.57	11.56	7.92	12.21	7.78	-5.5	-6	9.05	9.00	8.97
25			8.93	7.25	9.64	7.16	10.31	7.68	10.62	7.63	10.95	7.58	11.61	7.94	12.27	7.80	-3.0	-4	9.17	9.12	9.07
27			8.86	7.21	9.64	7.16	10.34	7.69	10.65	7.64	10.96	7.59	11.57	7.92			-1.0	-2	9.29	9.23	9.19
29			8.80	7.18	9.50	7.10	10.17	7.62	10.49	7.58	10.81	7.53	11.45	7.88			1.0	0	9.40	9.34	9.29
31			8.73	7.15	9.35	7.03	9.99	7.54	10.32	7.51	10.66	7.47	11.32	7.83			2.0	1	9.45	9.39	9.34
33	8.22	6.72	8.58	7.08	9.21	6.96	9.82	7.47	10.16	7.44	10.51	7.41	11.19	7.78			3.0	2	9.82	9.77	9.71
35	8.05	6.63	8.44	7.01	9.06	6.90	9.64	7.39	10.00	7.37	10.36	7.35	11.07	7.74			5.0	4	10.21	10.15	10.09
37	7.92	6.57	8.30	6.94	8.91	6.83	9.46	7.32	9.79	7.29	10.13	7.26	10.80	7.64			7.0	6	11.33	11.27	11.20
39	7.78	6.49	8.16	6.87	8.75	6.76	9.28	7.24	9.59	7.21	9.90	7.17	10.53	7.54			9.0	8	11.78	11.71	11.64
41	7.64	6.42	8.02	6.81	8.60	6.69	9.09	7.16	9.38	7.12	9.68	7.08	10.26	7.45			11.5	10	12.23	12.16	12.09
43	7.50	6.35	7.88	6.74	8.45	6.62	8.91	7.09	9.18	7.04	9.45	7.00	9.99	7.35			13.5	12	12.91	12.83	12.75
46	7.33	6.26	7.67	6.64	8.22	6.52	8.58	6.95	8.83	6.91	9.07	6.85	9.57	7.20			15.5	14	13.59	13.50	13.42
50	7.09	6.14	7.39	6.51	7.91	6.38	8.19	6.79	8.35	6.72	8.51	6.64	8.83	6.95			16.5	16	13.93	13.84	13.75

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

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Model			VNAP	٧F	Indo	or unit	FDT	60VF	(2 uni	ts)	Outd	loor ur	nit FC	DC125	VNA								
Cooling	mod و	e														(kW)	Heat	ing mo	ode:H0	0			(kW)
							Inde	oor air t	tempera	ture							Ou	tdoor		Indoor	air temp	perature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air	temp.			°CDB		
an temp.	12 °	CWB	14 °(CWB	16 °	CWB	18 °0	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	7.28	10.74	7.76	11.03	7.67	11.34	7.57	11.96	7.89	12.57	7.67	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	7.48	11.26	7.96	11.57	7.87	11.91	7.78	12.58	8.09	13.25	7.86	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	7.69	11.78	8.17	12.11	8.07	12.47	7.98	13.20	8.30	13.92	8.06	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	7.90	12.29	8.37	12.65	8.28	13.04	8.19	13.82	8.51	14.59	8.26	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	8.01	12.56	8.48	12.92	8.39	13.32	8.30	14.11	8.61	14.90	8.36	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	8.11	12.82	8.59	13.19	8.49	13.60	8.40	14.40	8.71	15.20	8.45	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	8.11	12.85	8.61	13.23	8.51	13.64	8.42	14.45	8.72	15.27	8.48	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	8.26	12.06	8.11	12.89	8.62	13.27	8.53	13.68	8.43	14.51	8.74	15.34	8.50	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	8.22	12.05	8.11	12.92	8.63	13.31	8.54	13.69	8.44	14.47	8.73			-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	8.18	11.87	8.03	12.71	8.55	13.11	8.46	13.51	8.37	14.31	8.67			1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	8.15	11.69	7.95	12.49	8.46	12.90	8.38	13.32	8.30	14.15	8.62			2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	7.71	10.72	8.05	11.51	7.87	12.27	8.37	12.70	8.30	13.13	8.22	13.99	8.56			3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	7.61	10.55	7.97	11.33	7.79	12.06	8.28	12.50	8.22	12.94	8.15	13.83	8.51			5.0	4	12.76	12.69	12.61	12.60	12.58
37	9.90	7.52	10.38	7.89	11.13	7.70	11.83	8.19	12.24	8.12	12.66	8.05	13.50	8.40			7.0	6	14.16	14.08	14.00	14.02	14.04
39	9.72	7.43	10.20	7.81	10.94	7.62	11.60	8.09	11.99	8.03	12.38	7.95	13.16	8.28			9.0	8	14.72	14.64	14.56	14.52	14.49
41	9.55	7.35	10.02	7.72	10.75	7.54	11.37	8.00	11.73	7.93	12.09	7.84	12.82	8.17			11.5	10	15.28	15.20	15.11	15.02	14.93
43	9.38	7.26	9.85	7.64	10.56	7.45	11.14	7.91	11.47	7.83	11.81	7.74	12.48	8.06			13.5	12	16.13	16.04	15.94	15.82	15.75
46	9.21	7.18	9.53	7.50	10.28	7.34	10.88	7.81	11.12	7.70	11.28	7.55	11.96	7.89			15.5	14	16.98	16.88	16.77	16.62	16.58
50	7.43	6.33	7.63	6.66	8.25	6.51	8.67	6.99	8.78	6.87	8.80	6.72	9.05	7.02			16.5	16	17.41	17.30	17.19	17.02	16.99

Model FDTC125VSAPVF Indoor unit FDT60VF (2 units) Outdoor unit FDC125VSA Cooling mode (kW) Heating mode:HC (kW) Indoor air temperature Indoor air temperature Outdoor Outdoor air temp. 18 °CDB 21 °CDB 23 °CDB 26 °CDB 27 °CDB 28 °CDB 31 °CDB 33 °CDB °CDB air temp. 18 °CWB 19 °CWB 20 °CWB

	12 (14 (10 (>VVD	10 (CVVD	19 (ZVVD	20 (22 (>VVD	24 (ZVVD	П	CDB	CVVD	
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC		-19.8	-20	I
11					10.15	7.28	10.74	7.76	11.03	7.67	11.34	7.57	11.96	7.89	12.57	7.67		-17.7	-18	ı
13					10.63	7.48	11.26	7.96	11.57	7.87	11.91	7.78	12.58	8.09	13.25	7.86		-15.7	-16	
15					11.10	7.69	11.78	8.17	12.11	8.07	12.47	7.98	13.20	8.30	13.92	8.06		-13.5	-14	
17					11.58	7.90	12.29	8.37	12.65	8.28	13.04	8.19	13.82	8.51	14.59	8.26		-11.5	-12	
19					11.82	8.01	12.56	8.48	12.92	8.39	13.32	8.30	14.11	8.61	14.90	8.36		-9.5	-10	
21					12.06	8.11	12.82	8.59	13.19	8.49	13.60	8.40	14.40	8.71	15.20	8.45		-7.5	-8	ĺ
23					12.06	8.11	12.85	8.61	13.23	8.51	13.64	8.42	14.45	8.72	15.27	8.48		-5.5	-6	
25			11.16	8.26	12.06	8.11	12.89	8.62	13.27	8.53	13.68	8.43	14.51	8.74	15.34	8.50		-3.0	-4	
27			11.08	8.22	12.05	8.11	12.92	8.63	13.31	8.54	13.69	8.44	14.47	8.73				-1.0	-2	
29			11.00	8.18	11.87	8.03	12.71	8.55	13.11	8.46	13.51	8.37	14.31	8.67				1.0	0	
31			10.92	8.15	11.69	7.95	12.49	8.46	12.90	8.38	13.32	8.30	14.15	8.62				2.0	1	ĺ
33	10.27	7.71	10.72	8.05	11.51	7.87	12.27	8.37	12.70	8.30	13.13	8.22	13.99	8.56				3.0	2	ĺ
35	10.07	7.61	10.55	7.97	11.33	7.79	12.06	8.28	12.50	8.22	12.94	8.15	13.83	8.51				5.0	4	
37	9.90	7.52	10.38	7.89	11.13	7.70	11.83	8.19	12.24	8.12	12.66	8.05	13.50	8.40				7.0	6	
39	9.72	7.43	10.20	7.81	10.94	7.62	11.60	8.09	11.99	8.03	12.38	7.95	13.16	8.28				9.0	8	ĺ
41	9.55	7.35	10.02	7.72	10.75	7.54	11.37	8.00	11.73	7.93	12.09	7.84	12.82	8.17				11.5	10	
43	9.38	7.26	9.85	7.64	10.56	7.45	11.14	7.91	11.47	7.83	11.81	7.74	12.48	8.06				13.5	12	ĺ
46	9.21	7.18	9.53	7.50	10.28	7.34	10.88	7.81	11.12	7.70	11.28	7.55	11.96	7.89				15.5	14	ĺ
50	7.43	6.33	7.63	6.66	8.25	6.51	8.67	6.99	8.78	6.87	8.80	6.72	9.05	7.02			ıſ	16.5	16	ĺ

°CDB	°CWB	16	18	20	22	24
-19.8	-20	7.77	7.73	7.70	7.67	7.65
-17.7	-18	8.16	8.13	8.11	8.06	8.03
-15.7	-16	8.57	8.53	8.50	8.46	8.42
-13.5	-14	9.02	8.98	8.94	8.90	8.86
-11.5	-12	9.46	9.41	9.37	9.33	9.28
-9.5	-10	9.90	9.84	9.80	9.76	9.70
-7.5	-8	10.32	10.28	10.23	10.17	10.12
-5.5	-6	10.50	10.45	10.39	10.33	10.28
-3.0	-4	10.66	10.61	10.55	10.49	10.43
-1.0	-2	10.82	10.77	10.71	10.65	10.58
1.0	0	10.99	10.93	10.87	10.80	10.73
2.0	1	11.07	11.01	10.94	10.88	10.81
3.0	2	11.92	11.85	11.78	11.73	11.68
5.0	4	12.76	12.69	12.61	12.60	12.58
7.0	6	14.16	14.08	14.00	14.02	14.04
9.0	8	14.72	14.64	14.56	14.52	14.49
11.5	10	15.28	15.20	15.11	15.02	14.93
13.5	12	16.13	16.04	15.94	15.82	15.75
15.5	14	16.98	16.88	16.77	16.62	16.58
16.5	16	17.41	17.30	17.19	17.02	16.99

PJA003Z383

Notes (1) These data show average status

s (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

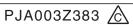
PJA003Z383

(b) Triple type

Model FDTC140VNATVF Indoor unit FDT50VF (3 units) Outdoor unit FDC140VNA (kW) Heating mode:HC (1/1/1) Cooling mode

0.11							Inde	oor air t	empera	ture							П	Out	door
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	П	air te	emp.
dii temp.	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °C	CWB	22 °	CWB	24 °	CWB	П	°CDB	°CWB
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	П	-19.8	-20
11					11.05	9.22	11.68	9.94	12.00	9.87	12.34	9.80	13.01	10.34	13.68	10.17	П	-17.7	-18
13					11.56	9.44	12.25	10.17	12.59	10.10	12.95	10.03	13.69	10.58	14.42	10.40	П	-15.7	-16
15					12.07	9.67	12.81	10.40	13.18	10.33	13.57	10.26	14.36	10.81	15.14	10.63	П	-13.5	-14
17					12.59	9.89	13.38	10.63	13.77	10.56	14.19	10.50	15.04	11.05	15.87	10.86	П	-11.5	-12
19					12.86	10.02	13.66	10.75	14.07	10.68	14.49	10.62	15.35	11.16	16.20	10.97	П	-9.5	-10
21					13.12	10.13	13.95	10.87	14.36	10.80	14.79	10.73	15.66	11.27	16.53	11.08	П	-7.5	-8
23					13.12	10.13	13.99	10.89	14.40	10.82	14.84	10.75	15.73	11.29	16.61	11.10	П	-5.5	-6
25			12.14	10.26	13.11	10.13	14.02	10.90	14.44	10.83	14.89	10.77	15.79	11.31	16.69	11.13	П	-3.0	-4
27			12.06	10.22	13.11	10.13	14.06	10.92	14.48	10.85	14.90	10.77	15.74	11.29			П	-1.0	-2
29			11.97	10.18	12.91	10.04	13.82	10.82	14.26	10.76	14.70	10.70	15.56	11.23			П	1.0	0
31			11.88	10.14	12.72	9.95	13.59	10.72	14.04	10.67	14.49	10.62	15.40	11.17			П	2.0	1
33	11.18	9.49	11.67	10.04	12.52	9.86	13.36	10.63	13.82	10.59	14.29	10.54	15.22	11.11			П	3.0	2
35	10.96	9.38	11.48	9.95	12.32	9.77	13.11	10.53	13.60	10.50	14.09	10.46	15.05	11.05			П	5.0	4
37	10.76	9.28	11.29	9.86	12.11	9.68	12.87	10.43	13.32	10.39	13.77	10.34	14.69	10.92			П	7.0	6
39	10.58	9.19	11.10	9.77	11.91	9.60	12.62	10.32	13.05	10.28	13.46	10.22	14.32	10.79			П	9.0	8
41	10.39	9.09	10.91	9.68	11.70	9.50	12.37	10.22	12.76	10.17	13.16	10.11	13.95	10.67			П	11.5	10
43	10.21	9.00	10.71	9.59	11.49	9.41	12.11	10.12	12.48	10.06	12.85	10.00	13.58	10.54				13.5	12
46	10.03	8.91	10.47	9.48	11.13	9.26	11.73	9.96	12.10	9.91	12.27	9.78	13.01	10.34			1	15.5	14
50	7.61	7.45	7.88	7.72	8.35	8.10	8.75	8.58	8.97	8.75	8.98	8.61	9.33	9.14			1	16.5	16

'V)) .	Heatır	ng mo	ae:H	ز			(KVV)
			door		Indoor	air temp	erature	
		air te	emp.			°CDB		
		°CDB	°CWB	16	18	20	22	24
)		-19.8	-20	7.94	7.91	7.88	7.85	7.82
7		-17.7	-18	8.44	8.41	8.37	8.34	8.30
)		-15.7	-16	8.94	8.90	8.86	8.82	8.79
3		-13.5	-14	9.50	9.46	9.41	9.37	9.33
3		-11.5	-12	10.07	10.02	9.98	9.93	9.88
7		-9.5	-10	10.64	10.59	10.54	10.49	10.44
3		-7.5	-8	11.21	11.15	11.10	11.04	10.99
)		-5.5	-6	11.51	11.45	11.39	11.33	11.27
3		-3.0	-4	11.80	11.74	11.68	11.62	11.55
		-1.0	-2	12.11	12.05	11.98	11.91	11.84
		1.0	0	12.42	12.35	12.28	12.20	12.13
		2.0	1	12.58	12.50	12.43	12.35	12.28
		3.0	2	13.35	13.27	13.20	13.13	13.08
		5.0	4	14.12	14.05	13.96	13.95	13.93
		7.0	6	15.68	15.59	15.50	15.52	15.55
		9.0	8	16.30	16.21	16.11	16.07	16.03
		11.5	10	16.91	16.83	16.73	16.63	16.53
		13.5	12	17.86	17.76	17.65	17.52	17.44
		15.5	14	18.80	18.69	18.57	18.40	18.36
		16.5	16	19.28	19.15	19.03	18.84	18.81
								_



Model FDTC140VSATVF Indoor unit FDT50VF (3 units) Outdoor unit FDC140VSA (kW) Cooling mode (kW) Heating mode:HC

	,	-														` '	_			-			•
							Inde	oor air t	empera	ture								utdoor		Indoor	air temp	oerature	,
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	a	r temp.			°CDB		
	12 °C	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	°CI	B °CW	3 16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19	8 -20	7.94	7.91	7.88	7.85	7.82
11					11.05	9.22	11.68	9.94	12.00	9.87	12.34	9.80	13.01	10.34	13.68	10.17	-17	7 -18	8.44	8.41	8.37	8.34	8.30
13					11.56	9.44	12.25	10.17	12.59	10.10	12.95	10.03	13.69	10.58	14.42	10.40	-15	7 -16	8.94	8.90	8.86	8.82	8.79
15					12.07	9.67	12.81	10.40	13.18	10.33	13.57	10.26	14.36	10.81	15.14	10.63	-13	5 -14	9.50	9.46	9.41	9.37	9.33
17					12.59	9.89	13.38	10.63	13.77	10.56	14.19	10.50	15.04	11.05	15.87	10.86	-11	5 -12	10.07	10.02	9.98	9.93	9.88
19					12.86	10.02	13.66	10.75	14.07	10.68	14.49	10.62	15.35	11.16	16.20	10.97	-9	5 -10	10.64	10.59	10.54	10.49	10.44
21					13.12	10.13	13.95	10.87	14.36	10.80	14.79	10.73	15.66	11.27	16.53	11.08	-7	5 -8	11.21	11.15	11.10	11.04	10.99
23					13.12	10.13	13.99	10.89	14.40	10.82	14.84	10.75	15.73	11.29	16.61	11.10	-5	5 -6	11.51	11.45	11.39	11.33	11.27
25			12.14	10.26	13.11	10.13	14.02	10.90	14.44	10.83	14.89	10.77	15.79	11.31	16.69	11.13	-3	0 -4	11.80	11.74	11.68	11.62	11.55
27			12.06	10.22	13.11	10.13	14.06	10.92	14.48	10.85	14.90	10.77	15.74	11.29			-1) -2	12.11	12.05	11.98	11.91	11.84
29			11.97	10.18	12.91	10.04	13.82	10.82	14.26	10.76	14.70	10.70	15.56	11.23			1.	0	12.42	12.35	12.28	12.20	12.13
31			11.88	10.14	12.72	9.95	13.59	10.72	14.04	10.67	14.49	10.62	15.40	11.17			2.) 1	12.58	12.50	12.43	12.35	12.28
33	11.18	9.49	11.67	10.04	12.52	9.86	13.36	10.63	13.82	10.59	14.29	10.54	15.22	11.11			3.) 2	13.35	13.27	13.20	13.13	13.08
35	10.96	9.38	11.48	9.95	12.32	9.77	13.11	10.53	13.60	10.50	14.09	10.46	15.05	11.05			5.) 4	14.12	14.05	13.96	13.95	13.93
37	10.76	9.28	11.29	9.86	12.11	9.68	12.87	10.43	13.32	10.39	13.77	10.34	14.69	10.92			7.) 6	15.68	15.59	15.50	15.52	15.55
39	10.58	9.19	11.10	9.77	11.91	9.60	12.62	10.32	13.05	10.28	13.46	10.22	14.32	10.79			9.	8 (16.30	16.21	16.11	16.07	16.03
41	10.39	9.09	10.91	9.68	11.70	9.50	12.37	10.22	12.76	10.17	13.16	10.11	13.95	10.67			11	5 10	16.91	16.83	16.73	16.63	16.53
43	10.21	9.00	10.71	9.59	11.49	9.41	12.11	10.12	12.48	10.06	12.85	10.00	13.58	10.54			13	5 12	17.86	17.76	17.65	17.52	17.44
46	10.03	8.91	10.47	9.48	11.13	9.26	11.73	9.96	12.10	9.91	12.27	9.78	13.01	10.34			15	5 14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.10	8.75	8.58	8.97	8.75	8.98	8.61	9.33	9.14			16	5 16	19.28	19.15	19.03	18.84	18.81

Notes (1) These data show average status.

s (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

(3) Ceiling susponded type (FDE) (a) Single type

Model FDE100VNAVG Indoor unit FDE100VG Outdoor unit FDC100VNA Cooling mode

(kW) Heating mode:HC

(kW)

0.44							Indo	oor air t	empera	ture							Out	door		Indoor	air temp	erature	:
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	emp.			°CDB		
	12 °C	CWB	14 °(CWB	16 °C	CWB	18 °C	CWB	19 °C	CWB	20 °C	CWB	22 °C	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	7.37	8.59	8.01	8.82	7.95	9.07	7.89	9.56	8.38	10.06	8.23	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	7.52	9.00	8.17	9.26	8.11	9.52	8.05	10.06	8.53	10.60	8.38	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.67	9.42	8.32	9.69	8.26	9.98	8.20	10.56	8.69	11.14	8.54	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.83	9.84	8.48	10.12	8.42	10.43	8.36	11.05	8.85	11.67	8.69	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.91	10.05	8.56	10.34	8.50	10.65	8.44	11.29	8.92	11.92	8.77	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.99	10.25	8.64	10.56	8.58	10.88	8.52	11.52	9.00	12.16	8.84	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.99	10.28	8.65	10.59	8.59	10.91	8.53	11.56	9.01	12.21	8.85	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	8.14	9.64	7.99	10.31	8.66	10.62	8.60	10.95	8.54	11.61	9.03	12.27	8.87	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	8.11	9.64	7.99	10.34	8.68	10.65	8.61	10.96	8.55	11.57	9.01			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	8.08	9.50	7.93	10.17	8.61	10.49	8.56	10.81	8.49	11.45	8.98			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	8.05	9.35	7.87	9.99	8.54	10.32	8.49	10.66	8.44	11.32	8.93			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	7.48	8.58	7.98	9.21	7.81	9.82	8.48	10.16	8.43	10.51	8.39	11.19	8.89			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	7.40	8.44	7.92	9.06	7.75	9.64	8.41	10.00	8.38	10.36	8.34	11.07	8.85			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	7.34	8.30	7.86	8.91	7.69	9.46	8.34	9.79	8.30	10.13	8.26	10.80	8.77			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	7.27	8.16	7.80	8.75	7.62	9.28	8.27	9.59	8.23	9.90	8.18	10.53	8.68			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	7.21	8.02	7.74	8.60	7.56	9.09	8.20	9.38	8.15	9.68	8.10	10.26	8.60			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	7.14	7.88	7.67	8.45	7.50	8.91	8.13	9.18	8.08	9.45	8.02	9.99	8.51			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	7.06	7.67	7.52	8.22	7.41	8.58	8.01	8.83	7.95	9.07	7.89	9.57	8.38			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.95	7.39	7.24	7.91	7.28	8.19	7.87	8.35	7.79	8.51	7.70	8.83	8.15			16.5	16	13.93	13.84	13.75	13.61	13.59

PFA004Z048

Model FDE100VSAVG Indoor unit FDE100VG Outdoor unit FDC100VSA Cooling mode

(kW) Heating mode:HC

(kW)

	,	_														, ,		9 -		_			
0.11							Inde	oor air t	empera	ture							Ou	tdoor		Indoor	air temp	erature	:
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air	emp.			°CDB		
un tomp.	12 °C	CWB	14 °	CWB	16 °0	CWB	18 °	CWB	19 °	CWB	20 °C	CWB	22 °(CWB	24 °C	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	7.37	8.59	8.01	8.82	7.95	9.07	7.89	9.56	8.38	10.06	8.23	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	7.52	9.00	8.17	9.26	8.11	9.52	8.05	10.06	8.53	10.60	8.38	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.67	9.42	8.32	9.69	8.26	9.98	8.20	10.56	8.69	11.14	8.54	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.83	9.84	8.48	10.12	8.42	10.43	8.36	11.05	8.85	11.67	8.69	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.91	10.05	8.56	10.34	8.50	10.65	8.44	11.29	8.92	11.92	8.77	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.99	10.25	8.64	10.56	8.58	10.88	8.52	11.52	9.00	12.16	8.84	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.99	10.28	8.65	10.59	8.59	10.91	8.53	11.56	9.01	12.21	8.85	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	8.14	9.64	7.99	10.31	8.66	10.62	8.60	10.95	8.54	11.61	9.03	12.27	8.87	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	8.11	9.64	7.99	10.34	8.68	10.65	8.61	10.96	8.55	11.57	9.01			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	8.08	9.50	7.93	10.17	8.61	10.49	8.56	10.81	8.49	11.45	8.98			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	8.05	9.35	7.87	9.99	8.54	10.32	8.49	10.66	8.44	11.32	8.93			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	7.48	8.58	7.98	9.21	7.81	9.82	8.48	10.16	8.43	10.51	8.39	11.19	8.89			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	7.40	8.44	7.92	9.06	7.75	9.64	8.41	10.00	8.38	10.36	8.34	11.07	8.85			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	7.34	8.30	7.86	8.91	7.69	9.46	8.34	9.79	8.30	10.13	8.26	10.80	8.77			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	7.27	8.16	7.80	8.75	7.62	9.28	8.27	9.59	8.23	9.90	8.18	10.53	8.68			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	7.21	8.02	7.74	8.60	7.56	9.09	8.20	9.38	8.15	9.68	8.10	10.26	8.60			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	7.14	7.88	7.67	8.45	7.50	8.91	8.13	9.18	8.08	9.45	8.02	9.99	8.51			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	7.06	7.67	7.52	8.22	7.41	8.58	8.01	8.83	7.95	9.07	7.89	9.57	8.38			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.95	7.39	7.24	7.91	7.28	8.19	7.87	8.35	7.79	8.51	7.70	8.83	8.15			16.5	16	13.93	13.84	13.75	13.61	13.59

Notes (1) These data show average status.

s (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

FDE125VNAVG Indoor unit FDE125VG Outdoor unit FDC125VNA Model (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Outdoor Indoor air temperature Outdoo 18 °CDB 21 °CDB 23 °CDB 28 °CDB 31 °CDB 33 °CDB air temp 26 °CDB 27 °CDB °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWB 20 °CWB 22 °CWB 24 °CWB CDB CWE 16 18 20 22 24 °CDB TC SHC SHC TC SHC SHC TC SHC 19.8 -20 7.77 7.73 7.67 7.65 TC SHC TC TC SHC SHC TC TC 7.70 10.74 8.83 11.03 8.76 1.96 2.57 8.96 8.03 10.15 8.20 11.34 8.68 17.7 -18 8.16 8.13 8.11 8.06 13 10.63 8.41 11.26 9.03 11.57 8.96 11.91 8.89 12.58 9.35 13.25 9.16 -15.7 -16 8.57 8.53 8.50 8.46 8.42 15 11.10 8.61 11.78 9.24 12.11 9.17 12.47 9.10 13.20 9.56 13.92 9.37 -13.5 -14 9.02 8.98 8.94 8.90 8.86 17 11.58 8.82 9.45 12.65 13.04 14.59 9.58 -11.5 -12 9.46 9.41 9.37 9.33 9.28 12.29 9.38 9.31 13.82 9.77 19 11.82 8.92 12.56 9.56 12.92 9.48 13.32 9.41 14.11 9.87 14.90 9.68 -9.5 -10 9.90 9.84 9.80 9.76 9.70 21 12.06 9.03 12.82 9.66 13.19 9.59 13.60 9.52 14.40 9.97 5.20 9.77 -7.5 -8 10.32 10.28 10.23 10.17 10.12 23 12.06 9.03 12.85 9.68 13.23 9.60 13.64 9.53 14.45 9.99 5.27 9.79 -5.5 -6 10.50 10.45 10.39 10.33 10.28 25 -3.0 -4 10.66 10.61 10.55 10.49 10.43 11.16 9.16 12.06 9.03 12.89 9.69 13.27 9.62 13.68 9.55 14.51 10.01 15.34 9.82 27 11.08 9.13 12.05 9.02 12.92 9.71 13.31 9.64 13.69 9.55 14.47 9.99 -1.0 -2 10.82 10.77 10.71 10.65 10.58 29 11.00 9.09 11.87 8.94 12.71 9.62 13.11 9.56 13.51 9.48 14.31 9.94 1.0 0 10.99 10.93 10.87 10.80 10.73 31 10.92 9.05 11.69 8.87 12.49 9.53 12.90 13.32 9.88 2.0 11.07 11.01 10.94 10.88 10.81 9.47 9.41 14.15 1 1.92 11.78 11.68 33 10.27 10.72 8.96 11.51 8.79 12.27 9.44 12.70 9.40 13.13 13.99 9.83 3.0 11.85 11.73 4 35 10.07 8.39 10.55 8.88 11.33 8.71 12.06 9.35 12.50 9.32 12.94 9.27 13.83 9.77 5.0 12.76 12.69 12 61 12 60 12 58 37 9.90 8.30 8.80 11.13 8.62 9.26 12.24 12.66 9.17 13.50 9.66 7.0 6 14.16 14.08 14.00 14.02 14.04 10.38 11.83 9.22 39 9.72 8.21 10.20 8.71 10.94 8.54 11.60 9.17 11.99 9.12 12.38 9.06 13.16 9.54 9.0 14.72 14.64 14.56 14.52 14.49 8 41 10.75 9 43 10 15 28 15 20 15 11 15 02 14 93 9 55 8 13 10.02 8 63 8 46 1137 9.08 1173 9.02 12 09 8 96 1282 115 43 9.38 8.04 9.85 8.55 10.56 8.38 11.14 8.99 11.47 8.92 11.81 8.85 2.48 9.31 13.5 12 16.13 16.04 15.94 15.82 15.75 46 9.21 7.96 9.53 8.41 10.28 8.26 10.88 8.89 11.12 8.79 11.28 8.66 11.96 9.14 15.5 14 16.98 | 16.88 | 16.77 | 16.62 16.58 16 16.5 17.41 17.30 17.19 17.02 50 7.43 7.11 7.63 7.48 8.25 7.42 8.67 8.78 7.94 7.80 9.05 8.22 16.99 8.04 8.80

PFA004Z048

(kW)

24 7.65 8.03 8.42 8.86 9.28 9.70 10.12 10.28 10.43 10.58 10.73 10.81 11.68 12.58 14.04 14.49 14.93 15.75 16.58 16.99

Model FDE125VSAVG Indoor unit FDE125VG Outdoor unit FDC125VSA Cooling mode (kW) Heating mode:HC

							Inde	oor air t	empera	ture							Out	door		Indoor	air temp	perature
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	emp.			°CDB	
un temp.	12 °	CWB	14 °(CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °(CWB	°CDB	°CWB	16	18	20	22
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.77	7.73	7.70	7.67
11					10.15	8.20	10.74	8.83	11.03	8.76	11.34	8.68	11.96	9.14	12.57	8.96	-17.7	-18	8.16	8.13	8.11	8.06
13					10.63	8.41	11.26	9.03	11.57	8.96	11.91	8.89	12.58	9.35	13.25	9.16	-15.7	-16	8.57	8.53	8.50	8.46
15					11.10	8.61	11.78	9.24	12.11	9.17	12.47	9.10	13.20	9.56	13.92	9.37	-13.5	-14	9.02	8.98	8.94	8.90
17					11.58	8.82	12.29	9.45	12.65	9.38	13.04	9.31	13.82	9.77	14.59	9.58	-11.5	-12	9.46	9.41	9.37	9.33
19					11.82	8.92	12.56	9.56	12.92	9.48	13.32	9.41	14.11	9.87	14.90	9.68	-9.5	-10	9.90	9.84	9.80	9.76
21					12.06	9.03	12.82	9.66	13.19	9.59	13.60	9.52	14.40	9.97	15.20	9.77	-7.5	-8	10.32	10.28	10.23	10.17
23					12.06	9.03	12.85	9.68	13.23	9.60	13.64	9.53	14.45	9.99	15.27	9.79	-5.5	-6	10.50	10.45	10.39	10.33
25			11.16	9.16	12.06	9.03	12.89	9.69	13.27	9.62	13.68	9.55	14.51	10.01	15.34	9.82	-3.0	-4	10.66	10.61	10.55	10.49
27			11.08	9.13	12.05	9.02	12.92	9.71	13.31	9.64	13.69	9.55	14.47	9.99			-1.0	-2	10.82	10.77	10.71	10.65
29			11.00	9.09	11.87	8.94	12.71	9.62	13.11	9.56	13.51	9.48	14.31	9.94			1.0	0	10.99	10.93	10.87	10.80
31			10.92	9.05	11.69	8.87	12.49	9.53	12.90	9.47	13.32	9.41	14.15	9.88			2.0	1	11.07	11.01	10.94	10.88
33	10.27	8.49	10.72	8.96	11.51	8.79	12.27	9.44	12.70	9.40	13.13	9.34	13.99	9.83			3.0	2	11.92	11.85	11.78	11.73
35	10.07	8.39	10.55	8.88	11.33	8.71	12.06	9.35	12.50	9.32	12.94	9.27	13.83	9.77			5.0	4	12.76	12.69	12.61	12.60
37	9.90	8.30	10.38	8.80	11.13	8.62	11.83	9.26	12.24	9.22	12.66	9.17	13.50	9.66			7.0	6	14.16	14.08	14.00	14.02
39	9.72	8.21	10.20	8.71	10.94	8.54	11.60	9.17	11.99	9.12	12.38	9.06	13.16	9.54			9.0	8	14.72	14.64	14.56	14.52
41	9.55	8.13	10.02	8.63	10.75	8.46	11.37	9.08	11.73	9.02	12.09	8.96	12.82	9.43			11.5	10	15.28	15.20	15.11	15.02
43	9.38	8.04	9.85	8.55	10.56	8.38	11.14	8.99	11.47	8.92	11.81	8.85	12.48	9.31			13.5	12	16.13	16.04	15.94	15.82
46	9.21	7.96	9.53	8.41	10.28	8.26	10.88	8.89	11.12	8.79	11.28	8.66	11.96	9.14			15.5	14	16.98	16.88	16.77	16.62
50	7.43	7.11	7.63	7.48	8.25	7.42	8.67	8.04	8.78	7.94	8.80	7.80	9.05	8.22			16.5	16	17.41	17.30	17.19	17.02

Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed. (Cooling only) In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency. (2) Capacities are based on the following conditions.

(2) Capacities are based on the following condition
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
(3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

FDE140VNAVG Indoor unit FDE140VG Outdoor unit FDC140VNA Model (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Outdoor Indoor air temperature Outdoo 18 °CDB 21 °CDB 23 °CDB 27 °CDB 28 °CDB 31 °CDB 33 °CDB air temp 26 °CDB °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWR 20 °CWB 22 °CWB 24 °CWB CDB CWE 16 18 20 22 24 °CDB TC SHC TC SHC SHC TC TC SHC SHC TC SHC 19.8 -20 7.94 7.91 7.88 7.85 7.82 TC TC SHC SHC TC 11.05 8.83 11.68 9.49 12.34 9.33 13.01 3.68 9.62 -17.7 8.44 8.41 8.37 8.34 8.30 12.00 9.41 9.81 -18 13 11.56 9.05 12.25 9.71 12.59 9.63 12.95 9.55 13.69 10.04 14.42 9.84 -15.7 -16 8.94 8.90 8.86 8.82 8.79 15 12.07 9.27 12.81 9.94 13.18 13.57 15.14 10.07 -13.5 -14 9.50 9.46 9.41 9.37 9.33 9.86 9.78 14.36 10.27 17 12.59 9.49 13.38 10.17 13.77 14.19 15.04 15.87 -11.5 10.07 10.02 9.98 9.93 9.88 10.09 10.50 10.29 -12 19 12.86 9.61 13.66 10.28 14.07 10.21 14.49 10.13 15.35 10.61 16.20 10.40 -9.5 -10 10.64 10.59 10.54 10.49 10.44 21 13.12 9.73 13.95 10.40 14.36 10.32 14.79 10.25 15.66 10.72 6.53 10.51 -7.5 -8 11.21 11.15 11.10 11.04 10.99 23 13.12 9.73 13.99 10.42 14.40 10.34 14.84 10.26 15.73 10.74 16.61 10.53 -5.5 -6 11.51 11.45 11.39 11.33 11.27 25 -3.0 -4 11.80 11.74 11.68 11.62 11.55 12.14 9.87 13.11 9.73 14.02 10.43 14.44 10.35 14.89 10.28 15.79 10.76 16.69 10.56 27 12.06 9.83 13.11 9.73 14.06 10.45 14.48 10.37 14.90 10.29 15.74 10.75 -1.0 -2 12.11 12.05 11.98 11.91 11.84 29 11.97 9.79 12.91 9.64 13.82 10.35 14.26 10.28 14.70 10.21 15.56 10.68 1.0 0 12.42 | 12.35 | 12.28 | 12.20 | 12.13 31 11.88 9.75 12.72 9.55 13.59 10.26 14.04 10.20 14.49 15.40 10.63 2.0 12.58 12.50 12.43 12.35 12.28 10.13 1 13.20 13.82 10.57 33 11.18 11.67 9.65 12.52 9.46 13.36 10.16 14.29 10.05 15.22 3.0 13.35 13.27 13.13 13.08 4 35 10.96 9.04 11.48 9.56 12.32 9.37 13.11 10.06 13.60 10.02 14.09 9.98 15.05 10.50 5.0 14.12 14.05 13.96 13 95 13 93 37 10.76 8.94 11.29 9.47 12.11 9.29 12.87 9.96 13.32 9.91 13.77 9.86 14.69 10.38 7.0 6 15.68 15.59 15.50 15.52 15.55 39 10.58 8.85 9.38 11.91 9.20 12.62 9.86 13.05 9.81 13.46 9.74 14.32 10.25 9.0 16.30 16.21 16.11 16.07 16.03 11.10 41 13 95 11.5 10 16 91 16 83 16 63 16.53 10.39 8 76 10.91 9 2 9 11 70 9 10 12 37 9 76 12 76 9 70 13 16 9 63 10 13 16 73 43 10.21 11.49 9.02 12.48 9.59 12.85 9.52 10.00 13.5 12 17.86 17.76 17.65 17.52 17.44 8.67 10.71 9.20 12.11 9.66 13.58 46 10.03 8.57 10.47 9.09 11.13 8.86 11.73 9.51 12.10 9.45 12.27 9.31 13.01 9.81 15.5 14 18.80 18.69 18.57 18.40 18.36 16 19.28 19.15 19.03 18.84 50 8.35 7.72 8.64 16.5 7.61 7.42 7.88 7.72 8.75 8.38 8.97 8.31 8.98 8.16 9.33 18.81

PFA004Z048

(kW)

Model FDE140VSAVG Indoor unit FDE140VG Outdoor unit FDC140VSA (kW) Heating mode:HC

Cooling	g mod	е														(KVV)	H
							Inde	oor air t	empera	ture							Γ
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	ı
dii terrip.	12 °	CWB	14 °	CWB	16 °C	CWB	18 °	CWB	19 °	CWB	20 °C	CWB	22 °(CWB	24 °C	CWB	Г
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	F
11					11.05	8.83	11.68	9.49	12.00	9.41	12.34	9.33	13.01	9.81	13.68	9.62	F
13					11.56	9.05	12.25	9.71	12.59	9.63	12.95	9.55	13.69	10.04	14.42	9.84	F
15					12.07	9.27	12.81	9.94	13.18	9.86	13.57	9.78	14.36	10.27	15.14	10.07	Ŀ
17					12.59	9.49	13.38	10.17	13.77	10.09	14.19	10.02	15.04	10.50	15.87	10.29	Ŀ
19					12.86	9.61	13.66	10.28	14.07	10.21	14.49	10.13	15.35	10.61	16.20	10.40	Г
21					13.12	9.73	13.95	10.40	14.36	10.32	14.79	10.25	15.66	10.72	16.53	10.51	Г
23					13.12	9.73	13.99	10.42	14.40	10.34	14.84	10.26	15.73	10.74	16.61	10.53	Г
25			12.14	9.87	13.11	9.73	14.02	10.43	14.44	10.35	14.89	10.28	15.79	10.76	16.69	10.56	Г
27			12.06	9.83	13.11	9.73	14.06	10.45	14.48	10.37	14.90	10.29	15.74	10.75			Г
29			11.97	9.79	12.91	9.64	13.82	10.35	14.26	10.28	14.70	10.21	15.56	10.68			Г
31			11.88	9.75	12.72	9.55	13.59	10.26	14.04	10.20	14.49	10.13	15.40	10.63			Г
33	11.18	9.15	11.67	9.65	12.52	9.46	13.36	10.16	13.82	10.11	14.29	10.05	15.22	10.57			Г
35	10.96	9.04	11.48	9.56	12.32	9.37	13.11	10.06	13.60	10.02	14.09	9.98	15.05	10.50			Г
37	10.76	8.94	11.29	9.47	12.11	9.29	12.87	9.96	13.32	9.91	13.77	9.86	14.69	10.38			Г
39	10.58	8.85	11.10	9.38	11.91	9.20	12.62	9.86	13.05	9.81	13.46	9.74	14.32	10.25			Г
41	10.39	8.76	10.91	9.29	11.70	9.10	12.37	9.76	12.76	9.70	13.16	9.63	13.95	10.13			Г
43	10.21	8.67	10.71	9.20	11.49	9.02	12.11	9.66	12.48	9.59	12.85	9.52	13.58	10.00			Γ
46	10.03	8.57	10.47	9.09	11.13	8.86	11.73	9.51	12.10	9.45	12.27	9.31	13.01	9.81			Γ
50	7.61	7.42	7.88	7.72	8.35	7.72	8.75	8.38	8.97	8.31	8.98	8.16	9.33	8.64			Γ

	Outo			Indoor	air temp	erature	:
	air te	emp.			°CDB		
	°CDB	°CWB	16	18	20	22	24
	-19.8	-20	7.94	7.91	7.88	7.85	7.82
	-17.7	-18	8.44	8.41	8.37	8.34	8.30
	-15.7	-16	8.94	8.90	8.86	8.82	8.79
	-13.5	-14	9.50	9.46	9.41	9.37	9.33
	-11.5	-12	10.07	10.02	9.98	9.93	9.88
	-9.5	-10	10.64	10.59	10.54	10.49	10.44
	-7.5	-8	11.21	11.15	11.10	11.04	10.99
	-5.5	-6	11.51	11.45	11.39	11.33	11.27
	-3.0	-4	11.80	11.74	11.68	11.62	11.55
	-1.0	-2	12.11	12.05	11.98	11.91	11.84
	1.0	0	12.42	12.35	12.28	12.20	12.13
	2.0	1	12.58	12.50	12.43	12.35	12.28
	3.0	2	13.35	13.27	13.20	13.13	13.08
	5.0	4	14.12	14.05	13.96	13.95	13.93
	7.0	6	15.68	15.59	15.50	15.52	15.55
	9.0	8	16.30	16.21	16.11	16.07	16.03
	11.5	10	16.91	16.83	16.73	16.63	16.53
	13.5	12	17.86	17.76	17.65	17.52	17.44
	15.5	14	18.80	18.69	18.57	18.40	18.36
	16.5	16	19.28	19.15	19.03	18.84	18.81

Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed. (Cooling only) In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency. (2) Capacities are based on the following conditions.

(2) Capacities are based on the following condition
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
(3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

(b) Twin type

Model FDE100VNAPVG Indoor unit FDE50VG (2 units) Outdoor unit FDC100VNA (kW) Heating mode:HC Cooling mode (1/1/1)

0.44							Inde	oor air t	empera	ture							Out	door		Indoor	air
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	emp.			°C
	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	°CDB	°CWB	16	18] :
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.
11					8.12	6.61	8.59	7.12	8.82	7.06	9.07	7.00	9.56	7.38	10.06	7.23	-17.7	-18	7.16	7.14	7.
13					8.50	6.77	9.00	7.28	9.26	7.23	9.52	7.17	10.06	7.54	10.60	7.40	-15.7	-16	7.50	7.46	7.
15					8.88	6.93	9.42	7.45	9.69	7.39	9.98	7.33	10.56	7.71	11.14	7.56	-13.5	-14	7.86	7.83	7.
17					9.26	7.10	9.84	7.62	10.12	7.56	10.43	7.50	11.05	7.88	11.67	7.73	-11.5	-12	8.23	8.19	8.
19					9.46	7.19	10.05	7.70	10.34	7.64	10.65	7.58	11.29	7.96	11.92	7.80	-9.5	-10	8.58	8.55	8.
21					9.65	7.27	10.25	7.78	10.56	7.73	10.88	7.67	11.52	8.04	12.16	7.88	-7.5	-8	8.93	8.89	8.
23					9.65	7.27	10.28	7.80	10.59	7.74	10.91	7.68	11.56	8.05	12.21	7.90	-5.5	-6	9.05	9.00	8.
25			8.93	7.38	9.64	7.27	10.31	7.81	10.62	7.75	10.95	7.70	11.61	8.07	12.27	7.91	-3.0	-4	9.17	9.12	9.
27			8.86	7.35	9.64	7.27	10.34	7.82	10.65	7.76	10.96	7.70	11.57	8.05			-1.0	-2	9.29	9.23	9.
29			8.80	7.32	9.50	7.20	10.17	7.75	10.49	7.70	10.81	7.64	11.45	8.01			1.0	0	9.40	9.34	9
31			8.73	7.29	9.35	7.14	9.99	7.68	10.32	7.63	10.66	7.59	11.32	7.97			2.0	1	9.45	9.39	9.
33	8.22	6.83	8.58	7.22	9.21	7.08	9.82	7.61	10.16	7.57	10.51	7.53	11.19	7.92			3.0	2	9.82	9.77	9.
35	8.05	6.75	8.44	7.15	9.06	7.01	9.64	7.54	10.00	7.51	10.36	7.47	11.07	7.88			5.0	4	10.21	10.15	10
37	7.92	6.68	8.30	7.09	8.91	6.95	9.46	7.46	9.79	7.43	10.13	7.39	10.80	7.79			7.0	6	11.33	11.27	11
39	7.78	6.61	8.16	7.02	8.75	6.88	9.28	7.39	9.59	7.35	9.90	7.30	10.53	7.70			9.0	8	11.78	11.71	11
41	7.64	6.54	8.02	6.96	8.60	6.81	9.09	7.32	9.38	7.27	9.68	7.22	10.26	7.61			11.5	10	12.23	12.16	12
43	7.50	6.48	7.88	6.89	8.45	6.75	8.91	7.25	9.18	7.20	9.45	7.14	9.99	7.52			13.5	12	12.91	12.83	12
46	7.33	6.39	7.67	6.80	8.22	6.65	8.58	7.12	8.83	7.07	9.07	7.00	9.57	7.38			15.5	14	13.59	13.50	13
50	7.09	6.28	7.39	6.67	7.91	6.52	8.19	6.97	8.35	6.89	8.51	6.81	8.83	7.14			16.5	16	13.93	13.84	13

/)	Heatii	ng mo	de:H	Ĵ			(KVV)
]		door		Indoor	air temp	erature	:
	air te	emp.			°CDB		
	°CDB	°CWB	16	18	20	22	24
	-19.8	-20	6.82	6.79	6.77	6.75	6.72
ı	-17.7	-18	7.16	7.14	7.10	7.08	7.04
1	-15.7	-16	7.50	7.46	7.44	7.40	7.37
1	-13.5	-14	7.86	7.83	7.79	7.76	7.72
1	-11.5	-12	8.23	8.19	8.15	8.12	8.08
]	-9.5	-10	8.58	8.55	8.50	8.47	8.42
ı	-7.5	-8	8.93	8.89	8.85	8.80	8.75
1	-5.5	-6	9.05	9.00	8.97	8.91	8.86
	-3.0	-4	9.17	9.12	9.07	9.03	8.97
	-1.0	-2	9.29	9.23	9.19	9.13	9.07
	1.0	0	9.40	9.34	9.29	9.23	9.18
	2.0	1	9.45	9.39	9.34	9.28	9.22
1	3.0	2	9.82	9.77	9.71	9.67	9.63
]	5.0	4	10.21	10.15	10.09	10.08	10.07
	7.0	6	11.33	11.27	11.20	11.22	11.23
ı	9.0	8	11.78	11.71	11.64	11.62	11.59
]	11.5	10	12.23	12.16	12.09	12.02	11.94
	13.5	12	12.91	12.83	12.75	12.65	12.60
	15.5	14	13.59	13.50	13.42	13.29	13.26
	16.5	16	13.93	13.84	13.75	13.61	13.59
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Model FDE100VSAPVG Indoor unit FDE50VG (2 units) Outdoor unit FDC100VSA Cooling mode (kW) Heating mode:HC (kW)

							Inde	oor air t	empera	iture							
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	a
an tomp.	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °(CWB	°CI
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19
11					8.12	6.61	8.59	7.12	8.82	7.06	9.07	7.00	9.56	7.38	10.06	7.23	-17
13					8.50	6.77	9.00	7.28	9.26	7.23	9.52	7.17	10.06	7.54	10.60	7.40	-15
15					8.88	6.93	9.42	7.45	9.69	7.39	9.98	7.33	10.56	7.71	11.14	7.56	-13
17					9.26	7.10	9.84	7.62	10.12	7.56	10.43	7.50	11.05	7.88	11.67	7.73	-11
19					9.46	7.19	10.05	7.70	10.34	7.64	10.65	7.58	11.29	7.96	11.92	7.80	-9
21					9.65	7.27	10.25	7.78	10.56	7.73	10.88	7.67	11.52	8.04	12.16	7.88	-7
23					9.65	7.27	10.28	7.80	10.59	7.74	10.91	7.68	11.56	8.05	12.21	7.90	-5
25			8.93	7.38	9.64	7.27	10.31	7.81	10.62	7.75	10.95	7.70	11.61	8.07	12.27	7.91	-3
27			8.86	7.35	9.64	7.27	10.34	7.82	10.65	7.76	10.96	7.70	11.57	8.05			-1.
29			8.80	7.32	9.50	7.20	10.17	7.75	10.49	7.70	10.81	7.64	11.45	8.01			1.
31			8.73	7.29	9.35	7.14	9.99	7.68	10.32	7.63	10.66	7.59	11.32	7.97			2.
33	8.22	6.83	8.58	7.22	9.21	7.08	9.82	7.61	10.16	7.57	10.51	7.53	11.19	7.92			3.
35	8.05	6.75	8.44	7.15	9.06	7.01	9.64	7.54	10.00	7.51	10.36	7.47	11.07	7.88			5.
37	7.92	6.68	8.30	7.09	8.91	6.95	9.46	7.46	9.79	7.43	10.13	7.39	10.80	7.79			7.
39	7.78	6.61	8.16	7.02	8.75	6.88	9.28	7.39	9.59	7.35	9.90	7.30	10.53	7.70			9.
41	7.64	6.54	8.02	6.96	8.60	6.81	9.09	7.32	9.38	7.27	9.68	7.22	10.26	7.61			11
43	7.50	6.48	7.88	6.89	8.45	6.75	8.91	7.25	9.18	7.20	9.45	7.14	9.99	7.52			13
46	7.33	6.39	7.67	6.80	8.22	6.65	8.58	7.12	8.83	7.07	9.07	7.00	9.57	7.38			15
50	7.09	6.28	7.39	6.67	7.91	6.52	8.19	6.97	8.35	6.89	8.51	6.81	8.83	7.14			16

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	Ш		door		Indoor	air temp	erature	:
	Ш	air te	emp.			°CDB		
	Ш	°CDB	°CWB	16	18	20	22	24
;	Ш	-19.8	-20	6.82	6.79	6.77	6.75	6.72
	Ш	-17.7	-18	7.16	7.14	7.10	7.08	7.04
	Ш	-15.7	-16	7.50	7.46	7.44	7.40	7.37
	Ш	-13.5	-14	7.86	7.83	7.79	7.76	7.72
	Ш	-11.5	-12	8.23	8.19	8.15	8.12	8.08
	Ш	-9.5	-10	8.58	8.55	8.50	8.47	8.42
	Ш	-7.5	-8	8.93	8.89	8.85	8.80	8.75
	Ш	-5.5	-6	9.05	9.00	8.97	8.91	8.86
	Ш	-3.0	-4	9.17	9.12	9.07	9.03	8.97
	Ш	-1.0	-2	9.29	9.23	9.19	9.13	9.07
	Ш	1.0	0	9.40	9.34	9.29	9.23	9.18
	Ш	2.0	1	9.45	9.39	9.34	9.28	9.22
	Ш	3.0	2	9.82	9.77	9.71	9.67	9.63
	Ш	5.0	4	10.21	10.15	10.09	10.08	10.07
	Ш	7.0	6	11.33	11.27	11.20	11.22	11.23
		9.0	8	11.78	11.71	11.64	11.62	11.59
		11.5	10	12.23	12.16	12.09	12.02	11.94
		13.5	12	12.91	12.83	12.75	12.65	12.60
		15.5	14	13.59	13.50	13.42	13.29	13.26
		16.5	16	13.93	13.84	13.75	13.61	13.59
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Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

Model Cooling			NAPV	G	Indooi	r unit	FDE6	60VG	(2 unit	s)	Outdo	or un	it FD	C125\	√NA	(kW)	Heati	ng mo	de:H0	Э			(kW)
							Inde	oor air t	empera	iture							Out	door		Indoor	air temp	erature	
Outdoor	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	emp.			°CDB		
air temp.	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °(CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	9.21	10.74	10.02	11.03	9.94	11.34	9.87	11.96	10.47	12.57	10.29	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	9.40	11.26	10.21	11.57	10.13	11.91	10.06	12.58	10.67	13.25	10.48	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	9.59	11.78	10.41	12.11	10.33	12.47	10.25	13.20	10.86	13.92	10.67	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	9.79	12.29	10.60	12.65	10.52	13.04	10.45	13.82	11.06	14.59	10.87	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	9.89	12.56	10.70	12.92	10.62	13.32	10.55	14.11	11.15	14.90	10.96	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	9.99	12.82	10.80	13.19	10.72	13.60	10.65	14.40	11.25	15.20	11.05	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	9.99	12.85	10.81	13.23	10.74	13.64	10.66	14.45	11.26	15.27	11.07	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	10.17	12.06	9.99	12.89	10.83	13.27	10.75	13.68	10.68	14.51	11.28	15.34	11.09	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	10.13	12.05	9.99	12.92	10.84	13.31	10.77	13.69	10.68	14.47	11.27			-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	10.10	11.87	9.91	12.71	10.76	13.11	10.69	13.51	10.62	14.31	11.22			1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	10.06	11.69	9.84	12.49	10.68	12.90	10.62	13.32	10.55	14.15	11.17			2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	9.35	10.72	9.97	11.51	9.76	12.27	10.59	12.70	10.54	13.13	10.48	13.99	11.12			3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	9.25	10.55	9.90	11.33	9.69	12.06	10.51	12.50	10.47	12.94	10.42	13.83	11.06			5.0	4	12.76	12.69	12.61	12.60	12.58
37	9.90	9.17	10.38	9.82	11.13	9.61	11.83	10.43	12.24	10.37	12.66	10.32	13.50	10.96			7.0	6	14.16	14.08	14.00	14.02	14.04
39	9.72	9.09	10.20	9.75	10.94	9.53	11.60	10.34	11.99	10.28	12.38	10.22	13.16	10.85			9.0	8	14.72	14.64	14.56	14.52	14.49
41	9.55	9.01	10.02	9.67	10.75	9.45	11.37	10.25	11.73	10.19	12.09	10.12	12.82	10.74			11.5	10	15.28	15.20	15.11	15.02	14.93
43	9.38	8.93	9.85	9.59	10.56	9.37	11.14	10.17	11.47	10.10	11.81	10.03	12.48	10.64			13.5	12	16.13	16.04	15.94	15.82	15.75
46	9.21	8.85	9.53	9.34	10.28	9.26	10.88	10.07	11.12	9.97	11.28	9.85	11.96	10.47			15.5	14	16.98	16.88	16.77	16.62	16.58
50	7.43	7.28	7.63	7.48	8.25	8.09	8.67	8.50	8.78	8.60	8.80	8.62	9.05	8.87			16.5	16	17.41	17.30	17.19	17.02	16.99

Model Cooling		125V 9	SAPV	'G	Indooi	unit	FDE	60VG	(2 unit	s)	Outdo	or uni	t FD	C125\	/SA	(kW)) Heati	ng mo	de:H	С			(kW)
							Inde	oor air t	empera	iture							Out	door		Indoor	air tem	perature	,
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	emp.			°CDB		
an temp.	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	9.21	10.74	10.02	11.03	9.94	11.34	9.87	11.96	10.47	12.57	10.29	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	9.40	11.26	10.21	11.57	10.13	11.91	10.06	12.58	10.67	13.25	10.48	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	9.59	11.78	10.41	12.11	10.33	12.47	10.25	13.20	10.86	13.92	10.67	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	9.79	12.29	10.60	12.65	10.52	13.04	10.45	13.82	11.06	14.59	10.87	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	9.89	12.56	10.70	12.92	10.62	13.32	10.55	14.11	11.15	14.90	10.96	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	9.99	12.82	10.80	13.19	10.72	13.60	10.65	14.40	11.25	15.20	11.05	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	9.99	12.85	10.81	13.23	10.74	13.64	10.66	14.45	11.26	15.27	11.07	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	10.17	12.06	9.99	12.89	10.83	13.27	10.75	13.68	10.68	14.51	11.28	15.34	11.09	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	10.13	12.05	9.99	12.92	10.84	13.31	10.77	13.69	10.68	14.47	11.27			-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	10.10	11.87	9.91	12.71	10.76	13.11	10.69	13.51	10.62	14.31	11.22			1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	10.06	11.69	9.84	12.49	10.68	12.90	10.62	13.32	10.55	14.15	11.17			2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	9.35	10.72	9.97	11.51	9.76	12.27	10.59	12.70	10.54	13.13	10.48	13.99	11.12			3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	9.25	10.55	9.90	11.33	9.69	12.06	10.51	12.50	10.47	12.94	10.42	13.83	11.06			5.0	4	12.76	12.69	12.61	12.60	12.58

10.32 13.50 10.96

11.96 10.47

10.85

7.0 6

9.0

11.5 10

13.5 12

15.5 14

16.5 16

8

15.28

Notes (1) These data show average status.

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9.90 9.17

9 72 9.09

9.55 9.01

9.38 8.93 9.85 9.59

9.21 8.85

11 60

10.88 10.07 11.12 9.97 11.28 9.85

8.67

9.45 11.37

9.26

s (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

8.50 8.78

10.43 12.24

11.99

10.34

10.25 11.73 10.19 12.09 10.12 12.82 10.74

10.17 11.47 10.10 11.81 10.03 12.48 10.64

10.37 12.66

12 38 10.22 13.16

10 28

8.60 8.80 8.62 9.05 8.87

10.38 9.82

10.20 9.75

10.02 9.67 10.75

9.53 9.34 11.13 9.61 11.83

10 94 9 53

10.56 9.37 11.14

10.28

8.25 8.09

17.41 17.30 17.19 17.02 16.99 PFA004Z048

14.16 | 14.08 | 14.00 | 14.02 | 14.04

14.72 14.64 14.56 14.52 14.49

15.20 15.11 15.02

16.13 | 16.04 | 15.94 | 15.82 | 15.75 16.98 16.88 16.77 16.62 16.58

14.93

FDE140VNAPVG Indoor unit FDE71VG (2 units) Model Outdoor unit FDC140VNA (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Indoor air temperature Outdoor Outdoo air temp 18 °CDB 21 °CDB 23 °CDB 26 °CDB 28 °CDB 31 °CDB 33 °CDB °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWR 20 °CWB 22 °CWB 24 °CWB °CDB | °CWE 16 18 20 22 24 CDB SHC 19.8 -20 7.94 7.88 7.85 7.82 TC TC SHC TC SHC TC SHC TC SHC TC SHC TC SHC TC SHC 7.91 8.30 11.05 9.57 11.68 10.37 12.00 10.29 12.34 10.21 3.0 10.80 3.68 10.60 17.7 18 8.44 8.41 8.37 8.34 13 11.56 9.78 12.25 10.58 12.59 10.50 12.95 10.42 13.69 11.02 4.42 10.82 -15.7 -16 8.94 8.90 8.86 8.82 8.79 15 12.07 10.00 12.81 10.80 13.18 10.72 13.57 14.36 11.23 15.14 11.03 -13.5 -14 9.50 9.46 9.41 9.37 9.33 10.64 17 10.02 9.98 9.93 9.88 12.59 10.21 13.38 11.02 13.77 10.94 14.19 15.04 11.46 15.87 11.25 -11.5 -12 10.07 19 12.86 10.33 13.66 11.13 14.07 11.05 14.49 10.97 15.35 11.56 16.20 11.35 -9.5 -10 10.64 10.59 10.54 10.49 10.44 21 13.12 10.44 13.95 11.24 14.36 11.16 14.79 11.08 5.66 11.66 6.53 11.45 -7.5 -8 1.21 11.15 11.10 11.04 10.99 23 13.12 10.44 13.99 11.26 14.40 11.17 14.84 11.10 15.73 11.69 6.61 11.47 -5.5 -6 11.51 11.45 11.39 11.33 11.27 -3.0 11.74 11.68 11.62 11.55 25 12.14 10.61 13.11 10.43 14.02 11.27 14.44 11.19 14.89 11.11 15.79 11.71 16.69 11.49 -4 11.80 27 12.06 10.57 13.11 10.43 14.06 11.29 14.48 11.21 14.90 11.12 15.74 11.69 -1.0 -2 12.11 12.05 11.98 11.91 11.84 11.97 29 10.53 12.91 10.35 13.82 11.19 14.26 11.12 14.70 11.04 15.56 11.63 1.0 0 12.42 12.35 12.28 12.20 12.13 11.88 10.49 12.72 11.10 14.04 11.04 10.97 11.58 2.0 12.58 12.50 12.43 12.35 12.28 31 10.26 13.59 14.49 15.40 1 33 11.18 10.40 12.52 10.18 11.01 13.82 10.96 14.29 10.90 11.52 3.0 3.35 13.27 13.20 13.13 13.08 35 10.96 9.68 11.48 10.31 12.32 10.10 13.11 10.92 13.60 10.88 14.09 10.82 15.05 11.46 5.0 4 14 12 14 05 13 96 13 95 13 93 7.0 37 12.11 10.77 13.77 11.34 6 15.68 15.59 15.50 15.52 15.55 10.76 9.59 11.29 10.23 10.01 12.87 10.82 13.32 10.71 14.69 16.30 16.03 39 10.58 9.50 11.10 10.14 11.91 9.93 12.62 10.73 13.05 10.67 13.46 10.60 14.32 11.22 9.0 8 16.21 16.11 16.07 10 16 63 16 53 41 10.39 9 4 1 10.91 10.06 1170 9 84 12 37 10.63 12 76 10.57 13 16 10.50 13 95 11 10 115 16 91 16 83 16 73 43 10.21 9.32 10.71 9.97 11.49 9.75 10.53 12.48 10.46 12.85 10.39 3.58 10.98 13.5 12 7.86 17.76 17.65 17.52 17.44 12.11 46 10.03 9.23 10.47 9.87 11.13 9.61 11.73 10.39 12.10 10.33 12.27 10.18 13.01 10.80 15.5 14 18.80 18.69 18.57 18.40 18.36 16 50 7.45 7.88 8.35 16.5 19.28 19.15 19.03 18.84 18.81 7.61 7.72 8.19 8.75 8.58 8.97 8.79 8.98 8.80 9.33 9.14

PFA004Z048

FDE140VSAPVG Indoor unit FDE71VG (2 units) Outdoor unit FDC140VSA Model (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Indoor air temperature Outdoor Outdoo 18 °CDB 21 °CDB 23 °CDB 26 °CDB 27 °CDB 28 °CDB 31 °CDB 33 °CDB °CDB air temp 14 °CWB 16 °CWB 19 °CWB 24 °CWB °CDB °CWE 16 24 12 °CWB 18 °CWB 20 °CWB 22 °CWB 18 20 22 °CDE TC TC тс TC 19.8 -20 7.91 7.82 11 11.05 9 5 7 11.68 10.37 12.00 10.29 12 34 10.21 13.01 10.80 3.68 10.60 177 -18 8 44 8 41 8.37 8 34 8.30 11.56 9.78 8.79 13 12.25 10.58 12.59 10.50 12.95 13.69 11.02 10.82 -15.7 -16 8.90 8.86 8.82 10.42 14.42 8.94 15 12.07 10.00 10.80 13.18 10.72 13.57 14.36 15.14 11.03 -13.5 -14 9.46 9.41 9.37 9.33 12.81 10.64 11.23 9.50 17 12.59 10.21 13.38 11.02 13.77 10.94 14.19 10.86 15.04 11.46 15.87 11.25 -11.5 -12 10.07 10.02 9.98 9.93 9.88 19 -9.5 -10 10.64 10.59 10.54 10.49 10.44 12.86 10.33 13.66 11.13 14.07 11.05 14.49 10.97 15.35 11.56 6.20 11.35 11.24 14.36 6.53 11.10 10.99 13.12 10.44 13.95 11.16 14.79 11.08 15.66 11.66 11.45 -7.5 11.21 11.15 11.04 23 13.12 10.44 14.40 14.84 -5.5 -6 11.51 11.45 11.39 11.33 11.27 13.99 11.26 11.17 11.10 15.73 11.69 16.61 11.47 25 12.14 10.61 13.11 14.02 11.27 14.44 11.19 11.71 6.69 11.49 -3.0 11.80 11.68 11.62 11.55 27 12 06 10.57 13.11 10 43 14 06 11 29 14 48 11.21 14 90 11.12 15 74 11 69 -1.0 -2 12.11 12.05 11.98 11.91 11.84 29 11.97 10.53 10.35 11.63 1.0 0 12.42 12.35 12.28 12.20 12.13 12.91 13.82 11.19 14.26 11.12 14.70 11.04 15.56 31 11.88 10.49 12.72 10.26 13.59 11.10 14.04 11.04 10.97 11.58 2.0 12.50 12.43 12.35 12.28 33 11 18 9 7 9 11 67 10 40 12 52 10 18 13.36 11.01 13 82 10.96 14 29 10.90 15 22 11.52 3.0 2 13 35 13 27 13 20 13 13 13.08

> 15.05 11.46

> > 11.10

10.80

10.82

13.16 10.50 13.95

9.23 Notes (1) These data show average statu

9.68

11.48 10.31 12.32 10.10 13.11 10.92 13.60

11.29 10.23 12.11 10.01 12.87 10.82 13.32 10.77 13.77 10.71 14.69 11.34

11 10 10 14 1191 9 93

10.91 10.06 11.70 9.84 12.37 10.63 12.76 10.57

10.47 9.87 11.13 9.61 11.73 10.39 12.10 10.33 12.27 10.18 13.01

8.35 8.19 8.75

10.96

10 76 9 59

10.58 9.50

10.39 9.41

10.21 9.32 10.71 9.97 11.49 9.75 12.11 10.53

10.03

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Depending on the system control, there may be ranges where the operation is not conducted continuously.

8.58

12 62 10.73 13 05 10 67 13 46 10.60 1432 11 22

These data show the case where the operation frequency of a compressor is fixed. (Online only) In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

12 48 10.46 12 85 10.39 13 58 10.98

8.97 8.79 8.98 8.80 9.33

10.88 14.09

(2) Capacities are based on the following conditions. Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows TC: Total cooling capacity (kW) SHC: Sensible heat capacity (kW) HC: Heating capacity (kW) PFA004Z048

15.68 | 15.59 | 15.50 | 15.52

18.80 18.69 18.57 18.40

19.28 19.15 19.03 18.84

15 55

16.53

18.36

18.81

5.0

7.0 6

9.0 8

11.5 10

13.5 12

15.5 14

16.5 16

4

14.12 14.05 13.96 13.95 13.93

16.30 16.21 16.11 16.07 16.03

6.91 16.83 16.73 16.63

17 86 17.76 17 65 17 52 17 44

(c) Triple type

Model FDE140VNATVG Indoor unit FDE50VG (3 units) Outdoor unit FDC140VNA (kW) Cooling mode (kW) Heating mode:HC

0.44					_		Indo	oor air t	empera	ture							Out	door		Indoor	air temp	erature)
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air te	emp.			°CDB		
а солтр	12 °	CWB	14 °0	CWB	16 °C	CWB	18 °C	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	9.45	11.68	10.22	12.00	10.14	12.34	10.06	13.01	10.63	13.68	10.44	-17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	9.66	12.25	10.44	12.59	10.35	12.95	10.27	13.69	10.85	14.42	10.65	-15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	9.87	12.81	10.65	13.18	10.57	13.57	10.49	14.36	11.07	15.14	10.87	-13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	10.09	13.38	10.87	13.77	10.79	14.19	10.72	15.04	11.29	15.87	11.09	-11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	10.20	13.66	10.99	14.07	10.91	14.49	10.83	15.35	11.40	16.20	11.19	-9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	10.32	13.95	11.10	14.36	11.02	14.79	10.94	15.66	11.50	16.53	11.29	-7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	10.32	13.99	11.12	14.40	11.03	14.84	10.95	15.73	11.53	16.61	11.31	-5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	10.49	13.11	10.31	14.02	11.13	14.44	11.05	14.89	10.97	15.79	11.54	16.69	11.33	-3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	10.45	13.11	10.31	14.06	11.14	14.48	11.07	14.90	10.98	15.74	11.53			-1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	10.41	12.91	10.23	13.82	11.05	14.26	10.98	14.70	10.90	15.56	11.47			1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	10.37	12.72	10.14	13.59	10.96	14.04	10.90	14.49	10.83	15.40	11.41			2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	9.68	11.67	10.27	12.52	10.06	13.36	10.87	13.82	10.81	14.29	10.75	15.22	11.36			3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	9.57	11.48	10.19	12.32	9.97	13.11	10.77	13.60	10.73	14.09	10.68	15.05	11.30			5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	9.48	11.29	10.10	12.11	9.89	12.87	10.68	13.32	10.62	13.77	10.57	14.69	11.18			7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	9.39	11.10	10.02	11.91	9.80	12.62	10.58	13.05	10.52	13.46	10.46	14.32	11.06			9.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	9.30	10.91	9.93	11.70	9.71	12.37	10.48	12.76	10.42	13.16	10.35	13.95	10.94			11.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	9.21	10.71	9.84	11.49	9.63	12.11	10.39	12.48	10.32	12.85	10.24	13.58	10.82			13.5	12	17.86	17.76	17.65	17.52	17.44
46	10.03	9.12	10.47	9.73	11.13	9.48	11.73	10.24	12.10	10.18	12.27	10.04	13.01	10.64			15.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			16.5	16	19.28	19.15	19.03	18.84	18.81

PFA004Z048

Model FDE140VSATVG Indoor unit FDE50VG (3 units) Outdoor unit FDC140VSA (kW) Cooling mode (kW) Heating mode:HC

	,		Indoor air tempe													()	_ :		.90					(,
							Indo	oor air t	empera	ture							۱ſ	Outo	door		Indoor	air temp	erature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	П	air te	emp.			°CDB		
an tomp.	12 °C	CWB	14 °0	CWB	16 °0	CWB	18 °C	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °(CWB	П	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	П	-19.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	9.45	11.68	10.22	12.00	10.14	12.34	10.06	13.01	10.63	13.68	10.44	П	-17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	9.66	12.25	10.44	12.59	10.35	12.95	10.27	13.69	10.85	14.42	10.65	П	-15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	9.87	12.81	10.65	13.18	10.57	13.57	10.49	14.36	11.07	15.14	10.87	П	-13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	10.09	13.38	10.87	13.77	10.79	14.19	10.72	15.04	11.29	15.87	11.09	П	-11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	10.20	13.66	10.99	14.07	10.91	14.49	10.83	15.35	11.40	16.20	11.19	П	-9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	10.32	13.95	11.10	14.36	11.02	14.79	10.94	15.66	11.50	16.53	11.29	П	-7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	10.32	13.99	11.12	14.40	11.03	14.84	10.95	15.73	11.53	16.61	11.31	П	-5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	10.49	13.11	10.31	14.02	11.13	14.44	11.05	14.89	10.97	15.79	11.54	16.69	11.33	П	-3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	10.45	13.11	10.31	14.06	11.14	14.48	11.07	14.90	10.98	15.74	11.53			П	-1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	10.41	12.91	10.23	13.82	11.05	14.26	10.98	14.70	10.90	15.56	11.47			П	1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	10.37	12.72	10.14	13.59	10.96	14.04	10.90	14.49	10.83	15.40	11.41			П	2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	9.68	11.67	10.27	12.52	10.06	13.36	10.87	13.82	10.81	14.29	10.75	15.22	11.36			П	3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	9.57	11.48	10.19	12.32	9.97	13.11	10.77	13.60	10.73	14.09	10.68	15.05	11.30			П	5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	9.48	11.29	10.10	12.11	9.89	12.87	10.68	13.32	10.62	13.77	10.57	14.69	11.18			П	7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	9.39	11.10	10.02	11.91	9.80	12.62	10.58	13.05	10.52	13.46	10.46	14.32	11.06			П	9.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	9.30	10.91	9.93	11.70	9.71	12.37	10.48	12.76	10.42	13.16	10.35	13.95	10.94			П	11.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	9.21	10.71	9.84	11.49	9.63	12.11	10.39	12.48	10.32	12.85	10.24	13.58	10.82			П	13.5	12	17.86	17.76	17.65	17.52	17.44
46	10.03	9.12	10.47	9.73	11.13	9.48	11.73	10.24	12.10	10.18	12.27	10.04	13.01	10.64				15.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			Ħ	16.5	16	19.28	19.15	19.03	18.84	18.81

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

(4) Duct connected-High static pressure type (FDU)

Model FDU100VNAVF2 Indoor unit FDU100VF2 Outdoor unit FDC100VNA Cooling mode

0.11	Indoor air temperature Of 18 °CDB 21 °CDB 23 °CDB 26 °CDB 27 °CDB 28 °CDB 31 °CDB 33 °CDB															
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB
an tomp.	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °0	CWB	20 °C	CWB	22 °	CWB	24 °0	CWB
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
11					8.12	6.88	8.59	7.50	8.82	7.38	9.07	7.26	9.56	7.69	10.06	7.42
13					8.50	6.99	9.00	7.61	9.26	7.48	9.52	7.36	10.06	7.78	10.60	7.49
15					8.88	7.10	9.42	7.71	9.69	7.58	9.98	7.45	10.56	7.87	11.14	7.57
17					9.26	7.21	9.84	7.82	10.12	7.69	10.43	7.56	11.05	7.96	11.67	7.65
19					9.46	7.27	10.05	7.88	10.34	7.74	10.65	7.60	11.29	8.01	11.92	7.69
21					9.65	7.33	10.25	7.93	10.56	7.80	10.88	7.66	11.52	8.06	12.16	7.73
23					9.65	7.33	10.28	7.94	10.59	7.80	10.91	7.66	11.56	8.06	12.21	7.74
25			8.93	7.64	9.64	7.33	10.31	7.95	10.62	7.81	10.95	7.67	11.61	8.07	12.27	7.75
27			8.86	7.62	9.64	7.33	10.34	7.95	10.65	7.82	10.96	7.68	11.57	8.06		
29			8.80	7.59	9.50	7.29	10.17	7.91	10.49	7.78	10.81	7.64	11.45	8.04		
31			8.73	7.57	9.35	7.24	9.99	7.86	10.32	7.74	10.66	7.61	11.32	8.02		
33	8.22	7.04	8.58	7.52	9.21	7.20	9.82	7.82	10.16	7.70	10.51	7.57	11.19	7.99		
35	8.05	6.98	8.44	7.47	9.06	7.15	9.64	7.77	10.00	7.66	10.36	7.54	11.07	7.97		
37	7.92	6.93	8.30	7.43	8.91	7.11	9.46	7.72	9.79	7.61	10.13	7.49	10.80	7.92		
39	7.78	6.88	8.16	7.38	8.75	7.06	9.28	7.68	9.59	7.56	9.90	7.44	10.53	7.87		
41	7.64	6.83	8.02	7.33	8.60	7.02	9.09	7.63	9.38	7.51	9.68	7.39	10.26	7.82		
43	7.50	6.77	7.88	7.29	8.45	6.97	8.91	7.58	9.18	7.46	9.45	7.34	9.99	7.77		
46	7.33	6.71	7.67	7.22	8.22	6.91	8.58	7.50	8.83	7.38	9.07	7.26	9.57	7.70		
50	7.09	6.63	7.39	7.13	7.91	6.82	8.19	7.41	8.35	7.28	8.51	7.14	8.83	7.57		

(kW))	Heatii	ng mo	de:H0	0			(kW)
		Out	door		Indoor	air temp	erature	:
DB		air te	emp.			°CDB		
WB		°CDB	°CWB	16	18	20	22	24
SHC		-19.8	-20	6.82	6.79	6.77	6.75	6.72
7.42		-17.7	-18	7.16	7.14	7.10	7.08	7.04
7.49		-15.7	-16	7.50	7.46	7.44	7.40	7.37
7.57		-13.5	-14	7.86	7.83	7.79	7.76	7.72
7.65		-11.5	-12	8.23	8.19	8.15	8.12	8.08
7.69		-9.5	-10	8.58	8.55	8.50	8.47	8.42
7.73		-7.5	-8	8.93	8.89	8.85	8.80	8.75
7.74		-5.5	-6	9.05	9.00	8.97	8.91	8.86
7.75		-3.0	-4	9.17	9.12	9.07	9.03	8.97
		-1.0	-2	9.29	9.23	9.19	9.13	9.07
		1.0	0	9.40	9.34	9.29	9.23	9.18
		2.0	1	9.45	9.39	9.34	9.28	9.22
		3.0	2	9.82	9.77	9.71	9.67	9.63
		5.0	4	10.21	10.15	10.09	10.08	10.07
		7.0	6	11.33	11.27	11.20	11.22	11.23
		9.0	8	11.78	11.71	11.64	11.62	11.59
		11.5	10	12.23	12.16	12.09	12.02	11.94
		13.5	12	12.91	12.83	12.75	12.65	12.60
		15.5	14	13.59	13.50	13.42	13.29	13.26
		16.5	16	13.93	13.84	13.75	13.61	13.59

PJG000Z046 ∕€



Model FDU100VSAVF2 Indoor unit FDU100VF2 Outdoor unit FDC100VSA Cooling mode

Heating mode:HC

(kW)

							Indo	oor air t	empera	ture							0	ıtdoor		Indoor	air temp	erature	
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °C	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air	temp.			°CDB		
dii temp.	12 °C	CWB	14 °C	CWB	16 °C	CWB	18 °0	CWB	19 °0	CWB	20 °C	CWB	22 °C	CWB	24 °0	CWB	°CD	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	6.88	8.59	7.50	8.82	7.38	9.07	7.26	9.56	7.69	10.06	7.42	-17.	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	6.99	9.00	7.61	9.26	7.48	9.52	7.36	10.06	7.78	10.60	7.49	-15.	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.10	9.42	7.71	9.69	7.58	9.98	7.45	10.56	7.87	11.14	7.57	-13.	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.21	9.84	7.82	10.12	7.69	10.43	7.56	11.05	7.96	11.67	7.65	-11.	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.27	10.05	7.88	10.34	7.74	10.65	7.60	11.29	8.01	11.92	7.69	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.33	10.25	7.93	10.56	7.80	10.88	7.66	11.52	8.06	12.16	7.73	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.33	10.28	7.94	10.59	7.80	10.91	7.66	11.56	8.06	12.21	7.74	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.64	9.64	7.33	10.31	7.95	10.62	7.81	10.95	7.67	11.61	8.07	12.27	7.75	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.62	9.64	7.33	10.34	7.95	10.65	7.82	10.96	7.68	11.57	8.06			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.59	9.50	7.29	10.17	7.91	10.49	7.78	10.81	7.64	11.45	8.04			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.57	9.35	7.24	9.99	7.86	10.32	7.74	10.66	7.61	11.32	8.02			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	7.04	8.58	7.52	9.21	7.20	9.82	7.82	10.16	7.70	10.51	7.57	11.19	7.99			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	6.98	8.44	7.47	9.06	7.15	9.64	7.77	10.00	7.66	10.36	7.54	11.07	7.97			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	6.93	8.30	7.43	8.91	7.11	9.46	7.72	9.79	7.61	10.13	7.49	10.80	7.92			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.88	8.16	7.38	8.75	7.06	9.28	7.68	9.59	7.56	9.90	7.44	10.53	7.87			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.83	8.02	7.33	8.60	7.02	9.09	7.63	9.38	7.51	9.68	7.39	10.26	7.82			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.77	7.88	7.29	8.45	6.97	8.91	7.58	9.18	7.46	9.45	7.34	9.99	7.77			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.71	7.67	7.22	8.22	6.91	8.58	7.50	8.83	7.38	9.07	7.26	9.57	7.70			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.63	7.39	7.13	7.91	6.82	8.19	7.41	8.35	7.28	8.51	7.14	8.83	7.57			16.5	16	13.93	13.84	13.75	13.61	13.59

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

Model Cooling	Cooling mode (kW) Heating mo														de:H0	0			(kW)				
							Inde	oor air t	empera	ture							Out	door		Indoor	air temp	oerature	,
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	emp.			°CDB		
an temp.	12 °C	CWB	14 °0	CWB	16 °0	CWB	18 °	CWB	19 °	CWB	20 °C	CWB	22 °C	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	9.23	10.74	10.04	11.03	9.97	11.34	9.90	11.96	10.51	12.57	10.34	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	9.44	11.26	10.24	11.57	10.17	11.91	10.11	12.58	10.72	13.25	10.55	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	9.63	11.78	10.44	12.11	10.37	12.47	10.31	13.20	10.92	13.92	10.75	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	9.84	12.29	10.64	12.65	10.58	13.04	10.52	13.82	11.13	14.59	10.96	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	9.94	12.56	10.75	12.92	10.68	13.32	10.62	14.11	11.23	14.90	11.06	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	10.04	12.82	10.86	13.19	10.79	13.60	10.73	14.40	11.33	15.20	11.15	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	10.04	12.85	10.87	13.23	10.80	13.64	10.74	14.45	11.35	15.27	11.17	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	10.20	12.06	10.04	12.89	10.88	13.27	10.82	13.68	10.76	14.51	11.37	15.34	11.20	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	10.16	12.05	10.04	12.92	10.90	13.31	10.83	13.69	10.76	14.47	11.35			-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	10.12	11.87	9.96	12.71	10.81	13.11	10.76	13.51	10.69	14.31	11.30			1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	10.09	11.69	9.88	12.49	10.72	12.90	10.67	13.32	10.62	14.15	11.24			2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	9.37	10.72	9.99	11.51	9.81	12.27	10.64	12.70	10.60	13.13	10.55	13.99	11.19			3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	9.28	10.55	9.92	11.33	9.73	12.06	10.55	12.50	10.52	12.94	10.48	13.83	11.14			5.0	4	12.76	12.69	12.61	12.60	12.58
37	9.90	9.19	10.38	9.84	11.13	9.65	11.83	10.46	12.24	10.42	12.66	10.38	13.50	11.02			7.0	6	14.16		14.00	14.02	14.04
39	9.72	9.11	10.20	9.76	10.94	9.57	11.60	10.37	11.99	10.33	12.38	10.28	13.16	10.91			9.0	8	14.72	14.64	14.56	14.52	
41	9.55	9.02	10.02	9.68	10.75	9.49	11.37	10.28	11.73	10.23	12.09	10.17	12.82	10.80			11.5	10	15.28	15.20	15.11	15.02	14.93
43	9.38	8.94	9.85	9.60	10.56	9.41	11.14	10.19	11.47	10.13	11.81	10.07	12.48	10.68			13.5	12	16.13		15.94	15.82	15.75
46	9.21	8.86	9.53	9.34	10.28	9.29	10.88	10.09	11.12	10.00	11.28	9.88	11.96	10.51			15.5	14	16.98	16.88	16.77		16.58
50	7.43	7.28	7.63	7.48	8.25	8.09	8.67	8.50	8.78	8.60	8.80	8.62	9.05	8.87			16.5	16	17.41	17.30	17.19	17.02	16.99

PJG000Z046 ∕€

Model Cooling			SAVF	. In	door u	ınit F	DU12	5VF	Ou	tdoor ı	unit l	FDC12	25VSA	L.		(kW)	Heatii	ng mo	de:H0	0			(kW)
							Inde	oor air t	empera	ture							Outo	door		Indoor	air temp	erature	,
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air te	emp.			°CDB		\neg
all terrip.	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °(CWB	24 °(CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	9.23	10.74	10.04	11.03	9.97	11.34	9.90	11.96	10.51	12.57	10.34	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	9.44	11.26	10.24	11.57	10.17	11.91	10.11	12.58	10.72	13.25	10.55	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	9.63	11.78	10.44	12.11	10.37	12.47	10.31	13.20	10.92	13.92	10.75	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	9.84	12.29	10.64	12.65	10.58	13.04	10.52	13.82	11.13	14.59	10.96	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	9.94	12.56	10.75	12.92	10.68	13.32	10.62	14.11	11.23	14.90	11.06	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	10.04	12.82	10.86	13.19	10.79	13.60	10.73	14.40	11.33	15.20	11.15	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	10.04	12.85	10.87	13.23	10.80	13.64	10.74	14.45	11.35	15.27	11.17	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	10.20	12.06	10.04	12.89	10.88	13.27	10.82	13.68	10.76	14.51	11.37	15.34	11.20	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	10.16	12.05	10.04	12.92	10.90	13.31	10.83	13.69	10.76	14.47	11.35			-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	10.12	11.87	9.96	12.71	10.81	13.11	10.76	13.51	10.69	14.31	11.30			1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	10.09	11.69	9.88	12.49	10.72	12.90	10.67	13.32	10.62	14.15	11.24			2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	9.37	10.72	9.99	11.51	9.81	12.27	10.64	12.70	10.60	13.13	10.55	13.99	11.19			3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	9.28	10.55	9.92	11.33	9.73	12.06	10.55	12.50	10.52	12.94	10.48	13.83	11.14			5.0	4	12.76	12.69	12.61	12.60	12.58
37	9.90	9.19	10.38	9.84	11.13	9.65	11.83	10.46	12.24	10.42	12.66	10.38	13.50	11.02			7.0	6	14.16	14.08	14.00	14.02	14.04
39	9.72	9.11	10.20	9.76	10.94	9.57	11.60	10.37	11.99	10.33	12.38	10.28	13.16	10.91			9.0	8	14.72	14.64	14.56	14.52	14.49
41	9.55	9.02	10.02	9.68	10.75	9.49	11.37	10.28	11.73	10.23	12.09	10.17	12.82	10.80			11.5	10	15.28	15.20	15.11	15.02	14.93

Notes (1) These data show average status.

8.86

43

46

9.38 8.94

9.21

8.09 8.67 8.50 8.78

s (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

11.47 10.13

11.12

10.00

8.60 8.80 8.62 9.05 8.87

11.81 10.07

11.28

9.88

12.48 10.68

11.96 10.51

9.85 9.60

7.48

9.53 9.34 10.56 9.41 11.14 10.19

10.28 9.29 10.88 10.09

8.25

17.41 17.30 17.19 17.02 16.99 PJG000Z046

16.13 16.04 15.94 15.82 15.75

16.98 16.88 16.77 16.62 16.58

13.5

15.5

16.5

12 14

16

FDU140VNAVF Indoor unit FDU140VF Outdoor unit FDC140VNA Model (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Outdoor Indoor air temperature Outdoo 18 °CDB 23 °CDB 28 °CDB 31 °CDB 33 °CDB air temp 21 °CDB 26 °CDB 27 °CDB °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWR 20 °CWB 22 °CWB 24 °CWB °CDB | °CWE 16 18 20 22 24 °CDB TC SHC TC SHC SHC TC SHC 19.8 -20 7.94 7.91 7.88 7.85 7.82 TC SHC TC SHC TC SHC TC TC SHC 11.05 10.75 12.34 13.01 3.68 10.85 8.44 8.41 8.37 8.34 8.30 9.86 11.68 12.00 10.63 10.50 11.15 17.7 -18 13 11.56 10.03 12.25 10.93 12.59 10.79 12.95 10.66 13.69 11.31 14.42 11.00 -15.7 -16 8.94 8.90 8.86 8.82 8.79 15 12.07 10.21 12.81 11.10 13.18 10.97 13.57 10.83 14.36 11.47 15.14 11.15 -13.5 -14 9.50 9.46 9.41 9.37 9.33 17 12.59 10.38 11.27 13.77 14.19 15.87 11.31 -11.5 -12 10.07 10.02 9.98 9.93 9.88 13.38 11.14 15.04 11.64 19 12.86 10.48 13.66 11.36 14.07 11.23 14.49 11.09 15.35 11.71 16.20 11.38 -9.5 -10 10.64 10.59 10.54 10.49 10.44 21 13.12 10.57 13.95 11.45 14.36 11.31 14.79 11.17 15.66 11.79 6.53 11.45 -7.5 -8 11.21 11.15 11.10 11.04 10.99 23 13.12 10.57 13.99 11.47 14.40 11.33 14.84 11.19 15.73 11.81 6.61 11.47 -5.5 -6 11.51 11.45 11.39 11.33 11.27 25 -3.0 -4 11.80 11.74 11.68 11.62 11.55 12.14 10.90 13.11 10.57 14.02 11.48 14.44 11.34 14.89 11.20 15.79 11.82 16.69 11.49 27 12.06 10.86 13.11 10.57 14.06 11.49 14.48 11.35 14.90 11.20 15.74 11.81 -1.0 -2 12.11 12.05 11.98 11.91 11.84 29 11.97 10.83 12.91 10.50 13.82 11.41 14.26 11.29 14.70 11.15 15.56 11.77 1.0 0 12.42 | 12.35 | 12.28 | 12.20 | 12.13 31 11.88 10.80 12.72 10.43 13.59 11.34 14.04 11.22 14.49 11.09 15.40 11.73 2.0 12.58 12.50 12.43 12.35 12.28 1 10.36 13.82 11.15 11.68 33 11.18 11.67 10.71 12.52 13.36 11.27 14.29 11.03 15.22 3.0 13.35 13.27 13.20 13.13 13.08 4 35 10.96 9.93 11.48 10.64 12.32 10.29 13.11 11.19 13.60 11.09 14.09 10.97 15.05 11.64 5.0 14 12 14 05 13 96 13 95 13 93 37 10.76 9.85 10.57 12.11 10.22 12.87 13.32 11.01 13.77 14.69 11.55 7.0 6 15.68 15.59 15.50 15.52 15.55 11.29 11.12 10.89 39 10.58 9.77 10.50 11.91 10.15 12.62 11.04 13.05 10.93 13.46 10.80 14.32 11.46 9.0 16.30 16.21 16.11 16.07 16.03 11.10 8 41 10.85 11.37 11.5 10 16 91 16 63 16.53 10.39 9 70 10.91 10 43 1170 10.08 12 37 10.96 12 76 13 16 10.72 13 95 16 83 16 73 43 10.21 9.62 10.71 10.36 11.49 10.01 12.11 10.89 12.48 10.76 12.85 10.64 13.58 11.29 13.5 12 17.86 17.76 17.65 17.52 17.44 46 10.03 9.54 10.47 10.26 11.13 9.89 11.73 10.77 12.10 10.66 12.27 10.48 13.01 11.15 15.5 14 18.80 18.69 18.57 18.40 18.36 16 19.28 19.15 19.03 18.84 50 7.61 7.45 7.88 8.35 8.19 8.58 8.79 8.80 9.14 16.5 18.81 7.72 8.75 8.97 8.98 9.33

PJG000Z046

Model FDU140VSAVF Indoor unit FDU140VF Outdoor unit FDC140VSA Cooling mode (kW) Heating mode:HC (kW) Indoor air temperature Indoor air temperature Outdoor Outdoo air temp 18 °CDB 21 °CDB 23 °CDB 26 °CDB 27 °CDB 28 °CDB 31 °CDB 33 °CDB °CDB air temp 14 °CWB 12 °CWB 16 °CWB 19 °CWB 20 °CWB 22 °CWB 24 °CWB °сов I°сwв 16 18 20 22 24 18 °CWB

CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	. !
11					11.05	9.86	11.68	10.75	12.00	10.63	12.34	10.50	13.01	11.15	13.68	10.85	ı
13					11.56	10.03	12.25	10.93	12.59	10.79	12.95	10.66	13.69	11.31	14.42	11.00	ı
15					12.07	10.21	12.81	11.10	13.18	10.97	13.57	10.83	14.36	11.47	15.14	11.15	ı
17					12.59	10.38	13.38	11.27	13.77	11.14	14.19	11.00	15.04	11.64	15.87	11.31	ı
19					12.86	10.48	13.66	11.36	14.07	11.23	14.49	11.09	15.35	11.71	16.20	11.38	
21					13.12	10.57	13.95	11.45	14.36	11.31	14.79	11.17	15.66	11.79	16.53	11.45	
23					13.12	10.57	13.99	11.47	14.40	11.33	14.84	11.19	15.73	11.81	16.61	11.47	
25			12.14	10.90	13.11	10.57	14.02	11.48	14.44	11.34	14.89	11.20	15.79	11.82	16.69	11.49	
27			12.06	10.86	13.11	10.57	14.06	11.49	14.48	11.35	14.90	11.20	15.74	11.81			
29			11.97	10.83	12.91	10.50	13.82	11.41	14.26	11.29	14.70	11.15	15.56	11.77			
31			11.88	10.80	12.72	10.43	13.59	11.34	14.04	11.22	14.49	11.09	15.40	11.73			i
33	11.18	10.02	11.67	10.71	12.52	10.36	13.36	11.27	13.82	11.15	14.29	11.03	15.22	11.68			
35	10.96	9.93	11.48	10.64	12.32	10.29	13.11	11.19	13.60	11.09	14.09	10.97	15.05	11.64			
37	10.76	9.85	11.29	10.57	12.11	10.22	12.87	11.12	13.32	11.01	13.77	10.89	14.69	11.55			
39	10.58	9.77	11.10	10.50	11.91	10.15	12.62	11.04	13.05	10.93	13.46	10.80	14.32	11.46			i
41	10.39	9.70	10.91	10.43	11.70	10.08	12.37	10.96	12.76	10.85	13.16	10.72	13.95	11.37			
43	10.21	9.62	10.71	10.36	11.49	10.01	12.11	10.89	12.48	10.76	12.85	10.64	13.58	11.29			
46	10.03	9.54	10.47	10.26	11.13	9.89	11.73	10.77	12.10	10.66	12.27	10.48	13.01	11.15			
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			П

	-19.8	-20	7.94	7.91	7.88	7.85	7.82
	-17.7	-18	8.44	8.41	8.37	8.34	8.30
	-15.7	-16	8.94	8.90	8.86	8.82	8.79
	-13.5	-14	9.50	9.46	9.41	9.37	9.33
	-11.5	-12	10.07	10.02	9.98	9.93	9.88
	-9.5	-10	10.64	10.59	10.54	10.49	10.44
	-7.5	-8	11.21	11.15	11.10	11.04	10.99
	-5.5	-6	11.51	11.45	11.39	11.33	11.27
	-3.0	-4	11.80	11.74	11.68	11.62	11.55
ı	-1.0	-2	12.11	12.05	11.98	11.91	11.84
	1.0	0	12.42	12.35	12.28	12.20	12.13
ı	2.0	1	12.58	12.50	12.43	12.35	12.28
	3.0	2	13.35	13.27	13.20	13.13	13.08
ı	5.0	4	14.12	14.05	13.96	13.95	13.93
ı	7.0	6	15.68	15.59	15.50	15.52	15.55
ı	9.0	8	16.30	16.21	16.11	16.07	16.03
	11.5	10	16.91	16.83	16.73	16.63	16.53
	13.5	12	17.86	17.76	17.65	17.52	17.44
	15.5	14	18.80	18.69	18.57	18.40	18.36
	16.5	16	19.28	19.15	19.03	18.84	18.81

Notes (1) These data show average status

Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed. (Cooling only) In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency. (2) Capacities are based on the following conditions.

(2) Capacities are based on the following condition
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
(3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

(kW)

(5) Duct connected-Low / Middle static pressure type (FDUM) (a) Single type

Model FDUM100VNAVF2 Cooling mode Indoor unit FDUM100VF2 Outdoor unit FDC100VNA (kW) Heating mode:HC

0.11							Inde	oor air t	empera	ture							П	Out					;	
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	Ш	air te	emp.			°CDB		
un tomp.	12 °	CWB	14 °	CWB	16 °C	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	П	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	П	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	6.88	8.59	7.50	8.82	7.38	9.07	7.26	9.56	7.69	10.06	7.42	П	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	6.99	9.00	7.61	9.26	7.48	9.52	7.36	10.06	7.78	10.60	7.49	П	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.10	9.42	7.71	9.69	7.58	9.98	7.45	10.56	7.87	11.14	7.57	П	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.21	9.84	7.82	10.12	7.69	10.43	7.56	11.05	7.96	11.67	7.65	П	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.27	10.05	7.88	10.34	7.74	10.65	7.60	11.29	8.01	11.92	7.69	П	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.33	10.25	7.93	10.56	7.80	10.88	7.66	11.52	8.06	12.16	7.73	П	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.33	10.28	7.94	10.59	7.80	10.91	7.66	11.56	8.06	12.21	7.74	П	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.64	9.64	7.33	10.31	7.95	10.62	7.81	10.95	7.67	11.61	8.07	12.27	7.75	П	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.62	9.64	7.33	10.34	7.95	10.65	7.82	10.96	7.68	11.57	8.06			П	-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.59	9.50	7.29	10.17	7.91	10.49	7.78	10.81	7.64	11.45	8.04			П	1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.57	9.35	7.24	9.99	7.86	10.32	7.74	10.66	7.61	11.32	8.02			П	2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	7.04	8.58	7.52	9.21	7.20	9.82	7.82	10.16	7.70	10.51	7.57	11.19	7.99			П	3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	6.98	8.44	7.47	9.06	7.15	9.64	7.77	10.00	7.66	10.36	7.54	11.07	7.97			П	5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	6.93	8.30	7.43	8.91	7.11	9.46	7.72	9.79	7.61	10.13	7.49	10.80	7.92			П	7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.88	8.16	7.38	8.75	7.06	9.28	7.68	9.59	7.56	9.90	7.44	10.53	7.87			П	9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.83	8.02	7.33	8.60	7.02	9.09	7.63	9.38	7.51	9.68	7.39	10.26	7.82			П	11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.77	7.88	7.29	8.45	6.97	8.91	7.58	9.18	7.46	9.45	7.34	9.99	7.77			П	13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.71	7.67	7.22	8.22	6.91	8.58	7.50	8.83	7.38	9.07	7.26	9.57	7.70				15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.63	7.39	7.13	7.91	6.82	8.19	7.41	8.35	7.28	8.51	7.14	8.83	7.57			ı	16.5	16	13.93	13.84	13.75	13.61	13.59

PJG000Z013

Model FDUM100VSAVF2 Indoor unit FDUM100VF2 Outdoor unit FDC100VSA Cooling mode (kW) Heating mode:HC (kW)

	·															, ,	_	9		_			, ,
0.11							Indo	oor air t	empera	ture							0	ıtdoor		Indoor	air temp	erature	:
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	aiı	temp.			°CDB		
un tomp.	12 °C	CWB	14 °(CWB	16 °0	CWB	18 °C	CWB	19 °C	CWB	20 °C	CWB	22 °C	CWB	24 °C	CWB	°CD	3 °CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	6.88	8.59	7.50	8.82	7.38	9.07	7.26	9.56	7.69	10.06	7.42	-17.	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	6.99	9.00	7.61	9.26	7.48	9.52	7.36	10.06	7.78	10.60	7.49	-15.	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.10	9.42	7.71	9.69	7.58	9.98	7.45	10.56	7.87	11.14	7.57	-13.	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.21	9.84	7.82	10.12	7.69	10.43	7.56	11.05	7.96	11.67	7.65	-11.	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.27	10.05	7.88	10.34	7.74	10.65	7.60	11.29	8.01	11.92	7.69	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.33	10.25	7.93	10.56	7.80	10.88	7.66	11.52	8.06	12.16	7.73	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.33	10.28	7.94	10.59	7.80	10.91	7.66	11.56	8.06	12.21	7.74	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.64	9.64	7.33	10.31	7.95	10.62	7.81	10.95	7.67	11.61	8.07	12.27	7.75	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.62	9.64	7.33	10.34	7.95	10.65	7.82	10.96	7.68	11.57	8.06			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.59	9.50	7.29	10.17	7.91	10.49	7.78	10.81	7.64	11.45	8.04			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.57	9.35	7.24	9.99	7.86	10.32	7.74	10.66	7.61	11.32	8.02			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	7.04	8.58	7.52	9.21	7.20	9.82	7.82	10.16	7.70	10.51	7.57	11.19	7.99			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	6.98	8.44	7.47	9.06	7.15	9.64	7.77	10.00	7.66	10.36	7.54	11.07	7.97			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	6.93	8.30	7.43	8.91	7.11	9.46	7.72	9.79	7.61	10.13	7.49	10.80	7.92			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.88	8.16	7.38	8.75	7.06	9.28	7.68	9.59	7.56	9.90	7.44	10.53	7.87			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.83	8.02	7.33	8.60	7.02	9.09	7.63	9.38	7.51	9.68	7.39	10.26	7.82			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.77	7.88	7.29	8.45	6.97	8.91	7.58	9.18	7.46	9.45	7.34	9.99	7.77			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.71	7.67	7.22	8.22	6.91	8.58	7.50	8.83	7.38	9.07	7.26	9.57	7.70			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.63	7.39	7.13	7.91	6.82	8.19	7.41	8.35	7.28	8.51	7.14	8.83	7.57			16.5	16	13.93	13.84	13.75	13.61	13.59

Notes (1) These data show average status.

s (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

FDUM125VNAVF Indoor unit FDUM125VF Outdoor unit FDC125VNA Model (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Outdoor Indoor air temperature Outdoo 18 °CDB 23 °CDB 28 °CDB 31 °CDB 33 °CDB air temp 21 °CDB 26 °CDB 27 °CDB °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWB 20 °CWB 22 °CWB 24 °CWB CDB CWE 16 18 20 22 24 °CDB TC SHC TC SHC SHC TC SHC 19.8 -20 7.77 7.73 7.67 7.65 TC SHC TC SHC TC SHC SHC TC TC 7.70 9.23 10.74 10.04 9.97 1.96 2.57 8.03 10.15 11.03 11.34 9.90 10.51 10.34 17.7 -18 8.16 8.13 8.11 8.06 13 10.63 9.44 11.26 10.24 11.57 10.17 11.91 10.11 12.58 10.72 13.25 10.55 -15.7 -16 8.57 8.53 8.50 8.46 8.42 15 11.10 9.63 11.78 10.44 12.11 10.37 12.47 10.31 13.20 10.92 13.92 10.75 -13.5 -14 9.02 8.98 8.94 8.90 8.86 17 11.58 9.84 12.29 10.64 12.65 14.59 -11.5 -12 9.46 9.41 9.37 9.33 9.28 10.58 13.04 13.82 10.96 19 11.82 9.94 12.56 10.75 12.92 10.68 13.32 10.62 14.11 11.23 14.90 11.06 -9.5 -10 9.90 9.84 9.80 9.76 9.70 21 12.06 10.04 12.82 10.86 13.19 10.79 13.60 10.73 14.40 11.33 5.20 11.15 -7.5 -8 10.32 10.28 10.23 10.17 10.12 23 12.06 10.04 12.85 10.87 13.23 10.80 13.64 10.74 14.45 11.35 5.27 11.17 -5.5 -6 10.50 10.45 10.39 10.33 10.28 25 -3.0 -4 10.66 10.61 10.55 10.49 10.43 11.16 10.20 12.06 10.04 12.89 10.88 13.27 10.82 13.68 10.76 14.51 11.37 15.34 11.20 27 11.08 10.16 12.05 10.04 12.92 10.90 13.31 10.83 13.69 10.76 14.47 11.35 -1.0 -2 10.82 10.77 10.71 10.65 10.58 29 11.00 10.12 11.87 9.96 12.71 10.81 13.11 10.76 13.51 10.69 14.31 11.30 1.0 0 10.99 | 10.93 | 10.87 | 10.80 10.73 31 10.92 10.09 11.69 9.88 12.49 10.72 12.90 10.67 13.32 10.62 11.24 2.0 11.07 11.01 10.94 10.88 10.81 14.15 1 10.64 10.60 11.19 1.92 11.78 11.68 33 10.27 10.72 9.99 9.81 12.27 12.70 13.13 10.55 13.99 3.0 11.85 11.73 4 35 10.07 9.28 10.55 9.92 11.33 9.73 12.06 10.55 12.50 10.52 12.94 10.48 13.83 11.14 5.0 12 76 12 69 12 61 12 60 12 58 37 9.90 9.84 11.13 9.65 10.46 12.24 10.42 12.66 10.38 11.02 7.0 6 14.16 14.08 14.00 14.02 14.04 9.19 10.38 11.83 13.50 39 9.11 10.20 9.76 10.94 9.57 11.60 10.37 11.99 10.33 12.38 10.28 13.16 10.91 9.0 14.72 14.64 14.56 14.52 14.49 9.72 41 10 23 10.80 10 15 28 15 20 15 11 15 02 14 93 9 55 9.02 10.02 9 68 10.75 9 4 9 1137 10.28 1173 12 09 10 17 1282 115 43 9.38 8.94 9.85 9.60 10.56 9.41 11.14 10.19 11.47 10.13 11.81 10.07 2.48 10.68 13.5 12 16.13 16.04 15.94 15.82 15.75 46 9.21 8.86 9.53 9.34 10.28 9.29 10.88 10.09 11.12 10.00 11.28 9.88 11.96 10.51 15.5 14 16.98 16.88 16.77 16.62 16.58 16 16.5 17.41 17.30 17.19 17.02 50 7.43 7.28 7.63 7.48 8.25 8.09 8.67 8.50 8.60 9.05 8.87 16.99 8.78 8.80 8.62

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Model FDUM125VSAVF Indoor unit FDUM125VF Outdoor unit FDC125VSA Cooling mode (kW) Heating mode:HC (kW)

	_															<u> </u>			-	_				<u> </u>
Outdoor							Ind	oor air t	empera	ture							1	Outo			Indoor	air temp	perature	;
air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB		air te	emp.			°CDB		
	12 °C	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	(°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	F	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	9.23	10.74	10.04	11.03	9.97	11.34	9.90	11.96	10.51	12.57	10.34	F	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	9.44	11.26	10.24	11.57	10.17	11.91	10.11	12.58	10.72	13.25	10.55	-	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	9.63	11.78	10.44	12.11	10.37	12.47	10.31	13.20	10.92	13.92	10.75	F	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	9.84	12.29	10.64	12.65	10.58	13.04	10.52	13.82	11.13	14.59	10.96	F	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	9.94	12.56	10.75	12.92	10.68	13.32	10.62	14.11	11.23	14.90	11.06		-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	10.04	12.82	10.86	13.19	10.79	13.60	10.73	14.40	11.33	15.20	11.15	Г	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	10.04	12.85	10.87	13.23	10.80	13.64	10.74	14.45	11.35	15.27	11.17	Г	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	10.20	12.06	10.04	12.89	10.88	13.27	10.82	13.68	10.76	14.51	11.37	15.34	11.20	Г	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	10.16	12.05	10.04	12.92	10.90	13.31	10.83	13.69	10.76	14.47	11.35			Г	-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	10.12	11.87	9.96	12.71	10.81	13.11	10.76	13.51	10.69	14.31	11.30			Γ	1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	10.09	11.69	9.88	12.49	10.72	12.90	10.67	13.32	10.62	14.15	11.24				2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	9.37	10.72	9.99	11.51	9.81	12.27	10.64	12.70	10.60	13.13	10.55	13.99	11.19			Γ	3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	9.28	10.55	9.92	11.33	9.73	12.06	10.55	12.50	10.52	12.94	10.48	13.83	11.14			Γ	5.0	4	12.76	12.69	12.61	12.60	12.58
37	9.90	9.19	10.38	9.84	11.13	9.65	11.83	10.46	12.24	10.42	12.66	10.38	13.50	11.02			Γ	7.0	6	14.16	14.08	14.00	14.02	14.04
39	9.72	9.11	10.20	9.76	10.94	9.57	11.60	10.37	11.99	10.33	12.38	10.28	13.16	10.91			Γ	9.0	8	14.72	14.64	14.56	14.52	14.49
41	9.55	9.02	10.02	9.68	10.75	9.49	11.37	10.28	11.73	10.23	12.09	10.17	12.82	10.80			Г	11.5	10	15.28	15.20	15.11	15.02	14.93
43	9.38	8.94	9.85	9.60	10.56	9.41	11.14	10.19	11.47	10.13	11.81	10.07	12.48	10.68			Г	13.5	12	16.13	16.04	15.94	15.82	15.75
46	9.21	8.86	9.53	9.34	10.28	9.29	10.88	10.09	11.12	10.00	11.28	9.88	11.96	10.51			Г	15.5	14	16.98	16.88	16.77	16.62	16.58
50	7.43	7.28	7.63	7.48	8.25	8.09	8.67	8.50	8.78	8.60	8.80	8.62	9.05	8.87			Г	16.5	16	17.41	17.30	17.19	17.02	16.99

Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed. (Cooling only) In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency. (2) Capacities are based on the following conditions.

(2) Capacities are based on the following condition
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
(3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

FDUM140VNAVF Indoor unit FDUM140VF Model Outdoor unit FDC140VNA (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Outdoor Indoor air temperature Outdoo 18 °CDB 23 °CDB 28 °CDB 31 °CDB 33 °CDB air temp 21 °CDB 26 °CDB 27 °CDB °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWB 20 °CWB 22 °CWB 24 °CWB CDB CWE 16 18 20 22 24 °CDB SHC TC SHC SHC SHC TC SHC 19.8 -20 7.94 7.91 7.88 7.85 7.82 TC TC SHC TC SHC TC SHC TC TC 10.75 11.05 9.86 12.34 13.01 3.68 10.85 8.44 8.41 8.37 8.34 8.30 11.68 12.00 10.63 10.50 11.15 17.7 -18 13 11.56 10.03 12.25 10.93 12.59 10.79 12.95 10.66 13.69 11.31 14.42 11.00 -15.7 -16 8.94 8.90 8.86 8.82 8.79 15 12.07 10.21 12.81 11.10 13.18 10.97 13.57 10.83 14.36 11.47 15.14 11.15 -13.5 -14 9.50 9.46 9.41 9.37 9.33 17 12.59 10.38 11.27 13.77 14.19 15.87 11.31 -11.5 -12 10.07 10.02 9.98 9.93 9.88 13.38 11.14 15.04 19 12.86 10.48 13.66 11.36 14.07 11.23 14.49 11.09 15.35 11.71 16.20 11.38 -9.5 -10 10.64 10.59 10.54 10.49 10.44 21 13.12 10.57 13.95 11.45 14.36 11.31 14.79 11.17 15.66 11.79 6.53 11.45 -7.5 -8 11.21 11.15 11.10 11.04 10.99 23 13.12 10.57 13.99 11.47 14.40 11.33 14.84 11.19 15.73 11.81 6.61 11.47 -5.5 -6 11.51 11.45 11.39 11.33 11.27 25 -3.0 -4 11.80 11.74 11.68 11.62 11.55 12.14 10.90 13.11 10.57 14.02 11.48 14.44 11.34 14.89 11.20 15.79 11.82 16.69 11.49 27 12.06 10.86 13.11 10.57 14.06 11.49 14.48 11.35 14.90 11.20 15.74 11.81 -1.0 -2 12.11 12.05 11.98 11.91 11.84 29 11.97 10.83 12.91 10.50 13.82 11.41 14.26 11.29 14.70 11.15 15.56 11.77 1.0 0 12.42 | 12.35 | 12.28 | 12.20 | 12.13 31 11.88 10.80 12.72 10.43 13.59 11.34 14.04 11.22 14.49 11.09 15.40 11.73 2.0 12.58 12.50 12.43 12.35 12.28 1 13.20 10.36 13.82 11.15 11.68 33 11.18 11.67 10.71 12.52 13.36 11.27 14.29 11.03 15.22 3.0 13.35 13.27 13.13 13.08 4 35 10.96 9.93 11.48 10.64 12.32 10.29 13.11 11.19 13.60 11.09 14.09 10.97 15.05 11.64 5.0 14.12 14 05 13 96 13 95 13 93 37 10.76 9.85 11.29 10.57 12.11 10.22 12.87 11.12 13.32 11.01 13.77 10.89 11.55 7.0 6 15.68 15.59 15.50 15.52 15.55 14.69 39 10.58 9.77 10.50 11.91 10.15 12.62 11.04 13.05 10.93 13.46 10.80 14.32 11.46 9.0 16.30 16.21 16.11 16.07 16.03 11.10 41 10.85 11.37 10 16 91 16 63 16.53 10.39 9 70 10.91 10 43 11 70 10.08 12 37 10.96 12 76 13 16 10.72 13 95 11.5 16.83 16 73 43 10.21 9.62 10.71 10.36 11.49 10.01 12.11 10.89 12.48 10.76 12.85 10.64 13.58 11.29 13.5 12 17.86 17.76 17.65 17.52 17.44 46 10.03 9.54 10.47 10.26 11.13 9.89 11.73 10.77 12.10 10.66 12.27 10.48 13.01 11.15 15.5 14 18.80 18.69 18.57 18.40 18.36 16 19.28 19.15 19.03 18.84 50 7.61 7.45 7.88 8.35 8.19 8.75 8.58 8.79 8.80 9.14 16.5 18.81 7.72 8.97 8.98 9.33

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Model FDUM140VSAVF Indoor unit FDUM140VF Outdoor unit FDC140VSA Cooling mode (kW) Heating mode:HC (kW)

		°CDB 21 °CDB 23 °				Indo	oor air t	empera	iture								Outo	door		Indoor	air temp	erature	:	
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB		air te	mp.			°CDB		
an temp.	12 °C	CWB	14 °C	CWB	16 °0	CWB	18 °C	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °0	CWB	°C	CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-1	9.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	9.86	11.68	10.75	12.00	10.63	12.34	10.50	13.01	11.15	13.68	10.85	-1	7.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	10.03	12.25	10.93	12.59	10.79	12.95	10.66	13.69	11.31	14.42	11.00	-1	15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	10.21	12.81	11.10	13.18	10.97	13.57	10.83	14.36	11.47	15.14	11.15	-1	3.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	10.38	13.38	11.27	13.77	11.14	14.19	11.00	15.04	11.64	15.87	11.31	-1	1.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	10.48	13.66	11.36	14.07	11.23	14.49	11.09	15.35	11.71	16.20	11.38	-9	9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	10.57	13.95	11.45	14.36	11.31	14.79	11.17	15.66	11.79	16.53	11.45	-1	7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	10.57	13.99	11.47	14.40	11.33	14.84	11.19	15.73	11.81	16.61	11.47		5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	10.90	13.11	10.57	14.02	11.48	14.44	11.34	14.89	11.20	15.79	11.82	16.69	11.49	-3	3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	10.86	13.11	10.57	14.06	11.49	14.48	11.35	14.90	11.20	15.74	11.81				1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	10.83	12.91	10.50	13.82	11.41	14.26	11.29	14.70	11.15	15.56	11.77			1	1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	10.80	12.72	10.43	13.59	11.34	14.04	11.22	14.49	11.09	15.40	11.73			2	2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	10.02	11.67	10.71	12.52	10.36	13.36	11.27	13.82	11.15	14.29	11.03	15.22	11.68			3	3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	9.93	11.48	10.64	12.32	10.29	13.11	11.19	13.60	11.09	14.09	10.97	15.05	11.64			5	5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	9.85	11.29	10.57	12.11	10.22	12.87	11.12	13.32	11.01	13.77	10.89	14.69	11.55			7	7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	9.77	11.10	10.50	11.91	10.15	12.62	11.04	13.05	10.93	13.46	10.80	14.32	11.46			9	9.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	9.70	10.91	10.43	11.70	10.08	12.37	10.96	12.76	10.85	13.16	10.72	13.95	11.37			1	1.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	9.62	10.71	10.36	11.49	10.01	12.11	10.89	12.48	10.76	12.85	10.64	13.58	11.29			1	3.5	12	17.86	17.76	17.65	17.52	17.44
46	10.03	9.54	10.47	10.26	11.13	9.89	11.73	10.77	12.10	10.66	12.27	10.48	13.01	11.15			1	5.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			1	6.5	16	19.28	19.15	19.03	18.84	18.81

Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed. (Cooling only) In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency. (2) Capacities are based on the following conditions.

(2) Capacities are based on the following condition
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
(3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

(b) Twin type

Model FDUM100VNAPVF Indoor unit FDUM50VF (2 units) Outdoor unit FDC100VNA Cooling mode (kW) (kW) Heating mode:HC 24

0.11			_		_		Indo	oor air t	empera	ture								Outo	door		Indoor	air temp	erature	:
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB		air te	emp.			°CDB		
dii temp.	12 °	CWB	14 °	CWB	16 °C	CWB	18 °C	CWB	19 °C	CWB	20 °C	CWB	22 °C	CWB	24 °C	CWB		°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	П	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	6.73	8.59	7.25	8.82	7.20	9.07	7.15	9.56	7.54	10.06	7.41		-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	6.90	9.00	7.42	9.26	7.37	9.52	7.32	10.06	7.71	10.60	7.58		-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.06	9.42	7.59	9.69	7.54	9.98	7.49	10.56	7.89	11.14	7.76		-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.23	9.84	7.77	10.12	7.71	10.43	7.67	11.05	8.06	11.67	7.93		-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.32	10.05	7.85	10.34	7.80	10.65	7.75	11.29	8.15	11.92	8.01		-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.41	10.25	7.94	10.56	7.89	10.88	7.84	11.52	8.23	12.16	8.09		-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.41	10.28	7.95	10.59	7.90	10.91	7.85	11.56	8.24	12.21	8.11	П	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.50	9.64	7.40	10.31	7.96	10.62	7.91	10.95	7.87	11.61	8.26	12.27	8.13		-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.47	9.64	7.40	10.34	7.98	10.65	7.93	10.96	7.87	11.57	8.25				-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.44	9.50	7.34	10.17	7.90	10.49	7.86	10.81	7.81	11.45	8.20				1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.40	9.35	7.27	9.99	7.83	10.32	7.79	10.66	7.76	11.32	8.16				2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	6.94	8.58	7.33	9.21	7.21	9.82	7.76	10.16	7.73	10.51	7.70	11.19	8.11				3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	6.85	8.44	7.27	9.06	7.14	9.64	7.68	10.00	7.66	10.36	7.64	11.07	8.07				5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	6.78	8.30	7.20	8.91	7.08	9.46	7.61	9.79	7.58	10.13	7.55	10.80	7.97				7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.71	8.16	7.13	8.75	7.00	9.28	7.53	9.59	7.50	9.90	7.46	10.53	7.88				9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.64	8.02	7.07	8.60	6.94	9.09	7.46	9.38	7.42	9.68	7.38	10.26	7.78				11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.57	7.88	7.00	8.45	6.87	8.91	7.38	9.18	7.34	9.45	7.29	9.99	7.69				13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.49	7.67	6.90	8.22	6.77	8.58	7.25	8.83	7.21	9.07	7.15	9.57	7.54				15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.37	7.39	6.77	7.91	6.64	8.19	7.09	8.35	7.02	8.51	6.95	8.83	7.29				16.5	16	13.93	13.84	13.75	13.61	13.59

B PJG000Z013

Model FDUM100VSAPVF Indoor unit FDUM50VF (2 units) Outdoor unit FDC100VSA (kW) Heating mode:HC (kW) Cooling mode

0.11							Indo	oor air t	empera	ture							Ou	door		Indoor	air temp	erature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air	emp.			°CDB		
	12 °	CWB	14 °	CWB	16 °	CWB	18 °0	CWB	19 °	CWB	20 °	CWB	22 °C	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	6.73	8.59	7.25	8.82	7.20	9.07	7.15	9.56	7.54	10.06	7.41	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	6.90	9.00	7.42	9.26	7.37	9.52	7.32	10.06	7.71	10.60	7.58	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.06	9.42	7.59	9.69	7.54	9.98	7.49	10.56	7.89	11.14	7.76	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.23	9.84	7.77	10.12	7.71	10.43	7.67	11.05	8.06	11.67	7.93	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.32	10.05	7.85	10.34	7.80	10.65	7.75	11.29	8.15	11.92	8.01	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.41	10.25	7.94	10.56	7.89	10.88	7.84	11.52	8.23	12.16	8.09	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.41	10.28	7.95	10.59	7.90	10.91	7.85	11.56	8.24	12.21	8.11	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.50	9.64	7.40	10.31	7.96	10.62	7.91	10.95	7.87	11.61	8.26	12.27	8.13	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.47	9.64	7.40	10.34	7.98	10.65	7.93	10.96	7.87	11.57	8.25			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.44	9.50	7.34	10.17	7.90	10.49	7.86	10.81	7.81	11.45	8.20			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.40	9.35	7.27	9.99	7.83	10.32	7.79	10.66	7.76	11.32	8.16			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	6.94	8.58	7.33	9.21	7.21	9.82	7.76	10.16	7.73	10.51	7.70	11.19	8.11			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	6.85	8.44	7.27	9.06	7.14	9.64	7.68	10.00	7.66	10.36	7.64	11.07	8.07			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	6.78	8.30	7.20	8.91	7.08	9.46	7.61	9.79	7.58	10.13	7.55	10.80	7.97			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.71	8.16	7.13	8.75	7.00	9.28	7.53	9.59	7.50	9.90	7.46	10.53	7.88			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.64	8.02	7.07	8.60	6.94	9.09	7.46	9.38	7.42	9.68	7.38	10.26	7.78			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.57	7.88	7.00	8.45	6.87	8.91	7.38	9.18	7.34	9.45	7.29	9.99	7.69			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.49	7.67	6.90	8.22	6.77	8.58	7.25	8.83	7.21	9.07	7.15	9.57	7.54			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.37	7.39	6.77	7.91	6.64	8.19	7.09	8.35	7.02	8.51	6.95	8.83	7.29			16.5	16	13.93	13.84	13.75	13.61	13.59

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

Model	FDU	M125	VNAF	PVF	Indo	or unit	: FDI	JM60	VF (2 ι	units)	O	utdoor	unit	FDC1	25VN	A							
Cooling	j mod	е														(kW)	Hea	ting mo	ode:H	0			(kW)
0.44							Inde	oor air t	empera	iture							0	utdoor		Indoor	air temp	perature	:
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	aiı	temp.			°CDB		
	12 °	CWB	14 °C	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	°CD	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	8.91	10.74	9.69	11.03	9.59	11.34	9.50	11.96	10.07	12.57	9.84	-17.	' -18	8.16	8.13	8.11	8.06	8.03
13					10.63	9.09	11.26	9.87	11.57	9.77	11.91	9.68	12.58	10.25	13.25	10.02	-15.	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	9.27	11.78	10.05	12.11	9.95	12.47	9.86	13.20	10.42	13.92	10.19	-13.	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	9.46	12.29	10.23	12.65	10.13	13.04	10.04	13.82	10.60	14.59	10.36	-11.	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	9.55	12.56	10.33	12.92	10.23	13.32	10.13	14.11	10.69	14.90	10.45	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	9.65	12.82	10.42	13.19	10.32	13.60	10.22	14.40	10.77	15.20	10.52	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	9.65	12.85	10.43	13.23	10.33	13.64	10.24	14.45	10.79	15.27	10.54	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	9.87	12.06	9.65	12.89	10.44	13.27	10.35	13.68	10.25	14.51	10.81	15.34	10.56	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	9.84	12.05	9.64	12.92	10.46	13.31	10.36	13.69	10.25	14.47	10.80			-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	9.80	11.87	9.57	12.71	10.38	13.11	10.29	13.51	10.19	14.31	10.75			1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	9.77	11.69	9.50	12.49	10.30	12.90	10.22	13.32	10.13	14.15	10.70			2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	9.09	10.72	9.68	11.51	9.43	12.27	10.22	12.70	10.15	13.13	10.07	13.99	10.65			3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	9.00	10.55	9.61	11.33	9.36	12.06	10.15	12.50	10.08	12.94	10.01	13.83	10.61			5.0	4	12.76	12.69	12.61	12.60	12.58
37	9.90	8.92	10.38	9.54	11.13	9.29	11.83	10.07	12.24	9.99	12.66	9.92	13.50	10.51			7.0	6	14.16	14.08	14.00	14.02	14.04
39	9.72	8.84	10.20	9.47	10.94	9.21	11.60	9.99	11.99	9.91	12.38	9.83	13.16	10.41			9.0	8	14.72	14.64	14.56	14.52	14.49
41	9.55	8.76	10.02	9.39	10.75	9.14	11.37	9.91	11.73	9.82	12.09	9.74	12.82	10.31			11.5	10	15.28	15.20	15.11	15.02	14.93
43	9.38	8.69	9.85	9.32	10.56	9.07	11.14	9.83	11.47	9.74	11.81	9.65	12.48	10.22			13.5	12	16.13	16.04	15.94	15.82	15.75
46	9.21	8.61	9.53	9.19	10.28	8.96	10.88	9.74	11.12	9.62	11.28	9.48	11.96	10.07			15.5	14	16.98	16.88	16.77	16.62	16.58
50	7.43	7.28	7.63	7.48	8.25	8.09	8.67	8.50	8.78	8.60	8.80	8.62	9.05	8.87			16.5	16	17.41	17.30	17.19	17.02	16.99

PJG000Z013 ∕₿

Model Cooling	_		VSAF	PVF	Indo	or unit	: FDI	JM60\	/F (2 ι	units)	Oı	utdoor	unit	FDC1	25VS/	-	Heati	ng mo	de:H0	Э			(kW)
							Inde	oor air t	empera	iture							Out	door		Indoor	air temp	oerature	,
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air te	emp.			°CDB		
un temp.					16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	8.91	10.74	9.69	11.03	9.59	11.34	9.50	11.96	10.07	12.57	9.84	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	9.09	11.26	9.87	11.57	9.77	11.91	9.68	12.58	10.25	13.25	10.02	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	9.27	11.78	10.05	12.11	9.95	12.47	9.86	13.20	10.42	13.92	10.19	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	9.46	12.29	10.23	12.65	10.13	13.04	10.04	13.82	10.60	14.59	10.36	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	9.55	12.56	10.33	12.92	10.23	13.32	10.13	14.11	10.69	14.90	10.45	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	9.65	12.82	10.42	13.19	10.32	13.60	10.22	14.40	10.77	15.20	10.52	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	9.65	12.85	10.43	13.23	10.33	13.64	10.24	14.45	10.79	15.27	10.54	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	9.87	12.06	9.65	12.89	10.44	13.27	10.35	13.68	10.25	14.51	10.81	15.34	10.56	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	9.84	12.05	9.64	12.92	10.46	13.31	10.36	13.69	10.25	14.47	10.80			-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	9.80	11.87	9.57	12.71	10.38	13.11	10.29	13.51	10.19	14.31	10.75			1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	9.77	11.69	9.50	12.49	10.30	12.90	10.22	13.32	10.13	14.15	10.70			2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	9.09	10.72	9.68	11.51	9.43	12.27	10.22	12.70	10.15	13.13	10.07	13.99	10.65			3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	9.00	10.55	9.61	11.33	9.36	12.06	10.15	12.50	10.08	12.94	10.01	13.83	10.61			5.0	4	12.76	12.69	12.61	12.60	12.58

9.92 13.50

11.96 10.07

10.51

10 41

7.0 6

9.0

11.5 10

13.5 12

15.5 14

16.5

8

16

15.28

Notes (1) These data show average status

9.90 8.92

9.72

9.55

9.38 8.69

9.21 8.61

8 84

8.76

37

39

41

43

46

10.88 9.74

8.67

s (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

8.50 8.78

10.07 12.24

11.99

11.73 9.82 12.09 9.74 12.82 10.31

11.47 9.74 11.81 9.65 12.48 10.22

11.12 9.62 11.28 9.48

9.99

9.99 12.66

9 9 1 12 38 9.83 13.16

8.60 8.80 8.62 9.05 8.87

10.38 9.54

10.20 9 4 7

10.02 9.39 10.75 9.14 11.37 9.91

9.85 9.32 10.56 9.07 11.14 9.83

9.53 9.19 11.13 9.29 11.83

10.94

10.28

8.25 8.09

9 2 1 11.60

8.96

17.41 17.30 17.19 17.02 16.99 PJG000Z013

14.16 | 14.08 | 14.00 | 14.02 | 14.04

14.72 14.64 14.56 14.52 14.49

15.20 15.11 15.02

16.13 | 16.04 | 15.94 | 15.82 | 15.75 16.98 16.88 16.77 16.62 16.58

14.93

FDUM140VNAPVF1 Indoor unit FDUM71VF1 (2 units) Outdoor unit FDC140VNA Model (kW) (kW) Heating mode:HC Cooling mode Indoor air temperature Outdoor Indoor air temperature Outdoo 18 °CDB 23 °CDB 28 °CDB 31 °CDB 33 °CDB air temp 21 °CDB 26 °CDB 27 °CDB °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWB 20 °CWB 22 °CWB 24 °CWB CDB CWE 16 18 20 22 24 °CDB TC SHC TC SHC SHC TC 19.8 -20 7.94 7.91 7.88 7.85 7.82 TC SHC TC SHC TC SHC SHC TC TC SHC 11.05 11.08 12.34 3.01 3.68 11.29 8.44 8.41 8.37 8.34 8.30 10.16 11.68 12.00 10.97 10.86 11.55 17.7 -18 13 11.56 10.34 12.25 11.27 12.59 11.16 12.95 11.04 13.69 11.73 14.42 11.46 -15.7 -16 8.94 8.90 8.86 8.82 8.79 15 12.07 10.53 12.81 11.46 13.18 11.34 13.57 11.23 14.36 11.91 15.14 11.64 -13.5 -14 9.50 9.46 9.41 9.37 9.33 17 12.59 10.72 11.65 13.77 14.19 15.04 12.10 15.87 11.81 -11.5 -12 10.07 10.02 9.98 9.93 9.88 13.38 11.53 11.42 19 12.86 10.82 13.66 11.74 14.07 11.63 14.49 11.51 15.35 12.18 16.20 11.89 -9.5 -10 10.64 10.59 10.54 10.49 10.44 21 13.12 10.92 13.95 11.84 14.36 11.72 14.79 11.60 15.66 12.27 6.53 11.97 -7.5 -8 11.21 11.15 11.10 11.04 10.99 23 13.12 10.92 13.99 11.85 14.40 11.73 14.84 11.62 15.73 12.29 6.61 11.99 -5.5 -6 11.51 11.45 11.39 11.33 11.27 25 -3.0 -4 11.80 11.74 11.68 11.62 11.55 12.14 11.20 13.11 10.91 14.02 11.86 14.44 11.75 14.89 11.63 15.79 12.30 16.69 12.01 27 12.06 11.16 13.11 10.91 14.06 11.88 14.48 11.76 14.90 11.64 15.74 12.29 -1.0 -2 12.11 12.05 11.98 11.91 11.84 29 11.97 11.13 12.91 10.84 13.82 11.80 14.26 11.69 14.70 11.57 15.56 12.24 1.0 0 12.42 | 12.35 | 12.28 | 12.20 12.13 31 11.88 11.09 12.72 10.76 13.59 11.72 14.04 11.62 14.49 11.51 15.40 12.19 2.0 12.58 12.50 12.43 12.35 12.28 1 11.64 13.82 11.55 13.20 33 11.18 11.67 11.01 12.52 10.69 13.36 14.29 11.45 12.15 3.0 13.35 13.27 13.13 13.08 4 35 10.96 10.19 11.48 10.93 12.32 10.62 13.11 11.56 13.60 11.48 14.09 11.39 15.05 12.10 5.0 14.12 14 05 13 96 13 95 13.93 37 10.76 10.10 11.29 10.85 12.11 10.54 12.87 11.48 13.32 11.39 13.77 11.29 14.69 12.00 7.0 6 15.68 15.59 15.50 15.52 15.55 39 10.58 10.02 11.10 10.78 11.91 10.47 12.62 11.39 13.05 11.30 13.46 11.20 14.32 11.90 9.0 16.30 16.21 16.11 16.07 16.03 8 41 11 21 11 80 10 16 63 16 53 10.39 9 94 10.91 10.69 1170 10.39 12 37 1131 12 76 13 16 11 11 13 95 115 16 91 16 83 16 73 43 10.21 9.86 10.71 10.50 11.49 10.32 12.11 11.23 12.48 11.12 12.85 11.02 3.58 11.70 13.5 12 7.86 17.76 17.65 17.52 17.44 46 10.03 9.78 10.47 10.26 11.13 10.19 11.73 11.10 12.10 11.01 12.27 10.84 13.01 11.55 15.5 14 18.80 18.69 18.57 18.40 18.36 16 19.28 19.15 19.03 18.84 50 7.61 7.45 7.88 8.35 8.75 8.58 8.97 8.79 8.98 9.14 16.5 18.81 7.72 8.19 8.80 9.33

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Model FDUM140VSAPVF1 Indoor unit FDUM71VF1 (2 units) Outdoor unit FDC140VSA Cooling mode (kW) Heating mode:HC (kW)

							Indo	oor air t	empera	iture							Г	Outo	door		Indoor	air temp	erature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB		air te	emp.			°CDB		
dii tompi	12 °C	CWB	14 °C	CWB	16 °	CWB	18 °C	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	°(CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-1	19.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	10.16	11.68	11.08	12.00	10.97	12.34	10.86	13.01	11.55	13.68	11.29	-1	17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	10.34	12.25	11.27	12.59	11.16	12.95	11.04	13.69	11.73	14.42	11.46	-1	15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	10.53	12.81	11.46	13.18	11.34	13.57	11.23	14.36	11.91	15.14	11.64	-1	13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	10.72	13.38	11.65	13.77	11.53	14.19	11.42	15.04	12.10	15.87	11.81	-1	11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	10.82	13.66	11.74	14.07	11.63	14.49	11.51	15.35	12.18	16.20	11.89	-	9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	10.92	13.95	11.84	14.36	11.72	14.79	11.60	15.66	12.27	16.53	11.97	-	7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	10.92	13.99	11.85	14.40	11.73	14.84	11.62	15.73	12.29	16.61	11.99	-	5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	11.20	13.11	10.91	14.02	11.86	14.44	11.75	14.89	11.63	15.79	12.30	16.69	12.01	-	3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	11.16	13.11	10.91	14.06	11.88	14.48	11.76	14.90	11.64	15.74	12.29			Г	1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	11.13	12.91	10.84	13.82	11.80	14.26	11.69	14.70	11.57	15.56	12.24			Г	1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	11.09	12.72	10.76	13.59	11.72	14.04	11.62	14.49	11.51	15.40	12.19			2	2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	10.28	11.67	11.01	12.52	10.69	13.36	11.64	13.82	11.55	14.29	11.45	15.22	12.15			- (3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	10.19	11.48	10.93	12.32	10.62	13.11	11.56	13.60	11.48	14.09	11.39	15.05	12.10				5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	10.10	11.29	10.85	12.11	10.54	12.87	11.48	13.32	11.39	13.77	11.29	14.69	12.00				7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	10.02	11.10	10.78	11.91	10.47	12.62	11.39	13.05	11.30	13.46	11.20	14.32	11.90			9	9.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	9.94	10.91	10.69	11.70	10.39	12.37	11.31	12.76	11.21	13.16	11.11	13.95	11.80			1	1.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	9.86	10.71	10.50	11.49	10.32	12.11	11.23	12.48	11.12	12.85	11.02	13.58	11.70			1	3.5	12	17.86	17.76	17.65	17.52	17.44
46	10.03	9.78	10.47	10.26	11.13	10.19	11.73	11.10	12.10	11.01	12.27	10.84	13.01	11.55			1	5.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			1	6.5	16	19.28	19.15	19.03	18.84	18.81

Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed. (Cooling only) In the heating mode in which the outside air temperature is 0°CDB or less, the compressor operates at maximum frequency. (2) Capacities are based on the following conditions.

(2) Capacities are based on the following condition
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
(3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

(c) Triple type

Model FDUM140VNATVF Indoor unit FDUM50VF (3 units) Outdoor unit FDC140VNA (kW) Heating mode:HC (1/1/1) Cooling mode

							Inde	oor air t	empera	iture								Dutdoo	or		lr
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	а	ir temp	٥.		
dii temp.	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	°C[OB °C	WB	16	Γ
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19	.8 -2	20	7.94	Γ
11					11.05	9.61	11.68	10.40	12.00	10.33	12.34	10.26	13.01	10.86	13.68	10.68	-17	.7 -	18	8.44	Γ
13					11.56	9.83	12.25	10.63	12.59	10.56	12.95	10.49	13.69	11.09	14.42	10.91	-15	.7 -	16	8.94	Γ
15					12.07	10.05	12.81	10.85	13.18	10.78	13.57	10.71	14.36	11.32	15.14	11.14	-13	.5 -	14	9.50	Г
17					12.59	10.27	13.38	11.08	13.77	11.01	14.19	10.95	15.04	11.55	15.87	11.37	-11	.5 -	12	10.07	1
19					12.86	10.39	13.66	11.19	14.07	11.13	14.49	11.06	15.35	11.66	16.20	11.47	-9.	5 -	10	10.64	1
21					13.12	10.51	13.95	11.31	14.36	11.24	14.79	11.17	15.66	11.77	16.53	11.58	-7.	5 -	-8	11.21	1
23					13.12	10.51	13.99	11.33	14.40	11.26	14.84	11.19	15.73	11.79	16.61	11.60	-5.	5 -	-6	11.51	1
25			12.14	10.65	13.11	10.50	14.02	11.34	14.44	11.27	14.89	11.21	15.79	11.81	16.69	11.63	-3.	0 -	-4	11.80	ľ
27			12.06	10.61	13.11	10.50	14.06	11.36	14.48	11.29	14.90	11.21	15.74	11.79			-1.	0 -	-2	12.11	ľ
29			11.97	10.57	12.91	10.41	13.82	11.26	14.26	11.20	14.70	11.14	15.56	11.73			1.0)	0	12.42	T
31			11.88	10.53	12.72	10.33	13.59	11.17	14.04	11.12	14.49	11.06	15.40	11.67			2.)	1	12.58	ľ
33	11.18	9.82	11.67	10.43	12.52	10.24	13.36	11.07	13.82	11.03	14.29	10.98	15.22	11.61			3.) :	2	13.35	1
35	10.96	9.71	11.48	10.35	12.32	10.15	13.11	10.97	13.60	10.95	14.09	10.91	15.05	11.55			5.0) (4	14.12	T
37	10.76	9.62	11.29	10.26	12.11	10.07	12.87	10.88	13.32	10.84	13.77	10.79	14.69	11.43			7.0)	6	15.68	ľ
39	10.58	9.53	11.10	10.17	11.91	9.98	12.62	10.78	13.05	10.73	13.46	10.68	14.32	11.30			9.)	8	16.30	ľ
41	10.39	9.43	10.91	10.08	11.70	9.89	12.37	10.67	12.76	10.62	13.16	10.56	13.95	11.18			11.	.5 1	10	16.91	ľ
43	10.21	9.34	10.71	9.99	11.49	9.80	12.11	10.57	12.48	10.52	12.85	10.45	13.58	11.05			13.	.5 1	12	17.86	ľ
46	10.03	9.25	10.47	9.88	11.13	9.65	11.73	10.42	12.10	10.37	12.27	10.24	13.01	10.86			15.	5 1	14	18.80	ľ
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			16.	.5 1	16	19.28	1

۷,)	Heatıı	ng mo	de:H	ز			(KVV)
			door		Indoor	air temp	erature	:
		air te	emp.			°CDB		
		°CDB	°CWB	16	18	20	22	24
;		-19.8	-20	7.94	7.91	7.88	7.85	7.82
		-17.7	-18	8.44	8.41	8.37	8.34	8.30
		-15.7	-16	8.94	8.90	8.86	8.82	8.79
		-13.5	-14	9.50	9.46	9.41	9.37	9.33
,		-11.5	-12	10.07	10.02	9.98	9.93	9.88
		-9.5	-10	10.64	10.59	10.54	10.49	10.44
		-7.5	-8	11.21	11.15	11.10	11.04	10.99
		-5.5	-6	11.51	11.45	11.39	11.33	11.27
		-3.0	-4	11.80	11.74	11.68	11.62	11.55
		-1.0	-2	12.11	12.05	11.98	11.91	11.84
		1.0	0	12.42	12.35	12.28	12.20	12.13
		2.0	1	12.58	12.50	12.43	12.35	12.28
		3.0	2	13.35	13.27	13.20	13.13	13.08
		5.0	4	14.12	14.05	13.96	13.95	13.93
		7.0	6	15.68	15.59	15.50	15.52	15.55
		9.0	8	16.30	16.21	16.11	16.07	16.03
		11.5	10	16.91	16.83	16.73	16.63	16.53
		13.5	12	17.86	17.76	17.65	17.52	17.44
		15.5	14	18.80	18.69	18.57	18.40	18.36
		16.5	16	19.28	19.15	19.03	18.84	18.81
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Model FDUM140VSATVF Indoor unit FDUM50VF (3 units) Outdoor unit FDC140VSA (kW) Heating mode:HC (kW) Cooling mode

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0.11							Indo	or air t	empera	ture								Outdo	oor		Indoor	air temp	erature	:
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB		air ter	mp.			°CDB		
	12 °C	CWB	14 °C	CWB	16 °C	CWB	18 °0	CWB	19 °C	CWB	20 °C	CWB	22 °(CWB	24 °0	CWB	°C	DB °	CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-1	9.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	9.61	11.68	10.40	12.00	10.33	12.34	10.26	13.01	10.86	13.68	10.68	-1	7.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	9.83	12.25	10.63	12.59	10.56	12.95	10.49	13.69	11.09	14.42	10.91	-1	5.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	10.05	12.81	10.85	13.18	10.78	13.57	10.71	14.36	11.32	15.14	11.14	-1	3.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	10.27	13.38	11.08	13.77	11.01	14.19	10.95	15.04	11.55	15.87	11.37	-1	1.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	10.39	13.66	11.19	14.07	11.13	14.49	11.06	15.35	11.66	16.20	11.47	-6	9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	10.51	13.95	11.31	14.36	11.24	14.79	11.17	15.66	11.77	16.53	11.58	-7	7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	10.51	13.99	11.33	14.40	11.26	14.84	11.19	15.73	11.79	16.61	11.60	-4	5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	10.65	13.11	10.50	14.02	11.34	14.44	11.27	14.89	11.21	15.79	11.81	16.69	11.63	-:	3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	10.61	13.11	10.50	14.06	11.36	14.48	11.29	14.90	11.21	15.74	11.79				1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	10.57	12.91	10.41	13.82	11.26	14.26	11.20	14.70	11.14	15.56	11.73			_1	.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	10.53	12.72	10.33	13.59	11.17	14.04	11.12	14.49	11.06	15.40	11.67			2	.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	9.82	11.67	10.43	12.52	10.24	13.36	11.07	13.82	11.03	14.29	10.98	15.22	11.61			3	.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	9.71	11.48	10.35	12.32	10.15	13.11	10.97	13.60	10.95	14.09	10.91	15.05	11.55			5	.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	9.62	11.29	10.26	12.11	10.07	12.87	10.88	13.32	10.84	13.77	10.79	14.69	11.43			7	.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	9.53	11.10	10.17	11.91	9.98	12.62	10.78	13.05	10.73	13.46	10.68	14.32	11.30			9	.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	9.43	10.91	10.08	11.70	9.89	12.37	10.67	12.76	10.62	13.16	10.56	13.95	11.18			1	1.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	9.34	10.71	9.99	11.49	9.80	12.11	10.57	12.48	10.52	12.85	10.45	13.58	11.05			1	3.5	12	17.86	17.76	17.65	17.52	17.44
46	10.03	9.25	10.47	9.88	11.13	9.65	11.73	10.42	12.10	10.37	12.27	10.24	13.01	10.86			1	5.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			1	6.5	16	19.28	19.15	19.03	18.84	18.81

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

(6) Floor standing type (FDF) (a) Single type

Model FDF100VNAVD2 Outdoor unit FDC100VNA Indoor unit FDF100VD2 Cooling mode

(kW) Heating mode:HC

(kW)

0.11							Indo	oor air t	empera	ture							Oı	ıtdoor		Indoor	air temp	perature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air	temp.			°CDB		
	12 °C	CWB	14 °0	CWB	16 °C	CWB	18 °C	CWB	19 °C	CWB	20 °C	CWB	22 °C	CWB	24 °	CWB	°CDI	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	7.02	8.59	7.61	8.82	7.55	9.07	7.49	9.56	7.93	10.06	7.79	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	7.18	9.00	7.77	9.26	7.71	9.52	7.65	10.06	8.09	10.60	7.95	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.34	9.42	7.93	9.69	7.87	9.98	7.82	10.56	8.25	11.14	8.11	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.50	9.84	8.09	10.12	8.03	10.43	7.98	11.05	8.42	11.67	8.27	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.59	10.05	8.18	10.34	8.12	10.65	8.06	11.29	8.50	11.92	8.35	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.67	10.25	8.26	10.56	8.20	10.88	8.15	11.52	8.57	12.16	8.42	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.67	10.28	8.27	10.59	8.21	10.91	8.16	11.56	8.59	12.21	8.44	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.79	9.64	7.67	10.31	8.28	10.62	8.23	10.95	8.17	11.61	8.61	12.27	8.46	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.76	9.64	7.67	10.34	8.29	10.65	8.24	10.96	8.17	11.57	8.59			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.73	9.50	7.61	10.17	8.22	10.49	8.18	10.81	8.12	11.45	8.55			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.70	9.35	7.54	9.99	8.15	10.32	8.11	10.66	8.06	11.32	8.51			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	7.19	8.58	7.63	9.21	7.48	9.82	8.09	10.16	8.05	10.51	8.01	11.19	8.46			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	7.10	8.44	7.57	9.06	7.42	9.64	8.01	10.00	7.99	10.36	7.95	11.07	8.42			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	7.04	8.30	7.50	8.91	7.35	9.46	7.94	9.79	7.91	10.13	7.87	10.80	8.33			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.97	8.16	7.44	8.75	7.29	9.28	7.87	9.59	7.83	9.90	7.79	10.53	8.24			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.90	8.02	7.38	8.60	7.22	9.09	7.80	9.38	7.76	9.68	7.71	10.26	8.15			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.84	7.88	7.32	8.45	7.16	8.91	7.73	9.18	7.68	9.45	7.63	9.99	8.07			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.75	7.67	7.22	8.22	7.07	8.58	7.60	8.83	7.55	9.07	7.49	9.57	7.93			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.64	7.39	7.10	7.91	6.94	8.19	7.46	8.35	7.38	8.51	7.30	8.83	7.69			16.5	16	13.93	13.84	13.75	13.61	13.59

PGA000Z772

Model FDF100VSAVD2 Indoor unit FDF100VD2 Outdoor unit FDC100VSA Cooling mode

(kW) Heating mode:HC

(kW)

	,	_														, ,				_			` ′
0.11			21 °CDB 23 °CDB				Indo	oor air t	empera	ture							О	utdoor		Indoor	air temp	erature	:
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	ai	temp.			°CDB		
un tomp.	12 °C	CWB	14 °C	CWB	16 °	CWB	18 °0	CWB	19 °C	CWB	20 °C	CWB	22 °C	CWB	24 °	CWB	°CD	3 °CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.	3 -20	6.82	6.79	6.77	6.75	6.72
11					8.12	7.02	8.59	7.61	8.82	7.55	9.07	7.49	9.56	7.93	10.06	7.79	-17.	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	7.18	9.00	7.77	9.26	7.71	9.52	7.65	10.06	8.09	10.60	7.95	-15.	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.34	9.42	7.93	9.69	7.87	9.98	7.82	10.56	8.25	11.14	8.11	-13.	5 -14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.50	9.84	8.09	10.12	8.03	10.43	7.98	11.05	8.42	11.67	8.27	-11.	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.59	10.05	8.18	10.34	8.12	10.65	8.06	11.29	8.50	11.92	8.35	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.67	10.25	8.26	10.56	8.20	10.88	8.15	11.52	8.57	12.16	8.42	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.67	10.28	8.27	10.59	8.21	10.91	8.16	11.56	8.59	12.21	8.44	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.79	9.64	7.67	10.31	8.28	10.62	8.23	10.95	8.17	11.61	8.61	12.27	8.46	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.76	9.64	7.67	10.34	8.29	10.65	8.24	10.96	8.17	11.57	8.59			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.73	9.50	7.61	10.17	8.22	10.49	8.18	10.81	8.12	11.45	8.55			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.70	9.35	7.54	9.99	8.15	10.32	8.11	10.66	8.06	11.32	8.51			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	7.19	8.58	7.63	9.21	7.48	9.82	8.09	10.16	8.05	10.51	8.01	11.19	8.46			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	7.10	8.44	7.57	9.06	7.42	9.64	8.01	10.00	7.99	10.36	7.95	11.07	8.42			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	7.04	8.30	7.50	8.91	7.35	9.46	7.94	9.79	7.91	10.13	7.87	10.80	8.33			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.97	8.16	7.44	8.75	7.29	9.28	7.87	9.59	7.83	9.90	7.79	10.53	8.24			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.90	8.02	7.38	8.60	7.22	9.09	7.80	9.38	7.76	9.68	7.71	10.26	8.15			11.	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.84	7.88	7.32	8.45	7.16	8.91	7.73	9.18	7.68	9.45	7.63	9.99	8.07			13.	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.75	7.67	7.22	8.22	7.07	8.58	7.60	8.83	7.55	9.07	7.49	9.57	7.93			15.	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.64	7.39	7.10	7.91	6.94	8.19	7.46	8.35	7.38	8.51	7.30	8.83	7.69			16.	16	13.93	13.84	13.75	13.61	13.59

Notes (1) These data show average status.

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Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

PGA000Z772

Model Cooling			NAVD	' In	door u	nit F	FDF12	5VD	Ou	ıtdoor ı	unit l	FDC12	25VNA	١.		(kW)	Heati	ng mo	ode:H0	С			(kW)
							Indo	oor air t	empera	iture							Out	door		Indoor	air temp	perature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	emp.			°CDB		
an temp.	12 °	CWB	14 °0	CWB 16 °CWB 18 °C			CWB	19 °0	CWB	20 °0	CWB	22 °C	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24	
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	7.89	10.74	8.45	11.03	8.38	11.34	8.32	11.96	8.72	12.57	8.55	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	8.10	11.26	8.67	11.57	8.60	11.91	8.53	12.58	8.94	13.25	8.76	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	8.31	11.78	8.88	12.11	8.81	12.47	8.75	13.20	9.16	13.92	8.98	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	8.53	12.29	9.10	12.65	9.03	13.04	8.97	13.82	9.38	14.59	9.20	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	8.64	12.56	9.21	12.92	9.14	13.32	9.08	14.11	9.49	14.90	9.30	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	8.75	12.82	9.32	13.19	9.25	13.60	9.19	14.40	9.59	15.20	9.40	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	8.75	12.85	9.34	13.23	9.27	13.64	9.20	14.45	9.61	15.27	9.43	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	8.86	12.06	8.75	12.89	9.35	13.27	9.28	13.68	9.22	14.51	9.63	15.34	9.45	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	8.82	12.05	8.74	12.92	9.37	13.31	9.30	13.69	9.22	14.47	9.62			-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	8.78	11.87	8.66	12.71	9.28	13.11	9.22	13.51	9.15	14.31	9.56			1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	8.74	11.69	8.58	12.49	9.18	12.90	9.13	13.32	9.08	14.15	9.50			2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	8.22	10.72	8.64	11.51	8.49	12.27	9.09	12.70	9.05	13.13	9.00	13.99	9.44			3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	8.12	10.55	8.56	11.33	8.41	12.06	9.00	12.50	8.97	12.94	8.93	13.83	9.38			5.0	4	12.76	12.69	12.61	12.60	12.58
37	9.90	8.03	10.38	8.48	11.13	8.32	11.83	8.90	12.24	8.86	12.66	8.82	13.50	9.26			7.0	6	14.16	14.08	14.00	14.02	14.04
39	9.72	7.94	10.20	8.39	10.94	8.24	11.60	8.81	11.99	8.76	12.38	8.71	13.16	9.14			9.0	8	14.72	14.64	14.56	14.52	14.49
41	9.55	7.85	10.02	8.30	10.75	8.15	11.37	8.71	11.73	8.66	12.09	8.60	12.82	9.02			11.5	10	15.28	15.20	15.11	15.02	14.93
43	9.38	7.76	9.85	8.22	10.56	8.07	11.14	8.62	11.47	8.56	11.81	8.49	12.48	8.90			13.5	12	16.13	16.04	15.94	15.82	15.75
46	9.21	7.68	9.53	8.07	10.28	7.94	10.88	8.51	11.12	8.42	11.28	8.29	11.96	8.72			15.5	14	16.98	16.88	16.77	16.62	16.58
50	7.43	6.80	7.63	7.20	8.25	7.08	8.67	7.64	8.78	7.53	8.80	7.40	9.05	7.76			16.5	16	17.41	17.30	17.19	17.02	16.99

Model FDF125VSAVD Indoor unit FDF125VD Outdoor unit FDC125VSA (kW) Cooling mode (kW) Heating mode:HC

			DB 21 °CDB				Indo	oor air t	empera	ture							ΙГ	Outo	door		Indoor	air temp	perature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	Ш	air te	emp.			°CDB		
all tomp.	12 °C	CWB	14 °C	CWB	16 °C	CWB	18 °0	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °0	CWB	Ιſ	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	ΙF	-19.8	-20	7.77	7.73	7.70	7.67	7.65
11					10.15	7.89	10.74	8.45	11.03	8.38	11.34	8.32	11.96	8.72	12.57	8.55	ΙF	-17.7	-18	8.16	8.13	8.11	8.06	8.03
13					10.63	8.10	11.26	8.67	11.57	8.60	11.91	8.53	12.58	8.94	13.25	8.76	ΙF	-15.7	-16	8.57	8.53	8.50	8.46	8.42
15					11.10	8.31	11.78	8.88	12.11	8.81	12.47	8.75	13.20	9.16	13.92	8.98	ΙF	-13.5	-14	9.02	8.98	8.94	8.90	8.86
17					11.58	8.53	12.29	9.10	12.65	9.03	13.04	8.97	13.82	9.38	14.59	9.20	ΙF	-11.5	-12	9.46	9.41	9.37	9.33	9.28
19					11.82	8.64	12.56	9.21	12.92	9.14	13.32	9.08	14.11	9.49	14.90	9.30	П	-9.5	-10	9.90	9.84	9.80	9.76	9.70
21					12.06	8.75	12.82	9.32	13.19	9.25	13.60	9.19	14.40	9.59	15.20	9.40	П	-7.5	-8	10.32	10.28	10.23	10.17	10.12
23					12.06	8.75	12.85	9.34	13.23	9.27	13.64	9.20	14.45	9.61	15.27	9.43	П	-5.5	-6	10.50	10.45	10.39	10.33	10.28
25			11.16	8.86	12.06	8.75	12.89	9.35	13.27	9.28	13.68	9.22	14.51	9.63	15.34	9.45	П	-3.0	-4	10.66	10.61	10.55	10.49	10.43
27			11.08	8.82	12.05	8.74	12.92	9.37	13.31	9.30	13.69	9.22	14.47	9.62			П	-1.0	-2	10.82	10.77	10.71	10.65	10.58
29			11.00	8.78	11.87	8.66	12.71	9.28	13.11	9.22	13.51	9.15	14.31	9.56			IE	1.0	0	10.99	10.93	10.87	10.80	10.73
31			10.92	8.74	11.69	8.58	12.49	9.18	12.90	9.13	13.32	9.08	14.15	9.50			П	2.0	1	11.07	11.01	10.94	10.88	10.81
33	10.27	8.22	10.72	8.64	11.51	8.49	12.27	9.09	12.70	9.05	13.13	9.00	13.99	9.44			П	3.0	2	11.92	11.85	11.78	11.73	11.68
35	10.07	8.12	10.55	8.56	11.33	8.41	12.06	9.00	12.50	8.97	12.94	8.93	13.83	9.38			П	5.0	4	12.76	12.69	12.61	12.60	12.58
37	9.90	8.03	10.38	8.48	11.13	8.32	11.83	8.90	12.24	8.86	12.66	8.82	13.50	9.26			П	7.0	6	14.16	14.08	14.00	14.02	14.04
39	9.72	7.94	10.20	8.39	10.94	8.24	11.60	8.81	11.99	8.76	12.38	8.71	13.16	9.14			П	9.0	8	14.72	14.64	14.56	14.52	14.49
41	9.55	7.85	10.02	8.30	10.75	8.15	11.37	8.71	11.73	8.66	12.09	8.60	12.82	9.02			П	11.5	10	15.28	15.20	15.11	15.02	14.93
43	9.38	7.76	9.85	8.22	10.56	8.07	11.14	8.62	11.47	8.56	11.81	8.49	12.48	8.90			Iľ	13.5	12	16.13	16.04	15.94	15.82	15.75
46	9.21	7.68	9.53	8.07	10.28	7.94	10.88	8.51	11.12	8.42	11.28	8.29	11.96	8.72			lf	15.5	14	16.98	16.88	16.77	16.62	16.58
50	7.43	6.80	7.63	7.20	8.25	7.08	8.67	7.64	8.78	7.53	8.80	7.40	9.05	7.76			IT	16.5	16	17.41	17.30	17.19	17.02	16.99

Notes (1) These data show average status.

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These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

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(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

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Model Cooling			NAVD) In	door u	ınit F	DF14	0VD	Ou	tdoor	unit l	FDC14	10VNA	١		(kW)	Heati	ng mo	de:H0	С			(kW)
							Inde	oor air t	empera	ture						Ť	Out	door		Indoor	air temp	erature	,
Outdoor	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB		emp.			°CDB		
air temp.	12 °C	CWB	WB 14 °CWB 16 °CWB		18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24		
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.94	7.91	7.88	7.85	7.82
11					10.56	8.07	11.16	8.63	11.47	8.56	11.79	8.49	12.43	8.89	13.07	8.71	-17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.05	8.29	11.71	8.85	12.03	8.78	12.38	8.71	13.08	9.12	13.78	8.93	-15.7	-16	8.94	8.90	8.86	8.82	8.79
15					11.54	8.51	12.25	9.08	12.60	9.01	12.97	8.94	13.72	9.35	14.48	9.16	-13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.03	8.73	12.79	9.31	13.16	9.24	13.57	9.18	14.37	9.58	15.17	9.39	-11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.29	8.86	13.06	9.42	13.45	9.36	13.85	9.29	14.67	9.69	15.49	9.50	-9.5	-10	10.64	10.59	10.54	10.49	10.44
21					12.55	8.97	13.33	9.55	13.72	9.47	14.14	9.41	14.97	9.80	15.80	9.61	-7.5	-8	11.21	11.15	11.10	11.04	10.99
23					12.55	8.97	13.37	9.56	13.76	9.49	14.19	9.42	15.03	9.83	15.88	9.63	-5.5	-6	11.51	11.45	11.39	11.33	11.27
25			11.61	9.08	12.54	8.97	13.40	9.57	13.80	9.51	14.24	9.44	15.09	9.85	15.95	9.66	-3.0	-4	11.80	11.74	11.68	11.62	11.55
27			11.52	9.03	12.54	8.97	13.44	9.59	13.85	9.53	14.24	9.45	15.04	9.83			-1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.44	8.99	12.34	8.88	13.21	9.49	13.63	9.44	14.05	9.37	14.88	9.77			1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.36	8.95	12.16	8.79	12.99	9.40	13.42	9.35	13.85	9.29	14.72	9.71			2.0	1	12.58	12.50	12.43	12.35	12.28
33	10.69	8.44	11.15	8.85	11.97	8.70	12.77	9.30	13.21	9.26	13.66	9.21	14.55	9.65			3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.47	8.33	10.98	8.76	11.77	8.62	12.54	9.20	13.00	9.17	13.46	9.13	14.38	9.59			5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.29	8.23	10.79	8.67	11.58	8.53	12.30	9.10	12.73	9.06	13.17	9.02	14.04	9.46			7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.11	8.14	10.61	8.59	11.38	8.44	12.06	9.00	12.47	8.96	12.87	8.90	13.69	9.33			9.0	8	16.30	16.21	16.11	16.07	16.03
41	9.94	8.05	10.43	8.50	11.18	8.35	11.82	8.90	12.20	8.85	12.58	8.79	13.33	9.21			11.5	10	16.91	16.83	16.73	16.63	16.53
43	9.76	7.96	10.24	8.41	10.99	8.26	11.58	8.80	11.93	8.74	12.29	8.67	12.98	9.08			13.5	12	17.86	17.76	17.65	17.52	17.44
46	9.58	7.87	10.01	8.30	10.64	8.10	11.21	8.65	11.57	8.60	11.73	8.46	12.44	8.89			15.5	14	18.80	18.69	18.57	18.40	18.36
50	7.27	6.73	7.53	7.16	7.99	6.97	8.37	7.52	8.57	7.46	8.58	7.32	8.91	7.72			16.5	16	19.28	19.15	19.03	18.84	18.81

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Model Cooling			SAVD	""	door u		DF140	740	Ou	tdoor	uniit i	DO1-	10VSA			(kW)	Heati	ng mo	de:H0	0			(kW
							Indo	or air t	empera	ture							Out	door		Indoor	air temp	perature)
Outdoor air temp.												air te	emp.			°CDB							
an temp.	12 °C	CWB	14 °C	CWB	16 °	CWB	18 °CWB 19 °CWB 20 °CWB 2						22 °C	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	8.28	11.68	8.84	12.00	8.77	12.34	8.69	13.01	9.09	13.68	8.90	-17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	8.52	12.25	9.08	12.59	9.01	12.95	8.93	13.69	9.33	14.42	9.14	-15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	8.75	12.81	9.32	13.18	9.25	13.57	9.18	14.36	9.58	15.14	9.38	-13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	8.99	13.38	9.56	13.77	9.49	14.19	9.43	15.04	9.83	15.87	9.63	-11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	9.12	13.66	9.69	14.07	9.62	14.49	9.55	15.35	9.94	16.20	9.75	-9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	9.25	13.95	9.82	14.36	9.74	14.79	9.67	15.66	10.06	16.53	9.86	-7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	9.25	13.99	9.83	14.40	9.76	14.84	9.69	15.73	10.09	16.61	9.89	-5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	9.35	13.11	9.24	14.02	9.85	14.44	9.78	14.89	9.71	15.79	10.11	16.69	9.91	-3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	9.30	13.11	9.24	14.06	9.87	14.48	9.80	14.90	9.72	15.74	10.09			-1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	9.26	12.91	9.14	13.82	9.76	14.26	9.70	14.70	9.63	15.56	10.02			1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	9.21	12.72	9.05	13.59	9.66	14.04	9.61	14.49	9.55	15.40	9.96			2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	8.70	11.67	9.11	12.52	8.96	13.36	9.56	13.82	9.52	14.29	9.47	15.22	9.90			3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	8.58	11.48	9.01	12.32	8.87	13.11	9.45	13.60	9.42	14.09	9.38	15.05	9.83			5.0	4	14.12	14.05	13.96	13.95	13.93

14.69 9.70

13.01 9.09

9.56

7.0 6

9.0

11.5 10

13.5 12

15.5 14

16.5 16

8

Notes (1) These data show average status

10.76 8.48

10.58

10.39 8.29

10.21 8.19

10.03 8.10 10.47 8.52 11.13

8.38

37

39

41

43

46

9.35 13.32

9.24

7.67 8.97

13 05

12.76 9.08 13.16 9.02 13.95 9.43

12.48 8.96 12.85 8.89 13.58 9.29

12 62

11.73 8.86 12.10 8.81 12.27 8.67

8.32

9.30 13.77 9.26

9 1 9 13 46 9 13 14 32

7.60 8.98 7.46 9.33 7.85

s (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

11.29 8.92

11.10

10.91 8.73 11.70 8.58 12.37 9.13

10.71 8.64 11.49 8.49 12.11 9.02

8 83 11 91 8 68

12.11 8.77 12.87

8.35 7.12 8.75

19.28 19.15 19.03 18.84 18.81 PGA000Z772

15.68 | 15.59 | 15.50 | 15.52 | 15.55

16.73

17.86 | 17.76 | 17.65 | 17.52 | 17.44

18.80 18.69 18.57 18.40 18.36

16.03

16.63 16.53

16.30 16.21 16.11 16.07

16.91 16.83

(b) Twin type

Model FDF140VNAPVD1 Indoor unit FDF71VD1 (2 units) Outdoor unit FDC140VNA Cooling mode (kW) Heating mode:HC (1/1/1)

0.44							Ind	oor air t	empera	iture							Г	Outo	door		Ir
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	ı	air te	emp.		
un temp.	12 °	CWB	14 °	CWB	16 °	CWB	18 °	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	ſ	°CDB	°CWB	16	Γ
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	ſ	-19.8	-20	7.94	Γ
11					11.05	8.94	11.68	9.66	12.00	9.54	12.34	9.42	13.01	9.94	13.68	9.65	ſ	-17.7	-18	8.44	Γ
13					11.56	9.12	12.25	9.85	12.59	9.73	12.95	9.60	13.69	10.11	14.42	9.82	Ī	-15.7	-16	8.94	T
15					12.07	9.31	12.81	10.04	13.18	9.91	13.57	9.79	14.36	10.29	15.14	9.99	Ī	-13.5	-14	9.50	T
17					12.59	9.51	13.38	10.23	13.77	10.10	14.19	9.98	15.04	10.48	15.87	10.17	ſ	-11.5	-12	10.07	ľ
19					12.86	9.61	13.66	10.32	14.07	10.20	14.49	10.07	15.35	10.56	16.20	10.25	Ī	-9.5	-10	10.64	ŀ
21					13.12	9.71	13.95	10.43	14.36	10.30	14.79	10.17	15.66	10.65	16.53	10.33	ſ	-7.5	-8	11.21	ľ
23					13.12	9.71	13.99	10.44	14.40	10.31	14.84	10.18	15.73	10.67	16.61	10.35	Ī	-5.5	-6	11.51	ľ
25			12.14	9.97	13.11	9.70	14.02	10.45	14.44	10.32	14.89	10.20	15.79	10.68	16.69	10.37	Ī	-3.0	-4	11.80	ľ
27			12.06	9.94	13.11	9.70	14.06	10.46	14.48	10.34	14.90	10.20	15.74	10.67			Ī	-1.0	-2	12.11	ľ
29			11.97	9.90	12.91	9.63	13.82	10.38	14.26	10.26	14.70	10.14	15.56	10.62			ſ	1.0	0	12.42	ľ
31			11.88	9.87	12.72	9.55	13.59	10.30	14.04	10.19	14.49	10.07	15.40	10.58			ſ	2.0	1	12.58	ľ
33	11.18	9.23	11.67	9.78	12.52	9.48	13.36	10.22	13.82	10.12	14.29	10.01	15.22	10.53			Ī	3.0	2	13.35	1
35	10.96	9.13	11.48	9.70	12.32	9.40	13.11	10.14	13.60	10.05	14.09	9.95	15.05	10.48			Ī	5.0	4	14.12	ľ
37	10.76	9.05	11.29	9.62	12.11	9.33	12.87	10.06	13.32	9.96	13.77	9.85	14.69	10.38			Ī	7.0	6	15.68	ľ
39	10.58	8.96	11.10	9.55	11.91	9.25	12.62	9.97	13.05	9.87	13.46	9.76	14.32	10.28			Ī	9.0	8	16.30	ŀ
41	10.39	8.88	10.91	9.47	11.70	9.17	12.37	9.89	12.76	9.78	13.16	9.67	13.95	10.18			ľ	11.5	10	16.91	ŀ
43	10.21	8.80	10.71	9.39	11.49	9.10	12.11	9.80	12.48	9.69	12.85	9.57	13.58	10.09			ľ	13.5	12	17.86	ŀ
46	10.03	8.72	10.47	9.30	11.13	8.97	11.73	9.68	12.10	9.57	12.27	9.40	13.01	9.94			ľ	15.5	14	18.80	ŀ
50	7.61	7.45	7.88	7.72	8.35	8.00	8.75	8.58	8.97	8.65	8.98	8.49	9.33	9.04			ı	16.5	16	19.28	1

V)	١.	неаш	ng mo	de:H	ز			(KVV)
			door		Indoor	air temp	erature	:
		air te	emp.			°CDB		
		°CDB	°CWB	16	18	20	22	24
;		-19.8	-20	7.94	7.91	7.88	7.85	7.82
		-17.7	-18	8.44	8.41	8.37	8.34	8.30
		-15.7	-16	8.94	8.90	8.86	8.82	8.79
		-13.5	-14	9.50	9.46	9.41	9.37	9.33
'		-11.5	-12	10.07	10.02	9.98	9.93	9.88
;		-9.5	-10	10.64	10.59	10.54	10.49	10.44
		-7.5	-8	11.21	11.15	11.10	11.04	10.99
;		-5.5	-6	11.51	11.45	11.39	11.33	11.27
'		-3.0	-4	11.80	11.74	11.68	11.62	11.55
		-1.0	-2	12.11	12.05	11.98	11.91	11.84
		1.0	0	12.42	12.35	12.28	12.20	12.13
		2.0	1	12.58	12.50	12.43	12.35	12.28
		3.0	2	13.35	13.27	13.20	13.13	13.08
		5.0	4	14.12	14.05	13.96	13.95	13.93
		7.0	6	15.68	15.59	15.50	15.52	15.55
		9.0	8	16.30	16.21	16.11	16.07	16.03
		11.5	10	16.91	16.83	16.73	16.63	16.53
		13.5	12	17.86	17.76	17.65	17.52	17.44
		15.5	14	18.80	18.69	18.57	18.40	18.36
		16.5	16	19.28	19.15	19.03	18.84	18.81
								•

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Model FDF140VSAPVD1 Indoor unit FDF71VD1 (2 units) Outdoor unit FDC140VSA Cooling mode

(kW) Heating mode:HC

(kW)

000	,	_														(,			.9					()
				°CDB 23 °CDB			Inde	oor air t	empera	ture							Γ	Outd	loor		Indoor	air temp	oerature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB		air te	mp.			°CDB		
	12 °C	CWB	14 °0	CWB	16 °C	CWB	18 °	CWB	19 °	CWB	20 °C	CWB	22 °	CWB	24 °C	CWB	٩	CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-	19.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	8.94	11.68	9.66	12.00	9.54	12.34	9.42	13.01	9.94	13.68	9.65	-	17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	9.12	12.25	9.85	12.59	9.73	12.95	9.60	13.69	10.11	14.42	9.82	-	15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	9.31	12.81	10.04	13.18	9.91	13.57	9.79	14.36	10.29	15.14	9.99		13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	9.51	13.38	10.23	13.77	10.10	14.19	9.98	15.04	10.48	15.87	10.17	-	11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	9.61	13.66	10.32	14.07	10.20	14.49	10.07	15.35	10.56	16.20	10.25	-	-9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	9.71	13.95	10.43	14.36	10.30	14.79	10.17	15.66	10.65	16.53	10.33	Ŀ	-7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	9.71	13.99	10.44	14.40	10.31	14.84	10.18	15.73	10.67	16.61	10.35	Ŀ	-5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	9.97	13.11	9.70	14.02	10.45	14.44	10.32	14.89	10.20	15.79	10.68	16.69	10.37	Ŀ	-3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	9.94	13.11	9.70	14.06	10.46	14.48	10.34	14.90	10.20	15.74	10.67			-	-1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	9.90	12.91	9.63	13.82	10.38	14.26	10.26	14.70	10.14	15.56	10.62			L	1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	9.87	12.72	9.55	13.59	10.30	14.04	10.19	14.49	10.07	15.40	10.58			L	2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	9.23	11.67	9.78	12.52	9.48	13.36	10.22	13.82	10.12	14.29	10.01	15.22	10.53			Ŀ	3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	9.13	11.48	9.70	12.32	9.40	13.11	10.14	13.60	10.05	14.09	9.95	15.05	10.48			Ŀ	5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	9.05	11.29	9.62	12.11	9.33	12.87	10.06	13.32	9.96	13.77	9.85	14.69	10.38			Ľ	7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	8.96	11.10	9.55	11.91	9.25	12.62	9.97	13.05	9.87	13.46	9.76	14.32	10.28			Ŀ	9.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	8.88	10.91	9.47	11.70	9.17	12.37	9.89	12.76	9.78	13.16	9.67	13.95	10.18			_1	11.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	8.80	10.71	9.39	11.49	9.10	12.11	9.80	12.48	9.69	12.85	9.57	13.58	10.09			1	13.5	12	17.86	17.76	17.65	17.52	17.44
46	10.03	8.72	10.47	9.30	11.13	8.97	11.73	9.68	12.10	9.57	12.27	9.40	13.01	9.94			1	15.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.00	8.75	8.58	8.97	8.65	8.98	8.49	9.33	9.04			1	16.5	16	19.28	19.15	19.03	18.84	18.81

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

PGA000Z772

(7) Wall mounted type (SRK) (a) Single type

Model SRK100VNAZR Cooling mode Outdoor unit FDC100VNA Indoor unit SRK100ZR-S

(kW) Heating mode:HC

(kW)

0.11							Indo	oor air t	empera	ture							Οι	tdoor		Indoor	air temp	erature	:
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air	temp.			°CDB		
all tollip.	12 °C	CWB	14 °0	CWB	16 °0	CWB	18 °C	CWB	19 °C	CWB	20 °C	CWB	22 °C	CWB	24 °	CWB	°CDE	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	6.51	8.59	7.00	8.82	6.94	9.07	6.89	9.56	7.24	10.06	7.11	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	6.67	9.00	7.16	9.26	7.11	9.52	7.06	10.06	7.42	10.60	7.28	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	6.84	9.42	7.33	9.69	7.28	9.98	7.23	10.56	7.59	11.14	7.46	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.01	9.84	7.51	10.12	7.46	10.43	7.41	11.05	7.77	11.67	7.63	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.10	10.05	7.60	10.34	7.54	10.65	7.49	11.29	7.85	11.92	7.71	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.19	10.25	7.68	10.56	7.63	10.88	7.58	11.52	7.94	12.16	7.79	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.19	10.28	7.70	10.59	7.65	10.91	7.59	11.56	7.95	12.21	7.81	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.28	9.64	7.19	10.31	7.71	10.62	7.66	10.95	7.61	11.61	7.97	12.27	7.83	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.25	9.64	7.19	10.34	7.72	10.65	7.67	10.96	7.61	11.57	7.95			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.22	9.50	7.12	10.17	7.65	10.49	7.61	10.81	7.56	11.45	7.91			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.18	9.35	7.05	9.99	7.57	10.32	7.54	10.66	7.50	11.32	7.86			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	6.75	8.58	7.11	9.21	6.99	9.82	7.50	10.16	7.47	10.51	7.44	11.19	7.82			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	6.66	8.44	7.04	9.06	6.92	9.64	7.43	10.00	7.41	10.36	7.38	11.07	7.77			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	6.59	8.30	6.98	8.91	6.86	9.46	7.35	9.79	7.32	10.13	7.29	10.80	7.68			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.52	8.16	6.91	8.75	6.79	9.28	7.28	9.59	7.24	9.90	7.20	10.53	7.58			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.45	8.02	6.84	8.60	6.72	9.09	7.20	9.38	7.16	9.68	7.12	10.26	7.49			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.38	7.88	6.78	8.45	6.65	8.91	7.12	9.18	7.08	9.45	7.03	9.99	7.39			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.30	7.67	6.68	8.22	6.55	8.58	6.99	8.83	6.94	9.07	6.89	9.57	7.25			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.18	7.39	6.55	7.91	6.42	8.19	6.83	8.35	6.76	8.51	6.68	8.83	7.00			16.5	16	13.93	13.84	13.75	13.61	13.59

PCA001Z630

Model SRK100VSAZR Indoor unit SRK100ZR-S Outdoor unit FDC100VSA Cooling mode

(kW) Heating mode:HC

(kW)

							Inde	or air t	empera	ture							Г	Outo	4000		Indoor	air tamr	erature	
Outdoor															0			air te			mador		Crature	
air temp.		CDB	21 °		_	CDB	26 °			CDB	_	CDB	31 °			CDB	L		-			°CDB		
	12 °	CWB	14 °0	CWB	16 °	CWB	18 °C	CWB	19 °C	CWB	20 °C	CWB	22 °C	CWB	24 °0	CWB		°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC		-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	6.51	8.59	7.00	8.82	6.94	9.07	6.89	9.56	7.24	10.06	7.11	Г	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	6.67	9.00	7.16	9.26	7.11	9.52	7.06	10.06	7.42	10.60	7.28	Г	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	6.84	9.42	7.33	9.69	7.28	9.98	7.23	10.56	7.59	11.14	7.46	Ī	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.01	9.84	7.51	10.12	7.46	10.43	7.41	11.05	7.77	11.67	7.63	Г	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.10	10.05	7.60	10.34	7.54	10.65	7.49	11.29	7.85	11.92	7.71	Γ	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.19	10.25	7.68	10.56	7.63	10.88	7.58	11.52	7.94	12.16	7.79	Γ	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.19	10.28	7.70	10.59	7.65	10.91	7.59	11.56	7.95	12.21	7.81	Γ	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.28	9.64	7.19	10.31	7.71	10.62	7.66	10.95	7.61	11.61	7.97	12.27	7.83	Г	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.25	9.64	7.19	10.34	7.72	10.65	7.67	10.96	7.61	11.57	7.95			Γ	-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.22	9.50	7.12	10.17	7.65	10.49	7.61	10.81	7.56	11.45	7.91				1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.18	9.35	7.05	9.99	7.57	10.32	7.54	10.66	7.50	11.32	7.86				2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	6.75	8.58	7.11	9.21	6.99	9.82	7.50	10.16	7.47	10.51	7.44	11.19	7.82				3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	6.66	8.44	7.04	9.06	6.92	9.64	7.43	10.00	7.41	10.36	7.38	11.07	7.77			Γ	5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	6.59	8.30	6.98	8.91	6.86	9.46	7.35	9.79	7.32	10.13	7.29	10.80	7.68			Γ	7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.52	8.16	6.91	8.75	6.79	9.28	7.28	9.59	7.24	9.90	7.20	10.53	7.58			Γ	9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.45	8.02	6.84	8.60	6.72	9.09	7.20	9.38	7.16	9.68	7.12	10.26	7.49				11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.38	7.88	6.78	8.45	6.65	8.91	7.12	9.18	7.08	9.45	7.03	9.99	7.39				13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.30	7.67	6.68	8.22	6.55	8.58	6.99	8.83	6.94	9.07	6.89	9.57	7.25				15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.18	7.39	6.55	7.91	6.42	8.19	6.83	8.35	6.76	8.51	6.68	8.83	7.00			ı	16.5	16	13.93	13.84	13.75	13.61	13.59

Notes (1) These data show average status.

s (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

(b) Twin type

Model SRK100VNAPZSX Outdoor unit FDC100VNA Indoor unit SRK50ZSX-S (2 units) (kW) Cooling mode (kW) Heating mode:HC

0.11							Indo	oor air t	empera	ture							Οι	tdoor		Indoor	air temp	erature	,
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air	temp.			°CDB		
un tomp.	12 °C	CWB	14 °(CWB	16 °C	CWB	18 °C	CWB	19 °0	CWB	20 °C	CWB	22 °C	CWB	24 °C	CWB	°CDE	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	6.78	8.59	7.32	8.82	7.26	9.07	7.21	9.56	7.61	10.06	7.47	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	6.94	9.00	7.48	9.26	7.43	9.52	7.37	10.06	7.77	10.60	7.63	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.11	9.42	7.65	9.69	7.59	9.98	7.54	10.56	7.94	11.14	7.80	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.27	9.84	7.82	10.12	7.76	10.43	7.71	11.05	8.11	11.67	7.97	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.36	10.05	7.90	10.34	7.85	10.65	7.79	11.29	8.19	11.92	8.04	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.44	10.25	7.99	10.56	7.93	10.88	7.88	11.52	8.27	12.16	8.12	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.44	10.28	8.00	10.59	7.94	10.91	7.89	11.56	8.29	12.21	8.14	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.55	9.64	7.44	10.31	8.01	10.62	7.96	10.95	7.90	11.61	8.30	12.27	8.16	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.52	9.64	7.44	10.34	8.02	10.65	7.97	10.96	7.91	11.57	8.29			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.49	9.50	7.38	10.17	7.95	10.49	7.91	10.81	7.85	11.45	8.25			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.46	9.35	7.31	9.99	7.88	10.32	7.84	10.66	7.79	11.32	8.20			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	6.98	8.58	7.39	9.21	7.25	9.82	7.81	10.16	7.78	10.51	7.74	11.19	8.16			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	6.89	8.44	7.32	9.06	7.18	9.64	7.74	10.00	7.71	10.36	7.68	11.07	8.12			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	6.83	8.30	7.26	8.91	7.12	9.46	7.67	9.79	7.63	10.13	7.60	10.80	8.02			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.76	8.16	7.19	8.75	7.05	9.28	7.59	9.59	7.56	9.90	7.51	10.53	7.93			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.69	8.02	7.13	8.60	6.99	9.09	7.52	9.38	7.48	9.68	7.43	10.26	7.84			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.62	7.88	7.07	8.45	6.92	8.91	7.45	9.18	7.40	9.45	7.35	9.99	7.75			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.54	7.67	6.97	8.22	6.83	8.58	7.32	8.83	7.27	9.07	7.21	9.57	7.61			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.42	7.39	6.84	7.91	6.69	8.19	7.17	8.35	7.09	8.51	7.01	8.83	7.37			16.5	16	13.93	13.84	13.75	13.61	13.59

PCA001Z630

(kW)

Model SRK100VSAPZSX Indoor unit SRK50ZSX-S (2 units) Outdoor unit FDC100VSA (kW) Heating mode:HC Cooling mode

							Indo	oor air t	empera	ture							Ou	tdoor		Indoor	air temp	perature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air	temp.			°CDB		
an tomp.	12 °	CWB	14 °	CWB	16 °0	CWB	18 °C	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °(CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	6.82	6.79	6.77	6.75	6.72
11					8.12	6.78	8.59	7.32	8.82	7.26	9.07	7.21	9.56	7.61	10.06	7.47	-17.7	-18	7.16	7.14	7.10	7.08	7.04
13					8.50	6.94	9.00	7.48	9.26	7.43	9.52	7.37	10.06	7.77	10.60	7.63	-15.7	-16	7.50	7.46	7.44	7.40	7.37
15					8.88	7.11	9.42	7.65	9.69	7.59	9.98	7.54	10.56	7.94	11.14	7.80	-13.5	-14	7.86	7.83	7.79	7.76	7.72
17					9.26	7.27	9.84	7.82	10.12	7.76	10.43	7.71	11.05	8.11	11.67	7.97	-11.5	-12	8.23	8.19	8.15	8.12	8.08
19					9.46	7.36	10.05	7.90	10.34	7.85	10.65	7.79	11.29	8.19	11.92	8.04	-9.5	-10	8.58	8.55	8.50	8.47	8.42
21					9.65	7.44	10.25	7.99	10.56	7.93	10.88	7.88	11.52	8.27	12.16	8.12	-7.5	-8	8.93	8.89	8.85	8.80	8.75
23					9.65	7.44	10.28	8.00	10.59	7.94	10.91	7.89	11.56	8.29	12.21	8.14	-5.5	-6	9.05	9.00	8.97	8.91	8.86
25			8.93	7.55	9.64	7.44	10.31	8.01	10.62	7.96	10.95	7.90	11.61	8.30	12.27	8.16	-3.0	-4	9.17	9.12	9.07	9.03	8.97
27			8.86	7.52	9.64	7.44	10.34	8.02	10.65	7.97	10.96	7.91	11.57	8.29			-1.0	-2	9.29	9.23	9.19	9.13	9.07
29			8.80	7.49	9.50	7.38	10.17	7.95	10.49	7.91	10.81	7.85	11.45	8.25			1.0	0	9.40	9.34	9.29	9.23	9.18
31			8.73	7.46	9.35	7.31	9.99	7.88	10.32	7.84	10.66	7.79	11.32	8.20			2.0	1	9.45	9.39	9.34	9.28	9.22
33	8.22	6.98	8.58	7.39	9.21	7.25	9.82	7.81	10.16	7.78	10.51	7.74	11.19	8.16			3.0	2	9.82	9.77	9.71	9.67	9.63
35	8.05	6.89	8.44	7.32	9.06	7.18	9.64	7.74	10.00	7.71	10.36	7.68	11.07	8.12			5.0	4	10.21	10.15	10.09	10.08	10.07
37	7.92	6.83	8.30	7.26	8.91	7.12	9.46	7.67	9.79	7.63	10.13	7.60	10.80	8.02			7.0	6	11.33	11.27	11.20	11.22	11.23
39	7.78	6.76	8.16	7.19	8.75	7.05	9.28	7.59	9.59	7.56	9.90	7.51	10.53	7.93			9.0	8	11.78	11.71	11.64	11.62	11.59
41	7.64	6.69	8.02	7.13	8.60	6.99	9.09	7.52	9.38	7.48	9.68	7.43	10.26	7.84			11.5	10	12.23	12.16	12.09	12.02	11.94
43	7.50	6.62	7.88	7.07	8.45	6.92	8.91	7.45	9.18	7.40	9.45	7.35	9.99	7.75			13.5	12	12.91	12.83	12.75	12.65	12.60
46	7.33	6.54	7.67	6.97	8.22	6.83	8.58	7.32	8.83	7.27	9.07	7.21	9.57	7.61			15.5	14	13.59	13.50	13.42	13.29	13.26
50	7.09	6.42	7.39	6.84	7.91	6.69	8.19	7.17	8.35	7.09	8.51	7.01	8.83	7.37			16.5	16	13.93	13.84	13.75	13.61	13.59

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

HC: Heating capacity (kW)

SRK125VNAPZSX Indoor unit SRK60ZSX-S (2 units) Outdoor unit FDC125VNA Model (kW) Heating mode:HC (kW) Cooling mode Indoor air temperature Outdoor Indoor air temperature Outdoo 18 °CDB 23 °CDB 28 °CDB 31 °CDB 33 °CDB air temp 21 °CDB 26 °CDB 27 °CDB °CDB air temp 12 °CWB 14 °CWB 16 °CWB 18 °CWB 19 °CWB 20 °CWB 22 °CWB 24 °CWB CDB CWE 16 18 20 22 24 °CDB TC SHC TC SHC SHC SHC TC SHC 19.8 -20 7.77 7.73 7.67 7.65 TC SHC TC SHC TC SHC TC TC 7.70 10.74 8.24 11.03 8.08 1.96 2.57 8.26 8.03 10.15 7.69 8.16 11.34 8.46 17.7 -18 8.16 8.13 8.11 8.06 13 10.63 7.90 11.26 8.44 11.57 8.36 11.91 8.28 12.58 8.66 13.25 8.46 -15.7 -16 8.57 8.53 8.50 8.46 8.42 15 11.10 8.10 11.78 8.65 12.11 8.57 12.47 8.49 13.20 8.87 13.92 8.66 -13.5 -14 9.02 8.98 8.94 8.90 8.86 17 11.58 8.31 12.65 13.04 14.59 8.87 -11.5 -12 9.46 9.41 9.37 9.33 9.28 12.29 8.86 8.78 8.70 13.82 19 11.82 8.42 12.56 8.97 12.92 8.88 13.32 8.80 14.11 9.18 14.90 8.97 -9.5 -10 9.90 9.84 9.80 9.76 9.70 21 12.06 8.53 12.82 9.08 13.19 8.99 13.60 8.91 14.40 9.28 5.20 9.06 -7.5 -8 10.32 10.28 10.23 10.17 10.12 23 12.06 8.53 12.85 9.09 13.23 9.01 13.64 8.93 14.45 9.30 5.27 9.08 -5.5 -6 10.50 10.45 10.39 10.33 10.28 25 -3.0 -4 10.66 10.61 10.55 10.49 10.43 11.16 8.66 12.06 8.53 12.89 9.11 13.27 9.02 13.68 8.94 14.51 9.32 15.34 9.11 27 11.08 8.62 12.05 8.52 12.92 9.12 13.31 9.04 13.69 8.95 14.47 9.31 -1.0 -2 10.82 10.77 10.71 10.65 10.58 29 11.00 8.59 11.87 8.44 12.71 9.03 13.11 8.96 13.51 8.88 14.31 9.25 1.0 0 10.99 10.93 10.87 10.80 10.73 31 10.92 8.55 11.69 8.36 12.49 8.94 12.90 8.87 13.32 8.80 9.20 2.0 11.07 11.01 10.94 10.88 10.81 14.15 1 1.92 11.78 11.68 33 10.27 10.72 8.45 8.28 12.27 8.85 12.70 8.80 13.13 8.73 13.99 9.14 3.0 11.85 11.73 4 35 10.07 7.95 10.55 8.37 11.33 8.20 12.06 8.76 12.50 8.72 12.94 8.66 13.83 9.08 5.0 12 76 12 69 12 61 12 60 12 58 37 9.90 7.87 11.13 8.12 8.67 12.24 12.66 8.56 8.97 7.0 6 14.16 14.08 14.00 14.02 14.04 10.38 8.29 11.83 8.62 13.50 39 7.78 10.20 8.21 10.94 8.03 11.60 8.58 11.99 8.52 12.38 8.45 13.16 8.86 9.0 14.72 14.64 14.56 14.52 14.49 9.72 8 41 10 15 28 15 11 15 02 14 93 9 55 7 69 10.02 8 13 10.75 7 95 1137 8 4 9 1173 8 42 12 09 8.35 1282 8 74 115 15 20 43 9.38 7.61 9.85 8.05 10.56 7.87 11.14 8.39 11.47 8.32 11.81 8.24 2.48 8.63 13.5 12 16.13 16.04 15.94 15.82 15.75 46 9.21 7.52 9.53 7.90 10.28 7.75 10.88 8.29 11.12 8.19 11.28 8.05 11.96 8.46 15.5 14 16.98 | 16.88 | 16.77 | 16.62 16.58 16 50 7.43 6.67 7.63 8.25 6.91 7.46 7.34 7.20 7.55 16.5 17.41 17.30 17.19 17.02 16.99 7.06 8.67 8.78 8.80 9.05

> B PCA001Z630

Model SRK125VSAPZSX Indoor unit SRK60ZSX-S (2 units) Outdoor unit FDC125VSA Cooling mode (kW) Heating mode:HC (kW)

							Indo	oor air t	empera	ture								Dutdoo	П		Indoor	air temp	erature	:
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	1	ir temp	. [°CDB		
an tomp.	12 °C	CWB	14 °C	CWB	16 °C	CWB	18 °C	CWB	19 °C	CWB	20 °C	CWB	22 °C	CWB	24 °0	CWB	°C	OB °C'	۷В	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19	.8 -2	0	7.77	7.73	7.70	7.67	7.65
11					10.15	7.69	10.74	8.24	11.03	8.16	11.34	8.08	11.96	8.46	12.57	8.26	-17	.7 -1	8	8.16	8.13	8.11	8.06	8.03
13					10.63	7.90	11.26	8.44	11.57	8.36	11.91	8.28	12.58	8.66	13.25	8.46	-1	.7 -1	6	8.57	8.53	8.50	8.46	8.42
15					11.10	8.10	11.78	8.65	12.11	8.57	12.47	8.49	13.20	8.87	13.92	8.66	-13	.5 -1	4	9.02	8.98	8.94	8.90	8.86
17					11.58	8.31	12.29	8.86	12.65	8.78	13.04	8.70	13.82	9.08	14.59	8.87	-1	.5 -1	2	9.46	9.41	9.37	9.33	9.28
19					11.82	8.42	12.56	8.97	12.92	8.88	13.32	8.80	14.11	9.18	14.90	8.97	-9	5 -1	0	9.90	9.84	9.80	9.76	9.70
21					12.06	8.53	12.82	9.08	13.19	8.99	13.60	8.91	14.40	9.28	15.20	9.06	-7	5 -	3	10.32	10.28	10.23	10.17	10.12
23					12.06	8.53	12.85	9.09	13.23	9.01	13.64	8.93	14.45	9.30	15.27	9.08	-5	5 -	3	10.50	10.45	10.39	10.33	10.28
25			11.16	8.66	12.06	8.53	12.89	9.11	13.27	9.02	13.68	8.94	14.51	9.32	15.34	9.11	-3	0 -	1	10.66	10.61	10.55	10.49	10.43
27			11.08	8.62	12.05	8.52	12.92	9.12	13.31	9.04	13.69	8.95	14.47	9.31			-1	0 -	2	10.82	10.77	10.71	10.65	10.58
29			11.00	8.59	11.87	8.44	12.71	9.03	13.11	8.96	13.51	8.88	14.31	9.25			1	0 (10.99	10.93	10.87	10.80	10.73
31			10.92	8.55	11.69	8.36	12.49	8.94	12.90	8.87	13.32	8.80	14.15	9.20			2	0 .		11.07	11.01	10.94	10.88	10.81
33	10.27	8.06	10.72	8.45	11.51	8.28	12.27	8.85	12.70	8.80	13.13	8.73	13.99	9.14			3	0 2	:	11.92	11.85	11.78	11.73	11.68
35	10.07	7.95	10.55	8.37	11.33	8.20	12.06	8.76	12.50	8.72	12.94	8.66	13.83	9.08			5	0 4		12.76	12.69	12.61	12.60	12.58
37	9.90	7.87	10.38	8.29	11.13	8.12	11.83	8.67	12.24	8.62	12.66	8.56	13.50	8.97			7	0 (14.16	14.08	14.00	14.02	14.04
39	9.72	7.78	10.20	8.21	10.94	8.03	11.60	8.58	11.99	8.52	12.38	8.45	13.16	8.86			9	0 8		14.72	14.64	14.56	14.52	14.49
41	9.55	7.69	10.02	8.13	10.75	7.95	11.37	8.49	11.73	8.42	12.09	8.35	12.82	8.74			11	.5 1)	15.28	15.20	15.11	15.02	14.93
43	9.38	7.61	9.85	8.05	10.56	7.87	11.14	8.39	11.47	8.32	11.81	8.24	12.48	8.63			13	.5 1	2	16.13	16.04	15.94	15.82	15.75
46	9.21	7.52	9.53	7.90	10.28	7.75	10.88	8.29	11.12	8.19	11.28	8.05	11.96	8.46			15	.5 1	4	16.98	16.88	16.77	16.62	16.58
50	7.43	6.67	7.63	7.06	8.25	6.91	8.67	7.46	8.78	7.34	8.80	7.20	9.05	7.55			16	.5 1	6	17.41	17.30	17.19	17.02	16.99

Depending on the system control, there may be ranges where the operation is not conducted continuously. These data show the case where the operation frequency of a compressor is fixed. (Cooling only) In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency. (2) Capacities are based on the following conditions.

(2) Capacities are based on the following condition
Corresponding refrigerant piping length: 7.5m
Level difference of Zero.
(3) Symbols are as follows
TC: Total cooling capacity (kW)
SHC: Sensible heat capacity (kW)
HC: Heating capacity (kW)

(c) Triple type

Model SRK140VNATZSX Indoor unit SRK50ZSX-S (3 units) Outdoor unit FDC140VNA (kW) Cooling mode (kW) Heating mode:HC

0.11					_		Indo	oor air t	empera	ture							Ou	tdoor		Indoor	air temp	erature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB	air t	emp.			°CDB		
un tomp.	12 °C	CWB	14 °C	CWB	16 °C	CWB	18 °C	CWB	19 °0	CWB	20 °C	CWB	22 °C	CWB	24 °	CWB	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	-19.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	9.70	11.68	10.52	12.00	10.44	12.34	10.36	13.01	10.98	13.68	10.78	-17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	9.92	12.25	10.74	12.59	10.66	12.95	10.58	13.69	11.20	14.42	11.00	-15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	10.13	12.81	10.96	13.18	10.88	13.57	10.80	14.36	11.42	15.14	11.22	-13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	10.35	13.38	11.18	13.77	11.10	14.19	11.03	15.04	11.64	15.87	11.44	-11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	10.46	13.66	11.29	14.07	11.21	14.49	11.14	15.35	11.75	16.20	11.54	-9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	10.58	13.95	11.40	14.36	11.32	14.79	11.25	15.66	11.85	16.53	11.65	-7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	10.58	13.99	11.42	14.40	11.34	14.84	11.26	15.73	11.87	16.61	11.67	-5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	10.75	13.11	10.57	14.02	11.43	14.44	11.35	14.89	11.28	15.79	11.89	16.69	11.69	-3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	10.71	13.11	10.57	14.06	11.45	14.48	11.37	14.90	11.29	15.74	11.88			-1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	10.67	12.91	10.48	13.82	11.35	14.26	11.29	14.70	11.21	15.56	11.82			1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	10.63	12.72	10.40	13.59	11.26	14.04	11.20	14.49	11.14	15.40	11.76			2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	9.90	11.67	10.53	12.52	10.32	13.36	11.17	13.82	11.12	14.29	11.06	15.22	11.70			3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	9.79	11.48	10.44	12.32	10.23	13.11	11.07	13.60	11.04	14.09	10.99	15.05	11.65			5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	9.70	11.29	10.36	12.11	10.15	12.87	10.98	13.32	10.93	13.77	10.88	14.69	11.53			7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	9.61	11.10	10.27	11.91	10.06	12.62	10.88	13.05	10.83	13.46	10.76	14.32	11.40			9.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	9.52	10.91	10.19	11.70	9.97	12.37	10.78	12.76	10.72	13.16	10.66	13.95	11.28			11.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	9.43	10.71	10.10	11.49	9.89	12.11	10.68	12.48	10.62	12.85	10.55	13.58	11.16			13.5	12	17.86	17.76	17.65	17.52	17.44
46	10.03	9.34	10.47	9.99	11.13	9.74	11.73	10.54	12.10	10.48	12.27	10.34	13.01	10.98			15.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			16.5	16	19.28	19.15	19.03	18.84	18.81

PCA001Z630 B

Model SRK140VSATZSX Indoor unit SRK50ZSX-S (3 units) Outdoor unit FDC140VSA Cooling mode

(kW) Heating mode:HC

(kW)

	,															()	<u> </u>		.90					(,
							Indo	oor air t	empera	ture							П	Outo	door		Indoor	air temp	perature	;
Outdoor air temp.	18 °	CDB	21 °	CDB	23 °	CDB	26 °	CDB	27 °	CDB	28 °	CDB	31 °	CDB	33 °	CDB		air te	emp.			°CDB		
an tomp.	12 °C	CWB	14 °0	CWB	16 °0	CWB	18 °C	CWB	19 °	CWB	20 °	CWB	22 °	CWB	24 °	CWB	H	°CDB	°CWB	16	18	20	22	24
°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	П	-19.8	-20	7.94	7.91	7.88	7.85	7.82
11					11.05	9.70	11.68	10.52	12.00	10.44	12.34	10.36	13.01	10.98	13.68	10.78	П	-17.7	-18	8.44	8.41	8.37	8.34	8.30
13					11.56	9.92	12.25	10.74	12.59	10.66	12.95	10.58	13.69	11.20	14.42	11.00	П	-15.7	-16	8.94	8.90	8.86	8.82	8.79
15					12.07	10.13	12.81	10.96	13.18	10.88	13.57	10.80	14.36	11.42	15.14	11.22	П	-13.5	-14	9.50	9.46	9.41	9.37	9.33
17					12.59	10.35	13.38	11.18	13.77	11.10	14.19	11.03	15.04	11.64	15.87	11.44	П	-11.5	-12	10.07	10.02	9.98	9.93	9.88
19					12.86	10.46	13.66	11.29	14.07	11.21	14.49	11.14	15.35	11.75	16.20	11.54		-9.5	-10	10.64	10.59	10.54	10.49	10.44
21					13.12	10.58	13.95	11.40	14.36	11.32	14.79	11.25	15.66	11.85	16.53	11.65	П	-7.5	-8	11.21	11.15	11.10	11.04	10.99
23					13.12	10.58	13.99	11.42	14.40	11.34	14.84	11.26	15.73	11.87	16.61	11.67	П	-5.5	-6	11.51	11.45	11.39	11.33	11.27
25			12.14	10.75	13.11	10.57	14.02	11.43	14.44	11.35	14.89	11.28	15.79	11.89	16.69	11.69	П	-3.0	-4	11.80	11.74	11.68	11.62	11.55
27			12.06	10.71	13.11	10.57	14.06	11.45	14.48	11.37	14.90	11.29	15.74	11.88			H	-1.0	-2	12.11	12.05	11.98	11.91	11.84
29			11.97	10.67	12.91	10.48	13.82	11.35	14.26	11.29	14.70	11.21	15.56	11.82			П	1.0	0	12.42	12.35	12.28	12.20	12.13
31			11.88	10.63	12.72	10.40	13.59	11.26	14.04	11.20	14.49	11.14	15.40	11.76			П	2.0	1	12.58	12.50	12.43	12.35	12.28
33	11.18	9.90	11.67	10.53	12.52	10.32	13.36	11.17	13.82	11.12	14.29	11.06	15.22	11.70			П	3.0	2	13.35	13.27	13.20	13.13	13.08
35	10.96	9.79	11.48	10.44	12.32	10.23	13.11	11.07	13.60	11.04	14.09	10.99	15.05	11.65			H	5.0	4	14.12	14.05	13.96	13.95	13.93
37	10.76	9.70	11.29	10.36	12.11	10.15	12.87	10.98	13.32	10.93	13.77	10.88	14.69	11.53				7.0	6	15.68	15.59	15.50	15.52	15.55
39	10.58	9.61	11.10	10.27	11.91	10.06	12.62	10.88	13.05	10.83	13.46	10.76	14.32	11.40			П	9.0	8	16.30	16.21	16.11	16.07	16.03
41	10.39	9.52	10.91	10.19	11.70	9.97	12.37	10.78	12.76	10.72	13.16	10.66	13.95	11.28			П	11.5	10	16.91	16.83	16.73	16.63	16.53
43	10.21	9.43	10.71	10.10	11.49	9.89	12.11	10.68	12.48	10.62	12.85	10.55	13.58	11.16			П	13.5	12	17.86	17.76	17.65	17.52	17.44
46	10.03	9.34	10.47	9.99	11.13	9.74	11.73	10.54	12.10	10.48	12.27	10.34	13.01	10.98			Iľ	15.5	14	18.80	18.69	18.57	18.40	18.36
50	7.61	7.45	7.88	7.72	8.35	8.19	8.75	8.58	8.97	8.79	8.98	8.80	9.33	9.14			Iľ	16.5	16	19.28	19.15	19.03	18.84	18.81

Notes (1) These data show average status.

Depending on the system control, there may be ranges where the operation is not conducted continuously.

These data show the case where the operation frequency of a compressor is fixed. (Cooling only)

In the heating mode in which the outside air temperature is 0°C DB or less, the compressor operates at maximum frequency.

(2) Capacities are based on the following conditions.

Corresponding refrigerant piping length: 7.5m

Level difference of Zero.

(3) Symbols are as follows

TC: Total cooling capacity (kW)

SHC: Sensible heat capacity (kW)

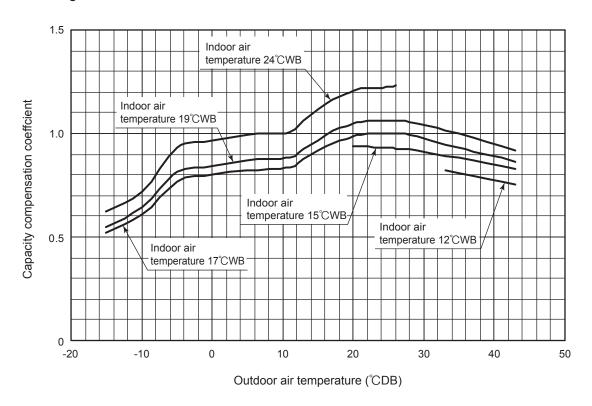
HC: Heating capacity (kW)

[References data]

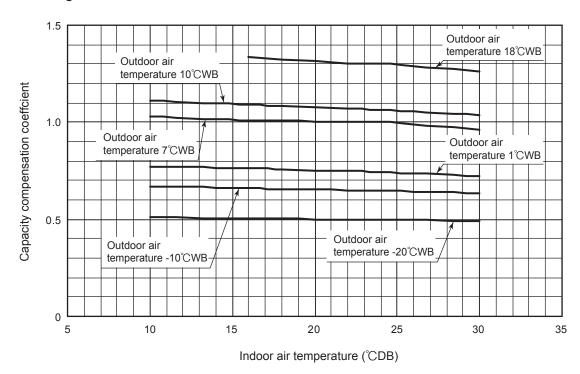
Capacity variation against outdoor and indoor temperature at rated capacity condition.

(I) Models FDC100, 125, 140VNA, 100, 125, 140VSA

1 Cooling



2 Heating



1.9.2 Correction of cooling and heating capacity in relation to air flow rate control (fan speed)

Fan speed	P-Hi	Me	Lo
Coefficient	1.00	0.97	0.95

1.9.3 Correction of cooling and heating capacity in relation to one way length of refrigerant piping

It is necessary to correct the cooling and heating capacity in relation to the one way equivalent piping length between the indoor and outdoor units.

Models 100 ~ 140

Equivale	Equivalent piping length (1)(m)			10	15	20	25	30	35	40	45	50	55
Heating			1	1	1	1	1	0.998	0.998	0.993	0.993	0.988	0.988
	100 model		1	0.991	0.978	0.964	0.951	0.937	0.924	0.910	0.897	0.883	0.870
	125 model	φ 15.88	1	0.986	0.968	0.950	0.932	0.914	0.896	0.878	0.860	0.842	0.824
Cooling	140 model		1	0.985	0.966	0.946	0.927	0.907	0.888	0.868	0.849	0.829	0.810
Cooling	100 model		1.016	1.013	1.007	1.002	0.996	0.991	0.985	0.980	0.974	0.969	0.963
	125 model	φ 19.05	1.022	1.018	1.009	1.001	0.992	0.984	0.975	0.967	0.958	0.950	0.941
	140 model		1.026	1.021	1.011	1.002	0.992	0.983	0.973	0.964	0.954	0.945	0.935

Note (1) Calculate the equivalent length using the following formula.

However, install the piping so that the piping length is within +5 m of the limit length (actual length) for the respective types.

• Equivalent length =Actual length + (Equivalent bend length x number of bends in the piping.) Equivalent length per bend.

Gas pipe diameter (mm)	φ 12.7	φ 15.88	φ 19.05	φ 22.22	φ25.4	φ 28.58
Equivalent bend length	0.20	0.25	0.30	0.35	0.40	0.45

1.9.4 Height difference between the indoor unit and outdoor unit

When the outdoor unit is located below indoor units in cooling mode, or when the outdoor unit is located above indoor units in heating mode, the correction coefficient mentioned in the below table should be subtracted from the value in the above table.

Height difference between the indoor unit and outdoor unit in the vertical height difference	5m	10m	15m	20m	25m	30m
Adjustment coefficient	0.99	0.98	0.97	0.96	0.95	0.94

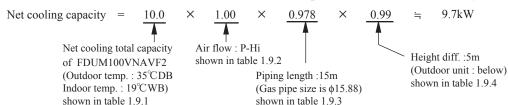
Piping length limitations

Item Model	100, 125, 140
Max. one way piping length	50m
Max. vertical height difference	Outdoor unit is higher 30m Outdoor unit is lower 15m

Note (1) Values in the table indicate the one way piping length between the indoor and outdoor units.

How to obtain the cooling and heating capacity

Example: The net cooling capacity of the model FDUM100VNAVF2 with the air flow "P-High", the piping length of 15m, the outdoor unit located 5m lower than the indoor unit, indoor wet-bulb temperature at 19.0°C and outdoor dry-bulb temperature 35°C is



1.10 APPLICATION DATA

1.10.1 Installation of indoor unit

(1) Ceiling cassette-4 way type (FDT)

PJF012D029▲

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This manual is for the installation of the indoor unit.

For electrical wiring work (Indoor unit), refer to page 217. For remote control installation, refer to page 233. For wireless kit installation, refer to page 578. For electrical wiring work (Outdoor unit) and refrigerant pipe work installation for outdoor unit, refer to page 245. For motion sensor kit installation, refer to the installation manual attached to the motion sensor kit.

This unit must always be used with the panel.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels.

 AWARNING and ACAUTION AWARNING: Wrong installation would cause serious consequences such as injuries or death ACAUTION: Wrong installation might cause serious consequences depending on circumstances Both mentions the important items to protect your health and safety so strictly follow them by any means.

The meanings of "Marks" used here are as shown on the right: Never do it under any circumstances. Always do it according to the instruction.

After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit. Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠ WARNING

Installation should be performed by the specialist.

If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn

Install the system correctly according to these installation manuals.

Improper installation may cause explosion, injury, water leakage, electric shock, and fire

Check the density refered by the foumula (accordance with ISO5149).

If the density exceeds the limit density, please consult the dealer and installate the ventilation system

•Use the genuine accessories and the specified parts for installation

0 If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit

Ventilate the working area well in case the refrigerant leaks during installation.

If the refrigerant contacts the fire, toxic gas is produced.

Install the unit in a location that can hold heavy weight. Improper installation may cause the unit to fall leading to accide

• Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.

proper installation may cause the unit to fall leading to accidents Do not mix air in to the cooling cycle on installation or removal of the air-conditioner.

If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries

Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.

Power source with insufficient capacity and improper work can cause electric shock and fire • Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in

order not to apply unexpected stress on the terminal. Loose connections or hold could result in abnormal heat generation or fire.

●Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services

0 panel property. Improper fitting may cause abnormal heat and fire.

● Check for refrigerant gas leakage after installation is completed. If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced.

•Use the specified pipe, flare nut, and tools for R410A.

Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle

 $\ensuremath{\bullet}$ Tighten the flare nut according to the specified method by with torque wrench. If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period.

lacktriangle Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can

Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.

Connect the pipes for refrigeration circuit securely in installation work before compressor is operated. or is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due

to abnormal high pressure in the system Stop the compressor before removing the pipe after shutting the service valve on pump down work.

If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit

and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.

Only use prescribed option parts. The installation must be carried out by the qualified installer.

If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire. Do not repair by yourself. And consult with the dealer about repair.

per repair may cause water leakage, electric shock or fir Consult the dealer or a specialist about removal of the air-conditioner.

Improper installation may cause water leakage, electric shock or fire. Turn off the power source during servicing or inspection work.

If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating far

Do not run the unit when the panel or protection guard are taken off.

Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock.

Shut off the power before electrical wiring work.

It could cause electric shock, unit failure and improper running

△ CAUTION

Perform earth wiring surely

Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring, Improper earth could cause unit failure and electric shock due to a short circuit

Earth leakage breaker must be installed.

If the earth leakage breaker is not installed, it can cause electric shocks

• Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all

Using the incorrect one could cause the system failure and fire

 Do not use any materials other than a fuse of correct capacity where a fuse should be used nnecting the circuit by wire or copper wire could cause unit failure and fire

 Do not install the indoor unit near the location where there is possibility of flammable gas leakage. f the gas leaks and gathers around the unit, it could cause fire.

Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled

It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.

 Secure a space for installation, inspection and maintenance specified in the manual Insufficient space can result in accident such as personal injury due to falling from the installation place

 Do not use the indoor unit at the place where water splashes such as laundry. Indoor unit is not waterproof. It could cause electric shock and fire.

Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.

It could cause the damage of the items.

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Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air-conditioner and cause a malituration and breakown. Or the air-conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.

Do not install the remote control at the direct sunlight.

It could cause breakdown or deformation of the remote control

 Do not install the indoor unit at the place listed below Places where flammable gas could leak

Places where carbon fiber, metal powder or any powder is floated. Place where the substances which affect the air condition ner are generated such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres.

Such as summer yeas, unionize yeas, axiv, amai or animount animophieres.

Places exposed to oil mist or steam directly.

On vehicles and ships

Places where machinery which generates high harmonics is used.

Places where cosmetics or special sprays a

frequently used. Highly salted area such as beach. Heavy snow area Places where the system is affected by smoke from a chimney Altitude over 1000m

30% or drain pipe is clogged, and it damages user's be

up not install the indoor unit in the locations listed below (Be sure to install the indoor unit (ccording to the installation manual for each model because each indoor unit has each limitation) Locations with any obstacles which can prevent inlet and outlet air of the unit Locations where vibration can be amplified due to insufficient strength of structure. Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit) Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit

n could drop when the relative humidity is higher than 8

nfrared specification unit) Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is plac

It can affect performance or function and etc. Do not put any valuables which will break down by getting wet under the air-conditioner.

 Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use It could cause the unit falling down and injury.

 Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit. If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water.

To avoid damaging, keep the indoor unit packed or cover the indoor unit Install the drain pipe to drain the water surely according to the installation manual

mproper connection of the drain pipe may cause dropping water into room and damaging user's belonging Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work

If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.

 For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps and not to make air-bleeding. Check if the drainage is correctly done during commissioning and ensure the space for inspection and ma Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.

ulation could cause condensation and it would wet ceiling, floor, and any other v

 Do not install the outdoor unit where is likely to be a nest for insects and small animals Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean

 Pay extra attention, carrying the unit by hand. Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the uby hand. Use protective gloves in order to avoid injury by the aluminum fin.

Make sure to dispose of the packaging material.

Leaving the materials may cause injury as metals like nail and woods are used in the package

Do not operate the system without the air filter. It may cause the breakdown of the system due to clogging of the heat exchange

Do not touch any button with wet hands.

Do not touch the refrigerant piping with bare hands when in operation.

The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn of

 Do not clean up the air-conditioner with water It could cause electric shock.

 Do not turn off the power source immediately after stopping the operation Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or b

Do not control the operation with the circuit breaker

It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.



1Before installation nstall correctly according to the installation manual Confirm the following points: OUnit type/Power source specification OPipes/Wires/Small parts

OAccessory items

Accessory item

t hanging		For refrigerant pig	pe		For drain pipe					
Level gauge	Pipe cover(big)	Pipe cover (small)	Strap	Pipe cover(big)	Pipe cover(small)	Drain hose	Hose clamp			
				0	0		8			
1	1	1	4	1	1	1	1			
For unit hight position adjustment and hanging suport	For heat insulation of gas pipe	For heat insulation of liquid tube	For pipe cover fixing	For heat insulation of drain socket	For heat insulation of drain socket	For drain pipe connecting	For drain hose mounting			
	Level gauge	Level gauge Pipe cover(big) The pipe cover(big) The pipe cover(big) The pipe cover(big) The pipe cover(big) The pipe cover(big) The pipe cover(big)	Level gauge Pipe cover(big) Pipe cover (small) Pipe cover (small) The cover (small) The cover (small) The cover (small) The cover (small) The cover (small) The cover (small) The cover (small) The cover (small)	Level gauge Pipe cover(big) Pipe cover (small) Strap Description De	Level gauge Pipe coveribing Pipe cover (small Strap Pipe coveribing Coveribing Pipe cover (small Strap Pipe coveribing Co	Level gauge Pipe cover(big) Pipe cover (small) Strap Pipe cover(sig) Pipe cover(small) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Level gauge Pipe cover(big) Pipe cover (brasil) Strap Pipe cover(big) Pipe cover(big) Drain hose Drain hose Drain hos			

2Selection of installation location for the indoor unit

- ① Select the suitable areas to install the unit under approval of the use
- Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on
- · Areas where there is enough space to install and service.
- · Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
- Areas where there is no obstruction of airflow on both air return grille and air supply port.
- Areas where fire alarm will not be accidentally activated by the air-conditioner.
- · Areas where the supply air does not short-circuit.
- Areas where it is not influenced by draft air.
- · Areas not exposed to direct sunlight.
- Areas where dew point is lower than around 28°C and relative humidity is lower than 80%. This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned

If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.

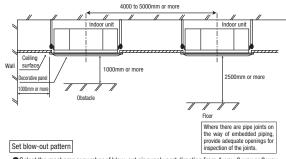
- Areas where TV and radio stays away more than 1m. (It could cause iamming and noise.) Areas where any items which will be damaged by getting wet are not placed such as food,
- table wares, server, or medical equipment under the unit,
- · Areas where there is no influence by the heat which cookware generates
- · Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
- · Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.

(A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air-conditioner might not work properly.) 2)Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is

- not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.
- ③If there are 2 units of wireless type, keep them away for more than 6m to avoid malfunction due to cross communication
- (4) When plural indoor units are installed nearby, keep them away for more than 4 to 5m.

Space for installation and service

- When it is not possible to keep enough space between indoor unit and wall or between indoor units, close the air supply port where it is not possible to keep space and confirm there is no short circuit of air flow
- ●Install the indoor unit at a height of more than 2.5m above the floor.



- Select the most proper number of blow-out air supply port direction from 4 way, 3 way or 2 way according to the shape of the room and installation position. (1 way is not available.)
- If it is necessary to change the number of air supply port, prepare the covering materials. (sold as accessory)
- Instruct the user not to use low fan speed when 2way or 3way air supply is used.
- Do not use 2way air supply port under high temperature and humidity environment. (Otherwise it could cause condensation and leakage of water.)
- It is possible to set the air flow direction port by port independently. Refer to tne user's manual for details.

3 Preparation before installation

If suspension bolt becomes longer, do reinforcement of earthquake resistant.

When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

Oln case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.

When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt. Prepare four (4) sets of suspension bolt, nut and spring washer (M10 or M8) on site.

Ceiling opening, Suspension bolts pitch, Pipe position

It is possible the suspension bolts pitch to adjust accoding to the this table

, , , , , , , , , , , , , , , , , , , ,			Single
Mark Type	P1	P2	V
1	770	725~770	
2	770~800	725	

Туре Series a d f g h le Split (PAC) 40 to 71 type 236 37 105 88 67 series 100 to 140 type 298 99 167 140 129 100 to 140 type 298 99 167 140 129 28 to 71 type 236 37 105 88 67 90 to 160 type 298 99 167 140 129

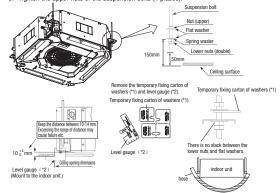
Symbol

Ceiling hole size (660 – 910) Suspension boils pitch P1 (778) H1, H2 G Control box	B Liquid plping C Drain piping D Hole for wiring F Suspension bolts G Outside air opening for ducting H1 Air outlet opening for ducting
H1, H2	50 38 24 25 44 13
Hanger plate for suspention bott	6 - 240 - 33

(4) Installation of indoor unit

Work procedure

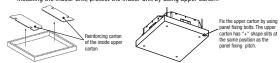
- Set the suspension bolt length to about 50 mm from the ceiling.
- 2. Temporarily locate the lower nuts of the suspension bolts (4 places) at a position approximately 150 mm from the ceiling.
- Temporarily locate the upper nuts of the suspension bolts (4 places) at positions sufficiently distance from the lower nuts so that they do not interfere with the suspension of the indoor unit and with its height adjustment.
- 4. Set the upper nuts of the suspension bolts and upper washers (4 places) at positions sufficiently distance from the lower nuts. Then, push and insert the temporary fixing carton of washers (*1) onto suspension bolts. Make sure that the upper washers do not slide down
- 5. Suspend the indoor unit.
- After suspending the indoor unit, mount the level gauge (*2) to the air outlet of the indoor unit, and adjust the suspension height of the indoor unit. Loosen the upper nuts (4 places). and adjust the suspension height using the lower nuts (4 places). Confirm there is no slack
- between the lower nuts and flat washers of the indoor unit hanger plate (4 places). Remove the temporary fixing carton of washers (from all 4 places).
- Make sure that the indoor unit is installed horizontally. Confirm the levelness of the indoor unit using a level gauge or transparent hose filled with water (Keep the height difference at both ends of the indoor unit within 3 mm.)
- Tighten the upper nuts of the suspension bolts (4 places).



4 Installation of indoor unit (continued)

Protection of the indoor unit

 If it is not possible to install the panel for a while or if attaching the ceiling board after installing the indoor unit, protect the indoor unit by using upper carton



Caution

- Do not adjust the unit height by adjusting the upper nuts. Doing so will cause unexpected stress on the indoor unit and cause the unit to become deformed, prevent the panel from being installed, and be generated fan interference noise
- Make sure that the indoor unit is installed horizontally and set the appropriate gap between the underside of the unit and the ceiling plane. Improper installation may cause air leakage, dew condensation, water leakage and noise.
- Even after the panel has been installed, the unit height can still be finely adjusted. Refer to the panel installation manual for details.
- Make sure there is no gap between the panel and the ceiling surface, and between the panel and the indoor unit. Any gap may cause air and/or water to leak, or condensation to

⑤Refrigerant pipe

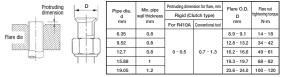
Caution

lacktriangle Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.

Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data.

1) In case of reuse: Do not use old flare nut, but use the nut attached to the unit or compatible with JIS B 8607, Class 2

2) In case of reuse: Flare the end of pipe replaced partially for R410A



- ●Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H3300) for refrigeration pipe installation
- In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not use any refrigerant other than the designated refrigerant
- Using other refrigerant except the designated refrigerant, may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.

 Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any
- dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc
- ■Use special tools for R410A refrigerant.

Work procedure

- Remove the flare nut and blind flanges on the pipe of the indoor unit.
 Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)
- Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
 Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit. **Bend radius of pipe must be 40 or larger. Once a pipe is bent, do not readjust the bending. Do not twist a pipe or collapse to 2/3D or smaller.
- *Do a flare connection as follows: Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the coppe pipe, and then remove them.
- When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
- 3. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.

 Make sure to insulate both gas pipes and liquid pipes completely.

 - Incomplete insulation may cause dew condensation or water dropping. Use heat-resistant (120 °C or more) insulations on the gas side pipes
 - In case of using at high humidity condition, reinforce insulation of refrigerant pipes.
 Surface of insulation may cause dew condition or water dropping, if insulations are not
- Refrigerant is charged in the outdoor unit.

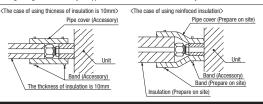
 As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

5Refrigerant pipe (continued)

Caution

Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the slide friction force on the threads and increase, in turn, the axial component force so that it could crack the flare by the stress corrosion.

Refrigerating machine oil may be applied to the internal surface of flare only



6Drain pipe

Caution

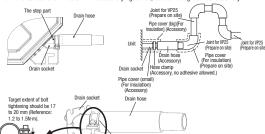
- Install the drain pipe according to the installation manual in order to drain properly.
 Imperfection in draining may cause flood indoors and wetting the household goods, etc.
 Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and
- inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell
- Connect the pipe securely to avoid water leakage from the joint.
- Connect the pipe securely to avoid condensation drop.

 Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

- Make sure that the drain hose (the soft PVC side) is inserted into the end of the step part of the
- Fix the hose clamp so that its bolt is located on the outside of the indoor unit, and the bolt are fastened in a vertical orientation.

 Do not apply adhesives on this end.
- Position the hose clamp so that it touches the insulation of the drain hose, and then tighten the bolt
- Turn the bolt several times until it is securely tightened, but do not tighten it excessively.



Prepare a joint for connecting VP25 pipe, adhere and connect the joint to the drain hose (the rigid PVC side), and adhere and connect VP25 pipe (americal and connect the joint to the rigid PVC side), and adhere and connect VP25 pipe (prepare on site). *As for drain pipe, apply VP25 made of rigid PVC which is on the market.

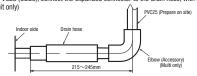
• Make sure that the adhesive will not get into the supplied drain hose.

the hose clamp so that it touches the insulation of

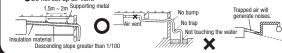
- It may cause the flexible part broken after the adhesive is dried up and gets rigid.
- The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water
- leakage.

 ◆As for drain pipe, apply VP25 (0D32).

 If apply PVC25 (0D25), connect the expanded connector to the drain hose, with adhesive.
- (Multi unit only)

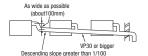


- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
- Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
- Do not set up air vent.



6 Drain pipe (continued)

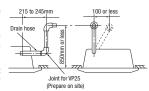
When sharing a drain pipe for more than 1 unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP30 or bigger size for main drain pipe.



- 6. Insulate the drain pipe.
 - Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
 - *After drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gapless.

Drain up

 The position for drain pipe outlet can be raised up to 850mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizon-tal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure



Drain test

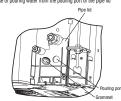
- After installing the drain pipe, make sure that drain system works correctly and that no water leaks
- from the joint and drain pan. Check whether the motor sound of the drain pump is normal. Conduct a drain test when installing, even during the heating season. In the case of new buildings, be sure to complete the test before fixing the ceiling.
- 1 Pour about 1,000 cc of test water into the drain pan of the indoor unit. Exercise care not to allow electrical equipment such as the drain pump and other components to become wet filling water.

Pour test water through the pouring port of the pipe lid using a feed water pump or a similar device, or through the refrigerant pipe joint.

In case of pouring water from the air outlet







- Make sure that water drains out completely and that no water leaks from any joints of the drain pipe during the test.
- Test to confirm that the water drains out correctly while listening to the drain pump motor operating sound.
- At the drain socket (transparent), it is possible to check whether the water drains out correctly.

 Unplug the rubber plug on the indoor unit so that the remaining water drains from the drain pan after the draining test. After checking the water drainage, fix the drain plug correctly, Installation work for the drain

pipe must be performed for the entire drain pipe up to the indoor unit.

If the pipe lid has been removed in order to pour water, mount the pipe lid again.

Drain pump operation

- In case electrical wiring work completed
- Drain pump can be operated by the wired remote control

For the operation method, retro [Operation for drain pump] in the installation manual for wiring work.

In case electrical wiring work not completed

Drain pump will run continuously when the dip switch "SW7-1" on the indoor unit PCB is turned ON, the connector CnB is disconnected, and then the power source (230 VAC on the terminal block ① and ②) is turned ON. Make sure to turn OFF "SW7-1" and reconnect the connector CnB after the test.

Wiring-out position and wiring connection

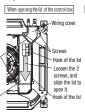
- Electrical installation work must be performed according to the installation manual by an
 electrical installation service provider qualified by a power provider of the country, and be
 executed according to the technical standards and other regulations applicable to electrical
- installation in the country.

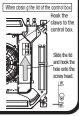
 Be sure to use an exclusive circuit.
 Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
- Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction
- Be sure to do D type earth work.
 For the details of electrical wiring work, see attached instruction manual for electrical wiring work
- Loosen the 2 screws of the lid of the control box, and slide the lid in the direction of the arrow shown in the figure. It will then be possible to open the lid.
- Unhook the lid from the control box,
- and remove the lid.

 Remove the 2 screws from the wiring cover, and remove the wiring cover.

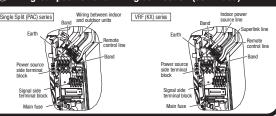
 Hold each wire inside the unit, and securely
- fasten them to the terminal block. Fix the wiring using clamps. Install the wiring cover and the lid of the control box.

iviaiii iuse specilication							
Specification	Part No.						
T3.15A L250V	SSA564A149AF						





(Continued) Twiring-out position and wiring connection (continued)



®Panel installation

- Install the panel on the indoor unit after electrical wiring work.
- Refer to the attached manual for panel installation for details

Check the following items after all installation work completed

Check if;	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Supply voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
There is mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks air flow on air inlet and outlet?	Insufficient capacity	

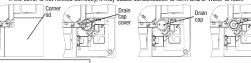
(1) How to check the dirt of drain pan and cleaning the inlet of the drain pump. (Maintenance)

The method of checking the dirt of drain pan

- It is possible to check dirt on the drain pan and drain pump inlet without removing the panel.
 - Open the inlet grille and remove the corner lid on the drain pan side
- Remove the drain cap cover (1 screw) from the panel corner
- Check the dirt on the drain pan from the drain cap, and check the drain pump inlet. If the drain pan is very dirty, remove the drain pan and clean it.

 After checking, refix the drain cap cover securely.

If the cover is not refixed correctly, it may cause condensation to form and/or water to leak



Cleaning of drain pump inlet

- It is possible to clean the drain pump inlet and surrounding area by removing the drain cap only; it
- is not necessary to remove the panel and drain pan.

 Before removing the drain cap, remove the rubber plug and drain water from the drain pan.

- Before removing the drain cap, remove the rubber plug and drain water from the drain pan.

 Remove the drain cap cover as described above.

 Insert the nose of the pilers into the concave portions (2 places) of the drain cap, and rotate the pilers about 1 turn in the CCW direction. The drain cap is removed.

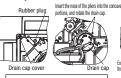
 When cleaning the drain pump infelt, use a soft plastic tool. If a metallic tool is used, the drain cap mounting portion may be scratched and water may leak.

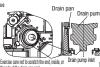
 Before mounting the drain cap, rinse it and remove any foreign material from the inside of the cap. If the drain cap is installed with foreign material inside it, it may cause water to leak.

 Insert the nose of the pilers into the concave portions of the drain cap and rotate the pilers to install the drain cap hoat 1 turn in the CW direction until it stops rotating. If the drain cap is not rotated for 1 or more turns, the cap will not have been installed correctly.

 Remove the drain cap, and then install it again correctly.

After tightening the drain cap, make sure the triangle (Δ) mark of the drain cap comes close to the triangle mark on the panel. If these triangle marks are not close to each other, tighten the drain cap further.
 Refix the drain cap cover and rubber plug securely. If the cover is not refixed correctly, it may cause condensation to form and/or water to leak.







that the 2 triann marks come close to each other

Notes for removing the drain pan

Before removing the drain pan, drain water from the drain pan. Remove the rubber plug and drain water.
The drain pan is installed by the temporary installation plate. Remove the 2 drain pan fixing screws, and loosen the 2 screws of the temporary installation plate. Sticke the temporary installation plate to the outside of the drain pan. And then, it is possible to remove the drain pan.
When reinstalling the drain pan, side the temporary installation plate to the tristed by the sticked and temporarly fix the drain pan. Then, tighten the 2

drain pan fixing screws and the 2 screws of the temporary installation plate. Also, refix the rubber plug securely,







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Panel installation

Read this manual together with the indoor unit's installation manual.

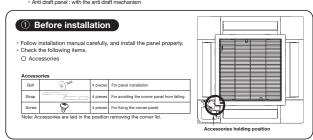


Function

The Anti draft panel has the anti draft mechanism. If the Anti draft panel is installed and the anti draft function is set, the anti draft function will be oprerated and reduce the draft feeling. (Refer to Refer to the Panel setting for details.)

Standard panel: without the anti draft mechanism

Anti draft panel: with the anti draft mechanism

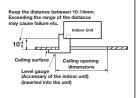


② Checking the indoor unit installation position

- · Read this manual together with the air-conditioner installation manual carefully.
- · Check if the opening size for the indoor unit is correct with the level gauge supplied in the indoor unit.
- Check if the gap between the plane and the indoor unit is correct by inserting the level gauge into the air outlet port of the indoor unit. (See below drawing)
- · Adjust the installation elevation if necessary.
- Remove the level gauge before installing the panel.

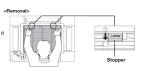
If there is a height difference beyond the design limit between the installation level of the indoor unit and the panel, the panel may be subject to excessive stress during installation and it may cause distortion and damage.

* The installation level of the indoor unit can be adjusted finely from the opening provided on the corner, even after panel is Installed (Refer to Installing the panel In for details.)



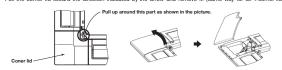
3 Removing the inlet grille

- Hold the stoppers on the inlet grille (2 places) toward OPEN direction, open the inlet grille.
 Remove the hooks of the inlet grille from the panel while it is in the open position.



Removing the corner lid

· Pull the corner lid toward the direction indicated by the arrow and remove it. (Same way for all 4 corner lids)



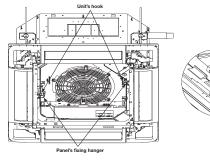
⑤ Orientation of the panel installation Take note that there is an orientation to install the panel. Install the panel with the orientation to install the pa Install the panel with the orientation shown on the Align the "PIPE SIDE" mark (on the panel) with the refrigerant pipes on the indoor unit. Ha Align the "DRAIN" mark (on the panel) with the drain pipe on the indoor unit. CAUTION ~~ In case the orientation of the panel is not correct, it will lead to air leakage and also it is not possible to connect the flap motor wiring. 0

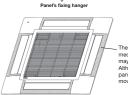
6 Installing the panel

- Temporary hanging

 Lift up the hanger (2 places) on the panel for temporary support.

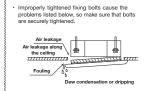
 Hang the panel on the hook on the indoor unit.



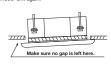


The Anti draft panel moves the parts of the anti draft mechanism (shaded area, 4 places). Note that they may break if they are moved forcibly by hand. Although the parts (shaded area) of the Standard panel are separate parts from the body, they do not move.

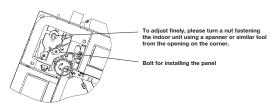
- The parts (shaded area), of the anti draft mechanism around the air outlet, are separate parts. Handle the panel with care. Especialy, the shaded area of the Anti draft panel move. Note that they may break if they are moved forcibly by hand.
- 2. Fix the panel on the indoor unit
- Fasten the panel on the indoor unit with the 4 bolts supplied with the panel.



If there is a gap between the ceiling and the panel even after the fixing botts are tightened, adjust the installation level of the indoor unit again.



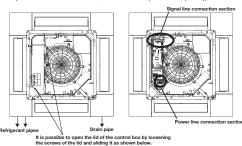
It is possible to adjust the installation height of the indoor unit with the panel installed as long as there is no influence on the drain pipe inclination and/or the indoor unit levelness.



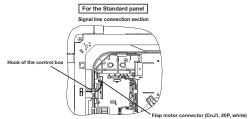
Do not give any stress on the panel when adjusting the height of the indoor unit to avoid unexpected distortion. It may cause the distortion of panel or failing to close the inlet grille, and the parts of the anti draft mechanism.

(7) Electrical wiring

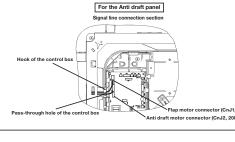
The wiring work varies depending on the panel type. Select the wiring work appropriate for the panel type. The connection positions of the indoor unit are as shown below irrespective of the panel type.



- <For the Standard panel>
 1. Loosen 2 screws on the control box lid of the indoor unit, and remove the lid by sliding it.
 2. Pass the flap motor wiring (20-wire) through the hook of the control box, and connect to CnJ1 (20P, white).
 3. Fix the control box lid of the indoor unit, and tighten 2 screws.



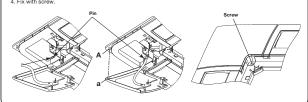
- <For the Anti draft panel>
 1. Loosen 2 screws on the control box lid of the indoor unit, and remove the lid by sliding it.
 2. Pass the flap motor cable (20-wire) through the hook of the control box, and connect to CnJ1 (20P, white).
 3. Pass the anti draft motor cable (20-wire) through the hook of the control box, and connect to CnJ2 (20P, white).
 4. Fix the control box lid of the indoor unit, and tighten the 2 screws.



Pass-through hole of the control box

8 Installing a corner lid To avoid unexpected falling of the corner lid, put the strap onto the corner lid's pin with turning the strap up.
 Then hang the strap of a corner lid onto the panel's pin.
 First insert the part "a" of a corner lid into the part "A" of the panel, and then engage 2 hooks.
 Fix with scrape.

ector (CnJ1, 20P, white)



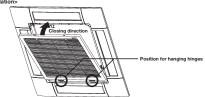
Installing the inlet grille

- To attach the inlet grille, follow the procedure described in Removing the intercrit

 1. Hang the hooks of the inlet grille in the hole of the panel. (The hooks of the grille can be hanged in 4 side of the panel as following.)

 2. After the grille is hanged, close the grille while the stoppers/2 places) on the grille are kept pressed to "OPEN" direction. When the grille comes to the original position, release the stoppers to hold the grille. Make sure to hear the sound of "CLICK" in both stoppers.

<Installation>



- Installing the inlet grille from the hinge side.
 Be careful in the inlet grille Installing, unstable installing may cause grille falling.
 Repair or replace the distorted, broken stopper at once, or the grille falling may occur.

10 Panel setting

<Flap swing range setting (Individual flap cotrol setting)>

It is possible to change the swing range of the flap by the wired remote control. Once the upper and lower limit positions are set, the flap will swing within the set range. It is also possible to set the different range to each flap.

The anti draft function will not be operated if the anti draft panel is installed and its wirings are only connected. To operate the anti draft function, enable the anti draft setting by using the wired or wireless remote control.

Note: It is not possible to set by the following remote control models or older. Wired:RC-EX1A, RC-E5, RCH-E3 Wireless: RCN-E1R

Once you have enabled the settings in this mode, the anti draft function is operated when the air-conditioner is started, and the parts of the anti draft mechanism are always open when the air-conditioner is operating. When the air-conditioner is stopped, they are closed. It is possible to enabled or disabled the anti draft function for each air outlet.

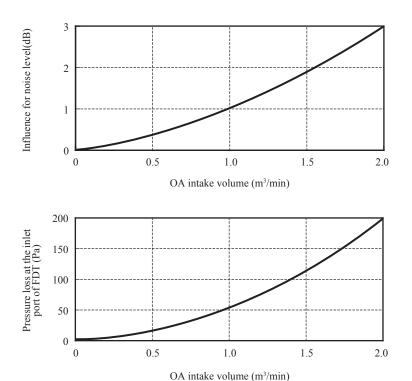
For the setting details, refer to the user's manual supplied with the remote control.

OUTDOOR AIR (OA) INTAKE FOR FDT

If it is required to intake OA through FDT unit, make sure to check following points carefully in order to conform to the requirement of customer.

If the OA intake volume through FDT unit is not satisfied with the required ventilation air volume, consider to install an independent ventilation system.

- 1) Be sure to calculate cooling/heating load considering the ventilation heat load and to decide the air-conditioning system.
- 2) Be sure the OA intake volume to FDT unit should not exceed 20% of the supply air (SA) volume of FDT unit and it should be less than 2m³/min.
- Be sure to decide the OA intake volume considering the mixed air temperature will be within the usage temperature range of FDT unit.
 - Especially in following case, please consider to intake OA after processing OA or reducing the OA intake volume.
- 4) Be sure to equip a suitable filter for OA intaken in order to protect the dust. (Because OA does not pass through the filter equipped on FDT unit)
- 5) Be sure to insulate OA duct.
 (If not, it may have dew condensation.)
- 6) Be sure to interlock the booster fan for OA with the fan of FDT unit by using CnT connector. (If not, the dust trapped on the filter of FDT unit may be blown out to the room by the OA being intaken during the fan of FDT unit stopping)
- 7) Be sure to select a suitable booster fan for OA considering the pressure loss in the OA duct and the pressure loss at the inlet port of FDT with following diagram.
 - (Please take into consideration the noise level as well)



<Selection of booster fan>

Booster fan should have a static pressure calculated with following formula

= the pressure loss at the inlet port of FDT (from above diagram)

+ Pressure loss in the OA duct (In case of ϕ 100 duct, 5Pa/m is required)

Select the booster fan from the fan characteristic diagram

Static pressure of booster fan

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(2) Ceiling cassette-4 way compact type (FDTC)

This manual is for the installation of an indoor unit

For electrical wiring work (Indoor), refer to the electrical wiring work installation manual (page 221). For remote control installation, refer to page 233. For wireless kit installation, refer to page 586. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to

This unit must always be used with the panel.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels. [AWARNING] and [ACAUTION] AWARNING: Wrong installation would cause serious consequences such as injuries or death. ACAUTION: Wrong installation might cause serious consequences depending on circumstances Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right: Never do it under any circumstances.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the
 customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit. Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

♠ WARNING

Installation should be performed by the specialist.

If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn

● Install the system correctly according to these installation manuals.

llation may cause explosion, injury, water leakage, electric shock, and fire

●Check the density refered by the foumula (accordance with ISO5149).

If the density exceeds the limit density, please consult the dealer and installate the ventilation system

Use the genuine accessories and the specified parts for installation. If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the

Ventilate the working area well in case the refrigerant leaks during installation. If the refrigerant contacts the fire, toxic gas is produced

•Install the unit in a location that can hold heavy weight. Improper installation may cause the unit to fall leading to accidents

●Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes

Improper installation may cause the unit to fall leading to accidents

Do not mix air in to the cooling cycle on installation or removal of the air-conditioner.

If air is mixed in, the pressure in the cooling cycle will rise abnormally and may co Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.

Power source with insufficient capacity and improper work can cause electric shock and fire.

• Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in

order not to apply unexpected stress on the terminal.

Loose connections or hold could result in abnormal heat generation or fire

• Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property.

mproper fitting may cause abnormal heat and fire

Check for refrigerant gas leakage after installation is completed.

If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced

Ouse the specified pipe, flare nut, and tools for R410A. Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle

● Tighten the flare nut according to the specified method by with torque wrench.

If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period. ● Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas car

Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also

cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak. • Connect the pipes for refrigeration circuit securely in installation work before compressor is operated. or is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due

Stop the compressor before removing the pipe after shutting the service valve on pump down work. 0

If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.

•Only use prescribed option parts. The installation must be carried out by the qualified installer. If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks. fi

Do not repair by yourself. And consult with the dealer about repair. Improper repair may cause water leakage, electric shock or fire

Consult the dealer or a specialist about removal of the air-conditioner.

Turn off the power source during servicing or inspection work.

If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan

Do not run the unit when the panel or protection guard are taken off.

Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock

Shut off the power before electrical wiring work.

It could cause electric shock, unit failure and improper running

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⚠ CAUTION

Perform earth wiring surely.

Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could se unit failure and electric shock or fire due to a short ci

Earth leakage breaker must be installed.

If the earth leakage breaker is not installed, it could cause electric shocks or fire.

sing the incorrect one could cause the system failure and fire

Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.

 Do not use any materials other than a fuse of correct capacity where a fuse should be used. Connecting the circuit by wire or copper wire could cause unit failure and fire

 Do not install the indoor unit near the location where there is possibility of flammable gas leakages If the gas leaks and gathers around the unit, it could cause fire.

Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled

It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire Secure a space for installation, inspection and maintenance specified in the manual

Insufficient space can result in accident such as personal injury due to falling from the installation place Do not use the indoor unit at the place where water splashes such as laundry.

Indoor unit is not waterproof. It could cause electric shock and fire. Do not use the indoor unit for a special purpose such as food storage, cooling for precision

instrument, preservation of animals, plants, and a work of art. It could cause the damage of the items.

 Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air-conditioner and cause a malfunction and breakdown. Or the air-conditioner might ence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jammin

 Do not install the remote control at the direct sunlight. It could cause breakdown or deformation of the remote control

Do not install the indoor unit at the place listed below.

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Places where flammable gas could leak. Places where carbon fiber, metal powder or any powder is floated.

Place where the substances which affect the air-conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres.

Places exposed to oil mist or steam directly. On vehicles and ships laces where machinery which generates high harmonics is used. Places where cosmetics or special sprays ar frequently used. Highly salted area such as beach

Heavy snow area Places where the system is affected by

smoke from a chimney. Altitude over 1000m

Do not install the indoor unit in the locations listed below (Re sure to install the indoor unit

according to the installation manual for each model because each indoor unit has each limitation)

- Locations with any obstacles which can prevent inlet and outlet air of the unit Locations where vibration can be amplified due to insufficient strength of structure

Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam, (in case of the

infrared specification unit)

Internation specimentary in the properties of the properties of the period of the properties of the properties of the properties of the properties of the properties of the properties of the performance or function and etc..

Do not put any valuables which will break down by getting wet under the air-conditioner.

Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings.

• Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use. It could cause the unit falling down and injury.

Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.

If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit. Install the drain pipe to drain the water surely according to the installation manual.

Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings

 Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit. Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety.

 Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can ccur, which can cause serious accidents

• For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.

Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.

omplete insulation could cause condensation and it would wet ceiling, floor, and any other val

 Do not install the outdoor unit where is likely to be a nest for insects and small animals Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to

 Pay extra attention, carrying the unit by hand. 0 Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin.

 Make sure to dispose of the packaging material. Leaving the materials may cause injury as metals like nail and woods are used in the package

Do not operate the system without the air filter.

It may cause the breakdown of the system due to clogging of the heat exchanger Do not touch any button with wet hands.

 Do not touch the refrigerant piping with bare hands when in operation. The pipe during operation would become very hot or cold according to the operating condition, and it could

 Do not clean up the air-conditioner with water. It could cause electric shock

Do not turn off the power source immediately after stopping the operation.

Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdow

Do not control the operation with the circuit breaker

It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury

① Before installation

- Install correctly according to the installation manual.
- Confirm the following points:
 - O Unit type/Power supply specification O Pipes/Wires/Small parts O Accessory items

Accessory itme

For unit	hanging		For refrigerant pipe			For dra	in pipe	
Flat washer (M10)	Level gauge (Insulation)	Pipe cover(big)	Pipe cover (small)	Strap	Pipe cover(big)	Pipe cover(small)	Drain hose	Hose clamp
0		6	6		0	0		()
8	4	1	1	4	1	1	1	1
For unit hanging	For adjustment in hoisting in the unit's main body	For heat insulation of gas pipe		For pipe cover	insulation	For heat insulation of drain socket		For drain hose mounting

2 Selection of installation location for the indoor unit

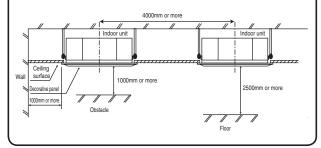
① Select the suitable areas to install the unit under approval of the user

- Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
- Areas where there is enough space to install and service.
- Areas where it can be drained properly. Areas where drain pipe descending slope can be taken. Areas where there is no obstruction of air flow on both air return grille and air supply port.
- Areas where fire alarm will not be accidentally activated by the air-conditioner.
- Areas where the supply air does not short-circuit.
- Areas where it is not influenced by draft air.
- Areas not exposed to direct sunlight.
- Areas where dew point is lower than around 28°C and relative humidity is lower than 80%. This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above If there is a possibility to use it under such a condition, attach additional insulation of 10 to
- 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.
- Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.) Areas where any items which will be damaged by getting wet are not placed such as food, table
- wares, server, or medical equipment under the unit.

 Areas where there is no influence by the heat which cookware generates.
- Areas where not exposed to oil mist, powder and/or steam directly such as above fryer
- Areas where lighting device such as fluorescent light or incandescent light doesn't affect the
- (A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air conditioner might not work properly.)
- Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.
- ③ If there are 2 units of wireless type, keep them away for more than 5m to avoid malfunction due to cross communication
- When plural indoor units are installed nearby, keep them away for more than 4m.

Space for installation and service

- When it is not possible to keep enough space between indoor unit and wall or between indoor units, close the air supply port where it is not possible to keep space and confirm there is no short circuit
- Install the indoor unit at a height of more than 2.5m above the floor.

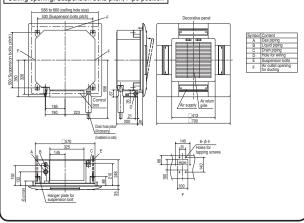


③ Preparation before installation

- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
- O For grid ceiling
- When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

 O In case the unit is hanged directly from the slab and is installed on the ceiling plane which has
- enough strength.
- When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt. Prepare four (4) sets of suspension bolt, nut and spring washer (M10 or M8) on site.

Ceiling opening, Suspension bolts pitch, Pipe position



4 Installation of indoor unit

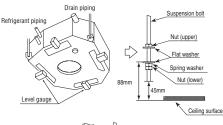
Work procedure

- This units is designed for 2 x 2 grid ceiling.
- If necessary, please detach the T bar temporarily before you install it.

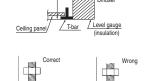
 If it is installed on a ceiling other than 2 x 2 grid ceiling, provide an inspection port on the control box
- Arrange the suspension bolt at the right position (530mm×530mm).
- Make sure to use four suspension bolts and fix them so as to be able to hold 500N load.
- 4. Ensure that the lower end of the suspension bolt should be 45mm above the ceiling plane Temporarily put the four lower nuts 88mm above the ceiling plane and the upper nuts on distant place from the lower nuts in order not to obstruct hanging the indoor unit or adjust the indoor unit position, and then hang the indoor unit.



Adjust the indoor unit position after hanging it by inserting the level gauge attached on the package into the air supply port and checking if the gap between the ceiling plane and the indoor unit is appropriate. In order to adjust the indoor unit position, adjust the lower nuts while the upper nuts are put on distant place. Confirm there is no backlash between the hanger plate for suspension bolt and the lower nut and washer



Û



Touch the nut (lower) an washer without any play



T-bar

When the ceiling panel comes below the T bar, align the bottom of the level gauge to the lower face of the ceiling panel.

4 Installation of indoor unit (continued)

- Make sure to install the indoor unit horizontally. Confirm the levelness of the indoor unit with a level gauge or transparent hose filled with water. Keep the height difference at both ends of the indoor unit within 3mm.
- 7. Tighten four upper nuts and fix the unit after height and levelness



Caution

- Do not adjust the height by adjusting upper nuts. It will cause unexpected stress on the indoor unit
 and it will lead to deformation of the unit, failure of attaching a panel, and generating noise from the
- Make sure to install the indoor unit horizontally and set the gap between the unit underside and the ceiling plane properly. Improper installation may cause air leakage, dew condensation, water leakage and noise.
- Even after decorative panel attached, still the unit height can be adjusted finely. Refer to the installation manual for decorative panel for details.
- Make sure there is no gap between decoration panel and ceiling surface, and between decoration
- panel and the indoor unit. The gap may cause air leakage, dew condensation and water leakage.

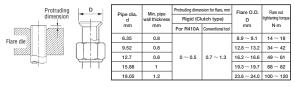
 In case decorative panel is not installed at the same time, or ceiling material is installed after the unit installed, put the cardboard template for installation attached on the package (packing material of cardboard box) on the bottom of the unit in order to avoid dust coming into the indoor unit.

5 Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.
 - Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data.

 1) In case of reuse: Do not use old flare nut, but use the one attached to the unit or compatible with JIS B 8607, Class 2.
 - 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H 3300) for refrigeration pipe installation
- In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not use any refrigerant other than R410A.
- Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- Use special tools for R410A refrigerant.

Work procedure

- 1. Remove the flare nut and blind flanges on the pipe of the indoor unit.
 - * Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them
 - (Gas may come out at this time, but it is not abnormal.)
- Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
- 2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit. *Bend radius of pipe must be 4D or larger. Once a pipe is bent, do not readjust the bending. Do not twist a pipe or collapse to 2/3D or smaller.
 - *Do a flare connection as follows:
 - Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them
 - When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe
- Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
 - Make sure to insulate both gas pipes and liquid pipes completely.
 - *Incomplete insulation may cause dew condensation or water dropping
 - Use heat-resistant (120 °C or more) insulations on the gas side pipes.
 - In case of using at high humidity condition, reinforce insulation of refrigerant pipes.
- Surface of insulation may cause dew condition or water dropping, if insulations are not reinfoced Refrigerant is charged in the outdoor unit.
 - As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the slide friction force on the threads and increase, in turn, the axial component force so that it could crack the flare by the

Stress corrosion.

Refrigerating machine oil may be applied to the internal surface of flare only

⑤ Refrigerant pipe (continued) Retingerant is charged in the mytoor समृद्धि case of using reinfoced insulation? As for the additional refrage and pharge for the indoor unit and promote the indoor unit and promote the indoor unit and promote the indoor unit and promote the indoor unit and promote the indoor unit. <Th attached to the Tightening torque N;m/ 14 to 18 / Unit 34 to 42 / 49 to 61 Band (Accessory 15.88Band (Accessory) 68 to 82 thckness 90 Assulation is 10mm 100 to 120 Band (Prepare on site) hould be 20mm or

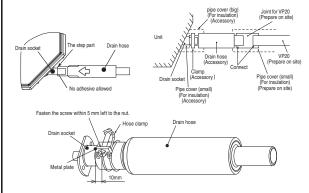
6 Drain pipe

Caution

- Install
- Do not but the drawnable glassify and alteruite but get working ensured the syder after the rule realised in flamm able game general hearis are small (Bowie Podle หกัญ or peditionely สามรัฐออก (exposed hearis) are small (Bowie Podle หกัญ or peditionely aroung penjuly addition). to <u>ଏକୋରେ ଚେଲ୍ୟାର ଉପ୍ୟକ୍ତିୟ ରେମାଲ ନ୍ୟୁନ୍ନ ନାଟର କା ସମ୍ବାନ୍ତି</u> ଓଡ଼ିଆନାର୍ଣ୍ଣ ସମ୍ବାନ୍ତି ସ୍ଥର୍ଗ୍ୟ ମନ୍ତି <mark>ସେମ୍ବାନ୍ତି ବ୍ୟ</mark>କ୍ତି ବିଷ୍ଟ୍ର ବିଷ୍ଟ ବି damad
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Work procedure

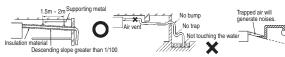
- Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part of drain
- Attach the hase glamp to the drain hose around 10mm from the end, and fasten the screw within
- Do not apply adhesives on this end.



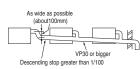
- 2. Prepare a joint for connecting VP20 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP20 pipe (prepare on site).
- * As for drain pipe, apply VP20 made of rigid PVC which is on the market
- Make sure that the adhesive will not get into the supplied drain hose.
- It may cause the flexible part broken after the adhesive is dried up and gets rigid
- Do not bend or make an excess offset on the drain hose as shown in the picture. Bend or excess offset will cause drain leakage



- 3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
- Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
- Do not set up air vent



When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP30 or bigger size for main drain pipe

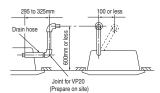


6 Drain pipe (continued)

- Insulate the drain pipe.
 - Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
 - * After drainage test implementation, cover the drain socket part with pipe cover (small size). then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gapless.

Drain up

 The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.



Drain test in pipe (continued)

sure that drain system work in good condition and no w Drain 18 fallow joint and drain pan. Check if the motor sound of drain pump is normal or not.

- Buttetrainstællstievrenfildirastadisteormælkeesuiregtseasonin system work in good condition and no water
- Feakage broindijnojncasesdraak panur Etrectoinh phletentolen tesstubref or fedrain pump is normal o
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- pamping the realitogget the electrical component wet.

 Make water to habitater is consciented the proping panid the realismountably leakapsofasmentojojojetshof tileodrizial piprepainteettesti
- 2. Obarkienstutteathtatewa atee risische abmeed voorbrainneede dy taavolitele the istraion wranten ile alpæget ingm Aarthyejoilnæino 6 dok ætr(tina mispe nætrith) ei teis þossible to Cherdir if the twater waster as next poet for drawnleyd out while the drain motor
- Usnpplægattinegdrætirthætudræin stocked (transplateeret) midvie persosibilen typwater ohelble till thine wateafted the heesbut more onlying it. And insulate the drain 3. https://doi.org/10.1001/j.com/
- on the drain pan after the test, and re-plug it. And insulate the drain



- Drain pump can be operated by remote control (wired).

 Light HIND PRIPHE Delerated by remote control (wired).
- O Froctise expectation in with the development of the controller (wired).

 Dealer pump can be operated by remote controller (wired).

Drain plug

- O Froatse ejectatian wineitigodore foot din Operation for drain pump in the installation manual for wiring Divaria pump will run continuously when the dip switch "SW7-1" on the indoor unit PCB is turned ON,
- Othec@senetextorc@h@iisndjsworknextetdijsmeththen the power supply (220-240VAC on the terminal block D@iia.pdn@)will[@ aondt@jojusky wheedt@hVip switch"SW7-1" on the indoor unit PCB is turned ON, medtotu@NOFFFdiSt607r1ecated,racdrthectttrepCoverecutppOrtB20ft246t1646son the terminal block (1) and (2) or ((L) and (N) 1) is turned ON.

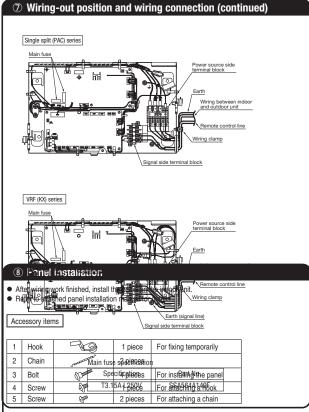
Make sure to turn OFF "SW7-1" and reconnect the Connector CNB after the test.

(7) Wiring-out position and wiring connection Wiring-out position and wiring connection

- installation service provider qualified by a power provider of the country, and be executed according to the period alternate and the period according to the usual alternate and the period according to the usual and the period according to the period of
- Des specified cord, rasten the wining forthe terminal securely, and hold the cord securely in order Right Babby that Restrict Pieces Wit the terminal. Les specified for graves and the properties of the proper

- For the details of electrical wiring work, see attached instruction manual for electrical wiring work. Remove a lid of the control box 1 screws).
- Hold each wiring inside the unit and fasten them to terminal block securely. For the same partial box (1 screws). The same partial box (1 screws). Hold and the same partial box (1 screws) is same partial box (1 screws). The same partial box securely. Fix the wiring with claim).
- 4. Install a lid of the control முது நக்கிரம் வழிக்கி place.





Attach the panel on the indoor unit after electrical wiring work.

® Panel installation

After wiring work finished, install the panel on the indoor unit.

Oheck list after installation

Accessory items ing items after all installation work completed.

Che	ck if		1		Expected trouble	1	Check
The	ind99kand	outdoor units de fixed	securerye	For fixing	temporarilyation, noi	se	
₫nsp	e cha jifor le	akage is done?	2 pieces		Insufficient capacity		
Insu Wat	lation work Bolt er is draine	is properly dese?	4 pieces	For insta	.Water leakage ling the panel Water leakage		
€up	pl ŞG6A ₩ge	s same as mentioned	n the Pinell n				
5 her	reSstANG-wi	ring or mis Connection	of papingoes	For attac	ાં ગ્લા કાદમિત્રાં ઉત્પા, not w	orking at all	
Eart	h wiring is o	connected properly?	it ofter electri	ool wiring w	Electric shock		
ICA	le size com	inel on the indoor un ply with specified size? Shed manual for pani ocks airflow on air inlet	al inetallation	for dotails	PCB burnt out, not w	orking at all	
Any	obstacle bl	ocks airflow on air inlet	and outlet?	ioi detailo.	Insufficient capacity		

9 Check list after installation

Check the following items after all installation work completed.

Check if	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Power source voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
There is mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks air flow on air inlet and outlet?	Insufficient capacity	

PANEL INSTALLATION MANUAL

PJA012D783

MARNING

Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
 Loose connection or hold will cause abnormal heat generation or fire.

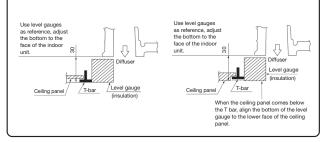


Make sure the power source is turned off when electric wiring work.
 Otherwise, electric shock, malfunction and improper running may occur.



① Checking the indoor unit installation position

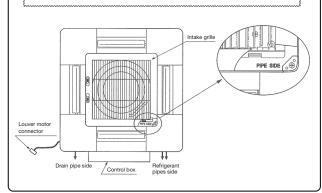
- Read this manual together with the air-conditioner installation manual carefully.
- Check if the gap between the ceiling plane and the indoor unit is correct by inserting the level gauge into the air outlet port of the indoor unit. (See below drawing)
- Adjust the installation elevation if necessary.
 Remove the level gauge before you attach the panel.



② Orientation of the panel and return air grille installation

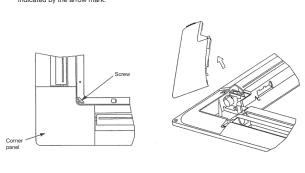
- 1. Take note that there is an orientation to install the panel.
- Attach the panel with the orientation shown on the below.
 Align the "PIPE SIDE" mark (on the panel) with the refrigerant pipes on the indoor unit.
- 2. The intake grille can also be attached in a rotated position by 90 degrees.

In case the orientation of the panel is not correct, it will lead to air leakage and also it is not possible to connect the louver motor wiring.



③ Removing a corner panel

• Unscrew the screw from the corner area, pull the corner panel toward the direction



4 Attaching a corner panel • First insert the part "a" of a corner panel into the part "A" of the cover panel, engage two hooks and tighten the screw.

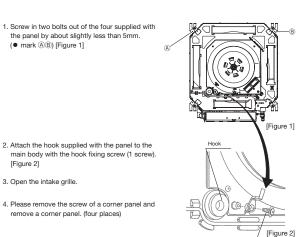
⑤ Panel installation

• Install the panel on the unit after completing the electrical wiring.

Accessories

1	Hook	70	1 piece	For fixing temporarily
2	Chain	Noocooper.	2 pieces	
3	Screw	(Dames	4 pieces	For hoisting the panel
4	Screw	Q)min	1 piece	For attaching a hook
5	Screw	Elm	2 pieces	For attaching a chain

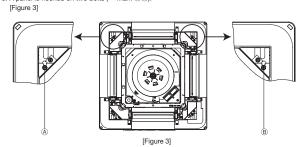
1. Screw in two bolts out of the four supplied with the panel by about slightly less than 5mm. (mark (A)(B)) [Figure 1]



remove a corner panel. (four places)

[Figure 2] 3. Open the intake grille.

A panel is hooked on two bolts (● mark (A)(B)).



DATA LOADING

In case the louver No to be set is uncertain, set any louver temporarily. The louver will swing once when the setting is completed and it is possible to confirm the louver No and the position. After that, choose the correct louver No and set the top and bottom position.

(horizontal) (1

NO.2

NO.1 NO.3

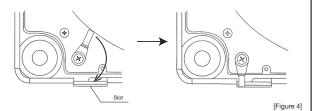
NO.4

Control box

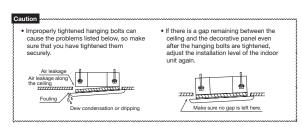
NOTICE

10

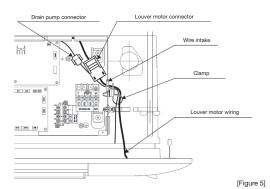
6. Please rotate a hook, put in the slot on the panel, and carry out fixing the panel temporarily, [Figure 4]



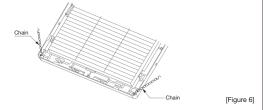
7. Tighten the two bolts used for fixing the panel temporarily and the other two.



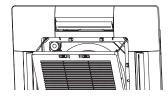
- 8. Please open the lid of a control box.
- 9. Like drain pump wiring, please band together by the clamp and put in louver motor wiring into a control box. [Figure 5]
- 10. Please connect a louver motor connector. [Figure 5]



11. Attach two chains to the intake grille with two screws. [Figure 6]



- 12. Replace the corner panels. Please also close a chain with a screw together then. [Figure 7]
- 13. Close the intake grill.



[Figure 7]

Make sure there is no stress given on the panel when adjusting the height of the indoor unit to avoid unexpected distortion. It may cause the distortion of panel or failing to close the air return grille

(7) How to set the air flow direction

It is possible to change the movable range of the louver on the air outlet from the wired remote control. Once the top and bottom position is set, the louver will swing within the range between the top and the bottom when swing operation is chosen. It is also possible to apply different setting to each louver.

1 Stop the air-conditioner and press of SET button and LOUVER below button simultaneously for three seconds or more. The following is displayed if the number of the indoor units connected to the remote control is one. Go to step 4.

*DATA LOADING **

≂െ‰് ≱

The following is displayed if the number of the indoor units connected to the remote control are more than one

~&\$ SELECT I/U ~ -1/U000 Å

2 Press ▲ or ▼ button. (selection of indoor unit)
Select the indoor unit of which the louver is set.

[EXAMPLE]

3 Press SET button, (determination of indoor unit) ted indoor unit is fixed.

[EXAMPLE]

*[/I/I00] * (displayed for two seconds)

"DATA LOADING " ுத⊒N_{0.1} ≱ா

4 Press ▲ or ▼ button. (selection of louver No.) Select the louver No. to be set according to the right figure. [EXAMPLE]

5 Press O SET button. (Determination of louver No.)

The louver No. to be set is confirmed and the display shows the upper limit of the movable range.

[EXAMPLE] If No.1 louver is selected,

"Ho.1 UPPER2 +" - current upper limit position

6 Press ▲ or ▼ button, (selection of upper limit position)

7 Press SET button. (Fixing of the upper limit position)
The upper limit position is fixed and the setting position is displayed for two seconds. Then proceed to lower limit position selection display.

[EXAMPLE]
No.1 UPPER2 (displayed for two seconds)

9 Press O SET button. (Fixing of the lower limit position)

Upper limit position and lower limit position are fixed, and the set positions are displayed for two seconds, then setting is completed.

• After the setting is completed, the lower which was set moves from the original position to the lower limit position, and goes back to the original position again. (This operation is not performed if the indoor unit and/or indoor unit fair is in operation.)

[EXAMPLE] No.1 U2 L6 (displayed for two seconds)

SET COMPLETE

হল No.1 ▲

10 Press () ON/OFF button.
I nuver adjusting mode ends and returns to the original display.

If the upper limit position number and the lower limit position number are set to the same position, the lower is fixed at that position auto swing does not function.

ATTENTION

If you press FESET button during settings, the display will return to previous display.

If you press OONOFF button during settings, the mode will be ended and return to original display, and the settings that have not been completed will become invalid.

When plural remote controls are connected, louver setting operation cannot be set by slave remote

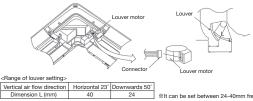
- It it is necessary to fix the louver position manually, follow the procedure mentioned below.

 1. Shut off the main power switch.

 2. Unplug the connector of the louver motor which you want to fix the position.

 Make sure to insulate unplugged connectors electrically with a vinyl tape.

 3. Adjust the louver position slowly by hand so as to be within the applicable range mentioned below table.



- Any automatic control or operation from the remote control will be disabled on the louver whose
 position is fixed in the above way.
 Do not set a louver beyond the specified range. Failure to observe this instruction may result in
 dripping, dew condensation, the fouling of the ceiling and the malfunctioning of the unit.

*It can be set between 24-40mm freely.

PFA012D628

(3) Ceiling suspended type (FDE)

This manual is for the installation of an indoor unit. For electrical wiring work (Indoor), refer to page 221. For remote control installation, refer to page 233. For wireless kit installation, refer to page 594. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to page 245.

SAFETY PRECAUTIONS ■ Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself. ■ The precautionary items mentioned below are distinguished into two levels, [AWARNING] and [ACAUTION] <u>AWARNING</u>: Wrong installation would cause serious consequences such as injuries or death. ACAUTION: Wrong installation might cause serious consequences depending on circumstances. Both mentions the important items to protect your health and safety so strictly follow them by any means. The meanings of "Marks" used here are as shown as follows: Never do it under any circumstances. Always do it according to the instruction. After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit. Ask your customers to keep this installation manual together with the user's manual, Also, ask them to hand over the user's manual to the new user when the owner is changed. **↑** WARNING Installation should be performed by the specialist. ø If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit. Install the system correctly according to these installation manuals. Improper installation may cause explosion, injury, water leakage, electric shock, and fire • When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage, referred by the formula (accordance with IS05149). If the density of refrigerant exceeds the limit, please consult the dealer and install the ventilation system, otherwise lack of oxygen can occur, which can cause serious accidents. •Use the genuine accessories and the specified parts for installation. 0 If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit. Ventilate the working area well in case the refrigerant leaks during installation 0 If the refrigerant contacts the fire, toxic gas is produce Install the unit in a location that can hold heavy weight. 0 Improper installation may cause the unit to fall leading to accident ● Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes. 0 tion may cause the unit to fall leading to accidents Do not mix air in to the cooling cycle on installation or removal of the air-conditioner. If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injur Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. 0 Power source with insufficient capacity and improper work can cause electric shock and fire. • Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in 0 order not to apply unexpected stress on the terminal. Loose connections or hold could result in abnormal heat generation or fire. Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services Improper fitting may cause abnormal heat and fire. Check for refrigerant gas leakage after installation is completed. 0 If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced. •Use the specified pipe, flare nut, and tools for R410A. 0 Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle ● Tighten the flare nut according to the specified method by with torque wrench 0 If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period

● Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur

Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.

If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due

If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit
and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.

• Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.

Stop the compressor before removing the pipe after shutting the service valve on pump down work.

If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan

Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get

Only use prescribed option parts. The installation must be carried out by the qualified installer.

If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire

• Do not repair by yourself. And consult with the dealer about repair.

Consult the dealer or a specialist about removal of the air-conditioner.

Do not run the unit when the panel or protection guard are taken off

Improper repair may cause water leakage, electric shock or fire.

Improper installation may cause water leakage, electric shock or fire.

Turn off the power source during servicing or inspection work

Shut off the power before electrical wiring work.

It could cause electric shock, unit failure and improper running

to abnormal high pressure in the system

burned, or electric shock.

Perform earth wiring surely. Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure, electric shock and fire due to a short circuit Earth leakage breaker must be installed. 0 f the earth leakage breaker is not installed, it can cause fire and electric shock: Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all 0 poles under over current. Using the incorrect one could cause the system failure and fire Do not use any materials other than a fuse of correct capacity where a fuse should be used. Connecting the circuit by wire or copper wire could cause unit failure and fire Do not install the indoor unit near the location where there is possibility of flammable gas leakages. If the gas leaks and gathers around the unit, it could cause fire Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled. It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire Secure a space for installation, inspection and maintenance specified in the manual 0 Insufficient space can result in accident such as personal injury due to falling from the installation place. Do not use the indoor unit at the place where water splashes such as laundry Indoor unit is not waterproof. It could cause electric shock and fire. Do not use the indoor unit for a special purpose such as food storage, cooling for precisior instrument, preservation of animals, plants, and a work of art. It could cause the damage of the items. Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics. Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air-conditioner and cause a malfunction and breakdown. Or the air-conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming. Do not install the remote control at the direct sunlight. It could cause breakdown or deformation of the remote control. Do not install the indoor unit at the place listed below Places where flammable gas could leak. Places where carbon fiber, metal powder or any powder is floated. Place where the substances which affect the air-conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres. Places where cosmetics or special sprays are frequently used. Highly salted area such as beach. Heavy snow area Places where the system is affected by Places exposed to oil mist or steam directly smoke from a chimney. Altitude over 1000m On vehicles and ships Places where machinery which generates high harmonics is used. Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation) Locations with any obstacles which can prevent link and outlet air of the unit Locations where vibration can be amplified due to insufficient strength of structure. Locations where vibration can be amplified due to insufficient strength of structure. Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit) Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m) Locations where drainage cannot run off safely It can affect performance or function and etc. Do not put any valuables which will break down by getting wet under the air-conditioner. Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use It could cause the unit falling down and injury. • Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit. If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit Install the drain pipe to drain the water surely according to the installation manual. 0 Improper connection of the drain pipe may cause dropping water into room and damaging user's bel Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit. Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety. Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work 0 If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents ● For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding Check if the drainage is correctly done during commissioning and ensure the space for inspection and mainte • Ensure the insulation on the pipes for refrigeration circuit so as not to condense water 0 Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuable Do not install the outdoor unit where is likely to be a nest for insects and small animals Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean Pay extra attention, carrying the unit by hand. rry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit hand. Use protective gloves in order to avoid injury by the aluminum fin. Make sure to dispose of the packaging material. 0 Leaving the materials may cause injury as metals like nail and woods are used in the package Do not operate the system without the air filter. \bigcirc t may cause the breakdown of the system due to clogging of the heat exchanger Do not touch any button with wet hands Do not touch the refrigerant piping with bare hands when in operation. The pipe during operation would become very hot or cold according to the operating condition, and it could ca Do not clean up the air-conditioner with water. It could cause electric shock. Do not turn off the power source immediately after stopping the operation. Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown Do not control the operation with the circuit breaker It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury

⚠ CAUTION

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①Before installation

- Install correctly according to the installation manual.
- •Confirm the following points:

OUnit type/Power source specification OPipes/Wires/Small parts OAccessory items

Accessory item

For un	it hanging	F	or refrigerant	pipe		F	or drain pipe			For air return grille
Flat washer (M10)	Paper pattern	Pipe cover (large)	Pipe cover (small)	Strap	Drain hose (with clamp)	Hose clamp	Fixing bracket	Screw	Heay insulation	Screw
0					@DDDDD	()				
8	1	1	1	4	1	1	1	2	1	4
For unit hanging	For unit hanging and adjustment	For heat insulation of gas pipe	For heat insulation of liquid pipe		For drain pipe connection	For drain hose mounting		For installing of fixing bracket	For drain hose	For fixing air return grille

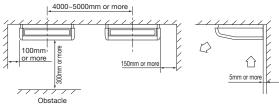


2 Selection of installation location for the indoor unit

- $\ensuremath{\textcircled{1}}$ Select the suitable areas to install the unit under approval of the user.
 - Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
 - · Areas where there is enough space to install and service.
 - · Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
 - · Areas where there is no obstruction of airflow on both air return grille and air supply port.
 - · Areas where fire alarm will not be accidentally activated by the air-conditioner.
 - · Areas where the supply air does not short-circuit.
 - · Areas where it is not influenced by draft air.
 - · Areas not exposed to direct sunlight.
 - Areas where dew point is lower than around 23°C and relative humidity is lower than 80% This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above.
 - Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
- · Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
- Areas where there is no influence by the heat which cookware generates.
- · Areas where not exposed to oil mist, powder and/or steam directly such as above fryer. $\ensuremath{\textcircled{2}} \ensuremath{\text{Check}} \ensuremath{\text{if}} \ensuremath{\text{the}} \ensuremath{\text{place}} \ensuremath{\text{where}} \ensuremath{\text{the}} \ensuremath{\text{air-conditioner}} \ensuremath{\text{is}} \ensuremath{\text{installed}} \ensuremath{\text{can}} \ensuremath{\text{hold}} \ensuremath{\text{the}} \ensuremath{\text{weight}} \ensuremath{\text{of}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{hold}} \ensuremath{\text{the}} \ensuremath{\text{weight}} \ensuremath{\text{of}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{hold}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{hold}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{can}} \ensuremath{\text{hold}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{can}} \ensuremath{\text{hold}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{can}} \ensuremath{\text{hold}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{of}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{hold}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{hold}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{of}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{can}} \ensuremath{\text{the}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{the}} \ensuremath{\text{the}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensuremath{\text{unit.}} \ensur$ If it is not able to hold, reinforce the structure with boards and beams strong enough
- to hold it. If the strength is not enough, it could cause injury due to unit falling.

③ When plural indoor units are installed nearby, keep them away for more than 4 to 5m.

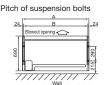
Space for installation and service

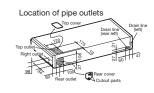


③Preparation before installation

- •If suspension bolt becomes longer, do reinforcement of earthquake resistant. O For grid ceiling
 - When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
 - O In case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength. When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.
- Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.

Pitch of suspension bolts and pipe position





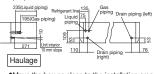
③Preparation before installation (continued)

40 to 50type 1070 1022 Single Split (PAC) series 60 to 71type 1320 1272 36 to 56type 1070 1022 VRF (KX) series 71type 1320 1272 112 to 140type 1620 1572

- %Pipes can be taken out in 3 directions (rear, right o top).
- Cut out holes using nippers, etc.
 Cut out holes to take out pipes along the cutoff line on the rear cover.
 Cut out the top face cover aligning to the piping
- position.

 When taking pipe out to right-hand side, cut out a
-g Pipe out to right-hand side, cut out a hole along the groove at the inside of side panel. After installing pipes and wires, seal clearances around pipes and wires with putty, etc. to shut off dust.

Make sure to install the covers at rear and top in order to protect the inside of unit from intrusion of outs or protect wires from damages by sharp edges. When taking them out to the right-hand side, remove burrs or sharp edges from the cutout.



Pipe position

- Move the box as close to the installation area as possible packed.
 If it must be unpacked, wrap the unit with a nylon sling, and be careful not to damage the unit.
- *Do not hold fragile plastic parts, such as the side panel, blow louver, etc.
- olf you need to lay the unit on a floor after unpacking, always put it with the intake grille facing upward.

Preparation before instalation

1. Remove the air return grille. Slide stoppers (4 places) of the catches, then pull out the pins (4 or 6 places).

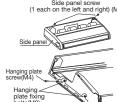


3. Remove the hanging plate. Remove the screw, and then looser the fixing bolts.



2. Remove the side panel.

Remove the screw and detach the side panel by sliding it toward the direction indicated by the arrow mark.



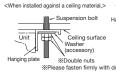
Hanging pla

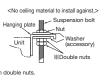
4 Installation of indoor unit

Work procedure

- Select the suspension bolt locations and the pipe hole location. (1) Use enclosed paper pattern as a reference, and drill the holes for the suspension bolts and pipe. *Decide the locations based on direct measurements.
- (2) Once the locations are properly placed, the paper pattern can be removed.
- 2. Install the suspension bolts in place.
- 3. Fix with 4 suspension bolts, which can endure load of 500N.
- 4. Check the measurements given at the right figure for the length of the suspension bolts.
- 5. Fasten the hanging plate onto the suspension bolts.







Paper pattern

Ceiling

Hanging plate

sion bolt

- 6. Install the unit to the hanging plate. (See the figure at right.)
- (1) Slide the unit in from front side to get it hanged on the hanging plate with the bolts. (2) Fasten the four fixing bolts (M8: 2
- ach on the left and right sides) firmly.
- (3) Fasten the two screws (M4: 1 each on the left and right sides).

⚠WARNINIG: Hang a side panel on from the panel side to the rear side and then fasten it securely onto the indoor unit with screws

*To ensure smooth drain flow install the unit with a descending slope toward the drain outlet.

(For left-side drain connection, give the reverse slope.)

Hanging plate

▲ CAUTION: Do not give the reversed slope, which may cause water leaks.

-185-

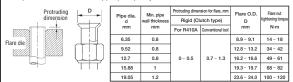
⑤Refrigerant pipe

Caution

Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.

Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the utdoor unit, catalogue or technical data.

1) In case of reuse: Do not use old flare nut, but use the one attached to the unit or compatible with JIS B 8607, Class 2. 2) In case of reuse: Flare the end of pipe replaced partially for R410A



 Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H 3300) for refrigeration pipe installation In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.

Do not use any refrigerant other than R410A. Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.

Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakd

• Use special tools for R410A refrigerant.

Work procedure

1. Remove the flare nut and blind flanges on the pipe of the indoor unit.

Make sure to loosen the flare nut with holding the nut on pine side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then rer (Gas may come out at this time, but it is not abnormal.)

Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)

Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.

• When pulling out pipes backward or upward, install them passing through the attached cover together with the electrical cabling.

Seal the gap with putty, or other, to protect from dust, etc.

*Bend radius of pipe must be 4D or larger. Once a pipe is bent, do not readjust the bending.

Do not twist a pipe or collapse to 2/3D or smaller.

*Do a flare connection as follows:

Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper

 When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.

Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.

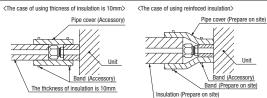
Make sure to insulate both gas pipes and liquid pipes completely.

Surface of insulation may cause dew condition or water dropping, if insulations are not reinfoced. Refrigerant is charged in the outdoor unit.

As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the slide friction force on the threads and increase, in turn, the axial component force so that it could crack the flare by the stress corrosion.

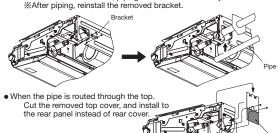
Refrigerating machine oil may be applied to the internal surface of flare only



The pipe can be connected from three different directions. (back, reight, top)

When the pipe is routed through the back.

If the bracket is removed, piping work will become easy.



6 Drain pipe

The drain pipes may pull out either from back, right or left side.

Caution

Install the drain pipe according to the installation manual in order to drain properly.

- Imperfection in draining may cause flood indoors and wetting the household goods, etc. Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful andinflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell,
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap
 in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

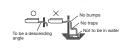
Work procedure

Insert drain hose completely to the base, and tighten the drain hose clamp securely. (adhesive must not be used.)

When plumbing on the left side, move the rubber plug and the cylindrical insulating materials by the pipe connecting hole on the left side of the unit to the right side.

A Beware of a possible outflow of water that may

occur upon removal of a drain plug.
Fix the drain hose at the lowest point with a hose clamp supplied as an accessory illustrated in the right drawing by laying it without leaving a slack.



Take head of electrical cables so that they may not run beneath the drain hose

⚠ A drain hose must be clamped down with a hose clamp. There is a possibility that drain water overflows.

Connect VP20(prepare on site) to drain hose. (adhesive must not be used.) * Use commercially available rigid PVC general pipe VP20 for drain pipe.

Do not to make the up-down bending and trap in the mid-way while assuming that the drain pipes is downhill. (more than 1/100)

Never set up air vent.Insulate the drain pipe.

 Insulate the drain hose clamp with the heat insulation supplied as accessories. When the unit is installed in a humid place, consider precautions against dew condensation such as heat insulation for the drain pipe.

Drain test

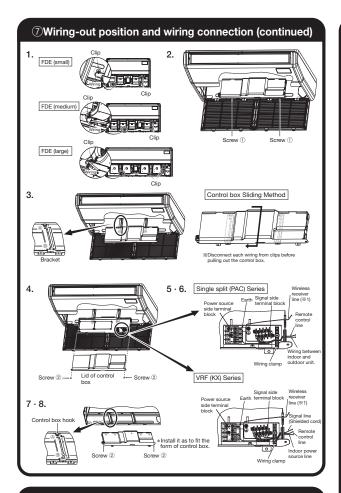
After installation of drain pipe, make sure that drain system work in good condition and no water leakage from joint and drain pan.

Do drain test even if installation of heating season.

(7) Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country. Be sure to use an exclusive circuit.
 Use specified cord, fasten the wiring to the terminal securely, and hold the
- cord securely in order not to apply unexpected stress on the terminal.
- Be sure to do D type earth work
- For the details of electrical wiring work, see attached instruction manual for electrical wiring work.
- Remove wiring from clips.
 Remove the control box (Screw ①, ②pcs).
- Pull out the control box by sliding along the groove on the bracket (Direction (A)→(B)).
- Remove the lid of control box (Screw 2), 2pcs).
- Hold each wiring inside the unit and connect to the terminal block surely.
- Fix the wiring by clamp.
 Install the lid of control box (Screw ②, ②pcs).
- Return the control box to the original place by sliding along the groove on the bracket (Direction $\textcircled{B} \rightarrow \textcircled{A}).$ 8.
- 9. Install the removed parts at their original places.
- %1 Wiring for the signal receiving section of wireless kit (Optional) are connected to the X and Y terminals on the terminal block (the site connection side), when the indoor unit is shipped from the factory.

It is not necessary to disconnect these wiring when wired remote control is connected. When the wired/wireless kits are used together, it becomes necessary to set the slaves and remote control.



®Control mode switching

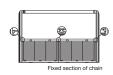
• The control content of indoor units can be switched in following way. (

		, , , , , , , , , , , , , , , , , , ,
Switch No.	Contr	ol Content
SW8-4	ON	Indoor unit silent mode
	OFF	Normal operation

9 Attaching the air return grille

- The air return grille must be attached when electrical cabling work is completed.
- 1. Fix the chains tied to the air return grille onto the indoor unit with screws supplied as accessories (4 pieces).
- 2. Close the air return grille This completes the unit installtion work





(1) Check list after installation

• Check the following items after all installation work completed.

Check if	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Supply voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
There is mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks air flow on air inlet and outlet?	Insufficient capacity	

(1) How to set the air flow direction

It is possible to change the movable range of the louver on the air outlet from the wired remote control. Once the top and bottom position is set, the louver will swing within the range between the top and the bottom when swing operation is chosen. It is also possible to apply different setting to each louver.

1. Stop the air-conditioner and press SET button and

- LOUVER button simultaneously for three seconds or
 - The following is displayed if the number of the indoor units connected to the remote control is one. Go to step 4.
 - The following is displayed if the number of the indoor units connected to the remote control are more than one.





2. Press ▲or ▼ button.(selection of indoor unit) • Select the indoor unit of which the louver is set.

3. Press SET button.(determination of indoor unit) •Selected indoor unit is fixed.

-≂~No.1 ▲

4. Press▲or▼ button.(selection of louver No.) •Select the louver No. to be set according to the right figure.

- 5. Press SET button.(Determination of louver No.)

 The louver No. to be set is confirmed and the display shows the upper limit of the movable range.

 [EXAMPLE] If No.1 louver is selected,

 "No.1 UFFE? \$ " \(\sum \) current upper limit position

- 6. Press ▲ or ▼button.(selection of upper limit position)
 - Select the upper limit of louver movable range.
 "position 1" is the most horizontal, and "position 6" is the most downward.
 "position --" is to return to the factory setting.





7. Press SET button.(Fixing of the upper limit position)

The upper limit position is fixed and the setting position is displayed for two seconds. Then proceed to lower limit position selection display.

No.1 LOWERS \$ (shows current setting

- 8. Press ▲or ▼button.(Selection of lower limit position)

Select the lower limit position of louver.

"position 1" is the most horizontal, and "position 6" is the most downwards.

"position --" is to return to the factory setting. If you need to change the setting to the default setting, use "position --".

No.1 LONER ▼ (the most horizontal)
No.1 LONER 2 ⊕
No.1 LONER 3 ⊕
No.1 LONER 4 ⊕
No.1 LONER 5 ⊕
No.1 LONER 6 ⊕ (the most downwards)
No.1 LONER 6 ⊕ (the most downwards)

- 9. Press O SET button.(Fixing of the lower limit position)
- •Upper limit position and lower limit position are fixed, and the set positions are displayed for two seconds, then setting is completed.

 After the setting is completed, the louver which was
 - set moves from the original position to the lower limit position, and goes back to the original position again. (This operation is not performed if the indoor unit and/or indoor unit fan is in operation.)

No.1 U2 L6 SET COMPLETE হ= No.1 ▲



10.Press OoWoFF button.

•Louver adjusting mode ends and returns to the original display.

Caution

If the upper limit position number and the lower limit position number are set to the same position, the louver is fixed at that position auto swing does not funtion.

If you press RESET button during settings, the display will return to previous display. If you press ON/OFF button during settings, the mode will be ended and return to original display, and the settings that have not be completed will become invalid.

When plural remote controls are connected, louver setting operation cannot be set by slave remote control.

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(4) Duct connected-High static pressure type (FDU)

PJG012D004B ∕∧

(a) Model FDU100VF2

- •This munual is for instaration of an indoor unit and an outdoor air processing unit (FDU-F).
- This manual is for the installation of an indoor unit.
- For electrical wiring work (Indoor), refer to page 255. For remote control installation, refer to page 233. For wireless kit installation, refer to page 602. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to page 245.

The case of FDU-F

- •The total connection capacity of the other air-conditioner units and the outdoor air processing units must be from 50% to 100% (the total includes the outdoor air processing unit).
 The connection capacity of the outdoor air processing unit must not exceed 30% of the capacity of the outdoor unit
- Single outdoor air processing unit can be used alone. The connection capacity of the outdoor air processing unit must be from 50% to 100% of the total capacity of the outdoor unit. Maximum number of outdoor air processing units that can be connected to the outdoor unit is
- Copacities of the suction air processing units can be calculated with the forllowing formulas. FDU850FKXEZ1 = 90, FDU1100FKXEZ1 = 140

SAFETY PRECAUTIONS Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself. The precautionary items mentioned below are distinguished into two levels, [AWARNING] and [ACAUTION]. [AWARNING]: Wrong installation would cause serious consequences such as injuries or death. [ACAUTION]: Wrong installation might cause serious consequences depending on circumstances. Both mentions the important items to protect your health and safety so strictly follow them by any means. customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit. Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed. **⚠ WARNING** Installation should be performed by the specialist. If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn Install the system correctly according to these installation manuals. Ø n may cause explosion, injury, water leakage, electric shock, and fire

- Check the density refered by the found (accordance with ISO5149).
- If the density exceeds the limit density please consult the dealer and installate the ventilation system Use the genuine accessories and the specified parts for installation.
- cified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of t
- Ventilate the working area well in case the refrigerant leaks during installation. ant contacts the fire, toxic gas is produc Install the unit in a location that can hold heavy weight.
- use the unit to fall le Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.
- use the unit to fall leading to accident Do not mix air in to the cooling cycle on installation or removal of the air-conditioner. If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries
- Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. Power source with insufficient capacity and improper work can cause electric shock and fire.
- Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely
 in order not to apply unexpected stress on the terminal. oose connections or hold could result in abnormal heat generation or fire.
- Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property. proper fitting may cause abnormal heat and fire
- Check for refrigerant gas leakage after installation is completed. If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produce
- Use the specified pipe, flare nut, and tools for R410A. Ising existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle
- Tighten the flare nut according to the specified method by with torque wrench. If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period. Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas
- Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- Connect the pipes for refrigeration circuit securely in installation work before compressor is operated. en the service valve is open without connecting the pipe, it could cause explosion and injuries due rmal high pressure in the system
- Stop the compressor before removing the pipe after shutting the service valve on pump down work.
- If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle. Only use prescribed option parts. The installation must be carried out by the qualified installer.
- Do not repair by yourself. And consult with the dealer about repair.
- Improper repair may cause water leakage, electric shock or fire Consult the dealer or a specialist about removal of the air-conditioner. 0
- Turn off the power source during servicing or inspection work 0 If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fail Do not run the unit when the panel or protection guard are taken off.
- ing the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get Shut off the power before electrical wiring work.

⚠ CAUTION

Perform earth wiring surely.

4 Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring, Improper earth could ise unit failure and electric shock or fire due to a short ci

Earth leakage breaker must be installed.

If the earth leakage breaker is not installed, it could cause electric shocks or fire

Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.

sing the incorrect one could cause the system failure and fire Do not use any materials other than a fuse of correct capacity where a fuse should be used.

Connecting the circuit by wire or copper wire could cause unit failure and fire Do not install the indoor unit near the location where there is possibility of flammable gas leakages. If the gas leaks and gathers around the unit, it could cause fire.

Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire

Secure a space for installation, inspection and maintenance specified in the manual.

sufficient space can result in accident such as personal injury due to falling from the installation place Do not use the indoor unit at the place where water splashes such as laundry.

Indoor unit is not waterproof. It could cause electric shock and fire Do not use the indoor unit for a special purpose such as food storage, cooling for precision

instrument, preservation of animals, plants, and a work of art. It could cause the damage of the items.

Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air-conditioner and cause a malfunction and breakdown. Or the air-conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.

Do not install the remote control at the direct sunlight.

It could cause breakdown or deformation of the remote contro Do not install the indoor unit at the place listed below.

- Places where flammable gas could leak.
 Places where carbon fiber, metal powder or any powder is floated.
 Place where the substances which affect the air-conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres.
- Places exposed to oil mist or steam directly.
- On vehicles and ships

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- Places where machinery which generates high harmonics is used.
- Places where cosmetics or special sprays are
- requently used.
 Highly salted area such as beach.
 Heavy snow area
 Places where the system is affected by smoke from a chimney. · Altitude over 1000m
- Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit.) according to the installation manual for each model because each indoor unit has each limitation)

 Locations with any obstacles which can prevent inlet and outlet air of the unit.

 Locations were vibration can be amplified due to insufficient strength of structure.

 Locations where wibration can be amplified due to insufficient strength of structure.

 Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the

 - infrared specification unit)
- Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m) · Locations where drainage cannot run off safely. It can affect performance or function and etc..
- lacktriangle Do not put any valuables which will break down by getting wet under the air-conditioner.
- tion could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's be Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.
- It could cause the unit falling down and injury. Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit. If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water.
- To avoid damaging, keep the indoor unit packed or cover the indoor unit Install the drain pipe to drain the water surely according to the installation manual.
- Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit
- Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to er's health and safet
- Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps and not to make air-bleeding. eck if the drainage is correctly done during commissioning and ensure the space for inspection and mai
- Ensure the insulation on the pipes for refrigeration circuit so as not to condense water
- mplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables
- Do not install the outdoor unit where is likely to be a nest for insects and small animals Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean.
- Pay extra attention, carrying the unit by hand.
- Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin. Make sure to dispose of the packaging material.
- Leaving the materials may cause injury as metals like nail and woods are used in the package
- Do not operate the system without the air filter.
- It may cause the breakdown of the system due to clogging of the heat exchanger.
- Do not touch any button with wet hands.
- It could cause electric shock.
- Do not touch the refrigerant piping with bare hands when in operation.
- The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or fros Do not clean up the air-conditioner with water
- It could cause electric shock.
- Do not turn off the power source immediately after stopping the operation
- Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown
- Do not control the operation with the circuit breaker.
- It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury

This model is high static ducted type air-conditioner unit. Therefore, do not use this model for direct blow type air-conditioning unit.

1Before installation

- Install correctly according to the installation manual.
- Confirm the following points:

Ounit type/Power source specification OPipes/Wires/Small parts

Accessory items

Accessory item

For hanging	Fo	r refrigerant pip	ie			For drain pipe			
Flat washer (M10)	Pipe cover (big)	Pipe cover (small)	Strap	Pipe cover (big)	Pipe cover (small)	Drain hose	Hose clamp	Elbow (Multi only)	
0	6	6		6	5		()		[
8	1	1	4	1	1	1	1	1	1
For unit hanging	For heat insulation of gas pipe	For heat insulation of liquid tube		For heat insulation of drain socket	For heat insulation of drain socket	For drain pipe connecting	For drain hose mounting	For drain pipe connecting	Ac ins

2Selection of installation location for the indoor unit

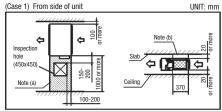
- ① Select the suitable areas to install the unit under approval of the use
- ·Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling. Areas where there is enough space to install and service.
- ·Areas where it can be drained properly. Areas where drain pipe descending slope can be
- ·Areas where there is no obstruction of air flow on both air return grille and air supply port.
- Areas where fire alarm will not be accidentally activated by the air-conditioner.
- ·Areas where the supply air does not short-circuit
- ·Areas where it is not influenced by draft air.
- Areas not exposed to direct sunlight.
- Areas where dew point is lower than around 28°C and relative humidity is lower than 80%.
- This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above.
- If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.
- -Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
 -Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
- Areas where there is no influence by the heat which cookware generates.
- Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
- Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.
- (A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air-conditioner might not work properly.)
- ·When operating the suction air processing unit independently, it operates in the outdoor air processing mode.
- Blowout temperatures are not same at the standard unit operation and the outdoor air processing mode operations. Since the temperatures become higher during cooling or lower during heating, take care of
- the direction of blowout outlet.
- Avoid directing the blowout outlet to the space where people are present
- 2 Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

Space for installation and service

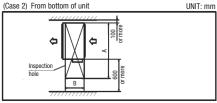
Make installation altitude over 2.5m.

(Indoor Unit)

Select either of two cases to keep space for installation and services.



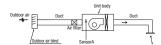
Notes (a) There must not be obstacle to draw out fan motor. (marked area) (b) Install refrigerant pipe, drain pipe, and wiring so as not to cross



(Size of inspe	ction hole)	UNIT: mm
Single type	-	71	100-140
Multi type	45, 56	71, 90	112-160
FDU-F	-	650	1100
A	1100	1300	1720
R	63	20	725

3 Cautions for the handling and installation place of outdoor air processing unit

1) This unit monitors the outdoor air temperature at the position of sensor A in the figure, and controls the start and stop with the thermostat based on the value of sensor A and the setting temperature by the remote control.



Remote control's setting temperature indicates the outdoor air temperature that controls the start and stop of operation by the thermostat.

When the thermostat is turned off, the operation is changed to the fan mode so that the outdoor air is blown out directly into the room. For example if the remote control is set to 22°C in cooling operation, and if the outdoor a temperature is 22°C or lower at that time, the unit will go into fan operation.

- When there is a difference between the air-conditioner temperature in the room during cooling operation and the tempera ture of air blown out from the outdoor air processing unit, dewing water may drip from the unit. To prevent the dewing, provide a sufficient heat insulation means at the air blow outlet.
- 3 Since the air blow outlet on the outdoor air processing unit may blow out the outdoor air directly, orient the outlet in such a way that it will not blow air directly to persons in the room.
- (4) Since the unit controls the thermostat start and stoo by monitoring the outdoor air temperature, it is prohibited to monitor the room temperature by means of the room temperature monitoring by changing the thermostat setting at the remote control side and the optional remote thermistor. Otherwise, dewing water may drip from the unit at lower outdoor air temperatures during cooling operation.
- (5) Install the remote control of the outdoor air processing unit at a place closer to the administrator to avoid the end user from using the remote control.

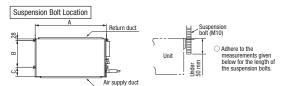
When handing over the unit to the end user, make sure to explain sufficiently about the foregoing cautions, the installation place of the remote control for the outdoor air processing unit and the position of air blow outle

4) Preparation before installation

- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
 - OFor grid ceiling

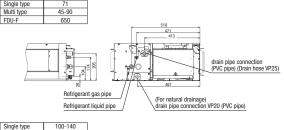
When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

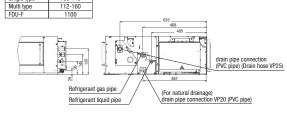
- Oln case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength
- When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt. Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.

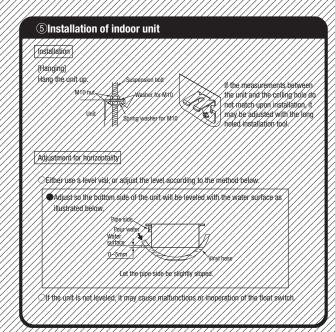


			UNIT: mm
Single type	_	71	100-140
Multi type	45, 56	71, 90	112-160
FDU-F	_	650	1100
Α	786	986	1720
В	472	472	725
r	125	125	190

Pipe locations UNIT: mm







6 Duct Work

- progated board (for preventing spottering) is attached to the main body of th on the outlet point, for not remove it until connecting the duct.

 Arrain titler can be provided on the main body of the air-condition
- it when connecting the duct on the inlet port.

Blowout duct

- Uşe rectangular duct to connect with unit,
- ●Duct stze tor each unit is as shown below.////

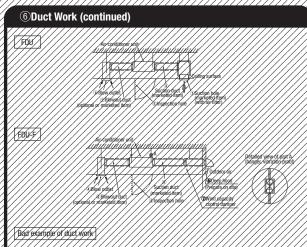
/	//////	//////	//////	//djvrt:/m/n
/	/Single_type/	//////		/100-148//
/	/Multitype/	//45/58//	//x/x6//}	/1/2/160//
/	//FGK-F//		//656///	//1x0//
/	// <i> </i>	//882//	//88///	//12/12//
/	///8///	///12///	//112//	//xyz///
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- ♠Duct should be at their minimum length
- We recommend to use sound and heat insulated duct to prevent it from Connect duct to unit before ceiling attachment

- When connecting the duct to the inlet port, remove the air filter it it is fitted to the inlet po
- Tolet port size for each unit is as shown below

////	////	/////	/ / Julyri Jilly /
Single type		///14//	/ 1/08-1/40//
/Multi/Type/	45,56	//71,80//	/ 1/12-160//
/ FDU-F /	///-//	//650//	//1400//
	//882//	//xx//	//1282///
//8//	//202//	//202//	//281///
77777	/////	//////	///////
/////	//////		
/////	/////	//////	///////
////			
	//		
			//// ///
			//// ///

- ●Make sure to insulate the duct to prevent dewing on th Plastall the specific blowout duct in a location where the air will circulate to the entire room.
- Conduct the installation of the specific blowout hole and the compection of the duct before attaching them to the ceiling: Insulate the area where the duct is secured by a band for de
- condensation prevention. Malke sure provide an inspection hole on the ceiling It is indispensable to egujøment, motor, functional components and cleaning of heat exchanger



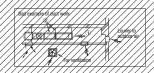
It a duct is not provided at the suction side but it is substituted with the space hurhibity in the space will increase by the influence of capacity of ventilation ran, strength o wind blowing, against the out door air louver, weather (rainy day) and others.

a)Mildisture in air is likely to condense over the external plates of the unit and to drip on the ceiting. Unit should be operated under the conditions as listed in the above table and within the limitation of wind volume. When the building is a concrete structure, especially immediately after the construction, humidity tends to rise even if the space over the ceiling is not substituted in place of a dupt. In such occasion, it is necessary to insulate the entire unit with glass wood (25 mm). (Use a virte net or equivalent to hold the glass wood in place, i

bill may run out the allowable limit of unit operation (Example, the case of FDU: Winen outdoor air temperature is 35°CDB, suction air temperature is 27°CWB) and it could result in such troubles as compressor overload, etc.

e)There is a possibility that the blow air volume may exceed the allowable range of operation due to the capacity of ventilation fan or strength of wind blowing against external air louve so that drainage from be heat exchanger may tall to reach the drain pan but leak outside (Esample: drip on to the ceiling) with consequential water leakage in the room) It vibration damping is het conducted between the unit and the duct, and between the unit and

the slab, vibration will be transpritted to the duct and vibration noise may eccur. Also, vibration may be transmitted from the unit to the slab. Vibration damping must be performed,



Connecting the air intake/vent ducts the case of FDV

XFresh Air Intake

Iter air intake duct enkil

. Use the side fresh air intake hore, or supply through a part of the suction duct

[for şimultangous air intake/vent] Intake air through the suction duct Athe side cannot be used?

Air Vent Use the side air vent hole. (always use together with the air intake)

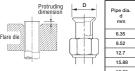
7Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.
- Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data.

 1) In case of reuse: Do not use old flare nut, but use the one attached to the unit or compatible with JIS B 8607, Class 2.

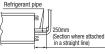
 2) In case of reuse: Flare the end of pipe replaced partially for R410A.



Pipe dia. d	Min. pipe	Protruding dimer	nsion for flare, mm	Flare O.D.	Flare nut	
	wall thickness	Rigid (CI	utch type)		tightening torque	
mm	mm	For R410A	Conventional tool	mm	N-m	
6.35	0.8			8.9 - 9.1	14 - 18	
9.52	0.8			12.8 - 13.2	34 - 42	
12.7	0.8	0 - 0.5	0.7 - 1.3	16.2 - 16.6	49 - 61	
15.88	1	1		19.3 - 19.7	68 - 82	
19.05	1.2	1		23.6 - 24.0	100 - 120	

- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H 3300) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- ●Do not use any refrigerant other than R410A. Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- Use special tools for R410A refrigerant.

Piping work Refrigerant pipe



When conducting piping work, make sure to allow the pipes to be aligned in a straight line for at least 250 mm, as shown in the left illustration. (This is necessary for the drain pump to function)

Work procedure

- Remove the flare nut and blind flanges on the pipe of the indoor unit.
- Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.

 (Gas may come out at this time, but it is not abnormal.)

 Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
- 2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit. **Bend radius of pipe must be 4D or larger. Once a pipe is bent, do not readjust the bending. Do not twist a pipe or collapse to 2/3D or smaller.
 **Do a flare connection as follows:

 - Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving. torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
 - When fastening the flare nut, align the refrigeration nine with the center of flare nut, screw. the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above. Make sure to hold the pipe on the indoor unit securely by a
- spanner when tightening the nut in order to avoid unexpected stress on the copper pipe. Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.

 - Make sure to insulate both gas pipes and liquid pipes completely.
 **Minomplete insulation may cause dew condensation or water dropping.
 Use heat-resistant (120 °C or more) insulations on the gas side pipes.

 - In case of using at high humidity condition, reinforce insulation of refrigerant pipes.
 Surface of insulation may cause dew condition or water dropping, if insulations are not reinfoced.

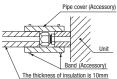
Refrigerant is charged in the outdoor unit.

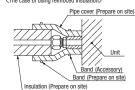
As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It nemygraung macmine on snoun not be applied to the threads of union or external surface of mare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the slide friction force on the threads and increase, in turn, the axial component force so that it could crack the flare

Refrigerating machine oil may be applied to the internal surface of flare only.

(The case of using thickness of insulation is 10mm)





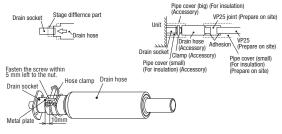
®Drain pipe

Caution

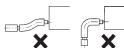
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen) In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance

Work procedure

- 1. Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part of drain socket.
 - Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.
- Do not apply adhesives on this end.
- Do not use acetone-based adhesives to connect to the drain socket.

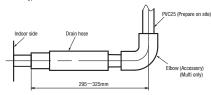


- Prepare a joint for connecting VP25 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP25 pipe (prepare on site). *As for drain pipe, apply VP25 made of rigid PVC which is on the market.
 - Make sure that the adhesive will not get into the supplied drain hose.
 - It may cause the flexible part broken after the adhesive is dried up and gets rigid.
 - The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.

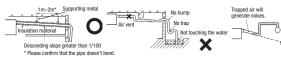


As for drain pipe, apply VP25 (0D32).

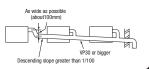
If apply PVC25 (OD25), connect the expanded connector to the drain hose, with adhesive (Multi unit only)



- 3. Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
 - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe
 - Do not set up air vent.



When sharing a drain pine for more. than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP30 or bigger size for main drain pipe



PJG012D004 /A

(b) Models FDU125VF, 140VF

This manual is for the installation of an indoor unit.

For electrical wiring work (Indoor), refer to page 225. For remote control installation, refer to page 233. For wireless kit installation, refer to page 602. For electrical wiring work (Outdoor) and

Perform earth wiring surely. refrigerant pipe work installation for outdoor unit, refer to page 245. **SAFETY PRECAUTIONS** Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself. ● The precautionary items mentioned below are distinguished into two levels, [▲WARNING] and [▲CAUTION] AWARNING: Wrong installation would cause serious consequences such as injuries or death. ▲CAUTION : Wrong installation might cause serious consequences depending on circumstances. Both mentions the important items to protect your health and safety so strictly follow them by any means. ●The meanings of "Marks" used here are as shown on the right: customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed. **△** WARNING ●Installation should be performed by the specialist. If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn Install the system correctly according to these installation manuals. 0 Improper installation may cause explosion, injury, water leakage, electric shock, and fire Check the density refered by the foumula (accordance with ISO5149). If the density exceeds the limit density, please consult the dealer and installate the ventilation system •Use the genuine accessories and the specified parts for installation. 0 If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit Ventilate the working area well in case the refrigerant leaks during installation. 0 If the refrigerant contacts the fire, toxic gas is produced ●Install the unit in a location that can hold heavy weight. 0 Improper installation may cause the unit to fall leading to accide •Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes. 0 Improper installation may cause the unit to fall leading to accide Do not mix air in to the cooling cycle on installation or removal of the air-conditioner. If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injur Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. Ø Power source with insufficient capacity and improper work can cause electric shock and fire. • Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal. 0 Loose connections or hold could result in abnormal heat generation or fire.

• Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services

If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced

Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle

If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period ● Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also

Connect the pipes for refrigeration circuit securely in installation work before compressor is operated. If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due

Stop the compressor before removing the pipe after shutting the service valve on pump down work. If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit

If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating far

Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get

Tighten the flare nut according to the specified method by with torque wrench

cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak

and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle •Only use prescribed option parts. The installation must be carried out by the qualified installer. If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire

● Do not repair by yourself. And consult with the dealer about repair. Improper repair may cause water leakage, electric shock or fire Consult the dealer or a specialist about removal of the air-conditioner.

mproper installation may cause water leakage, electric shock or fire Turn off the power source during servicing or inspection work.

Do not run the unit when the panel or protection guard are taken off.

burned, or electric shock.

Shut off the power before electrical wiring work.

It could cause electric shock, unit failure and improper runnin

panel property.

Improper fitting may cause abnormal heat and fire. Check for refrigerant gas leakage after installation is completed.

 \bullet Use the specified pipe, flare nut, and tools for R410A.

Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth	could
cause unit failure and electric shock or fire due to a short circuit.	_
 Earth leakage breaker must be installed. If the earth leakage breaker is not installed, it could cause electric shocks or fire. 	•
Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect al	_
poles under over current. Using the incorrect one could cause the system failure and fire.	•
Do not use any materials other than a fuse of correct capacity where a fuse should be used.	
Connecting the circuit by wire or copper wire could cause unit failure and fire.	\bigcirc
 Do not install the indoor unit near the location where there is possibility of flammable gas leaked 	ages.
If the gas leaks and gathers around the unit, it could cause fire.	
 Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are ha 	
It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fir	
 Secure a space for installation, inspection and maintenance specified in the manual. 	0
Insufficient space can result in accident such as personal injury due to falling from the installation place.	0
 Do not use the indoor unit at the place where water splashes such as laundry. Indoor unit is not waterproof. It could cause electric shock and fire. 	$\langle \rangle$
Do not use the indoor unit for a special purpose such as food storage, cooling for precision	
instrument, preservation of animals, plants, and a work of art.	\bigcirc
It could cause the damage of the items. Do not install nor use the system near equipments which generate electromagnetic wave or high harmo	nics.
Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommuni	ication 🚫
equipment might influence the air-conditioner and cause a malfunction and breakdown. Or the air-conditioner mig influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jam	
Do not install the remote control at the direct sunlight.	
It could cause breakdown or deformation of the remote control.	
Do not install the indoor unit at the place listed below. Places where geometries or energial control of the place listed below.	nun ara —
Places where flammable gas could leak. Places where carbon fiber, metal powder or any powder is floated. Flaces where carbon fiber, metal powder or any powder is floated. frequently used.	ays are
Place where the substances which affect the air-conditioner are generated Highly salted area such as beach.	0
such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres. Places exposed to oil mist or steam directly. Heavy snow area Places where the system is affected by	y
On vehicles and ships smoke from a chimney. Places where machinery which generates high harmonics is used. Altitude over 1000m	
Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit	
according to the installation manual for each model because each indoor unit has each limitati	ion)
 Locations with any obstacles which can prevent inlet and outlet air of the unit Locations where vibration can be amplified due to insufficient strength of structure. 	\bigcirc
Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the	S
infrared specification unit) Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5	
Locations where desirans connet you off cofely	om)
Locations where drainage cannot run off safely. It can affect performance or function and etc.	om)
Locations where damage cannot run or sarely. It can affect performance or function and etc. Do not put any valuables which will break down by getting wet under the air-conditioner.	om)
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⚠ CAUTION

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Do not turn off the power source immediately after stopping the operation.

Do not control the operation with the circuit breaker.

Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdo

It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury

OThis model is middle static ducted type air-conditioner unit. Therefore, do not use this model for direct blow type air-conditioner unit.

● Install correctly according to the installation manual. ● Confirm the following points: Ounit type/Power source specification OPipes/Wires/Small parts OAccessory items Accessory item For hanging For retrigerant pipe For thanging For retr

2Selection of installation location for the indoor unit

- ① Select the suitable areas to install the unit under approval of the user.
 - Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use
 a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
 - · Areas where there is enough space to install and service.
 - Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
 - · Areas where there is no obstruction of airflow on both air return grille and air supply port.
 - · Areas where fire alarm will not be accidentally activated by the air-conditioner.
 - · Areas where the supply air does not short-circuit.
 - Areas where it is not influenced by draft air.
 - · Areas not exposed to direct sunlight.
 - Areas where dew point is lower than around 28°C and relative humidity is lower than 80%.
 This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air conditioner is operated under the severer condition than mentioned above.
 If there is a possibility to use it under such a condition, attach additional insulation of 10 to
 - 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.
 - Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
 Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
 - Areas where there is no influence by the heat which cookware generates.
 - ${\mbox{\footnote{in}}}$ Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
 - Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.

(A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air-conditioner might not work properly.)

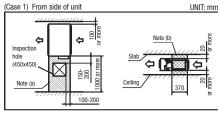
② Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

Space for installation and service

• Make installation altitude over 2.5m.

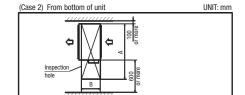
(Indoor Unit)

Select either of two cases to keep space for installation and services.



Notes (a) There must not be obstacle to draw out fan motor. (marked area)

(b) Install refrigerant pipe, drain pipe, and wiring so as not to cross marked area.



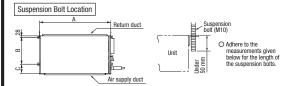
(Size of inspe	UNIT: mm		
Single type		71	100-140
Multi type	45, 56	71, 90	112-160
A	1100	1300	1720
R	60	20	725

3Preparation before installation

If suspension bolt becomes longer, do reinforcement of earthquake resistant.
 OFor grid ceiling

When the suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.

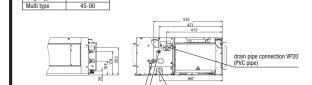
- OIn case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.
- When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.
- Prepare four (4) sets of suspension bolt, nut and spring washer (M10) on site.



			UNIT: mm
Single type	-	71	100-140
Multi type	45, 56	71, 90	112-160
A	786	986	1404
В	472	472	530
С	135	135	180

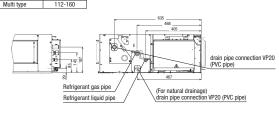
Refrigerant liquid pipe

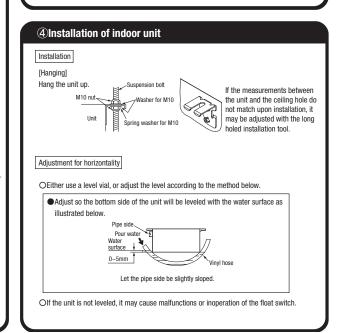
Pipe locations UNIT: mm



(For natural drainage) drain nine connection VP20 (PVC pipe)

Single type 100-140





5Duct work

- A corrugated board (for preventing sputtering) is attached to the main body of the air-conditioner
 (on the outlet nort). Do not remove it until connecting the duct.
 - An air filter can be provided on the main body of the air-conditioner (on the inlet port). Remove it when connecting the duct on the inlet port.
- ②Blowout duct
- Use rectangular duct to connect with unit.
- Duct size for each unit is as shown below.

			UNII: mn
Single type	_	71	100-140
Multi type	45, 56	71, 90	112-140
A	682	882	1202
В	172	172	172
В	•		

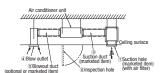
- Duct should be at their minimum length.
- We recommend to use sound and heat insulated duct to prevent it from condensation.
- Connect duct to unit before ceiling attachment.

3 Inlet port

- When connecting the duct to the inlet port, remove the air filter if it is fitted to the inlet port.
- Inlet port size for each unit is as shown below.

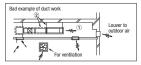
				OIVIT. IIIIII
5	Single type	-	71	100-140
	Multi Type	45, 56	71, 90	112-160
	A	582	742	1282
	В	202	202	237
	(ref		A	
В	::			

- Make sure to insulate the duct to prevent dewing on it.
- ④Install the specific blowout duct in a location where the air will circulate to the entire room.
 - Conduct the installation of the specific blowout hole and the connection of the duct before attaching them to the ceiling.
 - Insulate the area where the duct is secured by a band for dew condensation prevention.
- (5)Make sure provide an inspection hole on the ceiling. It is indispensable to service electric equipment, motor, functional components and cleaning of heat exchanger.



Bad example of duct work

- ①If a duct is not provided at the suction side but it is substituted with the space over the ceiling, humidity in the space will increase by the influence of capacity of ventilation fan, strength of wind blowing against the out door air louver, weather (rainy day) and others.
 - a)Moisture in air is likely to condense over the external plates of the unit and to drip on the ceiling. Unit should be operated under the conditions as listed in the above table and within the limitation of wind volume. When the building is a concrete structure, especially immediately after the construction, humidity tends to rise even if the space over the ceiling is not substituted in place of a duct. In such occasion, it is necessary to insulate the entire unit with class wool (25mm). (Use a wire net or equivalent to hold the glass wool in place.)
- b)It may run out the allowable limit of unit operation (Example: When outdoor air temperature is 35°C DB, suction air temperature is 27°C WB) and it could result in such troubles as compressor overload, etc..
- c)There is a possibility that the blow air volume may exceed the allowable range of operation due to the capacity of ventilation fan or strength of wind blowing against external air louver so that drainage from be heat exchanger may fall to reach the drain pan but leak outside (Example: drip on to the ceiling) with consequential water leakage in the room.
- ②If vibration damping is not conducted between the unit and the duct, and between the unit and the slab, vibration will be transmitted to the duct and vibration noise may occur. Also, vibration may be transmitted from the unit to the slab. Vibration damping must be performed.



⑤Duct work (continued)

Connecting the air intake/vent ducts

①Fresh Air Intake

[for air intake duct only]

OUse the side fresh air intake hole, or supply through a part of the suction duct.

[for simultaneous air intake/vent]
OIntake air through the suction duct.
(the side cannot be used)

OUse the side air vent hole.
(always use together with the air intake)

Oinsulate the duct to protect it from dew condensation

Side fresh air intake hole Side fresh air intake hole Fresh air intake through the suction duct Air went hole Fresh air intake through the suction duct Fresh air intake through the suction duct

6Refrigerant pipe

Caution

Secure with a band, etc.

(2) Air Vent

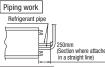
Use the new refrigerant pipe.

When re-using the existing pipe system for R22 or R407C, pay attention to the following items.

- . Change the flare nuts with the attached ones (JIS category 2), and reprocess the flare parts.
- Do not use thin-walled pipes.
- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H 3300) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not use any refrigerant other than R410A.

Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.

- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- Use special tools for R410A refrigerant.



When conducting piping work, make sure to allow the pipes to be aligned in a straight line for at least 250 mm, as shown in the left illustration. (This is necessary for the drain pump to function)

Work procedure

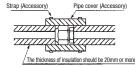
- Remove the flare nut and blind flanges on the pipe of the indoor unit.
 - Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)
- Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
- Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
 Bend the pipe with as big radius as possible and do not bend the pipe repeatedly. In addition, do not twist and crush the pipes.

*Do a flare connection as follows:

- Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
- When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table below. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
- Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
- Make sure to insulate both gas pipes and liquid pipes completely
- *Incomplete insulation may cause dew condensation or water dropping.
- Refrigerant is charged in the outdoor unit.
 As for the additional refrigerant charge for the indoor unit and pipin

As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

Pipe diameter	Tightening torque N·m
ф 6.35	14 to 18
ф 9.52	34 to 42
ф 12.7	49 to 61
A 15 99	69 to 92



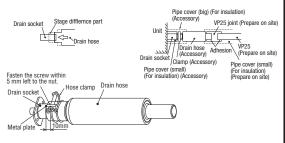
7 Drain pipe

Caution

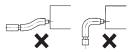
- Install the drain pipe according to the installation manual in order to drain properly.
 Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end
 of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

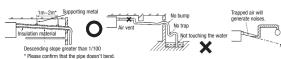
- Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part
 of drain socket
 - Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.
 - Do not apply adhesives on this end.
 - Do not use acetone-based adhesives to connect to the drain socket.



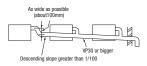
- Prepare a joint for connecting VP25 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP25 pipe (prepare on site).
 XAs for drain pipe, apply VP25 made of rigid PVC which is on the market.
 - Make sure that the adhesive will not get into the supplied drain hose.
 It may cause the flexible part broken after the adhesive is dried up and gets rigid.
 - The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.



- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
 - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
 - Do not set up air vent.



●When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP30 or bigger size for main drain pipe.

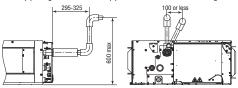


- 4. Insulate the drain pipe.
 - Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.
 - After drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gapless.

7 Drain pipe (continued)

Drain up

• The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.



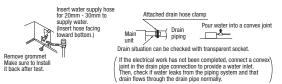
Otherwise, the construction point makes it same as drain pipe construction

Drain test

- 1. Conduct a drain test after completion of the electrical work
- 2. During the trail, make sure that drain flows properly through the piping and that no water leaks from connections.
- 3. In case of a new building, conduct the test before it is furnished with the ceiling.
- 4. Be sure to conduct this test even when the unit is installed in the heating season.

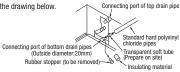
Procedures

- 1. Supply about 1000 cc of water to the unit through the air outlet by using a feed water pump.
- 2. Check the drain while cooling operation.



Outline of bottom drain piping work

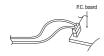
 If the bottom drain piping can be done with a descending gradient (1/50-1/100), it is possible to connect the pipes as shown in the drawing below.



Uncoupling the drain motor connector

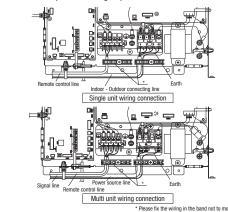
 Uncouple the connector CnR for the drain motor as illustrated in the drawing on the right.

Note: If the unit is run with the connector coupled, drain water will be discharged from the upper drain pipe joint, causing a water leak.



(8) Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
 - Be sure to use an exclusive circuit.
- Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
- Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
- For the details of electrical wiring work, see attached instruction manual for electrical wiring
- 1. Remove a lid of the control box (2 screws).
- 2. Hold each wiring inside the unit and fasten them to terminal block securely.
- 3. Fix the wiring with clamps
- 4. Install the removed parts back to original place.



<u>Sexternal static pressure setting</u>

You can set External Static Pressure (E.S.P.) by method of MANUAL SETTING on remote control. Indoor unit will control fan-speed to keep rated air flow volume at each fan speed setting (Lo-Uhi) You can set required E.S.P.by wired remote control that calculated with the set air flow rate and pressure loss of the duct connected.

- How to set E.S.P. by wired remote control
 - Push "◆" marked button(E.S.P. button)
- ② Select indoor unit No. by using \$\Display \text{button}
- ③ Select setting No. by using ◆ button and set E.S.P. by O button. See detailed procedure in technical manual.

Notice

You can NOT set E.S.P. by wireless remote control.



When E.S.P. setting is higher than actual E.S.P., the air flow rate becomes excessively higher. This will cause water leakage if water splashes.

When E.S.P. setting is lower than actual E.S.P., the air flow rate becomes excessively lower and the cooling or heating may become ineffective. In order to reduce the risk above the factory E.S.P. setting is set within the range of 80 - 150 Pa

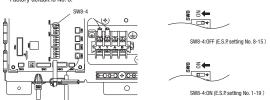
E.S.P. butto

(E.S.P. setting No. 8-15). Be sure to use within the range of 80-150 Pa in actual operations. If actual E.S.P. is lower than 80 Pa, it may cause water leakage.

Setting No. 8 9 10 11 12 13 14 15 E.S.P (Pa) 80 90 100 110 120 130 140 150

** If 1 – 7 is selected for the setting No. on the remote control, the setting No. shows No. 8.

If 16 – 20 is selected for the setting No. on the remote control, the setting No. shows No. 15. Factory default is No. 8.



If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 – 200 Pa (E.S.P. setting No. 1 - 19). This should not be used when actual E.S.P. cannot be confirmed, because the risk above

Setting No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
E.S.P. (Pa)	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	200

 \divideontimes If 20 is selected for the setting No. on the remote control, the setting No. shows No. 19.

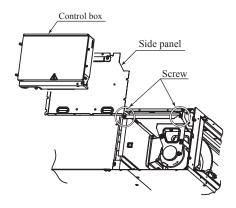
10 Check list after installation

Check the following items after all installation work completed.

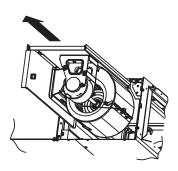
Check if	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Supply voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
No mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks air flow on air inlet and outlet?	Insufficient capacity	
Is setting of E.S.P finished?	Excessive air flow, water drop blow out	

(c) Replacement procedure of the fan unit

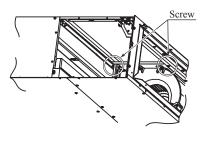
- Notes(1) The unit is a heavy item. It must be supported securely and handled with care not to drop when it is necessary to replace.
 - (2) For the maintenance space, refer to page 189.
- (i) Remove the control box and the side panel, and remove the screws marked in the circles (2 places) from the unit located at the near side.



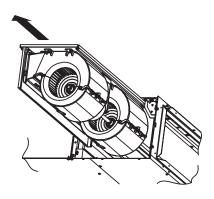
(ii) Take out the fan unit located at the near side in the arrow direction.



(iii) Remove the screws marked in the circles (2 places) from the fan unit located at the far side.



(iv) Take out the fan unit in the arrow direction.



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(5) Duct connected-Low / Middle static pressure type (FDUM)



(a) Indoor unit

This manual is for the installation of an indoor unit.

For electrical wiring work (Indoor), refer to page 221. For remote control installation, refer to page 233. For wireless kit installation, refer to page 602. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to page 245

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, [AWARNING] and [ACAUTION] [AWARNING]: Wrong installation would cause serious consequences such as injuries or death. ACAUTION: Wrong installation might cause serious consequences depending on circumstances
- Both mentions the important items to protect your health and safety so strictly follow them by any means. The meanings of "Marks" used here are as shown on the right
- Never do it under any circumstances. After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit. Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠ WARNING

Installation should be performed by the specialist

If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn

Install the system correctly according to these installation manuals.

Improper installation may cause explosion, injury, water leakage, electric shock, and fire.

Check the density refered by the foumula (accordance with ISO5149).

If the density exceeds the limit density please consult the dealer and installate the ventilation system

• Use the genuine accessories and the specified parts for installation.

If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit

Ventilate the working area well in case the refrigerant leaks during installation.

If the refrigerant contacts the fire, toxic gas is produced

Install the unit in a location that can hold heavy weight.

ion may cause the unit to fall leading to accid

● Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.

Improper installation may cause the unit to fall leading to accidents

Do not mix air in to the cooling cycle on installation or removal of the air-conditioner.

If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries

Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. Power source with insufficient capacity and improper work can cause electric shock and fire

•Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in

order not to apply unexpected stress on the terminal.

Loose connections or hold could result in abnormal heat generation or fire

● Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services

Improper fitting may cause abnormal heat and fire

● Check for refrigerant gas leakage after installation is completed.

If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced

Ouse the specified pipe, flare nut, and tools for R410A.

ng existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cyclo ● Tighten the flare nut according to the specified method by with torque wrench.

If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period

Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can

Poisonous gases will flow into the room through drainage pine and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak

● Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.

or is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries dur to abnormal high pressure in the system.

Stop the compressor before removing the pipe after shutting the service valve on pump down work. If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle

Only use prescribed option parts. The installation must be carried out by the qualified installer. install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fi

Do not repair by yourself. And consult with the dealer about repair.

Improper repair may cause water leakage, electric shock or fire. Consult the dealer or a specialist about removal of the air conditioner.

Improper installation may cause water leakage, electric shock or fire.

Turn off the power source during servicing or inspection work. If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan

 $\ensuremath{\bullet}$ Do not run the unit when the panel or protection guard are taken off.

Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get

Shut off the power before electrical wiring work.

It could cause electric shock, unit failure and improper running

⚠ CAUTION

Perform earth wiring surely.

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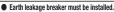
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Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could e unit failure and electric shock or fire due to a short circuit.

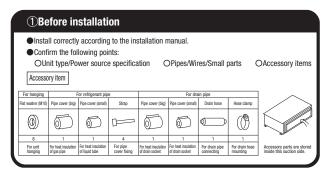


If the earth leakage breaker is not installed, it could cause electric shocks or fire.

 Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.

0 Ising the incorrect one could cause the system failure and fire Do not use any materials other than a fuse of correct capacity where a fuse should be used nnecting the circuit by wire or copper wire could cause unit failure and fire Do not install the indoor unit near the location where there is possibility of flammable gas leakage. If the gas leaks and gathers around the unit, it could cause fire. Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled. t could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire Secure a space for installation, inspection and maintenance specified in the manual 0 ufficient space can result in accident such as personal injury due to falling from the installation place Do not use the indoor unit at the place where water splashes such as laundry. ndoor unit is not waterproof. It could cause electric shock and fire. Do not use the indoor unit for a special purpose such as food storage, cooling for precision ment, preservation of animals, plants, and a work of art. It could cause the damage of the items. Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics. quipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunica quipment might influence the air conditioner and cause a malfunction and breakdown. Or the air conditioner might uence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming Do not install the remote control at the direct sunlight. It could cause breakdown or deformation of the remote control. Do not install the indoor unit at the place listed below. Places where cosmetics or special sprays a Places where flammable gas could leak Places where carbon fiber, metal powder or any powder is floated. frequently used. Highly salted area such as beach. Place where the substances which affect the air condi such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres. Heavy snow area ed to oil mist or steam directly. Places where the system is affected by smoke from a chimney Altitude over 1000m Places where machinery which generates high harmonics is used Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation) Locations with any obstacles which can prevent inlet and outlet air of the unit Locations where vibration can be amplified due to insufficient strength of structure Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the Locations where the inhaded receiver is exposed to the direct sumight of the strong light beant, (in case of the infrared specification until) Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m) Locations where drainage cannot run off safely. It can affect performance or function and etc. Do not put any valuables which will break down by getting wet under the air conditioner. $\langle \rangle$ Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use. It could cause the unit falling down and injury. Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit f sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit. ø Install the drain pipe to drain the water surely according to the installation manual. Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit. Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to user's health and safety. Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work 0 sity of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can ccur, which can cause serious accidents For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding. Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance Ensure the insulation on the pipes for refrigeration circuit so as not to condense water. complete insulation could cause condensation and it would wet ceiling, floor, and any other val Do not install the outdoor unit where is likely to be a nest for insects and small animals. nsects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to ceep the surroundings clean. Pay extra attention, carrying the unit by hand Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin. Make sure to dispose of the packaging material. 0 eaving the materials may cause injury as metals like nail and woods are used in the package. Do not operate the system without the air filter. It may cause the breakdown of the system due to clogging of the heat exchanger. Do not touch any button with wet hands. Do not touch the refrigerant piping with bare hands when in operation. The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or Do not clean up the air conditioner with water. It could cause electric shock. Do not turn off the power source immediately after stonning the operation. Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown Do not control the operation with the circuit breaker It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury

OThis model is middle static ducted type air-conditioner unit. Therefore, do not use this model for direct blow type air-conditioner unit.



2Selection of installation location for the indoor unit

- ① Select the suitable areas to install the unit under approval of the user.
 - Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use
 a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
 - · Areas where there is enough space to install and service.
 - Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
 - ${\boldsymbol{\cdot}}$ Areas where there is no obstruction of air flow on both air return grille and air supply port.
 - · Areas where fire alarm will not be accidentally activated by the air-conditioner.
 - Areas where the supply air does not short-circuit.
 - · Areas where it is not influenced by draft air.
 - · Areas not exposed to direct sunlight.
 - Areas where dew point is lower than around 28°C and relative humidity is lower than 80%. This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above. If there is a possibility to use it under such a condition, attach additional insulation of 10 to
 - if there is a possibility to use it under such a condition, attach additional insulation of 10 to , 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.

 Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
 - Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
 - · Areas where there is no influence by the heat which cookware generates.
 - ${\boldsymbol{\cdot}}$ Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
 - Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.

(A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air-conditioner might not work properly.)

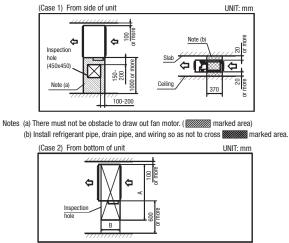
② Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

Space for installation and service

Make installation altitude over 2.5m.

(Indoor Unit)

Select either of two cases to keep space for installation and services.

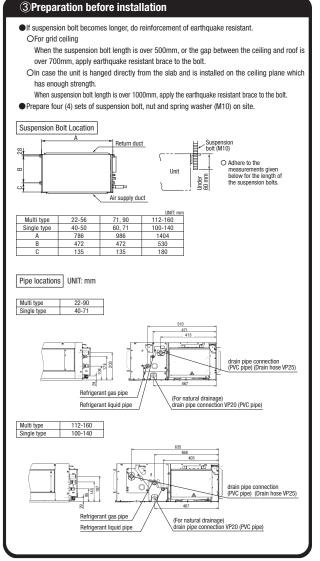


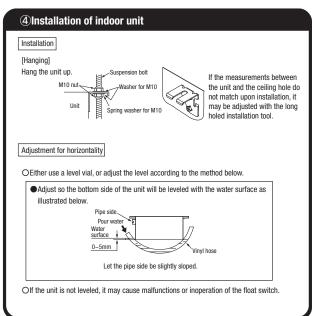
(Size of inspection hole)

 Single type
 40-50
 60-71
 100-140

 Multi type
 22-56
 71-90
 112-160

 A
 1100
 1300
 1720





⑤Duct work

- ① A corrugated board (for preventing sputtering) is attached to the main body of the air-conditione (on the outlet port). Do not remove it until connecting the duct.
 - An air filter can be provided on the main body of the air-conditioner (on the inlet port). Remove it when connecting the duct on the inlet port.

②Blowout duct

 Use rectangular duct to connect with unit. Duct size for each unit is as shown below

			UNIT: mm
Single type	40-50	60-71	100-140
Multi type	22-56	71-90	112-140
A	682	882	1202
В	172	172	172
B 3	•		

- Duct should be at their minimum length
- We recommend to use sound and heat insulated duct to prevent it from condensation. Connect duct to unit before ceiling attachment.

(3) Inlet port

- When shipped the inlet port lies on the back.
- When connecting the duct to the inlet port, remove the air filter if it is fitted to the inlet port.
- When placing the inlet port to carry out suction from the bottom side, use the following procedure to replace the suction duct joint and the bottom plate







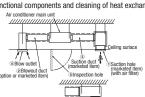
and duct joint

ecure with a band, etc



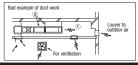
- Fit the duct join with a screw; fit the bottom plate
- Make sure to insulate the duct to prevent dewing on it
- (4)Install the specific blowout duct in a location where the air will circulate to the entire room
 - Conduct the installation of the specific blowout hole and the connection of the duct before attaching them to the ceiling.
 - •Insulate the area where the duct is secured by a band for dew condensation prevention.

⑤Make sure provide an inspection hole on the ceiling. It is indispensable to service electric equipment, motor, functional components and cleaning of heat exchanger.



Bad example of duct work

- 1 If a duct is not provided at the suction side but it is substituted with the space over the ceiling, humidity in the space will increase by the influence of capacity of ventilation fan, strength of wind blowing against the out door air louver, weather (rainy day) and others
 - a)Moisture in air is likely to condense over the external plates of the unit and to drip on the ceiling. Unit should be operated under the conditions as listed in the above table and within the limitation of wind volume. When the building is a concrete structure, especially immediately after the construction, humidity tends to rise even if the space over the ceiling is not substituted in place of a duct. In such occasion, it is necessary to insulate the entire unit with glass wool (25mm). (Use a wire net or equivalent to hold the glass wool in place.)
- b)It may run out the allowable limit of unit operation (Example: When outdoor air te is 35°C DB, suction air temperature is 27°C WB) and it could result in such troubles as compressor overload. etc.
- c)There is a possibility that the blow air volume may exceed the allowable range of operation due to the capacity of ventilation fan or strength of wind blowing against external air louver so that drainage from be heat exchanger may fall to reach the drain pan but leak outside (Example: drip on to the ceiling) with consequential water leakage in the room.
- (2)If vibration damping is not conducted between the unit and the duct, and between the unit and the slab, vibration will be transmitted to the duct and vibration noise may occur. Also, vibration may be transmitted from the unit to the slab. Vibration damping must be performed.



5 Duct work (continued)

Connecting the air intake/vent ducts

1) Fresh Air Intake

[for air intake duct only]

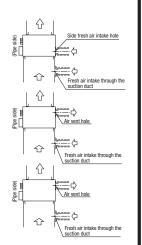
OUse the side fresh air intake hole, or supply through a part of the suction duct.

[for simultaneous air intake/vent] OIntake air through the suction duct (the side cannot be used)

2)Air Vent

OUse the side air vent hole (always use together with the air intake)

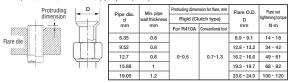
Oinsulate the duct to protect it from dew condensation.



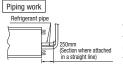
6Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.
- on a max companions with 150 5 out), folds 5... Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data.
- 1) In case of reuse: Do not use old flare nut, but use the one attached to the unit or compatible with JIS B 8607, Class 2 2) In case of reuse: Flare the end of pipe replaced partially for R410A



- Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H 3300) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- ●Do not use any refrigerant other than R410A.
- Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc. ■Use special tools for R410A refrigerant.



When conducting piping work, make sure to allow the pipes to be aligned in a straight line for at least 250 mm, as shown in the left illustration. (This is necessary for the drain pump to function)

Work procedure

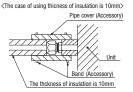
- Remove the flare nut and blind flanges on the pipe of the indoor unit.
 Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the
- nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them (Gas may come out at this time, but it is not abnormal.)

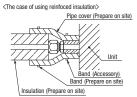
 Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
- 2. Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit. *Bend radius of pipe must be 4D or larger. Once a pipe is bent, do not readjust the bending
 - Do not twist a pipe or collapse to 2/3D or smaller *Do a flare connection as follows:
 - Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.
 - When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.
- Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
- Make sure to insulate both gas pipes and liquid pipes completely.
 %Incomplete insulation may cause dew condensation or water dropping.
 Use heat-resistant (120 °C or more) insulations on the gas side pipes.
- In case of using at high humidity condition, reinforce insulation of refrigerant pipes.
 Surface of insulation may cause dew condition or water dropping, if insulations are not

6Refrigerant pipe (continued)

As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit

Caution: Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the slide friction force on the threads and increase, in turn, the axial component force so that it could crack the flare by the stress corrosion. Refrigerating machine oil may be applied to the internal surface of flare only





7 Drain pipe

Caution

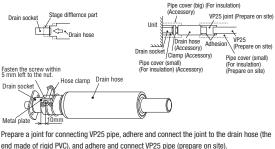
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

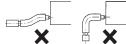
1. Make sure to insert the drain hose (the end mode of soft PVC) to the end of the step part of drain socket.

Attach the hose clamp to the drain hose around 10mm from the end, and fasten the screw within 5mm left to the nut.

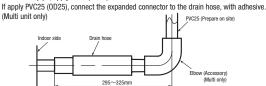
- Do not apply adhesives on this end.
- Do not use acetone-based adhesives to connect to the drain socket.



- 2. Prepare a joint for connecting VP25 pipe, adhere and connect the joint to the drain hose (the end made of rigid PVC), and adhere and connect VP25 pipe (prepare on site) *As for drain pipe, apply VP25 made of rigid PVC which is on the market.
 - Make sure that the adhesive will not get into the supplied drain hose. It may cause the flexible part broken after the adhesive is dried up and gets rigid.
 - The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.



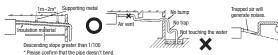
As for drain pipe, apply VP25 (OD32).



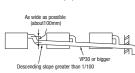
7 Drain pipe (continued)

Do not set up air vent.

- Make sure to make descending slope of greater than 1/100 and do not make up-down bend
 - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.



When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP30 or bigger size for main drain pipe

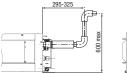


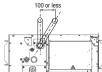
- 4. Insulate the drain pipe.
- Be sure to insulate the drain socket and rigid PVC pipe installed indoors otherwise it may cause dew condensation and water leakage.

XAfter drainage test implementation, cover the drain socket part with pipe cover (small size), then use the pipe cover (big size) to cover the pipe cover (small size), clamps and part of the drain hose, and fix and wrap it with tapes to wrap and make joint part gapless.

Drain up

● The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.





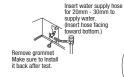
Otherwise, the construction point makes it same as drain pipe construction.

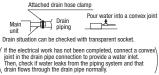
Drain test

- Conduct a drain test after completion of the electrical work.
- 2. During the trail, make sure that drain flows properly through the piping and that no water leaks from connections.
- 3. In case of a new building, conduct the test before it is furnished with the ceiling.
- 4. Be sure to conduct this test even when the unit is installed in the heating season.

Procedures

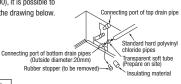
- 1. Supply about 1000 cc of water to the unit through the air outlet by using a feed water pump.
- 2. Check the drain while cooling operation





Outline of bottom drain piping work

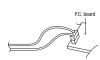
 $\ensuremath{\bullet}$ If the bottom drain piping can be done with a descending gradient (1/50-1/100), it is possible to connect the pipes as shown in the drawing below.



Uncoupling the drain motor connector

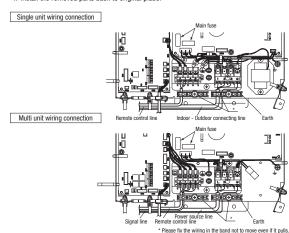
 Uncouple the connector CnR for the drain motor as illustrated in the drawing on the right.

Note: If the unit is run with the connector coupled. drain water will be discharged from the upper drain pipe joint, causing a water leak



®Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an
 electrical installation service provider qualified by a power provider of the country, and be
 executed according to the technical standards and other regulations applicable to electrical
 installation in the country.
 - Be sure to use an exclusive circuit.
- Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
- Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
- For the details of electrical wiring work, see attached instruction manual for electrical wiring work.
- 1. Remove a lid of the control box (2 screws).
- 2. Hold each wiring inside the unit and fasten them to terminal block securely.
- 3. Fix the wiring with clamps.
- 4. Install the removed parts back to original place.



Main fuse specification

Model	Specification	Port No.
22-56 T3.15A L250V		SSA564A149AF
71-160	T5A L250V	SSA564A149AM

9 External static pressure setting

You can set External Static Pressure (E.S.P.) by either method of MANUAL SETTING or AUTO-MATIC SETTING by remote control.

Indoor unit will control fan-speed to keep rated air flow volume at each fan speed setting (Lo-Uhi)

1. MANUAL SETTING

You can set required E.S.P. by wired remote control that calculated with the set air flow rate and pressure loss of the duct connected.

Select No.1-10 (10Pa-100Pa) from following table according to calculation result. Refer to technical manual for details of air flow characteristic.

Setting No.	1	2	3	4	5	6	7	8	9	10
External Static Pressure (Pa)	10	20	30	40	50	60	70	80	90	100

- When you set No.11-19 by remote control, unit will control fan-speed with setting of No.10 Factory default is at No.5.
- How to set E.S.P by wired remote control
- ① Push "◆" marked button(E.S.P button).
- ② Select indoor unit No. by using \$\Display\$ button.
- ③ Select setting No. by using **♦** button and set E.S.P. by □ button. See detailed procedure in technical manual.



You can NOT set E.S.P. by wireless remote control.



Caution

Be sure to set E.S.P. according to actual duct connected.

Wrong settings causes excessive air flow volume or water drop blown out.

2. AUTOMATIC SETTING

Indoor unit will recognize E.S.P. by itself automatically and select appropriate fan speed No.1-10.

9 External static pressure setting (continued)

- How to start automatic setting
 - ①, ② Same setting as MANUAL SETTING.

 - ② After setting E.S.P. at "AUT", operate unit in FAN mode with certain fan speed (Lo-Uhi).

Indoor unit fan will run automatically and recognize E.S.P. by itself.

The operation for automatic E.S.P. recognition will last about 6 minutes, and it will be stopped after recognition is completed.

Caution

- Be sure to execute AUTOMATIC SETTING by remote control AFTER ducting work is completed.

 When duct specification is changed after AUTOMATIC SETTING, be sure to execute AUTOMATIC SETTING again after power resetting and turning on again.
- Be sure to execute AUTOMATIC SETTING before trial cooling operation.
- (See ELECTRICAL WIRING WORK INSTRUCTION about trial cooling operation)
- · Before AUTOMATIC SETTING, be sure to check that return air filter in duct is installed and damper is opened.

Wrong procedure causes excessive air flow or water drop blown out.

Notice

- During operation for automatic recognition (the Auto Operation), fan rotates with certain speeds regardless of set fan speed by remote control.
- · When duct is set with low static pressure (around 10-50Pa), even if indoor unit operate with higher air flow volume than rated one, but it is not abnormal.
- · When you changed operation mode or stop operation with ON/OFF button during Auto Operation, the Auto operation will be canceled.
- In such case, be sure to execute AUTOMATIC SETTING again according to above procedure.

(11) Check list after installation

Check the following items after all installation work completed.

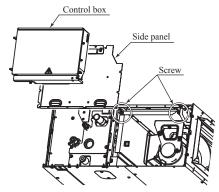
Check if	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Power source voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
No mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks air flow on air inlet and outlet?	Insufficient capacity	
Is setting of E.S.P finished?	Excessive air flow, water drop blow out	

(b) Replacement procedure of the fan unit

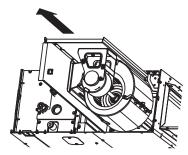
Notes(1) The unit is a heavy item. It must be supported securely and handled with care not to drop when it is necessary to replace. (2) For the maintenance space, refer to page 199.

(i) Model FDUM50VF

 Remove the control box and the side panel, and remove the screws marked in the circles (2 places) in the figure.

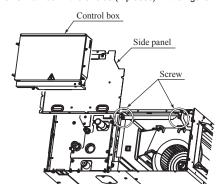


2) Take out the fan unit in the arrow direction.

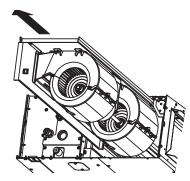


(ii) Models FDUM60VF, 71VF1

1) Remove the control box and the side panel, and remove the screws marked in the circles (2 places) in the figure.

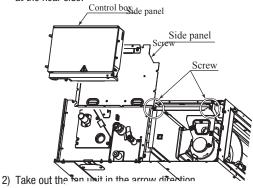


2) Take out the fan unit in the arrow direction.

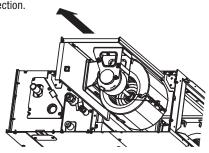


(iii) Models FDUM100VF2, 125VF, 140VF

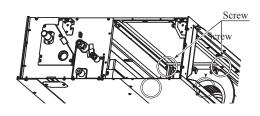
 Remove the control box and the side panel, and remove the screws marked in the circles (2 places) from the unit located at the near side.



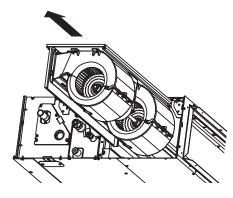
2) Take out the fan unit located at the near side in the arrow direction.



3) Remove the screws marked in the circles (2 places) from the fan unit located at the far side.



4) Take out the fan unit in the arrow direction.



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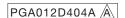
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(6) Floor standing type (FDF)



This manual is for the installation of an indoor unit.

For electrical wiring work (Indoor), refer to the page 229. For remote control installation, refer to the page 240. For wireless kit installation, refer to the page 602. For electrical wiring work (Outdoor) and refrigerant pipe work installation for outdoor unit, refer to the page 245.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- MARNING: Wrong installation would cause serious consequences such as injuries or death. ACAUTION: Wrong installation might cause serious consequences depending on circumstances. Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right:

 Never do it under any circumstances.

 Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit. Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠ WARNING

Installation should be performed by the specialist.

If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overtum of the unit.

- $\ensuremath{\bullet}$ Install the system correctly according to these installation manuals.
- Improper installation may cause explosion, injury, water leakage, electric shock, and fire
- Check the density refered by the foumula (accordance with ISO5149).
 - If the density exceeds the limit density, please consult the dealer and installate the ventilation system
- Use the genuine accessories and the specified parts for installation.

If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit

- Ventilate the working area well in case the refrigerant leaks during installation.
- If the refrigerant contacts the fire, toxic gas is product
- ●Install the unit in a location that can hold heavy weight. Improper installation may cause the unit to fall leading to accidents
- Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.
- on may cause the unit to fall leading to accidents
- Do not mix air in to the cooling cycle on installation or removal of the air-conditioner.
- If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injurie
- Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. Power source with insufficient capacity and improper work can cause electric shock and fire.
- •Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in
 - order not to apply unexpected stress on the terminal Loose connections or hold could result in abnormal heat generation or fire
- Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services
- Improper fitting may cause abnormal heat and fire.
- Check for refrigerant gas leakage after installation is completed.
 - f the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produce
- Use the specified pipe, flare nut, and tools for R410A.
- Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle Tighten the flare nut according to the specified method by with torque wrench.
- If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period
- Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas car Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also
- cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak
- Connect the pipes for refrigeration circuit securely in installation work before compressor is operated. If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system
- Stop the compressor before removing the pipe after shutting the service valve on pump down work. If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit
- and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle • Only use prescribed option parts. The installation must be carried out by the qualified installer.
- f you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire
- Do not repair by yourself. And consult with the dealer about repair. Improper repair may cause water leakage, electric shock or fire
- Consult the dealer or a specialist about removal of the air-conditioner.
- Improper installation may cause water leakage, electric shock or fire. ● Turn off the power source during servicing or inspection work
 - If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- Do not run the unit when the panel or protection guard are taken off.
 - Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock.
- Shut off the power before electrical wiring work.
- It could cause electric shock, unit failure and improper runnin

↑ CAUTION

Perform earth wiring surely.

not connect the arth wining to the gas pipe, water pipe, lightning rod and telephone earth wiring. Imperfect earth work rounding) could cause an electric shock or fire if some trouble or earth leakage occurs.

- Earth leakage breaker must be installed.
- nless the earth leakage circuit breaker is provided, if could cause a fire or electric shock
- Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.
- Using the incorrect one could cause the system failure and fire
- Do not use any materials other than a fuse of correct capacity where a fuse should be used. Connecting the circuit by wire or copper wire could cause unit failure and fire
- Do not install the indoor unit near the location where there is possibility of flammable gas leakages If the gas leaks and gathers around the unit, it could cause fire.
- The gas beare any garden was the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.
- It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire
- Secure a space for installation, inspection and maintenance specified in the manual.
- nsufficient space can result in accident such as personal injury due to falling from the installation place Do not use the indoor unit at the place where water splashes such as laundry.
- Indoor unit is not waterproof. It could cause electric shock and fire.
- Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art. It could cause the damage of the items.
- Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics. Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunicat equipment might influence the air-conditioner and cause a malfunction and breakdown. Or the air-conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.
- Do not install the remote control at the direct sunlight.
- t could cause breakdown or deformation of the remote control.
- Do not install the indoor unit at the place listed below
- Places where flammable gas could leak. Places where carbon fiber, metal powder or any powder is floated. Place where the substances which affect the air-conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammonic atmospheres.
- Places exposed to oil mist or steam directly.
- On vehicles and ships

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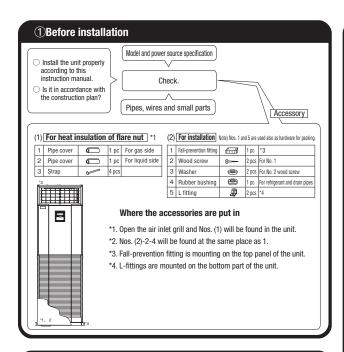
- Places where machinery which generates high harmonics is used.
- Places where cosmetics or special sprays are frequently used.
- Highly salted area such as beach.
 Heavy snow area
 Places where the system is affected by
- - smoke from a chimney. Altitude over 1000m
- Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit
 according to the installation manual for each model because each indoor unit has each limitation)
 Locations with any obstacles which can prevent inlet and outlet air of the unit
 Locations where vibration can be amplified due to insufficient strength of structure.

 - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the
- infrared specification unit)
- initiation specification unity.

 Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)

 Locations where drainage cannot run off safely.

 can affect performance or function and etc...
- Do not put any valuables which will break down by getting wet under the air-conditioner could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it dam
- Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use. It could cause the unit falling down and injury.
- Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit. If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit.
- Install the drain pipe to drain the water surely according to the installation manual
- nproper connection of the drain pipe may cause dropping water into room and damaging user's belo Do not share the drain pipe for indoor unit and GHP (Gas Heat Pump system) outdoor unit.
- Toxic exhaust gas would flow into room and it might cause serious damage (some poisoning or deficiency of oxygen) to Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can
- occur, which can cause serious accidents For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps. and not to make air-bleeding.
- Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance
- Ensure the insulation on the pipes for refrigeration circuit so as not to condense water. Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other val
- Do not install the outdoor unit where is likely to be a nest for insects and small animals sects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to
- keep the surroundings clean Pay extra attention, carrying the unit by hand.
- Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the uni by hand. Use protective gloves in order to avoid injury by the aluminum fin Make sure to dispose of the packaging material.
- Leaving the materials may cause injury as metals like nail and woods are used in the package Do not operate the system without the air filter. It may cause the breakdown of the system due to clogging of the heat exchange
- Do not touch any button with wet hands.
- It could cause electric shock
- Do not touch the refrigerant piping with bare hands when in operation.
- The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn o
- Do not clean up the air-conditioner with water
- Do not turn off the power source immediately after stopping the operation
- Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown
- Do not control the operation with the circuit breaker.
- It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.



2) Selection of installation place for the indoor unit

- ① Select the suitable areas to install the unit under approval of the user.

 -Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.

 -Areas where there is enough space to Install and service.

 -Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.

 -Areas where there is no obstruction of air flow on both air return grille and air supply port.

 -Areas where fire alarm will not be accidentally activated by the air-conditioner.

 -Areas where the supply air does not short-circuit.

 -Areas where it is not influenced by draft air.

 -Areas not exponsed to direct sunlight.

 - Areas not exposed to direct sunlight.

 Areas where dew point is lower than around 23°C and relative humidity is lower than 80%.

- Areas where devi point is lower than around 23°C and relative humidity is lower than 80%.

 This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air conditioner is operated under the severer condition than mentioned above. If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.

 -Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)

 -Areas where TV and radio stays away more than 1m. (It could cause jamming and solven).

 -Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.

 -Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.

 -Areas where lighting device sometimes affects the infrared receiver for the wireless remote control and the air-conditioner might not work properly.

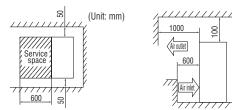
 -When operating the suction air processing unit independently, it operates in the outdoor air processing mode.
- mode.

 Blowout temperatures are not same at the standard unit operation and the outdoor air processing mode
- operations. Since the temperatures become higher during cooling or lower during heating, take care of the direction
- or blowout outlet.

 Avoid directing the blowout outlet to the space where people are present.

 Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.

Space for installation and service



• Secure sufficient spaces for inspection and maintenance.

<u>^</u>WARNING

Install the unit securely on a floor that can endure its weight sufficiently Insufficient strength or incorrect installation could result in injuries if the unit falls.

- ATTENTION: Select a place for installation where the following conditions are fulfilled with customer's consent. . Where cool or hot air can be blown sufficiently and widely.
 - Where the piping and wiring work to outdoor unit can be done easily.
 - · Where drainage water can run off completely.
 - . Where the installation floor is strong enough. Where the unit its protected from direct exposure to sunlight.
 - Where there is no obstacle at he air inlet and air outlet.
 - . Where the fire alarm apparatus will not be activated by malfunction. Where There is no risk for short-circuit of air.

3 Carrying-in and installation of the unit

Carrying-in

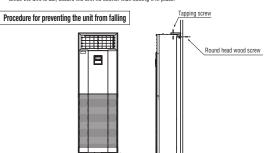
ATTENTION:

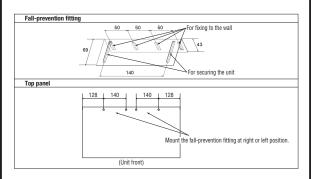


- · Carry in the unit kept in a package as near as possible to the installation place.
- When it is necessary to unpack the unit before carrying in, sufficient care must be taken not to damage it by using nylon slings or the like. Note) Do not hold on the air inlet grill, air outlet louver or other sections made of plastics.
- · When placing the unit on the floor after unpacking, be sure to have its front face at the ton

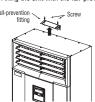
ATTENTION:

- . Be sure to fix the unit with L-fittings and the fall-prevention fitting.
- Since the unit is tall, secure the unit no sooner than setting it in place

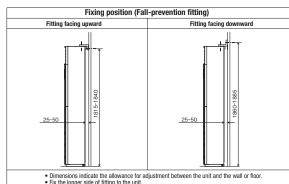




(1) Fixing the unit with the fall-prevention fitting



- ①Loosen screws (2 pcs) and remove the fall-prevention fitting.
- 2 Select a position to fix the fall-prevention fitting as illustrated and fix it to the top of unit and the wall.
 - · The fixing positon of the fall-prevention fitting is as illastrated below



Fix the longer side of fitting to the unit.
 When the fitting is faced downward, fix it to the wall first

(3) Carrying-in and installation of the unit (Continued) (2) Fixing the unit with the L-fittings ①Remove the L-fittings mounted on the unit with screws. ②Turn over the L-fitting and fix it to the unit and either the floor or the wall as illustrated. Fixing position of the L-fittings are as illustrated below. Fixing position (L fitting) ₹2<u>× ø</u>8 ATTENTION: Install the unit on the level. Inclination must be less than 1°in fore-aft and right-left directions.

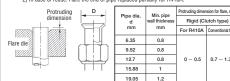
4 Refrigerant piping

Caution

Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product or a nut compatible with JIS B 8607, Class 2.

Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data

1) In case of reuse: Do not use old flare nut, but use the one attached to the unit or compatible with JIS B 8607, Class 2 In case of reuse: Flare the end of pipe replaced partially for R410A



• Use phosphorus deoxidized copper alloy seamless pipe (C1220T specified in JIS H 3300) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.

Do not use any refrigerant other than R410A.

Using other refrigerant except R410A (R22 etc.) may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.

• Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.

•Use special tools for R410A refrigerant.

Work procedure

1. Remove the flare nut and blind flanges on the pipe of the indoor unit.

38 Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)

Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)

Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit. **Bend radius of pipe must be 4D or larger. Once a pipe is bent, do not readjust the bending Do not twist a pipe or collapse to 2/3D or smaller.

※ Do a flare connection as follows:■ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them.

When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above. Make sure to hold the pipe on the indoor unit securely by a spanner when tightening the nut in order to avoid unexpected stress on the copper pipe.

Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.

Make sure to insulate both gas pipes and liquid pipes completely.

incomplete insulation may cause dew condensation or water dropping.

Use heat-resistant (120 °C or more) insulations on the gas side pipes.

In case of using at high humidity condition, reinforce insulation of refrigerant pipes.
 Surface of insulation may cause dew condition or water dropping, if insulations are not reinfoced.

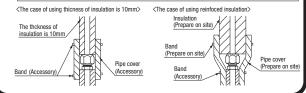
4. Refrigerant is charged in the outdoor unit.

As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

Caution:

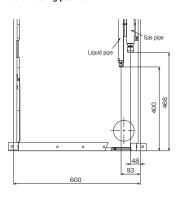
Refrigerating machine oil should not be applied to the threads of union or external surface of flare. It is because, even if the same tightening torque is applied, the oil is likely to decrease the slide friction force on the threads and increase, in turn, the axial component force so that it could crack the flare

Refrigerating machine oil may be applied to the internal surface of flare only.



(Continued)

Pine and wire extracting position



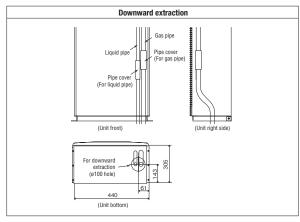
N-m

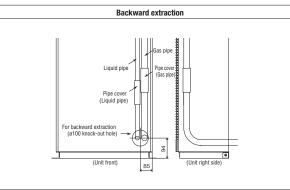
8.9 — 9.1

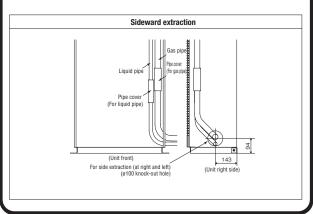
12.8 - 13.2 34 - 42 16.2 - 16.6 49 - 61

19.3 - 19.7 68 - 82 23.6 - 24.0 | 100 - 120 Do not cut off the flange at the hole on the base plate for the downward extraction









⑤Drain pipe

∱WARNING

 Do not insert the drain pipe directly in the drain ditch where toxic gases such as sulffuric gas are produced.
 Toxic gas may flow into the room.

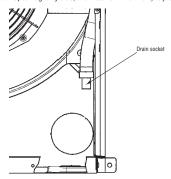
ACAUTION

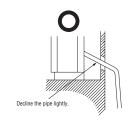
• Install the drain pipe properly according to the installation manual and insulate it to prevent from dew condensation.

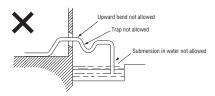
Improper installation of drain pipe may cause damage of furniture drainage water leaked or dew condensation.

Procedure

- 1. Connect the drain socket to the drain pipe (VP20) provided at site and fix the joint with adhesive tape, or the like.
- When the pipe provided at site runs through a room, insulate the pipe with a commercial insulator (Polyethylene foam: Specific gravity 0.03, thickness 15 mm or more) to prevent dewing.







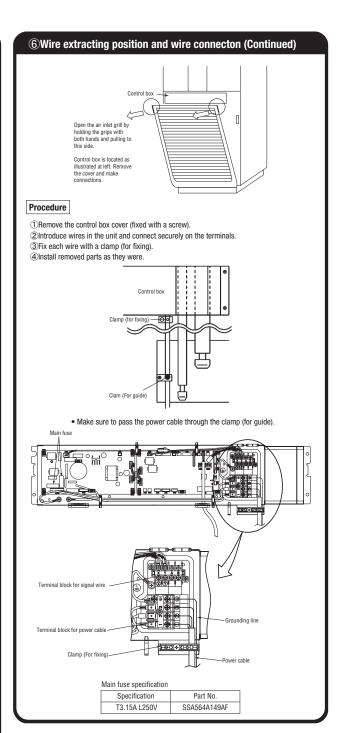
ATTENTION:

- Insulate the drain pipe to prevent dewing. (Especially in room and unit)
- \bullet Incline the drain pipe downward to the outlet (1/50 1/100). Upward bend or trap is not allowed on the way.

6Wire extracting position and wire connecton

Control box position and power cable connection

- Electric work must be made by qualified electricians according to the "Engineering standards concerning electric equipment", "Extension wiring regulations" and the electric wiring work manual. Be sure to use dedicated electric circuits.
- •Make sure to use specified wires for wiring, and connect them securely. Clamp the wires to protect the terminal connection from external force.
- Make sure to protect the unit with the D-type grounding work.
- ●For details of wiring work, refer to the attached electric wiring work manual.



7Check list after installation

Check the following items after all installation work completed.

Check if;	Expected trouble	Check
The indoor and outdoor units are fixed securely?	Falling, vibration, noise	
Inspection for gas leakage is done?	Insufficient capacity	
Insulation work is properly done?	Water leakage	
Water is drained properly?	Water leakage	
Power source voltage is same as mentioned in the model name plate?	PCB burnt out, not working at all	
There is mis-wiring or mis-connection of piping?	PCB burnt out, not working at all	
Earth wiring is connected properly?	Electric shock	
Cable size comply with specified size?	PCB burnt out, not working at all	
Any obstacle blocks air flow on air inlet and outlet?	Insufficient capacity	

(7) Wall mounted type (SRK)

(a) Models SRK50ZSX-S, 60ZSX-S

RLF012A200A

Model SRK20,25,35,50,60ZSX-S R410A REFRIGERANT USED

• This installation manual deals with an indoor unit installation only. For an outdoor unit installation, refer to page 245.

SAFETY PRECAUTIONS

- **WARNING** Indicates a potentially hazardous situation which, if not avoided, can result in serious consequences such as death or severe injury.

 A CAUTION Indicates a potentially hazardous situation which, if not avoided, can result in personal injury or properly damage.

 Both mention the important items to protect your health and safety. Therefore, strictly follow them by any means.

- Before installation, read the "SAFETY PRECAUTIONS" carefully and strictly follow it during the installation work in order to protect yourself.

 Be sure to confirm no operation problem on the equipment after completing the installation. If unusual noise can be heard during the test run, consult the dealer.

Be sure to use only for residential purpose.

If this unit is installed in inferior environment such as machine shop, vehicle (like ship), warehouse etc., it can malfunction.

Installation must be carried out by the qualified installer completely in accordance with the installation manual.

dance with the installation manual.
Installation by non qualified person or incorrect installation can cause serious troubles such as water leak, electric shock, fire and personal injury.

Be sure to wear protective goggles and gloves while performing installation work. Improper safety measures can result in personal injury.

Use the original accessories and the specified components for the installation.

Using parts other than those prescribed may cause water leak, electric shock, fire and personal injury.

• Do not install the unit near the location where leakage of flammable gases can occur. If leaked gases accumulate around the unit, it can cause fire resulting in property damage and personal injury.

When installing the unit in small rooms, make sure that refrigerant density does not exceed the limit (Reference: ISOS149) in the event of leakage. If refrigerant density exceeds the limit, consult the dealer and install the ventilation system. Otherwise lack of oxygen can occur resulting in serious accident.

Install the unit in a location where unit will remain stable, horizontal and free

of any vibration transmission.

Unsuitable installation location can cause the unit to fall resulting in material damage and personal injury.

Do not run the unit with removed panels or protections.

• The precautionary items mentioned below are distinguished into two levels, [AWARNING] and [ACAUTION].
• Se sure to explain the operating methods as well as the maintenance methods of this equipment to the

MARNING

During pump down work, be sure to stop the compressor before closing ser-

vice valves and removing connecting pipes.

If the connecting pipes are removed when the compressor is in operation and service valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.

In the event of refrigerant leakage during installation, be sure to ventilate the

In the event of retrigerant teakage during installation, working area properly.

If the refrigerant comes into contact with naked flames, poisonous gases will be produced.

Electrical work must be carried out by the qualiffied electrician, strictly in accordance with national or regional electricity regulations.

Incorrect installation can cause electric shock, fire or personal injury.

Make sure that earth leakage breaker and circuit breaker of appropriate capabilities are installed.

pacities are installed.

Circuit breaker should be able to disconnect all poles under over current. Absence of appropriate

breakers can cause electric shock, personal injury or properly damage.

Be sure to switch off the power source in the event of installation, mainte nance or service.

If the power source is not switched off, there is a risk of electric shock, unit failure or personal injury.

Be sure to tighten the cables securely in terminal block and relieve the cables properly to prevent overloading the terminal blocks.
Loose connections or cable mountings can cause anomalous heat production or fire.
Do not process, splice or modify the power cable, or share the socket with

Unsuitable installation now with removed particular to the unit with removed particular proteins and personal injury.

Do not run the unit with removed particular proteins and personal injury.

Do not vent R410A into atmosphere.

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↑ CAUTION

Take care when carrying the unit by hand.

If the unit weight is more than 20kg, it must be carried by two or more persons.

Do not carry the unit by the plastic straps. Always use the carry handle.

Do not install the outdoor unit in a location where insects and small animals

can inhabit. Insects and small animals can enter the electrical parts and cause damage resulting in fire or person-

al injury. Instruct the user to keep the surroundings clean

al injury. Instruct the user to keep the surroundings clean.

If the outdoor unit is installed at height, make sure that there is enough space for installation, maintenance and service.

Insufficient space can result in personal injury due to falling from the height.

Do not install the unit near the location where neighbours are bothered by noise or air generating from the unit.

It can affect surrounding environment and cause a claim.

Do not install in the locations where unit is directly exposed to corrosive gases (like sulphide gas, chloride gas), sea breeze or salty atmosphere.

It can cause corrosion of heat exchanger and damage to plastic parts.

Do not install the unit close to the equipments that generate electromagnetic • waves and/or high-harmonic waves.

Equipment such as inverters, standby generators, medical high frequency equipments and telecom-

Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.

There are heat sources nearby

Chemical substances like ammonia (organic fertilizer), calcium chloride (snow melting agent) and acid (sulfurous acid etc.), which can harm the unit, will generate or accumulate.
 Prain water can not be discharged properly.
 TV set or radio receiver is placed within 1m.

Height above sea level is more than 1000m.

It can cause performance degradation, corrosion and damage of components, unit malfunction and fire

Unit is directly exposed to rain or sunlight.

There is any obstacle which can prevent smooth air circulation from inlet and outlet side of the unit.

Unit is directly exposed to oil mist and steam such as kitchen.

Do not install the unit in the locations where:

Dispose of all packing materials properly.

Packing materials contain nails and wood which can cause personal injury Keep the polybag away from children to avoid the risk of suffocation.

Do not put anything on the outdoor unit.

Object may fall causing property damage or personal injury.

Do not touch the aluminum fin of the outdoor unit.

Aluminium fin temperature is high during heating operation. Touching fin can cause burn.

Do not touch any refrigerant pipe with your hands when the system is in operation.

During operation the refrigerant pipes become extremely hot or extremely cold depending on the operating condition. Touching pipes can cause personal injury like burn (hot/cold).

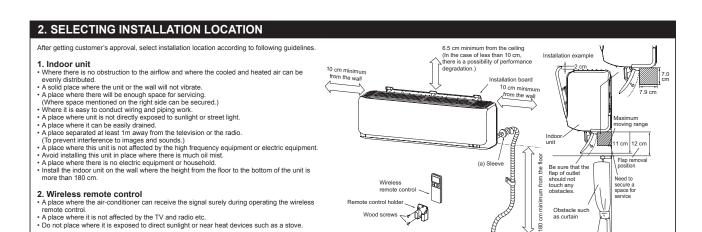
Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations.

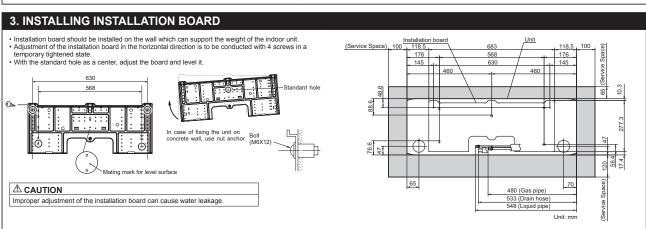
The isolator should be locked in OFF state in accordance with EN60204-1.

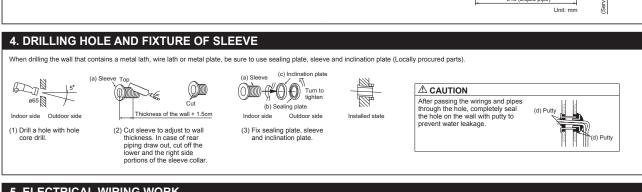
1. ACCESSORIES AND TOOLS Standard accessories (supplied with indoor unit) (5) Wood screws (for remote control holder ø3.5 X 16mm) 1pc (1) Installation board (b (c (2) Wireless remote control 685 (6) Batteries [R03 (AAA, Micro) 1.5V] (d (e (f) Remote control holder 7) Air-cleaning filters (g (4) Tapping screws (for installation board ø4 X 25mm) 4pcs (8) Insulation (#486 50 X 100 t3)

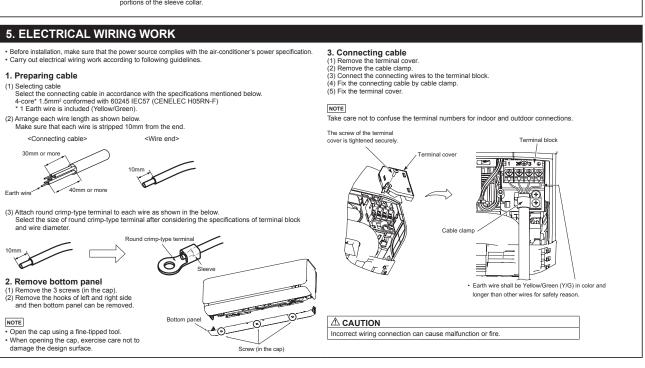
	Locally procured parts	1	Tools for	installation Work
1)	Sleeve (1pc)		Plus headed driver	Pipe cutter
0)	Sealing plate (1pc)		Knife	Hole core drill (65mm in diameter)
:)	Inclination plate (1pc)		Saw	Wrench key (Hexagon) [4mm]
i)	Putty		Tape measure	Flaring tool set*
)	Connecting cable		Torque wrench	Gas leak detector*
f)	Drain hose (extension hose)		Torque wrench (14.0-62.0N·m (1.4-6.2kgf·m))	Pipe bender
٠,	Piping cover (for insulation of connection piping)		Plier	Flare adjustment gauge
"	(for insulation of connection piping)			* Designed specifically for R410A
1)	Clamp and screw (for finishing work)			,,

(i) Electrical tape









6. FORMING PIPING AND DRAIN HOSE 1. Forming piping Piping is possible in the right, rear, downward, left, left rear or left downward direction Forming of pipings • Hold the bottom of the piping and fix direction before stretching it and shaping it. Taping of the exterior Tape only the portion that goes through the wall. Always tape the wiring with the piping. NOTE Sufficient care must be taken not to damage the panels when connecting pipes Cut out the panel smoothly along the 2. Drain change procedures (1) Remove the screw and drain hose. (2) Remove the drain cap by hand or pliers. (3) Insert the drain cap which was removed at procedure (2) securely using a hexagonal wrench etc. (4) Install the drain hose and screw securely. (1) (2) (3) Left do Right hand side piping Left hand side piping Piping in the left rear direction Piping in the right rear direction **⚠** CAUTION Incorrect installation of drain hose and cap can cause water leakage Piping in the right directio

⚠ CAUTION

Incorrect drainage work can cause water leakage.

Arrange the drain hose in a downward angle. Avoid the following drain piping. 樹 Higher than specified The drain hose Wavy The gap to the ground is 5 cm or less. The drain hose tip is in the gutter.

- Pour water to the drain pan located under the heat exchanger, and ensure that the water is discharged outdoor.
 When extended drain hose is present inside the room, insulate it securely with heat insulator available in the market.

Since this air-conditioner is designed to collect dew drops on the rear surface to the drain pan, do not install the connecting wire above the gutter.



8. INSTALLING INDOOR UNIT

1. Installing the indoor unit to installation board

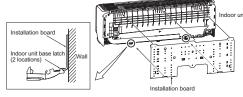
(1) Pass the pipe through the hole in the wall, and hook the upper part of the indoor unit to the installation board.

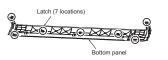
7. DRAINAGE WORK



(2) Gently push the lower part to fix the indoor unit base lower latch to installation board.

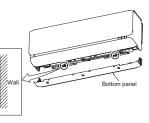






2. Removing the indoor unit from installation board

- Remove the bottom panel. (Refer to 5.2)
 (2) Pull the indoor unit base latch downward. (both right and left hand sides). (The indoor unit base latch can be removed from the installation board.)
 (3) Push up the indoor unit upward so that it can be removed from installation board.



9. CONNECTING PIPING WORK

1. Preparation of connecting pipe

(in the cap).

1.1. Selecting connecting pipe
Select connecting pipe according to the following table

		9
	Model SRK20/25/35	Model SRK50/60
Gas pipe	ø9.52	ø12.7
Liquid pipe	ø6.35	ø6.35

- Pipe wall thickness must be greater than or equal to 0.8 mm.
 Pipe material must be O-type (Phosphorus deoxidized seamless copper pipe ICS 23.040.15, ICS 77.150.30)

 77.150.30

1.2. Cutting connecting pipe

- (1) Cut the connecting pipe to the required length with pipe cutter.
 (2) Hold the pipe downward and remove the burrs. Make sure that no foreign material enters the pipe.
 (3) Cover the connecting pipe ends with the tape.

2. Piping work

- 2.1. Flaring pipe
 (1) Take out flare nuts from the service valves of indoor unit and engage them onto connecting pipes.
- (1) Take Out lide tribs from the service varies or indoor and and engage tries in the confecency pipes.

 (2) Flare the pipes according to table and figure shown below.

 Flare dimensions for R410A are different from those for conventional refrigerant.

 Although it is recommended to use the flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a flare adjustment

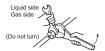
gauge		
	Copper pipe outer diameter	A 0 -0.4
- Lil	ø6.35	9.1
	ø9.52	13.2
	ø12.7	16.6



	Copper pipe	Rigid (clutch) type
	outer diameter	R410A	Conventional
	ø6.35		
1	ø9.52	0 - 0.5	1.0 - 1.5
	ø12.7		

2.2 Connecting pipes
(1) Connect pipes on both liquid and gas sides.
(2) Tighten nuts to specified torque shown in the table below.

Operation valve size (mm)	Tightening torque (N·m)
ø6.35 (1/4")	14-18
ø9.52 (3/8")	34-42
ø12.7 (1/2")	49-61



⚠ CAUTION

 Do not apply refrigerating machine oil to the flared surface. It can cause refrigerant leakage • Do not apply excess torque to the flared nuts. The flared nuts may crack resulting in refrigerant

3. Heating and condensation prevention

- (1) Dress the connecting pipes (both liquid and gas pipes) with insulation to prevent it from heating and dew condensation
- Use the heat insulating material which can withstand 120°C or higher temperature. Make sure that insulation is wrapped tightly around the pipes and no gap is left between them.

 (2) Wrap the refrigerant pipings of indoor unit with indoor unit heat insulation using tape.

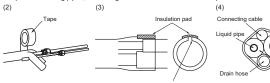
Installation board

Indoor unit base latch (2 locations)

سري.

- (3) Cover the flare-connected joints (indoor side) with the indoor unit heat insulation and wrap it with an insulation pad (standard accessory provided with indoor unit).

 (4) Wrap the connecting pipes, connecting cable and drain hose with the tape.



Position it so that the slit area faces

Gas pipe Ó

NOTE

Locations where relative humidity exceeds 70%, both liquid and gas pipes need to be dressed with 20mm or

⚠ CAUTION

- Improper insulation can cause condensate(water) formation during cooling operation.
- Condensate can leak or drip causing damage to household property.

 Poor heat insulating capacity can cause pipe outer surface to reach high temperature during heating operation. It can cause cable deterioration and personal injury.

- (1) Make sure that the exterior portion of connecting pipes, connecting cable (1) wake sure that the exterior point on commercing pipes, conflicting cases and drain hose is wrapped properly with tape. Shape the connecting pipes to match with the contours of the pipe assembly route. (2) Fix the pipe assembly with the wall using clamps and screws. Pipe assembly should be anchored every 1.5m or less to isolate the vibration. (3) Install the service cover securely. Water may enter the unit if service cover is not installed properly, resulting in unit malfunction and failure.



Make sure that the connecting pipes do not touch the components within the unit. If pipes touch the internal components, it may generate abnormal sounds and/or vibrations.

10. HOW TO OPEN, CLOSE, REMOVE AND INSTALL THE AIR INLET PANEL

1. Open
Pull the air inlet panel at both ends of lower part
and release latches, then pull up the panel until
you feel resistance.
(The panel stops at approx. 60° open position)

2. Close

Hold the panel at both ends of lower part, lower it downward slowly, then push it slightly until the latch works.

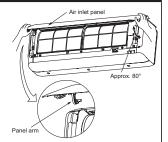
3. Removing
Open the panel by 80 degrees (as shown in the right illustration) and then pull it forward.

ngnt illustration) and men pull it trovvaira.

4. Installing
Insert the panel arm into the slot on the front panel from the position shown in right illustration, hold the panel at both ends of lower part, lower it downward slowly, then push it slightly until the latch undie.

NOTE

When carrying out maintenance, handle the air inlet panel with care.



13. INSTALLING TWO AIR-CONDITIONERS IN THE SAME ROOM

In case two air-conditioners are installed in the same room, apply this setting so that one unit can be operated with only one wirelesss remote control.

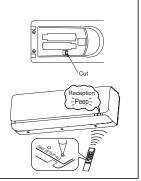
- Setting one wirelesss remote control
 (1) Slide and take out the cover and batteries.
 (2) Cut the switching line next to the battery with
- wire cutters.
 (3) Set the batteries and cover again.

- (3) Set the batteries and cover again.

 Setting one indoor unit

 (1) Turn off the power source and turn it on after
 1 minute.
 (2) Send the signal by pressing the ACL switch
 on the wireless remote control that was set
 according to the procedure described on the
 above side.
 (3) Check that the reception buzzer sound "peep"
 is emitted from the indoor unit. Since the signs
- is emitted from the indoor unit. Since the signal is sent about 6 seconds after the ACL switch is pressed, point the wireless remote control to the indoor unit for a while.

If no reception buzzer is emitted, restart the setting

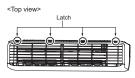


11. HOW TO REMOVE AND INSTALL THE SIDE AND FRONT PANEL

1. Side panel (R/L)

- 1.1. Removing
 (1) Remove the 2 screws.
 (2) Remove the 3 latches and then side panel can be removed.

- 1.2. Installing
 (1) Cover the unit with the side panel and fix 3 latches.
 (2) Secure the side panel with the 2 screws.

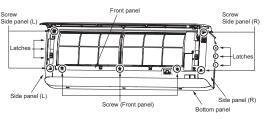


2. Front panel

- 2. Front panel
 2.1. Removing
 (1) Remove the side panel (R/L), the air inlet panel, the air filters and the bottom panel.
 (2) Remove the 3 screws.
 (3) Remove the 4 upper latches and then front panel can be removed.

 2.2. Installing
 (1) Cover the unit with the front panel and fix 4 upper latches.
 (2) Secure the front panel with the 3 screws.
 (3) Install the bottom panel, the side panel

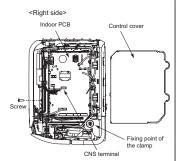
- (3) Install the bottom panel, the side panel (R/L), the air inlet panel and the air filters.

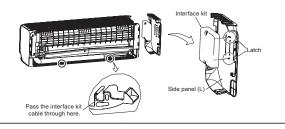


14. TERMINAL CONNECTION FOR AN INTERFACE

To install wired remote control, superlink etc., interface kit is needed.

- (1) Remove the air inlet panel, bottom panel and side panel (R).
 (2) Remove the control cover. (Remove the screw.)
- (3) There is a terminal (respectively marked with CNS) for the indoor control board. While connecting an interface, connect to the respective terminal securely with the connection harness supplied with an option "Interface kit SC-BIKN-E" and fasten the connection harness onto the indoor control box with the clamp and screw supplied with the kit.
 (4) Hook to fix the interface kit to the 2
- latches on side panel (L). For more details, refer to the user's manual of "Interface kit SC-BIKN-F"



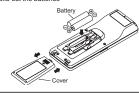


12. INSTALLING WIRELESS REMOTE CONTROL

Mount the batteries

- (1) Slide and take out the cover of backside.
 (2) Mount the batteries [R03 (AAA, Micro), ×2 pieces] in the body properly.
 (Fit he poles with the indication marks + & -)
- (3) Set the cover again.

- Do not use new and old batteries together.
- In case the unit is not operated for a long time, take out the batteries





Installing remote control holder

(1) Select the place where the unit can receive signals.
(2) Fix the holder to pillar or wall with wood

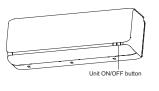
15. PUMP DOWN WORK

For the environmental protection, be sure to pump down when relocating or disposing of the unit. Pump down is the method of recovering refrigerant from the indoor unit to the outdoor unit before the connecting pipes are removed from the unit. When pump down is carried out, forced cooling operation is needed

Forced cooling operation

- (1) Turn off the power source and turn it on again after 1 minute. The air inlet panel and flap open and close.
- (2) After the air inlet panel closes, press the ON/OFF button continuously for at least 5 seconds. Then operation will start.

For the detail of pump down, refer to the installation manual of outdoor unit.



16. INSTALLATION CHECK AND TEST RUN

After finishing the installation work, check the following points again before turning on the power. Conduct a test run and ensure that the unit operates properly. At the same time, explain to the customer how to use the unit and how to take care of the unit following the user's manual.

Before test run

Before test run, check following points.	
Power source voltage complies with the rated voltage of air-conditioner.	
Earth leakage breaker and circuit breaker are installed.	
Power cable and connecting cable are securely fixed to the terminal block.	
Both liquid and gas service valves are fully open.	
No gas leaks from the joints of the service valves.	
Indoor and outdoor side pipe joints have been insulated.	
Hole on the wall is completely sealed with putty.	
Drain hose and cap are installed properly.	
Screw of the terminal cover is tightened securely.	

Test run
Check following points during test run

Indoor unit receives signal of wireless remote control.	
Air-conditioning operation is normal.	
There is no abnormal noise.	
Water drains out smoothly.	
Display of wireless remote control is normal.	

After test run	
Explain the operating and maintenance methods to the user according to the user's manual.	
Keep this installation manual together with user's manual.	

During restart or change in operation mode, the unit will not start operating for approximately 3 minutes. This is to protect the unit and it is not malfunction.

RLD012A011 🛦

Carry out the electrical work for ground lead with care. Do not connect the ground lead to the gas line, water fine, lighthing conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-droubling.

(b) Model SRK100ZR-S

Use the circuit breaker of correct capacity. Circuit breaker should be able to Install isolator or disconnect switch on the power source wiring in Using the incorrect one could cause the system failure and fire. disconnect all poles under over current.

A wired remote control unit is supplied separately as an option part. While installing the unit, be sure to check the selection of installation place, power source specifications, usage limitation (piping length, heigh differences between indoor and outdoor units, power source voilage etc.) and installation spaces This installation manual illustrates the method of installing an indoor unit. For electrical wiring work, see instructions set out on the backside. For outdoor unit installation and refrigerant piping, refer to page 245.

Before installation, read the "SAFETY PRECAUTIONS" carefully and strictly • Keep the installation manual together with owner's manual at a place where follow it during the installation work in order to protect yourself. SAFETY PRECAUTIONS

new user.

Wrong installation would cause serious consequences such The precautionary items mentioned below are distinguished into two levels, <u>AWARNING</u> and <u>RACAUTION</u>.

<u>MARRING</u>: worng installation would cause serious consequences such

mention the important items to protect your health and safety so strictly Wrong installation might cause serious consequences as injuries or death. **A**CAUTION

0 Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.

follow them by any means.

protective clothing, groves etc.) should be taken by qualified installer.

• Pay attention not to fall down the tools, etc. when installing the unit at the Before starting the installation work, proper precautions (using suitable · If unusual noise can be heard during operation, consult the dealer. The meanings of "Marks" used here are shown as follows: Never do it under any circumstances. high position.

Ö

and not to make traps and air-bleedings.

and damaging personal property.

installation manual

Always do it according to the instruction.

Installation must be carried out by the qualified installer.

• Tighten the flare nut by torque wrench with specified method.

If you missall the system by yourself, it may cause serious trouble such as if the filter must were lightened with recess torque, this may cause burst and refriger and leave, electric shocks, fire and personal injury, as a result of a nater leave, electric shocks, fire and personal injury, as a result of a system malfundion. Do not carry out the installation and maillaneance a system malfundion. Do not carry out the installation and maillaneance and the installation must be carried out by the qualified work except the by qualified installer.

Install the system in full accordance with the installation manual.

The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to

Power source with insufficient capacity and incorrect function done by Failure to shut off the power can cause electric shocks, unit failure or improper work can cause electric shocks and fire.

• Be sure to shut off the power before starting electrical work. the dedicated circuit.

 Be sure to use the cables conformed to safety standard and cable Unconformable cables can cause electric leak, anomalous heat ampacity for power distribution work. incorrect function of equipment. production or fire.

Locations with direct exposure of oil mist and steam such as kitchen and

machine plant.

are used.

Locations where cosmetic or special sprays are often used.

gas, chloride gas, acid and alkaline can occur.

Vehicles and ships.

Do not install the unit in the locations listed below.

0

· Take care when carrying the unit by hand.

from the installation place.

metal parts should be secured.

 This appliance must be connected to main power source by means of a circuit breaker or switch [fuse Model 63(21):16A, Model 71(24), 80(28), 92, 100:20A] with a contact separation of at least 3mm. When plugging this appliance, a plug conforming to the norm

cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks. Use the prescribed cables for electrical connection, tighten the Loose connections or cable mountings can cause anomalous heat IEC60884-1 must be used. If the refrigerant comes into contact with naked flames, poisonous gas is

Arrange the wiring in the control box so that it cannot be pushed up Be sure to switch off the power source in the event of installation, further into the box. Install the service panel correctly. Incorrect installation may result in overheating and fire production or fire.

install the ventilation system, otherwise lack of oxygen can occur, which

If the density of refrigerant exceeds the limit, consult the dealer and

referred by the formula (accordance with ISO5149).

When installing in small rooms, take prevention measures not to

exceed the density limit of refrigerant in the event of leakage,

Ventilate the working area well in the event of refrigerant leakage

material damage and personal injury.

during installation.

Unsuitable installation locations can cause the unit to fall resulting in

Install the unit in a location with good support.

leaks, electric shocks, fire and personal injury.

After completing installation, check that no refrigerant leaks from

If the power source is not shut off, there is a risk of electric shocks, unit · Be sure to wear protective goggles and gloves while at work. failure or personal injury due to the unexpected start of fan. Earth leakage breaker must be installed inspection or servicing. If refrigerant leaks into the room and comes into contact with an oven or other hot surface, poisonous gas is produced.

Use the prescribed pipes, flare nuts and tools for R410A.

R22 or R407C) can cause the unit failure and

serious accidents due to burst of the refrigerant circuit.

Using existing parts (for

0

Locations where something located above the unit could fall.

installation).

components, malfunction and fire

If the earth leakage breaker is not installed, it can cause electric shocks. Do not bundle or wind or process the power cord. Do not deform the power cord by treading it.
 This may cause fire or heating.

Touching rotating equipments, hot surfaces or high voltage parts can greenhouse gas, covered by the Kyoto Protocol with Groval Warming Potential (GWP)=1975. Do not run the unit with removed panels or protections. Do not put the drainage pipe directly into drainage channels where
poleonous gases such as sulphde gas can occur.
Poisonous gases will flow into the room through drainage pipe and
seriousy fladet the user's health and selety. This can also cause the
corresion of the indoor unit and a resultant unit failure or refigerant leak. Ensure that no air enters in the refrigerant circuit when the unit is installed and removed.

The forced operation by short-circuiting protective device of pressure switch and temperature control or the use of non specified component · Do not perform any change of protective device itself or its setup can cause fire or burst. If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury.

Do not process or splice the power cable, or share the socket with other power plugs.
This may cause fire or electric shock due to defecting contact, defecting

 Do not vent R410A into the atmosphere: R410A is a fluorinated cause personal injury due to entrapment, burn or electric shocks.

the strong light beam (in case of the infrared specification unit).

model because each indoor unit has each limitation).

 Locations where an equipment affected by high harmonics is placed (TV not install the unit near the location where leakage of · Locations where drainage cannot run off safely. It can affect performance or function and etc. set or radio receiver is placed within 1m).

combustible gases can occur.

If the unit weights more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps, always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins. When perform the air-conditioner operation (cooling or dehumidifying operation) in which ventilator is installed in the room. In this case, using the Be sure to insulate the refrigerant pipes so as not to condense the ambient wrapper away from children and to dispose after tear it up.

For installation work, be careful not to get injured with the heat exchanger. Any remaining packing materials can cause personal injury as it contains nails air-conditioner in parallel with the ventilator, there is the possibility that drain water may backflow in accordance with the room lapse into the Insufficient insulation can cause condensation, which can lead to moisture negative pressure status. Therefore, set up the opening port such as and wood. And to avoid danger of suffocation, be sure to keep the plastic damage on the ceiling, floor, furniture and any other valuables. Dispose of any packing materials correctly. piping flare portion or screws etc. air moisture on them. Incorrect installation of the drainage pipe can cause dropping water into the room Be sure to install indoor unit properly according to instruction manual so Improper installation of indoor unit can cause dropping water into the room and

Install the drainage pipe to run off drainage securely according to the

The isolator should be locked in OFF state in accordance with EN60204-1

that drainage can run off smoothly.

accordance with the local codes and regulations.

· Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.
If the density of refrigerant exceeds the limit in the event of refrigerant leakage in opening port if the room lapse into negative pressure status due to register incorporate the air into the room that may appropriate to ventilation (For example; Open the door a little). In addition, just as above, so set up the of the wind for the high rise apartment etc. space for inspection and maintenance.

After maintenance, all wiring, wiring ties and the like, should be returned to their original state and wiring route, and the necessary clearance from all Be sure to install the drainage pipe with descending slope of 1/100 or more, Secure a space for installation, inspection and maintenance specified in the Check if the drainage runs off securely during commissioning and ensure the Insufficient space can result in accident such as personal injury due to falling

Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire.

• Do not use the indoor unit at the place where water splashes may can accumulate or collect, or where volatile combustible substances gas etc.) or combustible gas (such as thinner and petroleum gases) Do not install the unit where corrosive gas (such as sulfurous acid If leaked gases accumulate around the unit, it can cause fire. are handled. · Locations where any substances that can affect the unit such as sulphide Locations where carbon fiber, metal powder or any powder is floating.

the small room, lack of oxygen can occur, which can cause serious accidents.

Since the indoor unit is not waterproof, it can cause electric shocks and fire · Do not install nor use the system close to the equipment that occur such as in laundries. · Locations where any machines which generate high frequency harmonics

equipments and telecommunication equipments can affect the system, and generates electromagnetic fields or high frequency harmonics. Equipment such as inverters, standby generators, medical high frequency cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or · Do not place any variables which will be damaged by getting wet cause jamming. · Locations with heavy snow (If installed, be sure to provide base flame and Locations with calcium chloride (e.g. snow melting agent).
 Locations where heat radiation from other heat source can affect the unit.

Locations with ammonic atmospheres (e.g. organic fertilizer).

· Locations without good air circulation.

Locations where the unit is exposed to chimney smoke.

snow hood mentioned in the manual).

Locations at high altitude (more than 1000m high).

Locations with salty atmospheres such as coastlines.

When the relative humidity is higher than 80% or drainage pipe is clogged, condensation or drainage water can drop and it can cause the damage of Do not install the remote control at the direct sunlight. under the indoor unit. Locations with any obstacles which can prevent inlet and outlet air of the unit. · Locations where short circuit of air can occur (in case of multiple units

Connecting the circuit with copper wire or other metal thread can cause unit It can cause the damage of the items.

• Do not use any materials other than a fuse with the correct rating in cooling precision instruments and preservation of animals, plants · Do not use the unit for special purposes such as storing foods, It can cause malfunction or deformation of the remote control. the location where fuses are to be used. or art. Locations with any obstacles which can prevent inlet and outlet air of the unit. It can cause remarkable decrease in performance, corrosion and damage of Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each Locations where strong air blows against the air outlet of outdoor unit.

 Do not touch any refrigerant pipes with your hands when the system · Do not touch any buttons with wet hands. It can cause electric shocks. failure and fire. Locations where vibration can be amplified due to insufficient strength of structure. Locations where the infrared receiver is exposed to the direct sunlight or

During operation the refrigerant pipes become extremely hot or extremely cold depending the operating condition, and it can cause burn injury or frost injury.

On not wash the inside of the air-conditioner. Water leakage and permanent damage may result

Electrical hazard exists.

If this appliance is installed in inferior environment such as machine shop

Be sure to use only for household and residence.

and etc., it can cause malfunction.
Use the original accessories and the specified components for

Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire.

If parts other than those prescribed by us are used, It may cause water

Insert the drain hose securely, making rotate. And install the screw.

Note: Be careful that If it is not inserted securely, water leakage may occur.

Insert the drain cap which was removed at procedure "2" securely using a hexagonal wrench etc.

Note, Be careful that if it is not inserted securely, water leakage may occur.

4

BEFORE INSTALLATION

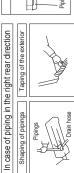
Before installation check that the power source matches the

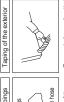
SELECTION OF INSTALLATION LOCATION

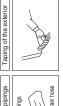
	Locally procured parts	Q'ty
(a)	Sealing plate	1
9	Sleeve	1
0	Inclination plate	1
9	Putty	1
(e)	Drain hose (extension hose)	1
Θ	Piping cover (for insulation of connection piping)	-

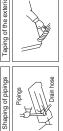
)	(SIS
⊕	Piping cover (for insulation of connection piping)	-	
	Necessary tools for the installation work	*	When









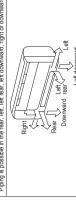


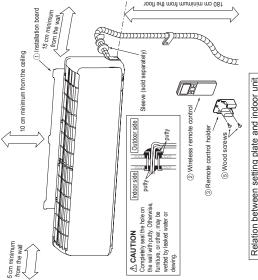


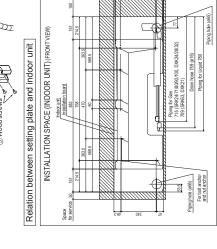












- Standard hole



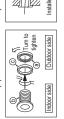


(Unit: mm)





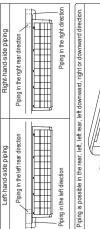






[Drain hose changing procedures]

. Remove the drain

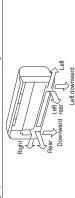


Remove it with hand or pliers

Remove the screw and drain hose, making it rotate.

3. Insert the drain cap.

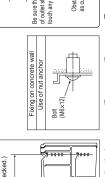
Connect the drain hose

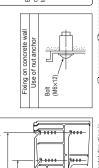


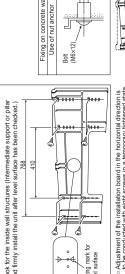
ISTALLATION OF INDOOR UNIT	Installation
istaliation of instaliation board	Diam's
ok for the inside wall structures (Intermediate support or pillar	Indoor unit /

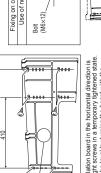
Indoor unit	Be sure that the flap of outlet should not touch any obstacles. Obstacle such as curtain
	Fixing on concrete wall Use of nut anchor Bot (MeX/12)
,	5

U_{SE}









8 Mating mark for evel surface

Adjustment of the installation board in the horizontal direction is
to be conducted with eight screws in a temporary lightened state.
 Adjust so the board will be level by turning the board with the
standard hole as the center.

drilling the wall that contains a metal lath, wire lath or metal plate, be sure to use pipe hole sleeve sold separately, ng of hole and fixture of sleeve (Locally procured parts)

Thickness of the wall + 1.5cm Outdoor side

In case of rear piping draw out, cut off the low and the right side portions of the sleeve collar. Installing the support of piping Drill a hole with whole core drill.

Top view]

Priprings Drain hose

Hole core drill (65mm in diameter)

9 | Wrench key (Hexagon) [4mm]

7 Torque wrench (14.0 - 82.0N·m (1.4 - 8.2kgf·m)

Spanner wrench

Hold the bottom of the piping and fix direction before stretching it and shaping it.

(Designed specifically for R410A (Designed specifically for R410A

Sufficient care must be taken not to damage the panel when connecting pipes.

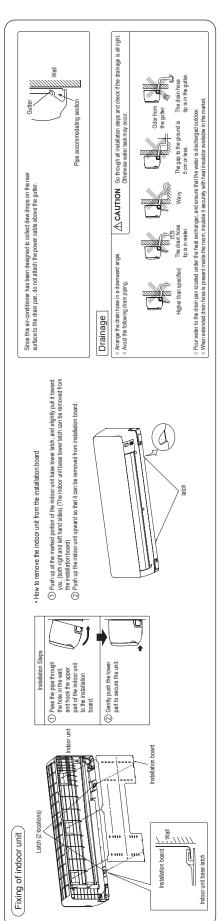
Gauge for projection adjustment (Used when flare is made by using) conventional flare tool

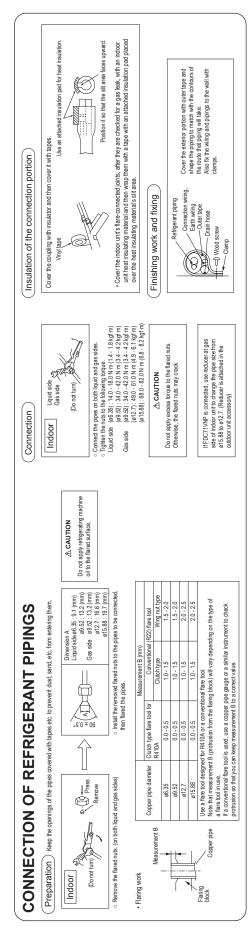
12

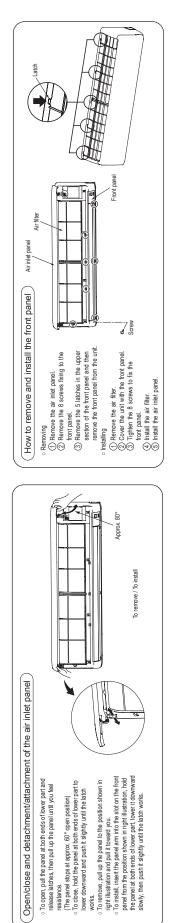
Pipe bender

Gas leak detector 10 Flaring tool set

-213 -







Be sure to attach round crimp-type **ELECTRICAL WIRING WORK**

Preparation of indoor unit

Mounting of connecting wires

 Open the air inlet panel.
 Remove the lid.
 Remove the wiring damp.
 Connect the connecting wire securely to the terminal block. 1) Connect the connection wire securely to the terminal

block. If the wire is not affixed completely, contact will be poor, and it is dangerous as the terminal block may heat

up and catch fire.

2) Take care not to confuse the terminal numbers for indoor

and outdoor connections.

(5) Fix the connecting wire by wining clamp.
(6) Attach the lid.
(7) Close the air inlet panel.

 In case of faulty wiring connection, indoor unit does not operate. Then, run lamp turns on and timer lamp

 Open the air inlet panel and remove the air filters.
 Install the air-cleaning filter in the filter holders, and then install the filter. holders in the air-conditioner.
• Each air-cleaning filter can be installed in the left or right filter holder.
③ Install the air filters and close the inlet panel.

Installing the air-cleaning filters

The screw of the lid is lightened securely

Use cables for interconnection wiring to avoid bosening of the H05RNR4G1.5 (example) or 245IEC57 CENELEC code for cables Required field cables.

One conductor of the cable is the earth conductor Natural-and/or synth, rubber wire insulation Polychloroprene rubber conductors Stranded core Number of conductors D R N R 65 D

Earth wire shall be Yellow/Green (Y/G) in color and longer than other AC wires for safety (yellow/green) Section of copper wire (mm²) Harmonized cable type 300/500 volts

Wiring

8

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INSTALLATION OF WIRELESS REMOTE CONTROL

Fixing to pillar or wall

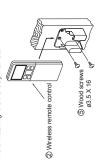
Uncover the wireless remote control, and mount the batteries [R03 (AAA, Micro),

Mounting method of battery

(Fit the poles with the indication marks, 🕂 & 🖵 without fail)

×2 pieces] in the body regularly.

Conventionally, operate the wireless remote control by holding in your hand.
 Avoid installing it on a clay wall etc.



When two air-conditioners are installed in the same room, use this setting when the two air-conditioners are not operated with one wireless remote control. Set the wireless remote control and indoor unit. Setting the wireless remote control ① Pull out the cover and take out

INSTALLING TWO AIR-CONDITIONERS IN THE SAME ROOM

Filter holder

Air-cleaning filter

Pass the connecting wire through the path from the bottom of the control box to the front part as shown in the illustration.

Turn off the power source, and turn it on after Setting an indoor unit

batteries.

② Disconnect the

switching line next to the

battery with wire cutters.

pressing the ACL switch on the wireless remote control. Since the signal is sent in about 6 seconds after the ACL switch is pressed, point the wireless remote control at the indoor unit for some time. ③ Check that the reception buzzer sound "Pip" is emitted from the according to the procedure described on the left side at the indoor unit and send a signal by ② Point the wireless remote control that was set

At completion of the setting, the indoor unit emits a buzzer sound "Pip". (If no reception tone is emitted, start the setting from the indoor unit.

③ Insert batteries. Close the cover

Disconnect

TERMINAL CONNECTION FOR AN INTERFACE

① Remove the air inlet panel, lid and front panel.
② Remove the control cover. (Remove the sorew.)
③ There is a terminal (respectively marked with CNS) for the indoor control board.

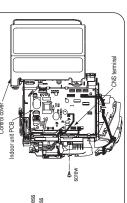
Forced cooling operation
 Turn off power source. Turn on power source again after a while. Then, press the ON/OFF button confinuously for at least 5 seconds. (The operation will start.)

HOW TO RELOCATE OR DISPOSE OF THE UNIT

Cover

In order to protect the environment, be sure to pump down (recovery of refrigerant).
 Pump down is the method of recovering refrigerant from the indoor unit to the outdoor unit when the pipes are removed from the unit.

In connecting an interface, connect to the respective terminal securely with the connection hamess supplied with an option "Interface connection kit SC-BIKN2-E" and fasten the connection hamess or more details, refer to the user's manual of your "Interface connection kit SC-BIKN2-E". onto the indoor control box with the clamp supplied with the kit.



NSTALLATION TEST CHECK POINTS

The power source voltage is correct as the rating. No gas leaks from the joints of the service valve. After installation
The powers

Power cables and crossover wires are securely fixed to

the terminal board.

Water drains smoothly. Protective functions are not working. Air-conditioning operation is normal. No abnormal noise. Test run

When the air-conditioner is restarted or when changing the operation, the unit will not start operating for approximately 3 minutes. This is to protect the unit and it is not a malfunction. Operation of the unit has been explained to the customer. (Three-minutes restart preventive timer) The wireless remote control is normal

Check the following points again after completion of the installation, and before turning on the power. Conduct a test run again and ensure that the unit operates properly. At the same time, explain to the customer how to use the unit and how to take care of the unit following the user's manual.

Unit ON/OFF button

(3) After low pressure gauge become 0.01MPa, stop cooling operation and close the gas valve.

Carry out cooling operation. (If indoor temperature is low, operate

forced cooling operation.

Gas side: Fully open the gas valve.

① Connect charge hose to check joint of outdoor unit. ② Liquid side: Close the liquid valve with hexagon wrench key.

How to pump down>

Service valve is fully open.

The pipe joints for indoor and outdoor pipes have been insulated. The screw of the lid is tightened securely.

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(8) Effective range of cool/hot wind (Reference)

(a) FDT series

Guideline for ceiling height

For Speed Setting	Model					
Fan Speed Setting	FDT50VG,60VG	FDT71VG	FDT100VG	FDT125VG,140VG		
Hi	2.7m	3.0m	3.2m	3.6m		
PHi	3.5m	3.8m	4.3m	4.5m		

Notes (1) If the ceiling height is over 3m, please consider to add circulators.

This table shows reference values in case of four outlet.

If you shut some outlets, they are different.

Fan speed setting can be changed by using a wired remote control.

(b) FDE series

Model	Effective range
FDE50VG	7.5m
FDE60VG, 71VG	8.0m
FDE100VG, 125VG, 140VG	9.0m

[Conditions] 1. Height of unit: 2.4 - 3.0 (m) above floor level

2. Fan speed: Hi

3. Location: Free space without obstacles

4. The effective range means the horizontal distance for wind to reach the floor.

5. Wind speed at the effective range: 0.5 m/s

(c) FDF series

Model	Effective range
FDF71VD1	5m
FDF100VD2, 125VD, 140VD	8m

[Conditions] 1. Fan speed: Hi

2. Location: Free space without obstacles

3. The effective range means the horizontal distance for the wind to reach the floor.

4. Wind speed at the effective range: 0.5 m/s

1.10.2 Electric wiring work installation

(1) FDT series

Electrical wiring work must be performed by an electrician qualified by a local power provider according to the electrical installation technical standards and interior wiring regulations applicable to the installation site.

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, AWARNING and ACAUTION.

AWARNING: Wrong installation would cause serious consequences such as injuries or death. ACAUTION: Wrong installation might cause serious consequences depending on circumstances. Both mentions the important items to protect your health and safety so strictly follow them by any means.

- The meanings of "Marks" used here are as shown on the right:
- Never do it under any circumstances.
- Accord with following items. Otherwise, there will be the risks of electric shock and fire caused by overheating or short circuit.

∆WARNING

- Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit
- Power source with insufficient capacity and improper work can cause electric shock and fir Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.
- Loose connections or hold could result in abnormal heat generation or fire. • Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property.

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- Improper fitting may cause abnormal heat and fire. Ouse the genuine option parts. And installation should be performed by a
- If you install the unit by yourself, it could cause water leakage, electric shock and fire
- ●Do not repair by yourself. And consult with the dealer about repair. Improper repair may cause water leakage, electric shock or fire.
- Consult the dealer or a specialist about removal of the air-conditioner. Improper installation may cause water leakage, electric shock or fire.
- Turn off the power source during servicing or inspection work.

 If the power is supplied during servicing or inspection work, it could cause electric
- Shut off the power before electrical wiring work.

shock and injury by the operating fan.

It could cause electric shock, unit failure and improper running.

Perform earth wiring surely.
Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short circuit

- Earth leakage breaker must be installed. If the earth leakage breaker is not installed, it can cause electric shocks.
- Make sure to install earth leakage breaker on power source line. (countermeasure thing to high harmonics.)
 Absence of breaker could cause electric shock
- Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current. Using the incorrect one could cause the system failure and fire.
- Do not use any materials other than a fuse of correct capacity where a fuse
- Connecting the circuit by wire or copper wire could cause unit failure and fire.
- Use power source line of correct capacity.

 Using incorrect capacity one could cause electric leak, abnormal heat generation and fire. Do not mingle solid cord and stranded cord on power source and signal side
- In addition, do not mingle difference capacity solid or stranded cord. Inappropriate cord setting could cause loosing screw on terminal block, bad electrical confact, smoke and fire contact, smoke and fire.
- Do not turn off the power source immediately after stopping the operation. Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- Do not control the operation with the circuit breaker.
 It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

Control mode switching The control content of indoor units can be switched in following way. (is the default setting) SW2 Indoor unit address (0-Fh) SW5-1 Master/Slave Switching (plural /Slave unit Setting) SW5-2 SW6-1-4 Model capacity setting ON Operation check, Drain motor test run SW7 - 1 OFF Normal operation

PSC012D049

① Electrical Wiring Connection

- Electrical wiring work must be performed by an electlician an qualified by a local power Electrical wiring work must be performed by an electlician an qualified by a local power provider. These wiring specifications are determined on the assumption that the following instructions are observed:

 ① Do not use ords other than coper one.
 ① Do not use ords other than coper one.
 ② Do not use ords other than coper one.
 ③ Do not use ords other than coper one.
 ⑤ In allowed in the relevant part 2;
 —cridiary tough nubber sheathed cord (code designation 60245 IEC 53);
 —lat thin finest cord (code designation 60227 IEC 41);
 —cridiary polyinyl choined sheathed cord (code designation 60227 IEC 53);
 ② Connect the power source to the outdoor unit.
 ② Pay extra attention so as not to confuse signal line and power source line connection, because an error in their connection can be burn all the boards at once.
- Connect ground wires before connecting wires between the indoor and outdoor units and Connect ground wries before connecting wires between the indoor and outdoor units and between indoor units. The ground wires need to be longer than the wires between the indoor and outdoor units, and protected from undue stress.

 Do not turn on the power source before completing the work. Round crimp terminal

 The ground wires must be connected by the Class D grounding connection.

 Use the round crimp terminals for connections to the terminal block.

 Use dedicated branch circuits, avoiding combination with other devices. Otherwise, it could this the payer neuron before requiring in percentage residents.

- trip the power source breaker, resulting in secondary accidents.

 Install the overcurrent and earth leakage breakers (sensitivity current: 30 mA) specified to respective models
- Do not connect indoor and outdoor signal cables to extension cables on the way. If the joint is wetted with intruding water, it could cause a ground insulation failure or poor connection, resulting in communication errors. (If it is inevitable to connect cables on the way, make sure to prevent the water intrusion completely.)
- When running wires (wires for power source, remote control, connecting between indoor and outdoor units, or other) behind the ceiling, protect them using copper or other pipes against assault by rat, or other
- It is up to 3.5 mm² the size of power source cables connected to indoor units. When using cables
- Intis by to 3.5 mini-ties have up owners source causes connected to mooth office, when using causes of 5.5 mm? or larger, provide a dedicated pull box for branching connection to indoor units. If signal and power source cables are connected mistakenly, it could burn down all PCBs. © Even if the power source of AC 202040300415 Vis connected mistakenly to A-8 signal cable, it is protected at initial occasion only. 2011 the remote control fails to detect the unit No. (address) at 15 minutes after turning the power on, check and repair all signal. •i
 - cables for misconnection.

 © Cit the jumper wire J10SL1 of burnt PCB, and reconnect connectors CnK (yellow) and CnK1 (white) to CnK2 (black; ^{AM} var vanomashs is fainnt on wires between the A-B terminal block and the PCB, replace them.
- At the outside of indoor and outdoor units, take care to avoid direct contacts between remote
- At the obside of micro and obtained, take tale to avoid direct contacts between remote control and power source cables.

 In no event connect the power source of AC 220/240/380/415 V to the remote control terminal block. It could cause failures.
- Connections of wiring between units, ground wire and remote control cable
- en connecting wires between units, ground wire or remote control wire, connect them according to the ni power source terminal block or signal terminal block in the control box. Connect the ground wire to the g wer source terminal block.
- power source terminal block.

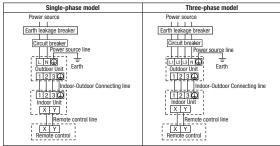
 2 Make sure to install an earth leakage breaker for the power source. Select a breaker for inverter circuit.

 3 When the earth leakage breaker is exclusive for the earth leakage protection, it is necessary to connect also an iss (Switch + Class St besic or wring circuit breaker in series to the earth leakage breaker.

 4) Install the isolating switch loose to the unit.
- Connect wires securing by tightening screws firmly. Confirm also no connector or wire (from terminal) is disconnected in the control box.
- When installing an auxiliary electric heater, consult the electric heater manual or technical data.

Cable connection for single unit installation

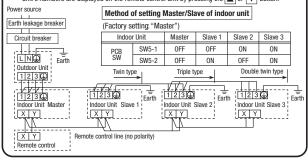
- ①As for connecting method of power source, select from following connecting patterns. In principle, do not directly connect power source line to inside unit.
- As for exceptional connecting method of power souce, discuss with the power provider of the country with referring to technical documents, and follow its instruction.
- 2) For cable size and circuit breaker selection, refer to the outdoor unit installation manual.



Cable connection for a V multi configuration installation

- ①Connect the same pairs number of terminal block "①, ②, and ③"and " X and Y " between master and slave indoor units.
- ②Do the same address setting of all inside units belong to same refrigerant system by rotary switch SW2 on indoor unit's PCB (Printed circuit board).
- (3) Set slave indoor unit as "slave 1" through "slave 3" by address switch SW5-1, 5-2 on PCB.

 (4) When the AIR CON No. button on the remote control unit is pressed after turning on the power, an indoor unit's address number will be displayed. Do not fail to confirm that the connected indoor unit's numbers are displayed on the remote control unit by pressing the 🛕 or 🔻 button.



2 Remote control, wiring and functions

- Do not install it on the following places
- 1)Places exposed to direct sunlight
- 2Places near heat devices
- 3High humidity places
- 4 Hot surface or cold surface enough to generate condensation
- ⑤Places exposed to oil mist or steam directly
- **6** Uneven surface

Installation and wiring of remote control

- 1) Install remote control referring to the attached installation manual.
- ②Wiring of remote control should use 0.3mm² ×2 core wires or cables.

The insulation thickness is 1mm or more. (on-site configuration)

3 Maximum prolongation of remote control wiring is 600 m.

If the prolongation is over 100m, change to the size below.

But, wiring in the remote control case should be under 0.5mm^2 . Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

100 - 200m	$0.5 \text{mm}^2 \times 2 \text{ cores}$
Under 300m	$0.75 mm^2 \times 2 cores$
Under 400m	$1.25 mm^2 \times 2 cores$
Under 600m	2.0mm ² × 2 cores

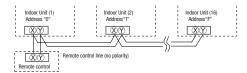
- (4) Avoid using multi-core cables to prevent malfunction
- ⑤Keep remote control line away from earth (frame or any metal of building).
- 6Make sure to connect remote control line to the remote control and terminal block of indoor unit. (No polarity)

Control plural indoor units by a single remote control

1) A remote control can control plural indoor units (Up to 16).

In above setting, all plural indoor units will operate under same mode and temperature setting. (2)Connect all indoor units with 2 core remote control line.

(3) Set unique remote control communication address from "0" to "F" to each inside unit by the rotary switch SW2 on the indoor unit's PCB.



Master/ slave setting when more than one remote control unit are used

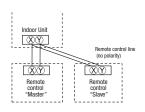
A maximum of two remote control units can be connected to one indoor unit (or one group of indoor units.)

The air-conditioner operation follows the last operation of the remote control regardless of the master/slave setting of it.

Acceptable combination is "two (2) wired remote controls". "one (1) wired remote control and one (1) wireless kit" or "two (2) wireless kits".

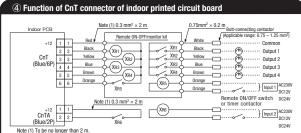
Set one to "Master" and the other to "Slave".

Note: The setting "Remote control unit sensor enabled" is only selectable with the master remote control unit in the position where you want to check room temperature.



No.	Item	Operation from the eco touch remote control (RC-EX3)	Operation from the standard remote contro (RC-E4, RC-E5)
1	Check the number of units connected in the multi remote control system.	[Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [IU address]	Press the AIR CON No. button to display the IU address. Press the A or ▼ button and check addresses of connected indoor units one by one.
2	Check if each unit is connected properly in the remote control system.	[Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [IU address] ⇒ [Check run mode]	① Press the AIR CON No. button to display the IU address. ② Press the Aor ▼ button and select one of IU addresses. ③ Press the ◎ (MODE) button. The unit starts to blow air.
3	Setting main/sub remote controls	[Menu] ⇒ [Service setting] ⇒ [R/C function settings] ⇒ [Service password] ⇒ [Main/Sub of R/C]	Set SW1 to "Sub" for the sub remote contro unit.
4	Checking operation data		Press the CHECK button. ⇒ "FERDITA" v" is displayed. ⇒ Press the SET button ⇒ "MATAUMINE" is displayed. ⇒ Select one of addresses for connected indoor units by pressing the [ar of] button. ⇒ Press the SET button. ⇒ "MATAUMINE" is displayed. ⇒ Select data by pressing the [ar of] button. ¬ Of button. ¬ Of SET button. ¬ Of SET button. ¬ Of SET button. ¬ OF SET bu
5	Checking inspection display	[Menu] ⇒ [Service setting] ⇒ [Service & Maintenance] ⇒ [Service password] ⇒ [Error display]	Press the [CHECK] button. → "GFR DATA ▼" displayed. → Press the [▼] button. → "BRUR DATA ▲" is displayed. → Press te [☑] (SET) button. → "DATA LIPOTES" is displayed. → Data is displayed.
6	Cooling test run from remote control	Menu ⇒ Service setting ⇒ Installation settings ⇒ Service password ⇒ Test run ⇒ Cooling test run ⇒ Start	1) Start the system by pressing the (IDONOFF) button. 2) Select **2* (Cool)** with the (IDONOFF) button. 3) Press the (ISSI) button for 3 seconds or longer. The screen display will switch to **3* **ETSTRIM** (SET) button, while the **** **TETRIM** *** is displayed, starts the cooling test run. The screen display will switch to **4* **TETRIM**
7	Trial operation of drain pump from remote control	[Menu] ⇒ [Service setting] ⇒ [Installation settings] ⇒ [Service password] ⇒ [Test run] ⇒ [Drain pump test run] ⇒ [Run]	① Start the system by pressing the ⑤ NOVOFF button. The display will chang to "\$ IEST HN ▼". ② Press the ☑ button once to display "®NINFIM ♥ = . ③ Pressing the ⑤ (SET) button starts the drain pump operation. The display will show "►SCO ID STIP".

nne menu configuration may vary depending on models of the remote control. If the model of your remote control is different, refer to the installation manual attached to the remote control.



- ■XR1-4 are DC 12 V relays. (Equivalent to Omron's LY2F)
- XR5 is a DC 12 V, 24 V or AC230 V relay. (Equivalent to Omron's MY2F)
- Maker and model of CnT connector (Site side)

Connector : Molex 5264-06 Terminal : Molex 5263T

● CnTA connector is used on FDT, or other. < Check with the specifications. > (Site side) Maker and model

Connector : J.S.T. Mfg. XAP02V-1-E Terminal : J.S.T. Mfg. SXA-01T-P0.6

Output 1 – 4 and input1/2 can be selected/set as required from following items.
 Factory default is set as shown below.

Output

1	RUN output	8	Fan ON output 3
2	Heating output	9	Defrost/oil return output
3	Compressor ON output	10	Ventilation output
4	Inspection (error) output	(1)	Heater output
(5)	Cooling output	(12)	Free cleaning output
6	Fan ON output 1	13	Indoor overload error output
7	7 Fan ON output 2		
Inpu	t		
1	RUN/STOP	(5)	Setting temp. shift
2	RUN permit prohibition	6	Compulsory thermostat OFF
3	Emergency stop	7	Temporary stop

3 Emergency stop

Cooling/Heating	8 Silent mode
Factory default setting	
CnT-2 Output 1 RUN output	CnT-5 Output 4 Inspection (error) output
CnT-3 Output 2 Heating output	CnT-6 Input 1 RUN/STOP
CnT-4 Output 3 Compressor ON output	CnTA Input 2 RIIN/STOP

●For the setting method, refer to the technical data.

⑤ Operation and setting from remote control A: Refer to the instruction manual for RC-EX series O: Nearly same function setting and operations are possible. Refer to the installation manual for RC-EX series \triangle : Similar function setting and opperations are possible. C: Loading a utility software vie Internet RC-F4 Description RC-FX3 Setting & display item RC-E5 1.Remote control network Control plural indoor units by a single remote control A remote control can control plural indoor units up to 16 (in one group of remote control network). 0 An address is set to each indoor unit. A pair of remote controls (including optional wireless remote control) can be connected within the remote control network. So one to "Main" and the other to "Sub". 2 Main/sub setting of remote controls В 0 2.TOP scrren, Switch manipulation Control", "State", or "Details" can be selected. (3-8) 1 Menu 2 Operation mode Cooling","Heating","Fan","Dry" or "Auto" can be set 3 Set temp. 4 Air flow direction et temperature" can be set by 0.5°C interval. 'Air flow direction" [Individual flap control] can be set Α Δ elect Enable or Disable for the "3D AUTO" (in case of FDK). 5 Fan speed 'Fan speed" can be set. 6 Timer setting 7 ON/OFF 8 F1 SW "Timer operation" can be set. "On/Off operation of the system" can be done. The system operates and is controlled according to the function specified to the F1 switch 9 F2 SW The system operates and is controlled according to the function specified to the F2 switch Α .Useful functions The moving range (the positions of upper limit and lower limit) of the flap for individual flap can be set. Set also the left and right limit positions for FDK. 1 Individual flap control Δ Α 2 Anti draft setting When the panel with the anti-draft function is assembled. When the panel with the anti draft function is assembled, select to Enable or Disable the anti draft setting for each operatio Α mode and for each blow outlet. 3 Timer settings Set On timer by hour The period of time to start operation after stopping can be set. The period of set time can be set within range of 1 hour-12 houres (1 hr interval). The operation mode, set temp and fan speed at starting operation can be set. Α Δ The period of time to stop operation after starting can be set. • The period of set time can be set within range of 1hour-12houres (1hr interval). Set Off timer by hour Α Δ Set On timer by clock The clock time to start operation can be set. The set clock time can be set by 5 minutes interval. [Once (one time only)] or [Everyday] operation can be switched. The operation mode, set temp and fan speed at starting operation can be set. Δ Set Off timer by clock The clock time to stop operation can be set. The set clock time can be set by 5 minutes interval. [Once (one time only)] or [Everyday] operation can be switched Α Δ Confirmation of timer settings Status of timer settings can be seen. Set the operation mode, setting temperature, air flow capacity and air flow direction for the choice setting operations Set them for the Favorite set 1 and the Favorite set 2 respectively. 5 Weekly timer On timer and Off timer on weekly basis can be set. 8-operation patterns per day can be set at a maximum. The setting clock time can be set by 5 minutes interval. Holiday setting is available. The operation mode, set temp and fan speed at starting operation can be set. Δ When leaving home for a long period like a vaction leave, the unit can be operated to maintain the room temperature not to be hotter in summer or not to be colder in winter. The judgment to switch the operation mode (Cooring ⇔ Heating) is done by the both factors of the set temp. and outdoor air temp The set temp. and fan speed can be set. 6 Home leave mode [Administrator password] 7 External Ventilation When the ventilator is combined. On/Off operation of the external ventilator can be done. It is necessary to set from [Menu] \Rightarrow [Service setting] \Rightarrow [R/C function settings] \Rightarrow [Ventilation setting]. If the "Independent" is selected for the ventilation setting, the ventilator can be operated or stopped 0 Select the language to display on the remote control. Select from English, German, French, Spanish, Italian, Dutch, Turkish, Portuguese, Russian, Polish, Japanese and Chinese. 8 Select the language Α Administrator password To prevent the timer from keeping ON, set hours to stop operation automatically with this timer. The selectable range of setting time is from 30 to 240 minutes. (10 minutes interval) 4.Energy-saving setting Sleep timer Δ Α When setting is "Enable", this timer will activate whenever the ON timer is set. 2 Peak-cut timer Power consumption can be reduced by restructing the maximum capacity. Power consumption can be reduced by restructing the maximum capacity. Set the [Start time], the [End time] and the capacity limit % (Peak-cut %). 4-operation patterns per day can be set at maximum. The setting time can be changed by 5-minutes interval. The selectable range of capacity limit % (Peak-cut %) is from 0% to 40-80% (20% interval). Holiday setting is available. Α 3 Automatic temp set back After the elapse of the set time period, the current set temp. will be set back to the [Set back time.] • The setting can be done in cooling and heating mode respectively. • Selectable range of the set time is from 20 min. to 120 min. (10 min. interval). • Set the [Set back temp.] by 1°C interval. Δ 4 Infrared sensor control (Motion sensor control) When the infrared sensor (motion sensor) is used, it is necessary to set Enable or Disable for the "Power control" and th Α When the panel with the infrared sensor (motion sensor) is assembled "Auto-off" 5 Filter 1 Filter sign reset Filter sign reset The filter sign can be reset. Α Setting next cleaning date The next cleaning date can be set .User setting Clock setting The current date and time can be set or revised 1 Internal settings Δ Α If a power failure continues no longer than 80 hours, the clock continues to tick by the built-in power source Date and time display [Display] or [Hide] the date and/or time can be set, and [12H] or [24H] display can be set When select [Enable], the +1hour adjustment of current time can be set. When select [Disable], the [Summer time] adjustmen Summer time Α can be reset. The contrast of LCD can be adjusted higher or lower. Contrast Backlight Switching on/off a light can be set and period of the lighting time can be set within the range of 5sec-90 sec (5sec interval). ontrol sound It can set with or without [Control sound (beep sound)] at touch panel. This is used to adjust the luminance of operation lamp. Operation lamp luminance Permission/Prohibition setting of operation can be set. [On/Off] 2 Administrator settings Permission/Prohibition setting [Change set temp] [Change operation mode] [Change flap direction] [Change fan speed] [High power operation] [Energy-saving operation] [Timer] [Request for administrator can be set. [Individual flap control] [Weekly timer] [Select the language] [Anti draft setting] Λ [Administrator password] The period of time to operate the outdoor unit by prioritizing the quiteness can be set. The [Start time] and the [End time] for operating outdoor unit in silent mode can be set. The period of the operation time can be set once aday by 5 minutes interal. Outdoor unit silent mode time Α Δ The upper/lower limit of temp. setting range can be set. • The limitation of indoor temp. setting range can be set for each operation mode in cooling and heating. Setting temp. range Δ Α The temp. increment setting can be changed by 0.5°C or 1.0°C Temp increment setting et temp. display Ways of displaying setting temperatures can be selected

				RC
tting & display item		Description	RC-EX3	RC
Administrator settings		Register [Room name] [Name of I/U]		П
[Administrator password]		Display [Indoor temp. display] or not. Display [Error code display] or not.	A	
[/tallillistrator password]		Display [Heating stand-by display] [Defrost operation display] [Auto cooling/heating display] [Display temp of R/C, Room, Outdoor] or not		l
	Change administrator password	The administrator password can be changed. (Default setting is "0000")	Α	
		The administrator password can be reset.	В	
		Functions can be set for F1 and F2. Selectable functions:	!	
		[High power operation], [Energy-saving operation], [Silent mode cont.], [Home leave mode], [Favorite set 1], [Favorite set 2] and [Filter sign reset].	A	
ervice setting	1	p dronte see 2) and p neer sign resety.		\vdash
Installer settings	Installation date	The [Installation date] can be registed.		
100		When registering the [Instaration date], the [Next service date] is displayed automatically.	В	
[Service password]		(For changing the [Next service date], please refer the item of [Service & Maintenance])		_
	Company information	The [Company information] can be registed and can be displayed on the R/C.		
		The [Company] can be registered within 26 characters. The [Phone No.] can be registed within 13 digits.	В	
	Test run	On/Off operation of the test run can be done.		\vdash
	Cooling test run	The [Cooling test run] can be done at 5°C of set temp. for 30 minutes.	В	
		Only drain pump can be operated.	į ,	
	Staric pressure adjustment	In case of combination with only the ducted indoor unit which has a function of static pressure adjustment, the static pressure is adjustable.	В	П
		• It can be set for each indoor unit individually.	В	
	Change auto-address	The set address of each indoor unit decided by auto-address setting method can be changed to any other address.	В	
	Address services of	(For multiple KX units only)		\vdash
	Address setting of main IU	Main indoor unit address can be set. •Only the Main indoor unit can change operation mode and the Sub indoor units dominated by the Main indoor shall follow.	В	
		The Main indoor unit can domain 10 indoor units at a maximum.		1
	IU back-up function	When a pair of indoor units (2 groups) is connected to one unit of remote control, it can be set Enable or Disable for the [IU	В	П
		rotation], [IU capacity back-up] and [IU fault back-up]	Б	<u>—</u>
1		Set Enable or Disable for the infrared sensor detectors of indoor units connected to the remote control.		1
	sensor setting) When the panel with the infrared	If Disable is selected, it cannot be control the infrared sensor control for the energy-saving setting.	В	ı
	sensor (motion sensor) is assembled.			ı
R/C function setting	Main/Sub R/C	The R/C setting of [Main/Sub] can be changed.	В	
	Return air temp.	When two or more indoor units are connected to one unit of remote control, suction sensors, which are used for the		Г
[Service password]		judgement by thermostat, can be selected.	В	ı
	215	It can be selected from [Individual], [Master IU] and [Average temp].		\vdash
		It can be set the mode to switch to the remote control sensor. It can be selected from cooling and heating.	В	\vdash
	R/C sensor adjustment Operation mode	The offset value of [R/C sensor] sensing temp. can be set respectively in heating and cooling. Enable or Disable can be set for each operation mode.	B B	\vdash
	°C / °F	Set the unit for setting temperatures.		\vdash
	[]	• °C or °F can be selected.	В	
	Fan speed	Fan speeds can be selected.	В	Т
	External input	When two or more indoor units are connected to one unit of remote control, the range to apply CnT inputs can be set.	В	
	Upper/lower flap control	[Stop at fixed position] or [Stop at any position] can be selected for the upper and lower louvers.	В	
	Left/right flap control	[Fixed position stop] or [Stop at any position] can be selected for the right and left louvers.	В	\vdash
	Ventilation setting	Combination control for ventilator can be set.	В	
	Auto-restart	The operation control method after recovery of power failure happened during operation can be set.	В	
	Auto temp setting	[Enable] or [Disable] of [Auto temp setting] can be selected.	B B	\vdash
IU settings	Auto fan speed Fan speed setting	[Enable] or [Disable] of [Auto fan speed] can be selected. The fan speed for indoor units can be set.	В	\vdash
io settings		The setting of filter sign display timer can be done from following patterns.	В	
[Service password]	External input 1	The connect of control by external input 1 can be changed.	В	\vdash
. ,		The type of external input 1 signal can be changed.	В	
	External input 2	The connect of control by external input 2 can be changed.	В	
	External input 2 signal	The type of external input 2 signal can be changed.	В	
		The judgement temp. of heating themo-off can be adjusted within the range from 0 to +3°C (1°C interval)	В	
		The sensing temp. of return air temp. sensor built in the indoor unit can be adjusted within the range of $\pm 2^{\circ}$ C.	В	-
		Fan control, when the cooling thermostat is turned OFF, can be changed.	В	
	Anti-frost temp.	Fan control, when the heating thermostat is turned OFF, can be changed.	B B	
		Judgment temperature for the anti-frost control during cooling can be changed. When the anti-frost control of indoor unit in cooling is activated, the fan speed can be changed.	В	\vdash
	Drain pump operation	In any operation mode in addition to cooling and dry mode, the setting of drain pump operation can be done.	В	\vdash
	14 6 11 6 11	The time period residual fan operation after stopping or thermo-off in cooling mode can be set.		
	is stopped		В	
		The time period residual fan operation after stopping or thermo-off in heating mode can be set.	В	
	is stopped	The fan operation rule following the residual fan operation after stopping or themo-off in heating mode can be set.	В	
	Fan circulator operation	In case that the fan is operated as the circulator, the fan control rule can be set.	В	\vdash
		When only the OA processing units are operated, control pressure value can be set.	В	$\overline{}$
		The [Auto rule selection] for switching the operation mode automatically can be selected from 3 patterns.	В	
		When selecting [Outdoor air temp. control], the judgment temp. can be offset by outdoor temp	В	Г
	Auto fan speed control	Auto switching range for the auto fan speed control can be set.	В	П
	IU overload alarm	If the difference between the setting temperature and the suction temperature becomes larger than the temperature difference set for the	В	П
		overload alarm, at 30 minutes after the start of operation, the overload alarm signal is transmitted from the external output (CnT-5).		-
		Functions assigned to the external outputs 1 to 4 can be changed.	В	\vdash
Service & Maintenance [Service password]	IU address	Max 16 indoor units can be connected to one remote control, and all address No. of the connected indoor units can be displayed. The indoor unit conforming to the address No. can be identified by selecting the address No. and tapping [Check] to operate the indoor fan.	В	
[Del vice bassword]	Next service date	The [Next service date] can be registered.		Г
		The [Next service date] and [Company information] is displayed on the message screen.	A B	
		The [Operation data] for indoor unit and outdoor unit can be displayed.	В	
	Error display			1
	Error history	The error history can be displayed.		l
	Display anomaly data Erase anomaly data	The operation data just before the latest error stop can be displayed. Anomaly operation data can be erased.	В	
	Reset periodical check	Anomaly operation data can be erased. The timer for the periodical check can be reset.	1	l
	Saving IU settings	The I/U settings memorized in the indoor PCB connected to the remote control can be saved in the memory of the remote control.	В	
	Special settings	[Erase IU address] [CPU reset] [Restore of default setting] [Touch panel calibration]	В	
	Indoor unit capacity display	Address No. and capacities of indoor units connected to the remote control are displayed.	В	
ontact company		Shows registered [Contact company] and [Contact phone].		
spection				
Confirmation of Inspection		This is displayed when any error occurs.	Α	
PC connection				\vdash
USB connection		Weekly timer setting and etc., can be set from PC.	C	

PSB012D999

(2) FDTC, FDE, FDUM series

Electrical wiring work must be performed by an electrician qualified by a local power provider according to the electrical installation technical standards and interior wiring regulations applicable to the installation site

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels. [AWARNING] and ACAUTION .

[AWARNING]: Wrong installation would cause serious consequences such as injuries or death. ACAUTION: Wrong installation might cause serious consequences depending on circumstances. Both mentions the important items to protect your health and safety so strictly follow them by any means.

- The meanings of "Marks" used here are as shown on the right:
- Never do it under any circumstances.
- Accord with following items. Otherwise, there will be the risks of electric shock and fire caused by overheating or short circuit.

↑WARNING

- Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.
 - Power source with insufficient capacity and improper work can cause electric shock and fire
- Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal. Loose connections or hold could result in abnormal heat generation or fire.
- ■Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property. Improper fitting may cause abnormal heat and fire
- Ouse the genuine option parts. And installation should be performed by a specialist.
 - If you install the unit by yourself, it could cause water leakage, electric shock and fire
- Do not repair by yourself. And consult with the dealer about repair. Improper repair may cause water leakage, electric shock or fire
- Consult the dealer or a specialist about removal of the air-conditioner.
- Improper installation may cause water leakage, electric shock or fire Turn off the power source during servicing or inspection work. supplied during servicing or inspection work, it could cause electric
- shock and injury by the operating fan. Shut off the power before electrical wiring work.

It could cause electric shock, unit failure and improper running.

△CAUTION

SW7-1

OFF

Perform earth wiring surely.
Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth 4 wiring. Improper earth could cause unit failure and electric shock due to a short circuit.

- ■Earth leakage breaker must be installed.
- If the earth leakage breaker is not installed, it can cause electric shocks
- Make sure to install earth leakage breaker on power source line. (countermeasure thing to high harmonics.) Absence of breaker could cause electric shock
- Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.

 Using the incorrect one could cause the system failure and fire
- Do not use any materials other than a fuse of correct capacity where a fuse
- should be used. Connecting the circuit by wire or copper wire could cause unit failure and fire.
- Use power source line of correct capacity.
- Using incorrect capacity one could cause electric leak, abnormal heat generation and fire. Do not mingle solid cord and stranded cord on power source and signal side
- In addition, do not mingle difference capacity solid or stranded cord. Inappropriate cord setting could cause loosing screw on terminal block, bad electrical confact, smake and fire
- Do not turn off the power source immediately after stopping the operation. Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or
- Do not control the operation with the circuit breaker.
 It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

Normal operation

Control mode switching The control content of indoor units can be switched in following way. (Switch No Control Content SW₂ Indoor unit address (0-Fh) SW5-1 Master/Slave Switching (plural /Slave unit Setting) SW5-2 Model capacity setting SW6-1-4 ON Operation check. Drain motor test run

1 Flectrical Wiring Connection

- Electrical wiring work must be performed by an electlician an qualified by a local power provider. These wiring specifications are determined on the assumption that the following instructions are observed:

 - Do not use cords other than coper ones.
 Do not use any supplies lighter than one specified in parentheses for each type be -braided cord (code designation 60245 IEC 51), if allowed in the relevant part 2; -ordinary tough rubber sheathed cord (code designation 60224 IEC 53); -late twin itself cord (code designation 60227 IEC 53); -late this times cord (code designation 60227 IEC 53);
 Connect the power supply to the outdoor unit.

 - ③ Pay extra attention so as not to confuse signal line and power source line connection, because an error in their connection can be burn all the boards at once.
- Screw the line to terminal block without any looseness, certainly.
- Do not turn on the switch of power source, before all of line work is done.
- Provide a dedicated branching circuit and never share a branching circuit with other equipment. If shared, disconnection at the circuit breaker may occur, which can cause secondary damage.
- Use three-core cable as wiring between indoor and outdoor unit. As for detail, refer to 'INSTALLATION MANUAL" of outdoor Unit.
- Set earth of D-type.

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 Do not add cord in the middle of line (of indoor power source, remote control and signal) route on outside of unit. If connecting point is flooded, it could cause problem as for electric or communication

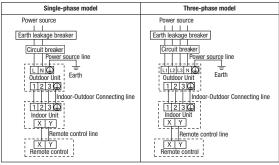
(In the case that it is necessary to set connecting point on the signal line way, perform thorough waterproof measurement.)

- ■Run the lines (power source, remote control and "between indoor and outdoor unit") upper ceiling through iron pipe or other tube protection to avoid the damage by mouse and so on
- Keep "remote control line" and "power source line" away from each other on constructing of unit outside.
- ■Do not connect the power source line [220V/240V/380V/415V] to signal side terminal block.
- Otherwise, it could cause failure. Connection of the line ("Between indoor and outdoor unit", Earth and Remote control)
- Remove lid of control box before connect the above lines, and connect the lines to terminal block according to number pointe label of terminal block according to number pointe label of terminal block or provided the provided of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of power source. Install and haskage break read provided by the state of the st
- (a) install earth reading error of power source ine. In abouton, select the type of preactor or inverter circuit as serim leakage breaker is only for earth-fault protection, hand switch (switch (switch fiself and type "B" fuse) or circuit breaker is required in series with the earth leakage breaker. If only for earth-fault protection, hand switch (switch fiself and type "B" fuse) or circuit breaker is required in series with the earth leakage breaker. If it is lead is obtain or disconnect switch on the power source writing in accordance with the local codes and regulations. The isolator should be set in the box with key to prevent buoching by another person when servicing.

Cable connection for single unit installation

- ①As for connecting method of power source, select from following connecting patterns. In principle, do
- not directly connect power source line to inside unit.

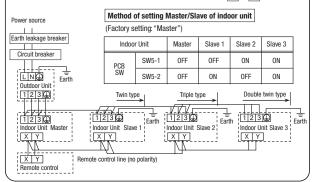
 As for exceptional connecting method of power souce, discuss with the power provider of the country with referring to technical documents, and follow its instruction.
- 2) For cable size and circuit breaker selection, refer to the outdoor unit installation manual.



Cable connection for a V multi configuration installation

- ①Connect the same pairs number of terminal block "①, ②, and ③"and " Ø and ⑨" between master and slave indoor units.
- 2Do the same address setting of all inside units belong to same refrigerant system by rotary switch SW2 on indoor unit's PCB (Printed circuit board).

 ③Set slave indoor unit as "slave 1" through "slave 3" by address switch SW5-1, 5-2 on PCB.
- (4) When the AIR CON No. button on the remote control unit is pressed after turning on the power, an indoor unit's address number will be displayed. Do not fail to confirm that the connected indoor unit's numbers are displayed on the remote control unit by pressing the 🔳 or 🔻 button.



2 Remote control, wiring and functions

- Do not install it on the following places
- ①Places exposed to direct sunlight
- 2)Places near heat devices
- 3 High humidity places
- $\textcircled{4}\mbox{Hot}$ surface or cold surface enough to generate condensation
- ⑤Places exposed to oil mist or steam directly.
- **6**Uneven surface

Installation and wiring of remote control

(1)Install remote control referring to the attached installation manual.

②Wiring of remote control should use $0.3 mm^2 \times 2$ core wires or cables. The insulation thickness is 1mm or more. (on-site configuration)

3 Maximum prolongation of remote control wiring is 600 m.

If the prolongation is over 100m, change to the size below.

But, wiring in the remote control case should be under 0.5mm ² . Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

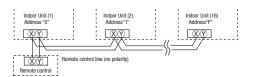
- Avoid using multi-core cables to prevent malfunction.
- ⑤Keep remote control line away from earth (frame or any metal of building).
- ⑥Make sure to connect remote control line to the remote control and terminal block of indoor unit. (No polarity)

Control plural indoor units by a single remote control.

In above setting, all plural indoor units will operate under same mode and temperature setting.

②Connect all indoor units with 2 cores remote control line.

③Set unique remote control communication address from "0" to "F" to each inside unit by the rotary switch SW2 on the indoor unit's PCB.



Master/ slave setting when more than one remote control unit are used

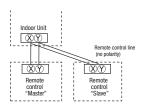
A maximum of two remote control units can be connected to one indoor unit (or one group of indoor units.)

The air-conditioner operation follows the last operation of the remote control regardless of the master/slave setting of it.

Acceptable combination is "two (2) wired remote controls", "one (1) wired remote control and one (1) wireless kit" or "two (2) wireless kits".

Set one to "Master" and the other to "Slave".

Note:The setting "Remote control unit sensor enabled" is only selectable with the master remote control unit in the position where you want to check room temperature.



3 Operation and confirmation from remote control

Operation from RC-EX1A

Operation from RC-E5

1 Check the number of units connected in the remote control system. It checks sub units of twin, triple or W-twin connection.

"Menu"⇒"Next"⇒"Service & Maintenance"⇒
"Input password"⇒"IU address"

Press AIR CON No. button to display the IU address. Press the ▼ or ▲ button and check addresses of connected indoor units one by one.

2 Check if each unit is connected properly in the remote control system. It cannot check main and sub units of twin, triple or W-twin connection.

When the operation is stopped, "Menu"⇒
"Next"⇒"Service & Maintenance"⇒
"Input password"⇒"IU address"⇒"check run mode"

If AIR CON No. button is pressed when the operation is stopped, the indoor unit address is displayed. If you select one of addresses for connected indoor units by pressing the 🔽 or 🛦 button and press the 📧 (MODE) button, the unit starts to blow a

3 Setting main/slave remote controls

"Menu"⇒"Next"⇒"R/C function settings"⇒
"Input password"⇒"Main/Sub of R/C"

Set SW1 to "Slave" for the slave remote control

4 Checking operation data

"Menu"⇒"Next"⇒"Service & Maintenance"⇒
"Input password"⇒"Operation data"

Press the (CHECK) button. ⇒ "(FRIMIA" v" is displayed. ⇒ Press the (SET) button. ⇒ "print(1990) is displayed. ⇒ Press the "b* \$3.001 / lv" button. ⇒ Select one of addresses for connected indoor units by pressing the A of V" button. ⇒ Press the (SET) button. ⇒ "(MINUMIA) is displayed. ⇒ Select data by pressing the A of V" button.

5 Checking inspection display

"Menu"⇒"Next"⇒"Service & Maintenance"⇒
"Input password"⇒"Inspection display"

Press the CHECK button. ⇒ ▼ button. ⇒ ERR DATA.⇒ Press the ((SET) button. ⇒ "DATA LOADING" is displayed. ⇒ Data.

6 Cooling test run from remote control

"Menu"⇒"Next"⇒"Installation settings"⇒ "Input password"⇒"Test run"⇒ "Cooling test run"⇒"Start" (1) Start the system by pressing the (ICONOFF) button.
(2 Select 1¢ (Cool)* with the (ICO) (MODE) button.
(3 Fers sith (IEEE) button for 3 seconds or longer.
The screen display will switch the TST RIN ▼
(3 When the (ICE) (SFT) button is presed while * 0 TEST RIN ▼
(5 indicated, a cooling lest run will start.
The screen display will switch the TST RIN ▼

7 Trial operation of drain pump from remote control

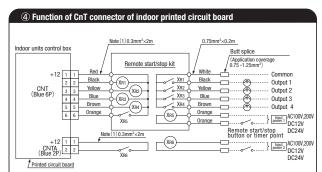
"Menu"⇒"Next"⇒"Installation settings"⇒
"Input password"⇒"Test run"⇒
"Drain pump test run"⇒"Run"

①Press the TEST button for three seconds or longer.

The display will change " \$ TEST RIN Y"

2 Press the Y button once and cause" (MMIRVIP + " to be displayed.

3 When the (30 SET) button is pressed, a drain pump operation will start. Display: " 6 OS 10 STOP"



Note (1): Do not use the length over 2 meter

 CnT connector (local) vendor model Connector: Made by molex 5264-06 Terminals: Made by molex 5263 T

Function

Output 1	Air-condi	tioner operation output (When the air-conditioner ON: XR1 = ON)	
Output 2	Heating output		
Output 3	Thermos	tat ON output (When the thermostat ON: X _{R3} = ON)	
Output 4	Air-condi	tioner check ON (When checking air-conditioner: XR4 = ON)	
	At shipping	XR5 OFF ⇒ ON: Air-conditioner oper ates.	
Input		XR5 ON ⇒ OFF: Air-conditioner stops.	
	*Function	ns and controls may vary depending on the switching at site.	
		XR6 OFF ⇒ ON: Air-conditioner oper ates.	
Input 2 (FDT etc.)	At shipping	XR6 ON ⇒ OFF: Air-conditioner stops.	
(1 0 1 616.)	*Function	ns and controls may vary depending on the switching at site.	

* Refer to I/U settings.

 CnTA connector is installed on FDT, etc. Refer to the spec. drawings. CnTA connector (local) vendor model

Connector: Made by JST XAP02V-1-E Terminals: Made by JST SXA-01T-P0.6

⑥Operation and setting from remote control

- A: Refer to the instruction manual for RC-EX series.
 B: Refer to the installation manual for RC-EX series.
 C: Loading a utility software vie Internet

 O: Nearly same function setting and operations are possible.

	Setting & display item	Description	RC-EX series	
Re	emote Control network			
	Control plural indoor units by a single remote control	A remote control can control plural indoor units up to 16 (in one group of remote control network). An address is set to each indoor unit.	0	
2	Master/slave setting of remote controls	A maximum of two remote controls (include option wireless) can be connected to one indoor unit. Set one to "Master" and the other to "Slave".	В	
.T0	OP screen, Switch manipulation		Α	
1	Menu	"Control", "Settings", or "Details" can be selected. (319.)	Α	
2	Operation mode	"Cooling", "Heating", "Fan", "Dry" or "Auto" can be set.	Α	(
	Set temp.	"Set temperature" can be set by 0.5°C interval.	Α	(
	Air flow direction	"Air flow direction". [Individual flap control setting] can be set.	Α	
	Fan speed	"Fan speed" can be set.	A	
	Timer setting	"Timer operation" can be set.	A	
6	ON/OFF	"On/Off operation of the system" can be done.	-	
			A	\vdash
	High power SW	"High power operation" or "Normal operation" can be selected.	A	⊢
	Energy-saving SW	"Energy-saving operation" or "Normal operation" can be selected.	Α	⊢
	nergy-saving settin		Α	_
1	Auto OFF timer [Administrator password]	For preventing the timer from keeping ON, set hours to stop operation automatically with this timer. -The selectable range of setting time is from 30 to 240 minutes (10minutes interval) -When setting is "Valid", this timer will activate whenever the ON timer is set.	А	
2	Peak-cut timer [Administrator password]	Power consumption can be reduced by restricting the maximum capacity. Set the [Start time], the [End time] and the capacity limit % (Peak-cut %). -4-operation patterns per day can be set at maximum. -The setting time can be changed by 5-minutes interval. -The selectable range of capacity limit % (Peak-cut %) is from 0% to 40-80% (20% interval). +Holiday setting is available.	А	
3	Automatic temp. set back [Administrator password]	After the elapse of the set time period, the current set temp. will be set back to the [Set back temp.] -The setting can be done in cooling and heating mode respectively. -The selectable range of the set time is from 20 min. to 120 min. (10 min. interval). -Set the [Set back temp.] by 1°C interval.	А	
In	dividual flap control setting		Α	
	Individual flap control setting	The moving range (the positions of upper limit and lower limit) of the flap for individual air outlet port can be set.	Α	1
	entilation			
	External ventilation (In combination with ventilator)	On/Off operation of the external ventilator can be done. -The settings of [Interlock] with AC (air-conditioner), [Single operation] of ventilator or operation [invalid] of ventilation can be done through [Ventilation settings] in the [Remote control] menu.	А	(
Filt	ter sign reset		Α	(
	Filter sign reset	The filter sign can be reset.	В	т
	Setting next cleaning date	The next cleaning date can be set.	A	\vdash
	tial settings	The flore floating date out to occ		+
	Clock setting	The surrout date and time can be act as united	_	_
	Date and time display	The current date and time can be set or revised.	A	-
	Summer time	[Display] or [Hide] the date and/or time can be set, and the [12H] or [24H] display can be set.	A	\vdash
		When select [Valid], the +1hour adjustment of current time can be set. When select [Invalid], the [Summer time] adjustment can be reset.	_	\vdash
	Contrast	The contrast of LCD can be adjusted higher or lower.	A	⊬
	Backlight	Switching on/off a light can be set and the period of the lighting time can be set within the range of 5sec-90sec (5sec interval).	A	-
_	Control sound	It can set with or without [Control sound (beep sound)] at touching panel.	A	\vdash
	ner settings		Α	_
1	Set On timer by hour	The period of time to start operation after stopping can be set. -The period of set time can be set within the range of 1hour-12hours (1hr interval). -The operation mode, set temp and fan speed at starting operation can be set.	А	_
	Set Off timer by hour	The period of time to stop operation after starting can be set. -The period of set time can be set within the range of 1hour-12hours (1hr interval).	Α	_
3	Set On timer by clock	The clock time to start operation can be set. -The set clock time can be set by 5 minutes interval. -[Once (one time only)] or [Everyday] operation can be switched.	А	_
4	Set Off timer by clock	-The operation mode, set temp, and fan speed at starting operation can be set. The clock time to stop operation can be set. The set clock time can be set by 5 minutes interval. -[Once (one time only)] or [Everyday] operation can be switched.	А	
5	Confirmation of timer settings	Status of timer settings can be seen.	Α	
	ekly timer	<u> </u>		
	Weekly timer	On timer and Off timer on weekly basis can be set.	1	
•	[Administrator password]	-8-operation patterns per day can be set at a maximum.		Η
		-The setting clock time can be set by 5 minutes interval.	Α	\vdash
		-Holiday setting is available.		
		Thorough Setting is available: The operation mode, set temp and fan speed at starting operation can be set.		\vdash
	<u> </u>	The operation move, set temp and rain speed at starting operation can be set.		4
D.H	lome leave mode		1	1
1	Home leave mode [Administrator password]	When leaving home for a long period like a vacation leave, the unit can be operated to maintain the room temperature not to be hotter in summer or not to be colder in winter. -The judgment to switch the operation mode (Cooling⇔Heating) is done by the both factors of the set temp. and outdoor air temp -The set temp. and fan speed can be set.	А	

	Setting & display item	Description	RC-EX	
		· ·	series	1
	dministrator settings	[Administrator password]	Α	+
1	Enable/Disable setting	Enable/Disable setting of operation can be set. [On/Off] [Change set temp.] [Change operation mode] [Change air flow direction] [Individual flap control setting] [Fan speed] [High power operation] [Energy-saving operation] [Timer settings] [Weekly timer setting]		
			Α	4
	0"	Request for administrator password can be set. [Individual flap control setting][Weekly timer][Energy-saving setting][Home leave mode][Administrator settings]		+
2	Silent mode timer	The period of time to operate the outdoor unit by prioritizing the quietness can be set.	Α	1 2
		•The [Start time] and the [End time] for operating outdoor unit in silent mode can be set. •The period of the operation time can be set once a day by 5 minutes interval.	- ' '	
3	Setting temp. range	The upper/lower limit of indoor temp. setting range can be set.	Α	
		•The limitation of indoor temp. setting range can be set for each operation mode in cooling and heating.		L
	Temp. increment setting	The temp. increment setting can be changed by 0.5°C or 1.0°C.	Α	
5	RC display setting	Register [Room name] [Name of I/U]		\vdash
		Display [indoor temp.] or not.	Α	
		Display [inspection code] or not.	, ,	4
		Display [Heating stand-by] [Defrost operation] [Auto cooling/heating] or not		(
6	Change administrator password	The administrator password can be changed. (Default setting is "0000")	Α	
		The administrator password can be reset.	В	
.In	staller settings	[Service password]	В	
1	Installation date	The [Installation date] can be registered.		
		When registering the [Installation date], the [Next service date] is displayed automatically. (For changing the [Next service date], please refer the item of [Service & Maintenance],)	В	
2	Service contact	The [Service contact] can be registered and can be displayed on the RC.		
		•The [Contact company] can be registered within 10 characters. •The [Contact phone] can be registered within 13 digits.	В	
3	Test run	On/Off operation of the test run can be done.		
	Cooling test run	The [Cooling test run] can be done at 5°C of set temp. for 30 minutes.	_	
	Drain pump test run	Only the drain pump can be operated.	В	
		The [Test run] operation can be done with fixed compressor Hz set by installer.		
4	Static pressure adjustment	In case of combination with only the ducted indoor unit which has a function of static pressure adjustment, the static pressure is adjustable.	В	т
	Change auto-address	The set address of each indoor unit decided by auto-address setting method can be changed to any other address. (For multiple KX units only)	В	_
- 1	Address setting of Main IU	Main indoor unit address can be set.	_	
-		•Only the Main indoor unit can change operation mode and the Sub indoor units dominated by the Main indoor unit shall follow.	В	4
_		•The Main indoor unit can domain 10 indoor units at a maximum.		1
.R	C function settings	[Service password]	В	Т
1 l	Main/Sub RC setting	The setting of [Main/Sub RC] can be changed.	В	
2	RC sensor	The offset value of [RC sensor] sensing temp. can be set respectively in heating and cooling.	В	
	9 RC sensor adjustment	The offset value of [RC sensor] sensing terms can be set respectively in heating and cooling.		
3	5 Ho dondor dajudimoni	•The setting range of offset value is ±3°C both in cooling and heating.	В	4
	12 Operation mode	The [Valid/Invalid] setting of [Auto][Cooling][Heating] and [Dry] can be done respectively.	В	(
- 1	13 Fan speed	The setting of [Fan speed] can be done from following patterns. 1-speed, 2-speeds (Hi-Me), 2-speeds (Hi-Lo), 3-speeds, 4-speeds.	В	
۱	14 External input	The applicable range ([Individual] or [All units]) of CnT input to the multiple indoor units connected in one control system.		Ť
6	14 External Input	- [Individual] : Only the unit received CnT input signal. [All units] : All the units connected to one control system received CnT input signal.	В	
- 1	15 Ventilation setting	The setting of [Invalid] operation of ventilator, [Interlock] with AC or [Independent] of ventilator can be selected.		+
'	13 ventuation setting	•When setting [Interlock], the operation of external ventilator is interlocked with the operation of AC •When setting [Independent], only the operation of external ventilator is available.	В	
8	16 Flap control	The [Flap control] method can be switched to[Stop at fixed position] or [Stop at any position] • [Stop at fixed position] : Stop the flap at a certain position		
۱	To Flap contact	among the designated 4 positions. (Stop at any position) : Stop the flap at any arbitrary position just after the stopping command from RC was sent.	В	
9	17 Auto-restart	The operation control method after recovery of power blackout happened during operation can be set.	В	
	18 Auto temp. setting	[Valid] or [Invalid] of [Auto temp. setting] can be selected.	В	+
- 1	19 Auto fan speed setting	[Valid] or [Invalid] of [Auto fan speed setting] can be selected.	В	+
_			В	+
	'U settings	[Service password]		+
- 1	High ceiling	The fan tap of indoor fan can be changed. •[Standard] [High ceiling 1] [High ceiling 2] can be selected.	В	1
- 1	Filter sign	The setting of filter sign display timer can be done from following patterns.	В	(
	External input 1	The content of control by external input can be changed. The selectable contents of control are [0n/0ff] [Permission/Prohibition] [Cooling/heating] [Emergency stop]	В	
. 1	External input 1 signal	The type of external input signal ([Level input]/[Pulse input]) can be changed.	В	(
5	External input 2	·The selectable contents of control are [On/Off] [Permission/Prohibition] [Cooling/heating] [Emergency stop]	В	\perp
6	External input 2 signal	The type of external input signal ([Level input]/[Pulse input]) can be changed.	В	
7 l	Heating thermo-off temp. adjust.	The judgment temp. of heating thermo-off can be adjusted within the range from 0 to +3°C (1°C interval)	В	
	Return air sensor adjust.	The sensing temp. of return air temp. sensor built in the indoor unit can be adjusted within the range of $\pm 2^{\circ}$ C.	В	
	Fan control in heating thermo OFF	The fan control method at heating thermo-off can be changed. The selectable fan control methods are [Low] [Set fan speed] [Intermittent] [Stop].	В	
. 1	Anti-frost temp.	The judgment temp. of anti-frost control for the indoor unit in cooling can be changed to [Temp. High] or [Temp. Low].	В	
	Anti-frost control	When the anti-frost control of indoor unit in cooling is activated, the fan speed can be changed.	В	
- 1	Drain pump operation	In any operation mode in addition to cooling and dry mode, the setting of drain pump operation can be done.	В	
- 1			В	
		The time period of residual fan operation after stopping or thermo-off in cooling mode can be set. The time period of residual fan operation after stopping or thermo-off in heating mode can be set.		_
- 1		The time period of residual fan operation after stopping or thermo-off in heating mode can be set.	В	
- 1		The fan operation rule following the residual fan operation after stopping or thermo-off in heating mode can be set.	В	
- 1	Fan circulator operation	In case that the fan is operated as the circulator, the fan control rule can be set.	В	\vdash
		When only the OA processing units are operated, control pressure value can be changed.	В	
	Auto operation mode	The [Auto rule selection] for switching the operation mode automatically can be selected from 3 patterns.	В	\perp
	Thermo. rule setting	When selecting [Outdoor air temp. control], the judgment temp. can be offset by outdoor temp	В	\perp
0	Auto fan speed control	lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	В	\perp
.Se	ervice & Maintenance	[Service password]	В	Г
1	IU address No.	Max. 16 indoor units can be connected to one remote control, and all address No. of the connected indoor units can be displayed.		
		The indoor unit conforming to the address No. can be identified by selecting the address No. and tapping [Check] to operate the indoor fan.	В	
2	Next service date	The [Next service date] can be registered. The [Next service date] and [Service contact] is displayed on the [Periodical check] message screen.	AB	
	Operation data	Total 39 items of [Operation data] for indoor unit and outdoor unit can be displayed.	В	
- 1	Error history	[Date and time of error occurred] [I/U address] [Error code] for Max. 16 latest cases of error history can be displayed.	В	
- 1	Display anomaly data	The operation data just before the latest error stop can be displayed.	В	+
- 1	Reset periodical check	The timer for the periodical check can be reset.	В	
	Saving I/U settings			+
		The I/U settings memorized in the indoor PCB connected to the remote control can be saved in the memory of the remote control.	В	+
_	Special settings	[Erase I/U address] [CPU reset] [Initializing] [Touch panel calibration]	В	
In	spection		Α	
				1
	Confirmation of Inspection	The address No, of anomalous indoor/outdoor unit and error code are displayed.		

PSB012D994

(3) FDU series

Electrical wiring work must be performed by an electrician qualified by a local power provider according to the electrical installation technical standards and interior wiring regulations applicable to the installation site.

Security instructions

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- lacktriangled The precautionary items mentioned below are distinguished into two levels, lacktriangled AMARNING and lacktriangled CAUTION .

- The meanings of "Marks" used here are as shown on the right:
- Never do it under any circumstances.
- Accord with following items. Otherwise, there will be the risks of electric shock and fire caused by overheating or short circuit.

↑WARNING

- Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.
- Power source with insufficient capacity and improper work can cause electric shock and fire.
- Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.
 Loose connections or hold could result in abnormal heat generation or fire.
- Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property.
- Improper fitting may cause abnormal heat and fire.
- Use the genuine option parts. And installation should be performed by a specialist.
- If you install the unit by yourself, it could cause water leakage, electric shock and fire
- Do not repair by yourself. And consult with the dealer about repair.

 Improper repair may cause water leakage, electric shock or fire.
- Consult the dealer or a specialist about removal of the air-conditioner.
- Improper installation may cause water leakage, electric shock or fire.

 Turn off the power source during servicing or inspection work.
- If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- Shut off the power before electrical wiring work.
- It could cause electric shock, unit failure and improper running.

↑CAUTION

- Perform earth wiring surely.
- Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock or fire due to a short circuit.
- Earth leakage breaker must be installed.
- If the earth leakage breaker is not installed, it could cause electric shocks or fire.
- Make sure to install earth leakage breaker on power source line. (countermeasure thing to high harmonics.)
- Absence of breaker could cause electric shock.
- Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.
 - Using the incorrect one could cause the system failure and fire.
- Do not use any materials other than a fuse of correct capacity where a fuse should be used.
- Connecting the circuit by wire or copper wire could cause unit failure and fire
- Use power source line of correct capacity.
 Using incorrect capacity one could cause electric leak, abnormal heat generation and fire.
- Do not mingle solid cord and stranded cord on power source and signal side terminal block.
- In addition, do not mingle difference capacity solid or stranded cord.

 Inappropriate cord setting could cause loosing screw on terminal block, bad electrical contact, smoke and fire.
- Do not turn off the power source immediately after stopping the operation. Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or broaded up.
- Do not control the operation with the circuit breaker. It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

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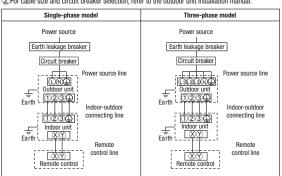
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1 Electrical Wiring Connection

- Use three-core cable as wiring between indoor and outdoor unit. As for detail, refer to "INSTAL-LATION MANUAL" of outdoor unit.
- Set earth of D-type.
- Keep "remote control line" and "power source line" away from each other on constructing of unit outside.
- Run the lines (power source, remote control and "between indoor and outdoor unit") upper ceiling through iron pipe or other tube protection to avoid the damage by mouse and so on.
- Do not add cord in the middle of line route (of power source, remote control and "between indoor and outdoor unit") on outside of unit. If connecting point is flooded, it could cause problem as for electric or communication. (In the case that it is necessary to set connecting point on the way, perform thorough waterproof measurement.)
- Do not connect the power source line [220V/240V/380V/415V] to signal side terminal block. Otherwise, it could cause failure.
- Screw the line to terminal block without any looseness, certainly.
- Do not turn on the switch of power source, before all of line work is done.
- Connection of the line ("Between indoor and outdoor unit", earth and remote control)
- ①Remove lid of control box before connect the above lines, and connect the lines to terminal block according to number pointed on label of terminal block. In addition, pay enough attention to confirm the number to lines, because there is electrical
- In addition, pay enough attention to confirm the number to lines, because there is electrical polarity except earth line. Furthermore, connect earth line to earth position of terminal block of power source.
- ②Install earth leakage breaker on power source line. In addition, select the type of breaker for inverter circuit as earth leakage breaker.
- ③If the function of selected earth leakage breaker is only for earth-fault protection, hand switch (switch itself and type "B" fuse) or circuit breaker is required in series with the earth leakage breaker.
- (a) Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations.
- The isolator should be set in the box with key to prevent touching by another person when servicing.

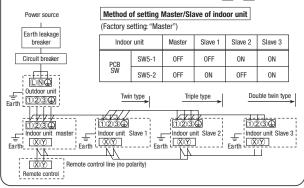
Cable connection for single unit installation

- ①As for connecting method of power source, select from following connecting patterns. In principle, do not directly connect power souce line to inside unit.
- As for exceptional connecting method of power souce, discuss with the power provider of the country with referring to technical documents, and follow its instruction.
- ②For cable size and circuit breaker selection, refer to the outdoor unit installation manual.



Cable connection for a V multi configuration installation

- ①Connect the same pairs number of terminal block "①, ②, and ③"and " ② and ① " between master and slave indoor units.
- ②Do the same address setting of all inside units belong to same refrigerant system by rotary switch SW2 on indoor unit's PCB (Printed circuit board).
- ③Set slave indoor unit as "slave 1" through "slave 3" by address switch SW5-1, 5-2 on PCB.
- ④When the AIR CON NO. button on the remote control unit is pressed after turning on the power, an indoor unit's address number will be displayed. Do not fail to confirm that the connected indoor unit's numbers are displayed on the remote control unit by pressing the or button.



2 Remote Control, Wiring and functions

- Do not install it on the following places
- 1) Places exposed to direct sunlight
- 2)Places near heat devices
- (3)High humidity places
- 4 Hot surface or cold surface enough to generate condensation
- 5Places exposed to oil mist or steam directly.

Installation and wiring of remote control

- ①Install remote control referring to the attached installation manual.
- ②Wiring of remote control should use 0.3mm² ×2 core wires or cables.

The insulation thickness is 1mm or more, (on-site configuration)

3 Maximum prolongation of remote control wiring is 600 m.

If the prolongation is over 100m, change to the size below.

But, wiring in the remote control case should be under 0.5mm². Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

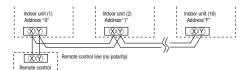
100 - 200m	$0.5 \text{mm}^2 \times 2 \text{ cores}$
Under 300m	0.75mm ² × 2 cores
Under 400m	1.25mm ² × 2 cores
Under 600m	2.0mm ² × 2 cores

- (4) Avoid using multi-core cables to prevent malfunction.
- ⑤Keep remote control line away from earth (frame or any metal of building).
- 6 Make sure to connect remote control line to the remote control and terminal block of indoor unit. (No polarity)

Control plural indoor units by a single remote control.

- (1)A remote control can control plural indoor units (Up to 16)
- In above setting, all plural indoor units will operate under same mode and temperature setting ②Connect all indoor units with 2 core remote control line.
- ③Set unique remote control communication address from "0" to "F" to each inside unit by the rotary switch SW2 on the indoor unit's PCB.

After a unit is energized, it is possible to display an indoor unit address by pressing AIR CON NO. button on the remote control unit. Press the ▲ or ▼ button to make sure that all indoor units connected are displayed in order.



Confirming method of indoor units

When indoor unit address number is displayed on remote control, pushing the (MODE) button to make the indoor unit with that number blow air (Display example:" I/U001 Push the (MODE) button again to stop the operation.

However, this operation is invalid on the air-conditioner running.

Master/ slave setting when more than one remote control unit are used

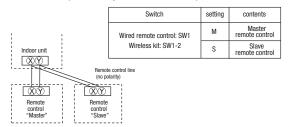
A maximum of two remote control units can be connected to one indoor unit (or one group of indoor units.)

The air-conditioner operation follows the last operation of the remote control regardless of the master/slave setting of it. Acceptable combination is "two (2) wired remote controls", "one (1) wired remote control and

one (1) wireless kit" or "two (2) wireless kits".

Set SW1 (wired remote control) or SW1-2 (wireless kit) to "Slave" for the slave remote control unit. It was factory set to "Master" for shipment.

Note:The setting "Remote control unit sensor enabled" is only selectable with the master remote control unit in the position where you want to check room temperature.



3Trial operation

The method of trial cooling operation

Operate the remote control unit as follows

- 1. Starting a cooling test run.
- (1)Start the system by pressing the OON/OFF button.
- ②Select " (Cool)" with the (MODE) button.
- ③Press the TEST button for 3 seconds or longer.

The screen display will switch to: " ♣ TEST RUN ▼ "

When the ○ (SET) button is pressed while " ♣ TEST RIN ▼ " is indicated, a cooling test run will start.

The screen display will switch to " # TEST RLN ".

2. Ending a cooling test run.

Pressing the OONOFF button, the (TEMP) button or (MODE) button will end a cooling test run. (Cooling test run will end after 30 minutes pass.)

* & TEST RLN " shown on the screen will go off.

Checking operation data

Operation data can be checked with remote control unit operation.

- 1. Press the CHECK button.
- The display change " (IPPR DATA ▼ " 2. Press the (SET) button while
- OPER DATA ▼ " is displayed.
- 3. When only one indoor unit is connected to remote control, " DATA LOADING " is displayed (blinking indication during data loading).

- "ै 🗣 SELECT I/U" (blinking 1 seconds) → "I/U000 ■" blinking.
- 5. Select the indoor unit number you would like to have data displayed with the ▲ w button.
- 6. Determine the indoor unit number with the (SET) button.

indoor unit is blinking for 2 seconds.)

	Number		Data Item
control unit operation.	01	8	(Operation Mode)
I. Press the CHECK button.	02	SET TEMP_6	(Set Temperature)
The display change " OPER DATA ▼ "	03	RETURN AIR_6	(Return Air Temperature)
2. Press the (SET) button while	04	@SENSOR5	(Remote Control ThermistorTemperature)
` '	05	THI-R1b	(Indoor Unit Heat Exchanger Thermistor / U Bend)
"OPERDATA ▼" is displayed.	06	THI-R2_b	(Indoor Unit Heat Exchanger Thermistor /Capillary)
3. When only one indoor unit is connected	07	THI-R3_b	(Indoor Unit Heat Exchanger Thermistor /Gas Header)
to remote control, " DATA LOADING " is	08	I/U FANSPEED	(Indoor Unit Fan Speed)
displayed (blinking indication during data	09	DEMAND_Hz	(Frequency Requirements)
loading).	10	ANSWERHz	(Response Frequency)
37	11	I/UEVP	(Pulse of Indoor Unit Expansion Value)
Next, operation data of the indoor unit	12	TOTAL I/U RUN	H (Total Running Hours of The Indoor Unit)
will be displayed. Skip to step 7.	21	OUTDOOR6	(Outdoor Air Temperature)
1. When plural indoor units is connected,	22	THO-R1b	(Outdoor Unit Heat Exchanger Thermistor) (Outdoor Unit Heat Exchanger Thermistor)
the smallest address number of indoor	24	THO-R2	(Compressor Frequency)
	25	HPHPa	(High Pressure)
unit among all connected indoor unit is	26	D MPa	(Low Pressure)
displayed.	27	Id b	(Discharge Pipe Temperature)
[Example]:	28		(Comp Bottom Temperature)
"&\$ SELECT I/J" (blinking 1 seconds) →	29	CT_AMP	(Current)
"I/U000 ▲" blinking.	30	TARGET SH &	(Target Super Heat)
	31	SH 6	(Super Heat)
5. Select the indoor unit number you would	32	TDSH &	(Discharge Pipe Super Heat)
like to have data displayed with the	33	PROTECTION No.	(Protection State No. of The Compressor)
▲ ▼ button.	34	O/UFANSPEED	(Outdoor Unit Fan Speed)
6. Determine the indoor unit number with the	35	63H1	(63H1 On/Off)
	36	DEFROST	(Defrost Control On/Off)
(SET) button.	37	TOTAL COMP RUN	
(The indoor unit number changes from	38	O/UEEV1P	(Pulse of The Outdoor Unit Expansion Valve EEVC)
blinking indication to continuous indication)	39	0/UEY2P	(Pulse of The Outdoor Unit Expansion Valve EEVH)
"I/U000" (The address of selected		nding on outdoor uni	t model, there are data not shown.
indoor unit is blinking for 2 seconds)			

DATA LOADING " (A blinking indication appears while data loaded.)

Next, the operation data of the indoor unit is indicated.

7. Upon operation of the 🛕 🔻 button, the current operation data is displayed in order from data number 01.

The items displayed are in the above table.

*Depending on models, the items that do not have corresponding data are not displayed.

- 8. To display the data of a different indoor unit, press the AIR CON NO. button, which allows you to go back to the indoor unit selection screen.
- 9. Pressing the ON/OFF button will stop displaying data.

Pressing the (RESET) button during remote control unit operation will undo your last operation and allow you to go back to the previous screen.

Olf two (2) remote controls are connected to one (1) inside unit, only the master control is available for trial operation and confirmation of operation data. (The slave remote control is not available.)

Trail operation of drain pump

Drain pump operation from remote control unit is possible. Operate a remote control unit by following the steps described below.

1. To start a forced drain pump operation.

1) Press the TEST button for three seconds or longer.

The display will change " & TEST RUN ▼

②Press the $\boxed{f v}$ button once and cause " ${\it DRAIN PURP}~~ \diamondsuit$ " to be displayed.

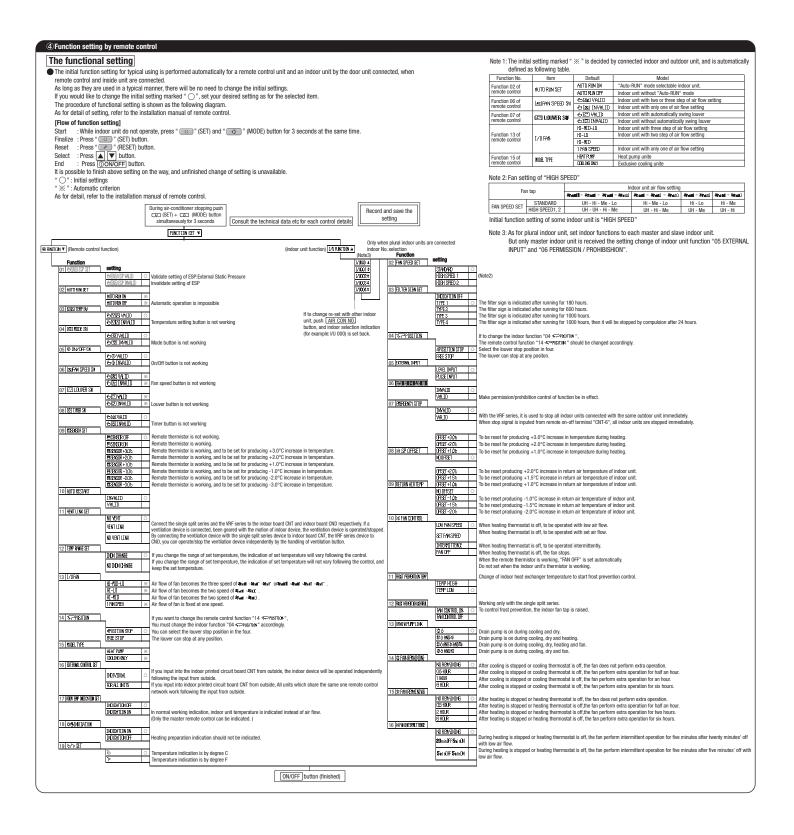
(SET) button is pressed, a drain pump operation will start.

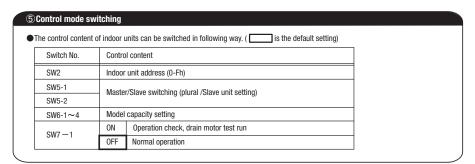
Display: " & O TO STOP

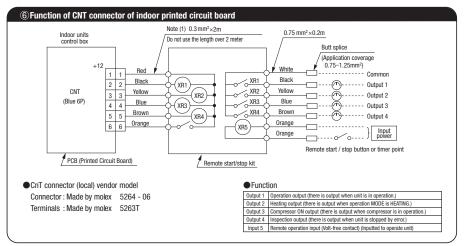
2. To cancel a drain pump operation.

①If either O (SET) or OON/OFF button is pressed, a forced drain pump operation will stop. The air-conditioning system will become OFF.

Olf two (2) remote controls are connected to one (1) inside unit, only the master control is available for trial operation and confirmation of operation data. (The slave remote control is not available.)







7Troubleshooting

The operation data is saved when the situation of abnormal operation happen, and the data can be confirmed by remote control. [Operating procedure]

1. Press the CHECK button.

The display change " OPER DATA

2. Once, press the 🔻 button, and the display change

" &RROR DATA

- started.
- 4. When only one indoor unit is connected to remote control, following is displayed.
- $\label{eq:theorems} \ensuremath{\text{\textcircled{1}}} \text{The case that there is history of abnormal operation.}$
- → Error code and " DATA LOADING" is displayed. [Example]: [E8] (ERROR CODE)
- "DATA LOADING" is displayed (blinking indication during data loading). Next, the abnormal operation data of the indoor unit will be displayed. Skip to step 8.
- $\begin{tabular}{ll} \hline \textbf{2} \hline \textbf{The case that there is not history of abnormal operation}. \\ \hline \end{tabular}$
- → " NO ERROR " is displayed for 3 seconds and this mode is closed. 5. When plural indoor units is connected, following is displayed.
- ①The case that there is history of abnormal operation.
- \rightarrow Error code and the smallest address number of indoor unit among all connected indoor unit is displayed.

[Example]: [E8] (ERROR CODE)

1/1000 ■ " blinking

- ②The case that there is not history of abnormal operation.
- → Only address number is displayed.
- 6. Select the indoor unit number you would like to have data displayed with the 🛕 🔻 button
- 7. Determine the indoor unit number with the O (SET) button.

[Example]: [E8] (ERROR CODE)

▲ " (The address of selected indoor unit is blinking for 2 seconds.) " I/U000

[E8] "DATA LOADING" (A blinking indication appears while data loaded.)

Next, the abnormal operation data is indicated.

If the indoor unit doing normal operation is selected, NO ENROR " is displayed for 3 seconds and address of indoor unit is displayed.

8. By the 🛕 🔻 button, the abnormal operation data is displayed.

Displayed data item is based on <a> Trial operation .

*Depending on models, the items that do not have corresponding data are not displayed.

9. To display the data of a different indoor unit, press the AIR CON No. button, which allows you to go back to the indoor unit slection screen. 10.Pressing the ON/OFF button will stop displaying data

Pressing the 🕜 (RESET) button during remote control unit operation will undo your last operation and allow you to go back to the previous screen.

Olf two (2) remote controls are connected to one (1) indoor unit, only the master control is available for trial operation and confirmation of operation data. (The slave remote control is not available.)

Error Code of indoor unit

Display on remote	LED on indoor circuit board		Content
control red (checking)		green (normal)	Content
	Off	Continuous blinking	Normal
Off	Off	Off	Fault on power, indoor power off or lack phase
E1	Off	Continuous blinking	Fault on the transmission between indoor circuit board and remote control
	Not sure	Not sure	Indoor computer abnormal
E5	Blinking twice	Continuous blinking	Fault on outdoor-indoor transmission
E6	Blinking once	Continuous blinking	Indoor heat exchange sensor interrupted or short-circuit
E7	Blinking once	Continuous blinking	Indoor air inhaling sensor broken or short-circuit
E8	Blinking once	Continuous blinking	The temperature of heat exchange abnormal
	Blinking once	Continuous blinking	Float switch actions (only with FS)
E9	Blinking twice	Continuous blinking	Drain pump over current
E10	Off	Continuous blinking	Excess number of remote control connections
E14	Blinking for three times	Continuous blinking	The communication fault for master/slave indoor units
F16	Blinking once	Continuous blinking	Fan motor (1) abnormal
EIO	Blinking twice	Continuous blinking	Fan motor (2) abnormal
E19	Blinking once	Continuous blinking	Configuration fault on running checking model
F20	Blinking once	Continuous blinking	Fan motor (1) abnormal rotation
L20	Blinking twice	Continuous blinking	Fan motor (2) abnormal rotation
E28	Off	Continuous blinking	Remote control sensor interrupted
Over E30	Off	Continuous blinking	Outdoor unit checking (outdoor circuit board LED checking)

(4) FDF series

Electrical wiring work must be performed by an electrician qualified by a local power provider according to the electrical installation technical standards and interior wiring regulations applicable to the installation site.

Security instructions

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, [AWARNING] and ACAUTION.

AWARNING: Wrong installation would cause serious consequences such as injuries or death. ACAUTION: Wrong installation might cause serious consequences depending on circumstances. Both mentions the important items to protect your health and safety so strictly follow them by any means.

- The meanings of "Marks" used here are as shown on the right: Never do it under any circumstances.
- Accord with following items. Otherwise, there will be the risks of electric shock and fire caused by overheating or short circuit.

↑ WARNING

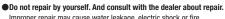
Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.

Power source with insufficient capacity and improper work can cause electric shock and fire.

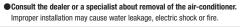
- Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.

 Loose connections or hold could result in abnormal heat generation or fire.
- Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel property. Improper fitting may cause abnormal heat and fire.
- Ouse the genuine option parts. And installation should be performed by a

If you install the unit by yourself, it could cause water leakage, electric shock and fire



Improper repair may cause water leakage, electric shock or fire



●Turn off the power source during servicing or inspection work. If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.

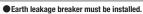
Shut off the power before electrical wiring work.

It could cause electric shock, unit failure and improper running.

ACAUTION

Perform earth wiring surely.

Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short circuit.



If the earth leakage breaker is not installed, it can cause electric shocks

Make sure to install earth leakage breaker on power source line (countermeasure thing to high harmonics.)

Absence of breaker could cause electric shock

Use the circuit breaker of correct canacity. Circuit breaker should be the one that disconnect all poles under over current.

Using the incorrect one could cause the system failure and fire.

Do not use any materials other than a fuse of correct capacity where a fuse should be used.

Connecting the circuit by wire or copper wire could cause unit failure and fire.

 Use power source line of correct capacity. Using incorrect capacity one could cause electric leak, abnormal heat generation and fire.

Do not mingle solid cord and stranded cord on power source and signal side terminal block.

In addition, do not mingle difference capacity solid or stranded cord. Inappropriate cord setting could cause loosing screw on terminal block, bad electrical contact, smoke and fire.

● Do not turn off the power source immediately after stopping the operation. Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or

hreakdown Do not control the operation with the circuit breaker.

It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.



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PGA012D405

1 Electrical wiring connection

- Use three-core cable as wiring between indoor and outdoor unit. As for detail, refer to "INSTALLATION MANUAL" of

- Use three-core cable as wrining between indoor and outdoor unit. As for detail, refer to "INSTALLATION MANUAL" of outdoor Unit.

 Set earth of D-type.

 Keep "remote control line" and "power source line" away from each other on constructing of unit outside.

 Paun the lines (power source, remote control and "between indoor and outdoor unit") upper ceiling through iron pipe or other tube protection to avoid the damage by mouse and so on.
- Do not add cord in the middle of line route (of power source, remote control and "between indoor and outdoor unit") on outside of unit. If connecting point is flooded, it could cause problem as for electric or communication. (In the case that it is necessary to set connecting point on the way, perform thorough waterproof measurement.)
- Do not connect the power source line [220V/240V/380V/415V] to signal side terminal block. Otherwise, it could

- Uo not connect the power source line |22/2W/24W/38W/415V| to signal side terminal block. Utherwise, it could cause failure.

 Screw the line to terminal block without any looseness, certainly.

 Do not turn on the switch of power source, before all of line work is done.

 Connection of the line ("Between indoor and outdoor unit", earth and remote control)

 (Remove lid of control box before connect the above lines, and connect the lines to terminal block according to number politiced on label of terminal block.

 In addition, pay enough attention to confirm the number to lines, because there is electrical polarity except earth line. Furthermore, connect earth line to earth oscition of terminal block of nower source.
- line. Furthermore, connect earth line to earth position of terminal block of power source.

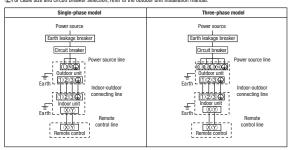
 ②Install earth leakage breaker on power source line. In addition, select the type of breaker for inverter circuit as
- earth leakage breaker. 3 If the function of selected earth leakage breaker is only for earth-fault protection, hand switch (switch itself and
- type "B" fuse) or circuit breaker is required in series with the earth leakage breaker (4) Install the local switch near the unit.

Cable connection for single unit installation

- ①As for connecting method of power source, select from following connecting patterns. In principle, do not directly connect
- power souce line to inside unit.

 As for exceptional connecting method of power souce, discuss with the power provider of the country with referring to
- technical documents, and follow its instruction.

 ②For cable size and circuit breaker selection, refer to the outdoor unit installation manual.



Cable connection for a V multi configuration installation

- ①Connect the same pairs number of terminal block "①, ②, and ③"and " (and () " betw indoor units.
- ②Do the same address setting of all inside units belong to same refrigerant system by rotary switch SW2 on indoor unit's PCB (Printed circuit board).
- 3 Set slave indoor unit as "slave 1" through "slave 3" by address switch SW5-1, 5-2 on PCB.
- 4) When the AIR CON NO. | button on the remote control unit is pressed after turning on the power, an indoor unit's address number will be displayed. Do not fail to confirm that the connected indoor unit's numbers are displayed on the remote control unit by pressing the ▲ or ▼ button.

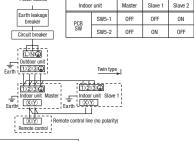
Slave 3

ON

ON

Method of setting Master/Slave of indoor unit

(Factory setting: "Master")

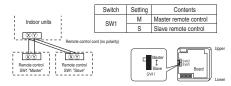


Switch and wiring specification

Refer to the installation manual attached to the outdoor unit.

2 Wiring for the remote control

• For each indoor unit, one more remote control can be connected in addition to the one which is built in the main unit.



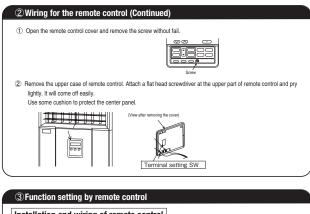
Set SW1 to "Slave" for the slave remote control. It was factory set to "Master" for shipment.

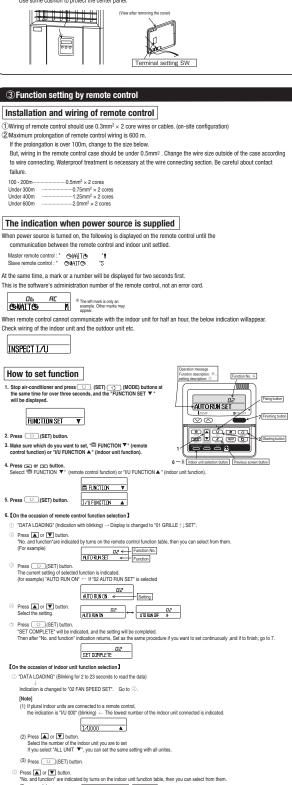
One of the declaration and extended control thermiston enabled its only selectable with the master render control thermiston enabled its only selectable with the master render control in the position where yet to check room temperature.

The air-conditioner operation follows the last operation of the remote control regardless of the master/slave setting of it.

* When setting the remote control built in the main unit to the "Slave":

Remove the cover and change the setting of switch as follows.

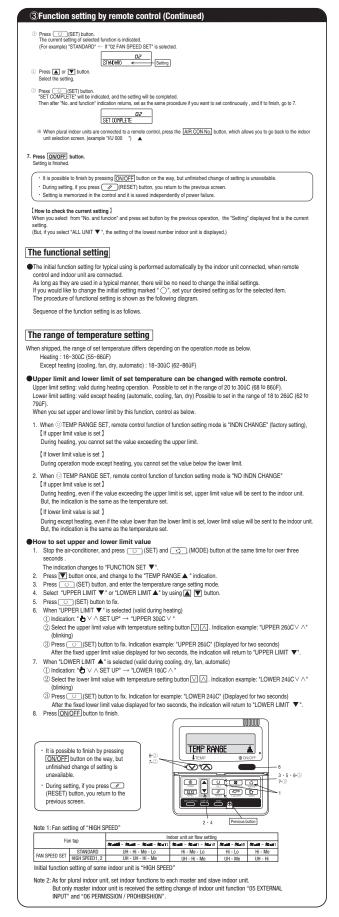


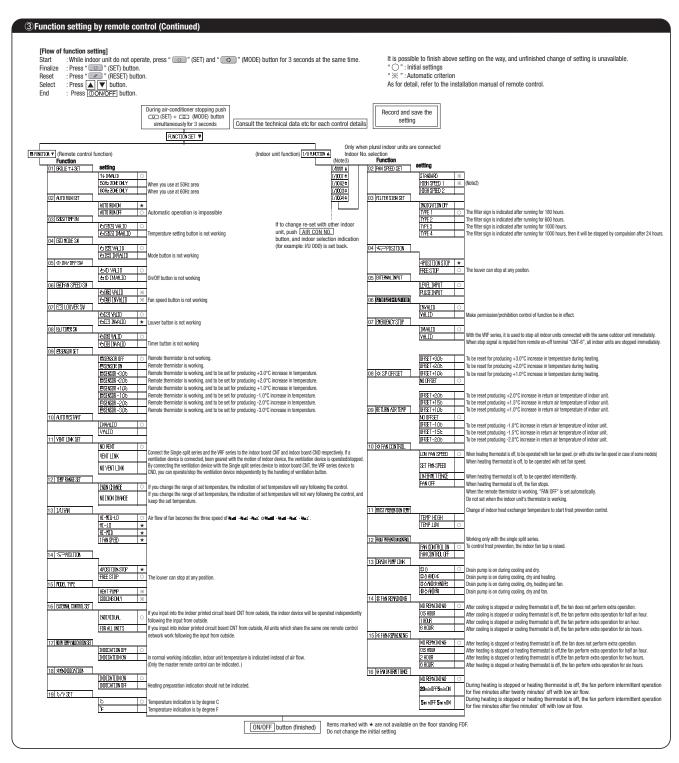


by turns on the indoor unit function t

SPEED SET ← Function No.

(For example)





The method of trial cooling operation Operate the remote control unit as follows. 1. Starting a cooling test run. ① Start the system by pressing the ①ONOFF button. ② Select " ② (Cool)" with the ② (MODE) button. ③ Press the TEST Button for 3 seconds or longer. The screen display will switch to ③ TEST RUN ▼ " ** TEST RUN ▼ " ** TEST RUN ▼ " is indicated, a cooling test run will start. The screen display will switch to ⑤ TEST RUN ▼ " ** THE STEST RUN ▼ " ** TEST RUN ▼ "

4 Trial operation (Continued)

Checking operation data

Operation data can be checked with remote control unit operation.

- 1. Press the CHECK button.
- The display change "OPER DATA ▼ "
- 2. Press the O (SET) button while OPERDATA ▼ "is displayed.
- 3. When only one indoor unit is connected to remote control, " DATA LOADING " is displayed (blinking indication during data loading).

Next, operation data of the indoor unit will be displayed. Skip to step 7.

4. When plural indoor units is connected, the smallest address number of indoor unit among all connected indoor unit is displayed. [Example]:

♦ SEECT I/U " (blinking 1 seconds) I/U000 ▲ " blinking.

- 5. Select the indoor unit number you would like to have data displayed with the **▲ ▼** button.
- 6. Determine the indoor unit number with the (SET) button.

Number		Data Item
01	恭	(Operation Mode)
02	SET TEMP6	(Set Temperature)
03	RETURN AIR	(Return Air Temperature)
04	■SENSOR6	(Remote Control ThermistorTemperature)
05	THI-R1b	(Indoor Unit Heat Exchanger Thermistor / U Bend)
06	THI-R2b	(Indoor Unit Heat Exchanger Thermistor /Capillary)
07	THI-R3ზ	(Indoor Unit Heat Exchanger Thermistor /Gas Header)
08	I/U FANSPED	(Indoor Unit Fan Speed)
09	DEMANDHz	(Frequency Requirements)
10	ANSWERHz	(Response Frequency)
11	I/U EEYP	(Pulse of Indoor Unit Expansion Value)
12	TOTAL I / U RUN	H (Total Running Hours of The Indoor Unit)
21	OUTDOORc	(Outdoor Air Temperature)
22	THO-R1C	(Outdoor Unit Heat Exchanger Thermistor
23	TH0-R2°c	(Outdoor Unit Heat Exchanger Thermistor
24	COMPHz	(Compressor Frequency)
25	HPMPa	(High Pressure)
26	LPMPa	(Low Pressure)
27	Tdb	(Discharge Pipe Temperature)
28	COMP BOTTOM &	(Comp Bottom Temperature)
29	CTAMP	(Current)
30	TARGET SH	(Target Super Heat)
31	SHb	(Super Heat)
32	TDSHt	(Discharge Pipe Super Heat)
33	PROTECTION No	(Protection State No. of The Compressor)
34	O/UFANSPED	(Outdoor Unit Fan Speed)
35	63H1	(63H1 On/Off)
36	DEFROST	(Defrost Control On/Off)
37	TOTAL COMP RUN_	(Total Running Hours of The Compressor)
38	0/UBEY1P	(Pulse of The Outdoor Unit Expansion Valve EEVC)
39	0/UBEY2P	(Pulse of The Outdoor Unit Expansion Valve EEVH)

*Depending on outdoor unit model, there are data not shown

(The indoor unit number changes from blinking indication to continuous indication)

I/U000 " (The address of selected indoor unit is blinking for 2 seconds.)

"DATA LOADING" (A blinking indication appears while data loaded.)

Next, the operation data of the indoor unit is indicated.

7. Upon operation of the 🛕 🔻 button, the current operation data is displayed in order from data number 01.

The items displayed are in the above table.

*Depending on models, the items that do not have corresponding data are not displayed.

- 8. To display the data of a different indoor unit, press the AIR CON No. button, which allows you to go back to the indoor unit selection screen.
- 9. Pressing the ON/OFF button will stop displaying data.

Pressing the $\ensuremath{ \ \hspace{-.8cm} /\hspace{-.8cm} }$ (RESET) button during remote control unit operation will undo your last operation and allow you to go back to the previous screen.

Olf two (2) remote control are connected to one (1) inside unit, only the master control is available for trial operation and confirmation of operation data. (The slave remote control is not available.)

⑤Control mode switching

The control content of indoor units can be switched in following way.

is the default setting) 0-----

SWITCH NO.	Control content	
SW2	Indoor unit address (0-Fh)	
SW5-1	- Master/Slave switching (plural /Slave unit setting)	
SW5-2		
SW6-1~4	Model capacity setting	
SW7 —1	ON	Operation check, drain motor test run
3W7 1	0FF	Normal operation

©Function of CnT connector of indoor printed circuit board Black Blue o---} Input power PCB (Printed Circuit B CnT connector (local) vendor model Connector: Made by molex 5264 - 06 Terminals: Made by molex 5263T Function Output 1 Operation output (there is output when unit is in operation.) Output 2 Heating output (there is output when operation MODE is HEATING.) Output 3 Compressor ON output (there is output when compressor is in operation.) Output 4 Inspection output (there is output when unit is stopped by error.)

Input 5 Remote operation input (Volt-free contact) (Inputted to operate unit)

7)Troubleshooting

The operation data is saved when the situation of abnormal operation happen, and the data can be confirmed by remote control.

Error Code of indoor unit

Display on remote	ELD on moon circuit board		0
control			Content
	Off	Continuous blinking	Normal
Off	Off	Off	Fault on power, indoor power off or lack phase
E1	Off	Continuous blinking	Fault on the transmission between indoor circuit board and remote control
	Not sure	Not sure	Indoor computer abnormal
E5	Blinking twice	Continuous blinking	Fault on outdoor-indoor transmission
E6	Blinking once	Continuous blinking	Indoor heat exchange sensor interrupted or short-circuit
E7	Blinking once	Continuous blinking	Indoor air inhaling sensor broken or short-circuit
E8	Blinking once	Continuous blinking	The temperature of heat exchange abnormal
E9	Blinking once	Continuous blinking	Float switch actions (only with FS)
E10	Off	Continuous blinking	Excess number of remote control connections
E14	Blinking for three times	Continuous blinking	The communication fault for master/slave indoor units
E16	Blinking once	Continuous blinking	Fan motor abnormal
E19	Blinking once	Continuous blinking	Configuration fault on running checking model
E28	Off	Continuous blinking	Remote control sensor interrupted
Over E30	Off	Continuous blinking	Outdoor unit checking (outdoor circuit board LED checking)

[Operating procedure]

1. Press the CHECK button.

The display change " OPER DATA ▼ "

2. Once, press the 🔻 button, and the display change

ERROR DATA A ".

- 3. Press the (SET) button and abnormal operation data mode is started.
- 4. When only one indoor unit is connected to remote control, following is displayed.
 - The case that there is history of abnormal operation.

→ Error code and " DATA LDADING " is displayed.

[Example]: [E8] (ERROR CODE)

"DATA LOADING" is displayed (blinking indication during data loading).

Next, the abnormal operation data of the indoor unit will be displayed. Skip to step 8.

2)The case that there is not history of abnormal operation.

- \rightarrow " ND ERROR " is displayed for 3 seconds and this mode is closed.
- 5. When plural indoor units is connected, following is displayed.

1) The case that there is history of abnormal operation.

→ Error code and the smallest address number of indoor unit among all connected indoor unit is displayed.

[Example]: [E8] (ERROR CODE)

* 1/1000 " blinking

 $\begin{tabular}{ll} \hline \textbf{2} \hline \textbf{The case that there is not history of abnormal operation}. \\ \hline \end{tabular}$

→ Only address number is displayed.

6. Select the indoor unit number you would like to have data displayed with the

7. Determine the indoor unit number with the (SET) button.

[Example]: [E8] (ERROR CODE)

▲ " (The address of selected indoor unit is blinking for 2 seconds.) I/U000

[E8] " DATA LOADING " (A blinking indication appears while data loaded.)

Next, the abnormal operation data is indicated.

If the indoor unit doing normal operation is selected, " \mbox{NN} FRROR " is displayed for 3 seconds and address of indoor unit is displayed.

8. By the 🛕 🔻 button, the abnormal operation data is displayed.

Displayed data item is based on 3 Trial operation

※Depending on models, the items that do not have corresponding data are not displayed.

9. To display the data of a different indoor unit, press the AIR CON No. button, which allows you to go back to the indoor unit slection screen.

10.Pressing the ON/OFF button will stop displaying data.

Pressing the (RESET) button during remote control unit operation will undo your last operation and allow you to go back to the previous screen.

(a) If two (2) remote control are connected to one (1) indoor unit, only the master control is available for trial operation and confirmation of operation data. (The slave remote control is not available.)

1.10.3 Installation of wired remote control (Option parts) (1) Model RC-EX3

PJZ012A131A

1. Safety precautions

Please read this manual carefully before starting installation work to install the unit properly. Every one of the followings is important information to be observed strictly.

<u></u> <u></u> MARNING	Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc.
∴ CAUTION	Failure to follow these instructions properly may cause injury or property damage.

It could have serious consequences depending on the circumstances.

The following pictograms are used in the text.



Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to a new owner.

MARNING

- Consult your dealer or a professional contractor to install the unit.

 Improper installation made on your own may cause electric shocks, fire or dropping of the unit.
- Installation work should be performed properly according to this installation manual.

Improper installation work may result in electric shocks, fire or break-down.

- Be sure to use accessories and specified parts for installation work.
 Use of unspecified parts may result in drop, fire or electric shocks.
- Install the unit properly to a place with sufficient strength to hold the weight.

If the place is not strong enough, the unit may drop and cause injury.

Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.

Power source with insufficient and improper work can cause electric shock and fire.

Shut OFF the main power source before starting electrical work. Otherwise, it could result in electric shocks, break-down or malfunction.

Do not modify the unit.
It could cause electric shocks, fire, or break-down.

Be sure to turn OFF the power circuit breaker before repairing/ inspecting the unit.

Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury.

↑ WARNING

Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak.

If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of significant deterioration of its performance or corrosion.

Do not install the unit where water vapor is generated excessively or condensation occurs.

It could cause electric shocks, fire, or break-down.

Do not use the unit in a place where it gets wet, such as laundry room.

It could cause electric shocks, fire, or break-down.

Do not operate the unit with wet hands.

It could cause electric shocks.

Do not wash the unit with water.

It could cause electric shocks, fire, or break-down.

Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.

Improper connections or fixing could cause heat generation, fire, etc.

Seal the inlet hole for remote control cable with putty.

If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

If dew or water enters the unit, it may cause screen display anomalies.

When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.

It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc.

The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.

Do not leave the remote control with its upper case removed.

If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

ACAUTION

Do not install the remote control at following places.

- (1) It could cause break-down or deformation of remote control.
 - · Where it is exposed to direct sunlight
 - Where the ambient temperature becomes 0 °C or below, or 40 °C or above
 - Where the surface is not flat
 - Where the strength of installation area is insufficient
- (2) Moisture may be attached to internal parts of the remote control, resulting in a display failure.
 - Place with high humidity where condensation occurs on the remote control
 - Where the remote control gets wet
- (3) Accurate room temperature may not be detected using the temperature sensor of the remote control.
 - Where the average room temperature cannot be detected
 - Place near the equipment to generate heat
 - Place affected by outside air in opening/closing the door
 - Place exposed to direct sunlight or wind from air-conditioner
 - Where the difference between wall and room temperature is large

To connect to a personal computer via USB, use the dedicated software.

Do not connect other USB devices and the remote control at the same time.

It could cause malfunction or break-down of the remote control/personal computer.

2. Accessories & Prepare on site

Following parts are provided.

Accessories R/C main unit, wood screw (ø3.5 x 16) 2 pcs, Quick reference

Following parts are arranged at site. Prepare them according to the respective installation procedures.

Item name	Q'ty	Remark
Switch box For 1 piece or 2 pieces (JIS C 8340 or equivalent)	1	
Thin wall steel pipe for electric appliance directly on a wall. (JIS C 8305 or equivalent)	As required	These are not required when installing directly on a wall.
Lock nut, bushing (JIS C 8330 or equivalent)	As required	
Lacing (JIS C 8425 or equivalent)	As required	Necessary to run R/C cable on the wall.
Putty	Suitably	For sealing gaps
Molly anchor	As required	
R/C cable (0.3 mm ² x 2 pcs)	As required	See right table when longer than 100 m

When the cable length is longer than 100 m, the max size for wires used in the R/C case is 0.5 mm². Connect them to wires of larger size near the outside of R/C. When wires are connected, take measures to prevent water, etc. from entering inside.

≦ 200 m	0.5 mm ² x 2 cores
≦ 300m	0.75 mm ² x 2 cores
≦ 400m	1.25 mm ² x 2 cores
≦ 600m	2.0 mm ² x 2 cores

3. Installation place

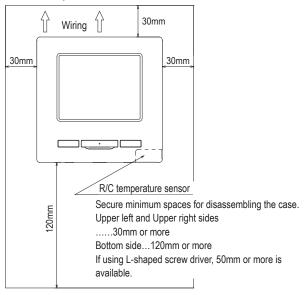
Secure the installation space shown in the figure.

For the installation method, "embedding wiring" or "exposing wiring" can be selected.

For the wiring direction, "Backward", "Upper center" or "Upper left" can be selected.

Determine the installation place in consideration of the installation method and wiring direction.

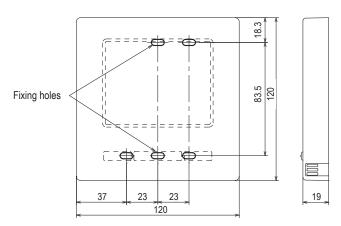
Installation space



4. Installation procedure

Perform installation and wiring work for the remote control according to the following procedure.

Dimensions (Viewed from front)



To remove the upper case from the bottom cases of R/C

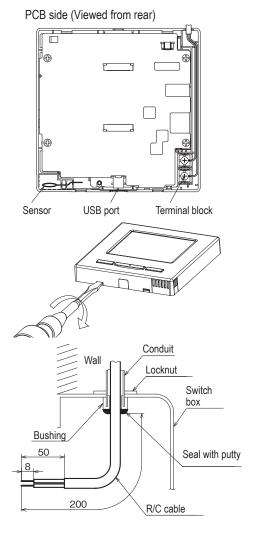
· Insert the tip of flat head screw driver or the like in the recess at the lower part of R/C and twist it lightly to remove. It is recommended that the tip of the screw driver be wrapped with tape to avoid damaging the case.

Take care to protect the removed upper case from moisture or dust.

In case of embedding wiring

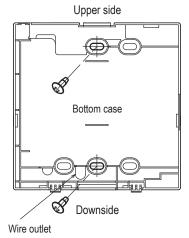
(When the wiring is retrieved "Backward")

① Embed the switch box and the R/C wires beforehand. Seal the inlet hole for the R/C wiring with putty.

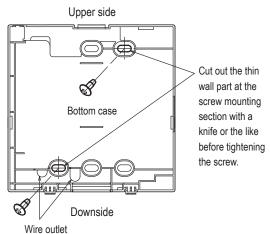


② When wires are passed through the bottom case, fix the bottom case at 2 places on the switch box.

Switch box for 1 pcs



Switch box for 2 pcs

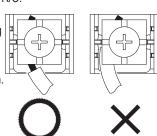


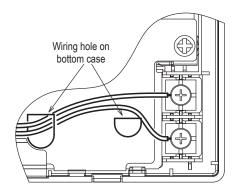
- ③ Connect wires from X and Y terminals of R/C to X and Y terminals of indoor unit. R/C wires (X, Y) have no polarity. Fix wires such that the wires will run around the terminal screws on the top case of R/C.
- 4 Install the upper case with care not to pinch wires of R/C.

Cautions for wire connection

Use wires of no larger than 0.5 mm² for wiring running through the remote control case. Take care not to pinch the sheath.

Tighten by hand (0.7 N $\,\mathrm{m}$ or less) the wire connection. If the wire is connected using an electric driver, it may cause failure or deformation.





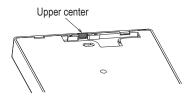
In case of exposing wiring

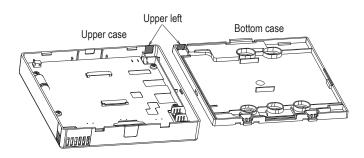
(When the wiring is taken out from the "upper center" or "upper left" of R/C)

1 Cut out the thin wall sections on the cases for the size of wire.

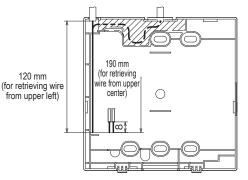
When taking the wiring out from the upper center, open a hole before separating the upper and bottom cases. This will reduce risk of damaging the PCB and facilitate subsequent work.

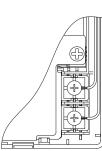
When taking the wiring out from the upper left, take care not to damage the PCB and not to leave any chips of cut thin wall inside.





- ② Fix the bottom R/C case on a flat surface with two wood screws.
- ③ In case of the upper center, pass the wiring behind the bottom case. (Hatched section)
- ④ Connect wires from X and Y terminals of R/C to X and Y terminals of indoor unit. R/C wires (X, Y) have no polarity. Fix wires such that the wires will run around the terminal screws on the top case of R/C.
- (5) Install the top case with care not to pinch wires of R/C.
- 6 Seal the area cut in 1 with putty.



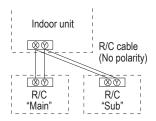


5. Main/Sub setting when more than one remote control are used

Up to two units of R/C can be used at the maximum for 1 indoor unit or 1 group.

One is main R/C and the other is sub R/C

Operating range is different depending on the main or sub R/C.



Set the "Main" and "Sub" as described at Section 8.

R/C operation	าร	Main	Sub	
Run/Stop, Ch Change flap speed operat	nange set ter direction, Au ions	0	0	
High power o	peration, En	ergy-saving operation	0	0
Silent mode of	control		0	×
Useful	Individual f	ap control	0	×
functions	Anti draft se	etting	0	×
	Timer		0	0
	Favorite se	tting	0	0
	Weekly tim	er	0	×
	Home leave	e mode	0	×
	External ve	External ventilation		0
	Select the language		0	0
Energy-savin	g setting		0	×
Filter	Filter sign reset		0	0
User setting	Initial settings		0	0
	Administrator settings	Permission/ Prohibition setting	0	×
		Outdoor unit silent mode timer	0	×
		Setting temp. range	0	×
		Temp. increment setting	0	×
		Set temp. display	0	0
		R/C display setting	0	0
		Change administrator password	0	0
		F1/F2 function setting	0	0

o: operable x: not operable					
R/C operation	ns		<u> </u>	Main	Sub
Service Installation		Installation date		0	×
setting	settings	Compan	y information	0	0
		Test run		0	×
		Static pr	essure adjustment	0	×
		Change	auto-address	0	×
		Address	Address setting of main IU		×
		IU back-	up function	0	×
		Infrared setting	sensor (motion sensor)	0	×
	R/C function	Main/Su	b of R/C	0	0
	settings	Return a	ir temp.	0	×
		R/C sen	sor	0	×
		R/C sen	sor adjustment	0	×
		Operation	n mode	0	×
		°C / °F		0	×
		Fan spe	ed	0	×
		External input Upper/lower flap control Left/right flap control Ventilation setting Auto-restart		0	×
				0	×
				0	×
				0	×
				0	×
		Auto ten	np. setting	0	×
		Auto fan speed		0	×
	IU settings			0	×
	Service &	IU address		0	0
	Maintenance	Next service date		0	×
		Operation data		0	×
		Error	Error history	0	0
		display	Display/erase anomaly data	0	×
			Reset periodical check	0	0
		Saving IU settings		0	×
		Special	Erase IU address	0	×
		sėttings	CPU reset	0	0
			Restore of default setting	0	×
			Touch panel calibration	0	0
Indoor u		nit capacity display	0	×	
			. , , ,		

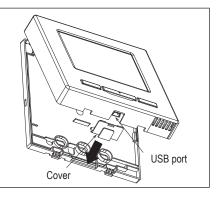
Advice: Connection to personal computer

It can be set from a personal computer via the USB port (mini-B). Connect after removing the cover for USB port of upper case.

Replace the cover after use.

Special software is necessary for the connection.

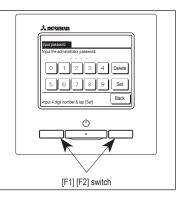
For details, view the web site or refer to the engineering data.



Advice: Initializing of password

Administrator password (for daily setting items) and service password (for installation, test run and maintenance) are used.

- oThe administrator password at factory default is "0000". This setting can be changed (Refer to User's Manual).
- If the administrator password is forgotten, it can be initialized by holding down the [F1] and [F2] switches together for five seconds on the administrator password input screen.
- Service password is "9999", which cannot be changed.
 When the administrator password is input, the service password is also accepted.



PJA012D730A

(2) Model RC-E5

Read together with indoor unit's installation manual.

MARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
 - Loose connection or hold will cause abnormal heat generation or fire.
- Make sure the power source is turned off when electric wiring work.
 Otherwise, electric shock, malfunction and improper running may occur.

•

ACAUTION

- Do not install the remote control at the following places in order to avoid malfunction.
 - (1) Places exposed to direct sunlight (4) Hot surface or cold surface enough to generate condensation
 - (5) Places exposed to oil mist or steam directly
 - (2) Places near heat devices (5) Places exposed to
 - (3) High humidity places (6) Uneven surface



Do not leave the remote control without the upper case.

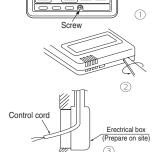
In case the upper cace needs to be detached, protect the remote control with a packaging box or bag in order to keep it away from water and dust.



Accessories	Remote control, wood screw (ø3.5×16) 2 pieces	
Prepare on site Remote control cord (2 cores) the insulated thickness in 1mm or more.		
	[In case of embedding cord] Erectrical box, M4 screw (2 pieces)	
	[In case of exposing cord] Cord clamp (if needed)	

Installation procedure

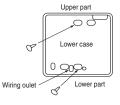
- Open the cover of remote control, and remove the screw under the buttons without fail.
- ② Remove the upper case of remote control. Insert a flat-blade screwdriver into the dented part of the upper part of the remote control, and wrench slightly.

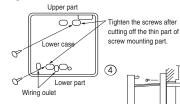


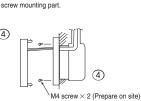
[In case of embedding cord]

3 Embed the erectrical box and remote control cord beforehand.

Prepare two M4 screws (recommended length is 12-16mm) on site, and install the lower case to erectrical box. Choose either of the following two positions in fixing it with screws.



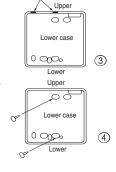




- S Connect the remote control cord to the terminal block. Connect the terminal of remote control (X,Y) with the terminal of indoor unit (X,Y). (X and Y are no polarity)
- Install the upper case as before so as not to catch up the remote control cord, and tighten with the screws.

[In case of exposing cord]

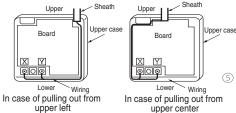
- ③ You can pull out the remote control cord from left upper part or center upper part. Cut off the upper thin part of remote control lower case with a nipper or knife, and grind burrs with a file etc.
- $\ensuremath{\textcircled{4}}$ Install the lower case to the flat wall with attached two wooden screws.



5 Connect the remote control cord to the terminal block.

Connect the terminal of remote control (X,Y) with the terminal of indoor unit (X,Y). (X and Y are no polarity)

Wiring route is as shown in the right diagram depending on the pulling out direction.



The wiring inside the remote control case should be within 0.3mm² (recommended) to 0.5mm². The sheath should be peeled off inside the remote control case.

The peeling-off length of each wire is as below.

	Pulling out from upper left	Pulling out from upper center
ı	X wiring: 215mm	X wiring: 170mm
ı	Y wiring: 195mm	Y wiring: 190mm



- Install the upper case as before so as not to catch up the remote control cord, and tighten with the screws.
- In case of exposing cord, fix the cord on the wall with cord clamp so as not to slack.

Installation and wiring of remote control

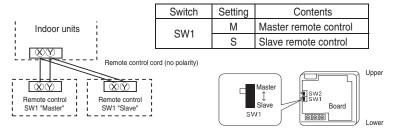
- ① Wiring of remote control should use 0.3mm² × 2 cores wires or cables. (on-site configuration)
- 2 Maximum prolongation of remote control wiring is 600 m.

If the prolongation is over 100m, change to the size below.

But, wiring in the remote control case should be under 0.5mm². Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

Master/ slave setting when more than one remote controls are used

A maximum of two remote controls can be connected to one indoor unit (or one group of indoor units.)



Set SW1 to "Slave" for the slave remote control. It was factory set to "Master" for shipment.

Note: The setting "Remote control sensor enabled" is only selectable with the master remote control in the position where you want to check room temperature.

The air-conditioner operation follows the last operation of the remote control regardless of the master/ slave setting of it.

The indication when power source is supplied

When power source is turned on, the following is displayed on the remote control until the communication between the remote control and indoor unit settled.

At the same time, a mark or a number will be displayed for two seconds first.

This is the software's administration number of the remote control, not an error cord.



When remote control cannot communicate with the indoor unit for half an hour, the below indication will appear

Check wiring of the indoor unit and the outdoor unit etc.



The range of temperature setting

When shipped, the range of set temperature differs depending on the operation mode as below.

Heating: 16-30°C (55-86°F)

Except heating (cooling, fan, dry, automatic): 18-30°C (62-86°F)

●Upper limit and lower limit of set temperature can be changed with remote control.

Upper limit setting: valid during heating operation. Possible to set in the range of 20 to 30°C (68 to 86°F). Lower limit setting: valid except heating (automatic, cooling, fan, dry) Possible to set in the range of 18 to 26°C (62 to 79°F).

When you set upper and lower limit by this function, control as below.

 When @TEMP RANGE SET, remote control function of function setting mode is "INDN CHANGE" (factory setting), [If upper limit value is set]

During heating, you cannot set the value exceeding the upper limit.

[If lower limit value is set]

During operation mode except heating, you cannot set the value below the lower limit.

2. When ② TEMP RANGE SET, remote control function of function setting mode is "NO INDN CHANGE" [If upper limit value is set]

During heating, even if the value exceeding the upper limit is set, upper limit value will be sent to the indoor unit. But, the indication is the same as the temperature set.

[If lower limit value is set]

During except heating, even if the value lower than the lower limit is set, lower limit value will be sent to the indoor unit. But, the indication is the same as the temperature set.

How to set upper and lower limit value

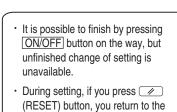
1. Stop the air-conditioner, and press (SET) and (MODE) button at the same time for over three seconds .

The indication changes to "FUNCTION SET ▼".

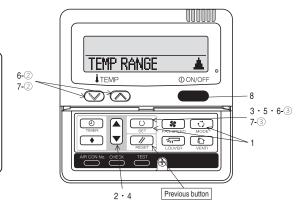
- 2. Press ▼ button once, and change to the "TEMP RANGE ▲ " indication.
- 3. Press (SET) button, and enter the temperature range setting mode.
- 4. Select "UPPER LIMIT ▼" or "LOWER LIMIT ▲" by using ▲ ▼ button.
- 5. Press (SET) button to fix.
- 6. When "UPPER LIMIT ▼" is selected (valid during heating)
 - ① Indication: " $\bigcirc \lor \land$ SET UP" \rightarrow "UPPER 30°C \lor "

 - ③ Press ◯ (SET) button to fix. Indication example: "UPPER 26°C" (Displayed for two seconds)

 After the fixed upper limit value displayed for two seconds, the indication will return to "UPPER LIMIT ▼".
- 7. When "LOWER LIMIT ▲" is selected (valid during cooling, dry, fan, automatic)
 - ① Indication: " \bigcirc $\lor \land$ SET UP" \rightarrow "LOWER 18°C \land "
 - ② Select the lower limit value with temperature setting button $\boxed{\lor}$ $\boxed{\land}$. Indication example: "LOWER 24°C \lor \land " (blinking)
 - ③ Press (SET) button to fix. Indication for example: "LOWER 24°C" (Displayed for two seconds) After the fixed lower limit value displayed for two seconds, the indication will return to "LOWER LIMIT ▼".
- 8. Press ON/OFF button to finish.



previous screen.



The functional setting

The initial function setting for typical using is performed automatically by the indoor unit connected, when remote control and indoor unit are connected.

As long as they are used in a typical manner, there will be no need to change the initial settings. If you would like to change the initial setting marked "C", set your desired setting as for the selected item. The procedure of functional setting is shown as the following diagram.

[Flow of function setting] Record and keep the Consult the technical data etc. for each control details Stop air-conditioner and press

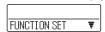
O.(SET) + O.(MODE) buttons
at the same time for over three seconds

Note 1: The initial setting marked " ** " is decided by connected indoor and outdoor unit, and is automatically defined as following table. ndoor and outdoor unit, and is automatically defined as I Model
"Auto-RIN" mode selectable indoor unit. Indoor unit without "Auto-RIN" mode Indoor unit with two or three step of air flow setting Indoor unit with only one of air flow setting Indoor unit with automatically swing louver Indoor unit without automatically swing louver Indoor unit with three step of air flow setting Indoor unit with three step of air flow setting Indoor unit with two step of air flow setting Function No. Remote control function02 AUTO RUN SET Remote control function06 Remote control function07
Remote control function13 LOUVER SW | Indoor unit with three step of air flow setting | IHI-NID-LID | Indoor unit with three step of air flow setting | IHI-NID | Indoor unit with two step of air flow setting | IHI-NID | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IF MN 57830 | Indoor unit with only one of air flow setting | IT MN 57830 | Indoor unit with only one of air flow setting | IT MN 57830 | Indoor unit with only one of air flow setting | IT MN 57830 | Indoor unit with only one of air flow setting | IT MN 57830 | Indoor unit with only one of air flow setting | IT MN 57830 | Indoor unit with only one of air flow setting | IT MN 57830 | Indoor unit with only one of air flow setting | IT

	FUNCTION SET ▼								
			No. are indicated only whe	n	Note2: Fan setting of *HI		r unit air flow set	tina	
	(Indoor unit func	tion) I/U FUNCTION A plural indoo	Function		Fan tap	2 (1.8 - 24 - 24 - 24)		Rest - Re(Sat -
		1/∪000 ▲	02 FAN SPEED SET	setting	FAN STANDARD	UH - Hi - Me - Lo	Hi - Me - Lo	Hi - Lo	Hi - N
	Validate setting of ESP:External Static Pressu Invalidate setting of ESP	I/U001 ≠ I/U002 ≠ I/U003 Φ		STANDARD X HIGH SPEED 1 X HIGH SPEED 2	SPEED HIGH SPEED1.2		UH - Hi - Me	UH - Me	UH - I
1*		I/0004 Φ	03 FILTER SIGN SET	TINDICATION OFF	Initial function setting of s	ome indoor unit is "HIGH SP	PEED*.		_
In Lo	- Automatical operation is impossible	To set other indoor unit, press		TYPE 2	he filter sign is indicated af he filter sign is indicated af he filter sign is indicated af	er running for 600 hours.			
ID O	Tomporatare detailing battern to not wenting	AIR CON No. button, which allows you to go back to the indoor		TYPE 4	he filter sign is indicated af ompulsion after 24 hours.	er running for 1000 hours, the	hen the indoor unit	will be stopp	ed by
D O		unit selection screen (for example: I/U 000 ▲).	04 동구POSITION	У	you change the indoor fun ou must change the remote ou can select the louver st	control function "14 57 PC	OSITION" according	gly.	
D O	On/Off button is not working		05 EXTERNAL INPUT		he louver can stop at any p				
.ID *	Fan speed button is not working		06 памличанским мониции	PULSE INPUT					
ID ×	Louver button is not working		07 TEMERGENCY STOP	INVALID O	ermission/prohibition contr	ol of operation will be valid.			
	Louver button is not working		107 TOURISHOUSE STOR	INVALID					
ID O	Timer button is not working			VALID V	Vith the VRF series, it is us When stop signal is inputed	ed to stop all indoor units cor from remote on-off terminal	nnected with the sa "CNT-6", all indoor	ame outdoor units are sto	unit imm pped imi
10									
	Remote thermistor is working.					.0°C increase in temperature			
)tc	Remote thermistor is working, and to be set for product Remote thermistor is working, and to be set for product	ing +3.0 C increase in temperature. ing +2.0 C increase in temperature.	OR 1 × SP OFFSET	OFFSET +2.05 T	o be reset for producing +2 o be reset for producing +1	.0°C increase in temperature .0°C increase in temperature	e during heating.		
30	Remote thermistor is working, and to be set for product	ing +1.0°C increase in temperature.	00 111001	NO OFFSET	o be received producing 11	.o o morodoo in temperature	o during ricuming.		
06	Remote thermistor is working, and to be set for product Remote thermistor is working, and to be set for product	ing -1.0°C increase in temperature.		OFFSET +2.05				74	
)c	Remote thermistor is working, and to be set for product	ing -3.0°C increase in temperature.		0FFSET +1.5%	o be reset producing +2.0 (o be reset producing +1.5)	Cincrease in return air temp Cincrease in return air temp	erature of indoor u erature of indoor u	nit. nit	
			09 RETURN AIR TEMP	OFFSET +1.0%	o be reset producing +1.0°	C increase in return air temp	erature of indoor u	nit.	
0				NO OFFSET O					
	-				o be reset producing -1.0°C o he reset producing -1.5°C	increase in return air tempe increase in return air tempe	erature of indoor up	nit. sir	
0	h	erior and the contract of	- International Internation	OFFSET -2.05	o be reset producing -2.0°0	increase in return air tempe	erature of indoor un	nit.	
	In case of Single split series, by connecting ver indoor printed circuit board (in case of VRF ser indoor printed circuit board), the operation of v	ies, by connecting it to CND of the	10 * FAN CONTROL	LOW FAN SPEED V	When heating thermostat is When heating thermostat is	OFF, fan speed is low speed OFF, fan speed is set speed	i. I.		
-	operation of indoor unit. In case of Single split series, by connecting ventilation circuit board (in case of VRF series, by connecting it to	device to CNT of the indoor printed		INTERMITTENCE V	When heating thermostat is	OFF, fan speed is operated OFF, the fan is stopped.			
	board), you can operate /stop the ventilation device in	dependently by (VENT) button.		V	When the remote thermistor	is working, "FAN OFF" is se the indoor unit's thermistor i	t automatically.		
	If you change the range of set temperature, the	indication of cat temperature		-	U IIULSEL FAN OFF WIEII	the mood units thermistor i	is working.		
0	will vary following the control.	·	11 FROST PREVENTION TEMP		hange of indoor heat exchi	anger temperature to start fro	ost prevention con	trol.	
SE .	If you change the range of set temperature, the	indication of set temperature		TEMP HIGH TEMP LOW					
	will not vary following the control, and keep the			TILIII LOW					
×		क्षेत्रता - क्षेत्रता (or क्षेत्रता - क्षेत्रता - क्षेत्रता - क्षेत्रता - क्षेत्रता - क्षेत्रता - क्षेत्रता -	12 FROST PREVENTION CONTROL	Jean control on 10	Vorking only with the Single	split series.			
	Air flow of fan becomes the two speed of % ant - Air flow of fan becomes the two speed of % ant -	खा क्षेत्रो.		FAN CONTROL ON O T	o control frost prevention, t	ne indoor fan tap is raised.			
×	Air flow of fan is fixed at one speed.		13 DRAIN PUMPLINK						
	If you change the remote controller function *14	4 ⇒72 POSITION",		SO C C	Prain pump is run during co Prain pump is run during co	oling and dry.			
	you must change the indoor function "04 "57-"F	POSITION" accordingly.		© O AND XX AND RE	rain pump is run during co	oling, dry, heating and fan.			
DP O	You can select the louver stop position in the fo	our.	14 S FAN REMAINING	© Ó AND≅ E	rain pump is run during co	oling, dry and fan.			
	The louver can stop at any position.		14 Lecturismum	NO REMAINING A	fter cooling is stopped is O	FF, the fan does not perform	extra operation.		
* *				0.5 HOUR A	fter cooling is stopped is O	FF, the fan perform extra op	eration for half an	hour.	
	1				iver cooling is stopped is O ifter cooling is stopped is O	FF, the fan perform extra op FF, the fan perform extra op	eration for six hour	s.	
0	If you input signal into CnT of the indoor printed indoor unit will be operated independently according to the independent of t	ed circuit board from external, the	15 × FAN REMAINING			eating thermostat is OFF, th			eration
	If you input into CnT of the indoor printed circuit bo	pard from external, all units which		0.5 HOUR A	fter heating is stopped or h	eating thermostat is OFF,the	fan perform extra	operation for	r half an l
	connect to the same remote control are operated a	according to the input from external.				eating thermostat is OFF,the			
F O			16 * FAN INTERNITTENCE		iner neating is stopped or h	eating thermostat is OFF, th	e ian periorm extra	s operation to	1 PIX LION
	In normal working indication, indoor unit temper			NO REMAINING	huina haatina is star 4 4	handing thermostat is OFF	the les series: '	ormittant c	votion f
	(Only the master remote control can be indica	ted.)		ZOBLINUTY SBLINUTY	ith low fan speed after twe	heating thermostat is OFF, hty minutes' OFF.			
f O	Heating preparation indication should not be in	ndicated.					the fan perform int	ermittent ope	ration fo
			17 PRESSURE CONTROL	CTANDADD					
<u> </u>	Temperature indication is by degree C Temperature indication is by degree F			TYPEI X C	Connected "OA Processing"	type indoor unit, and is auto	matically defined.		
		ON/OFF button							
F	0	Temperature indication is by degree C		Temperature indication is by degree C Temperature indication is by degree F ONOFF button	Heating preparation indication should not be indicated. Temperature indication is by degree C Temperature indication is by degree F ON/OFF button	Healing preparation indication should not be indicated. Temperature indication is by degree C Temperature indication is by degree F ONIOFF button TONIOFF button	Heating preparation indication should not be indicated. Temperature indication is by degree C Temperature indication is by degree F ONOFFI button	Heating preparation indication should not be indicated. Temperature indication is by degree C Temperature indication is by degree F ONOFF button ONOFF Dutton	Healing preparation indication should not be indicated. Temperature indication is by degree C Temperature indication is by degree F ONOFF button To PRESSIRE OWNER. The temperature indication is by degree F ONOFF button

How to set function

Stop air-conditioner and press ○ (SET) (MODE) buttons at the same time for over three seconds, and the "FUNCTION SET ▼" will be displayed.



- 2. Press (SET) button.
- Make sure which do you want to set, "

 FUNCTION ▼"

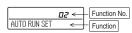
 (remote control function) or "I/U FUNCTION ▲" (indoor unit function).
- Press ▲ or ▼ button.
 Selecct "■ FUNCTION ▼" (remote control function) or "I/U FUNCTION ▲" (indoor unit function).



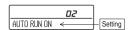
5. Press (SET) button.

- 6. [On the occasion of remote control function selection]

 - Press ▲ or ▼ button. *No. and function*are indicated by turns on the remote control function table, then you can select from them. (For example)



Press ()(SET) button. The current setting of selected function is indicated. (for example) "AUTO RUN ON" — If "02 AUTO RUN SET" is selected



④ Press ▲ or ▼ button. Select the setting.



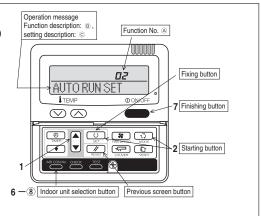
⑤ Press 〇 (SET)

"SET COMPLETE" will be indicated, and the setting will be completed.

Then after "No. and function" indication returns, Set as the same procedure if you want to set continuously ,and if to finish, go to 7.



7. Press ON/OFF button. Setting is finished.



[On the occasion of indoor unit function selection]

"DATA LOADING" (Blinking for 2 to 23 seconds to read the data)
 Indication is changed to "02 FAN SPEED SET".
 Go to ②.

[Note]

 If plural indoor units are connected to a remote control, the indication is "I/U 000" (blinking) ← The lowest number of the indoor unit connected is indicated.



- (2) Press ▲ or ▼ button. Select the number of the indoor unit you are to set If you select "ALL UNIT ▼", you can set the same setting with all unites.
- (3) Press O (SET) button.
- ② Press ▲ or ▼ button.

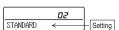
"No. and function" are indicated by turns on the indoor unit function table, then you can select from them.

(For example)



③ Press O (SET) button.

The current setting of selected function is indicated. (For example) "STANDARD" ← If "02 FAN SPEED SET" is selected.



- ④ Press ▲ or ▼ button. Select the setting.
- Press ()(SET) button. "SET COMPLETE" will be indicated, and the setting will be completed.

Then after "No. and function" indication returns, set as the same procedure if you want to set continuously , and if to finish, go to 7.



When plural indoor units are connected to a remote control, press the AIR CON No. button, which allows you to go back to the indoor unit selection screen. (example "I/U 000 ▲")

...

**

When plural indoor units are connected to a remote control, press the AIR CON No.

**

Indoor units are connected to a remote control, press the AIR CON No.

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Indoor units are connected to a remote control, press the AIR CON No.

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Indoor units are connected to a remote control, press the AIR CON No.

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Indoor units are connected to a remote control, press the AIR CON No.

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Indoor units are connected to a remote control, press the AIR CON No.

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Indoor units are connected to a remote control, press the AIR CON No.

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Indoor units are connected to a remote control, press the AIR CON No.

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Indoor units are connected to a remote control, press the AIR CON No.

**

Indoor units are connected to a remote control, press the AIR CON No.

**

Indoor units are connected to a remote control

- It is possible to finish by pressing ON/OFF button on the way, but unfinished change of setting is unavailable.
- During setting, if you press (RESET) button, you return to the previous screen.
- Setting is memorized in the control and it is saved independently of power failure.

[How to check the current setting]

When you select from "No. and funcion" and press set button by the previous operation, the "Setting" displayed first is the current setting.

(But, if you select "ALL UNIT $\ensuremath{\mathbf{v}}$ ", the setting of the lowest number indoor unit is displayed.)

1.10.4 Installation of outdoor unit Models FDC100-140VNA, 100-140VSA

PSC012D106

100VNA-140VNA,100VSA-140VSA Designed for R410A refrigerant Inverter driven split PAC

○This installation manual deals with outdoor units and general installation specifications only. For indoor units, refer to the respective installation manuals supplied with the units.
○When install the unit, be sure to check whether the selection of installation place, power source specifications, usage limitation (piping length, height

Check before installation work

- Model name and power source Refrigerant piping length
- Piping, wiring and miscellaneous small parts Indoor unit installation manual
 - The precautions described below are divided into <u>△WARNING</u> and <u>△CAUTION</u>. The matters with possibilities leading to serious consequences such as death or serious personal injury due to erroneous handling are listed in the $\boxed{\Delta WARNING}$ and the matters with possibilities leading to personal injury or damage of the unit due to erroneous handling including probability leading to serious consequences in some cases are listed in $\boxed{\Delta CAUTION}$. These are very important precautions for safety. Be sure to observe all of them without fail.

● We recommend you to read this "SAFETY PRECAUTIONS" carefully before the installation work in order to gain full advantage of the functions of the unit and to

avoid malfunction due to mishandling.

SAFETY PRECAUTIONS

differences between indoor and outdoor units, power source voltage and etc.) and installation spaces.

The meaning of "Marks" used here are as shown below Never do it under any circumstance.

Always do it according to the instruction

For 3 phase power source outdoor unit,EN61000-3-2 is not applicable if consent by the utility company or nortification to the utility company is given before usage.
 a) a phase power source unit, both indoor and outdoor, is suitable for installation in a commercial and light industrial environment. If installed as a house-hold appliance it could cause electromagnetic interference.
 5 and 6 He units of single phase power source are equipment complying with IEC 61000-3-12.
 Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owners is manual.

eeep the installation manual together with owner's manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user.

installation must be carried out by the qualified installer.
 if you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system

Use the original accessories and the specified components for installation.
 I parts original accessories and the specified components for installation.
 I parts order than those prescribed by us see used, it may cause fail of the unit, water leats, electric shocks, fire, retrigerant leat, substandard performance, control failure and prescribing in flags.

Install the system in full accordance with the instruction manual.
 Incorrect installation may cause bursts, personal injury, water leaks, el

the expert about prevention measures. If the density of refrigerant exceeds the limit in the event of leakage, lack of oxygen can occur, which

When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage accordance with ISOS148.

• Tighten the flare nut by using double spanners and torque wrench according to prescribed method. Be sure not to tighten the flare nut too much. fare connection or damage on the flare part by tightening with excess torque can cause burst or refrigerant leaks which result in lack of oxygen.

WARNING

If the compressor is operated in state of opening service valves before competed connection of refrigerant plaining work, you may incur frost blue or injury from an abrupt refrigerant outflow and air can be sucked into refrigerant circuit, which can cause busst or personal njury due to annously high pressure in the refrigerant. Do not open the service valves for liquid line and gas line until completed refrigerant piping work, air tightness test

 Be sure to switch off the power source in the event of installation, inspection or servicing.
 If the power source is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan Do not perform any change of protective device itself or its setup condition.
 The forced operation by short-circuiting protective device of pressure switch and temperature control or the use of non Only use prescribed optional parts. The installation must be carried out by the qualified installer.
 If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire

 Stop the compressor before closing valve and disconnecting refrigerant pipes in case of pump down operation.
 If disconnecting refigerant pipes in siste of opening service valves before compressor sopping, you may incur frost bile or injury from an abunty fringerant outflow and air can be sucked, which can cause bust or personal injury due to amonatously injury from an abunty fringerant outflow and air can be sucked, which can cause bust or personal injury due to amonatously or Consult the dealer or an expert regarding removal of the unit.
 Incorrect installation can cause water leaks, electric shocks or fire.

Heaqu up the unit at the specified points with ropes which can support the weight in lifting for portage. And to avoid joiling out of alignment,
be sure to hasy up the unit at 4-point support.
 A in myoper manner of potage scales? Support can cause death or serious personal injury due to falling of the unit

 Install the unit in a location with good support.
 Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury. Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds.
 Unsuitable installation locations can cause the unit to fall and cause material damage and personal injur

After completed installation, check that no refrigerant leaks from the system.
 If refrigerant leaks into the room and comes into contact with an oven or other hot surface, poisonous gas is produced.

Ventitate the working area well in the event of refrigerant leakage during installation.
 If the refrigerant comes into contact with naked flames, poisonous gas is produced.

The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national
winting gradiation," and the system must be connected to the dedicated circuit. Four each continuation is sufficient capacity and incorrect function done by impropry work can cause electric shocks and fine.

Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks.

Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work.
 Unconformable cables can cause electric leak, anomalous heat production or fire.

Be sure to shut off the power before starting electrical work.
 Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment.

Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly, incorrect installation may result in overheating and fire.

Do not perform brazing work in the airtight room
It can cause lack of oxygen.

mountings can cause anomalous heat production or fire.

Use the prescribed pipes, flare nuts and tools for R410A.
 Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit.

 Ensure that no air enters in the refrigerant circuit when the unit is installed and removed.
 If are enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury. Be sure to wear protective goggles and gloves while at work. injury from an abrupt refrigerant outfl high pressure in the refrigerant circuit

 Do not run the unit with removed panels or protections.
 Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric Do not perform any repairs or modifications by yourself. Consult the dealer if the unit requires repair.
 If you repair or modify the unit, it can cause water leaks, electric shocks or fire. Be sure to fix up the service panels.
 Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water.

Do not process or splice the power cord, or share the socket with other power plugs.
 This may cause fire or electric shock due to defecting contact, defecting insulation and over-current etc.

Do not bundle or wind or process the power cord. Do not deform the power cord by treading it.
This may cause fire or heating.

-245-

	0 🔛	CAUTION	
	 Carry out the electrical work for ground heat with care. Dond connect the gound lead the gost flaw, when line, lighting conductor or belightone line's ground lead, incorrect grounding can cause unit faults such as electric stocks due to struct-requiring, liver connecting grounding where to a gas pige because if gas basis, could cause explosion or gritton. 	 Do not install the unit in the locations listed below. Locations where earning metal powder or any powder is floating; Locations where earns businenses that can after the unit such as supplied gas, choirde gas, acid and alkaline can occur, Locations where any sustemes that can after the unit such as supplied gas, choirde gas, acid and alkaline can occur. 	, chloride gas, acid and alkaline can occur.
E	Use the circuit breaker for all pole with correct capacity. Using the incorrect circuit breaker, it can cause the unit mafunction and fire.	 Vehicles and ships Locations where cosmetic or special sprays are often used. 	1
•	 Install solator or disconnect switch on the power source wiring in accordance with the local codes and regulations. The isolator should be locked in accordanced with BH60204-1. 	 Locations with other exposure of oil mist and steam such as wither and machine plant. Locations where any machines which generate high frequency harmonics are used. rocations with eathy atmospheres such as creatines. 	nine pikin. Used.
	 Take care when carrying the unit by hand. If the nutweight more that 2004, it must be carried by the or more persons. Do not carry by the pissuic straps, always use the carry handle when carrying the unit by hand Use goves to infinitive the risk of custs by the adminimum fire. 	 Locations with heavy snow (if installed, be sure to provide base flame and snow hood mentioned in the manual) Locations with the rult is exposed to coliming snow Locations when the nult is exposed to coliming snow Locations find attuck (more than 1000m high) 	w hood mentioned in the manual)
	 Dispose of any packing materials connectly. Any remaining properties or case personal injury as it contains reals and wood. And to avoid danger of sufficiation, be sure to keep the plastic warpize away from children and to dispose after text it up. 	 Locations with ammonic atmospheres (e.g. organic fertilizer). Locations with calcium chloride (e.g. snow melting agent). Locations where heat radiation from other heat source can affect the unit 	
	 Pay attention not to damage the drain pan by weld spatter when welding work is done near the indoor unit. If weld spatter intend in the indoor unit during welding work, it can cause pin-tole in drain para and result in water leadage, to prevent such damage, leap the indoor unit in its packing or corent. 	 Locations without good air droutation. Locations with any obstacles which can prevent inlet and outlet air of the unit is confined without any obstacles within the concerning of the confidence. 	ión de la companya de la companya de la companya de la companya de la companya de la companya de la companya de
	 Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them. Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables. 	 Locations where snot claud to all cool of a financial industry to unit or the clauding where strong air blows against the air outlet of outdoor unit Locations where something located above the unit could fall. 	tion)
	 Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work. If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents. 	It can cause remarkable decrease in performance, corrosion and damage of components, malfunction and fine. — no not install the particle with the locations listed halow.	mponents, malfunction and fire.
	 Perform installation work properly according to this installation manual. Improper installation can cause abrormal whatkons or increased noise generation. 	 Locations where descripted not an oroperating sound or but born with can bother relighborhood. Locations where descripted had an oroperating sound or but born with can bother relighborhood. Locations where outlet are of the outdoor unit blows directly to an animal or plants. The outlet air can affect adversely to the plant etc. 	bother neighborhood. The outlet air can affect adversely to the plant etc.
	• After maintenance, all wiring, wining ties and the like, should be returned to their original state and wining route, and the necessary clearance from all metal parts should be secured.	 Locations where vibration can be amplified and transmitted due to insufficient strength of structure. Locations where vibration and operation sound generated by the outdoor unit can affect seriously. (on the wall or at the place near bed room) 	strength of structure. can affect seriously, (on the wall or at the place near bed room)
(Earth leakage breaker must be installed. If the earth leakage breaker is not installed, it can cause fire or electric shocks. 	 Locations where an equipment affected by high harmonics is placed. (IV set or radio receiver is placed within 5m) Locations where drainage cannot not of safely. It-one affect enrounding common and course a claim. 	r radio receiver is placed within 5m)
<u>) </u>	 Do not use any materials other than a fuse with the correct rading in the location where fuses are to be used. Connecting the circuit with copper wire or other metal thread can cause unit failure and fire. 	real aires, and when the prevention dance commit. The property of the prevention of animals, plants or art. From cases the demand of the illens.	ecision instruments and preservation of animals, plants or art.
	Do not install the unit near the location where teakage of combustible gases can occur. It leaved gases accumulate around the unit, it can cause fire.	Do not touch any buttons with wet hands. I can reaso plarify chocks.	
	 Un our inseal mer un where contraver gas shard as surface and gas etc.) or combustioning gas shard as unimer and perforeum gases) can accumulate or collect, or where widate combustible bushateness are handled. Corrosive gas can cause corrosion of heat excitations, breakage of plastic parts and etc. And combustible gas can cause fire. 	 Do not brush any refrigerant pipes with your hands when the system is in operation. During operation the refrigerant pipes become activemely hot or extremely odd depending the operating condition, and it can cause burn injury or frost injury. 	operation. depending the operating condition, and it can cause burn injury or frost injury.
	 Secure a space for installation, inspection and maintenance specified in the manual. Insufficient space can result in accident such as personal injury due to falling from the installation place. 	Do not clean up the unit with water. It can cause electric shocks.	
	 When the outdoor unit is institled on a roof or a high place, provide permanent ladders and handralis about the outdoor unit if softly it scribbly scribbles are not provided, it can cause presonal rightly due to falling from the restalation place. 	 Do not operate the outdoor unit with any article placed on it. You may incur property damage or personal injure from a fall of the article. 	
	 Up not install not use the system doces to the equipment that generalese decroinagapietic helds or high inequency harmonics. Equipment such as inerties standby generators, medical high frequency is and decommunication equipments can affect the system; and coalese manufacture and such medical equipment and relative manufacture and the equipment and relative the equipment and obstance in register and beautiful medical for each equipment, and obstanct its function of cause primming. 	Do not step onto the outdoor unit. You may incur injury from a drop or fall.	
	 Do not install the outdoor unit in a location where insects and small animats can inhabit. Insects and small animats can enter the electric parts and cause damage or fire, instruct the user to keep the surroundings clean. 	 Do not touch the suction or aluminum fin on the outdoor unit. This may cause injury. 	
	 Do not use the base flame for outdoor unit which is corroded or damaged due to long periods of operation. Using an old and damage base flame can cause the unit talling down and cause personal injury. 	 Do not put anything on the outdoor unit and operating unit. This may cause damage the objects or injury due to falling to the object. 	

		Dedicated R410A tools
	a)	Gauge manifold
Tho	(q	Charge hose
cated	(0	Electronic scale for refrigerant charging
	(р	Torque wrench
	(ә	Flare tool
	(J	Protrusion control copper pipe gauge
tion)	(6	Vacuum pump adapter
	(Ч	Gas leak detector

		Dedicated R410A to
Do not use any enrigerant other than R410A, M410A will rise to pressure about 1.6 times higher than that of a conventional reingerant.	a)	Gauge manifold
A Children Containing Holdy Ras a pilk Indication make to the contract of the containing the containing the containing of a worm referenced for the containing of a worm referenced for the containing of a worm referenced for the containing of a worm referenced for the containing the containing of a worm referenced for the containing the containing the containing of a worm referenced for the containing thas a containing the containing the containing the containing the	(q	b) Charge hose
unic designed for n410A has a ocessed dimension of the flared	(Э	Electronic scale for refriger
R410A tools isked in the table on the night before installing or servicing this unit.	(P	Torque wrench
Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to charge, which results in performance degradation.	(e)) Flare tool
• In charging refrigerant, always take it out from a cylinder in the liquid phase.	J.	Protrusion control copper pi
● All indoor units must be models designed exclusively for R410A. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected into the system, will impair proper system operation)	()	g) Vacuum pump adapter

Notabilia as a unit designed for R410A

1. HAULAGE AND INSTALLATION (Take particular care in carrying in or moving the unit, and always perform such an operation with two or more persons.)

⚠ CAUTION When a unit is hoisted with slings for haulage, take into consideration the offset of its gravity center position.

If not properly balanced, the unit can be thrown off-balance and fall.

1) Delivery

Deliver the unit as close as possible to the installation site before removing if from the packaging.
 When some compelling reason recestitates the urpacking of the unit before it is carried in, use withon sings or protective wood please so as not to damage the unit by ropes lifting it.

3) Selection of installation location for the outdoor unit

Walls surrounding the unit in the four sides are not acceptable.

Inter match be 1-mater of larger stage on the above s.

Where a danger of short-circuiting exists, install guide louvers.

Where a danger of short-circuiting exists, install guide louvers.

Where now now unit are installed provide sufficient intake space consciously so that short-circuiting may not occur.

Where pling srown can bury the outdoor unit, provide proper snow guards.

A barrier wall placed in front of the exhaust diffuser must not be higher than the unit.

• The right hand side of the unit as viewed from the front (diffuser side) is heavier. A person carnying the right hand side must take heed of this fact. A person carnying the left hand side must hold with his right hand the handle provided on the front panel of the unit and with his left hand the conner column section.

Portage ล 5) Installation space

- Be sure to select a suitable installation place in consideration of hollowing conditions.

 A place where it is not recorded and another the another the unit.

 A place where it is not exposed to lot states and the another the unit.

 A place where it is not exposed to lot states.

 A place where the unit is not exposed to lot states.

 A place where the unit will not be adjassed without any touche.

 A place where drain where can be disposed without any touche.

 A place where of an unit and exposed point of the states o

4) Caution about selection of installation location

(1) If the unit is installed in the area where the snow will accumulate, following measures are required. The bottom plate of unit and intake, outlet may be blocked by snow.

1.Install the unit on the base so that the bottom is higher than snow cover surface.













Since drain water generated by defrost control may freeze, following measures are required.

— Both itseached claim pipil work by using a drain blown and rain growmes, loppional jards), Refer to Drain pipiling work.]

— Recommend setting blosts control (SW3-1) and Stown Guard Fan Control (SW3-2), Refer to Setting SW3-1, SW3-2.)

— Attach heaster on a base plate on site, if there is prosshifty to freeze drain water.

In case that the product has a corrective drainage system, the drainage paths should have suitable measure against freching but be sure into the nether the material of drainage paths with heat.

(3) If the unit can be affected by strong wind, following measures are required. Strong wind can cause tendency of the nuti can be famile of the familiar for the motion, or can cause performance degradation, or can trigger anomalous stop of the unit due to failing of this pressure.

In Install the outlet air blow side of the 2 Install the outlet air blow side of 3. The unit should be installed on unit to face a wall of building, or a windlesses seeler of the unit in a position perendicular the stable and level fundation, provide a feroze or a windlesse screen. Or the direction of wind.

If the foundation is not feel fundation is not feel fundation. 3.The unit should be installed on the stable and level foundation. If the foundation is not level, tie down the unit with wires. Wind direction

Over 500 mm.



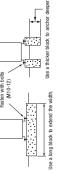
(1) Anchor bolt fixed position

6) Installation

Intake

Ouflet (service) Intake 1





Outlet 580

a

- In installing the unit, fix the unit's legs with bolts specified on the left. 200

The profusion of an anchor both on the frost side must be kept within 15 mm.

Securely install the units of their does during early quiese or strong winds, etc.

Refer to the left illustrations for information regarding concrete foundations.

Refer to the left illustrations for information regarding concrete foundations.

Resid the unit is elect area. (With a gradient of Z firm or less).

Improper installation ran result in a compressor failure, broken piping within the unit and abnormal noise generation.

7) To run the unit for a cooling operation, when the outdoor temperature is -5°C or lower.

• When the outdoor air temperature is -5°C or lower, provide a snow hood to the outdoor unit on site. So hat storp wind will not blow against the outdoor heat exchanger directly. Regarding outline of a snow hood, refer to our technical mental.

2. REFRIGERANT PIPING WORK

1) Restrictions on unit installation and use

Check the following points in light of the indoor unit specifications and the installation site.
 Observe the following restrictions on unit installation and use. Improper installation can result in a compressor failure or performance degradation.

						Marks appearing in the drawing	
Designations	One-way pipe lengt	One-way pipe length difference from the first branching point to the indoor unit	point to the indoor	nıţ		<3m	≥ 3m
MOSITICALITY	Mod	Model for outdoor units	Dimensional restrictions	Single type	Twin type	Triple type A	Triple type B
	100VNA,125VNA,100VSA,125VSA	00VSA, 125VSA	;				
one-way pipe lengino reingerantipping	140VNA, 140VSA		moc vi	_	141142	L+U+U2+U3	L+L1+L2+L3
	100VNA,125WNA,100VSA,125VSA	00VSA, 125VSA	1			1	1
Main pipe length	140VNA, 140VSA		W SOM	ı	_	7	7
One-way pipe length between the first branching point from to the second branching point	Triple type	1400MA, 140VSA	NI Si	1	ı	1	g)
	Twin type	All Models	1		11,12	ı	ı
one-way pipe lengin arest tre filst transmit point	Triple type	140WM, 140VSA	M /I	ı	1	L1, L2, L3	110
One-way pipe length from the first branching point to indoor units through the second branching point	Triple type	140VMA, 140VSA	≥ 27m	-	ı	1	La+L2, La+L3 o>
	Twin type	All Models	≥ 10m		11-12	1	
Une-way pipe length difference from the first pranching noting to the inclosuring	Wolfels from	A COLOR A ASSESSMENT	IIV	1	-	111421,112431,1134111	
	adki adui	HOWAY, HOVSA	M01 All		ı	1	L1-(La+L2),L1-(La+L3) (1)
One way pipe length difference from the second branching point to the indoor unit	Triple type	140VNA, 140VSA	™ 10m	1	ı	1	112-131
Eleantion of Moreon on Indianam in door on a take or units	When the outdoor u	When the outdoor unit is positioned higher,	≥ 50m ≈	,	,	3	3
restrict direction between 11000 and outpoin direction	When the outdoor u	When the outdoor unit is positioned lower,	M 15m				=
Elevation difference between indoor units			N 0.5m	1	-	MMN	M N2 N3

△CAUTION

The use restrictors appearing in the table above are applicable to the standard tippe size combinations shown in the table below, Where are assisting pipes with the table pipe connection, the very of the sight restrictions should apply depending on its pipe size. For more information, see "6. URILEATION OF EXSTING FPNG." — With the triple pipe connection, the very of use 8. officerant when the difference of one-very pipe length after the first branching point is 5m to 10m. For death to the death of the pipe connection, the very of use 8. officerant when the difference of one-very pipe.
 Note (1) Itself the indoor units suitait. + L1 becomes the longest one-very pipe.
 Assist the pipe length difference between L1 and L(14 + L2) within 10m.
 All the mite outdoor units is related at a position ingirer than the nodor units y 3m or more, set SMS-2 on the control PGB to 0N.

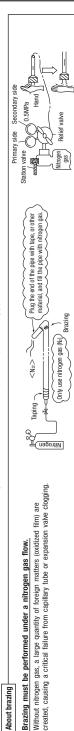
2) Determination of pipe size

• Determine refrigerant pipe size pursuant to the following guidelines based on the indoor unit specifications.

				10000111		-	
		Gas pip e	Diquid pipe	Gas pipe	Pidnid bibe	edid seg	Liquid pipe
		ф15.88	φ9.52	φ15.88	φ9.52	φ15.88	φ9.52
Ontai	Outdoor unit comected	Rare	Flare	Rare	Rare	Rare	Flare
Refrigeran	Refrigerant piping (Main pipe L.)	ф15.88	φ9.52	Ø15.88	φ9.52	φ15.88	φ9.52
	Indoor unit connected	φ15.88	φ9.52	φ15.88	φ9.52	φ15.88	Φ9.25
in the case of a single type	Capacity of indoor unit	Model	Model 100V	Model	Model 125V	Model	Model 140V
	Branching pipe set	DIS-WA1G	M1G	-SIQ	DIS-WA1G	A-SIQ	DIS-WA1G
	Refrigerant piping (branch pipe L1,L2)	φ12.7	φ9.52	ф12.7	φ9.52	φ15.88	φ9.25
In the case of a twin type	Indoor unit connected	φ12.7	φ6.35	Ø12.7	φ6.35	φ15.88	φ9.52
	Capacity of indoor unit	Model	Model 50V×2	Model 60V×2	0V×2	Wodel 71VX2	V×2
	Branching pipe set					DIS-TA1G	416
	Refrigerant piping (branch pipe L1,L2,L3)					Φ12.7	φ9.52
In the case of a triple type A	Indoor unit comected			l		φ12.7	φ6.35
	Capacity of indoor unit					EXADS IRPOW	DWc3
	Branching pipe set					DIS-WA16	A1G
	Refrigerant piping (branch pipe La)					φ15.88	φ9.52
	Refrigerant piping (branch pipe L1)					φ12.7	φ9.25
In the case of a triple type B	Branching pipe set (After branch pipe La)		1	1		DIS-WA1G	A1G
	Refrigerant piping (branch pipe L2,L3)					φ12.7	φ9.52
	Indoor unit connected					φ12.7	ф6.35
	Connection of inclusion could					A Laboratory	Attended Profession

△CAUTION
 When the Story or 60V model is connected as an indoor unit, always use a ¢9.52 liquid pipe for the branch (branching pipe – indoor unit) and a diameter joint supplied with the branching pipe, a refrigerant distribution disorder may occur, causing one of the indoor units to fall it in rated capacity.
 If a ¢6.35 pipe is used for connection with a branching pipe, a refrigerant distribution disorder may occur, causing one of the indoor units to fall it in rate dated.
 A riser pipe must be a part of the main. A branching pipe set should be installed horizontally at a point as close to an indoor unit as possible. A branching part must be dressed with a heat-insulation material supplied as an accessory.
 For the details of installation work required at and near a branching area, see the installation manual supplied with your branching pipe set

Single type >	Indoor unit in the beyond off energe from the outdoor unit is the largest.) The unit of which elevation off energe from the outdoor unit is the largest.) Indoor unit in the beginning in the control of the beginning in the control of the beginning in the	Triple type A > indoor unit (The unit of which elevation difference from the outdoor unit is the largest.) The unit of which elevation difference from the outdoor unit is the largest.) The unit of which elevation difference from the outdoor unit is the largest. The unit of which is the unit of which is the largest. The unit of which is the un	A Triple type B > Indoor unit
	system is 5." atalis, refer		different Il short of Ile.



3) Refrigerant pipe wall thickness and material

Select refrigerant pipes of the table shown on the right wall thickness and material as specified for each pile selection.
 This unit uses R410A, Always use 1/2H pipes having a 1,0mm or thicker wall for 4/18.05
 This unit uses R410A, Always use 1/2H pipes having a 1,0mm or thicker wall for 4/18.05
 This urit griep pipes, because 0-type pipes do not meet the pressure resistance requirement.

Station valve	Mitrogen Relief valve
Plug the end of the pipe with lape, or other and the pipe with lape, or other and the pipe with integen gas.	(Only use nitrogen gas (Nu) Brazing

■ Take care so that installed pipes may not touch components within a unit. If touching with an internal component, it will generate abnormal sounds and/or vibrations. On-site piping work

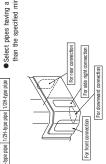
Pipe c Minim Pipe r *Phos

28.58	O. NOTE	pe pipe Select	than the
28.		le 1/2H-tyj	
25.4	1.0	1/2H-type pit	
22.22	1.0	1/2H-type pipe	
15.88	1.0	0-type pipe	
12.7	8.0	0-type pipe	JIS H 3300
9.52	8.0	edid edvit-0	C1220T, JIS
6.35	8.0	0-type pipe	copper pipe
diameter [mm]	mum pipe wall thickness [mm]	material*	sphorus deoxidized seamless

mum pipe thickness wall thickness larger

	NOTE	 Select pipes having a w 	than the specified minir
80.03	1.0	1/2H-type pipe	
1.03	1.0	pe pipe 1/2H-type pipe 1/2H-type pipe	
77	0:	edid ed	





(тт)	In the case of a rigid (clutch) type	With a conventional tool		7	0.7-1.3		
For raz connection side right connection connection Copper pipe protrusion for flaring: B (mm)	In the case of a	With an R410A tool			0.0-0		
For rear connection For side right connection and connection Copper pipe protru	Copper	diameter	$\phi 6.35$	Φ9.52	Φ12.7	φ15.88	
For front connection For dront connection For downward connection Copper p							

Flared pipe end: A (mm

Copper pipe outer diameter φ6.35 φ9.52

• The pipe can be laid in any of the following directions: side right, front, rear and downward.

• Annow a knock-cut pide provided on the pipe penetration to open a minimum necessary area and attach an edging material supplied as an accessary by cuting it to an appropriate length before laying a pipe.

• Garry out the on site piping work with the operation valve fully closed.

• Garry out the on site piping work with the operation valve fully closed.

• Garry cut the on site piping work with the operation valve fully closed.

• Garry cut the on site piping work with the operation valve fully closed.

• Garry cut the on site piping work with the operation valve fully closed.

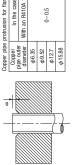
• Garry cut the on site piping work with the operation valve fully closed.

• Garry cut the one site piping work with the operation valve full pipe to a radius as large as practical (HTO—HTSQ). Do not bend a pipe repeatedly to correct its form.

• Flore connection is used between the unit and refrigerant pipe. There a pipe after engaging a flare full one. The dimensions regioned specifically for HTIO, conventional faming tools can also be used by adjusting the measurement of protosion B with a protosion control or HTIO.

First remove the five screws (x mark) of the service panel and push it down into the direction of the arrow mark and then remove it by pulling it toward you.

How to remove the service panel



13.2



nner.		
Do not hold the valve cap area with a spanner.	Use a torque wrench. If a torque wrench is not available, fasten the flare nut manually first and then tighten it further, using the left table as a guide.	



Uo not hold the valve cap area with a span Use a borque wrench. If a torque wrench is not available, fasten the flare nut manually first and then tighten it further, using the left table as a guide.
Use a torque wrench. I fasten the flare nut ma further, using the left to

nner			/_	
Do not noid the valve cap area with a spanner	Use a torque wrench. If a torque wrench is not available,	fasten the flare nut manually first and then tighten it	further, using the left table as a guide.	the colored about initial accordance on the
	Use a to	fasten	further,	o'oulou ao
				+

nner.		_
Do not hold the valve cap area with a spanner.	Use a torque wrench. If a torque wrench is not available, fasten the flare nut manually first and then tighten it further, using the left table as a guide.	unlunt about joint or inno day the

nner.		_
Do not noid the valve cap area with a spanner.	Use a brque wrench. If a torque wrench is not available, fasten the flare nut manually first and then tighten it further, using the left table as a quide.	oth no bouning trial stocks during

A CALITION Do not apply force beyond proper fastening torque in tightening (operation valve size Trightening torque Trightening angle Recommended length	Operation valve size	Tightening torque	Tightening angle	Recommended length	Do not hold the valve cap area with	ap area with
the flare nut.	(mm)	(M·M)	()	of a tool handle (mm)		
	φ6.35 (1/4")	14-18	45-60	150		
FIX Doth liquid and gas service valves at the valve main bodies as illustrated	φ9.52 (3/8")	34-42	30-45	200	Use a torque wrench. If a torque wrench is not availa	is not availa
on the right, and then tasten them, applying appropriate tastening toldue.	φ12.7 (1/2")	49-61	30-45	250	fasten the flare nut manually first and then tighten it	n tighten it
5) Air tightness test	φ15.88 (5/8")	68-82	15-20	300	Turmer, using the left table as a guide.	
① Although outdoor and indoor units themselves have been tested for air lightness at the factory, check the connecting pipes after the installation work for air lightness from the operation valve's check joint equipped on the outdoor unit side. While conducting a test, keep the operation valve shut all the time.	connecting pipes a	fter the installati	on work for air tij	ghtness from the opera	tion valve's check joint equipped on the	Outdoor unit
 a) Raise the pressure to 0.5 MPa, and then stop. Leave it for five minutes to see if the pressure drops. b) Then raise the pressure to 1.5 MPa, and ston. Leave it for five more minutes to see if the pressure drops. 						
c) Then raise the pressure to the specified level (4.15 MPa), and record the ambient temperature and the pressure.	essure.					_
of it is acceptable. When the arrivation pressurized to the specified level and left for about one day, it is acceptable. When the ambient temperature fall 1°C, the pressure also fall approximately 0.01 MPa. The research for a non-servate for	ne day, it is accept	able. When the a	mbient temperatu	ure fall 1°C, the pressu	re also fall approximately 0.01 MPa. The	Close
e) if a pressure drop is observed in checking e) and a) - d), a leak exists somewhere. Find a leak by applying bubble test liquid to welded parts and flare joints and repair it. After repair, conduct an air-dightness test again.	ibble test liquid to w	elded parts and f	lare joints and repa	air it. After repair, condu	ct an air-tightness test again.	

gauge.

The pipe should be anchored every 1.5m or less to isolate the vibration.

Tighten a flare joint securely with a double spanner.

2		
DO HOLHOIG BIG YORK COLD GOOD WILL B SPORTED.	se a brque wrench. If a torque wrench is not available, asten the flare nut manually first and then tighten it urther, using the left table as a guide.	valve's check joint equipped on the

Gas side operation v	Check Joint Por Parameter	@	
Outdoor unit	950):	Z Z	_
oint equipped on the	ately 0.01 MPa. The	st again.	

Pay attention to the following points in addition to the above for the R410A and compatible machines.

Airtighteness test completed

Vacuuming begins

Oto prevent a different oil from entering, assign dedicated tools, etc. to each refrigerant type. Under no circumstances must a gauge manifold and a charge hase in particular be shared with other refrigerant types (RZZ, R407, € etc.). Use a counterflow prevention adapter to prevent vacuum pump oil from entering the refrigerant system.

Vacuuming completed Vacuum gauge check Fill refrigerant

② In conducting an air-lightness test, use nitrogen gas and pressurize the system with nitrogen gas from the gas side. Do not use a medium other than nitrogen gas under any circumstances.

Run the vacuum pump for at least one hour after the vacuum gauge shows -101kPa or lower. (-755mmHg or lower) < Work flow> When the system has remaining moisture inside or a feety point, the vacuum gauge indicator will rise.
Check the system for a leaky point and then draw air to create a vacuum again,

Confirm that the vacuum gauge indicator does not rise even if the system is left for one hour or more.

7) Additional refrigerant charge

(1) Calculate a required refrigerant charge volume from the following table

ity rich	Standard refrigerant charge volume (kg)	Pipe length for standard refrigerant charge volume (m)	Additional charge volume (kg) per meter of refrigerant piping (liquid pipe)	Refrigerar charged for at the fact	Installation's pipe length (m) covered without additional refrigerant charge	
	2.0	0	0.06	3.8	30	

Installation's pipe length (m) covered without additional refrigerant charge 30

Refrigerant volume charged for shipment at the factory (kg) 3.8

Additional charge volume (kg) per meter of refrigerant piping (liquid pipe) Main pipe Branch pipe

Pipe length for standard refrigerant charge volume (m)

Standard refrigerant charge volume (kg) 2.0

> 100WIA-140VNA 100VSA-140VSA Capacity

<Twin, triple type>

Item

90.0

- A standard refrigerant charge volume means a refrigerant charge volume for an installation with Om long refrigerant piping.
 This unit contains factory charged for refrigerant charge and and additional refrigerant piping acceeds 30m.
 When refrigerant piping exceeds 30m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 30m.
 When refrigerant piping exceeds 30m, additionally charge an amount calculated from the pipe length and the above table for the portion in excess of 30m.
 When refrigerant piping is shorter than 3m, reduce enfigerant by 1kg from the factory charged volume and adulate to 28kg.
 If an existing pipe system is used, a required refrigerant charge volume will vary depending on the liquid pipe size. For further information, see "6. UTILIZATION OF EXISTING PIPING."

Formula to calculate the volume of additional refrigerant required

Additional charge volume (kg) = { Main pipe length (m) - Length covered without additional charge 30 (m) } x 0.06 (kg/m) + Total length of tranch pipes (m) x 0.06 (kg/m)

● To charge refrigerant again, recover refrigerant from the system first and then charge the volume calculated from the above table (Standard refrigerant charge volume + additional charge volume for total pipe length.) it is not necessary to charge refrigerant additionally

(2) Charging refrigerant

- "When an additional charge volume calculation result is negative,
- Since R410A refrigerant must be charged in the liquid phase, you should charge it, keeping the container cylinder upside down or using a refrigerant cylinder equipped with a siphon tube.

 Solvage refrigerant always must be that age service port with the operation where shuft. When you find it difficult to charge are required amount, fully open the culton read was not be serviced port in the local phase all the time. When the cylinder valve is throttled down or a dedicated conversion to charge refrigerant may be selecting or the cylinder shuft in the coling moment in the confined was care must be that so that refrigerant may be discharged from the cylinder shuft in the cylinder valve is throttled down or a dedicated conversion to the charge program in the colingerant into mist is used to protect the compressor, howeve, adjust charge conditions so that refrigerant will gasify upon entering the unit.

 In charging refrigerant, always charge a calculated them by using a scale to messure the charge volume.

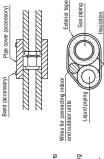
 In the program of the

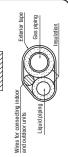
8) Heating and condensation prevention

(1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.

NOTE Put down the refrigerant volume calculated from the pipe length onto the caution label attached on the back side of the service panel.

- (2) Use a heat insulating material that can withstand 120°C or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.
 Improper heat insulation/anti-dev dressing can result in a water least or dripping water that connect not he confersulation or the confersulation or personal injury from burns because this ranked searcely heat insulated in order to prevent damage from dripping water that connect from the confersulation or them during a cooling operation or personal injury from burns because this ranked can reach quite a high temperature due to discharged gas flowing inside during a hearing operation.
 Was indoor units' fare joints with heat insulating parts (pipe cover) for heat insulating parts (pipe cover) for heat insulating material and a pipe tightly together so that no gaps may be left between them and wrap them together with a connecting cable by a dressing type.
 - Although it is verified in a test that this air-conditioner unit shows satisfactory performance under JIS condensation test conditions, both gas and liquid pipes need to be dressed with 20 mm or thicker heat insulation materials above the ceiling where relative humidity exceeds 70%.





3. DRAIN PIPING WORK

П

mmm,

- Execute drain piping by using a drain elbow and drain grommets supplied separately as optional parts. Where water drained from the outdoor units a problem.

 Whater may drip where there is a larger amount of drain water. Sea reduce the above and drain grommets with putty or adequate calking material.

 Condensed water may flow out from vicinity of operation valve or connected pipes.

 Where you are likely to have several days of sub-zero temperatures in a row, do not use a drain elbow and drain grommets. (There is a risk of drain water freezing inside and blooking the drain.)

 Do not use drain elbow and grommet made of plastic for drain piping when base hear for outdoor unit is used. Plastic grommet and elbow will be damaged and on burnt in worst case.

 Prepare another drain tray made of metallic material for collecting drain when base hears is sed.

Grommet-

•When condensed water needs to be led to a drain, etc., install the unit on a flat base (supplied separately as an optional part) or concrete blocks.
Then, please secure space for the drain elbow and the drain hose. -Drain hose (Grommet, Drain elbow and Drain hose are procured on the installer's part)

4. ELECTRICAL WIRING WORK For details of electrical cabling, refer to the indoor unit installation manual

Electrical installation work must be performed by an electrical installation service provider qualified by a power provider of the country. Februaria installation work must be executed according to the technical standards and other regulations applicable to electrical installations in the country.

• Do not use any supply cord lighter than one specified in parentheses for each type below.

• Datalect and (code designation 6024 EEC 51).

• ordinary tough rubber sheathed cord (code designation 60245 EEC 53).

• ordinary tough rubber sheathed cord (code designation 60224 EEC 41);

Do not use anything lighter than polychloroprene sheathed flexible cord (code designation 60245 EEC57) for supply cords of parts of appliances for outdoor use.

If mipropery grounded, an electric shock or mailturidion may result.

If mipropery grounded, an electric shock or mailturidion may result.

A grounding wire in sust be connected before comediting the power cable. Provide a grounding wire longer than the power cable.

• The installation of an impulse wittshalling type earth leskage breaker is necessary. A failure to install an earth leakage breaker can result in an accident such as an electric shock or a fire.

Power source, and ground terminal block Signal line terminal block

Outdoor unit Do not turn on the power until the electrical work is completeded.
 To not turn as a condessive agreated for power factor improvement under any circumstances. (It dose not improve power factor, while it can cause an abnormal overhead acided.).
 For power source eables, seconduits.
 Do not lay electronic obses, use conduits.
 Do not lay electronic cables (remote control and signaling wires) and other cables together outside the unit. Laying them beginer can result in the man antifunctioning or a failure of the unit due to electric noises.
 Festen cables so that may not butch the poling, acc.
 When cables are connected, make sure that all electrical components within the electrical component box are free of loose connection coupling or terminal connection and then afters in the cover securely. (Improper cover attachment can result in maturationing or a failure of the unit, where present and then afters in the toose. itchgear or Circuit breaker Earth leakage breaker Harmonic resistant type) •Aways use a fivee-core cable for an indoor-outdoor connecting cable. Never use a shield cable.
•Connect a parting a common terminal number with an indoor-outdoor connecting wire.
● In cabling fast breaking a common that the clamps so that no external force may work on terminal connections.
● Grounding terminals are provided in the control box. L1 L2 L3 N 2/N 3 | ± 2/N 3 ± Earth leakage breaker X

-=	≥	_	_	_	$\overline{}$	-	ı		š						_
	aker		Outdoor unit		Indoor unit			ontrol			Grounding wire thickness		41 6mm		
Earth leakage breaker Harmonic resistant type)	Switchgear or Circuit breaker		-	2/N 3 ±	2/N 3 =	_	4	Y Remote control	Model 100VNA -140VNA		Cable length (m)	OC.	07	40	90
Earth le (Harmon	Switchgea			Ē	Ē	×	-	×	Model		MAX. over current (A)	26	27	17	10
	able Shield cable		Part No.	PCA006A092	Ι	owing suitoo	eculing wiles	nstallation work	h leakage circuit r inverter circuits peration	door unit.	Power cable thickness(mm ²)	4	200	3 0	2.0
	t cable 4-core cable	ation	Specification	250V 30A	I	ando souppio so	IIION IONNINO-IO	ounding system i d unplugged.	Always use an earth leakage circuit breaker designed for inverter circuits to prevent a faulty operation	with the duct type in	Power source Powe	Single phase 3 wire	220V 60Hz	3 phase 4 wire	MO-415V SURZ
	VCT catityre cable VVF flat cable	Main fuse specification	Model	100VNA~140VNA	00VSA~140VSA	conjust militarenese receptive receptive of the recursor	OWEI CADIE, IIIUO	Always perform grounding system installation work with the power cord unplugged.	CAUTION	**At the connection with the duct type indoor unit.	od labow	Duis Awastawoot	14 OWA	100VS,125VSA 3 p	1 4040 4
	0	-		44	ш,					del 100VSA -140VSA	outdoor wire thickness × number		#16mm x 3		

Indoor unit

X Y Remote control

odel 100VSA - 140VSA

Indoor-outdoor wire thickness \times number

φ1.6mm x 3

					lation instructions or the construction	units without heaters. For units with heaters, refer to the installation instructions	or units with heat	without heaters. I	or units
38	18	0.0	380V 60Hz	140VSA			40	0	
40	- 21	3.6	3 phase 4 wire	100VS,125VSA		-	q	ţ	
2	27	200	220V 60Hz	14 OWA	φ1.6mm x 3	#16mm	777	1.7	
30	26	u u	Single phase 3 wire	100 WA,125 WA			20	29	
Cable length	MAX. over current (A)	Power cable thickness(mm?) MAX. over current (A)	Power source	Model	Indoor-outdoor wire thickness × number	Grounding wire frickness	Cable length (m)	MAX. over current (A)	(ww)ss

	ation instructions or the construction	
	, refer to the install	
	units with heaters	
	For	
	without heaters.	
	above table are for units w	
	n the	ij
2000 00112	ins shown in	he indoor u

Outgoing cable direction

As like the refrigerant pipe, it can be let out in any of the following directions: side right, front, rear and downward. It is attached on the back side of the service par

Wiring diagram

The apprehensions shown in the above table are for units without heaters. For units with heaters, refer to the installation instructions or the construction instructions of the infloor units of the

0VSA-140VSA

5.5 3.5

Single phase 3 wire 220-240V 50Hz

Model 100VNA -140VNA

5. TEST RUN

△ WARNING

Before conduct a test run, make sure that the operation valves are open.
 Turn on power 6 hours prior to a test run to energize the candizase header.
 In case of the first operation after turning on power, even if the unit does not move for 30 minutes, it is not a breakdown.
 Always give a 3-minute or longer interval before you start the unit again whenever it is stopped.
 Pernoving the service panel will expose high-voltage like parts and high-temperature parts, which are quite dangerous.
 Take ulmost care not to incur an electric stork or burns. Do not leave the unit with the service panel open.

A CAUTION

When you operate switches (SW3, SW5) for on-site setting, be careful not to buch a live part.
 * You cannot check discharge pressure from the fluid operation valve charge port.
 * The 4-way valve (203) is seraptized cluring a heating operation.
 * When power source is cut off to reset the unit, give 3 or more minutes before you turn on power again after power is cut off it to reset the unit, give 3 or more minutes before you turn on power again after power is cut off. If this procedure is not observed in turning on power again, "Communication error between outdoor and indoor unit" may occur.

(1) A test run can be initiated from an outdoor unit by using SW3-3 and SW3-4 for on-site

Cooling during a test run Heating during a test run Normal or after the test operation ; ≥ SW-3-3 SW-3-4 0FF NO 1) Test run method

(2) Switching SW6-3 to ON will start the compressor. (6) The unit wister a confing operation, when SW6-4 is OFF, or a heating operation, when SW6-4 is ON, (4) Do not fail to switch SW8-3 to OFF when a test run is completed. Use check joints provided on the piping before and after the four-way valve installed inside the outdoor unit for checking discharge pressure and suchion pressure. As indicated in the table stown on the right, pressure detected at each point will vary depending on whether a cooling or heading operation has been selected. Checking the state of the unit in operation

Setting SW3-1, SW3-2, SW5-2, SW7-3, on-site

3

Charge port of the gas operation valve Suction pressure (Low pressure) Discharge pressure (High pressure) Suction pressure (Low pressure) Check joint of the pipe Cooling operation Heating

OFF

(1) Defrost control switching SWR3-1)

When this switch is turned OM, the unit will run in the defrost mode more frequently.

Set this switch to ON, when installed in a region where outdoor temperature falls below zero during the season the unit is run for a heating

(2) Show quart an control (SW3-2).
When this switch is timed 0W, the outdoor unit fan will run for 10 seconds in every 10 minutes, when outdoor temperature fails to 3°C or lower and the compressor is not running.
When the unit is used in a very snowy country, set this switch to 0M.
When the unit is used in a very snowy country, set this switch to 0M.
Is then the unit is used in a very snowy country, set this switch to 0M when outdoor unit is installed at a position higher than indoor unit by 30m or more.

(4) Lower noise silent mode (SW7-3)
Upper limit of compressor speed and fan speed becomes lower in silent mode

4) Failure diagnosis in a test run

Error indicated on the	Printed circuit board LEC	Error indicated on the Printed circuit board LED(The cycles of 5 seconds)	College second	and so &
remote control unit	Red LED	Green LED	raini e everil.	ACTION
E34	Blinking once	Blinking continuously Open phase	Open phase	Check power cables for loose contact or disc
E40	Blinking once	Blinking continuously	Blinking once Blinking continuously (63H1 actuation or operation with operation walves shut 2. If an error has been canceled when 3 minutes in a contract once the contract of	Check whether the operation valves are operation valves are operation and the second sec
E57	Blinking once	Blinking continuously	Blinking once Blinking continuously Short of refrigerant error or operation with operation valves shut (occurs mainly during a cooling operation)	since a compressor stop, you can restart the u effecting Check Reset from the remote control
lf an arror co	de other than th	avode batail ago	If an arrar and a other than those listed above is indicated refer to the wiring diagram of the outdoor unit and the indoor unit	outdoor unit and the indoor unit

connection.

5) The state of the electronic expansion valve.

During a cooling operation Full open position Full open position During a heating operation Full open position Complete shut position The following table illustrates the steady states of the electronic expansion valve. When the unit comes to a normal stop When power is turned on During a cooling operation rowmers shut position Full open position Full open position Valve for a cooling operation

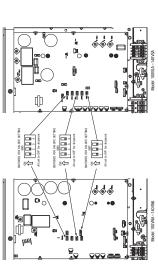
6) Heed the following on the first operation after turning on the circuit breaker.

This outdoor unit may start in the standby mode (waiting for a compressor startup), which can continue up to 30 minutes, to prevent the oil level in the compressor from lowering on the first operation after turning on the circuit breaker. If that is the case, do not suspect a unit failure.

 When you leave the outdoor unit with power supplied to it, be sure to close the panel. A failure to observe these instructions can result in a compressor breakdown. Items to check before a test run Item No.used in the installation manual

installation manual		TIPL VOIDS	5
		If brazed, was it brazed under a nitrogen gas flow?	
	Refrinerant	Were air-tightness test and vacuum extraction surely performed?	
2	plumbing	Are heat insulation materials installed on both liquid and gas pipes?	
		Are operation valves surely opened for both liquid and gas systems?	
		Have you recorded the additional refrigerant charge volume and refrigerant pipe length on the panel's label?	
		Is the unit free of cabling errors such as uncompleted connection, an absent or reversed phase?	
		Are properly rated electrical equipments used for circuit breakers and cables?	
		Doesn't cabling cross-connect between units, where more than one unit are installed?	
		Aren't indoor-outdoor signal wires connected to remote control wires?	
4	Electric	Do indoor-outdoor connecting cables connect between the same terminal numbers?	
-	wiring	Are either VCT cabtyre cables or WF flat cables used for indoor-outdoor connecting cables?	
		Does grounding satisfy the D type grounding (type III grounding) requirements?	
		Is the unit grounded with a dedicated grounding wire not connected to another unit's grounding wire?	
		Are cables free of loose screws at their connection points?	
		Are cables held down with cable clamps so that no external force works onto terminal connections?	
	diam's a coole of	Is indoor unit installation work completed?	
	IIIOOOL UIII	Where a face cover should be attached onto an indoor unit, is the face cover attached to the indoor unit?	
Test run proc	edure • A	Test run procedure Always carry out a test run and check the following in order as listed.	ed.

Turn	The contents of operation	Check
Θ	Open the gas side operation valve fullly.	
@	Open the liquid side operation valve fully.	
(e)	Close the panel.	
9	Where a remote control unit is used for unit setup on the installation site, follow instructions for unit setup on the installation site with a remote control unit.	
(SW3+3 OW / SW3+4 OFF; the unit will start a cooling operation.	
9	SW3-3 ON / SW3-4 ON: the unit will start a heating operation.	
9	When the unit starts operation, press the wind direction button provided on the remote control unit to check its operation.	
©	Place your hand before the indoor unit's diffuser to check whether cold (warm) winds come out in a cooling (heating) operation.	
@	Make sure that a red LED is not blinking.	
6	When you complete the test run, do not forget to turn SW3-3 to the OFF position.	
9	Where options are used, check their operation according to the respective instruction manuals.	



6. UTILIZATION OF EXISTING PIPING

<table of="" pipe="" restrictions="" size=""></table>	©:Standard pipe size ⊝:Applicable △:Restricted to shorter pipe length limits ×:Not applicable	Additional charging amount of refrigerant per 1m 0.08kg/m 0.08kg/m 0.08kg/m	φ9.52 φ9.52 φ	0	Н	wered without additional charge 30 30 15	n one-way pipe length 50 50 25 aread without additional charge 30 30 15	Usbahlaniky		Additional changing amount of refrigerant per 1m 0.09km/m 0.06km/m 0.06km/m	φ9.52 φ1.2.7 φ1.5.88 φ19.05.88.1 φ1.2.7	Combination type Combination of capacity	159V Twin 60-460 0 ×	50+50+50	$\frac{1}{2}$ Because of its insufficient pressure resistance, turn the dip swiftch SWE-1 provided on the outdoor unit board to the ON position for ϕ 19.05 \times 11.0.	In the case of a win-triple-double-Nummodel, this also applies to the case where ϕ 19.05 × 11.0 is used in a pipe system after the first branching point). However, vivin need not turn the risk switch SIMS-1 in the INI nowton if 179H nines or mines busin 12 or thicker walls are used.	instruction to the control of the co	%3 Keep the total pipe length, not one-very pipe length, below the specified maximum pipe length. %4 Plying size after branch should be equal or smaller than main pipe size.	***> Pying size from Irit binarch to motor unit should be @ 9.5.2 (Lightain) / Ø 12.1 (Lists) ● When refrigerant piping is stored than 3.m, replace refrigerant by 1/40 from Taktory of branged volume. ■ In considerations of signs of the and the stored that the stored is the stored that the stored	 Any combinations of pipe sizes not itsed in the table or marked with X in the table are not usable. 	<the are="" branching="" existing="" model="" of="" pipes="" reusable.="" types="" units="" which=""> Models later than Type 8.</the>	●FDC * * * 8 □ □	The branching pipes used with models other than those listed above are not reusable because of their insufficient	pressure resistance, Pease use our genume Dranching papes for R41 Un. ● ★ * * * are numbers representing horspower. □ □ is an alphanumeric letter. Formula to calculate additional charge volume	Additional charge volume (kg) = (Main pipe length (m) - Length covered without additional charge shown in the table (m) X Additional charge volume part meter of pipe shown in the table (kg/m) + Total length of branch pipes (m) X Additional charge volume per meter of pipe shown in the table (kg/m)	% If you obtain a negative figure as a result of calculation, no additional refrigerant needs to be charged. Example When an 140V (single insulation) is Installed in a 20m long estating pipe system (indid of 12.7, gas of 19.05), the quantity of refrigerant for charge additionally should be (20m-15m) x 0.086pm = 0.4 kg.
Theck whether an existing pipe system is reusable or not by using the following flow chart.	START	Are an outdoor unit and an indoor unit connected to the NO		Are the existing units aur products? No White northe existing unit use? No Make an inquiry Liber	for reusability.	Can like	Does have acking up one and the to receive a safety at of the billowing?	confirming the floring periodicities. Where the outdoor unit is above. Since riess an own for the flore depend for a case where where the outdoor unit is above. Since ries are sent to depen since the confirming the sent to depen since the confirming the sent to depen since the confirming the sent to depend the sent	is the unit to install in the axisting pipe system a YES toward-independent of the axisting pipe of the axisting pipe of the axisting pipe to a specified type.	NO Change	RES Report the damaged darks Report the damaged darks Report to dented the damaged darks Report to impossible.	Repair	is the existing pipe system to reuse free of gas leade? Check whether redrigerant dauge was required frequently for the pipe system for air tightness on the site.	Air tightness is OK	Are there any branch pipes with no indoor unit connected?	NO Remove	Are that insulation materials of the existing pipe system to reuse free of peet-offs or deterication?	Freat misuations is here searly for boom gas and requiring person	oorts? Repai	No loose pipe supports Some loose pipe supports	The existing pipe system is applicable. Install a new pipe system.	MARNING < Where the existing unit can be run for a cooling operation.>	Carry out the following steps with the existing unit (in the order of (1), (2), (3) and (4))	(1) Pour let unit ou de mineres but a double geretain. (2) Step the indoor fat and fur the unit for 3 minutes for a cooling operation (refurning liquid). (3) Obset he liquid side operation valve of the buddow unit and pump down (refinerant recovery). (4) Blow with infronces as. 3. ** If discolored refineration oil or any foreign matters is discharged by the blow.	wash the pipe system or install a new pipe system ●For the face mut, on thou set he did one, but see the one supplied with the outdoor unit. Process, a flate to the offinersions specified for F410A.	■ Furn on-site setting switch SWE-1 to the 0N position. Where the gas ppe size is \$\phi\$ 19.09) <where a="" be="" cannot="" cooling="" existing="" for="" operation.="" run="" the="" unit=""> Meah the pie system or install a new pie system. ● If you choose bu wash the pie system, contact our distributor in the area.</where>

1.10.5 Instructions for branching pipe set (DIS-WA1, WB1, TA1, TB1)

For R410A PSB012D865 🛕

- This set is for R410A refrigerant.
- Select a branching pipe set correctly rated for the combined total capacity of connected indoor units and install it according to this manual.
 An improperly installed branching pipe set can cause degraded performance or an abnormal unit stop.
- Provide good heat insulation to the pipes by following instructions contained in this manual.
- Improper heat insulation can result in degraded performance or a water leak accident from condensation.
- Please make sure that only parts supplied as accessories or the manufacturer's approved parts are used in installing the unit, because a leak of refrigerant can result in a lack-of-oxygen accident, if it reaches a concentration beyond the tolerable limit.

This manual explains how to use a branching pipe set that is indispensable in connecting pipes for a twin/triple/double-twin configuration installation (system). For the details of piping work, unit installation work and electrical installation work, please refer to the installation manuals and installation guides supplied with your outdoor and indoor units.

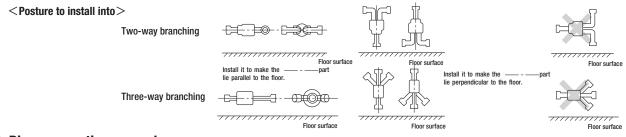
1. Branching pipe set specifications

- (1) Please make sure that you have chosen the right branching pipe set and the specifications of the parts contained in it by checking with the table below.
- (2) Connect pipes as illustrated in the table below. The pipe from an outdoor unit must be brazed to the pipe connection port "①" and the pipes from indoor units to "②," "③" and "④."

Branching pipe set type	Supported outdoor/inc	loor unit combinations		Part	lists	
branching pipe set type	Outdoor unit model	Indoor unit model	Branching pipe set for a liquid pipe	Branching pipe set for a gas pipe	Different diameter pipe joint	Heat insulation material
	3HP	1.5HP+1.5HP	ID9.52	ID15.88	Joint A	
	4HP	2HP+2HP			ID9.52 □□□■ 2 pieces	
DIS-WA1		1.5HP+2.5HP	Q	1 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Flare joint (for indoor unit side connection)	
(Two-way branching set)	5HP	2.5HP+2.5HP			(
, , , , , , ,		2HP+3HP	ID9.52 🗘 ③	ID15.88 ID15.88	Joint B 2 pieces	
	6HP	3HP+3HP	1 piece	1 piece	0D15.88 D12.7	One each for liquid and gas
		2HP+4HP	i piece	i piece		
		4HP+4HP	ID9.52			
DIS-WB1 (Two-way branching set)	8HP	3HP+5HP		①	Joint C 1 piece 0D12.7 D9.52	
	10HP	5HP+5HP	ID12.7 3 ID9.52 1 piece	1D25.4 ID15.88 ID15.88		One each for liquid and gas
DIS-TA1 (Three-way branching set)	6HP	2HP+2HP+2HP	109.52 1 piece	ID12.7 ① 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Joint A ID9.52	One each for liquid and gas
DIS-TB1 (Three-way branching set)	8HP	3HP+3HP+3HP	109.52 109.52 1 piece	1015.88 1015.88 1025.4 1 piece	Joint A 2 pieces	One each for liquid and gas

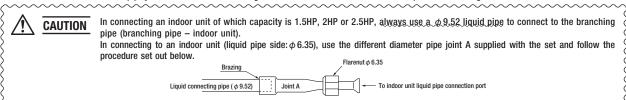
(3) To connect pipes for a Double Twin installation (involving 4 indoor units), please see 2-7. "Double Twin configuration."(4) A branching pipe set must always be installed into the posture as illustrated in the drawing below.

ID stands for inner diameter and OD, outer diameter.



2. Pipe connecting procedure

Braze the different diameter pipe joint found in the set matching the connected outdoor and indoor unit capacities according to the instructions set out below.



2-1 DIC-WA1

Supported of lutdoor unit model	Indoor unit model	Liquid branching pipe	Gas branching pipe
ЗНР	1.5HP+1.5HP		Joint B 2
	2HP+2HP	Flare joint (φ 6.35) → Joint A	Joint B ID12.7
4HP	1.5HP+2.5HP	Connecting pipe (\$\phi 9.52\$) ID9.52 \(\begin{array}{c} \choose \choos	ID12.7
	2.5HP+2.5HP	(ψ 0.55)	Joint B 1015.88 1015.88 1015.88 1015.88
5HP	2HP+3HP	Flare joint $(\phi 6.35)$ Joint A Connecting pipe $(\phi 9.52)$ ID9.52 $(\phi 9.52)$	Joint 8 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
	3HP+3HP	ID9.52 ID9.52 ID9.52	ID15.88 (2) (3) ID15.88
6НР	2HP+4HP	Flare joint $(\phi 6.35)$ Connecting pipe $(\phi 9.52)$	Joint B (D12.7) Joint B (D15.88) ID15.88

2-2 DIS-WB1

Supported of	ombinations	Liquid branching pipe	Gas branching pipe
Outdoor unit model	Indoor unit model	Liquid branching pipe	das branching pipe
8HP	3HP+5HP	ID9.52	ID15.88
	4HP+4HP	Joint C ID9.52	ID15.88
10HP	5HP+5HP	ID9.52 ID12.73 (2) ID9.52	ID15.88 (2) (3) (3) (1015.88

2-3 DIS-TA1 Applicable to the difference in length of pipes after the branch being less than 3 m * Connection is not allowed when the difference in length of pipes is larger than 3 m.

Supported of Outdoor unit model	ombinations Indoor unit model	Liquid branching pipe	Gas branching pipe
6НР	2HP+2HP+2HP	Connecting pipe Joint A (ϕ 9.52) ID9.52 Flare joint (ϕ 6.35) Joint A CAUTION Reference	1012.7 ① ② ③ ④

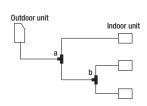
2-4 DIS-TB1 Applicable to the difference in length of pipes after the branch being less than 3 m *Connection is not allowed when the difference in length of pipes is larger than 3 m.

Supported of	ombinations	Liquid branching pipe	Gas branching pipe
Outdoor unit model	Indoor unit model	Liquid branching pipe	uas branching pipe
8НР	3HP+3HP+3HP	ID9.52 3 ID9.52	① ② ③ ④ ID25.43

use the joint supplied with the branch piping set like *A

2-5. Triple type for same model/same capacity or different model/same capacity

When the difference in length of pip

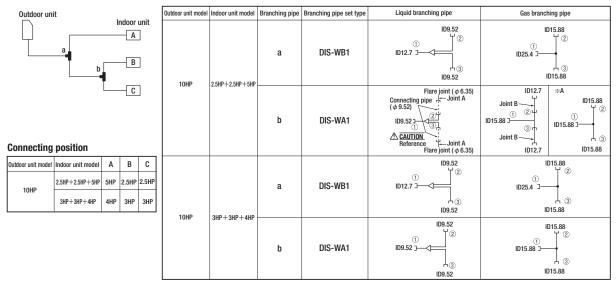


	Indoor unit model	Branching pipe	Branching pipe set type	Liquid branching pipe	Gas branching pipe
	2HP+2HP+2HP	a a	braining pipe set type	Flare joint (ϕ 6.35) Connecting pipe (ϕ 9.52) ID9.52 CAUTION Reference	Joint B (2) ID15.88
		b	DIS-WA1	Flare joint (\$\phi 6.35\$) - Joint A Connecting pipe (\$\phi 9.52\$) ID9.52 \text{CAUTION} Reference} - Joint A Flare joint (\$\phi 6.35\$)	Joint B Joint B Joint B ID12.7
8НР	3HP+3HP+3HP	a	DIS-WB1	ID9.52 ID9.52 109.52 Joint C ID9.52	ID15.88 ID25.4 3 3 ID15.88
		b	DIS-WA1	ID9.52 (2) (2) (3) (109.52 (10	ID15.88 1D15.88 ID15.88

2-6. Triple type for same model/different capacity or different model/different capacity

Applicable to the difference in length of pipes after the branch being less than 3 m

* Connection is not allowed when the difference in length of pipes is larger than 3 m.



Note When connect the indoor unit of an old model that is shown in the model list, use the joint supplied with the branch piping set like ** A.

2-7. Double Twin type

Pipes should be connected as follows for a Double Twin installation (4 connected indoor units. The capacity of an outdoor unit available for this configuration is either 8HP or 10HP only):

s either 8HP or 10 Outdoor unit capacity	Indoor unit capacity	Branching pipe	Branching pipe set type	Outdoor unit model	Liquid branching pipe	Gas branching pipe
8HP 10HP	2HP×4 units 2.5HP×4 units			8HP	ID9.52 (D9.52) (D9.52) (D9.52) (D9.52) (D9.52)	ID15.88 ⊕
Outdoor unit b Indoor unit		a DIS-WB1		10HP	ID9.52 ID9.52 ID9.52	ID25.4 3————————————————————————————————————
b [8НР	Flare joint (ϕ 6.35) Connecting pipe Joint A (ϕ 9.52)	ID12.7 Joint B 2 ID15.88 Joint B Joint B ID12.7
		b	DIS-WA1	10HP	D9.52 → Signature Signatur	#A

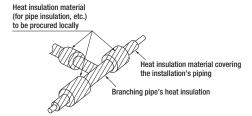
Note When connect the indoor unit of an old model that is shown in the model list, use the joint supplied with the branch piping set like * A.

3. Heat insulation work

(1) Condensation can also occur on liquid pipes with this model. Please provide good heat insulation to both liquid and gas pipes.

(2) For the heat insulation of a branching pipe, always use the heat insulation material supplied with the set and provide heat insulation according to the instructions set out below.

It has an adhesive layer on the entire inner face.
 Remove a separator and wrap it around the branching pipe.

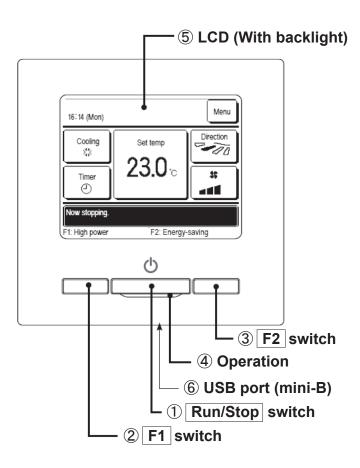


2. Apply a heat insulation material (to be procured locally) to the joint between the branching pipe's heat insulation and the heat insulation material covering the installation's piping as described above and wrap a tape over the gap shown as a hatched (///) area to complete dressing of the piping.

1.11 OUTLINE OF OPERATION CONTROL BY MICROCOMPUTER

1.11.1 Remote control

(1) Wired remote control Model RC-EX3



Touch panel system, which is operated by tapping the LCD screen with a finger, is employed for any operations other than the ①Run/Stop, ②F1 and ③F2 switches.

1 Run/Stop switch

One push on the button starts operation and another push stops operation.

2 F1 switch3 F2 switch

This switch starts operation that is set in switch function change.

4 Operation

This lamp lights in green(yellow-green) during operation. It changes to red(orange) if any error occurs.

Operation lamp luminance can be changed.

5 LCD (With backlight)

A tap on the LCD lights the backlight. The backlight turns off automatically if there is no operation for certain period of time. Lighting period of the backlight lighting can be changed.

If the backlight is ON setting, when the screen is tapped while the backlight is turned off,the backlight only is turned on.(Operations with switches \bigcirc , \bigcirc and \bigcirc are excluded.)

6 USB port

USB connector (mini-B) allows connecting to a personal computer.

For operating methods, refer to the instruction manual attached to the software for personal computer (eco-touch remote control utility software).

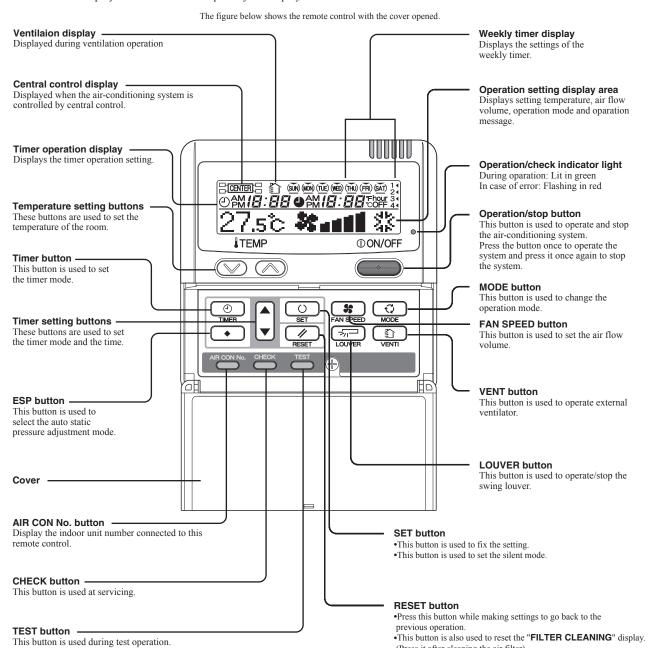
Note(1) When connecting to a personal computer, do not connect simultaneously with other USB devices.

Please be sure to connect to the computer directly, without going through a hub, etc.

Model RC-E5

The figure below shows the remote control with the cover opened. Note that all the items that may be displayed in the liquid crystal display area are shown in the figure for the sake of explanation

Characters displayed with dots in the liquid crystal display area are abbreviated.



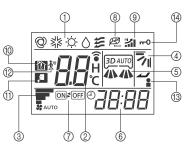
^{*} All displays are described in the liguid crystal display for explanation.

(Press it after cleaning the air filter)

(2) Wireless remote control

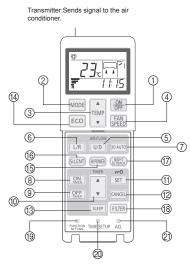
RCN-E2 (Except FDF & SRK series)

Indication section



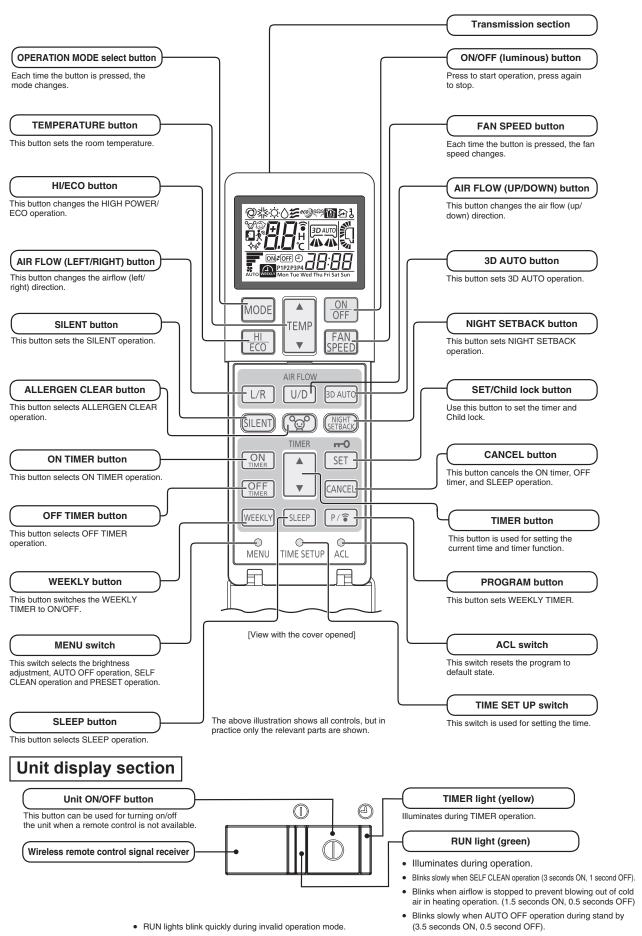
	1	OPERATION MODE display	Indicates selected operation mode.				
		SET TEMP display	Indicates set temperature.				
.	(<u>2</u>)	SLEEP TIMER time display	Indicates the amount of time remaining on the sleep timer.				
,	E)	Indoor function setting number display	Indicates the setting number of the indoor function setting.				
	3	FAN SPEED display	Indicates the selected air flow volume.				
)	4	UP/DOWN AIR FLOW display	Indicates the up/down louver position.				
)	(5)	LEFT/RIGHT AIR FLOW display	Indicates the left/right louver position.(RCN-EK2 only)				
)	6	Clock display	Indicates the current time. If the timer is set, the ON TIMER and OFF TIMER setting times are indicated.				
	7	ON/OFF TIMER display	Displayed when the timer is set.				
	8	ECO mode display	Displayed when the energy-saving operation is active.				
	9	HI POWER display	Displayed when the high power operation is active.				
	10	NIGHT SETBACK display	Displayed when the home leave mode is active.				
	11	SILENT display	Displayed when the silent mode control is active.				
	12)	Motion sensor display	Displayed when the infrared sensor control(motion sensor control) is enabled.				
	13	Anti draft setting display	Displayed when anti draft setting is enabled.				
	(14)	Child lock display	Displayed when child lock is enabled.				

Operation section



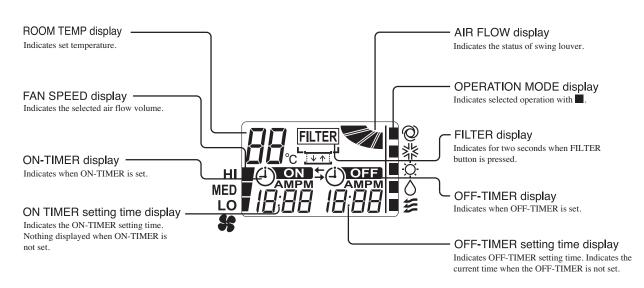
1	ON/OFF button	When this is pressed once, the air-conditioner starts to operate and when this is pressed once again, it stops operating.				
2	MODE button	Every time this button is pressed, displays switch as below ○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○				
3	TEMP button	Change the set temperature by pressing ▲ or ▼ button.				
4	FAN SPEED button	The fan speed is switched in the following order: 1-speed → 2-speed → 3-speed → 4-speed → AUTO → 1-speed.				
(5)	U/D button	Used to determine the up/down louver position.				
6	L/R button	Used to determine the left/right louver position. (RCN-EK2 only)				
7	3D AUTO button	Used to switch whether or not to enable or disable 3D AUTO mode. (RCN-EK2 only)				
8	ON TIMER button	Used to set the ON TIMER.				
9	OFF TIMER button	Used to set the OFF TIMER.				
10	SELECT button	Used to switch the time when setting the timer or adjusting the time. Used to switch the settings of the indoor function.				
(1)	SET button	Used to determine the setting when setting the timer or adjusting the time. Used to determine the settings of the indoor function. When press and hold SET button ,Child Lock is enabled.				
12	CANCEL button	Used to cancel the timer setting.				
13	SLEEP button	Used to set the sleep timer.				
14)	ECO button	Pressing this button starts the energy-saving operation. Pressing this button again cancels it.				
15	HI POWER button	Pressing this button starts the high power operation. Pressing this button again cancels it.				
16	SILENT button	Pressing this button starts the silent mode control. Pressing this button again cancels it.				
17)	NIGHT SETBACK button	Pressing this button starts the home leave mode. Pressing this button again cancels it.				
18	FILTER button	Pressing this button resets FILTER SIGN.				
19	FUNCTION SETTING switch	Used to set the indoor function.				
20	TIME SETUP switch	Used to set the current time.				
21)	ACL switch	Used to reset the microcomputer.				

SRK series only

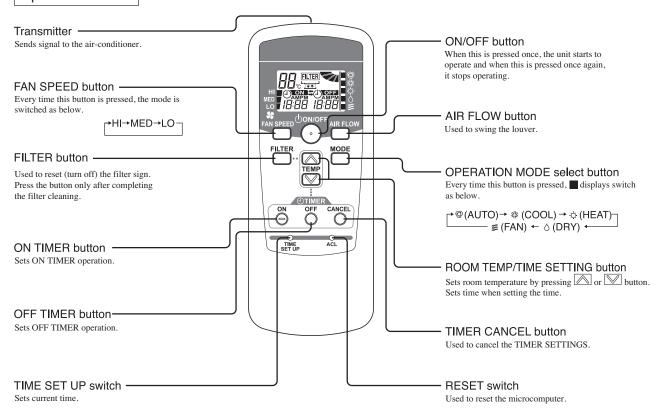


RCN-EIR (FDF series only)

Indication section



Operation section



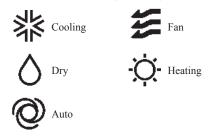
^{*} All displays are described in the liquid crystal display for explanation.

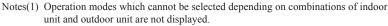
1.11.2 Operation control function by the wired remote control

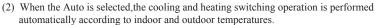
Model RC-EX3

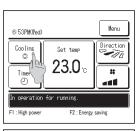
(1) Switching sequence of the operation mode switches of remote control

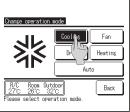
- (a) Tap the change operation mode button on the TOP screen.
- (b) When the change operation mode screen is displayed, tap the button of desired mode.
- (c) When the operation mode is selected, the display returns to the TOP screen. Icons displayed have the following meanings.





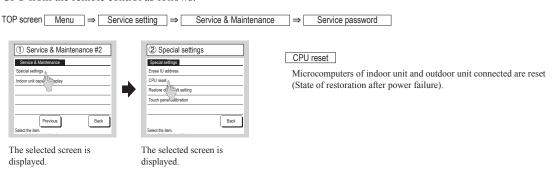






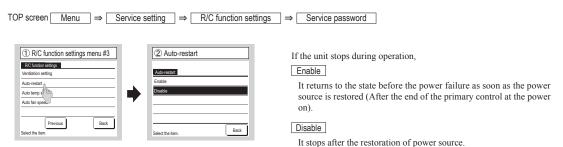
(2) CPU reset

Reset CPU from the remote control as follows.



(3) Power failure compensation function (Electric power source failure)

Enable the Auto-restart function from the remote control as follows.



- •Since the status of remote control is retained in memory always, it restarts operations according to the contents of memory as soon as the power source is restored. Although the timer mode is cancelled, the weekly timer, peak cut timer and silent mode timer operate according to the following contents:
 - When the clock setting is valid : These timer settings are also valid.
- When the clock setting is invalid: These timer settings become "Invalid" since the clock setting is invalid.

 These timer settings have to be changed to "Valid" after the timer setting.

•Content memorized with the power failure compensation are as follows.

Note(1) Items (f) and (g) are memorized regardless whether the power failure compensation is effective or not while the setting of silent mode is cancelled regardless whether the power failure compensation is effective or not.

- (a) At power failure Operating/stopped
 - If it had been operating under the off timer mode, sleep timer mode, the state of stop is memorized.
- (b) Operation mode
- (c) Air flow volume mode
- (d) Room temperature setting
- (e) Louver auto swing/stop

However, the stop position (4-position) is cancelled so that it returns to Position (1).

- (f) "Remote control function items" which have been set with the administrator or installation function settings ("Indoor function items" are saved in the memory of indoor unit.)
- (g) Weekly timer, peak-cut timer or silent mode timer settings
- (h) Remote control function setting

(4) Alert displays

If the following (a) to (c) appear, check and repair as follows.

(a) Communication check between indoor unit and remote control



This appears if communications cannot be established between the remote control and the indoor unit.

Check whether the system is correctly connected (indoor unit, outdoor unit, remote control) and whether the power source for the outdoor unit is connected.

(b) Clock setting check



• This appears when the timer settings are done without clock setting.Set the clock setting before the timer settings.

(c) Misconnection



• This appears when something other than the air-conditioner has been connected to the remote control.
Check the location to which the remote control is connected.

Model RC-E5

(1) Switching sequence of the operation mode switches of remote control



(2) CPU reset

This functions when "CHECK" and "ESP" buttons on the remote control are pressed simultaneously. Operation is same as that of the power source reset.

(3) Power failure compensation function (Electric power source failure)

- This becomes effective if "Power failure compensation effective" is selected with the setting of remote control function.
- Since it memorizes always the condition of remote control, it starts operation according to the contents of memory no sooner than normal state is recovered after the power failure. Although the auto swing stop position and the timer mode are cancelled, the weekly timer setting is restored with the holiday setting for all weekdays.

After recovering from the power failure, it readjusts the clock and resets the holiday setting for each weekday so that the setting of weekly timer becomes effective.

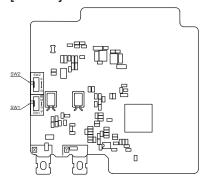
• Content memorized with the power failure compensation are as follows.

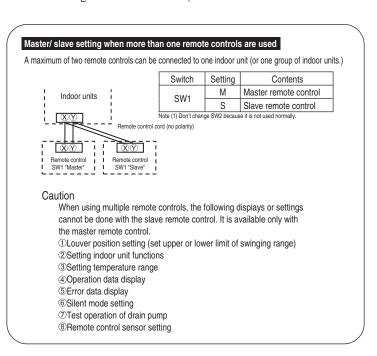
Note (1) Items (f), (g) and (h) are memorized regardless whether the power failure compensation is effective or not while the setting of silent mode is cancelled regardless whether the power failure compensation is effective or not.

- (a) At power failure Operating/stopped

 If it had been operating under the off timer mode, sleep timer mode, the state of stop is memorized. (Although the timer mode is cancelled at the recovery from power failure, the setting of weekly timer is changed to the holiday setting for all weekdays.)
- (b) Operation mode
- (c) Air flow volume mode
- (d) Room temperature setting
- (e) Louver auto swing/stop
 - However, the stop position (4-position) is cancelled so that it returns to Position (1).
- (f) "Remote control function items" which have been set with the remote control function setting ("Indoor function items" are saved in the memory of indoor unit.)
- (g) Upper limit value and lower limit value which have been set with the temperature setting control
- (h) Sleep timer and weekly timer settings (Other timer settings are not memorized.)

[Parts layout on remote control PCB]



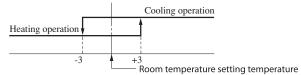


1.11.3 Operation control function by the indoor control

(I) FDT, FDTC, FDE, FDU, FDUM, FDF series

(1) Auto operation

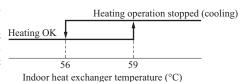
(a) If "Auto" mode is selected by the remote control, the heating and the cooling are automatically switched according to the difference between outdoor air temperature and setting temperature and the difference between setting temperature and return air temperature. (When the switching of cooling mode ↔ heating mode takes place within 3 minutes, the compressor does not operate for 3 minutes by the control of 3-minute timer.) This will facilitate the cooling/heating switching operation in intermediate seasons and the adaptation to unmanned operation at stores, etc (ATM corner of bank).



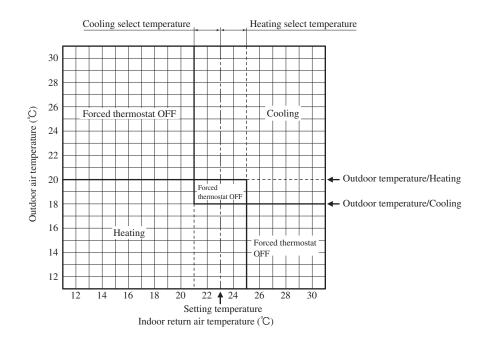
Room temperature (detected with Thi-A) [deg]

Notes (1) Temperature range of switching cooling/heating mode can be changed by RC-EX3 from $\pm 1.0 \sim \pm 4.0$.

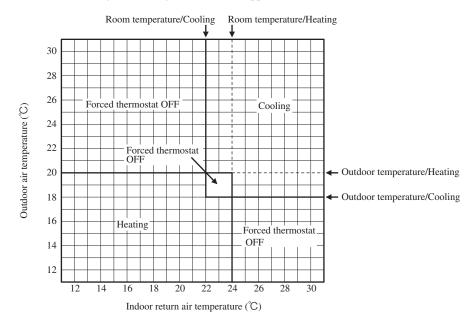
- (2) Room temperature control during auto cooling/auto heating is performed according to the room temperature setting temperature. (DIFF: ± 1 deg)
- (3) If the indoor heat exchanger temperature rises to 59°C or higher during heating operation, it is switched automatically to cooling operation. In addition, for 1 hour after this switching, the heating operation is not performed, regardless of the temperature shown at right.



- (b) The following automatic controls are performed other than (a) above.
 - (i) Cooling or heating operation mode is judged according to the conditions of the "Judgment based on Setting temperature + Cooling select temperature and Indoor return air temperature" and the "Judgment based on Outdoor temperature".
 - 1) In "Setting temperature Cooling select temperature < Indoor return air temperature" and "Outdoor temperature/Cooling < Outdoor return air temperature" ⇒ Operation mode: Cooling
 - 2) "Setting temperature + Heating select temperature > Indoor return air temperature" and "Outdoor temperature/Heating > Outdoor air temperature" ⇒ Operation mode: Heating
 - 3) The outdoor air temperature of the above judgment conditions is sampled at every 10 minutes.
 - 4) In the range where the above cooling and heating zones are overlapped ⇒ Forced thermostat OFF



- (ii) Regardless of the setting temperature, the cooling or heating operation mode is judged according to the "Judgment based on Room temperature/Cooling or Heating and Outdoor temperature/Cooling or Heating".
 - 1) In case of "Room temperature/Cooling < Indoor return air temperature" and "Outdoor temperature/Cooling < Outdoor air temperature" \Rightarrow Operation mode: Cooling
 - 2) In case of "Room temperature/Heating > Indoor return air temperature" and "Outdoor temperature /Heating > Outdoor air temperature" \Rightarrow Operation mode: Heating
 - 3) The outdoor air temperature of the above judgment conditions is sampled at every 10 minutes.
 - 4) In the range where the above cooling and heating zones are overlapped \Rightarrow Forced thermostat OFF



(2) Operations of functional items during cooling/heating

Operation	Cooling						
Functional item	Thermostat ON	Thermostat OFF	Fan	Thermostat ON	Thermostat OFF	Hot start (Defrost)	Dehumidifying
Compressor	0	×	×	0	×	0	O/×
4-way valve	×	×	×	0	0	○(×)	×
Outdoor unit fan	0	×	×	0	×	○(×)	O/×
Indoor unit fan	0	0	0	O/×	O/×	O/×	O/×
Drain pump ⁽³⁾	0	X ⁽²⁾	× ⁽²⁾		O/× ⁽²⁾		Thermostat ON: O Thermostat OFF: X ⁽²⁾

Notes (1) \bigcirc : Operation \times : Stop \bigcirc/\times : Turned ON/OFF by the control other than the room temperature control.

- (2) ON during the drain motor delay control.
- (3) Drain pump ON setting may be selected with the indoor unit function setting of the wired remote control.

(3) Dehumidifying (DRY) operation

(a) FDT series

Indoor ambient temperatures and humidity are controlled simultaneously with the relative humidity sensor (HS) and the suction temperature sensor [Thi-A (or the remote control sensor when it is activated)], which are installed at the suction inlet.

- (i) When the operation has been started with cooling, if there is a difference of 2°C or less between the suction and setting temperatures, the tap of indoor fan is lowered by one tap. This tap is retained for 3 minutes after changing the tap.
- (ii) After the above condition, when a difference between suction and setting temperature is lower than 3°C, and the relative humidity is high, the tap of indoor unit fan is lowered by one tap.
 When the difference between suction and setting temperature is larger than 3°C, the fan of indoor unit fan is raised by one tap. This tap is retained for 3 minutes after changing the tap.
- (iii) When relative humidity becomes lower, the indoor unit fan tap is retained.
- (iv) In case of the thermostat OFF, the indoor unit fan tap at the thermostat ON is retained.

(b) Except FDT series

Return air temperature thermistor [Thi-A (by the remote control when the remote control thermistor is enabled)] controls the indoor temperature environment simultaneously.

- (i) Operation is started in the cooling mode. When the difference between the return air temperature and the setting temperature is 2°C or less, the indoor unit fan tap is brought down by one tap. That tap is retained for 3 minutes after changing the indoor unit fan tap.
- (ii) If the return air temperature exceeds the setting temperature by 3°C during dehumidifying operation, the indoor unit fan tap is raised. That tap is retained for 3 minutes after changing the indoor unit fan tap.
- (iii) If the thermostat OFF is established during the above control, the indoor unit fan tap at the thermostat ON is retained so far as the thermostat is turned OFF.

(4) Timer operation

(a) RC-EX3

(i) Sleep timer

Set the time from the start to stop of operation. The time can be selected in the range from 30 to 240 minutes (in the unit of 10-minute).

Note (1) Enable the "Sleep timer" setting from the remote control. If the setting is enabled, the timer operates at every time.

(ii) Set OFF timer by hour

Set the time to stop the unit after operation, in the range from 1 to 12 hours (in the unit of hour).

(iii) Set ON timer by hour

Set the time to start the unit after the stop of operation, in the range from 1 to 12 hours (in the unit of hour). It is allowed also to set simultaneously the indoor temperature, operation mode, air flow rate and warm-up enabled/disabled.

(iv) Set ON timer by clock

Set the time to start operation. The time can be set in the unit of 5-minute. This setting can be activated only once or at every time. It is allowed also to set simultaneously the indoor temperature, operation mode, air flow rate and warm-up enabled/disabled.

Note (1) It is necessary to set the clock to use this timer.

(v) Set OFF timer by clock

Set the time to stop operation. The time can be set in the unit of 5-minute. This setting can be activated only once or at every time.

Note (1) It is necessary to set the clock to use this timer.

(vi) Weekly timer

Set the ON or OFF timer for a week. Up to 8 patterns can be set for a day. The day-off setting is provided for holidays and non-business days.

Note (1) It is necessary to set the clock to use the weekly timer.

(vii) Combination of patterns which can be set for the timer operations

	Sleep time	Set OFF timer by hour	Set ON timer by hour	Set OFF timer by clock	Set ON timer by clock	Weekly timer
Sleep time		×	×	0	0	0
Set OFF timer by hour	×		×	×	×	×
Set ON timer by hour	×	×		×	×	×
Set OFF timer by clock	0	×	×		0	×
Set ON timer by clock	0	×	×	0		×
Weekly timer	0	×	×	×	×	

Note (1) ○: Allowed ×: Not

(b) RC-E5

(i) Sleep timer

Set the duration of time from the present to the time to turn off the air-conditioner.

It can be selected from 10 steps in the range from "OFF 1 hour later" to "OFF 10 hours later". After the sleep timer setting, the remaining time is displayed with progress of time in the unit of hour.

(ii) OFF timer

Time to turn OFF the air-conditioner can be set in the unit of 10 minutes.

(iii) ON timer

Time to turn ON the air-conditioner can be set. Indoor temperature can be set simultaneously.

(iv) Weekly timer

Timer operation (ON timer, OFF timer) can be set up to 4 times a day for each weekday.

(v) Timer operations which can be set in combination

Item Item	Timer	OFF timer	ON timer	Weekly timer
Timer		X		×
OFF timer	OFF timer ×		0	×
ON timer	ON timer O			×
Weekly timer	×	×	×	

Notes (1) ○: Allowed ×: Not

(2) Since the ON timer, sleep timer and OFF timer are set in parallel, when the times to turn ON and OFF the airconditioner are duplicated, the setting of the OFF timer has priority.

(5) Remote control display during the operation stop

When the operation is stopped (the power source is turned ON), it displays preferentially the "Room temperature", "Center/Remote", "Filter sign", "Inspection" and "Timer operation".

(6) Hot start (Cold draft prevention at heating)

(a) Operating conditions

When either one of following conditions is satisfied, the hot start control is performed.

- (i) From stop to heating operation
- (ii) From cooling to heating operation
- (iii) Form heating thermostat OFF to ON
- (iv) After completing the defrost operation (only on units with thermostat ON)

(b) Contents of operation

- (i) Indoor fan motor control at hot start
 - 1) Within 7 minutes after starting heating operation, the fan mode is determined depending on the condition of thermostat (fan control with heating thermostat OFF).
 - a) Thermostat OFF
 - i) Operates according to the fan control setting at heating thermostat OFF.
 - ii) Even if it changes from thermostat OFF to ON, the fan continues to operate with the fan control at thermostat OFF till the heat exchanger thermistor (Thi-R1 or R2, whichever higher) detects 35°C or higher.
 - iii) When the heat exchanger thermistor (Thi-R1 or R2, whichever higher) detects 35°C or higher, the fan operates with the set air flow volume.
 - b) Thermostat ON
 - i) When the heat exchanger thermistor (Thi-R1 or R2, whichever higher) detects 25°C or lower, the fan is turned OFF and does not operate.
 - ii) When the heat exchanger thermistor (Thi-R1 or R2, whichever higher) detects 25°C or higher, the fan operates with the fan control at heating thermostat OFF.
 - iii) When the heat exchanger thermistor (Thi-R1 or R2, whichever higher) detects 35°C or higher, the fan operates with the set air flow volume.
 - c) If the fan control at heating thermostat OFF is set at the "Set air flow volume" (from the remote control), the fan operates with the set air flow volume regardless of the thermostat ON/OFF.
 - 2) Once the fan motor is changed from OFF to ON during the thermostat ON, the indoor fan motor is not turned OFF even if the heat exchanger thermistor detects lower than 25°C.
 - Note (1) When the defrost control signal is received, it complies with the fan control during defrost operation.
 - 3) Once the hot start is completed, it will not restart even if the temperature on the heat exchanger thermistor drops.
- (ii) During the hot start, the louver is kept at the horizontal position.
- (iii) When the fan motor is turned OFF for 7 minutes continuously after defrosting, the fan motor is turned ON regardless of the temperatures detected with the indoor heat exchanger thermistors (Thi-R1, R2).

(c) Ending condition

- (i) If one of following conditions is satisfied during the hot start control, this control is terminated, and the fan is operated with the set air flow volume.
 - 1) Heat exchanger thermistor (Thi-R1 or R2, whichever higher) detects 35°C or higher.
 - 2) It has elapsed 7 minutes after starting the hot start control.

(7) Hot keep

Hot keep control is performed at the start of the defrost operation.

- (a) Control
 - (i) When the indoor heat exchanger temperature (detected with Thi-R1 or R2) drops to 35°C or lower, the speed of indoor fan is changed to the lower tap at each setting.
 - (ii) During the hot keep, the louver is kept at the horizontal position.
- (b) Ending condition

When the indoor fan is at the lower tap at each setting, it returns to the set air flow volume as the indoor heat exchanger temperature rises to 45°C or higher.

(8) Auto swing control (FDT, FDTC, FDE, FDF only)

Note Even if [Auto Swing] is selected, the louver position with anit draft function is fixed to position 1.

(a) RC-EX3

- (i) Louver control
 - 1) To operate the swing louver when the air-conditioner is operating, press the "Direction" button on the TOP screen of remote control. The wind direction select screen will be displayed.
 - 2) To swing the louver, touch the "Auto swing" button. The lover will move up and down. To fix the swing louver at a position, touch one of [1] [4] buttons. The swing lover will stop at the selected position.
 - 3) Louver operation at the power on with a unit having the louver 4-position control function
 - The louver swings one time automatically (without operating the remote control) at the power on.
 - This allows the microcomputer recognizing and inputting the louver motor (LM) position.
- (ii) Automatic louver level setting during heating

At the hot start and the heating thermostat OFF, regardless whether the auto swing switch is operated or not (auto swing or louver stop), the louver takes the level position (in order to prevent blowing of cool wind). The louver position display LCD continues to show the display which has been shown before entering this control.

(iii) Louver free stop control

If you touch the "Menu" \rightarrow "Next" \rightarrow "R/C settings" buttons one after another on the TOP screen of remote control, the "Flap control" screen is displayed. If the free stop is selected on this screen, the louver motor stops upon receipt of the stop signal from the remote control. If the auto swing signal is received from the remote control, the auto swing will start from the position before the stop.

(b) RC-E5

- (i) Louver control
 - 1) Press the "LOUVER" button to operate the swing louver when the air-conditioner is operating.
 - "SWING -" is displayed for 3 seconds and then the swing louver moves up and down continuously.
 - 2) To fix the swing louver at a position, press one time the "LOUVER" button while the swing louver is moving so that four stop positions are displayed one after another per second.
 - When a desired stop position is displayed, press the "LOUVER" button again. The display stops, changes to show the "STOP 1—" for 5 seconds and then the swing louver stops.
 - 3) Louver operation at the power on with a unit having the louver 4-position control function
 - The louver swings one time automatically (without operating the remote control) at the power on.
 - This allows inputting the louver motor (LM) position, which is necessary for the microcomputer to recognize the louver position.
 - Note (1) If you press the "LOUVER" button, the swing motion is displayed on the louver position LCD for 10 second. The display changes to the "SWING ->
 "display 3 seconds later.
- (ii) Automatic louver level setting during heating

At the hot start with the heating thermostat OFF, regardless whether the auto swing switch is operated or not (auto swing or louver stop), the louver takes the level position (In order to prevent the cold start). The louver position display LCD continues to show the display which has been shown before entering this control.

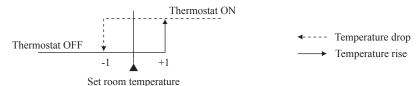
(iii) Louver-free stop control

When the louver-free stop has been selected with the indoor function of wired remote control " \Rightarrow_{n} POSITION", the louver motor stops when it receives the stop signal from the remote control. If the auto swing signal is received from the remote control, the auto swing will start from the position where it was before the stop.

(9) Thermostat operation

(a) Cooling

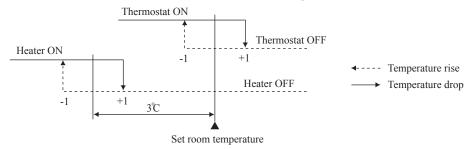
- (i) Thermostat is operated with the room temperature control.
- (ii) Thermostat is turned ON or OFF relative to the set room temperature as shown below.



(iii) Thermostat is turned ON when the room temperature is in the range of -1 < Set temperature < +1 at the start of cooling operation (including from heating to cooling).

(b) Heating

- (i) Thermostat is operated with the room temperature control.
- (ii) Thermostat is turned ON or OFF relative to the set room temperature as shown below.



(iii) Thermostat is turned ON when the room temperature is in the range of -1 < Set point < +1 at the start of heating operation (including from cooling to heating).

(c) Fan control during heating thermostat OFF

- (i) Following fan controls during the heating thermostat OFF can be selected with the indoor function setting of the wired remote control.
 - ① Low fan speed (Factory default), ② Set fan speed, ③ Intermittence, ④ Fan OFF
- (ii) When the "Low fan speed (Factory default)" is selected, the following taps are used for the indoor fans.
 - · For AC motor: Lo tap
 - · For DC motor : ULo tap
- (iii) When the "Set fan speed" is selected, it is operated with the set fan speed also in the thermostat OFF condition.
- (iv) If the "Intermittence" is selected, following controls are performed:
 - 1) If the thermostat is turned OFF during the heating operation, the indoor unit moves to the hot control and turns OFF the indoor fan if the heat exchanger thermistors (both Thi-R1 and R2) detect 25°C or lower.
 - Indoor fan OFF is fixed for 5 minutes. After the 5 minutes, the indoor fan is operated at Lo or ULo for 2 minutes.
 In the meantime the louver is controlled at level.
 - 3) After operating at Lo or ULo for 2 minutes, the indoor fan moves to the state of 1) above.
 - 4) If the thermostat is turned ON, it moves to the hot start control.
 - 5) When the heating thermostat is turned OFF, the remote control displays the temperature detected at the fan stop and revises the temperature later when the indoor fan changes from Lo or ULo to stop.
 - The remote control uses the operation data display function to display temperatures and updates values of temperature even when the indoor fan is turned OFF.
 - 6) When the defrosting starts while the heating thermostat is turned OFF or the thermostat is turned OFF during defrosting, the indoor fan is turned OFF. (Hot keep or hot start control takes priority.) However, the suction temperature is updated at every 7-minute.
 - 7) When the heating thermostat is turned ON or the operation is changed to another mode (including stop), this control is stopped immediately, and the operating condition is restored.
- (v) When the "Fan OFF" is selected, the fan on the indoor unit of which the thermostat has been turned OFF, is turned OFF. The same occurs also when the remote control sensor is effective.

(d) Fan control during cooling thermostat OFF

- (i) Following fan controls during the cooling thermostat OFF can be selected with the indoor function setting of the wired remote control.
 - ① Low fan speed, ② Set fan speed (Factory default), ③ Intermittence, ④ Fan OFF
- (ii) When the "Low fan speed" is selected, the following taps are used for the indoor fans.
 - For AC motor : Lo tap
 - · For DC motor: ULo tap
- (iii) When the "Set fan speed" is selected, it is operated with the set fan speed also in the thermostat OFF condition.
- (iv) If the "Intermittence" is selected, following controls are performed:
 - 1) If the thermostat is turned OFF during the cooling operation, the indoor unit fan motor stope.
 - 2) Indoor fan OFF is fixed for 5 minutes. After the 5 minutes, the indoor fan is operated at Lo or ULo for 2 minutes. In the meantime the louver is controlled at level.
 - 3) After operating at Lo or ULo for 2 minutes, the indoor fan moves to the state of 1) above.
 - 4) If the thermostat is turned ON, the fan starts operation at set fan speed.
 - 5) When the cooling thermostat is turned OFF, the remote control displays the temperature detected at the fan stop and revises the temperature later when the indoor fan changes from Lo or ULo to stop.
 - By using operation data display function at wireless remote control, the tempenature as displayad and the value is updated including the fan stops.
 - 6) When the cooling thermostat is turned ON or the operation is changed to another mode (including stop), this control is stopped immediately, and the operating condition is restored.
- (v) When the "Fan OFF" is selected, the fan on the indoor unit of which the thermostat has been turned OFF, is turned OFF. The same occurs also when the remote control sensor is effective.

(10) Filter sign

As the operation time (Total ON time of ON/OFF switch) accumulates to 180 hours (1), "FILTER CLEANING" is displayed on the remote control. (This is displayed when the unit is in trouble and under the centralized control, regardless of ON/OFF)

Notes (1) Time setting for the filter sign can be made as shown below using the indoor function of wired remote control "Filter sign". (It is set at setting 1 at the shipping from factory.)

Filter sign setting	Function		
Setting 1	Setting time: 180 hrs (Factory default)		
Setting 2	Setting time: 600 hrs		
Setting 3	Setting time: 1,000 hrs		
Setting 4	Setting time: 1,000 hrs (Unit stop) (2)		

(2) After the setting time has elapsed, the "FILTER CLEANING" is displayed and, after operating for 24 hours further (counted also during the stop), the unit stops

(11) Compressor inching prevention control

(a) 3-minute timer

When the compressor has been stopped by the thermostat, remote control operation switch or anomalous condition, its restart will be inhibited for 3 minutes. However, the 3-minute timer is invalidated at the power on the electric power source for the unit.

- (b) 3-minute forced operation timer
 - (i) Compressor will not stop for 3 minutes after the compressor ON. However, it stops immediately when the unit is stopped by means of the ON/OFF switch or by when the thermister turned OFF the change of operation mode.
 - (ii) If the thermostat is turned OFF during the forced operation control of heating compressor, the louver position (with the auto swing) is returned to the level position.
 - Note (1) The compressor stops when it has entered the protective control.

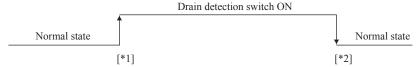
(12) Drain pump control

- (a) This control is operated when the inverter frequency is other than 0 Hz during the cooling operation and automatic cooling and dehumidifying operations.
- (b) Drain pump ON condition continues for 5 minutes even when it enters the OFF range according to (i) above after turning the drain pump ON, and then stops. The 5-minute delay continues also in the event of anomalous stop.
- (c) The drain pump is operated with the 5-minute delay operation when the compressor is changed from ON to OFF.
- (d) Even in conditions other than the above (such as heating, fan, stop, cooling thermostat OFF), the drain pump control is performed by the drain detection.
- (e) Following settings can be made using the indoor function setting of the wired remote control.
 - (i) 🗱 (Standard (in cooling & dry)): Drain pump is run during cooling and dry.
 - (ii) 攀合部()禁 [Operate in standard & heating]: Drain pump is run during cooling, dry and heating.
 - (iii) 攀合副原副[Operate in heating & fan]: Drain pump is run during cooling, dry, heating and fan.
 - (iv) 禁冷部() 注 [Operate in standard & fan]: Drain pump is run during cooling, dry and fan.

 Note (1) Values in [] are for the RC-EX3 model.

(13) Drain motor (DM) control

(a) Drain detection switch is turned ON or OFF with the float switch (FS) and the timer.



- [*1] Drain detection switch is turned "ON" when the float switch "Open" is detected for 3 seconds continuously in the drain detectable space.
- [*2] Drain detection switch is turned "OFF" when the float switch "Close" is detected for 10 seconds continuously.
- (i) It detects always from 30 seconds after turning the power ON.
 - 1) There is no detection of anomalous draining for 10 seconds after turning the drain pump OFF.
 - 2) Turning the drain detection switch "ON" causes to turn ON the drain pump forcibly.
 - 3) Turning the drain detection switch "OFF" releases the forced drain pump ON condition.
- (b) Indoor unit performs the control A or B depending on each operating condition.

Indoor unit operation mode						
	Stop (1) Cooling Dry Fan (2) Heating					
Compressor ON		Control A				
Compressor OFF	Control B					

Notes (1) Including the stop from the cooling, dehumidifying, fan and heating, and the anomalous stop (2) Including the "Fan" operation according to the mismatch of operation modes

(i) Control A

- 1) If the float switch detects any anomalous draining condition, the unit stops with the anomalous stop (displays E9) and the drain pump starts. After detecting the anomalous condition, the drain motor continues to be ON.
- 2) It keeps operating while the float switch is detecting the anomalous condition.

(ii) Control B

If the float switch detects any anomalous drain condition, the drain motor is turned ON for 5 minutes, and at 10 seconds after the drain motor OFF it checks the float switch. If it is normal, the unit is stopped under the normal mode or, if there is any anomalous condition, E9 is displayed and the drain motor is turned ON. (The ON condition is maintained during the drain detection.)

(14) Operation check/drain pump test run operation mode

- (a) If the power is turned on by the dip switch (SW7-1) on the indoor PCB when electric power source is supplied, it enters the mode of operation check/drain pump test run. It is ineffective (prohibited) to change the switch after turning power on.
- (b) When the communication with the remote control has been established within 60 seconds after turning power on by the dip switch (SW7-1) ON, it enters the operation check mode. Unless the remote control communication is established, it enters the drain pump test run mode.
 - Note (1) To select the drain pump test run mode, disconnect the remote control connector (CNB) on the indoor PCB to shut down the remote control communication.

(c) Operation check mode

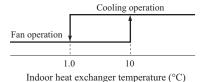
There is no communication with the outdoor unit but it allows performing operation in respective modes by operating the remote control.

(d) Drain pump test run mode

As the drain pump test run is established, the drain pump only operates and during the operation protective functions by the microcomputer of indoor unit become ineffective.

(15) Cooling, dehumidifying frost protection

(a) To prevent frosting during cooling mode or dehumidifying mode operation, the of compressor speed is reduced if the indoor heat exchanger temperature (detected with Thi-R) drops to 1.0°C or lower at 4 minutes after the start of compressor operation. If the indoor unit heat exchanger temperature is 1.0°C or lower after 1 minutes, the compressor speed is reduced further. If it becomes 2.5°C or higher, the control terminates. When the indoor heat exchanger temperature has become as show below after reducing the compressor speed, it is switched to the fan operation. For the selection of indoor fan speed, refer to item 2).



(b) Selection of indoor fan speed

If it enters the frost prevention control during cooling operation (excluding dehumidifying), the indoor unit fan speed is switched

- (i) In the case of FDUM only.
 - 1) When the indoor return air detection temperature (detected with Thi-A) is 23°C or higher and the indoor heat exchanger temperature (detected with Thi-R) detects the compressor frequency drop start temperature A°C+1°C, of indoor unit fan speed is increased by 20 min⁻¹.
 - 2) If the phenomenon of 1) above is detected again after the acceleration of indoor unit fan, indoor unit fan speed is increased further by 20 min⁻¹.

Note (1) Indoor unit fan speed can be increased by up to 2 taps.

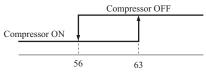
• Compressor frequency drop start temperature

Symbol Item	A
Temperature - Low (Factory default)	1.0
Temperature - High	2.5

Note (1) Frost prevention temperature setting can be selected with the indoor unit function setting of the wired remote control.

(16) Heating overload protection

(a) If the indoor heat exchanger temperature (detected with Thi-R) at 63°C or higher is detected for 2 seconds continuously, the compressor stops. When the compressor is restarted after a 3-minute delay, if a temperature at 63°C or higher is detected for 2 seconds continuously within 60 minutes after initial detection and if this is detected 5 times consecutively, the compressor stops with the anomalous stop (E8). Anomalous stop occurs also when the indoor heat exchanger temperature at 63°C or higher is detected for 6 minutes continuously.



Indoor heat exchanger temperature (°C)

(b) Indoor unit fan speed selection

If, after second detection of heating overload protection up to fourth, the indoor fan is set at Me and Lo taps when the compressor is turned ON, the indoor fan speed is increased by 1 tap.

(17) Anomalous fan motor

- (a) After starting the fan motor, if the fan motor speed is 200 min⁻¹ or less is detected for 30 seconds continuously and 4 times within 60 minutes, then fan motor stops with the anomalous stop (E16).
- (b) If the fan motor fails to reach at -50 min⁻¹ less than the required speed, it stops with the anomalous stop (E20).

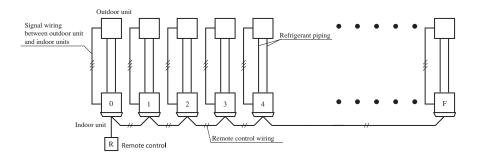
(18) Plural unit control - Control of 16 units group by one remote control

(a) Function

One remote control switch can control a group of multiple number of unit (Max. 16 indoor units). "Operation mode" which is set by the remote control switch can operate or stop all units in the group one after another in the order of unit No.⁽¹⁾. Thermostat and protective function of each unit function independently.

Notes (1) Unit No. is set by SW2 on the indoor unit control PCB. Unit No. setting by SW2 is necessary for the indoor unit only.

SW2: For setting of 0 - 9, A - F



(2) Unit No. may be set at random unless duplicated, it should be better to set orderly like 0, 1, 2..., F to avoid mistake.

(b) Display to the remote control

- (i) Center or each remote control basis, heating preparation: the youngest unit No. among the operating units in the remote mode (or the center mode unless the remote mode is available) is displayed.
- (ii) Inspection display, filter sign: Any of unit that starts initially is displayed.
- (iii) Confirmation of connected units
 - In case of RC-EX3 remote control
 If you touch the buttons in the order of "Menu" → "Next" → "Service & Maintenance" → "IU address" on the
 TOP screen of remote control, the indoor units which are connected are displayed.
 - 2) In case of RC-E5 remote control Pressing "AIR CON No." button on the remote control displays the indoor unit address. If "▲" "▼" button is pressed at the next, it is displayed orderly starting from the unit of youngest No.

(iv) In case of anomaly

- 1) If any anomaly occurs on a unit in a group (a protective function operates), that unit stops with the anomalous stop but any other normal units continue to run as they are.
- Signal wiring procedure
 Signal wiring between indoor and outdoor units should be made on each unit same as the normal wiring. For the group control, lay connect with sires wiring between rooms using terminal blocks (X, Y) of remote control.
 Connect the remote control communication wire separately from the power source wire or wires of other electric devices (AC220V or higher).

(19) High ceiling control

When sufficient air flow rate cannot be obtained from the indoor unit which is installed at a room with high ceiling, the air flow rate can be increased by changing the fan tap. To change the fan tap, use the indoor unit function "FAN SPEED SET" on the wired remote control.

Fan tap		Indoor unit air flow setting					
		2014 - 2014 - 2016 - 2016	**************************************	*************************************	201 - 20I		
FAN SPEED SET	STANDARD	PHi - Hi - Me - Lo	Hi - Me - Lo	Hi - Lo	Hi - Me		
	HIGH SPEED1, 2	PHi - PHi - Hi - Me	PHi - Hi - Me	PHi - Me	PHi - Hi		

Notes (1) Factory default is STANDARD

- (2) At the hot-start and heating thermostat OFF, or other, the indoor unit fan is operated at the low speed tap of each setting
- (3) This function is not able to be set with wireless remote controls or simple remote control (RCH-E3)

(20) Abnormal temperature thermistor (return air/indoor heat exchanger) broken wire/short-circuit detection

(a) Broken wire detection

When the return air temperature thermistor detects -55°C or lower or the heat exchanger temperature thermistor detect -55°C or lower for 5 seconds continuously, the compressor stops. After a 3-minute delay, the compressor restarts but, if it is detected again within 60 minutes after the initial detection for 6 minutes continuously, stops again (the return air temperature thermistor: E7, the heat exchanger temperature thermistor: E6).

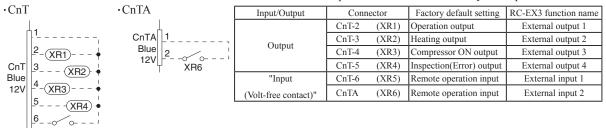
(b) Short-circuit detection

If the heat exchanger temperature thermistor detects 70°C or higher for 5 seconds continuously at 2 minutes and 20 seconds after the compressor ON during cooling operation, the compressor stops (E6).

(21) External input/output control (CnT or CnTA)

External input/output connectors are provided on the indoor unit control PCB, and each input/output is possible to be changed by RC-EX3.

Be sure to connect the wired remote control to the indoor unit. Remote operation with CnT/CnTA only is not possible.



Priority order for combinations of CnT and CnTA input.

			CnTA							
		① Operation stop level	② Operation stop pulse	③ Operation permission/prohibition level	4 Operation permission/prohibition pulse	⑤ Cooling/heating selection level	6 Cooling/heating selection pulse			
	① Operation stop level	CnT ①	CnT ①	CnT ① +CnTA ②	CnT ①	CnT ① /CnTA ⑤	CnT ① /CnTA ⑥			
	② Operation stop pulse	CnT ②	CnT ②	CnT ② +CnTA ③	CnT ②	CnT ② /CnTA ⑤	CnT ② /CnTA ⑥			
CnT	③ Operation permission/prohibition level	CnT ③ >CnTA ①	CnT ③ >CnTA ②	CnT ③ +CnTA ③	CnT ③	CnT ③ /CnTA ⑤	CnT ③ /CnTA ⑥			
Cni	Operation permission/prohibition pulse	CnT 4	CnT 4	CnT 4 +CnTA 3 **	CnT ④	CnT 4 /CnTA 5	CnT 4 /CnTA 6			
	(5) Cooling/heating selection level	CnT ⑤ /CnTA ①	CnT 5 /CnTA 2	CnT 5 /CnTA 3 **	CnT (5) /CnTA (4)	CnT ⑤	CnT ⑤			
	Cooling/heating selection pulse	CnT 6 /CnTA 1	CnT 6 /CnTA 2	CnT 6 /CnTA 3	CnT 6 /CnTA 4	CnT 6	CnT 6			

Note (1) Following operation commands are accepted when the operation prohibition is set with CnTA as indicated with *.

Individual operation command from remote control, test run command from outdoor unit and operation command from option device, CnT input.

Reference: Explanation on the codes and the combinations of codes in the table above

- 1. In case of CnT "Number", the CnT "Number" is adopted and CnTA is invalidated.
- 2. In case of CnTA "Number", the CnTA "Number" is adopted and CnT is invalidated.
- 3. In case of CnT "Number"/CnTA "Number", the CnT "Number" and the CnTA "Number" become independent functions each other.
- 4. In case of CnT "Number" + CnTA "Number", the CnT "Number" and the CnTA "Number" become competing functions each other.
- 5. In case of CnT "Number" > CnTA "Number", the function of CnT "Number" supersedes that of CnTA "Number".
- 6. In case of CnT "Number" < CnTA "Number", the function of CnTA "Number" supersedes that of CnT "Number". (The "Number" above means ① ⑥ in the table.)

(a) Output for external control (remote display)

Indoor unit outputs the following signal for operation status monitoring.

	Output name	Condition
1	Operation output	During operation
2	Heating output	During heating operation
3	Compressor ON output	During compressor operation
4	Inspection(Error) output	When anomalous condition occurs.
5	Cooling output	During cooling operation
6	Fan operation output 1	When indoor unit's fan is operating
7	Fan operation output 2	When indoor unit's fan is operating, and fan speed is higher than Hi speed.
8	Fan operation output 3	When indoor unit's fan is operating, and fan speed is Lower than Me speed.
9	Defrost/oil return output	When indoor unit receive defrost/oil return signal from the outdoor unit.
10	Ventilation output	When "Venti.ON" is selected from remote control
11	Free cooling output	When the ambient temp. is between 10 - 18 C in cooling and fan operation
12	Indoor unit overload alrm output	Refer to "IU overload alarm"

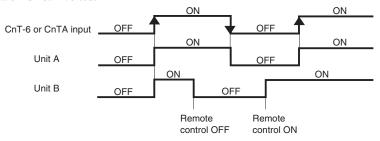
(b) Input for external control

The external input for the indoor unit can be selected from the following input.

	Input name	Content
1	Run/Stop	Refer to [(21) (c) Remote operation input]
2	Premission/Prohibition	Refer to [(22) Operation permission/prohibition]
3	Cooling/Heating	Refer to [(24) Selection of cooling/heating external input function]
4	Emergency stop	Indoor/outdoor units stop the operation, and [E63] is displayed.
5	Setting temperature shift	Set temperature is shifted by +2/-2C in cooling/heating.
6	Forced thermo-OFF	Unit goes thermo off.
7	Temporary stop	Refer to [(23) Temporary stop input]
8	Silent mode	Outdoor unit silent mode is avtivate.

(i) In case of "Level input" setting (Factory default)

Input signal to CnT-6 or CnTA is OFF→ON unit ON Input signal to CnT-6 or CnTA is ON→OFF unit OFF Operation is not inverted.

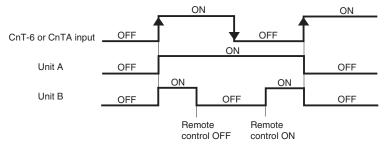


Note: The latest operation has priority

It is available to operate/stop by remote control or central control.

(ii) In case of "Pulse input" setting (Local setting)

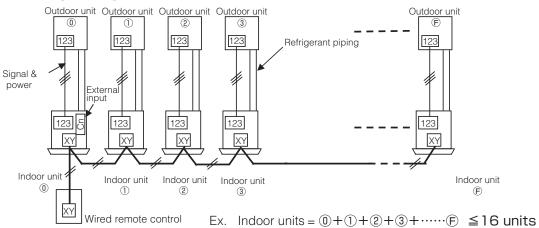
It is effective only when the input signal to CnT-6 or CnTA is changed OFF→ON, and at that time unit operation [ON/OFF] is inverted.



(c) Remote operation

(i) In case of multiple units (Max. 16 indoor units group) are connected to one wired remote control

When the indoor function setting of wired remote control for "External control set" is changed from "Individual (Factory default)" to "For all units", all units connected in one wired remote control system can be controlled by external operation input.



	Individual operation	on (Factory default)	All units operation (Local setting)	
	ON	OFF	ON	OFF
CnT-6 or CnTA	Only the unit directly connected to the remote control can be operated.	Only the unit directly connected to the remote control can be stopped opeartion.	All units in one remote control system can be operated.	All units in one remote control system can be stopped operation.
	Unit ① only	Unit ① only	Units ① – ⑤	Units ① – ⑤

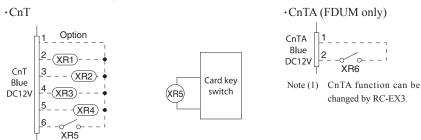
When more than one indoor unit (Max. 16 indoor units) are connected in one wired remote control system:

- (1) With the factory default, external input to CnT-6 or CnTA is effective for only the unit ①.
- (2) When setting "For all unit" (Local setting), all units in one remote control system can be controlled by external input to CnT-6 or CnTA on the indoor unit ①.
- (3) External input to CnT-6 or CnTA on the other indoor unit than the unit ① is not effective.

(22) Operation permission/prohibition

(In case of adopting card key switches or commercially available timers)

When the indoor function setting of wired remote control for "Operation permission/prohibition" is changed from "Invalid (Factory default)" to "Valid", following control becomes effective.



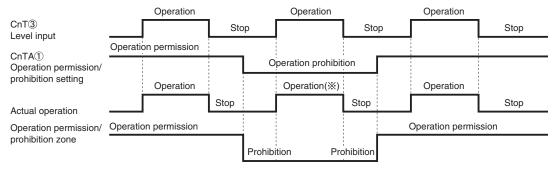
	1	operation default)		on/prohibition mode ocal setting)
CnT 6 on	ON	OFF	ON	OFF
CnT-6 or CnTA	Operation	Stop	Operation permission*1	Operation prohibition (Unit stops)

*1 Only the "LEVEL INPUT" is acceptable for external input, however when the indoor function setting of "Level input (Factory default)" or "Pulse input" is selected by the function for "External input" of the wired remote control, operation status will be changed as follows.

I	n case of "Level input" setting	In case of "Pulse input" setting
	Unit operation from the wired remote control becomes available*(1)	Unit starts operation *(2)

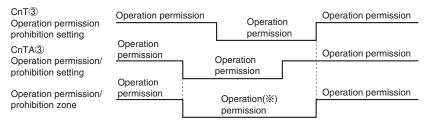
- *(1) In case that "Operation permission/prohibition mode" setting is "Valid" and "External input" setting is "Level input (Factory default)";
 - ① When card key switch is ON (CnT-6 or CnTA ON: Operation permission), start/stop operation of the unit from the wired remote control becomes available.
 - When card key switch is OFF (CnT-6 or CnTA OFF: Operation prohibition), the unit stops operation in conjunction with OFF signal, and start/stop operation of the unit from the wired remote control becomes unavailable.
- *(2) In case that "Operation permission/prohibition mode" setting is "Valid" and "External input" setting is "Pulse input (Local setting)";
 - ① When card key switch is ON (Operation permission), the unit starts operation in conjunction with ON signal. and also start/stop operation of the unit from the wired remote control becomes available.
 - When card key switch is OFF (Operation prohibition), the unit stops operation in conjunction with OFF signal, and start/stop operation of the unit from the wired remote control becomes unavailable.
- (3) This function is invalid only at "Center mode" setting done by central control.

(a) In case of CnT ③ Operation stop level > CnTA ① Operation permission/prohibition level



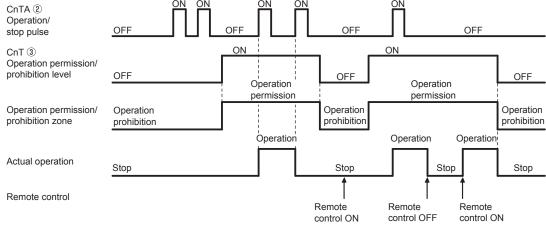
(*) CnT level input supersedes CnTA operation prohibition.

(b) In case of CnT 3 operation permission/prohibition level + CnTA 3 operation permission/prohibition level



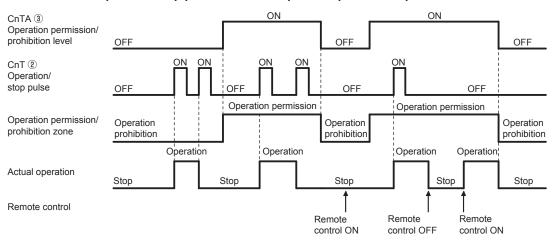
(*) Operation prohibition zone is determined by the OR judgment between CnT operation prohibition zone and CnTA operation prohibition zone.

(c) In case of CnT 3 operation permission/prohibition level > CnTA 2 operation/stop pulse



Note (1) If it is prohibited by CnT, all "Operation" and "Stop" commands are not accepted.

(d) In case of CnT ② operation/stop pulse + CnTA ③ operation permission/prohibition level

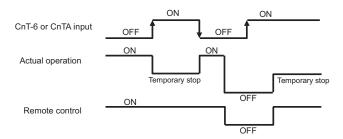


(23) Temporary stop input

In case of temporary stop, operation lamp of remote control lights, but indoor/outdoor unit stop the operation.

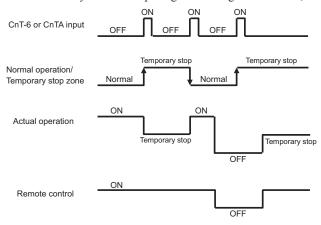
(a) In case of "level input" setting (Factory default)

Input signal to CnT-6 or CnTA is OFF \to ON : Temporary stop Input signal to CnT-6 or CnTA is OFF \to ON : Normal operation



(b) In case of "pulse input" setting (Local setting)

It is effective only when the input signal is changed OFF→ON, and "temporary stop/normal operation" is inverted.



(24) Selection of cooling/heating external input function

- (a) When "External input 1 setting: Cooling/heating" is set by the indoor unit function from remote control, the cooling or heating is selected with CnT-6 or CnTA.
- (b) When the external input 1 method selection: Level input is set by the indoor unit function:
 - CnT-6 or CnTA: OPEN \rightarrow Cooling operation mode
 - CnT-6 or CnTA: CLOSE \rightarrow Heating operation mode
- (c) When the external input 1 method selection: Pulse input is set by the indoor unit function:

 If the external input is changed OPEN → CLOSE, operation modes are inverted (Cooling → Heating or Heating → Cooling).
- (d) If the cooling/heating selection signal is given by the external input, the operation mode is transmitted to the remote control.
 - Selection of cooling/heating external input function

External input selection	External input method	Operation		
		External terminal input (CnT or CnTA)	OFF ON OFF ON Cooling zone , Heating zone , Cooling zone , Heating zone ,	
	⑤ Level	Cooling/heating	Cooling Heating Cooling	
External input selection		Cooling/heating (Competitive)	Cooling Heating Cooling Auto, cooling, dry mode command † † Heating, auto, heating mode command from remote control from remote control	
Cooling/heating selection	@ p. l	External terminal input (CnT or CnTA)	OFF ON OFF Heating zone The sciting "Cooling/basing selection", the cooling/basing is selected by the current operation mode. During heating: Set at the heating zone (cooling prohibition zone). During cooling, dry, and and fan mode: Set at cooling zone (theating prohibition zone).	
	(6) Pulse	Cooling/heating	Auto Heating Cooling	
		Cooling/heating (Competitive)	Auto Cooling Cooling Cooling 1 Set "Cooling 1 Auto, cooling, dry mode command 1 Auto, heating mode Heating" "Pulse" by remote control	

Note (1) Regarding the priority order for combinations of CnT and CnTA, refer to Page 275.

Stop

(25) Fan control at heating startup

(a) Starting conditions

At the start of heating operation, if the difference of setting temperature and return air temperature is 5°C or higher after the end of hot start control, this control is performed.

- (b) Contents of control
 - (i) Sampling is made at each minute and, when the indoor unit heat exchanger temperature (detected with Thi-R) is 37°C or higher, present number of revolutions of indoor unit fan speed is increased by 10 min⁻¹.
 - (ii) If the indoor unit heat exchanger temperature drops below 37°C at next sampling, present number of revolutions of indoor unit fan speed is reduced by 10 min⁻¹.
- (c) Ending conditions

Indoor fan speed is reduced to the setting airflow volume when the compressor OFF is established and at 30 minutes after the start of heating operation.

(26) Room temperature detection temperature compensation during heating

With the standard specification, the compressor is turned ON/OFF with the thermostat setting temperature. When the thermostat is likely to turn OFF earlier because the unit is installed at the ceiling where warm air tends to accumulate, the setting can be changed with the wired remote control indoor unit function "SPOFFSET". The compressor and the heater are turned ON/OFF at one of the setting temperature +3, +2 or +1°C in order to improve the feeling of heating. The setting temperature, however, has the upper limit of 30°C.



(27) Return air temperature compensation

This is the function to compensate the deviation between the detection temperature by the return air temperature thermistor and the measured temperature after installing the unit.

(a) It is adjustable in the unit of 0.5°C with the wired remote control indoor unit function "RETURN AIR TEMP".

(b) Compensated temperature is transmitted to the remote control and the compressor to control them.

Note (1) The detection temperature compensation is effective on the indoor unit thermistor only.

(28) High power operation (RC-EX3 only)

It operates at with the set temperature, fixed at 16°C for cooling, 30°C for heating and maximum indoor fan speed for 15 minutes maximum.

(29) Energy-saving operation (RC-EX3 only)

It operates with the setting temperature fixed at 28°C for cooling, 22°C for heating or 25°C for auto. When fan control in cooling/heating thermo-OFF setting is "Set fan speed", fan speed during thermo-OFF is changed to "Low" (Maximum capacity is restricted at 80%.)

(30) Warm-up control (RC-EX3 only)

Operation will be started 5 to 60 minutes before use according to the forecast made by the microcomputer which calculates when the operation should be started in order to warm up the indoor temperature near the setting temperature at the setting time of operation start.

(31) Home leave mode (RC-EX3 only)

When the unit is not used for a long period of time, the room temperature is maintained at a moderate level, avoiding extremely hot or cool temperature.

- (a) Cooling or heating is operated according to the outdoor temperature (factory setting 35°C for cooling, 0°C for heating) and the setting temperature. (factory setting 33°C for cooling, 10°C for heating)
- (b) Setting temperature and indoor fan speed can be set by RC-EX3.

(32) Auto temp. setting (RC-EX3 only)

Setting temperature is adjusted automatically at the adequate temperature the center setting temperature. is 24°C by correcting the outdoor air temperature.

(33) Fan circulator operation (RC-EX3 only)

When the fan is used for circulation, the unit is operated as follows depending on the setting with the remote control.

- (a) If the invalid is selected with the remote control, the fan is operated continuously during the fan operation. (mormal fan mode)
- (b) If the valid is selected with the remote control, the fan is operated or stopped when on the difference of the remote control temperature sensor and the return air temperature sensor becomes bigger than 3°C.

(34) The operation judgment is executed every 5 minutes (RC-EX3 only)

Setting temperature Ts is changed according to outdoor temperature

This control is valid with cooling and heating mode. (Not auto mode)

- (a) Operate 5 minutes forcedly.
- (b) Setting temperature is adjusted every 10 minutes.
 - (i) Cooling mode.
 - Ts = outdoor temperature offset value
 - (ii) Heating mode.
 - Ts = outdoor temperature offset value
- (c) If the return air temperature lower than 18°C in cooling or return air temperature becomes higher than 25°C in heating, unit goes thermostat OFF.

(35) Auto fan speed control (RC-EX3 only)

In order to reach the room temperature to the set temperature as quickly as possible, the air flow rate is increased when the set temperature of thermostat differs largely from the return air temperature. According to temperature difference between set temperature and return air temperature, indoor fan tap are controlled automalically.

- Auto 1: Changes the indoor fan tap within the range of $Hi \leftrightarrow Me \leftrightarrow Lo$.
- Auto 2: Changes the indoor fan tap within the range of PHi \leftrightarrow Hi \leftrightarrow Me \leftrightarrow Lo.

(36) IU overload alarm (RC-EX3 only)

If the following condition is satisfied at 30 minutes after starting operation, RC-EX3 shows maintenance code "M07" and the signal is transmitted to the external output (CnT-2-5).

- · Cooling, Dry, Auto(Cooling): Indoor air temperature = Set room temperature by remote control + Alarm temperature difference
- Heating, Auto(Heating) : Indoor air temperature = Set room temperature by remote control Alarm temperature difference

Alarm temperature difference is selectable between 5 to 10°C.

If the following condition is satisfied or unit is stopped, the signal is disappeared.

- · Cooling, Dry, Auto(Cooling): Indoor air temperature = Set room temperature + Alarm temperature difference -2°C
- Heating, Auto(Heating) : Indoor air temperature = Set room temperature Alarm temperature difference +2°C

(37) Peak-cut timer (RC-EX3 only)

Power consumption can be reduced by restricting the maximum capacity.

Set the [Start time], the [End time] and the capacity limit % (Peak-cut %).

- · 4-operation patterns per day can be set at maximum.
- The setting time can be changed by 5-minutes interval.
- The selectable range of capacity limit % (Peak-cut %) is from 0% to 40-80% (20% interval).
- · Holiday setting is available.

(II) SRK series

(1) Unit ON/OFF button

When the wireless remote control batteries become weak, or if the wireless remote control is lost or malfunctioning, this button may be used to turn the unit on and off.

(a) Operation

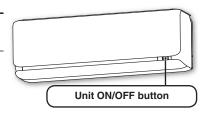
Push the button once to place the unit in the automatic mode. Push it once more to turn the unit off.

(b) Details of operation

The unit will go into the automatic mode in which it automatically determines, from room temperature (as detected by sensor), whether to go into the COOL, DRY or HEAT modes.

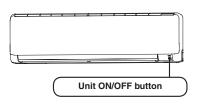
(i) SRK-ZSX series

Function Operation mode	Room temperature setting	Fan speed	Flap/Louver	Timer switch
Cooling	About 24°C			
DRY	About 25°C	Auto	Auto	Continuous
Heating	About 26°C			



(ii) SRK-ZR series

Function Operation mode	Roon temperature setting	Fan speed	Swing contral	Timer switch
Cooling				
DRY	About 24°C	Auto	Auto	Continuous
Heating				



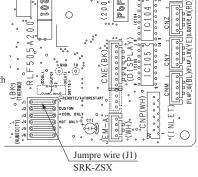
(2) Auto restart function

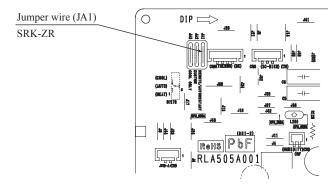
(a) Auto restart function records the operational status of the air-conditioner immediately prior to be switched off by a power cut, and then automatically resumes operations after the power has been restored.

- (b) The following settings will be cancelled:
 - (i) Timer settings
 - (ii) HIGH POWER operation (Only SRK-ZSX series)

Notes (1) Auto restart function is set at on when the air-conditioner is shipped from the factory. Consult with your dealer if this function needs to be switched off.

- (2) When power failure ocurrs, the timer setting is cancelled. Once power is resumed, reset the timer.
- (3) If the jumper wire (J1: SRK-ZSX, JA1:SRK-ZR) "AUTO RESTART" is cut, auto restart is disabled. (See the diagram at right)





(3) Auto swing control

Note Even if [Auto Swing] is selected, the louver position with anti draft function is fixed to position 1.

(a) RC-EX3

- (i) Louver control
 - 1) To operate the swing louver when the air-conditioner is operating, press the "Direction" button on the TOP screen of remote control. The wind direction select screen will be displayed.
 - 2) To swing the louver, touch the "Auto swing" button. The lover will move up and down. To fix the swing louver at a position, touch one of [1] [4] buttons. The swing lover will stop at the selected position.
 - 3) Louver operation at the power on with a unit having the louver 4-position control function
 The louver swings one time automatically (without operating the remote control) at the power on.
 This allows the microcomputer recognizing and inputting the louver motor (LM) position.
- (ii) Automatic louver level setting during heating

At the hot start and the heating thermostat OFF, regardless whether the auto swing switch is operated or not (auto swing or louver stop), the louver takes the level position (in order to prevent blowing of cool wind). The louver position display LCD continues to show the display which has been shown before entering this control.

(iii) Louver free stop control

If you touch the "Menu" \rightarrow "Service setting" \rightarrow "R/C settings" buttons one after another on the TOP screen of remote control, the "Flap control" screen is displayed. If the free stop is selected on this screen, the louver motor stops upon receipt of the stop signal from the remote control. If the auto swing signal is received from the remote control, the auto swing will start from the position before the stop.

(b) RC-E5

- (i) Louver control
 - 1) Press the "LOUVER" button to operate the swing louver when the air-conditioner is operating.
 - "SWING -" is displayed for 3 seconds and then the swing louver moves up and down continuously.
 - 2) To fix the swing louver at a position, press one time the "LOUVER" button while the swing louver is moving so that four stop positions are displayed one after another per second.
 - When a desired stop position is displayed, press the "LOUVER" button again. The display stops, changes to show the "STOP 1 —" for 5 seconds and then the swing louver stops.
 - 3) Louver operation at the power on with a unit having the louver 4-position control function
 - The louver swings one time automatically (without operating the remote control) at the power on.
 - This allows inputting the louver motor (LM) position, which is necessary for the microcomputer to recognize the louver position.
 - Note (1) If you press the "LOUVER" button, the swing motion is displayed on the louver position LCD for 10 second. The display changes to the "SWING display 3 seconds later.
- (ii) Automatic louver level setting during heating

At the hot start with the heating thermostat OFF, regardless whether the auto swing switch is operated or not (auto swing or louver stop), the louver takes the level position (In order to prevent the cold start). The louver position display LCD continues to show the display which has been shown before entering this control.

(iii) Louver free stop control

When the louver-free stop has been selected with the indoor function of wired remote control " \rightarrow_{n} " POSITION", the louver motor stops when it receives the stop signal from the remote control. If the auto swing signal is received from the remote control, the auto swing will start from the position where it was before the stop.

Note (1) When the indoor function of wired remote control ">¬POSITION" has been switched, switch also the remote control function "¬¬POSITION" in the same way.

(4) Timer operation

(a) RC-EX3

(i) Sleep timer

Set the time from the start to stop of operation. The time can be selected in the range from 30 to 240 minutes (in the unit of 10-minute).

Note (1) Enable the "Sleep timer" setting from the remote control. If the setting is enabled, the timer operates at every time.

(ii) Set OFF timer by hour

Set the time to stop the unit after operation, in the range from 1 to 12 hours (in the unit of hour).

(iii) Set ON timer by hour

Set the time to start the unit after the stop of operation, in the range from 1 to 12 hours (in the unit of hour). It is allowed also to set simultaneously the indoor temperature, operation mode, air flow rate and warm-up enabled/disabled.

(iv) Set ON timer by clock

Set the time to start operation. The time can be set in the unit of 5-minute. This setting can be activated only once or at every time. It is allowed also to set simultaneously the indoor temperature, operation mode, air flow rate and warm-up enabled/disabled.

Note (1) It is necessary to set the clock to use this timer.

(v) Set OFF timer by clock

Set the time to stop operation. The time can be set in the unit of 5-minute. This setting can be activated only once or at every time.

Note (1) It is necessary to set the clock to use this timer.

(vi) Weekly timer

Set the ON or OFF timer for a week. Up to 8 patterns can be set for a day. The day-off setting is provided for holidays and non-business days.

Note (1) It is necessary to set the clock to use the weekly timer.

(vii) Combination of patterns which can be set for the timer operations

	Sleep time	Set OFF timer by hour	Set ON timer by hour	Set OFF timer by clock	Set ON timer by clock	Weekly timer
Sleep time		×	×	0	0	0
Set OFF timer by hour	×		×	×	×	×
Set ON timer by hour	×	×		×	×	×
Set OFF timer by clock	0	×	×		0	×
Set ON timer by clock	0	×	×	0		×
Weekly timer	0	×	×	×	×	

Note (1) ○: Allowed ×: Not

(b) RC-E5

(i) Sleep timer

Set the duration of time from the present to the time to turn off the air-conditioner.

It can be selected from 10 steps in the range from "OFF 1 hour later" to "OFF 10 hours later". After the sleep timer setting, the remaining time is displayed with progress of time in the unit of hour.

(ii) OFF timer

Time to turn OFF the air-conditioner can be set in the unit of 10 minutes.

(iii) ON timer

Time to turn ON the air-conditioner can be set. Indoor temperature can be set simultaneously.

(iv) Weekly timer

Timer operation (ON timer, OFF timer) can be set up to 4 times a day for each weekday.

(v) Timer operations which can be set in combination

Item	Timer	OFF timer	ON timer	Weekly timer
Timer		×	0	×
OFF timer	×		0	×
ON timer	0	0		×
Weekly timer	×	×	×	

Notes (1) ○: Allowed ×: Not

⁽²⁾ Since the ON timer, sleep timer and OFF timer are set in parallel, when the times to turn ON and OFF the air-conditioner are duplicated, the setting of the OFF timer has priority.

(5) Remote control display during the operation stop

When the operation is stopped (the power source is turned ON), it displays preferentially the "Room temperature", "Center/Remote", "Filter sign", "Inspection" and "Timer operation".

(6) Outline of heating or cooling operation

(a) Operation of major functional components in heating mode

	Heating				
	Thermostat ON	Thermostat OFF	Failure		
Compressor	ON	OFF	OFF		
Indoor fan	ON	ON(HOT KEEP)	OFF		
Outdoor fan	ON	OFF (few minutes ON)	OFF		
4-way valve	ON	ON	OFF (3 minutes ON)		

(b) Operation of major functional components in Cooling mode

	Cooling				
	Thermostat ON	Thermostat OFF	Failure		
Compressor	ON	OFF	OFF		
Indoor fan	ON	ON	OFF		
Outdoor fan	ON	OFF (few minutes ON)	OFF (few minutes ON)		
4-way valve	OFF	OFF	OFF		

(7) Indoor fan motor protection

When the air-conditioner is operating and the indoor fan motor is turned ON, if the indoor fan motor has operated at 300 min⁻¹ or under for more than 30 seconds, the unit enters first in the stop mode and then stops the entire system.

(8) Serial signal transmission error protection (Only SRK-ZSX series)

(a) Purpose:

Prevents malfunction resulting from error on the indoor \leftrightarrow outdoor signals.

(b) Detail of operation:

If the compressor is operating and a serial signal cannot be received from the indoor control with outdoor control having serial signals continues for 7 minute and 35 seconds, the compressor is stopped. After the compressor has been stopped, it will be restarted after the compressor start delay if a serial signal can be received again from the indoor control.

(9) Plural unit control – Control of 16 units group by one remote control

(a) Function

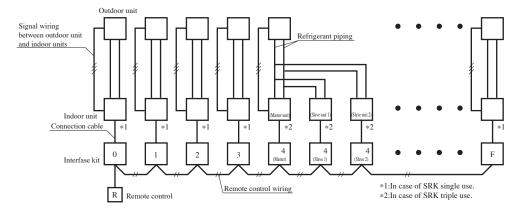
One remote control switch can control a group of multiple number of unit (Max. 16 indoor units). "Operation mode" which is set by the remote control switch can operate or stop all units in the group one after another in the order of unit No. (1). Thermostat and protective function of each unit function independently.

Note (1) Unit No. is set by SW1 on the interface PCB. Unit No. setting by SW1 is necessary for the interface only. In cases of the twin and triple specification, it is necessary set for the master and the slave units. This can be selected by SW3. (All are set for the master unit at the shipping from factory.)

SW1: For setting of 0-9, A-FSW3: For setting of master and slave units (See table shown at right.)

SW3 setting (For interface PCB)

Switch	SW3-1	SW3-2
Master	OFF	OFF
Slave1	OFF	ON
Slave2	ON	OFF



(2) Unit No. may be set at random unless duplicated, it should be better to set orderly like 0, 1, 2..., F to avoid mistake.

(b) Display to the remote control

- (i) Central or each remote control basis, heating preparation: the youngest unit No. among the operating units in the remote mode (or the center mode unless the remote mode is available) is displayed.
- (ii) Inspection display, filter sign: Any of unit that starts initially is displayed.
- (iii) Confirmation of connected units
 - In case of RC-EX3 remote control
 If you touch the buttons in the order of "Menu" → "Service setting" → "Service & Maintenance" → "IU address" on the TOP screen of remote control, the indoor units which are connected are displayed.
 - 2) In case of RC-E5 remote control Pressing "AIR CON No." button on the remote control displays the indoor unit address. If "▲" "▼" button is pressed at the next, it is displayed orderly starting from the unit of youngest No.

(c) In case of anomaly

- i) If any anomaly occurs on a unit in a group (a protective function operates), that unit stops with the anomalous stop but any other normal units continue to run as they are.
- ii) Signal wiring procedure
 Signal wiring between indoor and outdoor units should be made on each unit same as the normal wiring. For
 the group control, lay connect with sires wiring between rooms using terminal blocks (X, Y) of interface kit.
 Connect the remote control communication wire separately from the power supply wire or wires of other
 electric devices (AC220V or higher).

(10) Filter sign

As the operation time (Total ON time of ON/OFF switch) accumulates to 180 hours (1), "Filter cleaning" is displayed on the remote control. (This is displayed when the unit is in trouble and under the centralized control, regardless of ON/OFF)

Note (1)Time setting for the filter sign can be made as shown below using the indoor function of wired remote control "FILTER SIGN SET". (It is set at 1 at the

Filter sign setting	Function
Setting 1	Setting time: 180 hrs (Factory default)
Setting 2	Setting time: 600 hrs
Setting 3	Setting time: 1,000 hrs
Setting 4	Setting time: 1,000 hrs (Unit stop) (2)

(2) After the setting time has elapsed, the "FILTER CLEANING" is displayed and, after operating for 24 hours further (counted also during the stop), the unit stops.

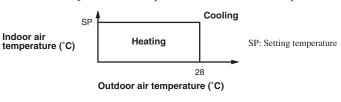
(11) Outline of automatic operation

shipping from factory.)

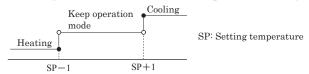
(a) SRK-ZSX series

(i) Determination of operation mode

Operation mode is determined by indoor air temperature and outdoor air temperature as following.



(ii) Operation mode is changes when keep cooling and heating thermostat off 20 minutes and be satisfied following conditions. If the setting temperature is changed with the remote control, the operation mode is judged immediately.



Indoor air temperature - Setting temperature (°C)

*It can not be changed to heating mode if outdoor air temperature is 28°C or higher.

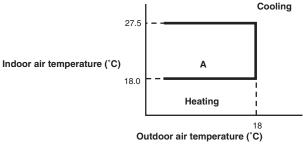
- (iii) When the unit is started again within one hour after the stop of automatic operation or when the automatic operation is selected during heating, cooling or dehumidifying operation, the unit is operated in the previous operation mode.
- (iv) Setting temperature can be adjusted within the following range. There is the relationship as shown below between the signals of the wireless remote control and the setting temperature.

														Unit · C
				Sig	nals of v	wireless	remote	control	(Display	')				
		18	19	20	21	22	23	24	25	26	27	28	29	30
Setting	Cooling	18	19	20	21	22	23	24	25	26	27	28	29	30
temperature	Heating	18	19	20	21	22	23	24	25	26	27	28	29	30

(b) SRK-ZR series

(i) Determination of operation mode

The unit checks the indoor air temperature and the outdoor air temperature, determines the operation mode, and then begins in the automatic operation.



- (ii) The unit checks the temperature every hour after the start of operation and, if the result of check is not same as the previous operation mode, changes the operation mode.
 - 1) If the setting temperature is changed with the remote control, the operation mode is judged immediately.
 - When both the indoor and the outdoor air temperatures are in the range "A", cooling or heating is switched depending on the difference between the setting temperature and the indoor air temperature.
 - 3) When the operation mode has been judged following the change of setting temperature with the remote control, the hourly judgment of operation mode is cancelled.
- (iii) When the unit is started again within one hour after the stop of automatic operation or when the automatic operation is selected during heating or cooling operation, the unit is operated in the previous operation mode.

(12) Frost prevention control (During cooling or dehumidifying)

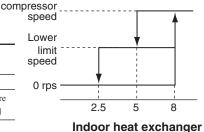
(a) SRK-ZSX series

(i) Operating conditions

- 1) Indoor heat exchanger temperature (Th2) is lower than 5°C.
- 2) 5 minutes after reaching the compressor speed except 0 rps.

(ii) Detail of anti-frost operation

Indoor heat exchanger temperature		2.5°C or lower
Lower limit of compressor command speed	25 rps	0 rps
Indoor fan	Depends on operation mode	Keep the fan speed before frost prevention control
Outdoor fan	Depends on compressor speed	Domando en eten mede
4-way valve	OFF	Depends on stop mode



temperature (°C)

Notes (1) When the indoor heat exchanger temperature is in the range of 2.5–5°C, the speed is reduced by 4 rps at each 20 seconds.

- (2) When the temperature is lower than 2.5°C, the compressor is stopped.
- (3) When the indoor heat exchanger temperature is in the range of 5–8°C, the compressor speed is been maintained.

(iii) Reset conditions

When either of the following condition is satisfied.

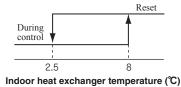
- 1) The indoor heat exchanger temperature (Th2) is 8°C or highe
- 2) The compressor speed is 0 rps.

(b) SRK-ZR series

- (i) Operating conditions
 - 1) More than 8 minutes after starting the compressor.
 - 2) Indoor heat exchanger temperature (detected with Th2) is lower than $2.5\,^{\circ}\mathrm{C}$.

(ii) Contents of frosting operation

	During this control	Reset
Compressor ON/OFF command	Forced stop	Operation command
Indoor fan motor	Depending on the air flor control	w setting with the remote



(iii) Resetting condition: Indoor heat exchanger temperature (Th2) is higher than 8 °C.

(13) Dew prevention control (During cooling or dehumidifying)

(a) SRK-ZSX series

Prevents dewing on the indoor unit.

(i) Operating conditions

When the following conditions have been satisfied for more than 30 minutes after starting operation

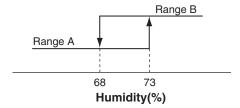
- 1) Compressor's speed is 22 rps or higher.
- 2) Detected value of humidity is 68% or higher.

(ii) Contents of operation

1) Air capacity control

Item		Model	SRK50, 60ZSX-S		
	ULO	Upper limit of compressor's speed	RangeA: 30 rps, RangeB: 24 rps		
	OLO	Indoor fan	4th speed		
	AUTO, LO	Upper limit of compressor's speed	RangeA: 40 rps, RangeB: 24 rps		
Twin	AUTO, LO	Indoor fan	Adaptable to compressor speed		
type	ME	Upper limit of compressor's speed	RangeA: 50 rps, RangeB: 30 rps		
	IVIE	Indoor fan	Adaptable to compressor speed		
	н	Upper limit of compressor's speed	RangeA: 50 rps, RangeB: 30 rps		
	П	Indoor fan	Adaptable to compressor speed		
	ULO	Upper limit of compressor's speed	RangeA: 30 rps, RangeB: 24 rps		
	OLO	Indoor fan	4th speed		
	AUTO, LO	Upper limit of compressor's speed	RangeA: 50 rps, RangeB: 24 rps		
Triple	AUTO, LO	Indoor fan	Adaptable to compressor speed		
type	ME	Upper limit of compressor's speed	RangeA: 50 rps, RangeB: 30 rps		
	IVIE	Indoor fan	Adaptable to compressor speed		
	н	Upper limit of compressor's speed	RangeA: 70 rps, RangeB: 30 rps		
	П	Indoor fan	Adaptable to compressor speed		

Note (1) Ranges A and B are as shown below.



- When this control has continued for more than 30 minutes continuously, the following wind direction control is performed.
 - a) When the vertical wind direction is set at other than the vertical swing, the flaps change to the horizontal position
 - b) When the horizontal wind direction is set at other than the horizontal swing, the louver changes to the vertical position.

(iii) Reset condition

Humidity is less than 63%.

(b) SRK-ZR series

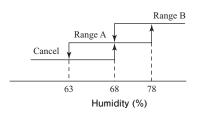
- (i) Operating conditions: When the following conditions have been satisfied for more than 30 minutes after starting operation
 - 1) Compressor's command speed is 20 rps or higher.
 - 2) Detected value of humidity is 68% or higher.

(ii) Contents of operation

1) Air capacity control

Model	SRK100ZR-S
Upper limit of compressor's command speed (1)	Range A: As per following table, Range B: 40 rps

Note (1) Ranges A and B are as shown below.



Condition for range A

Compressor's command speed is controlled according to the indoor unit heat exchanger temperature (Th2) and the indoor unit room temperature (Th1).

Condition	Compressor's command speed
Th2 ≤ Th1-10	 Decreases the compressor's target max speed by 4 rps. If the condition is met still 20 seconds later, the speed is decreased further by 4 rps. This process is repeated further so far as the condition is satisfied. [Lower limit is 20 rps.]
$Th1-10 < Th2 \le Th1-6$	Compressor's target max. speed or changed value of the same is maintained.
Th2-6 < Th1	Changed compressor's target max. speed is increased at a rate of 1 rps/20 seconds.

When this control has continued for more than 30 minutes continuously, the following wind direction control is performed.

When the vertical wind direction is set at other than the vertical swing, the flaps change to the horizontal position.

- (iii) Reset conditions: When either of the following conditions is satisfied.
 - 1) Compressor's command speed is less than 20 rps.
 - 2) Detected value of humidity is less than 63%.

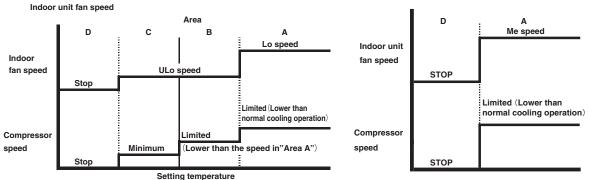
(14) Outline of dehumidifying (DRY) operation

(a) Purpose of DRY mode

The purpose is "Dehumidification", and not to control the humidity to the target condition. Indoor/outdoor unit control the operation condition to reduce the humidity, and also prevent over cooling.

(b) Outline of control

(i) Indoor unit fan speed and compressor are controlled by the area which is selected by the temperature difference.



Difference between set temperature and indoor air temperature. (SRK-ZSX series) Difference between set temperature and return temperature (SRK-ZSX series)

(ii) The indoor unit check the current area by every 5 minutes, and operate by the next checking.

1.11.4 Operation control function by the outdoor control

(1) Determination of compressor speed (frequency)

Required frequency

(a) Cooling/dehumidifying operation

Unit: rps

C,	5 & 1				
	Model		100	125	140
Max. required frequency	Usual operation		90 105		105
	Silvat and and and and silvat SV	SW7-3 OFF	60	80	85
	Silent mode, outdoor temperature $\leq 15^{\circ}$ C	SW7-3 ON	47	50	53
Min. required frequency			15	15	15

(b) Heating operation

Unit: rps

Model			100	125	140
Max. required frequency	Usual operation	operation		105	110
	Cil 4 1-	SW7-3 OFF	60	80	85
	Silent mode	SW7-3 ON	47	50	53
Min. required frequency			15	15	15

- (c) If the indoor unit fan speed becomes "Me" or "Lo", Max required frequentcy goes down accordingly depending on indoor unit model.
- (d) Max. required frequency under high outdoor air temperature in cooling mode

 Maximum required frequency is selected according to the outdoor air temperature (Tho-A).

Unit: rps

	Model	100	125	140
Max. required frequency	Outdoor air temperature is 40°C or higher	75 90		96
	Outdoor air temperature is 46°C or higher	75	75	75

(e) Max. required frequency under outdoor air temperature in heating mode

Maximum required frequency is selected according to the outdoor air temperature (Tho-A).

Unit: rps

				- I
	Model	100	125	140
Max. required frequency	Outdoor air temperature is 18°C or higher	60	80	85

- (f) Selection of max. required frequency by heat exchanger temperature
 - Maximum required frequency is selected according to the outdoor unit heat exchanger temperature (Tho-R) during cooling/dehumidifying or according to the indoor unit heat exchanger temperature (Thi-R) during heating mode.
 - 2) When there are 3 indoor unit heat exchanger temperatures (Thi-R), whichever the highest applies.

Unit: rps

	Model		100	125	140
Max. required frequency	Cooling/ dehumidifying	Outdoor unit heat exchanger temperature is 56°C or higher	90	100	100
	Heating	Indoor unit heat exchanger temperature is 56°C or higher	90	100	100

- (g) When any of the controls from (a) to (f) above may duplicate, whichever the smallest value among duplicated controls is taken as the maximum required frequency.
- (h) During heating, it is operated with the maximum required frequency until the indoor unit heat exchanger temperature becomes 40°C or higher.

(2) Compressor start control

- (a) Compressor starts upon receipt of the thermostat ON signal from the indoor unit.
- (b) However, at initial start after turning the power source breaker, it may enter the standby state for maximum 30 minutes ("PREPARATION" is displayed on the remote control) in order to prevent the oil loss in the compressor.

If the cooling/dehumidifying/heating operation is selected from the remote control when the outdoor unit is in the standby state, " PREPARATION" is displayed for 3 seconds on the remote control.

Compressor soft start control

(a) Compressor protection start I

[Control condition] Normally, the compressor operation frequency is raised in this start pattern.

- [Control contents] a) Starts with the compressor's target frequency at **A** rps.
 - However, when the ambient air temperature (Tho-A) is 35°C or higher during cooling/ dehumidifying or the indoor return air temperature (Thi-A) is 25°C or higher during heating, it starts at C rps.
 - b) At 30 seconds after the start of compressor, its target frequency changes to **B** rps and the compressor is operated for 2 - 4 minutes with its operation frequency fixed at **B** rps.

Model	Operation mode	A rps	B rps	C rps
100-140	Cooling/Dehumidifying	55	55	30
100-140	Heating	55	55	30

(b) Compressor protection start III

[Control condition] Number of compressor starts is only 1 counted after the power source breaker ON.

[Control contents] Operates by selecting one of following start patterns according to the operation mode and the outdoor air temperature (Tho-A).

Low frequency operation control during cooling/dehumidifying

[Control condition] Upon establishing the conditions of compressor protection start III, the low frequency operation control is performed during cooling/dehumidifying.

[Control contents]

- ① Starts with the compressor's target frequency at A rps. When the outdoor air temperature (Tho-A) is 35°C or higher, it starts at **C** rps.
- ② At 30 seconds after the compressor start, the compressor's target frequency is changed to B rps and the compressor's operation frequency is fixed for 10 minutes.

Model	Operation mode	A rps	B rps	C rps
100-140	Cooling/Dehumidifying	55	55	30

Low frequency operation control during heating

[Control condition] When the conditions of compressor protection start III are established and the following condition is satisfied, the low number of revolutions operation control is performed during heating.

① At 30 minutes or more after turning the power source breaker on

[Control contents]

- ① Starts the compressor with its target frequency at A rps. However, when the indoor unit return air temperature (Thi-A) is 25°C or higher, it start at **C** rps.
- ② At 30 seconds after the start of compressor, the compressor's target frequency is changed to **B** rps and the compressor's operation frequency is fixed for 10 minutes.

ĺ	Model	Operation mode	A rps	B rps	C rps	
	100-140	Heating	55	55	30	

(4) Outdoor unit fan control

(a) Outdoor unit fan tap and fan motor speed

Unit: min-1

Model	Mode	Fan motor tap						
		① speed	2 speed	3 speed	4 speed	⑤ speed	6 speed	⑦ speed
100-140	Cooling/Dehumidifying	200	350	600(1)	740	820	870	950
	Heating	200	350	600(1)	740	820	870	950

Note (1) If the "silent mode start" signal is received from the remote control, the speed changes from 600 to 500.

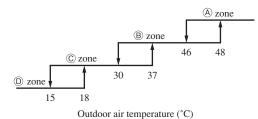
(b) Fan tap control during Cooling/Defumidifying operation

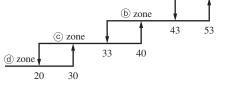
Fan taps are selected depending on the outdoor unit heat exchanger temperature (Tho-R1, R2) and the outdoor air temperature (Tho-A). Note (1) It is detected by Tho-R1 or R2, whichever the higher.

	(A) zone	® zone	© zone	① zone	
a zone	Tap 5	Tap 5	Tap 5	Tap 4	
(b) zone	Tap 5	Tap 5	Tap 4 ⁽¹⁾	Tap 3	
© zone	Tap 4	Tap 4 ⁽¹⁾	Tap 3	Tap 2	
d zone	Tap 3	Tap 3	Tap 2	Tap 1	

Note (1) If the "silent mode start" signal is received from the remote control, the speed changes from Tap 4 to Tap 3.

a zone





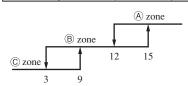
Outdoor unit heat exchanger temperature (°C)

(c) Fan tap control during heating operation

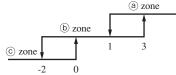
Fan taps are selected depending on the outdoor unit heat exchanger temperature (Tho-R1, R2) and the outdoor air temperature (Tho-A). Note (1) It is detected by Tho-R1 or R2, whichever the lower.

	(A) zone	® zone	© zone
a zone	Tap 3	Tap 3	Tap 4
(b) zone	Tap 3	Tap 4 ⁽¹⁾	Tap 5
© zone	Tap 4	Tap 5	Tap 6

Note (1) If the "silent mode start" signal is received from the remote control, the speed changes from Tap 4 to Tap 3.



Outdoor air temperature (°C)

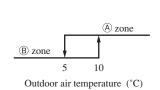


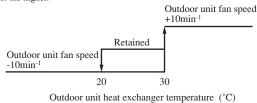
Outdoor unit heat exchanger temperature (°C)

(d) Outdoor unit fan control at cooling low outdoor air

1) When all the following conditions are established after the start of compressor, the following control is implemented. If the outdoor air temperature (Tho-A) is in the zone (B) in the cooling/dehumidifying mode, it has elapsed 20 seconds from the start of outdoor unit fan and the outdoor unit fan is at the tap 1 speed, the outdoor unit fan speed is controlled according to the outdoor unit heat exchanger temperature (Tho-R1, R2).

Note (1) It is detected with Tho-R1 or R2, whichever the higher.





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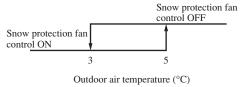
- 2) The outdoor unit heat exchanger temperature is detected always and, when the number of revolutions of the outdoor fan speed has been increased or decreased, there is no change of fan speed for 20 seconds.
- 3) Rage of the outdoor unit fan speed under this control is as follows.
 - a) Lower limit: 130min⁻¹
 - b) Upper limit: 500min⁻¹
- 4) As any of the following conditions is established, this control terminates.
 - a) When the outdoor air temperature is in the zone (A) and the outdoor unit heat exchanger temperature at 30°C or higher is established for 40 seconds or more continuously.
 - b) When the outdoor fan speed is 500rpm and the outdoor unit heat exchanger temperature at 30°C or higher is established for 40 seconds or more continuously.
 - When the outdoor unit heat changer temperature at 45°C or higher is established for 40 seconds or more.

(e) Caution at the outdoor unit fan start control (3 phase models only)

When the outdoor unit fan is running at 400min⁻¹ before operating the compressor, it may operate with the compressor only, without starting up the outdoor fan. This is normal.

(f) Snow protection fan control

If the dip switch (SW3-2) on the outdoor unit control PCB is turned ON, the outdoor unit fan is operated for 30 seconds at 4 tap speed once in every 10 minutes depending on the outdoor air temperature (detected with Tho-A) in the stop mode or anomalous stop mode.



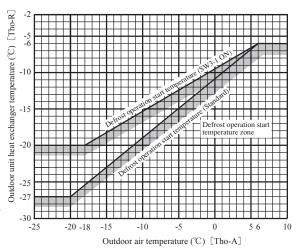
(5) Defrost operation

(a) Starting conditions

If all of the following defrosting conditions A or conditions B are met, the defrost operation starts.

1) Defrost conditions A

- a) Cumulative compressor operation time after the end of defrosting has elapsed 37 minutes, and the cumulative compressor operation time after the start of heating operation (remote control ON) has elapsed 30 minutes.
- b) After 5 minutes from the compressor ON
- c) After 5 minutes from the start of outdoor unit fan
- d) After satisfying all above conditions, if temperatures of the outdoor unit heat exchanger temperature thermistor (Tho-R1, R2) and the outdoor air temperature thermistor (Tho-A) become lower than the defrost operation start temperature as shown by the right figure for 15 seconds continuously.



Defrost conditions B

- a) When previous defrost ending condition is the time out of defrost operation and it is in the heating operation after the cumulative compressor operation time after the end of defrost operation has become 30 minutes.
- b) After 5 minutes from the start of compressor
- c) After 5 minutes from the start of outdoor unit fan

(b) Ending conditions

When any of the following conditions is satisfied, the heating operation starts.

- 1) When it has elapsed 8 minutes and 20 seconds after the start of defrost operation.
- When the outdoor unit heat exchanger temperatures (Tho-R1, R2), whichever the lower, becomes 7°C or higher for 10 seconds continuously.

(c) Switching of defrost operation with SW3-1

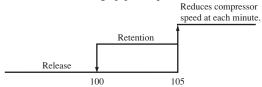
- 1) If SW3-1 on the outdoor unit control PCB is turned to ON, it becomes easier to enter the defrost operation. Use this when installing a unit at snowing regions.
- 2) Control contents
 - a) It allows entering the defrost operation under the defrost condition A when the cumulative heating operation time becomes 30 minutes. It is 37 minutes at SW3-1 OFF (Factory default).
 - b) It allows entering the defrost operation under the defrost condition B when the cumulative heating operation time becomes 25 minutes. It is 30 minutes at SW3-1 OFF (Factory default).
 - c) It allows the defrost operation with the outdoor unit heat exchanger temperature (Tho-R).

(6) Protective control/anomalous stop control by compressor's number of revolutions

(a) Compressor discharge pipe temperature protection

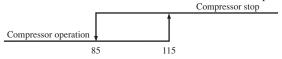
Protective control

As the discharge pipe temperature (detected with Tho-D) exceeds the setting value, the compressor speed (frequency) is controlled to suppress the rise of discharge pipe temperature.



Discharge pipe temperature (°C)

- 2) Anomalous stop control
 - a) If the discharge pipe temperature (detected with Tho-D) exceeds the setting value, the compressor stops.
 - b) When it is detected 2 times within 60 minutes or after continuous 60 minutes, including the stop of compressor, E36 is displayed on the remote control and it enters the anomalous stop mode.



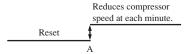
Discharge pipe temperature (°C)

3) Reset of anomalous stop mode

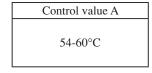
As it drops to the reset value of 85°C or lower for 45 minutes continuously, it becomes possible to restart from the remote control.

(b) Cooling high pressure protection

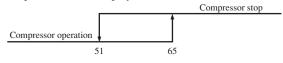
- 1) Protective control
 - a) When the outdoor air temperature (Tho-A) is 40°C or higher and the outdoor unit heat exchanger temperature (Tho-R) exceeds the setting value, the compressor speed (frequency) is controlled to suppress the rise of high pressure.
 - b) Control value A is updated to an optimum value automatically according to the operating conditions.



Outdoor unit heat exchanger temperature (°C)



- 2) Anomalous stop control
 - a) As the outdoor unit heat exchanger temperature (Tho-R) exceeds the setting value, the compressor stops.
 - b) If it is detected 5 times within 60 minutes or 65°C or higher continues for 60 minutes, including the stop of compressor, E35 is displayed on the remote control and it enters the anomalous stop mode.



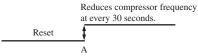
Outdoor unit heat exchanger temperature (°C)

3) Reset of anomalous stop mode

As it reaches the reset value of 51°C or lower, it becomes possible to restart from the remote control.

(c) Heating high pressure protection

- 1) Protective control
 - a) As the indoor unit heat exchanger temperature (Thi-R) exceeds the setting value, the compressor speed (frequency) is controlled to suppress the rise of high pressure.
 - b) Control value A is updated to an optimum value automatically according to the operating conditions.



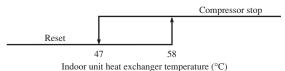
	Existing piping adaptation switch: SW5-						
Model	OFF (Shipping)	ON					
	Control value A (°C)						
100-140	48-54	46-52					
Note (1) Adoptation to existing mining is at ON							

Indoor unit heat exchanger temp. (°C)

Note (1) Adaptation to existing piping is at ON

- 2) Anomalous stop control
 - Operation control function by the indoor unit control See the heating overload protection, page 273.
- 3) Adaptation to existing piping, stop control

If the existing piping adaptation switch, SW5-1, is turned ON, the compressor stops to protect existing piping when the indoor unit heat exchanger temperature (Thi-R) exceeds the setting value.

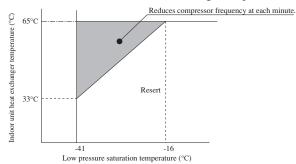


(d) Anomaly detection control by the high pressure switch (63H1)

- 1) If the pressure rises and operates the high pressure switch (opens at 4.15MPA/closes at 3.15MPa), the compressor stops.
- 2) Under any of the following conditions, E40 is displayed and it enters the anomalous stop mode.
 - a) When it occurs 5 times within 60 minutes that pressure rises and the compressor is stopped by 63H1.
 - b) When 63H1 has been in the open state for 60 minutes continuously, including the stop of compressor.

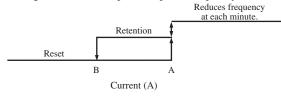
(e) Compressor pressure ratio protection control

- 1) During heating operation, if the indoor unit heat exchanger temperature (Thi-R) and the low pressure saturation temperature (SST) exceed the setting values at 10 minutes after the start of compressor, the compressor speed (frequency) is controlled to protect the compressor.
- 2) This control is not performed during the outdoor fan ON and for 10 minutes from the start of outdoor unit fan.
- 3) This control is not performed during defrost operation and at 10 minutes after the reset of defrost operation.
- 4) When there are 3 indoor unit heat exchanger temperatures (Thi-R), the highest temperature is detected.



(f) Over-current protection current safe controls I, II

Detecting the outdoor unit inverter input (primary) current and the output (secondary) current, if the current values exceed setting values, the compressor speed (frequency) is controlled to protect the inverter.



(Fig. C) The control value "A" and the reset value vary depending on the compressor speed.

8	24	
ne(22	Outdoor air temp.35°C
va	20	Outdoor an temp.35 C
set	18	
r re	16	
0 10	14	
Control or reset value(A)	12	Outdoor air temp.43°C
ပိ	10	
	4	50 60 70 80 90 100 110 120 130
		Compressor speed (frequency) (rps)

		Coo	ling	Heating		
Model		Control value A	Reset value B	Control value A	Reset value B	
Primary	100	13.5 (23.0)	12.5 (22.0)	13.5 (23.0)	12.5 (22.0)	
current side	125, 140	13.5 (23.0)	12.5 (22.0)	13.5 (23.0)	12.5 (22.0)	
Secandary	100	12.0 (Fig.C)	11.0 (A-1)	12.0 (23)	11.0 (22)	
current side	125, 140	12.0 (Fig.C)	11.0 (A-1)	12.0 (23)	11.0 (22)	

Note (1) Value in () are for the single phase models.

(g) Power transistor temperature protection

Anomalous stop control

- 1) If the power transistor drops supply voltage, the protective switch in the power transistor operates to protect the compressor and the power transistor.
- 2) Under any of the following condition, E41 is displayed and it enters the anomalous stop mode.
 - i) When the protective switch in the power transistor operates 5 times within 60 minutes and the compressor stops.

(h) Anomalous power transistor current

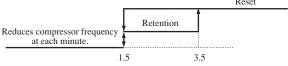
- Prevents over-current on the inverter. If the current value in the power transistor exceeds the setting value, the compressor stops.
- 2) If the current value in the power transistor exceeds the specified value and the compressor stops 4 times within 30 minutes, E42 is displayed on the remote control and it enters the anomalous stop mode.

(i) Anomalous inverter PCB

If the power transistor detects any anomaly for 15 minutes, including the stop of compressor, E51 is displayed on the remote control and it enters the anomalous stop mode.

(j) Anti-frost control by the compressor frequency control

- If the indoor unit heat exchanger temperature (detected with Thi-R) exceeds the setting value at 4 minutes after the start of compressor, the compressor speed (frequency) is controlled to initiate the anti-frost control of indoor unit heat exchanger.
- 2) When there are 3 indoor unit heat exchanger temperatures (Thi-R), the lowest temperature is detected.



Indoor unit heat exchanger temperature (°C)

3) Regarding the anti-frost control by the operation stop, refer to the operation control function by the indoor unit control and the cooling, dehumidifying frost prevention of page 273.

(k) Dewing prevention control

[Control condition] During cooling and dehumidifying operation, if all the following conditions are established, the compressor speed (frequency) is reduced to prevent dewing and water splash.

- ① Cooling electronic expansion valve aperture (EEVC) is 500 pulses.
- 2 Suction overheat is 10°C or higher.
- 3 Compressor speed (frequency) is 60 rps or higher.

[Control contents]

- 1 When the suction overheat is 10°C or higher, the compressor speed (frequency) is reduced at each 1 minute.
- ② Compressor speed (frequency) does not rise till the cooling expansion valve becomes 460 pulses.
- 3 This control takes 60 rps as its lower limit so that compressor speed is not controlled when it is less than 60 rps.

(I) Refrigerant quantity shortage protection

Under the compressor protection start III control during cooling and dehumidifying operations, the following control is performed by detecting the indoor unit heat exchanger temperature (Thi-R) and the indoor unit return air temperature (Thi-A).

[Control condition] When the state that the indoor unit heat exchanger temperature (Thi-R) does not become lower than the indoor unit return air temperature (Thi-A) by 4°C or more continues for 1 minute.

[Control contents] It judges that the flowing of refrigerant in to the indoor unit is insufficient so that the compressor is stopped and E57 is displayed on the remote control.

(m) Broken wire detection on temperature thermistor

1) Outdoor unit heat exchanger thermistor and outdoor air thermistor

If the following is detected for 5 second continuously within 2 minutes to 2 minutes and 20 seconds after the compressor ON, the compressor stops. After a delay of 3 minutes, it restarts but, if the same is detected repeatedly 3 times within 40 minutes, the compressor stops with the anomalous stop.

Note (1) During defrost operation and for 3 minutes after the end of defrost operation, it is not detected.

- Outdoor unit heat exchanger thermistor: -50°C or lower
- Outdoor air temperature thermistor: -45 or lower
- 2) Discharge pipe temperature thermistor and suction pipe temperature thermistor

If the following is detected for 5 second continuously within 10 minutes to 10 minutes and 20 seconds after the compressor ON, the compressor stops. After a delay of 3 minutes, it restarts but, if the same is detected repeatedly 3 times within 40 minutes, the compressor stops with the anomalous stop.

Note (1) During defrost operation and for 3 minutes after the end of defrost operation, it is not detected.

- Discharge pipe temperature thermistor: -10°C or lower
- Suction pipe temperature thermistor: -50 or lower

(n) Fan motor error

- 1) If the fan speed of 100rpm or under is detected for 30 second continuously under the outdoor unit fan control (with the operation command of fan tap at ① speed or higher), the compressor stops.
- 2) When the fan motor speed drops to 100rpm or under 5 times within 60 minutes and the compressor stops, it enters the anomalous stop mode with E48 displayed on the remote control.

(o) Anomalous stop by the compressor start stop

- 1) When it fails to shift to the compressor DC motor's rotor position defection operation at 5 seconds after establishing the compressor start condition, the compressor stops temporarily and restarts 3 minutes later.
- If it fails to shift to the position detection operation again at second time, it judges the anomalous compressor start and stops the compressor by the anomalous stop (E59).

(7) Silent mode

- (a) As "Silent mode start" signal is received from the remote control, it operates by dropping the outdoor unit fan tap and the compressor speed (frequency).
- (b) For details, refer to items (1) and (4) above.

(8) Test run

(a) It is possible to operate from the outdoor unit using the dip switch on the outdoor unit control PCB.

	ON	SW3-4	OFF	Cooling test run	
SW3-3	OIN	3 W 3-4	ON	Heating test run	
	OFF	N	Normal and end of test run		

Make sure to turn SW3-3 to OFF after the end of operation.

(b) Test run control

- 1) Operation is performed at the maximum compressor speed (frequency), which is determined for each model.
- 2) Each protective control and error detection control are effective.
- 3) If SW3-4 is switched during test run, the compressor is stoped for once by the stop control and the cooling/heating operation is switched.
- 4) Setting and display of remote control during test run

Item Mode	Contents of remote control setting/display
Cooling test run	Setting temperature of cooling is 5°C.
Heating test run	Setting temperature of heating (preparation) is 30°C.

(9) Pump-down control

When SW7-1 is OFF, turning ON the pump-down switch SW1 for 2 seconds during the operation stop or anomalous stop (excluding the thermostat OFF), the pump-down operation is performed. (This is invalid when the indoor unit is operating. This is effective even when the indoor unit is stopped by the anomalous stop or the power source is turned OFF.)

(a) Control contents

- 1) Close the service valve at the liquid side. (It is left open at the gas side.)
- 2) Compressor is started with the target speed (frequency) at 55 rps in the cooling mode.
- 3) Red and green lamps (LED) flash continuously on the outdoor unit control PCB.
- Each of protection and error detection controls, excluding the low pressure control, anti-frost control and dewing prevention control, is effective.
- 5) Outdoor unit fan is controlled as usual.
- 6) Electronic expansion valve is fully opened.

(b) Ending conditions

Stop control is initiated depending on any of the following conditions.

- 1) Suction pipe temperature of -36°C or lower is detected for 5 seconds continuously.
 - a) Red LED: Light, Green LED: Flashing, Remote control: Displays stop.
 - b) It is possible to restart when the suction pipe temperature of -36°C or higher.
 - c) Electronic expansion valve (cooling/heating) is kept fully open.
- 2) Stop by the error detection control
 - a) Red LED: Flashing, Green LED: Flashing
 - b) Restart is prohibited. To return to normal operation, reset the power source.
 - c) Electronic expansion valve (cooling/heating) is left fully open.
- 3) When the cumulative operation time of compressor under the pump-down control becomes 5 minutes.
 - a) Red LED: OFF, Green LED: Flashing, Remote control: Stop
 - b) It is possible to pump-down again.
 - c) Electronic expansion valve (cooling/heating) is left fully open.

Note (1) After the stop of compressor, close the service valve at the gas side.

Caution: Since pressing the pump-down switch cancels communications with the indoor unit, the indoor unit and the remote control display "Transmission error – E5". This is normal.

(10) Base heater ON/OFF output control (Option)

(a) Base heater ON conditions

When all of following conditions are satisfied, the base heater is turned ON.

- · When power source is turned ON
- · During the compressor stop and when "heater OFF condition" indicated in the following (c) isn't formed
- For 5 minutes from the compressor start

But, when the compressor ON condition is formed and when it's heater OFF by the following (c) item, the heater isn't tured ON.

· During defrost operation

(b) Base heater OFF conditions

When all of following conditions are satisfied, the base heater is turned OFF.

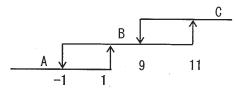
- · When it has passed for 5 minutes or more from the compressor start
- · After it passed for 5 minutes from defrost operation return
- · When "heater OFF condition" indicated in the following (c) is formed

(c) Base heater ON/OFF condition

After the compressor stop, the base heater ON/OFF changes the control method by the outdoor air temperature [Tho-A].

- (i) When the outdoor air temperature is A territory
 After the compressor stop, the base heater is always turned ON.
- (ii) When the outdoor air temperature is B territory
 (ii-1) After it passed for 8 minutes 30 seconds from the compressor stop, the base heater is turned OFF.
 (ii-2) (ii-1) later, after it passed for 8 hours from the compressor stop, the base heater is always turned ON.
- (iii) When the outdoor air temperature is C territory

 After the compressor stop, the base heater is always turned OFF.



Outdoor air temperature (°C) [Tho-A]

1.12 MAINTENANCE DATA

1.12.1 Diagnosing of microcomputer circuit

(1) Selfdiagnosis function

(a) Check indicator table

Whether a failure exists or not on the indoor unit and outdoor unit can be know by the contents of remote control error code, indoor/outdoor unit green LED (power pilot lamp and microcomputer normality pilot lamp) or red LED (check pilot lamp).

Note (1) SRK series only.

At the indoor unit side, errors are displayed with the combination of RUN light and TIMER light on the display panel.

(i) Indoor unit

1) FDT, FDTC, FDE, FDU, FDUM, FDF series

Ren	note con	ntrol	Indoor co	ntrol PCB	Outdoor co	ontrol PCB	Location of trou-			Reference					
Error co	ode Re	ed LED	Red LED	Green LED (1)	Red LED	Green LED (1)	ble	Description of trouble	Repair method	page					
			Stays OFF	Keeps flashing	Stays OFF	Keeps flashing	_	Normal operation		_					
No-indica	ation Sta	ays OFF	Stays OFF	Stays OFF	2-time flash	Stays OFF	Indoor unit power source	Power OFF, broken wire/blown fuse, broken transformer wire	Repair	345					
			*	Keeps	g, off	Keeps	Remote control wires	Poor connection, breakage of remote control wire * For wire breaking at power ON, the LED is OFF.	Repair	246					
			3-time flash	flashing	Stays OFF	flashing	Remote control	Defective remote control PCB	Replacement of remote control	346					
	WAIT@		Stays OFF	Keeps flashing	2-time flash	Keeps flashing	Indoor-outdoor units connection wire	Poor connection, breakage of indoor-outdoor units connection wire	Repair	347-351					
							Remote control	Improper setting of master and slave by remote control Poor connection of remote control signal wire (White)							
E	,		Stavs OFF	* Keeps	Stays OFF	Keeps	Remote control wires (Noise)	* For wire breaking at power ON, the LED is OFF • Intrusion of noise in remote control wire	Repair	353					
	1		Suly3 OI I	flashing	Stays Of F	flashing	Remote control indoor control PCB	*• Defective remote control or indoor control PCB (defective communication circuit)?	Replacement of remote control or PCB	333					
			2-time flash	Keeps flashing	2-time flash	Keeps flashing	Indoor-outdoor units connection wire	Poor connection of wire between indoor-outdoor units during operation (disconnection, loose connection) Anomalous communication between indoor-outdoor units by noise, etc.	Repair						
	_		2-time	Keeps		Keeps	(Noise)	CPU-runaway on outdoor control PCB	Power reset or Repair						
E	-		flash	flashing	Stays OFF	flashing	Outdoor control PCB	*• Occurrence of defective outdoor control PCB on the way of power source (defective communication circuit)?	Replacement of PCB	354					
			2-time flash	Keeps flashing	Stays OFF	Keeps flashing	Outdoor control PCB	Defective outdoor control PCB on the way of power source	Replacement						
			Hasii	Hashing		nasning	Fuse	Blown fuse							
E	5		1-time flash	Keeps	Stays OFF	Keeps	Indoor heat exchanger tempera- ture thermistor	Defective indoor heat exchanger temperature thermistor (defective element, broken wire, short-circuit) Poor contact of temperature thermistor connector	Replacement, repair of temperature thermistor	355					
	-		Hasii	flashing		flashing	Indoor control PCB	*• Defective indoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB						
F.	7		1-time flash	Keeps flashing	Stays OFF	Keeps flashing	Indoor return air temperature therm- istor	Defective Indoor return air temperature thermistor (defective element, broken wire, short-circuit) Poor contact of temperature thermistor connector	Replacement, repair of temperature thermistor	356					
_	· I	Keeps			nasning	nasning	nasning	nasning	nasning		asimig	Indoor control PCB	*• Defective indoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB	
	fl	lashing					Installation or oper- ating condition	Heating over-load (Anomalously high indoor heat exchanger temperature)	Repair						
E	3		1-time flash	Keeps flashing	Stays OFF	Keeps flashing	Indoor heat exchanger tempera- ture thermistor	Defective indoor heat exchanger temperature thermistor (short-circuit)	Replacement of temperature therm- istor	357					
							Indoor control PCB	*• Defective indoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB						
L	_						Drain trouble	Defective drain pump (DM), broken drain pump wire, disconnected connector	Replacement, repair of DM						
F	7		1-time	Keeps	a opp	Keeps	Float switch	Anomalous float switch operation (malfunction)	Repair	2.50					
	-		flash	flashing	Stays OFF	flashing	Indoor control PCB	*• Defective indoor control PCB (Defective float switch input circuit) *• Defective indoor control PCB (Defective DM drive output circuit)?	Replacement of PCB	358					
							Option	Defective optional parts (At optional anomalous input setting)	Repair						
E			Stays OFF	Keeps flashing	Stays OFF	Keeps flashing	Number of connect- ed indoor units	When multi-unit control by remote control is performed, the number of units is over	Repair	359					
E !	4		3-time flash	Keeps flashing	Stays OFF	Keeps flashing	Indoor unit No. set- ting	•No master is assigned to slaves.	Repair	360					
<u> </u>							Remote control wires	Anomalous remote control wire connection, broken wire between master and slave units							
EI	5		1(2)-time flash	Keeps flashing	Stays OFF	Keeps flashing	Fan motor Indoor power PCB	Defective fan motor Defective indoor power PCB	Replacement, repair Replacement	361					
	8		1-time flash	Keeps flashing	Stays OFF	Keeps flashing	Address setting error	Address setting error of master and slave indoor units	Repair	362					
Ēi	3		1-time flash	Keeps flashing	Stays OFF	Keeps flashing	Indoor control PCB	Improper operation mode setting	Repair	363					
<u> </u>			******	-140111115				<u> </u>							

Remote	Remote control Indoor control PCB Outdoor control PCB		Location of trou-			Reference			
Error code	Red LED	Red LED	Green LED (1)	Red LED	Green LED (1)	ble	Description of trouble	Repair method	page
con	,	1(2)-time	Keeps	eps Stays OFF Keeps		Fan motor	Indoor fan motor rotation speed anomaly	Replacement, repair	364
EEn		flash	flashing	Stays OFF		Indoor power PCB	Defective indoor power PCB	Replacement	304
E28		Stays OFF	Keeps flashing	Stays OFF	Keeps flashing	Remote control temperature thermistor	Broken wire of remote control temperature thermistor	Repair	365

Notes (1) Normal indicator lamp (Indoor, outdoor units: Green) extinguishes (or lights continuously) only when CPU is anomalous. It keeps flashing in any trouble other than anomalous CPU.

(2) * mark in the description of trouble means that, in ordinary diagnosis, it cannot identify the cause definitely, and, if the trouble is repaired by replacing the part, it is judged consequently that the replaced part was defective.

2) SRK series

Remote	control	Indoor ur	it display	Outdoor c	ontrol PCB	Location of	Description of trouble	Repair method	Reference	
Error code	Red LED	RUN light	TIMER light	Red LED	Green LED	trouble	Decompact of trease	nopun memou	page	
		ON	Stays OFF	Stays OFF	Keeps flashing	_	•Normal operation	-	_	
		_	_	2-time flash	Stays OFF	Indoor unit power source	•Power OFF, broken wire/blown fuse, broken transformer wire	Repair	387	
					Keeps	Remote control wires	•Poor connection, breakage of remote control wire * For wire breaking at power ON, the LED is OFF.	Repair		
	a opp	_	_	Stays OFF	flashing	Remote control	Defective remote control PCB	Replacement of remote control	388	
No-indication	Stays OFF	Stays OFF	Keeps flashing	Stays OFF	Keeps flashing	Limit switch, air inlet panel	*Limit switch operate *Defective limit switch (Poor contact of limit switch connector) *Set is defective air inlet panel	Replacement, repair	389	
			- masining		manning	Indoor control PCB	Defective indoor control PCB (Defective limit switch input circuit)?	Replacement of PCB		
⊕WAI INSPE0		_	_	2-time flash	Keeps flashing	Indoor-outdoor units connection wire	Poor connection, breakage of indoor-outdoor units connection wire	Repair	390-394	
						Remote control	Improper setting of master and slave by remote control Poor connection of remote control signal wire (White)			
F!					Keens	Remote control wires (Noise)	* For wire breaking at power ON, the LED is OFF	Repair		
L 1		- Stays OFF Stay		Replacement of remote control or PCB	396					
		ON	6-time flash	2-time flash	Keeps flashing	Indoor-outdoor units connection wire	Poor connection of wire between indoor-outdoor units during operation (disconnection, loose connection) Anomalous communication between indoor-outdoor units by noise, etc.	Repair		
E5			6-time	Store OFF	Keeps	(Noise)	•CPU-runaway on outdoor control PCB	Power reset or Repair		
		ON	flash	Stays OFF	flashing	Outdoor control PCB	*•Occurrence of defective outdoor control PCB on the way of power source (defective communication circuit)?	Replacement of PCB	397	
		ON	6-time	Stavs OFF	Keeps	Outdoor control PCB	*Defective outdoor control PCB on the way of power source	Replacement		
	. ,		flash	,	flashing	Fuse	•Blown fuse			
	Keeps flashing	1-time	ON	Store OFF	6-time	Indoor heat exchanger tempera ture sensor 1	Defective indoor heat exchanger temperature sensor 1 (defective element, broken wire, short-circuit) Poor contact of temperature sensor 1 connector	Replacement, repair of temperature sensor 1		
		flash	ON	Stays OFF	flash	Indoor control PCB	*Defective indoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB		
E6		3-time flash	ON	Stays OFF	Keeps	Indoor heat exchanger tempera ture sensor 2	Defective indoor heat exchanger temperature sensor 2 (defective element, broken wire, short-circuit) Poor contact of temperature sensor 2 connector	Replacement, repair of temperature sensor 2	398	
		Hasii			flashing	Indoor control PCB	Defective indoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB		
No-indication		2-time	ON	Stays OFF	Keeps	Indoor room temperature sensor	Defective indoor room temperature sensor(defective element, broken wire, short-circuit) Poor contact of temperature sensor connector	Replacement, repair of temperature sensor	399	
		flash		Sulys Of 1	flashing	Indoor control PCB	*Defective indoor control PCB (Defective temperature sensor input circuit)?	Replacement of PCB		
E 10		_	_	Stays OFF	Keeps flashing	Number of con- nected indoor units	When multi-unit control by remote control is performed, the number of units is over	Repair	400	
F !4		3-time	Keeps	Stays OFF	Keeps	Indoor unit No. set- ting	•No master is assigned to slaves.	Repair	401	
_ ' '		flash	flashing	Ĺ	flashing	Remote control wires	•Anomalous remote control wire connection, broken wire between master and slave units	,		
F IF		6-time flash	ON	Stays OFF	Keeps flashing	Fan motor	•Defective fan motor	Replacement, repair	402	
- ''		nasn				Indoor control PCB Remote control	Defective indoor control PCB	Replacement		
L28		_	_	Stays OFF	Keeps flashing	temperature therm- istor	Broken wire of remote control temperature thermistor	Repair	403	

Note (1) *mark in the Description of trouble means that, in ordinary diagnosis, it cannot identify the cause definitely, and, if the trouble is repaired by replacing the part, it is judged consequently that the replaced part was defective.

(ii) Outdoor unit

1) FDT, FDTC, FDE, FDU, FDUM, FDF series

Remote	control	Indoor co	ntrol PCB	Outdoor co	ontrol PCB					
Error code	Red LED	Red LED	Green LED (1)	Red LED	Green LED (1)	Location of trouble	Description of trouble	Repair method	Reference page	
						Installation or operating condition	Higher outdoor heat exchanger temperature	Repair		
E35		Stays OFF	Keeps flashing	1 time flash	Keeps flashing	Outdoor heat exchanger temperature thermistor	Defective outdoor heat exchanger temperature thermistor	Replacement of temperature thermistor	366	
						Outdoor control PCB	*• Defective outdoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB		
						Installation or operating condition	Higher discharge temperature	Repair		
E 36		Stays OFF	Keeps flashing	1 time flash	Keeps flashing	Discharge pipe temperature thermistor	Defective discharge pipe temperature thermistor	Replacement, repair of temperature thermistor	367	
						Outdoor control PCB	*• Defective outdoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB		
E37		Stays OFF	Keeps	1 time flash	Keeps	Outdoor heat exchanger temperature thermistor	Defective outdoor heat exchanger temperature thermistor, broken wire or poor connector connection	Replacement, repair of temperature thermistor	368	
י ב ב			flashing		flashing	Outdoor control PCB	*• Defective outdoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB		
E 38		Stays OFF	Keeps	1 time flash	Keeps	Outdoor air temperature thermistor	Defective Outdoor air temperature thermistor, broken wire or poor connector connection	Replacement, repair of temperature thermistor	369	
			flashing		flashing	Outdoor control PCB	*• Defective outdoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB	$oxed{oxed}$	
E39	Stays OFF Keeps 1 time flash Keeps flashing			Discharge pipe temperature thermistor	Defective discharge pipe temperature thermistor, broken wire or poor connector connection	Replacement, repair of temperature thermistor	370			
			Hasning	Outdoor control PCB	*• Defective outdoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB				
E40		Stays OFF	Keeps	1 time flash	Keeps	Installation or operating condition	• Rising high pressure (Operation of 63H1) • Service valve closing operation	Repair	371	
_ ''		,	flashing		flashing	Outdoor control PCB	*• Defective outdoor control PCB (Defective 63H1 input circuit)?	Replacement of PCB		
E42		Stays OFF	Keeps	1 time flash	Keeps	Outdoor control PCB compressor	Current cut (Anomalous compressor over-current)	Replacement of PCB	372.373	
L 1L		Stays Of 1	flashing	1 time masii	flashing	Installation or operating condition	Service valve closing operation	Repair	312 313	
EYT		Stays OFF	Keeps	1 time flash	Keeps	Outdoor control PCB	Defective outdoor control PCB	Replacement of PCB	373-1	
		Stays Of 1	flashing	T time masii	flashing	active filter	Defective active filter of control	Replacement of I CB	3/3-1	
E48		Stays OFF	Keeps	1 time flash	Keeps	Outdoor fan motor	Anomalous outdoor fan motor	Replacement, repair	374	
		Stays Of 1	flashing	1 time masii	flashing	Outdoor control PCB	*• Defective outdoor control PCB (Defective motor input circuit)?	Replacement of PCB	3/4	
E5 1		Stays OFF	Keeps flashing	1 time flash	Keeps flashing	Main PCB	Anomalous main PCB	Replacement of PCB	375	
E53		Stays OFF	Keeps	1 time flash	Keeps	Suction pipe temperature thermistor	Defective suction pipe temperature thermistor, broken wire or poor connector connection	Replacement, repair of temperature thermistor	376	
		siays OFF	flashing	. dine masii	flashing	Outdoor control PCB	*• Defective outdoor PCB (Defective thermistor input circuit)?	Replacement of control PCB	3,0	
		Store OFF	Keeps	1	Keeps	Operation status	Shortage in refrigerant quantity"	Repair	377	
E57		Stays OFF	flashing	1 time flash	flashing	Installation status	Service valve closing operation	Service valve opening check	3//	
E59		Stays OFF	Keeps flashing	5 times flash	Keeps flashing	Compressor inverter PCB	Anomalous compressor startup	Replacement	378•379	

Note (1) * mark in the description of trouble means that, in ordinary diagnosis, it cannot identify the cause definitely, and, if the trouble is repaired by replacing the part, it is judged consequently that the replaced part was defective.

2) SRK series

Remote c	ontrol	Indoor ur	nit display	Outdoor co	ontrol PCB				D-4			
Error code	Red LED	RUN light	TIMER light	Red LED	Green LED	Location of trouble	Description of trouble	Repair method	Reference page			
						Installation or operating condition	Higher outdoor heat exchanger temperature	Repair				
E35		ON	Keeps flashing	1-time flash	Keeps flashing	Outdoor heat exchanger temperature thermistor	Defective outdoor heat exchanger temperature thermistor	Replacement of temperature thermistor	404			
						Outdoor control PCB	*• Defective outdoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB				
						Installation or operating condition	Higher discharge temperature	Repair				
E36		ON	5-time flash	1-time flash	Keeps flashing	Temperature thermistor	Defective discharge pipe temperature thermistor	Replacement, repair of temperature thermistor	405			
						Outdoor control PCB	*• Discharge pipe Defective outdoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB				
		Keeps	2-time		Keeps	Outdoor heat exchanger temperature thermistor	Defective outdoor heat exchanger temperature thermistor, broken wire or poor connector connection	Replacement, repair of temperature thermistor				
E37		flashing	flash	1-time flash	flashing	Outdoor control PCB	*• Defective outdoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB	406			
E 38		Keeps			1-time flash	I timo floch	Garla Lina Garla Keeps		Outdoor air temperature thermistor	Defective Outdoor air temperature thermistor, broken wire or poor connector connection	Replacement, repair of temperature thermistor	409
		flashing	1-time masn	flashing		Outdoor control PCB	*• Defective outdoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB	409			
E39		Keeps	4-time			Discharge pipe temperature thermistor	Defective discharge pipe temperature thermistor, broken wire or poor connector connection	Replacement, repair of temperature thermistor	408			
		flashing	flash			Outdoor control PCB	*• Defective outdoor control PCB (Defective temperature thermistor input circuit)?	Replacement of PCB	400			
E40	Keeps flashing	_	- 1-time flash Keeps		- 1-time flash Keeps flashing		Installation or operating condition	• Rising high pressure (Operation of 63H1) • Service valve closing operation	Repair	409		
_ ,0	inasining .				Hashing	Outdoor control PCB	*• Defective outdoor control PCB (Defective 63H1 input circuit)?	Replacement of PCB				
E42		ON	1-time flash	1-time flash	Keeps	Outdoor control PCB compressor	* Current cut (Anomalous compressor over-current)	Replacement of PCB	410 • 411			
L 'L			T time rition	T time hash	flashing	Installation or operating condition	Service valve closing operation	Repair				
ЕЧП		5-time flash	ON	1 time flash	Keeps	Outdoor control PCB	Defective outdoor control PCB	Replacement of PCB	411-1			
_ ' '		nasn			flashing	active filter	Defective active filter of control	replacement of FeB				
E48		ON	7-time flash	1 time flash	Keeps	Outdoor fan motor Outdoor control PCB	Anomalous outdoor fan motor Defective outdoor control PCB (Defective motor input circuit)?	Replacement, repair Replacement of PCB	412			
E5 1		ON	4-time flash	1-time flash	Keeps flashing	Inverter PCB	Anomalous inverter PCB	Replacement of PCB Replacement, repair of	413			
E53		Keeps	5-time	1-time flash	Keeps	Suction pipe temperature thermistor	Defective suction pipe temperature thermistor, broken wire or poor connector connection	temperature thermistor Replacement of control	414			
		flashing	flash		flashing	Outdoor control PCB	*• Defective outdoor PCB (Defective thermistor input circuit)?	PCB				
E57		7-time flash	ON	1-time flash	Keeps flashing	Operation status Installation status	Shortage in refrigerant quantity Service valve closing operation	Repair Service valve opening check	415			
E 59		_	_	5-time flash	Keeps flashing	Compressor, inverter PCB	Service varve closing operation Anomalous compressor startup	Replacement	416 • 417			

Note (1) * mark in the description of trouble means that, in ordinary diagnosis, it cannot identify the cause definitely, and, if the trouble is repaired by replacing the part, it is judged consequently that the replaced part was defective.

(iii) Option control in-use

1) FDT, FDTC, FDE, FDU, FDUM, FDF series

		Indoor unit control PCB		Outdoor unit control PCB		Description of trouble	Banair mathas
Error code	Red LED	Red LED	Green LED	Red LED	Green LED Description of trouble		Repair method
E 75	Keeps flashing	Stays OFF	Keeps flashing	Stays OFF	Keeps flashing	Communication error (Defective communication circuit on the main unit of SC-SL2N-E or SC-SL4) ete.	Replacement

2) SRK series

		Indoor unit o	lisplay panel	Outdoor unit	control PCB	Description of trouble	
Error code	Red LED	RUN light	TIMER light	Red LED	Green LED		
E 75	Keeps flashing	-	-	Stays OFF	Keeps flashing	Communication error (Defective communication circuit on the main unit of SC-SL2N-E or SC-SL4) ete.	Replacement

(iv) Display sequence of error codes or inspection indicator lamps

■ Occurrence of one kind of error

Displays are shown respectively according to errors.

■ Occurrence of plural kinds of error

Section	Category of display
Error code on remote control	Displays the error of higher priority (When plural errors are persisting)
Red LED on indoor control PCB	E 1>E5>····>E 10>E35>·····Eb0
Red LED on outdoor control PCB	• Displays the present errors. (When a new error has occurred after the former error was reset.)

■ Error detecting timing

Section	Error description	Error code	Error detecting timing
	Drain trouble (Float switch activated)	E9	Whenever float switch is activated after 30 second had past since power ON.
	Communication error at initial operation	"@WAIT®"	No communication between indoor and outdoor units is established at initial operation.
	Remote control communication circuit error	Εl	Communication between indoor unit and remote control is interrupted for mote than 2 minutes continuously after initial communication was established.
	Communication error during operation	E5	Communication between indoor and outdoor units is interrupted for mote than 2 minutes continuously after initial communication was established.
Indoor	Excessive number of connected indoor units by controlling with one remote control	E 10	Whenever excessively connected indoor units is detected after power ON.
	Return air temperature thermistor anomaly	ΕT	-50 (-45) °C or lower is detected for 5 (15) seconds continuously within 60 minutes after initial detection of this anomalous temperature.
	Indoor heat exchanger temperature thermistor anomaly	E6	-50 (-28) °C or lower is detected for 5 (15) seconds continuously within 60 minutes after initial detection of this anomalous temperature. Or 70°C or higher is detected for 5 seconds continuously. (SRK series removes)
	Outdoor air temperature thermistor anomaly	E 38	-45°C or lower is detected for 5 seconds continuously 3 times within 40 minutes after initial detection of this anomalous temperature. Or -45°C or higher is detected for 5 seconds continuously within 20 seconds after compressor ON.
Outdoor	Outdoor heat exchanger temperature thermistor anomaly	E37	-50°C or lower is detected for 5 seconds continuously 3 times within 40 minutes after initial detection of this anomalous temperature. Or -50°C or lower is detected for 5 seconds continuously within 20 seconds after compressor ON.
	Discharge pipe temperature thermistor anomaly	E39	-10°C or lower is detected for 5 seconds continuously 3 times within 40 minutes after initial detection of this anomalous temperature.
	Suction pipe temperature thermistor anomaly	E53	-50°C or lower is detected for 5 seconds continuously 3 times within 40 minutes after initial detection of this anomalous temperature.

Note (1) Value in () are for the SRK series.

■ Error log and reset

Error indicator	Memorized error log	Reset	
Remote control display	Higher priority error is memorized.	Stop the unit by pressing the ON/OFF	
Red LED on indoor control PCB	Not memorized.	switch of remote control. • If the unit has recovered from anomaly, it	
Red LED on outdoor control PCB	Memorizes a mode of higher priority.	can be operated.	

■ Resetting the error log

- Resetting the memorized error log in the remote control

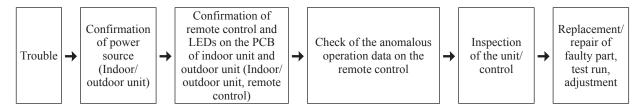
 Holding down "CHECK" button, press "TIMER" button to reset the error log memorized in the remote control.
- Resetting the memorized error log in the indoor unit

The remote control transmits error log erase command to the indoor unit when "VENTI" button is pressed while holding down "CHECK" button.

Receiving the command, the indoor unit erase the log and answer the status of no error.

(2) Troubleshooting procedure

When any trouble has occurred, inspect as follows. Details of respective inspection method will be described on later pages.



(3) Troubleshooting at the indoor unit

(a) FDT, FDTC, FDE, FDU, FDUM, FDF series

With the troubleshooting, find out any defective part by checking the voltage (AC, DC), resistance, etc. at respective connectors at around the indoor PCB, according to the inspection display or operation status of unit (the compressor does not run, fan does not run, the 4-way valve does not switch, etc.), and replace or repair in the unit of following part.

(i) Replacement part related to indoor PCB's

Control PCB, power source PCB, temperature thermistor (return air, indoor heat exchanger), remote control switch, limit switch, transformer and fuse

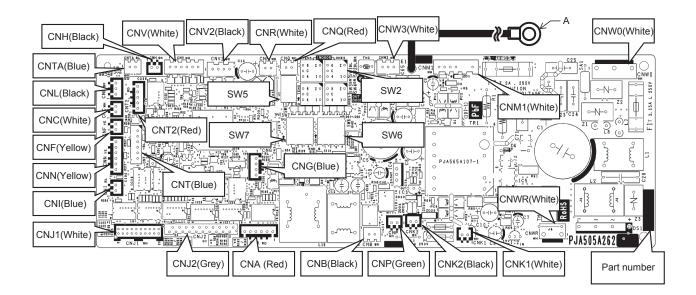
Note (1) With regard to parts of high voltage circuits and refrigeration cycle, judge it according to ordinary inspection methods.

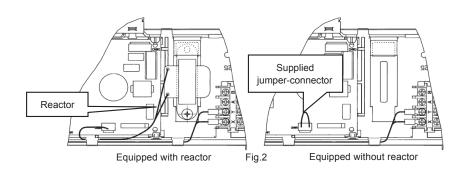
(ii) Instruction of how to replace indoor control PCB

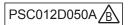
SAFETY PRECAUTIONS Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the replacement in order to protect yourself. The precautionary items mentioned below are distinguished into two levels, WARNING and CAUTION. Both mentions the important items to protect your health and safety so strictly follow them by any means. After completing the replacement, do commissioning to confirm there are no anomaly. WARNING Replacement should be performed by the specialist. If you replace the PCB by yourself, it may lead to serious trouble such as electric shock or fire. Replace the PCB correctly according to these instructions. Improper replacement may cause electric shock or fire. Shut off the power before electrical wiring work. Replacement during the applying the current would cause the electric shock, unit failure or improper running. It would cause the damage of connected equipment such as fan motor,etc. Fasten the wiring to the terminal securely, and hold the cable securely so as not to apply unexpected stress on the terminal. Loose connections or hold could result in abnormal heat generation or fire. Check the connection of wiring to PCB correctly before turning on the power, after replacement. Defectiveness of replacement may cause electric shock or fire CAUTION In connecting connector onto the PCB, connect not to deform the PCB. It may cause breakage or malfunction. Insert connecter securely, and hook stopper. It may cause fire or improper running. Bundle the cables together so as not to be pinched or be tensioned. It may cause malfunction or electric shock for disconnection or deformation.

1) Model FDT series

- a) Replace the control PCB
 - i) Unscrew terminal (Arrow A) of the "E1" wiring (yellow/green) that is connected to PCB.
 - ii) Replace the PCB only after all the wirings connected to the connector are removed.
 - iii) Fix the board such that it will not pinch any of the wires.
 - iv) Switch setting must be same setting as that of the removed PCB.
 - v) Reconnect the all wirngs to the PCB, that was removed in 2.
 - vi) Rescrew the terminal (Arrow A) of the "E1" wiring, that was removed in 1.
 - vii) When there is no wire to connect to CNWR, connect the supplied jumper-connector. (Refer to Fig.2) If nothing is connected to CNWR, it doesn't work even when power is turned on.
- b) Control PCB (**Parts mounting are different by the kind of PCB.)







2) Model FDTC series

a) Control PCB

PSB012D976C

Replace and set up the PCB according to this instruction.

i) Set to an appropriate address and function using switch on PCB.

Select the same setting with the removed PCB.

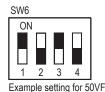
item	switch		Content	of control		
Address	SW2	Plural ind	loor units con	trol by 1 remo	ote control	
Master /		Master	Slave 1	Slave 2	Slave 3	
Slave	SW5-1	_	_	0	0	
setting	SW5-2	_	0	_	0	
Test run	SW7-1	_	Normal			
1 CS(TUIT	3vv7-1	0	Operation c	Operation check/drain motor test run		

O:ON -:OFF

ii) Set to an appropriate capacity using the model selector switch(SW6).

Select the same capacity with the PCB removed from the unit.

50VF 0 - 0					SW6
	_	0	-	0	50VF
60VF 0 0 0	-	0	0	0	60VF

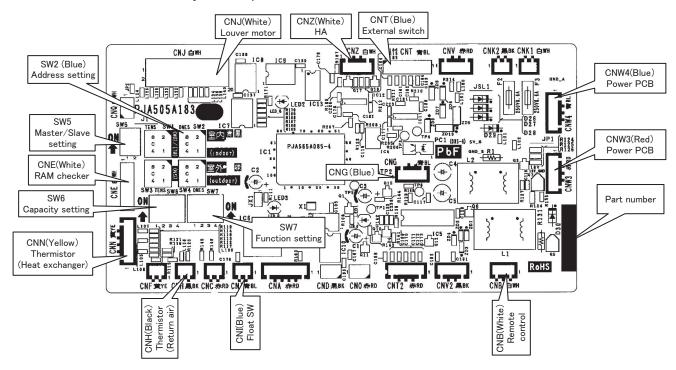


iii) Replace the PCB

- 1) Fix the PCB so as not to pitch the cords.
- 2 Connect connectors to the PCB. Connect a cable connector with the PCB connector of the same color.
- ③ Do not pass CPU surrounding about wirings.

iv) Control PCB

Parts mounting are different by the kind of PCB.



b) Power PCB

PSB012D953A

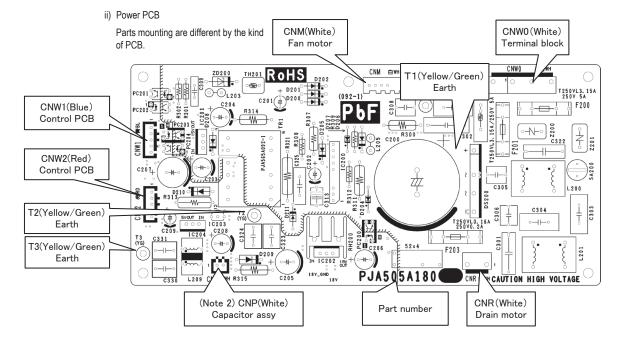
This PCB is a general PCB. Replace the PCB according to this instruction.

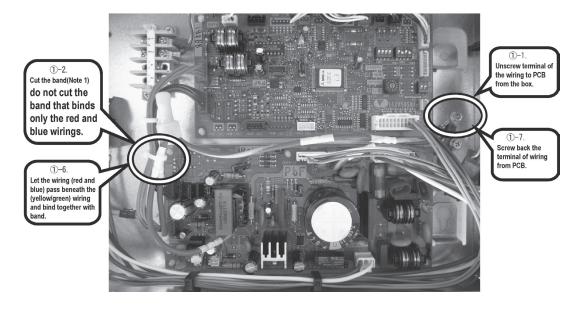
- i) Replace the PCB (refer to right dwg.)
 - ① Unscrew terminal of the wiring(yellow/green) soldered to PCB from the box.
 - ② Cut the band that binds the wiring (red and blue) from connector CNW1 and CNW2, and the wiring (yellow/green) from PCB (T2/T3) . (Note 1) (However, do not cut the band that binds only the red and blue wirings.)
 - 3 Replace the PCB only after all the wirings connected to the connector are removed.
 - 4 Fix the board such that it will not pinch any of the wires.
 - ⑤ Reconnect the wirings to the PCB. Wiring connector color should match with the color of connector of the PCB. (Note 2)
 - 6 Let the wiring (red and blue) pass beneath the (yellow/green) wiring and bind together with band.
 - TScrew back the terminal of wiring (yellow/green) from PCB(T1, T2/T3), that was removed in 1.

In that case, do not place the crimping part of the wiring under the PCB.

(Note 1): It might not be applicable on some models.

(Note 2): After replacing PCB, connection between capacitor assy and connector CNP is no longer needed.





3) Models FDE, FDU, FDUM series

a) Control PCB

Replace and set up the PCB according to this instruction.

i) Set to an appropriate address and function using switch on PCB.

Select the same setting with the removed PCB.

item	switch		Content	of control			
Address	SW2	Plural indoor units control by 1 remote control					
Master /Slave setting		Master	Slave1	Slave2	Slave3		
	SW5-1	_	_	0	0		
setting	SW5-2	_	0	_	0		
Test run	SW7-1	_	Normal				
restruit	3007-1	0	Operation c	heck/drain m	otor test run		

O:ON -:OFF

ii) Set to an appropriate capacity using the model selector switch(SW6).

Select the same capacity with the PCB removed from the unit.

SW6	-1	-2	-3	-4
50V	0	_	0	_
60V	0	0	0	_
71V	0	_	_	0

SW6	-1	-2	-3	-4
100V	0	0	ı	0
125V	-	-	0	0
140V	0	_	0	0



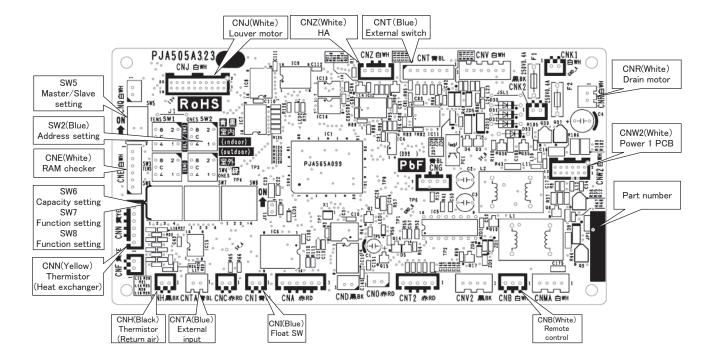
Example setting for 50V

iii) Replace the PCB

- ① Exchange PCB after detaching all connectors connected with the PCB.
- 2) Fix the PCB so as not to pitch the wiring.
- 3 Connect connectors to the PCB. Match the wiring connector to the connector color on the PCB and connect it.

iv) Control PCB

Parts mounting are different by the kind of PCB.



b) Power PCB

This PCB is a general PCB. Replace the PCB according to this instruction.

- i) Replace the PCB
 - ① Unscrew terminal of the wiring(yellow/green) connected to Terminal block (CNWO) from the box.
 - 2 Replace the PCB only after all the wirings connected to the connector are removed.
 - ③ Fix the board such that it will not pinch any of the wires.
 - Reconnect the wirings to the PCB. Wiring connector color should match with the color of connector of the PCB.
 - ⑤ Screw back the terminal of wiring, that was removed in 1.

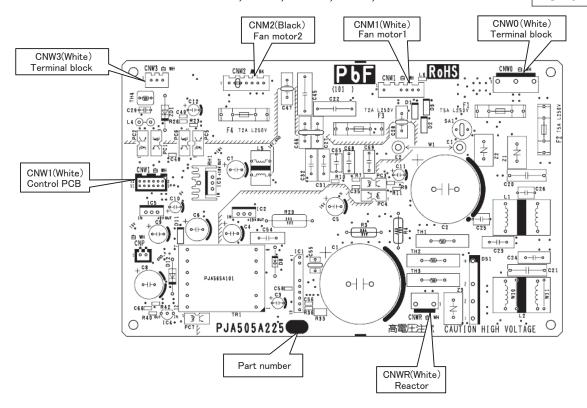
ii) Power PCB

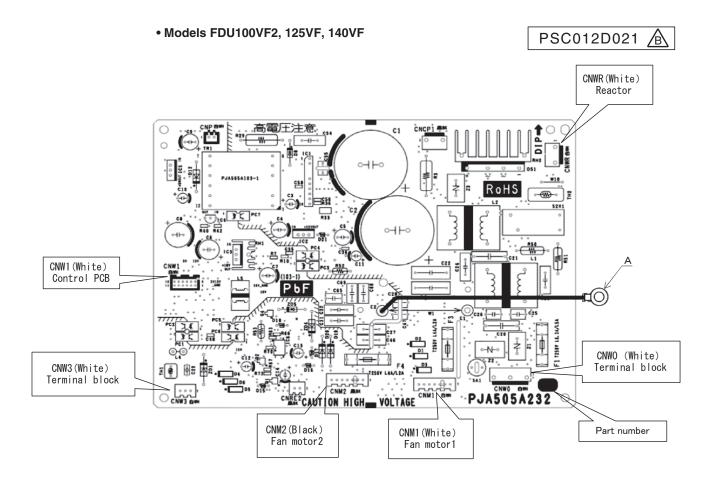
Parts mounting are different by the kind of PCB.

• Models FDE50-140VG, FDUM50VF PSB012D992 CNM1(White) CNW0 (White) CNW3 (White) Terminal block Part number Fan motor Terminal block CNW0 F3 T2A L250V 0 CNM1 **←** CNW1(White) Control PCB 011 C24 C23 Ξ E PC7 高電圧注意 CAUTION HIGH VOLTAGE

• Models FDUM60VF, 71VF1, 100VF2, 125VF, 140VF

PSB012D993





4) Model FDF series

a) Control PCB

PSB012D976C ⚠

Replace and set up the PCB according to this instruction.

i) Set to an appropriate address and function using switch on PCB.
 Select the same setting with the removed PCB.

item	switch	Content of control			
Address	SW2	Plural indoor units control by 1 remote control			te control
Master /Slave		Master	Slave1	Slave2	Slave3
setting	SW5-1	_	_	0	0
Setting	SW5-2	_	0	ı	0
Test run SW7-1		_	Normal		
		0	Operation check/drain motor test r		

Set to an appropriate capacity using the model selector switch(SW6).
 Select the same capacity with the PCB removed from the unit.

SW6	-1	-2	-3	-4
71V	0	_	_	0
100V	0	0	-	0
125V	_	_	0	0
140V	0	_	0	0

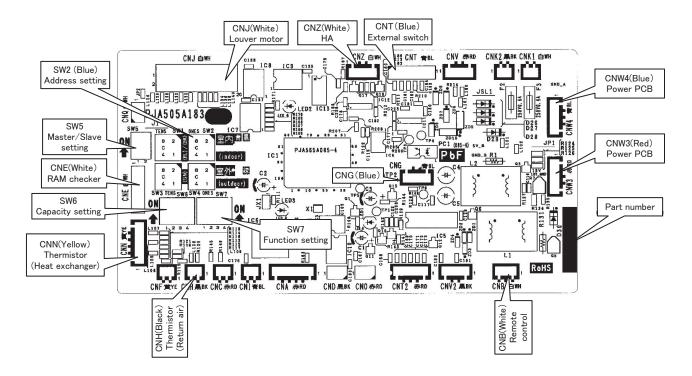


iii) Replace the PCB

- ① Fix the PCB so as not to pitch the cords.
- 2 Connect connectors to the PCB. Connect a cable connector with the PCB connector of the same color.
- ③ Do not pass CPU surrounding about wirings.

iv) Control PCB

Parts mounting are different by the kind of PCB.



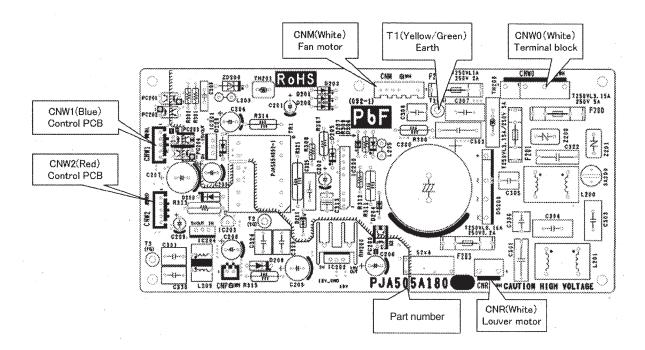
b) Power PCB

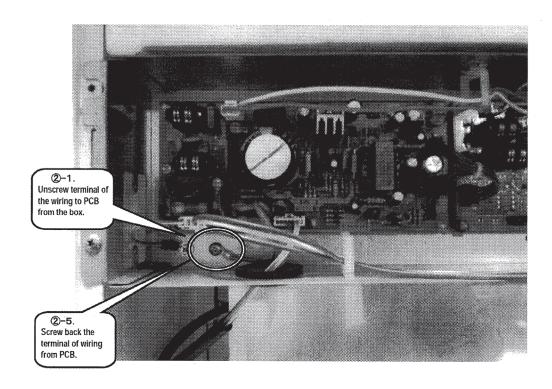
PSB012D953C∕€

This PCB is a general PCB. Replace the PCB according to this instruction.

Replace the PCB

- i) Unscrew terminal of the wining (yellow/green) soldered to PCB from the box.
- ii) Replace the PCB only after all the wirings connected to the connector are removed.
- iii) Fix the board such that it will not pinch any of the wires.
- iv) Reconnect the wirings to the PCB. Wiring connector color should match with the color of connector of the PCB.
- v) Screw back the terminal of wiring (yellow/green) from PCB(T1), that was removed in 1. In that case, do not place the crimping part of the wiring under the PCB.





●DIP switch setting list

Switches	Description		D	efault setting	Remarks
SW2	Address No. setting at plural indoor	units control by 1 R/C	0		0-F
SW5-1	Magtar/Clave getting	Master*/Slave	OFF		See table 2
SW5-2	Master/Slave setting	Master /Slave	OFF		See table 2
SW6-1					
SW6-2	Model selection		As per model		See table 1
SW6-3			As per ii	nouei	See table 1
SW6-4					
SW7-1	Test run, drain motor	Normal*/Test run	OFF	Normal	
SW7-2	Reserved		OFF		Keep OFF
SW7-3	Reserved		OFF		Keep OFF
SW7-4	Reserved		OFF		Keep OFF
JSL1	Superlink terminal spare	Normal*/switch to spare	With		

^{*} Default setting

Table 1: Indoor unit model selection with SW6-1-SW6-4

Switches	50V	60V	71V	100V	125V	140V
SW6-1	ON	ON	ON	ON	OFF	ON
SW6-2	OFF	ON	OFF	ON	OFF	OFF
SW6-3	ON	ON	OFF	OFF	ON	ON
SW6-4	OFF	OFF	ON	ON	ON	ON

Table 2: Indoor unit Master/Slave setting with SW5-1,SW5-2

Switches	SW5-1	SW5-2
Master	OFF	OFF
Slave1	OFF	ON
Slave2	ON	OFF
Slave3	ON	ON

(b) SRK series

(i) Cautions

- 1) If you are disassembling and checking an air-conditioner, be sure to turn off the power before beginning. When working on indoor units, let the unit sit for about 1 minute after turning off the power before you begin work.
- 2) When taking out printed circuit boards, be sure to do so without exerting force on the circuit boards or package components.
- 3) When disconnecting and connecting connectors, take hold of the connector housing and do not pull on the lead wires.

(ii) Items to check before troubleshooting

- 1) Is the air-conditioner running? Is it displaying any self-diagnosis information?
- 2) Is a power source with the correct voltage connected?
- 3) Are the control lines connecting the indoor and outdoor units wired correctly and connected securely?
- 4) Is the outdoor unit's service valve open?

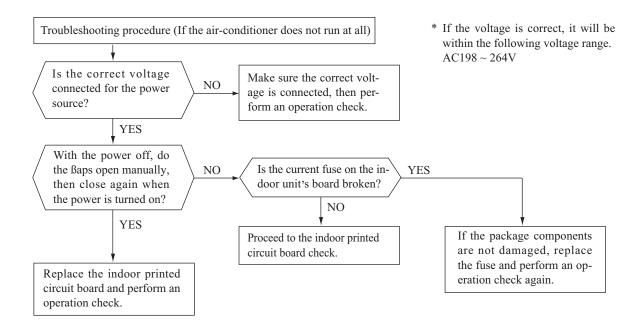
(iii) Troubleshooting procedure (If the air-conditioner does not run at all)

If the air-conditioner does not run at all, diagnose the trouble using the following troubleshooting procedure.

Important

When all the following conditions are satisfied, we say that the air-conditioner will not run at all.

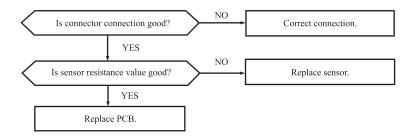
- 1) The RUN light does not light up.
- 2) The flaps do not open.



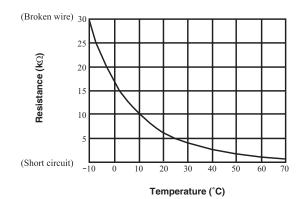
(iv) Inspection procedures corresponding to detail of trouble

Sensor error

Broken sensor wire, connection



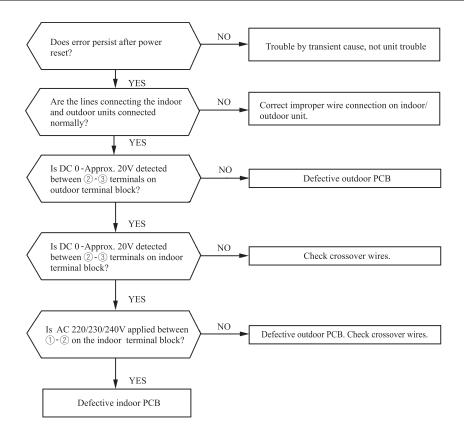
◆ Sensor temperature characteristics (Room temp., indoor heat exchanger temp.)



Defective fan motor, connector poor connection, defective indoor PCB Indoor fan motor error Is connector connection good? Correct connector connection. YES NO Is fan motor resistance value good? * Disconnect the fan motor connector, then investigate YES the fan motor and indoor PCB separately. Replace indoor fan motor. NO Is the output of the indoor PCB Notes (1) See pages 320 for the fan motor and indoor PCB check YES procedure. (2) After making sure the fan motor and indoor PCB are nor-Defective indoor PCB mal, connect the connectors and confirm that the fan motor (If power is turned on while one or the other is broken down, it could cause the other to break down also.) Power source reset Replace fan motor. (If the error persists after replacing Is it normalized? the fan motor, replace the indoor PCB.) YES Malfunction by temporary noise

Error of signal transmission

Wiring error including power cable, defective indoor/

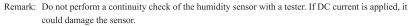


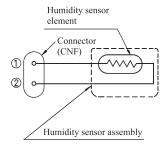
(v) Phenomenon observed after shortcircuit, wire breakage on sensor

Sensor	Operation	Pheno	menon	
Selisoi	mode	Shortcircuit	Disconnected wire	
Room temperature	Cooling	Release of continuous compressor operation command.	Continuous compressor operation command is not released.	
sensor	Heating	Continuous compressor operation command is not released.	Release of continuous compressor operation command.	
Heat exchanger sensor	Cooling	Freezing cycle system protection trips and stops the compressor.	Continiuous compressor operation command is not released. (Anti-frosting)	
0011001	Heating	High pressure control mode (Compressor stop command)	Hot keep (Indoor fan stop)	
	Cooling	Refer to the table below.	Refer to the table below.	
Humidity sensor	Heating	Normal system operation is possible.		

■ Humidity sensor operation

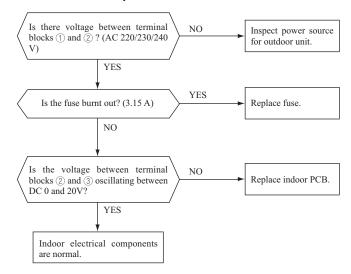
Failu	ure mode	Control input circuit resding	Air-conditioning system operation	
cted	① Disconnected wire			
Disconnected wire	② Disconnected wire	Humidity reading is 0%	Anti-condensation control is not done.	
Dis	12 Disconnected wire			
Short	① and ② are shot circuited	Humidity reading is 100%	Anti-condensation control keep doing.	





(vi) Checking the indoor electrical equipment

1) Indoor PCB check procedure



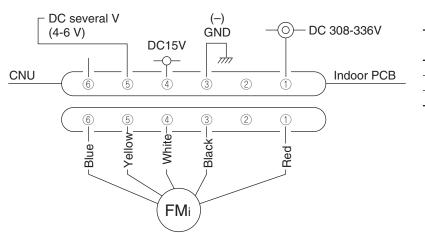
2) Indoor unit fan motor check procedure

This is a diagnostic procedure for determining if the indoor unit's fan motor or the indoor PCB is broken down.

a) Indoor PCB output check

- i) Turn off the power.
- ii) Remove the front panel, then disconnect the fan motor lead wire connector.
- iii) Turn on the power. If the unit operates when the ON/OFF button is pressed, if trouble is detected after the voltages in the following figure are output for approximately 30 seconds, it means that the indoor PCB is normal and the fan motor is broken down.

If the voltages in the following figure are not output at connector pins No. ①, ④ and ⑤, the indoor PCB has failed and the fan motor is normal.



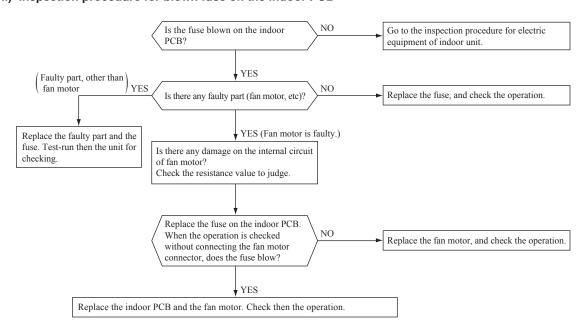
Measuring point	Voltage range when normal
1 - 3	DC 308-336V
4-3	DC 15V
(5) - (3)	DC several V (4-6V)

b) Fan motor resistance check

Measuring point	Resistance when normal
① - ③ (Red - Black)	20 MΩ or higher
(4) - (3) (White - Black)	20 k Ω or higher

- Notes (1) Remove the fan motor and measure it without power connected to it.
 - (2) If the measured value is below the value when the motor is normal, it means that the fan motor is faulty.

(vii) Inspection procedure for blown fuse on the indoor PCB



(4) Troubleshooting at the outdoor unit

When troubleshooting the outdoor unit, firstly assess the overview of malfunction and try to presume the cause and the faulty part by checking the error code dispalyed on the remote control and flashing pattern of indicator lamps (Red LED and Green LED), and then proceed further inspection and remedy it.

Self-diagnosis system by microcomputer on indoor and outdoor PCB can assist to find the cause of malfunction smoothly by making a diagnosis of not only the anomaly of microcomuter, but also the anomaly in power source system, installation space, overload resulting from improper charging amount of refrigerant and etc.

Unless the power is reset, the error log is saved in memory and the inspection indicator lamps on outdoor PCB keep flashing after automatical recovering from malfunction.

After automatical recovering from malfunction, if any another error mode which has a higher priority than the previous error saved in memory occurs, it is overwritten in memory and is displayed.

[Reset of power source]

Be sure to avoid electrical shock, when replacing or checking the outdoor control PCB, because some voltage is still retained in the electrolytic capacitor on the PCB even after shutting down the power source to the outdoor unit.

Be sure to start repairing work, after confirming that the Green LED on the PCB has been extiguished for more than 10 seconds after more than 3 minutes had been passed since power shut down, and reconfirming that voltage has been discharged sufficiently by measuring the voltage (DC) between both terminals of electrolytic capacitor (C58) (Measurment of voltage may be disturbed by the moisture-proof coating. In such case, remove the coating and measure it by taking care of avoiding electrical shock.)

(a) Module of part to be replaced for outdoor unit control

Outdoor control PCB, temperature thermistor (of outdoor heat exchanger, discharge pipe, outdoor air and suction pipe), Fuses (for power source and control PCB), Noise filter and Reactor.

(b) Replacement procedure of outdoor control PCB

Precautions for Safety

Since the following precaution is the important contents for safety, be sure to observe them.
 WARNING and CAUTION are described as follows:

∴WARNING

Indicates an imminently hazardous situation which will result in death or serious injury if proper safety procedures and instructions are not adhered to.

∴ CAUTION

Indicates a potentially hazardous situation which may result in minor or moderate injury if proper safety procedures and instructions are not adhered to.

∕!\ WARNING

- Securely replace the PCB according to this procedure.
 If the PCB is incorrectly replaced, it will cause an electric shock or fire.
- Be sure to check that the power source for the outdoor unit is turned OFF before replacing the PCB. The PCB replacement under current-carrying will cause an electric shock or fire.
- After finishing the PCB replacement, check that wiring is correctly connected with the PCB before power distribution. If the PCB is incorrectly replaced, it will cause an electric shock or fire.

CAUTION

Band the wiring so as not to tense because it will cause an electric shock.

(i) Models FDC100VNA, 125VNA, 140VNA

PCA012D083

1) Disassembly

- a) After the breaker is shut down, remove the service panel, top panel and rear panel. (Refer to Fig.1).
- b) Don't touch the main PCB until three minutes have passed after the breaker is shut doun.
 (After having shut down the breaker, some capacitor is held by high voltage. It is very dangerous to touch the main PCB in this condition.)
 - In the situation that hamesses are connected to main PCB, be sure to measure voltage (DC) on main PCB, and check that the voltage is discharged sufficiently (DC voltage 30 V or less). (Refer to Fig.2)
- c) Disconnect the connectors, faston terminals and round terminals from the main PCB as shown in Fig.2.
 And then remove the fixing screws (3 places) as shown in Fig.3.
 After removing the main PCB, wipe off the heat conduction sheet neatly from the copper plate.

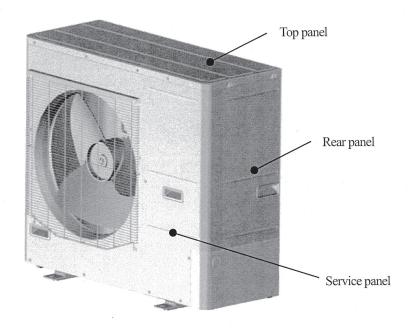


Fig.1 Outdoor unit overall view

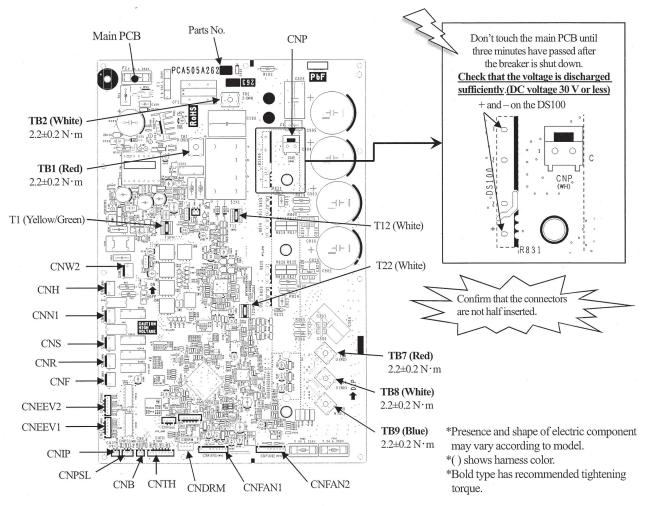


Fig.2 Parts arrangement view of main PCB and voltage measurement points

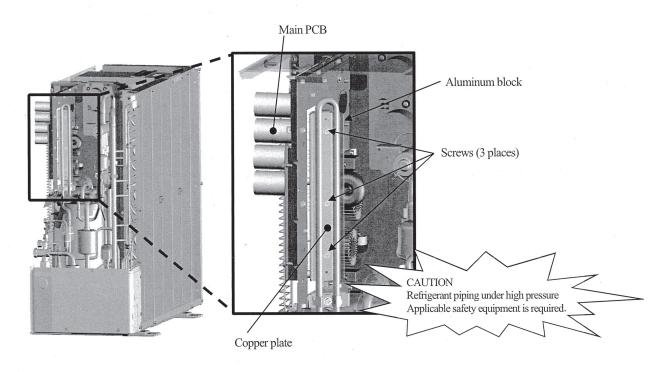


Fig.3 Outdoor unit side view

2) Exchange

- a) Match the setting of new main PCB switches (JSW1, SW3-7) with former main PCB. (Refer to Fig.4)
- b) Tum over the separator of new heat conduction sheet and paste the heat conduction sheet on the aluminum block. (Refer to Fig.5)
- c) Install the attached hamess clip on the new main PCB as shown in Fig.6.

3) Installation

- a) Install the new main PCB on the control and tighten the screw as shown in Fig.7.
- b) Reconnect the connectors, faston terminals and round terminals to the main PCB as before. (Refer to Fig.2) (Confirm that the **connectors are not half inserted**.)

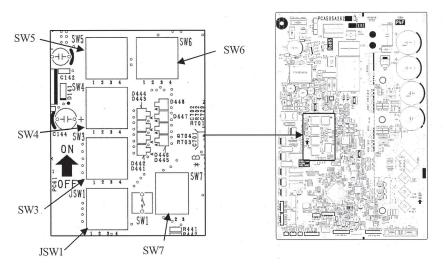


Fig.4 Switch position of main PCB

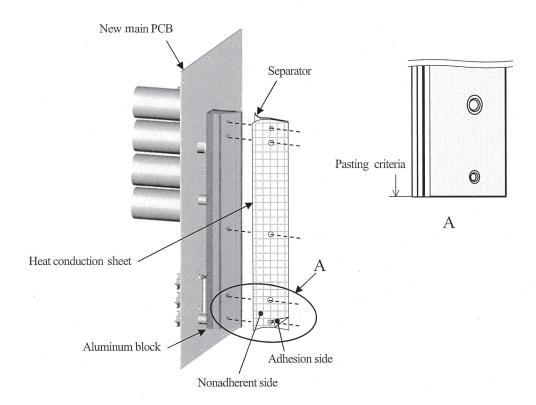


Fig.5 Detail of paste for the heat conduction sheet

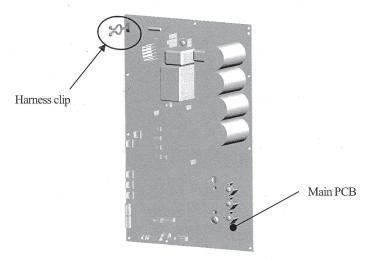


Fig.6 Install of the harness clip

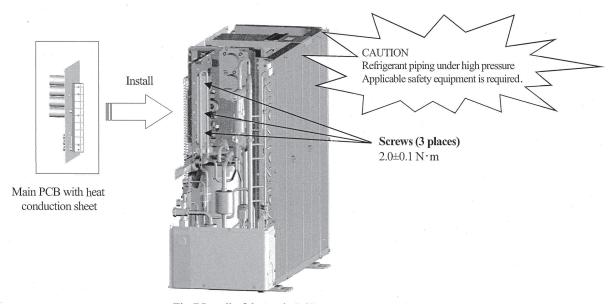
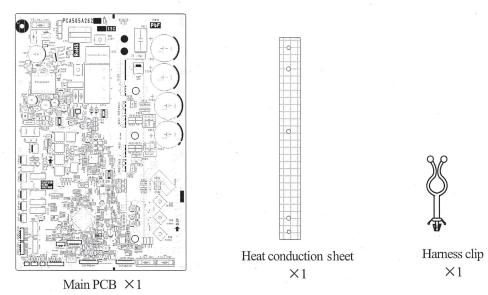


Fig.7 Install of the main PCB

• Accessories

Check the following accessories are packed in. (Except this manual)



(ii) Models FDC100VSA, 125VSA, 140VSA

PCA012D084

1) Disassembly

- a) After the breaker is shut down, remove the service panel, top panel and rear panel. (Refer to Fig.1).
- b) Don't touch the main PCB until three minutes have passed after the breaker is shut doun.

 (After having shut down the breaker, some capacitor is held by high voltage. It is very dangerous to touch the main PCB in this condition.)
 - In the situation that hamesses are connected to main PCB, be sure to measure voltage (DC) on main PCB, and check that the voltage is discharged sufficiently (DC voltage 30 V or less). (Refer to Fig.2)
- c) Disconnect the connectors, faston terminals and round terminals from the main PCB as shown in Fig.2.
 And then remove the fixing screws (3 places) as shown in Fig.3.
 After removing the main PCB, wipe off the heat conduction sheet neatly from the copper plate.

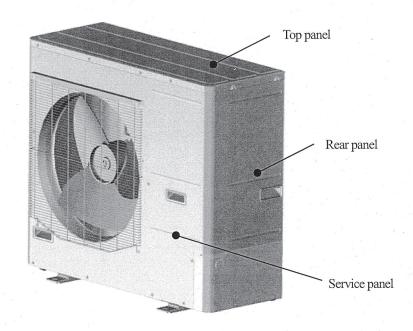


Fig.1 Outdoor unit overall view

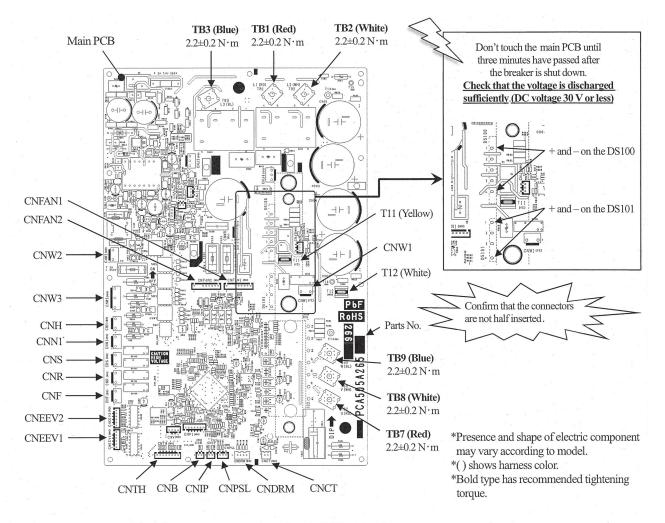
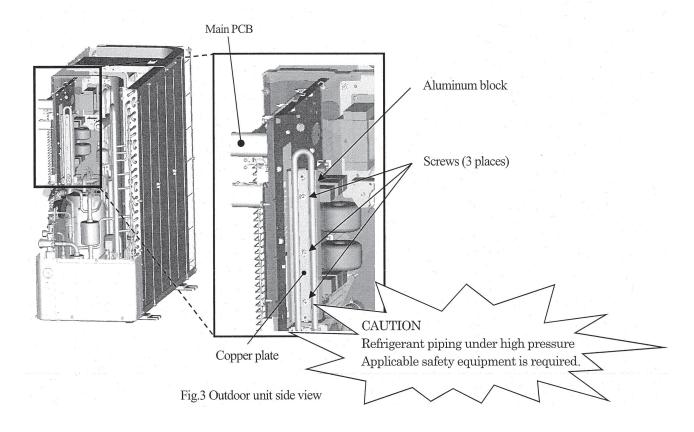


Fig.2 Parts arrangement view of main PCB and voltage measurement points



2) Exchange

- a) Match the setting of new main PCB switches (JSW1, SW3-7) with former main PCB. (Refer to Fig.4)
- b) Tum over the separator of new heat conduction sheet and paste the heat conduction sheet on the aluminum block. (Refer to Fig.5)

3) Installation

- a) Install the new main PCB on the control and tighten the screw as shown in Fig.6.
- b) After the new Main PCB is installed on the control, reconnect the connectors, faston terminals, and round terminals to the main PCB as before. (Refer to Fig.2)

(Confirm that the **connectors are not half inserted**.)

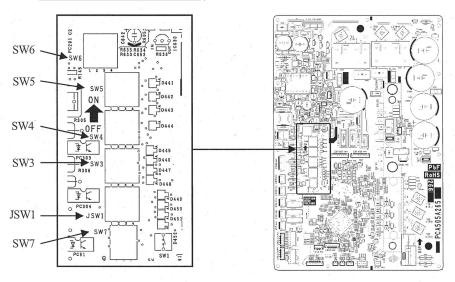


Fig.4 Switch position of main PCB

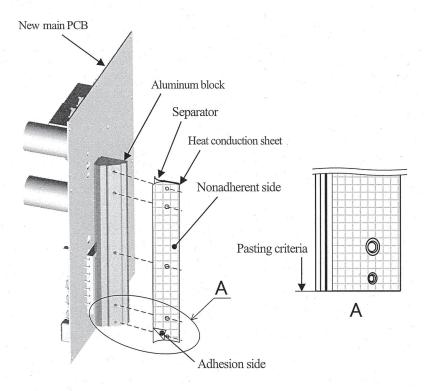


Fig.5 Detail of paste for the heat conduction sheet

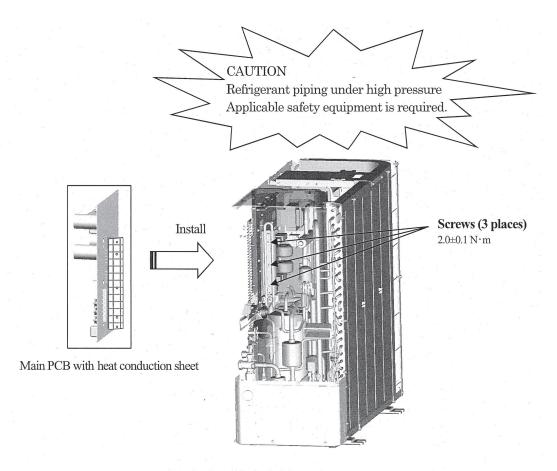
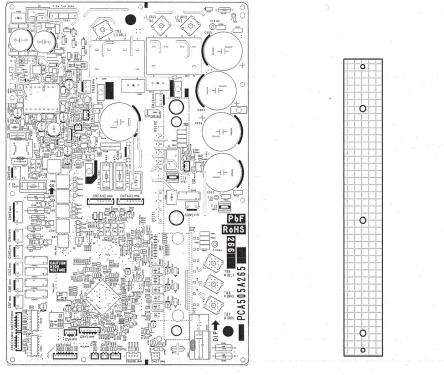


Fig.6 Installation of the main PCB

Accessories

Check following accessories are packed in. (Except this manual)



Main PCB ×1

Heat conduction sheet $\times 1$

DIP switch setting list (Outdoor unit)

Switches	Description	on	Defau	Default setting	Remarks
SW1	(See table 1)		OFF		
JSW1-1					
JSW1-2	Model selection		As per model	ıodel	See table 2
JSW1-3			,		
JSW1-4	Reserved		OFF		Keep OFF
SW3-1	Defrost condition	Normal*/Cold region	OFF	Normal	Refer to page 295
SW3-2	Snow protection control	ction	OFF	Normal	Refer to page 294
SW3-3	Test run SW		OFF	Normal	Refer to page 298
SW3-4	Test run mode	Cooling*/Heating	OFF	Cooling	Refer to page 298
SW4-1	Reserved		OFF		Keep OFF
SW4-2	Cancel measuring of refrigerant leak	Normal*/Cancel	OFF	Normal	Detection function of error in E57 refrigeration system protection (OFF: Detection / ON: Cancel to detect)
SW4-3	Reserved		OFF		
SW4-4	Reserved		OFF		Keep OFF
SW5-1	Utilization of existing piping control	Normal*/Existing piping control	OFF	Normal	See Note 1
SW5-2	Hight difference of IU and OU control	Normal*/High head control	OFF	Normal	When the outdoor unit is positioned higher than 30m (OFF: Normal/ON: high head)
SW5-3	Reserved		OFF		Keep OFF
SW5-4	Reserved		OFF		Keep OFF
SW6-1	Reserved		HO		Keep OFF
SW6-2	Reserved		OFF		Keep OFF
SW6-3	Reserved		OFF		Keep OFF
SW6-4	Inverter checker mode	Normal*/Check INV	OFF	Normal	Refer to page 333
SW7-1	SW1 function selection		OFF		See table1
SW7-2	Frost protection by frequent external ON/OFF	Normal*/connected external device	OFF	Normal	In case external device switches ON/OFF frequently, switch to ON to start defrost operation even though short operation time.
SW7-3	Silent mode selection	Normal*/Silent mode	OFF	Normal	Refer to page 298
		* Default setting			

* Default setting

Table 1: SW1 fuction selection

SW1 function

0: OFF 1:ON

Reset cumulative time of compressor operation | Reset of operation time after replacing a compressor

Refer to page 299

Table 2: Outdoor unit model selection with JSW1-1-JSW1-3 0: C	door unit m	nodel sele	ction with	JSW1-1-J	SW1-3 0: OFI	F 1:ON
	100VN	100VS	125VN	125VS	140VN	140VS
JSW1-1	0	0	1	1	0	0
JSW1-2	0	0	0	0	1	1
JSW1-3	0	0	0	0	0	0

Note 1: Utilization of existing pipe

In case of reusing annealed pipe \emptyset 19.05 × t1.0, be sure to turn the dip switch on the outdoor PCB ON as shown in the table because of its insufficient strength. If its material is 1/2H or its thickness is 1.2mm or more it is no necessary.

² If bending radius of existing pipe is less than R70mm, be sure to turn the dip switch on the outdoor PCB shown in the table due to its insufficient strength.

Check of anomalous operation data with the remote control (a) In case of RC-E5 remote control

Operation data can be checked with remote control unit operation.

- ① Press the CHECK button. The display change "OPER DATA
- 2 Press the (SET) button while "OPER DATA T" is displayed.
- 3 When only one indoor unit is connected to remote control, "DATA LOADING" is displayed (blinking indication during data loading).
 - Next, operation data of the indoor unit will be displayed. Skip to step ⑦.
- 4 When plural indoor units is connected, the smallest address number of indoor unit among all connected indoor unit is displayed. [Example]:
 - " (blinking 1 seconds) → " [/[]000 inking.
- ⑤ Select the indoor unit number you would like to have data displayed with the | \ | \ | button.
- 6 Determine the indoor unit number with the (SET) button. (The indoor unit number changes from blinking indication to continuous indication)
 - "[/[]000" (The address of selected indoor unit is blinking for 2 seconds.)
 - "DATA LOADING" (A blinking indication appears while data loaded.)

Next, the operation data of the indoor unit is indicated.

 Upon operation of the **button**, the current operation data is displayed in order from data number 01

The items displayed are in the above table.

- ® To display the data of a different indoor unit, press the AIR CON No. button, which allows you to go back to the indoor unit selection screen.
- Pressing the OON/OFF button will stop displaying data.

Pressing the (RESET) button during remote control unit operation will undo your last operation and allow you to go back to the previous screen.

⊙If two (2) remote controls are connected to one (1) inside unit, only the master control is available for trial operation and confirmation of operation data. (The slave remote control is not available.)

Details of compressor protection status No. 33

No.	Contents of display	In case of FDC100-140 refer to
"0"	Normal	
"1"	Discharge pipe temperature protection control	Page295, (6).(a).1)
"2"	Discharge pipe temperature anomaly	Page295, (6).(a).2)
"3"	Current safe control of inverter primary current	Page296, (6).(f)
"4"	High pressure protection control	Page295, (6).(b).1), (c).1)
"5"	High pressure anomaly	Page295, (6).(b).2)
"8"	Anti-frost prevention control	Page297, (6).(j)
"9"	Current cut	Page296, (6).(f)
"11"	Power transistor anomaly (Overheat)	Page297, (6).(h)
"12"	Compression ratio control	Page296, (6).(e)
'13"	Spare	
'14"	Dewing prevention control	Page297, (6).(k)
"15"	Current safe control of inverter secondary current	Page296, (6).(f)
'16"	Stop by compressor rotor lock	
"17"	Stop by compressor startup failure	Page298, (6).(o)
"18"	Active filter anomaly	

Nullibel		Data Itelli
01	35 36	(Operation Mode)
02	SET TEMP	(Set Temperature)
03	RETURN AIRで	(Return Air Temperature)
04	■SENSORc	(Remote Controller Thermistor Tempeature)
05	THI-R1c	(Indoor Heat Exchanger Thermistor / U Bend)
06	THI-R2ზ	(Indoor Heat Exchanger Thermistor /Capillary)
07	THI-R3c	(Indoor Heat Exchanger Thermistor /Gas Header)
08	I/U FANSPEED	(Indoor Unit Fan Speed)
09	DEMANDHz	(Frequency Requirements)
10	ANSWERHz	(Response Frequency)
11	I/UEEVP	(Pulse of Indoor Unit Expansion Value)
12	TOTAL I / U RUN	H (Total Running Hours of The Indoor Unit)
21	OUTDOORზ	(Outdoor Air Temperature)
22	THO-R1c	(Outdoor Heat Exchanger Thermistor)
23	THO-R2c	(Outdoor Heat Exchanger Thermistor)
24	COMPHz	(Compressor Frequency)
25	HPMPa	(High Pressure)
26	LPMPa	(Low Pressure)
27	Td°	(Discharge Pipe Temperature)
28	COMP BOTTOM ಓ	(Comp Bottom Temperature)
29	CTAMP	(Current)
30	TARGET SH	(Target Super Heat)
31	SHc	(Super Heat)
32	TDSHt	(Discharge Pipe Super Heat)
33	PROTECTION No	(Protection State No. of The Compressor)
34	0/UFANSPEED	(Outdoor Unit Fan Speed)
35	63H1	(63H1 On/Off)
36	DEFROST	(Defrost Control On/Off)
37	TOTAL COMP RUN_	
38	0/U EEV1P	(Pulse of The Outdoor Unit Expansion Valve EEVC)
39	0/U EEV2P	(Pulse of The Outdoor Unit Expansion Valve EEVH)

Data Item

- Note(1) Operation data display on the remote control.
 - *Data is dispalyed until canceling the protection control.
 *In case of multiple protections controlled, only the younger No. is displayed
- Note(2) Common item
 - ① In heating mode.

Number

- During protection control by the command signal for reducing compressor frequency from indoor unit, No. "4" is displayed.
- ② In cooling and dehumidifying mode

 During protection control by the command signal for reducing compressor frequency from indoor unit, No. "8" is displayed

^{*}Depending on models, the items that do not have corresponding data are not displayed.

(b) In case of RC-EX3 remote control

[Operating procedure]

- ① On the TOP screen, touch the buttons in the order of "Menu" → "Service setting" → "Service & Maintenance" → "Service password" → "Set" → "Error display" → "Error history".
- ② When only one indoor unit is connected to the remote control, followings will be displayed.
 - 1. When there is any anomaly: "Loading. Wait a while" is displayed, followed by the operation data at the occurrence of anomaly. Contents of display
 - · Error code
 - · Number and data item
 - 2. When there is no anomaly: "No anomaly" is displayed, and this mode is terminated.
- When two or more indoor units are connected to the remote control, followings will be displayed.
 - 1. When there is any anomaly: If the unit having anomaly is selected on the "Select IU" screen, "Loading. Wait a while" is displayed, followed by the operation data at the occurrence of anomaly.

Contents of display

- · Indoor unit No.
- · Error code
- · Number and data item
- 2. When there is no anomaly: "No anomaly" is displayed, ant this mode is terminated.

Note (1) When the number of connected units cannot be shown in a page, select "Next".

- ④ If you press [RUN/STOP] button, the display returns to the TOP screen.
 - ◎ If you touch "Back" button on the way of setting, the display returns to the last precious screen.

Note (1) When two remote controls are used to control indoor units, the check of anomaly operation data can be made on the master remote control only. (It cannot be operated from the slave remote control.)

■ Anomaly operation data (Corresponding data may not be provided depending on models. Such items will not be displayed.)

Number		Data Item
01	*	(Operation Mode)
02	SET TEMP	(Set Temperature)
03	RETURN AIR₺	(Return Air Temperature)
04	ല SENSOR ზ	(Remote Controller Thermistor Tempeature)
05	THI-R1t	(Indoor Heat Exchanger Thermistor / U Bend)
06	THI-R2ზ	(Indoor Heat Exchanger Thermistor /Capillary)
07	THI-R3_t	(Indoor Heat Exchanger Thermistor /Gas Header)
08	I/U FANSPEED	(Indoor Unit Fan Speed)
09	DEMANDHz	(Frequency Requirements)
10	ANSWERHz	(Response Frequency)
11	I/U EEVP	(Pulse of Indoor Unit Expansion Value)
12	TOTAL I/U RUN	H (Total Running Hours of The Indoor Unit)
21	OUTDOORზ	(Outdoor Air Temperature)
22	THO-R1c	(Outdoor Heat Exchanger Thermistor)
23	THO-R2t	(Outdoor Heat Exchanger Thermistor)
24	COMPHz	(Compressor Frequency)
25	HPMPa	(High Pressure)
26	LPMPa	(Low Pressure)
27	Td5	(Discharge Pipe Temperature)
28	COMP BOTTOMზ	(Comp Bottom Temperature)
29	CTAMP	(Current)
30	TARGET SH	(Target Super Heat)
31	SHt	(Super Heat)
32	TDSHt	(Discharge Pipe Super Heat)
33	PROTECTION No	(Protection State No. of The Compressor)
34	O/UFANSPEED	(Outdoor Unit Fan Speed)
35	63H1	(63H1 On/Off)
36	DEFROST	(Defrost Control On/Off)
37	TOTAL COMP RUN_	
38	0/U EEY1P	(Pulse of The Outdoor Unit Expansion Valve EEVC)
39	0/U	(Pulse of The Outdoor Unit Expansion Valve EEVH)

Details of compressor protection status No. 33

No.	Contents of display	In case of FDC100-140 refer to
"0"	Normal	
"1"	Discharge pipe temperature protection control	Page295, (6).(a).1)
"2"	Discharge pipe temperature anomaly	Page295, (6).(a).2)
"3"	Current safe control of inverter primary current	Page295, (6).(f)
"4"	High pressure protection control	Page295, (6).(b).1), (c).1)
"5"	High pressure anomaly	Page295, (6).(b).2)
"8"	Anti-frost prevention control	Page297, (6).(j)
"9"	Current cut	Page296, (6).(f)
"11"	Power transistor anomaly (Overheat)	Page297, (6).(h)
"12"	Compression ratio control	Page296, (6).(e)
"13"	Spare	
"14"	Dewing prevention control	Page297, (6).(k)
"15"	Current safe control of inverter secondary current	Page296, (6).(f)
"16"	Stop by compressor rotor lock	
"17"	Stop by compressor startup failure	Page298, (6).(o)
"18"	Active filter anomaly	

Note(1) Operation data display on the remote control.

•Data is dispalyed until canceling the protection control.

· In case of multiple protections controlled, only the younger No. is displayed ote(2) Common item

1 In heating mode.

During protection control by the command signal for reducing compressor frequency from indoor unit, No. "4" is displayed.

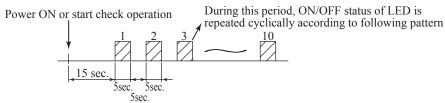
② In cooling and dehumidifying mode

During protection control by the command signal for reducing compressor frequency from indoor unit, No. "8" is displayed.

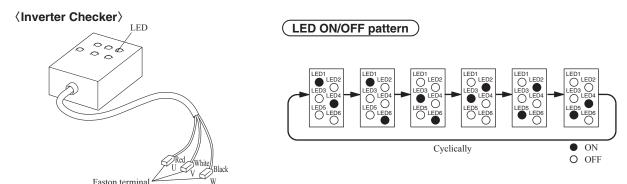
(6) Inverter checker for diagnosis of inverter output

- Checking method
 - (a) Setup procedure of checker.
 - 1) Power OFF (Turn off the breaker).
 - 2) Remove the terminal cover of compressor and disconnect the wires (U, V, W) from compressor.
 - 3) Connect the wires U (Red), V (White) and W (Black) of checker to the terminal of disconnected wires (U, V, W) from compressor respectively.
 - (b) Operation for judgment.
 - 1) Power ON after SW6-4 on outdoor inverter PCB was turned ON.
 - 2) After 15 seconds since power has turned ON, LED start ON/OFF for 5 seconds cyclically and it repeats 10 times.
 - 3) Check ON/OFF status of 6 LED's on the checker.
 - 4) Judge the PCB by ON/OFF status of 6 LED's on the checker.

ON/OFF status of LED	If all of LED are ON/OFF according to following pattern	If all of LED stay OFF or some of LED are ON/OFF
Inverter PCB	Normal	Anomalous

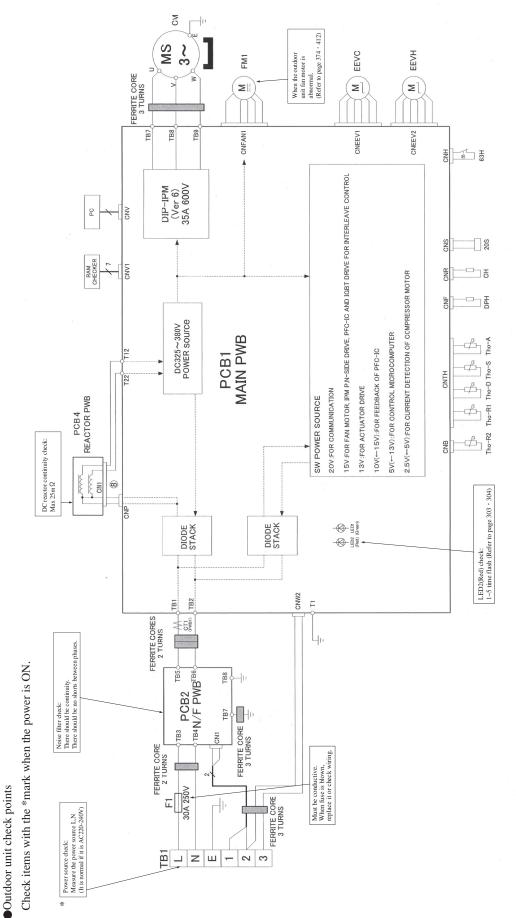


5) Be sure to turn off SW6-4 on outdoor inverter PCB, after finishing the check operation.



Connect to the terminal of the wires which are disconnected from compressor.

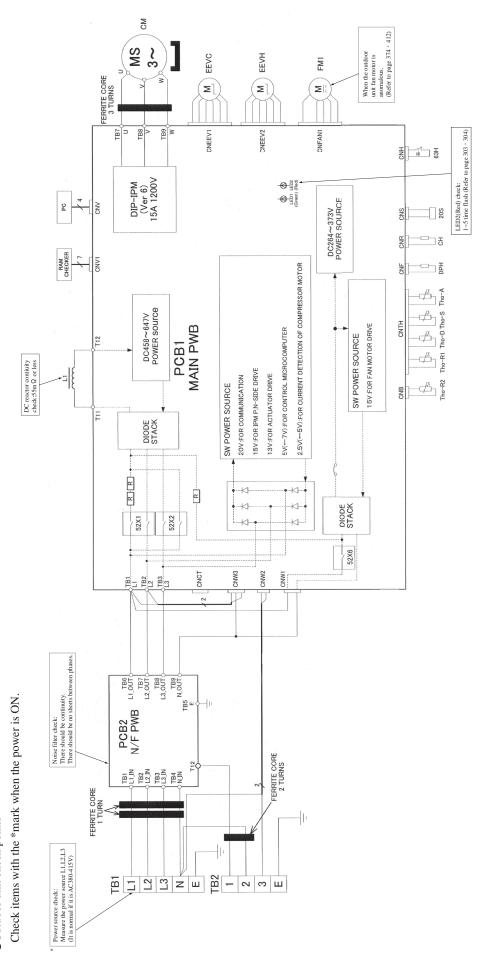
Models FDC100, 125, 140VNA



Outdoor unit control failure diagnosis circuit diagram

3 8

FDC100,125,140VSA Outdoor unit check points



1.12.2 Troubleshooting flow

(1) List of troubles

(a) FDT, FDTC, FDE, FDU, FDUM, FDF series

Remote control display	Description of trouble	Reference page
None	Operates but does not cool.	338
None	Operates but does not heat.	339
None	Earth leakage breaker activated	340
None	Excessive noise/vibration (1/3)	341
None	Excessive noise/vibration (2/3)	342
None	Excessive noise/vibration (3/3)	343
None	Louver motor failure (FDT, FDTC, FDE, FDF series)	344
None	Power source system error (Power source to indoor unit control PCB)	345
None	Power source system error (Power source to remote control)	346
INSPECT I/U	INSPECT I/U (When 1 or 2 remote controls are connected)	347
INSPECT I/U	INSPECT I/U (Connection of 3 units or more remote controls)	348
⊕WAIT⊕	Communication error at initial operation	349-351
None	No display	352
E1	Remote control communication circuit error	353
E5	Communication error during operation	354
E6	Indoor heat exchanger temperature thermistor anomaly	355
E7	Return air temperature thermistor anomaly	356
E8	Heating overload operation	357
E9	Drain trouble (FDT, FDTC, FDU, FDUM series)	358
E10	Excessive number of connected indoor units (more than 17 units) by controlling with one remote control	359
E14	Communication error between master and slave indoor units	360
E16	Indoor fan motor anomaly	361
E18	Address setting error of master and slave indoor unit	362
E19	Indoor unit operation check, drain motor check setting error	363
E20	Indoor fan motor rotation speed anomaly	364
E28	Remote control temperature thermistor anomaly	365
E35	Cooling overload operation	366
E36	Discharge pipe temperature error	367
E37	Outdoor heat exchanger temperature thermistor anomaly	368
E38	Outdoor air temperature thermistor anomaly	369
E39	Discharge pipe temperature thermistor anomaly	370
E40	High pressure error (63H1 activated)	371
E42	Current cut	372 · 373
E47	Active filter anomaly	373-1
E48	Outdoor fan motor anomaly	374
E51	Inverter and fan motor anomaly	375
E53	Suction pipe temperature thermistor anomaly	376
E57	Insufficient refrigerant amount or detection of service valve closure	377
E59	Compressor startup failure	378 · 379

#

(b) SRK series

Remote control display	Description of trouble	Reference page
None	Operates but does not cool.	380
None	Operates but does not heat.	381
None	Earth leakage breaker activated	382
None	Excessive noise/vibration (1/3)	383
None	Excessive noise/vibration (2/3)	384
None	Excessive noise/vibration (3/3)	385
None	Louver motor failure	386
None	Power source system error (Power source to indoor unit control PCB)	387
None	Power source system error (Power source to remote control)	388
None	Limit switch anomaly	389
INSPECT I/U	INSPECT I/U (When 1 or 2 remote controls are connected)	390
INSPECT I/U	INSPECT I/U (Connection of 3 units or more remote controls)	391
⊕WAIT⊕	Communication error at initial operation	392-394
None	No display	395
E1	Remote control communication circuit error	396
E5	Communication error during operation	397
E6	Indoor heat exchanger temperature sensor anomaly	398
None	Room temperature sensor anomaly	399
E10	Excessive number of connected indoor units (more than 17 units) by controlling with one remote control	400
E14	Communication error between master and slave indoor units	401
E16	Indoor fan motor anomaly	402
E28	Remote control temperature thermistor anomaly	403
E35	Cooling overload operation	404
E36	Discharge pipe temperature error	405
E37	Outdoor heat exchanger temperature thermistor anomaly	406
E38	Outdoor air temperature thermistor anomaly	407
E39	Discharge pipe temperature thermistor anomaly	408
E40	High pressure error (63H1 activated)	409
E42	Current cut	410 • 411
E47	Active filter anomaly	411-1
E48	Outdoor fan motor anomaly	412
E51	Inverter and fan motor anomaly	413
E53	Suction pipe temperature thermistor anomaly	414
E57	Insufficient refrigerant amount or detection of service valve closure	415
E59	Compressor startup failure	416 • 417

(2) Troubleshooting

(a) FDT, FDTC, FDE, FDU, FDUM, FDF series

Error code LED Green Red Content	
End code	
Remote control: None Indoor Keeps flashing Stays OFF Operates but does not cool	
Outdoor Keeps flashing Stays OFF Stays OFF	

1. Applicable model

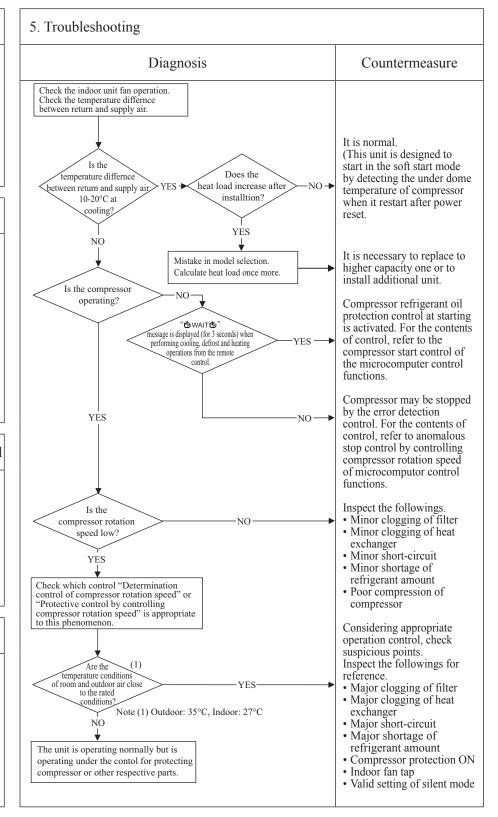
All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause

- Poor compression of compressor
- Faulty expansion valve operation



					A)
Error code	LED	Green	Red	Content	
Remote control: None	Indoor	Keeps flashing	Stays OFF	Operates but does not heat	
	Outdoor	Keeps flashing	Stays OFF	Operates but does not near	,
					_

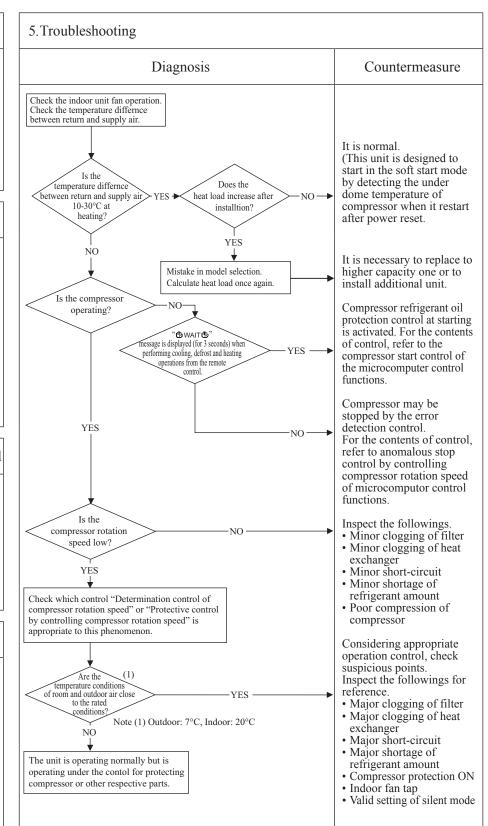
All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause

- Faulty 4-way valve operation
- Poor compression of compressor
- Faulty expansion valve operation



Error code LED Green Red Content					
	Content	Red	Green	LED	Error code
Remote control: None Indoor Stays OFF Stays OFF Earth leakage breaker activated	Farth leakage breaker activ	Stays OFF	Stays OFF	Indoor	Remote control: None
Outdoor Stays OFF Stays OFF Stays OFF	Latin leakage breaker detr	Stays OFF	Stays OFF	Outdoor	

5. Troubleshooting 1. Applicable model All models Diagnosis Countermeasure Are OK the insulation resistance and Replace compressor.* NO coil resistance of compressor? YES 2. Error detection method Is insulation of respective harnesses OK Secure insulation NO Is any harness bitten between resistance. pannel and casing YES Check the outdoor unit grounding wire/earth leakage breaker. Check of the outdoor unit grounding wire/earth leakage breaker 3. Condition of error displayed ① Run an independent grounding wire from the grounding screw of outdoor unit to the grounding terminal on the distribution $panel.\ (Do\ not\ connect\ to\ another\ grounding\ wire.)$ 2 In order to prevent malfunction of the earth leakage breaker itself, confirm that it is conformed to higher harmonic regulation. * Insulation resistance of compressor · Immediately after installation or when the unit has been left for long time without power source, the insulation resistance may drop to a few $M\Omega$ because of refrigerant migrated in the compressor. When the earth breaker is activated at lower insulation resistance, check the following points. ① 6 hours after power ON, check if the insulation resistance 4. Presumable cause recovers to normal. When power ON, crankcase heater heat up compressor and evaporate the refrigerant migrated in the compressor. · Defective compressor 2 Check if the earth leakage breaker is conformed to higher harmonic regulation or not. Since the unit is equipped with inverter, it is necessary to use components conformed to higher harmonic regulation in order to prevent malfunction of earth leakage breaker.

					<u> </u>
(Error code	LED	Green	Red	Content
	Remote control: None	Indoor	-	_	Excessive noise/vibration (1/3)
		Outdoor	-	_	Excessive horse, violation (1/3)

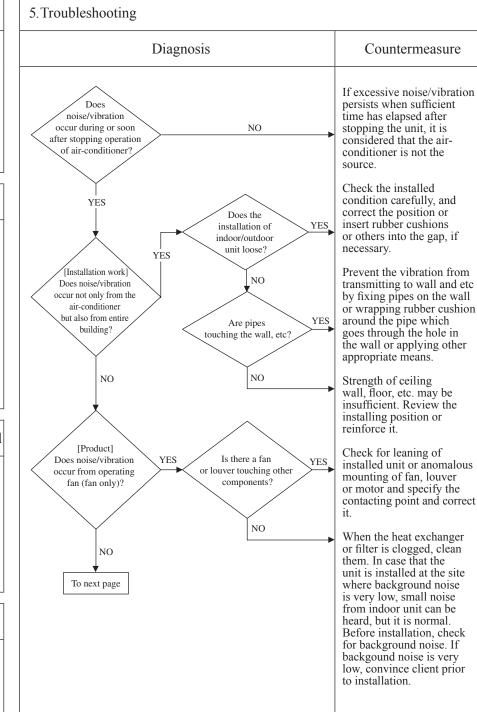
All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause

- ① Improper installation work
 - Improper anti-vibration work at instllation
 - · Insufficient strength of mounting face
- Defective product Before/after shipping from factory
- ③ Improper adjustment during commissioning
 - · Excess/shortage of refrigerant, etc.



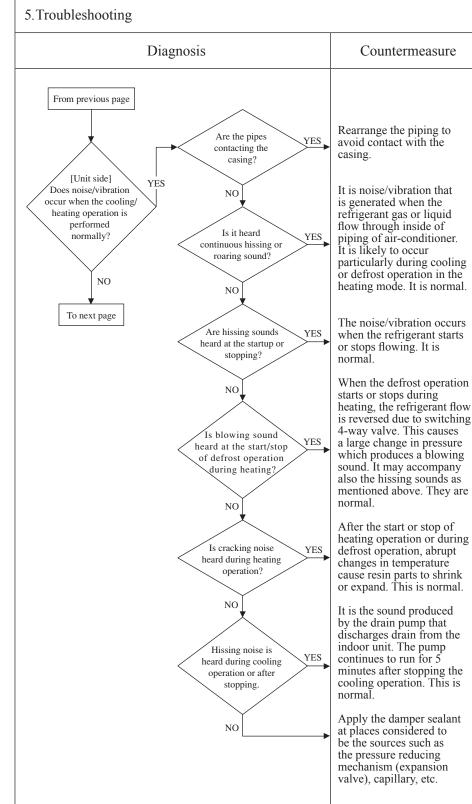
				<u> </u>
Error code	LED	Green	Red	Content
Remote control: None	Indoor	-	_	Excessive noise/vibration (2/3)
	Outdoor	-	_	Excessive noise/violation (2/3)

1.Applicable model All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause



				<u> </u>
Error code	LED	Green	Red	Content
Remote control: None	Indoor	_	-	Excessive noise/vibration (3/3)
	Outdoor	_	-	Excessive noise, violation (5/5)

1. Applicable model 5. Troubleshooting All models Diagnosis Countermeasure From previous page If insufficient cooling/ heating problem happens due to anomalous operating conditions at cooling/ heating, followings are Adjustment during commissioning Does noise/vibration occur when the cooling/heating operation is in anomalous condition? 2. Error detection method suspicious. Overcharge of refrigerant Insufficient charge of YES refrigerant • Intrusion of air, nitrogen, etc. In such occasion, it is necessary to recover refrigerant, vacuum-dry and recharge refrigerant. * Since there could be many causes of noise/ vibration, the above do not cover all. In such case, check the conditions when, where, 3. Condition of error displayed how the noise/vibration occurs according to following check point. • Indoor/outdoor unit • Cooling/heating/fan mode • Startup/stop/during operation Operating condition (Indoor/outdoor temperatures, pressure) • Time it occurred • Operation data retained by the remote control 4. Presumable cause such as compressor rotation speed, heat exchanger temperature, EEV opening degree, etc. Tone (If available, record the noise) · Any other anomalies

Error code LED Green Red Content Louver motor failure	<u> </u>			
Louvel motor famile		LED Green Red Content Louver motor foilure	LED	Error code
Remote control: None Indoor Keeps flashing Stays OFF (FDT FDTC FDE FDE series)			itrol: None Indoo	Remote control
Outdoor Keeps flashing Stays OFF (TD1, TD1C, TDE, TD1 SCITES)		Outdoor Keeps flashing Stays OFF (TDT, TDTC, TDE, TDT SCITES)	Outdoo	

1. Applicable model 5. Troubleshooting All models Diagnosis Countermeasure ▲ Check at the indoor unit side. Operate after waiting for more than 1 minute. Does the louver operate at the power 2. Error detection method on? Is LM wiring broken? NO Repair wiring. YES Defective indoor unit control YES Is LM locked? PCB → Replace. Replace LM. YES -Is the louver operable with the remote control? Normal YES 3. Condition of error displayed Adjust LM lever and then check again. NO LM: louver motor 4. Presumable cause • Defective LM • LM wire breakage • Faulty indoor unit control PCB

				<u> </u>
Error code	LED	Green	Red	Power source system error
Remote control: None	Indoor	Stays OFF	Stays OFF	2
	Outdoor	Stays OFF	2-time flash	(Power source to indoor unit control PCB)

5. Troubleshooting 1. Applicable model All models Diagnosis Countermeasure AC220/240V detected between 1 and 2 on the terminal block of indoor Is AC380/415V unit? AC380/415V for 3-phase unit detected between 1, 2 and 3 on the terminal block of outdoor unit or is AC220/240V for 1-phase unit detected between 1 and 2 on the terminal Defective outdoor unit main YES PCB (Noise filter) 2. Error detection method block of outdoor. Misconnection or breakage YES of connecting wires Are fuses OK (F1,2) Is the Defective indoor unit control or power PCB → Replace. check of resistance between 1-3 of CNW0 YES OK? YES Is the checked result of resistance of fan motor, Replace fan motor, louver louver motor, etc OK? motor, etc. Replace fuse. YES 3. Condition of error displayed Is DC5V Defective indoor unit power PCB → Replace. detected between 4-5 NO of CNW2? Note (1) 5 for GND Open JX1. Is JX1 open? Defective indoor unit control YES PCB → Replace. 4. Presumable cause • Misconnection or breakage of connecting wires Blown fuse • Faulty transformer Faulty indoor control or power PCB • Broken harness • Faulty outdoor unit main PCB (Noise filter)

						Ø
Error code		LED	Green	Red	Content Poyyor source system error	
Remote co	ontrol: None	Indoor	Keeps flashing	3-time flash	Power source system error (Power source to remote control)	
		Outdoor	Keeps flashing	Stays OFF	(1 ower source to remote control)	

1. Applicable model 5. Troubleshooting All models Diagnosis Countermeasure Isn't there any Correct. loose connection of remote YES control wires? NO 2. Error detection method Isn't remote control wire broken or Replace wires. YES short-circuited? NO Disconnect remote control wires. Is DC15V or higher detected between X-Y Replace remote control. of indoor unit terminal block? 3. Condition of error displayed ΝO Is DC180V between ①-② of CNW2? Defective indoor power PCB→Replace. YES Defective indoor unit control PCB→Replace. 4. Presumable cause • Remote control wire breakage/short-circuit • Defective remote control Malfunction by noise Faulty indoor power PCB Broken harness • Faulty indoor unit control PCB

				<u>(4)</u>
Error code	LED	Green	Red	Content
Remote control: INSPECT I/U	Indoor	Keeps flashing	Stays OFF	11 (81 2 3 1 1, 6
	Outdoor	Keeps flashing	2-time flash	(When 1 or 2 remote controls are connected)

\bigcup 1. Applicable model 5. Troubleshooting All models Diagnosis Countermeasure Are 2 units of remote control connected? YES NO (1),(2) Set one remote control for "Master" and the other for "Slave" Is it set at the slave remote control? Set SW1 on remote control PCB at "Master". 2. Error detection method Note (1) Use SW1 to set at master or slave. Note (2) "Slave" is displayed Communication between on the remote control LCD. indoor unit and remote control is disabled for more than 30 Does it NO minutes after the power on. become normal? NO Do more than Set address again. (SW2 on one indoor units have the YES same address indoor unit control PCB) NO 3. Condition of error displayed Are remote control wires laid along high voltage wires? Same as above Separate remote control YES wires from high voltage wires. NO Disconnect the connecting wire 3 between the indoor and outdoor unit. 4. Presumable cause Power source reset • Improper setting Surrounding environment • Defective remote control Does DM Defective indoor unit control communication circuit start 60 seconds later YES • Faulty indoor unit control PCB PCB→Replace. automatically? Defective remote control NO

Note: If any error is detected 30 minutes after displaying "WAIT" on the remote control, the display changes to "INSPECT I/U".

→Change.

					9
(1	Error code	LED	Green	Red	Content
	Remote control: INSPECT I/U	Indoor	Keeps flashing	Stays OFF	11 (81 2 6 1 1) 6
		Outdoor	Keeps flashing	2-time flash	(Connection of 3 units or more remote control)

All models

2. Error detection method

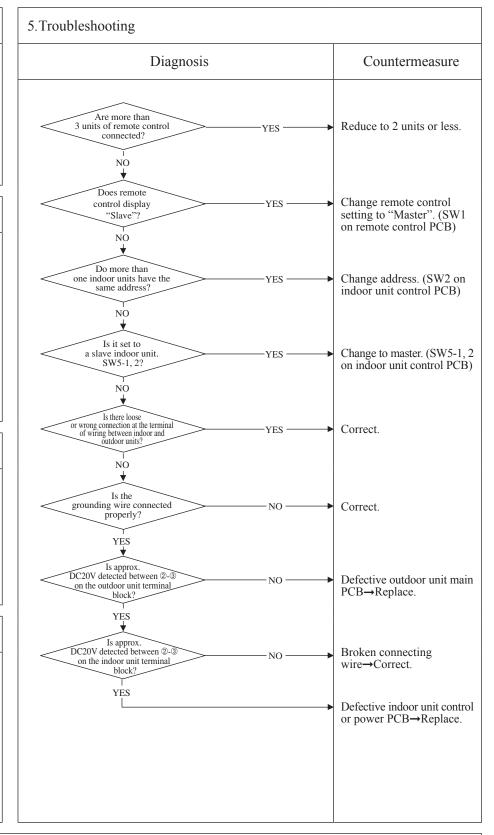
Indoor unit cannot communicate for more than 30 minutes after the power on with remote control.

3. Condition of error displayed

Same as above

4. Presumable cause

- Improper setting
- Surrounding environment
- Defective remote control communication circuit
- Faulty indoor unit control or power PCB
- Faulty outdoor unit main PCB



Note: If any error is detected 30 minutes after displaying "WAIT "on the remote control, the display changes to "INSPECT I/U".

				Ω
Error code	LED	Green	Red	Content Communication error at
Remote control: WAIT	Indoor	Keeps flashing	Stays OFF	initial operation (1/3)
	Outdoor	Keeps flashing	2-time flash	1
	•			

1. Applicable model Models FDC100-140 VNA

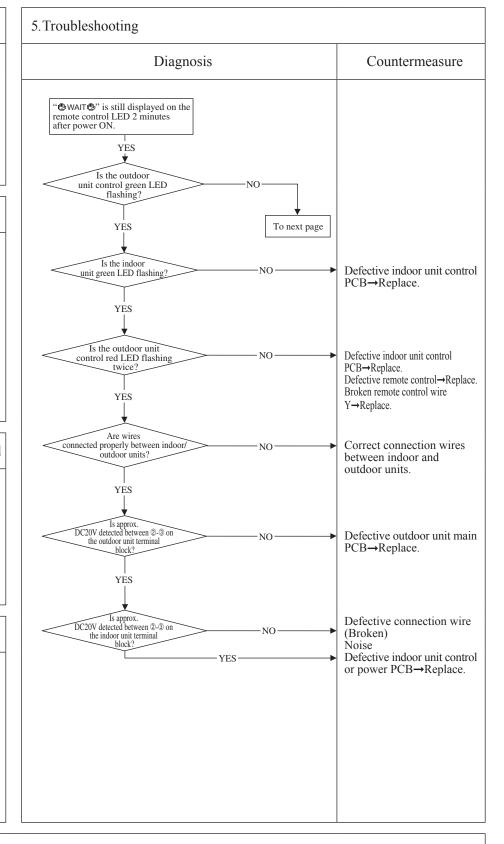
100-140 VSA

2. Error detection method

3. Condition of error displayed

4. Presumable cause

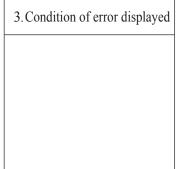
- Faulty indoor unit control or power PCB
 • Defective remote control
- Broken remote control wire
- Faulty outdoor unit main PCB
- Broken connection wires



				9
Error code	LED	Green	Red	Content Communication error at
Remote control: @WAIT@	Indoor	Keeps flashing	Stays OFF	initial operation (2/3)
	Outdoor	Keeps flashing	2-time flash	• /

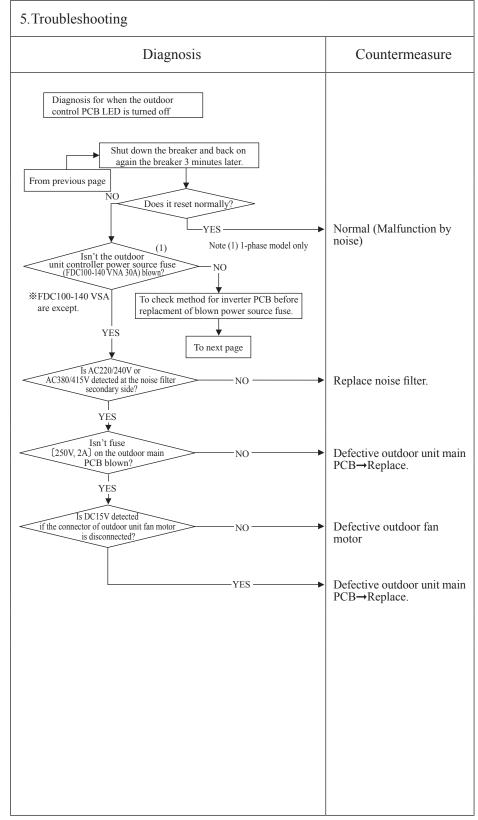
1.Applicable model Models FDC100-140 VNA 100-140 VSA

2.Error detection method



Faulty noise filter Faulty indoor unit control PCB Faulty outdoor unit main PCB Faulty fan motor

4. Presumable cause



_					Ω
	Error code	LED	Green	Red	Content Communication error at
	Remote control: WAIT	Indoor	Keeps flashing	Stays OFF	initial operation (3/3)
		Outdoor	Keeps flashing	2-time flash	1

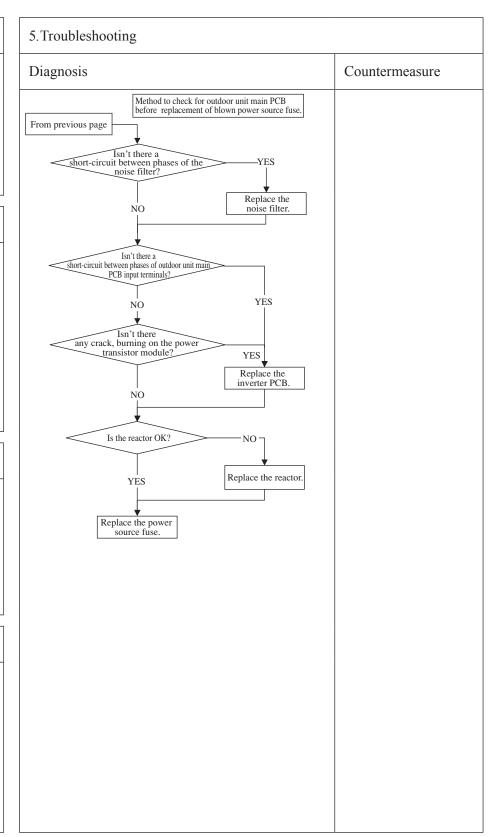
1.Applicable model Models FDC100-140 VNA 100-140 VSA

2. Error detection method

3. Condition of error displayed

4. Presumable cause

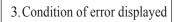
- Blown fuse
- Faulty noise filter
- Faulty outdoor unit main PCB
- Faulty reactor



				<u> </u>
Error code	LED	Green	Red	Content
Remote control: None	Indoor	Stays OFF	Stays OFF	No display
	Outdoor	Stays OFF	Stays OFF	110 display

1.Applicable model All models

2. Error detection method



4. Presumable cause

- Faulty indoor unit control PCB
 Defective remote control
 Broken remote control wire

Outdoor Swys or Swys or	
5. Troubleshooting	
Diagnosis	Countermeasure
Remote control does not display anything after the power on.	
Is DC10V or higher detected at remote control connection YES terminals?	Defective remote control
Is DC10V or higher	
Is DC10V or higher detected on remote control wires if the remote control is removed?	Defective remote control
Are wires connected properly between the indoor/outdoor units? YES	➤ Defective connecting wire. Defective remote control wire (Short-circuit, etc.)
NO	 Defective indoor unit control PCB→Replace.
	,

					<u></u>
	Error code	LED	Green	Red	Content
	Remote control: E1	Indoor	Keeps flashing	Stays OFF	Remote control
		Outdoor	Keeps flashing	Stays OFF	communication circuit error
l					

All models

2. Error detection method

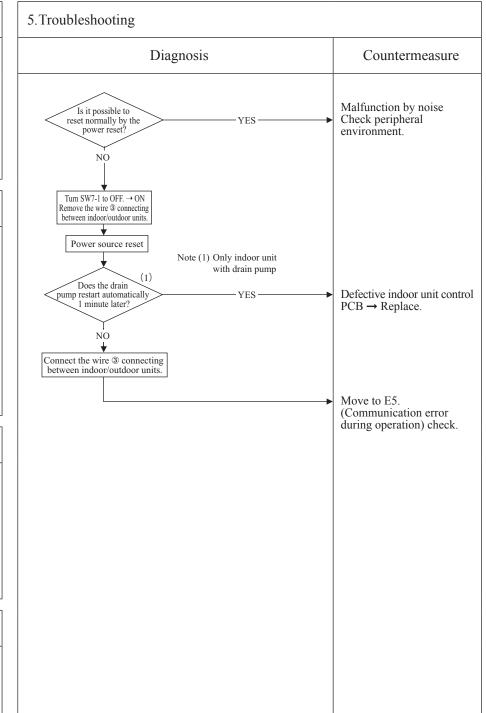
When normal communication between the remote control and the indoor unit is interrupted for more than 2 minutes. (Detectable only with the remote control)

3. Condition of error displayed

Same as above

4. Presumable cause

- Defective communication circuit between remote control-indoor unit
- Noise
- Defective remote controlFaulty indoor unit control PCB



Note: If the indoor unit cannot communicate normally with the remote control for 180 seconds, the indoor unit PCB starts to reset automatically.

Firmer code LED Green Red Content	<u> </u>						
Enorcode EBB Green Red Content		Content	Red	Green	LED	Error code	6
Remote control: E5 Indoor Keeps flashing 2-time flash Communication error during operate	ration	Communication error during operation	2-time flash	Keeps flashing	Indoor	Remote control: E5	
Outdoor Keeps flashing See below See below	anon	Communication error during operation	See below	Keeps flashing	Outdoor		

All models

1. Applicable model

2. Error detection method

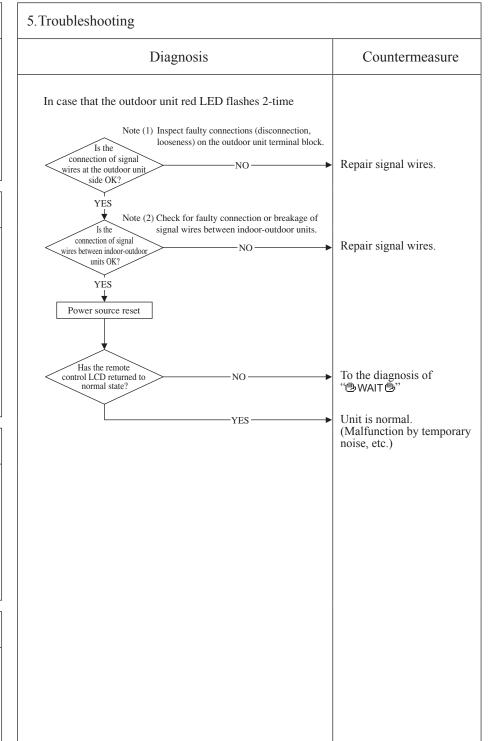
When normal communication between indoor and outdoor unit is interrupted for more than 2 minutes.

3. Condition of error displayed

Same as above is detected during operation.

4. Presumable cause

- Unit No. setting error
- Broken remote control wire
- Faulty remote control wire connection
- Faulty outdoor unit main PCB



Note: Pressing the pump-down switch cancels communications between indoor and outdoor unit so that "communication error-E5" is displayed on indoor unit and remote control, but it is normal.

							<u> </u>
(PE	Error code	LED	Green	Red	Content	
	R	Remote control: E6	Indoor	Keeps flashing	1-time flash		
			Outdoor	Keeps flashing	Stays OFF	temperature thermistor anomaly	
							$\overline{}$

All models

2. Error detection method

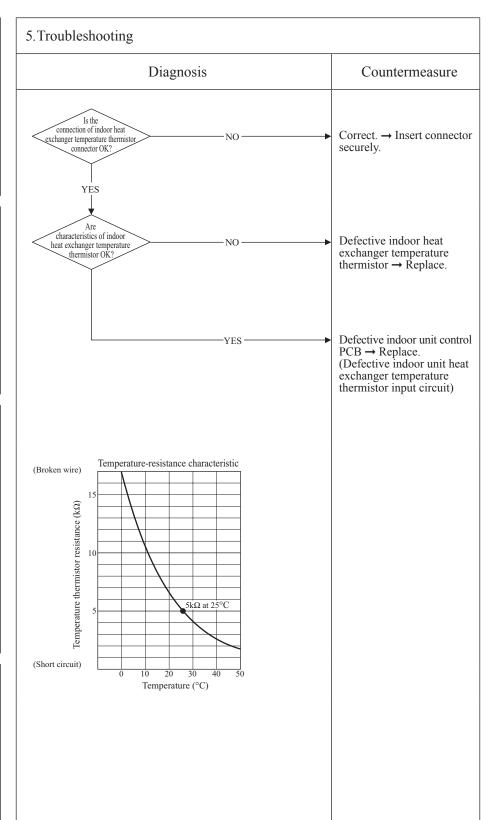
Anomalously low temperature or high temperature (resistance) is detected on the indoor heat exchanger thermistor (Thi-R1, R2 or R3).

3. Condition of error displayed

- When the temperature thermistor detects -50°C or lower for 5 seconds continuously, the compressor stops. After 3-minutes delay, the compressor starts again automatically, but if this error occurs again within 60 minutes after the initial detection
- detection.
 Or if 70°C or higher is detected for 5 seconds continuously.

4. Presumable cause

- Defective indoor heat exchanger thermistor connector
- Indoor heat exchanger temperature thermistor anomaly
- Faulty indoor unit control PCB



						_9
(1	Error code	LED	Green	Red	Content	
	Remote control: E7	Indoor	Keeps flashing	1-time flash		
		Outdoor	Keeps flashing	Stays OFF	thermistor anomaly	

All models

2. Error detection method

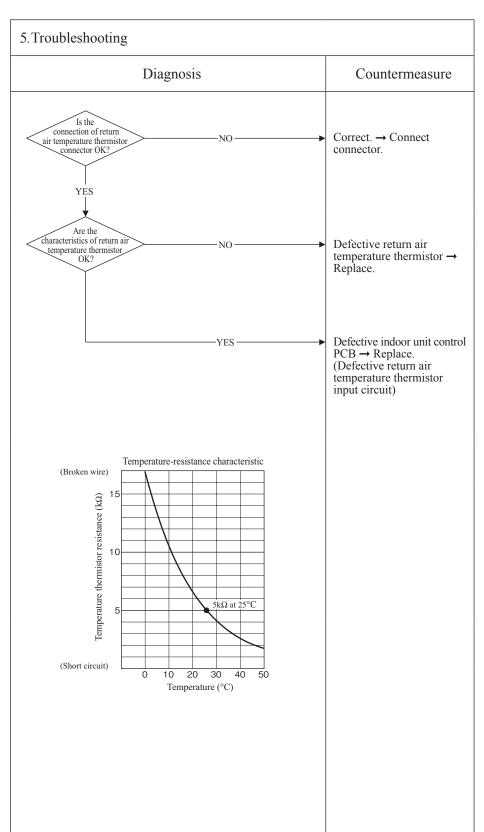
Anomalously low temperature or high temperature (resistance) is detected by indoor return air temperature thermistor (Thi-A)

3. Condition of error displayed

• When the temperature thermistor detects -50°C or lower for 5 seconds continuously, the compressor stops. After 3-minute delay, the compressor starts again automatically, but if this error occurs again within 60 minutes after the initial detection.

4. Presumable cause

- Defective return air temperature thermistor connector
- Defective return air temperature thermistor
- Faulty indoor unit control PCB



						_9
(1	Error code	LED	Green	Red	Content	
	Remote control: E8	Indoor	Keeps flashing	1-time flash	Heating overload operation	
		Outdoor	Keeps flashing	Stays OFF	Treating overload operation	

All models

2. Error detection method

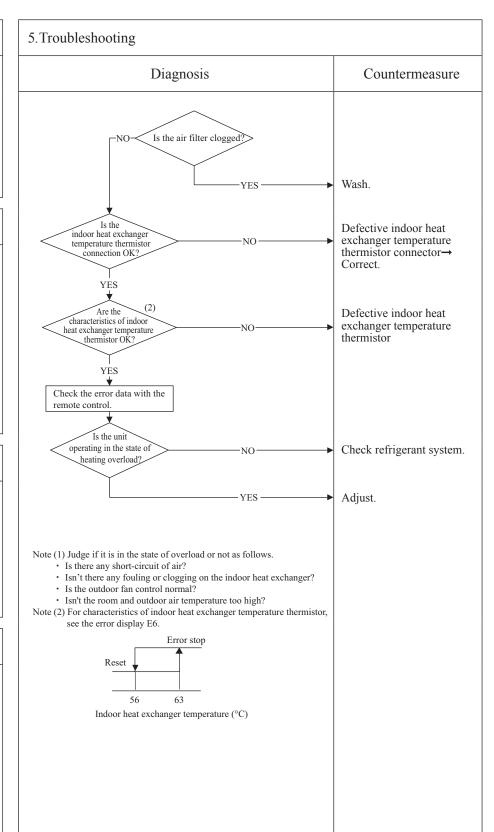
Indoor heat exchanger temperature thermistor (Thi-R1, R2, R3)

3. Condition of error displayed

When it is detected 5 times within 60 minutes from initial detection or when the overload condition is detected for 6 minutes continuously.

4. Presumable cause

- · Clogged air filter
- Defective indoor heat exchanger temperature thermistor connector
- Defective indoor heat exchanger temperature thermistor
- Anomalous refrigerant system



Note: During heating operation; After starting compressor, compressor rotation speed is decreased by detecting indoor heat exchanger temperature (Thi-R) in order to control high pressure.

9	Error code	LED	Green	Red	Content	
	Remote control: E9				Drain trouble	
	Remote control. E9	Indoor	Keeps flashing	1-time flash	(FDT, FDTC, FDU, FDUM series)	

FDT, FDTC, FDU, FDUM series only

2. Error detection method

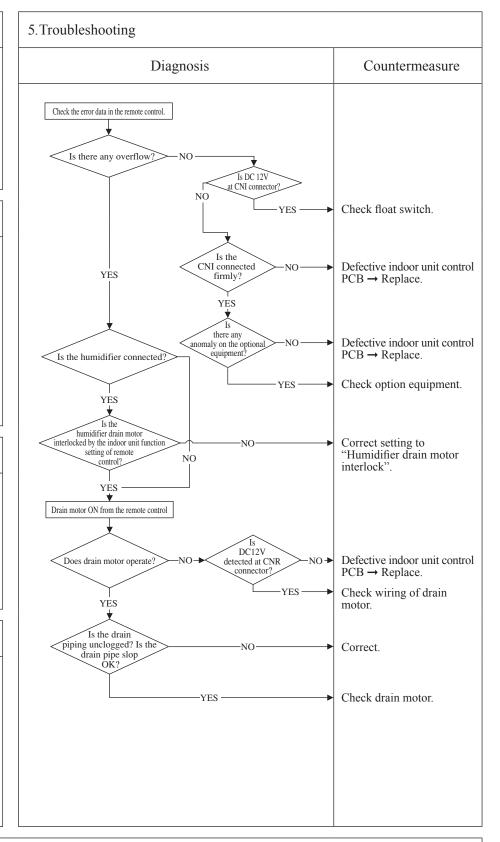
Float switch is activated

3. Condition of error displayed

If the float switch OPEN is detected for 3 seconds continuously or if float switch connector or wire is disconnected.

4. Presumable cause

- Defective indoor unit control or power PCB
- Float switch setting error
- Humidifier drain motor interlock setting error
- Optional equipment setting error
- · Drain piping error
- Defective drain motor
- Disconnection of drain motor wiring



Note: When this error occurred at power ON, disconnection of wire or connector of the float switch is suspected. Check and correct it (or replace it, if necessary).

Error code	LED	Green	Red	Content	Fycessive	number	of connected
Remote control: E10			Stays OFF	Content	Excessive number of conne indoor units (more than 17 u		
remote control. E10			Stays OFF	by	controlling	with on	e remoto control
		1 0	,				
1.Applicable model	5. Tro	ublesho	oting				
All models				Diagnos	is		Countermeasure
	∠i	ndoor units c	ore than 17 onnected to ore control?	ne	NO	-	Defective remote control → Replace.
2. Error detection method					YES —		Reduce to 16 or less units
When it detects more than 17 of indoor units connected to one remote contorl 3. Condition of error displayed							
Same as above							
4. Presumable cause • Excessive number of indoor							
Excessive number of indoor units connected Defective remote control							

From code LED Green Red Content	
Ellor code	
Remote control: E14 Indoor Keeps flashing 3-time flash Communication error	٠,
Outdoor Keeps flashing Stays Off between master and slave indoor	or units

5. Troubleshooting

1. Applicable model

All models

2. Error detection method

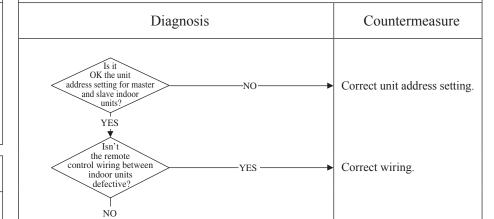
When communication error between master and slave indoor units occurs

3. Condition of error displayed

Same as above

4. Presumable cause

- Broken remote control wire
- Defective remote control wire connection
- Defective indoor unit control **PCB**



-NO

YES

PCB→Replace.

environment.

• Malfunction by noise • Check surrounding

Defective indoor unit control

Note (1) Set dip switches SW5-1 and SW5-2 as shown in the following table. (Factory default setting - "Master")

		Indoor unit						
		Master	Slave-a	Slave-b				
Dip switch	SW5-1	OFF	OFF	ON				
switch	SW5-2	OFF	ON	OFF				

Is it restored by resetting the power source?

•	Unit a	laaress	setting	eno
_	D 1		44	1

Note:		

						Ð
	Error code	LED	Green	Red	Content	
	Remote control: E16	Indoor	Keeps flashing	1-time flash	Indoor fan motor anomaly	
		Outdoor	Keeps flashing	Stays OFF		
- 1	·					_

All models

2. Error detection method

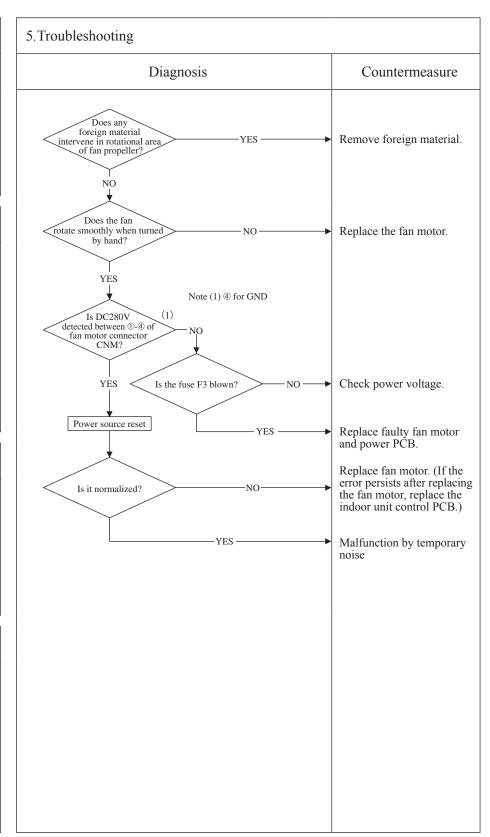
Detected by rotation speed of indoor fan motor

3. Condition of error displayed

- When actual rotation speed of indoor fan motor drops to lower than 200min⁻¹ for 30 seconds continuously, the compressor and the indoor fan motor stop.
- After 2-seconds, it starts again automatically, but if this error occurs 4 times within 60 minutes after the initial detection.

4. Presumable cause

- Defective indoor unit power (control) PCB
- Foreign material at rotational area of fan propeller
- Defective fan motor
- Dust on control PCB
- Blown fuse
- External noise, surge



					'17 • PAC-T-268
		1			G
Error code	LED	Green	Red	Content	C
Remote control: E18	Indoor	Keeps flashing	1-time flash	Address settin master and slave	g error or
	Outdoor	Keeps flashing	Stays Off	master and stave	indoor units
J					
1.Applicable model	5.Tro	ublesho	oting		
All models				Countermeasure	
			occurs Master IU		
2. Error detection method		_	function of rei	mote	
IU address has been set using the "Master IU address set" function of remote control.				YES-	Return address No. to "IU …" using [▲] or [▲] button.

3. Condition of error displayed

Same as above

4. Presumable cause

Same as above

1		
	YES-	Return address No. to "IU" using [▲] or [▲] button.
		"III " in - [A]
		1∪ using [▲] or
		[A] button
		[] outton.
1		
1		
-		
1		
1		
1		
-		
1		
-		

		'17 • PAC-T-268
Error code Remote control: E19	LED Green Red Content Indoor unit oper	· ·
1.Applicable model	5. Troubleshooting	
All models	Diagnosis	Countermeasure
2. Error detection method After indoor operation check, when the communication between indoor and outdoor unit is established and SW7-1 is still kept ON.	E19 occurs when the power ON Is SW7-1 on the indoor control PCB ON? YES	Defective indoor unit control PCB (Defective SW7) →Replace. Turn SW7-1 on the indoor unit control PCB OFF and reset the power.

3. Condition of error displayed

Same as above

4. Presumable cause	
Mistake in SW7-1 setting Due to forgetting to turn OFF SW7-1 after indoor operation heck)	

_					
(1	Error code	LED	Green	Red	Indoor fan motor rotation
	Remote control: E20	Indoor	Keeps flashing	1-time flash	
		Outdoor	Keeps flashing	Stays OFF	speed anomaly
					1

All models

2. Error detection method

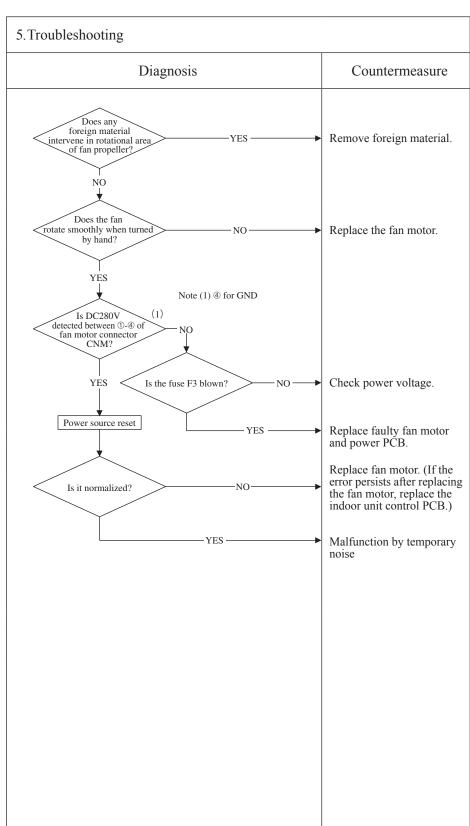
Detected by rotation speed of indoor fan motor

3. Condition of error displayed

When the actual fan rotation speed does not reach to the speed of [required speed -50 min⁻¹] after 2 minutes have been elapsed since the fan motor rotation speed command was output, the unit stops by detecting indoor fan motor anomaly.

4. Presumable cause

- Defective indoor power (control) PCB
- Foreign material at rotational area of fan propeller
- Defective fan motor
- Dust on control PCB
- Blown fuse
- External noise, surge



					<u> </u>
C	Error code	LED	Green	Red	Content
	Remote control: E28	Indoor	Keeps flashing	Stays OFF	
		Outdoor	Keeps flashing	Stays OFF	temperature thermistor anomaly

All models

2. Error detection method

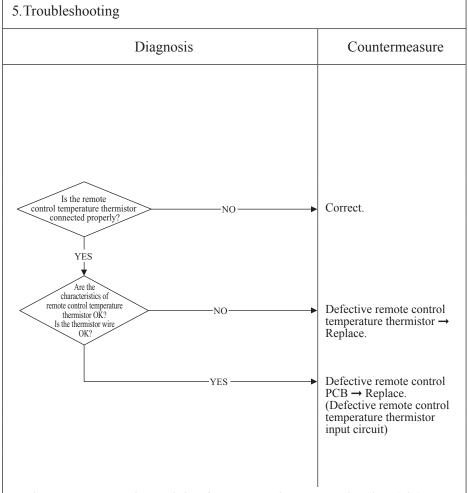
Detection of anomalously low temperature (resistance) of remote control temperature thermistor (Thc)

3. Condition of error displayed

When the temperature thermistor detects -50°C or lower for 5 seconds continuously, the compressor stops. After 3-minutes delay, the compressor starts again automatically, but if this error occurs again within 60 minutes after the initial detection.

4. Presumable cause

- Faulty connection of remote control temperature thermistor
- Defective remote control temperature thermistor
- Defective remote control PCB



Resistance-temperature characteristics of remote control temperature thermistor (Thc)

Temperature (°C)	Resistance value ($k\Omega$)	Temperature (°C)	Resistance value ($k\Omega$)
0	65	30	16
1	62	32	15
2	59	34	14
4	53	36	13
6	48	38	12
8	44	40	11
10	40	42	9.9
12	36	44	9.2
14	33	46	8.5
16	30	48	7.8
18	27	50	7.3
20	25	52	6.7
22	23	54	6.3
24	21	56	5.8
26	19	58	5.4
28	18	60	5.0

Note: After 10 seconds has passed since remote control thermistor was switched from valid to invalid, E28 will not be displayed even if the thermistor harness is disconnected. At same time the thermistor, which is effective, is switched from remote control thermistor to indoor return air temperature thermistor. Even though the remote control thermistor is set to be Effective, the return air temperature displayed on remote control for checking still shows the value detected by indoor return air temperature thermistor, not by remote control temperature thermistor.

_					<u> </u>
	Error code	LED	Green	Red	Content
	Remote control: E35	Indoor control PCB	Keeps flashing	Stays OFF	Cooling overload operation
		Outdoor control PCB	Keeps flashing	1-time flash	(Models FDC100-140 VNA/VSA only)

Models FDC100-140 VNA 100-140 VSA

2. Error detection method

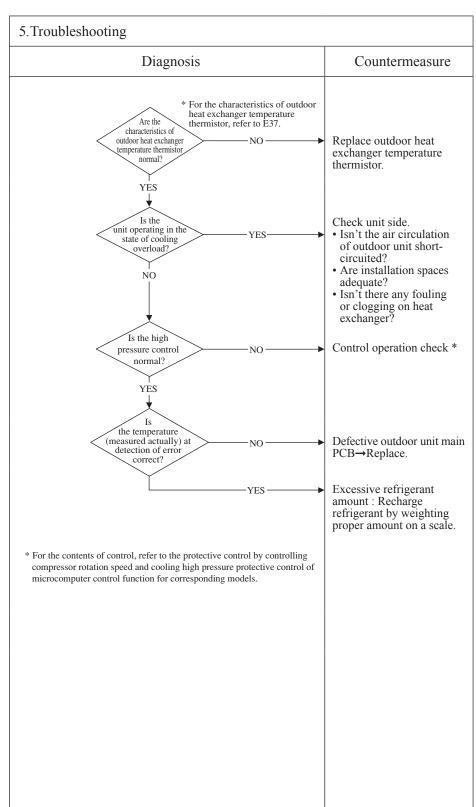
For the error detection method, refer to the protective control by controlling compressor rotation speed and cooling high pressure protective control of microcomputer control function for corresponding models.

3. Condition of error displayed

When outdoor heat exchanger temperature anomaly is detected 5 times within 60 minutes or this anomalous state is detected 60 minutes continuously including compressor stop.

4. Presumable cause

- Defective outdoor heat exchanger temperature thermistor
- Defective outdoor unit main PCB
- Indoor, outdoor unit installation spaces
- Short-circuit of air on indoor, outdoor units
- Fouling, clogging of heat exchanger
- Excessive refrigerant amount



							3)
(1	Error code	LED	Green	Red	Content		
	Remote control: E36	Indoor control PCB	Keeps flashing	Stays OFF		Discharge pipe	
		Outdoor control PCB	Keeps flashing	1-time flash		temperature error	

All models

2. Error detection method

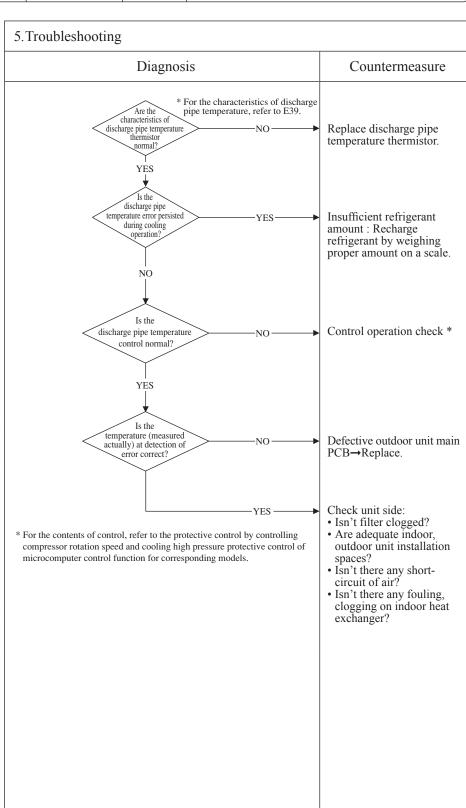
For the error detection method, refer to the protective control by controlling compressor rotation speed and cooling high pressure protective control of microcomputer control function for corresponding models.

3. Condition of error displayed

When discharge pipe temperature anomaly is detected 2 times within 60 minutes or this anomalous state is detected 60 minutes continuously including compressor stop.

4. Presumable cause

- · Defective outdoor unit main PCB
- Defective discharge pipe temperature thermistor
- Clogged filter
 Indoor, outdoor unit installation spaces
- · Short-circuit of air on indoor, outdoor units
- Fouling, clogging of heat exchanger



_					<u> </u>
(1	Error code	LED	Green	Red	Content Outdoor heat
	Remote control: E37	Indoor control PCB	Keeps flashing	Stays OFF	exchanger temperature
		Outdoor control PCB	Keeps flashing	1-time flash	themistor anomaly

All models

2. Error detection method

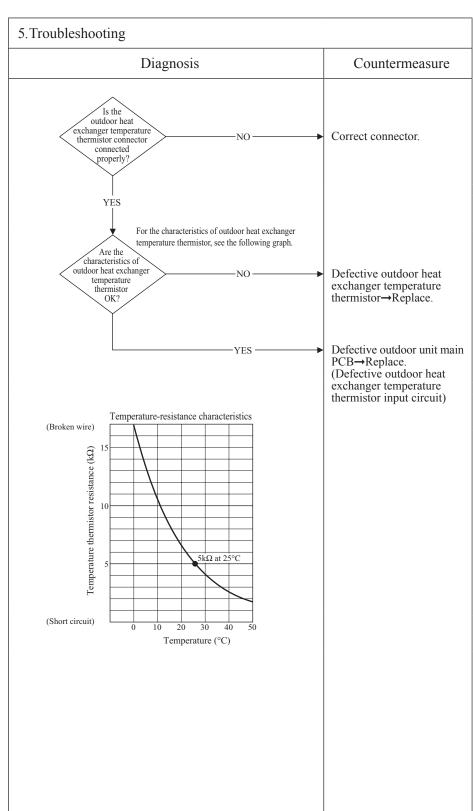
Detection of anomalously low temperature (resistance) on the outdoor heat exchanger temperature thermistor

3. Condition of error displayed

- When the temperature thermistor detects -50°C or lower for 20 seconds continuously within 2 minutes to 2 minutes 20 seconds after the compressor ON, the compressor stops. After 3-minutes delay, the compressor starts again automatically, but if this anomalous temperature is detected 3 times within 40 minutes.
 When -50°C or lower is detected for 5
- When -50°C or lower is detected for 5 seconds continuously within 20 second after compressor ON.

4. Presumable cause

- Defective outdoor unit main PCB
- Broken thermistor harness or temperature sensing section
- Disconnected wire connection (connector)



					<u> </u>
4	Error code	LED	Green	Red	Content
	Remote control: E38	Indoor control PCB	Keeps flashing	Stays OFF	Outdoor air temperature
		Outdoor control PCB	Keeps flashing	1-time flash	thermistor anomaly

All models

2. Error detection method

Detection of anomalously low temperature (resistance) on outdoor air temperature thermistor

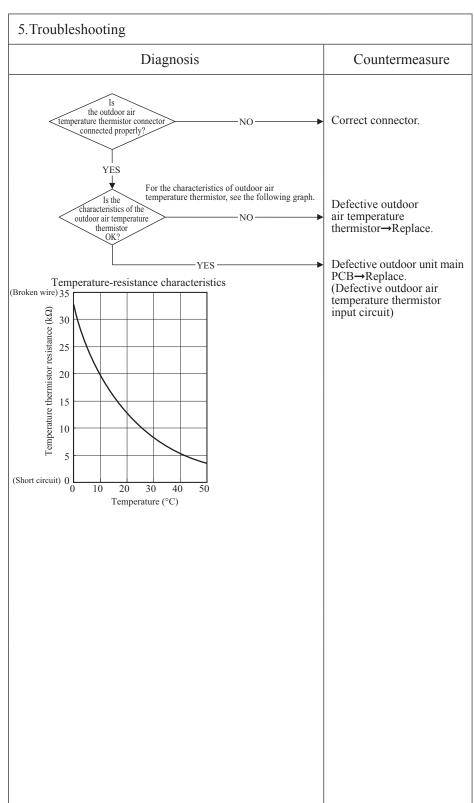
3. Condition of error displayed

- When the temperature thermistor detects -45°C or lower for 5 seconds continuously within 2 minutes to 2 minutes 20 seconds after the compressor ON, the compressor stops. After 3-minutes delay, the compressor starts again automatically, but if this anomalous temperature is detected 3 times within 40 minutes.

 When -45°C or lower is detected for
- When -45°C or lower is detected fo 5 seconds continuously within 20 second after compressor ON.

4. Presumable cause

- Defective outdoor unit main PCB
- Broken thermistor harness or temperature sensing section (Check molding.)
- Disconnected wire connection (connector)



Error code	LED	Green	Red	Content
Remote control: E39	Indoor control PCB	Keeps flashing	Stays OFF	Discharge p
	Outdoor control PCB	Keeps flashing	1-time flash	thermis

Discharge pipe temperature thermistor anomaly

1. Applicable model

All models

2. Error detection method

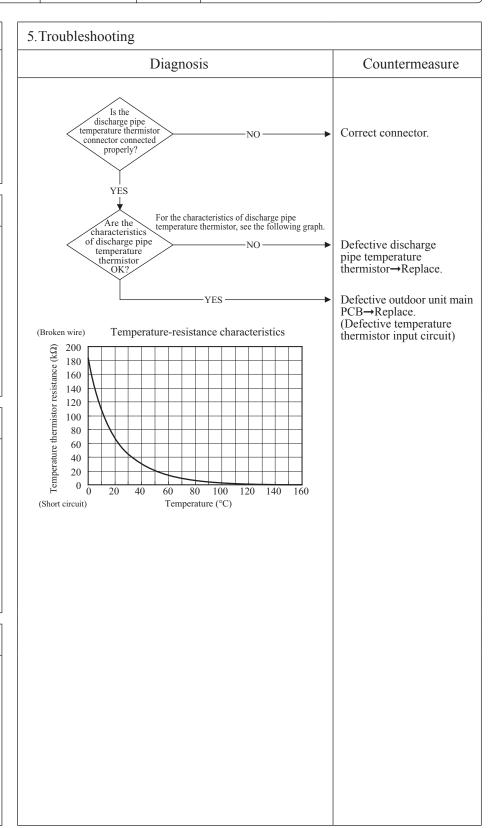
Detection of anomalously low temperature (resistance) on the discharge pipe temperature thermistor

3. Condition of error displayed

When the temperature thermistor detects -10°C or lower for 5 seconds continuously within 10 minutes to 10 minutes 20 seconds after the compressor ON, the compressor stops. After 3-minutes delay, the compressor starts again automatically, but if this anomalous temperature is detected 3 times within 40 minutes.

4. Presumable cause

- Defective outdoor unit main PCB
- Broken thermistor harness or temperature sensing section (Check molding.)
- Disconnected wire connection (connector)

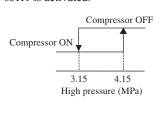


					<u>. </u>
(1	Error code	LED	Green	Red	Content High pressure error
	Remote control: E40	Indoor control PCB	Keeps flashing	Stays OFF	(63H1 activated)
		Outdoor control PCB	Keeps flashing	1-time flash	(Models FDC100-140 VNA/VSA only)

Models FDC100-140 VNA 100-140 VSA

2. Error detection method

When the high pressure switch 63H1 is activated.

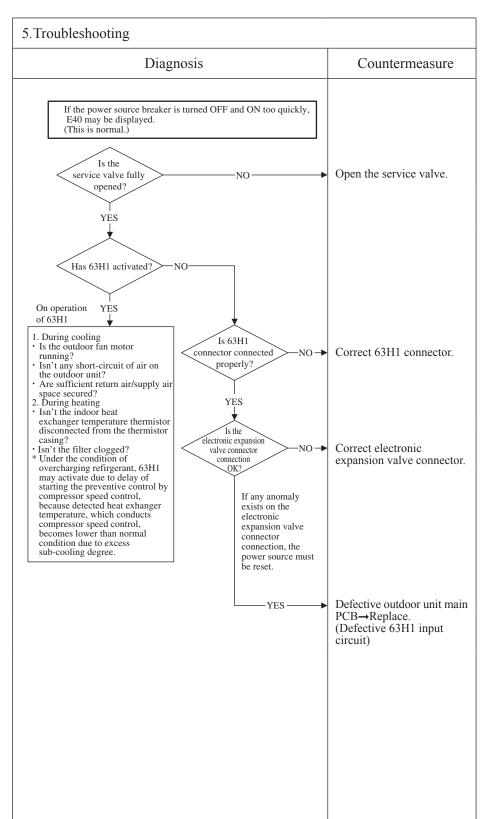


3. Condition of error displayed

If 63H1 turns OFF (opened), the compressor stops. After 3-minutes delay, the compressor restarts. If this anomaly occurs 5 times within 60 minutes or continues for 60 minutes continuously.

4. Presumable cause

- Short circuit of air flow, disturbance of air flow and clogging filter at outdoor heat exchanger/Breakdown of fan motor
- Defective outdoor unit main PCB
- Defective 63H1 connector
- Defective electronic expansion valve connector
- Closed service valve
- Mixing of non-condensing gas (nitrogen, etc.)



Note: In the protective control range for compressor startup (initial startup after power ON), even if 63H1 is activated only once (63H1turns OFF), immediately the error is displayed.

(1	Error code	LED	Green	Red	Content
	Remote control: E42	Indoor control PCB	Keeps flashing	Stays OFF	Current cut (1/2)
		Outdoor control PCB	Keeps flashing	1-time flash	

All models

2. Error detection method

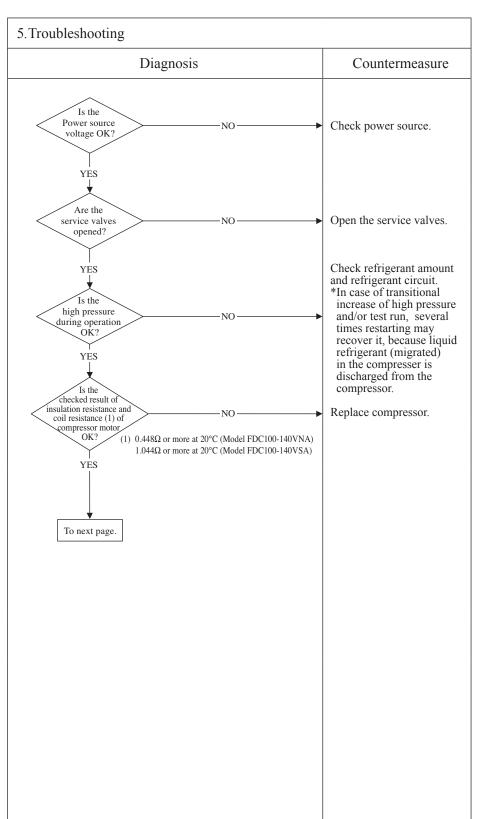
In order to prevent from overcurrent of inverter, if the current exceeds the specifications, it makes the compressor stopping.

3. Condition of error displayed

- If the output current of inveter exceeds the specifications, it makes the compressor stopping.
- After 3-minute delay, the compressor restarts, but if this amonaly occurs 4 times within 30 minute after the initial detection.

4. Presumable cause

- The service valves closed
- Faulty power source
- Insufficient refrigerant amount
- Faulty compressor
- Faulty power transistor module



				<u> </u>
Error code	LED	Green	Red	Content
Remote control: E47	Indoor	Keeps flashing	Stays OFF	Control PCB A/F module anomaly (Model FDC100-140VNA only)
	Outdoor control PCB	Keeps flashing	1-time flash	

Model FDC100-140VNA

2. Error detection method

In order to avoid an unexpected trouble, if the protective circuit defect unexpected voltage, current and movement of the power element, it makes the compressor stopping.

3. Condition of error displayed

- If the A/F anomaly occurs, it makes the compressor stopping.
- After 3-minutes delay, the compressor restarts if this anomaly occurs 4 times within 30minutes or continues for 15minutes continuously.

4. Presumable cause

- Defective control PCB
- Defective reactor PCB

-		
	5. Troubleshooting	
	Diagnosis	Countermeasure
	Is the Power supply voltage OK?	Check power supply.
	Are wires connected properly between the reactor PCB (PCB7) and the control PCB (PCB1)?	Correct wires
	Change the control PCB (PCB1) Does it become nomal? NO	Change the reactor PCB (PCB7) and the connection wire between the reactor PCB (PCB7) and the
		control PCB (PCB1)

Note:

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Error code	LED	Green	Red	Content
Remote control: E42	Indoor	Keeps flashing	Stays OFF	Current cut (2/2)
	Outdoor control PCB	Keeps flashing	1-time flash	

All models

2. Error detection method

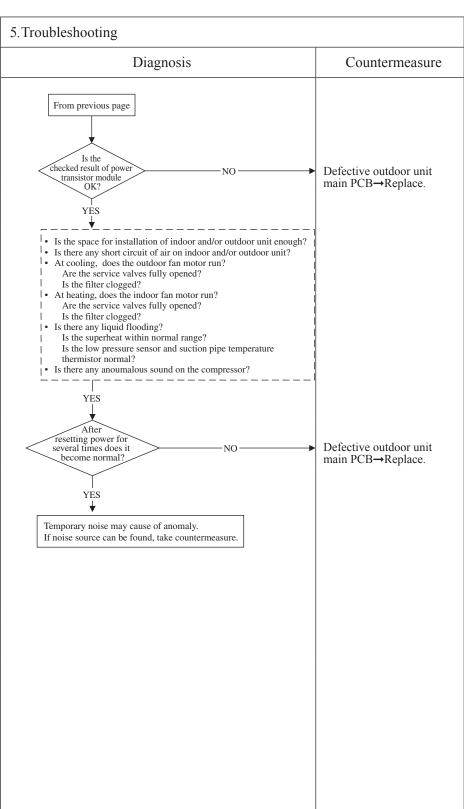
In order to prevent from overcurrent of inverter, if the current exceeds the specifications, it makes the compressor stopping.

3. Condition of error displayed

- If the output current of inveter exceeds the specifications, it makes the compressor stopping.
- After 3-minute delay, the compressor restarts, but if this amonaly occurs 4 times within 30 minute after the initial detection.

4. Presumable cause

- Defective outdoor unit main PCB
- Faulty power source
- Insufficient refrigerant amount
- Faulty compressor
- Faulty power transistor module



Error code	LED	Green	Red	Content
Remote control: E48	Indoor control PCB	Keeps flashing	Stays OFF	Outdoor fan motor anomaly
	Outdoor control PCB	Keeps flashing	1-time flash	(Models FDC100-140 VNA/VSA only)

Models FDC100-140 VNA 100-140 VSA

2. Error detection method

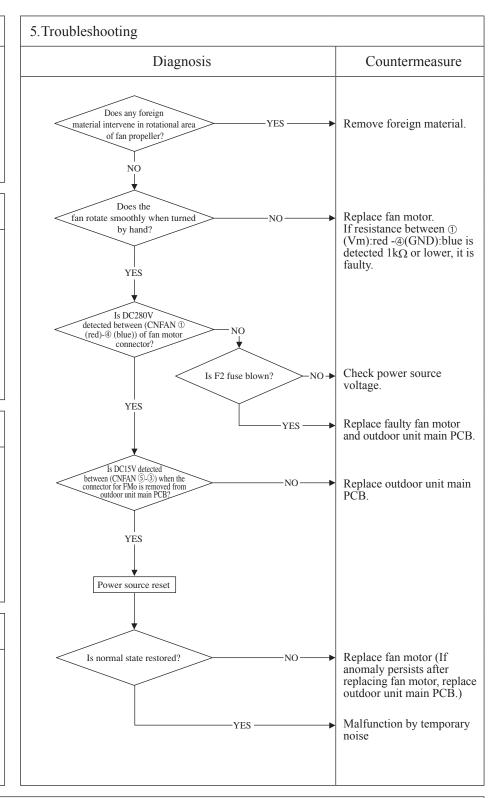
Detected by rotation speed of outdoor fan motor

3. Condition of error displayed

When actual rotation speed of outdoor fan motor (FMo1) drops to 100min⁻¹ or lower for 30 minutes continuously, the compressor and the outdoor fan motor stop. After 3-minutes delay, it starts again automatically, but if this anomaly occurs 5 times within 60 minutes after the initial detection.

4. Presumable cause

- · Defective outdoor unit main PCB
- · Foreign material at rotational area of fan propeller
- Defective fan motor
- · Dust on outdoor unit main PCB
- · Blow fuse
- External noise, surge



Note: When E48 error occurs, in almost cases F2 fuse (4A) on the outdoor control PCB is blown. There are a lot of cases that fuse is blown and E48 occurs due to defective fan motor. And even though only the outdoor control PCB (or fuse) is replaced, another trouble (*1) could occur. Therefore when fuse is blown, check whether the fan motor is OK or not.

After confirming the fan motor normal, check by power ON. (Don't power ON without confirming the fan motor normal.)
*1 The error which does not seem to relate E48 may occur like as "WAIT", Stay OFF of LED on outdoor control PCB, inverter communication error (E45) and etc.

				<u> </u>
Error code	LED	Green	Red	Content
Remote control: E51	Indoor control PCB	Keeps flashing	Stays OFF	Inverter and fan motor anomaly
	Outdoor control PCB	Keeps flashing	1-time flash	(Models FDC100-140 VNA/VSA only)

Outdoor contr	ol PCB Keeps flashing 1-time flash	
1.Applicable model	5. Troubleshooting	
Models FDC100-140 VNA	Diagnosis	Countermeasure
100-140 VSA	Models FDC100-140VNA/VSA Replace immediately the main PCB.	
2. Error detection method		
When power transistor anomaly is detected for 15 minutes continuously		
3. Condition of error displayed		
Same as above		
4. Presumable cause		
Outdoor fan motor anomaly Outdoor unit main PCB anomaly		

Note:		

_					<u> </u>
	Error code	LED	Green	Red	Suction pipe
	Remote control: E53	Indoor control PCB	Keeps flashing	Stays OFF	temperature thermistor anomaly
		Outdoor control PCB	Keeps flashing	1-time flash	(Models FDC100-140 VNA/VSA only)

Models FDC100-140 VNA 100-140 VSA

2. Error detection method

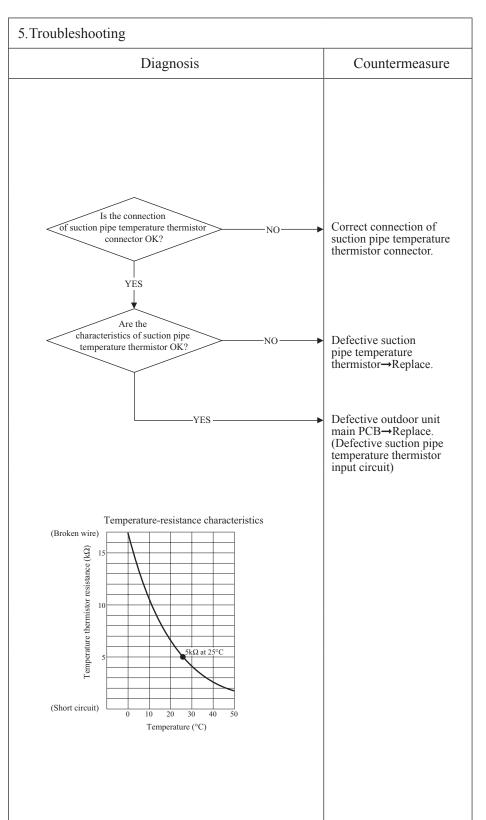
When the suction pipe temperature thermistor detects anomalously low temperature

3. Condition of error displayed

If the temperature thermistor detects -50°C or lower for 5 seconds continuously within 10 minutes to 10 minutes 20 seconds after compressor ON, the compressor stops. When the compressor is restarted automatically after 3-minutes delay, if this anomaly occurs 3 times within 40 minute.

4. Presumable cause

- Defective suction pipe temperature thermistor connection
- Defective suction pipe temperature thermistor
- Defective outdoor unit main PCB



				G. G. G. G. G. G. G. G. G. G. G. G. G. G
Error code	LED	Green	Red	Content
Remote control: E57	Indoor control PCB	Keeps flashing	Stays OFF	Insufficient refrigerant amount or detection of service valve closure
	Outdoor control PCB	Keeps flashing	1-time flash	(Models FDC100-140 VNA/VSA only)

Models FDC100-140 VNA 100-140 VSA

2. Error detection method

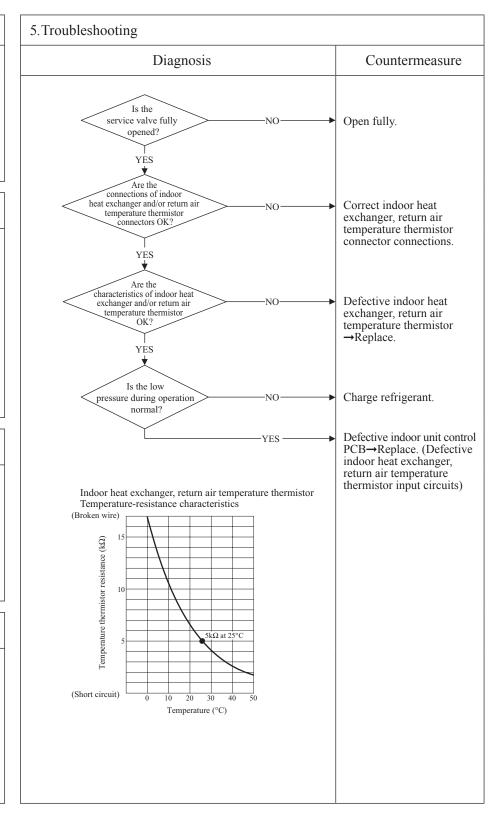
- Judge insufficient refrigerant amount by detecting the temperature differnce between indoor heat exchanger (Thi-R) and indoor return air (Thi-A).
- It detects at initial startup in cooling or dehumidifying mode after power ON.

3. Condition of error displayed

Anomalous stop at initial detection

4. Presumable cause

- Defective indoor heat exchanger temperature thermistor
- Defective indoor return air temperature thermistor
- Defective indoor unit control PCB
- Insufficient refrigerant amount



Note: Insufficient refrigerant amount preventive control makes compressor stopped, if it judges insufficient refrigerant amount by detecting the temperature difference between indoor heat exchanger (Thi-R) and return air temperature (Thi-A) for 1 minute after compressor ON in cooling or dehumidifying mode and for 9 minutes after compressor ON in heating mode. [in cooling mode: (Thi-A)-(Thi-R)>4degC, in heating mode: (Thi-R)-(Thi-A)<4degC]

					9
(1	Error code	LED	Green	Red	Content
	Remote control: E59	Indoor control PCB	Keeps flashing	Stays OFF	Compressor startup failure (1/2)
		Outdoor control PCB	Keeps flashing	5-time flash	(Models FDC100-140 VNA/VSA only)

Models FDC100-140 VNA 100-140 VSA

2. Error detection method

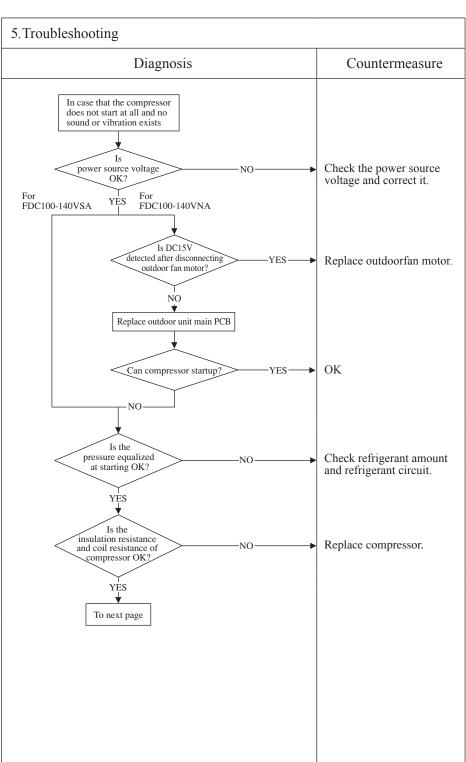
When it fails to change over to the operation for rotor position detection of compressor motor

3. Condition of error displayed

If the compressor fails to startup for 20 times (10 patterns x2 times) continuously.

4. Presumable cause

- · Outdoor fan motor anomaly
- Outdoor unit main PCB anomaly
- Anomalous power source voltage
- Insufficient or Excessive refrigerant amount
- · Faulty component for refrigerant circuit
- Compressor anomaly (Motor or bearing)



- institution resistance. The unit is left for long period without power source or soon after installation, insulation resistance may decrease to several M Ω or lower due to the liquid refrigerant migrated in the refrigerant oil in compressor. If the electric leakage breaker is activated due to low insulation resistance, check followings.

 ① Check whether the insulation resistance can recover or not, after 6 hours has passed since power ON.

 (By energize the crankcase heater, liquid refrigerant migrated in the refrigerant oil in compressor can be evaporated)

 - © Check whether the electric leakage breaker conforms to high-harmonic specifications (As inverter PAC units has inverter, in order to prevent from improper operation, be sure to use the breaker of high-harmonic type)

				<u> </u>
Error code	LED	Green	Red	Content
Remote control: E59	Indoor control PCB	Keeps flashing	Stays OFF	Compressor startup failure (2/2)
	Outdoor control PCB	Keeps flashing	5-time flash	(Models FDC100-140 VNA/VSA only)

Models FDC100-140 VNA 100-140 VSA

2. Error detection method

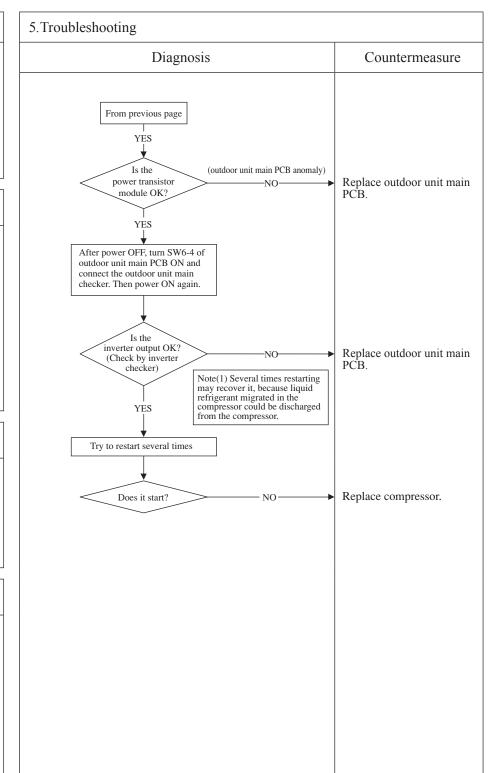
When it fails to change over to the operation for rotor position detection of compressor motor

3. Condition of error displayed

If the compressor fails to startup for 20 times (10 patterns x2 times) continuously.

4. Presumable cause

- Outdoor fan motor anomaly
- Outdoor unit main PCB anomaly
- Anomalous power source voltage
- Insufficient or Excessive refrigerant amount
- Faulty component for refrigerant circuit
- Compressor anomaly (Motor or bearing)



Note:		

(b) SRK series

						(H)
9	Error code	Indoor	RUN light	TIMER light	Content	
		display	_	-	Content	
	- 10-10				Operates but does not cool	
		control PCB	Keeps flashing	Stays OFF	F :	
			Remote control: None display Outdoor unit	Remote control: None display Green LED	Remote control: None display	display Content

1. Applicable model

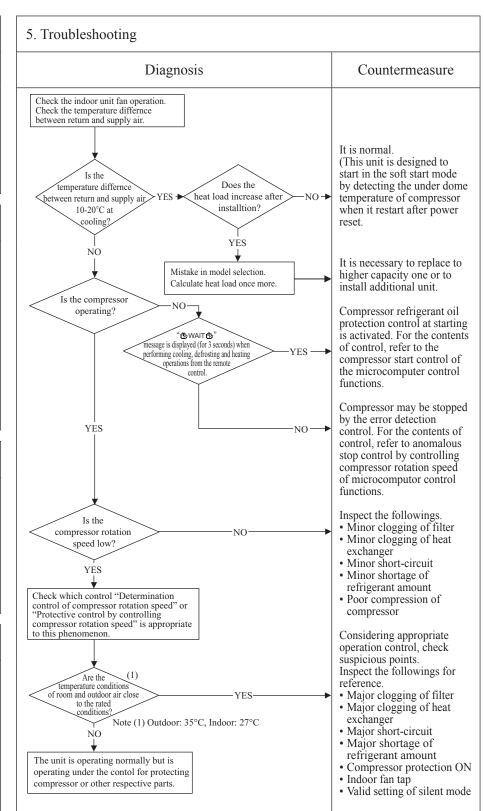
All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause

- Poor compression of compressor
- Faulty expansion valve operation



				<u></u>
Error code	Indoor	RUN light	TIMER light	Content
	display	_	_	
			Red LED	
	control PCB	Keeps flashing	Stays OFF	1

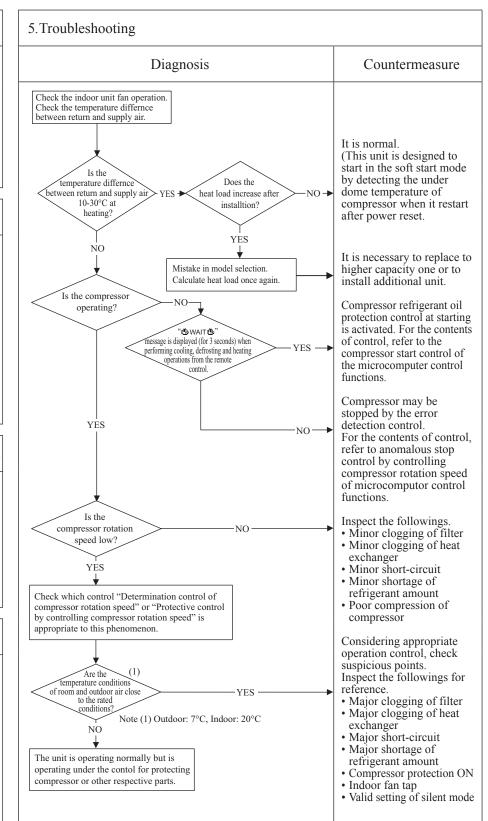
All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause

- Faulty 4-way valve operation
- Poor compression of compressor
- Faulty expansion valve operation



						ᡌ
U	Error code	Indoor	RUN light	TIMER light	Content	
		display	_	_	Content	
	Remote control: None	Outdoor unit	Green LED	Red LED	Earth leakage breaker activated	
		control PCB	Stays OFF	Stays OFF		J
						_

1.Applicable model All models

2.Error detection method

3. Condition of error displayed

4. Presumable cause

- Defective compressor
- Noise

5. Troubleshooting	
Diagnosis	Countermeasure
Are OK the insulation resistance and coil resistance of compressor?	Replace compressor.*
Is insulation of respective harnesses OK? Is any harness bitten between pannel and casing or etc?	Secure insulation resistance.
YES Check the outdoor unit grounding wire/earth leakage breaker.	
Check of the outdoor unit grounding wire/earth leakage breaker	
Run an independent grounding wire from the grounding screw of outdoor unit to the grounding terminal on the distribution panel. (Do not connect to another grounding wire.) In order to prevent malfunction of the earth leakage breaker itself, confirm that it is conformed to higher harmonic regulation.	
* Insulation resistance of compressor • Immediately after installation or when the unit has been left for long time without power source, the insulation resistance may drop to a few MΩ because of refrigerant migrated in the compressor. When the earth breaker is activated at lower insulation resistance, check the following points. ① 6 hours after power ON, check if the insulation resistance recovers to normal. When power ON, crankcase heater heat up compressor and evaporate the refrigerant migrated in the compressor. ② Check if the earth leakage breaker is conformed to higher	

Note:

Since the unit is equipped with inverter, it is necessary to use components conformed to higher harmonic regulation in order to prevent malfunction of earth leakage breaker.

harmonic regulation or not.

					_9
Error code	Indoor display	RUN light	TIMER light	Content	
Remote control: None	Outdoor unit	Green LED	Red LED	Excessive noise/vibration (1/3)	
	control PCB	_	_	,	

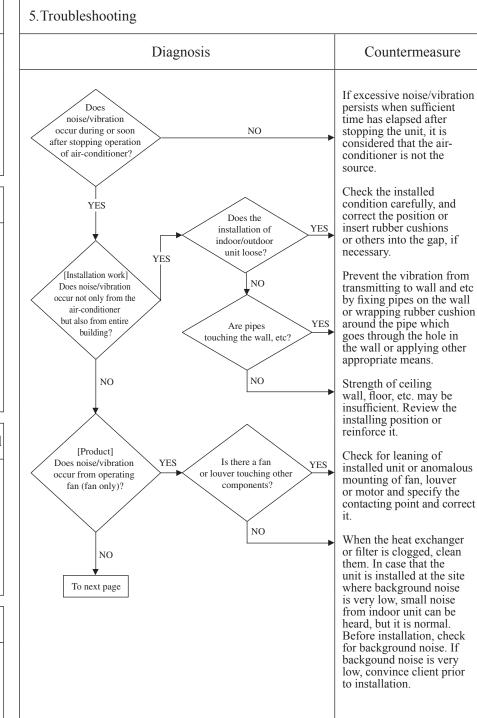
1. Applicable model All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause

- ① Improper installation work
 - · Improper anti-vibration work at instllation
 - · Insufficient strength of mounting face
- Defective product Before/after shipping from factory
- ③ Improper adjustment during commissioning
 - · Excess/shortage of refrigerant, etc.



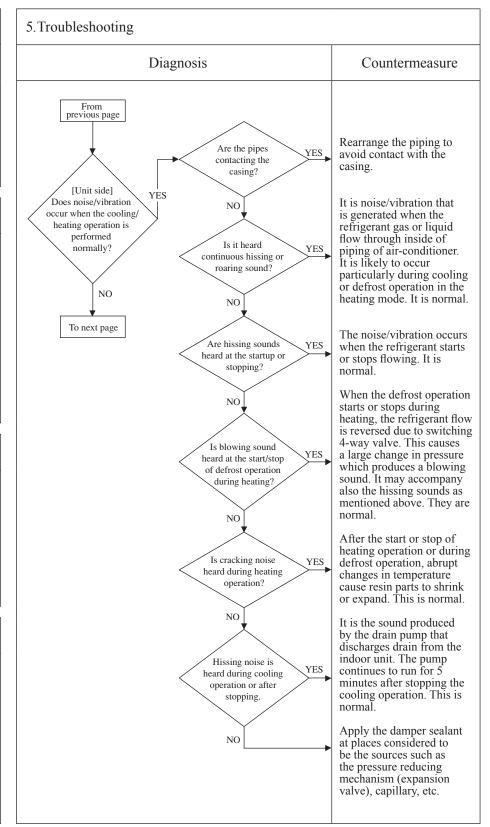
Error code	Indoor display	RUN light	TIMER light	Content	
Remote control: None	Outdoor unit	Green LED	Red LED	Excessive noise/vibration (2/3)	
	control PCB	_	_		J

1.Applicable model All models

2.Error detection method

3. Condition of error displayed

4. Presumable cause



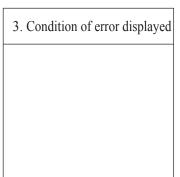
_						1)
U	Error code	Indoor	RUN light	TIMER light	Content	
	Ziror code	display	_	_		
	Remote control: None	Outdoor unit	Green LED	Red LED	Excessive noise/vibration (3/3)	
		control PCB	_	-		
						_

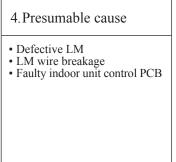
1. Applicable model 5. Troubleshooting All models Diagnosis Countermeasure From previous page If insufficient cooling/ Adjustment heating problem happens due to anomalous operating conditions at cooling/ during commissioning Does noise/vibration occur when the cooling/heating operation is in anomalous condition? 2. Error detection method heating, followings are suspicious. • Overcharge of refrigerant YES • Insufficient charge of refrigerant • Intrusion of air, nitrogen, etc. In such occasion, it is necessary to recover refrigerant, vacuum-dry and recharge refrigerant. * Since there could be many causes of noise/ vibration, the above do not cover all. In such case, check the conditions when, where, 3. Condition of error displayed how the noise/vibration occurs according to following check point. • Indoor/outdoor unit · Cooling/heating/fan mode • Startup/stop/during operation Operating condition (Indoor/outdoor temperatures, pressure) • Time it occurred • Operation data retained by the remote control 4. Presumable cause such as compressor rotation speed, heat exchanger temperature, EEV opening degree, etc. • Tone (If available, record the noise) · Any other anomalies

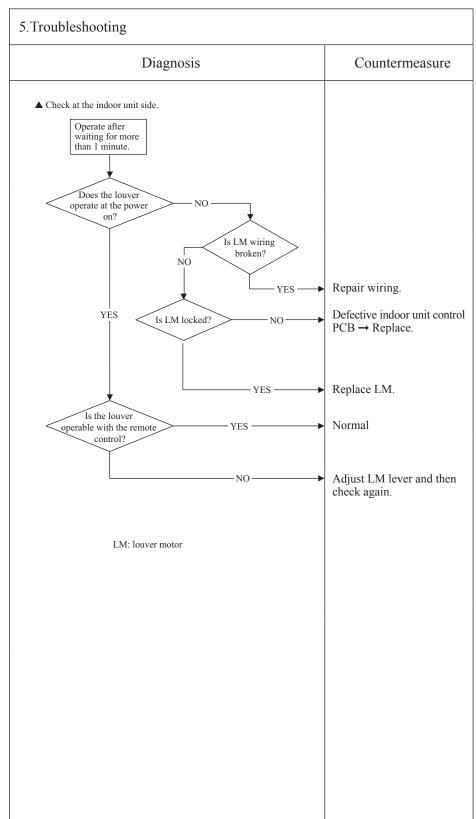
Error code	Indoor display	RUN light	TIMER light	Content		
Remote control: None	Outdoor unit control PCB				Louver motor failure	

1.Applicable model All models

2.Error detection method







					(4)
9	Error code	1110001	RUN light	TIMER light	Content Dower source system error
		display	_	_	Power source system error
	Remote control: None	Outdoor unit	Green LED	Red LED	(Power source to indoor unit control PCB)
		control PCB	Stays OFF	2-time flash	(10 Well boulded to illustrate unit control 1 C.)

1. Applicable model 5. Troubleshooting All models Diagnosis Countermeasure AC220/240V detected between 1 and 2 on the terminal block of indoor unit? Is AC380/415V for 3-phase unit detected between 1, 2 and 3 on the teminal block of outdoor unit or is AC220/240V for 1-phase unit detected between 1 and 2 on the terminal block of outdoor Defective outdoor unit YES main PCB (Noise filter) 2. Error detection method Misconnection or breakage of connecting wires YES Are fuse OK Replace fuse. (250V 3.15A)? YES Defective indoor unit control PCB → Replace. 3. Condition of error displayed 4. Presumable cause • Misconnection or breakage of connecting wires • Blown fuse Faulty indoor unit control PCBBroken harness • Faulty outdoor unit main PCB (Noise filter)

Error code Remote control: None Indoor display Outdoor unit control PCB Keeps flashing Stays OFF Indoor display Outdoor unit control PCB Keeps flashing Stays OFF Content Power source system error (Power source to remote control)	Power source system error (Power source to remote control)
---	--

1. Applicable model 5. Troubleshooting All models Diagnosis Countermeasure Isn't there any loose connection of remote Correct. YES control wires? NO 2. Error detection method Isn't remote control wire broken or Replace wires. YES short-circuited? NO Disconnect remote control wires. Is DC15V or higher detected between X-Y Replace remote control. of interface kit terminal block? 3. Condition of error displayed NO Disconnect connecting wires Is DC15V or higher detected between X-Y Replace interface kit. of indoor unit terminal block? 4. Presumable cause NO Defective indoor unit control PCB→Replace. • Remote control wire breakage/short-circuit • Defective remote control Malfunction by noise Broken harness • Faulty indoor unit control PCB • Faulty interface kit

Error code Remote control: None	Indoor display Stays OFF Keeps flashing Outdoor unit control PCB Keeps flashing Stays OFF	anomaly
1.Applicable model	5. Troubleshooting	
All models	Diagnosis	Countermeasure
	Is the inlet panel set correctly? NO YES	Correction, re-set
2. Error detection method The limit switch operates when the indoor unit is stopped.	Are limit switch OK? NO	Defective limit switch → Replace.
	YES	Defective indoor unit control PCB → Replace. (Defective limit switch input circuit)
	Note (1) Check the operation of limit switch by checking if the error can be rest or not by pushing the limit switch by finger when the inlet panel is removed.	
3. Condition of error displayed		
Same as above		
4. Presumable cause		
Defective limit switch Faulty indoor unit control PCB		

					<u> </u>
9	Error code	Indoor display	RUN light	TIMER light	Content INSPECT I/U
				Red LED 2-time flash	(W/L 1 2
H					

All models

2. Error detection method

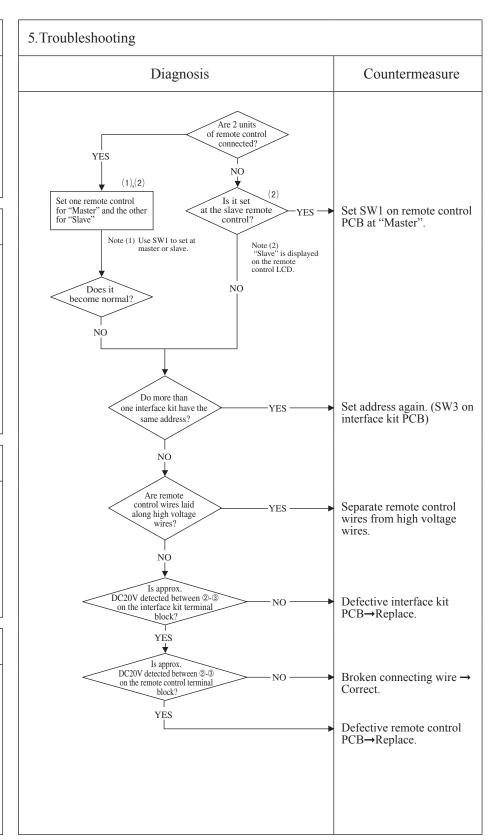
Communication between indoor unit and remote control is disabled for more than 30 minutes after the power on.

3. Condition of error displayed

Same as above

4. Presumable cause

- Improper setting
- Surrounding environment
- Defective remote control communication circuit
- Faulty interface kit PCB



Note: If any error is detected 30 minutes after displaying "WAIT "on the remote control, the display changes to "INSPECT I/U".

					<u> </u>
(1	Error code	Indoor display	RUN light	TIMER light	Content INSPECT I/U
		Outdoor unit control PCB			(0

1.Applicable model All models

2. Error detection method

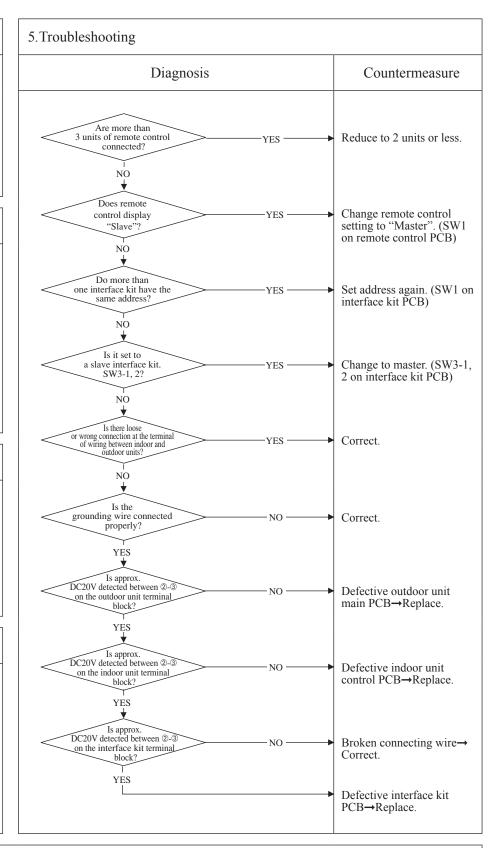
Indoor unit cannot communicate for more than 30 minutes after the power on with remote control.

3. Condition of error displayed

Same as above

4. Presumable cause

- Improper setting
- Surrounding environment
- Defective remote control communication circuit
- Faulty indoor unit control PCB
- Faulty outdoor unit main PCB
- Faulty interface kit PCB



Note: If any error is detected 30 minutes after displaying "WAIT "on the remote control, the display changes to "INSPECT I/U".

					μ	n
P	Error code	Indoor	RUN light	TIMER light	Content	
		display	-	_	Communication error at	
	Remote control: WAIT	Outdoor unit	Green LED	Red LED		
		control PCB	Keeps flashing	2-time flash	initial operation (1/3)	J
						_

All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause

- Faulty indoor unit control PCB
 Defective remote control

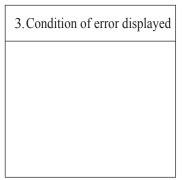
- Broken remote control wire
 Faulty outdoor unit main PCB
 Broken connection wires

Replace. Defective remote control of Broken remote control wire Replace. Are wires connected properly between indoor/ outdoor units? DC20V detected between ②-③ on the outdoor unit terminal block? YES DC20V detected between ②-③ on the outdoor unit terminal block? YES DC20V detected between ②-③ on the outdoor unit terminal block? YES DC20V detected between ②-④ on the outdoor unit terminal block? DC20V detected between ②-④ on the outdoor unit terminal block? DC20V detected between ②-④ on the outdoor unit terminal block? DC20V detected between ③-④ on the outdoor unit terminal block? DC20V detected between ③-④ on the outdoor unit terminal block?	To next page YES Is the outdoor unit control green LED flashing? YES YES YES To next page Defective indoor unit control PC Replace. Defective remote control→Repla Broken remote control wire Y→ Replace. Correct connection wire y→ Replace. Correct connection wire between indoor and outdoor units. Defective outdoor unit main PCB→Replace. Defective outdoor unit main PCB→Replace.
Is the outdoor unit control red LED flashing twice? YES Octorect connected properly between indoor/ outdoor units? Defective remote control wire Replace. Correct connection between indoor and outdoor units. Defective remote control wire Replace. Correct connection between indoor and outdoor units. Defective outdoor units. Defective connection wire Replace. Defective outdoor units. Defective connection between indoor and outdoor units. Defective outdoor units.	Is the outdoor unit control PC Replace. Defective indoor unit control PC Replace. Defective remote control → Repla Broken remote control wire Y→ Replace. Are wires connected properly between indoor/ outdoor units? NO Defective indoor unit control PC Replace. Correct connection wire Y→ Replace. Correct connection wire between indoor and outdoor units. Defective outdoor units. Defective outdoor unit main PCB→Replace. Defective connection wire between indoor and outdoor units. Defective outdoor unit main PCB→Replace. Defective indoor unit control PC Replace. Correct connection wire between indoor and outdoor units.
Correct connection between indoor outdoor units? NO Setween indoor and outdoor units. DC20V detected between ②-③ on the outdoor unit reminal block? YES DC20V detected between ②-③ on the outdoor unit reminal block? YES DC20V detected between ②-③ on the outdoor unit reminal block? YES DC20V detected between ②-③ on the outdoor unit reminal block? YES DC20V detected between ②-③ on the outdoor unit reminal block? YES DC20V detected between ③-③ on the outdoor unit reminal block?	Correct connection wire between indoor and outdoor units. VES Sapprox.
the outdoor unit terminal block? YES DC20V detected between ②□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between ③□③ on blockered between □□③ on b	the outdoor unit terminal block? YES DC20V detected between ②-③ on the indoor unit terminal block? YES Defective connection w (Broken) Noise Defective indoor unit connection w (Broken) Noise
DC20V detected between @-3 on the indoor unit terminal NO (Broken)	DC20V detected between @-③ on he indoor unit terminal holock? NO (Broken) Noise Noise Defective indoor unit con
YES — Defective indoor unit	

		1		1		1)
U	Error code	Indoor	RUN light	TIMER light	Content	
		display	_	_	Communication error at	
	Remote control: WAIT	Outdoor unit	Green LED	Red LED		
				2-time flash		
		I.		I.		_

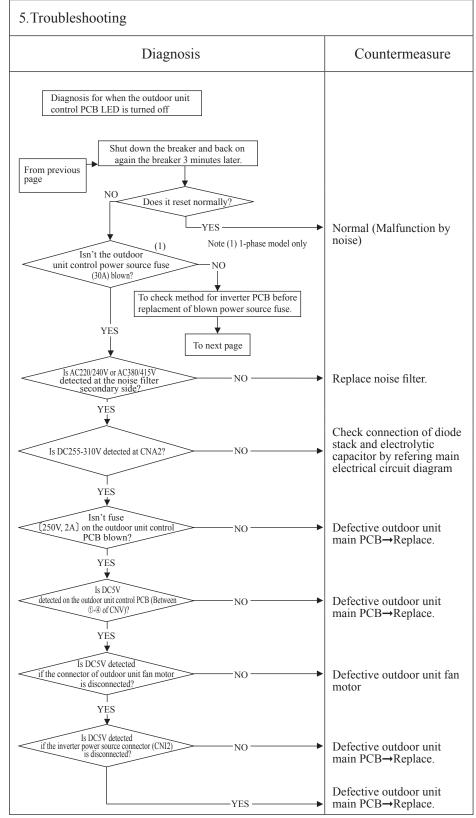
1.Applicable model All models

2. Error detection method



4. Presumable cause

- Faulty noise filter
- Faulty indoor unit control PCB
- Faulty outdoor unit main PCB
- Faulty fan motor



						9
P	Error anda	Indoor	RUN light	TIMER light	Content	
	Error code	display	_	_		
	Remote control: WAIT	Outdoor unit	Green LED	Red LED	Communication error at	
				2-time flash		
			тесро пазниц	2 time masii	i i i i i i i i i i i i i i i i i i i	

All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause

- Blown fuseFaulty noise filterFaulty outdoor unit main PCBFaulty reactor

5. Troubleshooting	
Diagnosis	Countermeasure
Method to check for outdoor unit main PCB before replacement of blown power source fuse.	
From previous page	
Isn't there a short-circuit between phases of the noise filter? YES	
noise filter?	
Replace the noise filter.	
•	
Isn't there a short-circuit between phases of outdoor unit main	
PCB input terminals?	
NO YES	
Isn't there any crack, burning on the power	
any crack, burning on the power transistor module? YES	
Replace the inverter PCB.	
Is the reactor OK? NO	
YES Replace the reactor.	
Is the	
electrolytic capacitor NO 7 OK?	
Replace the electrolytic capacitor.	
YES capacitor.	
Replace the power	
Replace the power source fuse.	

					<u> </u>)
(Error code	Indoor	RUN light	TIMER light	Content	
	Error code	display	_	_	Content	
	Remote control: None	Outdoor unit	Green LED	Red LED	No display	
				Stays OFF	- F J	
			-	-		/

All models

2. Error detection method

3. Condition of error displayed

4. Presumable cause

- Faulty indoor unit control PCB
 Defective remote control
 Broken remote control wire
 Defective interface kit

5. Troubleshooting							
Diagnosis	Countermeasure						
Remote control does not display anything after the power on.							
Is DC10V or higher detected at remote control connection YES NO	Defective remote control						
Is DC10V or higher detected on remote control wires if the remote control is removed?	Defective remote control						
Is DC10V or higher detected at interface kit connection terminals?	Defective interface kit						
Is DC10V or higher detected on connecting wires if the interface kit is removed?	Defective interface kit						
Are wires connected properly between the indoor/outdoor units? NO	Defective connecting wire. Defective remote control wire (Short-circuit, etc.)						
—	Defective indoor unit control PCB→Replace.						

							<u>a</u>
	91	Error code	Indoor	RUN light	TIMER light	Content	
	-		display	_	_	Remote control	
	R	Remote control: E1	Outdoor unit	Green LED	Red LED		
			control PCB	Keeps flashing	Stays OFF	communication circuit error	J
1							_

1.Applicable model All models

2. Error detection method

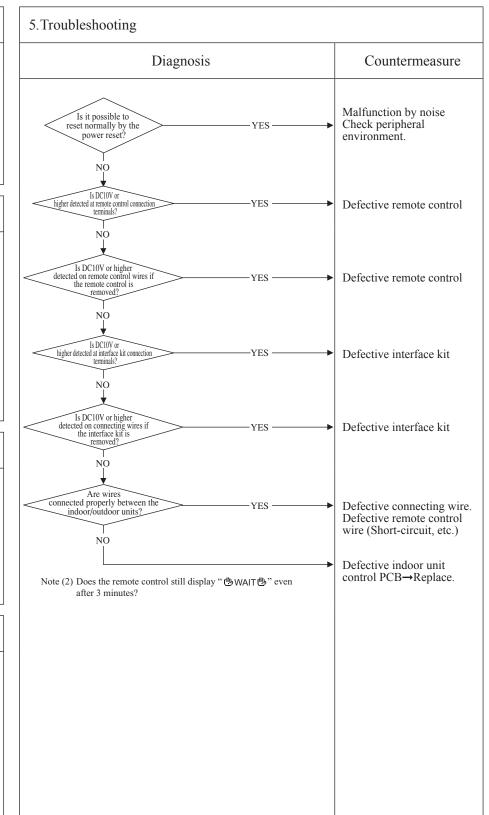
When normal communication between the remote control and the indoor unit is interrupted for more than 2 minutes. (Detectable only with the remote control)

3. Condition of error displayed

Same as above

4. Presumable cause

- Defective communication circuit between remote control-indoor unit
- Noise
- Defective remote control
- Faulty indoor unit control PCB
- Defective interface kit



Note: If the indoor unit cannot communicate normally with the remote control for 180 seconds, the indoor unit PCB starts to reset automatically.

9	Remote control: E5	display Outdoor unit	ON Green LED	TIMER light 6-time flash Red LED See below	Communication error during operation
\bigcup					

All models

2. Error detection method

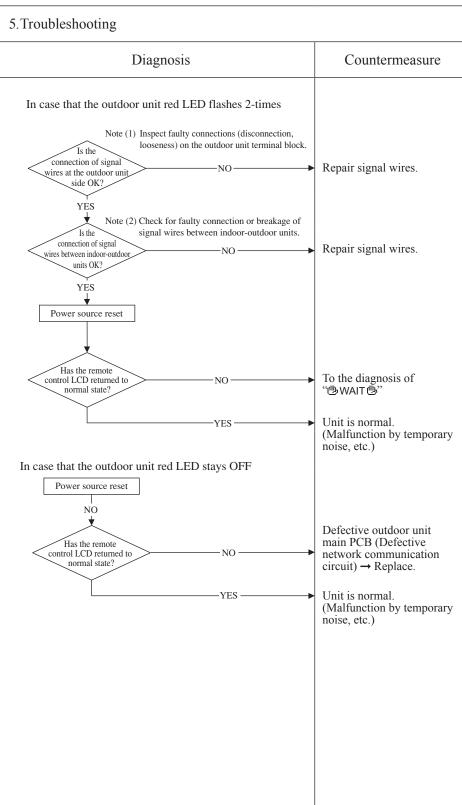
When normal communication between indoor and outdoor unit is interrupted for more than 2 minutes.

3. Condition of error displayed

Same as above is detected during operation.

4. Presumable cause

- Unit No. setting error
- Broken remote control wire
- Faulty remote control wire connection
- Faulty outdoor unit main PCB



Note: Pressing the pump-down switch cancels communications between indoor and outdoor unit so that "communication error-E5" is displayed on indoor unit and remote control, but it is normal.

| Error code | Remote control: E6 | Indoor display | Timer light | Timer light | Content | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat exchanger | Indoor heat

1. Applicable model

Note(1) Value in () are the Th22.

All models

2. Error detection method

Anomalously low temperature or high temperature (resistance) is detected on the indoor heat exchanger sensor (Th21, Th22).

3. Condition of error displayed

• When the temperature sensor detects -28°C or lower for 15 seconds continuously, the compressor stops. After 3-minutes delay, the compressor starts again automatically, but if this error occurs again within 60 minutes after the initial detection.

4. Presumable cause

- Defective indoor heat exchanger sensor connector
- Indoor heat exchanger
- temperature sensor anomaly
 Faulty indoor unit control PCB

5. Troubleshooting Diagnosis Countermeasure Is the connection of indoor heat exchanger temperature sensor Correct. → Insert connector securely. YES Are characteristics of indoor Defective indoor heat heat exchanger temperature sensor OK? exchanger temperature sensor → Replace. Defective indoor unit control PCB → Replace. (Defective indoor unit heat exchanger temperature sensor input circuit) Temperature-resistance characteristic (Broken wire) Temperature sensor resistance (kΩ) 5kΩ at 25°C (Short circuit) Temperature (°C)

							B
(Error code	Indoor	RUN light	TIMER light	Content		
	Error code	display	2-time flash	ON	Content	Room temperature	
	Remote control: None	Outdoor unit	Green LED	Red LED		1	
		control PCB				sensor anomaly	
							_

All models

2. Error detection method

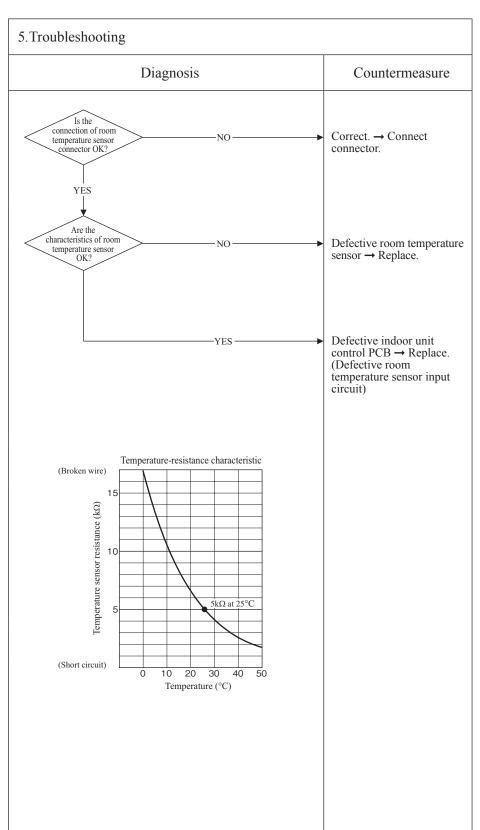
Anomalously low temperature or high temperature (resistance) is detected by indoor room temperature sensor (Th1)

3. Condition of error displayed

• When the temperature sensor detects -45°C or lower for 15 seconds continuously, the compressor stops. After 3-minute delay, the compressor starts again automatically, but if this error occurs again within 60 minutes after the initial detection.

4. Presumable cause

- Defective room temperature sensor connector
- Defective room temperature sensor
- Faulty indoor unit control PCB



Error code	Indoor display - Content Excessive number	
Remote control: E10	Outdoor unit Green LED Red LED Indoor units (more	than 17 units)
	Control PCB Keeps flashing Stays OFF by controlling with on	e remote control
)		
1.Applicable model	5. Troubleshooting	
All models	Diagnosis	Countermeasure
	Aren't more than 17 indoor units connected to one remote control?	Defective remote control → Replace.
2.Error detection method	YES	Reduce to 16 or less units.
When it detects more than 17 of indoor units connected to one remote contorl		
3. Condition of error displayed		
Same as above		
4. Presumable cause		
Excessive number of indoor units connected Defective remote control		

ror code	Indoor	RUN light	TIMER light	Content
Remote control: E14	display	_	_	Communication error
	Outdoor unit	Green LED	Red LED	between master and slave indoor units
	control PCB	Keeps flashing	Stays OFF	between master and slave indoor units
	211	mote control: E14 Outdoor unit	mote control: E14 Misolar Control Contr	display

All models

2. Error detection method

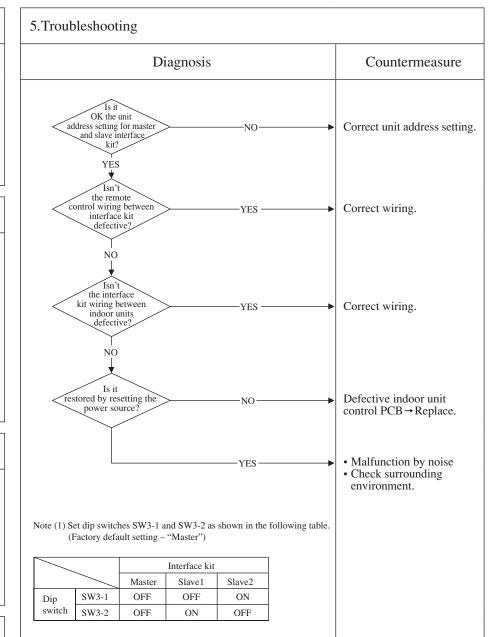
When communication error between master and slave indoor units occurs

3. Condition of error displayed

Same as above

4. Presumable cause

- Unit address setting error
- Broken remote control wire
- Defective remote control wire connection
- Broken interface kit wire
- Defective interface kit wire connection
- Defective indoor unit control PCB



Note:			

					(
91	Error code	Indoor	RUN light	TIMER light	Content
'		display	6-time flash	ON	Content
				Red LED	
		control PCB	Keeps flashing	Stays OFF	indicat in motor unomary

All models

2. Error detection method

Detected by rotation speed of indoor fan motor

3. Condition of error displayed

• When actual rotation speed of indoor fan motor drops to lower than 300min⁻¹ for 30 seconds continuously, the compressor and the indoor fan motor stop.

4. Presumable cause

- Defective indoor unit control PCB
- Foreign material at rotational area of fan propeller
 Defective fan motor
- Dust on indoor unit control PCB External noise, surge

5. Troubleshooting					
Diagnosis	Countermeasure				
Does any foreign material intervene in rotational area of fan propeller? NO	Remove foreign material.				
Does the fan rotate smoothly when turned by hand?	Replace the fan motor.				
YES Note (1) ③ for GND Is DC280V detected between ①-③ of fan motor connector CNU? YES YES	Replace indoor unit control PCB				
Power source reset Is it normalized? NO YES	Replace fan motor. (If the error persists after replacing the fan motor, replace the indoor unit control PCB.) Malfunction by temporary noise				

Error code
Remote control: E28

Indoor display - Outdoor unit control PCB Keeps flashing Stays OFF

Content

Content

Timer light display - Outdoor unit control PCB Keeps flashing Stays OFF

Remote control temperature thermistor anomaly

1. Applicable model

All models

2. Error detection method

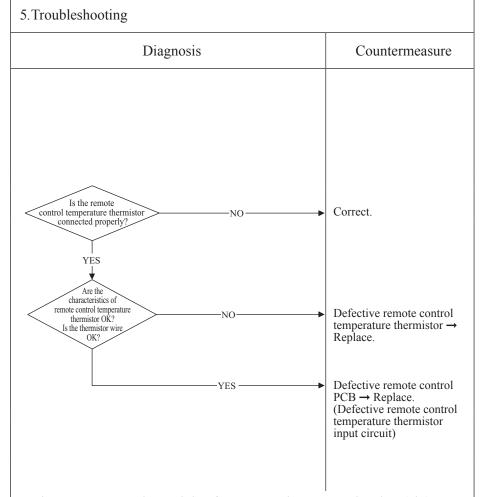
Detection of anomalously low temperature (resistance) of remote control temperature thermistor (Thc)

3. Condition of error displayed

When the temperature thermistor detects -50°C or lower for 5 seconds continuously, the compressor stops. After 3-minutes delay, the compressor starts again automatically, but if this error occurs again within 60 minutes after the initial detection.

4. Presumable cause

- Faulty connection of remote control temperature thermistor
- Defective remote control temperature thermistor
- Defective remote control PCB



Resistance-temperature characteristics of remote control temperature thermistor (Thc)

Temperature (°C)	Resistance value ($k\Omega$)	Temperature (°C)	Resistance value ($k\Omega$)
0	65	30	16
1	62	32	15
2	59	34	14
4	53	36	13
6	48	38	12
8	44	40	11
10	40	42	9.9
12	36	44	9.2
14	33	46	8.5
16	30	48	7.8
18	27	50	7.3
20	25	52	6.7
22	23	54	6.3
24	21	56	5.8
26	19	58	5.4
28	18	60	5.0
	10		0.0

Note: After 10 seconds has passed since remote control thermistor was switched from valid to invalid, E28 will not be displayed even if the thermistor harness is disconnected. At same time the thermistor, which is effective, is switched from remote control thermistor to indoor return air temperature thermistor. Even though the remote control thermistor is set to be Effective, the return air temperature displayed on remote control for checking still shows the value detected by indoor return air temperature thermistor, not by remote control temperature thermistor.

Q _E	Indoor display	RUN light	TIMER light
Error code	ilidool display	ON	Keeps flashing
Remote control: E35	Outdoor unit control PCB	Green LED	Red LED
		Keeps flashing	1-time flash
	Outdoor unit	Yellow	LED
	inverter PCB	Keeps f	lashing

Cooling overload operation

1. Applicable model

All models

2. Error detection method

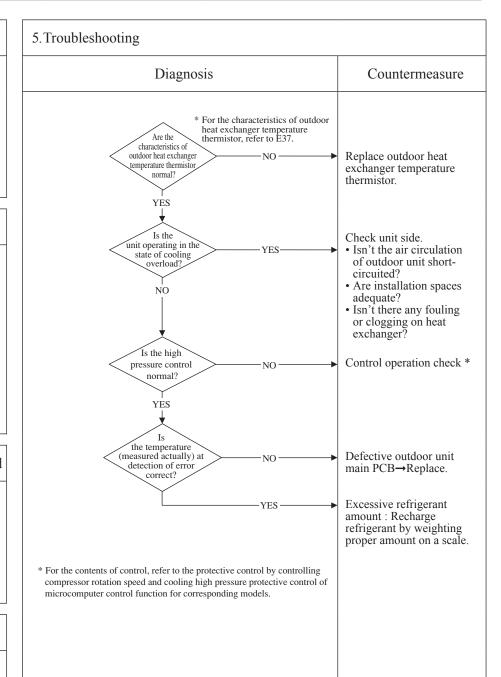
For the error detection method, refer to the protective control by controlling compressor rotation speed and cooling high pressure protective control of microcomputer control function for corresponding models.

3. Condition of error displayed

When outdoor heat exchanger temperature anomaly is detected 5 times within 60 minutes or this anomalous state is detected 60 minutes continuously including compressor stop.

4. Presumable cause

- Defective outdoor heat exchanger temperature thermistor
- Defective outdoor unit main PCB
- Indoor, outdoor unit installation spaces
- Short-circuit of air on indoor, outdoor units
- Fouling, clogging of heat exchanger
- Excessive refrigerant amount



							(A
C	E	Indoor display	RUN light	TIMER light	Contont		
	Error code	muoor uispiay	ON	5-time flash	Content		
	Remote control: E36	Outdoor unit	Green LED	Red LED		Discharge pipe	
		control PCB	Keeps flashing	1-time flash		Discharge pipe	
		Outdoor unit	Yellow LED Keeps flashing			temperature error	
		inverter PCB					

All models

2. Error detection method

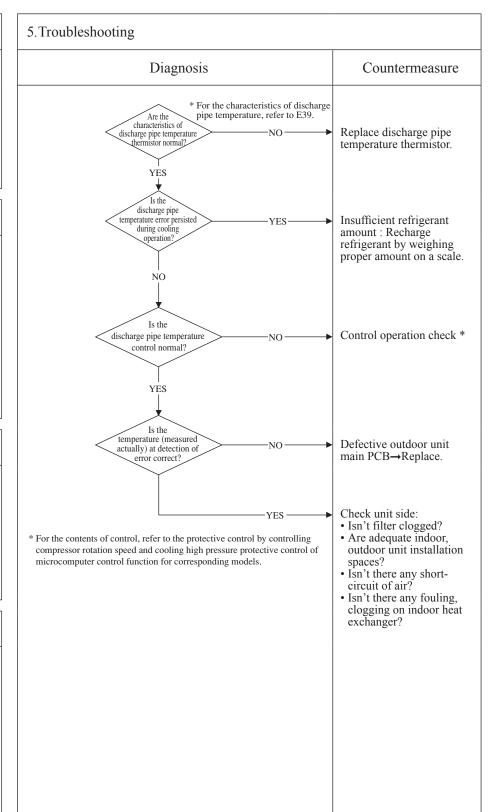
For the error detection method, refer to the protective control by controlling compressor rotation speed and cooling high pressure protective control of microcomputer control function for corresponding models.

3. Condition of error displayed

When discharge pipe temperature anomaly is detected 2 times within 60 minutes or this anomalous state is detected 60 minutes continuously including compressor stop.

4. Presumable cause

- · Defective outdoor unit main PCB
- Defective discharge pipe temperature thermistor
- Clogged filter
- Indoor, outdoor unit
- installation spaces
 Short-circuit of air on indoor, outdoor units
- · Fouling, clogging of heat exchanger



(A	Г. 1	Indoor display	RUN light	TIMER light
		Error code	ilidool display	Keeps flashing	2-time flash
		Remote control: E37	Outdoor unit	Green LED	Red LED
			control PCB	Keeps flashing	1-time flash
			Outdoor unit inverter PCB	Yellow	LED
				Keeps f	lashing

Outdoor heat exchanger temperature thermistor anomaly

1.Applicable model

All models

2. Error detection method

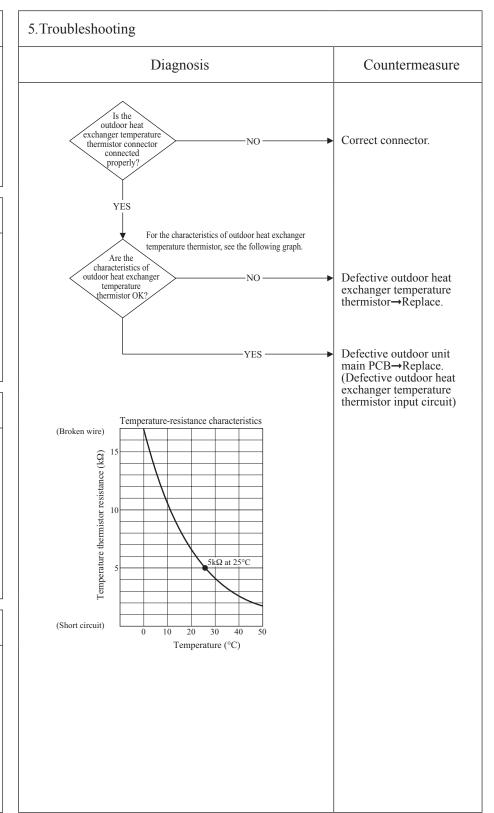
Detection of anomalously low temperature (resistance) on the outdoor heat exchanger temperature thermistor

3. Condition of error displayed

- When the temperature thermistor detects -50°C or lower for 20 seconds continuously within 2 minutes to 2 minutes 20 seconds after the compressor ON, the compressor stops. After 3-minutes delay, the compressor starts again automatically, but if this anomalous temperature is detected 3 times within 40 minutes.
- When -50°C or lower is detected for 5 seconds continuously within 20 second after compressor ON.

4. Presumable cause

- Defective outdoor unit main PCB
- Broken thermistor harness or temperature sensing section
- Disconnected wire connection (connector)



1	Ø	Г. 1	Indoor display	RUN light	TIMER light	Cantant
		Error code	muoor dispiay	Keeps flashing	1-time flash	Content
		Remote control: E38	Outdoor unit	Green LED	Red LED	Outdoor a
			control PCB	Keeps flashing	1-time flash	
			Outdoor unit	Yellow	LED	thermis
			inverter PCB	Keeps fl	lashing	***************************************

Outdoor air temperature thermistor anomaly

1. Applicable model

All models

2. Error detection method

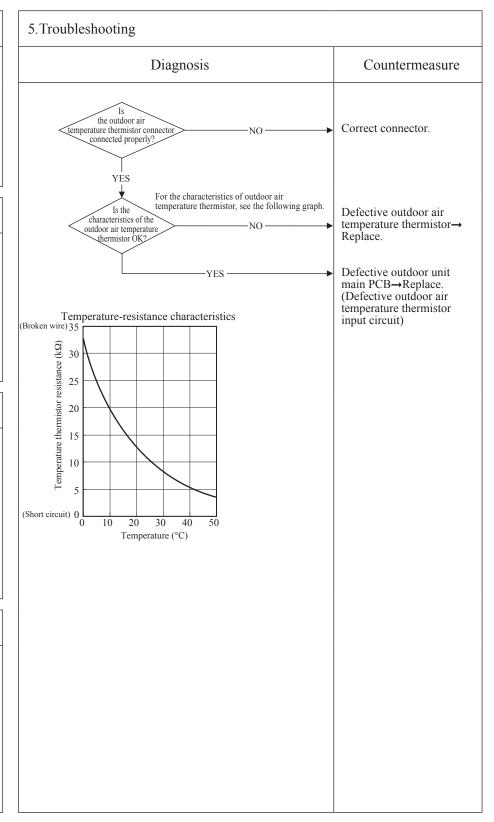
Detection of anomalously low temperature (resistance) on outdoor air temperature thermistor

3. Condition of error displayed

- When the temperature thermistor detects -45°C or lower for 5 seconds continuously within 2 minutes to 2 minutes 20 seconds after the compressor ON, the compressor stops. After 3-minutes delay, the compressor starts again automatically, but if this anomalous temperature is detected 3 times within 40 minutes.
- When -45°C or lower is detected for 5 seconds continuously within 20 second after compressor ON.

4. Presumable cause

- Defective outdoor unit main PCB
- Broken thermistor harness or temperature sensing section (Check molding.)
- Disconnected wire connection (connector)



1	Q	D1.	Indoor display	RUN light	TIMER light	Contont
		Error code	Indoor display	Keeps flashing	4-time flash	Content
		Remote control: E39	Outdoor unit	Green LED	Red LED	Dis
			control PCB	Keeps flashing	1-time flash	Dis
			Outdoor unit	Yellow	LED	temperature
ı			inverter PCB	Keeps f	lashing	or the desired

Discharge pipe emperature thermistor anomaly

1. Applicable model

All models

2. Error detection method

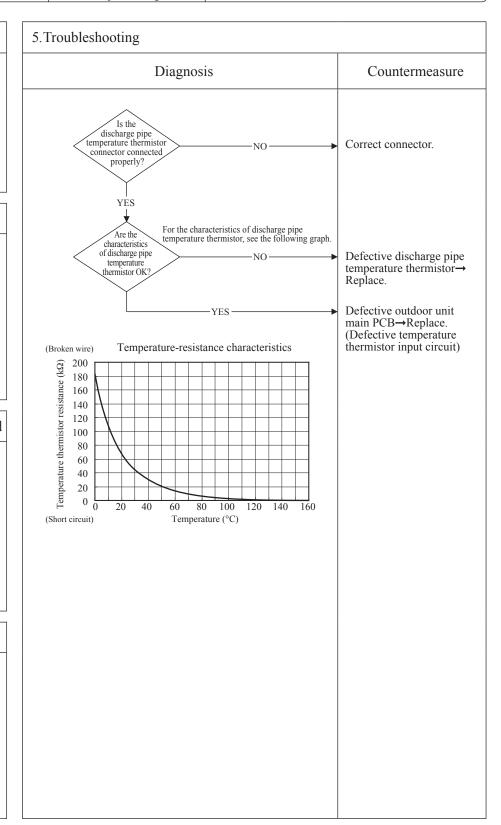
Detection of anomalously low temperature (resistance) on the discharge pipe temperature thermistor

3. Condition of error displayed

When the temperature thermistor detects -10°C or lower for 5 seconds continuously within 10 minutes to 10 minutes 20 seconds after the compressor ON, the compressor stops. After 3-minutes delay, the compressor starts again automatically, but if this anomalous temperature is detected 3 times within 40 minutes.

4. Presumable cause

- Defective outdoor unit main PCB
- Broken thermistor harness or temperature sensing section (Check molding.)
- Disconnected wire connection (connector)

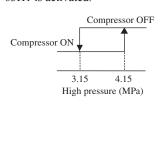


					<u> </u>
(I		Indoor display	RUN light	TIMER light	
	Error code	Indoor display	_	_	Content
	Remote control: E40	Outdoor unit	Green LED	Red LED	High pressure error
		control PCB	Keeps flashing	1-time flash	
		Outdoor unit	Yellow	LED	(63H1 activated)
		inverter PCB	Keeps flashing		(00111 000110000)

All models

2. Error detection method

When the high pressure switch 63H1 is activated.

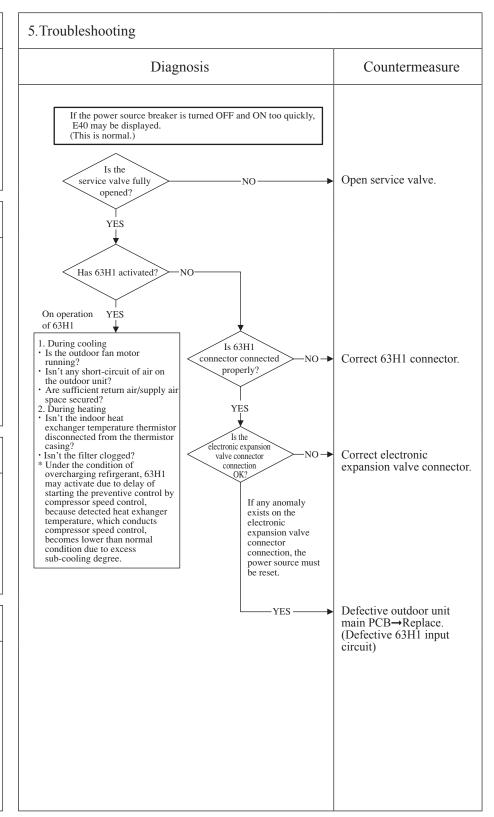


3. Condition of error displayed

If 63H1 turns OFF (opened), the compressor stops. After 3-minutes delay, the compressor restarts. If this anomaly occurs 5 times within 60 minutes or continues for 60 minutes continuously.

4. Presumable cause

- Short circuit of air flow, disturbance of air flow and clogging filter at outdoor heat exchanger/Breakdown of fan motor
- Defective outdoor unit main PCB
- Defective 63H1 connector
- Defective electronic expansion valve connector
- Closed service valve
- Mixing of non-condensing gas (nitrogen, etc.)



Note: In the protective control range for compressor startup (initial startup after power ON), even if 63H1 is activated only once (63H1turns OFF), immediately the error is displayed.

					\mathcal{G}
(I		Indoor display	RUN light	TIMER light	
	Error code	Indoor display	ON	1-time flash	Content
	Remote control: E42	Outdoor unit	Green LED	Red LED	
		control PCB	Keeps flashing	1-time flash	Current cut (1/2)
		Outdoor unit	Yellow LED		Current cut (1/2)
		inverter PCB	1-time flash		

All models

2. Error detection method

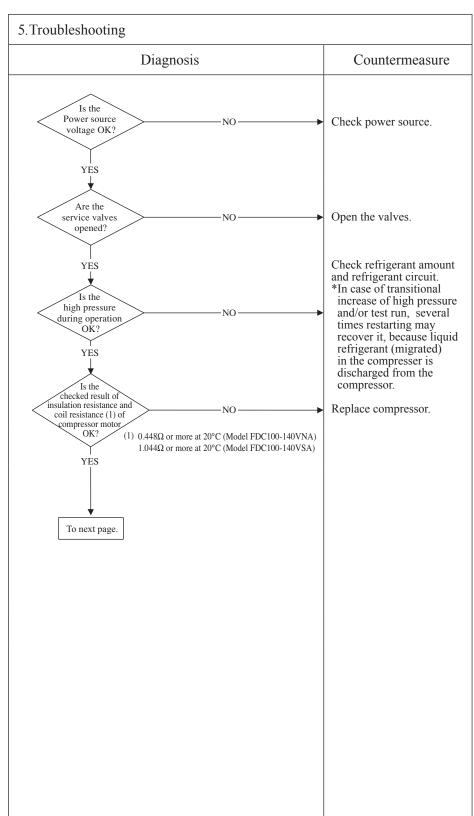
In order to prevent from overcurrent of inverter, if the current exceeds the specifications, it makes the compressor stopping.

3. Condition of error displayed

- If the output current of inveter exceeds the specifications, it makes the compressor stopping.
- After 3-minute delay, the compressor restarts, but if this amonaly occurs 4 times within 30 minute after the initial detection.

4. Presumable cause

- The valves closed
- Faulty power source
- Insufficient refrigerant amount
- Faulty compressor
- Faulty power transistor module



					\mathcal{G}
(I		Indoor display	RUN light	TIMER light	
	Error code	Indoor display	ON	1-time flash	Content
	Remote control: E42	Outdoor unit	Green LED	Red LED	
		control PCB	Keeps flashing	1-time flash	Current cut (2/2)
		Outdoor unit	Yellow LED		
		inverter PCB	1-time flash		

All models

2. Error detection method

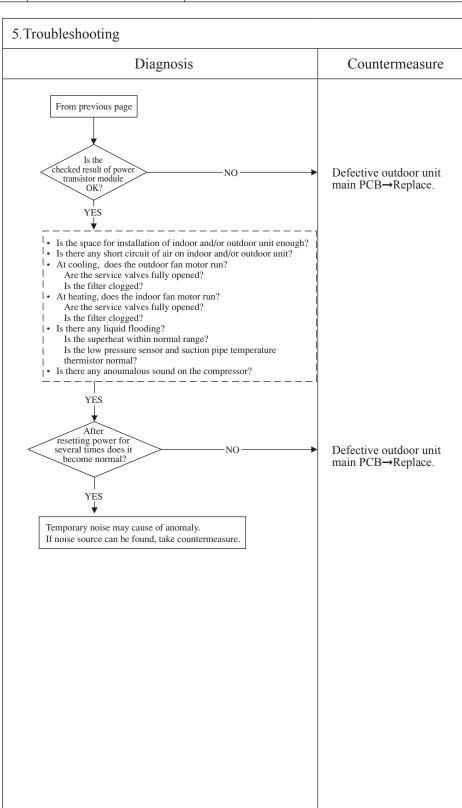
In order to prevent from overcurrent of inverter, if the current exceeds the specifications, it makes the compressor stopping.

3. Condition of error displayed

- If the output current of inveter exceeds the specifications, it makes the compressor stopping.
- After 3-minute delay, the compressor restarts, but if this amonaly occurs 4 times within 30 minute after the initial detection.

4. Presumable cause

- Defective outdoor unit main PCB
- · Faulty power source
- · Insufficient refrigerant amount
- Faulty compressor
- Faulty power transistor module



					<u> </u>
(1	Error code	Indoor display	RUN light	TIMER light	Content
	Remote control: E47	ilidool display	5-time flash	ON	Control PCB A/F module anomaly
		Outdoor unit	Green LED	Red LED	(Model FDC100-140VNA only)
		control PCB	Keeps flashing	1-time flash	

Model FDC100-140VNA

2. Error detection method

In order to avoid an unexpected trouble, if the protective circuit defect unexpected voltage, current and movement of the power element, it makes the compressor stopping.

3. Condition of error displayed

- If the A/F anomaly occurs, it makes the compressor stopping.
- After 3-minutes delay, the compressor restarts if this anomaly occurs 4 times within 30minutes or continues for 15minutes continuously.

4. Presumable cause

- Defective control PCB
- Defective reactor PCB

5.Troubleshooting	
Diagnosis	Countermeasure
Is the Power supply voltage OK? YES	Check power supply.
Are wires connected properly between the reactor PCB (PCB7) and the control PCB (PCB1)?	Correct wires
Change the control PCB (PCB1) Does it become nomal?	Change the reactor PCB (PCB7) and the connection wire between the reactor PCB (PCB7) and the control PCB (PCB1)

Ø	E 1	Indoor display	RUN light	TIMER light
	Error code	muoor uispiay	ON	7-time flash
	Remote control: E48	Outdoor unit	Green LED	Red LED
		control PCB	Keeps flashing	1-time flash
		Outdoor unit inverter PCB	Yellow LED	
			Keeps flashing	

Outdoor fan motor anomaly

1. Applicable model

All models

2. Error detection method

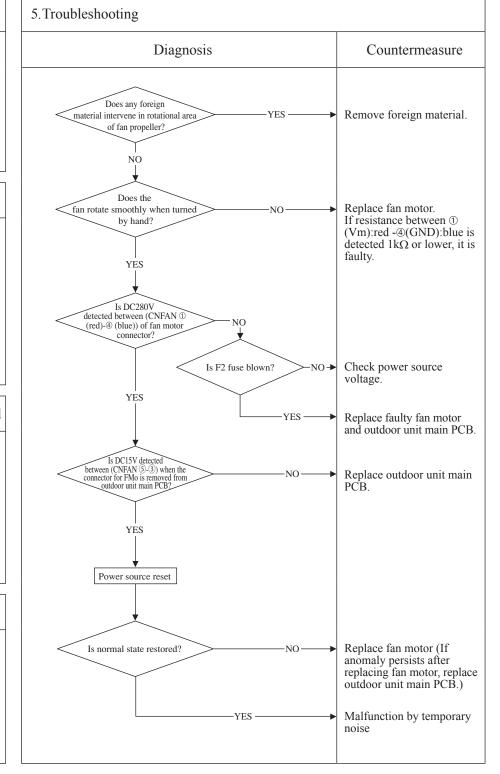
Detected by rotation speed of outdoor fan motor

3. Condition of error displayed

When actual rotation speed of outdoor fan motor (FMo1) drops to 100min⁻¹ or lower for 30 minutes continuously, the compressor and the outdoor fan motor stop. After 3-minutes delay, it starts again automatically, but if this anomaly occurs 5 times within 60 minutes after the initial detection.

4. Presumable cause

- · Defective outdoor unit main **PCB**
- · Foreign material at rotational area of fan propeller
- Defective fan motor
- Dust on outdoor unit main PCB
- · Blow fuse
- · External noise, surge



Note: When E48 error occurs, in almost cases F2 fuse (4A) on the outdoor unit control PCB is blown. There are a lot of cases that fuse is blown and E48 occurs due to defective fan motor. And even though only the outdoor unit control PCB (or fuse) is replaced,, another trouble (*1) could occur. Therefore when fuse is blown, check whether the fan motor is OK or not.

After confirming the fan motor normal, check by power ON. (Don't power ON without confirming the fan motor normal.)
*1 The error which does not seem to relate E48 may occur like as "WAIT", Stay OFF of LED on outdoor unit control PCB, inverter communication error (E45) and etc.

					9
6	Г 1	Indoor display	RUN light	TIMER light	Gtt
	Error code	ilidool display	ON	4-time flash	Content
	Remote control: E51	Outdoor unit	Green LED	Red LED	
		control PCB	Keeps flashing	1-time flash	Inverter and fan motor anomaly
		Outdoor unit	Yellow	LED	The state of the s
		inverter PCB	6-time	flash	

		Outdoor unit	Yellow LED	involver and la	in intotor unformary
. ,		inverter PCB	6-time flash		
<u> </u>	l.Applicable model	5.	Troubleshooting		
All models			Diagnos	Countermeasure	
			Models FDC100-140VNA/VS Replace immediately the main P	6 A CB.	
,	2.Error detection met	thod			
i	When power transistor and s detected for 15 minutes ontinuously	omaly			
	2 Condition of arror dis	played			
_	3. Condition of error dis	piayeu			
\$	same as above				
4	4. Presumable cause				
•	Defective outdoor fan m Defective outdoor unit m PCB	otor nain			

Note:			

1	Q	Г. 1	Indoor display	RUN light	TIMER light
		Error code	muoor uispiay	Keeps flashing	5-time flash
		Remote control: E53	Outdoor unit	Green LED	Red LED
			control PCB	Keeps flashing	1-time flash
			Outdoor unit	Yellow	LED
			inverter PCB	Keeps f	lashing

Suction pipe temperature thermistor anomaly

1. Applicable model

All models

5. Troubleshooting

Diagnosis	Countermeasure

2. Error detection method

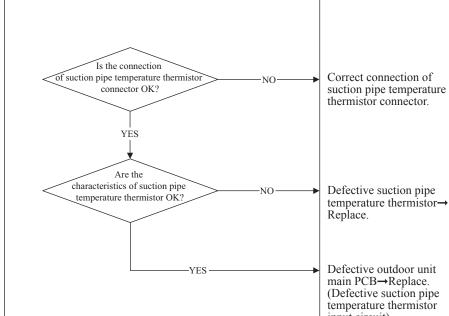
When the suction pipe temperature thermistor detects anomalously low temperature

3. Condition of error displayed

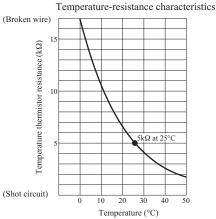
If the temperature thermistor detects -50°C or lower for 5 seconds continuously within 10 minutes to 10 minutes 20 seconds after compressor ON, the compressor stops. When the compressor is restarted automatically after 3-minutes delay, if this anomaly ocuurs 3 times within 40 minute.

4. Presumable cause

- Defective suction pipe temperature thermistor connection
- Defective suction pipe temperature thermistor
- Defective outdoor unit main PCB



Defective outdoor unit main PCB→Replace. (Defective suction pipe temperature thermistor input circuit)



Œ		Indoor display	RUN light	TIMER light
	Error code	muoor uispiay	7-time flash	ON
	Remote control: E57	Outdoor unit	Green LED	Red LED
		control PCB	Keeps flashing	1-time flash
		Outdoor unit	Yellow	LED
		inverter PCB	Keens f	ashino

Insufficient refrigerant amount or detection of service valve closure

1. Applicable model

All models

2. Error detection method

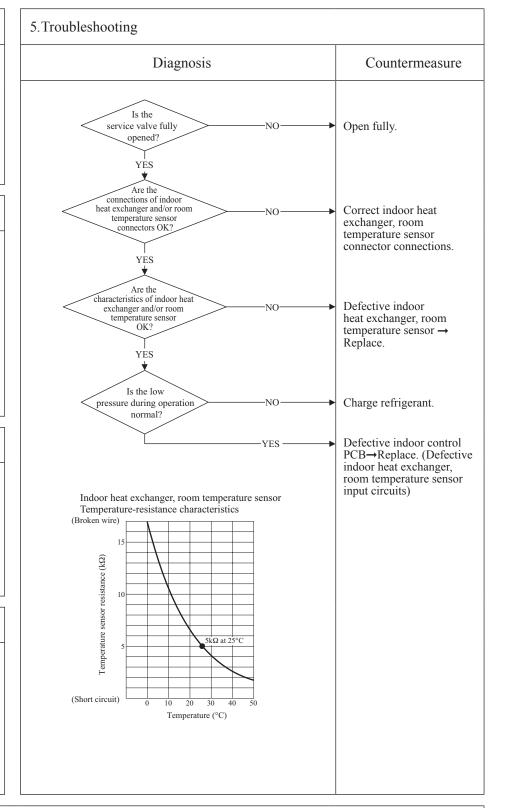
- Judge insufficient refrigerant amount by detecting the temperature differnce between indoor heat exchanger (Th2) and indoor room (Th1).
- It detects at initial startup in cooling or dehumidifying mode after power ON.

3. Condition of error displayed

Anomalous stop at initial detection

4. Presumable cause

- Defective indoor heat exchanger temperature sensor
- Defective indoor room temperature sensor
- Defective indoor unit control PCB
- · Insufficient refrigerant amount



Note: Insufficient refrigerant amount preventive control makes compressor stopped, if it judges insufficient refrigerant amount by detecting the temperature difference between indoor heat exchanger (Th2) and room temperature (Th1) for 1 minute after compressor ON in cooling or dehumidifying mode and for 9 minutes after compressor ON in heating mode. [in cooling mode: (Th1)-(Th2)>4degC, in heating mode: (Th2)-(Th1)<4degC]

					<u> </u>
(I		Indoor display	RUN light	TIMER light	Ctt
	Error code	ilidool display	_	_	Content
	Remote control: E59	Outdoor unit	Green LED	Red LED	
		control PCB	Keeps flashing	5-time flash	Compressor startup failure (1/2)
		Outdoor unit	Yellow	LED	Compressor startup ramare (1/2)
		inverter PCB	Stays	OFF	

All models

2. Error detection method

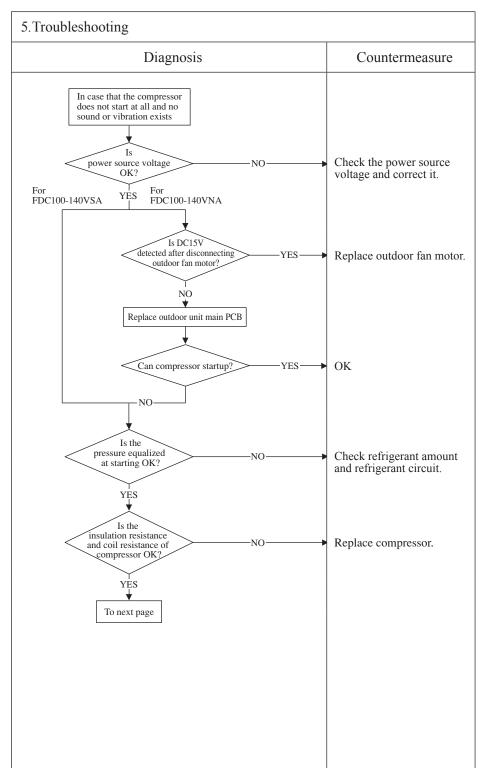
When it fails to change over to the operation for rotor position detection of compressor motor

3. Condition of error displayed

If the compressor fails to startup for 20 times (10 patterns x2 times) continuously.

4. Presumable cause

- Faulty outdoor fan motor
- Faulty outdoor unit main PCB
- Anomalous power source voltage
- Insufficient or Excessive refrigerant amount
- · Faulty component for refrigerant circuit
- Compressor anomaly (Motor or bearing)



Note: Insulation resistance

- The unit is left for long period without power source or soon after installation, insulation resistance may decrease to several $M\Omega$ or lower due to the liquid refrigerant migrated in the refrigerant oil in compressor. If the electric leakage breaker is activated due to low insulation resistance, check followings.

 © Check whether the insulation resistance can recover or not, after 6 hours has passed since power ON.

 (By energize the crankcase heater, liquid refrigerant migrated in the refrigerant oil in compressor can be evaporated)

 © Check whether the electric leakage breaker conforms to high-harmonic specifications

 (As INVERTR PAC units has inverter, in order to prevent from improper operation, be sure to use the breaker of high-harmonic type)

					<u> </u>
U		Indoor display	RUN light	TIMER light	Gtt
	Error code	ilidool display	_	_	Content
	Remote control: E59	Outdoor unit	Green LED	Red LED	
		control PCB	Keeps flashing	5-time flash	Compressor startup failure (2/2)
		Outdoor unit	Yellow	LED	Compressor startup famare (2/2)
		inverter PCB	Stays	OFF	
1					

1. Applicable model 5. Troubleshooting All models Diagnosis Countermeasure From previous page YES Is the (outdoor unit main PCB anomaly) Replace outdoor unit main PCB power transistor NO: module OK? 2. Error detection method YES After power OFF, turn SW6-4 of outdoor unit main PCB ON and connect the outdoor unit main checker. Then power ON again. inverter output OK? (Check by inverter checker) Replace outdoor unit main PCB. Note(1) Several times restarting may recover it, because liquid refrigerant migrated in the compressor could be discharged from the compressor. YES 3. Condition of error displayed Try to restart several times Replace compressor. Does it start? NO 4. Presumable cause • Faulty outdoor fan motor • Faulty outdoor unit main PCB • Anomalous power source voltage • Insufficient or Excessive refrigerant amount • Faulty component for refrigerant circuit • Compressor anomaly (Motor or bearing)

Note:			

1.13 DISASSEMBLY PROCEDURE

Precautions for safety ! WARNING

- Read these "Precautions for safety" carefully before starting disassembly work and do it in the proper way.
- When disassembling, be sure to turn off the power. When disassembling the electrical components, check the electrical wiring diagram.
- The electrical components are under high voltage by the operation of the booster capacitor.
- Fully discharge the capacitor before commencing a repair work. Failure to observe this warning could result in electric shock.
- When parts of refrigerant cycle is disassembled by welding, be sure to work after collecting a refrigerant, if the refrigerant isn't collected, the unit might explode.
- Be sure to collect refrigerant without spreading it in the air.
- These contents are an example. Please refer to a similar part of actual unit.

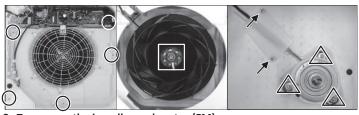
(1) Indoor unit

(a) FDT series









3. To remove the impeller and motor (FM)

- (1) Remove the lid of control box. (See No.1)
- (2) Disconnect the motor connector(CNMx) on PCB in control box.
- (3) Remove 5 bellmouth fixing screws and remove it.(O mark)
- (4) Remove the impeller fixing nut and remove it.(☐ mark)
- (5) Remove 2 plate fixing screws and remove it.(← mark)
- (6) Remove 3 motor fixing nuts and remove it.(△ mark)





5. To remove drain pump (DM) and flot switch (FS)

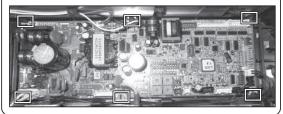
- (1) Remove the drain pan. (See No.4)
- (2) Pull the hose to the arrow direction and remove it.
- (3) Remove 3 drain pump fixing screws and remove it.(O mark)
- (4) Remove the flot switch fixing screw and remove it.(☐ mark)

1. To remove the lid of control box

(1) Remove 2 lid fixing screws and remove it.

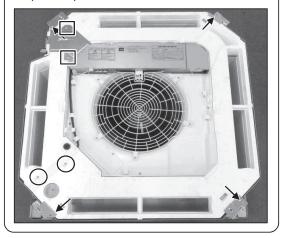
2. To remove the printed circuit board (PCB)

- (1) Remove the lid of control box. (See No.1)
- (2) Pull off all the inserted connectors.
- (3) Take off 6 fixing hooks and remove it.



4. To remove the drain pan

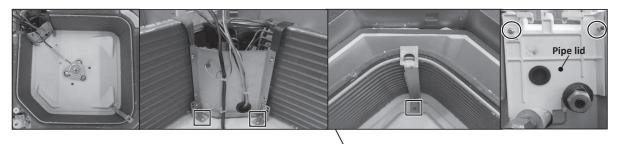
- (1) Remove the lid of control box. (See No.1)
- (2) Pull off all the inserted connectors.
- (3) Remove 2 plate fixing screws and remove it. (O mark)
- (4) Remove 2 lid fixing screws and remove it. (□ mark)
- (5) Remove 4 drain pan fixing screws and remove it. (← mark)





6. To remove the thermistors (example "Thi-R1")

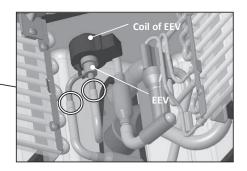
- (1) Remove the drain pan. (See No.4)
- (2) Pull out the thermistor"Thi-R1" from the sensor holder.



- 7. To remove the heat exchanger assembly

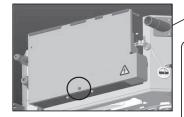
 - (1) Remove the drain pan.(See No.4)
 (2) Remove 2 pipe lid fixing screws and remove it.(○ mark)
 (3) Remove 3 heat exchanger assembly fixing screws and remove it.(□ mark)
- 8. To remove the Electronic Expansion Valve (EEV)

 - Remove the heat exchanger assembly.(See No.7)
 Remove the coil of EEV by pull out on the top.
 Remove welded part of EEV by welding.(O mark)



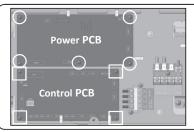


(b) FDTC series PJA012D792



1. To remove the lid of control box

(1) Remove the lid fixing screw and remove it.

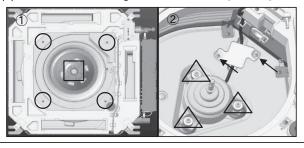


2. To remove the printed circuit board (PCB)

- (1) Remove the lid of control box.(See No.1)
- (2) Pull off all the inserted connectors.
- Power PCB
 - (3) Take off 5 power PCB fixing locking supports and remove it.(O mark)
- Control PCB
 - (4) Take off 4 control PCB fixing locking supports and remove it.(☐ mark)

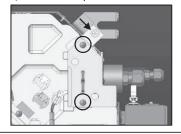
3. To remove the impeller and motor (FM)

- (1) Remove the lid of control box. (See No.1)
- (2) Disconnect the motor connector(CNMx) in the middle of wiring.
- (3) Remove 4 bellmouth fixing screws and remove it.(O mark)
- (4) Remove the impeller fixing nut and remove it.(□ mark)
- (5) Remove 2 plate fixing screws and remove it.(← mark)
- (6) Remove 3 motor fixing nuts and remove it.(△ mark)



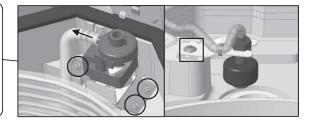
4. To remove the drain pan

- Remove 2 plate fixing screws and remove it. (O mark)
- (2) Remove 4 drain pan fixing screws and remove it. (← mark, Four corners)



5. To remove drain pump (DM) and flot switch (FS)

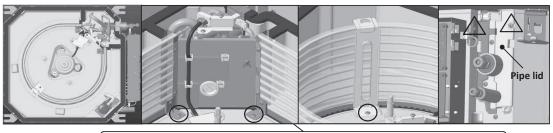
- (1) Remove the lid of control box. (See No.1)
- (2) Disconnect the drain pump connector(CNRx) and flot switch connector(CNIx) in the middle of wiring.
- (4) Remove the drain pan. (See No.4)
- (5) Pull the hose to the arrow direction and remove it.
- (6) Remove 3 drain pump fixing screws and remove it.(O mark)
- (7) Remove the flot switch fixing screw and remove it.(□ mark)





6. To remove the thermistors (example "Thi-R1")

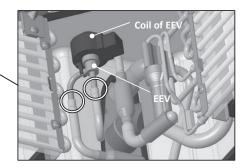
- (1) Remove the lid of control box. (See No.1)
- (2) Disconnect the Tho-R1 connector(CNNx) in the middle of wiring.
- (3) Remove the drain pan. (See No.3)
- (4) Pull out the thermistor"Thi-R1" from the sensor holder.



- 7. To remove the heat exchanger assembly
 - (1) Remove the drain pan. (See No.4)

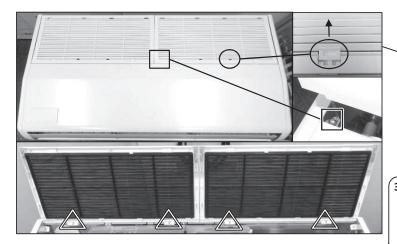
 - (2) Remove 2 plate fixing screws and remove it.(△ mark)
 (3) Remove 3 heat exchanger assembly fixing screws and remove it.(○ mark)
- 8. To remove the Electronic Expansion Valve (EEV)

 - Remove the heat exchanger assembly.(See No.7)
 Remove the coil of EEV by pull out on the top.
 Remove welded part of EEV by welding.(O mark)





(c) FDE series PFA012D631



1. To remove air inlet grille.

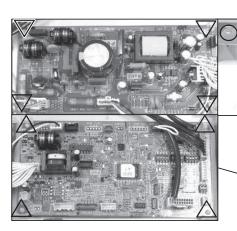
- (1) Slide the hook in the direction of the arrow.(O mark)
- (2) Remove 4 wire fixing screws.(☐ mark)
- (3) Remove 4 air inlet grille fixing screws.(△ mark)

2. To remove the lid of control box

- (1) To remove air inlet grille.(See.No.1)
- (2) Remove 2 wire fixing screws and remove it. (← mark)
- (3) Remove 2 lid fixing screws and remove it. (O mark)

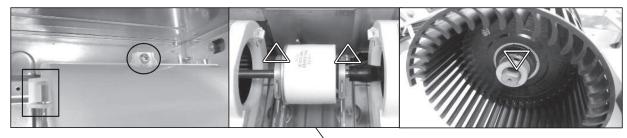
3. To remove the control box

- (1) Remove the lid of control box.(See No.2)
- (2) Pull off all the inserted connectors.
- (3) Remove 2 control box fixing screws and remve it.(mark)
- (4) Pull out the control box.



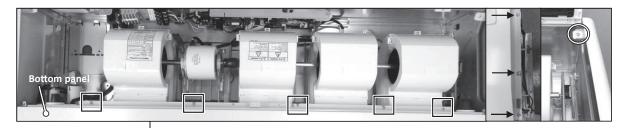


- (1) Remove the lid of control box.(See No.2)
- (2) Pull off all the inserted connectors.
- Control PCB
 - (3) Take off 4 control PCB fixing locking supports and remove it.(△ mark)
- Power PCB
 - (4) Take off 4 power PCB fixing locking supports and remove it.(∇ mark)



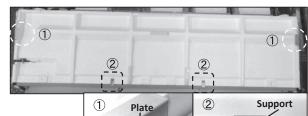
5. To remove the impeller and motor (FM)

- (1) Remove the lid of control box.(See No.1)
- (2) Disconnect the motor connector(CNFx) in the middle way of wiring.
- (3) Remove the fan casing fixing screw.(O mark) Take off the fan casing fixing hook and remove it.(□ mark)
- (4) Remove the impeller fixing screw and remove it.(∇ mark) (5) Remove 2 motor fixing screws and remove it.(△ mark)



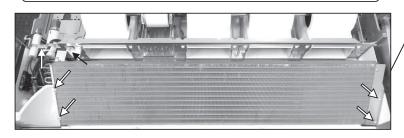
6. To remove side panel and bottom panel

- (1) Remove air inlet grille. (See No.1)
- (2) Remove the right and left side panel fixing screws and remove it.(O mark)
- (3) Remove 5 bottom panel fixing screws.(☐ mark) Remove 6 bottom panel fixing screws and remove it. (← mark, left and right side)



7. To remove drain pan

- (1) Remove side panel and bottom panel. (See No.5)
- (2) Remove 2 plate fixing screws and remove it.(O mark, Pic.①)
- (3) Remove 2 support fixing screws and remove it.(☐ mark, Pic.②)
- (4) Pull out the drain pan.



8. To remove the heat exchanger assembly

- (1) Remove the drain pan. (See No.6)
- (2) Remove 6 heat exchanger assy fixing screws and remove it.(← mark)

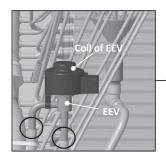


9. To remove the louver motor (LM)

- (1) Remove the lid of control box. (See No.1)
- (2) Disconnect the louver motor connector (CNJ) on PCB in control box.
- (3) Remove side panel.(See No.5)
- (4) Remove 2 louver motor fixing screws and remove it.

10. To remove the thermistors (example "Thi-R3")

- (1) Remove the lid of control box. (See No.1)
- (2) Disconnect the Tho-R3 connector(CNNx) on PCB in control box.
- (3) Remove the drain pan. (See No.3)
- (4) Pull out the thermistor"Thi-R1" from the sensor holder.



11. To remove the Electronic Expansion Valve (EEV)

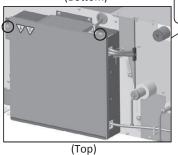
- (1) Remove the heat exchanger assembly.(See No.9)
- (2) Remove the coil of EEV by pull out on the top.
- (3) Remove welded part of EEV by welding.(O mark)



(d) FDU, FDUM series

PJG012D019

(Bottom)



To remove the lid of control box

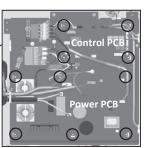
(1) Remove 2 lid fixing screws and remove it.

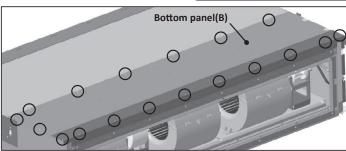
2. To remove the printed circuit board (PCB)

- (1) Remove the lid of control box.(See No.1)
- (2) Pull off all the inserted connectors.

Control PCB

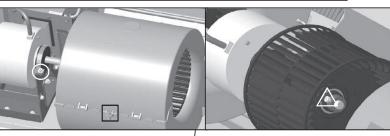
- (3) Take off 4 control PCB fixing locking supports(O mark) and remove it.
- Power PCB
 - (4) Take off 6 power PCB fixing locking supports(O mark) and remove it.





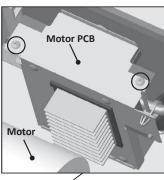
To remove the bottom panel(B)

(1) Remove 18 panel fixing screws and remove it.

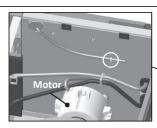




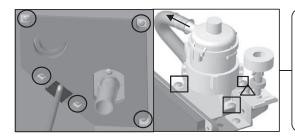
- 4. To remove the impellers and motors(FM) (1) Remove the lid of control box. (See No.1)
 - (2) Remove the bottom panel(B).(See No.3)
 - (3) Disconnect the motor connector(CNFMx or CNMx) on PCB in control box.
 - (4) Remove the motor fixing screw and remove it. (O mark/right and left side)
 - (5) Remove the fan casing fixing screw and remove it.(□ mark)
 - (6) Remove the sirocco fan fixing bolt and remove it.(△ mark)



- To remove the motor PCB
 - (1) Remove the lid of control box. (See No.1)
 - (2) Remove the bottom panel(B). (See No.3)
 - (3) Disconnect the motor PCB connector (CNFMx or CNMx)on PCB in control box.
 - (4) Remove 2 motor PCB fixing screws and remove it.

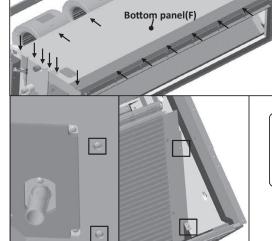


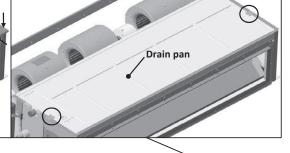
- To remove the thermistors (example "Thi-A")
 - (1) Remove the lid of control box. (See No.1)
 - (2) Remove the bottom panel(B).(See No.3)
 - (3) Disconnect the Thi-A connector(CNH) on PCB in control box.
 - (4) Pull the thermistor fixing clip and remove it.(O mark)



7. To remove the drain pump(DM) and flot switch(FS)

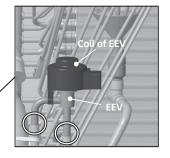
- (1) Remove the lid of control box.(See No.1)
- (2) Remove 5 drain pump assembly fixing screws and remove it.(O mark)
- (3) Disconnect the drain pump connector(CNR) on PCB in control box.
- (4) Pull a hose to the arrow direction and remove it.
- (5) Remove 3 drain pump fixing screws and remove it.(☐ mark)
- (6) Disconnect the flot switch connector(CNI) on PCB in control box.
- (7) Remove the flot switch fixing screw and remove it.(△ mark)





8. To remove the heat exchanger assembly

- (1) Remove the bottom panel(B).(See No.3)
- (2) Remove 22 bottom panel(F) fixing screws and remove it.(← mark)
- (3) Remove 2 drain pan fixing screws and remove it.(O mark)
- (4) Remove 4 heat exchanger assy fixing screws and remove it.(□ mark)



9. To remove the Electronic Expansion Valve (EEV)

- (1) Remove the heat exchanger assembly. (See No.8)
- (2) Remove the coil of EEV by pull out on the top.
- (3) Remove welded part of EEV by welding.(O mark)



10. To remove the thermistors (example "Thi-R3")

- (1) Remove the lid of control box. (See No.1)
- (2) Disconnect the Thi-R3 connector(CNN) on PWB in control box.
- (3) Remove the drain pan. (See No.8)
- (4) Pull out the thermistor"Thi-R3" from the sensor holder.



(e) FDF series PGA012D410



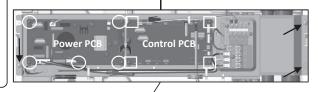
1. To remove the air inlet grille

(1) Pull the air inlet grille forward and remove it.



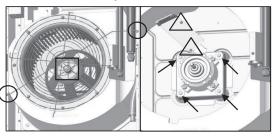
- 2. To remove the lid of control box
- (1) Remove the air inlet grille(See No.1)
- (2) Remove 2 the lid fixing screw and remove it.

- 3. To remove the control box
 - (1) Remove the lid of control box.(See No.2)
 - (2) Pull off all the inserted connectors.
 - (3) Remove 3 control box fixing screws and remove it. (← mark)



5. To remove the impeller and motor (FM)

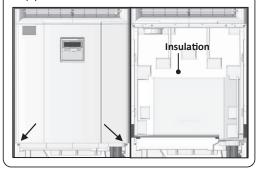
- (1) Remove the lid of control box. (See No.2)
- (2) Disconnect the motor connector(CNM) on PCB in control box.
- (3) Remove 2 fan guard fixing screws and remove it.(O mark)
- (4) Remove the impeller fixing nut and remove it.(☐ mark)
- (5) Remove 2 plate fixing screws and remove it.(△ mark)
- (6) Remove 4 motor fixing nuts and remove it.(← mark)



4. To remove the printed circuit board (PCB)

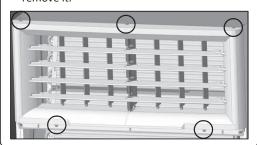
- (1) Remove the lid of control box. (See No.2)
- (2) Pull off all the inserted connectors.
- Power PCB
 - (3) Take off 5 power PCB fixing locking supports and remove it.(O mark)
- Control PCB
 - (4) Take off 4 control PCB fixing locking supports and remove it.(□ mark)

- 6. To remove the center panel assembly
 - (1) Remove the air inlet grille.(See No.1)(2) Remove 2 center panel fixing screws and
 - remove it.(← mark)
 - (3) Pull the insulation out.



7. To remove the air outlet grille

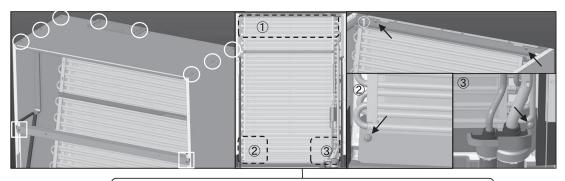
- (1) Remove the lid of control box. (See No.2)
- (2) Disconnect the luover motor connector(CNJ2) in the middle of wiring.
- (3) Remove the center panel assembly. (See No.6)
- (4) Remove 5 air outlet grille fixing screws and remove it.





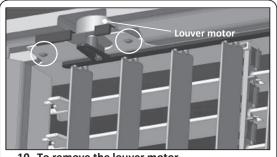
8. To remove the thermistors (example"Thi-R3")

- (1) Remove the lid of control box. (See No.2)
- (2) Disconnect the Tho-R3 connector(CNN) on PCB in control box.
- (3) Remove the center panel assembly. (See No.6)
- (4) Pull out the thermistor"Thi-R3" from the sensor holder.



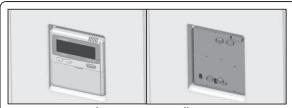
- 9. To remove the heat exchanger assembly
 (1) Remove the center panel assembly.(See No.6)

 - (2) Remove 8 top panel fixing screws and remove it.(○ mark)
 (3) Remove 2 support fixing screws and remove it.(□ mark)
 (4) Remove 4 heat exchanger assy fixing screws and remove it.(← mark)



- 10. To remove the louver motor

 - (1) Remove the air outlet grille.(See No.7)(2) Remove 2 louver motor fixing screws and remove it.(O mark)



11. To remove the remote controller

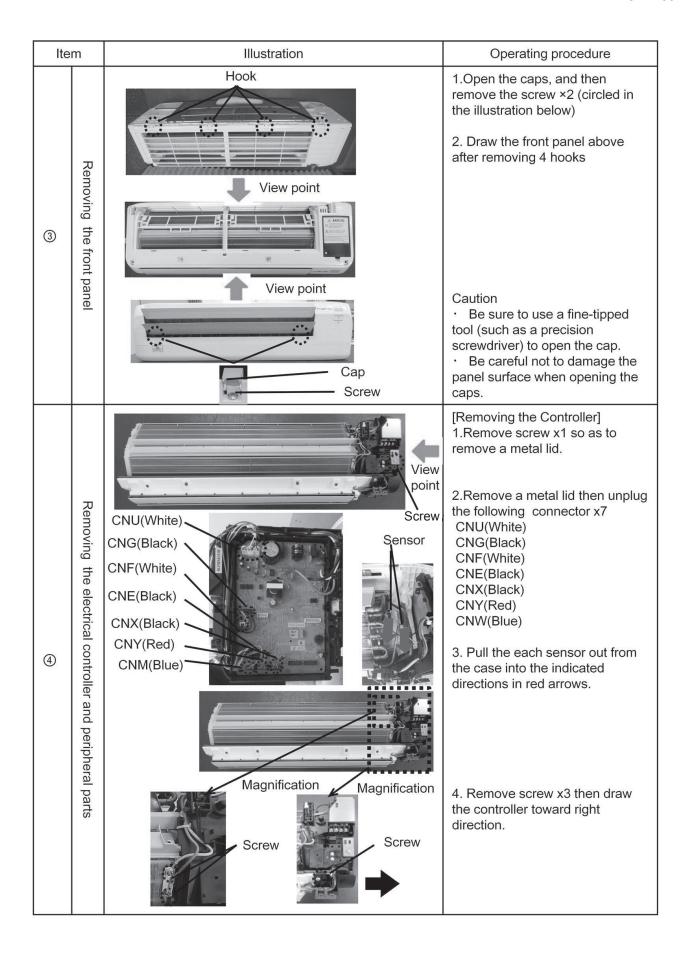
(1) Take off the remote controller case hooks and remove it.

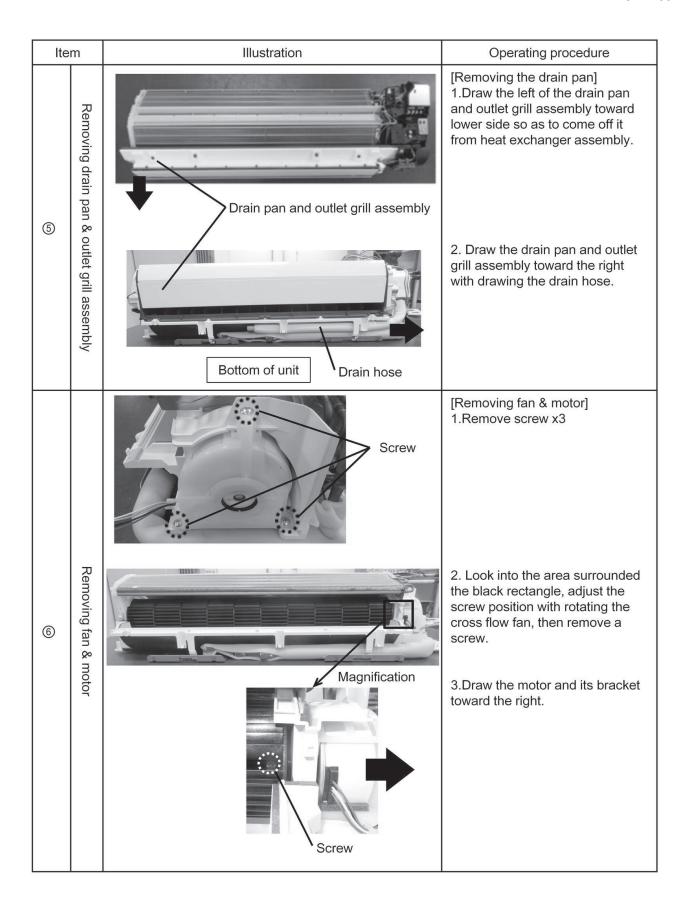


General view

(f) SRK series PHA012D402

Ite	m	Illustration	Operating procedure
1		Air inlet panel	[Removing the air inlet panel] 1.Hold lower edge of the air inlet panel, and then open it to about 80°.
	Removing the front panel	Air filter	[Removing the filter] 1.Remove the air filter ×2.
2	el	Air cleaning filter	2.Remove the air-cleaning filter ×2 3.Holding both sides of the air inlet panel, pull the left and right sides forward at the same time to remove the panel.





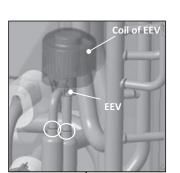
Ite	m	Illustration	Operating procedure
7	Disassemble the motor	Hook	[Removing the motor case] 1.Release the hook ×4 (circled in the illustration), and then remove the motor case (U).
	Removing th	Screw	1.Remove the screw ×2 (circled in the illustration) on the left side of the heat exchanger.
8	Removing the fan and heat exchanger		2.While lifting up and supporting the left side of the heat exchanger, pull out the fan to the left, keeping it angled down.

(2) Outdoor unit

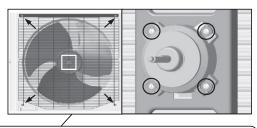
PCA012D089

1. To remove the service panel

(1) Remove 5 service panel fixing screws and remove it.







2. To remove the fan motor (FM)

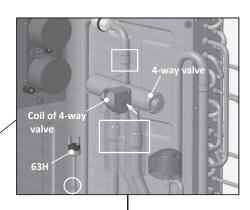
- (1) Remove the service panel. (See No.1)
- (2) Disconnect the motor connector(FMxx or CNFxx) on PCB in control box.
- (3) Remove 4 fan guard fixing screws and remove it.(← mark)
- (4) Remove the propeller fan fixing nut and remove it.(□ mark)
- (5) Remove 4 fan motor fixing nuts and remove it.(O mark)

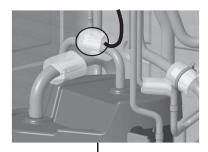
3. To remove the electronic expantion valve (EEV)

- (1) Remove the service panel. (See No.1)
- (2) Disconnect the EEV connector(CNEEVx) on PCB in control box.
- (3) Remove the coil of EEV by pull out on the top.
- (4) Remove welded part of EEV by welding. (O mark)

4. To remove the high pressure switch (63H)

- (1) Remove the service panel. (See No.1)
- (2) Disconnect the 63H connector(CNH) on PCB in control box.
- (3) Remove welded part of high pressure switch by welding.(O mark)





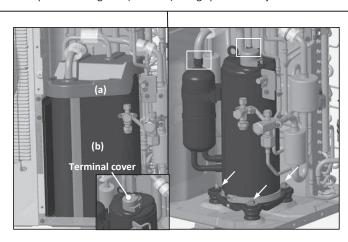
5. To remove the 4-way valve (20S)

- (1) Remove the service panel. (See No.1)
- (2) Disconnect the coil of 4-way valve connector (CNS) on PCB in control box.
- (3) Remove the coil of 4-way valve fixing screw and remove it.(← mark)
- (4) Remove welded part of 4-way valve by welding. (☐ mark)

6. To remove the thermistors (example "Tho-D1")

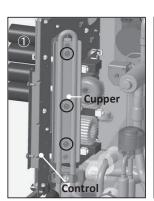
- (1) Remove the service panel. (See No.1)
- (2) Disconnect the Tho-D1 connector(CNTH) on PCB in control box.
- (3) Pull out the thermistor"Tho-D1" from the sensor holder.

- 7. To remove the compressor (CM)
- (1) Remove the service panel.(See No.1)
- (2) Remove the insulation which covers compressor. (Strings (a) ~ (b) should be loosen.)
- (3) Remove the terminal cover fixing bolt and remove it, and disconnect the power wiring.
- (4) Remove welded part of compressor by welding. (☐ mark)
- (5) Remove 3 compressor fixing nuts(← mark) using spaner or adjustable wrench.



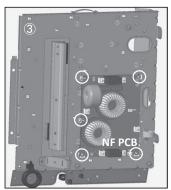
8. To remove the printed circuit board (PCB)

- (1) Remove the service panel and rear panel, top panel.
- (2) Remove 3 cupper plate fixing screws.(O mark, Pic.①)
- (3) Pull off all the inserted connectors of control PCB.(Pic.②)
- (4) Take off 10 control PCB fixing locking supports and remove it.(O mark, Pic.②)
- (5) Pull off all the inserted connectors of NF PCB.(Pic.③)
- (6) Take off 5 NF PCB fixing locking supports and remove it.(O mark, Pic.③)





Front of controller



Rear of controller

1.14 TECHNICAL INFORMATION

(1) Ceiling cassette - 4 way type (FDT) Model FDT100VNAVG

Information to identify the model(s) to which	h the inforn	nation relati	es to:	If function includes heating: Indicate the h	eating seas	on the
Indoor unit model name	FDT100V		es to.	information relates to. Indicated values sh		
Outdoor unit model name	FDC100V	-		heating season at a time. Include at least		
Outdoor unit model name	ILDC 1004	IVA		I lieating season at a time. Include at least	the neating	season Average.
E (C) (C)				1		
Function(indicate if present)				Average(mandatory)	Yes	
cooling	Yes			Warmer(if designated)	No	
heating	Yes			Colder(if designated)	No	
Item	symbol	value	unit	Item	symbol	value class
Design load				Seasonal efficiency and energy efficiency	class	
cooling	Pdesigno	10.0	kW	cooling	SEER	6.78 A++
heating / Average	Pdesignh	8.5	kW	heating / Average	SCOP/A	4.52 A+
heating / Warmer	Pdesignh		kW	heating / Warmer	SCOP/W	
heating / Colder	Pdesignh	-	kW	heating / Colder	SCOP/C	
						unit
Declared capacity at outdoor temperature			_	Back up heating capacity at outdoor temp		
heating / Average (-10°C)	Pdh	8.5	kW	heating / Average (-10°C)	elbu	0 kW
heating / Warmer (2°C)	Pdh	-	kW	heating / Warmer (2°C)	elbu	- kW
heating / Colder (-22°C)	Pdh	-	kW	heating / Colder (-22°C)	elbu	- kW
, ,						
Declared capacity for cooling, at indoor te	mperature 2	7(19)°C an	d	Declared energy efficiency ratio, at indoor	temperatur	e 27(19)°C and
outdoor temperature Tj	po.ata.o _	. (10) 0 a	~	outdoor temperature Tj	tomporatar	5 = . (. 5)
Tj=35°C	Pdc	10.0	kW	Tj=35°C	EERd	3.66 -
Tj=30°C	Pdc	7.37	kW	Tj=30°C	EERd	5.20 -
Tj=25°C	Pdc	4.74	kW	Tj=25°C	EERd	8.95 -
Tj=20°C	Pdc	3.55	kW	Tj=20°C	EERd	12.3 -
Declared capacity for heating / Average se	eason, at inc	door		Declared coefficient of performance / Ave	rage seasor	ı, at indoor
temperature 20°C and outdoor temperatur				temperature 20°C and outdoor temperature		
Tj=-7°C	Pdh	7.52	kW	Tj=-7°C	COPd	3.34 -
Tj=2°C	Pdh	4.58	kW	Tj=2°C	COPd	4.22
Tj=2 C Tj=7°C	Pdh		kW		COPa	5.92
		2.94		117		
Tj=12°C	Pdh	2.77	kW	Tj=12°C	COPd	6.93 -
Tj=bivalent temperature	Pdh	6.77	kW	Tj=bivalent temperature	COPd	2.51 -
Tj=operating limit	Pdh	8.5	kW	Tj=operating limit	COPd	2.84 -
		•				
Declared capacity for heating / Warmer se	ason, at inc	loor		Declared coefficient of performance / Wai	mer season	, at indoor
temperature 20°C and outdoor temperatur	e Ti			temperature 20°C and outdoor temperature	e Ti	
Tj=2°C	Pdh	-	kW	Tj=2°C	COPd	
Tj=7°C	Pdh	-	kW	Tj=7°C	COPd	
1 *				1 1 -		
Tj=12°C	Pdh	-	kW	Tj=12°C	COPd	
Tj=bivalent temperature	Pdh	-	kW	Tj=bivalent temperature	COPd	
Tj=operating limit	Pdh	-	kW	Tj=operating limit	COPd	
Declared capacity for heating / Colder sea	son, at indo	or		Declared coefficient of performance / Colo	der season,	at indoor
temperature 20°C and outdoor temperatur				temperature 20°C and outdoor temperature	e Ti	
Tj=-7°C	Pdh	-	kW	Tj=-7°C	COPd	
Tj=2°C	Pdh		kW	Ti=2°C	COPd	
			_	11,		
Tj=7°C	Pdh	-	kW	Tj=7°C	COPd	
Tj=12°C	Pdh	-	kW	Tj=12°C	COPd	
Tj=bivalent temperature	Pdh	-	kW	Tj=bivalent temperature	COPd	
Tj=operating limit	Pdh	-	kW	Tj=operating limit	COPd	- -
Tj=-15°C	Pdh	-	kW	Tj=-15°C	COPd	
		•				
Bivalent temperature				Operating limit temperature		
heating / Average	Tbiv	-10	°C	heating / Average	Tol	-20 °C
heating / Warmer	Tbiv	-	°C	heating / Warmer	Tol	- °C
heating / Colder	Tbiv	-	°C	heating / Colder	Tol	- °C
Tiousing / Coluct	1 1014			nodang / Golder	101	0
Cycling interval conceits			1	Cycling interval officians:		
Cycling interval capacity	Doves		الالالا	Cycling interval efficiency	EEDave	
for cooling	Pcycc	-	kW	for cooling	EERcyc	-
for heating	Pcych	-	kW	for heating	COPcyc	
Degradation coefficient			_	Degradation coefficient		
cooling	Cdc	0.25	-	heating	Cdh	0.25 -
Electric power input in power modes other	than 'active	mode'		Annual electricity consumption		
off mode	Poff	8	W	cooling	Qce	516 kWh/a
standby mode	Psb	8	w	heating / Average	Qhe	2631 kWh/a
thermostat-off mode	Pto	20	w	heating / Warmer	Qhe	- kWh/a
crankcase heater mode	Pck	8	w	heating / warrier	Qhe	- kWh/a
orannouse realer mode	1 01	_ ,	4.4	modulig / coldel	WIID	- \(\forall \tau \)
0 " 1 10 " 1 10 "				To:: "		
Capacity control(indicate one of three opti				Other items		
	ons)			Sound power level(indoor)	Lwa	63 dB(A)
	ons)					
	ons)			Sound power level(outdoor)	Lwa	70 dB(A)
fixed	ons)				Lwa GWP	70 dB(A)
	No			Sound power level(outdoor) Global warming potential		70 dB(A) 1975 kgCO2eq.
staged	No No			Sound power level(outdoor) Global warming potential Rated air flow(indoor)		70 dB(A) 1975 kgCO2eq. 2220 m3/h
	No			Sound power level(outdoor) Global warming potential		70 dB(A) 1975 kgCO2eq.
staged variable	No No Yes	d address o	of the manuf	Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor)		70 dB(A) 1975 kgCO2eq. 2220 m3/h
staged variable Contact details for obtaining	No No Yes			Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) acturer or of its authorised representative.		70 dB(A) 1975 kgCO2eq. 2220 m3/h
staged variable Contact details for obtaining more information Mitsubisl	No No Yes Name and	ustries Air-	Conditioning	Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) acturer or of its authorised representative. g Europe, Ltd.		70 dB(A) 1975 kgCO2eq. 2220 m3/h
staged variable Contact details for obtaining more information Mitsubisl 5 The Sc	No No Yes Name and in Heavy Indiguare, Stock	ustries Air-	Conditioning	Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) acturer or of its authorised representative.		70 dB(A) 1975 kgCO2eq. 2220 m3/h
staged variable Contact details for obtaining more information Mitsubisl	No No Yes Name and in Heavy Indiguare, Stock	ustries Air-	Conditioning	Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) acturer or of its authorised representative. g Europe, Ltd.		70 dB(A) 1975 kgCO2eq. 2220 m3/h
staged variable Contact details for obtaining more information Mitsubisl 5 The Sc	No No Yes Name and in Heavy Indiguare, Stock	ustries Air-	Conditioning	Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) acturer or of its authorised representative. g Europe, Ltd.		70 dB(A) 1975 kgCO2eq. 2220 m3/h

Model FDT100VSAVG

	l(s) to which the informa		If function includes heating: Indicate	
Indoor unit model name Outdoor unit model name	FDT100VG FDC100VS		information relates to. Indicated valu	
Outdoor unit model name	FDC100V3	PA	heating season at a time. Include at	least the fleating season Average.
Function(indicate if present)			Average(mandatory)	Yes
cooling	Yes		Warmer(if designated)	No
heating	Yes		Colder(if designated)	No
Itom	symbol	value unit	Item	symbol value class
Item Design load	Syllibol	value utilit	Seasonal efficiency and energy effic	
cooling	Pdesignc	10.0 kW	cooling	SEER 6.78 A+
heating / Average	Pdesignh	8.5 kW	heating / Average	SCOP/A 4.52 A
heating / Warmer	Pdesignh	- kW	heating / Warmer	SCOP/W
heating / Colder	Pdesignh	- kW	heating / Colder	SCOP/C
Declared capacity at outdoor ter	mnerature Tdesignh		Back up heating capacity at outdoor	temperature Tdesignh
heating / Average (-10°C)	Pdh	8.5 kW	heating / Average (-10°C)	elbu 0 kW
heating / Warmer (2°C)	Pdh	- kW	heating / Warmer (2°C)	elbu - kW
heating / Colder (-22°C)	Pdh	- kW	heating / Colder (-22°C)	elbu - kW
		(10)00		1 07/40)90
Declared capacity for cooling, a	t indoor temperature 27	(19)°C and	Declared energy efficiency ratio, at in outdoor temperature Ti	ndoor temperature 27(19)°C and
outdoor temperature Tj Tj=35°C	Pdc [10.0 kW	Tj=35°C	EERd 3.66 -
Tj=30°C	Pdc	7.37 kW	Tj=30°C	EERd 5.20 -
Tj=25°C	Pdc	4.74 kW	Tj=25°C	EERd 8.95 -
Tj=20°C	Pdc	3.55 kW	Tj=20℃	EERd 12.3 -
Declared capacity for heating / /		oor	Declared coefficient of performance	
temperature 20°C and outdoor to Tj=-7°C	emperature 1j Pdh - [7.52 kW	temperature 20°C and outdoor temperature Tj=-7°C	COPd 3.34 -
Tj=-7 C Tj=2°C	Pdh	4.58 kW		COPd 3.34 -
Tj=7°C	Pdh	2.94 kW	Tj=7°C	COPd 5.92 -
Tj=12°C	Pdh	2.77 kW	Tj=12°C	COPd 6.93 -
Tj=bivalent temperature	Pdh	6.77 kW	Tj=bivalent temperature	COPd 2.51 -
Tj=operating limit	Pdh	8.5 kW	Tj=operating limit	COPd 2.84 -
Declared canacity for heating ()	Narmar assass at inda	or	Declared coefficient of performance	/ Warmer cases at indeer
Declared capacity for heating / \ temperature 20°C and outdoor to		OI	temperature 20°C and outdoor temperature	
Tj=2°C	Pdh	- kW	Tj=2°C	COPd
Tj=7°C	Pdh	- kW	Tj=7°C	COPd
Tj=12°C	Pdh	- kW	Tj=12°C	COPd
Tj=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd
Tj=operating limit	Pdh	- kW	Tj=operating limit	COPd
Declared capacity for heating / 0 temperature 20°C and outdoor to		r	Declared coefficient of performance temperature 20°C and outdoor 20°C and outdoor 20°C and outdoor 20°C and outdoor 20°C and outdoor 20°C and outdoor 20°C and outdoor 20°C and outdoor 20°C and outdoor 20°C and outdoor 20°C and outdoor 20°C and outd	
Tj=-7°C	Pdh	- kW	Tj=-7°C	COPd
Tj=2°C	Pdh	- kW	Tj=2°C	COPd
Tj=7°C	Pdh	- kW	Tj=7°C	COPd
Tj=12°C	Pdh	- kW	Tj=12°C	COPd
Tj=bivalent temperature	Pdh Pdh	- kW - kW	Tj=bivalent temperature	COPd
Tj=operating limit Tj=-15°C	Pdh	- kW	Tj=operating limit Tj=-15°C	COPd
1, 100	i un	ice v	1) 10 0	001 0
Bivalent temperature			Operating limit temperature	
heating / Average	Tbiv	-10 °C	heating / Average	Tol -20 °C
heating / Warmer	Tbiv	- °C	heating / Warmer	Tol - °C
heating / Colder	Tbiv	- ℃	heating / Colder	Tol - °C
Cycling interval capacity			Cycling interval efficiency	
	Pcycc	- kW	for cooling	EERcyc
for cooling	Pcych	- kW	for heating	COPcyc
for heating		·	Degradation coefficient	
for heating Degradation coefficient		0.25		Cdb
for heating Degradation coefficient	Cdc	0.25 -	heating	Cdh 0.25 -
for cooling for heating Degradation coefficient cooling Electric power input in power m		<u>'</u>	heating	Cdh 0.25 -
for heating Degradation coefficient cooling Electric power input in power me		<u>'</u>		Cdh 0.25 -
for heating Degradation coefficient	odes other than 'active i	mode'	Annual electricity consumption cooling heating / Average	Qce 516 kWh/z Qhe 2631 kWh/z
for heating Degradation coefficient cooling Electric power input in power mooff mode standby mode thermostat-off mode	odes other than 'active r Poff Psb Pto	mode'	Annual electricity consumption cooling heating / Average heating / Warmer	Qce 516 kWh/z Qhe 2631 kWh/z Qhe - kWh/z
Degradation coefficient cooling Electric power input in power moff mode standby mode chermostat-off mode	odes other than 'active r Poff Psb	mode'	Annual electricity consumption cooling heating / Average	Qce 516 kWh/z Qhe 2631 kWh/z
for heating Degradation coefficient cooling Electric power input in power moff mode standby mode thermostat-off mode crankcase heater mode	odes other than 'active i Poff Psb Pto Pck	mode'	Annual electricity consumption cooling heating / Average heating / Warmer heating / colder	Qce 516 kWh/z Qhe 2631 kWh/z Qhe - kWh/z
for heating Degradation coefficient cooling Electric power input in power moff mode standby mode thermostat-off mode crankcase heater mode	odes other than 'active i Poff Psb Pto Pck	mode'	Annual electricity consumption cooling heating / Average heating / Warmer heating / colder Other items	Qce 516 kWh// Qhe 2631 kWh// Qhe - kWh// Qhe - kWh//
for heating Degradation coefficient cooling Electric power input in power moff mode standby mode	odes other than 'active i Poff Psb Pto Pck	mode'	Annual electricity consumption cooling heating / Average heating / Warmer heating / colder Other items Sound power level(indoor)	Qce 516 kWh/z Qhe 2631 kWh/z Qhe - kWh/z Qhe - kWh/z Lwa 63 dB(A)
for heating Degradation coefficient cooling Electric power input in power moff mode standby mode thermostat-off mode crankcase heater mode	odes other than 'active i Poff Psb Pto Pck	mode'	heating Annual electricity consumption cooling heating / Average heating / Warmer heating / colder Other items Sound power level(indoor) Sound power level(outdoor)	Qce 516 kWh/s Qhe 2631 kWh/s Qhe - kWh/s Qhe - kWh/s Lwa 63 dB(A) Lwa 70 dB(A)
for heating Degradation coefficient cooling Electric power input in power moff mode standby mode thermostat-off mode crankcase heater mode Capacity control(indicate one of	odes other than 'active in Poff Psb Pto Pck	mode'	Annual electricity consumption cooling heating / Average heating / Warmer heating / colder Other items Sound power level(indoor)	Qce 516 kWh/s Qhe 2631 kWh/s Qhe - kWh/s Qhe - kWh/s Lwa 63 dB(A) Lwa 70 dB(A)
for heating Degradation coefficient cooling Electric power input in power moff mode standby mode thermostat-off mode crankcase heater mode Capacity control(indicate one of fixed staged	odes other than 'active in Poff Psb Pto Pck Three options)	mode'	heating Annual electricity consumption cooling heating / Average heating / Warmer heating / colder Other items Sound power level(indoor) Sound power level(outdoor) Global warming potential	Qce 516 kWh/s Qhe 2631 kWh/s Qhe - kWh/s Qhe - kWh/s Lwa 63 dB(A) Lwa 70 dB(A) GWP 1975 kgCO
for heating Degradation coefficient cooling Electric power input in power moff mode standby mode thermostat-off mode crankcase heater mode Capacity control(indicate one of fixed staged variable	odes other than 'active in Poff Psb Pto Pck three options) No No Yes	8 W 8 W 20 W 8 W	Annual electricity consumption cooling heating / Average heating / Warmer heating / colder Other items Sound power level(indoor) Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor)	Qce
for heating Degradation coefficient cooling Electric power input in power moff mode standby mode thermostat-off mode crankcase heater mode Capacity control(indicate one of fixed staged variable Contact details for obtaining	odes other than 'active in Poff Psb Pto Pck Three options) No No Yes Name and	mode' 8 W 8 W 20 W 8 W	heating Annual electricity consumption cooling heating / Average heating / Warmer heating / colder Other items Sound power level(indoor) Sound power level(outdoor) Global warming potential Rated air flow(outdoor) Rated air flow(outdoor)	Qce
Degradation coefficient cooling Electric power input in power moff mode standby mode thermostat-off mode crankcase heater mode Capacity control(indicate one of fixed staged variable	odes other than 'active in Poff Psb Pto Pck three options) No No Yes Name and Mitsubishi Heavy Indu	mode' 8 W 8 W 20 W 8 W address of the mastries Air-Condition	heating Annual electricity consumption cooling heating / Average heating / Warmer heating / colder Other items Sound power level(indoor) Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) nufacturer or of its authorised representating Europe, Ltd.	Qce
Degradation coefficient cooling Electric power input in power moff mode standby mode thermostat-off mode crankcase heater mode Capacity control(indicate one of staged variable Contact details for obtaining	odes other than 'active in Poff Psb Pto Pck Three options) No No Yes Name and Mitsubishi Heavy Indu 5 The Square, Stockle	mode' 8 W 8 W 20 W 8 W address of the mastries Air-Condition	heating Annual electricity consumption cooling heating / Average heating / Warmer heating / colder Other items Sound power level(indoor) Sound power level(outdoor) Global warming potential Rated air flow(outdoor) Rated air flow(outdoor)	Qce
Degradation coefficient cooling Electric power input in power most mode standby mode hermostat-off mode crankcase heater mode Capacity control(indicate one of ixed staged rariable	odes other than 'active in Poff Psb Pto Pck three options) No No Yes Name and Mitsubishi Heavy Indu	mode' 8 W 8 W 20 W 8 W address of the mastries Air-Condition	heating Annual electricity consumption cooling heating / Average heating / Warmer heating / colder Other items Sound power level(indoor) Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) nufacturer or of its authorised representating Europe, Ltd.	Qce

Model FDT100VNAPVG

nformation to identify the model(nation relate	es to:	If function includes heating: Indicate the information relates to. Indicated values			
Outdoor unit model name	FDC100V			heating season at a time. Include at le			verage'.
Tunation/indicate if process)				1 (Vaa		
Function(indicate if present) cooling	Yes			Average(mandatory) Warmer(if designated)	Yes No		
neating	Yes			Colder(if designated)	No		
,				Total (in the signature)			
tem	symbol	value	unit	Item	symbol	value	class
Design load	Deleviene	40.0	71.347	Seasonal efficiency and energy efficie		0.00	
cooling	Pdesigno	10.0	kW kW	cooling	SEER	6.89	A++
neating / Average neating / Warmer	Pdesignh Pdesignh	8.5	kW	heating / Average heating / Warmer	SCOP/A SCOP/W	4.47	A+
neating / Colder	Pdesignh	<u> </u>	kW	heating / Colder	SCOP/C	<u> </u>	+
		l .	1	g. conto		1	unit
Declared capacity at outdoor tem	perature Tdesignh			Back up heating capacity at outdoor to	emperature Tdes	signh	
neating / Average (-10°C)	Pdh	8.5	kW	heating / Average (-10°C)	elbu	0	kW
neating / Warmer (2°C)	Pdh	-	kW	heating / Warmer (2°C)	elbu	-	kW
neating / Colder (-22°C)	Pdh	-	kW	heating / Colder (-22°C)	elbu	-	kW
Declared canacity for eaching at	indoor tomporature 2	7/10\°C and	d	Declared energy officiency ratio at inc	door tomporative	27/10\°C	and
Declared capacity for cooling, at in outdoor temperature Tj	ndoor temperature 2	7(19) C and	u	Declared energy efficiency ratio, at incoutdoor temperature Tj	oor temperature	27(19) C	and
Fj=35°C	Pdc	10.0	kW	Tj=35°C	EERd	3.55	٦.
Γj=30°C	Pdc	7.37	kW	Tj=30°C	EERd	5.02	⊣ ₋
Γj=25°C	Pdc	4.74	kW	Tj=25℃	EERd	9.27	− -
rj=20°C	Pdc	3.55	kW	Tj=20°C	EERd	13.57	-
-							•
Declared capacity for heating / Av		door		Declared coefficient of performance / /		, at indoor	
emperature 20°C and outdoor te			7	temperature 20°C and outdoor temper			_
Γj=-7°C	Pdh	7.52	kW	Tj=-7°C	COPd	3.13	վ-
Γj=2°C	Pdh	4.58	kW	Tj=2°C	COPd	4.22	վ-
Γj=7°C	Pdh	2.94	kW	Tj=7°C	COPd	5.92	⊣ -
Γj=12°C Γi=hivalent temperature	Pdh Pdh	2.77 6.77	kW kW	Tj=12°C Ti=bivalent temperature	COPd COPd	7.04	-1.
Fj=bivalent temperature Fj=operating limit	Pan Pdh	8.5	kW	Tj=blvalent temperature Tj=operating limit	COPa	2.37	_[
j-operating innit	Full	0.5	LVAA	TIJ-operating limit	COPu	2.00	
Declared capacity for heating / W	armer season, at ind	oor		Declared coefficient of performance /	Warmer season	at indoor	
emperature 20°C and outdoor tel				temperature 20°C and outdoor temper		, ataoo.	
Γj=ݰC	Pdh	-	kW	Tj=2°C	ĆOPd	-	٦-
rj=7°C	Pdh	-	kW	Tj=7°C	COPd	-	<u></u> -
rj=12℃	Pdh	-	kW	Tj=12°C	COPd	-	٦-
rj=bivalent temperature	Pdh	-	kW	Tj=bivalent temperature	COPd	-	-
Γj=operating limit	Pdh	-	kW	Tj=operating limit	COPd	-	<u> </u>
Declared capacity for heating / Compensature 20°C and outdoor tergi=-7°C rj=2°C rj=7°C rj=12°C	mperature Tj Pdh Pdh Pdh Pdh	- - -	kW kW kW	Declared coefficient of performance / (temperature 20°C and outdoor temper Tj=-7°C Tj=12°C Tj=12°C	COPd COPd COPd COPd COPd]- - - - -
Γj=bivalent temperature	Pdh	-	kW	Tj=bivalent temperature	COPd	-	
Γj=operating limit	Pdh	-	kW	Tj=operating limit	COPd	-	վ-
⁻j=-15°C	Pdh	-	kW	Tj=-15°C	COPd	-	
Bivalent temperature				Operating limit temperature			
neating / Average	Tbiv	-10	°C	heating / Average	Tol	-20	°C
neating / Warmer	Tbiv	-	°C	heating / Warmer	Tol	-	°C
neating / Colder	Tbiv	-	°C	heating / Colder	Tol	-	°C
					·		
Cycling interval capacity	Dovos		Trw	Cycling interval efficiency	EEDove		٦_
or cooling or heating	Pcycc Pcych	-	kW kW	for cooling for heating	EERcyc COPcyc	-	⊣ [
umg	1 GyGII		1000	io. Housing	OO1 Cyc		
Degradation coefficient			_	Degradation coefficient			
ooling	Cdc	0.25	-	heating	Cdh	0.25	Ī-
				11.	·		
Electric power input in power mod			٦١٨/	Annual electricity consumption	000	E00	
off mode	Poff Psb	8	W	cooling heating / Average	Qce Qhe	508 2662	kWh/a kWh/a
standby mode hermostat-off mode	Pto	20	W	heating / Warmer	Qhe	- 2002	kWh/a
rankcase heater mode	Pck	8	W	heating / warmer	Qhe	-	kWh/a
	. 31	<u> </u>	1		۵۵	1	1
Capacity control(indicate one of t	nree options)			Other items			
,	. ,			Sound power level(indoor)	Lwa	54	dB(A)
				Sound power level(outdoor)	Lwa	70	dB(A)
Second 1	No			Global warming potential	GWP	1975	kgCO2
	No		· · · ·	Rated air flow(indoor)	-	1200	m3/h
staged	Yes			Rated air flow(outdoor)	-	4500	m3/h
staged							
ixed staged variable							
taged variable				acturer or of its authorised representativ	e.		
taged ariable Contact details for obtaining nore information	Mitsubishi Heavy Ind	ustries Air-	Conditioning	g Europe, Ltd.	e.		
aged ariable ontact details for obtaining lore information	Mitsubishi Heavy Ind 5 The Square, Stockl	ustries Air-	Conditioning	g Europe, Ltd.	e.		
aged ariable ontact details for obtaining ore information	Mitsubishi Heavy Ind	ustries Air-	Conditioning	g Europe, Ltd.	e.		

Model FDT100VSAPVG

Information to identify the mode Indoor unit model name	el(s) to which the information		If function includes heating: Indicate information relates to. Indicated value		
Outdoor unit model name	FDC100VS		heating season at a time. Include at		'Average'.
	*				
Function(indicate if present)	Voc		Average(mandatory)	Yes No	
cooling heating	Yes Yes		Warmer(if designated) Colder(if designated)	No	
	1.00		oo.ao.(aoo.ga.oa)		
Item	symbol	value unit	Item	symbol value	class
Design load	Ddooigno [10.0 kW	Seasonal efficiency and energy effic		n I A
cooling heating / Average	Pdesignc Pdesignh	10.0 kW 8.5 kW	cooling heating / Average	SEER 6.89 SCOP/A 4.4	
heating / Warmer	Pdesignh	- kW	heating / Warmer	SCOP/W -	
heating / Colder	Pdesignh	- kW	heating / Colder	SCOP/C -	-
D 1 1 11 11 1					unit
Declared capacity at outdoor te heating / Average (-10°C)	mperature I designn Pdh	8.5 kW	Back up heating capacity at outdoor heating / Average (-10°C)	elbu 0	kW
heating / Warmer (2°C)	Pdh	- kW	heating / Warmer (2°C)	elbu -	kW
heating / Colder (-22°C)	Pdh	- kW	heating / Colder (-22°C)	elbu -	kW
			15		
Declared capacity for cooling, a outdoor temperature Tj	t indoor temperature 27	(19)°C and	Declared energy efficiency ratio, at i outdoor temperature Tj	ndoor temperature 27(19) C and
Tj=35°C	Pdc	10.0 kW	Tj=35°C	EERd 3.5	5 -
Tj=30°C	Pdc	7.37 kW	Tj=30°C	EERd 5.0	
Tj=25°C	Pdc	4.74 kW	Tj=25°C	EERd 9.2	
Tj=20°C	Pdc	3.55 kW	Tj=20°C	EERd 13.5	57 -
Declared capacity for heating /	Average season, at indo	oor	Declared coefficient of performance	/ Average season, at ind	oor
temperature 20°C and outdoor			temperature 20°C and outdoor temp		001
Tj=-7°C	Pdh [7.52 kW	Tj=-7°C	COPd 3.1	
Tj=2°C	Pdh	4.58 kW	Tj=2°C	COPd 4.2	
Tj=7°C Tj=12°C	Pdh Pdh	2.94 kW 2.77 kW	Tj=7°C Tj=12°C	COPd 5.9 COPd 7.0	
Tj=12 C Tj=bivalent temperature	Pdh	6.77 kW	Tj=12 C	COPd 7.0 COPd 2.3	
Tj=operating limit	Pdh	8.5 kW	Tj=operating limit	COPd 2.6	
· · · · · · · · · · · · · · · · · · ·	'	'		· '	
Declared capacity for heating /		or	Declared coefficient of performance		oor
temperature 20°C and outdoor t	emperature Tj Pdh	- kW	temperature 20°C and outdoor temp		
Tj=2°C Tj=7°C	Pdh	- kW	Tj=2°C Tj=7°C	COPd -	 -[
Tj=12°C	Pdh	- kW	Tj=12°C	COPd -	
Tj=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd -	-
Tj=operating limit	Pdh	- kW	Tj=operating limit	COPd -	-
Declared capacity for heating /	Colder season, at indoo	r	Declared coefficient of performance	/ Colder season, at indoo	or
temperature 20°C and outdoor			temperature 20°C and outdoor temp		
Tj=-7℃ Tj=2℃	Pdh Pdh	- kW - kW	Tj=-7°C Tj=2°C	COPd -	— [
Tj=7°C	Pdh	- kW	Tj=2 C Ti=7°C	COPd -	 [
Tj=12℃	Pdh	- kW	Tj=12°C	COPd -	-
Tj=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd -	-
Tj=operating limit	Pdh	- kW	Tj=operating limit	COPd -	
Tj=-15°C	Pdh	- kW	Tj=-15°C	COPd -	-
Bivalent temperature			Operating limit temperature		
heating / Average	Tbiv	-10 °C	heating / Average	Tol -20	°C
heating / Warmer	Tbiv	- °C	heating / Warmer	Tol -	
heating / Colder	Tbiv	- ℃	heating / Colder	Tol -	°C
Cycling interval capacity			Cycling interval efficiency		
for cooling	Pcycc	- kW	for cooling	EERcyc -	-
for heating	Pcych	- kW	for heating	COPcyc -	-
Degradation coefficient cooling	Cdc	0.25 -	Degradation coefficient heating	Cdh 0.2	5 -
cooming	Cut	0.20 -	Tueaning	Guii U.2	<u> </u>
Electric power input in power m	odes other than 'active i	mode'	Annual electricity consumption		
off mode	Poff	8 W	cooling	Qce 508	
standby mode	Psb	8 W	heating / Average	Qhe 266	
thermostat-off mode crankcase heater mode	Pto Pck	20 W 8 W	heating / Warmer heating / colder	Qhe -	kWh/a kWh/a
orannoase Healer HIUUE	FUK	9 VV	Meaning / Coluct	WIIC -	LVVII/a
Capacity control(indicate one o	f three options)		Other items		
	. ,		Sound power level(indoor)	Lwa 54	
e			Sound power level(outdoor)	Lwa 70	. ,
fixed staged	No No		Global warming potential Rated air flow(indoor)	GWP 197	
staged variable	Yes		Rated air flow(indoor) Rated air flow(outdoor)	- 450	
	1 .55			1,100	1
	T	addrace of the mai	nufacturer or of its authorised representat	ive.	
Contact details for obtaining					
Contact details for obtaining more information	Mitsubishi Heavy Indu	stries Air-Condition	ning Europe, Ltd.		
	Mitsubishi Heavy Indu 5 The Square, Stockle	stries Air-Condition			
	Mitsubishi Heavy Indu	stries Air-Condition	ning Europe, Ltd.		

Model FDT125VNAVG

Model(s): FDC125VNA / FE	DT125VG						
Outdoor side heat exchanger of air cond	ditioner:	air					
Indoor side heat exchanger of air condit	tioner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		258.0	%
Declared cooling capacity for part load a	at given outdoor t	emperatu	res		refficiency ratio or gas utilization ef	-	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdoo	r temperatures	IJ
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or		1
			_	17-133 6	GUEc,bin / AEFc,bin	309.0	%
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or		
	L			., 100 0	GUEc,bin / AEFc,bin	475.0	%
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	EERd or	775.0	0/
			_		GUEc,bin / AEFc,bin	775.0	%
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or	1270.0	%
	-		_		GUEc,bin / AEFc,bin	1270.0]"
Degradation							
coefficient for	Cdc	0.25	-				
air conditioners**			_				
Power consumpiton in other than 'active	e mode'						
Off mode	P _{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.020	kW	Standby mode	P _{SB}	0.008	kW
	[_				1
Other items							
	-		_	For air-to-air air	conditioner:	4500	m3/h
Capacity control		variable		air flow-rate,out	door measured	4000	
	F		۱				
Sound power level,	L_{WA}	71.0	dB				
outdoor	L						
	Ē		ا ر				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides	L		JGCV				
GWP of the			kg CO _{2eq}				
refrigerant		2088	(100years)				
	_		_				
Contact details Mitsut	bishi heavy indus	tries thern	nal systems,L	TD			
** If Cdc is not determined by measuren	nent then the def	ault degra	dation coeffic	eient air conditione	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt						ance	
of the outdoor unit, with a combination of	of indoor unit(s) re	ecommen	ded by the ma	anufacturer or imp	orter.		
						P.IF000	7/125 Å

Information to identify the model(s) to whi	ch the information r	elates ·		ED0405) (N	A / EDT405//O			
Outdoor side heat exchanger of heat pum				FDC125VN	A / FDT125VG			
Indoor side heat exchanger of heat pump		air						
Indication if the heater is equipped with a		air iter :		N	lo			
if applicable : electric motor	oappromontary noo				<u>- </u>			
Parameters shall be declared for the aver	age heating season	n naramete	ers for the w	armer and c	older heating seasons	are ontional		
Item	Symbol		Unit	arrior arra o	Item	Symbol	Value	Unit
Rated heating capacity	- Cynniddi	valuo	0			ng energy efficiency ηs,h	74,40	J
realing capacity	Prated,h	14.0	kW		ocasonal space ricatii	ig energy emotericy 1/3,11	172.1	%
Declared heating capacity for part load at and outdoor temperature Tj	indoor temperature	e 20°C				f performance or gas utilization of	-	
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	310.0	%
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	415.0	%
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	579.0	%
T _j =+12℃	Pdh	2.7	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	643.0	%
T _{blv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent temperature	COPd or GUEh,bin / AEFh,bin	257.0	%
T _{OL} =operation limit	Pdh	7.7	kW		T _{OL} =operation limit	COPd or GUEh,bin / AEFh,bin	235.0	%
For air-to-water heat pumps : T _j =-15°C (if T _{OL} <-20°C)	Pdh	-	kW		For air-to-water heat pumps:T _j =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
Bivalent temperature	T _{biv}	-10.0	°C		(if T _{OL} <-20°C) For water-to-air heat]
Degradation	[pumps:Operation limit T _{ol} temperature		-	°C
coefficient	C_{dh}	0.25	-					•
heat pumps**								
Power consumpiton in modes other than 'a	active mode'				Supplementary heater	ei	bu -	kW
Off mode	P _{OFF}	0.008	kW		back-up heating capac	ж		J
Thermostat-off mode	P _{TO}	0.035	kW		Type of energy input	_		1
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	Р	O.008	kW
Other items								1
Capacity control	[variable			For air-to-air heat pum air flow-rate,outdoor m		4380	m3/h
Sound power level,	. 1				For water-/brine-to-air	heat pumps :]
outdoor measured	L _{WA}	71.0	dB		Rated brine or water fi outdoor side heat exch	iow-rate,	-	m3/h
Emissions of nitrogen			mg/kWh			<u>,</u>		
oxides(if applicable)	NOx ***	-	fuel input GCV					
GWP of the	[2088	kg CO _{2eq}					
refrigerant			(100years)					
Contact details	bishi heavy industr	ies thermal	systems I T	<u> </u> D				
Contact details Mitsu ** If Cdh is not determined by measureme					ers shall be 0.25.			
	are default			20.1310011				
*** from 26 September 2018 Where information relates to multi-spilt air	conditioners the to	et recult on	d nerformor	nce data bo	ohtained on the basis o	f the nerformance		
of the outdoor unit, with a combination of i						п по репоппансе		
							P.IF000	//25 A

Model FDT125VSAVG

Model(s): FDC125VSA / FI	DT125VG						
Outdoor side heat exchanger of air con	ditioner :	air					
Indoor side heat exchanger of air condi	tioner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	e cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		258.0	%
Declared cooling capacity for part load	at given outdoor	temperatu	res	Declared energy	y efficiency ratio or gas utilization	efficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdo	or temperatures	Гј
			٦				1
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	309.0	%
T: +20°0	D.I.	0.0	المدر		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or	475.0	%
Ti=+25°C	Pdc	5.9	kW		GUEc,bin / AEFc,bin		
Tj=+25°C	Fuc	5.5		Tj=+25℃	EERd or	775.0	%
Tj=+20°C	Pdc	3.5	kW	T: . 0000	GUEc,bin / AEFc,bin		
1]-120 0	i uc	3.3		Tj=+20°C	EERd or	1270.0	%
Degradation			ו ו		GUEc,bin / AEFc,bin		J
Degradation	Cda	0.25					
coefficient for air conditioners**	Cdc		-				
all conditioners			_				
Power consumpiton in other than 'active	e mode'						
. ener concumption in care alan acare							
Off mode	P _{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.020	kW	Standby mode	P_{SB}	0.008	kW
			_				•
Other items							
	·		_	For air-to-air air	conditioner:	4500	m3/h
Capacity control		variable		air flow-rate,out	door measured	4500	1110/11
	1		_				
Sound power level,	L_WA	71.0	dB				
outdoor							
	ı	1	,				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
	ĺ		۱ ا				
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant			(Tooyears)				
,	bishi heavy indus				ore chall be 0.25		
** If Cdc is not determined by measurer	nent then the de	ıauıı degra	iualion coeffic	dent air conditions	ers shall de u,zb.		
*** from 26 September 2018							
Where information relates to multi-spilt						mance	
of the outdoor unit, with a combination	ot indoor unit(s) r	ecommen	ded by the ma	anufacturer or imp	oorter.		
						P.IF000	7425 A

Information to identify the model(s) to w	hich the information i	relates :		FDC125VS	A / FDT125VG			
Outdoor side heat exchanger of heat pu	mp :	air						
Indoor side heat exchanger of heat pur	ıp:	air						
Indication if the heater is equipped with	a supplementary hea	ater :		N	lo			
if applicable : electric motor								
Parameters shall be declared for the av	erage heating season	n , paramete	ers for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity						ng energy efficiency ηs,h		
Traited recalling supusity	Prated,h	14.0	kW		ocasonal space neath	ig chargy amoratoy (p.,)	172.1	%
Declared beating aggressity for particular		- 20°0		1	Dealers desefficient of			1
Declared heating capacity for part load	at indoor temperature	20 C				f performance or gas utilization efficie	•	
and outdoor temperature Tj					auxiliary ellergy factor	for part load at given outdoor tempe	ratures 1j	
T _j =-7°C	Pdh	8.7	kW		T _i =-7°C	COPd or		1
1 _j 7 C	Full	0.7	KVV		1 _j 7 C		310.0	%
T .0°0	D.III	5.3	l.,,,		T .0%0	GUEh,bin / AEFh,bin		1
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	COPd or	415.0	%
	ī		l			GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	COPd or	579.0	%
	ſ		ı			GUEh,bin / AEFh,bin		
T _j =+12°C	Pdh	2.7	kW		T _j =+12°C	COPd or	643.0	%
	ı					GUEh,bin / AEFh,bin		
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent	COPd or	257.0	%
					temperature	GUEh,bin / AEFh,bin		
T _{OL} =operation limit	Pdh	7.7	kW		T _{OL} =operation limit	COPd or	235.0	%
						GUEh,bin / AEFh,bin	200.0	70
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or		0/
T _i =-15°C	•		•		pumps:T _i =-15°C	GUEh,bin / AEFh,bin	_	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			•
,					, ,			
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			1
	· DIV		J -		pumps:Operation limit		_	°C
Degradation	[T _{ol} temperature			
coefficient	C	0.25			0,1011,101			1
heat pumps**	C_{dh}							
meat pumps	l							
				-				
								1
Power consumpiton in modes other that	n 'active mode'				Supplementary heater	eibu	-	kW
	_ [l		back-up heating capac	city]
Off mode	P _{OFF}	0.008	kW					1
Thermostat-off mode	P _{TO}	0.035	kW		Type of energy input	P _{SB}	0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode]
				4				
Other items								,
			ī		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable			air flow-rate,outdoor m	neasured]
								_
Sound power level,	. [71.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured	L _{WA}	71.0	uБ		Rated brine or water fi	ow-rate,	-	m3/h
	•		•		outdoor side heat exch			
Emissions of nitrogen			mg/kWh				-	•
oxides(if applicable)	NOx ***	-	fuel input					
oxides(ii applicable)	***		GCV					
	ı		GCV					
				1				
GWP of the	Ī		l CO					
		2088	kg CO _{2eq} (100years)					
refrigerant	l		() ,					
	subishi heavy industr							
** If Cdh is not determined by measurer	nent then the default	degradation	n coefficient	air condition	ers shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt	air conditioners,the te	est result an	d performar	nce data be	obtained on the basis of	f the performance		
of the outdoor unit, with a combination of	of indoor unit(s) recon	nmended by	the manufa	acturer or im	porter.			
							PJF0002	Z425 <u>/</u> €

Model FDT140VNAVG

Model(s): FDC140VNA / FD	T140VG						
Outdoor side heat exchanger of air condi	tioner:	air					
Indoor side heat exchanger of air condition	oner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		243.6	%
Declared cooling capacity for part load at	given outdoor	temperatu	res	Declared energy	efficiency ratio or gas utilization ef	ficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdoo	r temperatures	Гј
-			۱ ا				1
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	281.0	%
T: . 00°0	B.1	40.0	ا ،		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	450.0	%
Ti-125°C	Pdc	6.4	kW		GUEc,bin / AEFc,bin		
Tj=+25°C	Fuc	0.4		Tj=+25°C	EERd or	695.0	%
Tj=+20°C	Pdc	3.5	kW	T: . 0000	GUEc,bin / AEFc,bin		
1]-120 0	i uc	3.3		Tj=+20°C	EERd or	1310.0	%
Degradation			n l		GUEc,bin / AEFc,bin		J
Degradation coefficient for	Cdc	0.25					
air conditioners**	Cuc						
all conditioners			_				
Power consumpiton in other than 'active	mode'						
· circi concumption in care atlant deare							
Off mode	P_{OFF}	0.008	kW	Crankcase heate	er mode P _{CK}	0.008	kW
Thermostat-off mode	P_{TO}	0.020	kW	Standby mode	P_SB	0.008	kW
			_				1
Other items							
			_	For air-to-air air	conditioner:	4500	m3/h
Capacity control		variable		air flow-rate,outo	loor measured	4000	1110/11
			_				
Sound power level,	L_{WA}	73.0	dB				
outdoor	WA						
		_	,				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
			ا ،				
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant			(Tooyears)				
•	shi heavy indu						
** If Cdc is not determined by measurement	ent then the de	erauit degra	aation coeffic	ent air conditione	rs snall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt a						ance	
of the outdoor unit, with a combination of	indoor unit(s)	recommen	ded by the ma	anufacturer or imp	orter.		
						P.IF000	7425 A

Information to identify the model(s) to which t	ne information	relates ·		EDC440\/N	A / FDT440\/C			
Outdoor side heat exchanger of heat pump :				FDC 140VN	A / FDT140VG			
Indoor side heat exchanger of heat pump:		air						
Indication if the heater is equipped with a sup	nlementary hea	air ater ·		N	lo			
if applicable : electric motor	promontary not			•	<u>- </u>			
Parameters shall be declared for the average	heating seaso	n naramet	ers for the w	armer and c	older heating seasons	are ontional		
Item	Symbol	Value	Unit	411101 4114 0	Item	Symbol	Value	Unit
Rated heating capacity	Gymbol	value	OTIIL			ng energy efficiency ηs,h	value	OTIIL
reated fleating capacity	Prated,h	15.5	kW		Seasonal space neath	ig energy emiciency rps,rr	168.0	%
Declared heating capacity for part load at ind and outdoor temperature Tj	oor temperature	e 20°C	•			f performance or gas utilization effic for part load at given outdoor temp		
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	228.0	%
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	433.0	%
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	583.0	%
T _j =+12°C	Pdh	2.6	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	688.0	%
T _{blv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	268.0	%
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	GUEn,bin / AEFn,bin COPd or GUEh,bin / AEFh,bin	230.0	%
For air-to-water heat pumps : Tj=-15°C	Pdh	-	kW		For air-to-water heat pumps:T _j =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C) Bivalent temperature	T _{biv}	-10.0	℃		(if T _{OL} <-20°C) For water-to-air heat]
Degradation]		pumps:Operation limit T _{ol} temperature		-	°C
coefficient	C_{dh}	0.25	-					
heat pumps** Power consumpiton in modes other than 'acti	ve mode'		I		Supplementary heater	eibu	-	kW
Off mode	P _{OFF}	0.008	kW		back-up heating capac	city		J
Thermostat-off mode	P _{TO}	0.035	kW		Type of energy input			1
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	P_{SB}	0.008	kW
Other items				-	For air-to-air heat pum	nns:		1
Capacity control		variable]		air flow-rate,outdoor m		4380	m3/h
Sound power level,	L _{WA}	73.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured	LWA	75.0	ub		Rated brine or water fi outdoor side heat exch		-	m3/h
Emissions of nitrogen oxides(if applicable)	NOx ***	-	mg/kWh fuel input GCV					
GWP of the refrigerant		2088	kg CO _{2eq} (100years)					
Contact details Mitsubisl	ni heavy industr	ies thermal	systems I T	D	ı			
** If Cdh is not determined by measurement t					ers shall be 0,25.			
*** from 26 September 2018		J						
Where information relates to multi-spilt air co	nditioners the t	est result or	nd nerformar	nce data he	obtained on the basis of	f the performance		
of the outdoor unit, with a combination of indo						The performance		
.							P.JF000	7/25 A

Model FDT140VSAVG

Model(s): FDC140VSA / FD	T140VG						
Outdoor side heat exchanger of air condi	itioner :	air					
Indoor side heat exchanger of air condition	oner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		243.6	%
Declared cooling capacity for part load at	t given outdoor	temperatu	res	Declared energy	y efficiency ratio or gas utilization e	fficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdoo	or temperatures	Гј
-			۱ ا				1
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	281.0	%
T: . 00°0	B.1	10.0	ا ،		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	450.0	%
Ti-125°C	Pdc	6.4	kW		GUEc,bin / AEFc,bin		
Tj=+25°C	Fuc	0.4		Tj=+25°C	EERd or	695.0	%
Tj=+20°C	Pdc	3.5	kW	T: . 00%	GUEc,bin / AEFc,bin		
1]-120 0	i uc	3.3		Tj=+20°C	EERd or	1310.0	%
Degradation			n l		GUEc,bin / AEFc,bin		J
Degradation coefficient for	Cdc	0.25					
air conditioners**	Cuc						
all conditioners			_				
Power consumpiton in other than 'active	mode'						
. ener concumption in care alan deave							
Off mode	P_{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P_{TO}	0.020	kW	Standby mode	P_{SB}	0.008	kW
			_				1
Other items							
			_	For air-to-air air	conditioner:	4500	m3/h
Capacity control		variable		air flow-rate,out	door measured	4000	1110/11
		-	_				
Sound power level,	L_WA	73.0	dB				
outdoor	WA						
			,				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
			ا ،				
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant			(100years)				
	ishi heavy indu						
** If Cdc is not determined by measurem	ent then the de	erauit degra	idation coeffic	ent air conditione	ers snall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt a						nance	
of the outdoor unit, with a combination of	indoor unit(s)	recommen	ded by the ma	anufacturer or imp	porter.		
						P.IF000	7425 A

Information to identify the model(s)	to which the information r	elates :						
Outdoor side heat exchanger of he				FDC140VS	A / FDT140VG			
		air						
Indoor side heat exchanger of heat		air			lo			
Indication if the heater is equipped		ilei .			10			
if applicable : electric mo		naramata	ro for the u	vormor and a	alder heating access	ara antional		
Parameters shall be declared for the litem	Symbol	-	Unit	varmer and c	Item	Symbol	Value	Unit
Rated heating capacity	- Cymiler	7 4.40	<u> </u>			ng energy efficiency ηs,h	Value	0
rated realing supusity	Prated,h	15.5	kW		Secusorial space ricalii	ing chargy children by 16,11	168.0	%
Declared heating capacity for part and outdoor temperature Tj	load at indoor temperature	e 20°C				f performance or gas utilization for part load at given outdoor t		
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	228.0	%
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	433.0	%
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	583.0	%
T _j =+12°C	Pdh	2.6	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	688.0	%
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	COPd or GUEh,bin / AEFh,bin	268.0	%
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	COPd or GUEh,bin / AEFh,bin	230.0	%
For air-to-water heat pumps : T_j =-15°C (if T_{OL} <-20°C)	Pdh	-	kW		For air-to-water heat pumps:T _j =-15°C (if T _{OL} <-20°C)	COPd or GUEh,bin / AEFh,bin	-	%
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat]
Degradation	[pumps:Operation limit T _{ol} temperature	t	-	°C
coefficient	C_{dh}	0.25	-					=
Power consumpiton in modes othe	r than 'active mode'	0.008	kW	-	Supplementary heater back-up heating capac	6	elbu -	kW
Thermostat-off mode	P _{TO}	0.035	kW		Type of energy input	ı	O.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	,	SB 0.006	KVV
Other items					For air-to-air heat pum	une.		1
Capacity control	[variable			air flow-rate,outdoor m		4380	m3/h
Sound power level,	L _{WA}		dB		For water-/brine-to-air	heat pumps :		
outdoor measured	LWA		uБ		Rated brine or water fi	iow-rate,	-	m3/h
Emissions of nitrogen oxides(if applicable)	NOx ***	-	mg/kWh fuel input GCV					
GWP of the refrigerant	[kg CO _{2eq} (100years)					
Contact details	Mitsubishi heavy industri	ies thermal	systems.LT	D .				
** If Cdh is not determined by mea	•				ers shall be 0,25.			
*** from 26 September 2018		-						
Where information relates to multi-	spilt air conditioners the te	est result and	d performa	nce data he	obtained on the basis o	of the performance		
of the outdoor unit, with a combina								
							P.IF000	7425 △

Model FDT125VNAPVG

Model(s): FDC125VNA / FDT	60VG (x2 unit	ts)					
Outdoor side heat exchanger of air conditi	oner:	air					
Indoor side heat exchanger of air condition	ner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space co	oling energy		
	Prated,c	12.5	kW	efficiency ηs,c		315.5	%
Declared cooling capacity for part load at	given outdoor	temperatur	es	Declared energy ef	ficiency ratio or gas utilization efficie	ncy /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy fac	ctor for part load at given outdoor tem	nperatures ⁻	Гј
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or]
		-	,	,	GUEc,bin / AEFc,bin	338.0	%
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or	587.0	%
			•		GUEc,bin / AEFc,bin	507.0	70
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	EERd or	925.0	%
					GUEc,bin / AEFc,bin	320.0	70
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or	1667.0	%
			,		GUEc,bin / AEFc,bin		,,,
Degradation							
coefficient for	Cdc	0.25	-				
air conditioners**							
Power consumpiton in other than 'active m	node'						
Off mode	P_{OFF}	0.008	kW	Crankcase heater i	mode P _{CK}	0.008	kW
Thermostat-off mode	P_{TO}	0.000	kW	Standby mode	P_{SB}	0.008	kW
Other items							1
			1	For air-to-air air coi	nditioner:	4500	m3/h
Capacity control		variable]	air flow-rate,outdoo	or measured		
			1				
Sound power level,	L_{WA}	71.0	dB				
outdoor]				
If a series deixes.							
If engine driven: Emissions of nitrogen	NOx ***	_	mg/kWh fuel input				
oxides	***		GCV				
oxides			JGCV				
			,				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
	hi heavy indu						
** If Cdc is not determined by measureme	nt then the de	etault degrad	dation coeffic	cient air conditioners	shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air						•	
of the outdoor unit, with a combination of i	ndoor unit(s)	recommend	ded by the ma	anufacturer or import	er.		
						P.IF000	7425 A

Information to identify the model(s) to wh	nich the information i	relates :		FDC125VN	IA / FDT60VG (x2 units)		
Outdoor side heat exchanger of heat pur	mp :	air						
Indoor side heat exchanger of heat pump	o :	air						
Indication if the heater is equipped with a	a supplementary hea	ater :		١	lo .			
if applicable : electric motor								
Parameters shall be declared for the ave	erage heating season	n , paramet	ers for the w	armer and o	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	- ,					ng energy efficiency ηs,h		
ration realing supusity	Prated,h	14.0	kW		Codociiai opaco iicatii	ig chargy chickensy (p.,.)	205.1	%
Declared heating capacity for part load a	at indoor tomporature	20°C	l	1	Doctored coefficient of	performance or gas utilization efficie	opey /	
and outdoor temperature Tj	it indoor temperature	200				for part load at given outdoor tempe		
and outdoor temperature 1)					auxiliary energy factor	for part load at given outdoor tempe	ratures rj	
T _j =-7°C	Pdh	8.7	kW		T _i =-7°C	COPd or		1
1,7 0	i dii		IKVV		1,7 0		350.0	%
T _i =+2°C	Pdh	5.3	kW		T=12°C	GUEh,bin / AEFh,bin		
1 _j -+2 C	ruii [3.3	IKVV		T _j =+2°C	COPd or	503.0	%
T . =0=	I	3.4	1			GUEh,bin / AEFh,bin		-
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	COPd or	678.0	%
	[1			GUEh,bin / AEFh,bin		
T _j =+12°C	Pdh	2.7	kW		T _j =+12°C	COPd or	794.0	%
	ı		1			GUEh,bin / AEFh,bin		.
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent	COPd or	292.0	%
	r		1		temperature	GUEh,bin / AEFh,bin		
T _{OL} =operation limit	Pdh	7.7	kW		T _{OL} =operation limit	COPd or	261.0	%
			,			GUEh,bin / AEFh,bin		
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or	_	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin]^
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
			_					_
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			
	•		_		pumps:Operation limit		-	°C
Degradation			1		T _{ol} temperature			
coefficient	C_{dh}	0.25	-					•
heat pumps**								
	ı							
Power consumpiton in modes other than	'active mode'				Supplementary heater			1
. Over concumption in modes offer than	douve mode				back-up heating capac	eibu	-	kW
Off mode	P _{OFF}	0.008	kW		back-up fleating capac	oity		1
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input			1
Crankcase heater mode	P _{ck}	0.008	kW			P _{SB}	0.008	kW
	· CK		1		Standby mode			J
Other items				1				
Other items					For electricity at the extreme			1
	Ī	variable	1		For air-to-air heat pum		4380	m3/h
Capacity control	l	variable	J		air flow-rate,outdoor m	neasured]
	1		1					1
Sound power level,	L _{WA}	71.0	dB		For water-/brine-to-air	heat pumps :		O //b
outdoor measured	Į]		Rated brine or water fi	ow-rate,	-	m3/h
	ı		1		outdoor side heat exch	nanger]
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
	Į		GCV					
	r		7					
GWP of the		2088	kg CO _{2eq}					
refrigerant			(100years)					
Contact details Mits	ubishi heavy industr	ies thermal	systems,LT	D				
** If Cdh is not determined by measurem					ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt a	air conditioners.the te	est result ar	nd performar	nce data be	obtained on the basis of	f the performance		
of the outdoor unit, with a combination of						•		
	,				•			
•							PJF0002	Z425 <u>&</u>

Model FDT125VSAPVG

Model(s): FDC125VSA / FE	OT60VG (x2 units	3)					
Outdoor side heat exchanger of air cond	ditioner :	air					
Indoor side heat exchanger of air condit	tioner :	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		315.5	%
Declared cooling capacity for part load a	at given outdoor	temperatu	res		efficiency ratio or gas utilization e	-	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdoo	or temperatures	Гј
Ti=+25°C	Pdc	12.5	kW				1
Tj=+35°C	Fuc	12.5		Tj=+35°C	EERd or	338.0	%
Tj=+30°C	Pdc	9.2	kW	T: .0000	GUEc,bin / AEFc,bin		
1,1-1.00 0	1 40	7.2		Tj=+30°C	EERd or	587.0	%
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or		
,			_	1]=+25 C	GUEc,bin / AEFc,bin	925.0	%
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or		
	L		_	1,1 120 0	GUEc,bin / AEFc,bin	1667.0	%
Degradation	ſ]		0020,511777270,5111		J
coefficient for	Cdc	0.25	_				
air conditioners**							
			-				
Power consumpiton in other than 'active	e mode'						
			_				_
Off mode	P _{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_SB	0.008	kW
Other items							1
	Γ		ا ١	For air-to-air air	conditioner:	4500	m3/h
Capacity control		variable		air flow-rate,out	door measured		
	1		ا ر				
Sound power level,	L_{WA}	71.0	dB				
outdoor	Ĺ						
M. coming additionary	[](1.3.4.0)-				
If engine driven:	NOx	_	mg/kWh				
Emissions of nitrogen	***		fuel input GCV				
oxides	L		JGCV				
GWP of the			kg CO _{2eq}				
refrigerant		2088	(100years)				
g	L		_				
Contact details Mitsul	pishi heavy indus	tries therr	nal systems,L	TD			
** If Cdc is not determined by measuren	nent then the def	ault degra	dation coeffic	ient air condition	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt	air conditioners,t	he test res	sult and perfo	mance data be o	btained on the basis of the perform	nance	
of the outdoor unit, with a combination of	of indoor unit(s) r	ecommen	ded by the ma	anufacturer or imp	orter.		
						P.IF000	7425 ^

Information to identify the model(s) to which	the information	relates ·		ED040E)/0	A / EDTON/O (**0't-	`			
Outdoor side heat exchanger of heat pump		air		FDC125VS	A / FDT60VG (x2 units)			
Indoor side heat exchanger of heat pump :		air							
Indication if the heater is equipped with a si	upplementary he			١	No				
if applicable : electric motor									
Parameters shall be declared for the average	ge heating seaso	n , paramet	ers for the w	armer and c	older heating seasons	are optional.			
Item	Symbol	Value	Unit		Item	Symbol		Value	Unit
Rated heating capacity						ng energy efficiency ηs,h			
, ,	Prated,h	14.0	kW		, , , , , , , , , , , , , , , , , , , ,			205.1	%
Declared heating capacity for part load at ir and outdoor temperature Tj	ndoor temperatur	e 20°C				f performance or gas utilizati for part load at given outdoo			
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or		350.0	%
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	•	503.0	%
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	•	678.0	%
T _j =+12°C	Pdh	2.7	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	•	794.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or		292.0	%
T _{OL} =operation limit	Pdh	7.7	kW		T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or		261.0	%
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	GUEh,bin / AEFh,bin COPd or		_	%
T _j =-15°C (if T _{OL} <-20°C)					pumps: T_j =-15°C (if T_{OL} <-20°C)	GUEh,bin / AEFh,bin	L		J
Bivalent temperature	T_{biv}	-10.0	°C		For water-to-air heat				00
Degradation]		pumps:Operation limit T _{ol} temperature			-	°C
coefficient	C_{dh}	0.25	-						
Power consumpiton in modes other than 'ad	ctive mode'				Supplementary heater		elbu	-	kW
Off mode	P_{OFF}	0.008	kW		3.17	. ,			•
Thermostat-off mode	P_{TO}	0.015	kW		Type of energy input		P _{SB}	0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode		SB	0.000	KVV
Other items							1		1
Capacity control		variable]		For air-to-air heat pur air flow-rate,outdoor m			4380	m3/h
Sound power level,		=4.5	4D		For water-/brine-to-air	heat pumps :	ſ]
outdoor measured	L_{WA}	71.0	dB		Rated brine or water fi			-	m3/h
			_		outdoor side heat exch	nanger			
Emissions of nitrogen			mg/kWh						_
oxides(if applicable)	NOx ***	-	fuel input GCV						
GWP of the		2088	kg CO _{2eq}						
refrigerant			(100years)						
Control details	iahi ha	daa Noo		<u> </u>	<u> </u>				
Contact details Mitsubi ** If Cdh is not determined by measuremen	ishi heavy indust				ners shall he 0.25				
	. alon the uclauli	acgradatio	oodiiioitill	an condition	.0.3 Shan DG 0,23.				
*** from 26 September 2018	nonditioner: #- '	oot recult	nd no-fo	noo deta !:	obtained on the first	f the performance			
Where information relates to multi-spilt air of the outdoor unit, with a combination of in-						и иле регтогталсе			
of the outdoor unit, with a combination of in	uooi uiii(s) fecol	ппепаеа Б	y une manufa	icturer or im	purter.				
								PJF0002	Z425 🙈

Model FDT140VNAPVG

Model(s): FDC140VNA / FDT7		ts)					
Outdoor side heat exchanger of air condition	ner:	air					
Indoor side heat exchanger of air conditions	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space cool	ing energy		
	Prated,c	13.6	kW	efficiency ηs,c		297.5	%
				_			
Declared cooling capacity for part load at gi	ven outdoor	temperatui	res	Declared energy effic	ciency ratio or gas utilization efficien	icy /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy facto	or for part load at given outdoor tem	peratures ⁻	Гj
Ti-125°C	Pdc	13.6	kw		Γ		1
Tj=+35°C	Fuc	13.0	Ivvv	Tj=+35°C	EERd or	330.0	%
Tj=+30°C	Pdc	10.0	kW		GUEc,bin / AEFc,bin		
11]=+30 C	ruc	10.0	J.vv	Tj=+30°C	EERd or	545.0	%
Tj=+25°C	Pdc	6.4	kW	T: .05°0	GUEc,bin / AEFc,bin		
11]-125 5	1 40	0.4]	Tj=+25°C	EERd or	815.0	%
Tj=+20°C	Pdc	3.5	kW	Ti- 120°C	GUEc,bin / AEFc,bin		
,			1	Tj=+20°C	EERd or GUEc,bin / AEFc,bin	1750.0	%
Degradation			1		GOLC, DITT ALT C, DITT		J
coefficient for	Cdc	0.25	_				
air conditioners**	040						
			1				
Power consumpiton in other than 'active mo	de'						
Off mode	P_{OFF}	0.008	kW	Crankcase heater mo	ode P _{CK}	0.008	kW
Thermostat-off mode	P_{TO}	0.000	kW	Standby mode	P_{SB}	0.008	kW
Other items					г		,
			,	For air-to-air air cond	litioner:	4500	m3/h
Capacity control		variable]	air flow-rate,outdoor	measured		
			, l				
Sound power level,	L_WA	73.0	dB				
outdoor]				
			1 I				
If engine driven:	NOx	_	mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
GWP of the			kg CO _{2eq}				
		2088	(100years)				
refrigerant			1				
Contact details Mitsubishi	i heavy indu	stries therm	nal systems,L	TD			
** If Cdc is not determined by measurement					nall be 0,25.		
*** from 26 September 2018		-					
Where information relates to multi-spilt air o	onditioners.	the test res	ult and perfor	mance data be obtain	ed on the basis of the performance		
of the outdoor unit, with a combination of inc							
,	-(-/		,				
						P.IF000	7/25 △

Information to identify the model(s) to w	hich the information i	relates :		FDC140VN	IA / FDT71VG (x2 units)		
Outdoor side heat exchanger of heat put	mp :	air						
Indoor side heat exchanger of heat pum	p:	air						
Indication if the heater is equipped with	a supplementary hea	ater :		١	lo .			
if applicable : electric motor								
Parameters shall be declared for the ave	erage heating season	n , paramete	ers for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	-,					ng energy efficiency ηs,h		
Trace realing supusity	Prated,h	15.5	kW		ocasonal space neath	ig chargy amoratoy (p.,)	192.6	%
Declared heating capacity for part load a	at indoor tomporature	20°C	l	1	Doctored coefficient of	f performance or gas utilization efficie	opey /	
and outdoor temperature Tj	at indoor temperature	5 20 C				for part load at given outdoor tempe	•	
and outdoor temperature 1)					auxiliary energy factor	for part load at given outdoor tempe	ratures rj	
T _j =-7°C	Pdh	9.3	kW		T _i =-7°C	COPd or		1
, , ,	i dii]		1, 70		326.0	%
T _i =+2°C	Pdh	5.7	kW		T _i =+2°C	GUEh,bin / AEFh,bin COPd or		
1,-+2 0	ruii [0.1	KVV		1,-+2 0		466.0	%
	[3.7	1			GUEh,bin / AEFh,bin		-
T_j =+7°C	Pdh	3.1	kW		T _j =+7°C	COPd or	640.0	%
	ſ		1		_	GUEh,bin / AEFh,bin		
T _j =+12°C	Pdh	2.6	kW		T _j =+12°C	COPd or	813.0	%
	ı		1			GUEh,bin / AEFh,bin		.
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	COPd or	277.0	%
	ı		1		temperature	GUEh,bin / AEFh,bin		
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	COPd or	246.0	%
			,			GUEh,bin / AEFh,bin		
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or	_	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin]^
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
			_					_
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			
			_		pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
	•		•					
				1				
Power consumpiton in modes other than	'active mode'				Supplementary heater]
					back-up heating capac	eibu	-	kW
Off mode	P _{OFF}	0.008	kW		back up fleating capac	Sity		•
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input			1
Crankcase heater mode	P _{CK}	0.008	kW			P _{SB}	0.008	kW
	OK [J		Standby mode			<u> </u>
Other items				1				
Other items					For air to air boot num	ana.		1
OittI	[variable	1		For air-to-air heat pum		4380	m3/h
Capacity control	L	741141010	J		air flow-rate,outdoor m	neasured]
	1		1					1 l
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air			m3/h
outdoor measured	Į]		Rated brine or water fi		-	1113/11
	ı		1		outdoor side heat exch	nanger]
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
	l		GCV					
	r		7					
GWP of the		2088	kg CO _{2eq}					
refrigerant	l		(100years)					
Contact details Mits	subishi heavy industr	ies thermal	systems,LT	D				
** If Cdh is not determined by measuren	nent then the default	degradation	n coefficient	air condition	ners shall be 0,25.		· <u> </u>	
*** from 26 September 2018								
Where information relates to multi-spilt	air conditioners,the to	est result an	nd performar	nce data be	obtained on the basis o	f the performance		
of the outdoor unit, with a combination o						•		
	, ,				-			
							PJF0002	Z425 <u>&</u>

Model FDT140VSAPVG

Model(s): FDC140VSA / FD	OT71VG (x2 units	3)					
Outdoor side heat exchanger of air cond	ditioner:	air					
Indoor side heat exchanger of air condit	tioner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		297.5	%
Declared cooling capacity for part load a	at given outdoor t	temperatu	res	Declared energy	y efficiency ratio or gas utilization e	fficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdoo	or temperatures	Гј
	г		ا				1
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	330.0	%
T: +20%	ъ. Г	40.0	المدر		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	545.0	%
Ti-125°C	Pdc	6.4	kW		GUEc,bin / AEFc,bin		
Tj=+25°C	Fuc	0.4		Tj=+25°C	EERd or	815.0	%
Tj=+20°C	Pdc	3.5	kW	T: . 00%	GUEc,bin / AEFc,bin		
1]-120 0	r dc _	3.3		Tj=+20°C	EERd or	1750.0	%
Degradation	Г		n l		GUEc,bin / AEFc,bin		J
Degradation coefficient for	Cdc	0.25					
air conditioners**	Cuc						
all conditioners	L		_				
Power consumpiton in other than 'active	mode'						
. ener concumption in care, arain deare							
Off mode	P _{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_{SB}	0.008	kW
	_		_				1
Other items							
	_		_	For air-to-air air	conditioner:	4500	m3/h
Capacity control	L	variable		air flow-rate,out	door measured	4000	1110/11
	-		_				
Sound power level,	L _{WA}	73.0	dB				
outdoor	""						
	г		,				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
	F		ا ،				
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant	L		(Tooyears)				
1							
	bishi heavy indus				ore shall be 0.25		
** If Cdc is not determined by measuren	nent then the der	auit degra	idation coeffic	elent air conditione	ers snall de 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt						nance	
of the outdoor unit, with a combination of	of indoor unit(s) re	ecommen	ded by the ma	anufacturer or imp	oorter.		
						P.IF000	7425 A

Information to identify the model(s) to which	ch the information i	relates :		FDC140VS	A / FDT71VG (x2 units)		
Outdoor side heat exchanger of heat pump	p :	air						
Indoor side heat exchanger of heat pump	:	air						
Indication if the heater is equipped with a	supplementary hea	iter :		١	lo .			
if applicable : electric motor								
Parameters shall be declared for the avera	age heating seaso	n , paramet	ers for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	.,					ng energy efficiency ηs,h		
ration rouning deputity	Prated,h	15.5	kW		Codociiai opaco iicatii	ig chargy chickensy (p.,	192.6	%
Declared heating capacity for part load at	indoor tomporature	20°C	l	1	Doctored coefficient of	f performance or gas utilization efficie	nov /	l
and outdoor temperature Tj	muoor temperature	20 0				for part load at given outdoor temper	•	
and outdoor temperature 1					auxiliary energy factor	for part load at given outdoor temper	atures ij	
T _j =-7°C	Pdh	9.3	kW		T _i =-7°C	COPd or		1
1,7	r un		IKVV		1,7 0		326.0	%
T _i =+2°C	Pdh	5.7	kW		T=12°C	GUEh,bin / AEFh,bin		
1,-+2 0	Pull [5.7	IKVV		T _j =+2°C	COPd or	466.0	%
=0-	I	3.7	1			GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.1	kW		T _j =+7°C	COPd or	640.0	%
	1		1			GUEh,bin / AEFh,bin	-	
T _j =+12°C	Pdh	2.6	kW		T _j =+12°C	COPd or	813.0	%
	ı		1			GUEh,bin / AEFh,bin		
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	COPd or	277.0	%
	r		1		temperature	GUEh,bin / AEFh,bin		
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	COPd or	246.0	%
			,			GUEh,bin / AEFh,bin		
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or	_	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
			_					_
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			
	•		_		pumps:Operation limit		-	°C
Degradation			1		T _{ol} temperature			
coefficient	C_{dh}	0.25	-					•
heat pumps**								
	ı							
Power consumpiton in modes other than 'a	active mode!				Supplementary heater			1
ower consumption in modes other than t	douve mode				back-up heating capac	eibu	-	kW
Off mode	P _{OFF}	0.008	kW		back-up neating capac	Sity		J
Thermostat-off mode	P _{TO}	0.015	kW		T a af an ann inn t			1
Crankcase heater mode	P _{CK}	0.008	kW		Type of energy input	P _{SB}	0.008	kW
Orankoase neater mode	' CK	0.000	I KVV		Standby mode			J
- · ·				-				
Other items								1
	1	variable	1		For air-to-air heat pum		4380	m3/h
Capacity control	l	variable	ļ		air flow-rate,outdoor m	neasured		l
	1		1					1
Sound power level,	L _{WA}	73.0	dB		For water-/brine-to-air	heat pumps :		0.11
outdoor measured	l		J		Rated brine or water fi	ow-rate,	-	m3/h
	Г		1		outdoor side heat exch	nanger]
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
			-					
GWP of the		2088	kg CO _{2eq}					
refrigerant		2000	(100years)					
	•		•					
Contact details Mitsul	bishi heavy industr	ies thermal	svstems.LT	D.	•			
** If Cdh is not determined by measureme					ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air	conditioners the to	est requit on	nd nerformar	nce data ho	obtained on the basis of	f the performance		
of the outdoor unit, with a combination of i						porrormanoo		
2. 2.0 Catago, and, war a combination of		onddd D	, a.e manule		F 1011			
1							PJF0002	Z425 <u></u> €

Model FDT140VNATVG

Model(s): FDC140VNA / FI	DT50VG (x3 unit	s)					
Outdoor side heat exchanger of air con	ditioner :	air					
Indoor side heat exchanger of air condi	tioner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		297.5	%
Declared cooling capacity for part load	at given outdoor	temperatu	res	Declared energy	y efficiency ratio or gas utilization of	efficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdo	or temperatures	Гј
T:05%		40.0	ا ،				1
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	330.0	%
Ti=+20°C	Pdc	40.0] _{I2M}	_	GUEc,bin / AEFc,bin		
Tj=+30°C	Puc	10.0	kW	Tj=+30°C	EERd or	545.0	%
Tj=+25℃	Pdc	6.4	kW		GUEc,bin / AEFc,bin		
1]-1200	1 00	0.4],,,,	Tj=+25°C	EERd or	815.0	%
Tj=+20°C	Pdc	3.5	kW	T:- + 20°C	GUEc,bin / AEFc,bin		
1, 120 0	1 40	0.0]	Tj=+20°C	EERd or	1750.0	%
Degradation			ן ר		GUEc,bin / AEFc,bin		J
coefficient for	Cdc	0.25					
air conditioners**	Ouc						
all conditioners			_				
Power consumpiton in other than 'active	e mode'						
Off mode	P_{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P_{TO}	0.000	kW	Standby mode	P_{SB}	0.008	kW
	'		_				•
Other items							
	,		_	For air-to-air air	conditioner:	4500	m3/h
Capacity control		variable]	air flow-rate,out	door measured		
	i	-	,				
Sound power level,	L_WA	73.0	dB				
outdoor]				
	1		۱ ا				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
	ĺ		۱ ا				
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant			(100years)				
	bishi heavy indus				are shall he 0.25		
** If Cdc is not determined by measurer	nent tilen tile de	iauit uegra	iualiUII COEIII(JEHL AH CUHUNUNG	513 311dli DC U,ZO.		
*** from 26 September 2018							
Where information relates to multi-spilt						nance	
of the outdoor unit, with a combination	ot indoor unit(s) r	ecommen	aea by the ma	anutacturer or imp	ooner.		
						P.IF000	7425 △

Information to identify the model(s) to which the	e information i	relates :		FDC140VNA / FDT50VG (x3 units)		
Outdoor side heat exchanger of heat pump :		air				
Indoor side heat exchanger of heat pump :		air				
Indication if the heater is equipped with a suppl	lementary hea			No		
	icinicintary nec					
• • • • • • • • • • • • • • • • • • • •						
Parameters shall be declared for the average r	neating seaso	n , paramete	ers for the w	armer and colder heating seasons are optional.		
Item	Symbol	Value	Unit	Item Symbol	Value	Unit
Rated heating capacity				Seasonal space heating energy efficiency ηs,h		
	Prated,h	15.5	kW		192.6	%
Declared heating capacity for part load at indoo	or temperature	e 20°C		Declared coefficient of performance or gas utilization e	fficiency /	
and outdoor temperature Tj				auxiliary energy factor for part load at given outdoor ter	-	
and outdoor temperature 1)				dustinary energy factor for part four at given outdoor ter	inperatures 1)	
T - 7°C	Pdh	9.3	kW	T _i =-7°C COPd or		
T _j =-7°C	Full	0.0	Ivvv	,	326.0	%
	Ī		1	GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.7	kW	T_j =+2°C COPd or	466.0	%
	Ē		-	GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.7	kW	T _j =+7°C COPd or	640.0	%
				GUEh,bin / AEFh,bin	040.0	,0
T _j =+12°C	Pdh	2.6	kW	T _i =+12°C COPd or	2/2.2	0.1
,	ı			GUEh,bin / AEFh,bin	813.0	%
T _{biv} =bivalent temperature	Pdh	10.5	kW	T _{bN} =bivalent COPd or		
I DIV DIVAIGN COMPETATURE	i uii		1.,,,	temperature	277.0	%
		~ ~	1	GUEN,DIN / AEFN,DIN	<u> </u>	
T _{OL} =operation limit	Pdh	7.9	kW	T _{OL} =operation limit COPd or	246.0	%
	r		1	GUEh,bin / AEFh,bin		
For air-to-water heat pumps :	Pdh	-	kW	For air-to-water heat COPd or		%
T _j =-15°C				pumps:T _j =-15°C GUEh,bin / AEFh,bin		, ,
(if T _{OL} <-20°C)				(if T _{OL} <-20°C)		
Bivalent temperature	T _{biv}	-10.0	°c	For water-to-air heat		
Bivaion temperature	1 DIV] ~	pumps:Operation limit		°C
Daniedakian	ī		1			Ŭ
Degradation				T _{oi} temperature		
coefficient	C_{dh}	0.25	-			
heat pumps**	[
Power consumpiton in modes other than 'active	e mode'			Supplementary heater		
				back-up heating capacity	u -	kW
Off mode	P _{OFF}	0.008	kW	back-up neating capacity		
Thermostat-off mode	P _{TO}	0.015	kW			
	1	0.008		Type of energy input Ps	B 0.008	kW
Crankcase heater mode	P _{CK}	0.006	kW	Standby mode		
Other items						1
	Ē		-	For air-to-air heat pumps:	4380	m3/h
Capacity control		variable		air flow-rate,outdoor measured		
	•				<u></u>	
Sound power level,	. 1]	For water-/brine-to-air heat pumps :		
outdoor measured	L_{WA}	73.0	dB	·	_	m3/h
outuoui illeasuleu	L		J	Rated brine or water flow-rate,		
	ſ		1	outdoor side heat exchanger	Щ	
Emissions of nitrogen	NOx		mg/kWh			
oxides(if applicable)	***	-	fuel input			
			GCV			
	_		_			
GWP of the		0000	kg CO _{2eq}			
refrigerant		2088	(100years)			
. Sgorani	Ĺ					
<u> </u>						
•	heavy industr					
** If Cdh is not determined by measurement the	en the default	aegradatio	n coefficient	air conditioners shall be 0,25.		
*** from 26 September 2018						
Where information relates to multi-spilt air cond	ditioners,the to	est result ar	nd performar	ce data be obtained on the basis of the performance		
of the outdoor unit, with a combination of indoo						
	. ,			·		
					PJF000Z	′425 <u>&</u>

Model FDT140VSATVG

Model(s): FDC140VSA / FD	T50VG (x3 unit	s)					
Outdoor side heat exchanger of air cond	litioner :	air					
Indoor side heat exchanger of air condit	ioner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		297.5	%
Declared cooling capacity for part load a	at given outdoor	temperatu	res	Declared energy	y efficiency ratio or gas utilization of	efficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdo	or temperatures	Гј
			ا				1
Tj=+35℃	Pdc	13.6	kW	Tj=+35°C	EERd or	330.0	%
T: +00%	D.1	10.0	ا ،		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	545.0	%
Ti-125°C	Pdc	6.4	kW		GUEc,bin / AEFc,bin		
Tj=+25°C	Fuc	0.4] _{vv}	Tj=+25°C	EERd or	815.0	%
Tj=+20°C	Pdc	3.5	kW	T: . 0000	GUEc,bin / AEFc,bin		
1]-120 0	1 uc	3.3		Tj=+20°C	EERd or	1750.0	%
Degradation			n l		GUEc,bin / AEFc,bin	L	J
Degradation coefficient for	Cdc	0.25					
air conditioners**	Cuc						
all conditioners			_				
Power consumpiton in other than 'active	mode'						
· ener concumption in case, and a conc							
Off mode	P_{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P_{TO}	0.000	kW	Standby mode	P_{SB}	0.008	kW
			-				•
Other items							
			_	For air-to-air air	conditioner:	4500	m3/h
Capacity control		variable		air flow-rate,out	door measured	4500	1110/11
		1	_				
Sound power level,	L_{WA}	73.0	dB				
outdoor	WA		_				
			,				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
			۱ ا				
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant			(Tooyears)				
	oishi heavy indu				ore shall be 0.25		
** If Cdc is not determined by measuren	nent then the de	fault degra	idation coeffic	cient air conditione	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt a						mance	
of the outdoor unit, with a combination o	t indoor unit(s) i	recommen	ded by the ma	anufacturer or imp	oorter.		
						P.IF000	7425 △

Information to identify the model(a) to	which the information	rolatoo :							
Information to identify the model(s) to violated or side heat exchanger of heat p				FDC140VS	A / FDT50VG (x3 units	3)			
Indoor side heat exchanger of heat pur		air							
Indication if the heater is equipped with		air			10				
if applicable : electric motor	ra supplementary ne	ater.		•					
Parameters shall be declared for the a	verage heating seaso	n naramete	ers for the w	armer and c	older heating seasons	are ontional			
Item	Symbol		Unit		Item	Symbol		Value	Unit
Rated heating capacity	Symbol	value	Offic			ng energy efficiency ηs,h		value	Offic
reacing capacity	Prated,h	15.5	kW		Seasonal space heath	ng energy emolency 1/5,11		192.6	%
Declared heating capacity for part load and outdoor temperature Tj	l at indoor temperatur	e 20°C				f performance or gas utiliza r for part load at given outdo			
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or		326.0	%
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin		466.0	%
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or GUEh,bin / AEFh,bin		640.0	%
T _j =+12°C	Pdh	2.6	kW		T _j =+12°C	COPd or GUEh,bin / AEFh,bin		813.0	%
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	COPd or GUEh,bin / AEFh,bin		277.0	%
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	COPd or GUEh,bin / AEFh,bin		246.0	%
For air-to-water heat pumps : T _j =-15°C	Pdh	-	kW		For air-to-water heat pumps:T _j =-15°C	COPd or GUEh,bin / AEFh,bin		-	%
(if T _{OL} <-20°C)			1.		(if T _{OL} <-20°C)		Г		1
Bivalent temperature	T _{biv}	-10.0]°C 1		For water-to-air heat pumps:Operation limit	t		-	င
Degradation coefficient		0.25			T _{ol} temperature		L		J
heat pumps**	C_{dh}	0.20	-						
Power consumpiton in modes other that	an 'active mode'				Supplementary heater		elbu	-	kW
Off mode	P_{OFF}	0.008	kW		Sack up ricating capa	ony	L		_
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input		P _{SB}	0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode		FSB	0.000	
Other items					For air-to-air heat pum	nps:		4380	m3/h
Capacity control		variable]		air flow-rate,outdoor n	neasured	_	4300]
Sound power level, outdoor measured	L_WA	73.0	dB		For water-/brine-to-air Rated brine or water f outdoor side heat excl	iow-rate,		-	m3/h
Emissions of nitrogen oxides(if applicable)	NOx ***	-	mg/kWh fuel input GCV						
GWP of the refrigerant		2088	kg CO _{2eq} (100years)						
Contact details Mi	itsubishi heavy indust	ries thermal	systems,LT	D_					
** If Cdh is not determined by measure					ners shall be 0,25.				
*** from 26 September 2018 Where information relates to multi-spil of the outdoor unit, with a combination						of the performance			
							Т	PJF000	7425 A

Models FDT50VG, 60VG, 71VG, 100VG, 125VG, 140VG

Model(s): FDT50VG										
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit			
Cooling capacity (sensible)	$P_{\text{rated,c}}$	4.4	kW	Total electric power input	P_{elec}	0.040	kW			
Cooling capacity (latent)	P _{rated,c}	0.6	kW	Sound power level (per speed setting,if applicable)	L_{WA}	54.0	dB			
Heating capacity	P _{rated,h}	5.4	kW							
Contact details	Mitsubishi h	itsubishi heavy industries thermal systems,LTD								

Model(s): FDT60VG										
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit			
Cooling capacity (sensible)	P _{rated,c}	5.5	kW	Total electric power input	P_{elec}	0.070	kW			
Cooling capacity (latent)	P _{rated,c}	0.1	kW	Sound power level (per speed setting,if applicable)	L_{WA}	60.0	dB			
Heating capacity	P _{rated,h}	6.7	kW							
Contact details	Mitsubishi h	itsubishi heavy industries thermal systems,LTD								

Model(s): FDT71VG													
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit						
Cooling capacity (sensible)	$P_{\text{rated,c}}$	6.4	kW	Total electric power input	P _{elec}	0.080	kW						
Cooling capacity (latent)	P _{rated,c}	0.7	kW	Sound power level (per speed setting,if applicable)	L _{WA}	62.0	dB						
Heating capacity	$P_{rated,h}$	8.0	kW										
Contact details	Mitsubishi I	litsubishi heavy industries thermal systems,LTD											

Model(s): FDT100VG													
ltem	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit						
Cooling capacity (sensible)	P _{rated,c}	8.8	kW	Total electric power input	P _{elec}	0.130	kW						
Cooling capacity (latent)	P _{rated,c}	1.2	kW	Sound power level (per speed setting,if applicable)	L _{WA}	63.0	dB						
Heating capacity	P _{rated,h}	11.2	kW										
Contact details	Mitsubishi h	litsubishi heavy industries thermal systems,LTD											

Model(s): FDT125VG										
ltem	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit			
Cooling capacity (sensible)	P _{rated,c}	9.9	kW	Total electric power input	P_{elec}	0.140	kW			
Cooling capacity (latent)	P _{rated,c}	2.6	kW	Sound power level (per speed setting,if applicable)	L _{WA}	64.0	dB			
Heating capacity	$P_{\text{rated,h}}$	14.0	kW							
Contact details	Mitsubishi h	litsubishi heavy industries thermal systems,LTD								

Model(s): FDT140VG											
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit				
Cooling capacity (sensible)	P _{rated,c}	10.5	kW	Total electric power input	P_{elec}	0.140	kW				
Cooling capacity (latent)	P _{rated,c}	3.5	kW	Sound power level (per speed setting,if applicable)	L _{WA}	64.0	dB				
Heating capacity	$P_{rated,h}$	16.0	kW								
Contact details	Contact details Mitsubishi heavy industries thermal systems,LTD										
						P.JF000	Z425 🗟				

(2) Ceiling cassette - 4 way compact type (FDTC) Model FDTC100VNAPVF

		History and the second	0 1 0
Information to identify the model(s) to whic		If function includes heating: Indicate	
Indoor unit model name Outdoor unit model name	FDTC50VF (x2 units) FDC100VNA	information relates to. Indicated value heating season at a time. Include at	
Outdoor unit model name	FDC100VNA	Ineating season at a time. Include at	least the heating season Average.
Function(indicate if present)		Average(mandatory)	Yes
cooling	Yes	Warmer(if designated)	No
heating	Yes	Colder(if designated)	No
rieating	163	Colder (II designated)	NO
Item	symbol value ur	Item	symbol value class
Design load	Symbol value ui	Seasonal efficiency and energy effic	
cooling	Pdesignc 10.0 kV	cooling	SEER 5.48 A
heating / Average	Pdesignh 8.5 kV	heating / Average	SCOP/A 3.93 A
heating / Warmer	Pdesignh - kV	heating / Warmer	SCOP/W
		heating / Warrier	SCOP/C
heating / Colder	Pdesignh - kV	neating / Colder	
			unit
Declared capacity at outdoor temperature		Back up heating capacity at outdoor	
heating / Average (-10°C)	Pdh 8.5 kV	heating / Average (-10°C)	elbu 0 kW
heating / Warmer (2°C)	Pdh - kV	heating / Warmer (2°C)	elbu - kW
heating / Colder (-22°C)	Pdh - kV	heating / Colder (-22°C)	elbu - kW
Declared capacity for cooling, at indoor ten	nperature 27(19)°C and	Declared energy efficiency ratio, at it	ndoor temperature 27(19)°C and
outdoor temperature Tj	D	outdoor temperature Tj	55D L
Tj=35°C	Pdc 10.0 kV	Tj=35°C	EERd 2.87 -
Tj=30°C	Pdc 7.37 kV	Tj=30°C	EERd 4.19 -
Tj=25°C	Pdc 4.74 kV	Tj=25°C	EERd 6.72 -
Tj=20°C	Pdc 3.55 kV	Tj=20°C	EERd 10.82 -
Declared capacity for heating / Average se	ason, at indoor	Declared coefficient of performance	/ Average season, at indoor
temperature 20°C and outdoor temperature	e Tj	temperature 20°C and outdoor temp	erature Tj
Tj=-7°C	Pdh 7.52 kV	Tj=-7°C	COPd 2.87 -
Tj=2°C	Pdh 4.58 kV	Tj=2°C	COPd 3.73 -
Tj=7°C	Pdh 2.94 kV	Tj=7°C	COPd 4.97 -
Tj=12°C	Pdh 2.75 kV	Ti=12°C	COPd 6.19 -
Tj=bivalent temperature	Pdh 6.77 kV	Tj=bivalent temperature	COPd 2.20 -
Tj=operating limit	Pdh 8.5 kV	Tj=operating limit	COPd 2.41 -
1)-operating limit	1 011 0.0	IJ-operating limit	2.41
Declared capacity for heating / Warmer se	ason at indoor	Declared coefficient of performance	/ Warmer season, at indoor
temperature 20°C and outdoor temperature		temperature 20°C and outdoor temp	
Tj=2°C	Pdh - kV	Tj=2°C	COPd
Tj=7°C	Pdh - kV	Ti=7°C	COPd
		Tj=12°C	
Tj=12°C	Pdh - kV	11 7	COPd
Tj=bivalent temperature	Pdh - kV	Tj=bivalent temperature	COPd
Tj=operating limit	Pdh - kV	Tj=operating limit	COPd
5 1 1 " () " () 1			10.11
Declared capacity for heating / Colder seasons		Declared coefficient of performance	
temperature 20°C and outdoor temperature		temperature 20°C and outdoor temp	
Tj=-7°C	Pdh - kV	Tj=-7°C	COPd
Tj=2°C	Pdh - kV	Tj=2°C	COPd
Tj=7°C	Pdh - kV	Tj=7°C	COPd
Tj=12°C	Pdh - kV	Tj=12°C	COPd
Tj=bivalent temperature	Pdh - kV	Tj=bivalent temperature	COPd
Tj=operating limit	Pdh - kV	Tj=operating limit	COPd
Tj=-15℃	Pdh - kV	Tj=-15°C	COPd
Bivalent temperature		Operating limit temperature	
heating / Average	Tbiv -10 °C	neating / Average	Tol -20 °C
heating / Warmer	Tbiv - °C	heating / Warmer	Tol - °C
heating / Colder	Tbiv - °C	heating / Colder	Tol - ℃
Cycling interval capacity		Cycling interval efficiency	
for cooling	Pcycc - kV	for cooling	EERcyc
for heating	Pcych - kV	for heating	COPcyc
	•		
Degradation coefficient		Degradation coefficient	
cooling	Cdc 0.25 -	heating	Cdh 0.25 -
<u> </u>			
Electric power input in power modes other	than 'active mode'	Annual electricity consumption	-
off mode	Poff 8 W	cooling	Qce 640 kWh/a
standby mode	Psb 8 W	heating / Average	Qhe 3029 kWh/a
thermostat-off mode	Pto 25 W	heating / Warmer	Qhe - kWh/a
crankcase heater mode	Pck 8 W	heating / colder	Qhe - kWh/a
oranicado neator mode	. on 0 W	incating / colder	- WAAIING
Capacity control(indicate one of three option	une)	Other items	
Capacity control(indicate one of three option	110)	Sound power level(indoor)	Lwa 60 dB(A)
		Sound power level(indoor)	Lwa 70 dB(A)
fived	No		
fixed	No	Global warming potential	GWP 1975 kgCO2ec
staged	No	Rated air flow(indoor)	- 810 m3/h
variable	Yes	Rated air flow(outdoor)	- 4500 m3/h
Contact details for obtaining		nanufacturer or of its authorised representative	/e.
	hi Heavy Industries Air-Cond		
5 The Sc	uare, Stockley Park, Uxbridge	Middlesex, UB11 1ET,	
United k	ingdom		
	ingdom		PJA003Z401 <u>&</u>

Model FDTC100VSAPVF

Information to identify the mode	(s) to which the information re	elates to:	If function includes heating: Indicate t	he heating seaso	n the
Indoor unit model name	FDTC50VF (x2	units)	information relates to. Indicated value		
Outdoor unit model name	FDC100VSA		heating season at a time. Include at le	east the heating s	eason 'Average'.
			_l		
Function(indicate if present)	V		Average(mandatory)	Yes	
cooling heating	Yes Yes		Warmer(if designated) Colder(if designated)	No No	
leating	Tes		Colder(ii designated)	NO	
tem	symbol value	e unit	Item	symbol	value class
Design load			Seasonal efficiency and energy efficiency		
cooling	Pdesignc 1	0.0 kW	cooling	SEER	5.48 A
neating / Average		8.5 kW	heating / Average	SCOP/A	3.93 A
neating / Warmer	Pdesignh	- kW	heating / Warmer	SCOP/W	
neating / Colder	Pdesignh	- kW	heating / Colder	SCOP/C	
					unit
Declared capacity at outdoor ter			Back up heating capacity at outdoor t		
neating / Average (-10°C)		8.5 kW	heating / Average (-10°C)	elbu	0 kW
neating / Warmer (2°C) neating / Colder (-22°C)	Pdh Pdh	- kW - kW	heating / Warmer (2°C) heating / Colder (-22°C)	elbu elbu	- kW kW
leating / Colder (-22 C)	Full	-	rieating / Colder (-22 C)	eibu	- KVV
Declared capacity for cooling, at	indoor temperature 27(19)°C	and	Declared energy efficiency ratio, at in-	door temperature	27(19)°C and
outdoor temperature Tj	indoor temperature 27 (10) o	unu	outdoor temperature Tj	acor temperature	27(10) 0 and
Γj=35°C	Pdc 1	0.0 kW	Tj=35°C	EERd	2.87 -
Tj=30°C	<u> </u>	.37 kW	Tj=30°C	EERd	4.19 -
Tj=25°C		.74 kW	Tj=25℃	EERd	6.72
Гј=20°С		.55 kW	Tj=20°C	EERd	10.82 -
Declared capacity for heating / A		· · · · · · · · · · · · · · · · · · ·	Declared coefficient of performance /		at indoor
temperature 20°C and outdoor t			temperature 20°C and outdoor tempe		
Гj=-7°С		. 52 kW	Tj=-7°C	COPd	2.87 -
Γj=2°C		. 58 kW	Tj=2°C	COPd	3.73 -
Γj=7°C	<u> </u>	. 94 kW	Tj=7°C	COPd	4.97 -
Tj=12°C		. 75 kW	Tj=12°C	COPd	6.19 -
Tj=bivalent temperature		. 77 kW	Tj=bivalent temperature	COPd	2.20 -
Tj=operating limit	Pdh 8	8.5 kW	Tj=operating limit	COPd	2.41 -
2	A/		Declared coefficient of moderning of	10/	-4 to at
Declared capacity for heating / \			Declared coefficient of performance /		at indoor
temperature 20°C and outdoor t Fj=2°C	·	- kW	temperature 20°C and outdoor tempe	COPd	
Γj=7°C			Tj=7°C	COPd	
,					
Γj=12℃			117	COPd	
Γj=bivalent temperature Γj=operating limit		- kW - kW	Tj=bivalent temperature Tj=operating limit	COPd COPd	
rj-operating innit	i dii	-	rj-operating innit	001 0	
Declared capacity for heating / 0	Colder season, at indoor		Declared coefficient of performance /	Colder season, a	t indoor
temperature 20°C and outdoor t			temperature 20°C and outdoor tempe		
Tj=-7°C	· · · · · ·	- kW	Tj=-7°C	COPd	
Tj=2°C	Pdh	- kW	Tj=2°C	COPd	
τj=7°C	Pdh	- kW	Tj=7℃	COPd	
Tj=12℃	Pdh	- kW	Tj=12℃	COPd	
Tj=bivalent temperature	_ '	- kW	Tj=bivalent temperature	COPd	
Tj=operating limit	Pdh	- kW	Tj=operating limit	COPd	
Гj=-15°С	Pdh	- kW	Tj=-15°C	COPd	
Bivalent temperature	Tu. : .	10 00	Operating limit temperature	T-1	20 00
heating / Average	<u> </u>	10 °C	heating / Average	Tol	-20 °C °C
heating / Warmer	-	- °C - °C	heating / Warmer	Tol	
neating / Colder	Tbiv	- °C	heating / Colder	Tol	- ℃
Cycling interval capacity			Cycling interval efficiency		
or cooling	Pcycc	- kW	for cooling	EERcyc	
or heating	-	- kW	for heating	COPcyc	
<u> </u>		<u> </u>			<u> </u>
Degradation coefficient			Degradation coefficient	· · · · · · · · · · · · · · · · · · ·	
cooling	Cdc 0.	.25 -	heating	Cdh	0.25 -
Electric news-timet in	adag other than lasting and 1		Appual alactricity sensured:		
Electric power input in power mo off mode		8 W	Annual electricity consumption cooling	Qce	640 kWh/a
standby mode		8 W	heating / Average	Qte	3029 kWh/a
hermostat-off mode		8 VV 25 W	heating / Average	Qhe	- kWh/a
crankcase heater mode		8 W	heating / warmer	Qhe	- kWh/a
.a.modoo nodioi modo	i Oit	- **	produing / doldor	QIIC.	I KVVII/a
Capacity control(indicate one of	three options)		Other items		
, ,	· · · · · · · · · · · · · · · · · · ·		Sound power level(indoor)	Lwa	60 dB(A)
			Sound power level(outdoor)	Lwa	70 dB(A)
ixed	No		Global warming potential	GWP	1975 kgCO2
staged	No		Rated air flow(indoor)	-	810 m3/h
rariable	Yes		Rated air flow(outdoor)	-	4500 m3/h
Contact details for obtaining	Name and addre	ess of the mani	ufacturer or of its authorised representative	е.	
more information	Mitsubishi Heavy Industries	Air-Conditionir	ng Europe, Ltd.		
	5 The Square, Stockley Park	, Uxbridge, Midd	dlesex, UB11 1ET,		
	United Kingdom				
	_				PJA003Z401 /k

Model FDTC125VNAPVF

Model(s): FDC125VNA / FDTC	60VF (x2 ur	nits)					
Outdoor side heat exchanger of air conditio	ner:	air					
Indoor side heat exchanger of air conditione	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space cool	ing energy		
	Prated,c	12.5	kW	efficiency ηs,c		218.5	%
Declared cooling capacity for part load at gi	ven outdoor	temperatui	res	Declared energy effic	ciency ratio or gas utilization efficier	ncy /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy facto	or for part load at given outdoor tem	peratures ⁻	Тј
			,		,		,
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	232.0	%
			,		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or	399.0	%
			,		GUEc,bin / AEFc,bin		
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	EERd or	617.0	%
			,		GUEc,bin / AEFc,bin		
Tj=+20°C	Pdc	3.4	kW	Tj=+20°C	EERd or	1259.0	%
			,		GUEc,bin / AEFc,bin		1
Degradation							
coefficient for	Cdc	0.25	-				
air conditioners**]				
				_			
Power consumpiton in other than 'active mo	ode'						
	_		1				ī
Off mode	P _{OFF}	0.008	kW	Crankcase heater me	· · · · · · · · · · · · · · · · · · ·	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_SB	0.008	kW
Other items							ī
Capacity control		variable	1	For air-to-air air cond		4500	m3/h
Capacity contact		variable	1	air flow-rate,outdoor	measured		1
O count of a count level			1				
Sound power level,	L_WA	71.0	dB				
outdoor			1				
If a sing drives.							
If engine driven: Emissions of nitrogen	NOx	_	mg/kWh fuel input				
oxides	***		GCV				
oxides			IGCV				
GWP of the			kg CO _{2eq}				
refrigerant		2088	(100years)				
Tomgerant			1				
Contact details Mitsubish	i heavy indu	stries therm	nal systems,L	TD			
** If Cdc is not determined by measurement					nall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air of	onditioners	the test res	ult and perfo	rmance data be obtain	ed on the basis of the performance		
of the outdoor unit, with a combination of in-							
	(3)		,				
	_					P.IA003	7401 A

Information to identify the control of the control	- lafe "							
Information to identify the model(s) to which th	e information	relates :		FDC125VN	IA / FDTC60VF (x2 unit	ts)		
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he	ater:		1	No			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramet	ers for the v	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	-,					ng energy efficiency ηs,h		
Trace nearing capacity	Prated,h	14.0	kW		ocasonal space neath	ng chargy amaidney rp,rr	171.2	%
Declared heating capacity for part load at indo	or tomporatu	ro 20°C	ı	1	Dealared coefficient of	f performance or gas utilization	officionay /	1
and outdoor temperature Ti	or temperatur	16 20 C						
and outdoor temperature 1)					auxiliary energy factor	for part load at given outdoor to	amperatures 1)	
T = 7°C	Pdh	8.7	kW		T = 7°C	COPd or		1
T _j =-7°C	Pull	0.7	KVV		T _j =-7°C		295.0	%
T . 202		F 2	1		T .000	GUEh,bin / AEFh,bin		1
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	COPd or	409.0	%
			7			GUEh,bin / AEFh,bin		4
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	COPd or	584.0	%
			7			GUEh,bin / AEFh,bin		_
T _j =+12°C	Pdh	2.7	kW		T _j =+12°C	COPd or	730.0	%
			_			GUEh,bin / AEFh,bin		
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent	COPd or	242.0	%
					temperature	GUEh,bin / AEFh,bin	242.0	/0
T _{OL} =operation limit	Pdh	7.7	kW		T _{OL} =operation limit	COPd or	226.0	0/
			-			GUEh,bin / AEFh,bin	226.0	%
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or		1.,
T _j =-15°C			_		pumps:T _i =-15°C	GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)	,	L	-1
(10] (25 5)					(101 (25 5)			
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			1
Bivalent temperature	* DIV		l ~		pumps:Operation limit		_	°C
Dogradation			1		T _{ol} temperature			
Degradation coefficient	0	0.25			1 _{0l} temperature			
	C_{dh}	0.23	-					
heat pumps**								
				-				
								7
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater	el	lbu -	kW
			7		back-up heating capac	city		
Off mode	P _{OFF}	0.008	kW					7
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input	P	O.008	kW
Crankcase heater mode	Pck	0.008	kW		Standby mode			
Other items								_
			_		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable			air flow-rate,outdoor m	neasured	4300	1113/11
			-					-
Sound power level,		74.0	.ID		For water-/brine-to-air	heat pumps :		1
outdoor measured	L_{WA}	71.0	dB		Rated brine or water fi		-	m3/h
outdoor modean ou			_		outdoor side heat exch			
Emissions of nitrogen			mg/kWh		Suldoor side riedt exer	langer		
_	NOx	_	-					
oxides(if applicable)	***		fuel input					
			GCV					
				1				
0.145 (1)			1					
GWP of the		2088	kg CO _{2eq} (100years)					
refrigerant			(Tooyears)	'				
	heavy indust							
** If Cdh is not determined by measurement th	en the defaul	t degradatio	n coefficient	air condition	ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air con	ditioners,the	test result ar	nd performa	nce data be	obtained on the basis o	f the performance		
of the outdoor unit, with a combination of indoo	or unit(s) reco	mmended b	y the manuf	acturer or im	porter.			
							PJA003	3Z401 🛦

Model FDTC125VSAPVF

Model(s): FDC125VSA / F	DTC60VF (x2 un	its)					
Outdoor side heat exchanger of air cor	nditioner:	air					
Indoor side heat exchanger of air cond	itioner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		218.5	%
Declared cooling capacity for part load	at given outdoor	temperatu	res	Declared energy	y efficiency ratio or gas utilization	efficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdo	oor temperatures	Tj
			7				1
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	232.0	%
T: +20%0	D.I.		المدر		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or	399.0	%
T: .05°0	Dda	5.0	kW		GUEc,bin / AEFc,bin		-
Tj=+25°C	Pdc	5.9	KVV	Tj=+25°C	EERd or	617.0	%
Tj=+20°C	Pdc	3.4	7,,,,		GUEc,bin / AEFc,bin		
1]-+20 C	Puc	3.4	kW	Tj=+20°C	EERd or	1259.0	%
D 1.0			7		GUEc,bin / AEFc,bin		J
Degradation	0.1	0.25					
coefficient for	Cdc	0.20	-				
air conditioners**							
Power consumpiton in other than 'activ	ro modo!						
Power consumpiton in other than 'activ	e mode						
Off mode	P _{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P _{SB}	0.008	kW
	.0		_		05		J
Other items							
				For air-to-air air	conditioner:]
Capacity control		variable	1	air flow-rate,out		4500	m3/h
			_				_
Sound power level,		74.0],,,				
outdoor	L_{WA}	71.0	dB				
			-				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
			_				
			_				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
1							
Contact details Mitsu	ubishi heavy indu	stries therr	nal systems,l	LTD			
** If Cdc is not determined by measure	ment then the de	fault degra	dation coeffi	cient air conditione	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spill	air conditioners,	the test res	sult and perfo	ormance data be o	btained on the basis of the perfor	mance	
of the outdoor unit, with a combination	of indoor unit(s)	recommen	ded by the m	anufacturer or imp	oorter.		
						PJA003	Z401.A

Information to identify the model(s) to which the information relates : FDC125VSA / FDTC60VF (x2 units)								
Outdoor side heat auchors of heat arms :								
Indoor side heat exchanger of heat pump: Indication if the heater is equipped with a supplementary heater: No								
if applicable : electric motor								
Parameters shall be declared for the average heating season, parameters for the warmer and colder heating seasons are optional.								
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	Gymbol	Value	Offic			ng energy efficiency ηs,h	Value	Offic
Trace Treating capacity	Prated,h	14.0	kW		ocasonal space neath	ng energy emotericy rp.,ii	171.2	%
Declared heating capacity for part load at indoor temperature 20°C and outdoor temperature Tj				=		f performance or gas utilization eff		
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	295.0	%
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	409.0	%
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	584.0	%
T _j =+12°C	Pdh	2.7	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	730.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or	242.0	%
T _{OL} =operation limit	Pdh	7.7	kW		T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	226.0	%
For air-to-water heat pumps : T _j =-15°C	Pdh	-	kW		For air-to-water heat pumps:T _j =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)			1		(if T _{OL} <-20°C)			-
Bivalent temperature	T _{biv}	-10.0]°C 1		For water-to-air heat pumps:Operation limit	i	-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**	o modo!			-	Supplementary heater			 1
Power consumpiton in modes other than 'activ Off mode	e mode P _{OFF}	0.008	kW		Supplementary heater back-up heating capac	eibu	-	kW
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input			1
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	P_SB	0.008	kW
Other items					For air-to-air heat pum	nps:		1
Capacity control		variable]		air flow-rate,outdoor n		4380	m3/h
Sound power level,	L_{WA}	71.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured	WM]		Rated brine or water f	iow-rate,	-	m3/h
			1		outdoor side heat excl	hanger		
Emissions of nitrogen oxides(if applicable)	NOx ***	-	mg/kWh fuel input GCV					
			-	-				
GWP of the		2088	kg CO _{2eq}					
refrigerant			(100years)					
Contact details	hoavarie de e	trios tho	custom- I T	<u> </u>	l			
Contact details Mitsubishi heavy industries thermal systems,LTD ** If Cdh is not determined by measurement then the default degradation coefficient air conditioners shall be 0,25.								
*** from 26 September 2018								
Where information relates to multi-spilt air conditioners, the test result and performance data be obtained on the basis of the performance								
of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer.								
							PJA003	3Z401 <u>A</u>

Model FDTC140VNATVF

Model(s): FDC140VNA / FD	TC50VF (x3 ur	nits)					
Outdoor side heat exchanger of air condi	tioner :	air					
Indoor side heat exchanger of air condition	oner :	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	e cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		266.3	%
Declared cooling capacity for part load at	given outdoor	temperatu	ires	Declared energy	y efficiency ratio or gas utilization	efficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdo	oor temperatures	Tj
_			٦				1
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	255.0	%
			٦		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	453.0	%
			٦		GUEc,bin / AEFc,bin		
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	708.0	%
T: +00°0	D.I.	0.0	المدر		GUEc,bin / AEFc,bin		
Tj=+20°C	Pdc	3.6	kW	Tj=+20°C	EERd or	2250.0	%
			٦		GUEc,bin / AEFc,bin		J
Degradation		0.25					
coefficient for	Cdc	0.25	-				
air conditioners**			_				
Davies acres manites in ather than lasting							
Power consumpiton in other than 'active	mode						
Off mode	P _{OFF}	0.008	kW	Crankcase heat	ter mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P _{SB}	0.008	kW
	10		_		36		1
Other items							
				For air-to-air air	conditioner:]
Capacity control		variable	7	air flow-rate,out		4500	m3/h
			_				
Sound power level,			٦.,				
outdoor	L_{WA}	73.0	dB				
			_				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
			_				
GWP of the		2088	kg CO _{2eq}				
refrigerant		2000	(100years)				
			_				
Contact details Mitsubi	shi heavy indu	stries therr	mal systems,	LTD			
** If Cdc is not determined by measureme	ent then the de	efault degra	adation coeffi	cient air condition	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt a	ir conditioners,	the test res	sult and perfo	ormance data be o	btained on the basis of the perfor	rmance	
of the outdoor unit, with a combination of	indoor unit(s)	recommen	ded by the m	nanufacturer or imp	porter.		
						P.IA003	7401 ^
						I PJAUU.	V 44111 AV

Information to identify the angle (CA) to the CA	n info	rolotee						
Information to identify the model(s) to which the	e information	relates :		FDC140VN	IA / FDTC50VF (x3 unit	ts)		
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he	ater:		١	No			
if applicable : electric motor								
Parameters shall be declared for the average I	neating seaso	on , paramet	ers for the w	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity					Seasonal space heating	ng energy efficiency ηs,h		
3	Prated,h	15.5	kW			3 3,	195.8	%
Declared heating capacity for part load at indo	or temperatur	- 20°C	1		Declared coefficient of	f performance or gas utilization	efficiency /	1
and outdoor temperature Ti	or temperatur	0 20 0				for part load at given outdoor to		
and outdoor temperature 1]					auxiliary energy factor	ioi pari load al giveri odidoor le	emperatures rj	
T - 7°C	Pdh	9.3	kW		T _i =-7°C	COPd or		7
T _J =-7°C	i uii	0.0	7,44		1,7 0		304.0	%
T-12°0	Dale	5.7	1.34/		T-12°0	GUEh,bin / AEFh,bin		+
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	473.0	%
			1			GUEh,bin / AEFh,bin		4
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or	676.0	%
			7			GUEh,bin / AEFh,bin		4
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	COPd or	982.0	%
		_	7			GUEh,bin / AEFh,bin		1
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	COPd or	243.0	%
			-		temperature	GUEh,bin / AEFh,bin		<u> </u>
T _{OL} =operation limit	Pdh	8.1	kW		T _{OL} =operation limit	COPd or	233.0	%
		•	-			GUEh,bin / AEFh,bin	233.0	70
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or		1.,
T _j =-15°C			_		pumps:T _i =-15°C	GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)	,	L	
C. TOE V = V = V					(· · · · · · · · · · · · · · · · · · ·			
Bivalent temperature	T _{biv}	-10.0	°c		For water-to-air heat			Т
Divalent temperature	¹ biv	10.0	J		pumps:Operation limit		_	°C
Degradation			1		T _{ol} temperature			
Degradation		0.25			1 ol temperature			_
coefficient	C_{dh}	0.25	-					
heat pumps**]					
				4				
								7
Power consumpiton in modes other than 'active	e mode'				Supplementary heater	el	bu -	kW
			-		back-up heating capac			
Off mode	P_{OFF}	0.008	kW					_
Thermostat-off mode	P_{TO}	0.015	kW		Type of energy input	D	SB 0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	'	SB 0.008	KVV
			-				•	_
Other items				1				
					For air-to-air heat pum	nos:	4000	0 //-
Capacity control		variable			air flow-rate,outdoor m		4380	m3/h
Supulsity control			1		an non rato, outdoor n	10404104	L	
Sound nower level			1		For water /brine to air	hoot numno :		T
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air		_	m3/h
outdoor measured			_		Rated brine or water fi			
			1		outdoor side heat exch	nanger		_
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	_	fuel input					
			GCV					
				4				
			7					
GWP of the		2088	kg CO _{2eq}					
refrigerant			(100years)					
Contact details Mitsubishi	heavy indust	ries thermal	systems,LT	D .				
** If Cdh is not determined by measurement th					ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air con	ditioners the	test result or	nd nerforma	nce data ho	obtained on the basis o	f the performance		
of the outdoor unit, with a combination of indoor						. a.s periorificance		
5. 2.5 Galagor ant, with a combination of fillooc			, are manule	astarbi Ul IIII	portor.			
L							PJA00	3Z401 🛦

Model FDTC140VSATVF

Model(s): FDC140VSA / FDT0	C50VF (x3 ur	nits)					
Outdoor side heat exchanger of air condition	oner:	air					
Indoor side heat exchanger of air condition	ier:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		266.3	%
Declared cooling capacity for part load at g	jiven outdoor	r temperatu	ires	Declared energy	efficiency ratio or gas utilization	efficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdo	or temperatures	Гј
_			٦				1
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	255.0	%
			٦		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	453.0	%
	D.1	-	7		GUEc,bin / AEFc,bin		
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	708.0	%
T: +00°0	D.I.	0.0	7,,,,,		GUEc,bin / AEFc,bin		
Tj=+20°C	Pdc	3.6	kW	Tj=+20°C	EERd or	2250.0	%
			7		GUEc,bin / AEFc,bin		J
Degradation		0.25					
coefficient for	Cdc	0.25	-				
air conditioners**							
Davier comprises in other than lastice man	a da!						
Power consumpiton in other than 'active m	ode						
Off mode	P_{OFF}	0.008	kW	Crankcase heate	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P _{SB}	0.008	kW
	10		_		de]
Other items							
				For air-to-air air	conditioner:]
Capacity control		variable	7	air flow-rate,outo	door measured	4500	m3/h
			_				
Sound power level,]				
outdoor	L_{WA}	73.0	dB				
			-				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
			_				
			_				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
Contact details Mitsubisl	ni heavy indu	stries therr	mal systems,l	LTD			
** If Cdc is not determined by measuremen	nt then the de	efault degra	adation coeffi	cient air conditione	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air	conditioners,	the test res	sult and perfo	ormance data be ob	btained on the basis of the perform	mance	
of the outdoor unit, with a combination of in	ndoor unit(s)	recommen	ded by the m	anufacturer or imp	oorter.		
						PJA003	7401 🗈

Information to identify the model(s) to which the	e information	relates ·		EDC440\10	A / EDTC50/F / 2 - "	·a)		
Outdoor side heat exchanger of heat pump :	e illioilliation			FDC140VS	A / FDTC50VF (x3 unit	S)		
		air						
Indoor side heat exchanger of heat pump :	la	air						
Indication if the heater is equipped with a supp	nementary ne	ater:		ı,	NO .			
if applicable : electric motor	hooting coops	n noromot	oro for the u	ormor and a	older heating account	ara antional		
Parameters shall be declared for the average				varifier and c		-		
Item	Symbol	Value	Unit	I	Item	Symbol	Value	Unit
Rated heating capacity	Prated,h	15.5	kW		Seasonal space heatir	ng energy efficiency ηs,h	195.8	%
Declared heating capacity for part load at indo	or temperatur	e 20°C			Declared coefficient of	f performance or gas utilizatio	n efficiency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor	temperatures Tj	
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	304.0	%
			1			GUEh,bin / AEFh,bin	304.0	
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	473.0	%
T _j =+7°C	Pdh	3.7	kW		T _i =+7°C	GUEh,bin / AEFh,bin COPd or		_
]		, •	GUEh,bin / AEFh,bin	676.0	%
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	COPd or	982.0	%
T. bischoot to const	D.III	40.5	1		T. Minds	GUEh,bin / AEFh,bin		4
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	COPd or GUEh,bin / AEFh,bin	243.0	%
T _{OL} =operation limit	Pdh	8.1	kW		T _{OL} =operation limit	COPd or	222.0	0/2
			- 1			GUEh,bin / AEFh,bin	233.0	%
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or	-	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		_
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
Bivalent temperature	T _{biv}	-10.0	l℃		For water-to-air heat			٦
,	DIV		ı		pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
								_
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater	•	elbu -	kW
	_		1		back-up heating capac	city		
Off mode	P _{OFF}	0.008	kW					7
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input		P _{SB} 0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode			_
Other items				-				
			_		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable			air flow-rate,outdoor m	neasured	4300	1113/11
		г	1					_
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air	heat pumps :		2 /h
outdoor measured					Rated brine or water fi		-	m3/h
			1		outdoor side heat exch	nanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	_	fuel input					
			GCV					
			_	1				
GWP of the		2088	kg CO _{2eq}					
refrigerant		2000	(100years)					
				<u> </u>				
Contact details Mitsubish ** If Cdh is not determined by measurement th	heavy indust				ners shall be 0.25			
	en me ueraul	ucyrauali0	ii coeiiicient	an condition	1013 311a11 DE U,Z3.			
*** from 26 September 2018	400				and the second second	f the market		
Where information relates to multi-spilt air con						the performance		
of the outdoor unit, with a combination of indoo	or unit(s) reco	mmended by	y the manufa	acturer or im	porter.			
<u> </u>							P.JA00	3Z401A

Models FDTC50VF, 60VF

Model(s): FDTC50VF										
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit			
Cooling capacity (sensible)	$P_{rated,c}$	3.7	kW	Total electric power input	P_{elec}	0.050	kW			
Cooling capacity (latent)	P _{rated,c}	1.3	kW	Sound power level (per speed setting,if applicable)	L_{WA}	60.0	dB			
Heating capacity	$P_{rated,h}$	5.4	kW							
Contact details	Mitsubishi I	tsubishi heavy industries thermal systems,LTD								

Model(s): FDTC60VF									
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit		
Cooling capacity (sensible)	$P_{\text{rated,c}}$	3.9	kW	Total electric power input	P_{elec}	0.050	kW		
Cooling capacity (latent)	P _{rated,c}	1.7	kW	Sound power level (per speed setting,if applicable)	L_{WA}	60.0	dB		
Heating capacity	$P_{\text{rated},h}$	6.7	kW						
Contact details	Mitsubishi heavy industries thermal systems,LTD								

(3) Ceiling suspended type (FDE) Model FDE100VNAVG

Information to identify the model(s) to w		es to:	If function includes heating: Indicate the					
Indoor unit model name	FDE100VG		information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'.					
Outdoor unit model name	FDC100VNA		neating season at a time. Include at leas	st the neati	ing season	'Average'.		
Function(indicate if present)			Average(mandatory)	Yes				
cooling	Yes		Warmer(if designated)	No				
heating	Yes		Colder(if designated)	No				
Item	symbol value unit		Item	symbol	value	class		
Design load			Seasonal efficiency and energy efficiency					
cooling	Pdesignc 10.0 kW		cooling	SEER	6.35	A++		
heating / Average heating / Warmer	Pdesignh 8.5 kW Pdesignh - kW		heating / Average heating / Warmer	SCOP/A SCOP/W	4.31	A+ -		
heating / Warrier	Pdesignh - kW		heating / Warrier	SCOP/C	- -	-		
						unit		
Declared capacity at outdoor temperatu			Back up heating capacity at outdoor ten	•		1, , , ,		
heating / Average (-10°C) heating / Warmer (2°C)	Pdh 8.5 kW Pdh - kW		heating / Average (-10°C) heating / Warmer (2°C)	elbu elbu	-	kW kW		
heating / Colder (-22°C)	Pdh - kW		heating / Colder (-22°C)	elbu	-	kW		
,			,			ı		
Declared capacity for cooling, at indoor	temperature 27(19)°C and	t	Declared energy efficiency ratio, at indo	or tempera	ture 27(19)°C and		
outdoor temperature Tj Tj=35°C	Pdc 10.00 kW		outdoor temperature Tj Tj=35°C	EERd	3.51	1_		
Tj=30°C	Pdc 7.37 kW		Tj=30°C	EERd	5.00	-		
Tj=25°C	Pdc 4.74 kW		Tj=25°C	EERd	7.80	-		
Tj=20°C	Pdc 3.48 kW		Tj=20°C	EERd	12.40	-		
Dodgrad conceits for heating / Asse	accoon of inde		Declared coefficient of perference / ^	10r0~~	00n of !!	nor.		
Declared capacity for heating / Average temperature 20°C and outdoor tempera			Declared coefficient of performance / Avtemperature 20°C and outdoor temperat		son, at ind	IUUI		
Tj=-7°C	Pdh 7.52 kW		Tj=-7°C	COPd	3.22]-		
Tj=2°C	Pdh 4.58 kW		Tj=2°C	COPd	4.04	-		
Tj=7°C	Pdh 2.94 kW		Tj=7°C	COPd	5.58	-		
Tj=12°C Tj=bivalent temperature	Pdh 2.78 kW Pdh 6.77 kW		Tj=12°C Ti=bivalent temperature	COPd COPd	6.46 2.42	-		
Tj=blvalent temperature Tj=operating limit	Pdh 8.50 kW		Tj-blvalent temperature Tj-poperating limit	COPd	2.75	-		
Tj operating innit	1 dii 0.00 KVV		1) operating initia	001 0	2.70	l		
Declared capacity for heating / Warmer			Declared coefficient of performance / W		son, at ind	oor		
temperature 20°C and outdoor tempera Tj=2°C	ture Tj Pdh - kW		temperature 20°C and outdoor temperat Tj=2°C	ture Tj COPd	-	,		
Tj=7°C	Pdh - kW		Ti=7°C	COPd		-		
Tj=12°C	Pdh - kW		Tj=12°C	COPd	-	-		
Tj=bivalent temperature	Pdh - kW		Tj=bivalent temperature	COPd	-	-		
Tj=operating limit	Pdh - kW		Tj=operating limit	COPd	-	-		
Declared capacity for heating / Colder s	eason at indoor		Declared coefficient of performance / Co	older seaso	n at indoo	nr.		
temperature 20°C and outdoor tempera			temperature 20°C and outdoor temperat		on, at muot	Ji		
Tj=-7°C	Pdh - kW		Tj=-7°C	COPd	-]-		
Tj=2°C	Pdh - kW		Tj=2°C	COPd	-	-		
Tj=7°C	Pdh - kW		Tj=7°C	COPd		-		
Tj=12°C Tj=bivalent temperature	Pdh - kW		Tj=12°C Ti=bivalent temperature	COPd COPd		-		
Tj=operating limit	Pdh - kW		Tj=operating limit	COPd	-	-		
Tj=-15°C	Pdh - kW		Tj=-15°C	COPd	-	-		
	•				•			
Bivalent temperature heating / Average	Tbiv -10 °C		Operating limit temperature heating / Average	Tol	-20	°c		
heating / Warmer	Tbiv - °C		heating / Warmer	Tol	-20	င်		
heating / Colder	Tbiv - °C		heating / Colder	Tol	-	°C		
	•				-			
Cycling interval capacity for cooling	Pcycc - kW		Cycling interval efficiency for cooling	EERcyc	-	1_		
for heating	Pcych - kW		for heating	COPcyc		_		
l l					!			
Degradation coefficient	0.1		Degradation coefficient	0.11		1		
cooling	Cdc 0.25 -		heating	Cdh	0.25	-		
Electric power input in power modes of	ner than 'active mode'		Annual electricity consumption					
off mode	Poff 8 W		cooling	Qce	552	kWh/a		
standby mode	Psb 8 W		heating / Average	Qhe	2762	kWh/a		
thermostat-off mode crankcase heater mode	Pto 30 W Pck 8 W		heating / Warmer heating / colder	Qhe Qhe	-	kWh/a kWh/a		
Crankcase neater mode	PCK O VV		rieating / colder	QHE	-	KVVII/a		
Capacity control(indicate one of three o	otions)		Other items					
			Sound power level(indoor)	Lwa	64	dB(A)		
fived	No		Sound power level(outdoor)	Lwa GWP	70	dB(A)		
fixed staged	No No		Global warming potential Rated air flow(indoor)	GWP	1975 1920	kgCO2eq. m3/h		
variable	Yes	\dashv	Rated air flow(indoor)	-	4500	m3/h		
			, ,					
Contact details for obtaining			facturer or of its authorised representative	/e.				
	ni Heavy Industries Air-Cor uare, Stockley Park, Uxbr							
United Ki		.agc, 1V						
				-				
					PFA004	4Z024 <u>/</u> ∆		

Model FDE100VSAVG

Information to identify the model(s)		on relates to:	If function includes heating: Indicate			
Indoor unit model name Outdoor unit model name	FDE100VG FDC100VSA		information relates to. Indicated value heating season at a time. Include a			n 'Average'.
Function/indicate if present			l Averes (mandatas)	Vac		
Function(indicate if present) cooling	Yes		Average(mandatory) Warmer(if designated)	Yes No		
heating	Yes		Colder(if designated)	No		
ltore	avended value	. umit	Hom	es mala el	value	alaaa
Design load	symbol value	unit	Item Seasonal efficiency and energy efficiency	symbol ciency class	value	class
cooling	Pdesignc 10.0	kW	cooling	SEER	6.35	A++
heating / Average	Pdesignh 8.5	kW	heating / Average	SCOP/A	4.31	A+
heating / Warmer heating / Colder	Pdesignh - Pdesignh -	kW kW	heating / Warmer heating / Colder	SCOP/W SCOP/C	-	-
		1			1	unit
Declared capacity at outdoor temp heating / Average (-10°C)	erature Tdesignh Pdh 8.5	kW	Back up heating capacity at outdoo heating / Average (-10°C)	r temperature Telbu	rdesignh 0	lkW
heating / Average (-10 C)	Pdh -	kW	heating / Warmer (2°C)	elbu	-	kW
heating / Colder (-22°C)	Pdh -	kW	heating / Colder (-22°C)	elbu	-	kW
Declared capacity for cooling, at in	door town perature 07/1/	0)°O and	Declared energy efficiency ratio, at	in do ou tour our	huma 07/10	0) °O and
outdoor temperature Tj	door temperature 27(18	a) C and	outdoor temperature Tj	indoor tempera	ature 27 (18	a) C and
Tj=35℃	Pdc 10.00		Tj=35°C	EERd	3.51]-
Tj=30°C	Pdc 7.37	kW	Tj=30°C	EERd	5.00	-
Tj=25°C Tj=20°C	Pdc 4.74 Pdc 3.48		Tj=25°C Tj=20°C	EERd EERd	7.80 12.40	-
	1 40 3.40	Lizaa		LLINU		<u> </u>
Declared capacity for heating / Ave			Declared coefficient of performance		son, at inc	door
temperature 20°C and outdoor tem	perature Tj Pdh 7.52	kW	temperature 20°C and outdoor temp	perature Tj COPd	3.22	1-
Tj=2°C	Pdh 4.58		Tj=2°C	COPd	4.04	1-
Tj=7°C	Pdh 2.94	kW	Tj=7°C	COPd	5.58]-
Tj=12°C	Pdh 2.78 Pdh 6.77		Tj=12°C	COPd	6.46 2.42	-
Tj=bivalent temperature Tj=operating limit	Pdh 6.77 Pdh 8.50		Tj=bivalent temperature Tj=operating limit	COPd COPd	2.42	-
Tj-operating mint	1 un 0.00	IXVV	rj-operating innit	001 u	2.70	1
Declared capacity for heating / Wa			Declared coefficient of performance		son, at ind	loor
temperature 20°C and outdoor tem Tj=2°C	Pdh -	kW	temperature 20°C and outdoor temp	copd		1_
Tj=7°C	Pdh -	kW	Tj=7°C	COPd	-	1-
Tj=12°C	Pdh -	kW	Tj=12°C	COPd	-]-
Tj=bivalent temperature	Pdh -	kW	Tj=bivalent temperature	COPd	-	-
Tj=operating limit	Pdh -	kW	Tj=operating limit	COPd	-	ļ-
Declared capacity for heating / Col			Declared coefficient of performance		on, at indo	or
temperature 20°C and outdoor tem		LAM	temperature 20°C and outdoor temp			1
Tj=-7°C Tj=2°C	Pdh -	kW kW	Tj=-7°C Tj=2°C	COPd COPd	-	-
Tj=7°C	Pdh -	kW	Tj=7°C	COPd	-	1-
Tj=12°C	Pdh -	kW	Tj=12°C	COPd	-	-
Tj=bivalent temperature Tj=operating limit	Pdh -	kW kW	Tj=bivalent temperature Tj=operating limit	COPd COPd	-	-
Tj=-15°C	Pdh -	kW	Ti=-15°C	COPd	<u> </u>	-
,		1	1 1 2		1	
Bivalent temperature	This 40	°_	Operating limit temperature	Tal	- 20	T°0
heating / Average heating / Warmer	Tbiv -10 Tbiv -	°C	heating / Average heating / Warmer	Tol Tol	-20	ိုင ိ
heating / Colder	Tbiv -		heating / Colder	Tol	-	°C
Overline interest "	•	•				
Cycling interval capacity for cooling	Pcycc -	kW	Cycling interval efficiency for cooling	EERcyc	-	7-
for heating	Pcych -	kW	for heating	COPcyc	-	1-
	- !	•		•	•	
Degradation coefficient cooling	Cdc 0.25		Degradation coefficient heating	Cdh	0.25	1_
cooming	Out 0.25	<u>, 1_</u>	Incamig	Guil	0.20	L*
Electric power input in power mode			Annual electricity consumption			7
off mode	Poff 8	W	cooling heating / Average	Qce	552	kWh/a
standby mode thermostat-off mode	Psb 8 Pto 30	W W	heating / Average heating / Warmer	Qhe Qhe	2762	kWh/a kWh/a
crankcase heater mode	Pck 8	w	heating / colder	Qhe	-	kWh/a
0			I Other items		_	
Capacity control(indicate one of the	ree options)		Other items Sound power level(indoor)	Lwa	64	dB(A)
			Sound power level(indoor)	Lwa	70	dB(A)
fixed	No		Global warming potential	GWP	1975	kgCO2eq.
staged	No	-	Rated air flow(indoor)	-	1920	m3/h
variable	Yes		Rated air flow(outdoor)	-	4500	m3/h
Contact details for obtaining	Name and addre	ss of the mar	nufacturer or of its authorised represer	ntative.		
more information Mits	ubishi Heavy Industries	Air-Conditio	ning Europe, Ltd.	-		
	ne Square, Stockley Pa red Kingdom	rk, Uxbridge,	Middlesex, UB11 1ET,			
Office	ca miguoni					
					PFA00	4Z024 △

Model FDE100VNAPVG

Design load cooling Pdesign 10.0 kW Seasonal efficiency and energy efficiency class cooling SEER 5.7 kW heating / Average Pdesignh kW Neating / Average SCOP/A 4.1 heating / Colder Pdesignh kW Neating / Average SCOP/A 4.1 heating / Average SCOP/A 4.1 heating / Colder SCOP/C 2.1 heating / Average Color Pdh kW Neating / Colder SCOP/C 2.1 heating / Average Color Pdh kW Neating / Colder SCOP/C 2.1 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.2 heating / Colder SCOP/C 2.3 heating / Colder S	one	ite to one	hould rela	If function includes heating: Indicate the information relates to. Indicated value	i (x2 units)	FDE50VG	del(s) to wh	nformation to identify the mod ndoor unit model name
Warmer(if designated) No	ason 'Average	ng seaso	t the heati	heating season at a time. Include at le	NA	FDC100V		Outdoor unit model name
term symbol value unt term symbol value unt term symbol value unt term symbol value unt term symbol value unt term symbol value unt term symbol value unt term symbol value unt term symbol value unt term symbol value unt term symbol value unt term symbol value participation of the value of t				Average(mandatory)				unction(indicate if present)
tem symbol value unit beign load beign load beign load beign load beign load beign load beign load beign load beign load beign load beign load load load load load load load load								•
Design load cooking Pdesign 10.0 NW heating / Average Pdesign 10.0 NW heating / Average Pdesign 10.0 NW heating / Average Pdesign 10.0 NW heating / Average Pdesign 10.0 NW heating / Colder Pdesign 10.0 NW heating / Average Pdesign 10.0 NW heating / Average Pdesign 10.0 NW heating / Average Pdesign 10.0 NW heating / Average (10°C) Pdn 8.5 NW heating / Average (10°C) Pdn 8.5 NW heating / Average (10°C) Pdn 10.0 NW he			No	Colder(if designated)		Yes		eating
poscing Pdesign 10.0 WW meating / Average Pdesignh 8.5 kW heating / Average Pdesignh 1.0 kW heating / Colder Pdesignh 1.0 kW heating / Colder Pdesignh 1.0 kW heating / Colder SCOP/R 1.0 kW heating / Colder SCOP/R 1.0 kW heating / Colder Capacity at outdoor temperature 7 designh 1.0 kW heating / Colder (22°C) Pdh 1.0 kW heating /	class	value			value unit	symbol		
Peating / Average Poesignh 8.5 W Poesignh	'1 A+	5 71			10.0 kW	Pdesigno		
Peating / Warmer Pdesignh		4.10				_		•
Declared capacity at outdoor temperature Tdesignh		-						
neating / Average (-10°C) Pdh 8.5 kW heating / Average (-10°C) elbu 0 heating / Average (-10°C) elbu 0 heating / Average (-10°C) elbu 0 heating / Average (-10°C) elbu 0 heating / Colder (-22°C)	-	-						
neating / Average (-10°C) Pdh R.5 W heating / Average (-10°C) elbu Oberating / Average (-10°C) Pdh W heating / Average (-10°C) elbu Oberating / Colder (-22°C) Pdh W heating / Average (-10°C) elbu Oberating / Colder (-22°C) elbu Oberating / Colder (unit							
Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature 17 17-35°C Pdc 10.00 NW 17-35°C Pdc 17.37 NW 17-30°C EERd 3.2 17-30°C Pdc 7.37 NW 17-30°C EERd 6.6 17-20°C EERd 6.6 17-20°C Pdc 7.37 NW 17-20°C EERd 6.6 17-20°C 17-20°C EERd 6.6 17-20°C 17-20°C 17-20°C 17-20°C 17-20°C 17-20°C 17-20°C 17-20°C 17-20°C 17-20°C 17-2						0	temperatur	
Declared capacity for cooling, at indoor temperature 27(19)°C and butdoor temperature Tj Fj. S°C Pdc 10.00 W Tj. S°C EERd 3.2 Tj. S°C EERd 4.4 W Tj. S°C EERd 4.5 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 4.6 Tj. S°C EERd 11.4 Tj. S°C Tj. S°								
Dutdoor temperature T		-						
Dutdoor temperature T								· · · · · · · · · · · · · · · · · · ·
	7(19)°C and	ture 27(1	or tempera		e 27(19)°C and	temperatur	at indoor t	
	- I	3 21	EEDd		10.00 kW	Pdc		
ji_22°C Pdc 4.74 W Ti_22°C EERd 16.8		4.49	-					
Declared capacity for heating / Average season, at indoor emperature 20°C and outdoor temperature T T T T T T T T T T		6.63						,
Emperature 20°C and outdoor temperature T 1 1 2 2 C Pdh	3 9 -	11.69	EERd	Tj=20°C	3.30 kW	Pdc		j=20°C
							/ A	
	t indoor	son, at inc			indoor			
	1 -	3.01			7.52 kW/		ı terriperati	
		3.84		11,				,
Fig. 12°C Pdh 6.77 kW Tj=bivalent temperature Pdh 6.77 kW Tj=bivalent temperature Pdh 6.77 kW Tj=bivalent temperature Tj Tj=operating limit COPd 2.6		5.29						,
Declared capacity for heating / Warmer season, at indoor emperature 20°C and outdoor temperature 7] 13°C		6.48				Pdh		
Declared capacity for heating / Warmer season, at indoor emperature 20°C and outdoor temperature Tj Tj=2°C		2.28		Tj=bivalent temperature	6.77 kW	Pdh		j=bivalent temperature
temperature 20°C and outdoor temperature Tj Tj=2°C	2 -	2.62	COPd	Tj=operating limit	8.50 kW	Pdh		j=operating limit
temperature 20°C and outdoor temperature Tj Tj=2°C	t indoor	eon at inc	armor coas	Declared coefficient of performance /	indoor	cascon at	/ Warmer	leclared canacity for heating
	t illuooi	3011, at 1110			IIIdooi			
Tj=12°C Pdh	-	-			- kW		. tomporati	
Tj-bivalent temperature Pdh	<u> </u>	-	COPd	Tj=7°C	- kW	Pdh		j=7°C
Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature Tj temperature 20°C and outdoor temperature Tj temperature 20°C and outdoor temperature Tj temperature 20°C and outdoor temperature Tj temperature 20°C and outdoor temperature Tj temperature 20°C and outdoor temperature Tj temperature 20°C and outdoor temperature Tj temperature 20°C and outdoor temperature Tj temperature 20°C and outdoor temperature Tj Tj=-7°C COPd COPd COPd COPd COPd COPd COPd COP	-	-	COPd	Tj=12°C	- kW	Pdh		j=12°C
Declared capacity for heating / Colder season, at indoor temperature 7 Tj=-7°C		-						
temperature 20°C and outdoor temperature Tj Tj=-7°C Pdh - kW Tj=-2°C OCPd Tj=2°C OCPd Tj=2°C OCPd Tj=2°C OCPd Tj=2°C OCPd Tj=12°C OCPd Tj=12°C OCPd Tj=12°C OCPd Tj=12°C OCPd Tj=12°C OCPd Tj=12°C OCPd Tj=bivalent temperature Pdh - kW Tj=bivalent temperature OCPd Tj=operating limit OCPd Tj=operating limit OCPd Tj=operating limit OCPd Tj=-15°C OCPd Tj=-	-	-	COPd	I j=operating limit	- KVV	Pdh		j=operating limit
temperature 20°C and outdoor temperature Tj Tj=-7°C Pdh - kW Tj=-2°C OCPd Tj=2°C OCPd Tj=2°C OCPd Tj=2°C OCPd Tj=2°C OCPd Tj=12°C OCPd Tj=12°C OCPd Tj=12°C OCPd Tj=12°C OCPd Tj=12°C OCPd Tj=12°C OCPd Tj=bivalent temperature Pdh - kW Tj=bivalent temperature OCPd Tj=operating limit OCPd Tj=operating limit OCPd Tj=operating limit OCPd Tj=-15°C OCPd Tj=-	indoor	n at indo	lder seaso	Declared coefficient of performance /	ndoor	eason at ir	/ Colder se	eclared capacity for heating
Tj=-7°C Pdh	114001	ni, at inac			14001			
Tj=°C Pdh - kW Tj=12°C COPd - Tj=12°	-	-	COPd	Tj=-7°C	- kW	Pdh		j=-7°C
Tj=12°C Pdh - kW Tj=bivalent temperature Pdh - kW Tj=bivalent temperature Pdh - kW Tj=operating limit Pdh - kW Tj=operating limit Pdh - kW Tj=operating limit COPd - Tj=bivalent temperature COPd - Tj=bivalent temperature COPd - Tj=operating limit COPd - COPd - Tj=operating limit COPd - Tj=operating limit temperature COPd - Tj=operating limit temperature Pheating / Average Tol - kW Tj=operating limit temperature Pheating / Warmer Tol - coperating / Warmer To								
Tj=bivalent temperature Pdh - kW Tj=operating limit COPd - Tj=operating limit Pdh - kW Tj=operating limit COPd - Tj=operating limit Pdh - kW Tj=operating limit COPd - Tj=operating limit COPd - Tj=operating limit COPd - Tj=operating limit COPd - Tj=operating limit COPd - Tj=operating limit temperature Pating / Average Pating / Average Pating / Average Pating / Average Pating / Average Pating / Average Pating / Average Pating / Average Pating / Colder Pating / Colder Pating / Colder Pating / Colder Pating / Colder Pating / Colder Pating / Colder Pating / Colder Pating / Colder Pating / Colder Pating / Colder Pating / COPcyc Pating Pating / COPcyc P		-		111				,
Tj=operating limit Pdh - kW Tj=operating limit COPd Tj=-15°C COPd Tj=-15								,
Tj=-15°C				117				
Sisvalent temperature heating / Average		-						
neating / Average Tbiv Tbiv - 10 °C heating / Warmer Tbiv - 10 °C heating / Warmer Tbiv - 10 °C heating / Warmer Tbiv - 10 °C heating / Warmer Tol - 10 °C heating / Colder Tol - 10 °C heatin		ь	001 u	1) 10 0	IKVV	T WIT		j 10 0
neating / Warmer								
Degradation coefficient cooling		-20						
Cycling interval capacity for cooling Pcych - kW for heating Pcych - kW for heating Pcych - kW for heating COPcyc - kW for heating COPcyc Pcych Pcych		-	-	· · ·				
For cooling Pcych - kW for cooling for heating Pcych - kW for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling For heating For cooling for heating For cooling For heating For cooling for heating For cooling For heating For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For heating For cooling For heating For heating For heating For cooling For heating For cooling For heating For cooling For heat	°C	<u> </u>	101	neating / Colder	- ⁻ C	I DIV		eating / Colder
For cooling Pcych - kW for cooling for heating Pcych - kW for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling for heating For cooling For heating For cooling for heating For cooling For heating For cooling for heating For cooling For heating For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For cooling For heating For heating For cooling For heating For heating For heating For cooling For heating For cooling For heating For cooling For heat				Cycling interval efficiency				Cycling interval capacity
Degradation coefficient cooling					- kW	Pcycc		or cooling
Code Code	-	-	COPcyc	for heating	- kW	Pcych		or heating
Cooling Cdc 0.25 - heating Cdh 0.25				Degradation coefficient				logradation as -ff:-:t
Electric power input in power modes other than 'active mode' off mode	25 -	0.25	Cdh		0.25 -	Cdc		
off mode	· <u>·</u>	3.23	Juli		0.20	540		ig
off mode poff mode poff standby mode problem p							modes oth	
thermostat-off mode Pto 30 W heating / Warmer heating / Colder Qhe Capacity control(indicate one of three options) Capacity control(indicate one of three options) Capacity control(indicate one of three options) No Sound power level(indoor) Lwa 50 Sound power level(outdoor) Lwa 70 Sound power level(outdoor) Lwa 70 Sound power level(outdoor) Rated air flow(indoor) - 78 Rated air flow(indoor) - 78 Rated air flow(outdoor) - 450 Contact details for obtaining Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd.		613			8 W	Poff		ff mode
Capacity control(indicate one of three options) Capacity control(indicate one of three options) Capacity control(indicate one of three options) Capacity control(indicate one of three options) Capacity control(indicate one of three options) Contact details for obtaining Name and address of the manufacturer or of its authorised representative. Capacity control(indicate one of three options) Contact details for obtaining Name and address of the manufacturer or of its authorised representative. Capacity control(indicate one of three options) Contact details for obtaining Name and address of the manufacturer or of its authorised representative.		2904						
Capacity control(indicate one of three options) Other items Sound power level(indoor) Sound power level(outdoor) Lwa 70 Sound power level(outdoor) Lwa 70 Global warming potential GWP 197 Rated air flow(indoor) - 78 Rated air flow(outdoor) - 450 Contact details for obtaining Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd.		-						
Sound power level(indoor) Lwa Sound power level(outdoor) Lwa To Sound power level(outdoor) Lwa To Sound power level(outdoor) Lwa To Global warming potential GWP 197 Rated air flow(indoor) - To Rated air flow(outdoor) - To Sound power level(outdoor) - To Sound power level(outdoor) Lwa To Global warming potential GWP 197 Rated air flow(outdoor) - To Sound power level(indoor) 197 Sound power level(indoor) Lwa To Sound power level(indoor) 197 Sound power l	kWh/a		QIIE	rieating / colder	o VV	PUK		rankcase neater mode
Sound power level(indoor) Lwa Sound power level(outdoor) Lwa To Sound power level(outdoor) Lwa To Sound power level(outdoor) Lwa To Global warming potential GWP 197 Rated air flow(indoor) - To Rated air flow(outdoor) - To Sound power level(outdoor) - To Sound power level(outdoor) Lwa To Global warming potential GWP 197 Rated air flow(outdoor) - To Sound power level(indoor) 197 Sound power level(indoor) Lwa To Sound power level(indoor) 197 Sound power l				Other items		otions)	of three on	Capacity control(indicate one
ixed No No No Variable No No No No No No No No No No No No No	dB(A)	60	Lwa			/	оо ор	
Rated air flow(indoor) - 78 Rated air flow(outdoor) - 450 Contact details for obtaining more information Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd.	dB(A)	70		Sound power level(outdoor)				
Variable Yes Rated air flow(outdoor) - 450 Contact details for obtaining more information Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd.		1975	GWP					
Contact details for obtaining Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd.		780	-	` ′				
more information Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd.	00 m3/h	4500	-	Rated air flow(outdoor)		Yes		ariable
more information Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd.			ρ.	urfacturer or of its authorised represents	address of the man	Name and	1	Contact details for obtaining
			·.				Mitsubishi	
						uare, Stocl	5 The Squ	
United Kingdom					3-7			
	A004Z024 <u>&</u>	- BETT	-					

Model FDE100VSAPVG

Information to identify the model	s) to which the information rela FDE50VG (x2 units)	tes to: If function includes heating: Indi	
Outdoor unit model name	FDC100VSA	heating season at a time. Include	de at least the heating season 'Average'.
Function(indicate if present)		Average(mandatory)	Yes
cooling	Yes	Warmer(if designated)	No
heating	Yes	Colder(if designated)	No
Item	symbol value ur	it Item	symbol value class
Design load		Seasonal efficiency and energy	
cooling	Pdesignc 10.0 kV		SEER 5.71 A+
heating / Average heating / Warmer	Pdesignh 8.5 kV Pdesignh - kV		SCOP/A 4.10 A+ SCOP/W
heating / Warmer	Pdesignh - kV		SCOP/C
	, 200.g.m. m		unit
Declared capacity at outdoor tem		Back up heating capacity at out	
heating / Average (-10°C) heating / Warmer (2°C)	Pdh 8.5 kV Pdh - kV	0 0 1	elbu 0 kW elbu - kW
heating / Colder (-22°C)	Pdh - kV		elbu - kW
		1.5	
Declared capacity for cooling, at outdoor temperature Tj	indoor temperature 27(19)°C a	outdoor temperature Tj	, at indoor temperature 27(19)°C and
Tj=35°C	Pdc 10.00 kV		EERd 3.21 -
Tj=30°C	Pdc 7.37 kV		EERd 4.49 -
Tj=25°C	Pdc 4.74 kV	117	EERd 6.63 -
Tj=20°C	Pdc 3.30 kV	/ Tj=20°C	EERd 11.69 -
Declared capacity for heating / A			ance / Average season, at indoor
temperature 20°C and outdoor te	mperature Tj	temperature 20°C and outdoor t	emperature Tj
Tj=-7°C	Pdh 7.52 kV	117	COPd 3.01 -
Tj=2°C Tj=7°C	Pdh 4.58 kV Pdh 2.94 kV		COPd 3.84 - COPd 5.29 -
Tj=12°C	Pdh 2.70 kV	117	COPd 6.48 -
Tj=bivalent temperature	Pdh 6.77 kV	117	COPd 2.28 -
Tj=operating limit	Pdh 8.50 kV	/ Tj=operating limit	COPd 2.62 -
Declared capacity for heating / W	Jarmer season at indoor	Declared coefficient of performa	ance / Warmer season, at indoor
temperature 20°C and outdoor te		temperature 20°C and outdoor t	
Tj=2°C	Pdh - kV	117	COPd
Tj=7°C	Pdh - kV	117	COPd
Tj=12°C	Pdh - kV	117	COPd
Tj=bivalent temperature Tj=operating limit	Pdh - kV	11, 1	COPd
Ty operating initia		in operating mine	00. 4
Declared capacity for heating / C		Declared coefficient of performa	
temperature 20°C and outdoor te Tj=-7°C	mperature 1j Pdh - kV	temperature 20°C and outdoor t	COPd
Tj=2°C	Pdh - kV		COPd -
Tj=7°C	Pdh - kV	/ Tj=7°C	COPd
Tj=12°C	Pdh - kV	117	COPd
Tj=bivalent temperature	Pdh - kV	117	COPd
Tj=operating limit Tj=-15°C	Pdh - kV	11 7 ' "	COPd
1]=-10 0	1 (11) - 11(4		001 u -
Bivalent temperature		Operating limit temperature	
heating / Average heating / Warmer	Tbiv -10 °C	heating / Average heating / Warmer	Tol
heating / Warmer	Tbiv - °C	heating / Colder	Tol - °C
3			
Cycling interval capacity	Poves Lin	Cycling interval efficiency	EEDovo
for cooling for heating	Pcycc - kV Pcych - kV		EERcyc
	. 5,011 - INV		
Degradation coefficient	04: [22]	Degradation coefficient	Odb
cooling	Cdc 0.25 -	heating	Cdh 0.25 -
Electric power input in power mo	des other than 'active mode'	Annual electricity consumption	
off mode	Poff 8 W	cooling	Qce 613 kWh/a
standby mode	Psb 8 W	heating / Average	Qhe 2904 kWh/a
thermostat-off mode crankcase heater mode	Pto 30 W Pck 8 W	heating / Warmer heating / colder	Qhe - kWh/a Qhe - kWh/a
oranicase neater mode	1 010 0 00	incating / colder	Que - NVVII/a
Capacity control(indicate one of t	hree options)	Other items	
		Sound power level(indoor)	Lwa 60 dB(A)
fixed	No	Sound power level(outdoor) Global warming potential	Lwa 70 dB(A) GWP 1975 kgCO2eq.
staged	No	Rated air flow(indoor)	- 780 m3/h
variable	Yes	Rated air flow(outdoor)	- 4500 m3/h
			· ·
Contact details for obtaining more information M	Name and address of tsubishi Heavy Industries Air-C	he manufacturer or of its authorised repre	esentative.
	The Square, Stockley Park, Ux		
	nited Kingdom		
			PFA004Z024 <u>∧</u>
			117007202 1 70

Model FDE125VNAVG

Model(s): FDC125VNA / FDE	125VG						
Outdoor side heat exchanger of air condition	oner:	air					
Indoor side heat exchanger of air condition	ner:	air					
Type : vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space coo	oling energy		
	Prated,c	12.5	kW	efficiency ηs,c		238.1	%
Declared cooling capacity for part load at o	niven outdoor	temperatur	es	Declared energy eff	iciency ratio or gas utilization efficier	ncv /	-
Tj and indoor 27°C/19°C(dry/wet bulb)	,				tor for part load at given outdoor tem	-	Гј
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	281.0	%
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or	448.0	%
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or	735.0	%
Tj=+20°C	Pdc	3.4	kW	Tj=+20°C	GUEc,bin / AEFc,bin EERd or	1097.0	%
Degradation		0.07			GUEc,bin / AEFc,bin		J
coefficient for air conditioners**	Cdc	0.25	-				
Power consumpiton in other than 'active m	ode'						
Off mode	P _{OFF}	0.008	kW	Crankcase heater m	node P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.030	kW	Standby mode	P _{SB}	0.008	kW
Other items				For air-to-air air con	ditioner		1
Capacity control		variable		air flow-rate,outdoor		4500	m3/h
Sound power level, outdoor	L_{WA}	71.0	dB				
If engine driven: Emissions of nitrogen oxides	NOx ***	-	mg/kWh fuel input GCV				
GWP of the refrigerant		2088	kg CO _{2eq} (100years)				
	hi heavy indu						
** If Cdc is not determined by measurement	nt then the de	efault degrad	dation coeffic	cient air conditioners s	shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air of the outdoor unit, with a combination of in						•	
						PFA0042	7024 △

Information to identify the model(s) to which	the information	relates ·		ED0405) (N	A / EDE405) (O			
Outdoor side heat exchanger of heat pump :	uic iiiioiiiiatioii			FDC125VN	A / FDE125VG			
Indoor side heat exchanger of heat pump:		air						
Indication if the heater is equipped with a sup	nlementary he	air ater ·		N	lo			
if applicable : electric motor	, p. o o							
Parameters shall be declared for the average	e heating seaso	n , paramete	ers for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity					l	ng energy efficiency ηs,h		
3.47	Prated,h	14.0	kW			3 3,	169.1	%
Declared heating capacity for part load at incland outdoor temperature Tj	loor temperatur	e 20°C	•			f performance or gas utilization e		
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	298.0	%
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	412.0	%
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	567.0	%
T _j =+12°C	Pdh	2.7	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	639.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	247.0	%
T _{OL} =operation limit	Pdh	7.7	kW		T _{OL} =operation limit	COPd or GUEh,bin / AEFh,bin	214.0	%
For air-to-water heat pumps : T _j =-15°C	Pdh	-	kW		For air-to-water heat pumps:T _j =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
(if T_{OL} <-20°C)			_		(if T _{OL} <-20°C)			
Bivalent temperature	T_{biv}	-10.0	℃		For water-to-air heat pumps:Operation limit	t	-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
Power consumpiton in modes other than 'act	ive mode'				Supplementary heater	eit	ou -	kW
Off mode	P _{OFF}	0.008	kW		back-up fleating capac	orty	<u> </u>	ı
Thermostat-off mode	P _{TO}	0.043	kW		Type of energy input	_		l
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	Ps	0.008	kW
Other items					For air-to-air heat pum	nps:	4200	2 /h
Capacity control		variable]		air flow-rate,outdoor n		4380	m3/h
Sound power level, outdoor measured	L_WA	71.0	dB		For water-/brine-to-air Rated brine or water fi		-	m3/h
			1		outdoor side heat excl	hanger		
Emissions of nitrogen oxides(if applicable)	NOx ***	-	mg/kWh fuel input GCV					
GWP of the			kg CO _{2eq}					
refrigerant		2088	(100years)					
Contact details	hi hoovayinda d	rios thoras '	evetem- I T	<u> </u>	<u> </u>			
Contact details Mitsubis ** If Cdh is not determined by measurement	hi heavy indust then the defaul				ers shall be 0,25.			
				20				
*** from 26 September 2018 Where information relates to multi-spilt air co	anditioners that	est recult on	nd nerformar	nce data ho	ohtained on the basis o	of the performance		
of the outdoor unit, with a combination of ind						a die periorifiance		
The state of the s			,		r - 			
							PFA004Z	7004 ^
							I PEΔ00/47	1124 //\

PFA004Z024 △

Model FDE125VSAVG

Model(s): FDC125VSA /	FDE125VG						
Outdoor side heat exchanger of air c	onditioner :	air					
Indoor side heat exchanger of air cor	nditioner :	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		238.1	%
Declared cooling capacity for part loa	nd at given outdoor	temperatu	ires	Declared energy	y efficiency ratio or gas utilization eff	iciency /	
Tj and indoor 27°C/19°C(dry/wet bulb)			auxiliary energy	factor for part load at given outdoor	temperatures	Гј
		г	7				1
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	281.0	%
			٦		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or	448.0	%
_			٦		GUEc,bin / AEFc,bin		
Tj=+25℃	Pdc	5.9	kW	Tj=+25°C	EERd or	735.0	%
			٦		GUEc,bin / AEFc,bin		
Tj=+20°C	Pdc	3.4	kW	Tj=+20°C	EERd or	1097.0	%
			٦		GUEc,bin / AEFc,bin]
Degradation		0.05					
coefficient for	Cdc	0.25	-				
air conditioners**			_				
Power consumpiton in other than 'ac	tive mode'						
Off mode	P _{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.030	kW	Standby mode	P _{SB}	0.008	kW
memostat on mode	. 10	0.000		Clariday mode	, 2B	0.000] _{KAA}
Other items							
				For air-to-air air	conditioner:		1
Capacity control		variable	7	air flow-rate,out		4500	m3/h
			_	a non rato,out			1
Sound power level,		74.0]				
outdoor	L_{WA}	71.0	dB				
			_				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
GWP of the		2088	kg CO _{2eq}				
refrigerant		2000	(100years)				
	subishi heavy indu						
** If Cdc is not determined by measu	rement then the de	fault degra	adation coeffic	cient air conditione	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-sp	ilt air conditioners,	the test res	sult and perfo	rmance data be ol	btained on the basis of the performa	ince	
of the outdoor unit, with a combination	n of indoor unit(s)	recommen	ded by the m	anufacturer or imp	porter.		

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Information to identify the model(s) to which the	e information	relates :		FDC125VS	SA / FDE125VG			
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary hea			١	No			
if applicable : electric motor								
Parameters shall be declared for the average h	neating seaso	n . paramet	ers for the w	armer and o	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	Cymbol	value	OTHE .			ng energy efficiency ηs,h	Value	OTIL
Rateu nealing capacity	Prated,h	14.0	kW		Seasonal space neath	ig energy emiciency ris,ri	169.1	%
Declared heating capacity for part load at indo and outdoor temperature Tj	or temperatur	e 20°C	l			performance or gas utilizatio	•	l
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	298.0	%
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	412.0	%
$T_j = +7^{\circ}C$	Pdh	3.4	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	567.0	%
T _j =+12°C	Pdh	2.7	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	639.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or	247.0	%
T _{OL} =operation limit	Pdh	7.7	kW		T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or	214.0	%
For air-to-water heat pumps : T _j =-15°C	Pdh	-	kW		For air-to-water heat pumps:T _i =-15°C	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)	30 <u>21,5</u> 1177211,511		I
Bivalent temperature	T_biv	-10.0	°C		For water-to-air heat pumps:Operation limit		_	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					•
heat pumps**								
	!	1	ı					
Power consumpiton in modes other than 'active	e mode'				Supplementary heater		elbu -	kW
			_		back-up heating capac		elbu -	KVV
Off mode	P _{OFF}	0.008	kW				<u></u>	_
Thermostat-off mode	P _{TO}	0.043	kW		Type of energy input		P _{SB} 0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode		1 SB 0.000	
			-					-
Other items	ı		1		For air-to-air heat pum	ips:	4380	m3/h
Capacity control		variable]		air flow-rate,outdoor m	neasured		1
Sound power level,	L_{WA}	71.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured					Rated brine or water fi	ow-rate,	-	m3/h
	ı		1		outdoor side heat exch	nanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				-				
GWP of the			kg CO _{2eq}					
		2088	(100years)					
refrigerant	ļ]` ′ ′					
Contact details Mitaubiahi	hoover industr	rica thormal	avatama I TI	<u> </u>				
Contact details Mitsubishi ** If Cdh is not determined by measurement the	heavy industreen the default				ners shall be 0.25.			
·								
*** from 26 September 2018	ditioners the t	eet recult co	nd nerforms	nce data ha	obtained on the basis s	f the performance		
Where information relates to multi-spilt air con- of the outdoor unit, with a combination of indoor						таке реполнание		
To and outdoor unit, with a combination of indoor	. ami(ə) 16001	ilinenueu D	y are manula	iotarei Ol IIII	portor.			
							DEA0047	7004 A

Model FDE140VNAVG

Model(s): FDC140VNA / FDE1	40VG						
Outdoor side heat exchanger of air condition	ner:	air					
Indoor side heat exchanger of air condition	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space coo	oling energy		
	Prated,c	13.6	kW	efficiency ηs,c		227.6	%
Declared cooling capacity for part load at g	iven outdoor	r temperatu	res		iciency ratio or gas utilization efficier	-	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy fact	or for part load at given outdoor tem	peratures	Гј
T:- 125°C	Pdc	13.6	kW		İ		1
Tj=+35°C	Fuc	13.6] _V vv	Tj=+35℃	EERd or	261.0	%
Tj=+30°C	Pdc	10.0	kW	T: .0000	GUEc,bin / AEFc,bin		
1]=-30 0	1 40	10.0],,,,	Tj=+30°C	EERd or	435.0	%
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or		
,			_	1]=+25 C	GUEc,bin / AEFc,bin	635.0	%
Tj=+20°C	Pdc	3.4	kW	Tj=+20°C	EERd or		
			_	1]200	GUEc,bin / AEFc,bin	1230.0	%
Degradation					0020,5 7.12. 0,5		ı
coefficient for	Cdc	0.25	_				
air conditioners**							
			_				
Power consumpiton in other than 'active m	ode'						
			_		•		
Off mode	P_{OFF}	0.008	kW	Crankcase heater m	node P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.030	kW	Standby mode	P_{SB}	0.008	kW
Other items					1		1
Capacity control		variable	1	For air-to-air air cond		4500	m3/h
Capacity control		variable	_	air flow-rate,outdoor	measured		J
Cound never level			1				
Sound power level, outdoor	L_{WA}	73.0	dB				
outdoor			_				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
GWP of the		2088	kg CO _{2eq}				
refrigerant		2000	(100years)				
•			nal systems,L				
** If Cdc is not determined by measuremen	t then the de	efault degra	dation coeffic	cient air conditioners s	shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air	conditioners	the test res	sult and perfo	rmance data be obtair	ned on the basis of the performance		
of the outdoor unit, with a combination of ir	door unit(s)	recommen	ded by the ma	anufacturer or importe	er.		
						PFA004	7024 ∧

Information to identify the model(s) to which the	e information	relates :		FDC140VN	IA / FDE140VG			
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary hea			N	lo			
if applicable : electric motor								
Parameters shall be declared for the average h	neating seaso	n . paramet	ers for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	Gyrribor	value	Offic			ng energy efficiency ηs,h	Value	Offic
Rateu neating capacity	Prated,h	15.5	kW		Seasonal space neali	ig energy emciency rps,ri	162.8	%
Declared heating capacity for part load at indo and outdoor temperature Tj	or temperatur	e 20°C	l			f performance or gas utilization for part load at given outdoor	-	
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	290.0	%
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	390.0	%
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	550.0	%
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	650.0	%
T _{blv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	250.0	%
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	COPd or GUEh.bin / AEFh.bin	220.0	%
For air-to-water heat pumps : T _j =-15°C	Pdh	-	kW		For air-to-water heat pumps:T _j =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)		<u> </u>	•
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
			•					
				1				
Power consumpiton in modes other than 'active	e mode'				Supplementary heater		elbu -	kW
			_		back-up heating capac	city	eibu -	KVV
Off mode	P_{OFF}	0.008	kW					
Thermostat-off mode	P _{TO}	0.045	kW		Type of energy input		P _{SB} 0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode		FSB 0.000	KVV
	•				·			_
Other items	ı		,		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable	1		air flow-rate,outdoor m	neasured		1
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air	heat pumps :		l
outdoor measured					Rated brine or water fi	iow-rate,	-	m3/h
	ı		1		outdoor side heat exch	nanger]
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				-				
GWP of the			kg CO _{2eq}					
		2088	(100years)					
refrigerant	ļ]` ′ ′					
Contact details Mitaubiahi	hoover industr	rica thormal	avatama I T	<u> </u>	l .			
Contact details Mitsubishi ** If Cdh is not determined by measurement the	heavy industreen the default				ners shall be 0.25.			
·								
*** from 26 September 2018	ditioners the t	get rocult co	nd nerforme	nce data ha	obtained on the besit of	f the performance		
Where information relates to multi-spilt air con- of the outdoor unit, with a combination of indoor						т ине регголявание		
or are outdoor unit, with a combination of muot	. ami(3) 16001	iended D	y are manula	acturer Of IIII	porter.			
							DEV004	7004 /

Model FDE140VSAVG

Model(s): FDC140VSA / FDE1	40VG						
Outdoor side heat exchanger of air condition		air					
Indoor side heat exchanger of air condition	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space cod	oling energy		
	Prated,c	13.6	kW	efficiency ηs,c		227.6	%
Declared cooling capacity for part load at g	iven outdoor	temperatur	res	Declared energy eff	iciency ratio or gas utilization efficier	ncv /	
Tj and indoor 27°C/19°C(dry/wet bulb)		,,,,,,,			tor for part load at given outdoor tem	-	Гј
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	261.0	%
Tj=+30℃	Pdc	10.0	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or	435.0	%
_			,		GUEc,bin / AEFc,bin		
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	635.0	%
Tj=+20°C	Pdc	3.4	kW	Tj=+20°C	GUEc,bin / AEFc,bin EERd or GUEc,bin / AEFc,bin	1230.0	%
Degradation]		COLO,DITT ALI C,DIT	I	'
coefficient for	Cdc	0.25	_				
air conditioners**							
			1				
Power consumpiton in other than 'active mo	ode'						
Off mode	P _{OFF}	0.008	kW	Crankcase heater n	node P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.030	kW	Standby mode	P _{SB}	0.008	kW
	.0	L	1		J. J. J. J. J. J. J. J. J. J. J. J. J. J		l
Other items				For air-to-air air con	ditionar		
Capacity control		variable]	air flow-rate,outdoor		4500	m3/h
Sound power level,	L_WA	73.0	dB				
outdoor			<u> </u>				
			1 ,,,,,				
If engine driven:	NOx	_	mg/kWh				
Emissions of nitrogen	***		fuel input GCV				
oxides			Joc v				
GWP of the			kg CO _{2eq}				
refrigerant		2088	(100years)				
		l .	1				
Contact details Mitsubish	i heavy indu	stries therm	nal systems,L	TD			
** If Cdc is not determined by measuremen	-				shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air of	conditioners.	the test res	ult and perfo	rmance data be obtai	ned on the basis of the performance		
of the outdoor unit, with a combination of in							
,	-(-/		,				
				·		PFA0042	Z024 ∕∆

Information to identify the model(e) to which	h the information :	rolatoo :							
Information to identify the model(s) to whic				FDC140VS	A / FDE140VG				
Outdoor side heat exchanger of heat pump Indoor side heat exchanger of heat pump :		air							
	unnlamentan, bee	air			No				
Indication if the heater is equipped with a s if applicable : electric motor	ирріеттепіату пеа	ater.			40				
Parameters shall be declared for the avera	ge heating seaso	n narameters	s for the w	armer and c	older heating seasons	are ontional			
				armor and c			Va	lue Unit	
Rated heating capacity	Symbol	value 0	nit		Item	Symbol ng energy efficiency ηs,h	va	ide Offic	
Rated heating capacity	Prated,h	15.5	kW		Seasonal space neath	ng energy emolency rps,n	162	2.8 %	
Declared heating capacity for part load at i and outdoor temperature Tj	ndoor temperature	e 20°C				of performance or gas utilization for part load at given outdoo		Тј	
T _j =-7°C	Pdh	9.3 k\	W		T _j =-7°C	COPd or	290	0.0 %	
T _j =+2°C	Pdh	5.7 k\	W		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	390	0.0 %	
T _j =+7°C	Pdh	3.7 k\	W		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	550	0.0 %	
T _j =+12°C	Pdh	2.8 k\	W		T _j =+12°C	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	650	0.0 %	
T _{blv} =bivalent temperature	Pdh	10.5 k\	W		T _{biv} =bivalent temperature	COPd or GUEh,bin / AEFh,bin	250	0.0 %	
T _{OL} =operation limit	Pdh	7.9 k\	W		T _{OL} =operation limit	COPd or GUEh,bin / AEFh,bin	220	0.0 %	
For air-to-water heat pumps : T _j =-15°C	Pdh	- k\	W		For air-to-water heat pumps:T _j =-15°C	COPd or GUEh,bin / AEFh,bin		- %	
(if T _{OL} <-20°C)	ī				(if T _{OL} <-20°C)		_		
Bivalent temperature	T _{biv}	-10.0 ℃			For water-to-air heat pumps:Operation limit	t		- ℃	
Degradation		0.05			T _{ol} temperature				
coefficient heat pumps**	C_{dh}	0.25							
Power consumpiton in modes other than 'a	ctive mode'				Supplementary heater		elbu ·	- kW	
Off mode	P _{OFF}	0.008 k\	w		back-up heating capa	city			
Thermostat-off mode	P _{TO}	0.045 k\			Type of energy input			\neg	
Crankcase heater mode	P _{CK}	0.008 k\			Standby mode		P _{SB} 0.0	008 kW	
Other items					For air-to-air heat pun	nps:	43	80 m3/h	n
Capacity control	[variable			air flow-rate,outdoor n	neasured		1113/11	•
Sound power level, outdoor measured	L _{WA}	73.0 di	В		For water-/brine-to-air Rated brine or water f outdoor side heat excl	fiow-rate,		- m3/h	1
Emissions of nitrogen oxides(if applicable)	NOx ***	- fu	ng/kWh uel input GCV						
GWP of the refrigerant			g CO _{2eq} 100years)						
Contact details Mitsub	ishi heavy industr	ries thermal sv	stems.LTI	 D					
** If Cdh is not determined by measuremer					ners shall be 0,25.				
*** from 26 September 2018									
Where information relates to multi-spilt air of the outdoor unit, with a combination of ir						of the performance			
							DE	A004Z024 /	A

Model FDE125VNAPVG

Model(s): FDC125VNA / F	FDE60VG (x2 units))					
Outdoor side heat exchanger of air col	nditioner: a	ir					
Indoor side heat exchanger of air cond	ditioner: a	ir					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		294.7	%
Declared cooling capacity for part load	l at given outdoor te	emperatur	res	Declared energy	efficiency ratio or gas utilization	efficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdo	oor temperatures	Гј
	_		,				1
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	308.0	%
	_		,		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or	532.0	%
	_		,		GUEc,bin / AEFc,bin		, ,
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	EERd or	846.0	%
	_		,		GUEc,bin / AEFc,bin		, ,
Tj=+20°C	Pdc	3.7	kW	Tj=+20°C	EERd or	1762.0	%
	_		.		GUEc,bin / AEFc,bin		,,,
Degradation							
coefficient for	Cdc	0.25	-				
air conditioners**]				
Power consumpiton in other than 'activ	ve mode'						
	<u></u>		.				
Off mode	P _{OFF}	0.008	kW	Crankcase heate	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_{SB}	0.008	kW
Other items						-	1
	_		,	For air-to-air air	conditioner:	4500	m3/h
Capacity control		variable]	air flow-rate,out	door measured		
	_		,				
Sound power level,	L _{WA}	71.0	dB				
outdoor	"]				
	_		,				
If engine driven:	NOv		mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
	_		,				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
Contact details Mits	ubishi heavy indust	ries therm	nal systems,L	.TD			
** If Cdc is not determined by measure	ement then the defa	ult degra	dation coeffic	cient air conditione	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spil	t air conditioners,th	e test res	ult and perfo	rmance data be ol	otained on the basis of the perfor	mance	
of the outdoor unit, with a combination	of indoor unit(s) re	commend	ded by the ma	anufacturer or imp	orter.		
						PFΔ004	7024 ^

Information to identify the model(s) to which t	he information	rolatos :						
Outdoor side heat exchanger of heat pump :	ne miornation			FDC125VN	A / FDE60VG (x2 units	3)		
Indoor side heat exchanger of heat pump:		air						
Indication if the heater is equipped with a sup	nlementary he	air ater ·		N	lo			
if applicable : electric motor	promontary no							
Parameters shall be declared for the average	heating seaso	n , paramete	ers for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity						ng energy efficiency ηs,h		
3.07.00	Prated,h	14.0	kW			3 3,	198.8	%
Declared heating capacity for part load at ind and outdoor temperature Tj	oor temperatur	re 20°C				f performance or gas utilizatio		1
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	343.0	%
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	467.0	%
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	692.0	%
T _j =+12°C	Pdh	2.7	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	871.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or	275.0	%
T _{OL} =operation limit	Pdh	7.7	kW		T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	248.0	%
For air-to-water heat pumps : T _i =-15°C	Pdh	-	kW		For air-to-water heat pumps:T _i =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			_
Bivalent temperature	T_{biv}	-10.0	°C		For water-to-air heat pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					_
heat pumps**								
			-					
Dougr consumpiton in modes other than last	ua mada!				Cumplementary beater			7
Power consumpiton in modes other than 'acti	ve mode				Supplementary heater back-up heating capac		elbu -	kW
Off mode	P _{OFF}	0.008	kW		back-up fleating capac	sity		
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input		_	1
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode		P _{SB} 0.008	kW
			1		,			_
Other items			_		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable	<u> </u>		air flow-rate,outdoor m	neasured	4000	
Sound power level,	L_WA	71.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured					Rated brine or water fi outdoor side heat exch			m3/h
Emissions of nitrogen			mg/kWh		Salador Side Heat excl	901		_
oxides(if applicable)	NOx ***	_	fuel input					
onesti applicasio)			GCV					
				•				
GWP of the		2088	kg CO _{2eq}					
refrigerant		2000	(100years)					
Contact details	ni heavy indust	rice thormal	evetomo I T	<u> </u>				
Contact details Mitsubisl ** If Cdh is not determined by measurement t	ni heavy indust hen the default				ers shall be 0,25.			
*** from 26 September 2018		<u> </u>			., .			
Where information relates to multi-spilt air co	nditioners the t	est result an	nd performar	nce data he	obtained on the basis o	f the performance		
of the outdoor unit, with a combination of indo						5 po		
	.,.,.230	2						
							<u> </u>	
							PFA0042	/ LEZZE //\

Model FDE125VSAPVG

Model(s): FDC125VSA / FDE6	0VG (x2 unit	ts)					
Outdoor side heat exchanger of air condition	ner:	air					
Indoor side heat exchanger of air condition	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space cod	oling energy		
	Prated,c	12.5	kW	efficiency ηs,c		294.7	%
Declared cooling capacity for part load at g Tj and indoor 27°C/19°C(dry/wet bulb)	ven outdoor	temperatur	res		iciency ratio or gas utilization efficien tor for part load at given outdoor tem	•	Гј
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	308.0	%
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or	532.0	%
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or GUEc,bin / AEFc,bin	846.0	%
Tj=+20°C	Pdc	3.7	kW	Tj=+20°C	EERd or GUEc,bin / AEFc,bin	1762.0	%
Degradation coefficient for air conditioners**	Cdc	0.25	_				
Power consumpiton in other than 'active mo	ode'						
Off mode	P_{OFF}	0.008	kW	Crankcase heater n	node P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P _{SB}	0.008	kW
Other items				For air-to-air air con	ditionor		
Capacity control		variable]	air flow-rate,outdoo		4500	m3/h
Sound power level, outdoor	L_{WA}	71.0	dB				
If engine driven: Emissions of nitrogen oxides	NOx ***	-	mg/kWh fuel input GCV				
GWP of the refrigerant		2088	kg CO _{2eq} (100years)				
Contact details Mitsubish ** If Cdc is not determined by measuremen			nal systems,L		shall he 0.25		
	t trieri trie de	iauii degra	uation coeffic	ient all conditioners s	onan DE U,20.		
*** from 26 September 2018							
Where information relates to multi-spilt air of							
of the outdoor unit, with a combination of in	door unit(s)	recommend	ded by the ma	anufacturer or importe	er.		
						PFA0042	Z024 ∆

1.6								
Information to identify the model(s) to which the	ne information	relates :		FDC125VS	A / FDE60VG (x2 units	5)		
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a sup	plementary he	ater:		N	lo			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity					l	ng energy efficiency ηs,h		
Table Manager Company	Prated,h	14.0	kW			·g e-re-ig) e-me-e-rej -[198.8	%
Declared begins conseit, for part lead at ind	or tomporativ	- 20°C	l	1	Declared coefficient of	f norformanae ar ana utilization off	ioionou /	
Declared heating capacity for part load at inde and outdoor temperature Tj	oor temperatur	le 20 C				f performance or gas utilization eff for part load at given outdoor tem		
			1					1
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	343.0	%
			1			GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	COPd or	467.0	%
						GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	COPd or	692.0	%
			_			GUEh,bin / AEFh,bin	002.0	,,,
T _i =+12°C	Pdh	2.7	kW		T _i =+12°C	COPd or	074.0	0,
			•			GUEh.bin / AEFh.bin	871.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent	COPd or		
UIV			1		temperature		275.0	%
T _{OL} =operation limit	Pdh	7.7	kW		·	GUEh,bin / AEFh,bin COPd or		1
T _{OL} -operation limit	Pull	7.7	IKVV		T _{OL} =operation limit		248.0	%
			1			GUEh,bin / AEFh,bin	-	
For air-to-water heat pumps :	Pdh	_	kW		For air-to-water heat	COPd or	-	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
			_					_
Bivalent temperature	T_biv	-10.0	°C		For water-to-air heat			
			•		pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25						1
heat pumps**	Odn		-					
near pumps			ļ					
								1
Power consumpiton in modes other than 'activ	/e mode'				Supplementary heater	elbu		kW
					back-up heating capac			
Off mode	P _{OFF}	0.008	kW					
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input	D	0.000	134/
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	P_{SB}	0.008	kW
			ı		Clariday mode		L	ı
Oth as it area				1				
Other items								1
			1		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable			air flow-rate,outdoor m	neasured		J
			1					1
Sound power level,	L_{WA}	71.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured	WA.				Rated brine or water fi	iow-rate,	-	m3/h
					outdoor side heat exch	nanger		
Emissions of nitrogen			mg/kWh					•
oxides(if applicable)	NOx ***	-	fuel input					
loxides(ii applicable)								
		<u> </u>	GCV					
			1					
GWP of the		2088	kg CO _{2eq}					
refrigerant			(100years)					
Contact details Mitsubish	i heavy indust	tries thermal	systems,LT	D				
** If Cdh is not determined by measurement to					ers shall be 0,25.			
*** from 26 September 2018								
	aditionare the	taet recult c-	ıd norformer	nce data ha	ohtained on the besit -	f the performance		
Where information relates to multi-spilt air co						т те репоплансе		
of the outdoor unit, with a combination of indo	or unit(s) reco	rrimended by	, the manufa	acturer or im	рогтег.			
							PFA0042	7024 ^

Model FDE140VNAPVG

Model(s): FDC140VNA	/ FDE71VG (x2 units)						
Outdoor side heat exchanger of air	conditioner: a	ir					
Indoor side heat exchanger of air co	onditioner : a	ir					
Type: vapour compression							
if applicable : electric moto	г						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		268.9	%
Declared cooling capacity for part lo	•	emperatu	res		efficiency ratio or gas utilization e	•	
Tj and indoor 27°C/19°C(dry/wet bu	lb)			auxiliary energy	factor for part load at given outdoo	or temperatures	Τj
Ti-+35°C	Pdc	13.6	kW				1
Tj=+35°C	Puc	13.0	JKVV	Tj=+35°C	EERd or	293.0	%
Tj=+30°C	Pdc	10.0	kW	T:	GUEc,bin / AEFc,bin		
1]-130 0	1 dc	10.0],,,,	Tj=+30°C	EERd or	468.0	%
Tj=+25°C	Pdc	6.4	kW	T:- + 25°C	GUEc,bin / AEFc,bin		
., -23 5	. 45	•]	Tj=+25°C	EERd or	740.0	%
Tj=+20°C	Pdc	3.7	kW	Tj=+20°C	GUEc,bin / AEFc,bin		
,]	1]=+20 C	EERd or	1762.0	%
Degradation			1		GUEc,bin / AEFc,bin		J
coefficient for	Cdc	0.25	_				
air conditioners**							
all conditioners	L		_				
Power consumpiton in other than 'a	ctive mode'						
·							
Off mode	P _{OFF}	0.008	kW	Crankcase heate	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_{SB}	0.008	kW
Other items							
	<u></u>		,	For air-to-air air	conditioner:	4500	m3/h
Capacity control	,	variable		air flow-rate,outd	door measured		
			,				
Sound power level,	L _{WA}	73.0	dB				
outdoor]				
	_		,				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
0145	Г		1				
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant	<u>L</u>](,,				
Contact dataile	litarrhiahi haaruriaduut		a al aventa man l	I TD			
Contact details M ** If Cdc is not determined by meas	litsubishi heavy industr				ers shall be 0.25		
*** from 26 September 2018		aogra		30114140110			
	snilt air conditionors the	e teet roo	ult and norfo	rmance data ha ak	ntained on the basis of the porform	nance	
Where information relates to multi-s of the outdoor unit, with a combinati						ialice	
or the outdoor unit, with a combinat	ion or muoor unit(s) fer	COMMINE	aca by tile illi	andiacidiei Oi IIIIP	Officer.		
						PFA0042	Z024∆

Information to identify the model(s) to which the	e information i	relates :		FDC140VN	IA / FDE71VG (x2 units)		
Outdoor side heat exchanger of heat pump :		air			arriberiro (xe anno	,		
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a suppl	lementary hea			N	No			
if applicable : electric motor	iomontary noc							
Parameters shall be declared for the average h	neating seaso	n naramete	ers for the w	armer and c	older heating seasons	are ontional		
				arrior arra o			1/-1 -	11.21
Item	Symbol	Value	Unit	I	Item	Symbol	Value	Unit
Rated heating capacity	Prated,h	15.5	kW		Seasonal space heating	ng energy efficiency ηs,h	188.8	%
	i rateu,ii	13.3	KVV				100.0	70
Declared heating capacity for part load at indoo	or temperature	e 20°C				performance or gas utilization efficie	•	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor temper	ratures Tj	
_	ī		ı		_			ı
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	316.0	%
	Ī		ı			GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	447.0	%
	r		ı			GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or	652.0	%
						GUEh,bin / AEFh,bin		, -
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	COPd or	875.0	%
	-		•'			GUEh,bin / AEFh,bin	675.0	70
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	COPd or	050.0	0/
					temperature	GUEh,bin / AEFh,bin	258.0	%
T _{OL} =operation limit	Pdh	8.3	kW		T _{OL} =operation limit	COPd or		
OL Sperdies mini					OL SPECENSION		236.0	%
Face six to surtee heat surees .	Dale		1.347			GUEh,bin / AEFh,bin		
For air-to-water heat pumps : T _j =-15°C	Pdh		kW		For air-to-water heat	COPd or GUEh,bin / AEFh,bin	-	%
					pumps:T _j =-15°C	GOETI, DILITA EFTI, DILI		
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
	_ [40.0			E			Ì
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			0-
	ſ		ı		pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
Power consumpiton in modes other than 'active	e mode'				Supplementary heater	elbu	_	kW
					back-up heating capac			KVV
Off mode	P _{OFF}	0.008	kW					•'
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input	D	0.000	1.347
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	P_{SB}	0.008	kW
	ı							
Other items								
					For air-to-air heat pum	ns:		
Capacity control		variable			air flow-rate,outdoor m		4380	m3/h
Capacity control	L		l		all llow-rate,outdoor in	leasured		l
	Ī		l					l
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air		_	m3/h
outdoor measured	ļ				Rated brine or water fi			1110/11
	ī		l		outdoor side heat exch	nanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
	ļ		GCV					
	Ē		i					
GWP of the		2088	kg CO _{2eq}					
refrigerant			(100years)					
Contact details Mitsubishi	heavy industr	ies thermal	systems,LT	D				
** If Cdh is not determined by measurement the					ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air cond	ditioners the t	est result on	ıd nerformar	nce data he	obtained on the basis of	f the performance		
of the outdoor unit, with a combination of indoo						. a.o poriormano		
in a outdoor unit, with a combination of Indoo	. um(ə) IECOI	nenueu D)	, are manule	JOLUICI UI IIII	portor.			
							PFA004Z	024 ⚠

Model FDE140VSAPVG

Model(s): FDC140VS	A / FDE71VG (x2 unit	s)					
Outdoor side heat exchanger of a	r conditioner :	air					
Indoor side heat exchanger of air	conditioner :	air					
Type: vapour compression							
if applicable : electric mot	or	<u> </u>					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space			
	Prated,c	13.6	kW	efficiency ηs,c		268.9	%
Declared cooling capacity for part	load at given outdoor	temperatu	res	Declared energy	y efficiency ratio or gas utilization	efficiency /	
Tj and indoor 27°C/19°C(dry/wet b	=	temperata	163		factor for part load at given outdo	-	Ti
I) alla iliadoi 27 or 10 o(ai y, mot o	uib)			auxilial y Clicigy	lactor for part load at given oata.	JOI temperatures	')
Tj=+35°C	Pdc	13.6	kW	Ti-+35°C	EEDd or		1
1]-100 0]	Tj=+35°C	EERd or	293.0	%
Tj=+30°C	Pdc	10.0	kW		GUEc,bin / AEFc,bin		·
1]-+30 6	i do l	10.0	_Kvv	Tj=+30°C	EERd or	468.0	%
T: :0500	Dda		ا ا		GUEc,bin / AEFc,bin	-	-
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	740.0	%
			ا ا		GUEc,bin / AEFc,bin	ļ	
Tj=+20°C	Pdc	3.7	kW	Tj=+20°C	EERd or	1762.0	%
	ı		_		GUEc,bin / AEFc,bin]^~
Degradation		<u> </u>]	ı			
coefficient for	Cdc	0.25	-				
air conditioners**							
	•		1				
				1			
Power consumpiton in other than	'active mode'			ı			
Power consumption in outer than	active mode			ı			
Off mode	P_{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode		0.000	kW			0.008	kW
Memiosiai-on mode	P_{TO}	0.000	Kvv	Standby mode	P_SB	0.000	JKVV
Other items				ı			1
	ľ		ا ا	For air-to-air air	conditioner:	4500	m3/h
Capacity control	l	variable]	air flow-rate,out	door measured		J
	ı		_				
Sound power level,	L _{WA}	73.0	dB				
outdoor	-vvA		u.b				
			_	ı			
If engine driven:			mg/kWh	ı			
Emissions of nitrogen	NOx ***	-	fuel input				
•			GCV				
oxides	ı		JGCv	ı			
	ŀ		ا م	ı			
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant	I		(100years)				
				<u>. </u>			
Contact details	Mitsubishi heavy indus	stries thern	nal systems,l	_TD			_
** If Cdc is not determined by mea	surement then the de	fault degra	dation coeffic	cient air conditione	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi	-spilt air conditioners.f	the test res	and perfo	rmance data be of	htained on the basis of the perfor	rmance	
of the outdoor unit, with a combina						manoc	
Of the outdoor unit, with a combine	allon or muoor unit(s) i	econinien	Jeu by the m	allulaciulei oi iliip	orter.		
<u> </u>						I DEVUUA	7024 A

Information to identify the model(s) to	which the information	rolatos :					
Information to identify the model(s) to			FDC140VS	SA / FDE71VG (x2 units	s)		
Outdoor side heat exchanger of heat		air					
Indoor side heat exchanger of heat pu		air		No			
Indication if the heater is equipped wi if applicable : electric moto		ater.		140			
Parameters shall be declared for the		n parameters for th	ne warmer and o	colder heating seasons	are ontional		
			io marrior and t			Value	Unit
Item Rated heating capacity	Symbol	Value Unit		Item	Symbol ing energy efficiency ηs,h	value	Offic
reacting capacity	Prated,h	15.5 kW		Seasonal space near	ing energy emoleticy rps,ii	188.8	%
Declared heating capacity for part loa and outdoor temperature Tj	d at indoor temperature	e 20°C			of performance or gas utilization r for part load at given outdoor	-	•
T _j =-7°C	Pdh	9.3 kW		T _j =-7°C	COPd or	316.0	%
T _j =+2°C	Pdh	5.7 kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	447.0	%
T _j =+7°C	Pdh	3.7 kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	652.0	%
T _j =+12°C	Pdh	2.8 kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	875.0	%
T _{biv} =bivalent temperature	Pdh	10.5 kW		T _{biv} =bivalent temperature	COPd or GUEh,bin / AEFh,bin	258.0	%
T _{OL} =operation limit	Pdh	8.3 kW		T _{OL} =operation limit	COPd or GUEh,bin / AEFh,bin	236.0	%
For air-to-water heat pumps : T _j =-15°C	Pdh	- kW		For air-to-water heat pumps:T _j =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)	_ 1	40.0		(if T _{OL} <-20°C)			1
Bivalent temperature	T _{biv}	-10.0 ℃		For water-to-air heat pumps:Operation limi	it	-	°C
Degradation coefficient	0	0.25		T _{ol} temperature			
heat pumps**	C_{dh}	0.20					
Power consumpiton in modes other th	nan 'active mode'			Supplementary heate back-up heating capa	•	elbu -	kW
Off mode	P _{OFF}	0.008 kW					7
Thermostat-off mode	P _{TO}	0.015 kW		Type of energy input		P _{SB} 0.008	kW
Crankcase heater mode	P _{CK}	0.008 kW		Standby mode]
Other items							
Capacity control		variable		For air-to-air heat pur air flow-rate,outdoor r	•	4380	m3/h
Sound power level, outdoor measured	L_{WA}	73.0 dB		For water-/brine-to-air Rated brine or water to outdoor side heat exc	fiow-rate,	-	m3/h
Emissions of nitrogen oxides(if applicable)	NOx ***	mg/kWl fuel inp GCV					
GWP of the refrigerant		2088 kg CO ₂ (100yea					
Contact details	/litsubishi heavy industr	ries thermal systems	LTD	1			
** If Cdh is not determined by measur				ners shall be 0,25.			
*** from 26 September 2018							
Where information relates to multi-sp	ilt air conditioners.the to	est result and perfor	mance data be	obtained on the basis of	of the performance		
of the outdoor unit, with a combination					p		
	• • • • • • • • • • • • • • • • • • • •	-					
						PFA0042	7004 ^

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Model FDE140VNATVG

Model(s): FDC140VNA / FDE	50VG (x3 uni	its)					
Outdoor side heat exchanger of air condition	oner :	air					
Indoor side heat exchanger of air condition	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space coo	ling energy		
	Prated,c	13.6	kW	efficiency ηs,c		268.9	%
Declared cooling capacity for part load at g	jiven outdoo	r temperatu	res	Declared energy effi	ciency ratio or gas utilization efficier	ncy /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy facto	or for part load at given outdoor tem	nperatures ⁻	Гј
			_				_
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	293.0	%
			_		GUEc,bin / AEFc,bin	230.0	/0
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	468.0	%
			_		GUEc,bin / AEFc,bin	400.0	70
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	740.0	%
			_		GUEc,bin / AEFc,bin	740.0	70
Tj=+20°C	Pdc	3.7	kW	Tj=+20°C	EERd or	1762.0	%
			-		GUEc,bin / AEFc,bin	1762.0	70
Degradation							-
coefficient for	Cdc	0.25	-				
air conditioners**							
			-				
Power consumpiton in other than 'active m	ode'						
Off mode	P_{OFF}	0.008	kW	Crankcase heater m	ode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_SB	0.008	kW
			-				•
Other items							_
			_	For air-to-air air cond	ditioner:	4500	m3/h
Capacity control		variable		air flow-rate,outdoor	measured	4300	1113/11
			_				
Sound power level,		73.0	dB				
outdoor	L_{WA}	73.0	QD.				
		•	_				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
			_				
GWP of the		2088	kg CO _{2eq}				
refrigerant		2000	(100years)				
Contact details Mitsubisl	าi heavy indu	stries thern	nal systems,L	.TD			
** If Cdc is not determined by measuremen	it then the de	efault degra	dation coeffic	cient air conditioners s	hall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air	conditioners	the test res	ult and perfo	rmance data be obtain	ned on the basis of the performance	;	
of the outdoor unit, with a combination of ir	ndoor unit(s)	recommend	ded by the m	anufacturer or importe	r.		

Information to identify the model(s) to which the	e information i	relates :		FDC140VN	IA / FDE50VG (x3 units))		
Outdoor side heat exchanger of heat pump :		air			WYY BEOVE (NO GINE)	,		
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a suppl	lementary hea			N	No			
if applicable : electric motor	iomontary noc							
Parameters shall be declared for the average h	neating seaso	n naramete	ers for the w	armer and c	older heating seasons a	are ontional		
				anner and e				
Item	Symbol	Value	Unit	1	Item	Symbol	Value	Unit
Rated heating capacity	Prated,h	15.5	kW		Seasonal space heatin	ng energy efficiency ηs,h	188.8	%
	i rateu,ii	13.5	KVV				100.0	70
Declared heating capacity for part load at indoo	or temperature	e 20°C				performance or gas utilization efficie	•	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor temper	ratures Tj	
	Ī		ı					
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	316.0	%
	Ī		i			GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	447.0	%
	r		1			GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or	652.0	%
						GUEh,bin / AEFh,bin		, -
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	COPd or	875.0	%
	-		•'			GUEh,bin / AEFh,bin	675.0	70
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	COPd or	050.0	0/
	L		•		temperature	GUEh,bin / AEFh,bin	258.0	%
T _{OL} =operation limit	Pdh	8.3	kW		T _{OL} =operation limit	COPd or		
OL Sperdies mini					OL SPECENSION		236.0	%
For six to water boot sweeps	Dale	-	1.347		Fan air ta watan baat	GUEh,bin / AEFh,bin		
For air-to-water heat pumps : T _j =-15°C	Pdh		kW		For air-to-water heat	COPd or GUEh,bin / AEFh,bin	-	%
					pumps:T _j =-15°C	GOETI, DILITA EFTI, DILI		
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
	_ [40.0			E			
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			0-
	ſ	1	ı		pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
Power consumpiton in modes other than 'active	e mode'				Supplementary heater	elbu	_	kW
					back-up heating capac			KVV
Off mode	P _{OFF}	0.008	kW					•'
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input	D	0.000	1.347
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	P_{SB}	0.008	kW
	ı							
Other items								
					For air-to-air heat pum	ns:		
Canacity central	1	variable			air flow-rate,outdoor m		4380	m3/h
Capacity control	L		l		all llow-rate,outdoor iii	leasured		l
	Ī		l					l
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air		_	m3/h
outdoor measured	ļ				Rated brine or water fi			1110/11
	ī		l		outdoor side heat exch	nanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
	ļ		GCV					
GWP of the		2088	kg CO _{2eq}					
refrigerant			(100years)					
Contact details Mitsubishi	heavy industr	ies thermal	systems,LT	D	•			
** If Cdh is not determined by measurement the					ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air cond	ditioners the t	est result on	ıd nerformar	nce data he	obtained on the basis of	f the performance		
of the outdoor unit, with a combination of indoo						. a.o poriormano		
in a outdoor unit, with a combination of Indoo	. um(ə) IECOI	nenueu b)	, are manule	JOLUICI UI IIII	portor.			
<u> </u>							PFA004Z	024 ⚠

Model FDE140VSATVG

Model(s): FDC140VSA / FDE5	60VG (x3 unit	s)					
Outdoor side heat exchanger of air condition		air					
Indoor side heat exchanger of air condition	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space coo	oling energy		
	Prated,c	13.6	kW	efficiency ηs,c		268.9	%
Declared cooling capacity for part load at g	iven outdoor	temperatui	res	Declared energy effi	iciency ratio or gas utilization efficier	ncy /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy fact	for for part load at given outdoor tem	peratures ⁻	Гј
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	293.0	%
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or	468.0	%
			1		GUEc,bin / AEFc,bin		
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or GUEc,bin / AEFc,bin	740.0	%
Tj=+20°C	Pdc	3.7	kW	Tj=+20°C	EERd or GUEc,bin / AEFc,bin	1762.0	%
Degradation			ן ן		OCCOUNTY ALTOURN		1
coefficient for	Cdc	0.25	-				
air conditioners**							
			-				
Power consumpiton in other than 'active m	ode'						
Off mode	P _{OFF}	0.008	kW	Crankcase heater m	node P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P _{SB}	0.008	kW
	10		J	,	ob .		1
Other items]
Capacity control		variable]	For air-to-air air con air flow-rate,outdoor		4500	m3/h
Sound power level,	1	73.0	dB				
outdoor	L_{WA}	73.0]ub				
If angine driven:			mg/kWh				
If engine driven: Emissions of nitrogen	NOx ***	_	fuel input				
oxides	***		GCV				
OXIGGS			1001				
GWP of the		2088	kg CO _{2eq}				
refrigerant		2000	(100years)				
		•					
Contact details Mitsubish	ni heavy indu	stries therm	nal systems,L	TD			
** If Cdc is not determined by measuremen	-				shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air	conditioners.	the test res	ult and perfo	rmance data be obtair	ned on the basis of the performance		
of the outdoor unit, with a combination of ir							
	(*/			,			
						PFA004Z	024 △

Information to identify the model(s) to which t	ne information	rolatos :						
Outdoor side heat exchanger of heat pump :	ic inionnation			FDC140VS	A / FDE50VG (x3 units)		
Indoor side heat exchanger of heat pump:		air						
Indication if the heater is equipped with a sup	nlementary he	air ater ·		N	lo			
if applicable : electric motor	promontary no							
Parameters shall be declared for the average	heating seaso	n , paramete	ers for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	- Cymbol	7 0.00	01110			ng energy efficiency ηs,h	74.40	
rade nearing expect,	Prated,h	15.5	kW		esassiiai opassiiisaii	ig onorgy constantly rip,in	188.8	%
Declared heating capacity for part load at ind and outdoor temperature Tj	oor temperatur	e 20°C				f performance or gas utilization for part load at given outdoo		•
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	316.0	%
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	447.0	%
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	652.0	%
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	875.0	%
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or	258.0	%
T _{OL} =operation limit	Pdh	8.3	kW		T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	236.0	%
For air-to-water heat pumps : T _j =-15°C	Pdh	-	kW		For air-to-water heat pumps:T _j =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			_
Bivalent temperature	T_{biv}	-10.0	°C		For water-to-air heat pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
Power consumpiton in modes other than 'acti	ve mode'				Supplementary heater		elbu -	kW
			ı		back-up heating capac	city	0.50]
Off mode	P _{OFF}	0.008	kW					7
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input		P _{SB} 0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode			_
Other items								
Capacity control		variable			For air-to-air heat pum air flow-rate,outdoor m		4380	m3/h
Sound nower love!					For water /hri t'	hoat numro :		1
Sound power level, outdoor measured	L_{WA}	73.0	dB		For water-/brine-to-air Rated brine or water fi outdoor side heat exch	iow-rate,	-	m3/h
Emissions of nitrogen			mg/kWh			~		_
oxides(if applicable)	NOx ***	-	fuel input GCV					
		,						
GWP of the			kg CO _{2eq}					
refrigerant		2088	(100years)					
reingeran			I					
Contact details Mitsubisl	ni heavy indust	ries thermal	systems I T	D.				
** If Cdh is not determined by measurement t					ers shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air co	nditioners,the t	est result an	ıd performar	nce data be o	obtained on the basis o	f the performance		
of the outdoor unit, with a combination of indo						•		
							PFA004	7024 A

Models FDE50VG, 60VG, 71VG, 100VG, 125VG, 140VG

Model(s): FDE50VG							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	$P_{\text{rated,c}}$	3.8	kW	Total electric power input	P _{elec}	0.050	kW
Cooling capacity (latent)	P _{rated,c}	1.2	kW	Sound power level (per speed setting,if applicable)	L_{WA}	60.0	dB
Heating capacity	P _{rated,h}	5.4	kW				
Contact details	Mitsubishi h	neavy indu	ustries therm	nal systems,LTD			

Model(s): FDE60VG							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	P _{rated,c}	5.0	kW	Total electric power input	P_{elec}	0.080	kW
Cooling capacity (latent)	P _{rated,c}	0.6	kW	Sound power level (per speed setting,if applicable)	L_{WA}	60.0	dB
Heating capacity	P _{rated,h}	6.7	kW				
Contact details	Mitsubishi h	neavy indu	ustries thern	nal systems,LTD			

Model(s): FDE71VG							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	P _{rated,c}	5.6	kW	Total electric power input	P _{elec}	0.080	kW
Cooling capacity (latent)	P _{rated,c}	1.5	kW	Sound power level (per speed setting,if applicable)	L _{WA}	60.0	dB
Heating capacity	P _{rated,h}	8.0	kW				
Contact details	Mitsubishi h	neavy indu	stries then	nal systems,LTD			

Model(s): FDE100VG							
ltem	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	P _{rated,c}	8.4	kW	Total electric power input	P_{elec}	0.130	kW
Cooling capacity (latent)	P _{rated,c}	1.6	kW	Sound power level (per speed setting,if applicable)	L _{WA}	64.0	dB
Heating capacity	$P_{rated,h}$	11.2	kW				
Contact details	Mitsubishi I	neavy indu	ustries ther	mal systems,LTD			

Model(s): FDE125VG							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	$P_{\text{rated,c}}$	9.3	kW	Total electric power input	P _{elec}	0.130	kW
Cooling capacity (latent)	P _{rated,c}	3.2	kW	Sound power level (per speed setting,if applicable)	L _{WA}	64.0	dB
Heating capacity	P _{rated,h}	14.0	kW				
Contact details	Mitsubishi I	neavy indu	ustries the	rmal systems,LTD			

Model(s): FDE140VG							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	P _{rated,c}	10.2	kW	Total electric power input	P_{elec}	0.140	kW
Cooling capacity (latent)	P _{rated,c}	3.8	kW	Sound power level (per speed setting,if applicable)	L _{WA}	65.0	dB
Heating capacity	P _{rated,h}	16.0	kW				
Contact details	Mitsubishi h	neavy indu	ustries thern	nal systems,LTD			

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(4) Duct connected-High static pressure type (FDU) Model FDU100VNAVF2

Information to identify the model(s)	to which the inf	formation r	elates to:	If function includes heating: Indicate	the heating se	ason the			
Indoor unit model name	FDU100V	/F2		information relates to. Indicated values should relate to one					
Outdoor unit model name	FDC100V	/NA		heating season at a time. Include at least the heating season 'Average					
Function(indicate if present)				Average(mandatory)	Yes				
cooling	Yes			Warmer(if designated)	No				
heating	Yes			Colder(if designated)	No				
Item	symbol	value	unit	Item	symbol	value	class		
Design load	Б	400		Seasonal efficiency and energy effic		0.44	1		
cooling	Pdesigno		kW	cooling	SEER	6.11	A++		
heating / Average	Pdesignh		kW	heating / Average	SCOP/A	4.19	A+		
heating / Warmer	Pdesignh		kW	heating / Warmer	SCOP/W	-	-		
heating / Colder	Pdesignh	-	kW	heating / Colder	SCOP/C	-	-		
							unit		
Declared capacity at outdoor tempe				Back up heating capacity at outdoor			7		
heating / Average (-10°C)	Pdh		kW	heating / Average (-10°C)	elbu	0	kW		
heating / Warmer (2°C)	Pdh		kW	heating / Warmer (2°C)	elbu	-	kW		
heating / Colder (-22°C)	Pdh	-	kW	heating / Colder (-22°C)	elbu	-	kW		
Declared capacity for cooling, at inc	oor temperatui	re 27(19) C	and	Declared energy efficiency ratio, at in	ndoor tempera	ture 27(19	and		
outdoor temperature Tj	Dda	40.0	LAM	outdoor temperature Tj	CCD4	2.52	1		
Tj=35°C	Pdc Pdc		kW kW	Tj=35°C	EERd	3.52			
Tj=30°C				Tj=30°C	EERd	4.83			
Tj=25°C	Pdc		kW	Tj=25°C	EERd	7.73	ļ-		
Tj=20°C	Pdc	3.54	kW	Tj=20°C	EERd	11.60	-		
Declared consolity for beatings / *	2000 0000	t indoo:	-	Declared coefficient of	/ Δνοσοσο	00n ct !	Noor		
Declared capacity for heating / Aver		ı ırıuoor		Declared coefficient of performance		son, at inc	IUUI		
temperature 20°C and outdoor temp		7.50	L \\\	temperature 20°C and outdoor temp	erature 1 _j COPd	3.21	7		
Ti=2°C	Pdh Pdh		kW kW	Tj=-7°C Tj=2°C	COPd	3.21	- 1⁻		
1 '									
Tj=7°C	Pdh		kW	Tj=7°C	COPd	5.42			
Tj=12°C	Pdh		kW	Tj=12°C	COPd	6.23	ļ-		
Tj=bivalent temperature	Pdh		kW	Tj=bivalent temperature	COPd	2.40	<u> </u> -		
Tj=operating limit	Pdh	8.5	kW	Tj=operating limit	COPd	2.70	-		
Declared conscitutor beating / War		Lindoor		Declared coefficient of newformance	/ \// arm ar as as	on otino	laar		
Declared capacity for heating / War		Hidoor		Declared coefficient of performance		son, at inc	1001		
temperature 20°C and outdoor temp			LAM	temperature 20°C and outdoor temp			1		
Tj=2°C	Pdh		kW	Tj=2°C	COPd	-			
Tj=7°C	Pdh		kW	Tj=7°C	COPd	-			
Tj=12°C	Pdh		kW	Tj=12°C	COPd	-	_ 1-		
Tj=bivalent temperature	Pdh		kW	Tj=bivalent temperature	COPd	-	<u> </u> -		
Tj=operating limit	Pdh	-	kW	Tj=operating limit	COPd	-	-		
Declared capacity for heating / Cold		ndoor		Declared coefficient of performance		n, at indo	or		
temperature 20°C and outdoor temp				temperature 20°C and outdoor temp			7		
Tj=-7°C	Pdh		kW	Tj=-7°C	COPd	-	<u> </u> -		
Tj=2°C	Pdh		kW	Tj=2°C	COPd	-	<u> </u> -		
Tj=7°C	Pdh		kW	Tj=7°C	COPd	-	_		
Tj=12°C	Pdh		kW	Tj=12°C	COPd	-	_		
Tj=bivalent temperature	Pdh	-	kW	Tj=bivalent temperature	COPd	-	-		
Tj=operating limit	Pdh	-	kW	Tj=operating limit	COPd		-		
Tj=-15°C	Pdh	-	kW	Tj=-15°C	COPd	-]-		
Bivalent temperature				Operating limit temperature			_		
heating / Average	Tbiv	-10	°C	heating / Average	Tol	-20	°C		
heating / Warmer	Tbiv	-	°C	heating / Warmer	Tol	-	°C		
heating / Colder	Tbiv	-	°C	heating / Colder	Tol	-	°C		
					·				
Cycling interval capacity	_			Cycling interval efficiency			_		
for cooling	Pcycc		kW	for cooling	EERcyc	-	<u> </u> -		
for heating	Pcych	-	kW	for heating	COPcyc	-	-		
Degradation coefficient	0.1			Degradation coefficient	C "		1		
cooling	Cdc	0.25	-	heating	Cdh	0.25	-		
Florida a sur 1 11	41 11 .	45		Association 2					
Electric power input in power mode				Annual electricity consumption	0	F70	TLANE.		
off mode	Poff	8	W	cooling	Qce	573	kWh/a		
standby mode	Psb		W	heating / Average	Qhe	2843	kWh/a		
thermostat-off mode	Pto		W	heating / Warmer	Qhe	-	kWh/a		
crankcase heater mode	Pck	8	W	heating / colder	Qhe	-	kWh/a		
Capacity control(indicate one of three	ee options)			Other items			1 in		
				Sound power level(indoor)	Lwa	65	dB(A)		
L .	-			Sound power level(outdoor)	Lwa	70	dB(A)		
fixed	No			Global warming potential	GWP	1975	kgCO2eq.		
staged	No			Rated air flow(indoor)	-	2160	m3/h		
variable	Yes			Rated air flow(outdoor)	-	4500	m3/h		
Contact details for obtaining				ufacturer or of its authorised represen	tative.				
				ning Europe, Ltd.					
		kley Park, I	Uxbridge,	Middlesex, UB11 1ET,					
Unite	ed Kingdom								
						PJG00	0Z160 <u>&</u>		

Model FDU100VSAVF2

Indoor unit model name Outdoor unit model name Function(indicate if present) cooling heating Item Design load cooling	FDU100V FDC100V Yes			information relates to. Indicated value heating season at a time. Include a	at least the heat		n 'Average
cooling heating Item Design load				Average(mandaton)	Vac		
cooling neating tem Design load				LIAvorago(mandatory)	Vaa		
tem Design load				Average(mandatory)	Yes		
tem Design load				Warmer(if designated) Colder(if designated)	No No		
Design load	1 .03			Colder(II designated)	NO		
	symbol	value	unit	Item	symbol	value	class
cooling	Б	40.0	7	Seasonal efficiency and energy eff			1
neating / Average	Pdesignc Pdesignh		kW kW	cooling heating / Average	SEER SCOP/A	6.11 4.19	A++ A+
neating / Average	Pdesignh		kW	heating / Warmer	SCOP/W		- AT
neating / Colder	Pdesignh		kW	heating / Colder	SCOP/C	-	-
						1	unit
Declared capacity at outdoor temper			7	Back up heating capacity at outdoo			7
neating / Average (-10°C) neating / Warmer (2°C)	Pdh Pdh	8.5	kW kW	heating / Average (-10°C) heating / Warmer (2°C)	elbu elbu	-	kW kW
neating / Warmer (2 C)	Pdh	-	kW	heating / Varifier (2 C)	elbu	<u> </u>	kW
icating / Colder (22 C)	i dii		IKVV	ricating / Golder (22 G)	Ciba	_	IXVV
Declared capacity for cooling, at ind	loor temperatui	re 27(19)°	C and	Declared energy efficiency ratio, a	t indoor tempera	ature 27(1	9)°C and
outdoor temperature Tj	Dda	40.0	٦٧٨٧	outdoor temperature Tj	EED4	2 50	7
Γj=35°C Γj=30°C	Pdc Pdc	7.37	kW kW	Tj=35°C Tj=30°C	EERd EERd	3.52 4.83	4]
Tj=30 C Tj=25°C	Pac Pdc	4.74	kW	Tj=30 C Tj=25°C	EERd	7.73	- [_
Γj=20°C	Pdc	3.54	kW	Tj=20°C	EERd	11.60	-
,					-		
Declared capacity for heating / Aver		t indoor		Declared coefficient of performance		son, at in	door
emperature 20°C and outdoor temp Fj=-7°C	perature Tj Pdh	7 50	7kW	temperature 20°C and outdoor tem	nperature Tj COPd	3.21	7
	Pan Pdh	7.52 4.58	kW		COPa	3.21	- [
Γj=7°C	Pdh	2.94	kW	Ti=7°C	COPd	5.42	┨_
Γj=12°C	Pdh	2.83	kW	Tj=12°C	COPd	6.23	1-
Γj=bivalent temperature	Pdh	6.77	kW	Tj=bivalent temperature	COPd	2.40]-
rj=operating limit	Pdh	8.5	kW	Tj=operating limit	COPd	2.70	-
D				Declared as #isiant of a reference	- / \\/	4 !	-l
Declared capacity for heating / Warr emperature 20°C and outdoor temp		Indoor		Declared coefficient of performance temperature 20°C and outdoor tem		ison, at inc	door
Fi=2°C	Pdh	-	kW	Ti=2°C	COPd	-	٦-
Γj=7°C	Pdh	-	kW	Tj=7°C	COPd	-	- -
, Γj=12°C	Pdh	-	kW	Tj=12°C	COPd	-	٦-
rj=bivalent temperature	Pdh	-	kW	Tj=bivalent temperature	COPd	-	1 -
Tj=operating limit	Pdh	-	kW	Tj=operating limit	COPd	-	-
Declared capacity for heating / Cold	ler season at i	ndoor		Declared coefficient of performance	e / Colder seas	on at indo	oor
temperature 20°C and outdoor temp		iluuul		temperature 20°C and outdoor tem		on, at muc	JOI
Tj=-7°C	Pdh	-	kW	Tj=-7°C	COPd	-	7-
Γj=2°C	Pdh	-	kW	Tj=2°C	COPd	-]-
Γj=7°C	Pdh	-	kW	Tj=7°C	COPd	-	-
Гј=12°С	Pdh	-	kW	Tj=12°C	COPd	-	_ -
Tj=bivalent temperature	Pdh	-	kW	Tj=bivalent temperature	COPd	-	
Γj=operating limit Γj=-15°C	Pdh Pdh	-	kW kW	Tj=operating limit	COPd COPd	-	-[
1]13 C	Full		KVV	1]=-13 C	COFU		<u> </u> -
Bivalent temperature			_	Operating limit temperature			_
heating / Average	Tbiv	-10	°C	heating / Average	Tol	-20	°C
neating / Warmer	Tbiv	-	℃	heating / Warmer	Tol	-	℃
neating / Colder	Tbiv	-	°C	heating / Colder	Tol	-	°C
Cycling interval capacity				Cycling interval efficiency			
or cooling	Pcycc	-	kW	for cooling	EERcyc	-	٦-
or heating	Pcych	-	kW	for heating	COPcyc	-	7-
	•				•		•
Degradation coefficient	Cda	0.05	7	Degradation coefficient	٥٩٦	0.05	7
cooling	Cdc	0.25	1-	heating	Cdh	0.25	1-
Electric power input in power modes	s other than 'ac	ctive mode	e'	Annual electricity consumption			
off mode	Poff	8	W	cooling	Qce	573	kWh/a
standby mode	Psb	8	W	heating / Average	Qhe	2843	kWh/a
hermostat-off mode	Pto	65	W	heating / Warmer	Qhe	-	kWh/a
rankcase heater mode	Pck	8	W	heating / colder	Qhe	-	kWh/a
Capacity control(indicate one of thre	e ontione)			Other items			
Dapacity control(illulcate one of thre	se opiions)			Sound power level(indoor)	Lwa	65	dB(A)
				Sound power level(inddor)	Lwa	70	dB(A)
ixed	No			Global warming potential	GWP	1975	kgCO2e
staged	No			Rated air flow(indoor)	-	2160	m3/h
variable	Yes			Rated air flow(outdoor)	-	4500	m3/h
			-				
Contact details for obtaining				nufacturer or of its authorised represe	entative.		
				ning Europe, Ltd. Middlesex, UB11 1ET,			
	e Square, Stoc ed Kingdom	меу гак,	Japinage,	windulesex, ODITILI,			
	9 ~ ~ 111						
						PJG00	0Z160

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Model FDU125VNAVF

Model(s): FDC125VNA / FDU	J125VF							
Outdoor side heat exchanger of air condi	tioner:	air						
Indoor side heat exchanger of air condition	oner:	air						
Type: vapour compression								
if applicable : electric motor								
Item	Symbol	Value	Unit	Item	Symbol		Value	Unit
Rated cooling capacity				Seasonal space co	ooling energy			
	Prated,c	12.5	kW	efficiency ηs,c			207.3	%
Declared cooling capacity for part load at	given outdoo	r temperatu	ires	Declared energy e	efficiency ratio	or gas utilization effici	ency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy fa	ctor for part lo	ad at given outdoor te	mperatures '	Tj
			٦					1
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or		287.0	%
T: 100°0	D.I.	0.0	7,,,,,		GUEc,bin /	AEFc,bin		-
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or		409.0	%
Ti-125°C	Ddo	5.9	الديمر		GUEc,bin /	AEFc,bin		-
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	EERd or		650.0	%
Tj=+20°C	Pdc	3.5	kW		GUEc,bin /	AEFc,bin		-
1,-120 0	i uc	3.3	KVV	Tj=+20°C	EERd or		865.0	%
Degradation			7		GUEc,bin /	AEFc,bin		1
Degradation coefficient for	Cdc	0.25						
air conditioners**	Cuc		-					
an conditioners			_					
Power consumpiton in other than 'active i	mode'							
			_					_
Off mode	P_{OFF}	0.010	kW	Crankcase heater	mode	P _{CK}	0.008	kW
Thermostat-off mode	P_{TO}	0.075	kW	Standby mode		P_{SB}	0.010	kW
Other items								1
			٦	For air-to-air air co	onditioner:		4500	m3/h
Capacity control		variable	_	air flow-rate,outdo	or measured]
			٦					
Sound power level,	L_WA	71.0	dB					
outdoor			_					
			٦ ,,,,,					
If engine driven: Emissions of nitrogen	NOx	_	mg/kWh fuel input					
oxides	***		GCV					
oxides			_0cv					
GWP of the		0000	kg CO _{2eq}					
refrigerant		2088	(100years)					
			_					
	shi heavy indu							
** If Cdc is not determined by measureme	ent then the d	efault degra	adation coeffi	cient air conditioners	shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt ai	r conditioners	the test res	sult and perfo	rmance data be obta	ained on the ba	asis of the performand	e	
of the outdoor unit, with a combination of	indoor unit(s)	recommen	ded by the m	anufacturer or impor	ter.			

Information to identify the model(s) to which the	ne information	relates :		FDC125VN	NA / FDU125VF			
Outdoor side heat exchanger of heat pump :		air		. 50.201.				
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a sup	plementary he			1	No			
if applicable : electric motor	, , .							
Parameters shall be declared for the average	heating seaso	on . paramet	ers for the w	varmer and o	colder heating seasons	are optional.		
						·	\/alua	Unit
Item Paradian Control of the Control	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	Prated,h	14.0	kW		Seasonal space heatir	ng energy efficiency ηs,h	162.1	%
Declared heating capacity for part load at inde	or temperatur	re 20°C		1	Declared coefficient of	f performance or gas utilization effici	ency /	
and outdoor temperature Tj	, , , , , , , , , , , , , , , , , , , ,					for part load at given outdoor temper		
,					, , , , , , , , , , , , , , , , , , , ,	, p. 1	,	
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	311.0	%
			=			GUEh,bin / AEFh,bin	311.0	/6
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	COPd or	391.0	%
			=			GUEh,bin / AEFh,bin	351.0	/6
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	COPd or	530.0	%
			_			GUEh,bin / AEFh,bin	330.0	/6
T _j =+12°C	Pdh	2.9	kW		T _j =+12°C	COPd or	600.0	%
			_			GUEh,bin / AEFh,bin	000.0	70
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent	COPd or	260.0	%
			_		temperature	GUEh,bin / AEFh,bin	200.0	70
T _{OL} =operation limit	Pdh	7.8	kW		T _{OL} =operation limit	COPd or	231.0	%
			_			GUEh,bin / AEFh,bin	201.0	
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or	_	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		,,,
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
			,					-
Bivalent temperature	T_biv	-10.0	°C		For water-to-air heat			
			,		pumps:Operation limit	t	-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**]					
				_				
								1
Power consumpiton in modes other than 'activ	ve mode'				Supplementary heater	elbu	-	kW
	_		1		back-up heating capac	city		
Off mode	P _{OFF}	0.010	kW					1
Thermostat-off mode	P _{TO}	0.090	kW		Type of energy input	P_{SB}	0.010	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode			
				-				
Other items								1
		verieble	1		For air-to-air heat pum		4380	m3/h
Capacity control		variable	J		air flow-rate,outdoor m	neasured]
			1					1
Sound power level,	L_{WA}	71.0	dB		For water-/brine-to-air		_	m3/h
outdoor measured			J		Rated brine or water fi		_	1113/11
			1		outdoor side heat exch	hanger		_
Emissions of nitrogen	NOx	_	mg/kWh					
oxides(if applicable)	***		fuel input					
			GCV					
				1				
GWP of the			kg CO _{2eq}					
		2088	(100years)					
refrigerant			1					
					1			
Contact details Mitsubish	ni heavy indust	ries thermal	systems I T	D.	1			
** If Cdh is not determined by measurement the					ners shall be 0,25.			
*** from 26 September 2018		3 ,						
Where information relates to multi-spilt air co	nditioners the	test recult or	nd nerforms	nce data bo	obtained on the basis o	of the performance		
of the outdoor unit, with a combination of indo			•			и ине репоппансе		
or the outdoor thin, with a combination of indo	or unit(a) IECO	епиеи В	y une manuli	aotaiti Ul IIII	iportor.			
L							PJG000	77160 A

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Model FDU125VSAVF

Model(s): FDC125VS	A / FDU125VF								
Outdoor side heat exchanger of a		air							
Indoor side heat exchanger of air	conditioner :	air							
Type: vapour compression									
if applicable : electric mo	tor								
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit		
Rated cooling capacity				Seasonal space	e cooling energy				
	Prated,c	12.5	kW	efficiency ηs,c		207.3	%		
Declared cooling capacity for part	1	y efficiency ratio or gas utilizatio	-						
Tj and indoor 27°C/19°C(dry/wet b	oulb)			auxiliary energy	/ factor for part load at given out	door temperatures	Гј		
Ti-125°C	Ddo	12.5	الديمر				I		
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	287.0	%		
Tj=+30°C	Pdc	9.2	kW	T: .0000	GUEc,bin / AEFc,bin				
1]-100 0	1 40	3.2		Tj=+30°C	EERd or	409.0	%		
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or				
,				11,-1250	GUEc,bin / AEFc,bin	650.0	%		
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or				
			_	1, 1200	GUEc,bin / AEFc,bin	865.0	%		
Degradation			7		0020,51177121 0,5111		<u>.</u>		
coefficient for	Cdc	0.25	-						
air conditioners**									
Power consumpiton in other than	'active mode'								
			_						
Off mode	P _{OFF}	0.010	kW	Crankcase hea	ter mode P _{CK}	0.008	kW		
Thermostat-off mode	P _{TO}	0.075	kW	Standby mode	P_{SB}	0.010	kW		
Other items							Ī		
Canacity control		verioble	7	For air-to-air air		4500	m3/h		
Capacity control		variable	_	air flow-rate,out	tdoor measured				
			7						
Sound power level,	L_{WA}	71.0	dB						
outdoor			_						
If anging driven:			mg/kWh						
If engine driven: Emissions of nitrogen	NOx ***	-	fuel input						
oxides	***		GCV						
OXIG00									
GWP of the		2000	kg CO _{2eq}						
refrigerant		2088	(100years)						
· ·			_						
Contact details	Mitsubishi heavy indu	stries ther	mal systems,L	.TD					
** If Cdc is not determined by mea	asurement then the de	fault degra	adation coeffic	cient air condition	ers shall be 0,25.				
*** from 26 September 2018									
Where information relates to multi-spilt air conditioners, the test result and performance data be obtained on the basis of the performance									
of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer.									

Information to identify the model(s) to which the	e information	relates :		EDC125\/S	^ / EDU425\/E			
Outdoor side heat exchanger of heat pump :		air		FDC 125V3	SA / FDU125VF			
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary hea			1	No			
if applicable : electric motor								
Parameters shall be declared for the average I	neating seaso	n , paramete	ers for the w	armer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity						ng energy efficiency ηs,h		
3.4	Prated,h	14.0	kW			3 - 3 - 3 - 4 - 4 - 4 - 4	162.1	%
Declared breatism consists for read lead at inde		- 20%			Dealers deservisions et	ff		
Declared heating capacity for part load at indo and outdoor temperature Tj	or temperatur	e 20 C				f performance or gas utilization effici for part load at given outdoor tempe		
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	311.0	%
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	391.0	%
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	530.0	%
T _j =+12°C	Pdh	2.9	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	600.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent	GUEh,bin / AEFh,bin COPd or	260.0	%
T _{OL} =operation limit	Pdh	7.8	kW		temperature T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or		
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	GUEh,bin / AEFh,bin COPd or	231.0	%
T _j =-15°C (if T _{OL} <-20°C)			ļ		pumps:T _j =-15°C (if T _{OL} <-20°C)	GUEh,bin / AEFh,bin	-	<u></u> %
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat pumps:Operation limit		_	°c
Degradation					T _{ol} temperature			
coefficient	C _{dh}	0.25	-					1
heat pumps**	- un							
			ı					
Power consumpiton in modes other than 'active	e mode'				Supplementary heater back-up heating capac	eibu	-	kW
Off mode	P _{OFF}	0.010	kW		back-up fleating capac	Sity		J
Thermostat-off mode	P _{TO}	0.090	kW		Type of energy input	D.		1
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	P_{SB}	0.010	kW
Other items								1
Capacity control		variable			For air-to-air heat pum air flow-rate,outdoor m		4380	m3/h
Sound power level,	. 1				For water-/brine-to-air	heat pumps :		1
outdoor measured	L _{WA}	71.0	dB		Rated brine or water fi	iow-rate,	-	m3/h
Emissions of nitrogen	I		mg/kWh		outdoor side heat exch	langor		1
oxides(if applicable)	NOx ***	-	fuel input GCV					
GWP of the			kg CO _{2eq}					
refrigerant		2088	(100years)					
romgorant	!		l					
Contact dotails Mitauhishi	heavy indust	riae thormal	evetame I TI	<u> </u>	<u>I</u>			
Contact details Mitsubishi ** If Cdh is not determined by measurement the	heavy industreen the default				ners shall be 0.25.			
*** from 26 September 2018	acidalt			20.1311101				
Where information relates to multi-spilt air con-	ditioners the to	est result an	d performan	ice data he	obtained on the basis o	f the performance		
of the outdoor unit, with a combination of indoor						ponormano		
Samuel and the same and the sam	(3) .0001				F - 2771			
-							PJG000)Z160 <u>&</u>

PJG000Z160 <u>A</u>

Model FDU140VNAVF

Model(s): FDC140VNA / FDI	J140VF						
Outdoor side heat exchanger of air condi	tioner:	air					
Indoor side heat exchanger of air condition	oner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space			
Nated cooling capacity	Prated,c	13.6	kW	efficiency ηs,c	Cooling energy	200.0	%
	,			emolericy rps,c			
Dedered earling conseits for part lead at	aivon outdoor	tomporatu	roo	Declared energy	officianay ratio or goo utilization o	efficiency /	
Declared cooling capacity for part load at	given outdoor	temperatu	res		efficiency ratio or gas utilization e	-	T :
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy f	factor for part load at given outdoo	or temperatures	ij
Ti-125°C	Ddo	12.6	kW				ī
Tj=+35°C	Pdc	13.6	TKVV	Tj=+35°C	EERd or	276.0	%
_			T		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	383.0	%
			7		GUEc,bin / AEFc,bin		ļ
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	588.0	%
			_		GUEc,bin / AEFc,bin		, ,
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or	970.0	%
			-		GUEc,bin / AEFc,bin	970.0	%
Degradation					.,.		•
coefficient for	Cdc	0.25	_				
air conditioners**	Ouc						
all conditioners			1				
Power consumpiton in other than 'active	mode'						
	_		T		_		ī
Off mode	P_{OFF}	0.008	kW	Crankcase heate	0.0	0.008	kW
Thermostat-off mode	P _{TO}	0.090	kW	Standby mode	P_{SB}	0.008	kW
Other items							т
			7	For air-to-air air c	conditioner:	4500	m3/h
Capacity control		variable		air flow-rate,outd	oor measured		
Sound power level,		72.0	dB				
outdoor	L_{WA}	73.0	uв				
			_				
If engine driven:			mg/kWh				
	NOx	_	_				
Emissions of nitrogen	***		fuel input				
oxides			GCV				
			7				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
Contact details Mitsubi	shi heavy indu	stries thern	nal systems,l	TD			
** If Cdc is not determined by measurement	ent then the de	fault degra	dation coeffi	cient air conditioner	rs shall be 0,25.		
*** from 26 September 2018							
	ir conditionere	the test res	rult and nerfo	rmance data he ob	tained on the basis of the perform	nance	
Where information relates to multi-spilt a						iui IUC	
of the outdoor unit, with a combination of	muoor unit(s)	ecommen	ueu by ine m	anuraciurer or impo	טונכו.		

Information to identify the model(s) to which the	e information	relates :		FDC140VN	IA / FDU140VF			
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			١	No			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramet	ers for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity					Seasonal space heating	ng energy efficiency ηs,h		
	Prated,h	15.5	kW		·		157.4	%
Declared heating capacity for part load at indo	or tomporatus	-0 30°C			Doctored coefficient of	f performance or gas utilization effic	rionau /	L
and outdoor temperature Tj	or temperatur	6 20 0				for part load at given outdoor temp		
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	300.0	%
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	380.0	%
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or GUEh,bin / AEFh,bin	518.0	%
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	COPd or	567.0	%
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or	256.0	%
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or	229.0	%
For air-to-water heat pumps : T _i =-15°C	Pdh	-	kW		For air-to-water heat pumps:T _i =-15°C	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)	GOLII,UIII / ALI II,UIII		1
Bivalent temperature	T_{biv}	-10.0	℃		For water-to-air heat pumps:Operation limit	•	-	°c
Degradation			1		T _{ol} temperature	•		
coefficient	C_{dh}	0.25	_					1
heat pumps**	- un							
			1					
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater	eibu	-	kW
Off mode	P _{OFF}	0.008	kW		back-up heating capac	city		1
Thermostat-off mode	P _{TO}	0.100	kW		Type of aparay input			1
Crankcase heater mode	P _{CK}	0.008	kW		Type of energy input Standby mode	P_{SB}	0.008	kW
			J		Standby mode			J
Other items				1				1
Capacity control		variable]		For air-to-air heat purr air flow-rate,outdoor m	•	4380	m3/h
Sound power level,]		For water-/brine-to-air	heat pumps ·		1
outdoor measured	L_{WA}	73.0	dB		Rated brine or water fi		-	m3/h
					outdoor side heat exch			
Emissions of nitrogen			mg/kWh			. 0.	ļ.	
oxides(if applicable)	NOx ***	-	fuel input					
(·			GCV					
				1				
GWP of the		2088	kg CO _{2eq}					
refrigerant		2000	(100years)					
			-					
Contact details Mitsubishi	heavy indust	ries thermal	systems,LT	D				
** If Cdh is not determined by measurement th	en the defaul	t degradation	n coefficient	air condition	ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air con	ditioners,the	test result ar	nd performa	nce data be	obtained on the basis o	of the performance		
of the outdoor unit, with a combination of indoo	or unit(s) reco	mmended b	y the manufa	acturer or im	porter.			
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							I PJG000	Z160 🛦

Model FDU140VSAVF

Model(s): FDC140VSA / F	DU140VF						
Outdoor side heat exchanger of air cor	nditioner:	air					
Indoor side heat exchanger of air cond	litioner :	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		200.0	%
Declared cooling capacity for part load	at given outdoor	temperatu	res	Declared energy	y efficiency ratio or gas utilization	efficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy	factor for part load at given outdo	oor temperatures	Гј
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	276.0	%
		_			GUEc,bin / AEFc,bin	270.0	70
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	383.0	%
			_		GUEc,bin / AEFc,bin	363.0	/0
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	E99.0	0/
			-		GUEc,bin / AEFc,bin	588.0	%
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or	070.0	0,
			_	'	GUEc,bin / AEFc,bin	970.0	%
Degradation					,		1
coefficient for	Cdc	0.25	_				
air conditioners**							
			4				
Power consumpiton in other than 'activ	ve mode'						
Tower consumption in other than detail	in mode						
Off mode	P _{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.090	kW	Standby mode	P _{SB}	0.008	kW
	10]		35		Ī
Other items							
outer terns				For air-to-air air	conditioner:		Ī
Capacity control		variable	1			4500	m3/h
			_	air flow-rate,outo	door measured		1
Sound power level,			1				
,	L_{WA}	73.0	dB				
outdoor			_				
			1				
If engine driven:	NOx	_	mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			JGCV				
OMP - 5 H] oo				
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant			_(,,				
<u> </u>	ubishi heavy indu				ore shall be 0.25		
** If Cdc is not determined by measure	ment then the de	iauit uegra	uauun coeffi	JEHR AIT CONDITIONS	513 SHAII DE U,ZD.		
*** from 26 September 2018							
Where information relates to multi-spil	t air conditioners,	the test res	ult and perfo	rmance data be ol	btained on the basis of the perfor	mance	
of the outdoor unit, with a combination	of indoor unit(s)	ecommen	ded by the ma	anufacturer or imp	oorter.		
						PIGOOO	7160 A

Information to identify the model(s) to which the	ne information	relates :		FDC140VS	A / FDU140VF			
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	olementary he			1	No.			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the w	varmer and o	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
	Cymbol	Value	Onic			-	Value	OTHE
Rated heating capacity	Prated,h	15.5	kW		Seasonal space neating	ng energy efficiency ηs,h	157.4	%
		0000	<u> </u>	1				<u> </u>
Declared heating capacity for part load at indo	or temperatur	e 20°C				f performance or gas utilization effi		
and outdoor temperature Tj					auxiliary energy factor	r for part load at given outdoor temp	peratures 1 _j	
0-		0.2	l		0-			1
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	300.0	%
T 202		F 7	l		T 000	GUEh,bin / AEFh,bin		1
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	380.0	%
			1			GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or	518.0	%
			1			GUEh,bin / AEFh,bin		1
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	COPd or	567.0	%
			1			GUEh,bin / AEFh,bin		1
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	COPd or	256.0	%
			1		temperature	GUEh,bin / AEFh,bin		1
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	COPd or	229.0	%
			_			GUEh,bin / AEFh,bin]
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or		%
T _j =-15°C			•		pumps:T _j =-15°C	GUEh,bin / AEFh,bin		
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			=
Bivalent temperature	T_biv	-10.0	°c		For water-to-air heat			1
			•		pumps:Operation limit	t	-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	_					
heat pumps**	uii							
			I					
				1				
Power consumpiton in modes other than 'activ	o modo!				Supplementary heater	-		1
Fower consumption in modes other than activ	e mode				Supplementary heater	eibu	-	kW
Off mode	P _{OFF}	0.008	kW		back-up heating capac	city		1
Thermostat-off mode	P _{TO}	0.100	kW		T			1
Crankcase heater mode	P _{CK}	0.008	kW		Type of energy input	P_{SB}	0.008	kW
oranicase neater mode	· CK	0.000]		Standby mode			J
- · ·				-				
Other items								1
		variable	1		For air-to-air heat pum	•	4380	m3/h
Capacity control		variable	ļ		air flow-rate,outdoor m	neasured		J
			1					1
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air	heat pumps :		0.//-
outdoor measured]		Rated brine or water fi	iow-rate,	-	m3/h
			1		outdoor side heat exch	hanger]
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				1				
GWP of the		2088	kg CO _{2eq}					
refrigerant		2000	(100years)	1				
Contact details Mitsubish	i heavy indust	ries thermal	systems,LT	D				
** If Cdh is not determined by measurement th					ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air cor	nditioners the	test result an	d performa	nce data he	obtained on the basis o	of the performance		
of the outdoor unit, with a combination of indo								
and a combination of mac	(0)1000	5.1464 0	,	51 1111				
<u> </u>							PJG000	7160 🛦

Models FDU100VF2, 125VF, 140VF

Model(s): FDU100VF2											
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit				
Cooling capacity (sensible)	$P_{rated,c}$	7.7	kW	Total electric power input	P_{elec}	0.350	kW				
Cooling capacity (latent)	P _{rated,c}	2.3	kW	Sound power level (per speed setting,if applicable)	L _{WA}	65.0	dB				
Heating capacity	$P_{rated,h}$	11.2	kW								
Contact details	Mitsubishi h	ditsubishi heavy industries thermal systems,LTD									

Model(s): FDU125VF											
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit				
Cooling capacity (sensible)	$P_{rated,c}$	10.5	kW	Total electric power input	P_{elec}	0.400	kW				
Cooling capacity (latent)	$P_{\text{rated,c}}$	2.0	kW	Sound power level (per speed setting,if applicable)	L _{WA}	67.0	dB				
Heating capacity	$P_{rated,h}$	14.0	kW								
Contact details	Mitsubishi I	litsubishi heavy industries thermal systems,LTD									

Model(s): FDU140VF											
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit				
Cooling capacity (sensible)	$P_{rated,c}$	11.2	kW	Total electric power input	P _{elec}	0.550	kW				
Cooling capacity (latent)	P _{rated,c}	2.8	kW	Sound power level (per speed setting,if applicable)	L _{WA}	70.0	dB				
Heating capacity	$P_{rated,h}$	16.0	kW								
Contact details	Mitsubishi I	itsubishi heavy industries thermal systems,LTD									

PJG000Z160 <u>&</u>

(5) Duct connected-Low / Middle static pressure type (FDUM) Model FDUM100VNAVF2

Information to identify the model	(s) to which the in	formation relates to:	If function includes heating: Indica	ate the heating s	eason the	<u>,</u>
Indoor unit model name	FDUM10		information relates to. Indicated va			
Outdoor unit model name	FDC100\	/NA	heating season at a time. Include			
			'		•	· ·
Function(indicate if present)			Average(mandatory)	Yes		
cooling	Yes		Warmer(if designated)	No		
heating	Yes		Colder(if designated)	No		
				•		
Item	symbol	value unit	Item	symbol	value	class
Design load	5		Seasonal efficiency and energy ef			
cooling	Pdesigno		cooling	SEER	6.11	A++
heating / Average	Pdesignh		heating / Average	SCOP/A	4.19	A+
heating / Warmer	Pdesignh		heating / Warmer	SCOP/W		 -
heating / Colder	Pdesignh	- KVV	heating / Colder	SCOP/C		unit
Declared capacity at outdoor ter	nnerature Tdesign	nh	Back up heating capacity at outdo	or temperature	Tdesignh	unit
heating / Average (-10°C)	Pdh	8.5 kW	heating / Average (-10°C)	elbu	0	kW
heating / Warmer (2°C)	Pdh	- kW	heating / Warmer (2°C)	elbu	-	kW
heating / Colder (-22°C)	Pdh	- kW	heating / Colder (-22°C)	elbu	-	kW
,			,			1
Declared capacity for cooling, at	indoor temperatu	re 27(19)°C and	Declared energy efficiency ratio, a	at indoor temper	ature 27(1	9)°C and
outdoor temperature Tj	•	, ,	outdoor temperature Tj	•	•	,
Tj=35°C	Pdc	10.0 kW	Tj=35°C	EERd	3.52	7-
Tj=30°C	Pdc	7.37 kW	Tj=30°C	EERd	4.83	7-
Tj=25°C	Pdc	4.74 kW	Tj=25°C	EERd	7.73]-
Tj=20°C	Pdc	3.54 kW	Tj=20°C	EERd	11.60	-
Declared capacity for heating / A		at indoor	Declared coefficient of performance		ason, at in	ndoor
temperature 20°C and outdoor to			temperature 20°C and outdoor ter			-
Tj=-7°C	Pdh	7.52 kW	Tj=-7°C	COPd	3.21	- -
Tj=2°C	Pdh	4.58 kW	Tj=2°C	COPd	3.91	 -
Tj=7°C	Pdh	2.94 kW	Tj=7°C	COPd	5.42	- -
Tj=12°C	Pdh	2.83 kW	Tj=12°C	COPd	6.23	- -
Tj=bivalent temperature	Pdh	6.77 kW	Tj=bivalent temperature	COPd	2.40	- -
Tj=operating limit	Pdh	8.5 kW	Tj=operating limit	COPd	2.70	-
Declared conscitutor bacting / V	Varmar access of	t indoor	Declared coefficient of norforman	00 / \\/055005 005	an ot in	door
Declared capacity for heating / V temperature 20°C and outdoor to		it iridoor	Declared coefficient of performance temperature 20°C and outdoor ter		ason, at m	door
Tj=2°C	Pdh	- kW	Tj=2°C	COPd	-	٦_
Ti=7°C	Pdh	- kW	Ti=7°C	COPd		1
Tj=12°C	Pdh	- kW	Ti=12°C	COPd	-	-1.
Tj=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd		┨_
Tj=operating limit	Pdh	- kW	Tj=blvalent temperature	COPd	- -	1
rj oporating innit	1 411	IXVV	1) operating intit		1	1
Declared capacity for heating / C	older season, at	indoor	Declared coefficient of performance	ce / Colder seas	on, at ind	oor
temperature 20°C and outdoor to			temperature 20°C and outdoor ter		,	
Tj=-7°C	Pdh	- kW	Tj=-7°C	COPd	-	-
Tj=2°C	Pdh	- kW	Tj=2°C	COPd	-	7-
Tj=7°C	Pdh	- kW	Tj=7°C	COPd	-	1-
Tj=12°C	Pdh	- kW	Tj=12°C	COPd	-	7-
Tj=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd	-	7-
Tj=operating limit	Pdh	- kW	Tj=operating limit	COPd	-	7-
Tj=-15°C	Pdh	- kW	Tj=-15°C	COPd	-	7-
Bivalent temperature			Operating limit temperature			٦.
heating / Average	Tbiv	-10 °C	heating / Average	Tol	-20	°C
heating / Warmer	Tbiv	- °C	heating / Warmer	Tol	-	°C
heating / Colder	Tbiv	- °C	heating / Colder	Tol	-	°C
Cycling interval conit			Cycling interval officiara			
Cycling interval capacity	Dovos	- kW	Cycling interval efficiency	EERcyc		٦_
for cooling for heating	Pcycc	- kW	for cooling for heating	COPcyc		+[
nor realing	Pcych	- KVV	I I I I I I I I I I I I I I I I I I I	COPCYC		<u></u>
Degradation coefficient			Degradation coefficient			
cooling	Cdc	0.25 -	heating	Cdh	0.25	7_
		0.20			0.20	1
Electric power input in power mo	des other than 'a	ctive mode'	Annual electricity consumption			
off mode	Poff	8 W	cooling	Qce	573	kWh/a
standby mode	Psb	8 W	heating / Average	Qhe	2843	kWh/a
thermostat-off mode	Pto	65 W	heating / Warmer	Qhe	-	kWh/a
crankcase heater mode	Pck	8 W	heating / colder	Qhe	-	kWh/a
Capacity control(indicate one of	three options)		Other items			7
			Sound power level(indoor)	Lwa	65	dB(A)
s .			Sound power level(outdoor)	Lwa	70	dB(A)
fixed	No		Global warming potential	GWP	1975	kgCO2eq.
staged	No		Rated air flow(indoor)	-	2160	m3/h
variable	Yes		Rated air flow(outdoor)		4500	m3/h
Contact details for shiring	NIa	d address of the	outgoturer or of its southii	nontati (a		
Contact details for obtaining more information		d address of the maindustries Air-Condition	nufacturer or of its authorised repres	senialive.		
			Middlesex, UB11 1ET,			
	nited Kingdom	. ,,				
	. 3					
	•				DICOO	171E0 A

Model FDUM100VSAVF2

Information to identify the model(s) to which the information relates to		
Indoor unit model name	FDUM100VF2	information relates to. Indicated value	
Outdoor unit model name	FDC100VSA	heating season at a time. Include at	t least the heating season 'Average'
Function(indicate if present)		Average(mandatory)	Yes
cooling	Yes	Warmer(if designated)	No
heating	Yes	Colder(if designated)	No
Item Design load	symbol value unit	Item Seasonal efficiency and energy efficiency	symbol value class
cooling	Pdesignc 10.0 kW	cooling	SEER 6.11 A++
heating / Average	Pdesignh 8.5 kW	heating / Average	SCOP/A 4.19 A+
heating / Warmer	Pdesignh - kW	heating / Warmer	SCOP/W
heating / Colder	Pdesignh - kW	heating / Colder	SCOP/C
Dealers described as the set of t	ture Tdesieub	1 D1 b4:	unit
Declared capacity at outdoor temp heating / Average (-10°C)	Pdh 8.50 kW	Back up heating capacity at outdoor heating / Average (-10°C)	elbu 0 kW
heating / Warmer (2°C)	Pdh - kW	heating / Warmer (2°C)	elbu - kW
heating / Colder (-22°C)	Pdh - kW	heating / Colder (-22°C)	elbu - kW
,	-		1
Declared capacity for cooling, at ir	ndoor temperature 27(19)°C and	Declared energy efficiency ratio, at	indoor temperature 27(19)°C and
outdoor temperature Tj	D4- 40.00 11M	outdoor temperature Tj	FFD4 0.50
Tj=35°C Tj=30°C	Pdc 10.00 kW Pdc 7.37 kW	Tj=35°C Tj=30°C	EERd 3.52 - EERd 4.83 -
Tj=30 C Tj=25°C	Pdc 7.37 kW	Tj=30 C Tj=25°C	EERd 4.83 -
Tj=20°C	Pdc 3.54 kW	Tj=20°C	EERd 11.60 -
-	1 523 1 1	_ _ · ·	
Declared capacity for heating / Ave		Declared coefficient of performance	
temperature 20°C and outdoor tem		temperature 20°C and outdoor temp	
Tj=-7°C	Pdh 7.52 kW	Tj=-7°C	COPd 3.21 -
Tj=2°C Tj=7°C	Pdh 4.58 kW Pdh 2.94 kW	Tj=2°C Ti=7°C	COPd 3.91 - COPd 5.42 -
Tj=7 C Tj=12°C	Pdh 2.94 kW	Tj=7 C	COPd 5.42 - COPd 6.23 -
Tj=bivalent temperature	Pdh 6.77 kW	Tj=bivalent temperature	COPd 2.40 -
Tj=operating limit	Pdh 8.50 kW	Tj=operating limit	COPd 2.70 -
	•		
Declared capacity for heating / Wa		Declared coefficient of performance	
temperature 20°C and outdoor tem		temperature 20°C and outdoor temp	COPd
Tj=7°C	Pdh - kW Pdh - kW	Ti=7°C	COPd
Tj=12°C	Pdh - kW	Tj=12°C	COPd
Tj=bivalent temperature	Pdh - kW	Tj=bivalent temperature	COPd
Tj=operating limit	Pdh - kW	Tj=operating limit	COPd
Declared capacity for heating / Co		Declared coefficient of performance	
temperature 20°C and outdoor tem	Pdh - kW	temperature 20°C and outdoor temp	COPd
Tj=2°C	Pdh - kW	Tj=2°C	COPd
Tj=7°C	Pdh - kW	Ti=7°C	COPd
Tj=12°C	Pdh - kW	Tj=12°C	COPd
Tj=bivalent temperature	Pdh - kW	Tj=bivalent temperature	COPd
Tj=operating limit	Pdh - kW	Tj=operating limit	COPd
Tj=-15°C	Pdh - kW	Tj=-15°C	COPd
Bivalent temperature		Operating limit temperature	
heating / Average	Tbiv -10 °C	heating / Average	Tol -20 ℃
heating / Warmer	Tbiv - °C	heating / Warmer	Tol - °C
heating / Colder	Tbiv - °C	heating / Colder	Tol - °C
	<u> </u>		•
Cycling interval capacity	Povoc Law	Cycling interval efficiency	EEDovo
for cooling for heating	Pcycc - kW Pcych - kW	for cooling for heating	EERcyc
ioi ricaliriy	FOYON - KVV	Lioi neating	
Degradation coefficient		Degradation coefficient	
cooling	Cdc 0.25 -	heating	Cdh 0.25 -
Electric power input in power mode		Annual electricity consumption	000 572 134/5/
off mode standby mode	Poff 8 W Psb 8 W	cooling heating / Average	Qce 573 kWh/a Qhe 2843 kWh/a
thermostat-off mode	Psb 8 W	heating / Average	Qhe 2843 kwh/a
crankcase heater mode	Pck 8 W	heating / warrier	Qhe - kWh/a
			1
Capacity control(indicate one of th	ree options)	Other items	
		Sound power level(indoor)	Lwa 65 dB(A)
fixed	No	Sound power level(outdoor)	Lwa 70 dB(A)
fixed	No No	Global warming potential	GWP 1975 kgCO2eq.
staged variable	Yes	Rated air flow(indoor) Rated air flow(outdoor)	- 2160 m3/h - 4500 m3/h
variable	100		4500 1113/11
Contact details for obtaining	Name and address of the ma	inufacturer or of its authorised represer	ntative.
more information Mits	subishi Heavy Industries Air-Conditi	oning Europe, Ltd.	
	he Square, Stockley Park, Uxbridge	, Middlesex, UB11 1ET,	
Uni	ted Kingdom		
			PJG000Z159 <u>A</u>
			3002 .00 ///

Model FDUM100VNAPVF

Model FDUM100VNA			
	el(s) to which the information relates		
Indoor unit model name Outdoor unit model name	FDUM50VF (x2 units) FDC100VNA	information relates to. Indicated v	e at least the heating season 'Average'.
Outdoor unit modername	PDC100VNA	Ineating season at a time. Include	at least the heating season Average.
Function(indicate if present)		Average(mandatory)	Yes
cooling	Yes	Warmer(if designated)	No
heating	Yes	Colder(if designated)	No
Item	symbol value unit	Item	symbol value class
Design load	D-li 40.0 1.14/	Seasonal efficiency and energy e	
cooling	Pdesignc 10.0 kW Pdesignh 8.5 kW	cooling	SEER 5.50 A SCOP/A 3.94 A
heating / Average heating / Warmer	Pdesignh 8.5 kW Pdesignh - kW	heating / Average heating / Warmer	SCOP/A 3.94 A SCOP/W
heating / Warmer	Pdesignh - kW	heating / Colder	SCOP/C
ricating / Colder	r designing = KVV	ricating / Colder	unit
Declared capacity at outdoor te	mperature Tdesignh	Back up heating capacity at outd	
heating / Average (-10°C)	Pdh 8.5 kW	heating / Average (-10°C)	elbu 0 kW
heating / Warmer (2°C)	Pdh - kW	heating / Warmer (2°C)	elbu - kW
heating / Colder (-22°C)	Pdh - kW	heating / Colder (-22°C)	elbu - kW
	t indoor temperature 27(19)°C and		at indoor temperature 27(19)°C and
outdoor temperature Tj	Ddo 400 kW	outdoor temperature Tj	EED4 200
Tj=35°C	Pdc 10.0 kW	Tj=35°C	EERd 3.08 -
Tj=30°C	Pdc 7.37 kW	Tj=30°C	EERd 4.24 -
Tj=25°C Tj=20°C	Pdc 4.74 kW Pdc 3.30 kW	Tj=25°C Ti=20°C	EERd 6.60 - EERd 11.05 -
1]-20 0	Fuc 3.30 KVV		EERU T1.05 -
Declared capacity for heating / /	Average season, at indoor	Declared coefficient of performar	nce / Average season, at indoor
temperature 20°C and outdoor t		temperature 20°C and outdoor te	
Tj=-7°C	Pdh 7.52 kW	Tj=-7°C	COPd 2.93 -
Tj=2°C	Pdh 4.58 kW	∏j=2°C	COPd 3.74 -
Tj=7°C	Pdh 2.94 kW	Ti=7°C	COPd 4.93 -
Tj=12°C	Pdh 2.70 kW	Tj=12°C	COPd 6.18 -
Tj=bivalent temperature	Pdh 6.77 kW	Tj=bivalent temperature	COPd 2.23 -
Tj=operating limit	Pdh 8.5 kW	Tj=operating limit	COPd 2.47 -
Declared capacity for heating / '	Warmer season, at indoor	Declared coefficient of performar	
temperature 20°C and outdoor t		temperature 20°C and outdoor te	
Tj=2°C	Pdh - kW	Tj=2°C	COPd
Tj=7°C	Pdh - kW	Tj=7°C	COPd
Tj=12°C	Pdh - kW	Tj=12°C	COPd
Tj=bivalent temperature	Pdh - kW	Tj=bivalent temperature	COPd
Tj=operating limit	Pdh - kW	Tj=operating limit	COPd
		[D.]	
Declared capacity for heating /		Declared coefficient of performar	
temperature 20°C and outdoor t	Pdh - kW	temperature 20°C and outdoor te	COPd
Tj=-7°C Tj=2°C		Tj=-7°C Ti=2°C	COPd
Tj=7°C	Pdh - kW Pdh - kW	Ti=7°C	COPd
Tj=12°C	Pdh - kW	Tj=12°C	COPd
Tj=bivalent temperature	Pdh - kW	Tj=bivalent temperature	COPd
Tj=operating limit	Pdh - kW	Tj=operating limit	COPd
Tj=-15°C	Pdh - kW	Tj=-15°C	COPd
1]- 10 0	1 (11)	1]- 10 0	501 4
Bivalent temperature		Operating limit temperature	
heating / Average	Tbiv -10 °C	heating / Average	Tol -20 °C
heating / Warmer	Tbiv - ℃	heating / Warmer	Tol - °C
heating / Colder	Tbiv - °C	heating / Colder	Tol - °C
Cycling interval capacity	_	Cycling interval efficiency	
for cooling	Pcycc - kW	for cooling	EERcyc
for heating	Pcych - kW	for heating	COPcyc
	·		
Degradation coefficient	-	Degradation coefficient	
cooling	Cdc 0.25 -	heating	Cdh 0.25 -
Clastria naviaria sur l'	adag ather the ended to the	Appropriate state to a second	
Electric power input in power me		Annual electricity consumption	000 627 134/5/
off mode	Poff 8 W	cooling	Qce 637 kWh/a Qhe 3022 kWh/a
standby mode thermostat-off mode	Psb 8 W Pto 45 W	heating / Average	Qhe 3022 kWh/a Qhe - kWh/a
crankcase heater mode	Pto 45 W	heating / Warmer heating / colder	Qhe - kWh/a
CIAIINCASE HEALEI IIIUUE	FUN O VV	Incating / Coluct	QIIC - KVVII/A
Capacity control(indicate one of	three ontions)	Other items	
Sapaon, control(maicate one of		Sound power level(indoor)	Lwa 60 dB(A)
		Sound power level(outdoor)	Lwa 70 dB(A)
fixed	No	Global warming potential	GWP 1975 kgCO2eq
staged	No	Rated air flow(indoor)	- 780 m3/h
variable	Yes	Rated air flow(outdoor)	- 4500 m3/h
	1		1.550 1110/11
Contact details for obtaining	Name and address of the	manufacturer or of its authorised repre	esentative.
more information N	litsubishi Heavy Industries Air-Con-	ditioning Europe, Ltd.	
5	The Square, Stockley Park, Uxbrid		
L	Inited Kingdom		
			T = .=
			PJG000Z159 <u>A</u>

Model FDUM100VSAPVF

T						
Information to identify the model(s) to			If function includes heating: Indicate the			
Indoor unit model name		VF (x2 units)	information relates to. Indicated values			- 10
Outdoor unit model name	FDC100\	/5A	heating season at a time. Include at lea	ist the neat	ing seaso	n Average.
Function/indicate if present)		1	Average (mandatem)	Vaa		
Function(indicate if present)	Yes		Average(mandatory) Warmer(if designated)	Yes No		
cooling	Yes		Colder(if designated)	No		
heating	162		Colder(ii designated)	NO		
Item	symbol	value unit	Item	symbol	value	class
Design load	Syllibol	value utilit	Seasonal efficiency and energy efficien		value	Ciass
cooling	Pdesigno	10.0 kW	cooling	SEER	5.50	Α
heating / Average	Pdesignh		heating / Average	SCOP/A	3.94	A
heating / Warmer	Pdesignh		heating / Warmer	SCOP/W		-
heating / Colder	Pdesignh		heating / Colder	SCOP/C	-	+ -
ricuting / Colder	r doorgrin	1000	ricating / Colder	000170	1	unit
Declared capacity at outdoor temperat	ure Tdesign	h	Back up heating capacity at outdoor ter	nperature ⁻	Tdesignh	unit
heating / Average (-10°C)	Pdh	8.50 kW	heating / Average (-10°C)	elbu	0	lkW
heating / Warmer (2°C)	Pdh	- kW	heating / Warmer (2°C)	elbu	-	kW
heating / Colder (-22°C)	Pdh	- kW	heating / Colder (-22°C)	elbu	-	kW
,		1	,		1	1
Declared capacity for cooling, at indoo	r temperatu	re 27(19)°C and	Declared energy efficiency ratio, at indo	or tempera	ature 27(1	9)°C and
outdoor temperature Tj	•	` '	outdoor temperature Ti		,	,
Tj=35°C	Pdc	10.00 kW	Tj=35°C	EERd	3.08	7-
Tj=30°C	Pdc	7.37 kW	Tj=30°C	EERd	4.24	7-
Tj=25°C	Pdc	4.74 kW	Tj=25°C	EERd	6.60	7-
Tj=20°C	Pdc	3.30 kW	Tj=20°C	EERd	11.05	7-
			<u> </u>			
Declared capacity for heating / Averag	e season, a	t indoor	Declared coefficient of performance / A	verage sea	ason, at in	door
temperature 20°C and outdoor temperature			temperature 20°C and outdoor tempera			_
Tj=-7°C	Pdh	7.52 kW	Tj=-7°C	COPd	2.93	
Tj=2°C	Pdh	4.58 kW	Tj=2°C	COPd	3.74]-
Tj=7°C	Pdh	2.94 kW	Tj=7°C	COPd	4.93]-
Tj=12°C	Pdh	2.70 kW	Tj=12°C	COPd	6.18]-
Tj=bivalent temperature	Pdh	6.77 kW	Tj=bivalent temperature	COPd	2.23]-
Tj=operating limit	Pdh	8.50 kW	Tj=operating limit	COPd	2.47	7-
						•
Declared capacity for heating / Warme	r season, a	t indoor	Declared coefficient of performance / V	/armer sea	son, at inc	loor
temperature 20°C and outdoor temperature	ature Tj		temperature 20°C and outdoor tempera	ture Tj		_
Tj=2°C	Pdh	- kW	Tj=2°C	COPd	-	_
Tj=7°C	Pdh	- kW	Tj=7°C	COPd	-	-
Tj=12°C	Pdh	- kW	Tj=12°C	COPd	-]-
Tj=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd	-	-
Tj=operating limit	Pdh	- kW	Tj=operating limit	COPd	-	-
Declared capacity for heating / Colder		ndoor	Declared coefficient of performance / C		on, at indo	or
temperature 20°C and outdoor temperature			temperature 20°C and outdoor tempera			7
Tj=-7°C	Pdh	- kW	Tj=-7°C	COPd	-	 -
Tj=2°C	Pdh	- kW	Tj=2°C	COPd	-	_ -
Tj=7°C	Pdh	- kW	Tj=7°C	COPd	-	_ -
Tj=12°C	Pdh	- kW	Tj=12°C	COPd	-	_ -
Tj=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd	-	_ -
Tj=operating limit	Pdh	- kW	Tj=operating limit	COPd	-	_ -
Tj=-15°C	Pdh	- kW	Tj=-15°C	COPd	-	-
			To			
Bivalent temperature	This	40 00	Operating limit temperature	Tel	20	7 ∘c
heating / Average	Tbiv	-10 °C	heating / Warmer	Tol	-20	°C
heating / Colder	Tbiv	- °C	heating / Warmer	Tol	-	°C
heating / Colder	Tbiv	- ℃	heating / Colder	Tol		°C
Cycling interval capacity		1	Cycling interval efficiency			
for cooling	Pcycc	- kW	for cooling	EERcyc	-	٦_
for heating	Pcych	- kW	for heating	COPcyc	-	HI.
ioi ricauriy	гоуоп	- 1.44	I'vi licating	COFCYC		1
Degradation coefficient			Degradation coefficient			
cooling	Cdc	0.25 -	heating	Cdh	0.25	7-
		·	9		0.20	
Electric power input in power modes of	her than 'ac	ctive mode'	Annual electricity consumption			
off mode	Poff	8 W	cooling	Qce	637	kWh/a
standby mode	Psb	8 W	heating / Average	Qhe	3022	kWh/a
thermostat-off mode	Pto	45 W	heating / Warmer	Qhe	-	kWh/a
crankcase heater mode	Pck	8 W	heating / volumer	Qhe	-	kWh/a
		**			1	1
Capacity control(indicate one of three	options)		Other items			
, 11 3, 11 32 (, /		Sound power level(indoor)	Lwa	60	dB(A)
			Sound power level(outdoor)	Lwa	70	dB(A)
fixed	No		Global warming potential	GWP	1975	kgCO2eq.
staged	No		Rated air flow(indoor)	-	780	m3/h
variable	Yes		Rated air flow(outdoor)	-	4500	m3/h
	1					1
Contact details for obtaining	Name an	d address of the man	ufacturer or of its authorised representati	ve.		
		dustries Air-Condition				
			Middlesex, UB11 1ET,			
United I	Kingdom	- '				
i						
						0Z159. <u>A</u>

Model FDUM125VNAVF

Model(s): FDC125VNA /	FDUM125VF						
Outdoor side heat exchanger of air co	onditioner :	air					
Indoor side heat exchanger of air con	ditioner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		207.3	%
Declared cooling capacity for part loa	d at given outdoor	temperatur	res	Declared energy	efficiency ratio or gas utilization ef	ficiency /	•
Tj and indoor 27°C/19°C(dry/wet bulb)	-			1	factor for part load at given outdoor	-	Гј
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	287.0	%
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or	409.0	%
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or	650.0	%
			7		GUEc,bin / AEFc,bin		
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or GUEc,bin / AEFc,bin	865.0	%
Degradation							-
coefficient for	Cdc	0.25	-				
air conditioners**]				
Power consumpiton in other than 'act	ive mode'						
Off mode	P_{OFF}	0.010	kW	Crankcase heate	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.075	kW	Standby mode	P_SB	0.010	kW
		l .					'
Other items				For air-to-air air o	conditioner:]
Capacity control		variable]	air flow-rate,outd		4500	m3/h
Sound power level,		74.0	4D				
outdoor	L_{WA}	71.0	dB				
If engine driven:	NO		mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
			,				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
•	subishi heavy indu		-				
** If Cdc is not determined by measur	rement then the de	fault degra	dation coeffic	cient air conditione	rs shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-sp	ilt air conditioners,	the test res	ult and perfo	rmance data be ob	otained on the basis of the performa	ance	
of the outdoor unit, with a combination	n of indoor unit(s)	recommend	ded by the m	anufacturer or imp	orter.		
						PJG000	Z159 <u>&</u>

Information to identify the model(s) to which	the information	relates :	FDC125VI	NA / FDUM125VF			
Outdoor side heat exchanger of heat pump :		air					
Indoor side heat exchanger of heat pump :		air					
Indication if the heater is equipped with a su	pplementary he	ater:		No			
if applicable : electric motor							
Parameters shall be declared for the averag	e heating seaso	on , parameters for th	e warmer and	colder heating seasons	are optional.		
Item	Symbol	Value Unit		Item	Symbol	Value	Unit
Rated heating capacity				Seasonal space heating	ng energy efficiency ηs,h		
	Prated,h	14.0 kW				162.1	%
Declared heating consoits for part lead at in	door tomporative	20°0		Dealared coefficient of	f performance or gas utilization effic	iona./	1
Declared heating capacity for part load at incland outdoor temperature Tj	door temperatur	e 20 C			r for part load at given outdoor temp	•	
T _j =-7°C	Pdh	8.7 kW		T _j =-7°C	COPd or	311.0	%
T _j =+2°C	Pdh	5.3 kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	391.0	%
T _j =+7°C	Pdh	3.4 kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	530.0	%
T _j =+12°C	Pdh	2.9 kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	600.0	%
T _{blv} =bivalent temperature	Pdh	9.8 kW		T _{biv} =bivalent	GUEh,bin / AEFh,bin COPd or	260.0	%
T _{oL} =operation limit	Pdh	7.8 kW		temperature T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or	231.0	%
For air-to-water heat pumps :	Pdh	- kW		For air-to-water heat	GUEh,bin / AEFh,bin COPd or	-	%
T_j =-15°C (if T_{OL} <-20°C)				pumps: T_j =-15°C (if T_{OL} <-20°C)	GUEh,bin / AEFh,bin]
Bivalent temperature	T_{biv}	-10.0 ℃		For water-to-air heat			
Degradation				pumps:Operation limit T _{ol} temperature	t	-	°C
coefficient	C_{dh}	0.25					
heat pumps**							
		•	_				
Power consumpiton in modes other than 'ac	tive mode'			Supplementary heater	eibu		kW
Off mode	P _{OFF}	0.010 kW		back-up heating capa	City		J
Thermostat-off mode	P _{TO}	0.090 kW		Tune of aparau input			1
Crankcase heater mode	P _{CK}	0.008 kW		Type of energy input Standby mode	P_SB	0.010	kW
Other items							1
Capacity control		variable		For air-to-air heat pur air flow-rate,outdoor n		4380	m3/h
Sound power level,	L _{WA}	71.0 dB		For water-/brine-to-air	heat pumps :		
outdoor measured				Rated brine or water f		-	m3/h
Emissions of pitrogen		ma/ld/M/k		outdoor side heat excl	nanger		1
Emissions of nitrogen oxides(if applicable)	NOx ***	mg/kWh fuel inpu GCV					
			-				
GWP of the		2088 kg CO ₂₆					
refrigerant		(100yea	ırs)				
		ries thermal systems					
** If Cdh is not determined by measurement	then the default	t degradation coeffici	ent air conditio	ners shall be 0,25.			
*** from 26 September 2018							
Where information relates to multi-spilt air o	onditioners,the t	test result and perform	mance data be	obtained on the basis of	of the performance		
of the outdoor unit, with a combination of ind	oor unit(s) reco	mmended by the mai	nufacturer or in	nporter.			
						PJG000	7150 A
						1 536000	∠ 100 /R\

Model FDUM125VSAVF

Model(s): FDC125VSA / FDUM	/125VF						
Outdoor side heat exchanger of air condition	ner:	air					
Indoor side heat exchanger of air condition	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		207.3	%
Declared cooling capacity for part load at g	iven outdoor	temperatu	res	Declared energy	efficiency ratio or gas utilization	efficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy f	factor for part load at given outdo	or temperatures	Tj
_			7				1
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	287.0	%
			7		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or	409.0	%
	D.1		7		GUEc,bin / AEFc,bin		-
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	EERd or	650.0	%
T: +00°0	Dde	0.5	الممر		GUEc,bin / AEFc,bin		
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or	865.0	%
			7		GUEc,bin / AEFc,bin]
Degradation		0.25					
coefficient for	Cdc	0.25	-				
air conditioners**							
Development to the state of the	1 - 1						
Power consumpiton in other than 'active me	ode						
Off mode	P _{OFF}	0.010	kW	Crankcase heate	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.075	kW	Standby mode	P _{SB}	0.010	kW
	10			,	OD.		J
Other items							
				For air-to-air air o	conditioner:]
Capacity control		variable		air flow-rate,outd	oor measured	4500	m3/h
			_				_
Sound power level,]				
outdoor	L_{WA}	71.0	dB				
			-				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
			_				
			_				
GWP of the		2088	kg CO _{2eq}				
refrigerant		2000	(100years)				
· · · · · · · · · · · · · · · · · · ·			nal systems,l				
** If Cdc is not determined by measuremen	t then the de	efault degra	dation coeffi	cient air conditioner	rs shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air	conditioners,	the test res	sult and perfo	rmance data be ob	tained on the basis of the perform	mance	
of the outdoor unit, with a combination of ir	door unit(s)	recommen	ded by the m	anufacturer or impo	orter.		
						P.IG000	7150 A

Information to identify the model(s) to which the	e information	relates :		FDC125VS	A / FDUM125VF			
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he	ater:		١	No.			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	n , paramet	ers for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	-,					ng energy efficiency ηs,h		
Trace healing capacity	Prated,h	14.0	kW		ocasonal space ricali	ng chargy children y 10,11	162.1	%
				_				
Declared heating capacity for part load at indo and outdoor temperature Tj	or temperatur	e 20°C				f performance or gas utilization eff for part load at given outdoor tem		
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	311.0	%
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	391.0	%
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	530.0	%
T _j =+12°C	Pdh	2.9	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	600.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or	260.0	%
T _{OL} =operation limit	Pdh	7.8	kW		T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or	231.0	%
For air-to-water heat pumps : T _i =-15°C	Pdh	-	kW		For air-to-water heat pumps:T _i =-15°C	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)	SSERJOHT ALI HJUHI		J
Bivalent temperature	T_{biv}	-10.0	℃		For water-to-air heat pumps:Operation limit	ł	-	°c
Degradation			1		T _{ol} temperature			
coefficient	C_{dh}	0.25	_					1
heat pumps**	-uii							
			1					
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater	eibu	-	kW
Off mode	P _{OFF}	0.010	kW		back-up heating capac	city		J
Thermostat-off mode	P _{TO}	0.090	kW		T			1
Crankcase heater mode	P _{CK}	0.008	kW		Type of energy input	P_{SB}	0.010	kW
Statistical states in sales	· CK	0.000]		Standby mode			J
Other items				-				 1
Capacity control		variable]		For air-to-air heat purr air flow-rate,outdoor m		4380	m3/h
Sound power level,			1		For water-/brine-to-air	heat numne :		1
	L_{WA}	71.0	dB		Rated brine or water fi	• •	_	m3/h
outdoor measured			1					
Entertain of the con-			1		outdoor side heat exch	nanger		J
Emissions of nitrogen	NOx	_	mg/kWh					
oxides(if applicable)	***		fuel input					
			GCV					
				1				
GWP of the			kg CO _{2eq}					
		2088	(100years)					
refrigerant](,,					
I	harana ta ta da			<u> </u>	<u> </u>			
Contact details Mitsubishi ** If Cdh is not determined by measurement th	heavy indust				ners shall he 0.25			
	en me asiadii	i ucyi auail0i	i coeilicielli	an contaition	1613 311411 DE U,Z3.			
*** from 26 September 2018								
Where information relates to multi-spilt air con						of the performance		
of the outdoor unit, with a combination of indoo	or unit(s) reco	mmended by	y the manufa	acturer or im	porter.			
							PJG000	Z159 Æ

Model FDUM140VNAVF

Model(s): FDC140VNA / FE	DUM140VF						
Outdoor side heat exchanger of air cond		air					
Indoor side heat exchanger of air condit	ioner :	air					
Type: vapour compression		-					
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		200.0	%
Declared cooling capacity for part load a	at given outdoor	temperatu	res	Declared energy	efficiency ratio or gas utilization e	efficiency /	
Tj and indoor 27°C/19°C(dry/wet bulb)		·			factor for part load at given outdoo	-	Тј
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	276.0	%
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or	383.0	%
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or	588.0	%
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	GUEc,bin / AEFc,bin EERd or	970.0	%
Degradation coefficient for air conditioners**	Cdc	0.25]-		GUEc,bin / AEFc,bin		
Power consumpiton in other than 'active Off mode Thermostat-off mode	e mode' P _{OFF} P _{TO}	0.008	kW kW	Crankcase heate	er mode P _{CK} P _{SB}	0.008	kW kW
			-				1
Other items				For air-to-air air o	conditioner:	4500	m3/h
Capacity control		variable]	air flow-rate,outd	loor measured	4500	1113/11
Sound power level, outdoor	L_{WA}	73.0	dB				
If engine driven: Emissions of nitrogen oxides	NOx ***	-	mg/kWh fuel input GCV				
GWP of the refrigerant		2088	kg CO _{2eq} (100years)				
Contact details Mitsut	oishi heavy indu	stries therr	nal systems,L	.TD			
** If Cdc is not determined by measuren	nent then the de	fault degra	dation coeffic	cient air conditione	rs shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt	air conditioners,	the test res	sult and perfo	rmance data be ob	tained on the basis of the perform	nance	
of the outdoor unit, with a combination of	of indoor unit(s)	recommen	ded by the ma	anufacturer or impo	orter.		
						PJG000	Z159 ♠

Information to identify the model(s) to which the	e information	relates :		FDC140VN	NA / FDUM140VF			
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor	-							
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the w	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	0,11.501	14,40				ng energy efficiency ηs,h	Tuiu0	0
reacting capacity	Prated,h	15.5	kW		Seasonal space neath	ing energy emiciency rps,ii	157.4	%
		_		-				
Declared heating capacity for part load at indo and outdoor temperature Tj	or temperatur	e 20℃				f performance or gas utilization efficition for part load at given outdoor temperature.		
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	300.0	%
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	380.0	%
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	518.0	%
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	567.0	%
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or	256.0	%
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or	229.0	%
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	GUEh,bin / AEFh,bin COPd or	-	%
T_{J} =-15°C (if T_{OL} <-20°C)					pumps: T_j =-15°C (if T_{OL} <-20°C)	GUEh,bin / AEFh,bin		J
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			200
Degradation]		pumps:Operation limit T _{ol} temperature	I	_	°C
coefficient	C_{dh}	0.25	-					
heat pumps**								
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater back-up heating capacitation	eibu	-	kW
Off mode	P _{OFF}	0.008	kW		back up noating capat	only		_
Thermostat-off mode	P _{TO}	0.100	kW		Type of energy input			1
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	P_{SB}	0.008	kW
Other items					For air-to-air heat pum	nne.		 1
Capacity control		variable]		air flow-rate,outdoor m		4380	m3/h
Sound power level,	L_WA	73.0	dB		For water-/brine-to-air Rated brine or water fi		_	m3/h
outdoor measured			1 1		outdoor side heat exch			
Emissions of nitrogen oxides(if applicable)	NOx ***	-	mg/kWh fuel input					
			GCV					
GWP of the		2088	kg CO _{2eq}					
refrigerant			(100years)					
]			
-	heavy indust							
** If Cdh is not determined by measurement th	en tne defaulf	ı degradatioi	n coefficient	air condition	iers snail be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air con						of the performance		
of the outdoor unit, with a combination of indoo	or unit(s) reco	mmended by	y the manuf	acturer or im	porter.			
							PJG000	Z159 ♠

Model FDUM140VSAVF

Model(s): FDC140VSA / FDUN							
Outdoor side heat exchanger of air conditio		air					
Indoor side heat exchanger of air conditione	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	=			Seasonal space coo	ling energy		
	Prated,c	13.6	kW	efficiency ηs,c		200.0	%
			<u> </u>				
Declared cooling capacity for part load at gi	ven outdoor	r temperatu	res		ciency ratio or gas utilization efficier	-	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy facto	or for part load at given outdoor tem	peratures	Τj
Ti-125°C	Pdc	13.6	kW				1
Tj=+35°C	Fuc	13.0]^vv	Tj=+35°C	EERd or	276.0	%
Tj=+30°C	Pdc	10.0	kW	T: .00°0	GUEc,bin / AEFc,bin		
1,30 0	1 00	10.0],,,,	Tj=+30°C	EERd or	383.0	%
Tj=+25°C	Pdc	6.4	kW	Ti-125°C	GUEc,bin / AEFc,bin		
			·	Tj=+25°C	EERd or GUEc,bin / AEFc,bin	588.0	%
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or		
			·	1]-1200	GUEc,bin / AEFc,bin	970.0	%
Degradation			1		GOEC, DITT ALT C, DITT		1
coefficient for	Cdc	0.25	_				
air conditioners**							
			1				
Power consumpiton in other than 'active mo	ode'						
Off mode	P_{OFF}	0.008	kW	Crankcase heater m	ode P _{CK}	0.008	kW
Thermostat-off mode	P_{TO}	0.090	kW	Standby mode	P_{SB}	0.008	kW
Other items					,		,
			,	For air-to-air air cond	ditioner:	4500	m3/h
Capacity control		variable]	air flow-rate,outdoor	measured		
			,				
Sound power level,	L_WA	73.0	dB				
outdoor]				
			, l				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
GWP of the] _{ka} co				
		2088	kg CO _{2eq} (100years)				
refrigerant]` ′ ′				
Contact details Mitsubish	i heavy indu	etrice thern	nal systems,L	I TD			
** If Cdc is not determined by measurement					hall be 0.25.		
*** from 26 September 2018							
	onditioners	the test res	ult and norfo	rmanco data bo obtain	and on the basis of the performance		
Where information relates to multi-spilt air of of the outdoor unit, with a combination of in-							
of the outdoor drift, with a combination of the	2001 unit(3)	recomment	ded by the file	andracturer or importe			
						P.IG000	7150 A

Information to identify the model(s) to which		relates :	FDC140VS	SA / FDUM140VF			
Outdoor side heat exchanger of heat pump	:	air					
Indoor side heat exchanger of heat pump :		air					
Indication if the heater is equipped with a su	upplementary hea	ater:	1	No			
if applicable : electric motor							
Parameters shall be declared for the average	ge heating seaso	n, parameters for the v	warmer and o	colder heating seasons	are optional.		
Item	Symbol	Value Unit		Item	Symbol	Value	Unit
Rated heating capacity				Seasonal space heating	ng energy efficiency ηs,h		
	Prated,h	15.5 kW				157.4	%
Designed besting aggressity for good load at its	-dt	- 20°0	-	Dealers desemble in the	ff	:/	1
Declared heating capacity for part load at ir and outdoor temperature Tj	idoor temperatur	e 20°C			f performance or gas utilization effic for part load at given outdoor temp		
T _j =-7°C	Pdh	9.3 kW		T _j =-7°C	COPd or	300.0	%
T _j =+2°C	Pdh	5.7 kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	380.0	%
T _j =+7°C	Pdh	3.7 kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	518.0	%
T _j =+12°C	Pdh	2.8 kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	567.0	%
T _{blv} =bivalent temperature	Pdh	10.5 kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or	256.0	%
T _{OL} =operation limit	Pdh	7.9 kW		T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or	229.0	%
For air-to-water heat pumps :	Pdh	- kW		For air-to-water heat	GUEh,bin / AEFh,bin COPd or	-	%
T _j =-15°C (if T _{OL} <-20°C)				pumps:T _j =-15°C (if T _{OL} <-20°C)	GUEh,bin / AEFh,bin		J
Bivalent temperature	T_{biv}	-10.0 °C		For water-to-air heat]
Degradation				pumps:Operation limit T _{ol} temperature	t	_	°C
coefficient	C_{dh}	0.25					
heat pumps** Power consumpiton in modes other than 'ac	ctive mode'			Supplementary heater	. elbu		kw
Off mode	P _{OFF}	0.008 kW		back-up heating capa]
Thermostat-off mode	P _{TO}	0.100 kW		Type of energy input			l
Crankcase heater mode	P _{CK}	0.008 kW		Standby mode	P_SB	0.008	kW
Other items			1	For air-to-air heat pun	200		1
Capacity control		variable		air flow-rate,outdoor n		4380	m3/h
Sound power level,	L_WA	73.0 dB		For water-/brine-to-air			m3/h
outdoor measured				Rated brine or water f outdoor side heat excl			1113/11
Emissions of nitrogen	NOx	mg/kWh					
oxides(if applicable)	***	fuel input					
GWP of the		2088 kg CO _{2eq}					
refrigerant		(100years))				
Octobrillatella	and the second second	Zan Branco II.					
		ries thermal systems,LT					
** If Cdh is not determined by measuremen	t tnen the default	degradation coefficient	t air condition	ners shall be 0,25.			
*** from 26 September 2018							
Where information relates to multi-spilt air of	conditioners,the t	est result and performa	ince data be	obtained on the basis o	of the performance		
of the outdoor unit, with a combination of in-	door unit(s) recor	mmended by the manuf	facturer or im	porter.			
	-					PJG000	7159 ♠

Model FDUM125VNAPVF

Model(s): FDC125VN	A / FDUM60VF (x2 ur	nits)					
Outdoor side heat exchanger of ai	r conditioner :	air					
Indoor side heat exchanger of air of	conditioner :	air					
Type: vapour compression							
if applicable : electric mot	or						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		248.7	%
Declared cooling capacity for part	load at given outdoor	temperatui	res	Declared energy	efficiency ratio or gas utilization ef	ficiency /	
Tj and indoor 27°C/19°C(dry/wet be	ulb)			auxiliary energy	factor for part load at given outdoo	r temperatures	Тј
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	286.0	%
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or		
•			J	1, 100 0	GUEc,bin / AEFc,bin	458.0	%
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	EERd or GUEc,bin / AEFc,bin	688.0	%
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or	1400.0	%
Degradation]		GUEc,bin / AEFc,bin]
coefficient for	Cdc	0.25	_				
air conditioners**	040						
		l .	1				
Power consumpiton in other than '	active mode'						
Off mode	P_{OFF}	0.008	kW	Crankcase heate	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_SB	0.008	kW
Other items							1
Capacity control		variable]	For air-to-air air o		4500	m3/h
Sound power level,	L_WA	71.0	dB				
outdoor	-WA	71.0					
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
GWP of the			kg CO _{2eq}				
refrigerant		2088	(100years)				
.ogo.a			1				
	Mitsubishi heavy indu						
** If Cdc is not determined by mea	surement then the de	fault degra	dation coeffic	cient air conditione	rs shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-	-spilt air conditioners,	the test res	ult and perfo	rmance data be ob	otained on the basis of the performa	ance	
of the outdoor unit, with a combina	ition of indoor unit(s)	ecommend	ded by the m	anufacturer or imp	orter.		
						PJG000	Z159 ∕k
						. 00000	

Information to identify the model(s) to which the	e information	relates :		EDC125VA	IA / FDUM60VF (x2 uni	ite)		
Outdoor side heat exchanger of heat pump :		air		FDC 125VIV	IA / FDOMOUVF (X2 uni	ils)		
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor								
Parameters shall be declared for the average h	neating seaso	n , paramet	ers for the w	armer and c	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	-					ng energy efficiency ηs,h		
January States of	Prated,h	14.0	kW			3 3,	188.3	%
Declared heating capacity for part load at indo	or temperatur	e 20°C			Declared coefficient of	f performance or gas utilization e	efficiency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor te	mperatures Tj	
			_					_
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	333.0	%
			,			GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	COPd or	459.0	%
			1			GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	COPd or	605.0	%
			1			GUEh,bin / AEFh,bin		
T _j =+12°C	Pdh	2.7	kW		T _j =+12°C	COPd or	771.0	%
			1			GUEh,bin / AEFh,bin	-	
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent temperature	COPd or	276.0	%
		7.7	1			GUEh,bin / AEFh,bin	-	
T _{OL} =operation limit	Pdh	7.7	kW		T _{OL} =operation limit	COPd or	248.0	%
			1			GUEh,bin / AEFh,bin	-	
For air-to-water heat pumps :	Pdh	_	kW		For air-to-water heat	COPd or	-	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		J
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
Bivalent temperature	т	-10.0]ે૯		For water-to-air heat			1
Bivalent temperature	T _{biv}	-10.0	10		pumps:Operation limit		_	°C
Degradation			1		T _{ol} temperature			-
coefficient	C_{dh}	0.25	_		GI-1 P-1-11			1
heat pumps**	-uii							
			1					
				1				
Power consumpiton in modes other than 'active	e mode'				Supplementary heater			l <i>.</i>
					back-up heating capac	eit	ou -	kW
Off mode	P_{OFF}	0.008	kW		3.17	. ,		
Thermostat-off mode	P_{TO}	0.015	kW		Type of energy input	Ps	0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	1 8	0.008	NVV
Other items								
			1		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable]		air flow-rate,outdoor m	neasured		
			1					1
Sound power level,	L_{WA}	71.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured]		Rated brine or water fi	iow-rate,	-	m3/h
			1		outdoor side heat exch	hanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				1				
OM/D of the]					
GWP of the		2088	kg CO _{2eq} (100years)					
refrigerant](,,,,,,,					
Contact details Mitsubishi	heavy indust	riae thormal	evetome I T	D.	<u>I</u>			
** If Cdh is not determined by measurement the					ners shall be 0,25.			
*** from 26 September 2018		J						
Where information relates to multi-spilt air con-	ditioners the t	est result or	nd nerformer	nce data ho	obtained on the basis o	of the performance		
of the outdoor unit, with a combination of indoo			•					
	(0) 10001		,	51 1111	F - 17811			
	_	-					PJG000	Z159 🛦

Model FDUM125VSAPVF

Model(s): FDC125VSA / FDU	M60VF (x2 ur	nits)					
Outdoor side heat exchanger of air conditi		air					
Indoor side heat exchanger of air condition	ner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space co	poling energy		
	Prated,c	12.5	kW	efficiency ηs,c		248.7	%
Declared cooling capacity for part load at	given outdoor	temperatur	res	Declared energy ef	fficiency ratio or gas utilization efficie	ncy /	•
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy fac	ctor for part load at given outdoor ten	nperatures ¹	Тј
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	286.0	%
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or		
			,	1]= . 30 0	GUEc,bin / AEFc,bin	458.0	%
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	EERd or GUEc,bin / AEFc,bin	688.0	%
Tj=+20°C	Pdc	3.5	kW	Tj=+20°C	EERd or	1400.0	%
Daniel define			1		GUEc,bin / AEFc,bin		ı
Degradation	Cda	0.25					
coefficient for air conditioners**	Cdc	0.20	-				
an conditioners							
Power consumpiton in other than 'active n	node'						
Off mode	P_{OFF}	0.008	kW	Crankcase heater	mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_{SB}	0.008	kW
Other items							1
Capacity control		variable		For air-to-air air colair flow-rate,outdoo		4500	m3/h
Sound power level, outdoor	L_WA	71.0	dB				
oddooi			J				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
Contact details Mitsubis	hi heavy indu	stries therm	nal systems.L	.TD			
** If Cdc is not determined by measureme					shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air	conditioners.	the test res	ult and perfo	rmance data be obta	ined on the basis of the performance)	
of the outdoor unit, with a combination of i							
	` '						
						PJG0002	∠159 🛦

Information to identify the model(s) to which the	e information	relates :		FDC125VS	SA / FDUM60VF (x2 uni	its)		
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he	ater:		1	No			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the w	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity						ng energy efficiency ηs,h		
rated reduing dapasity	Prated,h	14.0	kW		ocasonal space near	ng energy emolency (ps,m	188.3	%
		0000		1			. ,	
Declared heating capacity for part load at indo and outdoor temperature Tj	or temperatur	e 20℃				f performance or gas utilization effic for part load at given outdoor temp		
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	333.0	%
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or	459.0	%
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	GUEh,bin / AEFh,bin COPd or	605.0	%
T _j =+12°C	Pdh	2.7	kW		T _j =+12°C	GUEh,bin / AEFh,bin COPd or	771.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent	GUEh,bin / AEFh,bin COPd or	276.0	%
T _{OL} =operation limit	Pdh	7.7	kW		temperature T _{OL} =operation limit	GUEh,bin / AEFh,bin COPd or	248.0	%
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	GUEh,bin / AEFh,bin COPd or	-	%
T_{j} =-15°C (if T_{OL} <-20°C)					pumps:T _j =-15°C (if T _{OL} <-20°C)	GUEh,bin / AEFh,bin]
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			္င
Degradation]		pumps:Operation limit T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
			•	_				
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater back-up heating capac	eibu	-	kW
Off mode	P _{OFF}	0.008	kW			,		_
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input	_		1
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	P_SB	0.008	kW
Other items				_	For air to air boot num	200		 ו
Capacity control		variable]		For air-to-air heat pum air flow-rate,outdoor m		4380	m3/h
Sound power level,	L_WA	71.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured]		Rated brine or water fi outdoor side heat exch		-	m3/h
Emissions of nitrogen			mg/kWh		1			
oxides(if applicable)	NOx ***	-	fuel input GCV					
CWP of the			ka CO					
GWP of the		2088	kg CO _{2eq} (100years)					
refrigerant			(Tooyears)					
Contrat details	hanning to do at	-i		<u> </u>	1			
Contact details Mitsubishi ** If Cdh is not determined by measurement th	heavy indust				ners shall he 0.25			
	en me asiadii	i ucyi auail01	i coeilicielli	an conuntor	1013 SHAII DE U,ZO.			
*** from 26 September 2018								
Where information relates to multi-spilt air con						of the performance		
of the outdoor unit, with a combination of indoo	or unit(s) reco	mmended by	y the manuf	acturer or im	porter.			
							PJG000	Z159 🛦

Model FDUM140VNAPVF1

Model(s): FDC140VNA / FDUM	71VF1 (x2	units)					
Outdoor side heat exchanger of air condition	ner:	air					
Indoor side heat exchanger of air conditione	r:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space cool	ing energy		
	Prated,c	13.6	kW	efficiency ηs,c		288.0	%
Declared cooling capacity for part load at give	en outdoor	temperatur	res	Declared energy effic	ciency ratio or gas utilization efficier	ncy /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy facto	or for part load at given outdoor tem	peratures 7	Гј
			1		ı		Ì
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	286.0	%
			1		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	504.0	%
			1		GUEc,bin / AEFc,bin		
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	740.0	%
			1		GUEc,bin / AEFc,bin		
Tj=+20°C	Pdc	3.6	kW	Tj=+20°C	EERd or	2400.0	%
			1		GUEc,bin / AEFc,bin		
Degradation							
coefficient for	Cdc	0.25	-				
air conditioners**]				
Power consumpiton in other than 'active mo	de'						
	_		1		_ [Ì
Off mode	P _{OFF}	0.008	kW	Crankcase heater mo	o	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P _{SB}	0.008	kW
Other items					1		Ì
Canacity control		venielele	1	For air-to-air air cond		4500	m3/h
Capacity control		variable]	air flow-rate,outdoor	measured		
			1				
Sound power level,	L_WA	73.0	dB				
outdoor]				
			1				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	_	fuel input				
oxides			GCV				
OWD - f #-] 				
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant			(100)00.0)				
			nal systems,L		acil ha 0.25		
** If Cdc is not determined by measurement	men me de	erauri degrad	uation coemic	dent all conditioners si	iali be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air co	onditioners	the test res	ult and perfor	rmance data be obtain	ed on the basis of the performance		
of the outdoor unit, with a combination of inc	loor unit(s)	recommend	ded by the ma	anufacturer or importer			
						P.IG0002	7150 A

Information to identify the model(s) to which	the information	relates :	FDC140VN	NA / FDUM71VF1 (x2 u	nits)		
Outdoor side heat exchanger of heat pump :		air					
Indoor side heat exchanger of heat pump :		air					
Indication if the heater is equipped with a sup	plementary he	ater:	I	No			
if applicable : electric motor							
Parameters shall be declared for the average	e heating seaso	on , parameters for the	warmer and	colder heating seasons	are optional.		
Item	Symbol	Value Unit		Item	Symbol	Value	Unit
Rated heating capacity					ng energy efficiency ηs,h		
reacting capacity	Prated,h	15.5 kW		ocasonal space neath	ng energy emolency rps,m	208.8	%
			-				1
Declared heating capacity for part load at inc and outdoor temperature Tj	loor temperatur	e 20°C			f performance or gas utilization effic r for part load at given outdoor temp		
T _j =-7°C	Pdh	9.3 kW		T _j =-7°C	COPd or	329.0	%
T _j =+2°C	Pdh	5.7 kW		T _j =+2°C	GUEh,bin / AEFh,bin COPd or GUEh,bin / AEFh,bin	507.0	%
T _j =+7°C	Pdh	3.7 kW		T _j =+7°C	COPd or GUEh,bin / AEFh,bin	702.0	%
T _j =+12°C	Pdh	2.8 kW		T _j =+12°C	COPd or	1037.0	%
T _{biv} =bivalent temperature	Pdh	10.5 kW		T _{biv} =bivalent temperature	GUEh,bin / AEFh,bin COPd or GUEh.bin / AEFh.bin	265.0	%
T _{OL} =operation limit	Pdh	8.3 kW		T _{OL} =operation limit	COPd or GUEh,bin / AEFh,bin	246.0	%
For air-to-water heat pumps : T _j =-15°C	Pdh	- kW		For air-to-water heat pumps:T _j =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)				(if T _{OL} <-20°C)			7
Bivalent temperature	T _{biv}	10.0 ℃		For water-to-air heat pumps:Operation limit	t	-	°C
Degradation				T _{ol} temperature]
coefficient	C_{dh}	0.25					
Power consumpiton in modes other than 'act	ive mode'			Supplementary heater	r elbu		kW
Off mode	P _{OFF}	0.008 kW		back-up heating capac	city]
Thermostat-off mode	P _{TO}	0.015 kW		Type of energy input			1
Crankcase heater mode	P _{CK}	0.008 kW		Standby mode	P_SB	0.008	kW
Other items				For air-to-air heat pun	ane:		1
Capacity control		variable		air flow-rate,outdoor n	•	4380	m3/h
Sound power level, outdoor measured	L_{WA}	73.0 dB		For water-/brine-to-air Rated brine or water f		-	m3/h
				outdoor side heat excl	hanger]
Emissions of nitrogen oxides(if applicable)	NOx ***	mg/kWh fuel input GCV					
GWP of the		2088 kg CO _{2eq} (100years	3)				
refrigerant							
Contact details Mitsubis	hi heavy indust	ries thermal systems,L	TD	1			
** If Cdh is not determined by measurement		•		ners shall be 0.25			
	are detault	39.4444011 0061110161	a conuntio	0 50 0,20.			
*** from 26 September 2018							
Where information relates to multi-spilt air co		•			of the performance		
of the outdoor unit, with a combination of inde	oor unit(s) reco	mmended by the manu	ıfacturer or im	nporter.			
						PJG000	7150 A
						1 5767000	

Model FDUM140VSAPVF1

Model(s): FDC140VSA / FDU	M71VF1 (x2 ı	units)					
Outdoor side heat exchanger of air condit	ioner :	air					
Indoor side heat exchanger of air conditio	ner :	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		288.0	%
Declared cooling capacity for part load at Tj and indoor 27°C/19°C(dry/wet bulb)	given outdoor	temperatu	ires		refficiency ratio or gas utilization factor for part load at given outdo	-	Tj
			٦				1
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	286.0	%
			7		GUEc,bin / AEFc,bin		1
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	504.0	%
			7		GUEc,bin / AEFc,bin		1
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	740.0	%
	_		٦		GUEc,bin / AEFc,bin		4
Tj=+20°C	Pdc	3.6	kW	Tj=+20°C	EERd or	2400.0	%
			7		GUEc,bin / AEFc,bin]
Degradation							
coefficient for	Cdc	0.25	-				
air conditioners**							
Devices accountables in other than leading							
Power consumpiton in other than 'active n	node.						
Off mode	P _{OFF}	0.008	kW	Crankcase heat	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P _{SB}	0.008	kW
The model on mode	• 10	0.000		Ctanasy mode	, 2R	0.000]
Other items							
				For air-to-air air	conditioner:	4500	2 /h
Capacity control		variable]	air flow-rate,out	door measured	4500	m3/h
			_				_
Sound power level,		72.0	٦				
outdoor	L_{WA}	73.0	dB				
			_				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
GWP of the		2022	kg CO _{2eq}				
refrigerant		2088	(100years)				
_			_				
Contact details Mitsubis	shi heavy indu	stries therr	nal systems,l	_TD			
** If Cdc is not determined by measureme	nt then the de	fault degra	adation coeffi	cient air conditione	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air	conditioners,	the test res	sult and perfo	rmance data be o	btained on the basis of the perfor	mance	
of the outdoor unit, with a combination of	ndoor unit(s)	recommen	ded by the m	anufacturer or imp	oorter.		
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						1 5 103000	/ INU A

Information to identify the model(s) to which th	e information	relates :		FDC140VS	SA / FDUM71VF1 (x2 ur	nits)		
Outdoor side heat exchanger of heat pump :		air			,	,		
Indoor side heat exchanger of heat pump:		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor								
Parameters shall be declared for the average	neating seaso	n , paramet	ers for the v	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity					Seasonal space heating	ng energy efficiency ηs,h		
	Prated,h	15.5	kW				208.8	%
Declared heating capacity for part load at indo	or temperatur	e 20°C			Declared coefficient of	f performance or gas utilization eff	ficiency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor tem	nperatures Tj	
			1					1
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	329.0	%
			1			GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	507.0	%
			1			GUEh,bin / AEFh,bin		
T_j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or	702.0	%
			1			GUEh,bin / AEFh,bin		
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	COPd or	1037.0	%
		40.5	1		L	GUEh,bin / AEFh,bin	-	
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	COPd or	265.0	%
T	D4l-	8.3	الممر			GUEh,bin / AEFh,bin		
T _{oL} =operation limit	Pdh	0.3	kW		T _{OL} =operation limit	COPd or	246.0	%
		_	1			GUEh,bin / AEFh,bin		
For air-to-water heat pumps :	Pdh	_	kW		For air-to-water heat	COPd or	-	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		l
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			1
Bivalent temperature	l biv	-10.0	l c		pumps:Operation limit		_	°C
Degradation			1		T _{ol} temperature			
coefficient	C_{dh}	0.25	_		GI TO P TO TO			l .
heat pumps**	oan							
		<u> </u>	1					
				1				
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater			l <i></i>
					back-up heating capac	eibt		kW
Off mode	P_{OFF}	0.008	kW		l and the second second	,		1
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input	D	0.000	1.34/
Crankcase heater mode	P_{CK}	0.008	kW		Standby mode	P _{SB}	0.008	kW
Other items								_
			_		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable			air flow-rate,outdoor m	neasured	4000	1110/11
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured	***				Rated brine or water fi	iow-rate,	-	m3/h
					outdoor side heat exch	nanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				-				
			1					
GWP of the		2088	kg CO _{2eq} (100years)					
refrigerant			(Tooyears)	Ί				
					1			
Control data	hara to t	P			1			
Contact details Mitsubishi ** If Cdh is not determined by measurement th	heavy indust				nere chall bo 0.05			
	on me deladil	ucyi adali0i	Loculcient	an conditiol	icio oliali De U,20.			
*** from 26 September 2018	and a contract of				ability of the state of the sta	f the conferen		
Where information relates to multi-spilt air con			•			τ tne pertormance		
of the outdoor unit, with a combination of indoo	r unit(s) reco	mmended by	y tne manuf	acturer or im	іропег.			
L							PJG000	Z159 🛦

Model FDUM140VNATVF

Model(s): FDC140VNA / FDUN		nits)					
Outdoor side heat exchanger of air condition	oner:	air					
Indoor side heat exchanger of air condition	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	Prated,c	13.6	kW	Seasonal space codefficiency ηs,c	oling energy	288.0	%
Declared cooling capacity for part load at g Tj and indoor 27°C/19°C(dry/wet bulb)	iven outdoo	r temperatu	res		ficiency ratio or gas utilization efficie tor for part load at given outdoor ten	-	Тј
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or GUEc,bin / AEFc,bin	286.0	%
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	504.0	%
Tj=+25℃	Pdc	6.4	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or GUEc,bin / AEFc,bin	740.0	%
Tj=+20°C	Pdc	3.6	kW	Tj=+20°C	EERd or GUEc,bin / AEFc,bin	2400.0	%
Degradation							_
coefficient for	Cdc	0.25	-				
air conditioners**]				
Power consumpiton in other than 'active m	ode' P _{OFF}	0.008	kW	Crankcase heater n	node P _{CK}	0.008	kw
Thermostat-off mode	P_{TO}	0.000	kW	Standby mode	P_SB	0.008	kW
Other items				For air-to-air air con	nditioner:]
Capacity control		variable]	air flow-rate,outdoo		4500	m3/h
Sound power level, outdoor	L_{WA}	73.0	dB				
If engine driven: Emissions of nitrogen oxides	NOx ***	-	mg/kWh fuel input GCV				
GWP of the refrigerant		2088	kg CO _{2eq} (100years)				
Contact details Mitsubish	ni heavy indu	istries thern	nal systems,L	I TD			
** If Cdc is not determined by measuremen					shall be 0,25.		
*** from 26 September 2018		oraan aogra			5.1a.i. 50 0,20.		
	conditioners	the test res	sult and parfa	rmanco data ho obtai	and on the basis of the performance		
Where information relates to multi-spilt air of the outdoor unit, with a combination of in						,	
						P.IG000	7150 A

Information to identify the model(s) to which the	e information	relates :		FDC140VN	IA / FDUM50VF (x3 uni	ts)		
Outdoor side heat exchanger of heat pump :		air			, , , , , , , , , , , , , , , , , , , ,	,		
Indoor side heat exchanger of heat pump:		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the v	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity					Seasonal space heating	ng energy efficiency ηs,h		
	Prated,h	15.5	kW				208.8	%
Declared heating capacity for part load at indo	or temperatur	e 20°C			Declared coefficient of	f performance or gas utilization e	efficiency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor ter	mperatures Tj	
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	329.0	%
		-				GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	507.0	%
						GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or	702.0	%
			1			GUEh,bin / AEFh,bin		
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	COPd or	1037.0	%
			1			GUEh,bin / AEFh,bin		
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	COPd or	265.0	%
			1		temperature	GUEh,bin / AEFh,bin		
T _{OL} =operation limit	Pdh	8.3	kW		T _{OL} =operation limit	COPd or	246.0	%
			1			GUEh,bin / AEFh,bin		
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or	-	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
		Г	1					ı
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			0
		Г	1		pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**]					
				-				
								ı
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater	elb	ou -	kW
Off and the	В	0.000	1		back-up heating capac	city		
Off mode	P _{OFF} P _{TO}	0.008	kW					ı
Thermostat-off mode		0.015	kW kW		Type of energy input	Ps	0.008	kW
Crankcase heater mode	P _{CK}	0.006	KVV		Standby mode			
Others				-				
Other items					Far air ta air baat arm			
Connection		variable	1		For air-to-air heat pum	•	4380	m3/h
Capacity control		variable	l		air flow-rate,outdoor m	neasured		
County according to			1			ht		l
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air		_	m3/h
outdoor measured			l		Rated brine or water fi			
Emissions of nitrogen			ma/k\A/b		outdoor side heat exch	langer		l
_	NOx	_	mg/kWh					
oxides(if applicable)	***		fuel input GCV					
			Joov					
				†				
GWP of the			kg CO _{2eq}					
refrigerant		2088	(100years))				
,goran		L	ı		1			
					1			
Contact details Mitsubishi	heavy indust	ries thermal	systems.L1	TD .				
** If Cdh is not determined by measurement th					ners shall be 0,25.			
*** from 26 September 2018		-						
Where information relates to multi-spilt air con	ditioners the	test result an	nd performa	nce data he	obtained on the basis o	f the performance		
of the outdoor unit, with a combination of indoor			•			s ponomiano		
a desiration of made	(3)		,		F			
							PJG0002	Z159 Æ

Model FDUM140VSATVF

Model(s): FDC140VSA / FDUN	•	nits)					
Outdoor side heat exchanger of air condition		air					
Indoor side heat exchanger of air condition	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	Prated,c	13.6	kW	Seasonal space coo efficiency ηs,c	oling energy	288.0	%
Declared cooling capacity for part load at gi Tj and indoor 27°C/19°C(dry/wet bulb)	ven outdoor	r temperatui	res		iciency ratio or gas utilization efficier or for part load at given outdoor tem	-	Тј
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or GUEc,bin / AEFc,bin	286.0	%
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or GUEc,bin / AEFc,bin	504.0	%
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or GUEc,bin / AEFc,bin	740.0	%
Tj=+20°C	Pdc	3.6	kW	Tj=+20°C	EERd or GUEc,bin / AEFc,bin	2400.0	%
Degradation]		• •••		-
coefficient for	Cdc	0.25	-				
air conditioners**							
Power consumption in other than 'active mo	P _{OFF}	0.008	kW	Crankcase heater m	310	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_SB	0.008	kW
Other items				For air-to-air air cond	ditioner:]
Capacity control		variable]	air flow-rate,outdoor		4500	m3/h
Sound power level, outdoor	L_{WA}	73.0	dB				
If engine driven: Emissions of nitrogen oxides	NOx ***	-	mg/kWh fuel input GCV				
GWP of the refrigerant		2088	kg CO _{2eq} (100years)				
Contact details Mitsubish ** If Cdc is not determined by measuremen	-		nal systems,L dation coeffic		hall be 0,25.		
*** from 26 September 2018 Where information relates to multi-spilt air of	conditioners	the test res	ult and perfo	rmance data be obtair	ned on the basis of the performance		
of the outdoor unit, with a combination of in							
						P.IG000	7150 A

Information to identify the model(s) to which the	e information	relates :		FDC140VS	SA / FDUM50VF (x3 uni	ts)		
Outdoor side heat exchanger of heat pump :		air			,	,		
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he	ater:		1	No			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the v	varmer and c	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	•					ng energy efficiency ηs,h		
	Prated,h	15.5	kW				208.8	%
				1				
Declared heating capacity for part load at indo	or temperatur	re 20°C			Declared coefficient of	f performance or gas utilization	efficiency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor to	emperatures Tj	
			1					1
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	329.0	%
_			1		_	GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	507.0	%
		2.7	1			GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or	702.0	%
T .40°0	D.II.	2.8	1		T . 10%	GUEh,bin / AEFh,bin		
T _j =+12°C	Pdh	2.0	kW		T _j =+12°C	COPd or	1037.0	%
T -bivelent to recent ver	Dale	10.5]		T -hinalant	GUEh,bin / AEFh,bin		
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	COPd or	265.0	%
T = operation limit	Pdh	8.3],,,,,			GUEh,bin / AEFh,bin		
T _{OL} =operation limit	Pull	0.0	kW		T _{OL} =operation limit	COPd or	246.0	%
En el de material de la companya de la companya de la companya de la companya de la companya de la companya de	D.II.] <i>.</i>		En alata and a bank	GUEh,bin / AEFh,bin		
For air-to-water heat pumps : T _i =-15°C	Pdh		kW		For air-to-water heat pumps:T _i =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)	OCEN, DITT THE TI, DITT		1
(11 10) (20 0)					(11 10) (20 0)			
Bivalent temperature	T _{biv}	-10.0	°c		For water-to-air heat]
	- DIV		1 -		pumps:Operation limit		_	°C
Degradation]		T _{ol} temperature			
coefficient	C_{dh}	0.25	-					1
heat pumps**								
			4					
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater		lh	1.34/
·					back-up heating capac	е	lbu -	kW
Off mode	P_{OFF}	0.008	kW					_
Thermostat-off mode	P_{TO}	0.015	kW		Type of energy input	F	O _{SB} 0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	•	SB 0.000	KVV
Other items								•
			1		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable			air flow-rate,outdoor n	neasured		
			1					1
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured					Rated brine or water fi	iow-rate,	-	m3/h
			1		outdoor side heat excl	hanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				-				
and the			1					
GWP of the		2088	kg CO _{2eq} (100years)					
refrigerant			(Tooyears)	1				
	Observation 1				l			
Contact details Mitsubishi ** If Cdh is not determined by measurement th	heavy indust				ners shall be 0.25			
·	on the utidul	. ucyrauauor	, coemicient	an continuit	iora arian DE U,ZO.			
*** from 26 September 2018	allelan		.al .a e .		abtained to 00 1 1	f the market control		
Where information relates to multi-spilt air con						tne performance		
of the outdoor unit, with a combination of indoo	or unit(s) reco	rrimended by	y tne manuf	acturer or im	ропег.			
L							PJG000	Z159 🛦

Models FDUM50VF, 60VF, 71VF1, 100VF2, 125VF, 140VF

Model(s): FDUM50VF							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	$P_{rated,c}$	3.7	kW	Total electric power input	P _{elec}	0.100	kW
Cooling capacity (latent)	P _{rated,c}	1.3	kW	Sound power level (per speed setting,if applicable)	L _{WA}	60.0	dB
Heating capacity	P _{rated,h}	5.4	kW				
Contact details	Mitsubishi h	neavy indu	ustries ther	nal systems,LTD			

Model(s): FDUM60VF							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	P _{rated,c}	3.9	kW	Total electric power input	P_{elec}	0.160	kW
Cooling capacity (latent)	P _{rated,c}	1.7	kW	Sound power level (per speed setting,if applicable)	L_{WA}	60.0	dB
Heating capacity	P _{rated,h}	6.7	kW				
Contact details	Mitsubishi h	neavy indu	ustries ther	mal systems,LTD			

Model(s): FDUM71VF1							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	$P_{\text{rated,c}}$	5.8	kW	Total electric power input	P _{elec}	0.200	kW
Cooling capacity (latent)	P _{rated,c}	1.3	kW	Sound power level (per speed setting,if applicable)	L _{WA}	65.0	dB
Heating capacity	$P_{rated,h}$	8.0	kW				
Contact details	Mitsubishi I	neavy indu	ustries the	rmal systems,LTD			

Model(s): FDUM100VF2							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	$P_{rated,c}$	7.7	kW	Total electric power input	P _{elec}	0.290	kW
Cooling capacity (latent)	P _{rated,c}	2.3	kW	Sound power level (per speed setting,if applicable)	L _{WA}	65.0	dB
Heating capacity	$P_{rated,h}$	11.2	kW				
Contact details	Mitsubishi h	neavy indu	ustries ther	mal systems,LTD			

Model(s): FDUM125VF							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	$P_{\text{rated,c}}$	10.5	kW	Total electric power input	P_{elec}	0.330	kW
Cooling capacity (latent)	P _{rated,c}	2.0	kW	Sound power level (per speed setting,if applicable)	L _{WA}	67.0	dB
Heating capacity	$P_{rated,h}$	14.0	kW				
Contact details	Mitsubishi I	neavy indu	ustries therr	nal systems,LTD			

Model(s): FDUM140VF										
ltem	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit			
Cooling capacity (sensible)	P _{rated,c}	11.2	kW	Total electric power input	P _{elec}	0.450	kW			
Cooling capacity (latent)	P _{rated,c}	2.8	kW	Sound power level (per speed setting,if applicable)	L _{WA}	70.0	dB			
Heating capacity	P _{rated,h}	16.0	kW							
Contact details	Mitsubishi h	Vitsubishi heavy industries thermal systems,LTD								

PJG000Z159<u>♠</u>

(6) Floor standing type (FDF) Model FDF100VNAVD2

nformation to identify the model(s) to wh	ich the information relates to FDF100VD2	If function includes heating: Indicate the heating season the					
ndoor unit model name Outdoor unit model name			information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'.				
Sutdoor drift moder name	IDOTOUTIA		cast the heating season Average.				
-unction(indicate if present)		Average(mandatory)	Yes				
cooling	Yes	Warmer(if designated)	No				
neating	Yes	Colder(if designated)	No				
tem	symbol value u	Item	symbol value class				
Design load cooling	Pdesignc 10.0 k	Seasonal efficiency and energy efficiency cooling	ency class SEER 5.70 A+				
neating / Average	Pdesignh 8.5 k	heating / Average	SCOP/A 4.00 A+				
neating / Warmer	Pdesignh - k	heating / Warmer	SCOP/W				
neating / Colder	Pdesignh - k'	heating / Colder	SCOP/C				
			unit				
Declared capacity at outdoor temperature		Back up heating capacity at outdoor t					
neating / Average (-10°C)	Pdh 8.50 k	heating / Average (-10°C)	elbu 0 kW				
neating / Warmer (2°C)	Pdh - k'	heating / Warmer (2°C)	elbu - kW				
neating / Colder (-22°C)	Pdh - k'	heating / Colder (-22°C)	elbu - kW				
Declared capacity for cooling, at indoor to	emperature 27(19)°C and	Declared energy efficiency ratio, at in	ndoor temperature 27(19)°C and				
outdoor temperature Tj	imperature 27 (13) 6 and	outdoor temperature Tj	ador temperature 27 (13) 6 and				
rj=35°C	Pdc 10.00 k	Tj=35°C	EERd 3.21 -				
Γj=30°C	Pdc 7.37 k	Tj=30°C	EERd 4.40 -				
Γj=25°C	Pdc 4.74 k ¹	Tj=25°C	EERd 7.70 -				
Гj=20°С	Pdc 3.41 k	Tj=20°C	EERd 9.90 -				
Declared capacity for heating / Average s		Declared coefficient of performance /					
emperature 20°C and outdoor temperatu Fj=-7°C	ıre I j Pdh 7.52 k'	temperature 20°C and outdoor tempe	erature I j COPd 3.11 -				
Γj=-7 C Γj=2°C	Pdh 7.52 K		COPd 3.11 - COPd 3.76 -				
Γj=2 C Γj=7°C	Pdh 4.58 K	Tj=2 C Ti=7°C	COPd 3.76 - COPd 5.06 -				
Γj=12°C	Pdh 2.86 kl	Tj=7 C Tj=12°C	COPd 5.06 -				
rj=12 0 Fj=bivalent temperature	Pdh 6.77 k	Tj=bivalent temperature	COPd 3.90 -				
rj=bivalent temperature	Pdh 8.50 k	Tj=blvalent temperature Tj=operating limit	COPd 2.57 -				
J speraming mini							
Declared capacity for heating / Warmer s	eason, at indoor	Declared coefficient of performance /	Warmer season, at indoor				
emperature 20°C and outdoor temperatu		temperature 20°C and outdoor temperature					
Гj=2°С	Pdh - k'	Tj=2°C	COPd				
Γj=7°C	Pdh k'	Tj=7°C	COPd				
Гj=12°С	Pdh - k'	Tj=12°C	COPd				
Γj=bivalent temperature	Pdh - k'	Tj=bivalent temperature	COPd				
Tj=operating limit	Pdh - k'	Tj=operating limit	COPd				
Declared capacity for heating / Colder se	ason at indoor	Declared coefficient of performance /	Colder season, at indoor				
emperature 20°C and outdoor temperature		temperature 20°C and outdoor temperature					
Fj=-7°C	Pdh - k'	Tj=-7°C	COPd				
Γj=2°C	Pdh - k'	Ti=2°C	COPd				
Γi=7°C	Pdh - k'	∏rj=7°C	COPd				
Γj=12℃	Pdh - k'	Tj=12℃	COPd				
rj=bivalent temperature	Pdh - k¹	Tj=bivalent temperature	COPd				
Tj=operating limit	Pdh - k¹	Tj=operating limit	COPd				
Γj=-15℃	Pdh - k'	Tj=-15℃	COPd				
	<u> </u>		·				
Bivalent temperature	This 40 o.	Operating limit temperature	Tol 20 00				
neating / Average neating / Warmer	Tbiv -10 °C	heating / Average heating / Warmer	Tol				
neating / Warmer neating / Colder	Tbiv - °C	heating / Warmer	Tol - °C Tol - °C				
loading / Ooldor	I DIV	Treating / Colder	101				
Cycling interval capacity		Cycling interval efficiency					
for cooling	Pcycc - k'	for cooling	EERcyc				
or heating	Pcych - k	for heating	COPcyc				
Degradation coefficient	Oda 5.55	Degradation coefficient	Cdb 25				
cooling	Cdc 0.25 -	heating	Cdh 0.25 -				
Electric power input in power modes other	er than 'active mode'	Annual electricity consumption					
off mode	Poff 8 W	cooling	Qce 614 kWh/a				
standby mode	Psb 8 W	heating / Average	Qhe 2978 kWh/a				
hermostat-off mode	Pto 80 V	heating / Warmer	Qhe - kWh/a				
crankcase heater mode	Pck 8 W	heating / colder	Qhe - kWh/a				
			<u> </u>				
2	iions)	Other items					
papacity control(indicate one of three opt		Sound power level(indoor)	Lwa 65 dB(A)				
Dapacity control(indicate one of three opt		Sound power level(outdoor)	Lwa 70 dB(A)				
Capacity control(indicate one of three opt		Global warming potential	GWP 1975 kgCO2e				
ixed	No						
ixed staged	No	Rated air flow(indoor)	- 1740 m3/h				
ixed staged		Rated air flow(indoor) Rated air flow(outdoor)	- 1740 m3/h - 4500 m3/h				
ixed staged variable	No Yes	Rated air flow(outdoor)	- 4500 m3/h				
ixed staged variable Contact details for obtaining	No Yes Name and address of th	Rated air flow(outdoor) anufacturer or of its authorised representativ	- 4500 m3/h				
ixed taged variable Contact details for obtaining nore information Mitsubi	No Yes	Rated air flow(outdoor) anufacturer or of its authorised representative oning Europe, Ltd.	- 4500 m3/h				
xed taged ariable Contact details for obtaining nore information Mitsubi 5 The S	No Yes Name and address of the shi Heavy Industries Air-Core	Rated air flow(outdoor) anufacturer or of its authorised representative oning Europe, Ltd.	- 4500 m3/h				
ixed taged ariable Contact details for obtaining nore information Mitsubi 5 The S	No Yes Name and address of the shi Heavy Industries Air-Cor Square, Stockley Park, Uxbri	Rated air flow(outdoor) anufacturer or of its authorised representative oning Europe, Ltd.	- 4500 m3/h				

Model FDF100VSAVD2

Information to identify the model(s) to		If function includes heating: Indicate the	
Indoor unit model name	FDF100VD2	information relates to. Indicated values	
Outdoor unit model name	FDC100VSA	heating season at a time. Include at le	ast the heating season 'Average'.
Function(indicate if present)		Average(mandatory)	Yes
cooling	Yes	Warmer(if designated)	No
heating	Yes	Colder(if designated)	No
Item	symbol value unit	Item	symbol value class
Design load		Seasonal efficiency and energy efficient	ncy class
cooling	Pdesignc 10.0 kW	cooling	SEER 5.70 A+
heating / Average	Pdesignh 8.5 kW	heating / Average	SCOP/A 4.00 A+
heating / Warmer	Pdesignh - kW	heating / Warmer	SCOP/W
heating / Colder	Pdesignh - kW	heating / Colder	SCOP/C
3			unit
Declared capacity at outdoor temper	ature Tdesignh	Back up heating capacity at outdoor to	
heating / Average (-10°C)	Pdh 8.50 kW	heating / Average (-10°C)	elbu 0 kW
heating / Warmer (2°C)	Pdh - kW	heating / Warmer (2°C)	elbu - kW
heating / Colder (-22°C)	Pdh - kW	heating / Colder (-22°C)	elbu - kW
Hodding / Colder (ZZ G)	T GIT	nedarig / Colder (ZZ G)	CIDG KVV
Declared capacity for cooling, at indo	or temperature 27/10\°C and	Declared energy efficiency ratio, at ind	door temperature 27/10\°C and
outdoor temperature Tj	or temperature 27 (19) C and	outdoor temperature Tj	oor tomperature 27 (19) O and
Tj=35°C	Pdc 10.00 kW	Tj=35°C	EERd 3.21 -
Tj=30°C	Pdc 7.37 kW	Tj=30°C	
Tj=25°C	Pdc 4.74 kW	Tj=25°C	EERd 7.70 -
Tj=20°C	Pdc 3.41 kW	Tj=20°C	EERd 9.90 -
		T	
Declared capacity for heating / Avera		Declared coefficient of performance / /	
temperature 20°C and outdoor temperature 20°C and outdoor temperature		temperature 20°C and outdoor temper	
Tj=-7°C	Pdh 7.52 kW	Tj=-7°C	COPd 3.11 -
Tj=2°C	Pdh 4.58 kW	Tj=2°C	COPd 3.76 -
Tj=7°C	Pdh 2.94 kW	Tj=7°C	COPd 5.06 -
Tj=12°C	Pdh 2.86 kW	Tj=12°C	COPd 5.96 -
Tj=bivalent temperature	Pdh 6.77 kW	Tj=bivalent temperature	COPd 2.30 -
Tj=operating limit	Pdh 8.50 kW	Tj=operating limit	COPd 2.57 -
• • •	· · · · · · · · · · · · · · · · · · ·		
Declared capacity for heating / Warn	ner season, at indoor	Declared coefficient of performance / \	Warmer season, at indoor
temperature 20°C and outdoor temperature 20°C and outdoor temperature		temperature 20°C and outdoor temper	
Ti=2°C	Pdh - kW	Ti=2°C	COPd
Tj=7°C	Pdh - kW	Ti=7°C	COPd
Ti=12°C	Pdh - kW	Ti=12°C	COPd
Tj=bivalent temperature	Pdh - kW	Tj=bivalent temperature	COPd
Tj=blvalent temperature Tj=operating limit	Pdh - kW	Tj=operating limit	COPd
1)-operating limit	T GIT - KVV	1)-operating limit	6014 - -
Declared capacity for heating / Colde	er season, at indoor	Declared coefficient of performance / 0	Colder season, at indoor
temperature 20°C and outdoor temperature		temperature 20°C and outdoor temper	
Tj=-7°C	Pdh - kW	Tj=-7°C	COPd
Tj=2°C	Pdh - kW	Tj=2°C	COPd
Tj=7°C	Pdh - kW	Ti=7°C	COPd
Tj=12°C	Pdh - kW	Tj=12°C	
		11 *	
Tj=bivalent temperature		Tj=bivalent temperature	COPd
Tj=operating limit	Pdh - kW	Tj=operating limit	COPd -
Tj=-15°C	Pdh - kW	Tj=-15℃	COPd
Disease the second		I Conserve Forth to	
Bivalent temperature	This do loo	Operating limit temperature	Tel 00 00
heating / Average	Tbiv°C	heating / Average	Tol -20 °C
heating / Warmer	Tbiv - °C	heating / Warmer	Tol - °C
heating / Colder	Tbiv - °C	heating / Colder	Tol - °C
		10	
Cycling interval capacity		Cycling interval efficiency	
for cooling	Pcycc - kW	for cooling	EERcyc
for heating	Pcych - kW	for heating	COPcyc
Degradation coefficient		Degradation coefficient	
cooling	Cdc 0.25 -	heating	Cdh 0.25 -
Electric power input in power modes		Annual electricity consumption	
off mode	Poff 8 W	cooling	Qce 614 kWh/a
standby mode	Psb 8 W	heating / Average	Qhe 2978 kWh/a
thermostat-off mode	Pto 80 W	heating / Warmer	Qhe - kWh/a
crankcase heater mode	Pck 8 W	heating / colder	Qhe - kWh/a
	· · · · · · · · · · · · · · · · · · ·		· · ·
Capacity control(indicate one of three	e options)	Other items	
•	-	Sound power level(indoor)	Lwa 65 dB(A)
		Sound power level(outdoor)	Lwa 70 dB(A)
fixed	No	Global warming potential	GWP 1975 kgCO2eq
staged	No	Rated air flow(indoor)	- 1740 m3/h
variable	Yes	Rated air flow(outdoor)	- 4500 m3/h
		1	1.000
Contact details for obtaining	Name and address of the many	ufacturer or of its authorised representative	-
	tsubishi Heavy Industries Air-Conditionir		*•
	The Square, Stockley Park, Uxbridge, M		
	ited Kingdom		
1011	J		
			PGA000Z812 <u>&</u>

Model FDF125VNAVD

Model(s): FDC125VNA	FDF125VD						
Outdoor side heat exchanger of air c	onditioner :	air					
Indoor side heat exchanger of air cor	nditioner :	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	e cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		211	%
Declared cooling capacity for part loa	ad at given outdoor	temperatu	res	_	y efficiency ratio or gas utilization	-	
Tj and indoor 27°C/19°C(dry/wet bulb	p)			auxiliary energy	factor for part load at given outdo	oor temperatures	Гј
T:- 125°0	Pdc	12.5	kW				1
Tj=+35°C	Puc	12.5]KVV	Tj=+35℃	EERd or	269.0	%
Tj=+30℃	Pdc	9.2	kW	T: . 0000	GUEc,bin / AEFc,bin		
1]=100 0	i de	3.2],,,,	Tj=+30°C	EERd or	410.0	%
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or		
,			_	1]=1250	GUEc,bin / AEFc,bin	670.0	%
Tj=+20°C	Pdc	3.4	kW	Tj=+20°C	EERd or		
			_	1,7 × 20 0	GUEc,bin / AEFc,bin	920.0	%
Degradation							
coefficient for	Cdc	0.25	-				
air conditioners**							
			_				
Power consumpiton in other than 'ac	tive mode'						
			,				1
Off mode	P_{OFF}	0.010	kW	Crankcase heat	-	0.008	kW
Thermostat-off mode	P_{TO}	0.070	kW	Standby mode	P_{SB}	0.010	kW
Other items							1
Capacity control		variable	ا ا	For air-to-air air		4500	m3/h
Capacity control		variable	_	air flow-rate,out	door measured		ļ
Cound nousen lovel			7				
Sound power level, outdoor	L_WA	71.0	dB				
outdoor			_				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	_	fuel input				
oxides			GCV				
GWP of the		2088	kg CO _{2eq}				
refrigerant		2000	(100years)				
•	subishi heavy indu						
** If Cdc is not determined by measu	rement then the de	fault degra	dation coeffic	cient air condition	ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-sp						mance	
of the outdoor unit, with a combination	on of indoor unit(s)	recommen	ded by the m	anufacturer or imp	oorter.		
						PGA000	Z812 <u>&</u>

Information to identify the model(s) to which th	e information	relates :		FDC125VN	IA / FDF125VD			
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			١	No.			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramet	ers for the w	varmer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity						ng energy efficiency ηs,h		
The state of the s	Prated,h	14.0	kW				155	%
				_				
Declared heating capacity for part load at indo	or temperatui	re 20°C			Declared coefficient of	f performance or gas utilization effic	iency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor temper	eratures Tj	
			1					1
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	295.0	%
		E 2	1		T 005	GUEh,bin / AEFh,bin		-
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	COPd or	377.0	%
T _i =+7°C	Pdh	3.4	kW		T = 1.7°C	GUEh,bin / AEFh,bin COPd or		-
1,-+7 0	ruii	<u> </u>	IVAA		T _j =+7°C		505.0	%
T _i =+12°C	Pdh	2.8	kW		T _i =+12°C	GUEh,bin / AEFh,bin COPd or		
1,-1120	i dii		lvvv		1,-1120	GUEh.bin / AEFh.bin	578.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent	COPd or		1
This breath temperature			1		temperature	GUEh.bin / AEFh.bin	243.0	%
T _{OL} =operation limit	Pdh	7.8	kW		T _{OL} =operation limit	COPd or		1
GE SPECIAL					OL THE STATE	GUEh,bin / AEFh,bin	223.0	%
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or		0/
T _i =-15°C			1		pumps:T _i =-15°C	GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			-
Bivalent temperature	T_biv	-10.0	°C		For water-to-air heat			
			_		pumps:Operation limit	t	-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**]					
								7
Power consumpiton in modes other than 'active	e mode'				Supplementary heater	elbu	_	kW
	_		1		back-up heating capac	city		
Off mode	P _{OFF}	0.010	kW					1
Thermostat-off mode	P _{TO}	0.085	kW		Type of energy input	P_{SB}	0.010	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode]
				-				
Other items					Far air ta air baat a m			1
O constitution of the last of		variable	1		For air-to-air heat pur		4380	m3/h
Capacity control		variable	J		air flow-rate,outdoor m	neasured		_
Sound power level,			1		For water /bring to air	hoat numne :		1
outdoor measured	L_{WA}	71.0	dB		For water-/brine-to-air Rated brine or water fi		_	m3/h
outdoor measured			1		outdoor side heat exch			
Emissions of nitrogen			mg/kWh					4
oxides(if applicable)	NOx ***	-	fuel input					
,			GCV					
				1				
GWP of the		2088	kg CO _{2eq}					
refrigerant		2000	(100years)					
		_						
-	heavy indust							
** If Cdh is not determined by measurement th	en the defaul	t degradation	n coefficient	air condition	ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air con	ditioners,the	test result ar	nd performa	nce data be	obtained on the basis o	of the performance		
of the outdoor unit, with a combination of indoo	or unit(s) reco	mmended by	y the manufa	acturer or im	porter.			
							PGA000	0Z812 <u>&</u>

Model FDF125VSAVD

Model(s): FDC125VSA / FDF							
Outdoor side heat exchanger of air condit	ioner:	air					
Indoor side heat exchanger of air condition	ner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	12.5	kW	efficiency ηs,c		211	%
Declared cooling capacity for part load at Tj and indoor 27°C/19°C(dry/wet bulb)	given outdoo	or temperatu	res		r efficiency ratio or gas utilization factor for part load at given outdo	-	Гј
Tj=+35℃	Pdc	12.5	kW	Tj=+35°C	EERd or GUEc,bin / AEFc,bin	269.0	%
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or	410.0	%
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or GUEc,bin / AEFc,bin	670.0	%
Tj=+20°C	Pdc	3.4	kW	Tj=+20°C	EERd or GUEc,bin / AEFc,bin	920.0	%
Degradation							-
coefficient for	Cdc	0.25	-				
air conditioners**							
Power consumpiton in other than 'active r Off mode Thermostat-off mode	node' P _{OFF} P _{TO}	0.010 0.070	kW kW	Crankcase heate	er mode P _{CK} P _{SB}	0.008	kW kW
			_				J
Other items				For air-to-air air	conditioner:	4500	m3/h
Capacity control		variable		air flow-rate,outo	door measured	4500	1113/11
Sound power level, outdoor	L_WA	71.0	dB				
If engine driven: Emissions of nitrogen oxides	NOx ***	-	mg/kWh fuel input GCV				
GWP of the refrigerant		2088	kg CO _{2eq} (100years)				
1							
	shi heavy indi		-		are shall he 0.25		
** If Cdc is not determined by measureme	ant unen the O	erault degra	iuauon coemi	ordin all contaitione	a 3 311a11 DE U,23.		
*** from 26 September 2018		- 41 1 ·			eretoral control of the control of		
Where information relates to multi-spilt air						mance	
of the outdoor unit, with a combination of	indoor unit(s)) recommen	aea by the m	anutacturer or imp	опег.		
						PGA000	17812 A

Information to identify the model(s) to which the	e information	relates :		FDC125VS	SA / FDF125VD			
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor	· ·							
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the w	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
	Gymbol	Value	Onit			•	Value	OTIIC
Rated heating capacity	Prated,h	14.0	kW		Seasonal space neating	ng energy efficiency ηs,h	155	%
Declared heating capacity for part load at indo	or temperatur	e 20°C			Declared coefficient of	f performance or gas utilization eff	iciency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor tem	peratures Tj	
0-		0.7	l					1
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	295.0	%
T _i =+2°C	Pdh	5.3	kW		T=12°C	GUEh,bin / AEFh,bin COPd or		
1]-+2 0	Full	0.0	Ivv		T _j =+2°C		377.0	%
T _i =+7°C	Pdh	3.4	kW		T _i =+7°C	GUEh,bin / AEFh,bin COPd or		
,,		<u> </u>	1		,,	GUEh,bin / AEFh,bin	505.0	%
T _i =+12°C	Pdh	2.8	kW		T _i =+12°C	COPd or		1
,			1		,	GUEh,bin / AEFh,bin	578.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent	COPd or		.,
					temperature	GUEh.bin / AEFh.bin	243.0	%
T _{OL} =operation limit	Pdh	7.8	kW		T _{OL} =operation limit	COPd or	200.0	٥,
			•		'	GUEh.bin / AEFh.bin	223.0	%
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or		%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin	_	76
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			-
			_					_
Bivalent temperature	T_biv	-10.0	°C		For water-to-air heat			
					pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
				1				
								1
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater	elbu	-	kW
O# d-	D	0.040	الممر		back-up heating capac	city		
Off mode	P _{OFF} P _{TO}	0.010	kW kW					1
Thermostat-off mode Crankcase heater mode	P _{CK}	0.003	kW		Type of energy input	P _{SB}	0.010	kW
Orankease neater mode	· CK	0.000	Ivv		Standby mode			J
Other items				1				
					For air-to-air heat pum	nps:	4000	m2/-
Capacity control		variable			air flow-rate,outdoor m	•	4380	m3/h
Sound power level,	L_WA	71.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured	-WA	71.0	ub		Rated brine or water fi	iow-rate,	-	m3/h
		-			outdoor side heat exch	nanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				4	ļ			
			1					
GWP of the		2088	kg CO _{2eq} (100years)					
refrigerant			(Tooyears)	'				
					1			
				<u> </u>	1			
	heavy indust		-		nore shall be 0.25			
** If Cdh is not determined by measurement th	en me detadh	ucyrauali0i	Logilicient	an condition	icio oliali De U,20.			
*** from 26 September 2018	ane				ability of the state of	f the conferen		
Where information relates to multi-spilt air con						tne performance		
of the outdoor unit, with a combination of indoo	or unit(s) reco	mmended by	y tne manufa	acturer or im	іропег.			
							PGA000	Z812 Æ

Model FDF140VNAVD

Model(s): FDC140VNA	/ FDF140VD						
Outdoor side heat exchanger of air c	onditioner :	air					
Indoor side heat exchanger of air cor	nditioner :	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space	cooling energy		
	Prated,c	13.0	kW	efficiency ηs,c		200.8	%
Declared cooling capacity for part loa	ad at given outdoor	temperatur	es	Declared energy	/ efficiency ratio or gas utilization efficiency	ciency /	
Tj and indoor 27°C/19°C(dry/wet bulb	-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			factor for part load at given outdoor t	-	Тј
Tj=+35°C	Pdc	13.0	kW	Tj=+35°C	EERd or	259.0	%
Tj=+30°C	Pdc	9.6	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or	372.0	%
Tj=+25°C	Pdc	6.2	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or	625.0	%
Tj=+20℃	Pdc	3.4	kW	Tj=+20°C	GUEc,bin / AEFc,bin EERd or	945.0	%
Degradation					GUEc,bin / AEFc,bin		J
coefficient for	Cdc	0.25	-				
air conditioners**							
Power consumpiton in other than 'ac	tive mode'						
Off mode	P_{OFF}	0.008	kW	Crankcase heate	er mode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.077	kW	Standby mode	P _{SB}	0.008	kW
Other items				For air-to-air air			1
Capacity control		variable		air flow-rate,outo		4500	m3/h
Sound power level, outdoor	L_WA	73.0	dB				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
GWP of the		2000	kg CO _{2eq}				
refrigerant		2088	(100years)				
Contact details Mit	subishi heavy indu	stries therm	nal systems,L	.TD			
** If Cdc is not determined by measu					ers shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-sp	oilt air conditioners,	the test res	ult and perfo	rmance data be of	btained on the basis of the performar	ice	
of the outdoor unit, with a combination							
						1 =	
						PGA000	J∠812 <u>&</u>

Information to identify the model(s) to which th	e information	relates :		FDC140VN	IA / FDF140VD			
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor	· ·							
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the w	varmer and o	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
	Gymbol	Value	Onit			•	Value	OTIIL
Rated heating capacity	Prated,h	15.5	kW		Seasonal space nealing	ng energy efficiency ηs,h	163.6	%
Davids of the state of the stat		. 0000	l	1	Dealers described	f f	T-1	l
Declared heating capacity for part load at indo	or temperatur	e 20°C				f performance or gas utilization ef		
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor ten	nperatures 1	
T _j =-7°C	Pdh	9.3	kW		T = 7°C	COPd or		1
1,7 0	ruii	0.0	Iv.		T _j =-7°C		292.0	%
T-12°0	Dale	5.7	1,,,,,		T - 12°0	GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	412.0	%
T =0-		3.7	l		o-	GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or	512.0	%
_			1		_	GUEh,bin / AEFh,bin		
T _j =+12°C	Pdh	2.9	kW		T _j =+12°C	COPd or	618.0	%
		46 -	1			GUEh,bin / AEFh,bin		
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	COPd or	240.0	%
			1		temperature	GUEh,bin / AEFh,bin		
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	COPd or	220.0	%
			1			GUEh,bin / AEFh,bin		
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or	_	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
								-
Bivalent temperature	T_biv	-10.0	°C		For water-to-air heat			
			_		pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					•
heat pumps**								
			•					
								_
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater	elbi		kW
					back-up heating capac		" -	KVV
Off mode	P _{OFF}	0.008	kW				<u> </u>	_
Thermostat-off mode	P _{TO}	0.085	kW		Type of energy input	P _{SE}	0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	FSE	0.008	KVV
			•		,			•
Other items				1				
					For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable			air flow-rate,outdoor m	neasured	4300	1113/11
			-					_
Sound power level,	1	72.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured	L_{WA}	73.0	uБ		Rated brine or water fi	iow-rate,	-	m3/h
					outdoor side heat exch			
Emissions of nitrogen			mg/kWh					
oxides(if applicable)	NOx ***	-	fuel input					
,			GCV					
			1					
				1				
GWP of the			kg CO _{2eq}					
refrigerant		2088	(100years))				
remgerant			J					
Contact details Mitsubishi	heavy indust	ries thermal	systems I T	ID.	1			
** If Cdh is not determined by measurement th			-		ners shall be 0.25.			
*** from 26 September 2018	dition ()	loot ree: "	d ne-f- ···	noo data t	obtained as the first	of the performance		
Where information relates to multi-spilt air con						и ине репоппансе		
of the outdoor unit, with a combination of indoo	uriit(s) reco	mmenaed by	y trie manuf	acturer or im	porter.			
							PGA000)Z812 Æ

Model FDF140VSAVD

Model(s): FDC140VSA / FDF	140VD						
Outdoor side heat exchanger of air condit		air					
Indoor side heat exchanger of air condition	ner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space of	ooling energy		
	Prated,c	13.6	kW	efficiency ηs,c		198.1	%
Declared cooling capacity for part load at	given outdoor	temperatu	res	Declared energy e	efficiency ratio or gas utilization efficie	ncy /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy fa	ctor for part load at given outdoor tem	nperatures ⁻	Гј
			,				1
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	251.0	%
			₁		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	368.0	%
T: +05°0	Dda	0.4	7,,,,		GUEc,bin / AEFc,bin		
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	608.0	%
Ti- 120°C	Ddo	2.4	7,44		GUEc,bin / AEFc,bin		
Tj=+20°C	Pdc	3.4	kW	Tj=+20°C	EERd or	945.0	%
Department			1		GUEc,bin / AEFc,bin		J
Degradation coefficient for	Cdc	0.25					
air conditioners**	Cuc	0.20	-				
all conditioners			_				
Power consumpiton in other than 'active r	node'						
Off mode	P_{OFF}	0.008	kW	Crankcase heater	mode P _{CK}	0.008	kW
Thermostat-off mode	P_{TO}	0.077	kW	Standby mode	P_SB	0.008	kW
			_				
Other items							
			_	For air-to-air air co	onditioner:	4500	m3/h
Capacity control		variable		air flow-rate,outdo	or measured		
			,				
Sound power level,	L_{WA}	73.0	dB				
outdoor			_				
			,				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
OMB CII			ا مما				
GWP of the		2088	kg CO _{2eq} (100years)				
refrigerant		<u></u>](,/				
Contact details Mitsubis	shi heavy indu	etrice therr	nal evetome I	I			
** If Cdc is not determined by measureme					s shall be 0,25.		
*** from 26 September 2018		3.0			•		
Where information relates to multi-spilt air	r conditioners	the test res	sult and nerfo	mance data he obte	ained on the basis of the performance		
of the outdoor unit, with a combination of						•	
		,					
·						PGA000	Z812 <u>&</u>

Information to identify the model(s) to which the	e information	relates :		FDC140VS	SA / FDF140VD			
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the w	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
	Cymbol	Value	OTIL			•	Value	Crint
Rated heating capacity	Prated,h	15.5	kW		Seasonal space neath	ng energy efficiency ηs,h	163.6	%
		0000		1				
Declared heating capacity for part load at indo	or temperatur	e 20°C				f performance or gas utilization ef		
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor ten	nperatures I j	
0-		0.3	1		- =0-			1
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	292.0	%
			1			GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	412.0	%
			1			GUEh,bin / AEFh,bin		
T_j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or	512.0	%
			1			GUEh,bin / AEFh,bin		
T _j =+12°C	Pdh	2.9	kW		T _j =+12°C	COPd or	618.0	%
			1		1	GUEh,bin / AEFh,bin		
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	COPd or	240.0	%
			1		temperature	GUEh,bin / AEFh,bin		
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	COPd or	220.0	%
			_			GUEh,bin / AEFh,bin		
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or		%
T _j =-15°C			•		pumps:T _j =-15°C	GUEh,bin / AEFh,bin		/0
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			-
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			
			•		pumps:Operation limit		-	°C
Degradation]		T _{ol} temperature			
coefficient	C_{dh}	0.25	_					1
heat pumps**								
			1					
				1				
Power consumpiton in modes other than 'activ	o modo!				Supplementary heater]
Power consumption in modes other than activ	e mode				Supplementary heater	EIDI	u -	kW
Off mode	P _{OFF}	0.008	kW		back-up heating capac	city		l
Thermostat-off mode	P _{TO}	0.085	kW					1
Crankcase heater mode	P _{CK}	0.003	kW		Type of energy input	P _{SE}	0.008	kW
Crankcase neater mode	' CK	0.000	IVAA		Standby mode			ļ
				-				
Other items								1
			1		For air-to-air heat pum		4380	m3/h
Capacity control		variable	J		air flow-rate,outdoor m	neasured		
			1					1
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured]		Rated brine or water fi	iow-rate,	-	m3/h
		_	7		outdoor side heat exch	hanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
GWP of the		2088	kg CO _{2eq}					
refrigerant		2000	(100years)					
			-					
Contact details Mitsubishi	heavy indust	ries thermal	systems.LT	D.	•			
** If Cdh is not determined by measurement th			-		ners shall be 0,25.			
*** from 26 September 2018		-						
Where information relates to multi-spilt air con	ditioners the	tact recult or	nd nerforms	nce data ha	obtained on the basis o	of the performance		
						л ак реполивное		
of the outdoor unit, with a combination of indoo	n unit(s) reco	mmenuea by	y une manufi	acturer or im	iporter.			
							PGA000	Z812 Æ

Model FDF140VNAPVD1

Model(s): FDC140VNA / FDF7	1VD1 (x2 un	nits)					
Outdoor side heat exchanger of air condition	ner:	air					
Indoor side heat exchanger of air condition	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space cool	ling energy		
	Prated,c	13.6	kW	efficiency ηs,c		271.6	%
Declared cooling capacity for part load at g	ivon outdoor	tomporatur	-00	Doclared energy office	ciency ratio or gas utilization efficier	201/	
Tj and indoor 27°C/19°C(dry/wet bulb)	iveri odlabor	temperatur	es		or for part load at given outdoor tem	-	Гј
Tj=+35℃	Pdc	13.6	kW	Tj=+35°C	EERd or	269.0	%
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or	470.0	%
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	GUEc,bin / AEFc,bin EERd or GUEc,bin / AEFc,bin	724.0	%
Tj=+20°C	Pdc	3.6	kW	Tj=+20°C	EERd or GUEc,bin / AEFc,bin	2118.0	%
Degradation					•		
coefficient for	Cdc	0.25	-				
air conditioners**]				
Power consumpiton in other than 'active mo	ode'						
Off mode	P_{OFF}	0.008	kW	Crankcase heater me	ode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P _{SB}	0.008	kW
			•		•		·
Other items				For air-to-air air cond	litioner]
Capacity control		variable]	air flow-rate,outdoor		4500	m3/h
Sound power level,	L	73.0	dB				
outdoor	L_{WA}	73.0	uв				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
			,				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
Contact details Mitsubish	i heavy indu	stries therm	nal systems,L	.TD			
** If Cdc is not determined by measuremen					nall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air of	conditioners	the test resi	ult and perfo	rmance data be obtain	ed on the basis of the performance		
of the outdoor unit, with a combination of in							
The second secon			,				
						PGA000	Z812 <u>&</u>

Information to identify the model(s) to which the	e information	relates :		FDC140VN	IA / FDF71VD1 (x2 unit	ts)		
Outdoor side heat exchanger of heat pump :		air			,	,		
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	n , paramet	ers for the w	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
	Cymbol	Value	Onic			-	Value	OTING
Rated heating capacity	Prated,h	15.5	kW		Seasonal space neatin	ng energy efficiency ηs,h	196.4	%
Declared heating capacity for part load at indo	or temperatur	e 20°C			Declared coefficient of	f performance or gas utilization e	efficiency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor te	mperatures Tj	
		0.0	1					l
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	311.0	%
T _i =+2°C	Pdh	5.7	kW		T=12°C	GUEh,bin / AEFh,bin COPd or		
1,-+2 0	Full	•	IV.		T _j =+2°C		473.0	%
T _i =+7°C	Pdh	3.7	kW		T _i =+7°C	GUEh,bin / AEFh,bin COPd or		
1,5-1,0	i dii		Ivv		1,-170		676.0	%
T _i =+12°C	Pdh	2.8	kW		T _i =+12°C	GUEh,bin / AEFh,bin COPd or		
17-12-0	i dii		Ivv		1,-1120		948.0	%
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	GUEh,bin / AEFh,bin COPd or		
- biy Straight temperature	. 411		1		temperature	GUEh.bin / AEFh.bin	252.0	%
T _{OL} =operation limit	Pdh	8.1	kW		T _{OL} =operation limit	GUEn,bin / AEFn,bin COPd or		<u>.</u> .
Top operation mine		<u> </u>	1		TOE OPERATION THINK	GUEh.bin / AEFh.bin	235.0	%
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or		
T _i =-15°C	i dii		KVV		pumps:T _i =-15°C	GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)		L	ı
OL 1 ,					02 ,			
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			
	5.0		1		pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	_					ı
heat pumps**	uii							
			1					
				1				
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater			
					back-up heating capac	eit	ou -	kW
Off mode	P _{OFF}	0.008	kW			. ,		
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input	Ps	3B 0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode	FS	0.006	KVV
			-	_	-			•
Other items								Ī
		г	1		For air-to-air heat purr	nps:	4380	m3/h
Capacity control		variable			air flow-rate,outdoor m	neasured		
			1					i
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured					Rated brine or water fi	iow-rate,	-	m3/h
			1		outdoor side heat exch	hanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				4				
			1					
GWP of the		2088	kg CO _{2eq} (100years)					
refrigerant			(Tooyears)	Ί				
				<u> </u>	<u> </u>			
	heavy indust		-		pore chall be 0.05			
** If Cdh is not determined by measurement tr	en me detault	uegradation	coemicient	an condition	icis stiail De U,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air cor						of the performance		
of the outdoor unit, with a combination of indo	or unit(s) reco	mmended by	the manuf	acturer or im	porter.			
L							PGA000	Z812 Æ

Model FDF140VSAPVD1

Model(s): FDC140VSA / FDF		nits)					
Outdoor side heat exchanger of air conditi		air					
Indoor side heat exchanger of air condition	ner:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	5 6-4-	40.0		Seasonal space	cooling energy	274.0],,
	Prated,c	13.6	kW	efficiency ηs,c		271.6	%
Declared cooling capacity for part load at s Tj and indoor 27°C/19°C(dry/wet bulb)	given outdoo	or temperatu	res kw	auxiliary energy f	efficiency ratio or gas utilization factor for part load at given outd	•	 тј 1
Tj=+35°C	Fuc	13.0]Kvv	Tj=+35°C	EERd or	269.0	%
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	GUEc,bin / AEFc,bin		
.,]		EERd or GUEc,bin / AEFc,bin	470.0	%
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or GUEc,bin / AEFc,bin	724.0	%
Tj=+20°C	Pdc	3.6	kW	Tj=+20°C	EERd or GUEc,bin / AEFc,bin	2118.0	%
Degradation							
coefficient for	Cdc	0.25	-				
air conditioners**							
Power consumpiton in other than 'active m			٦				,
Off mode	P _{OFF}	0.008	kW	Crankcase heate	O.C.	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_SB	0.008	kW
Other items				For air-to-air air o	conditioner:]
Capacity control		variable]	air flow-rate,outd		4500	m3/h
Sound power level, outdoor	L_{WA}	73.0	dB				
If engine driven:	NOv		mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
			nal systems,l				
** If Cdc is not determined by measureme	nt then the a	efault degra	dation coem	cient air conditione	rs shall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air						mance	
of the outdoor unit, with a combination of i	ndoor unit(s)	recommen	ded by the m	anufacturer or impo	orter.		
						PGA000	7812 ♠

Information to identify the model(s) to which th	e information	relates :		FDC140VS	SA / FDF71VD1 (x2 unit	(S)		
Outdoor side heat exchanger of heat pump :		air			,	,		
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the w	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity					Seasonal space heating	ng energy efficiency ηs,h		
	Prated,h	15.5	kW				196.4	%
				4				
Declared heating capacity for part load at indo	or temperatur	e 20°C			Declared coefficient of	f performance or gas utilization ef	ficiency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor ten	nperatures Tj	
			1					ı
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	311.0	%
T 000		F 7	l		T 000	GUEh,bin / AEFh,bin		
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	473.0	%
T - : 7°0	Dale	3.7	1,,,,,		T - 17°0	GUEh,bin / AEFh,bin		
T _j =+7°C	Pdh	5.7	kW		T _j =+7°C	COPd or	676.0	%
T _i =+12°C	Pdh	2.8	kW		T=142°C	GUEh,bin / AEFh,bin COPd or		
1 - + 12 C	Pull		IKVV		T _j =+12°C		948.0	%
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	GUEh,bin / AEFh,bin COPd or		
Tow Sivalent temperature	i uii		I.z.		temperature	GUEh.bin / AEFh.bin	252.0	%
T _{OL} =operation limit	Pdh	8.1	kW		T _{OL} =operation limit	GUEN,bin / AEFN,bin COPd or		
Tot operation mile	i dii		1,,,,		TOE OPERATION MINE	GUEh.bin / AEFh.bin	235.0	%
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or		
T _i =-15°C	i dii		IVVV		pumps:T _i =-15°C	GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			ı
oc ,					GE ,			
Bivalent temperature	T _{biv}	-10.0	℃		For water-to-air heat			
			•		pumps:Operation limit	t	-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					•'
heat pumps**								
								ı
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater	elbi	u -	kW
	_		1		back-up heating capac	city		
Off mode	P _{OFF}	0.008	kW					ı
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input	P _{SE}	0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode			
Others Name				1				
Other items					Can air ta air baat ann			
Conneity		variable	1		For air-to-air heat pur		4380	m3/h
Capacity control		variable	l		air flow-rate,outdoor m	neasured		
Sound power level,			1		For water-/brine-to-air	hoat numne :		
outdoor measured	L_{WA}	73.0	dB		Rated brine or water fi		_	m3/h
outdoor measured			I		outdoor side heat exch			
Emissions of nitrogen			mg/kWh					ı
oxides(if applicable)	NOx ***	-	fuel input					
,			GCV					
			•					
				1				
GWP of the		2088	kg CO _{2eq}					
refrigerant		2000	(100years))				
		_						
	heavy indust		-					
** If Cdh is not determined by measurement th	en the default	t degradatior	n coefficient	t air conditior	ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air con	ditioners,the t	test result ar	d performa	nce data be	obtained on the basis o	of the performance		
of the outdoor unit, with a combination of indoo	or unit(s) reco	mmended by	the manuf	acturer or im	porter.			
							PGA000	Z812 ♠

Models FDF71VD1, 100VD2, 125VD, 140VD

Model(s): FDF71VD1							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	P _{rated,c}	5.1	kW	Total electric power input	P _{elec}	0.050	kW
Cooling capacity (latent)	P _{rated,c}	2.0	kW	Sound power level (per speed setting,if applicable)	L _{WA}	61.0	dB
Heating capacity	$P_{rated,h}$	8.0	kW				
Contact details	Mitsubishi h	neavy indu	ustries ther	mal systems,LTD			

Model(s): FDF100VD2							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	P _{rated,c}	8.0	kW	Total electric power input	P_{elec}	0.200	kW
Cooling capacity (latent)	P _{rated,c}	2.0	kW	Sound power level (per speed setting,if applicable)	L_{WA}	65.0	dB
Heating capacity	$P_{rated,h}$	11.2	kW				
Contact details	Mitsubishi h	neavy indu	ustries thern	nal systems,LTD			

Model(s): FDF125VD							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	P _{rated,c}	9.0	kW	Total electric power input	P_{elec}	0.200	kW
Cooling capacity (latent)	P _{rated,c}	3.5	kW	Sound power level (per speed setting,if applicable)	L _{WA}	73.0	dB
Heating capacity	$P_{rated,h}$	14.0	kW				
Contact details	Mitsubishi I	neavy indi	ustries ther	mal systems,LTD			

Model(s): FDF140VD							
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit
Cooling capacity (sensible)	P _{rated,c}	9.6	kW	Total electric power input	P_{elec}	0.200	kW
Cooling capacity (latent)	P _{rated,c}	4.4	kW	Sound power level (per speed setting,if applicable)	L _{WA}	73.0	dB
Heating capacity	$P_{rated,h}$	16.0	kW				
Contact details	Mitsubishi I	neavy indu	ustries then	mal systems,LTD			

PGA000Z812 <u>&</u>

(7) Wall mounted type (SRK) Model SRK100VNAZR

Information to identify the model	(s) to which the information	n relates to:	If function includes heating: Indicate the h	neating seaso	n the	
Indoor unit model name	SRK100ZR-		information relates to. Indicated values sl			
Outdoor unit model name	FDC100VNA		heating season at a time. Include at least			erage'.
			_			
Function(indicate if present)			Average(mandatory)	Yes		
cooling	Yes Yes		Warmer(if designated) Colder(if designated)	No No		
neating	res		Colder(ii designated)	NO		
tem	symbol v	alue unit	Item	symbol	value	class
Design load	- Oynibol V	aido dilic	Seasonal efficiency and energy efficiency		value	Oldoo
cooling	Pdesignc	10.0 kW	cooling	SEER	6.26	A++
neating / Average	Pdesignh	8.5 kW	heating / Average	SCOP/A	4.33	A+
neating / Warmer	Pdesignh	- kW	heating / Warmer	SCOP/W	-	-
neating / Colder	Pdesignh	- kW	heating / Colder	SCOP/C	-	
Dealared assessible at a state on ton	nanatura Talanianah		Dook up hosting consity at cutdoor town	anatura Talaa		unit
Declared capacity at outdoor ten neating / Average (-10°C)	Pdh	8.5 kW	Back up heating capacity at outdoor temperature / Average (-10°C)	elbu	gnn 0	kW
neating / Warmer (2°C)	Pdh	- kW	heating / Warmer (2°C)	elbu	-	kW
neating / Colder (-22°C)	Pdh	- kW	heating / Colder (-22°C)	elbu	_	kW
, ,		u .				
Declared capacity for cooling, at	indoor temperature 27(19)°C and	Declared energy efficiency ratio, at indoo	r temperature	27(19)°C a	and
outdoor temperature Tj	_		outdoor temperature Tj			_
[j=35°C	Pdc	10.0 kW	Tj=35°C	EERd	3.13	
Гј=30°С	Pdc	7.37 kW	Tj=30°C	EERd	4.98	_ -
Γj=25°C	Pdc	4.74 kW	Tj=25°C	EERd	7.80	⊣ ⁻
Γj=20°C	Pdc	3.48 kW	Tj=20°C	EERd	12.40	<u> </u> -
Seclared capacity for bacting / A	verage season of indee-		Declared coefficient of performance / Ave	rage cocce	at indoor	
Declared capacity for heating / A emperature 20°C and outdoor to			temperature 20°C and outdoor temperature		at IIIUUUI	
Fj=-7°C	Pdh	7.52 kW	Ti=-7°C	COPd	3.22	7-
Γj=2°C	Pdh	4.58 kW	Ti=2°C	COPd	4.04	⊣ ₋
Γj=7°C	Pdh	2.94 kW	Tj=7°C	COPd	5.58	-
-j=12°C	Pdh	2.78 kW	Tj=12°C	COPd	6.85	
rj=bivalent temperature	Pdh	6.77 kW	Tj=bivalent temperature	COPd	2.42	-
rj=operating limit	Pdh	8.5 kW	Tj=operating limit	COPd	2.78	-
Declared capacity for heating / V			Declared coefficient of performance / Wa		at indoor	
emperature 20°C and outdoor to		1,147	temperature 20°C and outdoor temperature			_
Γj=2°C	Pdh	- kW	Tj=2°C	COPd	-	– ⁻
[j=7°C	Pdh	- kW - kW	Tj=7°C Tj=12°C	COPd COPd	-	⊣ ⁻
Γj=12°C Γj=bivalent temperature	Pdh Pdh	- kW - kW	Tj=12 C Tj=bivalent temperature	COPd	-	- ⁻
Fj=operating limit	Pdh	- kW	Tj=operating limit	COPd	<u> </u>	_[
emperature 20°C and outdoor te j=-7°C j=2°C jj=7°C jj=12°C jj=bivalent temperature	Pdh Pdh Pdh Pdh Pdh Pdh Pdh	- kW - kW - kW - kW	temperature 20°C and outdoor temperatu Tj=-7°C Tj=2°C Tj=7°C Tj=12°C Tj=bivalent temperature	COPd COPd COPd COPd COPd	-	- - - - -
j=operating limit	Pdh	- kW	Tj=operating limit	COPd	-	_
- j=-15°C	Pdh	- kW	Tj=-15℃	COPd	-	-
Bivalent temperature		10 100	Operating limit temperature	- .		70-
neating / Average	Tbiv	-10 °C	heating / Average	Tol	-20	္ဆိ ့
neating / Warmer neating / Colder	Tbiv Tbiv	- °C	heating / Warmer heating / Colder	Tol Tol	-	_°C
locality / Ooldel	I DIV	- 10	Insating / Solder	101	1 -	10
Cycling interval capacity			Cycling interval efficiency			
or cooling	Pcycc	- kW	for cooling	EERcyc	-	
or heating	Pcych	- kW	for heating	COPcyc	-]
						·
Degradation coefficient cooling	Cdc F	0.25 -	Degradation coefficient	Cdh	0.25	
oomig	Cdc	J.20 -	heating	Cdh	0.25	
Electric power input in power mo	des other than 'active mo	de'	Annual electricity consumption			
off mode	Poff	8 W	cooling	Qce	560	kWh/a
standby mode	Psb	8 W	heating / Average	Qhe	2750	kWh/a
hermostat-off mode	Pto	30 W	heating / Warmer	Qhe	-	kWh/a
rankcase heater mode	Pck	8 W	heating / colder	Qhe	-	kWh/a
			7 (0)			
Capacity control(indicate one of	three options)		Other items	1		dD/A:
			Sound power level(indoor)	Lwa	63	dB(A)
ved	No		Sound power level(outdoor) Global warming potential	Lwa GWP	70 1975	dB(A) kgCO2
ixed taged	No		Rated air flow(indoor)	GWP -	1975	kgCO2 m3/h
ariable	Yes		Rated air flow(indoor)	-	4500	m3/h
unuolo	169				7300	1110/11
Contact details for obtaining	Name and a	ddress of the manu	facturer or of its authorised representative.			
nore information	Mitsubishi Heavy Indust					
	5 The Square, Stockley					
	United Kingdom	-				
					_	01Z717 <u>/</u>

Model SRK100VSAZR

nformation to identify the model(a) to which	ah tha informatio	n rolaton to:	If function includes heating: Indicate the he	oting occoo	tho	
Information to identify the model(s) to which indoor unit model name	SRK100ZR-S		If function includes heating: Indicate the he information relates to. Indicated values sho			
Outdoor unit model name	FDC100VSA		heating season at a time. Include at least the			rage'
	1.20.00.00.	•		io iloutilig o		.ago.
Function(indicate if present)			Average(mandatory)	Yes		
cooling	Yes		Warmer(if designated)	No		
neating	Yes		Colder(if designated)	No		
tem	symbol va	alue unit	Item	symbol	value	class
Design load	_		Seasonal efficiency and energy efficiency of			
cooling	Pdesignc	10.0 kW	cooling	SEER	6.26	A++
neating / Average	Pdesignh	8.5 kW	heating / Average	SCOP/A	4.33	A+
neating / Warmer	Pdesignh	- kW	heating / Warmer	SCOP/W	-	-
neating / Colder	Pdesignh	- kW	heating / Colder	SCOP/C	-	
D	Talancia and		Deal, we have to a secret at a state of the second		In	unit
Declared capacity at outdoor temperature neating / Average (-10°C)	Pdh	8.5 kW	Back up heating capacity at outdoor tempe heating / Average (-10°C)	elbu	9nn 0	kW
neating / Average (-10 C)	Pdh	- kW	heating / Average (-10 C)	elbu	-	kW
neating / Warrier (2.2°C)	Pdh	- kW	heating / Colder (-22°C)	elbu	-	kW
icating / Colder (ZZ O)	1 011	IXVV	modaling / Golder (EE G)	CIDA		1000
Declared capacity for cooling, at indoor ter	mperature 27(19)°C and	Declared energy efficiency ratio, at indoor t	emperature	27(19)°C a	nd
outdoor temperature Tj	. ,,,,	•	outdoor temperature Tj		. , -	
rj=35°C	Pdc	10.0 kW	Tj=35°C	EERd	3.13	7-
Γj=30°C	Pdc	7.37 kW	Tj=30°C	EERd	4.98	
Γj=25°C	Pdc	4.74 kW	Tj=25°C	EERd	7.80	¬ -
rj=20°C	Pdc	3.48 kW	Tj=20°C	EERd	12.40	1
Declared capacity for heating / Average se			Declared coefficient of performance / Avera	,	at indoor	
emperature 20°C and outdoor temperature		7.50 1	temperature 20°C and outdoor temperature			_
Γj=-7°C	Pdh	7.52 kW	Tj=-7°C	COPd	3.22	⊣ -
Γj=2°C	Pdh	4.58 kW	Tj=2°C	COPd	4.04	վ-
¯j=7°C	Pdh	2.94 kW	Tj=7°C	COPd	5.58	վ⁻
j=12°C	Pdh	2.78 kW	Tj=12°C	COPd	6.85	վ-
j=bivalent temperature	Pdh	6.77 kW	Tj=bivalent temperature	COPd	2.42	վ-
j=operating limit	Pdh	8.5 kW	Tj=operating limit	COPd	2.78]-
Declared capacity for heating / Warmer se	ason at indoor		Declared coefficient of performance / Warn	ner ceacon	at indoor	
emperature 20°C and outdoor temperature			temperature 20°C and outdoor temperature		at indoor	
Fi=2°C	Pdh [- kW	Ti=2°C	COPd	_	٦₋
;j=7°C	Pdh	- kW	Tj=7°C	COPd		⊣ _
i=12℃	Pdh	- kW	Tj=12°C	COPd	-	⊣ _
j=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd	_	⊣ _
j=operating limit	Pdh	- kW	Tj=operating limit	COPd	-	− _
, , , ,		•			L	
Declared capacity for heating / Colder seas	son, at indoor		Declared coefficient of performance / Colde	er season, at	indoor	
emperature 20°C and outdoor temperature	e Tj		temperature 20°C and outdoor temperature	: Tj		
Гј=-7℃	Pdh	- kW	Tj=-7℃	COPd	-	-
Γj=2°C	Pdh	- kW	Tj=2°C	COPd	-	٦-
Γj=7°C	Pdh	- kW	Tj=7°C	COPd	-	٦-
rj=12°C	Pdh	- kW	Tj=12°C	COPd	-	٦-
j=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd	-	-
j=operating limit	Pdh	- kW	Tj=operating limit	COPd	-	7-
-j=-15°C	Pdh	- kW	Tj=-15℃	COPd	-	<u> </u>
Bivalent temperature		40 100	Operating limit temperature	Tal		¬ ∞
neating / Average	Tbiv	-10 °C	heating / Average	Tol	-20	°C
eating / Warmer	Tbiv	- °C	heating / Warmer	Tol	-	°C
eating / Colder	Tbiv	- ℃	heating / Colder	Tol	-	°C
Cycling interval capacity			Cycling interval efficiency			
or cooling	Pcycc	- kW	for cooling	EERcyc	-	٦-
or heating	Pcych	- kW	for heating	COPcyc	-	-
-		<u> </u>				
Degradation coefficient			Degradation coefficient			_
ooling	Cdc	0.25 -	heating	Cdh	0.25	<u> -</u>
Electric power input in power modes other	than lactive ma	de'	Annual electricity consumption			
lectric power input in power modes other iff mode	Poff	8 W	cooling	Qce	560	lkWh/a
tandby mode	Psb	8 W	heating / Average	Qhe	2750	kWh/a
hermostat-off mode	Pto	30 W	heating / Average	Qhe	-	kWh/a
	Pck	8 W	heating / Warrier	Qhe	-	kWh/a
		- 1			1	1
			Other items			
crankcase heater mode	ons)				63	dB(A)
crankcase heater mode	ons)		Sound power level(indoor)	Lwa		
crankcase heater mode	ons)		Sound power level(indoor) Sound power level(outdoor)	Lwa Lwa	70	dB(A)
crankcase heater mode Capacity control(indicate one of three option	ons)					
rankcase heater mode Capacity control(indicate one of three option			Sound power level(outdoor)	Lwa	70	
crankcase heater mode Capacity control(indicate one of three optionixed staged pariable	No		Sound power level(outdoor) Global warming potential	Lwa	70 1975	kgČÓ2
crankcase heater mode Capacity control(indicate one of three option ixed staged	No No		Sound power level(outdoor) Global warming potential Rated air flow(indoor)	Lwa GWP -	70 1975 1470	kgCO2 m3/h
crankcase heater mode Capacity control(indicate one of three option ixed staged variable Contact details for obtaining	No No Yes		Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) facturer or of its authorised representative.	Lwa GWP -	70 1975 1470	kgCO2 m3/h
crankcase heater mode Capacity control(indicate one of three option ixed staged variable Contact details for obtaining more information Mitsubis	No No Yes Name and activities the Heavy Industri	ries Air-Conditionin	Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) Ifacturer or of its authorised representative. g Europe, Ltd.	Lwa GWP -	70 1975 1470	kgCO2 m3/h
capacity control(indicate one of three options xed taged ariable Contact details for obtaining nore information Mitsubis 5 The So	No No Yes Name and acthi Heavy Industriquare, Stockley	ries Air-Conditionin	Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) facturer or of its authorised representative.	Lwa GWP -	70 1975 1470	kgČÓ2 m3/h
rankcase heater mode sapacity control(indicate one of three option axed taged ariable contact details for obtaining more information Mitsubis	No No Yes Name and acthi Heavy Industriquare, Stockley	ries Air-Conditionin	Sound power level(outdoor) Global warming potential Rated air flow(indoor) Rated air flow(outdoor) Ifacturer or of its authorised representative. g Europe, Ltd.	Lwa GWP -	70 1975 1470	kgCO2 m3/h

Model SRK100VNAPZSX

Information to identify the mode	I(c) to which the informa	tion rolates to:	If function includes heating: Indicate	the heating coace	tho	
Information to identify the mode Indoor unit model name		X-S (x2 units)	If function includes heating: Indicate in information relates to. Indicated value			
Outdoor unit model name	FDC100V		heating season at a time. Include at I			rage'.
	1: 20.000					
Function(indicate if present)			Average(mandatory)	Yes		
cooling	Yes		Warmer(if designated)	No		
heating	Yes		Colder(if designated)	No		
ltem	symbol	value unit	Item	symbol	value	class
Design load	Pdosigno	10.0 kW	Seasonal efficiency and energy efficiency	ency class SEER	6.55	A++
cooling	Pdesigno	8.5 kW	cooling heating / Average	SCOP/A	4.47	A++ A+
neating / Average neating / Warmer	Pdesignh Pdesignh	- kW	heating / Average	SCOP/W	- 4.47	- AT
neating / Colder	Pdesignh	- kW	heating / Warrier	SCOP/C	—	-
reating / colder	i designii	-	ricating / Colder	000170		unit
Declared capacity at outdoor ter	mperature Tdesignh		Back up heating capacity at outdoor	temperature Tdesi	gnh	G. III
neating / Average (-10°C)	Pdh	8.5 kW	heating / Average (-10°C)	elbu	0	kW
heating / Warmer (2°C)	Pdh	- kW	heating / Warmer (2°C)	elbu	-	kW
heating / Colder (-22°C)	Pdh	- kW	heating / Colder (-22°C)	elbu	-	kW
Declared capacity for cooling, a	indoor temperature 27(19)℃ and	Declared energy efficiency ratio, at in	idoor temperature	27(19)℃ a	nd
outdoor temperature Tj	Dele	40.0	outdoor temperature Tj	CCD4	2.40	7
Tj=35°C Ti=30°C	Pdc	10.0 kW	Tj=35°C Ti=30°C	EERd	3.46	վ⁻
,	Pdc Pdc	7.37 kW	11 7 **	EERd	4.79	վ⁻
Τj=25℃ Τj=20℃	Pdc	4.74 kW 3.70 kW	Tj=25°C Tj=20°C	EERd EERd	8.42 13.67	- -
IJ-20 C	Fuc	3.70 KVV	1]=20 C	EERU	13.07	
Declared capacity for heating / /	Average season, at indo	or	Declared coefficient of performance /	Average season	at indoor	
temperature 20°C and outdoor t			temperature 20°C and outdoor temperature			
Fj=-7°C	Pdh	7.52 kW	Tj=-7°C	COPd	3.32	¬ -
., Tj=2℃	Pdh	4.58 kW	Ti=2°C	COPd	4.25	−
., = 0 Гј=7°С	Pdh	2.94 kW	Tj=7°C	COPd	5.54	
Tj=12℃	Pdh	2.75 kW	Tj=12°C	COPd	7.05	
Tj=bivalent temperature	Pdh	6.77 kW	Tj=bivalent temperature	COPd	2.44	7-
Tj=operating limit	Pdh	8.5 kW	Tj=operating limit	COPd	2.81	<u> 1-</u>
Declared capacity for heating / \	Varmer season, at indo	or	Declared coefficient of performance /		at indoor	
emperature 20°C and outdoor t	emperature Tj		temperature 20°C and outdoor temperature			_
Γj=2℃	Pdh	- kW	Tj=2°C	COPd	-	
Γj=7°C	Pdh	- kW	Tj=7°C	COPd	-	
Tj=12°C	Pdh	- kW	Tj=12°C	COPd	-	
Tj=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd	-	
Tj=operating limit	Pdh	- kW	Tj=operating limit	COPd	-	-
Daalaaad aanaaita faabaatiaa 16	Dalalana a a a a a a a da a a a a a a a a a a		Dealers described and an effective of	/ O-1-1	to do on	
Declared capacity for heating / (Declared coefficient of performance		Indoor	
temperature 20°C and outdoor t Ti=-7°C	Pdh	- kW	temperature 20°C and outdoor temperature 20°C and outdoor temperature	COPd		_
Tj=-7 C Tj=2°C	Pdh	- kW	Tj=-7 C Tj=2°C	COPd	<u> </u>	վ⁻
,	Pdh		11 '			- F
Tj=7°C		- kW	Tj=7°C Tj=12°C	COPd	-	վ⁻
Tj=12°C Tj=bivalent temperature	Pdh Pdh	- kW - kW	Tj=12 C	COPd COPd	-	⊣ ⁻
Tj=blvalent temperature Tj=operating limit	Pdh	- kW	Tj=operating limit	COPd	-	-[
Tj=-15°C	Pdh	- kW	Ti=-15°C	COPd	—	-[
1]10 0	T UII	-	1]=-10 0	001 0		
Bivalent temperature			Operating limit temperature			
heating / Average	Tbiv	-10 ℃	heating / Average	Tol	-20	°C
heating / Warmer	Tbiv	- ℃	heating / Warmer	Tol	-	-©
neating / Colder	Tbiv	- °c	heating / Colder	Tol	-	°C
Cycling interval capacity			Cycling interval efficiency			
or cooling	Pcycc	- kW	for cooling	EERcyc	-	_ -
or heating	Pcych	- kW	for heating	COPcyc		-
			1 =			
Degradation coefficient	C4-	0.25	Degradation coefficient	C41-	0.05	7
cooling	Cdc	0.25 -	heating	Cdh	0.25]-
Electric nower input in news ===	ndee other than lastice =	node'	Annual electricity consumation			
Electric power input in power months	odes other than factive r Poff	8 W	Annual electricity consumption cooling	Qce	535	kWh/a
standby mode	Psb	8 W	heating / Average	Qhe	2665	kWh/a
thermostat-off mode	Pto	25 W	heating / Average	Qhe	-	kWh/a
crankcase heater mode	Pck	8 W	heating / warrier	Qhe	-	kWh/a
		1 1 1 1 1 1			1	
Capacity control(indicate one of	three options)		Other items			
			Sound power level(indoor)	Lwa	59	dB(A)
			Sound power level(outdoor)	Lwa	70	dB(A)
ïxed	No		Global warming potential	GWP	1975	kgCO2
staged	No		Rated air flow(indoor)		858	m3/h
variable	Yes		Rated air flow(outdoor)	-	4500	m3/h
			-			
Contact details for obtaining	Name and	address of the manu	facturer or of its authorised representativ	e.		
more information	Mitsubishi Heavy Indu					
	5 The Square, Stockle					
	United Kingdom	<u>.</u>				
)1Z717 <u>/</u> ∆

Model SRK100VSAPZSX

Information to identify the mode	I(e) to which the informat	tion relates to:	If function includes heating: Indicate	the heating caseo	the.	
Indoor unit model name		K-S (x2 units)	information relates to. Indicated value			
Outdoor unit model name	FDC100VS		heating season at a time. Include at			rage'.
	1 3000					J
Function(indicate if present)			Average(mandatory)	Yes		
cooling	Yes		Warmer(if designated)	No		
heating	Yes		Colder(if designated)	No		
tem	symbol	value unit	Item Seasonal efficiency and energy efficiency	symbol	value	class
Design load cooling	Pdesignc	10.0 kW	cooling	SEER	6.55	A++
neating / Average	Pdesignh	8.5 kW	heating / Average	SCOP/A	4.47	A++
neating / Warmer	Pdesignh	- kW	heating / Warmer	SCOP/W		-
neating / Colder	Pdesignh	- kW	heating / Colder	SCOP/C		-
ioamig / colaci				000170	-1	unit
Declared capacity at outdoor te	nperature Tdesignh		Back up heating capacity at outdoor	temperature Tdesi	gnh	
neating / Average (-10°C)	Pdh	8.5 kW	heating / Average (-10°C)	elbu	0	kW
heating / Warmer (2°C)	Pdh	- kW	heating / Warmer (2°C)	elbu	-	kW
neating / Colder (-22°C)	Pdh	- kW	heating / Colder (-22°C)	elbu	-	kW
Declared capacity for cooling, a	t indoor temperature 27(19)℃ and	Declared energy efficiency ratio, at i	indoor temperature	27(19)℃ a	nd
outdoor temperature Tj	Pdc	40.0	outdoor temperature Tj	EERd	3.46	_
Γj=35℃ Γi=30℃	Pdc	10.0 kW 7.37 kW	Tj=35°C Ti=30°C	EERd	4.79	- ⁻
Tj=30 C Tj=25°C	Pdc	4.74 kW	Tj=30 C	EERd	8.42	[
Tj=20°C	Pdc	3.70 kW	Tj=20°C	EERd	13.67	⊣_
·, =0 0	1 40	J. 5.75 KVV		LLIN	10.07	
Declared capacity for heating / /	Average season, at indoo	or	Declared coefficient of performance	/ Average season	at indoor	
temperature 20°C and outdoor t		-	temperature 20°C and outdoor temp	,		
Tj=-7°C	Pdh	7.52 kW	Tj=-7°C	COPd	3.32	7-
, Гј=2°С	Pdh	4.58 kW	Tj=2°C	COPd	4.25	<u> </u>
Tj=7℃	Pdh	2.94 kW	Tj=7°C	COPd	5.54	
Tj=12℃	Pdh	2.75 kW	Tj=12°C	COPd	7.05	
rj=bivalent temperature	Pdh	6.77 kW	Tj=bivalent temperature	COPd	2.44]-
Tj=operating limit	Pdh	8.5 kW	Tj=operating limit	COPd	2.81	-
Declared capacity for heating / \		or	Declared coefficient of performance		at indoor	
emperature 20°C and outdoor t			temperature 20°C and outdoor temp			_
Гј=2°С	Pdh	- kW	Tj=2°C	COPd	-	_ -
Гј=7°С	Pdh	- kW	Tj=7°C	COPd	-	⊣ -
Tj=12℃	Pdh	- kW	Tj=12°C	COPd	-	վ-
Tj=bivalent temperature	Pdh Pdh	- kW	Tj=bivalent temperature	COPd	-	- -
Tj=operating limit	Full	- kW	Tj=operating limit	COPd	-	
Declared capacity for heating / 0	Colder season at indoor		Declared coefficient of performance	/ Colder season a	indoor	
temperature 20°C and outdoor t			temperature 20°C and outdoor temp		illuuui	
Tj=-7°C	Pdh	- kW	Ti=-7°C	COPd	-	٦_
., 7 °C Tj=2°C	Pdh	- kW	Ti=2°C	COPd		⊣ _
Tj=7°C	Pdh	- kW	Ti=7°C	COPd	_	⊣ ₋
Tj=12°C	Pdh	- kW	Tj=12°C	COPd	_	⊣ ₋
Tj=bivalent temperature	Pdh	- kW	Tj=bivalent temperature	COPd	-	_
Tj=operating limit	Pdh	- kW	Tj=operating limit	COPd	-	− _
Tj=-15°C	Pdh	- kW	Ti=-15°C	COPd	-	− -
	<u> </u>	l l				-1
Bivalent temperature			Operating limit temperature			
heating / Average	Tbiv	-10 ℃	heating / Average	Tol	-20	°C
heating / Warmer	Tbiv	- °C	heating / Warmer	Tol	-	°C
neating / Colder	Tbiv	- ℃	heating / Colder	Tol	-	°C
Cycling interval capacity	5	1	Cycling interval efficiency			_
or cooling	Pcycc	- kW	for cooling	EERcyc	-	վ-
or heating	Pcych	- kW	for heating	COPcyc		-
Donnadation			Degradation #5-1			
Degradation coefficient	Cdc	0.25 -	Degradation coefficient	Cdh	0.25	٦_
cooling	Cac	0.20 -	heating	Cdfi	0.25	-
Electric power input in power m	ndes other than lactive m	node'	Annual electricity consumption			
Electric power input in power m off mode	Poff	8 W	cooling	Qce	535	kWh/a
standby mode	Psb	8 W	heating / Average	Qhe	2665	kWh/a
thermostat-off mode	Pto	25 W	heating / Warmer	Qhe	-	kWh/a
crankcase heater mode	Pck	8 W	heating / volder	Qhe	-	kWh/a
	-				•	
Capacity control(indicate one of	three options)		Other items			
	. ,		Sound power level(indoor)	Lwa	59	dB(A)
			Sound power level(outdoor)	Lwa	70	dB(A)
fixed	No		Global warming potential	GWP	1975	kgČÓ2e
staged	No		Rated air flow(indoor)	-	858	m3/h
/ariable	Yes		Rated air flow(outdoor)	-	4500	m3/h
	<u> </u>					
Contact details for obtaining			ufacturer or of its authorised representati	ve.		
more information	Mitsubishi Heavy Indu					
	5 The Square, Stockle	y Park, Uxbridge, N	fiddlesex, UB11 1ET,			
	United Kingdom					
	1					
)1Z717 <u>/</u> ∆

Model SRK125VNAPZSX

Model(s): FDC125VNA / SRK6	0ZSX-S (x2	units)					
Outdoor side heat exchanger of air conditio	ner :	air					
Indoor side heat exchanger of air conditione	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space coo	oling energy		
	Prated,c	12.5	kW	efficiency ηs,c		257.7	%
Declared cooling capacity for part load at gi	ven outdoo	r temperatu	res	Declared energy effi	iciency ratio or gas utilization efficier	ncy /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy fact	or for part load at given outdoor tem	peratures ⁻	Гј
_			ا				1
Tj=+35℃	Pdc	12.5	kW	Tj=+35°C	EERd or	273.0	%
			ا ،		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or	456.0	%
			ا ،		GUEc,bin / AEFc,bin		
Tj=+25°C	Pdc	5.9	kW	Tj=+25°C	EERd or	759.0	%
			ا ،		GUEc,bin / AEFc,bin		
Tj=+20°C	Pdc	3.7	kW	Tj=+20°C	EERd or	1480.0	%
			,		GUEc,bin / AEFc,bin		
Degradation							
coefficient for	Cdc	0.25	-				
air conditioners**]				
Power consumpiton in other than 'active mo	ode'						
05	В	0.000	ا ۱	0	n D	0.000	الممر
Off mode	P _{OFF}	0.008	kW	Crankcase heater m	OI.	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_{SB}	0.008	kW
Other items							1
Capacity control		variable	1	For air-to-air air con		4500	m3/h
Capacity control		variable	_	air flow-rate,outdoor	measured		J
			ı l				
Sound power level,	L_{WA}	71.0	dB				
outdoor]				
			1 ,,,,,				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			JGCV				
GWP of the			kg CO _{2ea}				
		2088	(100years)				
refrigerant			<u> </u>				
Contact details Mitsubish	i boowy indu	etrice thorn	nal systems,L	I TD			
** If Cdc is not determined by measurement			-		shall be 0.25.		
*** from 26 September 2018							
	onditionoro	the test rea	ult and norfa	rmanaa data ha ahtair	and on the basis of the performance		
Where information relates to multi-spilt air of the outdoor unit, with a combination of in-						;	
of the outdoor unit, with a combination of in-	aooi uiii(S)	reconninent	ueu by lile Ma	аниволитен от штропе	71.		
						PCA001	7717 ∧

Information to identify the model(s) to which th	e information	relates :		FDC125VN	IA / SRK60ZSX-S (x2 u	ınits)		
Outdoor side heat exchanger of heat pump :		air			,	,		
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor								
Parameters shall be declared for the average	neating seaso	on , paramete	ers for the w	varmer and c	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	-				Seasonal space heating	ng energy efficiency ηs,h		
	Prated,h	14.0	kW				192.5	%
				1				
Declared heating capacity for part load at indo	or temperatur	e 20°C			Declared coefficient of	f performance or gas utilization	n efficiency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor	temperatures Tj	
			1					7
T _j =-7°C	Pdh	8.7	kW		T _j =-7°C	COPd or	337.0	%
_			1		_	GUEh,bin / AEFh,bin		-
T _j =+2°C	Pdh	5.3	kW		T _j =+2°C	COPd or	459.0	%
		2.4	1			GUEh,bin / AEFh,bin		-
T _j =+7°C	Pdh	3.4	kW		T _j =+7°C	COPd or	652.0	%
T .40°0	D.III	2.8	l		T : 10°0	GUEh,bin / AEFh,bin		-
T _j =+12°C	Pdh	2.0	kW		T _j =+12°C	COPd or	800.0	%
T., -hivalent temperature	Pdh	9.8	kW		Tbiyoloot	GUEh,bin / AEFh,bin COPd or	-	1
T _{biv} =bivalent temperature	Pan	3.0	IKVV		T _{biv} =bivalent temperature		278.0	%
T = anaration limit	Pdh	7.9	kW			GUEh,bin / AEFh,bin COPd or		1
T _{OL} =operation limit	Pull	1.0	IKVV		T _{OL} =operation limit		246.0	%
En eleteratura de la companya de la	D.III		l.,,,		E	GUEh,bin / AEFh,bin		1
For air-to-water heat pumps : T _i =-15°C	Pdh		kW		For air-to-water heat pumps:T _i =-15°C	COPd or GUEh,bin / AEFh,bin	-	%
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)	COLII,DIII / ALI II,DIII		_
(ii · OL < 25 0)					(II TOL (20 0)			
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			1
	- DIV		1 -		pumps:Operation limit		-	°C
Degradation)		T _{ol} temperature			
coefficient	C_{dh}	0.25	-					4
heat pumps**								
			•					
				1				
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater	-	a lla	134/
·					back-up heating capac	,	elbu -	kW
Off mode	P_{OFF}	0.008	kW				<u> </u>	_
Thermostat-off mode	P_{TO}	0.015	kW		Type of energy input		P _{SB} 0.008	kW
Crankcase heater mode	P_{CK}	0.008	kW		Standby mode		1 SB 0.000	KVV
Other items							-	-
			1		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable			air flow-rate,outdoor m	neasured		
			1					7
Sound power level,	L_WA	71.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured					Rated brine or water fi	iow-rate,	-	m3/h
			1		outdoor side heat exch	hanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				-				
OWD of the			l					
GWP of the		2088	kg CO _{2eq} (100years)					
refrigerant			[(,					
Contact details	hoover indeed	rioe thermal	evetoma I T	<u> </u>	1			
Contact details Mitsubishi ** If Cdh is not determined by measurement th	heavy indust en the default		-		ners shall be 0.25			
			5510110	50.101001				
*** from 26 September 2018	ditionara the	toot rocult a-	nd norform -	noo doto h-	obtained on the basis s	of the performance		
Where information relates to multi-spilt air con						и иле реполнансе		
of the outdoor unit, with a combination of indoo	n unit(a) IECO	enueu D)	, are manuli	uotuiti Ul IIII	portor.			
							PCA00	1Z717 <u>/</u> ∆

Model SRK125VSAPZSX

Model(s): FDC125VSA / SRK60	DZSX-S (x2	units)					
Outdoor side heat exchanger of air condition	ner:	air					
Indoor side heat exchanger of air conditione	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space cool	ling energy		
	Prated,c	12.5	kW	efficiency ηs,c		257.7	%
_							
Declared cooling capacity for part load at gir	ven outdoor	r temperatui	res	Declared energy effic	ciency ratio or gas utilization efficier	ncy /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy facto	or for part load at given outdoor tem	peratures ⁻	Гј
T: . 05%	Dd-	40.5	7,,,,,		ı		1
Tj=+35°C	Pdc	12.5	kW	Tj=+35°C	EERd or	273.0	%
T:- 120°0	Dda	0.0	1,,,,,	_	GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	9.2	kW	Tj=+30°C	EERd or	456.0	%
Tj=+25°C	Pdc	5.9	kW		GUEc,bin / AEFc,bin		
1,-125 0	i do	5.5],,,	Tj=+25°C	EERd or	759.0	%
Tj=+20°C	Pdc	3.7	kW	T:00%	GUEc,bin / AEFc,bin		
1]-+20 C	Fuc	3.7	7,00	Tj=+20°C	EERd or	1480.0	%
Do avo dotion			1		GUEc,bin / AEFc,bin		l
Degradation coefficient for	Cdo	0.25					
air conditioners**	Cdc	0.20	-				
all conditioners			1				
Power consumpiton in other than 'active mo	ıde'						
Tower consumption in other than active me	uc						
Off mode	P_{OFF}	0.008	kW	Crankcase heater mo	ode P _{CK}	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P _{SB}	0.008	kW
			1		·		ı
Other items							
				For air-to-air air cond	litioner:	4500	m3/h
Capacity control		variable		air flow-rate,outdoor	measured	4500	1110/11
			_				
Sound power level,	L_{WA}	71.0	dB				
outdoor	-WA						
			_				
If engine driven:	NOv		mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
			- I				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
			nal systems,L				
** If Cdc is not determined by measurement	then the de	efault degra	dation coeffic	cient air conditioners sh	nall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air c	onditioners,	,the test res	ult and perfo	rmance data be obtain	ed on the basis of the performance		
of the outdoor unit, with a combination of inc	door unit(s)	recommend	ded by the ma	anufacturer or importer	٠.		
						PCA001	7717 ∧

Information to identify the model(s) to which the	ne information	relates :		EDC13EVS	A / CDVC07CV C (v2 v	nita)		
Outdoor side heat exchanger of heat pump :		air		FDC 125V3	SA / SRK60ZSX-S (x2 u	illits)		
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	olementary he			1	No			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramet	ters for the w	armer and c	older heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity	-					ng energy efficiency ηs,h		
3 · · · · · · · · · · · · · · · · · · ·	Prated,h	14.0	kW			3, 1 3, 1 1 1, 1, 1, 1	192.5	%
				4				
Declared heating capacity for part load at indo	or temperatu	re 20°C				f performance or gas utilization effic	•	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor temp	eratures Tj	
T 700	D.III	8.7	7		T 790	000.1		1
T _j =-7°C	Pdh	0.7	kW		T _j =-7°C	COPd or	337.0	%
T _i =+2°C	Pdh	5.3	kW		T _i =+2°C	GUEh,bin / AEFh,bin COPd or		1
1]-+2 0	Full	0.0	Tran		1,-+2 0		459.0	%
T _i =+7°C	Pdh	3.4	kW		T _i =+7°C	GUEh,bin / AEFh,bin COPd or		1
]		,,	GUEh,bin / AEFh,bin	652.0	%
T _i =+12°C	Pdh	2.8	kW		T _i =+12°C	COPd or		1
,			_		,	GUEh,bin / AEFh,bin	800.0	%
T _{biv} =bivalent temperature	Pdh	9.8	kW		T _{biv} =bivalent	COPd or	270.0	0/
			_		temperature	GUEh,bin / AEFh,bin	278.0	%
T _{OL} =operation limit	Pdh	7.9	kW		T _{OL} =operation limit	COPd or	246.0	%
			_			GUEh,bin / AEFh,bin	240.0	
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or	_	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
			7					7
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			0.0
			ר		pumps:Operation limit		-	°C
Degradation		0.25			T _{ol} temperature			
coefficient	C_{dh}	0.23	-					
heat pumps**			1					
				1				
Power consumpiton in modes other than 'activ	o modo!				Supplementary heater			1
rower consumption in modes office than activ	e mode				Supplementary heater back-up heating capac	eibu	-	kW
Off mode	P _{OFF}	0.008	kW		back-up fleating capat	Sity	I	
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input			1
Crankcase heater mode	P_{CK}	0.008	kW		Standby mode	P_{SB}	0.008	kW
			-					-
Other items								_
			-		For air-to-air heat pum	nps:	4380	m3/h
Capacity control		variable			air flow-rate,outdoor n	neasured		
			7					7
Sound power level,	L_WA	71.0	dB		For water-/brine-to-air	heat pumps :		
outdoor measured					Rated brine or water fi	iow-rate,	-	m3/h
			7		outdoor side heat excl	hanger]
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				1				
GWP of the			kg CO _{2eq}					
		2088	(100years)					
refrigerant]					
Contact details Mitsubish	i heavy indus	tries thermal	I systems.LT	D .	1			
** If Cdh is not determined by measurement the					ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air cor	nditioners,the	test result a	nd performar	nce data be	obtained on the basis o	f the performance		
of the outdoor unit, with a combination of indo			•					
							DO ACC	17717 ^
							PCAU0	1Z717 <u>/</u> ∆

Model SRK140VNATZSX

Model(s): FDC140VNA / SRK5		units)					
Outdoor side heat exchanger of air condition		air					
Indoor side heat exchanger of air condition	∍r :	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space coo	ling energy		
	Prated,c	13.6	kW	efficiency ηs,c		311.5	%
		1	<u> </u>				
Declared cooling capacity for part load at gi	ven outdoor	r temperatu	res		ciency ratio or gas utilization efficier	•	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy facto	or for part load at given outdoor tem	peratures	Гј
Tj=+35°C	Pdc	13.6	kW	T: .0500			1
1,000	1 40	10.0],,,,	Tj=+35°C	EERd or	300.0	%
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	GUEc,bin / AEFc,bin EERd or		
			-	1,1-130 0	GUEc,bin / AEFc,bin	533.0	%
Tj=+25°C	Pdc	6.4	kW	Tj=+25℃	EERd or		
			-	1,1 120 0	GUEc,bin / AEFc,bin	859.0	%
Tj=+20°C	Pdc	3.9	kW	Tj=+20°C	EERd or	0400.0	0/
		l-	-		GUEc,bin / AEFc,bin	2438.0	%
Degradation]				
coefficient for	Cdc	0.25	-				
air conditioners**							
Power consumpiton in other than 'active mo	ode'						
	_	F	ا ،		_		1
Off mode	P _{OFF}	0.008	kW	Crankcase heater m	511	0.008	kW
Thermostat-off mode	P _{TO}	0.000	kW	Standby mode	P_SB	0.008	kW
Othersiteure							
Other items				Fan air ta air air ann	dition on]
Capacity control		variable	1 l	For air-to-air air cond		4500	m3/h
Supusity some		741144515	-	air flow-rate,outdoor	measured		J
Sound power level,			1				
outdoor	L_{WA}	73.0	dB				
			-				
If engine driven:			mg/kWh				
Emissions of nitrogen	NOx ***	-	fuel input				
oxides			GCV				
			-				
			_				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
•			nal systems,L				
** If Cdc is not determined by measuremen	then the de	efault degra	dation coeffic	cient air conditioners s	hall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air of							
of the outdoor unit, with a combination of in	door unit(s)	recommend	ded by the ma	anufacturer or importe	r.		
						PCA001	7717 ∧

Information to identify the model(s) to which th	e information	relates :		FDC140VN	NA / SRK50ZSX-S (x3 u	nits)		
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	lementary he			1	No			
if applicable : electric motor								
Parameters shall be declared for the average	heating seaso	on , paramete	ers for the v	varmer and o	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated heating capacity					Seasonal space heating	ng energy efficiency ηs,h		
	Prated,h	15.5	kW				219.6	%
Declared heating capacity for part load at indo	or temperatur	e 20°C			Declared coefficient of	f performance or gas utilization eff	ficiency /	
and outdoor temperature Tj					auxiliary energy factor	for part load at given outdoor terr	nperatures Tj	
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or	336.0	%
		-				GUEh,bin / AEFh,bin		<u> </u>
T _j =+2°C	Pdh	5.7	kW		T _j =+2°C	COPd or	531.0	%
		-				GUEh,bin / AEFh,bin		<u> </u>
T _j =+7°C	Pdh	3.7	kW		T _j =+7°C	COPd or	760.0	%
		-				GUEh,bin / AEFh,bin		<u> </u>
T _j =+12°C	Pdh	2.8	kW		T _j =+12°C	COPd or	1100.0	%
						GUEh,bin / AEFh,bin		
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent	COPd or	274.0	%
			1		temperature	GUEh,bin / AEFh,bin		
T _{OL} =operation limit	Pdh	8.0	kW		T _{OL} =operation limit	COPd or	252.0	%
			1			GUEh,bin / AEFh,bin		
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or	-	%
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
			1					1
Bivalent temperature	T_biv	-10.0	°C		For water-to-air heat			
			1		pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
				4				
								1
Power consumpiton in modes other than 'activ	e mode'				Supplementary heater	elbu	L	kW
			1		back-up heating capac	city		J
Off mode	P _{OFF}	0.008	kW					1
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input	P _{SB}	0.008	kW
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode			J
				-				
Other items								1
		variable	1		For air-to-air heat pum	•	4380	m3/h
Capacity control		variable]		air flow-rate,outdoor m	neasured		J
			1					1
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air			m3/h
outdoor measured			ļ		Rated brine or water fi			1113/11
			1		outdoor side heat exch	nanger		J
Emissions of nitrogen	NOx	_	mg/kWh					
oxides(if applicable)	***		fuel input					
			GCV					
				†	<u> </u>			
GWP of the			kg CO _{2eq}					
		2088	(100years))				
refrigerant			l ' '		1			
					1			
Contact details Mitsubishi	heavy indust	ries thermal	systems I T	ΓD	1			
** If Cdh is not determined by measurement th					ners shall be 0,25.			
*** from 26 September 2018		3			, .			
Where information relates to multi-spilt air con	ditionare the t	test recult or	nd nerforms	nce data ba	obtained on the basis o	f the performance		
of the outdoor unit, with a combination of indoor			•			п по репоппансе		
or are outdoor unit, with a combination of mood	or unit(a) IECO	nenueu D	y une manul	acturer Ut III	portor.			
<u> </u>							PCA001	Z717 A

Model SRK140VSATZSX

Model(s): FDC140VSA / SRK5		units)					
Outdoor side heat exchanger of air condition	ner:	air					
Indoor side heat exchanger of air condition	er:	air					
Type: vapour compression							
if applicable : electric motor							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity				Seasonal space cool	ling energy		
	Prated,c	13.6	kW	efficiency ηs,c		311.5	%
Declared cooling capacity for part load at g	iven outdoor	r temperatu	res	Declared energy effic	ciency ratio or gas utilization efficier	ncy /	
Tj and indoor 27°C/19°C(dry/wet bulb)				auxiliary energy facto	or for part load at given outdoor tem	peratures '	Tj
			,		r		,
Tj=+35°C	Pdc	13.6	kW	Tj=+35°C	EERd or	300.0	%
			,		GUEc,bin / AEFc,bin		
Tj=+30°C	Pdc	10.0	kW	Tj=+30°C	EERd or	533.0	%
			,		GUEc,bin / AEFc,bin		
Tj=+25°C	Pdc	6.4	kW	Tj=+25°C	EERd or	859.0	%
			,		GUEc,bin / AEFc,bin		
Tj=+20°C	Pdc	3.9	kW	Tj=+20°C	EERd or	2438.0	%
			,		GUEc,bin / AEFc,bin]
Degradation							
coefficient for	Cdc	0.25	-				
air conditioners**							
Power consumpiton in other than 'active mo	ode'						
			_				_
Off mode	P_{OFF}	0.008	kW	Crankcase heater me	ode P _{CK}	0.008	kW
Thermostat-off mode	P_{TO}	0.000	kW	Standby mode	P _{SB}	0.008	kW
Other items					г		,
			,	For air-to-air air cond	ditioner:	4500	m3/h
Capacity control		variable		air flow-rate,outdoor	measured]
			,				
Sound power level,	L_{WA}	73.0	dB				
outdoor	WA						
			,				
If engine driven:	NOx		mg/kWh				
Emissions of nitrogen	***	-	fuel input				
oxides			GCV				
			_				
GWP of the		2088	kg CO _{2eq}				
refrigerant			(100years)				
Contact details Mitsubish	i heavy indu	stries thern	nal systems,L	TD			
** If Cdc is not determined by measuremen	t then the de	efault degra	dation coeffic	cient air conditioners st	hall be 0,25.		
*** from 26 September 2018							
Where information relates to multi-spilt air	conditioners	the test res	sult and perfo	rmance data be obtain	ed on the basis of the performance		
of the outdoor unit, with a combination of in	door unit(s)	recommend	ded by the ma	anufacturer or importer	r.		
						Barri	
						PCA001	1//1//\\\\

Information to identify the model(s) to which the	e information	relates :		FDC140VS	SA / SRK50ZSX-S (x3 u	nits)		
Outdoor side heat exchanger of heat pump :		air						
Indoor side heat exchanger of heat pump :		air						
Indication if the heater is equipped with a supp	ementary hea	ater :		١	No			
if applicable : electric motor								
Parameters shall be declared for the average h	neating seaso	n , paramet	ers for the w	varmer and c	colder heating seasons	are optional.		
Item	Symbol	Value	Unit		Item	Symbol	Val	ue Unit
Rated heating capacity					Seasonal space heatir	ng energy efficiency ηs,h		
	Prated,h	15.5	kW				219	0.6 %
Declared heating capacity for part load at indoor	or tomporatur	o 20°C	1	1	Doctored coefficient of	f performance or gas utilizatio	n officionay /	I
and outdoor temperature Tj	or temperature	6 20 0				for part load at given outdoor		Тј
T _j =-7°C	Pdh	9.3	kW		T _j =-7°C	COPd or		
,					,	GUEh,bin / AEFh,bin	336	6.0 %
T _j =+2°C	Pdh	5.7	kW		T _i =+2°C	COPd or		
,					,	GUEh,bin / AEFh,bin	531	.0 %
T _j =+7°C	Pdh	3.7	kW		T _i =+7°C	COPd or		
,			1		,,	GUEh,bin / AEFh,bin	760	0.0 %
T _i =+12°C	Pdh	2.8	kW		T _i =+12°C	COPd or		
1,-112.0	i dii		J.v.v.		1,-1120		1100	0.0 %
T -birelest to see east us	Dalle	10.5],,,,,		T -hivelest	GUEh,bin / AEFh,bin		
T _{biv} =bivalent temperature	Pdh	10.5	kW		T _{biv} =bivalent temperature	COPd or	274	l. 0 %
		0.0	1			GUEh,bin / AEFh,bin		
T _{OL} =operation limit	Pdh	8.0	kW		T _{OL} =operation limit	COPd or	252	2.0 %
	,		1			GUEh,bin / AEFh,bin		
For air-to-water heat pumps :	Pdh	-	kW		For air-to-water heat	COPd or	-	. %
T _j =-15°C					pumps:T _j =-15°C	GUEh,bin / AEFh,bin		
(if T _{OL} <-20°C)					(if T _{OL} <-20°C)			
			1					
Bivalent temperature	T _{biv}	-10.0	°C		For water-to-air heat			
			,		pumps:Operation limit		-	°C
Degradation					T _{ol} temperature			
coefficient	C_{dh}	0.25	-					
heat pumps**								
			•					
Power consumpiton in modes other than 'active	e mode'				Supplementary heater			110/
·					back-up heating capac		elbu -	kW
Off mode	P _{OFF}	0.008	kW		3			<u> </u>
Thermostat-off mode	P _{TO}	0.015	kW		Type of energy input		_	
Crankcase heater mode	P _{CK}	0.008	kW		Standby mode		P _{SB} 0.00	08 kW
			1		Clanaby mode			
Other items				1				
					For air-to-air heat pum	ine:		
Canacity central	İ	variable]				438	80 m3/h
Capacity control	ļ	74114510	1		air flow-rate,outdoor m	leasured		
	1		1					
Sound power level,	L_{WA}	73.0	dB		For water-/brine-to-air			m3/h
outdoor measured	ļ		j		Rated brine or water fi			1113/11
	i		1		outdoor side heat exch	nanger		
Emissions of nitrogen	NOx		mg/kWh					
oxides(if applicable)	***	-	fuel input					
			GCV					
				4				
		1	1					
GWP of the		2088	kg CO _{2eq}					
refrigerant			(100years)					
Contact details Mitsubishi	heavy industr	ries thermal	systems,LT	D				
** If Cdh is not determined by measurement the	en the default	degradatio	n coefficient	air condition	ners shall be 0,25.			
*** from 26 September 2018								
Where information relates to multi-spilt air cond	ditioners.the t	est result ar	nd performa	nce data be	obtained on the basis or	f the performance		
of the outdoor unit, with a combination of indoo								
, 2 22	(2), (000)		,	2. 3				
							PC	CA001Z717 🛆

Models SRK50ZSX-S, 60ZSX-S, 100ZR-S

Model(s): SRK50ZSX-S									
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit		
Cooling capacity (sensible)	$P_{rated,c}$	4.0	kW	Total electric power input	P_{elec}	0.030	kW		
Cooling capacity (latent)	$P_{rated,c}$	1.0	kW	Sound power level (per speed setting,if applicable)	L_{WA}	59.0	dB		
Heating capacity	$P_{rated,h}$	6.0	kW						
Contact details	Mitsubishi I	Mitsubishi heavy industries thermal systems,LTD							

Model(s): SRK60ZSX-S									
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit		
Cooling capacity (sensible)	$P_{rated,c}$	4.7	kW	Total electric power input	P _{elec}	0.040	kW		
Cooling capacity (latent)	$P_{rated,c}$	1.4	kW	Sound power level (per speed setting,if applicable)	L_{WA}	62.0	dB		
Heating capacity	$P_{rated,h}$	6.8	kW						
Contact details	Mitsubishi I	Mitsubishi heavy industries thermal systems,LTD							

Model(s): SRK100ZR-S								
Item	Symbol	Vaiue	Unit	Item	Symbol	Vaiue	Unit	
Cooling capacity (sensible)	P _{rated,c}	7.4	kW	Total electric power input	P _{elec}	0.060	kW	
Cooling capacity (latent)	P _{rated,c}	2.6	kW	Sound power level (per speed setting,if applicable)	L _{WA}	63.0	dB	
Heating capacity	$P_{rated,h}$	11.2	kW					
Contact details	Mitsubishi I	Mitsubishi heavy industries thermal systems,LTD						

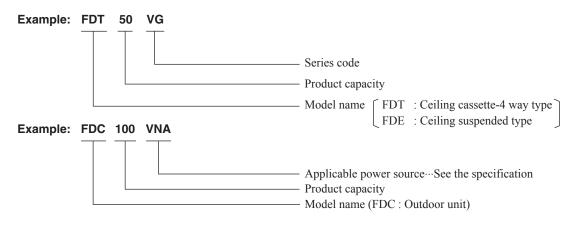
2. V MULTI SYSTEM

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2.1 GENERAL INFORMATION

2.1.1 How to read the model name



2.1.2 Table of models

Model Capacity	50	60	71
Ceiling cassette-4 way type (FDT)	0	0	0
Ceiling suspended type (FDE)	0	0	0
Outdoor unit to be combined (FDC)	FDC100VNA FDC100VSA (4 Horse Power)	FDC125VNA FDC125VSA (5 Horse Power)	FDC140VNA FDC140VSA (6 Horse Power)

2.1.3 Table of system combinations

Outdoor unit	Туре	Indoor unit assembly capacity	Branch pipe set (Option)		
FDC100VNA FDC100VSA	50+50				
FDC125VNA FDC125VSA	I WIII	60+60 50+71	DIS-WA1G		
	Twin	71+71			
FDC140VNA FDC140VSA	Triple	50+50+50	DIS-TA1G or DIS-WA1G×2set		

Notes(1) Always use the branch piping set (option) at branches in the refrigerant piping.

(2) If wireless specifications are used, use 1 wireless indoor unit in combination with wired indoor units.

(3) The combinations except the above table forbids.

2.2 SPECIFICATIONS

(1) Indoor units

(a) Ceiling cassette-4 way type (FDT)

Model Item			Model			
				FDT50VG		
Power source			1 Phase 220-240V 50Hz / 220V 60Hz			
Operation	Sound power level	Cooling Heating		54		
data	Sound pressure level	Cooling Heating	dB(A)	P-Hi:38 Hi:33 Me:30 Lo:27		
	Silent mode sound press	sure level		-		
Exterior din	nensions (Height × Width	× Depth)	mm	Unit 236 × 840 × 840 Panel 35 × 950 × 950		
Exterior app	pearance			Plaster white		
(Munsell co	olor)			(6.8Y8.9/0.2) near equivalent		
Net weight			kg	UNIT 19 PANEL 5		
Heat excha	nger			Louver fin & inner grooved tubing		
Fan type &	Q'ty			Turbo fan ×1		
Fan motor (Starting method)		W	50 < Direct line start >		
Air flow Cooling Heating		m³/min	P-Hi:20 Hi:16 Me:13 Lo:10			
Available external static pressure		Pa	0			
Outside air	intake			Possible		
Air filter, Qu	ality / Quantity			Pocket plastic net ×1(Washable)		
Shock & vib	oration absorber			Rubber sleeve (for fan motor)		
Operation	Remote control			(option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-T-5AW-E2		
control	Room temperature contr	ol		Thermostat by electronics		
CONTROL	Operation display			-		
Safety equi	nmonto			Overload protection for fan motor		
Salety equi	pinents			Frost protection thermostat		
	Defricerent pining size (00)		Liquid line: φ 6.35(1/4")		
	Refrigerant piping size (O.D.)	mm	Gas line: ϕ 12.7 (1/2")		
Installation	Connecting method			Flare piping		
data Attached length of piping Insulation for piping Drain hose		m	-			
			Necessary (both Liquid & Gas lines)			
			Hose connectable VP25 (O.D.32)			
Drain pump, max lift height		mm	Built-in drain pump, 850			
IP number				IPX0		
Standard ad	ccessories			Mounting kit, Drain hose		
Option part	S			_		
A1 1 (4)	T			T		

Notes (1) The data are measured at the following conditions.

Item	Indoor air t	Indoor air temperature		temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

⁽²⁾ This air-conditioner is manufactured and tested in conformity with the ISO.

⁽³⁾ Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	
Item				FDT60VG
Power source			1 Phase 220-240V 50Hz / 220V 60Hz	
Operation	Sound power level	Cooling Heating		60
data	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 44 Hi: 34 Me: 32 Lo: 28
	Silent mode sound press	sure level		-
Exterior din	nensions (Height × Width	× Depth)	mm	Unit 236 × 840 × 840 Panel 35 × 950 × 950
Exterior ap	pearance			Plaster white
(Munsell co	olor)			(6.8Y8.9/0.2) near equivalent
Net weight			kg	UNIT 21 PANEL 5
Heat excha	inger			Louver fin & inner grooved tubing
Fan type &	Q'ty			Turbo fan ×1
Fan motor	(Starting method)		W	50 < Direct line start >
Air flow		Cooling Heating	m³/min	P-Hi:26 Hi:17 Me:14 Lo:11
Available ex	Available external static pressure		Pa	0
Outside air	intake			Possible
Air filter, Qu	uality / Quantity			Pocket plastic net ×1(Washable)
Shock & vil	oration absorber			Rubber sleeve (for fan motor)
Operation	Remote control			(option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-T-5AW-E2
control	Room temperature contr	ol		Thermostat by electronics
CONTROL	Operation display			-
Safety equi	inmente			Overload protection for fan motor
Salety equi	prilerits			Frost protection thermostat
	Refrigerant piping size (O D)	mm	Liquid line: φ 6.35(1/4")
	heirigerant piping size (J.D.)	111111	Gas line: φ12.7 (1/2")
Installation	Connecting method			Flare piping
data	data Attached length of piping		m	_
Insulation for piping			Necessary (both Liquid & Gas lines)	
Drain hose			Hose connectable VP25 (O.D.32)	
Drain pump	Drain pump, max lift height		mm	Built-in drain pump, 850
IP number				IPX0
Standard a	ccessories			Mounting kit, Drain hose
Option part	ts			_
Notes (1)	The data are measured at			The pine length in 7.5m

		_			
Item	Indoor air t	emperature Outdoor air temperature		temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1000151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

 (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model			
Item				FDT71VG		
Power sour	ce			1 Phase 220-240V 50Hz / 220V 60Hz		
Operation	Sound power level	Cooling Heating		62		
data	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 46 Hi: 35 Me: 34 Lo: 29		
	Silent mode sound press	ure level		_		
Exterior din	nensions (Height × Width	< Depth)	mm	Unit 236 × 840 × 840 Panel 35 × 950 × 950		
Exterior ap	pearance			Plaster white		
(Munsell co	olor)			(6.8Y8.9/0.2) near equivalent		
Net weight			kg	UNIT 21 PANEL 5		
Heat excha	inger			Louver fin & inner grooved tubing		
Fan type &	Q'ty			Turbo fan ×1		
Fan motor	(Starting method)		W	50 < Direct line start >		
Air flow	Air flow Cooling Heating		m³/min	P-Hi: 28 Hi: 18 Me: 15 Lo: 12		
Available external static pressure		Pa	0			
Outside air	intake			Possible		
	uality / Quantity			Pocket plastic net ×1(Washable)		
Shock & vil	oration absorber			Rubber sleeve (for fan motor)		
Operation	Remote control			(option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-T-5AW-E2		
control	Room temperature contr	ol		Thermostat by electronics		
CONTROL	Operation display			_		
Safety equi	inments			Overload protection for fan motor		
Salety equi	prilerits			Frost protection thermostat		
	Refrigerant piping size () D)	mm	Liquid line: φ 9.52(3/8")		
	0 11 0 (J.D.)	111111	Gas line: φ 15.88 (5/8")		
Installation				Flare piping		
data	Attached length of piping	9	m	_		
Insulation for piping			Necessary (both Liquid & Gas lines)			
Drain hose			Hose connectable VP25 (O.D.32)			
	Drain pump, max lift height		mm	Built-in drain pump, 850		
IP number				IPX0		
Standard a				Mounting kit, Drain hose		
Option part	ts			_		
Notes (1)	The data are measured at	the following	aa condi	tions The nine length is 7.5m		

		_		· · · · · · · · · · · · · · · · · · ·	
Item	Indoor air t	emperature	nperature Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

 (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

(b) Ceiling suspended type (FDE)

		Model	FDE50VG			
Power source			1 Phase 220-240V 50Hz / 220V 60Hz			
Sound power level	Cooling Heating		60			
Sound pressure level	Cooling Heating	dB(A)	P-Hi: 46 Hi: 38 Me: 36 Lo: 31			
Silent mode sound press	ure level		-			
ensions (Height × Width >	Depth)	mm	210 × 1,070 × 690			
earance			Plaster white			
lor)			(6.8Y8.9/0.2) near equivalent			
		kg	28			
nger			Louver fin & inner grooved tubing			
Q'ty			Centrifugal fan ×2			
Starting method)		W	30 < Direct line start >			
Air flow Cooling Heating		m³/min	P-Hi:13 Hi:10 Me:9 Lo:7			
Available external static pressure		Pa	0			
ntake			Not possible			
ality / Quantity			Pocket plastic net ×2 (Washable)			
ration absorber			Rubber sleeve (for fan motor)			
Remote control			(option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-E-E2			
Room temperature contro	ol		Thermostat by electronics			
Operation display			_			
omente			Internal thermostat for fan motor			
			Frost protection thermostat			
Refrigerant nining size ((ו ח כ	mm	Liquid line: φ6.35 (1/4")			
			Gas line: ϕ 12.7 (1/2")			
Installation Connecting method			Flare piping			
data Attached length of piping Insulation for piping		m	_			
			Necessary (both Liquid & Gas lines)			
Drain hose			Hose connectable VP20 (O.D.26)			
, max lift height		mm	_			
			IPX0			
cessories			Mounting kit, Drain hose			
3			_			
	Sound power level Sound pressure level Silent mode sound press ensions (Height × Width > earance elor) Inger Oty Starting method) ternal static pressure entake eality / Quantity ration absorber Remote control Room temperature control Operation display ments Refrigerant piping size (Connecting method Attached length of piping Insulation for piping Drain hose , max lift height	Sound power level Cooling Heating Sound pressure level Cooling Heating Silent mode sound pressure level lensions (Height × Width × Depth) learance lor) learance lor) learance lor) mger 2'ty Starting method) Cooling Heating ternal static pressure Intake lality / Quantity ration absorber Remote control Room temperature control Operation display learance lord Attached length of piping Insulation for piping Drain hose Inmax lift height Insulation for piping	Sound power level Cooling Heating Sound pressure level Cooling Heating Silent mode sound pressure level ensions (Height × Width × Depth) mm pearance elor) kg Tooling Heating method) W Starting method) W Ecooling Heating mall mall mall mall mall mall mall mal			

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

⁽²⁾ This air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

⁽⁴⁾ The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model			
Item				FDE60VG		
Power source			1 Phase 220-240V 50Hz / 220V 60Hz			
Sound power level Heating		Cooling Heating		60		
Operation data	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 47 Hi: 41 Me: 37 Lo: 32		
	Silent mode sound press	sure level		_		
Exterior din	nensions (Height × Width	× Depth)	mm	210 × 1,320 × 690		
Exterior ap	pearance			Plaster white		
(Munsell co	olor)			(6.8Y8.9/0.2) near equivalent		
Net weight			kg	33		
Heat excha	inger			Louver fin & inner grooved tubing		
Fan type &				Centrifugal fan ×4		
Fan motor	Fan motor (Starting method)		W	50 < Direct line start >		
Air flow	Air flow Cooling Heating		m³/min	P-Hi: 20 Hi: 16 Me: 13 Lo: 10		
Available ex	Available external static pressure		Pa	0		
Outside air	intake			Not possible		
Air filter, Qu	ality / Quantity			Pocket plastic net ×2 (Washable)		
Shock & vil	oration absorber			Rubber sleeve (for fan motor)		
Operation	Remote control			(option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-E-E2		
control	Room temperature contr	ol		Thermostat by electronics		
CONTROL	Operation display			-		
Safety equi	nmente			Internal thermostat for fan motor		
Salety equi	prilerits			Frost protection thermostat		
	Refrigerant piping size (0.0.)	mm	Liquid line: φ 6.35 (1/4")		
	heingerant piping size (O.D.)	mm	Gas line: φ12.7 (1/2")		
Installation Connecting method			Flare piping			
data Attached length of piping		m	_			
Insulation for piping			Necessary (both Liquid & Gas lines)			
Drain hose			Hose connectable VP20 (O.D.26)			
Drain pump	, max lift height		mm	-		
IP number				IPX0		
Standard a	ccessories			Mounting kit, Drain hose		
Option part	S			_		
Notes (1)	The data are magazired at	t the fellowin	na condi	The pine length is 7.5m		

Item	Indoor air temperature		Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1909191-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

 (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	FDE71VG			
Item				FDETIVG			
Power sour	ce			1 Phase 220-240V 50Hz / 220V 60Hz			
Operation	Sound power level	Cooling Heating		60			
data	Sound pressure level	Cooling Heating	dB(A)	P-Hi: 47 Hi: 41 Me: 37 Lo: 32			
	Silent mode sound press	sure level		-			
Exterior din	nensions (Height × Width	× Depth)	mm	210 × 1,320 × 690			
Exterior app	pearance			Plaster white			
(Munsell co	olor)			(6.8Y8.9/0.2) near equivalent			
Net weight			kg	33			
Heat excha	inger			Louver fin & inner grooved tubing			
Fan type &	Q'ty			Centrifugal fan ×4			
Fan motor	(Starting method)		W	50 < Direct line start >			
Air flow	Air flow Cooling Heating		m³/min	P-Hi: 20 Hi: 16 Me: 13 Lo: 10			
Available ex	xternal static pressure		Pa	0			
Outside air	intake			Not possible			
	ality / Quantity			Pocket plastic net ×2 (Washable)			
Shock & vik	oration absorber			Rubber sleeve (for fan motor)			
Operation	Remote control			(option) wired: RC-EX3, RC-E5, RCH-E3 wireless: RCN-E-E2			
control	Room temperature contr	ol		Thermostat by electronics			
CONTRIO	Operation display			_			
Safety equi	nmente			Internal thermostat for fan motor			
Salety equi	prilents			Frost protection thermostat			
	Refrigerant piping size (O D)	mm	Liquid line: φ 9.52 (3/8")			
				Gas line: ϕ 15.88 (5/8")			
Installation Connecting method			Flare piping				
data Attached length of piping		m	_				
Insulation for piping			Necessary (both Liquid & Gas lines)				
Drain hose			Hose connectable VP20 (O.D.26)				
	o, max lift height		mm	_			
IP number				IPX0			
Standard a				Mounting kit, Drain hose			
Option part				_			
[NI_+ /4]	The date and accessing a sa-	التناسع والما		The sales Locate is 7.5 cm			

Item	Indoor air temperature		Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
 (3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

 (4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(2) Outdoor units

		,	Model				
Item				FDC100VNA			
Power sour	ce			1 Phase 220-240V 50Hz / 220V 60Hz			
Nominal cooling capacity (range)		kW	10.0 [4.0(Min.)-11.2(Max.)]				
	Nominal heating capacity		kW	11.2 [4.0(Min.)-12.5(Max.)]			
Operation	Sound power level	Cooling		70			
data		Cooling	dB(A)	54			
	Sound pressure level	Heating	`	56			
	Silent mode sound pressi	ure level		50/44 (Normal/Silent)			
Exterior din	nensions (Height × Width ×	Depth)	mm	845×970×370			
Exterior app	pearance			Stucco white			
(Munsell co				(4.2Y7.5/1.1) near equivalent			
Net weight			kg	80			
Compresso	or type & Q'ty			RMT5126MCE3×1			
Compressor motor (Starting method)			kW	Direct line start			
Refrigerant oil (Amount, type)			l	0.9 M-MA68			
Refrigerant (Type, amount, pre-charge length)		kg	R410A 3.8kg in outdoor unit (incl. the amount for the piping of : 30m)				
Heat exchanger			Straight fin & inner grooved tubing				
Refrigerant	control			Electronic expansion valve			
Fan type &	Q'ty			Propeller fan ×1			
	(Starting method)		W	86 < Direct line start >			
Air flow	-	Cooling	m³/min	75			
Air flow		Heating	m /min	73			
Shock & vik	oration absorber			Rubber sleeve (for compressor)			
Electric hea	ater		W	20 (Crankcase heater)			
0-4-4				Internal thermostat for fan motor			
Safety equi	pments			Abnormal discharge temperature protection			
	Befriessest sieles eies (6) D)		Liquid line: φ 9.52 (3/8")			
	Refrigerant piping size (C	J.D.)	mm –	Gas line: φ 15.88 (5/8")			
	Connecting method			Flare piping			
Installation	Attached length of piping		m	-			
data	Insulation for piping			Necessary (both Liquid & Gas lines)			
	Refrigerant line (one way) length	m	Max.50m			
	Vertical height diff. between O		m	Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)			
	Drain hose			Hole size ϕ 20 × 3pcs			
IP number				IP24			
Standard a	ccessories			_			
Option part				<u>-</u>			
	The data are measured at	the fellowi		The nine length is 7.5m			

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

- (2) This air-conditioner is manufactured and tested in conformity with the ISO.
- (a) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 (4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model	FDC400/CA		
Item				FDC100VSA		
Power sour	ce			3 Phase 380-415V 50Hz / 380V 60Hz		
Nominal cooling capacity (range)		kW	10.0 [4.0(Min.)-11.2(Max.)]			
	Nominal heating capacity	(range)	kW	11.2 [4.0(Min.)-12.5(Max.)]		
Operation	Sound power level	Cooling Heating		70		
data	Sound pressure level	Cooling	dB(A)	54		
	·	Heating		56		
	Silent mode sound pressu	ire level		50/44 (Normal/Silent)		
Exterior din	nensions (Height × Width ×	Depth)	mm	845×970×370		
Exterior ap	pearance			Stucco white		
(Munsell co	olor)			(4.2Y7.5/1.1) near equivalent		
Net weight			kg	82		
Compresso	or type & Q'ty			RMT5126MCE4×1		
Compresso	or motor (Starting method)		kW	Direct line start		
Refrigerant	oil (Amount, type)		Q	0.9 M-MA68		
Refrigerant (Type, amount, pre-charge length)		kg	R410A 3.8kg in outdoor unit (incl. the amount for the piping of : 30m)			
Heat exchanger				Straight fin & inner grooved tubing		
Refrigerant	control			Electronic expansion valve		
Fan type &	Q'ty			Propeller fan ×1		
Fan motor	(Starting method)		W	86 < Direct line start >		
A : 61		Cooling	m³/min	75		
Air flow		Heating	m ⁻ /min	73		
Shock & vil	oration absorber			Rubber sleeve (for compressor)		
Electric hea	ater		W	20 (Crankcase heater)		
0.6.1				Internal thermostat for fan motor		
Safety equi	pments			Abnormal discharge temperature protection		
	B (: /o	D)		Liquid line: φ9.52 (3/8")		
	Refrigerant piping size (O	.D.)	mm -	Gas line: ϕ 15.88 (5/8")		
	Connecting method			Flare piping		
Installation	Attached length of piping		m			
data	Insulation for piping			Necessary (both Liquid & Gas lines)		
	Refrigerant line (one way)	lenath	m	Max.50m		
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)		
	Drain hose			Hole size ϕ 20 × 3pcs		
IP number				IP24		
Standard a	ccessories			- · · · · · · · · · · · · · · · · · · ·		
Option part				——————————————————————————————————————		
	The data are measured at t	the following	na condit	ions. The pipe length is 7.5m.		

Item	Indoor air temperature		Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1303131-11

⁽²⁾ This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

Item			Model	FDC125VNA		
Power sour	ce			1 Phase 220-240V 50Hz / 220V 60Hz		
Nominal cooling capacity (range)		kW	12.5 [5.0(Min.)-14.0(Max.)]			
	Nominal heating capacity		kW	14.0 [4.0(Min.)-16.0(Max.)]		
Operation	Sound power level	Cooling Heating		71		
data	Sound pressure level	Cooling Heating	dB(A)	55 57		
	Silent mode sound pressu	re level		51/45 (Normal/Silent)		
Exterior dim	nensions (Height × Width ×	Depth)	mm	845×970×370		
Exterior app	pearance			Stucco white		
(Munsell co	olor)			(4.2Y7.5/1.1) near equivalent		
Net weight			kg	80		
Compresso	r type & Q'ty			RMT5126MCE3×1		
Compresso	r motor (Starting method)		kW	Direct line start		
Refrigerant	oil (Amount, type)		l	0.9 M-MA68		
Refrigerant (Type, amount, pre-charge length)		length)	kg	R410A 3.8kg in outdoor unit (incl. the amount for the piping of : 30m)		
Heat exchanger				Straight fin & inner grooved tubing		
Refrigerant control			Electronic expansion valve			
Fan type & Q'ty				Propeller fan ×1		
Fan motor (Starting method)		W	86 < Direct line start >		
	,	Cooling	3, ,	75		
Air flow		Heating	m³/min –	73		
Shock & vib	oration absorber			Rubber sleeve (for compressor)		
Electric hea	ter		W	20 (Crankcase heater)		
				Internal thermostat for fan motor		
Safety equip	pments			Abnormal discharge temperature protection		
		5 \		Liquid line: φ 9.52 (3/8")		
	Refrigerant piping size (O	.D.)	mm –	Gas line: ϕ 15.88 (5/8")		
	Connecting method			Flare piping		
Installation	Attached length of piping		m	_		
data	Insulation for piping			Necessary (both Liquid & Gas lines)		
	Refrigerant line (one way)	length	m	Max.50m		
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)		
	Drain hose			Hole size φ20 × 3pcs		
IP number				IP24		
Standard ad	ccessories			_		
Option part				_		
	The data are measured at	the following	ng conditi	ons. The pipe length is 7.5m.		

Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Staridards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

⁽²⁾ This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

Item			Model	FDC125VSA		
Power source				3 Phase 380-415V 50Hz / 380V 60Hz		
	Nominal cooling capacity (range)		kW	12.5 [5.0(Min.)-14.0(Max.)]		
Operation	Nominal heating capacity (range)		kW	14.0 [4.0(Min.)-16.0(Max.)]		
	Sound power level	Cooling Heating		71		
data	Sound pressure level	Cooling Heating	dB(A)	55 57		
	Silent mode sound pressure level			51/45 (Normal/Silent)		
Exterior din	nensions (Height × Width ×	Depth)	mm	845×970×370		
Exterior app	pearance			Stucco white		
(Munsell co	olor)			(4.2Y7.5/1.1) near equivalent		
Net weight			kg	82		
Compresso	r type & Q'ty			RMT5126MCE4×1		
Compresso	r motor (Starting method)		kW	Direct line start		
Refrigerant	oil (Amount, type)		l	0.9 M-MA68		
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (incl. the amount for the piping of : 30m)		
Heat excha	nger			Straight fin & inner grooved tubing		
Refrigerant control				Electronic expansion valve		
Fan type & Q'ty				Propeller fan ×1		
Fan motor (Starting method)		W	86 < Direct line start >		
	,	Cooling	3, ,	75		
Air flow		Heating	m³/min —	73		
Shock & vib	oration absorber			Rubber sleeve (for compressor)		
Electric hea	iter		W	20 (Crankcase heater)		
0 ()				Internal thermostat for fan motor		
Safety equi	pments			Abnormal discharge temperature protection		
				Liquid line: φ 9.52 (3/8")		
	Refrigerant piping size (O.D.)		mm	Gas line: ϕ 15.88 (5/8")		
	Connecting method			Flare piping		
Installation	Attached length of piping		m			
data	Insulation for piping			Necessary (both Liquid & Gas lines)		
	Refrigerant line (one way)	length	m	Max.50m		
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)		
	Drain hose			Hole size $\phi 20 \times 3pcs$		
IP number			IP24			
Standard ad	ccessories			<u> </u>		
Option part						
	The data are measured at	the followi	na conditi	ons. The pipe length is 7.5m.		

Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

⁽²⁾ This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

			Model				
Item				FDC140VNA			
Power source				1 Phase 220-240V 50Hz / 220V 60Hz			
	Nominal cooling capacity (range)		kW	13.6 [5.0(Min.)-14.5(Max.)]			
Operation	Nominal heating capacity (range)		kW	15.5 [4.0(Min.)-16.5(Max.)]			
	Sound power level	Cooling Heating		73			
data	C	Cooling	dB(A)	57			
	Sound pressure level	Heating		59			
	Silent mode sound pressu	ire level		53/47 (Normal/Silent)			
Exterior din	nensions (Height × Width ×	Depth)	mm	845×970×370			
Exterior ap	pearance			Stucco white			
(Munsell co	olor)			(4.2Y7.5/1.1) near equivalent			
Net weight			kg	80			
Compresso	or type & Q'ty			RMT5126MCE3×1			
Compresso	or motor (Starting method)		kW	Direct line start			
Refrigerant	oil (Amount, type)		Q	0.9 M-MA68			
Refrigerant	(Type, amount, pre-charge	length)	kg	R410A 3.8kg in outdoor unit (incl. the amount for the piping of : 30m)			
Heat excha	anger			Straight fin & inner grooved tubing			
Refrigerant	control			Electronic expansion valve			
Fan type &	Q'ty			Propeller fan ×1			
Fan motor	(Starting method)		W	86 < Direct line start >			
Λ: fl =		Cooling	m³/min	75			
Air flow		Heating	m /min	73			
Shock & vil	bration absorber			Rubber sleeve (for compressor)			
Electric hea	ater		W	20 (Crankcase heater)			
0.1.				Internal thermostat for fan motor			
Safety equi	ipments			Abnormal discharge temperature protection			
	Defiles and disinguished (O	· D \		Liquid line: φ 9.52 (3/8")			
	Refrigerant piping size (O).D.)	mm –	Gas line: ϕ 15.88 (5/8")			
	Connecting method			Flare piping			
Installation	Attached length of piping		m	-			
data	Insulation for piping			Necessary (both Liquid & Gas lines)			
	Refrigerant line (one way)	length	m	Max.50m			
	Vertical height diff. between O.		m	Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)			
	Drain hose			Hole size ϕ 20 × 3pcs			
IP number			IP24				
Standard a	ccessories	,		_			
Option part	ts			_			
	The data are measured at	the followi	na conditi	ons. The pipe length is 7.5m.			

Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19℃	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

⁽²⁾ This air-conditioner is manufactured and tested in conformity with the ISO.
(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 230V 50Hz or 220V 60Hz.

			Model				
Item				FDC140VSA			
Power source				3 Phase 380-415V 50Hz / 380V 60Hz			
Operation	Nominal cooling capacity (range)		kW	13.6 [5.0(Min.)-14.5(Max.)]			
	Nominal heating capacity	(range)	kW	15.5 [4.0(Min.)-16.5(Max.)]			
	Sound power level	Cooling Heating	٦	73			
data		Cooling		57			
	Sound pressure level	Heating		59			
	Silent mode sound pressu	ure level		53/47 (Normal/Silent)			
Exterior din	nensions (Height × Width ×	Depth)	mm	845×970×370			
Exterior app	pearance			Stucco white			
(Munsell co	olor)			(4.2Y7.5/1.1) near equivalent			
Net weight			kg	82			
Compresso	or type & Q'ty			RMT5126MCE4×1			
Compresso	or motor (Starting method)		kW	Direct line start			
Refrigerant	oil (Amount, type)		l	0.9 M-MA68			
Refrigerant	(Type, amount, pre-charge	e length)	kg	R410A 3.8kg in outdoor unit (incl. the amount for the piping of : 30m)			
Heat excha	ınger			Straight fin & inner grooved tubing			
Refrigerant	control			Electronic expansion valve			
Fan type &	Q'ty			Propeller fan ×1			
Fan motor ((Starting method)		W	86 < Direct line start >			
Air flow		Cooling	m³/min	75			
All llow		Heating		73			
Shock & vib	oration absorber			Rubber sleeve (for compressor)			
Electric hea	ater		W	20 (Crankcase heater)			
Cofoty coul	in manta			Internal thermostat for fan motor.			
Safety equi	priients			Abnormal discharge temperature protection.			
	Defiles and sinks a sink (6		mm	Liquid line: φ 9.52 (3/8")			
	Refrigerant piping size (C	J.D.)		Gas line: φ 15.88 (5/8")			
	Connecting method			Flare piping			
Installation data	Attached length of piping		m	_			
	Insulation for piping			Necessary (both Liquid & Gas lines)			
	Refrigerant line (one way) length		m	Max.50m			
	Vertical height diff. between O		m	Max.50m (Outdoor unit is higher) Max.15m (Outdoor unit is lower)			
	Drain hose			Hole size φ20 × 3pcs			
IP number				IP24			
Standard a	ccessories			_			
Option part	ts			_			
	The data are measured at	Ale e de II e i		The pine length is 7 Fm			

Item	Indoor air t	emperature	Outdoor air	temperature	Standards
Operation	DB	WB	DB	WB	Standards
Cooling	27°C	19°C	35°C	24°C	ISO5151-T1
Heating	20°C	_	7°C	6°C	1505151-11

⁽²⁾ This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

(4) The operation data indicate when the air-conditioner is operated at 400V 50Hz or 380V 60Hz.

(3) Operation chart

The V Multi is a system that allows for different models and capacities of indoor units to be connected so the individual operating characteristics of the indoor and outdoor are provided. Use the procedure shown in item (c) to calculate the combined operating characteristics.

(a) Operating characteristic of outdoor unit

(220-240V 50Hz/220V 60Hz)

Item	Model	FDC100VNA	FDC125VNA	FDC140VNA
Cooling power consumption	kW	2.60/2.62	3.91/3.91	4.70/4.70
Heating power consumption	K VV	2.51/2.51	3.60/3.60	4.29/4.29
Cooling running current		12.8-11.7/12.8	18.5-16.9/18.5	21.6-19.8/21.6
Heating running current	A	12.5-11.4/12.5	17.2-15.8/17.2	19.4-17.8/19.4
Inrush current (L.R.A) < Max. running current>	A	5 < 24>		

(380-415V 50Hz/380V 60Hz)

Item	Model	FDC100VSA	FDC125VSA	FDC140VSA
Cooling power consumption	kW	2.60/2.62	3.91/3.91	4.70/4.70
Heating power consumption	K VV	2.51/2.51	3.60/3.60	4.29/4.29
Cooling running current	Α.	3.8-3.5/3.8	5.9-5.4/5.9	7.2-6.6/7.2
Heating running current	А	3.7-3.3/3.7	5.4-4.9/5.4	6.8-6.2/6.8
Inrush current (L.R.A) <max. current="" running=""></max.>	A	5 <15>		

Note(1) This packaged air-conditioner is manufactured and tested in conformity with the following standard. ISO-T1 "UNITARY AIR-CONDITIONERS"

(b) Operating characteristic of indoor unit

FDT Series

(220-240V 50Hz/220V 60Hz)

Item	/lodel	FDT50VG	FDT60VG	FDT71VG
Cooling power consumption	1 337	0.04-0.04/0.04	0.07-0.07/0.07	0.08-0.08/0.08
Heating power consumption	kW	0.04-0.04/0.04	0.07-0.07/0.07	0.08-0.08/0.08
Cooling running current		0.20-0.19/0.20	0.35-0.32/0.35	0.40-0.37/0.40
Heating running current	A	0.20-0.19/0.20	0.35-0.32/0.35	0.40-0.37/0.40

FDE Series

(220-240V 50Hz/220V 60Hz)

Item	lodel	FDE50VG	FDE60VG	FDE71VG
Cooling power consumption	kW	0.05-0.06/0.06	0.10-0.11/0.11	0.11-0.12/0.14
Heating power consumption	K W	0.05-0.06/0.06	0.09-0.10/0.10	0.10-0.11/0.13
Cooling running current		0.25-0.26/0.29	0.46-0.48/0.50	0.50-0.53/0.67
Heating running current	A	0.23-0.25/0.28	0.42-0.44/0.46	0.46-0.48/0.63

Notes(1) This packaged air-conditioner is manufactured and tested in conformity with the following standard. ISO-T1 "UNITARY AIR-CONDITIONERS"

⁽²⁾ The values shown in the above table are common to both cooling and heating operations.

(c) Calculation of total operation characteristics

Since the operation characteristics of V Multi system depend on combination of indoor unit, calculate the total operation characteristics of the system by using the formulas below according to speciations of each indoor unit or outdoor unit.

(i) 1 Phase models

1) Total power consumption

Total power consumption (kW) = Power consumption of outdoor unit + \sum (Power consumption of indoor unit)

2) Total running current

Total running current (A) = Running current of outdoor unit + \sum (Running current of indoor unit)

3) Total power factor

Total power factor (%) = [Total power consumption (W) / Total running current (A) \times Power source] \times 100 Total operation characteristics = Operation characteristic value of outdoor unit + Operation characteristic value of indoor unit

[Example]

(Conditions) Operation voltage Indoor unit: 220 V, 50 Hz

Outdoor unit: 220 V, 50 Hz

Operation mode Cooling and Heating

Unit------ Outdoor unit: FDC140VNA × 1 unit

Indoor unit: FDT71VG × 2 units

Operation characteristics of each unit

(Cooling/Heating)

Item Model	FDC140VNA	FDT71VG
Power consumption (kW)	4.70/4.29	0.08/0.08
Running current (A)	21.6/19.4	0.40/0.40

① Total power consumption (kW)

(Cooling)
$$4.70 + (0.08 \times 2) = 4.86$$

(Heating)
$$4.29 + (0.08 \times 2) = 4.45$$

2 Total running current (A)

(Cooling)
$$21.6 + (0.40 \times 2) = 22.4$$

(Heating)
$$19.4 + (0.40 \times 2) = 20.2$$

3 Total power factor (%)

(Cooling)
$$\frac{4.86 \times 1000}{22.4 \times 220} \times 100 = 99 \%$$

(Heating)
$$\frac{4.45 \times 1000}{20.2 \times 220} \times 100 = 100 \%$$

(ii) 3 Phase models

1) Total power consumption

Total power consumption (kW) = Power consumption of outdoor unit + Σ (Power consumption of indoor unit)

2) Total running current

Total running current (A) = Running current of outdoor unit + $[\Sigma (Running current of indoor unit) \times 1/3]$

3) Total power factor

Total power factor (%) = [Total power consumption (W) / $\sqrt{3}$ × Total running current (A) × Power source] × 100 Total operation characteristics = Operation characteristic value of outdoor unit + Operation characteristic value of indoor unit

[Example]

(Conditions) Operation voltage Indoor unit: 220 V, 50 Hz

Outdoor unit: 380 V, 50 Hz

Operation mode Cooling and Heating

Unit----- Outdoor unit: FDC125VSA × 1 unit

Indoor unit: FDT50VG × 1 unit, FDT71VG × 1 unit

Operation characteristics of each unit

(Cooling/Heating)

Item Model	FDC125VSA	FDT50VG	FDT71VG
Power consumption (kW)	3.91/3.60	0.04/0.04	0.08/0.08
Running current (A)	5.9/5.4	0.20/0.20	0.40/0.04

① Total power consumption (kW)

(Cooling)
$$3.91 + 0.04 + 0.08 = 4.03$$
 (kW)

(Heating)
$$3.60 + 0.04 + 0.08 = 3.72$$
 (kW)

② Total running current (A)

(Cooling)
$$5.9 + \left[(0.20 + 0.40) \times \frac{1}{2} \right] = 6.1 \text{ (A)}$$

(Cooling)
$$5.9 + \left[(0.20 + 0.40) \times \frac{1}{3}) \right] = 6.1 \text{ (A)}$$

(Heating) $5.4 + \left[(0.20 + 0.40) \times \frac{1}{3}) \right] = 5.6 \text{ (A)}$

3 Total power factor (%)

(Cooling)
$$\frac{4.03 \times 1000}{\sqrt{3} \times 6.1 \times 380} \times 100 = 100 \%$$

(Cooling)
$$\frac{4.03 \times 1000}{\sqrt{3} \times 6.1 \times 380} \times 100 = 100 \%$$
(Heating)
$$\frac{3.72 \times 1000}{\sqrt{3} \times 5.6 \times 380} \times 100 = 100 \%$$

2.3 EXTERIOR DIMENSIONS			
(1) Indoor units			
(a) Ceiling cassette-4 way type (FDT)	.See	page	76
(b) Ceiling suspended type (FDE)	.See	page	79
(2) Outdoor units	See	page	90
(3) Remote control (Option parts)	.See	page	91
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(1) Indoor units			
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(b) Ceiling suspended type (FDE)	.See	page	97
(2) Outdoor units	.See	page	106
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(1) Indoor units			
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(b) Ceiling suspended type (FDE)	.See	page	109
(2) Outdoor units	.See	page	112
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(1) Indoor units			
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(1) Ceiling cassette-4 way type (FDT)	.See	page	171
(2) Ceiling suspended type (FDE)	.See	page	184
2.10.2 Electric wiring work installation			
(1) Ceiling cassette-4 way type (FDT)	.See	page	217
(2) Ceiling suspended type (FDE)	.See	page	221
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3.1 WIRELESS KIT

3.1.1 FDT series (RCN-T-5AW-E2)

Notes

Following function of FDT indoor unit series are not able to be set with this wireless remote control (RCN-T-5AW-E2).

1. Individual flap control system



Safety precautions

•Please read this manual carefully before starting installation work to install the unit properly. Every one of the followings is important information to be observed strictly.

MARNING Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc.

⚠CAUTION Failure to follow these instructions properly may cause injury or property damage. It could have serious consequences depending on the circumstances.

•The following pictograms are used in the text.



Never do.



Always follow the instructions given.

•Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to a new owner.

↑ WARNING



• Consult your dealer or a professional contractor to install the unit.

Improper installation made on your own may cause electric shocks, fire or dropping of the unit.



• Installation work should be performed properly according to this installation manual. Improper installation work may result in electric shocks, fire or break-down.



• Be sure to use accessories and specified parts for installation work.

Use of unspecified parts may result in drop, fire or electric shocks.



• Install the unit properly to a place with sufficient strength to hold the weight. If the place is not strong enough, the unit may drop and cause injury.



• Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. Power source with insufficient and improper work can cause electric shock and fire.



• Shut OFF the main power source before starting electrical work. Otherwise, it could result in electric shocks, break-down or malfunction.



• Do not modify the unit.

It could cause electric shocks, fire, or break-down.



• Be sure to turn OFF the power circuit breaker before repairing/inspecting the unit.

Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury.



 Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak.

If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of significant deterioration of its performance or corrosion.



• Do not install the unit where water vapor is generated excessively or condensation occurs. It could cause electric shocks, fire, or break-down.



• Do not use the unit in a place where it gets wet, such as laundry room. It could cause electric shocks, fire, or break-down.



• Do not operate the unit with wet hands. It could cause electric shocks.

∴ WARNING



• Do not wash the unit with water.

It could cause electric shocks, fire, or break-down.



 Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.

Improper connections or fixing could cause heat generation, fire, etc.



When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.

It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc.

The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.



Do not leave the remote control with its PCB case removed.

If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

⚠CAUTION

- Do not install the wireless kit at the following places in order to avoid malfunction. It could cause break-down or deformation of remote control.
 - (1) Places exposed to direct sunlight
 - (2) Places near heat devices
 - (3) High humidity places
 - generate condensation
 - type) or sunlight (4) Hot surface or cold surface enough to (9) Places where the receiver is affected by infrared rays of any other communication devices
 - (5) Places exposed to oil mist or steam directly (10) Places where some object may obstruct the
 - (6) Uneven surface

communication with the remote control

(8) Places where the receiver is influenced by

the fluorescent lamp (especially inverter

(7) Places affected by the direct air flow of the AC unit

(1) Accessories

Please make sure that you have all of the following accessories.

① Receiver	1	
② Parts set (A)	1	_
③ Installation manual	1	

① Wireless remote control	Ø	1
② Remote control holder		1
③ Screw for holder	\$	2
④ AAA dry cell battery (LR03)	0	2
⑤ User's manual		1

②Preparation before installation

Setting on site

PCB on the receiver has the following switches to set the function.

Default setting is shown with mark.

SW1	Prevents interference during plural setting	ON : Normal	OFF : Customized
SW2	Receiver master/ slave setting	ON : Master	OFF : Slave
SW3	Buzzer	ON : Valid	OFF : Invalid
SW4	Auto restart	ON : Valid	OFF : Invalid

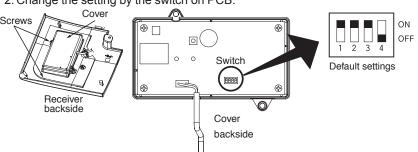
Preparation before installation (continued)

To change setting

1. Remove the cover by unscrewing two screws from the back of receiver.

plural remote controls

2. Change the setting by the switch on PCB.



Up to two receiver or wired remote control can be installed in one indoor unit group.

Master/Slave setting when using

When two receiver or wired remote control are used, it is necessary to change SW on the PCB to set it as slave.

3. When SW1 is turned to OFF position, change the wireless remote control setting.

For the method of changing the setting, refer to Setting to avoid mixed communication of Wireless remote control.

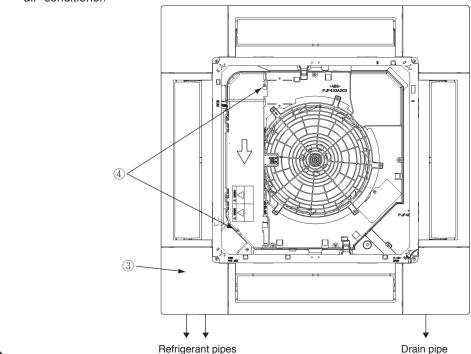
*The receivable area of the signal refer to ⑤ Receiver

③ How to install the receiver

The receiver can be installed by replacing with a corner panel on the applicable decorative panel.

Preparation before installation

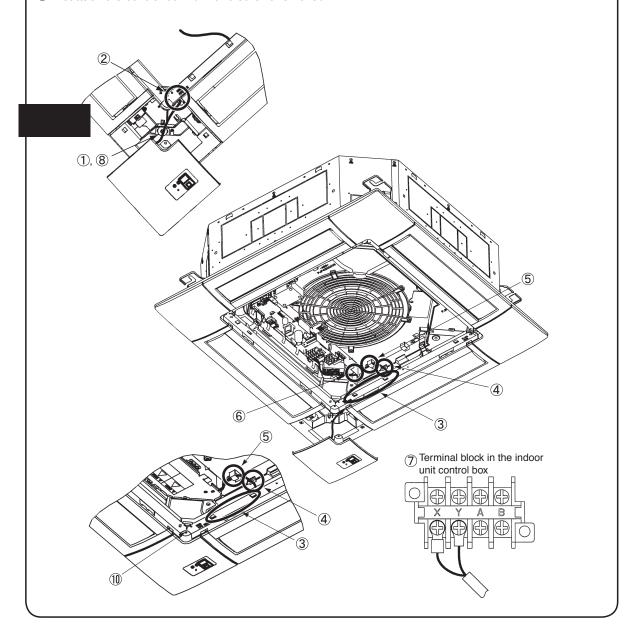
- ① Attach the decorative panel onto the air-conditioner according to the installation manual for the panel.
- ② Remove the air return grille.
- ③ Remove a corner panel located on the refrigerant pipes side.
- 4 Remove three screws and detach the cover (indicated as shadowed area) from the control box of the air- conditioner.



(3) How to install the receiver(continued)

Installation of the receiver

- ① Loosen the bolts which fix the panel and make a gap between the panel and the indoor unit.
- 2 Put the wiring of the receiver through the opening.
- ③ Put the wiring on the notch on the control box so as not to be pinched by the control box and lid as shown below.
- 4 Connect the wiring to the terminal block provided in the control box. (No polarity)
- ⑤ Attach the receiver to the panel according to the panel installation manual.
- ⑥ Fix the wiring with the clamp so that the wiring do not contact the edge of control box's metal sheet.
- 7 Reattach the control box lid with 3 screws removed.

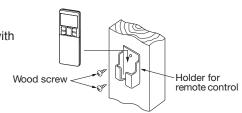


4 Wireless remote control

Installation tips for the remote control holder

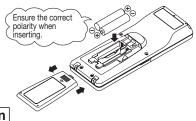
Fix the remote control holder using the screws supplied with this product.

- * Precautions for installing the holder
- Adjust the position so that it is upright.
- Ensure that the screw heads are not protruding.
- Do not attach the holder on plaster wall



How to insert batteries

- 1. Detach the back lid.
- 2. Insert the batteries. (two AAA batteries)
- 3. Reattach the back lid.



Setting to avoid mixed communication

- 1. Detach the back lid, and remove the batteries.
- 2. Cut off the switching wire in the battery compartment using nippers.
- 3. Insert the batteries, and attach the back lid.



Changing the remote control setting

How to change the Auto Run setting

The Auto Run mode is not available on the building air-conditioning and gas heat pump series (excluding the cooling/heating free multi system).

When using the remote control to operate those models, set the remote control to disable the Auto Run mode.

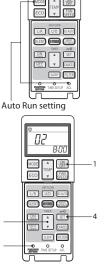
To disable the Auto Run mode, press the $\boxed{\text{ACL}}$ switch while holding down the $\boxed{\text{MODE}}$ button, or insert batteries while holding down the $\boxed{\text{MODE}}$ button.

* Note: Once the batteries are removed, the setting is reset to the factory default. When the batteries are removed, repeat the steps described above.

Indoor function settings

- 1. How to set indoor functions
 - 1) Press the ON/OFF button to stop the unit.
 - ② Press the desired one of the buttons shown item 2. while holding down the FUNCTION SETTING switch.
 - ③ Use the selection buttons, ▲ and ▼, to change the setting.
 - 4 Press the SET button.

The buzzer on the remote control signal receiver beeps twice, and the LED lamp flashes four times at two-second intervals.



4 Wireless remote control (continued)

2. Setting details
The following functions can be set.

Button	Number indicator	Function setting		
	00	Fun speed setting : Standard		
FAN SPEED	01	Fun speed setting: Setting 1 *		
	02	Fun speed setting: Setting 2 *		
	00	Room heating temperature adjustment : Disable		
MODE	01	Room heating temperature adjustment : +1°C		
MODE	02	Room heating temperature adjustment : +2°C		
	03	Room heating temperature adjustment : +3°C		
	00	Filter sign display : OFF		
	01	Filter sign display : 180 hours		
FILTER	02	Filter sign display: 600 hours		
	03	Filter sign display: 1000 hours		
	04	Filter sign display : Operation stop after 1000 hours have elapsed		
LL/D	00	Anti draft setting : Disable		
U/P 01		Anti draft setting : Enable		
SILENT	00	Infrared sensor setting (Motion sensor setting) : Disable		
SILENI	01	Infrared sensor setting (Motion sensor setting) : Enable		
	00	Infrared sensor control (Motion sensor control) : Disable		
HI POWER	01	Infrared sensor control (Motion sensor control) : Power control only		
HIPOWER	02	Infrared sensor control (Motion sensor control) : Auto OFF only		
	03	Infrared sensor control (Motion sensor control): Power control and Auto OFF		
	00	Cooling fan residual-period running : Disable		
ON TIMER	01	Cooling fan residual-period running : 0.5 hours		
ON TIMER	02	Cooling fan residual-period running : 2 hours		
	03	Cooling fan residual-period running : 6 hours		
	00	Heating fan residual-period running : Disable		
OFF TIMER	01	Heating fan residual-period running : 0.5 hours		
OFF HIVER	02	Heating fan residual-period running : 2 hours		
	03	Heating fan residual-period running : 6 hours		
NICHT	00	Remote control signal receiver LED : Brightness High		
NIGHT SETBACK	01	Remote control signal receiver LED : Brightness Low		
OLIDAGIC	02	Remote control signal receiver LED : OFF		

^{*} Refer to technical data.

3 Receiver

1 Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

- 1. Connect the XY terminal with 2 cores wire. As for the size, refer to the following note.
- For Packaged air-conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [0] to [F] so as not to duplicate.

Restrictions on the thickness and length of wire (Maximun total extension 600m.)

Standard Within 0.3 mm² × 100m

Within 0.5 mm² × 200m

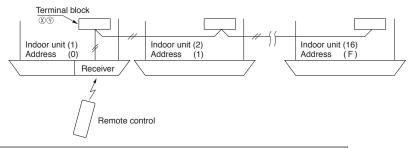
Within 0.75mm² × 300m

Within 1.25mm² × 400m

Within 2.0 mm² × 600m

For the shop series

For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.



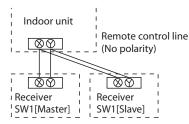
For the building air-conditioning and gas heat pump series

Set the indoor unit and outdoor unit numbers by manually specifying the addresses.

Use the rotary switchs SW1 and SW2 provided on the indoor unit PCB (printed circuit board) to set the indoor unit numbers so that they are not duplicated.

Master/Slave setting when using plural remote control

Up to two receivers can be installed in one indoor unit group.

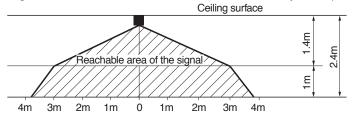


Switch	Setting	Function
SW2	ON	Master
3772	OFF	Slave

Wireless remote control's operable area

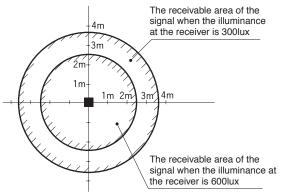
Standard reachable area of the signal [condition] Illuminance at the receiver: 300lux

(when no lighting is installed within 1m of the receiver in an ordinary office.)



⑤ Receiver (continued)

2. Correlation between illuminance at the receiver and reachable area of the signal in a plain view. The drawing in the right shows the correlation between the reachable area of the signal and illuminance at the receiver when the remote control is operated at 1.0m high under the condition of ceiling height of 2.4m. When the illuminance becomes double, the area is narrowed down to two thirds.



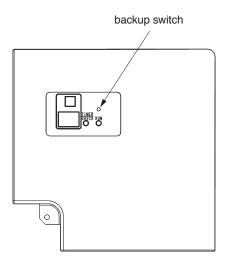
3. Installation tips when several receivers are installed close Minimum distance between the indoor units which can avoid cross communication is 5m under the condition of 300lux of illuminance at the receiver.

(When no lighting is installed within 1m of the receiver in an ordinary office)

Backup switch

A Backup switch is provided on the receiver. Even when the operation from the wireless remote control is not possible (due to flat batteries, control lost, or control failure), still it possible to operate as temporary means. Press the switch directly when operating it.

- The air-conditioner starts the operation with the condition of Auto mode, 23°C of set point, High fan speed and horizontal louver position.
- 2. The air-conditioner stops the operation when the switch is pressed when in operation.



Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with the wireless remote control unit, while the backup switch on the receiver is depressed.
- If the backup switch on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check wiring by consulting with inspection guides.

How to read the 2-digit display

On the receiver of a wireless kit, a two-digit (7-segment) display is provided.

- 1. An indication will be displayed for one hour after power on.
- 2. An indication will be displayed for 3.5 seconds after transmitting a "STOP" command from the wireless remote control or the operation of the backup switch to stop the unit.
- 3. An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
- 4. When there are no error records to indicate, addresses of all the connected units are displayed.
- 5. When there are some error records remaining, the error records are displayed.
- 6. Error records can be cleared by transmitting a "STOP" command from the wireless remote control, while the backup button is pressed.

3.1.2 FDTC series (RCN-TC-24W-E2)

PJA012D791

Note:

Following functions of FDTC Type-F indoor unit series are not able to be set with this wireless remote control (RCN-TC-24W-E2).

1. Individual flap control system

Safety precautions

•Please read this manual carefully before starting installation work to install the unit properly. Every one of the followings is important information to be observed strictly.

MARNING Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc.

<u>^</u>CAUTION Failure to follow these instructions properly may cause injury or property damage. It could have serious consequences depending on the circumstances.

•The following pictograms are used in the text.



Never do.



Always follow the instructions given.

• Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to a new owner.

WARNING



• Consult your dealer or a professional contractor to install the unit.

Improper installation made on your own may cause electric shocks, fire or dropping of the unit.



• Installation work should be performed properly according to this installation manual. Improper installation work may result in electric shocks, fire or break-down.



• Be sure to use accessories and specified parts for installation work.

Use of unspecified parts may result in drop, fire or electric shocks.



• Install the unit properly to a place with sufficient strength to hold the weight. If the place is not strong enough, the unit may drop and cause injury.



• Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. Power source with insufficient and improper work can cause electric shock and fire.



• Shut OFF the main power source before starting electrical work.

Otherwise, it could result in electric shocks, break-down or malfunction.



• Do not modify the unit.

It could cause electric shocks, fire, or break-down.



• Be sure to turn OFF the power circuit breaker before repairing/inspecting the unit.

Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury.



• Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak.

If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of signi ficant deterioration of its performance or corrosion.



• Do not install the unit where water vapor is generated excessively or condensation occurs. It could cause electric shocks, fire, or break-down.



• Do not use the unit in a place where it gets wet, such as laundry room. It could cause electric shocks, fire, or break-down.



• Do not operate the unit with wet hands. It could cause electric shocks.

⚠ WARNING



Do not wash the unit with water.

It could cause electric shocks, fire, or break-down.



• Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.

Improper connections or fixing could cause heat generation, fire, etc.



 When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.

It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc. The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.



Do not leave the remote control with its PCB case removed.

If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

⚠ CAUTION

- Do not install the wireless kit at the following places in order to avoid malfunction. It could cause break-down or deformation of remote control.
 - (1) Places exposed to direct sunlight
 - (2) Places near heat devices
 - (3) High humidity places
 - (4) Hot surface or cold surface enough to (9) Places where the receiver is affected by infrared
 - generate condensation rays of any other communication devices (5) Places exposed to oil mist or steam directly (10) Places where some object may obstruct the

 - (6) Uneven surface
- (8) Places where the receiver is influenced by the fluorescent lamp (especially inverter type) or sunlight
 - communication with the remote control.
 - (7) Places affected by the direct air flow of the AC unit

① Accessories

Please make sure that you have all of the following accessories

① Receiver	1	
② Parts set	1	
③ Installation manual	1	

•	0000011001			
-	① Wireless remote control	TENDO	1	
	② Remote control holder		1	
	③ Screw for holder	© ™	2	
	④ AAA dry cell battery (LR03)		2	
	⑤ User's manual		1	

Preparation before installation

Setting on site

PCB on the receiver has the following switches to set the functions. Default setting is shown with mark.

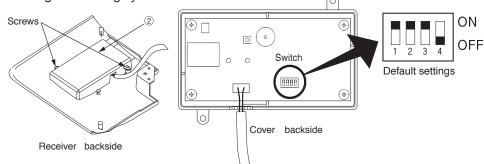
SW1	Prevents interference during plural setting	ON : Normal OFF : Remote
SW2	Receiver master/slave setting	ON : Master OFF : Slave
SW3	Buzzer	ON : Valid OFF : Invalid
SW4	Auto restart	ON : Valid OFF : Invalid

Preparation before installation (continued)

To change setting

 Remove the cover by unscrewing two screws from the back of receiver.

2. Change the setting by the switch on PCB.



Master/Slave setting when using plural remote controls

Up to two receiver or wired remote control can be installed in one indoor unit group. When two receiver or wired remote control are used, it is necessary to change SW on the PCB to set it as slave.

3. When SW1 is turned to OFF position, change the wireless remote control setting.

For the method of changing the setting, refer to Setting to avoid mixed communication of

(4) Wireless remote control

.

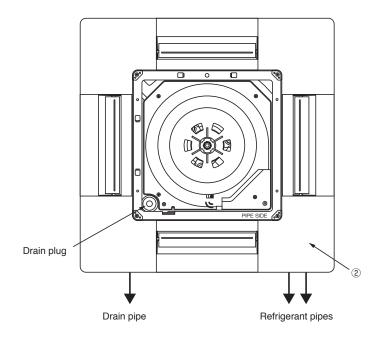
*The receivable area of the signal refer to ⑤ Receiver

3 How to install the receiver

The receiver can be installed by replacing with a corner panel on the applicable decorative panel.

Preparation before installation

- ① Remove the air return grille.
- 2 Remove a corner panel located on the refrigerant pipes side.
- ③ Remove two screws and detach the lid from the control box of the air-conditioner.

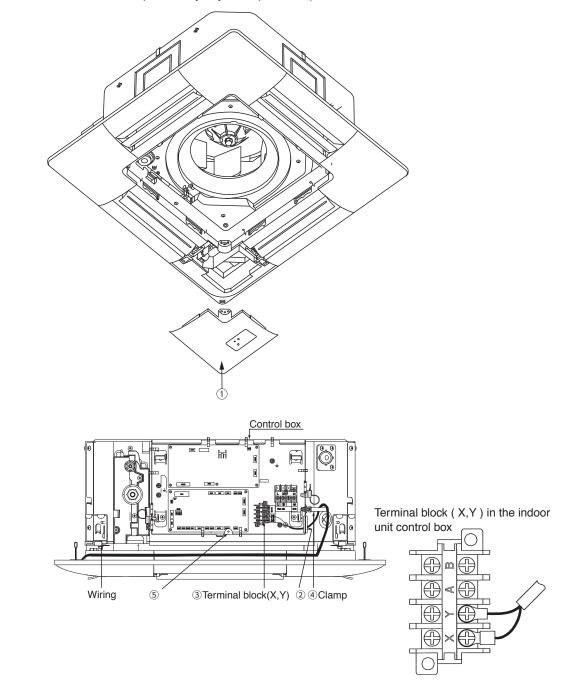


(3) How to install the receiver(continued)

Installation of the receiver

- ① Attach the receiver to the panel according to the panel installation manual.
- 2 Put the wiring in the control box with other wiring as shown below.
- 3 Connect the wiring to the terminal block (X,Y) provided in the control box.(No polarity)
- 4 Fix the wiring with the clamp as shown below.
- 5 Reattach the control box lid with 1 screw removed.

Note: Make sure wires not to be pinched by any other parts like panel and control box.

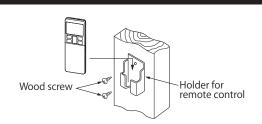


(4) Wireless remote control

Installation tips for the remote control holder

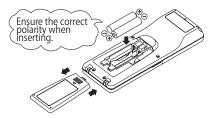
Fix the remote control holder using the screws supplied with this product.

- * Precautions for installing the holder
- Adjust the position so that it is upright.
- Ensure that the screw heads are not protruding.
- Do not attach the holder on plaster wall.



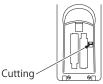
How to insert batteries

- 1. Detach the back lid.
- 2. Insert the batteries. (two AAA batteries)
- 3. Reattach the back lid.



Setting to avoid mixed communication

- 1. Detach the back lid, and remove the batteries.
- 2. Cut off the switching wire in the battery compartment using nippers.
- 3. Insert the batteries, and attach the back lid.



Changing the wireless remote control setting

How to change the Auto Run setting

The Auto Run mode is not available on the building air-conditioner and gas heat pump series (excluding the cooling/heating free multi system).

When using the wireless remote control to operate those models, set the wireless remote control to disable the Auto Run mode.

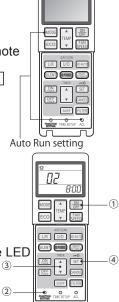
To disable the Auto Run mode, press the $\boxed{\text{ACL}}$ switch while holding down the $\boxed{\text{MODE}}$ button, or insert batteries while holding down the $\boxed{\text{MODE}}$ button.

* Note: Once the batteries are removed, the setting is reset to the factory default. When the batteries are removed, repeat the steps described above.

Indoor function settings

- 1. How to set indoor functions
 - ① Press the ON/OFF button to stop the unit.
 - ② Press the desired one of the buttons shown item 2. while holding down the FUNCTION SETTING switch.
 - ③ Use the selection buttons, ▲ and ▼, to change the setting.
 - 4 Press the SET button.

The buzzer on the wireless remote control signal receiver beeps twice, and the LED lamp flashes four times at two-second intervals.



4 Wireless remote control (continued)

2. Setting details The following functions can be set.

Button	Number indicator	Function setting	
00 Fun speed setting : Standard		Fun speed setting : Standard	
FAN SPEED	01	Fun speed setting: Setting 1 *	
02		Fun speed setting: Setting 2 *	
	00	Room heating temperature adjustment : Disable	
MODE	01	Room heating temperature adjustment : +1°C	
MODE	02	Room heating temperature adjustment : +2°C	
	03	Room heating temperature adjustment : +3°C	
	00	Filter sign display : OFF	
	01	Filter sign display : 180 hours	
FILTER	02	Filter sign display : 600 hours	
	03	Filter sign display : 1000 hours	
	04	Filter sign display: Operation stop after 1000 hours have elapsed	
U/P	00	Anti draft setting : Disable	
(Up/Down)	01	Anti draft setting : Enable	
CULENT	00	Infrared sensor setting (Motion sensor setting) : Disable	
SILENT	01	Infrared sensor setting (Motion sensor setting) : Enable	
	00	Infrared sensor control (Motion sensor control) : Disable	
LII DOWED	01	Infrared sensor control (Motion sensor control): Power control only	
HI POWER	02	Infrared sensor control (Motion sensor control) : Auto OFF only	
	03	Infrared sensor control (Motion sensor control) : Power control + Auto OFF	
	00	Cooling fan residual-period running : Disable	
ON TIMER	01	Cooling fan residual-period running : 0.5 hours	
ON TIMER	02	Cooling fan residual-period running : 2 hours	
	03	Cooling fan residual-period running : 6 hours	
	00	Heating fan residual-period running : Disable	
OFF TIMER	01	Heating fan residual-period running : 0.5 hours	
OFF TIMER	02	Heating fan residual-period running : 2 hours	
	03	Heating fan residual-period running : 6 hours	
NICHT	00	Remote control signal receiver LED : Brightness High	
NIGHT SETBACK	01	Remote control signal receiver LED : Brightness Low	
OLIDACK	02	Remote control signal receiver LED : OFF	

^{*} Refer to technical data.

5 Receiver

1 Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

- 1. Connect the XY terminal with 2 cores wire. As for the size, refer to the following note.
- 2. For Packaged air-conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [0] to [F] so as not to duplicate.

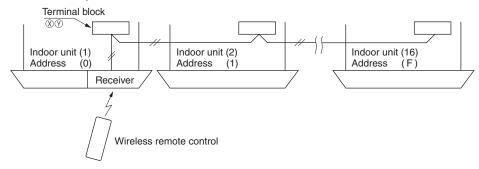
Restrictions on the thickness and length of wire (Maximun total extension 600m.)

Standard Within 0.3 mm² × 100m Within 0.5 mm² × 200m

> Within 0.75mm² × 300m Within 1.25mm² × 400m Within 2.0 mm² × 600m

For the shop series

For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.

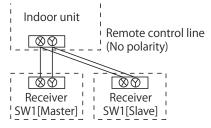


For the building air-conditioner and gas heat pump series

Set the indoor unit and outdoor unit numbers by manually specifying the addresses. Use the rotary switchs SW1 and SW2 provided on the indoor unit PCB (printed circuit board) to set the indoor unit numbers so that they are not duplicated.

Master/Slave setting when using plural remote control

Up to two receivers can be installed in one indoor unit group.

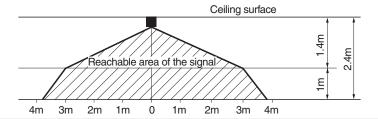


Switch	Setting	Function
SW2	ON	Master
	OFF	Slave

Wireless remote control's operable area

1. Standard reachable area of the signal

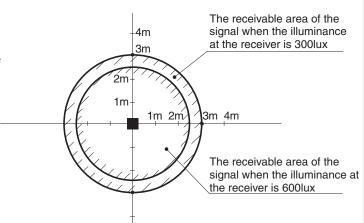
[Condition] Illuminance at the receiver: 300lux (when no lighting is installed within 1m of the receiver in an ordinary office.)



5 Receiver (continued)

Correlation between illuminance at the receiver and reachable area of the signal in a plain view.

The drawing in the right shows the correlation between the reachable area of the signal and illuminance at the receiver when the wireless remote control is operated at 1m high under the condition of ceiling height of 2.4m.

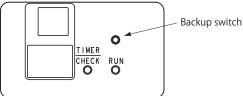


Installation tips when several receivers are installed close
 Minimum distance between the indoor units which can avoid cross communication is 5m under the
 condition of 300lux of illuminance at the receiver.
 (When no lighting is installed within 1m of the receiver in an ordinary office.)

Backup switch

A backup switch is provided on the receiver section of the panel surface.

When operation from the wireless remote control unit is not possible (due to flat batteries, a mislaid unit, a unit failure), you can use it as an emergency means. You should operate this switch manually.



- I. If pressed while the air-conditioner is in a halt, it will cause the air-conditioner to start operation in the automatic mode (in the case of cooling only, in the cooling mode).

 Wind speed: Hi fan, Temperature setting: 23°C, Louver: horizontal
- 2. If pressed while the air-conditioner is in operation, it will stop the air-conditioner.

Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with the wireless remote control unit, while the backup switch on the receiver is depressed.
- If the backup switch on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check wiring by consulting with inspection guides.

How to read the two-digit display

On the receiver of a wireless kit, a two-digit (7-segment) display is provided.

- 1. An indication will be displayed for one hour after power on.
- 2. An indication will be displayed for 3.5 seconds after transmitting a "STOP" command from the wireless remote control or the operation of the backup switch to stop the unit.
- 3. An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
- When there are no error records to indicate, addresses of all the connected units are displayed.
- 5. When there are some error records remaining, the error records are displayed.
- 6. Error records can be cleared by transmitting a "STOP" command from the wireless remote control, while the backup button is pressed.

3.1.3 FDE series (RCN-E-E2)

PFA012D630

Safety precautions

•Please read this manual carefully before starting installation work to install the unit properly. Every one of the followings is important information to be observed strictly.

MARNING Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc.

<u>^</u>CAUTION Failure to follow these instructions properly may cause injury or property damage. It could have serious consequences depending on the circumstances.

•The following pictograms are used in the text.

 \bigcirc

Never do.



Always follow the instructions given.

• Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to a new owner.

∴WARNING



• Consult your dealer or a professional contractor to install the unit.

Improper installation made on your own may cause electric shocks, fire or dropping of the unit.



• Installation work should be performed properly according to this installation manual. Improper installation work may result in electric shocks, fire or break-down.



• Be sure to use accessories and specified parts for installation work.

Use of unspecified parts may result in drop, fire or electric shocks.



• Install the unit properly to a place with sufficient strength to hold the weight.

If the place is not strong enough, the unit may drop and cause injury.



• Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. Power source with insufficient and improper work can cause electric shock and fire.



• Shut OFF the main power source before starting electrical work. Otherwise, it could result in electric shocks, break-down or malfunction.



• Do not modify the unit.

It could cause electric shocks, fire, or break-down.



• Be sure to turn OFF the power circuit breaker before repairing/inspecting the unit.

Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury.



• Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak.

If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of significant deterioration of its performance or corrosion.



• Do not install the unit where water vapor is generated excessively or condensation occurs. It could cause electric shocks, fire, or break-down.



• Do not use the unit in a place where it gets wet, such as laundry room. It could cause electric shocks, fire, or break-down.



• Do not operate the unit with wet hands.

It could cause electric shocks.

! WARNING



Do not wash the unit with water.

It could cause electric shocks, fire, or break-down.



 Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.

Improper connections or fixing could cause heat generation, fire, etc.

• When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.



It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc. The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.



• Do not leave the remote control with its PCB case removed. If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

⚠ CAUTION

- Do not install the wireless kit at the following places in order to avoid malfunction. It could cause break-down or deformation of remote control.
 - (1) Places exposed to direct sunlight
 - (2) Places near heat devices
 - (3) High humidity places
 - (4) Hot surface or cold surface enough to (9) Places where the receiver is affected by infrared generate condensation
 - (5) Places exposed to oil mist or steam directly (10) Places where some object may obstruct the
 - (6) Uneven surface
 - (7) Places affected by the direct air flow of the AC unit

(8)	Places where the receiver is influenced by
	the fluorescent lamp (especially inverter
	type) or sunlight

- rays of any other communication devices
- communication with the remote control

1 Accessories

Please make sure that you have all of the following accessories.

① Receiver	E.:	1
② Parts set		1
③ Installation manual		1

-	① Wireless remote control	1
	② Remote control holder	1
	③ Screw for holder	\$ 2
	④ AAA dry cell battery (LR03)	2
	⑤ User's manual	1

② Preparation before installation

Setting on site

PCB on the receiver has the following switches to set the function.

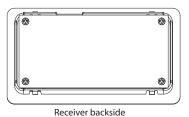
Default setting is shown with mark.

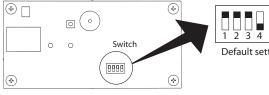
SW1	Prevents interference during plural setting	ON : Normal OFF : Customized
SW2	Receiver master/slave setting	ON : Master OFF : Slave
SW3	Buzzer	ON : Valid OFF : Invalid
SW4	Auto restart	ON : Valid OFF : Invalid

2 Preparation before installation (continued)

To change setting

- 1. Remove four screws located on the back of the receiver and detach the board.
- 2. Change the setting by the switch on PCB.





ON Default settings

Master/Slave setting when using plural remote controls

Up to two receiver or wired remote control can be installed in one indoor unit group. When two receiver or wired remote control are used, it is necessary to change SW on the PCB to set it as slave.

3. When SW1 is turned to OFF position, change the wireless remote control setting. For the method of changing the setting, refer to Setting to avoid mixed communication of 4 Wireless remote control

*The receivable area of the signal refer to ⑤ Receiver .

(3) How to install the receiver

The receiver can be installed by replacing with a cover of the panel. **CAUTION:** When installing the receiver after unit has been fixed, injury due to falling may result because of working at high place.

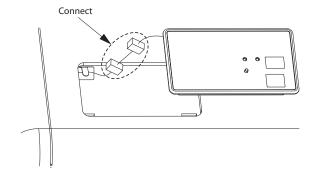
① Remove the cover

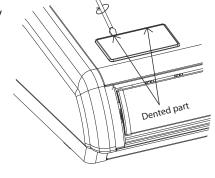
Insert a flat-blade screw driver into the dented part (2 places), and wrench slightly.

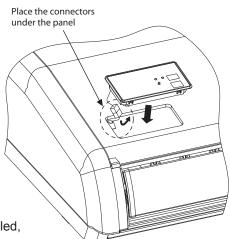
2 Connect the wiring

Connect wiring of the receiver to the wiring in the back.

ATTENTION: Do not remove the clamp fixed the wiring.







3 Installation of the receiver

Check direction of the receiver, and fix to the panel.

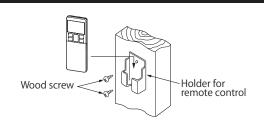
CAUTION: Connect the connectors before installing the receiver. In case of connecting after the receiver had been installed, it will be necessary to remove the panel.

(4) Wireless remote control

Installation tips for the remote control holder

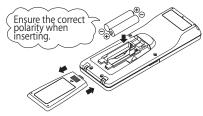
Fix the remote control holder using the screws supplied with this product.

- * Precautions for installing the holder
- Adjust the position so that it is upright.
- Ensure that the screw heads are not protruding.
- Do not attach the holder on plaster wall



How to insert batteries

- 1. Detach the back lid.
- 2. Insert the batteries. (two AAA batteries)
- 3. Reattach the back lid.



Setting to avoid mixed communication

- 1. Detach the back lid, and remove the batteries.
- 2. Cut off the switching wire in the battery compartment using nippers.
- 3. Insert the batteries, and attach the back lid.



Changing the wireless remote control setting

How to change the Auto Run setting

The Auto Run mode is not available on the building air-conditioner and gas heat pump series (excluding the cooling/heating free multi system).

When using the wireless remote control to operate those models, set the wireless remote control to disable the Auto Run mode.

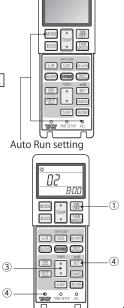
To disable the Auto Run mode, press the ACL switch while holding down the MODE button, or insert batteries while holding down the MODE button.

* Note: Once the batteries are removed, the setting is reset to the factory default. When the batteries are removed, repeat the steps described above.

Indoor function settings

- 1. How to set indoor functions
 - 1) Press the ON/OFF button to stop the unit.
 - ② Press the desired one of the buttons shown item 2. while holding down the FUNCTION SETTING switch.
 - ③ Use the selection buttons, ▲ and ▼, to change the setting.
 - (4) Press the SET button.

The buzzer on the wireless remote control signal receiver beeps twice, and the LED lamp flashes four times at two-second intervals.



4 Wireless remote control (continued)

2. Setting details The following functions can be set.

Button	Number indicator	Function setting	
	00	Fun speed setting : Standard	
FAN SPEED	01	Fun speed setting: Setting 1 *	
02		Fun speed setting: Setting 2 *	
	00	Room heating temperature adjustment : Disable	
MODE	01	Room heating temperature adjustment : +1°C	
MODE	02	Room heating temperature adjustment : +2°C	
	03	Room heating temperature adjustment : +3°C	
	00	Filter sign display : OFF	
	01	Filter sign display: 180 hours	
FILTER	02	Filter sign display : 600 hours	
	03	Filter sign display: 1000 hours	
	04	Filter sign display : Operation stop after 1000 hours have elapsed	
U/P	00	Anti draft setting : Disable	
(Up/Down) 01 Anti draft setting : Enable		Anti draft setting : Enable	
OII ENT	00	Infrared sensor setting (Motion sensor setting) : Disable	
SILENT	01	Infrared sensor setting (Motion sensor setting) : Enable	
	00	Infrared sensor control (Motion sensor control) : Disable	
HI POWER	01	Infrared sensor control (Motion sensor control): Power control only	
HI POWER	02	Infrared sensor control (Motion sensor control) : Auto OFF only	
	03	Infrared sensor control (Motion sensor control): Power control + Auto OFF	
	00	Cooling fan residual-period running : Disable	
ON TIMER	01	Cooling fan residual-period running : 0.5 hours	
ON TIMER	02	Cooling fan residual-period running : 2 hours	
	03	Cooling fan residual-period running : 6 hours	
	00	Heating fan residual-period running : Disable	
OFF TIMED	01	Heating fan residual-period running : 0.5 hours	
OFF TIMER	02	Heating fan residual-period running : 2 hours	
	03	Heating fan residual-period running : 6 hours	
NIOLIT	00	Remote control signal receiver LED : Brightness High	
NIGHT SETBACK	01	Remote control signal receiver LED : Brightness Low	
SETBACK	02	Remote control signal receiver LED : OFF	

^{*} Refer to technical data.

5 Receiver

1 Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

- 1. Connect the XY terminal with 2 cores wire. As for the size, refer to the following note.
- 2. For Packaged air-conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [0] to [F] so as not to duplicate.

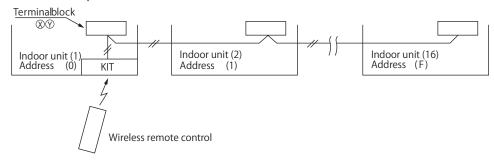
Restrictions on the thickness and length of wire (Maximun total extension 600m.)

Standard Within 0.3 mm² × 100m

Within $0.5 \text{ mm}^2 \times 200 \text{m}$ Within $0.75 \text{mm}^2 \times 300 \text{m}$ Within $1.25 \text{mm}^2 \times 400 \text{m}$ Within $2.0 \text{ mm}^2 \times 600 \text{m}$

For the shop series

For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.

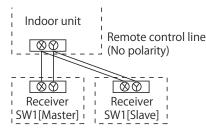


For the building air-conditioner and gas heat pump series

Set the indoor unit and outdoor unit numbers by manually specifying the addresses. Use the rotary switchs SW1 and SW2 provided on the indoor unit PCB (printed circuit board) to set the indoor unit numbers so that they are not duplicated.

Master/Slave setting when using plural remote control

Up to two receivers can be installed in one indoor unit group.



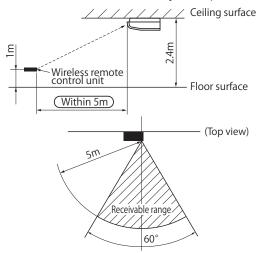
Switch	Setting	Function
SW2	ON	Master
	OFF	Slave

⑤ Receiver (continued)

Wireless remote control's operable area

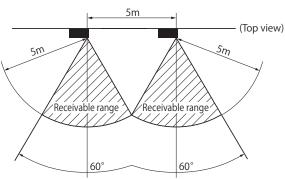
 Standard signal receiving range [Condition]

Illuminance at the receiver area: 360 lux. (When no lighting fixture is located within 1m of indoor unit in an ordinary office)



Points for attention in connecting a plural number of indoor units [Condition]

Illuminance at the receiver area: 360 lux.



Backup switch

A backup switch is provided on the receiver section of the panel surface.

When operation from the wireless remote control unit is not possible (due to flat batteries, a mislaid unit, a unit failure), you can use it as an emergency means. You should operate this switch manually.

 If pressed while the air-conditioner is in a halt, it will cause the air-conditioner to start operation in the automatic mode (in the case of cooling only, in the cooling mode).
 Wind speed: Hi fan, Temperature setting: 23°C,

Wind speed: Hi fan, Temperature setting: 23°C, Louver: horizontal.

2. If pressed while the air-conditioner is in operation, it will stop the air-conditioner.

Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with the wireless remote control unit, while the backup switch on the receiver is depressed.
- If the backup switch on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check wiring by consulting with inspection guides.

How to read the two-digit display

A two-digit indicator (7-segment indicator) is provided on the receiver section.

- 1. An indication will be displayed for one hour after power on.
- 2. An indication appears for 3.5 seconds when a "Stop" command is sent from the wireless remote control unit while the air-conditioner is not running.
- 3. An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
- 4. When there are no error records to indicate, addresses are displayed for all of the connected units.
- 5. When there are some error records remaining, the error records are displayed.
- 6. Error records can be cleared by transmitting a "Stop" command from the wireless remote control unit, while the backup switch is depressed.

3.1.4 FDU, FDUM, FDF series (RCN-KIT4-E2)

PJZ012D112A

Safety precautions

- •Please read this manual carefully before starting installation work to install the unit properly. Every one of the followings is important information to be observed strictly.
- MARNING Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc.
- <u>^</u>CAUTION Failure to follow these instructions properly may cause injury or property damage. It could have serious consequences depending on the circumstances.
- •The following pictograms are used in the text.

$\overline{\Diamond}$

Never do.



Always follow the instructions given.

• Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to a new owner.

⚠WARNING



• Consult your dealer or a professional contractor to install the unit.

Improper installation made on your own may cause electric shocks, fire or dropping of the unit.



• Installation work should be performed properly according to this installation manual. Improper installation work may result in electric shocks, fire or break-down.



• Be sure to use accessories and specified parts for installation work.

Use of unspecified parts may result in drop, fire or electric shocks.



• Install the unit properly to a place with sufficient strength to hold the weight. If the place is not strong enough, the unit may drop and cause injury.



• Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit. Power source with insufficient and improper work can cause electric shock and fire.



• Shut OFF the main power source before starting electrical work. Otherwise, it could result in electric shocks, break-down or malfunction.



- Do not modify the unit.
 - It could cause electric shocks, fire, or break-down.



Be sure to turn OFF the power circuit breaker before repairing/inspecting the unit.
 Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury.



• Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak.

If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of significant deterioration of its performance or corrosion.



• Do not install the unit where water vapor is generated excessively or condensation occurs. It could cause electric shocks, fire, or break-down.



• Do not use the unit in a place where it gets wet, such as laundry room. It could cause electric shocks, fire, or break-down.



Do not operate the unit with wet hands.
 It could cause electric shocks.

⚠ WARNING



Do not wash the unit with water.

It could cause electric shocks, fire, or break-down.



• Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.

Improper connections or fixing could cause heat generation, fire, etc.



When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises. It could cause malfunction or break-down due to hazardous effects on the inverter, private

power generator, high frequency medical equipment, radio communication equipment, etc. The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.



• Do not leave the remote control with its PCB case removed.

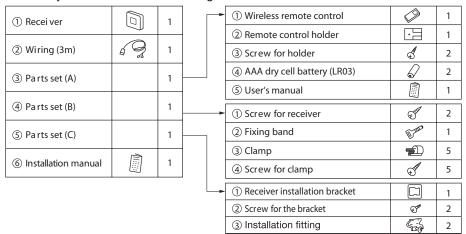
If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

⚠ CAUTION

- Do not install the wireless kit at the following places in order to avoid malfunction. It could cause break-down or deformation of remote control.
 - (1) Places exposed to direct sunlight
 - (2) Places near heat devices
 - (3) High humidity places
 - (4) Hot surface or cold surface enough to (9) Places where the receiver is affected by infrared generate condensation
 - (5) Places exposed to oil mist or steam directly (10) Places where some object may obstruct the
 - (6) Uneven surface
 - (7) Places affected by the direct air flow of the AC unit
- (8) Places where the receiver is influenced by the fluorescent lamp (especially inverter type) or sunlight
 - rays of any other communication devices
 - - communication with the remote control

(1) Accessories

Please make sure that you have all of the following accessories.



2 Preparation before installation

Setting on site

PCB on the receiver has the following switches to set the function. Default setting is shown with mark.

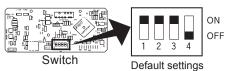
SW1	Prevents interference during plural setting	ON : Normal	OFF : Customized
SW2	Receiver master/ slave setting	ON : Master	OFF : Slave
SW3			
SW4	Auto restart	ON : Valid	OFF : Invalid

② Preparation before installation (continued)

To change setting

- Remove one screws located on the under of the receiver and detach the board.
- 2. Change the setting by the switch on PCB.





3. When SW1 is turned to OFF position, change the wireless remote control setting.

For the method of changing the setting, refer to Setting to avoid mixed communication of 4 Wireless remote control.

*The receivable area of the signal refer to (5) Receiver

Master/Slave setting when using plural remote controls

Up to two receiver or wired remote control can be installed in one indoor unit group.

When two receiver or wired remote control are used, it is necessary to change SW on the PCB to set it as slave.

③ How to install the receiver

The following two methods can be used to install the receiver onto a ceiling or a wall. Select a method according to the installation position.

<Installation position>

- (A) Direct installation onto the ceiling with wood screws.
- (B) Installation with accessory's bracket

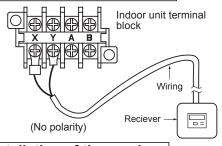
(1) Drilling of the ceiling (ceiling opening)

Drill the receiver installation holes with the dimensions shown right at the ceiling position where wires can be connected.



(A) Direct installation onto the ceiling with wood screws.	88mm(H)×101mm(W)	
(B) Installation with enclosed bracket	108mm(H)×108mm(W)	

(2) Wiring connection of receiver



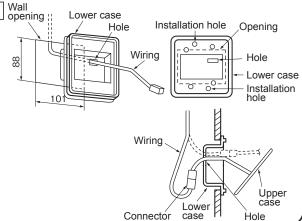
Do not connect the wiring to the power source of the terminal block. If it is connected, printed board will be damaged.

(3) Installation of the receiver

Remove the screw on the side of the receiver and sprit it into the upper case and lower case. Install the receiver with one of the two installation methods (A) to (C) shown below.

(A) Direct installation onto the ceiling with screws

- Use this installation method when the ceiling is wooden, and there is no problem for strength in installing directly with wood screws.
- ① Put through the wiring from the back side to the hole of the lower case.
- ② Fit the lower case into the ceiling opening. Make sure that the clearance between the convex part of the back of the lower case and the ceiling opening must be as equal as possible on both sides.
- ③ Using the two installation holes shown right, fix the lower case onto the ceiling with the enclosed wood screws. (The other four holes are not used.)
- 4 Connect the wiring with the wiring from the upper case by the connector.

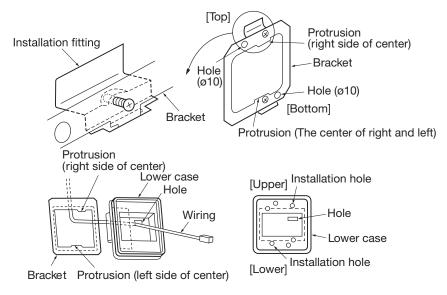


3 How to install the receiver(continued)

- 5 Take out the connector to the backside from the hole of the lower case putting through the wiring at ①.
- 6 Fit the upper case and the lower case, and tighten the screws.

(B) Installation with enclosed bracket

Use this method when installaing onto a gypsum board (7 to 18mm), etc.

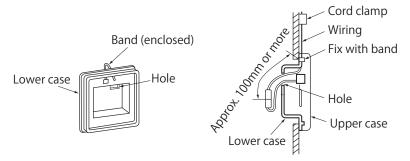


- ① Catch the two protrusion of the enclosed bracket onto the fitting as shown above, and temporarily fix with the screws. (The bracket has an Upper/Lower and front/back orientation. Confirm the Upper/Lower protrusion positions and the positional relation of the ø10 holes on the bracket and the installation hole on the lower case with the above drawing.)
- ② Insert the end of the installation fitting into the back of the ceiling from the opening, and tighten the screws to fix the bracket onto the ceiling.
- 3 Pass the wiring from the rear side through the hole on the lower case.
- 4 Fit the lower case onto the bracket, and fix the lower case to the bracket using the two installation holes shown above. (The other four holes are not used.)
- 5 Follow step 1 to 6 for (A) to complete the installation.

③ How to install the receiver (continued)

(C) Exposed installation

Use the following procedure when installing the case with the wiring exposed.



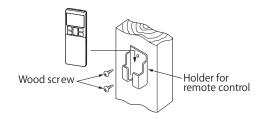
- ① Cut off the thin section on the side of the upper case with a pair of nippers or a knife, and remove the burrs with a file, etc. (The wiring is passed through this section.)
- ② Pass the enclosed band through the wiring outlet hole on the lower case.
- ③ Use on of the light detection adaptor installation methods (A) or (B) explained in section 3, and fix the lower case onto the wall. Do not pass the wiring through the hole on the lower case.
- 4 Fix the wiring using the band while leaving the wiring length from the band fixing section to the end of the wiring connector at 100mm or more.
- (5) Connect the wiring with the wiring protruding front the upper case using a connector.
- (6) Pass the connected connector and the excess wiring through the hole on the lower case.
- Tit the upper case onto the lower case, and tighten the screws.
- Adequately fix the wiring with the enclesed cord clamp.

(4) Wireless remote control

Installation tips for the remote control holder

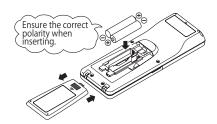
Fix the remote control holder using the screws supplied with this product.

- * Precautions for installing the holder
- Adjust the position so that it is upright.
- Ensure that the screw heads are not protruding.
- Do not attach the holder on plaster wall.



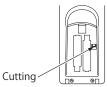
How to insert batteries

- 1. Detach the back lid.
- 2. Insert the batteries. (two AAA batteries)
- 3. Reattach the back lid.



Setting to avoid mixed communication

- 1. Detach the back lid, and remove the batteries.
- 2. Cut off the switching wire in the battery compartment using nippers.
- 3. Insert the batteries, and attach the back lid.



4 Wireless remote control (continued)

Changing the wireless remote control setting

How to change the Auto Run setting

The Auto Run mode is not available on the building air-conditioner and gas heat pump series (excluding the cooling/heating free multi system).

When using the wireless remote control to operate those models, set the wireless remote control to disable the Auto Run mode.

To disable the Auto Run mode, press the ACL switch while holding down the MODE button, or insert batteries while holding down the MODE button.

* Note: Once the batteries are removed, the setting is reset to the factory default. When the batteries are removed, repeat the steps described above.

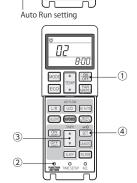
Indoor function settings

- 1. How to set indoor functions
 - 1) Press the ON/OFF button to stop the unit.
 - ② Press the desired one of the buttons shown below while holding down the FUNCTION SETTING switch.
 - ③ Use the selection buttons, ▲ and ▼, to change the setting.
 - (4) Press the SET button.

The buzzer on the wireless remote control signal receiver beeps twice, and the LED lamp flashes four times at two-second intervals.

2. Setting details

The following functions can be set.



SLEEP FIL

Button	Number indicator	Function setting	Button	Number indicator	Function setting
	00	Fun speed setting : Standard		00	Cooling fan residual-period running : Disable
FAN SPEED	01	Fun speed setting : Setting 1 *	ON TIMER	01	Cooling fan residual-period running : 0.5 hours
	02	Fun speed setting : Setting 2 *	ONTIMER	02	Cooling fan residual-period running : 2 hours
	00	Room heating temperature adjustment : Disable		03	Cooling fan residual-period running : 6 hours
	01	Room heating temperature adjustment : +1°C		00	Heating fan residual-period running : Disable
	02	Room heating temperature adjustment : +2°C	OFF TIMER	01	Heating fan residual-period running : 0.5 hours
	03	Room heating temperature adjustment : +3°C	OFF HIVER	02	Heating fan residual-period running : 2 hours
	00	Filter sign display : OFF		03	Heating fan residual-period running : 6 hours
	01	Filter sign display : 180 hours	NUCLIT	00	Remote control signal receiver LED : Brightness High
FILTER	02	Filter sign display : 600 hours	NIGHT SETBACK	01	Remote control signal receiver LED : Brightness Low
FILTER	03	Filter sign display : 1000 hours	SEIBAGK	02	Remote control signal receiver LED : OFF
	04	Filter sign display :	* Refer to technical data.		
		Operation stop after 1000 hours have elapsed			
U/P	00	Anti draft setting : Disable			
0/1	01	Anti draft setting : Enable			
SILENT	00	Infrared sensor setting (Motion sensor setting) : Disable			
SILLINI	01	Infrared sensor setting (Motion sensor setting) : Enable			
	00	Infrared sensor control (Motion sensor control) : Disable			
	01	Infrared sensor control (Motion sensor control):			
		Power control only			
HI POWER	02	Infrared sensor control (Motion sensor control) : Auto OFF only			

5 Receiver

1 Control plural indoor units with one remote control

Up to 16 indoor units can be connected.

1. Connect the XY terminal with 2 cores wire. As for the size, refer to the following note.

Power control and Auto OFF

Infrared sensor control (Motion sensor control):

2. For Packaged air-conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [0] to [F] so as not to duplicate.

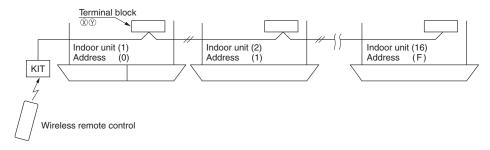
Restrictions on the thickness and length of wire (Maximun total extension 600m.)

Standard Within $0.3 \text{ mm}^2 \times 100 \text{m}$ Within $0.5 \text{ mm}^2 \times 200 \text{m}$ Within $0.75 \text{mm}^2 \times 300 \text{m}$ Within $1.25 \text{mm}^2 \times 400 \text{m}$ Within $2.0 \text{ mm}^2 \times 600 \text{m}$

(5) Receiver (continued)

For the shop series

For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.

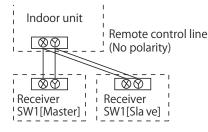


For the building air-conditioner and gas heat pump series

Set the indoor unit and outdoor unit numbers by manually specifying the addresses. Use the rotary switchs SW1 and SW2 provided on the indoor unit PCB (printed circuit board) to set the indoor unit numbers so that they are not duplicated.

Master/Slave setting when using plural remote control

Up to two receivers can be installed in one indoor unit group.

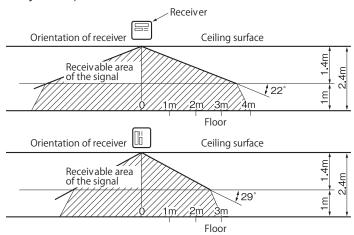


Switch	Setting	Function	
SW2	ON	Master	
	OFF	Slave	

When installed on ceiling

1. Standard reachable area of the signa

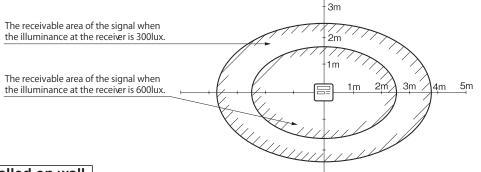
[Condition] Illuminance at the receiver : **300lux** (when no lighting is installed within 1m of the receiver in an ordinary office.)



2. Correlation between illuminance at the receiver and reachable area of the signal in a plain view.

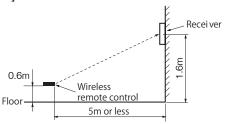
[Condition] Correlation between the reachable area of the signal and illuminance at the receiver when the wireless remote control is operated at 1m high under the condition of ceiling height of 2.4m. When the illuminance becomes double, the area is narrowed down to two third.

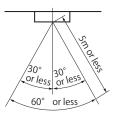
(5) Receiver (continued)



When installed on wall

[Condition] Illuminance at the receiver: 800lux.

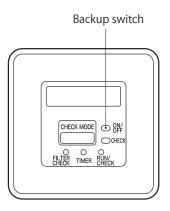




Backup switch

A backup switch is provided on the receiver section of the panel surface. When operation from the wireless remote control unit is not possible (due to flat batteries, a mislaid unit, a unit failure), you can use it as an emergency means. You should operate this switch manually.

- 1. If pressed while the air-conditioner is in a halt, it will cause the air-conditioner to start operation in the automatic mode (in the case of cooling only, in the cooling mode). Wind speed: Hi fan, Temperature setting: 23°C, Louver: horizontal
- If pressed while the air-conditioner is in operation, it will stop the airconditioner.



Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with the wireless remote control unit, while the backup switch on the receiver is depressed.
- If the backup switch on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check wiring by consulting with inspection guides.

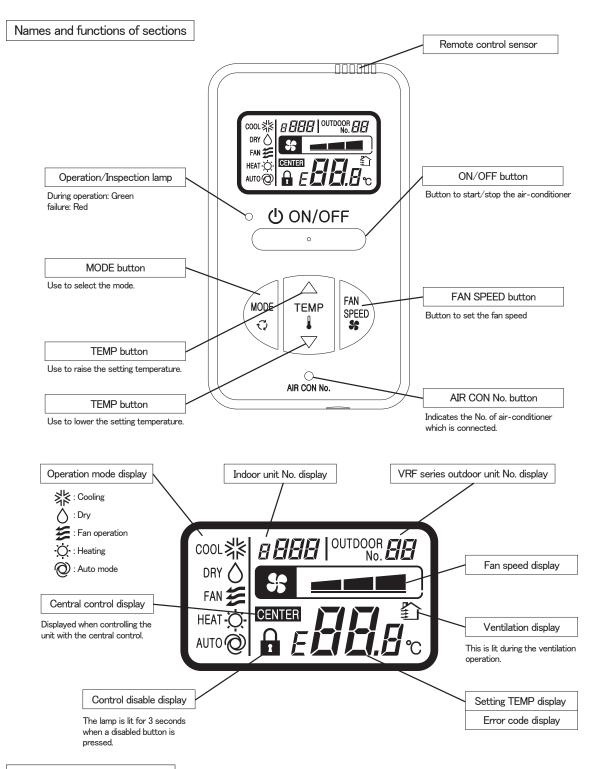
How to read the 6-digit display

A 6-digit indicator (7-segment indicator) is provided on the receiver section.

- 1. An indication will be displayed for one hour after power on.
- 2. An indication appears for 3.5 seconds when a "Stop" command is sent from the wireless remote control unit while the air-conditioner is not running.
- 3. An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
- 4. When there are no error records to indicate, addresses are displayed for all of the connected units.
- 5. When there are some error records remaining, the error records are displayed.
- 6. Error records can be cleared by transmitting a "Stop" command from the wireless remote control unit, while the backup switch is depressed.

3.2 SIMPLE WIRED REMOTE CONTROL (RCH-E3)

Following functions of FDU indoor unit series are not able to be set with this simple wired remote control (RCH-E3). 1. 4-fan speed setting (P-Hi/Hi/Me/Lo)→ 3-fan speed setting (Hi/Me/Lo)



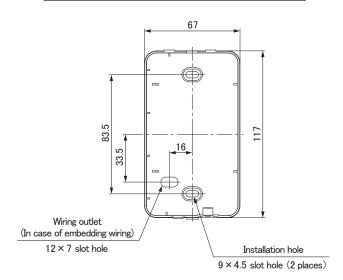
Installation of remote control

Do not install the remote control at the following places in order to avoid malfunction.

- (1) Places exposed to direct sunlight (2) Places near heat devices
- (3) High humidity places
- (4) Hot surface or cold surface enough to generate condensation
- (5) Places exposed to oil mist or steam directly
- (6) Uneven surface

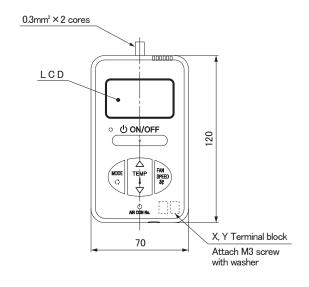
PJZ000Z272

Remote control installation dimensions

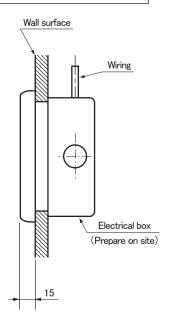


Note: Installation screw for remote control M4 screw (2 pieces)

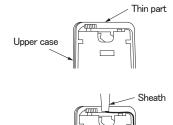
In case of exposing wiring



In case of embedding wiring



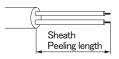
The remote control wiring can be extracted from the upper center. After the thin part in the upper side of the remote control upper case is scraped with a nipper or knife, remove burr with a file.





The peeling length of each wiring is as follows:

X wiring : 160mm Y wiring : 150mm



Wiring specifications

- (1) Wiring of remote control should use $0.3 \text{mm}^2 \times 2$ cores wires or cables. (on–site configuration)
- (2) Maximum prolongation of remote control wiring is 600m.

If the prolongation is over 100m, change to the size below.

But, the wiring in the remote control case should be $0.3 \mathrm{mm^2}$ (recommended) to $0.5 \mathrm{mm^2}$

Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire

connecting section. Be careful about contact failure.

Length	Wiring thickness
100 to 200m	0.5mm² × 2 cores
Under 300m	0.75mm² × 2 cores
Under 400m	1.25mm² × 2 cores
Under 600m	2.0mm ² × 2 cores

Unit:mm

Adapted to RoHS directive

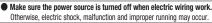
Simple Remote Control Installation Manual

PJZ012D069 A

Read together with indoor unit's installation manual.

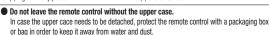
! WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
 - Loose connection or hold will cause abnormal heat generation or fire.



⚠ CAUTION

- Do not install the remote control at the following places in order to avoid malfunction.
- (1) Places exposed to direct sunlight (2) Places near heat devices
- (4) Hot surface or cold surface enough to generate condensation
- (3) High humidity places
- (5) Places exposed to oil mist or steam directly
- (6) Uneven surface





Accessories	Remote control, wood screw (ϕ 3.5 $ imes$ 16) 2 pieces
Prepare on site	Remote control cord (2 cores) (Refer to [2. Installation and wiring of remote control]) [In case of embedding cord] Electrical box, M4 screw (2 pieces) [In case of exposing cord] Cord clamp (if needed)

1. Installation procedure

In case of embedding cord

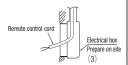
(1) Make certain to remove the screw on the bottom surface of the remote control.



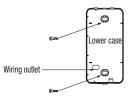
(2) Remove the upper case of the remote control. Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote control and slightly twist it, and the case is

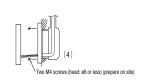


(3) Pre-bury the electrical box and remote control cord.



(4) Prepare two M4 screws (recommended length: 12 – 16mm), and install the lower case to the electrical box. Do not use a screw whose screw head is larger than the height of the wall around the screw hole.





- (5) Connect the remote control cord to the terminal block. Connect the terminals (X and Y) of the remote control and the terminals (X and Y) of the indoor unit. (No polarity of X and Y)
- Mount the upper case for restoring to its former state so as not to crimp the remote control cord, and secure with the removed screw.

In case of exposing cord

Make certain to remove a screw on the bottom surface of the



(2) Remove the upper case of the remote control. Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote control and slightly twist it, and the case is removed.

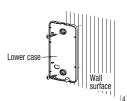


(3) The remote control cord can be extracted from the upper center.

After the thin part in the upper side of the remote control upper case is scraped with a nipper or knife, remove burr with a file.



(4) The lower case of the remote control is mounted to a flat wall with two accessory wood screws.



Connect the remote control cord to the terminal block. Connect the terminals (X and Y) of the remote control and the terminals (X and Y) of the indoor unit. (No polarity of X and

The wiring route is as shown in the right.



The wiring in the remote control case should be 0.3 mm² (recommended) to 0.5 mm² at maximum.

Further, peel off the sheath.

The peeling length of each wiring is as follows:

X wiring : 160mm Y wiring: 150mm



- (6) Mount the upper case for restoring to its former state so as not to crimp the remote control cord, and secure with the removed screw.
- In the case of exposing installation, secure the remote control cord to the wall surface with a cord clamp so as not to loosen the remote control cord.

2. Installation and wiring of remote control

- (1) Wiring of remote control should use 0.3mm² × 2 cores wires or cables. (on-site configuration)
- (2) Maximum prolongation of remote control wiring is 600 m.

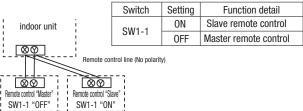
If the prolongation is over 100m, change to the size below.

But, the wiring in the remote control case should be 0.3mm² (recommended) to 0.5mm². Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire

connecting section. Be careful about contact failure. 100 - 200m · · · · · · · · · · · · 0.5mm² × 2 cores Under $400m \cdot \cdot \cdot \cdot \cdot 1.25mm^2 \times 2$ cores Under 600m······2.0mm² × 2 cores

3. Master/ slave setting when more than one remote control are used

(1) Up to two remote controls can be connected to one unit (or one group) of indoor unit.

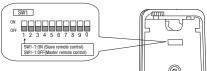


(2) Set the switch SW1-1 of the slave remote control is "Slave" (ON). The factory default is set as "Master" (OFF).

(Note) • The remote control thermistor enabled setting can be set only to the master remote control.

. Install the master remote control at the position to detect room temperature.

The air-conditioner operation follows the last operation of the remote control in case of the master / slave setting.



4. The indication when power source is supplied

 At the time of turning the power source on, after the light is on for the first 2 seconds, the display becomes as shown below.

The number displayed on the upper side of LCD in the remote control is the software number,

and this is not an error code.



Software number

(The number in the left is one example. Another number may be shown.)

- (2) Then, "88.0 °C" blinks on the remote control until the communication between the remote control and the indoor unit is established.
- (3) In the case of connecting one remote control with one unit (or one group) of indoor unit, make certain to set the master remote control (factory default).

 If the slave remote control is set, a communication cannot be established.
- (4) If a state where the communication between the remote control and the indoor unit cannot be established continues about for 30 minutes, "E" is displayed. Confirm the wiring of the indoor unit and the outdoor unit and master/slave setting of the remote control.



5. Confirmation method for return air temperature

Return air temperature can be confirmed by the remote control operation.

(1) Press AIR CON No. button for over 5 seconds.

"88" blinks on the temperature setting indicator.

("88" blinks for approximately 2 seconds while data is read.)



Then, the return air temperature is displayed.

(Example) return air temperature: "27 °C" (blinking)

(Note) For the return air temperature, in the normal case, the return air temperature of the indoor unit is displayed; however, in the case that the remote control thermistor is effective, detected temperature by the remote control thermistor is displayed.

(2) Press ON/OFF button. End.

[In the case that the remote thermistor is ineffective and plural indoor units are connected to one remote control 1

(1) Press AIR CON No. button for over 5 seconds.

indoor unit No. indicator: "U 000" (blinking) (Among the connected indoor units, the lowest number is displayed.)



(2) Press TEMP or TEMP button. Select the indoor unit No.

(3) Press MODE button.

Dectder the indoor unit No.

(Example) indoor unit No. indicator: "U 000"

"88" blinks on the temperature setting indicator. (blinking for approximately 2 to 10 seconds while data is read) Then, the return air temperature is displayed. When AIR CON No. is pressed, return to the indoor unit selection display (example, "U 000").

(4) Press ON/OFF button. End.

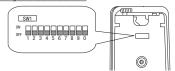
6. Function setting

Each function of the remote control and the indoor unit is automatically set to the initial setting, which is the standard use, on the occasion of connecting the remote control with the indoor unit. In the case of the standard use, the setting change is unnecessary. However, if you whould like to change the initial setting "o", change the setting for only the item of the function number. Record the setting contents and stored them.

$(1) \quad \hbox{Function setting item by switch on PCB}$

	Switch No.	Setting	Setting detail	Initial setting
Γ	SW1-1	ON	Slave remote control	
	3W1-1	0FF	Master remote control	0
Γ	SW1-2	ON	Remote control thermistor enabled	
	3W1-2	0FF	Remote control thermistor disabled	0
Г	SW1-3	ON	"MODE" button prohibited	
	3W1-3	0FF	"MODE" button enabled	0
Γ	SW1-4	ON	"ON/OFF" button prohibited	
L	3W1-4	0FF	"ON/OFF" button enabled	0

Switch No.	Setting	Setting detail	Initial setting
SW1-5 ON		"TEMP" button prohibited	
3W1-3	0FF	"TEMP" button enabled	0
SW1-6	ON	"FAN SPEED" button prohibited	※ Note 1
SW1-6	0FF	"FAN SPEED" button enabled	* Note 1
SW1-7	ON	Auto restart function enabled	
3W1-7	0FF	Auto restart function disabled	0
SW1-8, 9, 0	ON	Not used	
	0FF	Not used	



- As for the slave remote control, function setting is impossible other than SW1-1.
- In the indoor unit with only one fan speed, "FAN SPEED" button cannot be enabled.

$(2) \quad \hbox{Function setting item by button operation} \\$

Classification	Function No.	Function	Setting No.	Setting	Initial setting	Remarks
			01	Fan speed: three steps		The fan speed is three steps, \$\$ = = - \$\$ = - \$\$ = .
	01 Indo	ladaa	02	Fan speed: two steps (Hi-Lo)		The fan speed is two steps, * ■■■ - * ■.
	UI	Indoor unit fan speed	03	Fan speed: two steps (Hi-Me)		The fan speed is two steps, * ■■ - * ■■.
			04	Fan: one step	※ Note 1	The fan speed is fixed to one step.
			01	Remote control thermistor: no offset	0	
			02	Remote control thermistor: +3.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at +3.0°C.
		Remote control	03	Remote control thermistor: +2.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at +2.0°C.
	03	thermistor at the time	04	Remote control thermistor: +1.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at +1.0°C.
		of cooling	05	Remote control thermistor: -1.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at -1.0°C.
			06	Remote control thermistor: -2.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at -2.0°C.
Remote			07	Remote control thermistor: -3.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offsett temperature at -3.0°C.
control			01	Remote control thermistor: no offset	0	
function			02	Remote control thermistor: +3.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at +3.0°C.
		Remote control	03	Remote control thermistor: +2.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at +2.0°C.
	04	thermistor at the time	04	Remote control thermistor: +1.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at +1.0°C.
		of heating	05	Remote control thermistor: -1.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at -1.0°C.
			06	Remote control thermistor: -2.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at -2.0°C.
			07	Remote control thermistor: -3.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at -3.0°C.
			01	No ventilator connection	0	
	05	Ventilation setting	02	Ventilator links air-conditioner		In case of Single split series, by connecting ventilation device to CNT of the indoor printed circuit board (in case of VRF series, by connecting it to CND of the indoor printed circuit board), the operation of ventilation device is linked with the operation of indoor unit.
	06	"Auto" operation	01	"Auto" operation enabled	※ Note 1	
	00	setting	02	"Auto" operation disabled	※ Note 1	"Auto" operation disabled
	07	Operation permission/		Disabled	0	
	-	prohibition External input	02	Enabled		Operation permission/prohibition control is enabled.
			01	Level input	0	
	08	External input	02	Pulse input		
			01	Standard	Note2	
	09	Fan speed setting	02	High speed 1	Note2	
			03	High speed 2	Note2	
		Fi-i	01	No remaining operation	0	After cooling stopped, no fan remaining operation
	Fan remaining operation at the time		02	0.5 hours		After cooling stopped, fan remaining operation for 0.5 hours
	10	of cooling	03	1 hour		After cooling stopped, fan remaining operation for 1 hour
			04	6 hours		After cooling stopped, fan remaining operation for 6 hours
		Face association	01	No remaining operation	0	After heating stopped or after heating thermostat OFF, no fan remaining operation
	11	Fan remaining operation at the time	02	0.5 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 0.5 hours
		of heating	03	2 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 2 hours
Indoor unit		0	04	6 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 6 hours
function		Setting temperature	01	No offset	0	
	12	offset at the time of	02	Setting temperature offset + 3.0 °C		The setting temperature at the time of heating is offset by +3.0 °C.
		heating	03	Setting temperature offset + 2.0 °C		The setting temperature at the time of heating is offset by +2.0 °C.
		Ť.	04	Setting temperature offset + 1.0 °C		The setting temperature at the time of heating is offset by +1.0 °C.
			01	Low fan speed	※ Note 1	At the time of heating thermostat OFF, operate with low fan speed.
			02	Setting fan speed		At the time of heating thermostat OFF, operate with the setting fan speed.
	13	Heating fan controller	03	Intermittent operation	※ Note 1	At the time of heatingr thermostat OFF, intermittently operate.
			04	Fan off		At the time of heating thermostat OFF, a fan will be stopped. When the remote control thermistor is enabled, automatically set to "Fan off". Do not set at the time of the indoor unit thermistor.
			01	No offset	0	
			02	Return air temperature offset +2.0 °C		Offset the return air temperature of the indoor unit by +2.0 °C.
		Return air temperature	03	Return air temperature offset +1.5 °C		Offset the return air temperature of the indoor unit by +1.5 °C.
	14	offset	04	Return air temperature offset +1.0 °C		Offset the return air temperature of the indoor unit by +1.0 °C.
			05	Return air temperature offset -1.0 °C		Offset the return air temperature of the indoor unit by -1.0 °C.
			06	Return air temperature offset -1.5 °C		Offset the return air temperature of the indoor unit by -1.5 °C.
			07	Return air temperature offset -2.0 °C	1	Offset the return air temperature of the indoor unit by -2.0 °C.

Note 1: The symbol " ** " in the initial setting varies depending upon the indoor unit and the outdoor unit to be connected, and this is automatically determined as follows:

automatically determined as follows:					
Swith No. Function No.	Function	Setting	Product model		
	"FAN SPEED"	"FAN SPEED" button prohibited	Product model whose indoor fan speed is only one step		
SW1-6		"FAN SPEED" button enabled	Product model whose indoor fan speed is two steps or three steps		
		Fan speed: three steps	Product model whose indoor unit fan speed is three steps		
Remote control function 01	Indoor unit fan	Fan speed: two steps (Hi-Lo)	Product model whose indoor unit fan speed is two steps		
hemote control function of	speed	Fan speed: two steps (Hi-Me)			
	.,	Fan: one step	Product model whose indoor unit fan speed is only one step		
Remote control function 06	"Auto" operation	"Auto" operation enabled	Product model where "Auto" mode is selectable		
nemote control function of	setting	"Auto" operation disabled	Product model without "Auto" mode		
Indoor unit function 13	Heating fan	Low fan speed	Product model except FDUS		
indoor driit idilction 13	control	Intermittent operation	FDUS		

Note 2: Fan speed of "High speed" setting

Fon annual natting		Indoor unit fan speed setting	
Fan speed setting	50 mm m - 50 mm - 50 m	\$0 mm M - \$0 m	\$\$ a a d d - \$\$ a a
Standard	Hi — Mid — Lo	Hi — Lo	Hi — Mid
High speed 1 · 2	UHi — Hi — Mid	UHi — Mid	UHi — Hi

Initial setting of some indoor unit is "High speed"

Note 3: As for plural indoor unit, set indoor functions to each master and slave indoor unit.

But only master indoor unit is received the setting change of indoor unit function "07 Operation permission/prohibition" and "08 External input".

7. How to set functions by button operation

(1) Stop air-conditioner, and simultaneously press AIR CON No. and T MODE buttons at the same time for over three seconds.

The function number "01" blinks in the upper right.

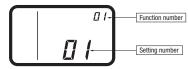


- (2) Press TEMP△ or TEMP▽ button. Select the function number.
- (3) Press MODE button.

(4) [In the case of selecting the remote control function (01-06)]

 $\ensuremath{\bigcirc}$ The current setting number of the selected function number blinks (Example)

Function number: "01" (lighting)
Setting number: "01" (blinking)



- ② Press TEMP△ or TEMP▽ button. Select the setting number.
- 3 Press MODE button.

The setting is completed.

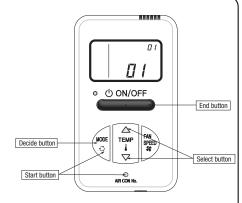
Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.

(Example)

Function number: "01" (lighting for 3 to 20 seconds) Setting number: "01" (lighting for 3 to 20 seconds)



Then, the screen goes back to the function number blinking indication (1), if the setting is sequentially conducted, continue with the same procedures. If the setting is finished, proceed to (5).



[In the case of selecting the indoor unit function (07-14)]

① "88" blinks on the temperature setting indicators.

(blinking for approximately 2 to 10 seconds while data are read)

After that, the current setting number of the selected function number blinks. (Example)

Function number: "07" (lighting) Setting number: "01" (blinking)

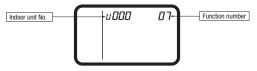


Proceed to ② . [Note]

a. In the case of connecting one remote control to plural indoor units, the display will be as follows:

Indoor unit No. display: "U 000" (blinking)

(Display the lowest number among the connected indoor units.)



b. Press $\boxed{\text{TEMP}}$ or $\boxed{\text{TEMP}}$ button.

Select the indoor unit No. to be set.

If "U ALL" is selected, the same setting can be set to all units.

c. Press MODE button.

Decide the indoor unit No.

"88" blinks on the temperature setting indicators. (blinking for 2 to 10 seconds while data is read)

When AIR CON No. button is pressed, go back to the indoor unit selection display (for example, "U 000" blinking).

 $\begin{tabular}{ll} \hline @ \mbox{ Press} \hline \mbox{ TEMP} \triangle \mbox{ or } \hline \mbox{ TEMP} \nabla \mbox{ button.} \\ \hline \end{tabular}$

Select the setting number

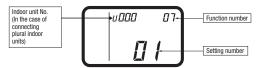
3 Press MODE button.

The setting is completed.

Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.

(Example)

Indoor unit No.: "U 000" (lighting for 3 to 20 seconds) Function number: "07" (lighting for 3 to 20 seconds) Setting number: "01" (lighting for 3 to 20 seconds)



Then, the screen goes back to the function number blinking indication (1), if the setting is sequentially conducted, continue with the same procedures. If the setting is finished, proceed to (5).

(5) **Press ON/OFF button.** The setting is completed.

- Even if ON/OFF button is pressed during setting, the setting is ended. However, any details where the setting has not been completed will be ineffective.
- The setting contents are stored in the control, and even if the power failure occur, this will not be lost.

[Confirmation method for current setting]

According to the operation, the "setting number" displayed first after selecting "function number" and pressing \(\overline{\mathcal{C}}\) MODE button is the currently set content. (However, in the case of selecting "U ALL" (all units), the setting number of the lowest number among the indoor units is displayed.)

3.3 OA SPACER (FDTC series)

This manual describes the installation methods for OA spacer (TC-OAS-E) and the duct joint (TC-OAD-E). © This OA spacer is designed for assembling on the indoor unit (FDTC Series), not for be using independently.



Application model	FDTCA151R, 201R, FDTCA22-56KXE4R, FDTC22-56KXE6 FDTC22-56KXE6A, FDTC22-56KXE6B, FDTC22-56KXE6D
	FDTC40V, 50V, FDTC40-60VB, FDTC25-60VD, FDTC40-60VF

- OPrepare the duct (size: Ø75) and the booster fan at site.
- ©For the installation of indoor unit, refer to the installation manual attached to the indoor unit.

SAFETY PRECAUTIONS

Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.

MARNING

- Installation should be performed by the specialist.
 - If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit.
 - •

- Install the system correctly according to these installation manuals.
 Improper installation may cause explosion, injury, water leakage, electric shock, and fire.
- ●Use the genuine accessories and the specified parts for installation.
- If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit.

 Turn off the power source during servicing or inspection work.
- If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.

 Shut off the power before electrical wiring work.

It could cause electric shock, unit failure and improper running.

!CAUTION

Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.

It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.



!

(1) Before installation

Confirm the following parts are included:

OA spacer (TC-OAS-E) Spacer Bracket 1 Bracket 2 Bracket 3 Bracket 4 Bolt 2 Bracket 3 Bracket 4 Bolt

Duct joint (TC-0AD-E)					
Duct Joint	Screw	Insulation 1 (120 × 54)	Insulation 2 (40 × 60)		
1	6	1	2		

② Prior study before installation (Usage limitation)

(1) Temperature conditions for OA spacer

- · Adjust the temperature conditions of mixed air with outdoor air and indoor air within the usage range of suction air temperature for the air-conditioner.
- The usage temperature conditions of intake outdoor air and indoor air around the ducts are shown in the following table.
- · If the temperature conditions of intake outdoor air do not meet, process the outdoor air before intaking.

Oneration made	Usage tempera	ture conditions
Operation mode	Intake outdoor air	Indoor air around the ducts
In heating	5°C DB or higher	18.5°C WB or lower and 60% RH or lower
In cooling	29°C DB or lower and 80% RH or lower	20°C DB or higher

(2) Intake outdoor air volume

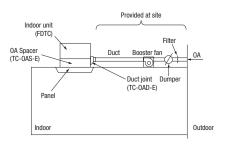
- Intake outdoor air volume is 2.6 m³/min at the maximum (when two sets of duct joints are used).
- Up to two sets of duct joint can be installed on OA spacer.
 - In case one set of duct joint is installed: 1.3 m³/min max.
 - In case two sets of duct joint is installed: 2.6 m³/min max.

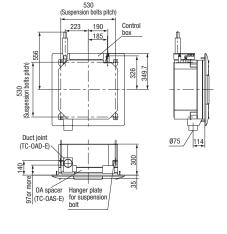
(3) Selection of booster fan

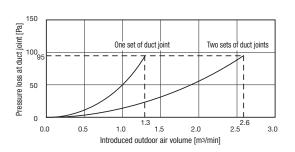
 Select the booster fan based on the duct resistance plus the pressure loss at the duct joint. (See the figure)

(4) Other conditions

- Determine the capacity of air-conditioner based on the calculation of air-conditioner load including the heat load of intake outdoor air.
- Install the filter for the intake outdoor air and the reverse flow prevention dumper during the duct work at site.
- · Insulate the duct and duct joint in order to prevent dewing.
- Interlock the operation of booster fan with ON/OFF operation of the indoor unit. (See Section 7.)





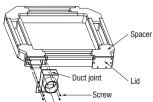


③ Installation of duct joint (TC-OAD-E) onto OA spacer

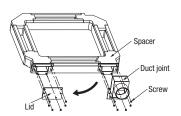
·There are two places where the duct joint can be installed.

When installing one duct joint

Install OA spacer at either one of two installation places on the duct joint.

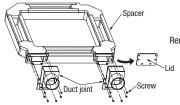


To install the duct joint, screw it in as shown at left.



When installing the duct joint at the lid side, remove the lid and reinstall it at the other end before installing the duct joint.

When installing two duct joints



Remove the lid and then install two pieces of duct joint.

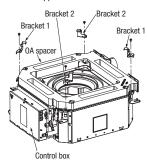
(4) Installation of OA spacer on the indoor unit

OA spacer can be installed regardless whether the indoor unit has already been hanged or not. (It is recommended to install before hanging the unit for convenience of installation.)

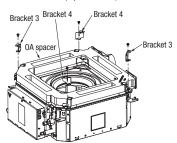
1-1. When installing OA spacer before hanging the indoor unit

Placing OA spacer on the indoor unit, fix the brackets 1 and 2 (2 pieces each) with bolts.

Install OA spacer in the appropriate position that the duct joint side of OA spacer becomes opposite to the control box of indoor unit.



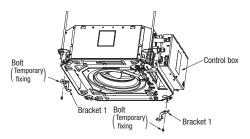
② Fix the brackets 3 and 4 (2 pieces each) with bolts.



1-2. When installing OA spacer after hanging the indoor unit

① After hanging the indoor unit (*), fix the bracket 1 (2 pieces) temporarily with bolt by 2 turns as shown in the figure.

* For the height (position) of hanging the indoor unit, refer to Section 5.

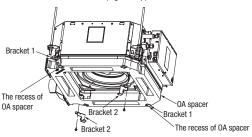


② Install OA spacer.

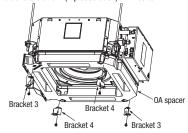
i. Install it in the way that the recess of OA spacer will fit on the bracket 1 fixed temporarily at the step \bigcirc .

ii. Tighten the bolt of bracket 1.

iii. Fix the bracket 2 with bolt. (Tighten up)



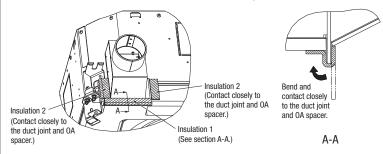
③ Fix the brackets 3 and 4 (2 pieces each) with bolts.



2. Applying insulation

Applying the insulation attached to duct joint set (TC-OAD-E)

- ① Applying the insulation 1 as shown in the figure.
- ② Applying the insulation 2 as shown in the figure.
- * Be sure to cover the entire surface of sheet metal of the duct joint with the insulation.

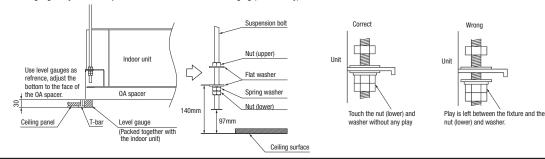


(5) Installation of indoor unit

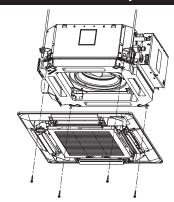
Work procedure

- 1. This units is designed for 2 x 2 grid ceiling.
 - If necessary, please detach the T bar temporarily before you install it.
 - If it is installed on a ceiling other than 2 x 2 grid ceiling, provide an inspection port on the control box side.
- 2. Arrange the suspension bolt at the right position (530mm530mm).
- 3. Make sure to use four suspension bolts and fix them so as to be able to hold 500N load.
- 4. Ensure that the lower end of the suspension bolt should be 97mm above the ceiling plane. Temporarily put the four lower nuts 140mm above the ceiling plane and the upper nuts on distant place from the lower nuts in order not to obstruct hanging the indoor unit or adjust the indoor unit position, and then hang the indoor unit.
- 5. Adjust the indoor unit position after hanging it by inserting the level gauge (Packed together with the indoor unit.) attached on the package into the air supply port and checking if the gap between the ceiling plane and the indoor unit is appropriate. (*) In order to adjust the indoor unit position, adjust the lower nuts while the upper nuts are put on distant place. Confirm there is no backlash between the hanger plate for suspension bolt and the lower nut and washer.

* Use the level gauge only when OA spacer has been installed before hanging (4 1-1 only).



6 Installation of panel



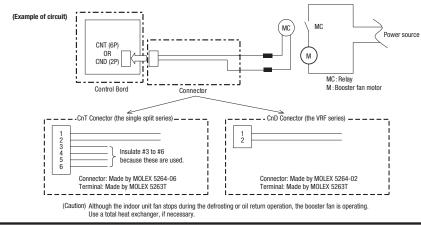
Tighten the panels to the brackets 3 and 4 with bolts. For further details, refer to the installation manual of panel.

(Caution) Connect the connector of lover motor within the control box.

Interlocking with the indoor unit fan

©Connect the Single split series and the VRF series to CnT on the indoor PCB and to CnD on the indoor PCB respectively. If a ventilation device is connected been geared with the motion of indoor device (ON: DC12V output, OFF: 0V output), the ventilation device is operated/stopped.

Set it at "VENT LINK" by selecting "No. 11 VENT LINK SET" from the Functional setting by remote control. For details, refer to the "ELECTRIC WIRNG WORK INSTRUCTION" of indoor unit.



3.4 DUCT JOINT (FDTC series)

PJZ012D073

• This product is used by assembling on the spacer (TC-OAS-E)

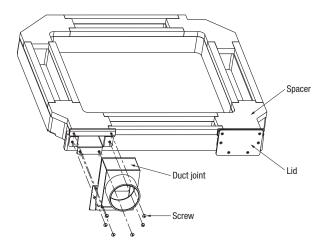
1.Before installation

• Confirm the following parts are included:

Duct joint	Screw	Insulation 1 (120 × 54)	Insulation 2 (40 × 60)
1	6	1	2

2.Regarding the use of this product

- Fix the product on the spacer (TC-OAS-E) as shown below.
 For the installation method, refer to the installation manual of the spacer.



3.5 FILTER KIT (FDUM series)

PJZ012D076A

This manual contains installation points and operating instructions for the filter kit manufactured by MHI. Carry out the work following the instructions below.

This manual also contains information on the usage after installation,

so keep this manual properly with USER'S MANUAL provided with the indoor unit.

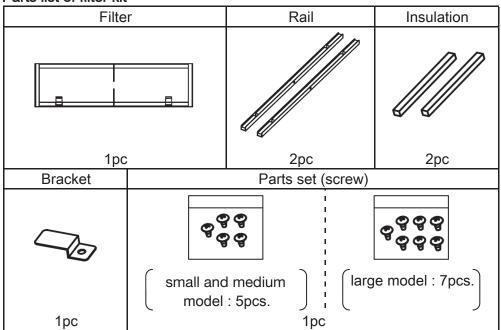
⚠ CAUTION

- · After unpacking, carry out this work on the ground.
- Do not carry out the work during operation, or there is a danger of being entangled in the rotating parts and getting injured.
- · Clean the air filter regularly.
- · Be sure to entrust qualified serviceman to performance on the air filter.
- Be sure to cut off the power and stop the unit before performing maintenance.

1. Table of filter kit parts No. and corresponding object models

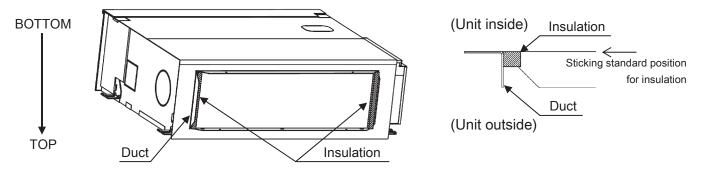
	Small model	Medium model	Large model
Single type	40, 50	60, 71	100 - 140
Multi type	22 - 56	71, 90	112 - 160
Filter Kit	UM-FL1EF	UM-FL2EF	UM-FL3EF

2. Parts list of filter kit

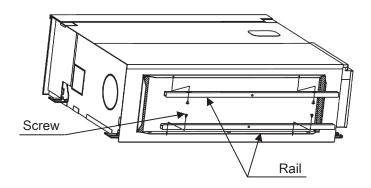


3. Installation Points

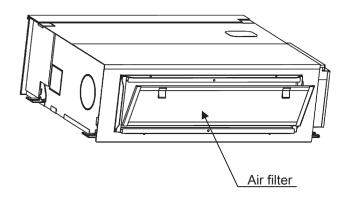
(1) Stick the insulation on both inner sides of the duct, leaving no space up and down.



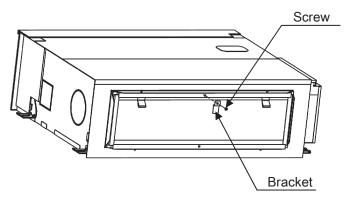
- (*) After unpacking, bottom side of the unit is located at the upper side.
- (2) Install the rail on both inner sides of the duct with the screw.

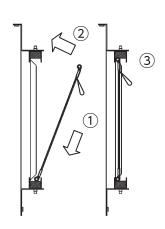


(3) Install the air filter on the rails.



(4) Install the bracket on the rail with the screw.





Installation procesure

(**) When the unit is installed, bottom side of the unit is located at the lower side.

3.6 BASE HEATER KIT (CW-H-E1)

PCZ012D007A/A

Model Name: CW-H-E1

↑ WARNING

- Follow the instruction and installation manual for outdoor unit when installing the heater.
- This heater must be installed by authorized personnel.
- Turn off the power source when the kit is installed.
- Failure to follow the above will result in serious accident like electrical shock or fire.

AREAS TO BE APPLIED

This kit is to be used in an area where the lowest temperature drops below zero.

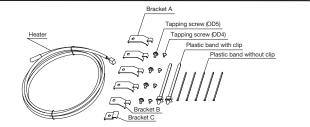
⚠Caution: In case the heater is not applied on the unit which is installed in an area mentioned above, it may be regarded as installation failure and warranty may not be given.

CAUTION

- Follow the law or regulation of the country where it is installed.
- Do not alter the heater.
- Lay down the heater so that the edge of the sheet metal does not damage the heater.
- Bending radius must be bigger than 25mm.
- Do not use the heater near flammable substances.
- Be sure to check the electrical insulation before use.
- Be sure to check the drain is not trapped by the heater.
- Do not leave refrigerant oil on the base.

Components

- Heater : 1pc
 Bracket A : 4pcs
 Bracket B : 1pcs
- Bracket C : 1pcs
 Tapping screw (OD5) : 4pcs
- Tapping screw (OD4) : 4pcsPlastic band with clip : 2pcs
- Plastic band : 5pcs

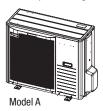


Applicable model

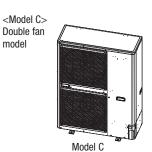
This heater kit is applicable for 3 different models.

<Model A>

Single fan with plastic fan guard model

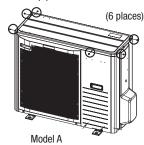


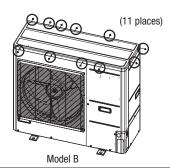


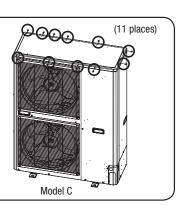


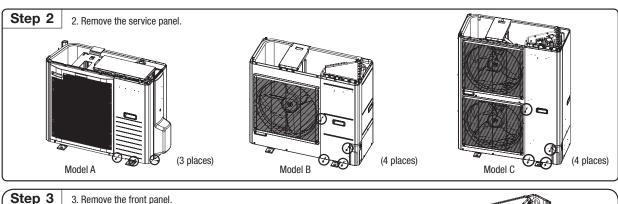
Installation procedure

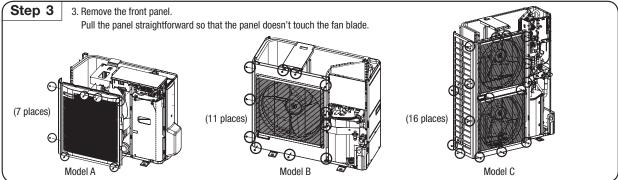
Step 1 1. Remove the top panel of the outdoor unit.

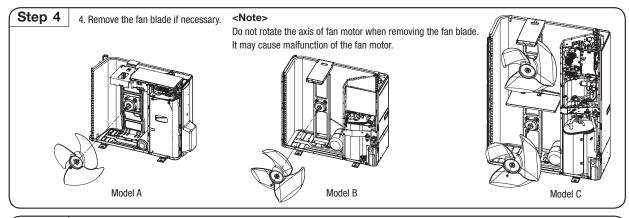


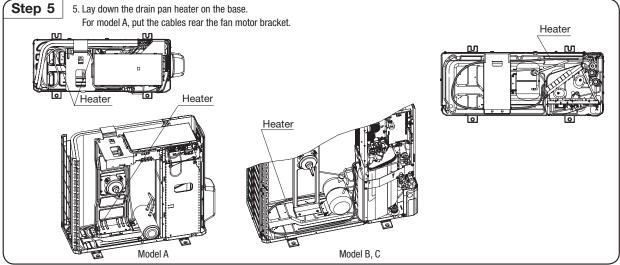






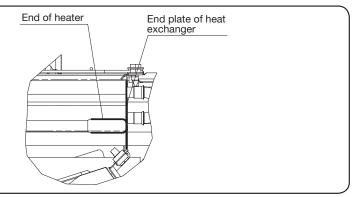






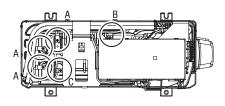
Step 6

6. Put the heater underneath the heat exchanger and align the end of heater with the end plate of heat exchanger.

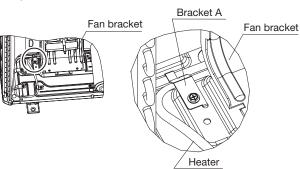


Step 7

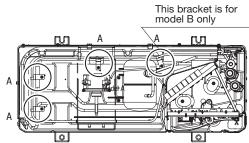
7. Fix the heater with brackets.



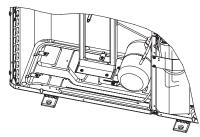
For model A, use 3 pcs of bracket A, 1pc of bracket B and C. Fix bracket A and C with the attached screw (OD4), and fix bracket B with the removed screw which is fastened at the same place.



Model A Detail view D



For model B and C, fix bracket A with the attached screw (0D5).



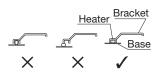
Model B, C

<Note for model A>

- 1) Put the end of heating part just after the bracket C.
- 2) Fix the incoming and out going cable with one bracket A on the left of fan bracket as figure shows.

<Note>

 Fix the heater so that the bracket doesn't pinch the heater as figure shows.



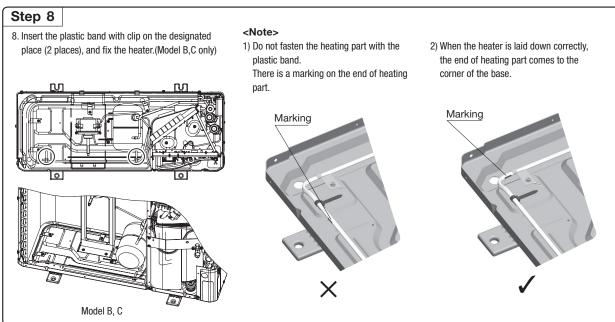
2) Place the heater so as to touch the base completely.

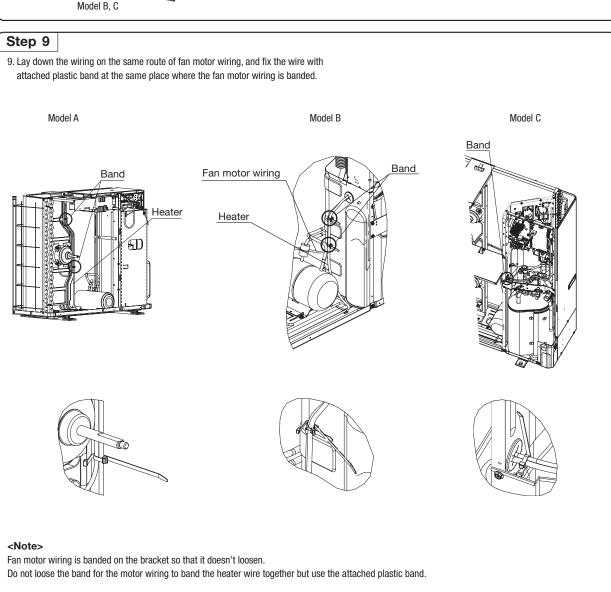


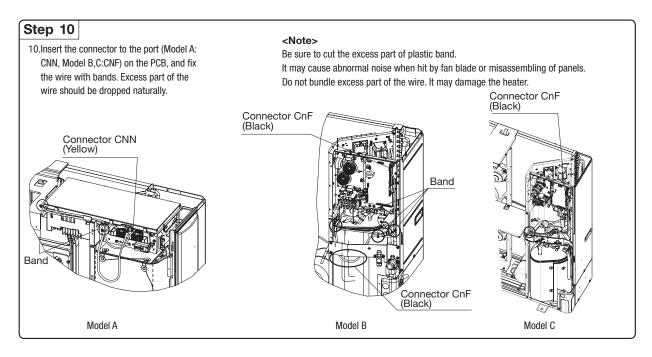
In bending position, twist the heater to make it easier to bend, and get back to be able to fix it with bracket.

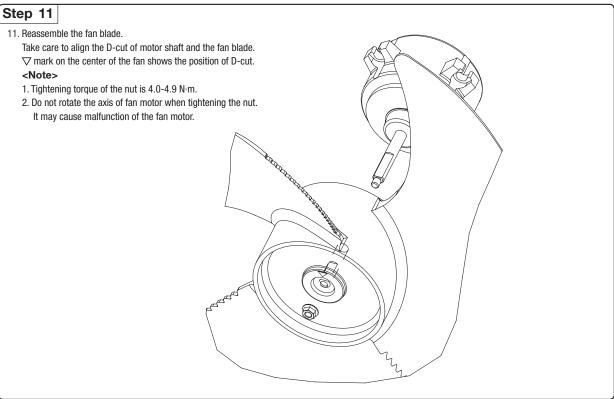


4) Be careful not to be injured by aluminum fin when fixing the heater with screw.



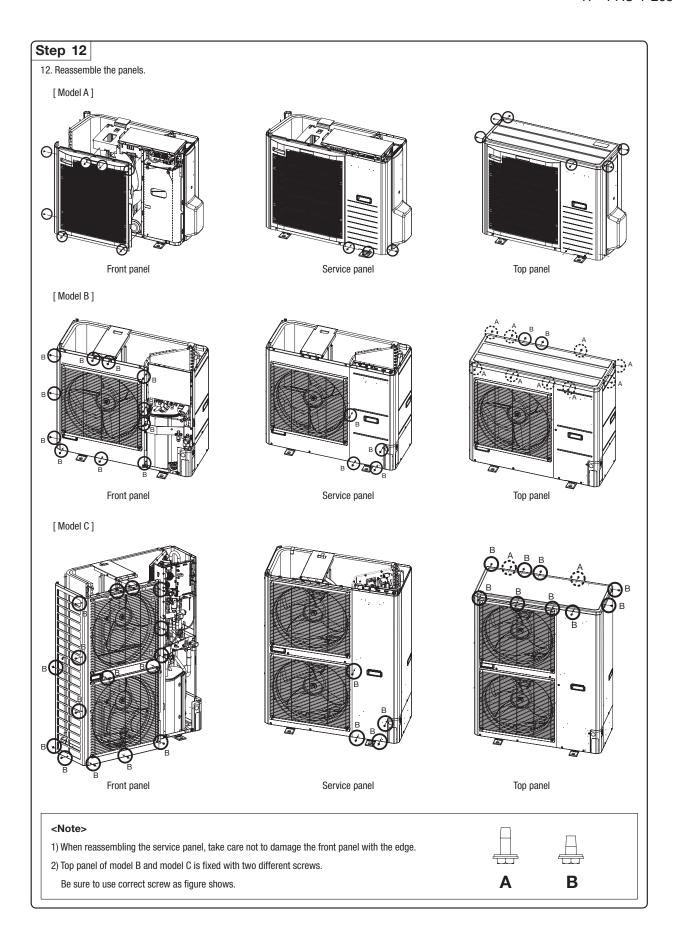






<Note>

- This heater should have bending radius of at least 25mm including non-heating part. Do not bundle the excess part of the wire. It may cause
 disconnection of the heater or insufficient capacity.
- Be sure to prevent the heater from touching any refrigerant piping.
 Especially, pay close attention not to make it touch with pipes which are close to the wiring route such as suction pipe, check valve and check joint.



3.7 INTERFACE KIT (SC-BIKN2-E)

*When RC-EX3 is connected, please use SC-BIKN2-E by all means.

RKZ012A099

Accessories included in package

Be sure to check all the accessories included in package.

No.	Part name	Quantity
1	Indoor unit's connection cable (cable length: 1.8m)	1
2	Wood screws (for mounting the interface: ø4x 25)	2
3	Tapping screws (for the cable clump and the interface mounting bracket)	3
4	Interface mounting bracket	1
5	Cable clamp (for the indoor unit's connection cable)	1
6	CnT terminal connection cable (total cable length: 0.5m)	1

Safety precautions

Before use, please read these Safety precautions thoroughly before installation.

 All the cautionary items mentioned below are important safety related items to be taken into consideration, so be sure to observe them at all times.

⚠Warning Incorrect installation could lead to serious consequences such as death, major injury or environmental destruction.

Symbols used in these precautions



Always go along these instruction.

After completed installation, carry out trial operation to confirm no anomaly, and ask the
user to keep this installation manual in a good place for future reference.

$\dot{\mathbb{N}}$

Warnings



● Installation must be carried out by a qualified installer.

If you install it by yourself, it may cause an electric shock, fire and personal injury, as a result of a system malfunction.

● Install it in full accordance with the installation manual.

Incorrect installation may cause an electric shock, fire and personal injury.

 Electrical work must be carried out by a qualified electrician in accordance with the technical standard for electrical equipment, the indoor wiring standard and this installation manual.

Incorrect installation may cause an electric shock, fire and personal injury.

● Use the specific cables for wiring. And connect all the cables to terminals or connectors securely and clamp them with cable clamps in order for external forces not to be transmitted to the terminals directly.

Incomplete connection may cause malfunction, and lead to heat generation and fire.

• Use the original accessories and specified components for installation.

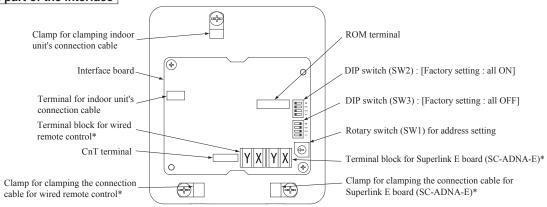
If the parts other than those prescribed by us are used, it may cause an electric shock, fire and sersonal injury.

Connecting the indoor unit's connection cable to the interface

- ①Remove the upper case of the interface.
 - Remove 2 screws from the interface casing before removal of upper casing.
- ②Connect the indoor unit's connection cable to the interface.
 - Connect the connector of the indoor unit connection cable to the connector on the interface's circuit board.
- 3Fix the indoor unit's connection cable with the cable clamp.
 - Cable can be brought in from the top or from the back.
 - Cut out the punch-outs for the connection cables running into the casing with cutter.
- (4) Connect the indoor unit's connection cable to the indoor control PCB.
 - Connect the indoor unit's connection cable to the indoor control PCB securely.
 - Clamp the connection cable to the indoor control box securely with the cable clamp provided as an accessory.
 - Regarding the cable connection to the indoor unit, refer to the installation manual for indoor unit.

TRemove the upper case Wiring inlet (top or back) Wiring inlet (top or back)

Name of each part of the interface



*Either the connection cables of Superlink E board (SC-ADNA-E) or of wired remote control is connectable.

		-			
Switch	Setting	Function	Switch	Setting	Function
SW2-1 ON** CnT level input		SW2-3	ON**	External input (CnT input)	
SW2-1	OFF	CnT pulse input	3 W 2-3	OFF	Operation permission/prohibition (CnT input)
SW2-2	ON**	Wired remote control : Enable	SW2-4	ON**	Annual cooling : Enable***
3 W 2-2	OFF	Wired remote control : Disable	3 W 2-4	OFF	Annual cooling : Disable***

^{**} Factory setting

*** Indoor fan control at low outdoor air temperature in cooling

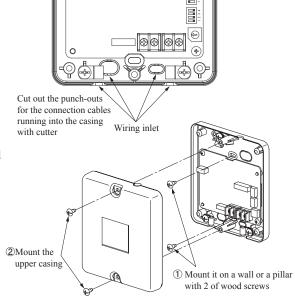
Wiring inlet

Installation of the interface

- Install the interface within the range of the connection cable length (approximately 1.3m) from the indoor unit.
- Be sure not to extend the connection cable on site. If the connection cable is extended, malfunction may occur.
- Fix the interface on the wall, pillar or the like.
- Don't install the interface and wired remote control at the following places.
 - OPlaces exposed to direct sunlight
 - OPlaces near heating devices
 - OHigh humidity places
 - OSurfaces where are enough hot or cold to generate condensation
 - OPlaces exposed to oil mist or steam directly
 - OUneven surface

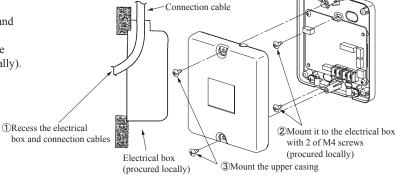
Mounting the interface directly on a wall

- ①Mount the lower casing of the interface on a flat surface with wood screws provided as standard accessory.
- 2 Mount the upper casing.



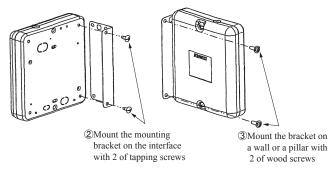
Recessing the interface in the wall

- ①Recess the electrical box (procured locally) and connection cables in the wall.
- ②Mount the lower casing of the interface to the electrical box with M4 screws (procured locally).
- 3 Mount the upper casing.



Mounting the interface with the mounting bracket

- ①Mount the upper casing.
- ②Mount the mounting bracket to the interface with tapping screws provided as standard accessory.
- 3Mount the mounting bracket on wall or the like with wood screws provided as standard accessory.



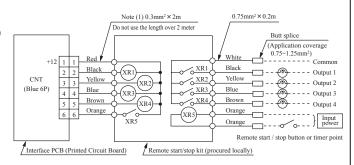
Installation check items

- ☐ Are the connection cables connected securely to the terminal blocks and connectors?
- ☐ Are the thickness and length of the connection cables conformed with the standard?

Functions of CnT connector

It is available to operate the air-conditioner and to monitor the operation status with the external control unit (remote display) by sending the input/output signal through CnT connector on the indoor control PCB.

- ①Connect a external remote control unit (procured locally) to CnT terminal.
- ②In case of the pulse input, switch OFF the DIP switch SW2-1 on the interface PCB.
- When setting operation permission/prohibition mode, switch OFF the DIP switch SW2-3 on the interface PCB.

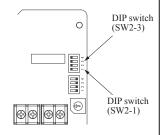


Input/	F	Output signal		6	
Output	Function	Relay	ON/OFF	Content	
Output 1	Operation output	XR1	ON	During air-conditioner operation	
Output 2	Heating output	XR2	ON	During heating operation	
Output 3	Compressor operation output	XR3	ON	During compressor running	
Output 4	Malfunction output	XR4	ON	During anomalous stop	

- ■XR₁₋₄ are for the DC 12V relay
- XR5 is a DC 12/24V or AC 220-240V relay
- ●CnT connector (local) maker, model

Connector	Molex	5264-06
Terminals	Molex	5263T

Immut/	Function	SW2-1		SW2-3			Air-	Operation by	
Input/ Output			Setting	Setting	Satting Input signal			conditioner	remote control
Output		Setting		Setting	Level/Pulse	XR5	Content		
				03.14		OFF→ON	External input	ON	
	External control input	ON* Level input	ON*	Level	ON→OFF	1	OFF	Allowed	
			DIN Level input	OFF	OFF	OFF→ON	Operation permission	OFF	
Input						ON→OFF	Operation prohibition	OFF	Not allowed
				ON* Pulse OFF Level	Pulse	OFF→ON	External input	OFF→ON	
		OFF Pulse	Pulse input					ON→OFF	Allowed
					OFF→ON	Operation permission	ON		
				Orr	revei	ON→OFF	Operation prohibition	OFF	Not allowed



In case of the remote control (RC-EX3 or later model), the external outputs (1-4) and the external input can be changed using the function setting of remote control. For the setting method, refer to the installation manual. Also refer to the technical manual to know how it is adapted to the function setting for the external outputs and input, at the indoor unit side.

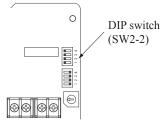
Connection of Superlink E board

Regarding the connection of Superlink E board, refer to the installation manual of Superlink E board. For electrical work, power source for all of units in the Superlink system

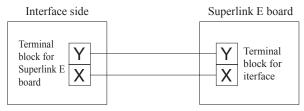
must be turned OFF.

①Switch ON the DIP switch SW2-2 (Factory setting: ON) on the interface PCB.

Caution: Wireless remote control attached to the indoor unit can be used in parallel, after connecting the wired remote control. However, some of functions other than the basic functions such as RUN/STOP, temperature setting, etc. may not work properly and may have a mismatch between the display and the actual behavior.



②Wiring connection between the interface and the Superlink E board.



3Clamp the connection cables with cable clamps.

No.	Names of recommended signal wires
1	Shielded wire
2	Vinyl cabtyre round cord
3	Vinyl cabtyre round cable
4	Vinyl insulated wire vinyl sheathed cable for control

Within 200 m $0.5 \text{ mm}^2 \times 2 \text{ cores}$ Within 300 m $0.75 \text{ mm}^2 \times 2 \text{ cores}$

Within 400 m $1.25 \text{ mm}^2 \times 2 \text{ cores}$

Within 600 m $2.0 \text{ mm}^2 \times 2 \text{ cores}$

^{*} Factory setting

DIP suitch

(SW2-2)

0

Connection of wired remote control

Regarding the connection of wired remote control, refer to the installation manual of wired remote control.

①Switch ON the DIP switch SW2-2 (Factory setting : ON) on the interface PCB.

Caution: Wireless remote control attached to the indoor unit can be used in parallel, after connecting the wired remote control. However, some of functions other than the basic functions such as RUN/STOP, temperature setting, etc. may not work properly and may have a mismatch between the display and the actual behavior.

②Wiring connection between the interface and the wired remote control.

Installation and wiring of wired remote control

- (A) Install the wired remote control with reference to the attached installation manual of wired remote control.
- $\bigcirc 0.3$ mm² \times 2 cores cable should be used for the wiring of wired remote control.
- © Maximum length of wiring is 600m.

If the length of wiring exceeds 100m, change the size of cable as mentioned below. 100m-200m: $0.5mm^2 \times 2$ cores, 300m or less: $0.75mm^2 \times 2$ cores, 400m or less: $1.25mm^2 \times 2$ cores, 600m or less: $2.0mm^2 \times 2$ cores However, cable size connecting to the terminal of wired remote control should not exceed $0.5mm^2$. Accordingly if the size of connection cable exceeds $0.5mm^2$, be sure to downsize it to $0.5mm^2$ at the nearest section of the wired remote control and waterproof treatment should be done at the connecting section in order to avoid contact failure.

- Don't use the multi-core cable to avoid malfunction.
- (E) Keep the wiring of wired remote control away from grounding (Don't touch it to any metal frame of building, etc.).
- © Connect the connection cables to the terminal blocks of the wired remote control and the interface securely (No polarity).
- 3 Clamp the connection cables with cable clamps.

Control of multiple units by a single wired remote control

Multiple units (up to 16) can be controlled by a single wired remote control. In this case, all units connected with a single wired remote control will operate under the same mode and same setting temperature.

- ①Connect all the interface with 2 cores cables of wired remote control line.
- ②Set the address of indoor unit for remote control communication from "0" to "F" with the rotary switch SW1 on the interface PCB.
- ③ After turning the power ON, the address of indoor unit can be displayed by pressing AIR CON No. button on the wired remote control.

 Make sure all indoor units connected are displayed in order by pressing

 or □ button.

Master/Slave setting wired when 2 of wired remote control are used

Maximum two wired remote control can be connected to one indoor unit (or one group of indoor units)

①Set the DIP switch SW1 on the wired remote control to "Slave" for the slave remote control. (Factory setting: Master)

O Caution: Remote control sensor of the slave remote control is invalid.

When using the wireless remote control in parallel with the wired remote control;

Since temperature setting range of wired remote control is different from that of wireless remote control, please adjust the setting range of wired remote control to be the same setting range of wireless remote control by following procedure. (The set temperature may not be displayed correctly on the wireless remote control, unless change of temperature setting range is done.)

Changing procedure of temperature setting range is as follows.

How to set upper and lower limit of temperature setting range

- 1. Stop the air-conditioner, and press (SET) and (MODE) button at the same time for 3 seconds or more.
 - The indication changes to "FUNCTION SET▼"
- 2. Press ♥ button once, and change to the "TEMP RANGE ▲" indication.
- 3. Press (SET) button, and enter the temperature range setting mode.
- 4. Confirm that the "Upper limit ▼" is shown on the display.
- 5. Press (SET)button to fix.
- 6. ①Indication: "ⓑ∨∧SET UP"→"UPPER 28°C ∨∧"
 - ②Select the upper limit value 30°C with temperature setting button □."UPPER30°C∨" (blinking)
 - ③Press (SET) button to fix. "UPPER 30°C" (Displayed for two seconds)

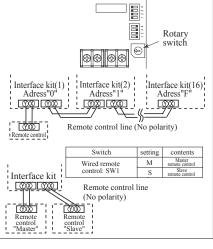
 After the fixed upper limit value displayed for two seconds, the indication will returm to "UPPER LIMIT ▼".
- 7. Press button once, "LOWER LIMIT ▲ " is selected, press (SET) button to fix.

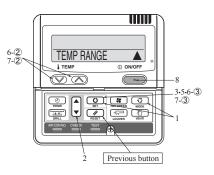
 ①Indication: "♠∨ ∧ SET UP" → "LOWER 20°C ∨ ∧"
 - ②Select the lower limit value 18°C with temperature setting button ☑."LOWER18°C ∧" (blinking)
 - ③Press (SET) button to fix. "LOWER 18°C" (Displayed for two seconds)

 After the fixed lower limit value displayed for two seconds, the indication will returm to "LOWER LIMIT▼"
- 8. Press ON/OFF button to finish.

Temperature setting range

Mode	Temperature setting range
Cooling, Heating, Dry, Auto	18-30°C

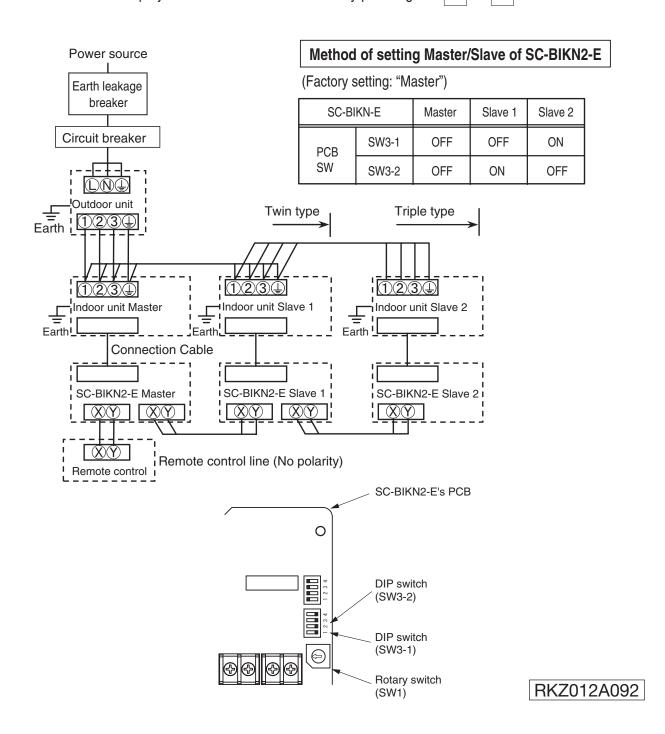




- It is possible to quit in the middle by pressing ON/OFF button, but the change of setting is incompleted.
- During setting, if pressing (RESET) button, it returns to the previous screen.

3.7.1 Cable connection for SRK twin/triple installation

- ①Connect the same pairs number of terminal block "①,②,and ③"and " 🛇 and 🈗 " between master and slave indoor units.
- ②Do the same address setting of all inside units belong to same refrigerant system by rotary switch SW1 on SC-BIKN2-E's PCB (Printed circuit board).
- ③Set slave indoor unit as "slave 1" through" slave 2" by address switch SW3-1, 3-2 on SC-BIKN2-E's PCB.
- ④When the AIR CON NO. button on the remote control unit is pressed after turning on the power, an indoor unit's address number will be displayed. Do not fail to confirm that the connected indoor unit's numbers are displayed on the remote control unit by pressing the ▲ or ▼ button.



3.8 SUPERLINK E BOARD (SC-ADNA-E)



- Read and understand the instructions completely before starting installation.
- Refer to the instructions for both indoor and outdoor units.

Safety precautions

- Carefully read "Safety precautions" first. Follow the instructions for installation.
- Precautions are grouped into "Warning 🗥 and "Caution 🖈". The "Warning 🗥 group includes items that may lead to serious injury or death if not observed. The items included
- in the "Caution A" group also may lead to serious results under certain conditions. Both groups are crucial for safety installation. Read and understand them carefully.

 After installation, conduct the test operation of the device to check for any abnormalities. Describe how to operate the device to the customer following the installation instruction manual. Instruct the customer to keep this installation instruction for future reference.

∕.\Warning

- This device should be installed by the dealer where you purchase the device or a licensed professional shop. If the device is incorrectly installed by the
- customer, it may result in electric shock or fire.

 Install the device carefully following the installation instruction. If the device is incorrectly installed, it may result in electric shock or fire.
- Use the accessory parts and specified parts for installation. If any parts that do not match the specifications are used, it may result in electric shock or fire.
- A person with the electrical service certification should conduct the service based on the "Technical standards for electrical facilities", "Electrical Wiring Code", and the installation instruction. If the work is done incorrectly, it may result in electric shock or fire
- Wiring should be securely connected using the specified types of wire. No external force on the wire should be applied to any terminals. If a secure connection is not achieved, it may result in electric shock or fire.

1 Application

Indoor-to-outdoor three core communication specification type 3 (since

Accessories

SL E board	Metal box	Metal cover	Screw for ground
	[0]	•	M4×8L 2 pieces
Pan head screws	Locking supports	Binding band	Grommet
	To secure the print board and the metal box Made of nylon 4 pieces	68	

3 Function

Allowing the center console SL1N-E, SL2N-E, and SL3N-AE/BE to control and monitor the commercial air-conditioner unit.

4 Control switching

Settings can be changed by the switch SW3 on the SL E board as in the following.

Switch	Symbol	Switch	Remarks
	4	ON	Master
	'	OFF (default)	Slave
		ON	Fixed previous protocol
	2	OFF (default)	Automatic adjustment of Superlink protocol
SW3	3	ON	Indicates the forced operation stop when abnormality has occurred.
		OFF (default)	Indicates the status of running/stop as it is, when abnormality has occurred.
		ON	The hundredth address activated "1"
	4	OFF (default)	The hundredth address activated "0"

∴Caution

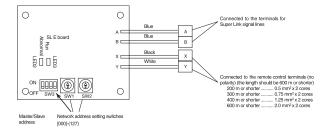
- Provide ground connection.
- The ground line should never be connected to the gas supply piping, the water supply piping, the lightning conductor rod, nor the telephone ground. If the grounding is improper, it may result in electric shock.
- Do not install the device in the following locations.
 - 1.Where there is mist/spray of oil or steam such as kitchens. 2.Where there is corrosive gases such as sulfurous acid gas.

 - 3. Where there is a device generating electromagnetic waves These may interfere with the control system resulting in the device becoming
 - Where flammable volatile materials such as paint thinner and gasoline may exist or where they are handled. This may cause a fire.

5 Connection Outline

Note for setting the address

- Set the address between 00 and 47 for the previous Superlink connection and between 000 and 127 for the new Superlink connection. (*1)
- Do not set the address overlapping with those of the other devices in the network. (The default is 000)



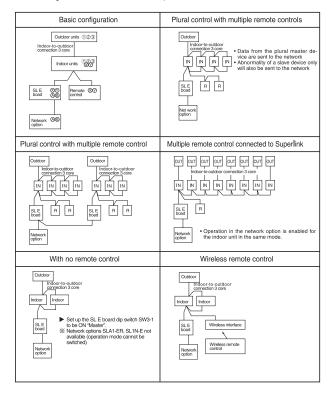
(*1) Whether the actual link is either the new Superlink or the previous Superlink depends on the models of the connected outdoor and indoor units. Consult the agent or the dealer.

Signal line specification

Communication method	Previous Superlink	New Superlink
Line type	MVVS	MVVS
Line diameter	0.75 - 1.25mm ²	0.75/1.25mm ²
Signal line (total length)	up to 1000m	up to 1500/1000m (*2)
Signal line (maximum length)	up to 1000m	up to 1000m

- (*2) Up to 1500 m for 0.75 mm², and up to 1000 m for 1.25 mm². Do not use 2.0 mm². It may cause an error.
- (*3) Connect grounding on both ends of the shielding wire. For the grounding method, refer to the section "6 Installation".

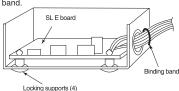
- Set the Superlink network address with SW1 (tens place), SW2 (ones place), and SW3 (hundreds place).
- (2) Set the SL E board SW3-1 to be ON (Master) when using this without any remote control (no wired remote controller nor wireless remote control).
- (3) Set up the plural master/slave device using the dip switches on the indoor unit board.
- (4) Set up the remote control master/slave device using the slide switch on the remote control board.
- (5) Set up "0" to "F" using the address rotary switch on the indoor unit board when controlling the indoor unit with the multiple remote control.



6 Installation

- 1. When using the metal box (mounted on the indoor unit / mounted on the back of the remote control):
 - (1) Mount the SL E board in the metal box using the locking supports.
 - (2) Wiring should go through the provided grommet since then through the wiring to the hole on the Metal box.

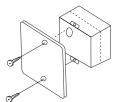
Secure the grommet after inserting the grommet into the Metal box as shown in below figure, then tie the wiring at the outlet of the unit using a binding band.



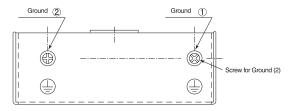
▲ When installed outside the indoor unit, put the metal cover on.



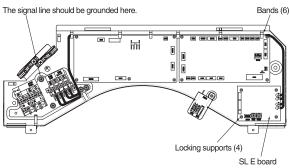
▲ When installed on the back of the remote control, mount it directly on the remote control bottom case.



Connect grounding. Connect grounding for the power line to Ground 1, and grounding for the signal line to Ground 2 or to the Ground on the indoor unit control box.



- When connecting to the indoor unit control box (ceiling-concealed type and FDT type only):
 - (1) Mount the SL E board in the control box using the locking supports.
 - (2) Remove 6 bands from the box and put the wiring through the bands to be secured.



Electrical shock hazard! Make sure to turn the power off for servicing. Be cautious so that no abnormal force should be applied to the wiring. Do not let the SL E board hung by the wiring. Do not damage the board with a screw driver.

The board is sensitive to static electricity. Release the static electricity of your body before servicing.

(you can do this by touching the control board which is grounded).

Location of installation

Install the device at the location where there are no electromagnetic waves nor where there is water and dust. The specified temperature range of the device is 0 to 40° C. Install the device at the location where the ambient temperature stays within the range. If it exceeds the specification, make sure to provide solution such as installing a cooling fan. When used outside of the range, it may cause abnormal operation.

7 Indicator display

Check the LED 3 (green) and LED 2 (red) on the SL E board for flashing.

SL E boa	ard LEDs		Display on the
Red	Green	Inspection mode	integrated network control device
Off	Flashing	Normal communication	
Off	Off	Disconnection in the remote control communication line (X or Y) Short-circuit in the remote control communication line (between X and Y) Faulty indoor unit remote control power Faulty remote control communication circuit Faulty CPU on SL E board	No corresponding unit number
One flash	Flashing	Disconnection in the Superlink signal line (A or B) Short-circuit in the Superlink signal line (between A and B) Faulty Superlink signal circuit	
Two flashes	Flashing	Faulty address setting for the SL E board (Set up the address for previous SL E board : more than 48 new SL E board : more than 128)	
Three flashes	Flashing	SL E board parent not set up when used without a remote control Faulty remote control communication circuit	E1
Four flashes	Flashing	Address overlapping for the SL E board and the Superlink network connected indoor unit	E2
Off	Flashing	Number of connected devices exceeds the specification for the multiple indoor unit control	E10

MICRO INVERTER PACKAGED AIR-CONDITIONERS



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