MHI

DATA BOOK

DRAFT

Manual No. '08•KX-DB-124D

INVERTER DRIVEN MULTI-INDOOR UNIT CLIMATE CONTROL SYSTEM

Alternative refrigerant R410A use models

(OUTDOOR UNIT)

KX6 series **(Heat pump type)**

FDC224KXE6, 280KXE6, 335KXE6

(INDOOR UNIT) –KX6 series–

FDT28KXE6A	FDTC22KXE6A	FDTW28KXE6	FDTS45KXE6	FDTQ22KXE6	FDU71KXE6
36KXE6A	28KXE6A	45KXE6	71KXE6	28KXE6	90KXE6
45KXE6A	36KXE6A	56KXE6		36KXE6	112KXE6
56KXE6A	45KXE6A	71KXE6			140KXE6
71KXE6A	56KXE6A	90KXE6			224KXE6
90KXE6A		112KXE6			280KXE6
112KXE6A		140KXE6			
140KXE6A					
160KXE6A					

FDUM22KXE6	FDQS22KXE6	FDK22KXE6	FDE36KXE6A	FDFL28KXE6	FDFU28KXE6
28KXE6	28KXE6	28KXE6	45KXE6A	45KXE6	45KXE6
36KXE6	36KXE6	36KXE6	56KXE6A	71KXE6	56KXE6
45KXE6	45KXE6	45KXE6	71KXE6A		71KXE6
56KXE6	56KXE6	56KXE6	112KXE6A		
71KXE6		71KXE6	140KXE6A		
90KXE6					
112KXE6					
140KXE6					

FDUH22KXE6
28KXE6
36KXE6

MITSUBISHI HEAVY INDUSTRIES, LTD.

CONTENTS

PREFACE

Combination table for KX4 series and KX6 series

( ) Date of launching in the market

Category	Outdoor unit	Connectable remote controller		Indoor unit: Same series	Same series	Same series	Mixed series	Mixed series	Mixed series	Same or Mixed series	Mixed series	Same series
			RC-E1	KXE4 (2004.4-)	KXE4(A) (2004.6-)	KXE4A (2004.11-)	KXE4A (2004.11-)	KXE4A (2004.11-)	KXE4A (2004.11-)			
		3-wire type	RC-E1R				KXE4R (2006.3-) KXE4BR (2007.4-) KXE5R (2007.4-)	KXE4R (2006.3-) KXE4BR (2007.4-) KXE5R (2007.4-)		KXE4R (2006.3-) KXE4BR (2007.4-) KXE5R (2007.4-)	KXE4R (2006.3-) KXE4BR (2007.4-) KXE5R (2007.4-)	
		2-wire type	RC-E3					KXE6 (2008.3-)	KXE6 (2008.3-)		KXE6 (2008.3-)	KXE6 (2008.3-)
Heat pump (2-pipe) systems	FDCA-HKXE4 5HP (2004.4-)			YES [C]	YES [C]	YES [C]	NO	NO	NO	NO	NO	NO
	FDCA-HKXE4 8-48HP (2004.4-)			NO	YES [C]	YES [C]	NO	NO	NO	NO	NO	NO
	FDCA-HKXE4A 5HP (2006.2-) FDCA-HKXE4R 5,6HP (2006.5-)			NO	YES [C]	YES [C]	YES [C]*1	NO	NO	YES [C]*1	NO	NO
	FDCA-HKXE4A 8-48HP (2006.2-) FDCA-HKXE4R 8-48HP (2006.5-) FDCA-HKXE4BR 8-48HP (2007.4-)			NO	YES [C]	YES [C]	YES [C]	YES [C]	YES [C]	YES [C]	YES [C]	YES [C]
	FDC-KXE6 4,5,6HP (2008.3-)			NO	NO	NO	NO	NO	NO	NO	NO	YES [A]*6
	FDC-KXE6 8-12HP (not yet)			NO	NO	NO	NO	NO	NO	YES [B]	YES [B]	YES [A]
	FDC-KXE6 14-48HP (not yet)			NO	NO	NO	NO	NO	NO	YES [B]	YES [B]	YES [A]
Heat recovery (3-pipe) systems [Note(3)]	FDCA-HKXRE4 8-48HP (2004.11-)			NO	NO	YES [C]	NO	NO	NO	NO	NO	NO
	FDCA-HKXRE4A 8-48HP (2006.2-) FDCA-HKXRE4R 8-48HP (2006.6-) FDCA-HKXRE4BR 8-48HP (2007.4-)			NO	NO	YES [C]	YES [C]	YES [C]	YES [C]	YES [C]	YES [C]	YES [C]
	FDC-KXRE6 8-48HP (not yet)			NO	NO	NO	NO	NO	NO	YES [B]	YES [B]	YES [A]

*1 except FDKA71KXE5R

Note (1) YES: Connectable (See following table in detail), NO: Not connectable

	Outdoor unit	Connected Indoor unit: Same series	Connected Indoor unit: Mixed series	Dip switch setting of outdoor unit KXE6	Superlink Protocol	Limitation
YES [A]*2	KXE6	KXE6		Ⅱ (New)	New (for KX6)	New (for KX6)
YES [B]	KXE6	KXE4 series	KXE6 & KXE4 series	Ⅰ (Previous)	Previous (for KX4)	Previous (for KX4)
YES [C]	KXE4 series	KXE4 series	KXE4 series		Previous (for KX4)	Previous (for KX4)

*2 If Outdoor unit system (YES [A]) is connected to other outdoor unit systems (YES [B] and/or YES [C]) in one superlink network, the dip switch of outdoor unit KXE6 of (YES [A]) should be set from Ⅱ (New) to Ⅰ (Previous). In this case the superlink protocol and limitation of outdoor unit system (YES [A]) are switched to Previous (for KX4).

(2) Combination with new Central control, PC windows central control and BMS interface unit

		Central control, PC windows central control and BMS interface unit: SC-SL1N-E	SC-SL2N-E	SC-SL3N-AE/BE	SC-WGWN-A/B	SC-LGWN-A	SC-BGWN-A/B
YES [A]	Connectable I/U	16	64	128 (128x1)	128 (64x2)*3	96 (48x2)	128 (64x2)*3
	Superlink protocol	New	New	New	New	New	New
	Connectable network	1	1	1	2	2	2
YES[B] & YES[C]	Connectable I/U	16	48	144 (48x3)	96*4 (48x2)	96*4 (48x2)	96*4 (48x2)
	Superlink*5 protocol	Previous	Previous	Previous	Previous	Previous	Previous
	Connectable network	1	1	3	2	2	2

*3 Maximum number of AC Cell is limited up to 96.
In case the number of connected indoor units are more than 96, some AC Cells should hold 2 or more indoor units.
*4 In case of other Central control like SC-SLxN-E is connected in the same network, the connectable indoor unit is limited up to 64 (32x2).
*5 In case of previous superlink protcol, the superlink mode of new central control should be set "Previous".
*6 In case of YES[A], previous central control is available to use. But the limitation of connectable indoor unit and so on is complied with the rule of previous superlink.

(3) The compatibility of PFD refrigerant flow branch controller is mentioned in following table.

Connectable PFD controller		Indoor unit: KXE4 & KXE5 series	KXE6 series
Outdoor unit	KXRE4 series	Current one only PFD-E PFD-ER	Current*7 & New (Not yet)
	KXRE6 series	Current one only PFD-E PFD-ER	New one only (Not yet)

*7 When the current PFD controller is connected, the connector of relay kit must be connected to CnT connector (NOT CnT 2).

1 GENERAL INFORMATION

1.1 Increased indoor unit connection capacity

• Capacity from 50% to 150% is possible

Item / Model	Number of connectable	Connectable capacity
FDC224KXE6	1 to 15 units	112 ~ 336
FDC280KXE6	1 to 19 units	140 ~ 420
FDC335KXE6	1 to 22 units	167 ~ 502

1.2 How to read the model name

(1) Outdoor unit

Example: FDC 224 KX E 6

- 6 — Series No.
- E — Application power source...See the specifications
- KX — Multi KX series
- 224 — Nominal capacity (nominal cooling capacity : 22.4kW)
- FDC — Model name (Outdoor unit)

(2) Indoor unit

Example: FDT 28 KX E 6A

- 6A — Series No.
- E — Application power source...See the specifications
- KX — Multi KX series
- 28 — Nominal capacity (nominal cooling capacity : 2.8 kW)
- FDT — Model name (Indoor unit : FDTC, FDT, FDTW, FDTQ, FDTS, FDU, FDUM, FDQS, FDE, FDK, FDFL, FDFU, FDUH)

Note

This unit complies with EN61000-3-3.
For outdoor unit, EN61000-3-2 is not applicable as consent by the utility company or notification to the utility company is given before usage. (Only 224, 280)
For outdoor unit, EN61000-3-12 is not applicable as consent by the utility company or notification to the utility company is given before usage. (Only 335)

1.3 Table of models

Model \ Capacity	22	28	36	45	56	71	90	112	140	160	224	280
Ceiling cassette-4 way type (FDT)		○	○	○	○	○	○	○	○	○		
Ceiling cassette-4 way compact type (FDTC)	○	○	○	○	○							
Ceiling cassette-2 way type (FDTW)		○		○	○	○	○	○	○			
Ceiling cassette-1 way type (FDTS)				○		○						
Ceiling cassette-1 way compact type (FDTQ)	○	○	○									
Duct connected-High static pressure type (FDU)						○	○	○	○		○	○
Duct connected-Middle static pressure type (FDUM)	○	○	○	○	○	○	○	○	○			
Duct connected (Ultra thin)-Low static pressure type (FDQS)	○	○	○	○	○							
Wall mounted type (FDK)	○	○	○	○	○	○						
Ceiling suspended type (FDE)			○	○	○	○		○	○			
Floor standing (with casing) type (FDFL)		○		○		○						
Floor standing (without casing) type (FDFU)		○		○	○	○						
Duct Connected Compact and Flexible type (FDUH)	○	○	○									
Outdoor units to be combined (FDC)	FDC224KXE6, 280KXE6, 335KXE6											

1.4 Table of indoor units panel (Optional)

Model		Parts Model
FDTC	Capacity:22,28,36,45,56	TC-PSA-24W-ER
FDT	Capacity:28,36,45,56,71, 90,112,140,160	T-PSA-36W-E
FDTW	Capacity:28,45,56	TW-PSA-24W-E
	Capacity:71,90	TW-PSA-34W-E
	Capacity:112,140	TW-PSA-44W-E
FDTQ (Direct blow panel)	Capacity:22,28,36	TQ-PSA-15W-E
		TQ-PSB-15W-E
FDTQ (Duct panel)	Capacity:22,28,36	QR-PNA-14W-ER
		QR-PNB-14W-ER
FDTS	Capacity:45	TS-PSA-29W-E
	Capacity:71	TS-PSA-39W-E

1.5 Branch pipe set and Header pipe set

(a) Branch pipe set (Option)

Total capacity downstream	Branching pipe set
Less than 180	DIS-22-1
180 or more but less than 371	DIS-180-1
371 or more but less than 540	DIS-371-1

(b) Header pipe set (Option)

Total capacity downstream	Header set model type	Number of branches
Less than 180	HEAD4-22-1	4 branches at the most
180 or more but less than 371	HEAD6-180-1	6 branches at the most
371 or more but less than 540	HEAD8-371-1	8 branches at the most

2 OUTDOOR UNIT

2.1 Specifications

Models			FDC224KXE6	FDC280KXE6	FDC335KXE6
Nominal cooling capacity*1			22.4	28.0	33.5
Nominal heating capacity*2			25.0	31.5	37.5
Power source			380-415V 3N～50Hz , 380V 3N～60Hz		
Power consumption	Cool	kW	5.60	8.09	9.82
	Heat		6.03	8.21	10.12
Running current	Cool	A	9.25 / 8.47	13.22 / 12.10	15.87 / 14.53
	Heat		9.85 / 9.02	13.41 / 12.28	16.36 / 14.98
Sound Pressure Level		dB(A)	58 / 58	59 / 60	61 / 61
Exterior dimensions Height x Width x Depth		mm	1675 × 1080 × 480		
Exterior appearance (Munsell color)			Stucco White (4.2 Y 7.5 / 1.1) near equivalent		
Net weight		kg	221		224
Refrigerant equipment compressor type & Q'ty			GTC5150NH40K×1	GTC5150NH40K×1	GTD5160NH40K×1
Motor		kW	3.81	5.22	7.25
Starting method			Direct line start		
capacity control		%	112-336	140-420	167-502
Crankcase heater		W	33		
Refrigerant equipment Heat exchanger			Straight fin & inner grooved tubing		
Refrigerant control			Electronic Expansion Valve		
Refrigerant			R410A		
Quantity		kg	11.5		
Refrigerant oil		l	1.7 (M-MA32R)		
Defrost control			MC controlled De-Icer		
Air handling equipment fan type & Q'ty			Propeller fan × 2		
Motor		W	144 × 2		
Starting method			Direct line start		
Air flow (Standard)		CMM	200		
Shock & vibration absorber			Rubber mount (for compressor)		
Safety equipment			Compressor over current protection / abnormal high pressure protection abnormal low pressure protection / abnormal discharge temperture protection / over current protection		
Installation data Refrigerant piping size		mm(in)	Liquid line : Ø9.52 (3/8")		Liquid line : Ø12.7 (1/4")
			Gas line : Ø19.05 (3/4")	Gas line : Ø22.22 (7/8")	Gas line : Ø25.4 (1")
Connecting method			Liquid:Flare / Gas:Brazing		
Drain			Hole for drain (Ø20 × 4)		
Insulation for piping			Necessary (both Liquid & Gas lines)		
Accessories			———	———	———
Exterior dimensions			PCB003Z030	PCB003Z031	PCB003Z032
Electrical wiring			PCB003Z033	PCB003Z033	PCB003Z035

Notes (1) The data are measured at the following conditions. (The piping length is 7.5m)

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃	-	7℃	6℃	

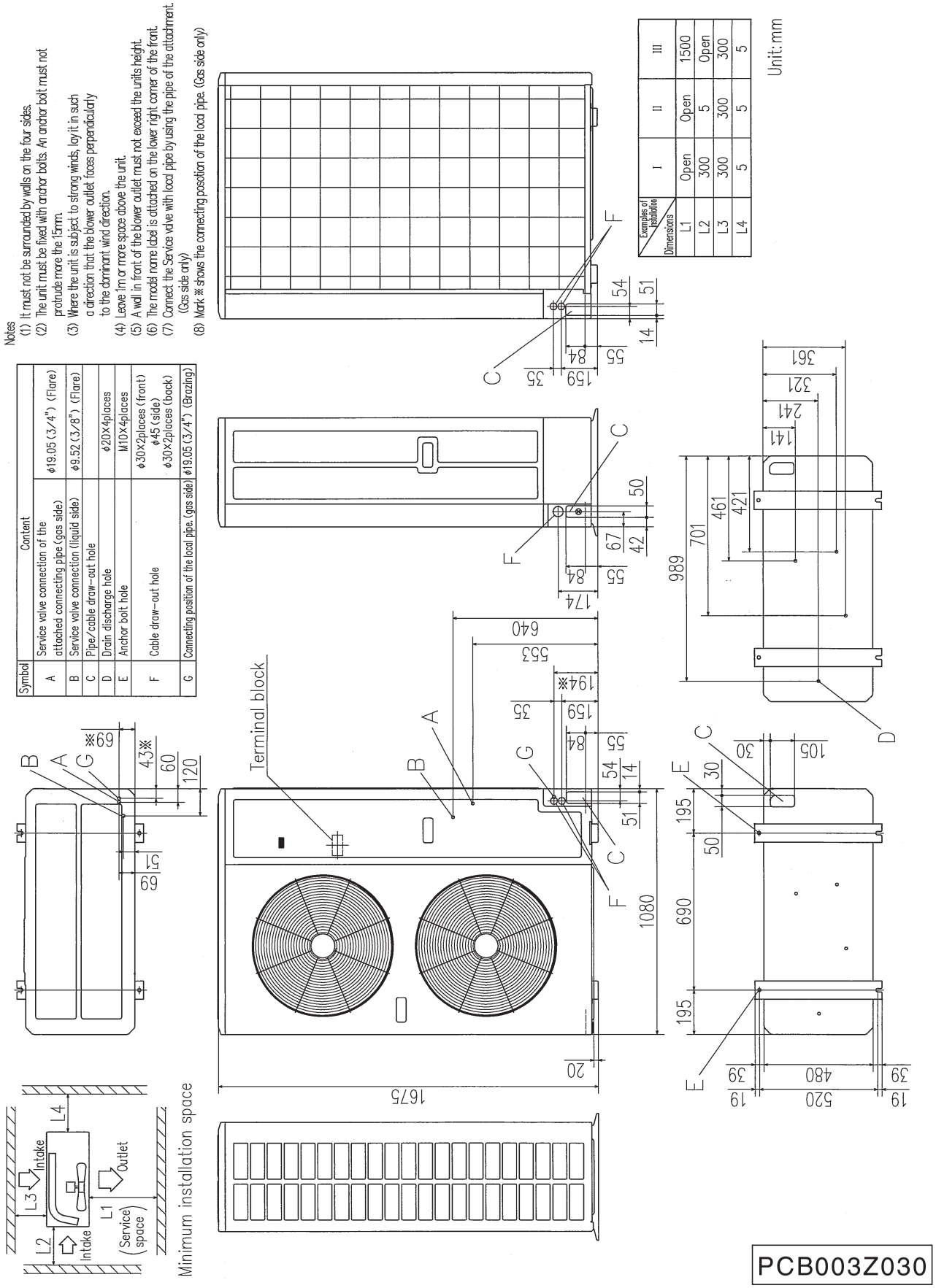
(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) Indoor unit other than KXE6 cannot be connected.

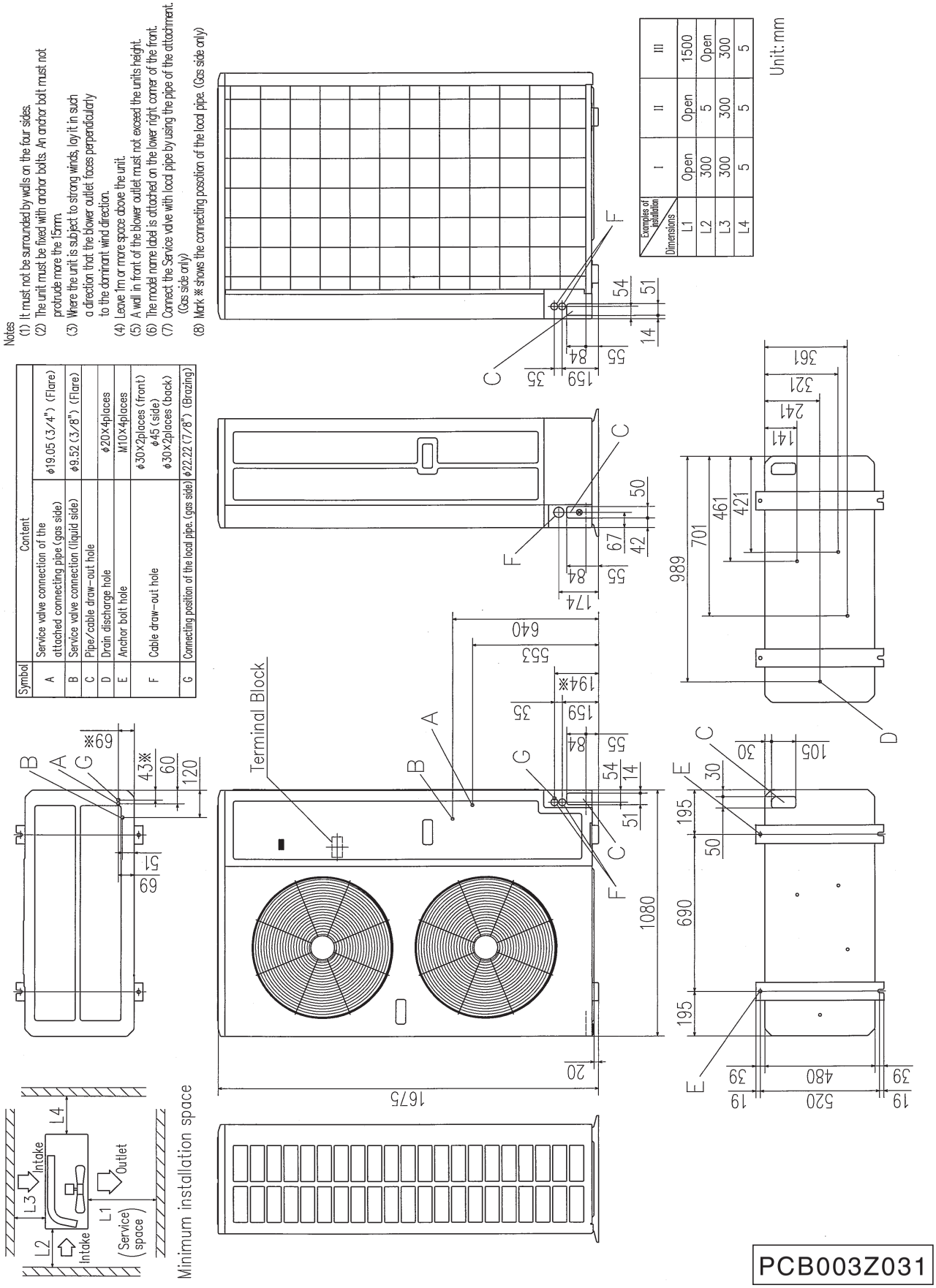
PCB003Z029

2.2 Exterior dimensions

Model FDC224KXE6



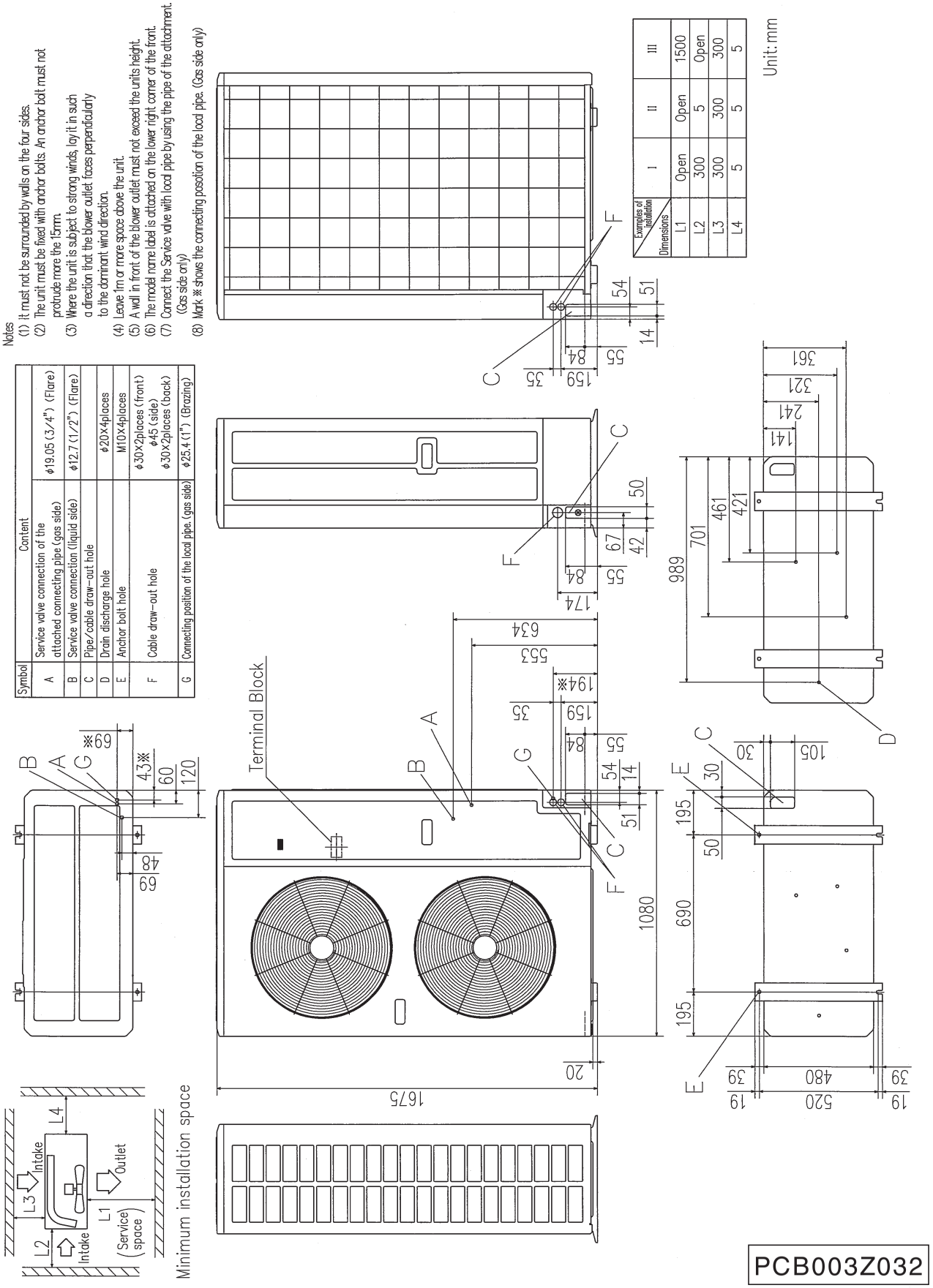
Model FDC280KXE6



Symbol	Content	
A	Service valve connection of the attached connecting pipe (gas side)	φ19.05 (3/4") (Flare)
B	Service valve connection (liquid side)	φ9.52 (3/8") (Flare)
C	Pipe/cable draw-out hole	
D	Drain discharge hole	φ20×4places
E	Anchor bolt hole	M10×4places
F	Cable draw-out hole	φ30×2places (front) φ45 (side) φ30×2places (back)
G	Connecting position of the local pipe. (gas side)	φ22.22 (7/8") (Brazing)

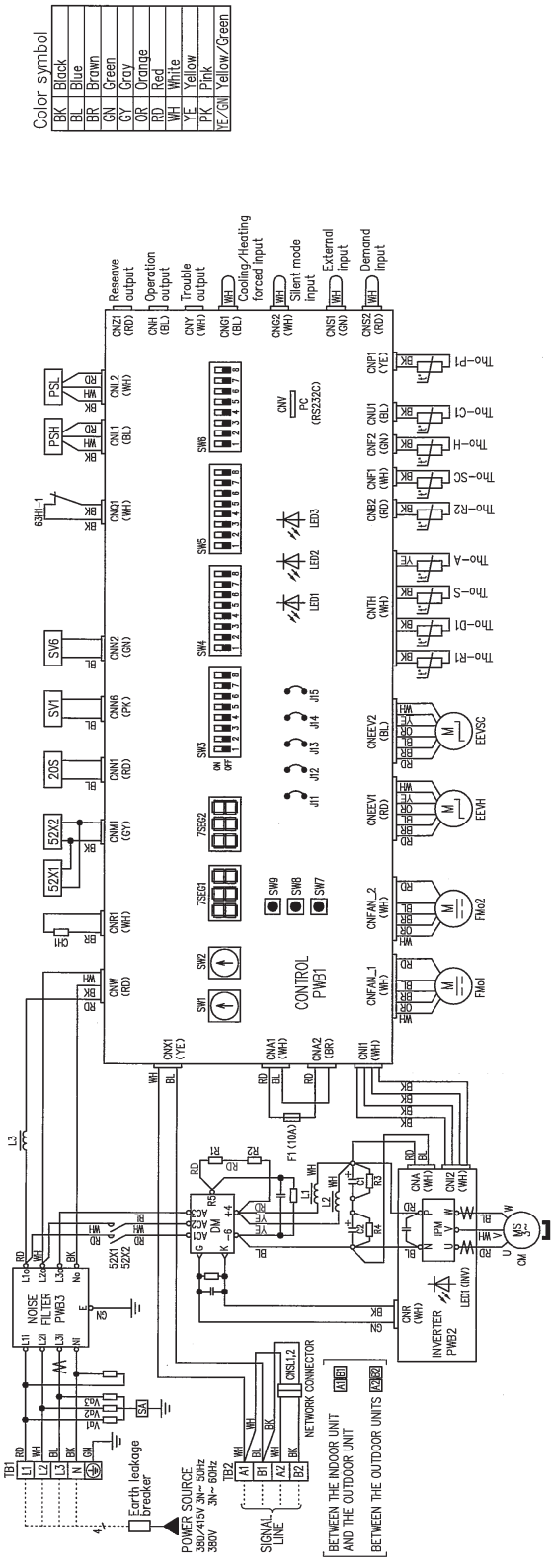
Examples of installation / Dimensions	I	II	III
L1	Open	Open	1500
L2	300	5	Open
L3	300	300	300
L4	5	5	5

Model FDC335KXE6



2.3 Electrical wiring

Models FDC224KXE6, 280KXE6

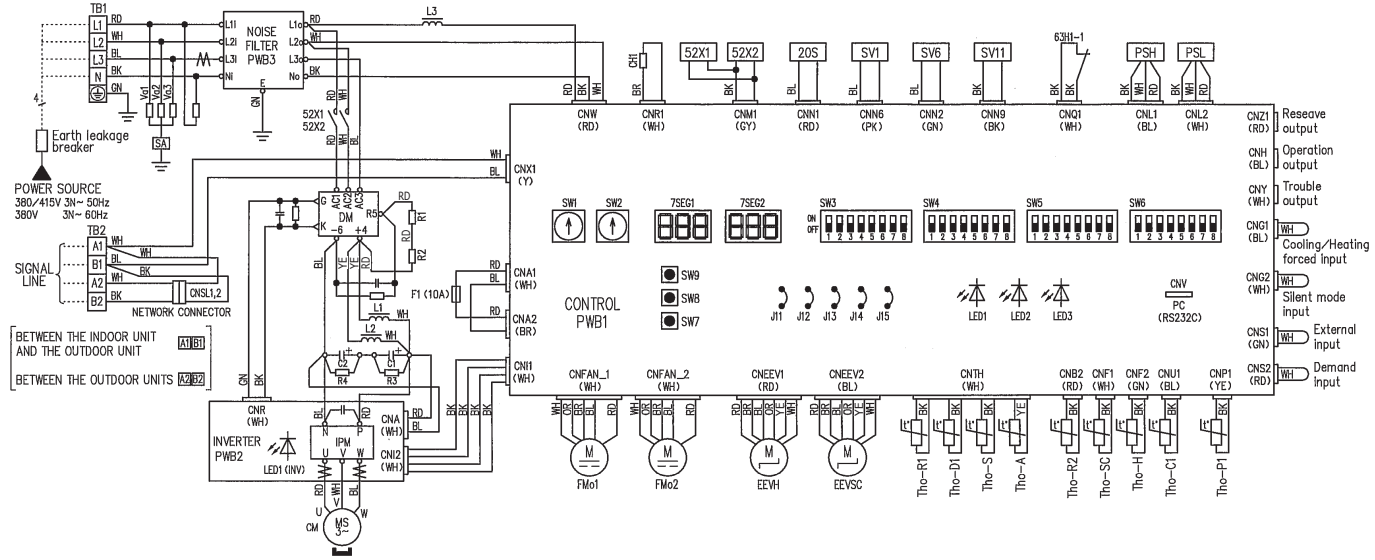


CH1	Crankcase heater
CM	Compressor motor
CNA~Z	Connector
CT1	Current sensor
C1	Electrolytic capacitor
DM	Diode module
EEVH	Heating expansion valve
EEVSC	Super-cooling coil expansion valve
FMo1,2	Blower motor
F1	Fuse
IPM	Intelligent power module
J11,12	Power supply, voltage switching
J13	External input switching level/pulse
J14	Spare
J15	Defrosting start temperature selection, normal/cold region
LED1	Inspection (Red)
LED1(INV)	Normal (Yellow) Flashing
LED2	Normal (Green)
LED3	Service (Green)
L1~L3	DC reactor
PSH	High pressure sensor
PSL	Low pressure sensor
PWB1~3	PCB
R1	Rush current suppression resistor
SV1	Solenoid valve (oil return)
SV6	Solenoid valve (fluid return)

SW1		Address setting SW outdoor unit No. (2 digits)
SW2		Address setting SW outdoor unit No. (1 digit)
SW3-1		Inspection LED reset
SW3-2		Spare
SW3-4,5		Spare
SW3-7	ON	Forced heating/cooling mode
	OFF	Normal operation
SW3-8	ON	Test mode
	OFF	Normal operation
SW4-1~4		Model setting
SW4-5,6		Demand switching
SW4-7,8		Spare
SW5-1	ON	Test run
	OFF	Normal operation
SW5-2	ON	Cooling at test run
	OFF	Heating at test run
SW5-3	ON	Pump-down operation
	OFF	Normal operation
SW5-4		Spare
SW5-5	ON	Super Link communication
	OFF	Super Link II communication
SW7		Data delete/write
SW8		7-segment indication up (1 digit)
SW9		7-segment indication up (2 digits)

TB1,2	Terminal block
Tho-A	External air thermistor
Tho-C1	Under-dome thermistor
Tho-D1	Discharge pipe thermistor
Tho-H	Super-cooling coil thermistor 2
Tho-P1	Power transistor thermistor
Tho-R1	Heat exchanger thermistor 1 (Exit/front)
Tho-R2	Heat exchanger thermistor 1 (Exit/rear)
Tho-S	Suction pipe thermistor
Tho-SC	Super-cooling coil thermistor 1
X01~03,06~09	Aux. relay
7SEG1	7-segment LED (Data display)
7SEG2	7-segment LED (Function display)
20S	4-way switching solenoid
52X1,2	Solenoid for CM
63H1-1	High pressure switch

PCB003Z033 A



Color symbol

BK	Black
BL	Blue
BR	Brawn
GN	Green
GY	Gray
OR	Orange
RD	Red
WH	White
YE	Yellow
RK	Pink
YE/GN	Yellow/Green

CH1	Crankcase heater
CM	Compressor motor
CNA-Z	Connector
CT1	Current sensor
C1	Electrolytic capacitor
DM	Diode module
EEVH	Heating expansion valve
EEVSC	Super-cooling coil expansion valve
FMo1,2	Blower motor
F1	Fuse
IPM	Intelligent power module
J11,12	Power supply, voltage switching
J13	External input switching level/pulse
J14	Spare
J15	Defrosting start temperature selection, normal/cold region
LED1	Inspection (Red)
LED1 (INV)	Normal (Yellow) Flashing
LED2	Normal (Green)
LED3	Service (Green)
L1~L3	DC reactor
PSH	High pressure sensor
PSL	Low pressure sensor
PWB1~3	PCB
R1	Rush current suppression resistor
SV1	Solenoid valve (oil return)
SV6	Solenoid valve (fluid return)
SV11	Solenoid valve (gas bypass)

SW1		Address setting SW outdoor unit No. (2 digits)
SW2		Address setting SW outdoor unit No. (1 digit)
SW3-1		Inspection LED reset
SW3-2		Spare
SW3-4,5		Spare
SW3-7	ON	Forced heating/cooling mode
	OFF	Normal operation
SW3-8	ON	Test mode
	OFF	Normal operation
SW4-1~4		Model setting
SW4-5,6		Demand switching
SW4-7,8		Spare
SW5-1	ON	Test run
	OFF	Normal operation
SW5-2	ON	Cooling at test run
	OFF	Heating at test run
SW5-3	ON	Pump-down operation
	OFF	Normal operation
SW5-4		Spare
SW5-5	ON	Super Link communication
	OFF	Super Link Ⅱ communication
SW7		Data delete/write
SW8		7-segment indication up (1 digit)
SW9		7-segment indication up (2 digits)

TB1,2	Terminal block
Tho-A	External air thermistor
Tho-C1	Under-dome thermistor
Tho-D1	Discharge pipe thermistor
Tho-H	Super-cooling coil thermistor 2
Tho-P1	Power transistor thermistor
Tho-R1	Heat exchanger thermistor 1 (Exit/front)
Tho-R2	Heat exchanger thermistor 1 (Exit/rear)
Tho-S	Suction pipe thermistor
Tho-SC	Super-cooling coil thermistor 1
X01~03,06~09	Aux. relay
7SEG1	7-segment LED (Data display)
7SEG2	7-segment LED (Function display)
20S	4-way switching solenoid
52X1,2	Solenoid for CM
63H1-1	High pressure switch

PCB003Z035 A

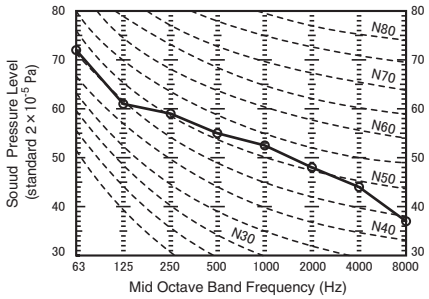
2.4 Noise level

Measured based on JIS B 8616

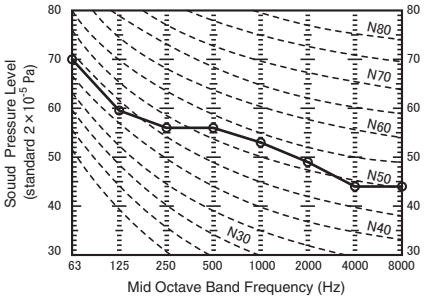
Mike position as highest noise level in position as below
Distance from front side 1m
Height 1m

Model FDC224KXE6

Noise level 58 dB (A)
Cooling

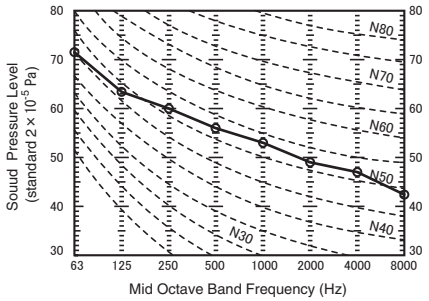


Noise level 58 dB (A)
Heating

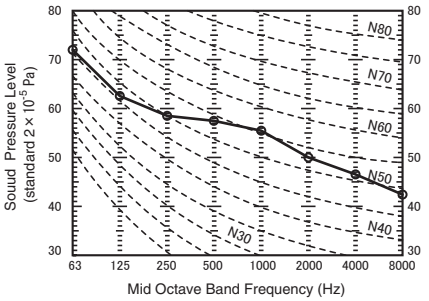


Model FDC280KXE6

Noise level 59 dB (A)
Cooling

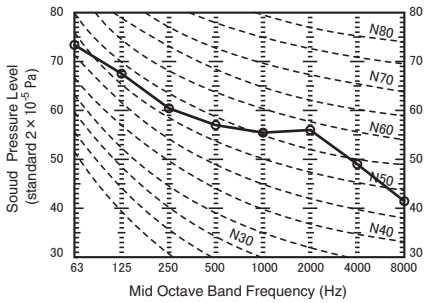


Noise level 60 dB (A)
Heating

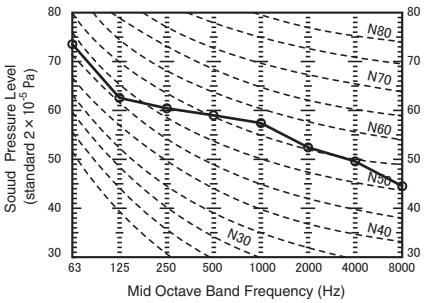


Models FDC335KXE6

Noise level 61 dB (A)
Cooling



Noise level 61 dB (A)
Heating



3 INDOOR UNIT

3.1 Specifications

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

Models FDT28KXE6A, 36KXE6A, 45KXE6A

Models			FDT28KXE6A	FDT36KXE6A	FDT45KXE6A
Panel model (Option)			T-PSA-36W-E	T-PSA-36W-E	T-PSA-36W-E
Nominal cooling capacity*1		kW	2.8	3.6	4.5
Nominal heating capacity*2			3.2	4.0	5.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03
	Heat		0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03
Running current	Cool	A	0.20 - 0.18 / 0.20	0.20 - 0.18 / 0.20	0.20 - 0.18 / 0.20
	Heat		0.20 - 0.18 / 0.20	0.20 - 0.18 / 0.20	0.20 - 0.18 / 0.20
Sound Pressure Level		dB(A)	Hi : 33 Me : 31 Lo : 30	Hi : 33 Me : 31 Lo : 30	Hi : 33 Me : 31 Lo : 30
Exterior dimensions Height x Width x Depth		mm	Unit : 246 × 840 × 840 Panel：35 × 950 × 950	Unit : 246 × 840 × 840 Panel：35 × 950 × 950	Unit : 246 × 840 × 840 Panel：35 × 950 × 950
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent
Net weight		kg	Unit：22 Panel：5.5	Unit：22 Panel：5.5	Unit：22 Panel：5.5
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Turbo fan × 1	Turbo fan × 1	Turbo fan × 1
Motor		W	50	50	50
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 18 Me : 16 Lo : 14	Hi : 18 Me : 16 Lo : 146	Hi : 18 Me :16 Lo : 14
Available static pressure		Pa	0	0	0
Outside air intake			Possible	possible	possible
Air filter, Q'ty			Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJF000Z051	PJF000Z051	PJF000Z051
Electrical wiring			PJF000Z053	PJF000Z053	PJF000Z053

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJF000Z049 A

Models FDT56KXE6A, 71KXE6A, 90KXE6A

Models			FDT56KXE6A	FDT71KXE6A	FDT90KXE6A
Panel model (Option)			T-PSA-36W-E	T-PSA-36W-E	T-PSA-36W-E
Nominal cooling capacity*1		kW	5.6	7.1	9.0
Nominal heating capacity*2			6.3	8.0	10.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.04 - 0.04 / 0.04	0.10 - 0.10 / 0.10	0.14 - 0.14 / 0.14
	Heat		0.04 - 0.04 / 0.04	0.10 - 0.10 / 0.10	0.14 - 0.14 / 0.14
Running current	Cool	A	0.20 - 0.18 / 0.20	0.30 - 0.28 / 0.30	0.45 - 0.40 / 0.45
	Heat		0.20 - 0.18 / 0.20	0.30 - 0.28 / 0.30	0.45 - 0.40 / 0.45
Sound Pressure Level		dB(A)	Hi : 33 Me : 31 Lo : 30	Hi : 33 Me : 31 Lo : 30	Hi : 40 Me : 37 Lo : 35
Exterior dimensions Height x Width x Depth		mm	Unit : 246 × 840 × 840 Panel：35 × 950 × 950	Unit : 246 × 840 × 840 Panel：35 × 950 × 950	Unit : 298 × 840 × 840 Panel：35 × 950 × 950
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent
Net weight		kg	Unit：24 Panel：5.5	Unit：24 Panel：5.5	Unit：27 Panel：5.5
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Turbo fan × 1	Turbo fan × 1	Turbo fan × 1
Motor		W	50	50	50
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 18 Me : 16 Lo : 14	Hi : 18 Me : 16 Lo : 14	Hi : 27 Me :24 Lo : 20
Available static pressure		Pa	0	0	0
Outside air intake			Possible	possible	possible
Air filter, Q'ty			Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJF000Z051	PJF000Z051	PJF000Z051
Electrical wiring			PJF000Z053	PJF000Z053	PJF000Z053

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJF000Z049 A

Models FDT112KXE6A, 140KXE6A, 160KXE6A

Models			FDT112KXE6A	FDT140KXE6A	FDT160KXE6A
Panel model (Option)			T-PSA-36W-E	T-PSA-36W-E	T-PSA-36W-E
Nominal cooling capacity*1		kW	11.2	14.0	16.0
Nominal heating capacity*2			12.5	16.0	18.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.14 - 0.14 / 0.14	0.14 - 0.14 / 0.14	0.14 - 0.14 / 0.14
	Heat		0.14 - 0.14 / 0.14	0.14 - 0.14 / 0.14	0.14 - 0.14 / 0.14
Running current	Cool	A	0.45 - 0.40 / 0.45	0.45 - 0.40 / 0.45	0.45 - 0.40 / 0.45
	Heat		0.45 - 0.40 / 0.45	0.45 - 0.40 / 0.45	0.45 - 0.40 / 0.45
Sound Pressure Level		dB(A)	Hi : 40 Me : 37 Lo : 35	Hi : 42 Me : 40 Lo : 37	Hi : 43 Me : 41 Lo : 38
Exterior dimensions Height x Width x Depth		mm	Unit : 298 × 840 × 840 Panel：35 × 950 × 950	Unit : 298 × 840 × 840 Panel：35 × 950 × 950	Unit : 298 × 840 × 840 Panel：35 × 950 × 950
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent
Net weight		kg	Unit：27 Panel：5.5	Unit：27 Panel：5.5	Unit：27 Panel：5.5
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Turbo fan × 1	Turbo fan × 1	Turbo fan × 1
Motor		W	140	140	140
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 27 Me : 24 Lo : 20	Hi : 30 Me : 27 Lo : 23	Hi : 30 Me :27 Lo : 23
Available static pressure		Pa	0	0	0
Outside air intake			Possible	possible	possible
Air filter, Q'ty			Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJF000Z052	PJF000Z052	PJF000Z052
Electrical wiring			PJF000Z053	PJF000Z053	PJF000Z053

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJF000Z049 A

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

Models FDTC22KXE6A, 28KXE6A, 36KXE6A

Models			FDTC22KXE6A	FDTC28KXE6A	FDTC36KXE6A
Panel model (Option)			TC-PSA-24W-ER	TC-PSA-24W-ER	TC-PSA-24W-ER
Nominal cooling capacity*1		kW	2.2	2.8	3.6
Nominal heating capacity*2			2.5	3.2	4.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03
	Heat		0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03	0.03 - 0.03 / 0.03
Running current	Cool	A	0.10 - 0.09 / 0.10	0.10 - 0.09 / 0.10	0.11 - 0.10 / 0.11
	Heat		0.10 - 0.09 / 0.10	0.10 - 0.09 / 0.10	0.11 - 0.10 / 0.11
Sound Pressure Level		dB(A)	Hi : 35 Me : 33 Lo : 32	Hi : 35 Me : 33 Lo : 32	Hi : 38 Me : 36 Lo : 34
Exterior dimensions Height x Width x Depth		mm	Unit : 248 × 570 × 570 Panel : 35 × 700 × 700	Unit : 248 × 570 × 570 Panel : 35 × 700 × 700	Unit : 248 × 570 × 570 Panel : 35 × 700 × 700
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent
Net weight		kg	Unit : 14 Panel : 3.5	Unit : 14 Panel : 3.5	Unit : 15 Panel : 3.5
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Turbo fan × 1	Turbo fan × 1	Turbo fan × 1
Motor		W	52	52	52
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 9.5 Me : 8.5 Lo : 8	Hi : 9.5 Me : 8.5 Lo : 8	Hi : 10 Me : 9 Lo : 8
Available static pressure		Pa	0	0	0
Outside air intake			Not Possible	Not possible	Not possible
Air filter, Q'ty			Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJA003Z330	PJA003Z330	PJA003Z330
Electrical wiring			PJA003Z331	PJA003Z331	PJA003Z331

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJA003Z328 A

Models FDTC45KXE6A, 56KXE6A

Models			FDTC45KXE6A	FDTC56KXE6A
Panel model (Option)			TC-PSA-24W-ER	TC-PSA-24W-ER
Nominal cooling capacity*1		kW	4.5	5.6
Nominal heating capacity*2			5.0	6.3
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.04 - 0.04 / 0.04	0.04 - 0.04 / 0.04
	Heat		0.04 - 0.04 / 0.04	0.04 - 0.04 / 0.04
Running current	Cool	A	0.14 - 0.13 / 0.14	0.15 - 0.14 / 0.15
	Heat		0.14 - 0.13 / 0.14	0.15 - 0.14 / 0.15
Sound Pressure Level		dB(A)	Hi : 40 Me : 38 Lo : 36	Hi : 45 Me : 42 Lo : 39
Exterior dimensions Height x Width x Depth		mm	Unit : 248 × 570 × 570 Panel：35 × 700 × 700	Unit : 248 × 570 × 570 Panel：35 × 700 × 700
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent
Net weight		kg	Unit：15 Panel：3.5	Unit：15 Panel：3.5
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Turbo fan × 1	Turbo fan × 1
Motor		W	52	52
Starting method			Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 11 Me : 10 Lo : 9	Hi : 13 Me : 11.5 Lo : 10
Available static pressure		Pa	0	0
Outside air intake			Not possible	Not possible
Air filter, Q'ty			Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics
Safety equipment			Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping
Refrigerant			R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJA003Z330	PJA003Z330
Electrical wiring			PJA003Z331	PJA003Z331

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJA003Z328 A

(c) Ceiling cassette-2 way type (FDTW)

Models FDTW28KXE6, 45KXE6, 56KXE6

Models			FDTW28KXE6	FDTW45KXE6	FDTW56KXE6
Panel model (Option)			TW-PSA-24W-E	TW-PSA-24W-E	TW-PSA-24W-E
Nominal cooling capacity*1		kW	2.8	4.5	5.6
Nominal heating capacity*2			3.2	5.0	6.3
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.09 - 0.10 / 0.09	0.09 - 0.10 / 0.09	0.09 - 0.10 / 0.09
	Heat		0.09 - 0.10 / 0.09	0.09 - 0.10 / 0.09	0.09 - 0.10 / 0.09
Running current	Cool	A	0.43 - 0.44 / 0.43	0.43 - 0.44 / 0.43	0.43 - 0.44 / 0.43
	Heat		0.43 - 0.44 / 0.43	0.43 - 0.44 / 0.43	0.43 - 0.44 / 0.43
Sound Pressure Level		dB(A)	Hi : 39 Me : 34 Lo : 32	Hi : 39 Me : 34 Lo : 32	Hi : 39 Me : 34 Lo : 32
Exterior dimensions Height x Width x Depth		mm	Unit : 267 × 817 × 620 Panel：8 × 1,055 × 680	Unit : 287 × 817 × 620 Panel：8 × 1,055 × 680	Unit : 287 × 817 × 620 Panel：8 × 1,055 × 680
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent
Net weight		kg	Unit：18 Panel：7	Unit：19 Panel：7	Unit：19 Panel：7
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Turbo fan × 1	Turbo fan × 1	Turbo fan × 1
Motor		W	30	30	30
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 14 Me : 12 Lo : 10	Hi : 14 Me : 12 Lo : 10	Hi : 14 Me : 12 Lo : 10
Available static pressure		Pa	0	0	0
Outside air intake			Possible	possible	possible
Air filter, Q'ty			Pocket plastic net ×1 (Washable)	Pocket plastic net ×1 (Washable)	Pocket plastic net ×1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJB001Z557	PJB001Z557	PJB001Z557
Electrical wiring			PJB001Z560	PJB001Z560	PJB001Z560

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJB001Z555

Models FDTW71KXE6, 90KXE6

Models			FDTW71KXE6	FDTW90KXE6
Panel model (Option)			TW-PSA-34W-E	TW-PSA-34W-E
Nominal cooling capacity*1		kW	7.1	9.0
Nominal heating capacity*2			8.0	10.0
Power source			220-240V～50Hz	220-240V～50Hz
Power consumption	Cool	kW	0.10 - 0.11	0.12 - 0.13
	Heat		0.10 - 0.11	0.12 - 0.13
Running current	Cool	A	0.48 - 0.50	0.57 - 0.59
	Heat		0.48 - 0.50	0.57 - 0.59
Sound Pressure Level		dB(A)	Hi : 41 Me : 36 Lo : 35	Hi : 41 Me : 37 Lo : 36
Exterior dimensions Height x Width x Depth		mm	Unit : 342 × 1,054 × 520 Panel：8 × 1,300 × 680	Unit : 342 × 1,054 × 620 Panel：8 × 1,300 × 680
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent
Net weight		kg	Unit：26 Panel：9	Unit：26 Panel：9
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Turbo fan × 1	Turbo fan × 1
Motor		W	35	40
Starting method			Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 16 Me : 13 Lo : 11	Hi : 19 Me : 16 Lo : 12
Available static pressure		Pa	0	0
Outside air intake			possible	possible
Air filter, Q'ty			Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping
Refrigerant			R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJB001Z558	PJB001Z558
Electrical wiring			PJB001Z561	PJB001Z561

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJB001Z555

Models FDTW112KXE6, 140KXE6

Models			FDTW112KXE6	FDTW140KXE6
Panel model (Option)			TW-PSA-44W-E	TW-PSA-44W-E
Nominal cooling capacity*1		kW	11.2	14.0
Nominal heating capacity*2			12.5	16.0
Power source			220-240V～50Hz	220-240V～50Hz
Power consumption	Cool	kW	0.18 - 0.20	0.20 - 0.24
	Heat		0.18 - 0.20	0.20 - 0.24
Running current	Cool	A	0.86 - 0.89	0.90 - 0.98
	Heat		0.86 - 0.89	0.90 - 0.98
Sound Pressure Level		dB(A)	Hi : 44 Me : 38 Lo : 37	Hi : 45 Me : 41 Lo : 39
Exterior dimensions Height x Width x Depth		mm	Unit : 357 × 1,524 × 620 Panel：8 × 1,770 × 680	Unit : 357 × 1,524 × 620 Panel：8 × 1,770 × 680
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent
Net weight		kg	Unit：38 Panel：11	Unit：38 Panel：11
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Turbo fan × 2	Turbo fan × 2
Motor		W	40 × 2	50 × 2
Starting method			Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 28 Me : 25 Lo : 23	Hi : 32 Me : 28 Lo : 24
Available static pressure		Pa	0	0
Outside air intake			possible	possible
Air filter, Q'ty			Pocket plastic net × 2 (Washable)	Pocket plastic net × 2 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping
Refrigerant			R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJB001Z559	PJB001Z559
Electrical wiring			PJB001Z562	PJB001Z562

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJB001Z555

(d) Ceiling cassette-1 way type (FDTS)

Models FDTS45KXE6, 71KXE6

Models			FDTS45KXE6	FDTS71KXE6
Panel model (Option)			TS-PSA-29W-E	TS-PSA-39W-E
Nominal cooling capacity*1		kW	4.5	7.1
Nominal heating capacity*2			5.0	8.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.09 - 0.11 / 0.09	0.12 - 0.15 / 0.12
	Heat		0.09 - 0.11 / 0.09	0.12 - 0.15 / 0.12
Running current	Cool	A	0.43 - 0.46 / 0.43	0.58 - 0.63 / 0.58
	Heat		0.43 - 0.46 / 0.43	0.58 - 0.63 / 0.58
Sound Pressure Level		dB(A)	Hi : 43 Me : 36 Lo : 36	Hi : 44 Me : 38 Lo : 36
Exterior dimensions Height x Width x Depth		mm	Unit : 194 × 1,040 × 650 Panel：10 × 1,290 × 770	Unit : 194 × 1,300 × 650 Panel：10 × 1,500 × 770
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2）near equivalent	Plaster White （6.8Y8.9 / 0.2）near equivalent
Net weight		kg	Unit：27 Panel：6	Unit：31 Panel：7
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	Centrifugal fan × 4
Motor		W	40	35 × 2
Starting method			Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 14 Me : 12 Lo : 10	Hi : 18 Me :15 Lo : 12
Available static pressure		Pa	0	0
Outside air intake			Possible	possible
Air filter, Q'ty			Pocket plastic net × 2 (Washable)	Pocket plastic net × 3 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping
Refrigerant			R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJC001Z193	PJC001Z194
Electrical wiring			PJC001Z195	PJC001Z196

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJC001Z191

(e) Ceiling cassette-1 way compact type (FDTQ)

Model FDTQ22KXE6

Models			FDTQ22KXE6	FDTQ22KXE6	FDTQ22KXE6	FDTQ22KXE6
Panel model (Option)			Direct blow panel TQ-PSA-15W-E	Direct blow panel TQ-PSB-15W-E	Duct panel QR-PNA-14W-ER	Duct panel QR-PNB-14W-ER
Nominal cooling capacity*1		kW	2.2	2.2	2.2	2.2
Nominal heating capacity*2			2.5	2.5	2.5	2.5
Power source			220-240V ⁓ 50Hz / 220V ⁓ 60Hz	220-240V ⁓ 50Hz / 220V ⁓ 60Hz	220-240V ⁓ 50Hz / 220V ⁓ 60Hz	220-240V ⁓ 50Hz / 220V ⁓ 60Hz
Power consumption	Cool	kW	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05
	Heat		0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05
Running current	Cool	A	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23
	Heat		0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23
Sound Pressure Level		dB(A)	Hi : 38 Lo : 33	Hi : 38 Lo : 33	Hi : 42 Lo : 39	Hi : 42 Lo : 39
Exterior dimensions Height x Width x Depth		mm	Unit : 250 × 570 × 570 Panel : 35 × 625 × 650	Unit : 250 × 570 × 570 Panel : 35 × 780 × 650	Unit : 250 × 570 × 570 Panel : 35 × 625 × 650	Unit : 250 × 570 × 570 Panel : 35 × 780 × 650
Exterior appearance (Munsell color)			Plaster White (6.8Y8.9 / 0.2) near equivalent	Plaster White (6.8Y8.9 / 0.2) near equivalent	Plaster White (6.8Y8.9 / 0.2) near equivalent	Plaster White (6.8Y8.9 / 0.2) near equivalent
Net weight		kg	Unit : 19 Panel : 2.5	Unit : 19 Panel : 3	Unit : 19 Panel : 2.5	Unit : 19 Panel : 3
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 1	Centrifugal fan × 1	Centrifugal fan × 1	Centrifugal fan × 1
Motor		W	20	20	20	20
Starting method			Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 7 Lo : 5.4	Hi : 7 Lo : 5.4	Hi : 7 Lo : 6.5	Hi : 7 Lo : 6.5
Available static pressure		Pa	0	0	30	30
Outside air intake			Possible	Possible	possible	possible
Air filter, Q'ty			Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")
Connecting method			Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJC001Z188	PJC001Z189	PJC001Z236	PJC001Z237
Electrical wiring			PJC001Z190	PJC001Z190	PJC001Z240	PJC001Z240

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJC001Z185

Model FDTQ28KXE6

Models			FDTQ28KXE6	FDTQ28KXE6	FDTQ28KXE6	FDTQ28KXE6
Panel model (Option)			Direct blow panel TQ-PSA-15W-E	Direct blow panel TQ-PSB-15W-E	Duct panel QR-PNA-14W-ER	Duct panel QR-PNB-14W-ER
Nominal cooling capacity*1		kW	2.8	2.8	2.8	2.8
Nominal heating capacity*2			3.2	3.2	3.2	3.2
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05
	Heat		0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05
Running current	Cool	A	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23
	Heat		0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23
Sound Pressure Level		dB(A)	Hi : 38 Lo : 33	Hi : 38 Lo : 33	Hi : 42 Lo : 39	Hi : 42 Lo : 39
Exterior dimensions Height x Width x Depth		mm	Unit : 250 × 570 × 570 Panel : 35 × 625 × 650	Unit : 250 × 570 × 570 Panel : 35 × 780 × 650	Unit : 250 × 570 × 570 Panel : 35 × 625 × 650	Unit : 250 × 570 × 570 Panel : 35 × 780 × 650
Exterior appearance (Munsell color)			Plaster White (6.8Y8.9 / 0.2) near equivalent	Plaster White (6.8Y8.9 / 0.2) near equivalent	Plaster White (6.8Y8.9 / 0.2) near equivalent	Plaster White (6.8Y8.9 / 0.2) near equivalent
Net weight		kg	Unit : 19 Panel : 2.5	Unit : 19 Panel : 3	Unit : 19 Panel : 2.5	Unit : 19 Panel : 3
Refrigerant equipment Heat exchanger			Slit fin & inner grooved tubing	Slit fin & inner grooved tubing	Slit fin & inner grooved tubing	Slit fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 1	Centrifugal fan × 1	Centrifugal fan × 1	Centrifugal fan × 1
Motor		W	20	20	20	20
Starting method			Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 7 Lo : 5.4	Hi : 7 Lo : 5.4	Hi : 7 Lo : 6.5	Hi : 7 Lo : 6.5
Available static pressure		Pa	0	0	30	30
Outside air intake			Possible	Possible	possible	possible
Air filter, Q'ty			Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")
Connecting method			Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJC001Z188	PJC001Z189	PJC001Z236	PJC001Z237
Electrical wiring			PJC001Z190	PJC001Z190	PJC001Z240	PJC001Z240

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJC001Z185

Model FDTQ36KXE6

Models			FDTQ36KXE6	FDTQ36KXE6	FDTQ36KXE6	FDTQ36KXE6
Panel model (Option)			Direct blow panel TQ-PSA-15W-E	Direct blow panel TQ-PSB-15W-E	Duct panel QR-PNA-14W-ER	Duct panel QR-PNB-14W-ER
Nominal cooling capacity*1		kW	3.6	3.6	3.6	3.6
Nominal heating capacity*2			4.0	4.0	4.0	4.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05
	Heat		0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05
Running current	Cool	A	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23
	Heat		0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23	0.20 - 0.22 / 0.23
Sound Pressure Level		dB(A)	Hi : 38 Lo : 33	Hi : 38 Lo : 33	Hi : 42 Lo : 39	Hi : 42 Lo : 39
Exterior dimensions Height x Width x Depth		mm	Unit : 250 × 570 × 570 Panel : 35 × 625 × 650	Unit : 250 × 570 × 570 Panel : 35 × 780 × 650	Unit : 250 × 570 × 570 Panel : 35 × 625 × 650	Unit : 250 × 570 × 570 Panel : 35 × 780 × 650
Exterior appearance (Munsell color)			Plaster White (6.8Y8.9 / 0.2) near equivalent	Plaster White (6.8Y8.9 / 0.2) near equivalent	Plaster White (6.8Y8.9 / 0.2) near equivalent	Plaster White (6.8Y8.9 / 0.2) near equivalent
Net weight		kg	Unit : 19 Panel : 2.5	Unit : 19 Panel : 3	Unit : 19 Panel : 2.5	Unit : 19 Panel : 3
Refrigerant equipment Heat exchanger			Slit fin & inner grooved tubing	Slit fin & inner grooved tubing	Slit fin & inner grooved tubing	Slit fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 1	Centrifugal fan × 1	Centrifugal fan × 1	Centrifugal fan × 1
Motor		W	20	20	20	20
Starting method			Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 7 Lo : 5.4	Hi : 7 Lo : 5.4	Hi : 7 Lo : 6.5	Hi : 7 Lo : 6.5
Available static pressure		Pa	0	0	30	30
Outside air intake			Possible	Possible	possible	possible
Air filter, Q'ty			Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)	Pocket plastic net × 1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJC001Z188	PJC001Z189	PJC001Z236	PJC001Z237
Electrical wiring			PJC001Z190	PJC001Z190	PJC001Z240	PJC001Z240

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJC001Z185

(f) Duct connected - High static peressure type (FDU)

Models FDU71KXE6, 90KXE6, 112KXE6, 140KXE6

Models			FDU71KXE6	FDU90KXE6	FDU112KXE6	FDU140KXE6
Nominal cooling capacity*1		kW	7.1	9.0	11.2	14.0
Nominal heating capacity*2			8.0	10.0	12.5	16.0
Power source			220-240V～50Hz	220-240V～50Hz	220-240V～50Hz	220-240V～50Hz
Power consumption	Cool	kW	0.29 - 0.32	0.35 - 0.39	0.39 - 0.45	0.39 - 0.45
	Heat		0.27 - 0.30	0.34 - 0.38	0.34 - 0.39	0.34 - 0.39
Running current	Cool	A	1.40 - 1.44	1.65 - 1.79	1.83 - 1.94	1.83 - 1.94
	Heat		1.33 -1.37	1.63 - 1.74	1.65 - 1.76	1.65 - 1.76
Sound Pressure Level		dB(A)	Hi : 41 Lo : 37	Hi : 42 Lo : 37	Hi : 42 Lo : 38	Hi : 43 Lo : 39
Exterior dimensions Height x Width x Depth		mm	295 ×850 × 650	350 × 1,370 × 650	350 × 1,370 × 650	350 × 1,370 × 650
Net weight		kg	40	63	63	63
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 2
Motor		W	230	280	280	370
Starting method			Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 25 Lo : 20	Hi : 34 Lo : 27	Hi : 34 Lo : 27	Hi : 42 Lo : 33.5
Available static pressure		Pa	Standrd : 50 Max : 130	Standrd : 50 Max : 130	Standrd : 50 Max : 130	Standrd : 50 Max : 130
Outside air intake			Possible (on Return duct)	Possible (on Return duct)	Possible (on Return duct)	Possible (on Return duct)
Air filter, Q'ty			Installed on site	Installed on site	Installed on site	Installed on site
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option: RC-E3	Remote control switch Option: RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Drain hose	Drain hose	Drain hose	Drain hose
Exterior dimensions			PJD001Z226	PJD001Z227	PJD001Z227	PJD001Z227
Electrical wiring			PJD001Z229	PJD001Z229	PJD001Z229	PJD001Z229

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJD001Z224 A

Models FDU224KXE6, 280KXE6

Models			FDU224KXE6	FDU280KXE6
Nominal cooling capacity*1		kW	22.4	28.0
Nominal heating capacity*2			25.0	31.5
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.94 - 1.03 / 1.46	0.96 - 1.05 / 1.48
	Heat		0.86 - 0.90 / 1.28	0.88 - 0.96 / 1.36
Running current	Cool	A	4.30 - 4.34 / 6.60	4.36 - 4.38 / 6.72
	Heat		3.74 - 3.77 / 5.74	3.98 - 4.00/ 6.13
Sound Pressure Level		dB(A)	Hi : 51	Hi : 52
Exterior dimensions Height x Width x Depth		mm	360 × 1,570 × 830	360 × 1,570 × 830
Net weight		kg	92	92
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 4	Centrifugal fan × 4
Motor		W	270 × 2	270 × 2
Starting method			Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 51 / 60	Hi : 68 / 80
Available static pressure		Pa	Standrd : 100 Max : 200	Standrd : 100 Max : 200
Outside air intake			Possible (on Return duct)	Possible (on Return duct)
Air filter, Q'ty			Installed on site	Installed on site
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø9.52 (3/8") Gas line: Ø19.05 (3/4")	Liquid line : Ø9.52 (3/8") Gas line: Ø22.2 (7/8")
Connecting method			Brazing	Brazing
Refrigerant			R410A	R410A
Drain hose			Connectable with VP25	Connectable with VP25
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Exterior dimensions			PJD001Z228	PJD001Z228
Electrical wiring			PJD001Z230	PJD001Z230

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJD001Z224 A

(g) Duct connected-Middld static pressure type (FDUM)

Models FDUM22KXE6, 28KXE6, 36KXE6

Models			FDUM22KXE6	FDUM28KXE6	FDUM36KXE6
Nominal cooling capacity*1		kW	2.2	2.8	3.6
Nominal heating capacity*2			2.5	3.2	4.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.09 - 0.11 / 0.09	0.11 - 0.13 / 0.11	0.11 - 0.13 / 0.11
	Heat		0.09 - 0.11 / 0.09	0.11 - 0.13 / 0.11	0.11 - 0.13 / 0.11
Running current	Cool	A	0.41 - 0.46 / 0.41	0.51 - 0.56 / 0.51	0.51 - 0.56 / 0.51
	Heat		0.41 - 0.46 / 0.41	0.51 - 0.56 / 0.51	0.51 - 0.56 / 0.51
Sound Pressure Level		dB(A)	Hi : 33 Me : 31 Lo : 28	Hi : 34 Me : 31 Lo : 28	Hi : 34 Me : 31 Lo : 28
Exterior dimensions Height x Width x Depth		mm	299 × 750 × 635	299 × 750 × 635	299 × 750 × 635
Net weight		kg	33	34	34
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 2
Motor		W	32	60	60
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 10 Me : 9 Lo : 8	Hi : 12 Me : 11 Lo : 10	Hi : 12 Me :11 Lo : 10
Available static pressure		Pa	Standard : 50/40 Max : 85/90	Standard : 50/40 Max : 85/90	Standard : 50/40 Max : 85/90
Outside air intake			Possible	possible	possible
Air filter, Q'ty			Installed on site	Installed on site	Installed on site
Shock & vibration absorber			Rubber sleeve(for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP 20	Connectable with VP 20	Connectable with VP 20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Drain hose	Drain hose	Drain hose
Exterior dimensions			PJR002Z254	PJR002Z255	PJR002Z255
Electrical wiring			PJR002Z258	PJR002Z258	PJR002Z258

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJR002Z252 A

Models FDUM45KXE6, 56KXE6, 71KXE6

Models			FDUM45KXE6	FDUM56KXE6	FDUM71KXE6
Nominal cooling capacity*1		kW	4.5	5.6	7.1
Nominal heating capacity*2			5.0	6.3	8.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.14 - 0.16 / 0.14	0.14 - 0.16 / 0.14	0.15 - 0.17 / 0.15
	Heat		0.14 - 0.16 / 0.14	0.14 - 0.16 / 0.14	0.15 - 0.17 / 0.15
Running current	Cool	A	0.63 - 0.67 / 0.63	0.63 - 0.67 / 0.63	0.68 - 0.71 / 0.71
	Heat		0.63 - 0.67 / 0.63	0.63 - 0.67 / 0.63	0.68 - 0.71 / 0.71
Sound Pressure Level		dB(A)	Hi : 35 Me : 32 Lo : 29	Hi : 35 Me : 32 Lo : 29	Hi : 35 Me : 32 Lo : 29
Exterior dimensions Height x Width x Depth		mm	299 × 750 × 635	299 × 750 × 635	299 × 950 × 635
Net weight		kg	34	34	40
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 2
Motor		W	60	60	100
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 14 Me : 12 Lo : 11	Hi : 14 Me : 12 Lo : 11	Hi : 18 Me :16 Lo : 14
Available static pressure		Pa	Standard : 50/40 Max : 85/90	Standard : 50/40 Max : 85/90	Standard : 50/40 Max : 85/100
Outside air intake			Possible	possible	possible
Air filter, Q'ty			Installed on site	Installed on site	Installed on site
Shock & vibration absorber			Rubber sleeve(for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP 20	Connectable with VP 20	Connectable with VP 20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Drain hose	Drain hose	Drain hose
Exterior dimensions			PJR002Z255	PJR002Z255	PJR002Z256
Electrical wiring			PJR002Z258	PJR002Z258	PJR002Z258

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJR002Z252 A

Models FDUM90KXE6, 112KXE6, 140KXE6

Models			FDUM90KXE6	FDUM112KXE6	FDUM140KXE6
Nominal cooling capacity*1		kW	9.0	11.2	14.0
Nominal heating capacity*2			10.0	12.5	16.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.16 - 0.19 / 0.16	0.24 - 0.28 / 0.24	0.28 - 0.32 / 0.32
	Heat		0.16 - 0.19 / 0.16	0.24 - 0.28 / 0.24	0.28 - 0.32 / 0.28
Running current	Cool	A	0.73 - 0.79 / 0.73	1.07 - 1.17 / 1.07	1.28 - 1.32 / 1.28
	Heat		0.73 - 0.79 / 0.73	1.07 - 1.17 / 1.07	1.28 - 1.32 / 1.28
Sound Pressure Level		dB(A)	Hi : 36 Me : 33 Lo : 30	Hi : 37 Me : 35 Lo : 32	Hi : 38 Me : 36 Lo : 33
Exterior dimensions Height x Width x Depth		mm	299 × 950 × 635	350 × 1,370 × 635	350 × 1,370 × 635
Net weight		kg	40	59	59
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 2
Motor		W	100	50 + 100	50 + 100
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 20 Me : 18 Lo : 15	Hi : 28 Me : 25 Lo : 22	Hi : 34 Me :31 Lo : 27
Available static pressure		Pa	Standard : 50/40 Max : 85/100	Standard : 60/60 Max : 90/100	Standard : 60/55 Max : 85/100
Outside air intake			Possible	possible	possible
Air filter, Q'ty			Installed on site	Installed on site	Installed on site
Shock & vibration absorber			Rubber sleeve(for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP 20	Connectable with VP 20	Connectable with VP 20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Drain hose	Drain hose	Drain hose
Exterior dimensions			PJR002Z256	PJR002Z257	PJR002Z257
Electrical wiring			PJR002Z258	PJR002Z259	PJR002Z259

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJR002Z252 A

(h) Duct connected (Ultra thin) - Low static pressure type (FDQS)

Models FDQS22KXE6, 28KXE6

Models			FDQS22KXE6	FDQS22KXE6	FDQS28KXE6	FDQS28KXE6
			Rear air return -	Bottom air return -	Rear air return -	Bottom air return -
Nominal cooling capacity*1		kW	2.2	2.2	2.8	2.8
Nominal heating capacity*2			2.5	2.5	3.2	3.2
Power source			220-240V～50Hz / -	220-240V～50Hz / -	220-240V～50Hz / -	220-240V～50Hz / -
Power consumption	Cool	kW	0.06 - 0.07 / -	0.06 - 0.07 / -	0.06 - 0.07 / -	0.06 - 0.07 / -
	Heat		0.06 - 0.07 / -	0.06 - 0.07 / -	0.06 - 0.07 / -	0.06 - 0.07 / -
Running current	Cool	A	0.35 - 0.38 / -	0.35 - 0.38 / -	0.35 - 0.38 / -	0.35 - 0.38 / -
	Heat		0.35 - 0.38 / -	0.35 - 0.38 / -	0.35 - 0.38 / -	0.35 - 0.38 / -
Sound Pressure Level		dB(A)	Hi : 37 Me : 35 Lo : 33	Hi : 43 Me : 41 Lo : 39	Hi : 37 Me : 35 Lo : 33	Hi : 43 Me : 41 Lo : 39
Exterior dimensions Height x Width x Depth		mm	180 × 940 × 580	180 × 940 × 580	180 × 940 × 580	180 × 940 × 580
Net weight		kg	27	27	27	27
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 1	Centrifugal fan ×1	Centrifugal fan ×1	Centrifugal fan ×1
Motor		W	25	25	25	25
Starting method			Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 9 Me : 8 Lo : 7.5	Hi : 9 Me : 8 Lo : 7.5	Hi : 9 Me : 8 Lo : 7.5	Hi : 9 Me : 8 Lo : 7.5
Available static pressure		Pa	Standrd : 15, Max : 30	Standrd : 15 , Max : 30	Standrd : 15 , Max : 30	Standrd : 15 , Max : 30
Outside air intake			-	-	-	-
Air filter, Q'ty			Installed on site	Installed on site	Installed on site	Installed on site
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option: RC-E3	Remote control switch Option: RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")
Connecting method			Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit,Drain hose	Mounting kit,Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJC001Z199	PJC001Z241	PJC001Z199	PJC001Z241
Electrical wiring			PJC001Z200	PJC001Z200	PJC001Z200	PJC001Z200

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJC001Z197 A

Model FDQS36KXE6

Models			FDQS36KXE6	FDQS36KXE6
			Rear air return -	Bottom air return -
Nominal cooling capacity*1		kW	3.6	3.6
Nominal heating capacity*2			4.0	4.0
Power source			220-240V～50Hz / -	220-240V～50Hz / -
Power consumption	Cool	kW	0.07 - 0.08 / -	0.07 - 0.08 / -
	Heat		0.07 - 0.08 / -	0.07 - 0.08 / -
Running current	Cool	A	0.36 - 0.39 / -	0.36 - 0.39 / -
	Heat		0.36 - 0.39 / -	0.36 - 0.39 / -
Sound Pressure Level		dB(A)	Hi : 37 Me : 35 Lo : 33	Hi : 43 Me : 41 Lo : 39
Exterior dimensions Height x Width x Depth		mm	180 × 940 × 580	180 × 940 × 580
Net weight		kg	28	28
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 1	Centrifugal fan × 1
Motor		W	25	25
Starting method			Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 9 Me : 8 Lo : 7.5	Hi : 9 Me : 8 Lo : 7.5
Available static pressure		Pa	Standrd : 15 , Max : 30	Standrd : 15 , Max : 30
Outside air intake			-	-
Air filter, Q'ty			Installed on site	Installed on site
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping
Refrigerant			R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit,Drain hose	Mounting kit,Drain hose
Exterior dimensions			PJC001Z199	PJC001Z241
Electrical wiring			PJC001Z200	PJC001Z200

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJC001Z197 A

Models FDQS45KXE6, 56KXE6

Models			FDQS45KXE6	FDQS45KXE6	FDQS56KXE6	FDQS56KXE6
			Rear air return -	Bottom air return -	Rear air return -	Bottom air return -
Nominal cooling capacity*1		kW	4.5	4.5	5.6	5.6
Nominal heating capacity*2			5.0	5.0	6.0	6.0
Power source			220-240V～50Hz / -	220-240V～50Hz / -	220-240V～50Hz / -	220-240V～50Hz / -
Power consumption	Cool	kW	0.07 - 0.08 / -	0.07 - 0.08 / -	0.08 - 0.09 / -	0.08 - 0.09 / -
	Heat		0.07 - 0.08 / -	0.07 - 0.08 / -	0.08 - 0.09 / -	0.08 - 0.09 / -
Running current	Cool	A	0.36 - 0.39 / -	0.36 - 0.39 / -	0.37 - 0.40 / -	0.37 - 0.40 / -
	Heat		0.36 - 0.39 / -	0.36 - 0.39 / -	0.37 - 0.40 / -	0.37 - 0.40 / -
Sound Pressure Level		dB(A)	Hi : 37 Me : 35 Lo : 33	Hi : 43 Me : 41 Lo : 39	Hi : 37 Me : 35 Lo : 33	Hi : 43 Me : 41 Lo : 39
Exterior dimensions Height x Width x Depth		mm	180 × 940 × 580	180 × 940 × 580	180 × 940 × 580	180 × 940 × 580
Net weight		kg	28	28	28	28
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 1	Centrifugal fan ×1	Centrifugal fan ×1	Centrifugal fan ×1
Motor		W	25	25	25	25
Starting method			Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 11 Me : 10 Lo : 9	Hi : 11 Me : 10 Lo : 9	Hi : 11 Me : 10 Lo : 9	Hi : 11 Me : 10 Lo : 9
Available static pressure		Pa	Standrd : 15 , Max : 30	Standrd : 15 , Max : 30	Standrd : 15 , Max : 30	Standrd : 15 , Max : 30
Outside air intake			-	-	-	-
Air filter, Q'ty			Installed on site	Installed on site	Installed on site	Installed on site
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option: RC-E3	Remote control switch Option: RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A	R410A
Drain pump			Built-in Drain pump	Built-in Drain pump	Built-in Drain pump	Built-in Drain pump
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit,Drain hose	Mounting kit,Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJC001Z199	PJC001Z241	PJC001Z199	PJC001Z241
Electrical wiring			PJC001Z200	PJC001Z200	PJC001Z200	PJC001Z200

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PJC001Z197 A

(i) Wall mounted type (FDK)

Models FDK22KXE6, 28KXE6, 36KXE6

Models			FDK22KXE6	FDK28KXE6	FDK36KXE6
Nominal cooling capacity*1		kW	2.2	2.8	3.6
Nominal heating capacity*2			2.5	3.2	4.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.05	0.05	0.05
	Heat		0.04	0.04	0.04
Running current	Cool	A	0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23
	Heat		0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23
Sound Pressure Level		dB(A)	Hi : 35 Me : 33 Lo : 31	Hi : 35 Me : 33 Lo : 31	Hi : 39 Me : 35 Lo : 31
Exterior dimensions Height x Width x Depth		mm	298 × 840 × 259	298 × 840 × 259	298 × 840 × 259
Exterior appearance （Munsell color）			Cool White （9.3G8.7 / 0.1） near equivalent	Cool White （9.3G8.7 / 0.1） near equivalent	Cool White （9.3G8.7 / 0.1） near equivalent
Net weight		kg	12	12	12
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Tangential fan × 1	Tangential fan × 1	Tangential fan × 1
Motor		W	33	33	33
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 8 Me : 7 Lo : 6	Hi : 8 Me : 7 Lo : 6	Hi : 10 Me :9 Lo : 7
Available static pressure		Pa	0	0	0
Outside air intake			Not possible	Not possible	Not possible
Air filter, Q'ty			Polypropylene net × 2 (Washable)	Polypropylene net × 2 (Washable)	Polypropylene net × 2 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line : Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain hose			Connectable with VP16	Connectable with VP16	Connectable with VP16
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Standard Accessories			Mounting kit	Mounting kit	Mounting kit
Exterior dimensions			PHA000Z981	PHA000Z981	PHA000Z981
Electrical wiring			PHA000Z983	PHA000Z983	PHA000Z983

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PHA000Z979 B

Models FDK45KXE6, 56KXE6, 71KXE6

Models			FDK45KXE6	FDK56KXE6	FDK71KXE6
Nominal cooling capacity*1		kW	4.5	5.6	7.1
Nominal heating capacity*2			5.0	6.3	8.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.05	0.05	0.09
	Heat		0.05	0.05	0.09
Running current	Cool	A	0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23	0.41 - 0.48 / 0.41
	Heat		0.23 - 0.21 / 0.23	0.23 - 0.21 / 0.23	0.41 - 0.48 / 0.41
Sound Pressure Level		dB(A)	Hi : 42 Me : 37 Lo : 33	Hi : 46 Me : 42 Lo : 37	Hi : 47 Me : 43 Lo : 39
Exterior dimensions Height x Width x Depth		mm	298 × 840 × 259	298 × 840 × 259	318 × 1,098 × 248
Exterior appearance （Munsell color）			Cool White （9.3G8.7 / 0.1） near equivalent	Cool White （9.3G8.7 / 0.1） near equivalent	Cool White （9.3G8.7 / 0.1） near equivalent
Net weight		kg	12.5	13	15.5
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Tangential fan × 1	Tangential fan × 1	Tangential fan × 1
Motor		W	33	33	45
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 11 Me : 9 Lo : 7	Hi : 14 Me : 12 Lo : 10	Hi : 21 Me :18 Lo : 15
Available static pressure		Pa	0	0	0
Outside air intake			Not possible	Not possible	Not possible
Air filter, Q'ty			Polypropylene net × 2 (Washable)	Polypropylene net × 2 (Washable)	Polypropylene net × 2 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat	Overload protection for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø9.52 (3/8") Gas line : Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain hose			Connectable with VP16	Connectable with VP16	Connectable with VP16
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Standard Accessories			Mounting kit	Mounting kit	Mounting kit
Exterior dimensions			PHA000Z981	PHA000Z981	PHA000Z982
Electrical wiring			PHA000Z983	PHA000Z983	PHA000Z984

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PHA000Z979 B

(j) Ceiling suspended type (FDE)

Models FDE36KXE6A, 45KXE6A, 56KXE6A

Models			FDE36KXE6A	FDE45KXE6A	FDE56KXE6A
Nominal cooling capacity*1		kW	3.6	4.5	5.6
Nominal heating capacity*2			4.0	5.0	6.3
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05
	Heat		0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05	0.04 - 0.05 / 0.05
Running current	Cool	A	0.19 - 0.21 / 0.23	0.19 - 0.21 / 0.23	0.19 - 0.21 / 0.23
	Heat		0.19 - 0.21 / 0.23	0.19 - 0.21 / 0.23	0.19 - 0.21 / 0.23
Sound Pressure Level		dB(A)	Hi : 39 Me : 38 Lo : 36	Hi : 39 Me : 38 Lo : 36	Hi : 39 Me : 38 Lo : 36
Exterior dimensions Height x Width x Depth		mm	210 × 1,070 × 690	210 × 1,070 × 690	210 × 1,070 × 690
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2） near equivalent	Plaster White （6.8Y8.9 / 0.2） near equivalent	Plaster White （6.8Y8.9 / 0.2） near equivalent
Net weight		kg	28	28	28
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan ×2	Centrifugal fan ×2	Centrifugal fan ×2
Motor		W	25	25	25
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 11 Me : 9 Lo : 7	Hi : 11 Me : 9 Lo : 7	Hi : 11 Me : 9 Lo : 7
Available static pressure		Pa	0	0	0
Outside air intake			Not possible	Not possible	Not possible
Air filter, Q'ty			Pocket plastic net × 2 (Washable)	Pocket plastic net × 2 (Washable)	Pocket plastic net × 2 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PFA003Z823	PFA003Z823	PFA003Z823
Electrical wiring			PFA003Z826	PFA003Z826	PFA003Z826

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PFA003Z821

Models FDE71KXE6A, 112KXE6A, 140KXE6A

Models			FDE71KXE6A	FDE112KXE6A	FDE140KXE6A
Nominal cooling capacity*1		kW	7.0	11.2	14.0
Nominal heating capacity*2			8.0	12.5	16.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.08 - 0.09 / 0.09	0.12 - 0.14 / 0.14	0.14 - 0.15 / 0.16
	Heat		0.07 - 0.08 / 0.08	0.11 - 0.13 / 0.13	0.13 - 0.14 / 0.15
Running current	Cool	A	0.37 - 0.38 / 0.41	0.56 - 0.59 / 0.65	0.64 - 0.65 / 0.73
	Heat		0.34 - 0.35 / 0.37	0.52 - 0.54 / 0.59	0.59 - 0.59 / 0.68
Sound Pressure Level		dB(A)	Hi : 41 Me : 39 Lo : 37	Hi : 44 Me : 41 Lo : 39	Hi : 46 Me : 44 Lo : 43
Exterior dimensions Height x Width x Depth		mm	210 × 1,320 × 690	250 × 1,620 × 690	250 × 1,620 × 690
Exterior appearance （Munsell color）			Plaster White （6.8Y8.9 / 0.2） near equivalent	Plaster White （6.8Y8.9 / 0.2） near equivalent	Plaster White （6.8Y8.9 / 0.2） near equivalent
Net weight		kg	37	49	49
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan ×4	Centrifugal fan ×4	Centrifugal fan ×4
Motor		W	20 × 2	30 × 2	40 × 2
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 18 Me : 14 Lo : 12	Hi : 26 Me : 23 Lo : 21	Hi : 29 Me : 26 Lo : 23
Available static pressure		Pa	0	0	0
Outside air intake			Not possible	Not possible	Not possible
Air filter, Q'ty			Pocket plastic net × 2 (Washable)	Pocket plastic net × 2 (Washable)	Pocket plastic net × 2 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")	Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PFA003Z824	PFA003Z825	PFA003Z825
Electrical wiring			PFA003Z827	PFA003Z827	PFA003Z827

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PFA003Z821

(k) Floor standing (with casing)type [FDFL]

Models FDFL28KXE6, 45KXE6, 71KXE6

Models			FDFL28KXE6	FDFL45KXE6	FDFL71KXE6
Nominal cooling capacity*1		kW	2.8	4.5	7.1
Nominal heating capacity*2			3.2	5.0	8.0
Power source			220-240V～50Hz	220-240V～50Hz	220-240V～50Hz
Power consumption	Cool	kW	0.09 - 0.10	0.09 - 0.10	0.09 - 0.10
	Heat		0.09 - 0.10	0.09 - 0.10	0.09 - 0.10
Running current	Cool	A	0.41 - 0.42	0.40 - 0.41	0.40 - 0.41
	Heat		0.41 - 0.42	0.40 - 0.41	0.40 - 0.41
Sound Pressure Level		dB(A)	Hi : 41 Me : 38 Lo : 36	Hi : 43 Me : 41 Lo : 40	Hi : 43 Me : 41 Lo : 40
Exterior dimensions Height x Width x Depth		mm	630 × 1,196 × 225	630 × 1,196 × 225	630 × 1,481 × 225
Exterior appearance （Munsell color）			Ceramic White （N8.0） near equivalent	Ceramic White （N8.0） near equivalent	Ceramic White （N8.0） near equivalent
Net weight		kg	32	32	40
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 2
Motor		W	30	40	40
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 12 Me : 11 Lo : 10	Hi : 14 Me : 12 Lo : 10	Hi : 18 Me : 15 Lo : 12
Available static pressure		Pa	0	0	0
Outside air intake			Not possible	Not possible	Not possible
Air filter, Q'ty			Polypropyiene net ×2 (Washable)	Polypropyiene net ×2 (Washable)	Polypropyiene net ×2 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø9.52 (3/8") Gas line: Ø15.88 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PGD000Z051	PGD000Z051	PGD000Z052
Electrical wiring			PGD000Z053	PGD000Z053	PGD000Z053

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PGD000Z049

(I) Floor standing (without casing) type [FDFU]

Models FDFU28KXE6, 45KXE6, 56KXET, 71KXE6

Models			FDFU28KXE6	FDFU45KXE6	FDFU56KXE6	FDFU71KXE6
Nominal cooling capacity*1		kW	2.8	4.5	5.6	7.1
Nominal heating capacity*2			3.2	5.0	6.3	8.0
Power source			220-240V～50Hz	220-240V～50Hz	220-240V～50Hz	220-240V～50Hz
Power consumption	Cool	kW	0.09 - 0.10	0.09 - 0.10	0.09 - 0.10	0.09 - 0.10
	Heat		0.09 - 0.10	0.09 - 0.10	0.09 - 0.10	0.09 - 0.10
Running current	Cool	A	0.41 - 0.42	0.40 - 0.41	0.40 - 0.41	0.40 - 0.41
	Heat		0.41 - 0.42	0.40 - 0.41	0.40 - 0.41	0.40 - 0.41
Sound Pressure Level		dB(A)	Hi : 41 Me : 38 Lo : 36	Hi : 43 Me : 41 Lo : 40	Hi : 43 Me : 41 Lo : 40	Hi : 43 Me : 41 Lo : 40
Exterior dimensions Height x Width x Depth		mm	630 × 1,077 × 225	630 × 1,077 × 225	630 × 1,077 × 225	630 × 1,362 × 225
Net weight		kg	25	25	25	32
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing	Louver fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 2	Centrifugal fan × 2
Motor		W	30	40	40	40
Starting method			Direct line start	Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 12 Me : 11 Lo : 10	Hi : 14 Me : 12 Lo : 10	Hi : 14 Me : 12 Lo : 10	Hi : 18 Me : 15 Lo : 12
Available static pressure		Pa	0	0	0	0
Outside air intake			Not possible	Not possible	Not possible	Not possible
Air filter, Q'ty			Polypropylene net × 1 (Washable)	Polypropylene net × 1 (Washable)	Polypropylene net × 1 (Washable)	Polypropylene net × 1 (Washable)
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option: RC-E3	Remote control switch Option: RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")	Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (5/8")
Connecting method			Flare piping	Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A	R410A
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Accessories			Mounting kit,Drain hose	Mounting kit,Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PGD000Z056	PGD000Z056	PGD000Z056	PGD000Z057
Electrical wiring			PGD000Z058	PGD000Z058	PGD000Z058	PGD000Z058

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

PGD000Z054

(m) Duct Connected - Compact and Flexible - type (FDUH)

Models FDUH22KXE6, 28KXE6, 36KXE6

Models			FDUH22KXE6	FDUH28KXE6	FDUH36KXE6
Nominal cooling capacity*1		kW	2.2	2.8	3.6
Nominal heating capacity*2			2.5	3.2	4.0
Power source			220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz	220-240V～50Hz / 220V～60Hz
Power consumption	Cool	kW	0.050 - 0.055 / 0.053	0.050 - 0.055 / 0.053	0.050 - 0.055 / 0.053
	Heat		0.050 - 0.055 / 0.053	0.050 - 0.055 / 0.053	0.050 - 0.055 / 0.053
Running current	Cool	A	0.23 - 0.24 / 0.26	0.23 - 0.24 / 0.26	0.23 - 0.24 / 0.26
	Heat		0.23 - 0.24 / 0.26	0.23 - 0.24 / 0.26	0.23 - 0.24 / 0.26
Sound Pressure Level		dB(A)	Hi : 33 Me : 30 Lo : 27	Hi : 33 Me : 30 Lo : 27	Hi : 33 Me : 30 Lo : 27
Exterior dimensions Height x Width x Depth		mm	Unit : 257 × 570 × 530	Unit : 257 × 570 × 530	Unit : 257 × 570 × 530
Net weight		kg	20	20	20
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	Slit fin & inner grooved tubing	Slit fin & inner grooved tubing
Refrigerant control			Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Air handling equipment Fan type & Q'ty			Centrifugal fan × 1	Centrifugal fan × 1	Centrifugal fan × 1
Motor		W	20	20	20
Starting method			Direct line start	Direct line start	Direct line start
Air flow (Standard)		CMM	Hi : 7 Me : 6.5 Lo : 6	Hi : 7 Me : 6.5 Lo : 6	Hi : 7 Me : 6.5 Lo : 6
Available static pressure		Pa	30	30	30
Outside air intake			Not possible	Not possible	Not possible
Air filter, Q'ty			Procure locally	Procure locally	Procure locally
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)	Rubber sleeve (for fan motor)
Insulation (noise & heat)			Polyurethane form	Polyurethane form	Polyurethane form
Operation control Operation switch			Remote control switch Option : RC-E3	Remote control switch Option : RC-E3	Remote control switch Option : RC-E3
Room temperature control			Thermostat by electronics	Thermostat by electronics	Thermostat by electronics
Safety equipment			Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat	Internal thermostat for fan motor Frost protection thermostat
Installation data Refrigerant piping size			Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line: Ø9.52 (3/8")	Liquid line : Ø6.35 (1/4") Gas line: Ø12.7 (1/2")
Connecting method			Flare piping	Flare piping	Flare piping
Refrigerant			R410A	R410A	R410A
Drain hose			Connectable with VP20	Connectable with VP20	Connectable with VP20
Insulation for piping			Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)	Necessary (both Liquid & Gas line)
Standard Accessories			Mounting kit, Drain hose	Mounting kit, Drain hose	Mounting kit, Drain hose
Exterior dimensions			PJC001Z253	PJC001Z253	PJC001Z253
Electrical wiring			PJC001Z255	PJC001Z255	PJC001Z255

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

Adapted to **RoHS** directive

Item	Indoor air temperature		Outdoor air temperature		Standards
Operation	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃		7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

(3) As for "Exterior dimensions" of <Bottom suction setting> , refer to "PJC001Z254".

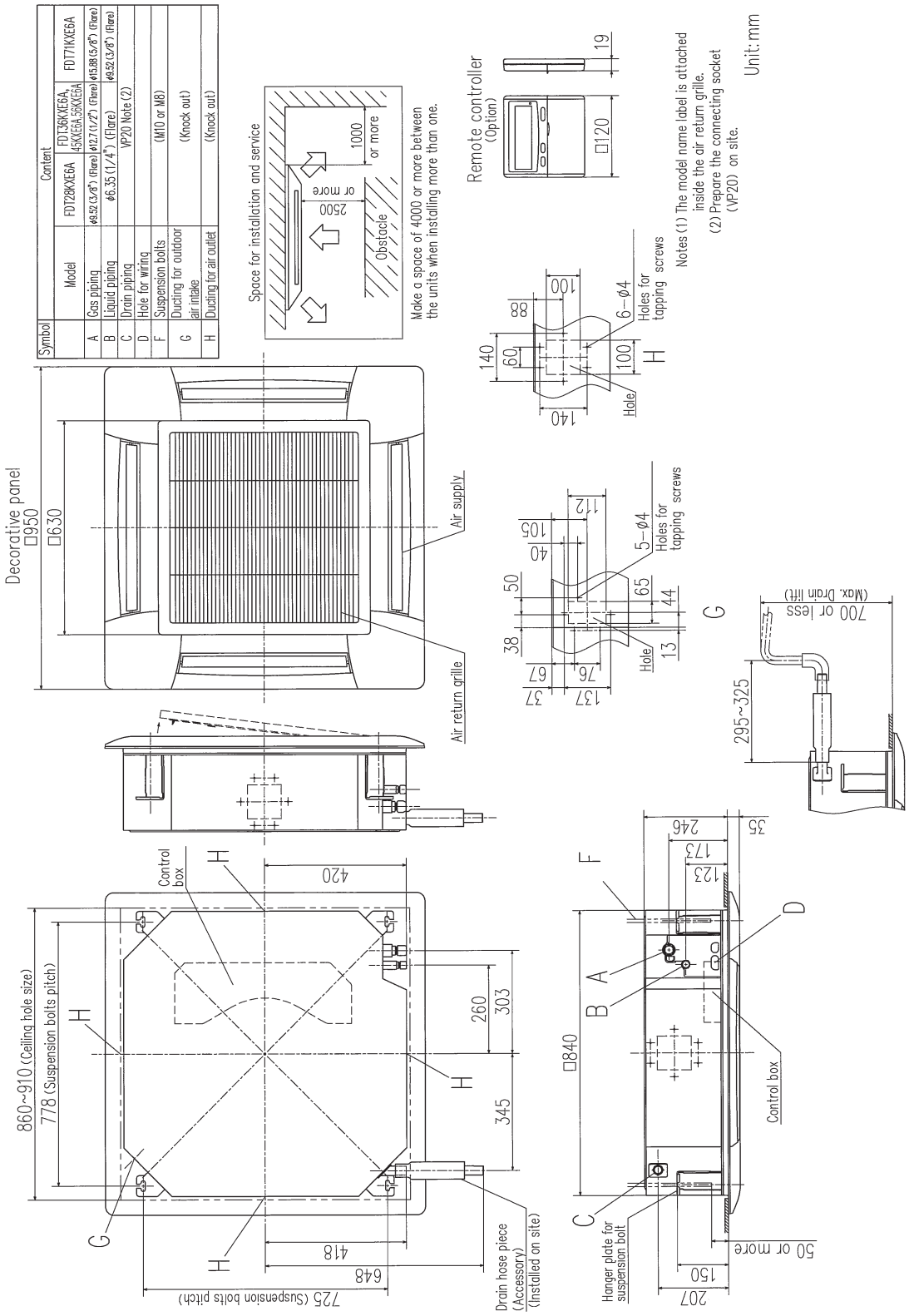
PJC001Z250 A

3.2 Exterior dimensions

(1) Indoor unit

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

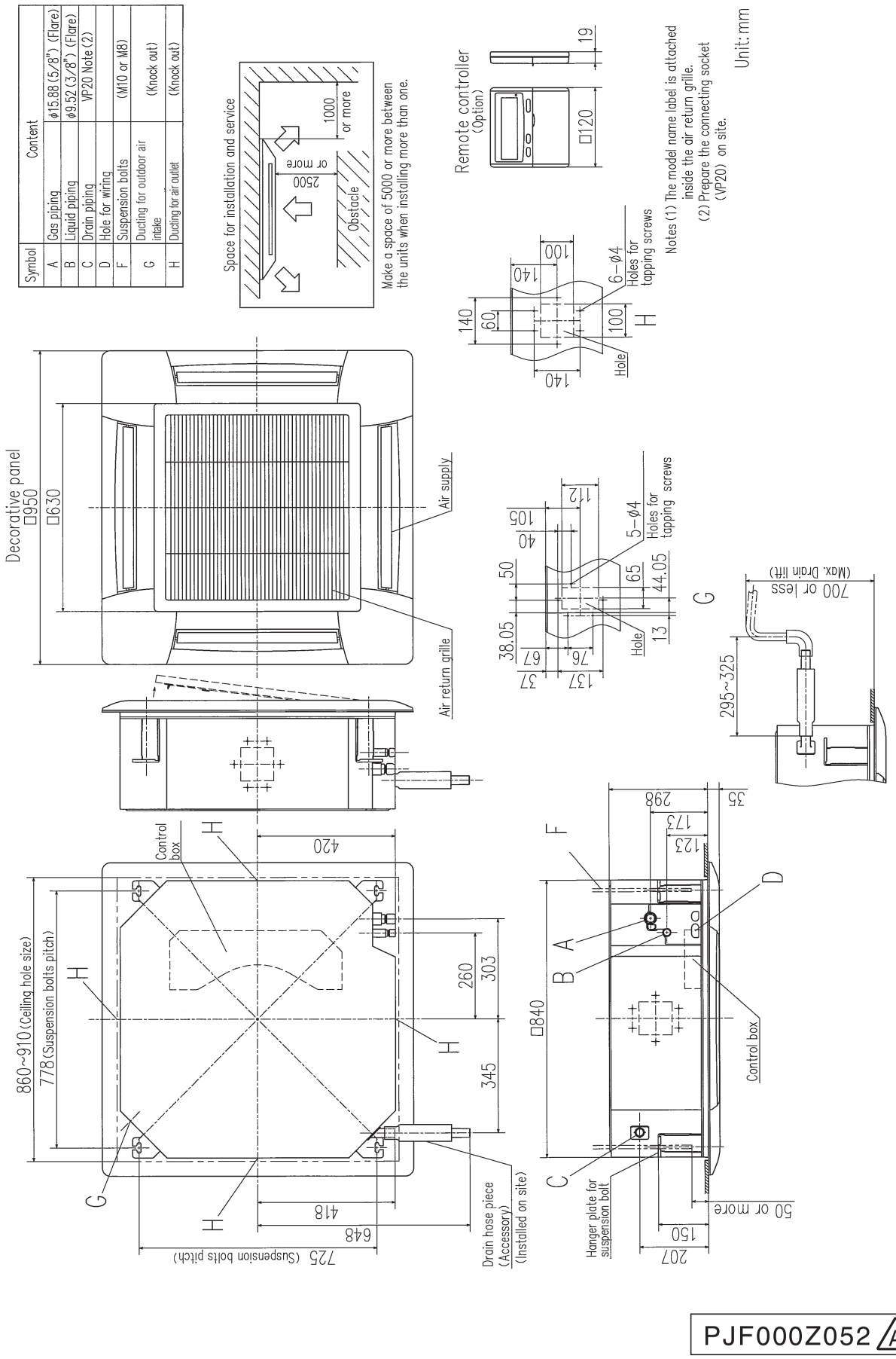
Models FDT28KXE6A, 36KXE6A, 45KXE6A, 56KXE6A, 71KXE6A



Symbol		Content	
	Model	FDT28KXE6A	FDT36KXE6A, 45KXE6A,56KXE6A	FDT71KXE6A
A	Gas piping	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)	ø15.88 (5/8") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)	ø9.52 (3/8") (Flare)
C	Drain piping	VP20 Note (2)	
D	Hole for wiring		
F	Suspension bolts	(M10 or M8)	
G	Ducting for outdoor air intake	(Knock out)	
H	Ducting for air outlet	(Knock out)	

PJF000Z051 A

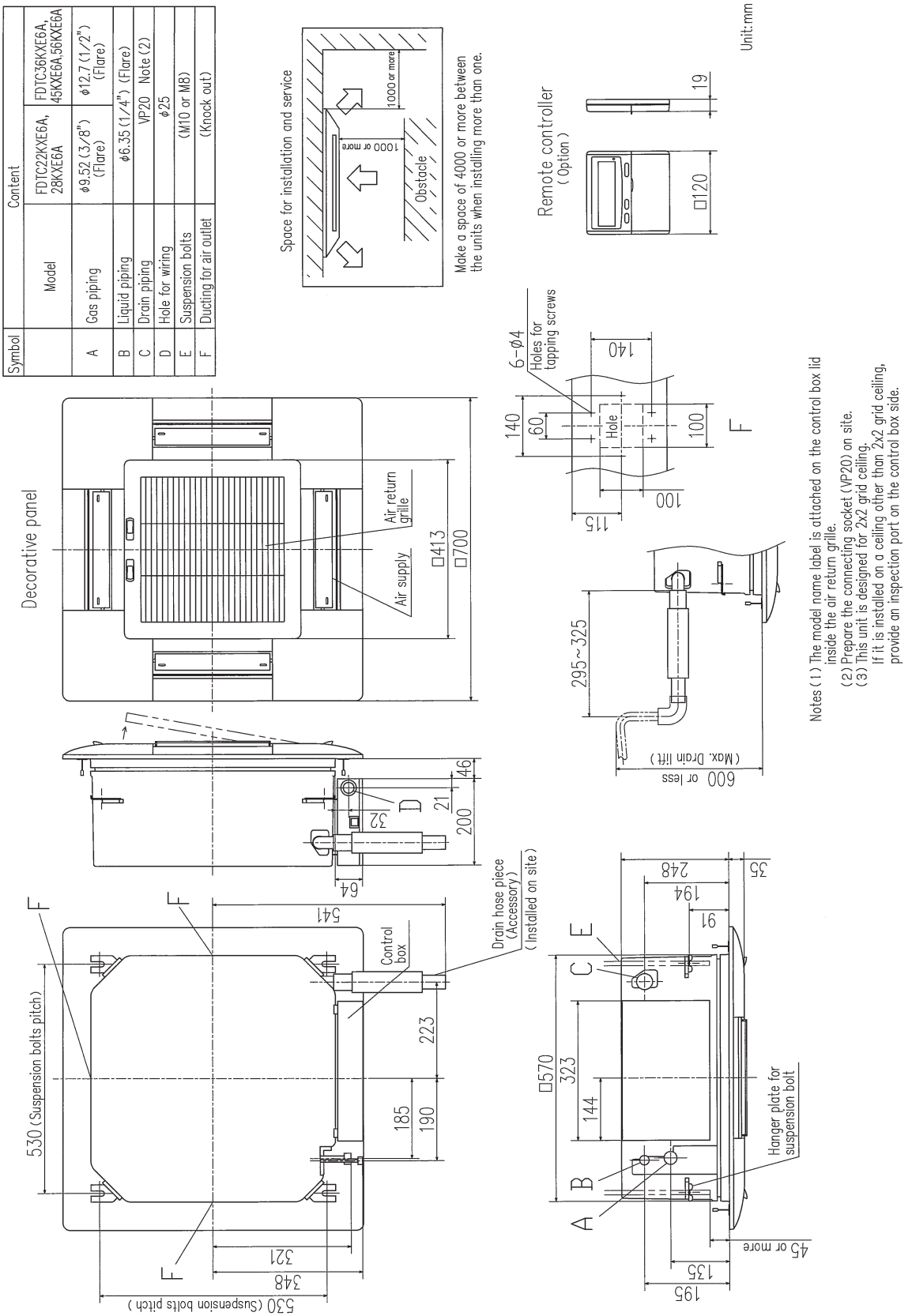
Models FDT90KXE6A, 112KXE6A, 140KXE6A, 160KXE6A



PJF000Z052 A

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

Models FDTC22KXE6A, 28KXE6A, 36KXE6A, 45KXE6A, 56KXE6A

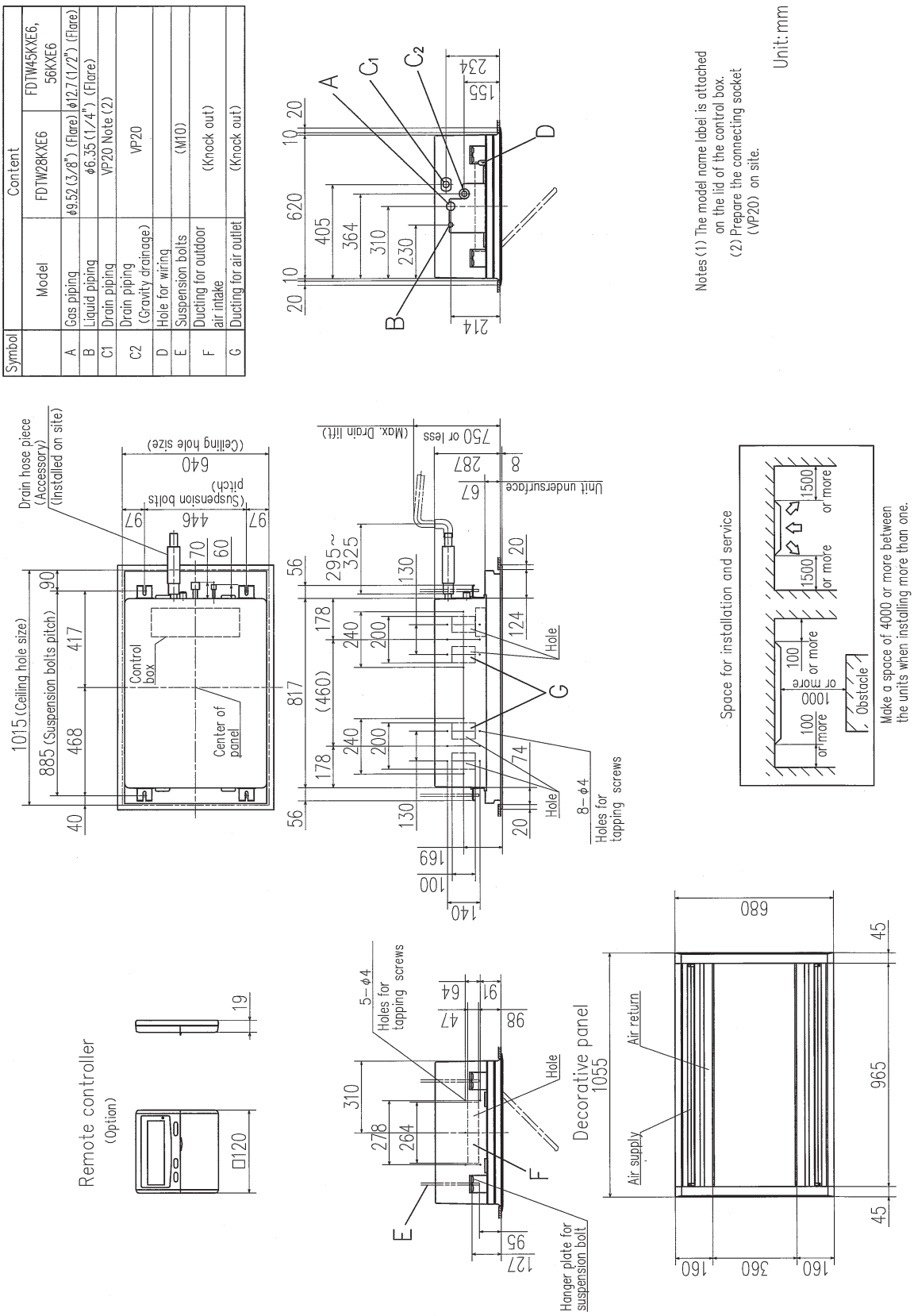


PJA003Z330 A

(C) Ceiling cassette-2 way type (FDTW)

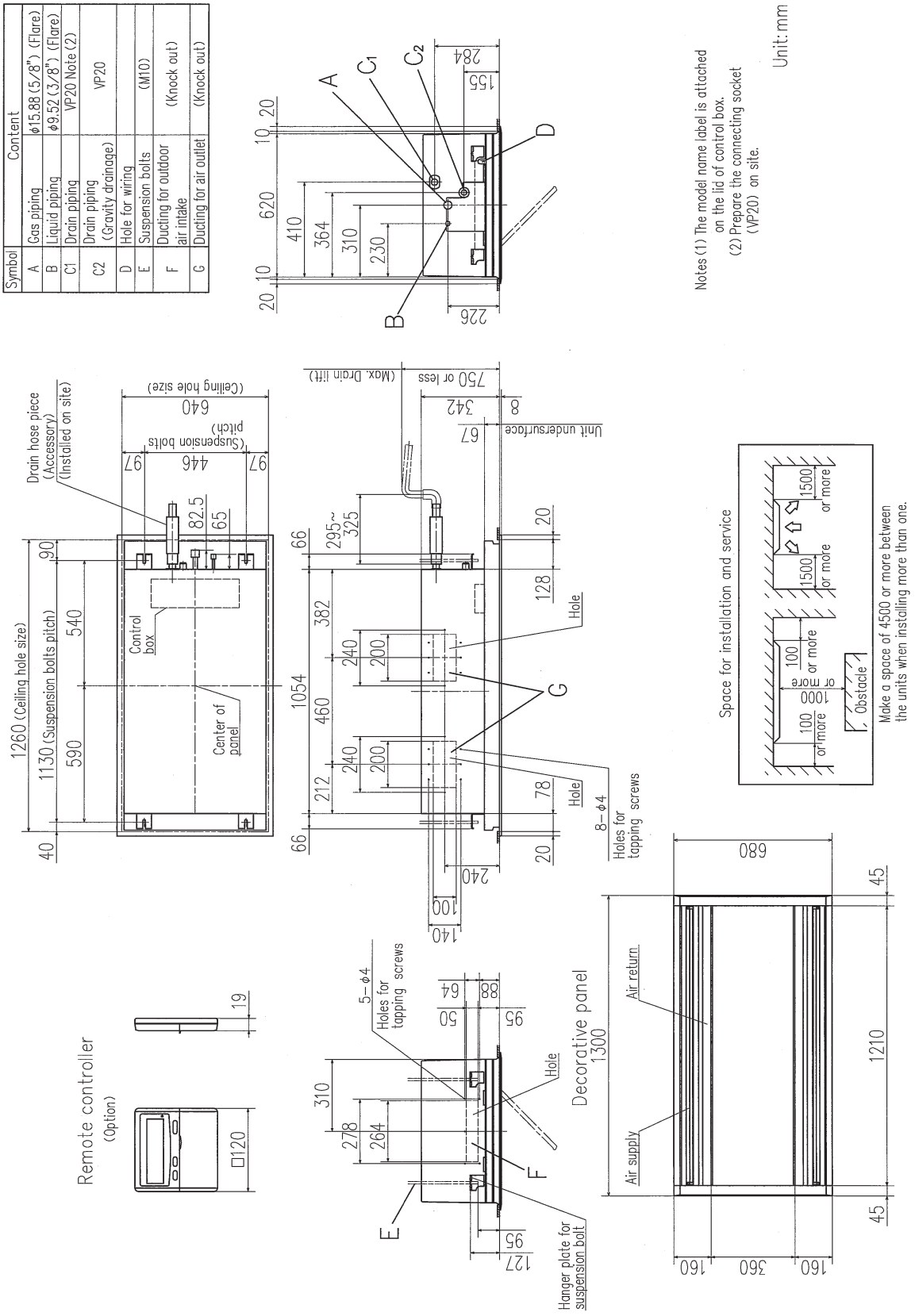
Models FDTW28KXE6, 45KXE6, 56KXE6

Symbol	Content		
	Model	FDTW28KXE6	FDTW45KXE6, 56KXE6
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C1	Drain piping	VP20 Note (2)	
C2	Drain piping (Gravity drainage)	VP20	
D	Hole for wiring		
E	Suspension bolts	(M10)	
F	Ducting for outdoor air intake	(Knock out)	
G	Ducting for air outlet	(Knock out)	



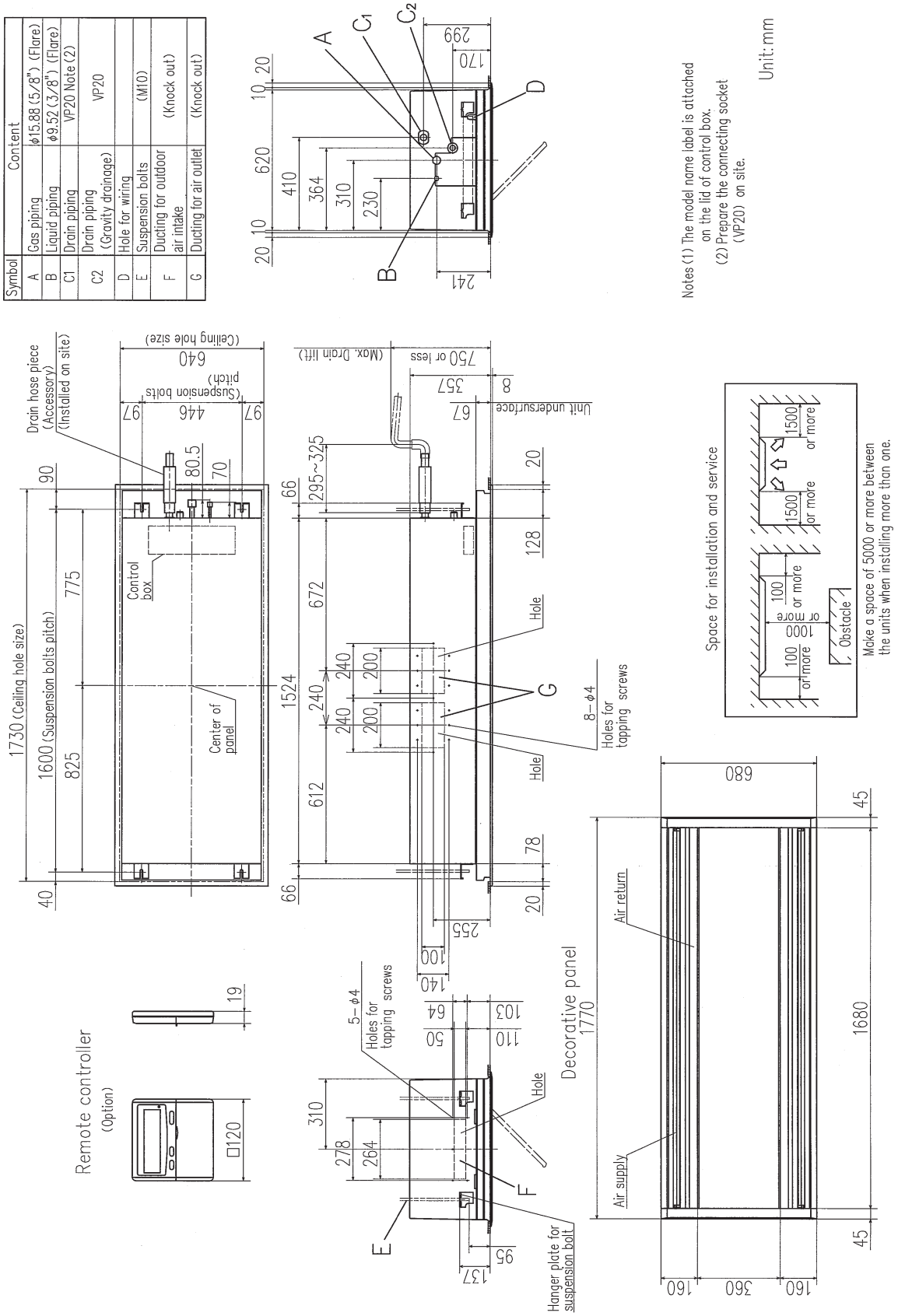
PJB001Z557

Models FDTW71KXE6, 90KXE6



PJB001Z558

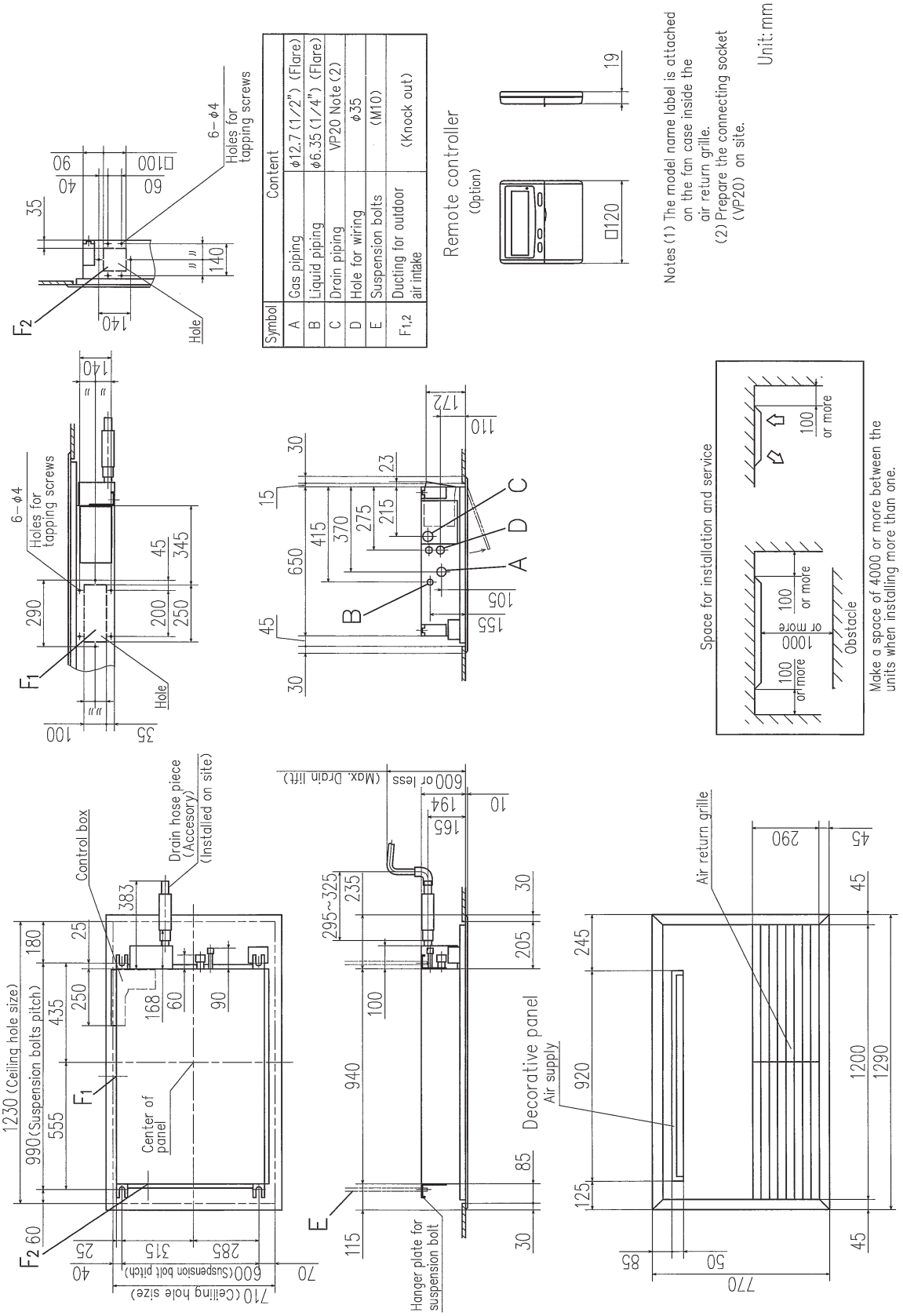
Models FDTW112KXE6, 140KXE6



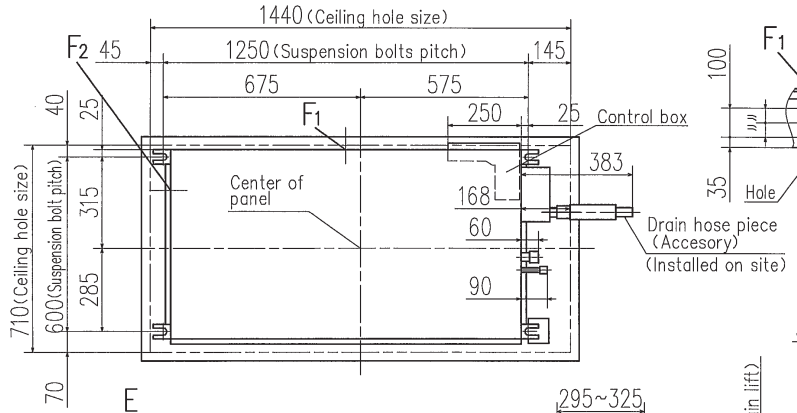
PJB001Z559

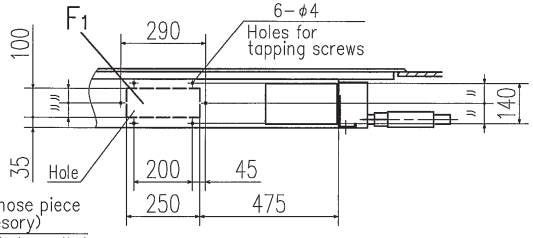
(d) Ceiling cassette-1 way type (FDTS)

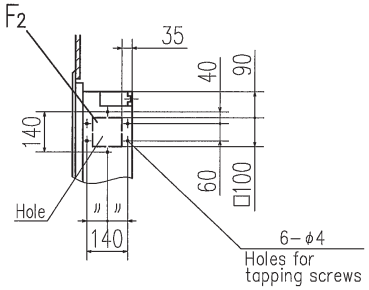
Model FDTS45KXE6

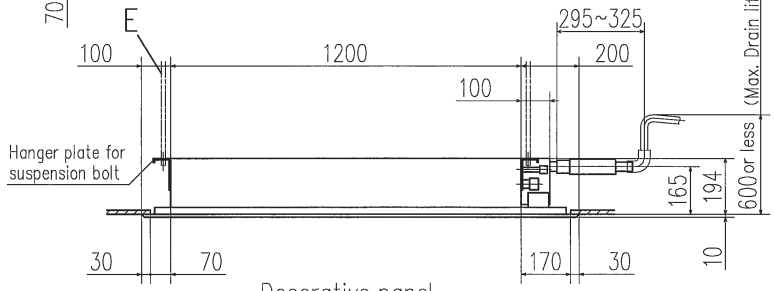


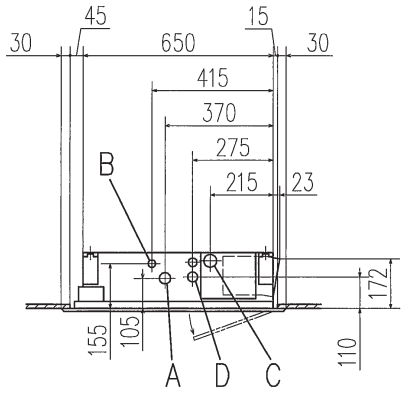
PJC001Z193





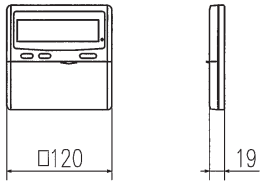






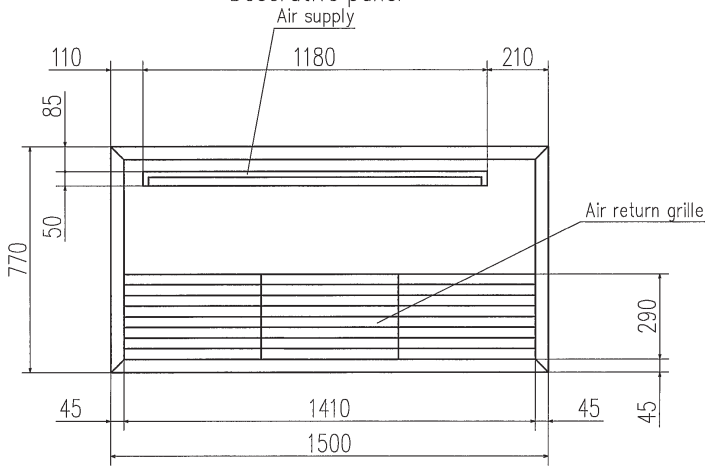
Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (Flare)
C	Drain piping	VP20 Note (2)
D	Hole for wiring	φ35
E	Suspension bolts	(M10)
F1,2	Ducting for outdoor air intake	(Knock out)

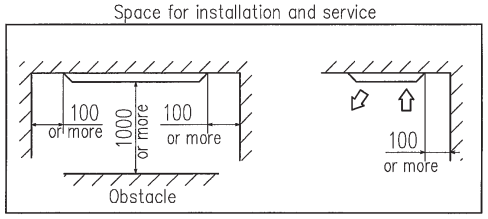
Remote controller
(Option)



Notes (1) The model name label is attached on the fan case inside the air return grille.
(2) Prepare the connecting socket (VP20) on site.

Unit: mm





Make a space of 4500 or more between the units when installing more than one.

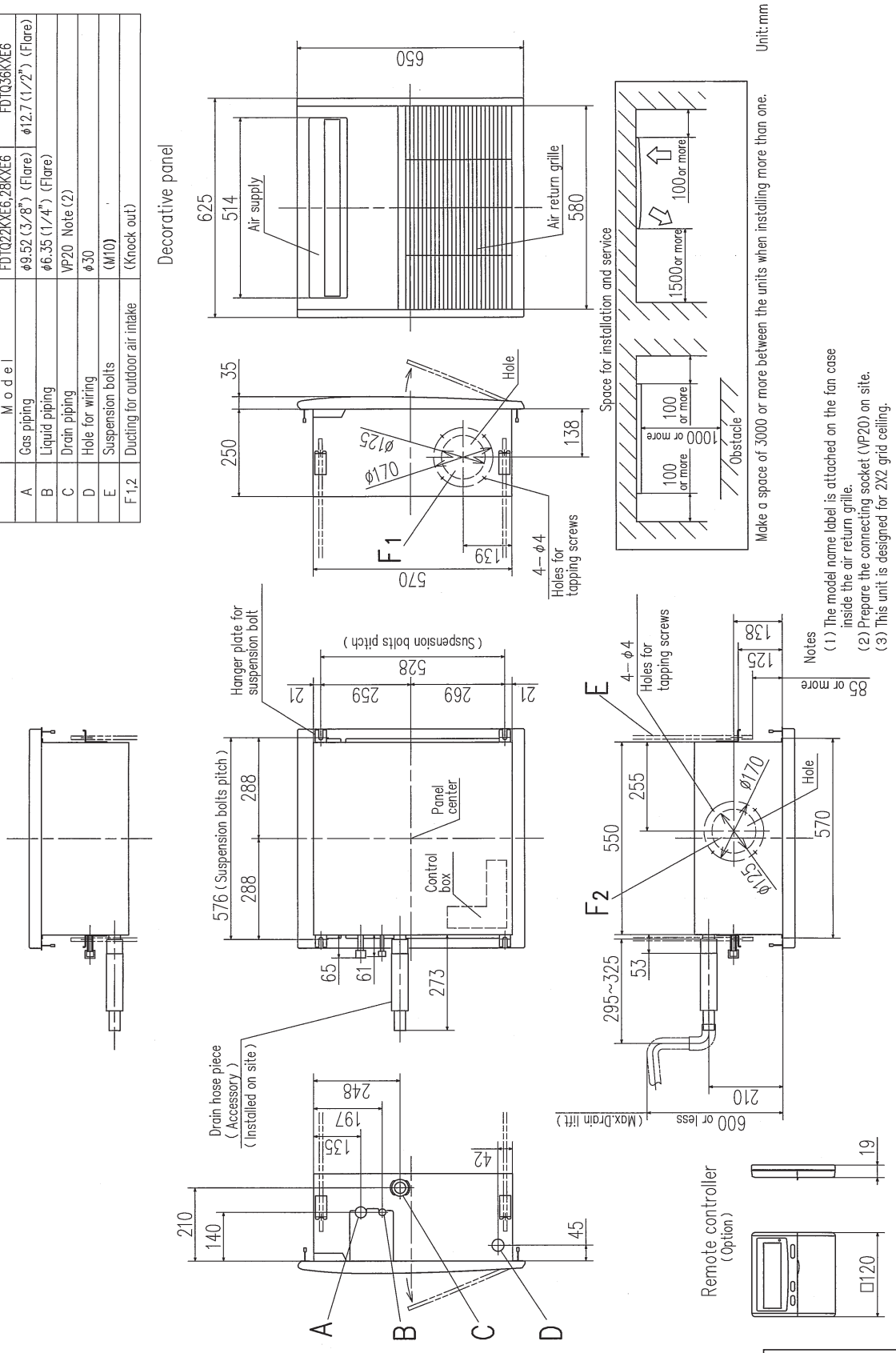
PJC001Z194

(e) Ceiling cassette-1 way compact type (FDTQ)

Models FDTQ22KXE6, 28KXE6, 36KXE6

Direct blow panel (TQ-PSA-15W-E)

Symbol	Content		
	Model	FDTQ22KXE6,28KXE6	FDTQ36KXE6
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Drain piping	VP20 Note (2)	
D	Hole for wiring	φ30	
E	Suspension bolts	(M10)	
F1,2	Ducting for outdoor air intake	(Knock out)	

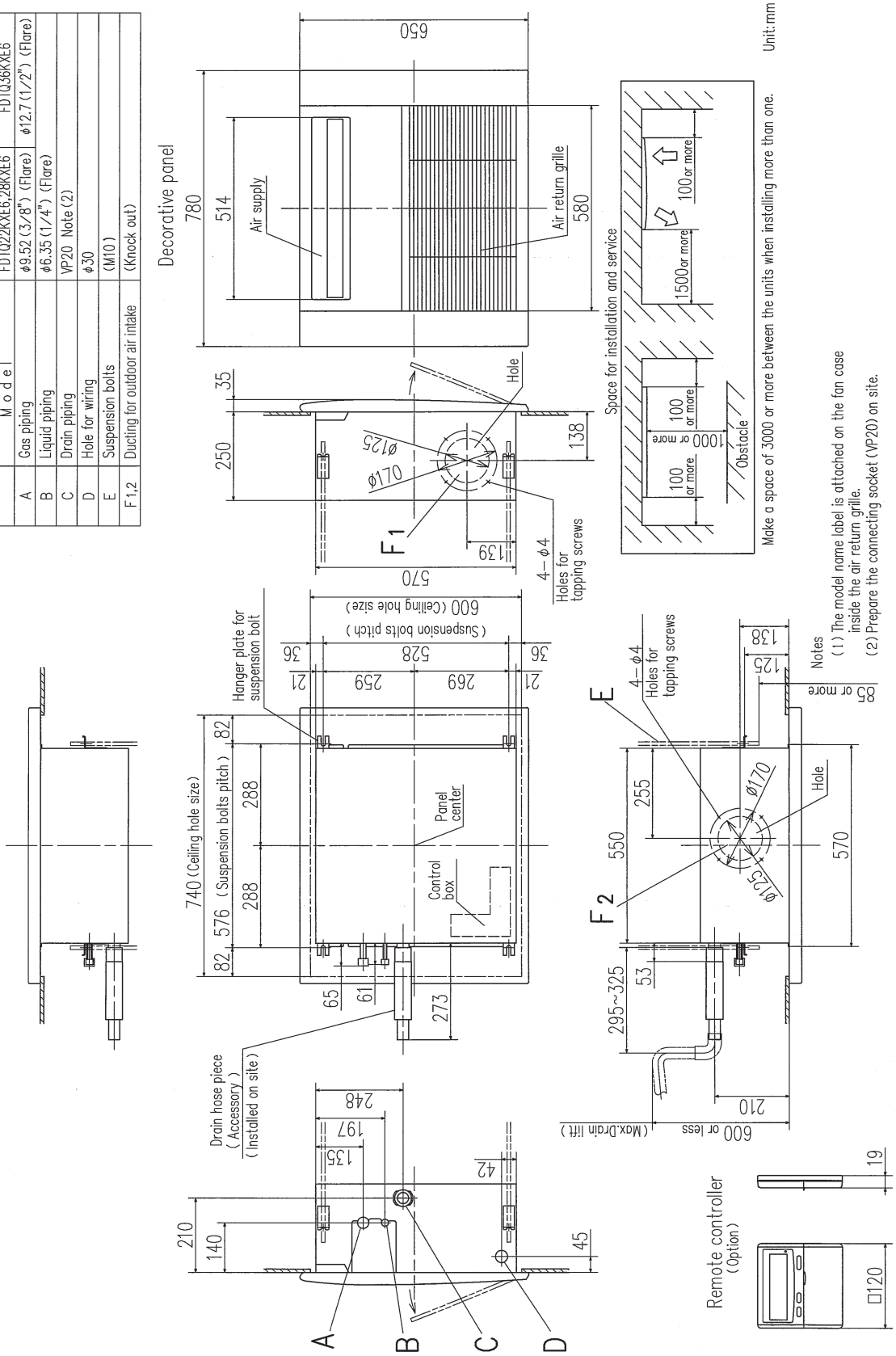


PJC001Z188

Models FDTQ22KXE6, 28KXE6, 36KXE6

Direct blow panel (TQ-PSB-15W-E)

Symbol	Content		
	Model	FDTQ22KXE6,28KXE6	FDTQ36KXE6
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Drain piping	VP20 Note (2)	
D	Hole for wiring	φ30	
E	Suspension bolts	(M10)	
F1,2	Ducting for outdoor air intake	(Knock out)	

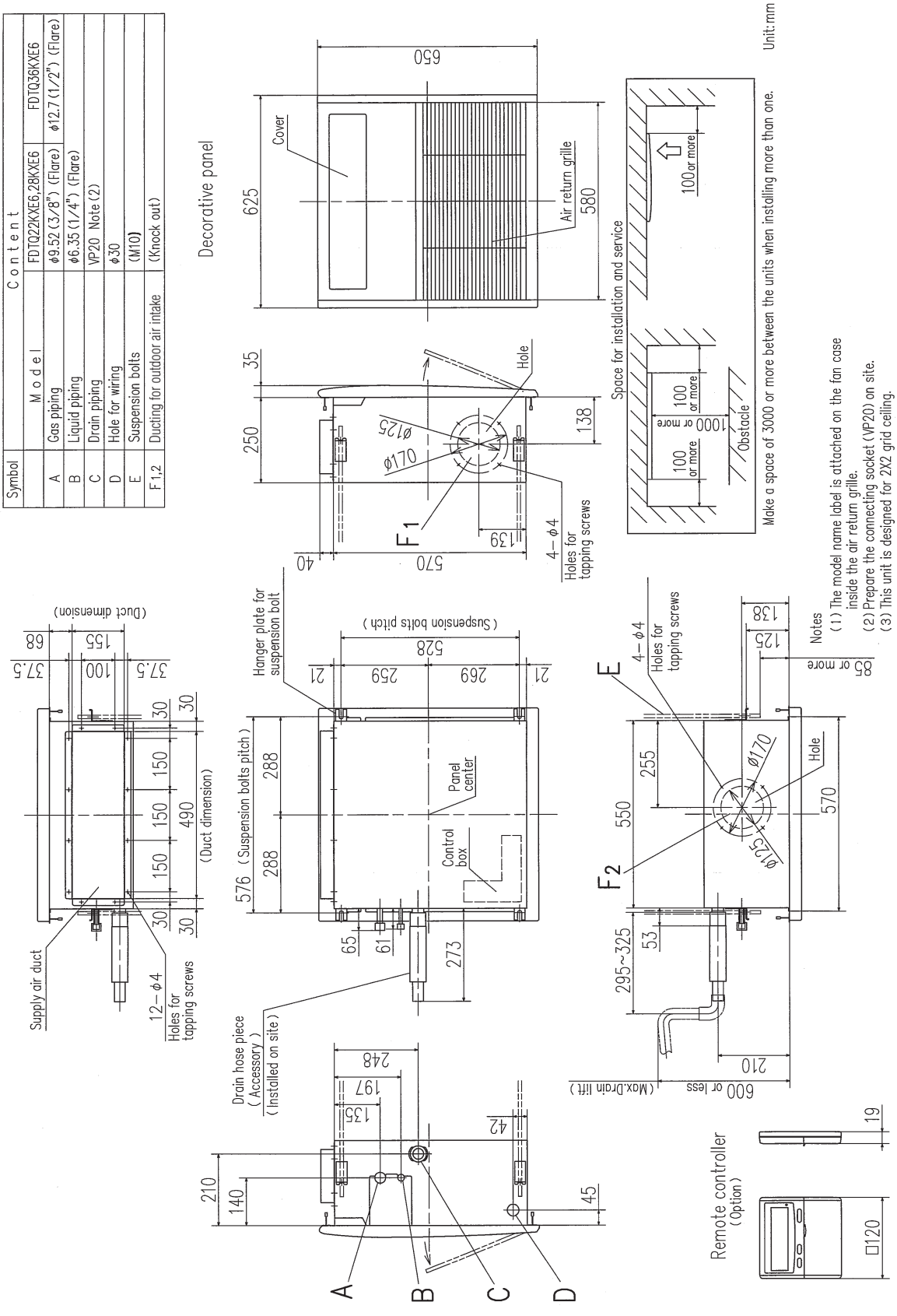


PJC001Z189

Models FDTQ22KXE6, 28KXE6, 36KXE6

Duct panel (QR-PNA-14W-ER)

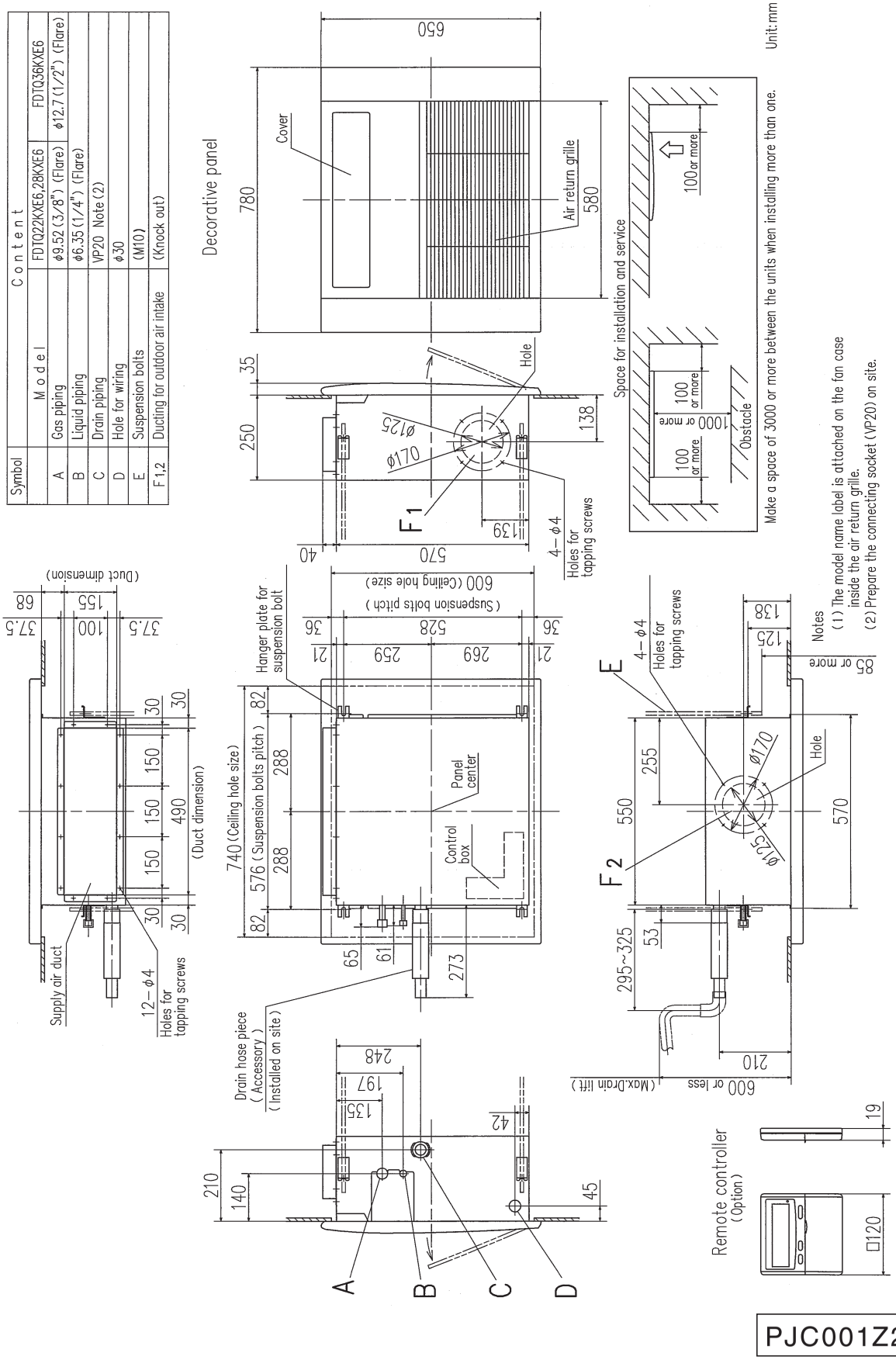
Symbol	Content		
	Model	FDTQ22KXE6,28KXE6	FDTQ36KXE6
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C	Drain piping	VP20 Note (2)	
D	Hole for wiring	ϕ30	
E	Suspension bolts	(M10)	
F1,2	Ducting for outdoor air intake	(Knock out)	



PJC001Z236

Models FDTQ22KXE6, 28KXE6, 36KXE6

Duct panel (QR-PNB-14W-ER)

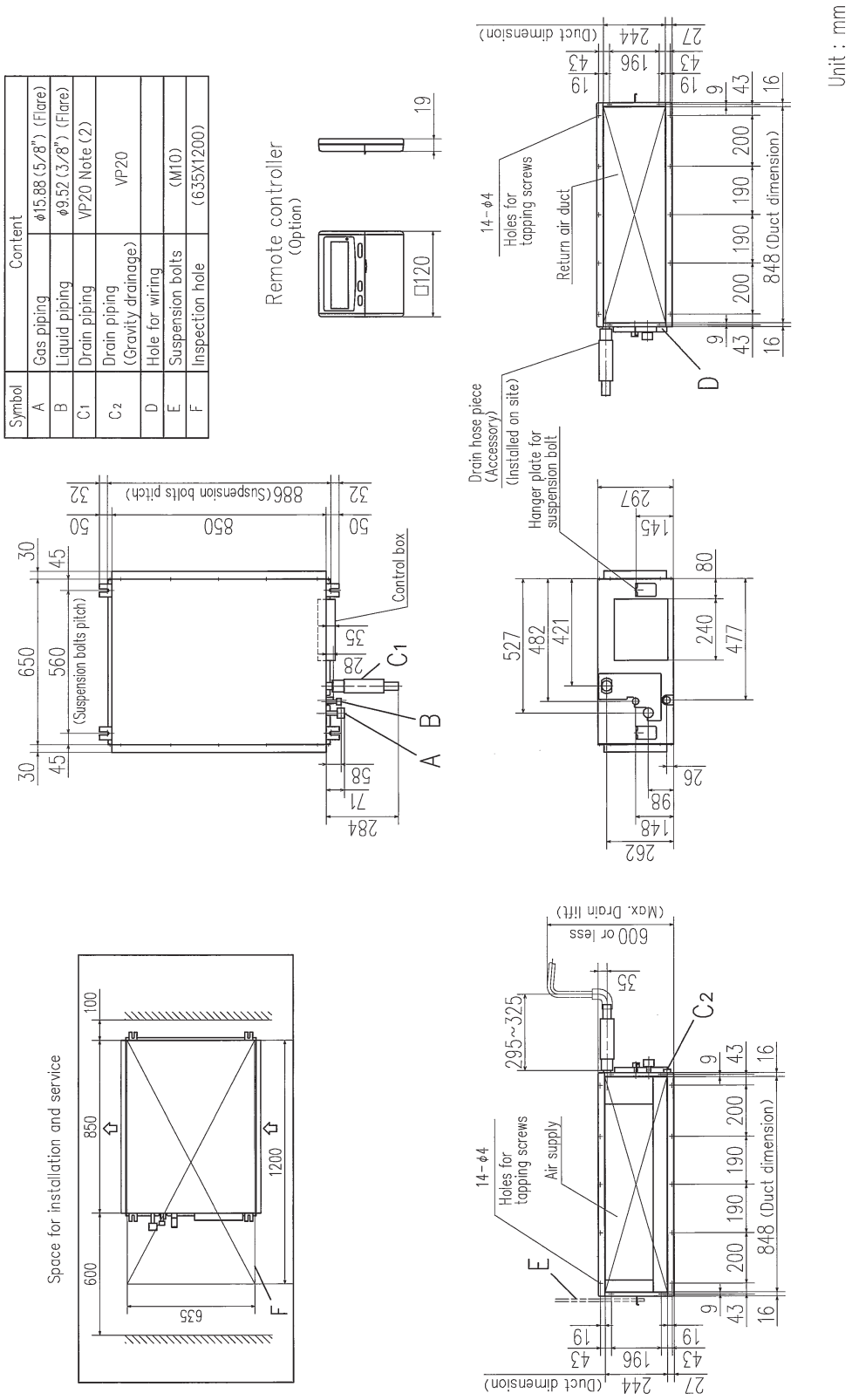


Symbol	Content		
	Model	FDTQ22KXE6,28KXE6	FDTQ36KXE6
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C	Drain piping	VP20 Note (2)	
D	Hole for wiring	ϕ30	
E	Suspension bolts	(M10)	
F1,2	Ducting for outdoor air intake	(Knock out)	

PJC001Z237

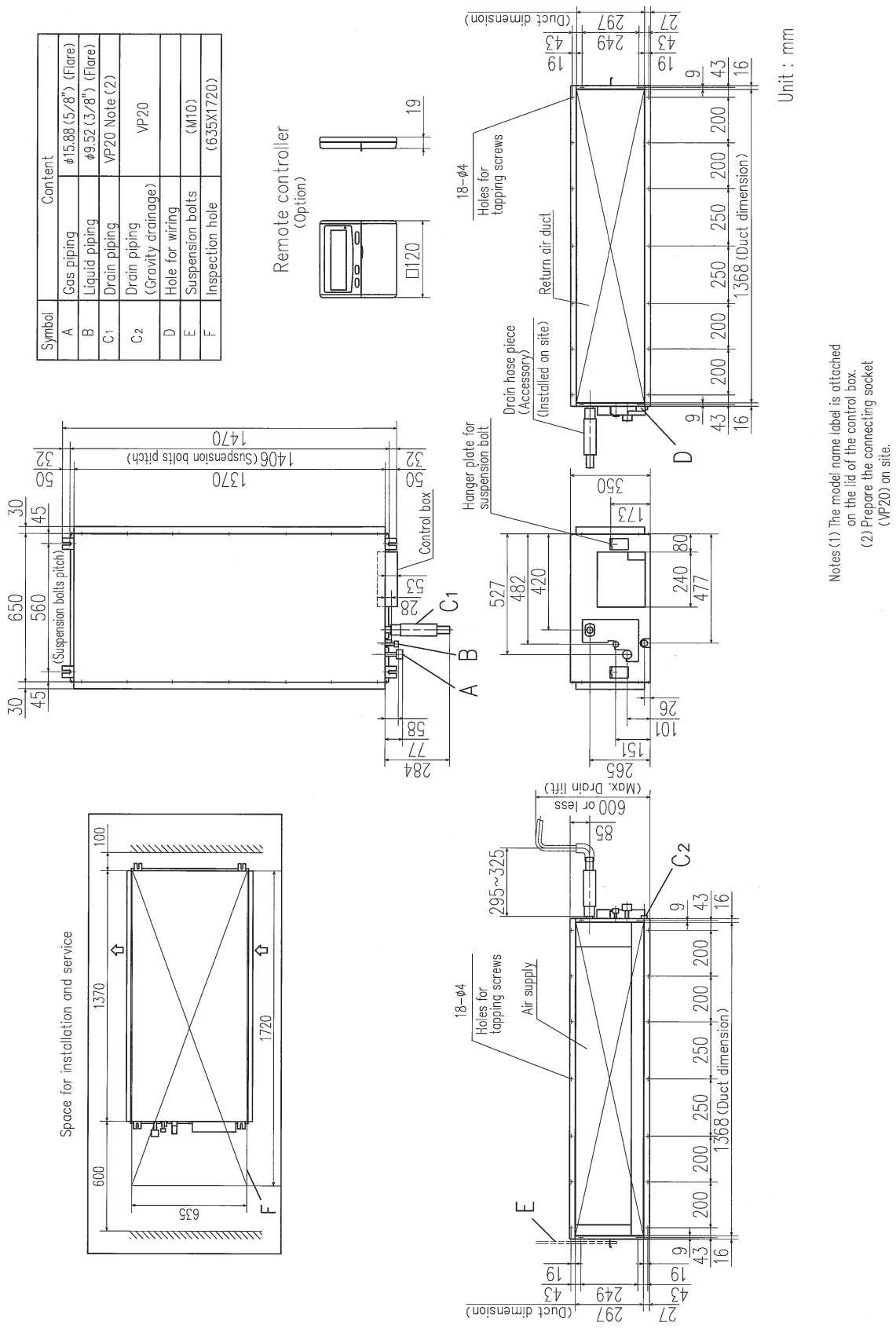
(f) Duct connected-High static pressure type (FDU)

Model FDU71KXE6



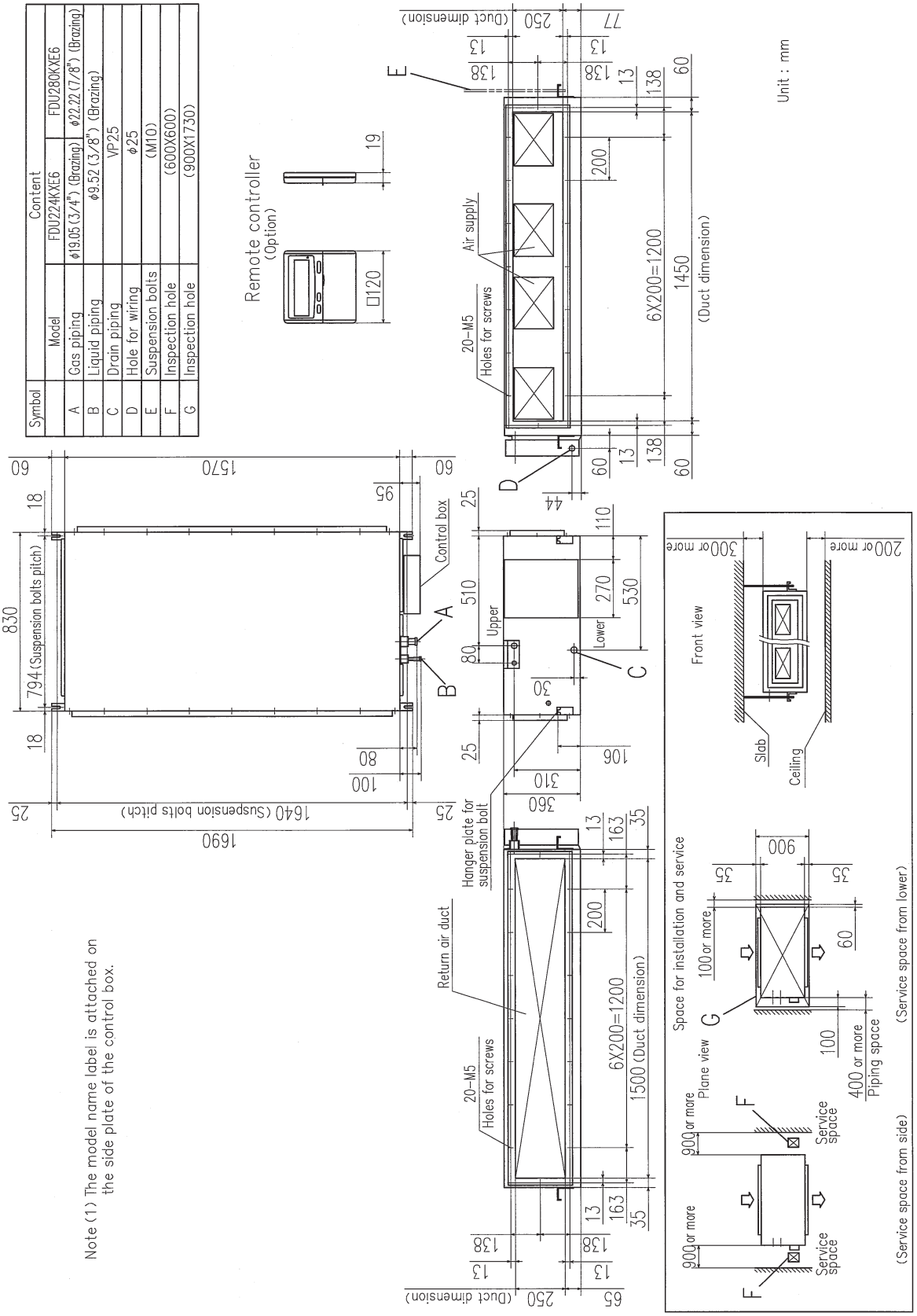
PJD001Z226 A

Models FDU90KXE6, 112KXE6, 140KXE6



PJD001Z227 A

Models FDU224KXE6, 280KXE6



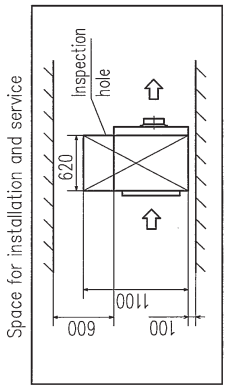
Symbol	Content		
	Model	FDU224KXE6	FDU280KXE6
A	Gas piping	φ19.05 (3/4") (Brazing)	φ22.22 (7/8") (Brazing)
B	Liquid piping	φ9.52 (3/8") (Brazing)	
C	Drain piping	VP25	
D	Hole for wiring	φ25	
E	Suspension bolts	(M10)	
F	Inspection hole	(600X600)	
G	Inspection hole	(900X1730)	

PJD001Z228

(g) Duct connected-Middle static pressure type (FDUM)

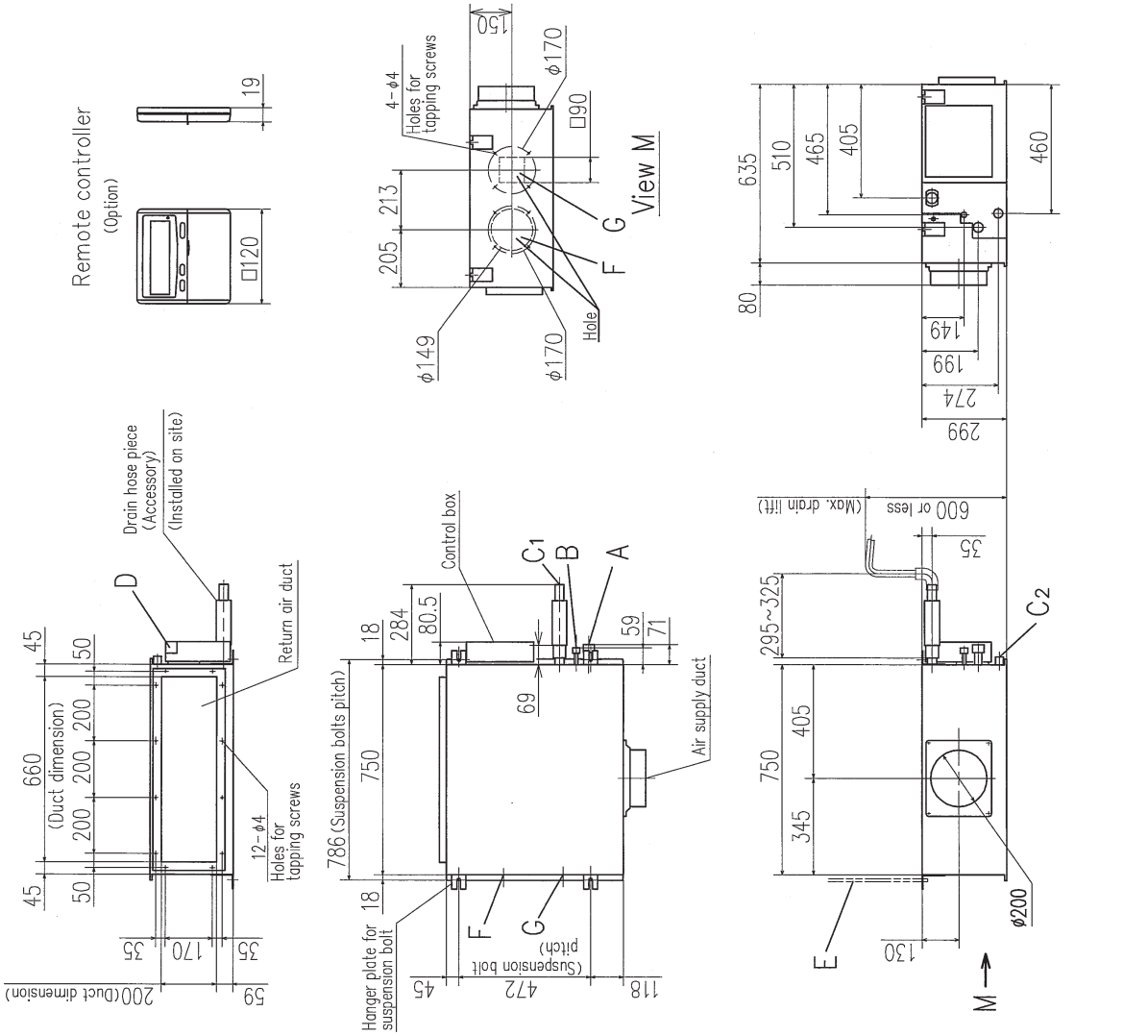
Models FDUM22KXE6

Symbol	Content	
A	Gas piping	ϕ9.52 (3/8") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)
C1	Drain piping	VP20 Note (2)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Ducting for outdoor air intake	(ø150) (Knock out)
G	Ducting for air outlet	(ø125) (Knock out)



Notes (1) The model name label is attached on the lid of the control box.
(2) Prepare the connecting socket (VP20) on site.

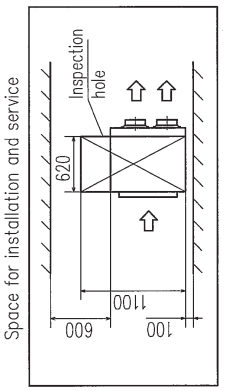
Unit: mm



PJR002Z254

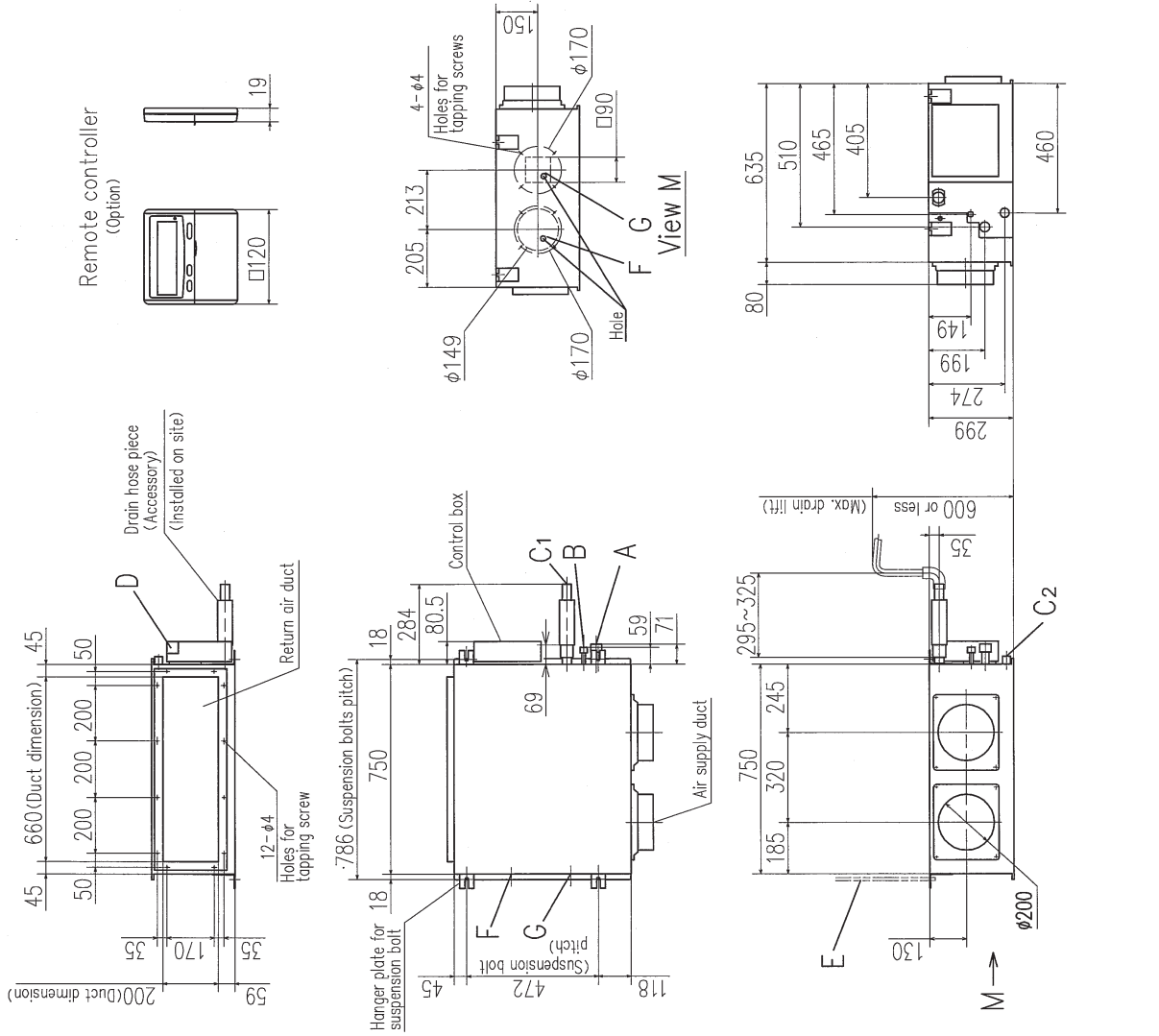
Models FDUM28KXE6, 36KXE6, 45KXE6, 56KXE6

Symbol	Content		
	Model	FDUM28KXE6	FDUM36KXE6, 45KXE6,56KXE6
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C1	Drain piping	VP20 Note (2)	
C2	Drain piping (Gravity drainage)	VP20	
D	Hole for wiring	(M10)	
E	Suspension bolts		
F	Ducting for outdoor air intake	(ø150) (Knock out)	
G	Ducting for air outlet	(ø125) (Knock out)	

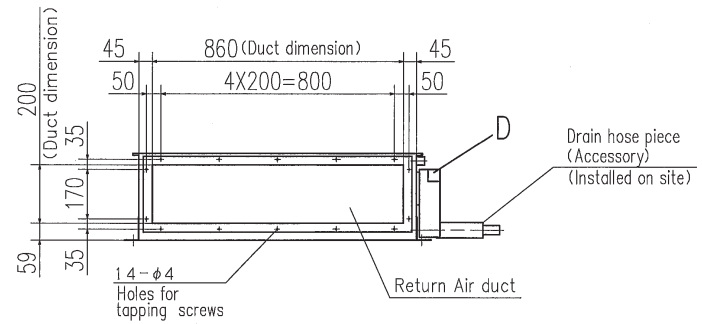


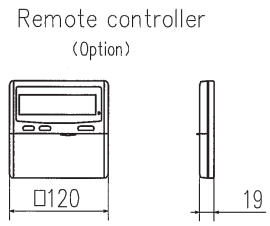
Notes (1) The model name label is attached on the lid of the control box.
(2) Prepare the connecting socket (VP20) on site.

Unit: mm

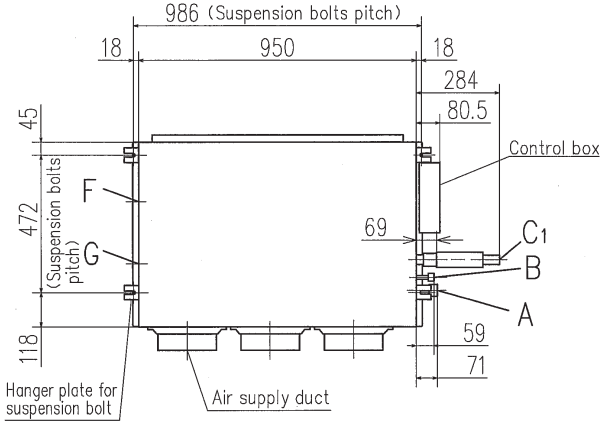


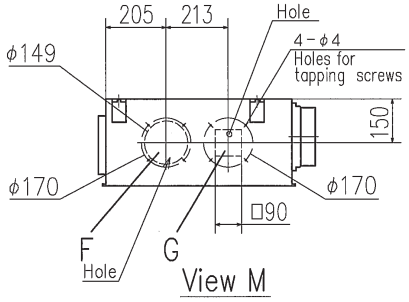
PJR002Z255

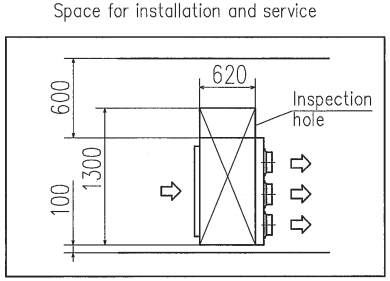


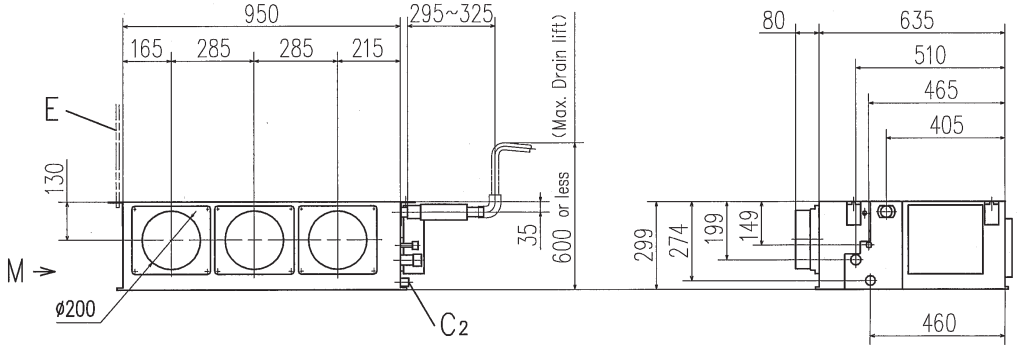


Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (Flare)
C1	Drain piping	VP20 Note (2)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Ducting for outdoor air intake	(ø150) (Knock out)
G	Ducting for air outlet	(ø125) (Knock out)





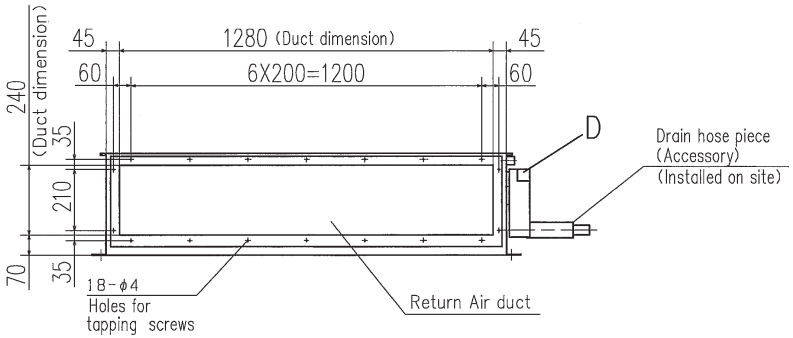


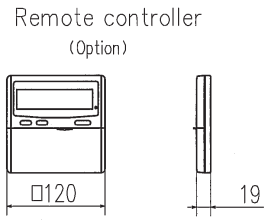


Notes (1) The model name label is attached on the lid of the control box.
(2) Prepare the connecting socket (VP20) on site.

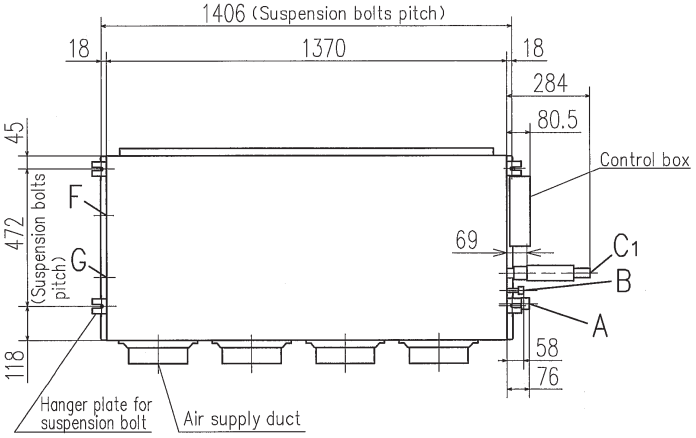
Unit: mm

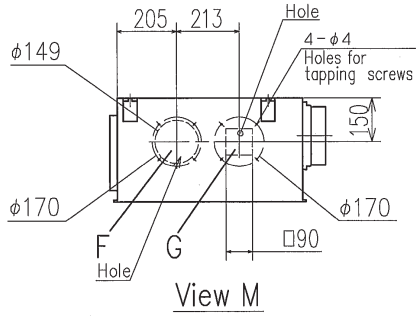
PJR002Z256

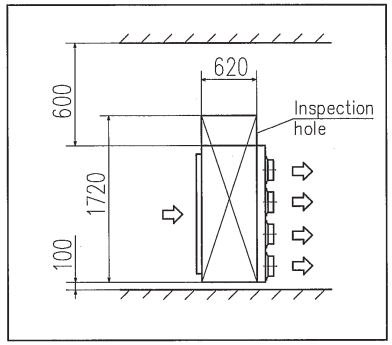


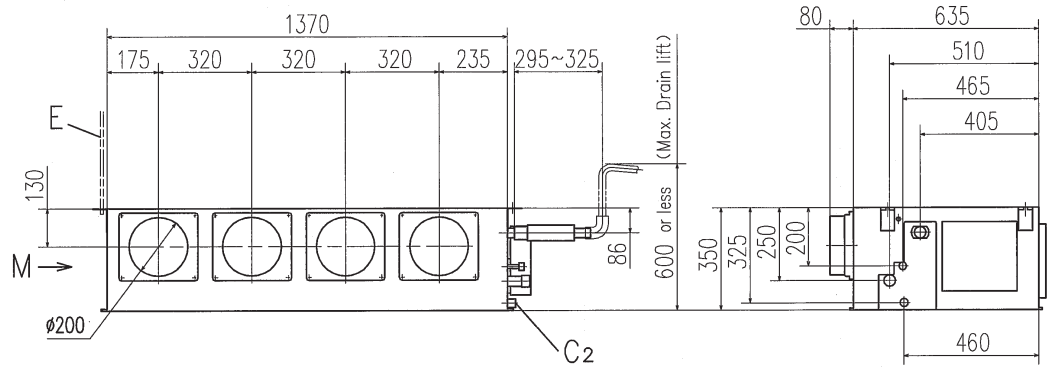


Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (Flare)
C1	Drain piping	VP20 Note (2)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Ducting for outdoor air intake	(φ150) (Knock out)
G	Ducting for air outlet	(φ125) (Knock out)









Notes (1) The model name label is attached on the lid of the control box.
(2) Prepare the connecting socket (VP20) on site.

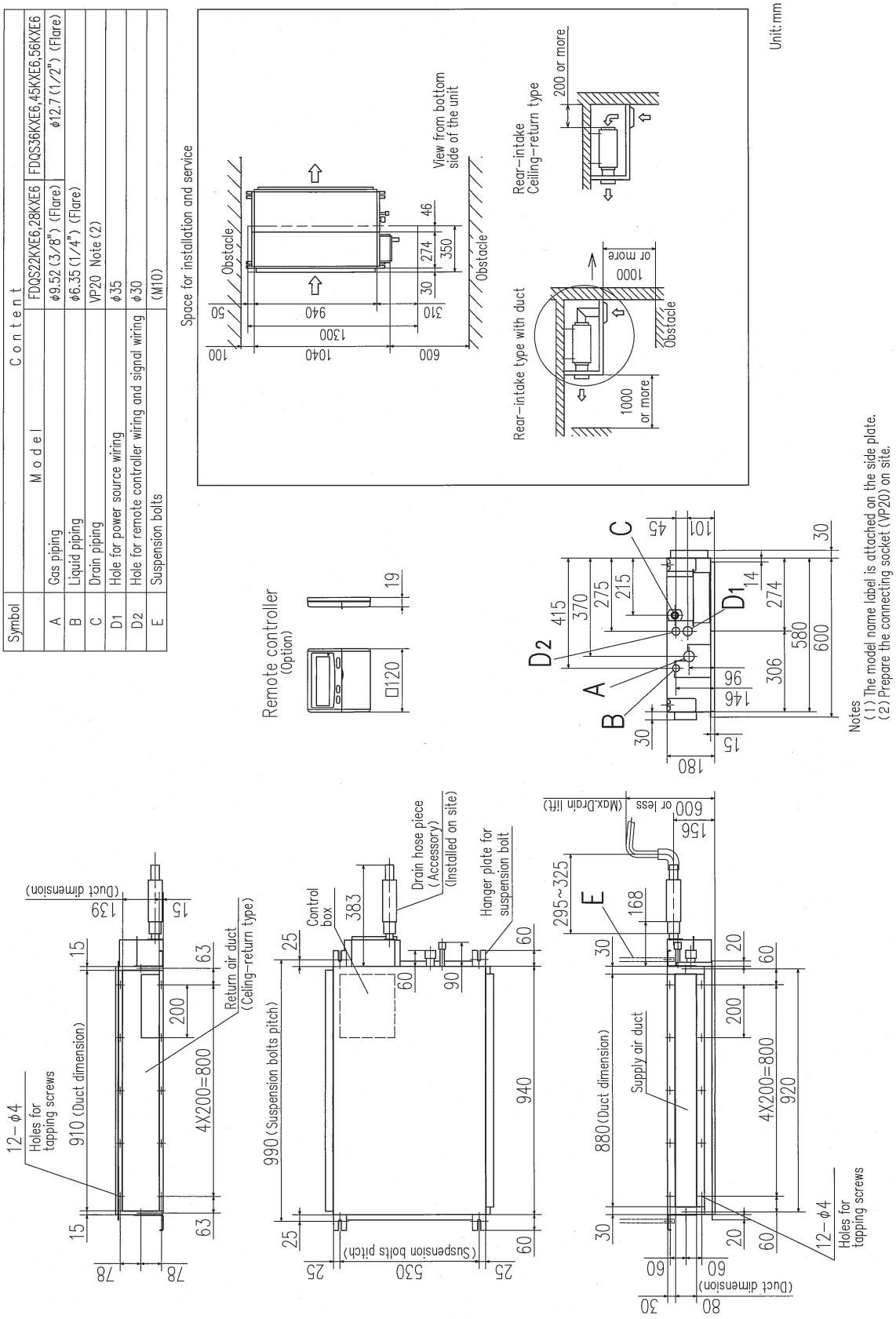
Unit: mm

PJR002Z257

(h) Duct connected (Ultra thin)-Low static pressure type (FDQS)

Models FDQS22KXE6, 28KXE6, 36KXE6, 45KXE6, 56KXE6 (Rear air return type)

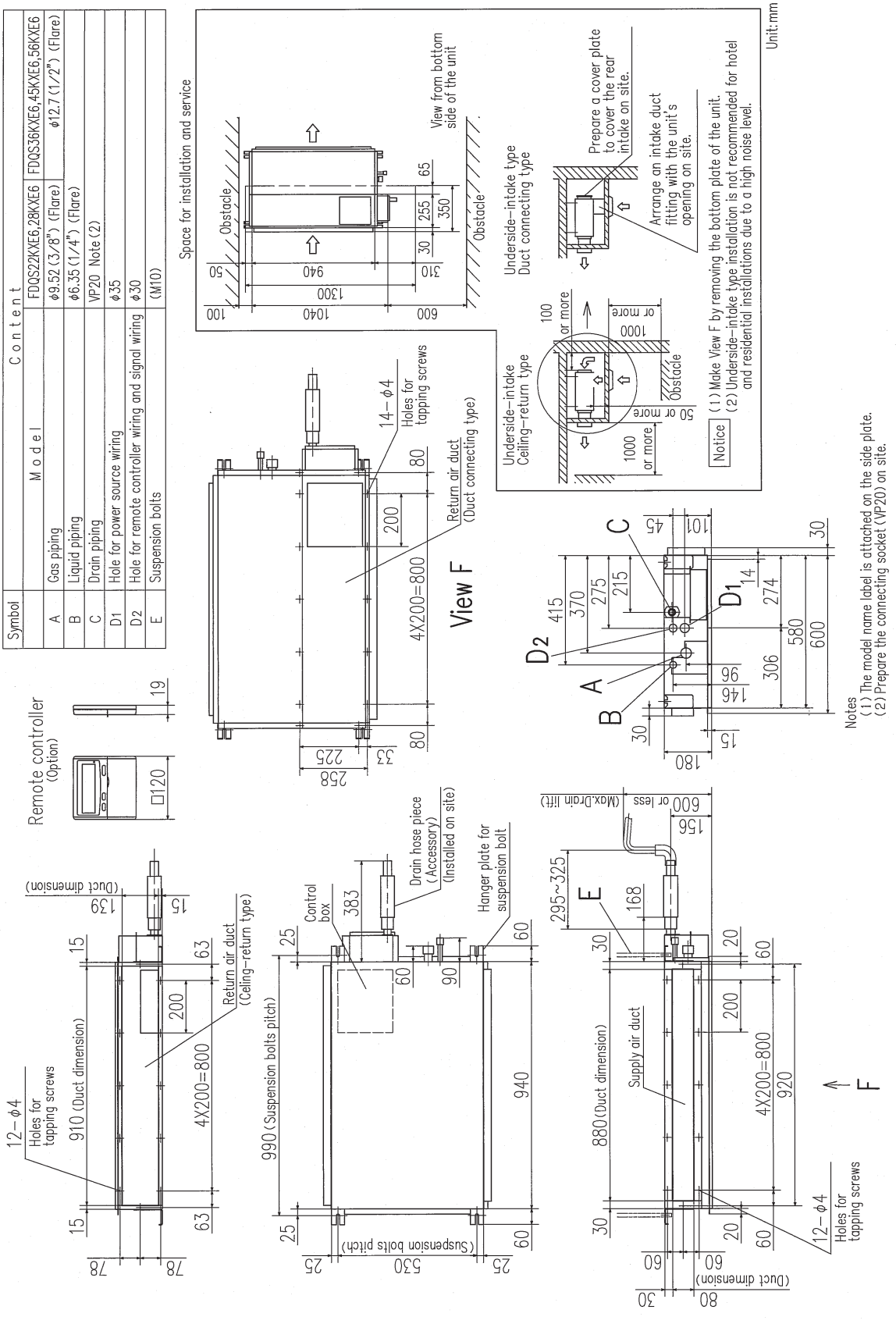
Symbol	Content		
	Model	FDQS22KXE6,28KXE6	FDQS36KXE6,45KXE6,56KXE6
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Drain piping	VP20 Note (2)	
D1	Hole for power source wiring	φ35	
D2	Hole for remote controller wiring and signal wiring	φ30	
E	Suspension bolts	(M10)	



PJC001Z199

Models FDQS22KXE6, 28KXE6, 36KXE6, 45KXE6, 56KXE6 (Underside air return type)

Symbol	Content		
	Model	FDQS22KXE6,28KXE6	FDQS36KXE6,45KXE6,56KXE6
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Drain piping	VP20 Note (2)	
D1	Hole for power source wiring	φ35	
D2	Hole for remote controller wiring and signal wiring	φ30	
E	Suspension bolts	(M10)	

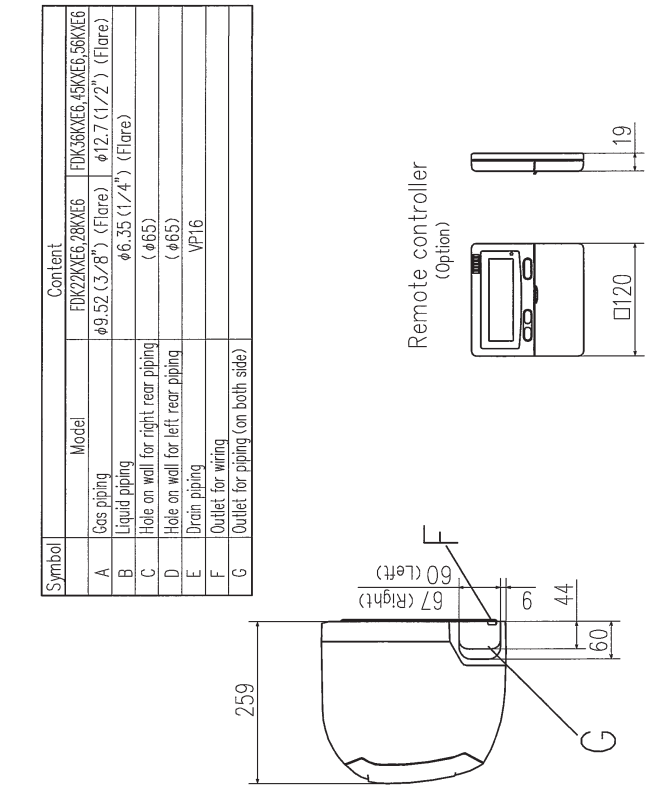


PJC001Z241

(i) Wall mounted type (FDK)

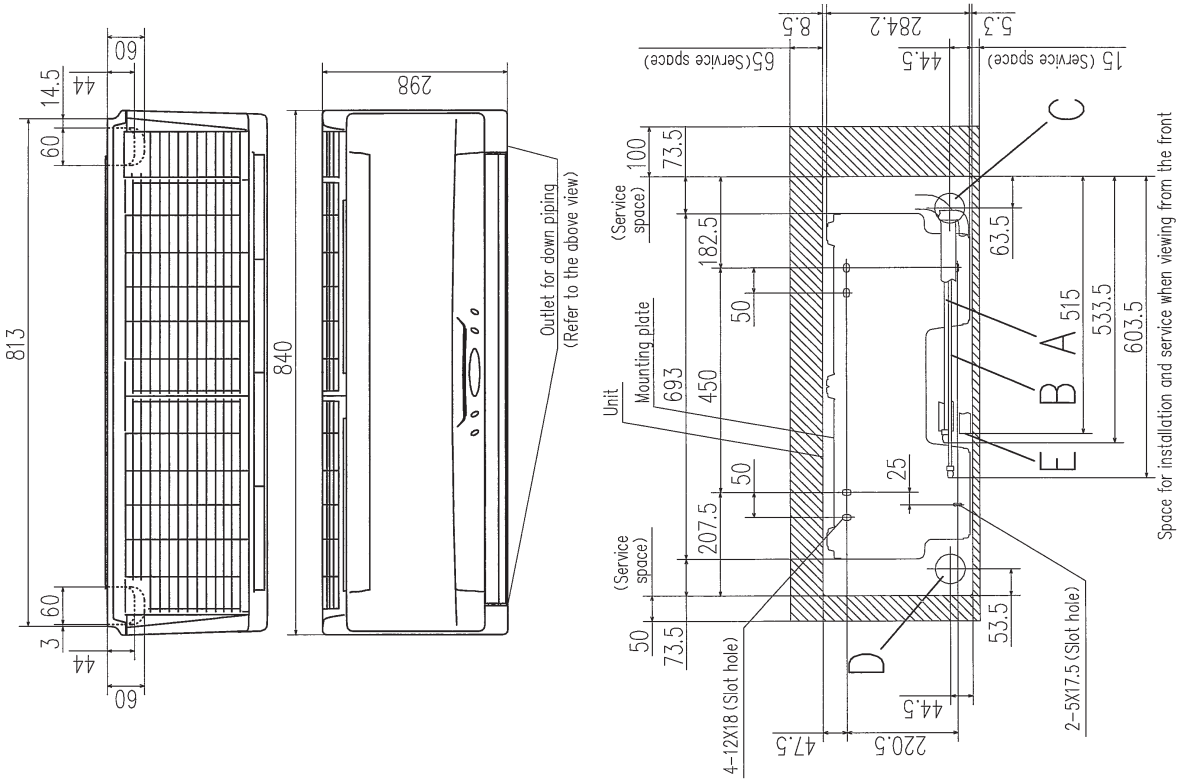
Models FDK22KXE6, 28KXE6, 36KXE6, 45KXE6, 56KXE6

Symbol	Model	Content	
		FDK22KXE6,28KXE6	FDK36KXE6,45KXE6,56KXE6
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C	Hole on wall for right rear piping	(ϕ65)	
D	Hole on wall for left rear piping	(ϕ65)	
E	Drain piping	VP16	
F	Outlet for wiring		
G	Outlet for piping (on both side)		

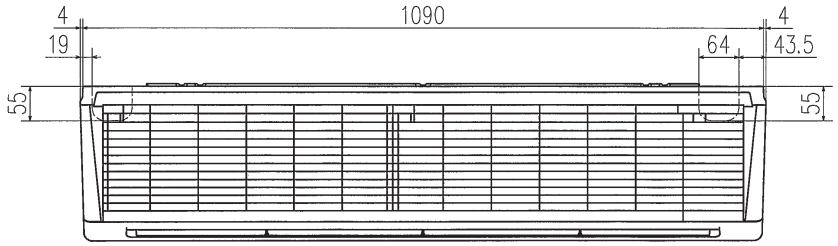


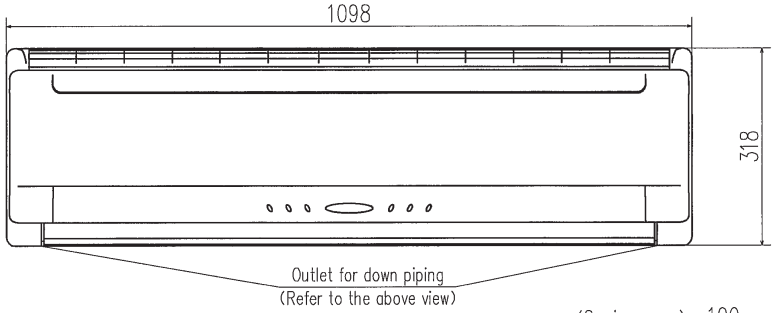
Unit: mm

Note (1) The model name label is attached on the underside of the panel.

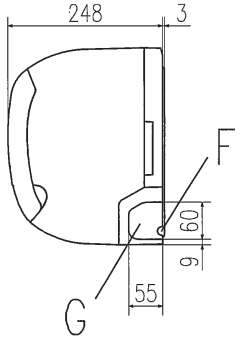


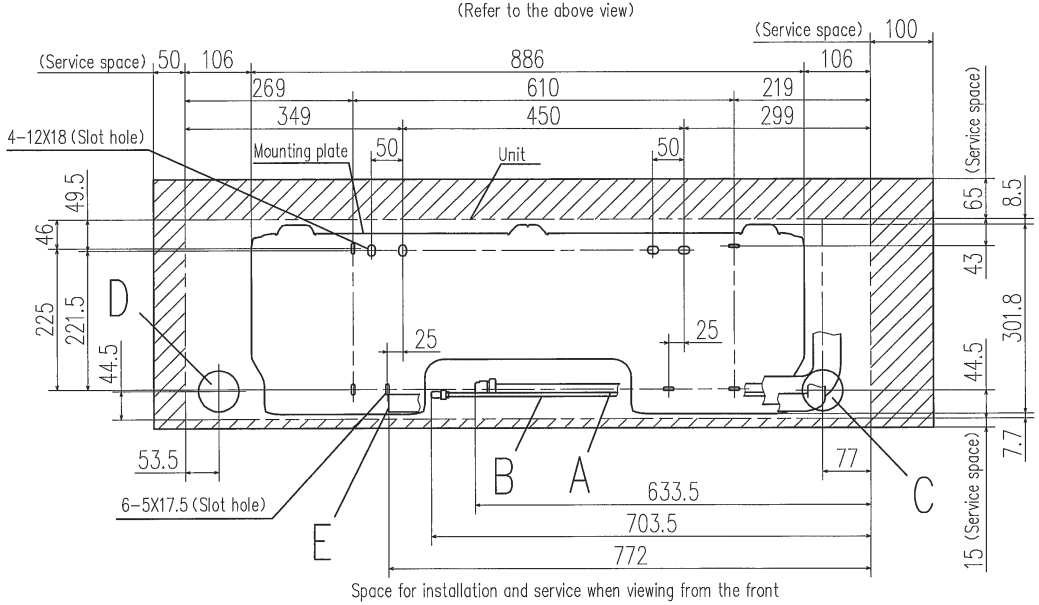
PHA000Z981 A





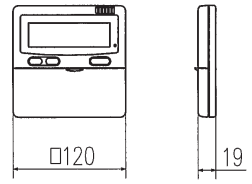
Symbol	Content	
A	Gas piping	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C	Hole on wall for right rear piping	(ϕ65)
D	Hole on wall for left rear piping	(ϕ65)
E	Drain piping	VP16
F	Outlet for wiring	
G	Outlet for piping (on both side)	





Space for installation and service when viewing from the front

Remote controller
(Option)



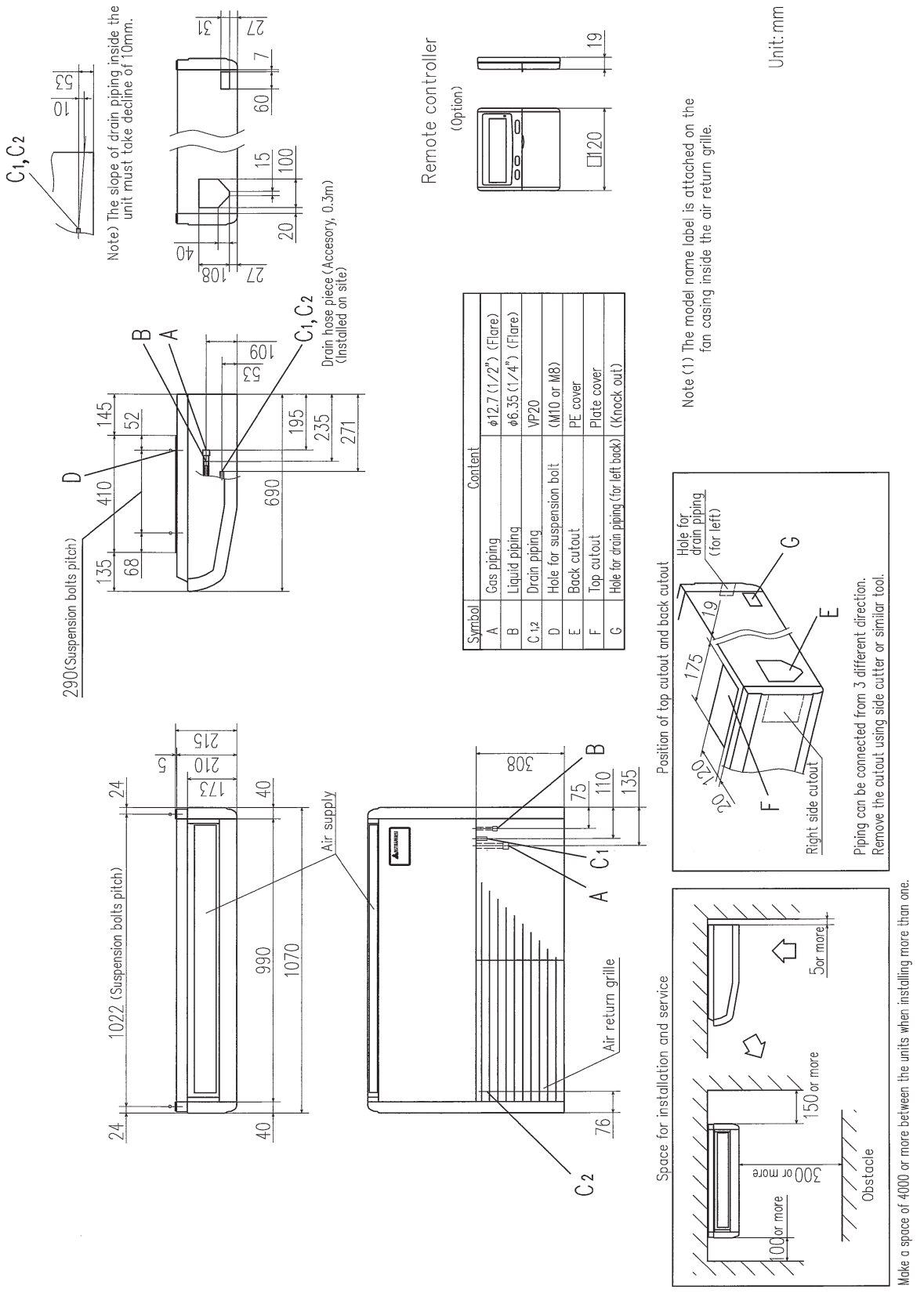
Note (1) The model name label is attached on the underside of the panel.

Unit: mm

PHA000Z982

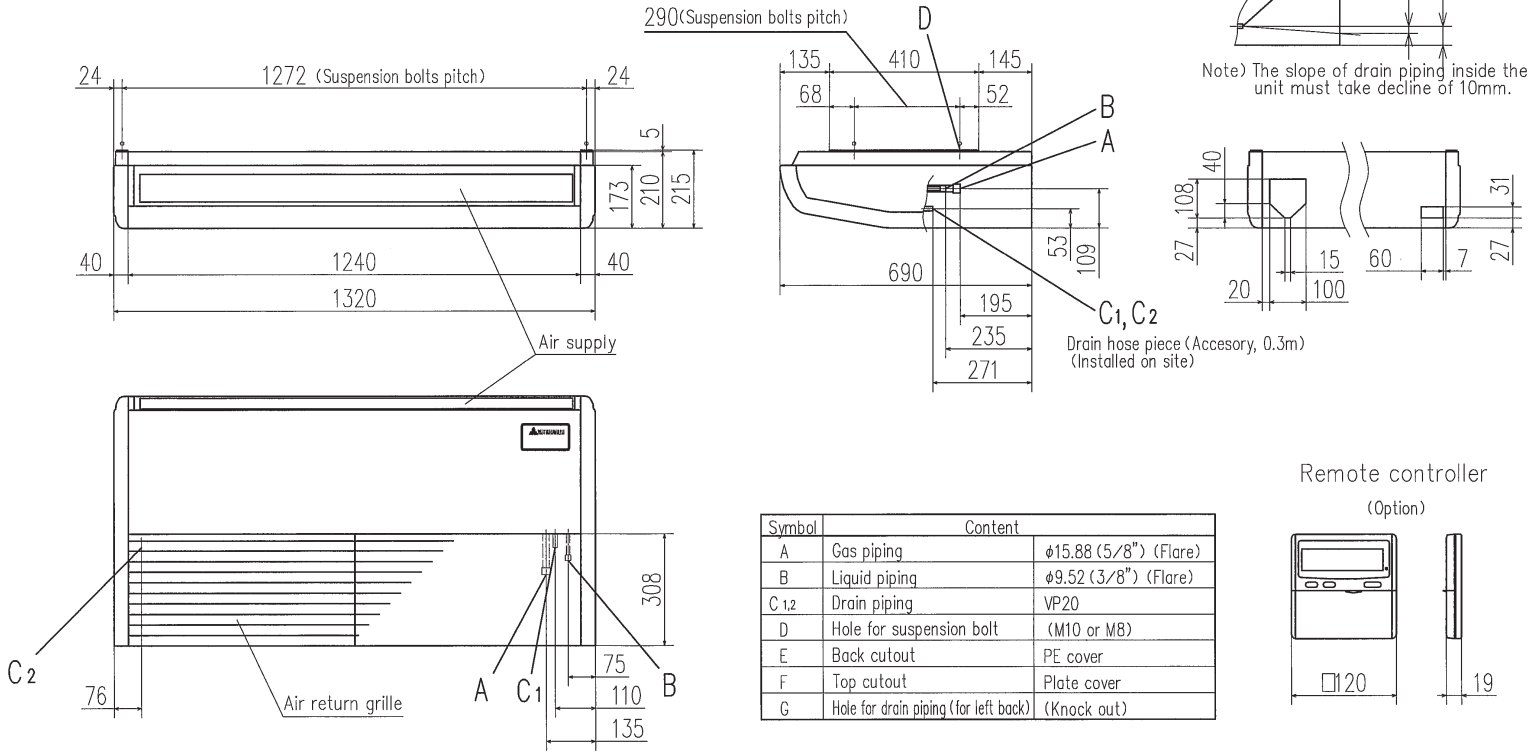
(i) Ceiling suspended type (FDE)

Models FDE36KXE6A, 45KXE6A, 56KXE6A



Symbol	Content	
A	Gas piping	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)
C1,2	Drain piping	VP20
D	Hole for suspension bolt	(M10 or M8)
E	Back cutout	PE cover
F	Top cutout	Plate cover
G	Hole for drain piping (for left back)	(Knock out)

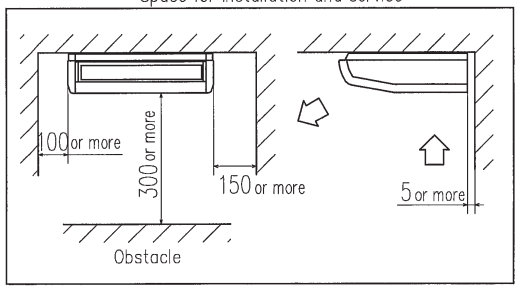
PFA003Z823



Symbol	Content	
A	Gas piping	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C 1,2	Drain piping	VP20
D	Hole for suspension bolt	(M10 or M8)
E	Back cutout	PE cover
F	Top cutout	Plate cover
G	Hole for drain piping (for left back)	(Knock out)

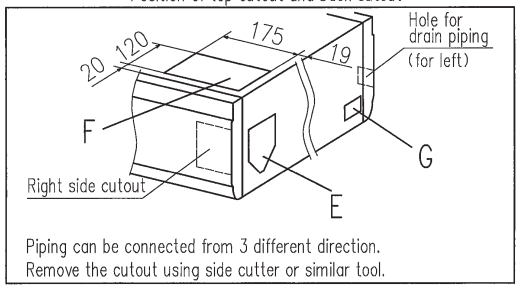
Remote controller
(Option)

Space for installation and service



Make a space of 4500 or more between the units when installing more than one.

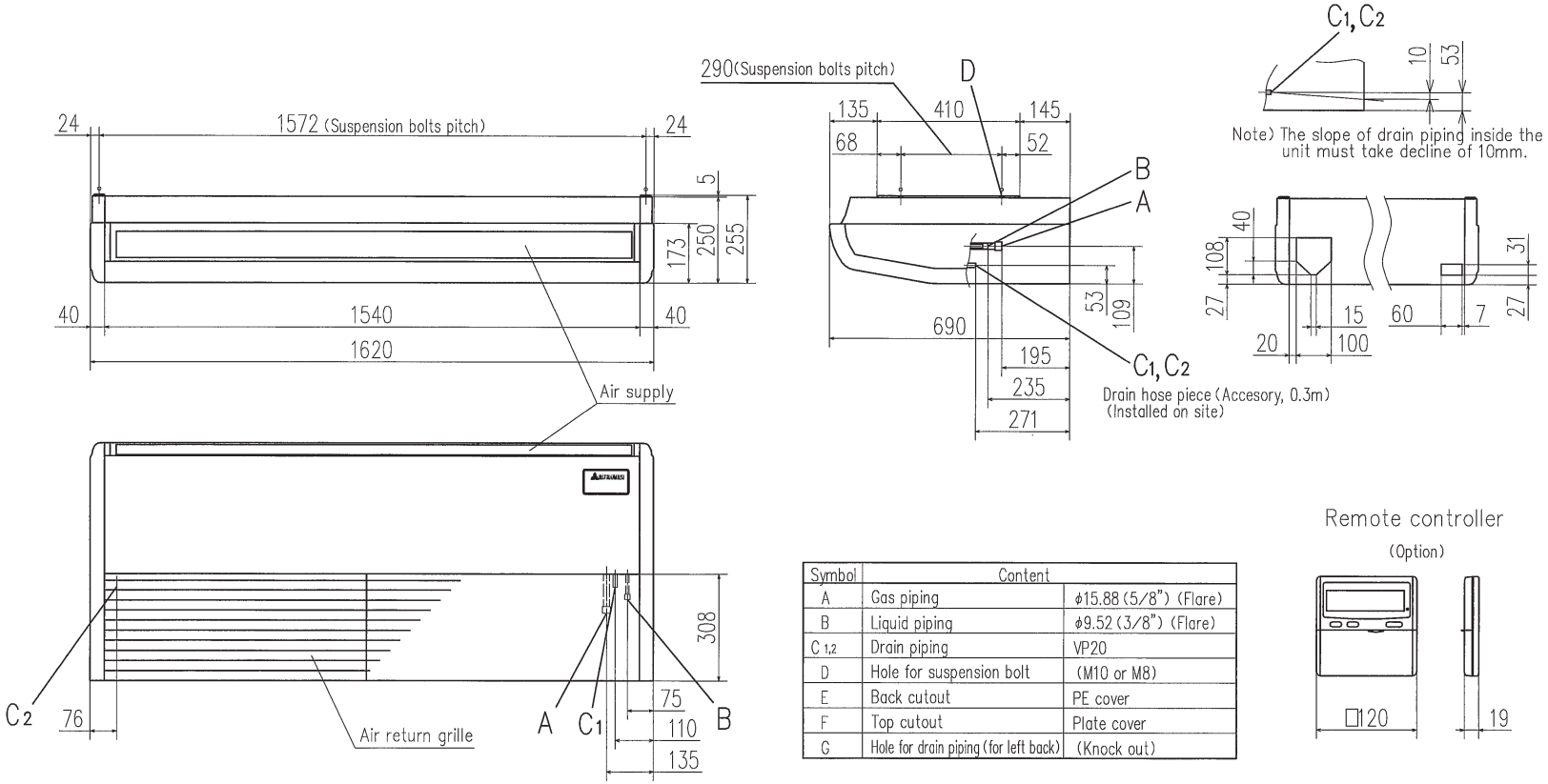
Position of top cutout and back cutout



Piping can be connected from 3 different direction.
Remove the cutout using side cutter or similar tool.

Note (1) The model name label is attached on the fan casing inside the air return grille.

Unit: mm

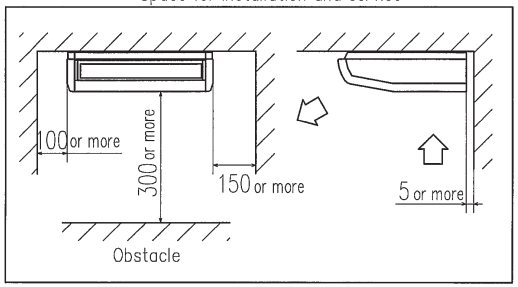


Symbol	Content	
A	Gas piping	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C 1,2	Drain piping	VP20
D	Hole for suspension bolt	(M10 or M8)
E	Back cutout	PE cover
F	Top cutout	Plate cover
G	Hole for drain piping (for left back)	(Knock out)

Remote controller

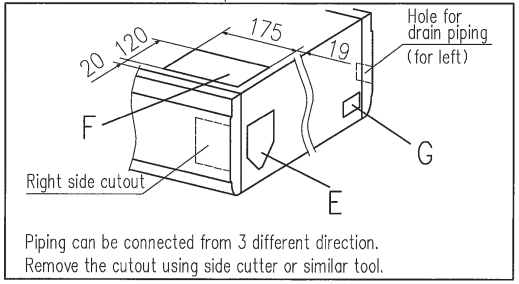
(Option)

Space for installation and service



Make a space of 5000 or more between the units when installing more than one.

Position of top cutout and back cutout



Piping can be connected from 3 different direction.
Remove the cutout using side cutter or similar tool.

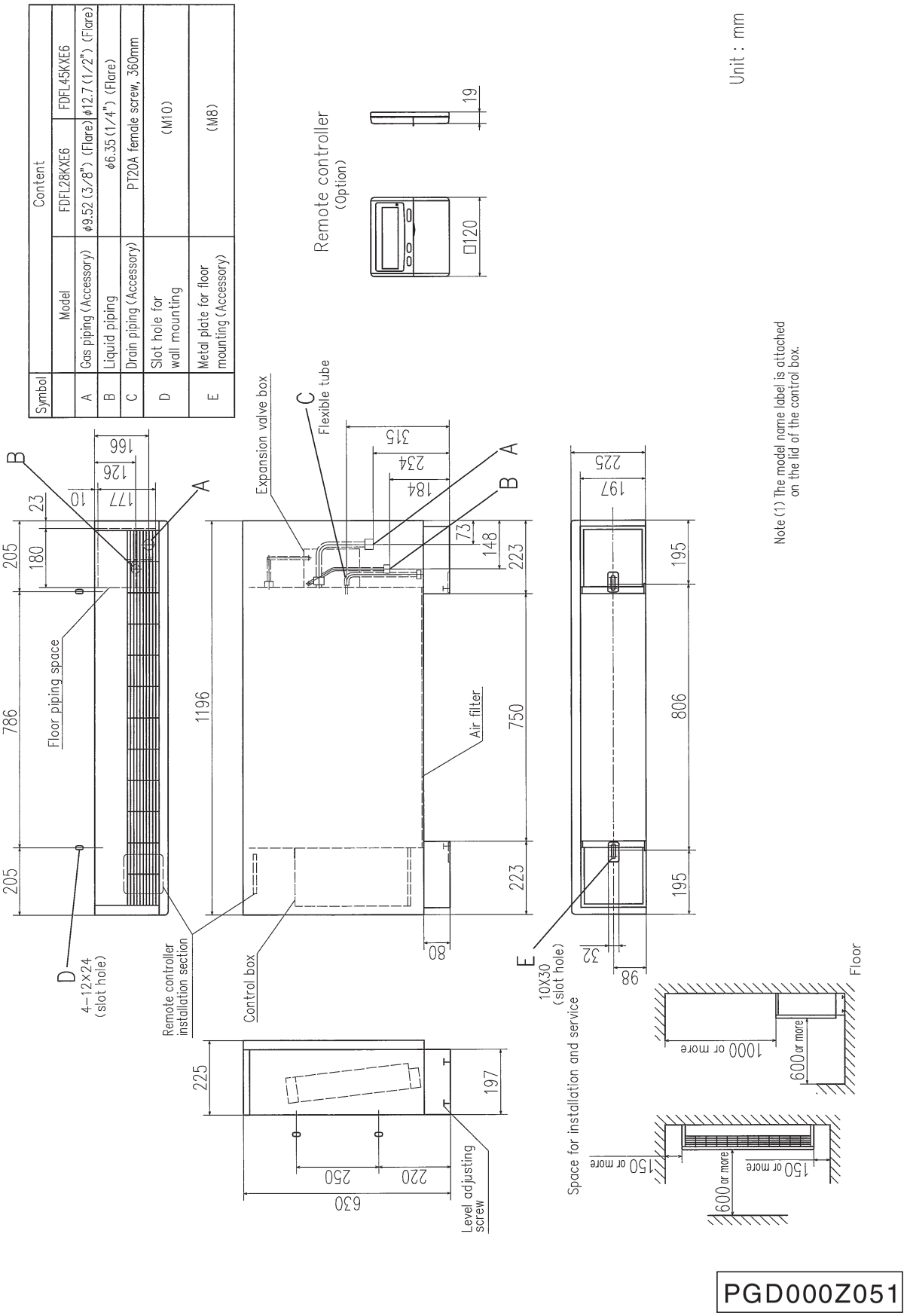
Note (1) The model name label is attached on the fan casing inside the air return grille.

Unit: mm

PFA003Z825

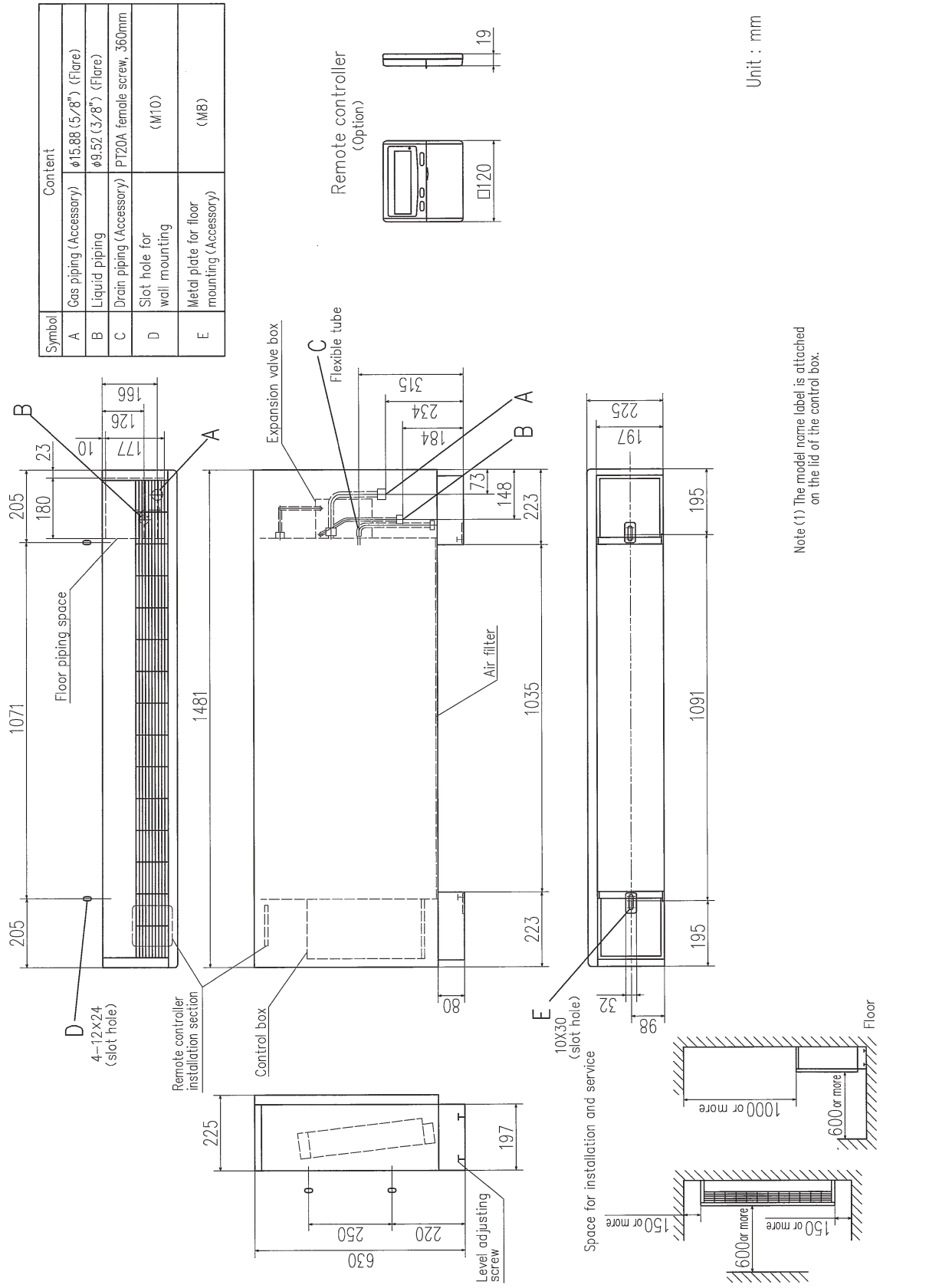
(k) Floor standing (with casing) type (FDFL)

Models FDFL28KXE6, 45KXE6



PGD000Z051

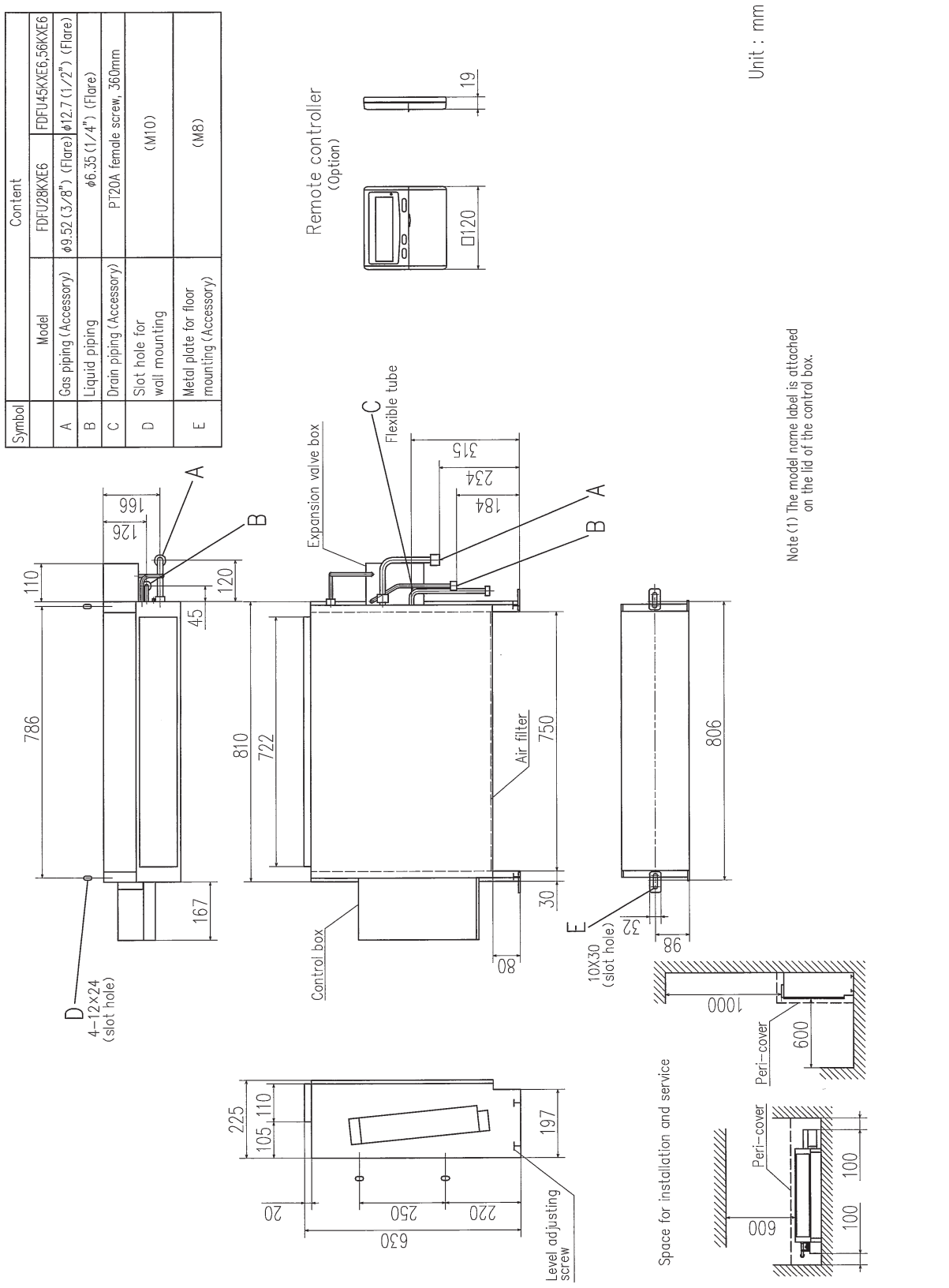
Model FDFL71KXE6



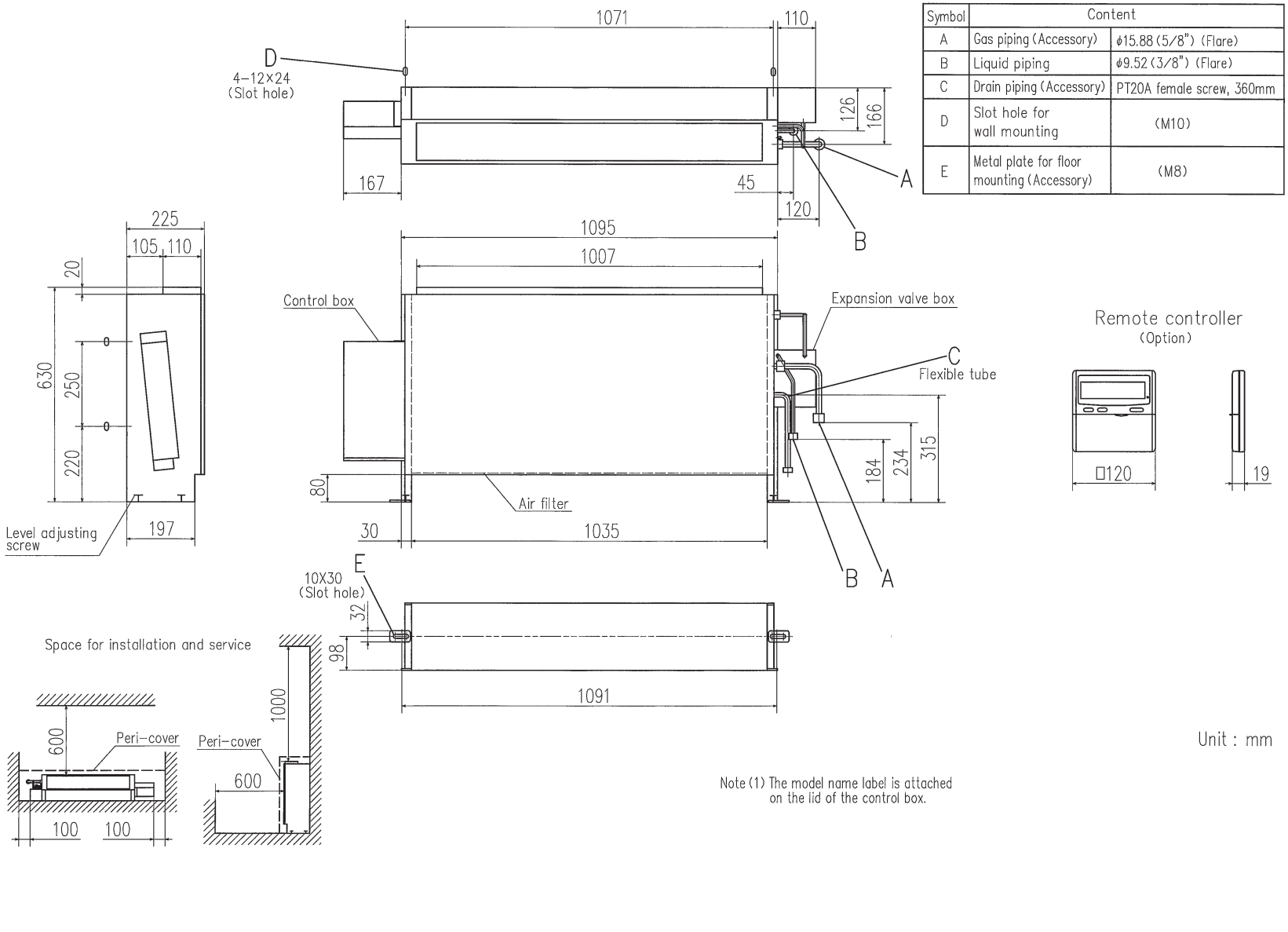
(i) Floor standing (with casing) type (FDFU)

Models FDFU28KXE6, 45KXE6, 56KXE6

Symbol	Content		
	Model	FDFU28KXE6	FDFU45KXE6,56KXE6
A	Gas piping (Accessory)	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Drain piping (Accessory)	PT20A female screw, 360mm	
D	Slot hole for wall mounting	(M10)	
E	Metal plate for floor mounting (Accessory)	(M8)	



PGD000Z056



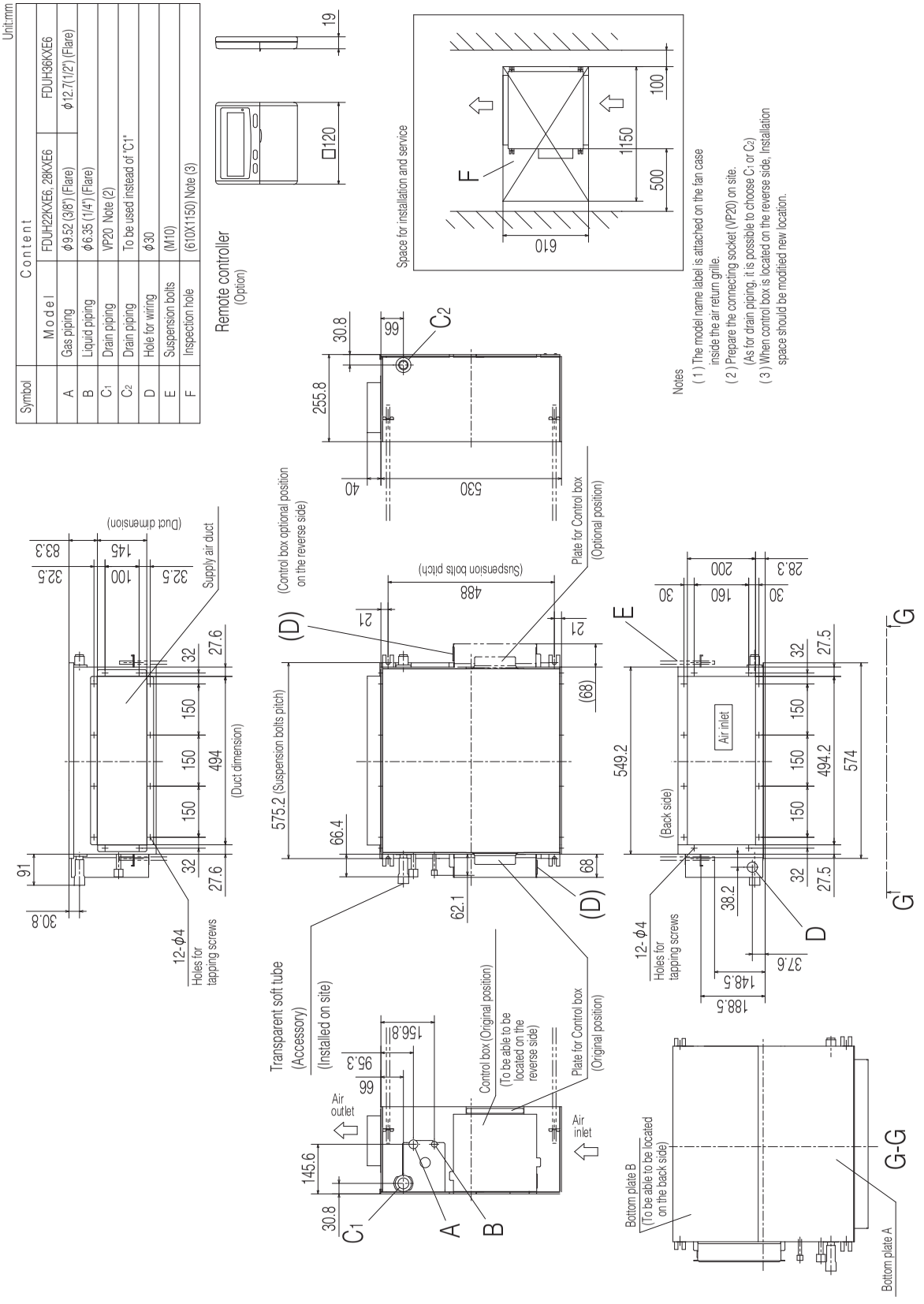
Symbol	Content	
A	Gas piping (Accessory)	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C	Drain piping (Accessory)	PT20A female screw, 360mm
D	Slot hole for wall mounting	(M10)
E	Metal plate for floor mounting (Accessory)	(M8)

Unit : mm

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

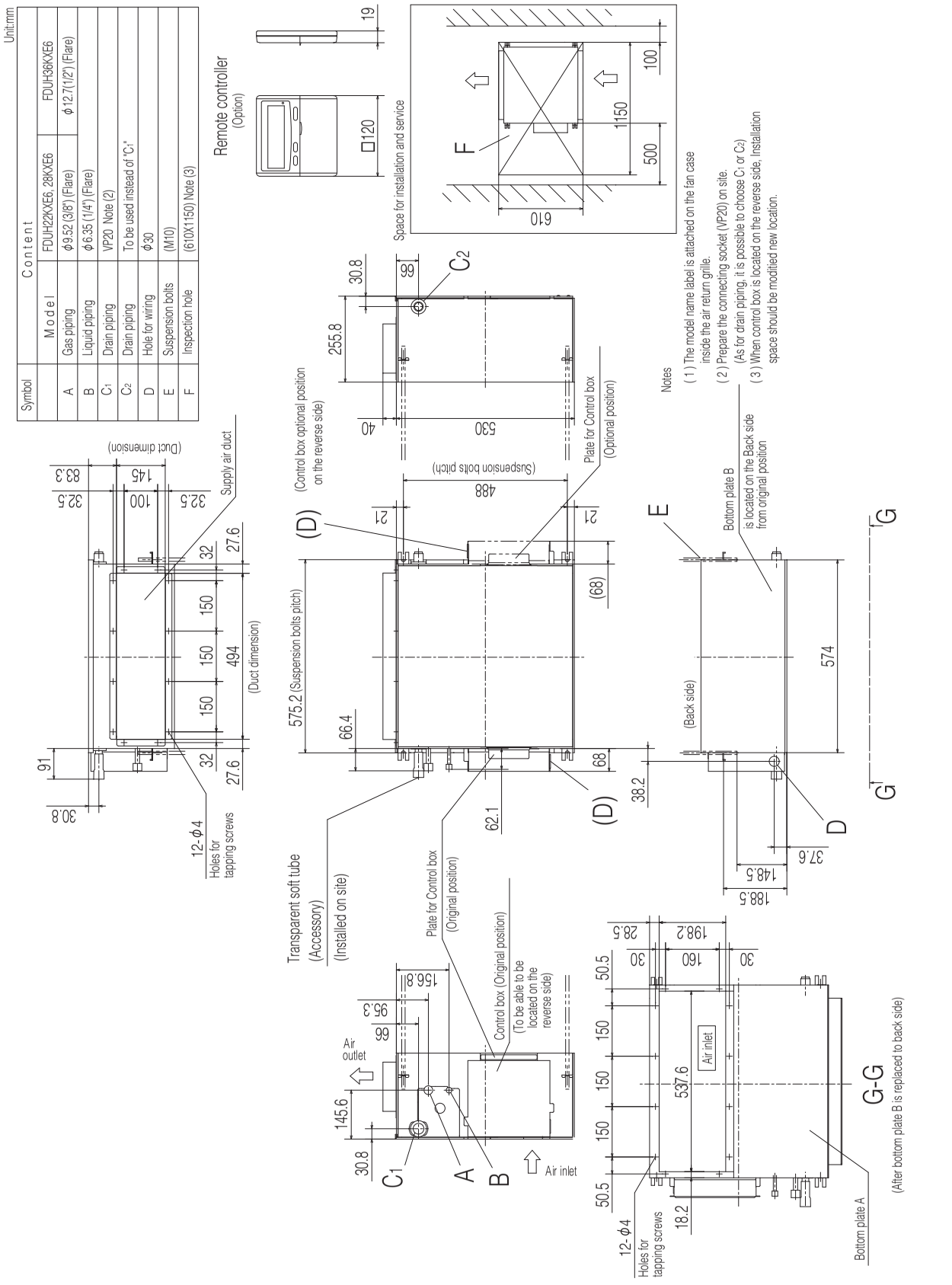
(m) Duct Connected-Compact and Flexible-type (FDUH)

Models FDUH22KXE6, 28KXE6, 36KXE6 (Rear air return type)



PJC001Z253 A

Models FDUH22KXE6, 28KXE6, 36KXE6 (Underside air return type)

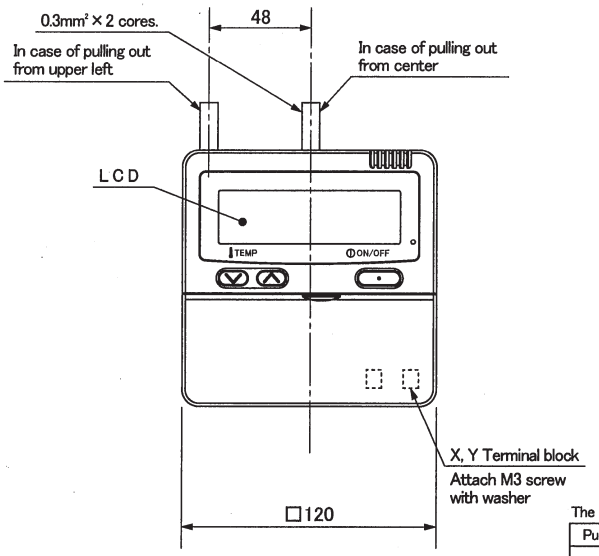


PJC001Z254 A

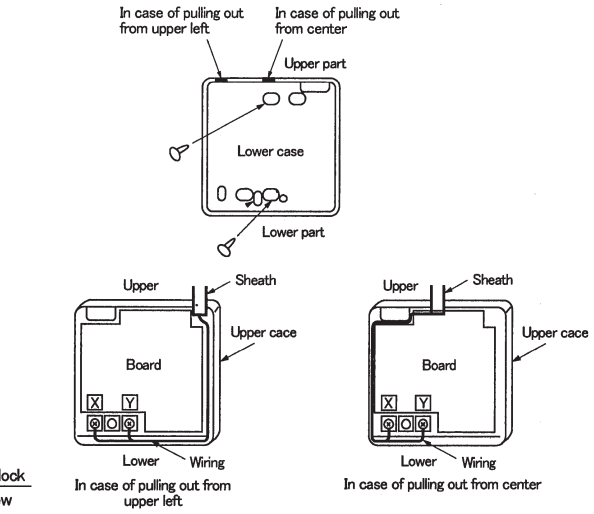
(2) Remote controller (Optional parts)

• Wired remote controller (Model : RC-E3)

Exposed mounting

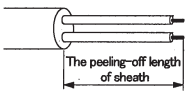


Wiring outlet
Cut off the upper thin part of remote control lower case with a nipper or knife, and grind burrs with a file etc.

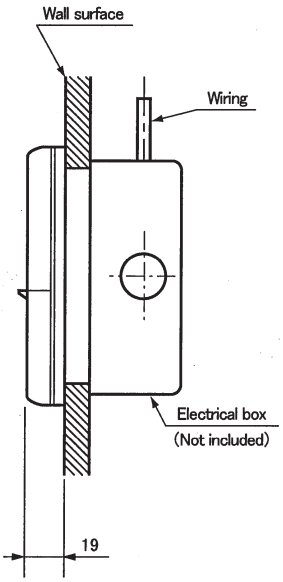


The peeling-off length of sheath

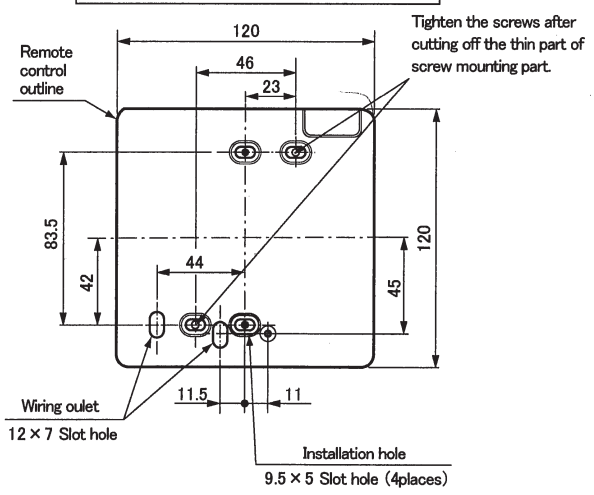
Pulling out from upper left	Pulling out from center
X wiring : 215mm Y wiring : 195mm	X wiring : 170mm Y wiring : 190mm



Embedded mounting



Remote control installation dimensions



(1) Installation screw for remote control
M4 Screw (2 pieces)

Unit:mm

Wiring specifications

(1) If the prolongation is over 100m, change to the size below.
But, wiring in the remote controller 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	0.5mm² × 2 cores
Under 300m	0.75mm² × 2 cores
Under 400m	1.25mm² × 2 cores
Under 500m	2.0mm² × 2 cores

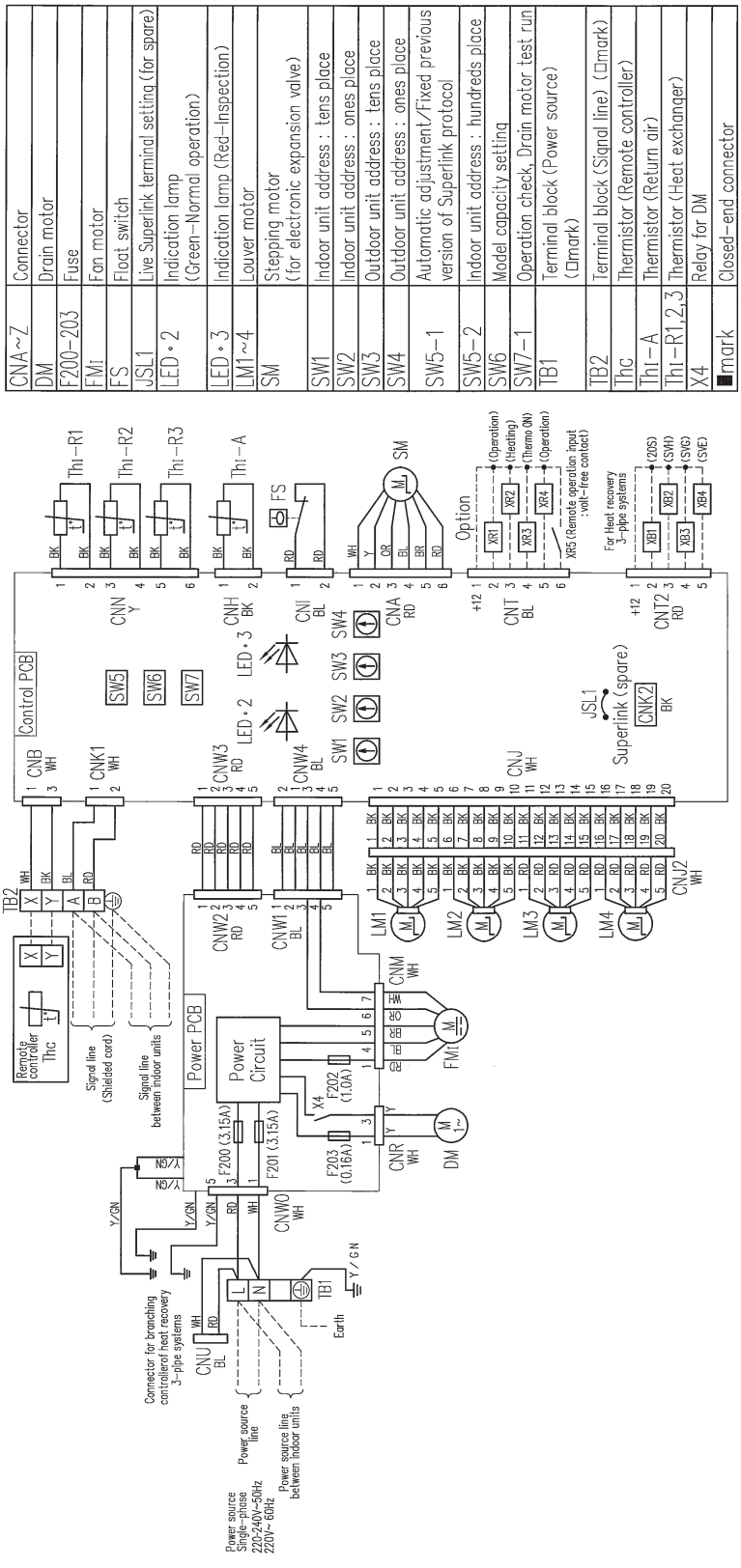
Adapted to **RoHS** directive

PJZ000Z262 A

3.3 Electrical wiring

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

Models All : models

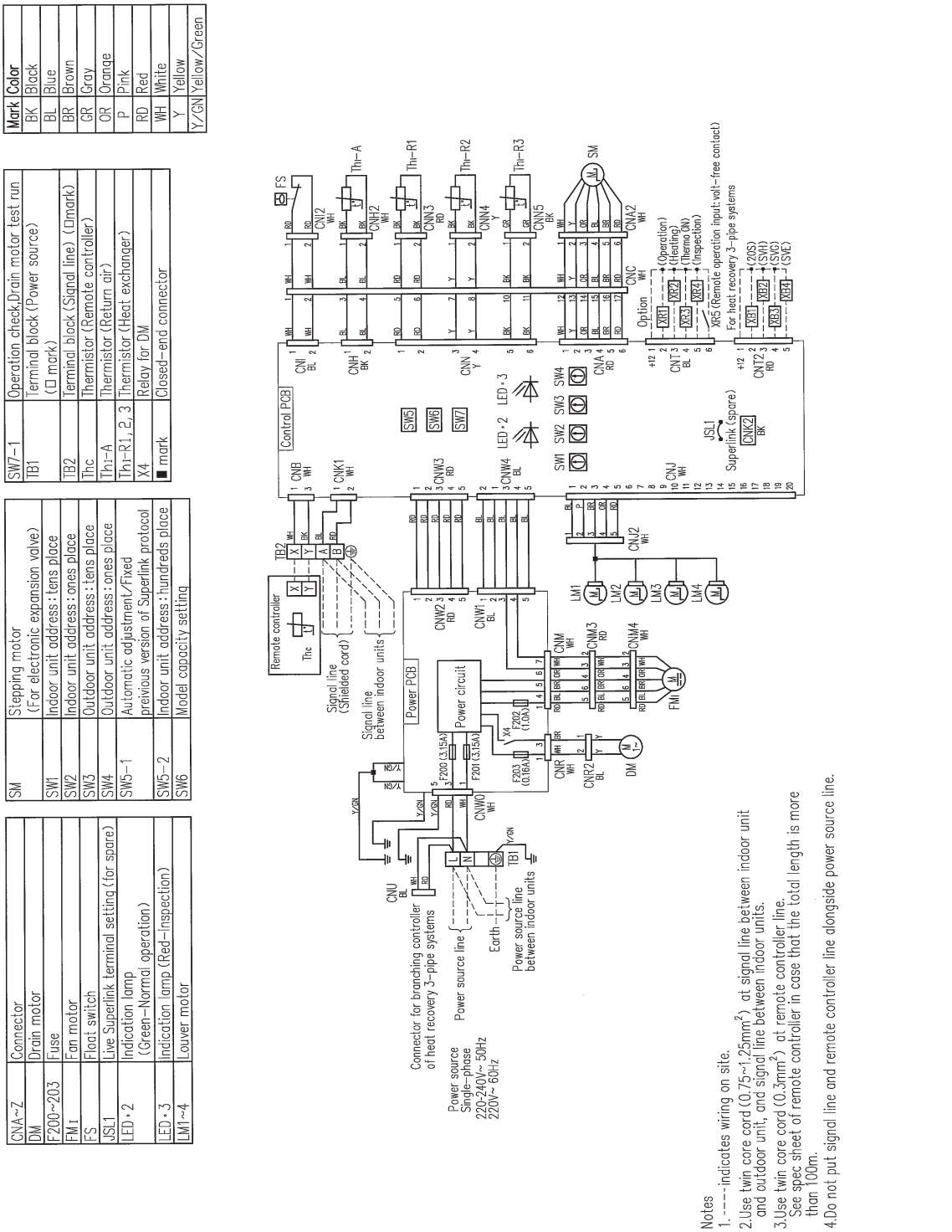


Notes
1. - - indicates wiring on site.
2. Use twin core cord (0.75~1.25mm^2) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cord (0.3mm^2) at remote controller line.
   See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PJF000Z053 B

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

Models All : moddels

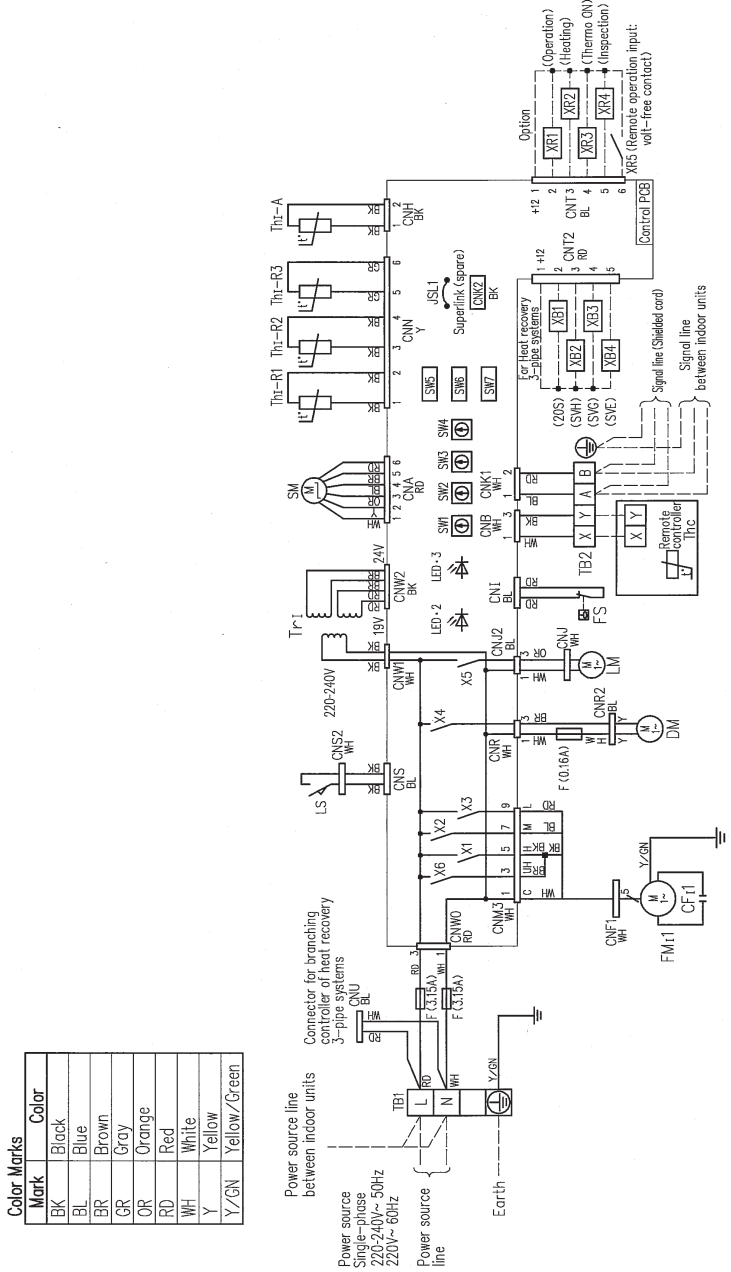


PJA003Z331 A

(c) Ceiling cassette-2 way type (FDTW)

Models FDTW28KXE6, 45KXE6, 56KXE6

CF11	Capacitor for FM1
CNA~Z	Connector
DM	Drain motor
F	Fuse
FM11	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED•2	Indication lamp (Green–Normal operation)
LED•3	Indication lamp (Red–Inspection)
LM	Louver motor
LS	Louver switch
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5–1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5–2	Indoor unit address: hundreds place
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 controller)
Th1–A	Thermistor (Return air)
Th1–R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
X5	Relay for LM

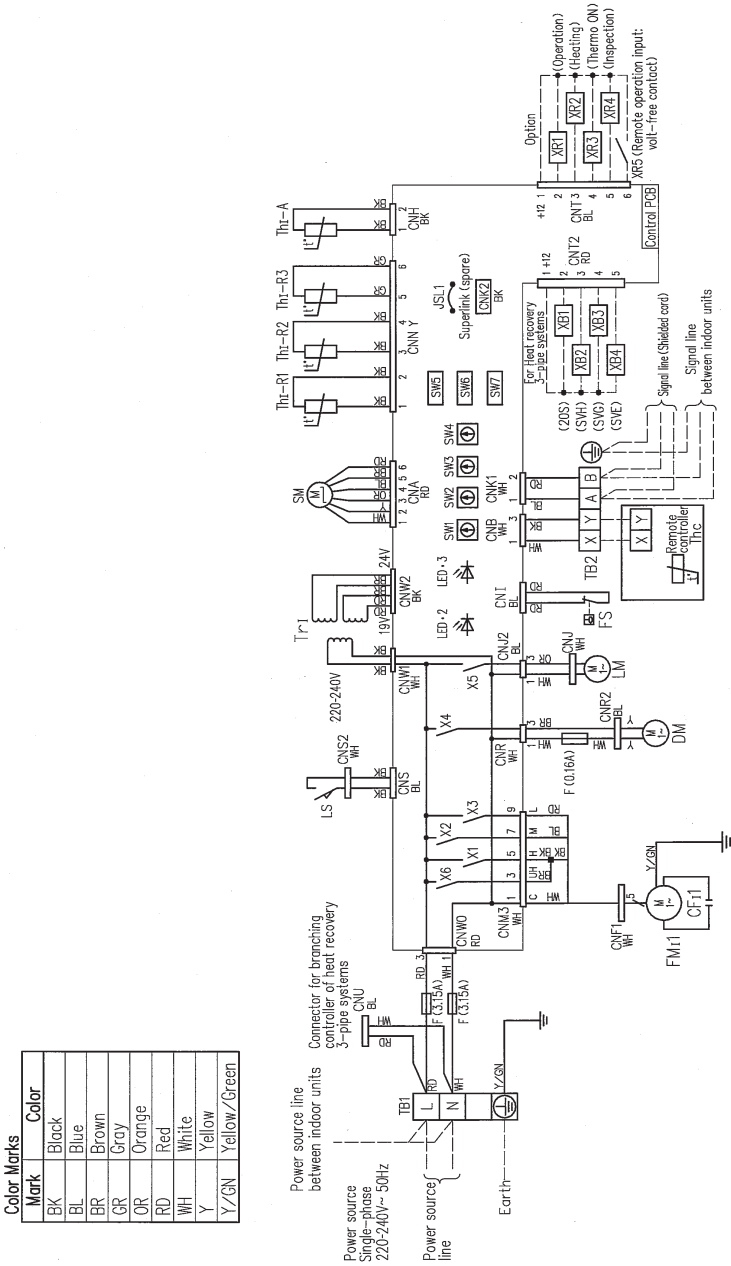


Notes 1. — indicates wiring on site.
2. Use twin core cable (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PJB001Z560 A

Models FDTW71KXE6, 90KXE6

CF11	Capacitor for FM1
CNA~Z	Connector
DM	Drain motor
F	Fuse
FM11	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED・2	Indication lamp (Green—Normal operation)
LED・3	Indication lamp (Red—Inspection)
LM	Louver motor
LS	Louver switch
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5—1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5—2	Indoor unit address: hundreds place
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 controller)
Th1—A	Thermistor (Return air)
Th1—R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
X5	Relay for LM

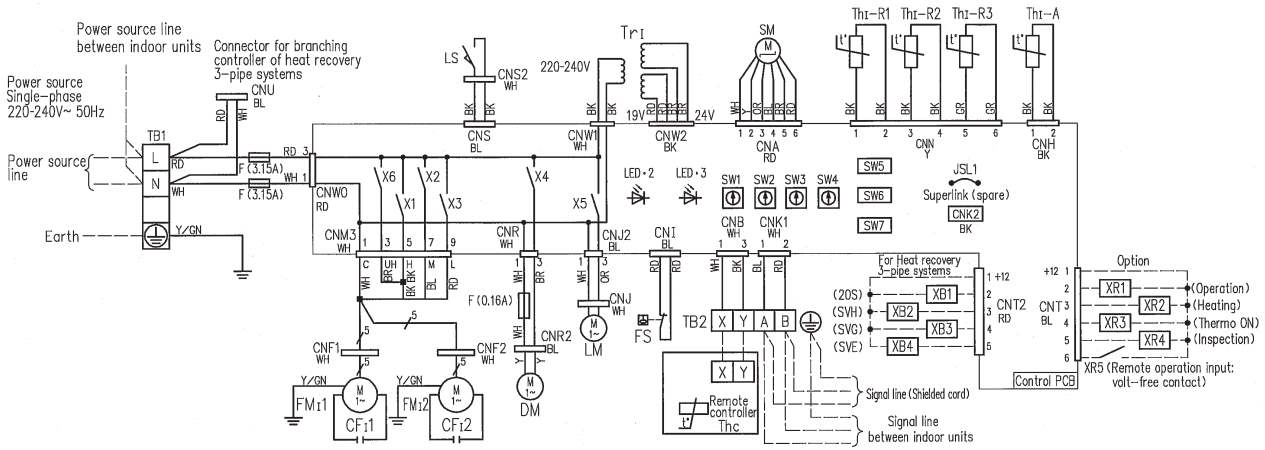


Notes 1. —— indicates wiring on site.
2. Use twin core cable (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PJB001Z561 A

Color Marks

Mark	Color
BK	Black
BL	Blue
BR	Brown
GR	Gray
OR	Orange
RD	Red
WH	White
Y	Yellow
Y/GN	Yellow/Green



CF i1,2	Capacitor for FMI
CNA~Z	Connector
DM	Drain motor
F	Fuse
FM i1,2	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED·2	Indication lamp (Green—Normal operation)
LED·3	Indication lamp (Red—Inspection)
LM	Louver motor
LS	Louver switch
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
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 controller)
Thi-A	Thermistor (Return air)
Thi-R1,2,3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
X5	Relay for LM
■mark	Closed-end connector

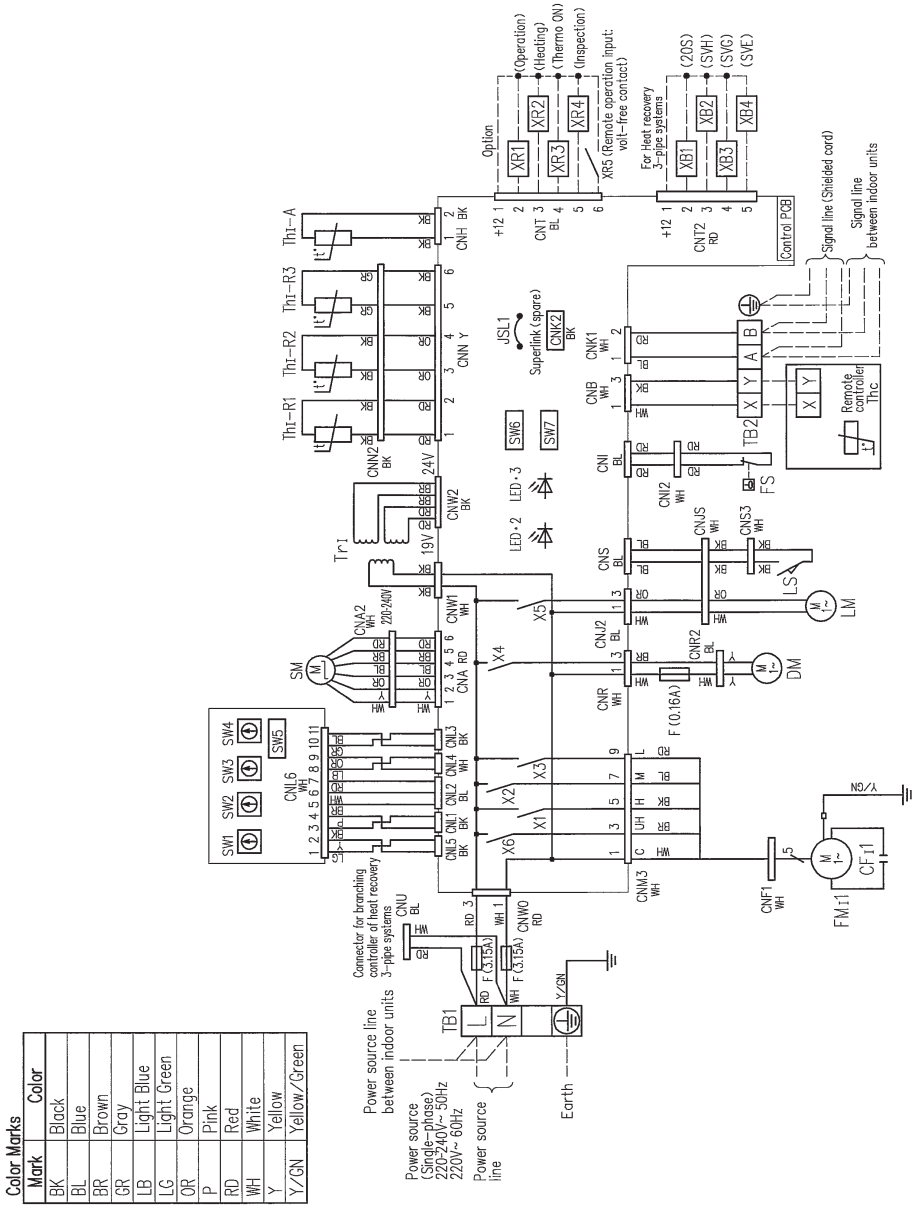
Notes 1. —— indicates wiring on site.
2. Use twin core cable (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PJB001Z562 A

(d) Ceiling cassette-1 way type (FDTS)

Model FDTS45KXE6

CF11	Capacitor for FMI
CNA~Z	Connector
DM	Drain motor
F	Fuse
FM11	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED・2	Indication lamp (Green-Normal operation)
LED・3	Indication lamp (Red-Inspection)
LM	Louver motor
LS	Louver switch
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
TB1	Terminal block (Power source) (Dmark)
TB2	Terminal block (Signal line) (Dmark)
Thc	Thermistor (Remote controller)
Th1-A	Thermistor (Return air)
Th1-R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
X5	Relay for LM
■mark	Closed-end connector

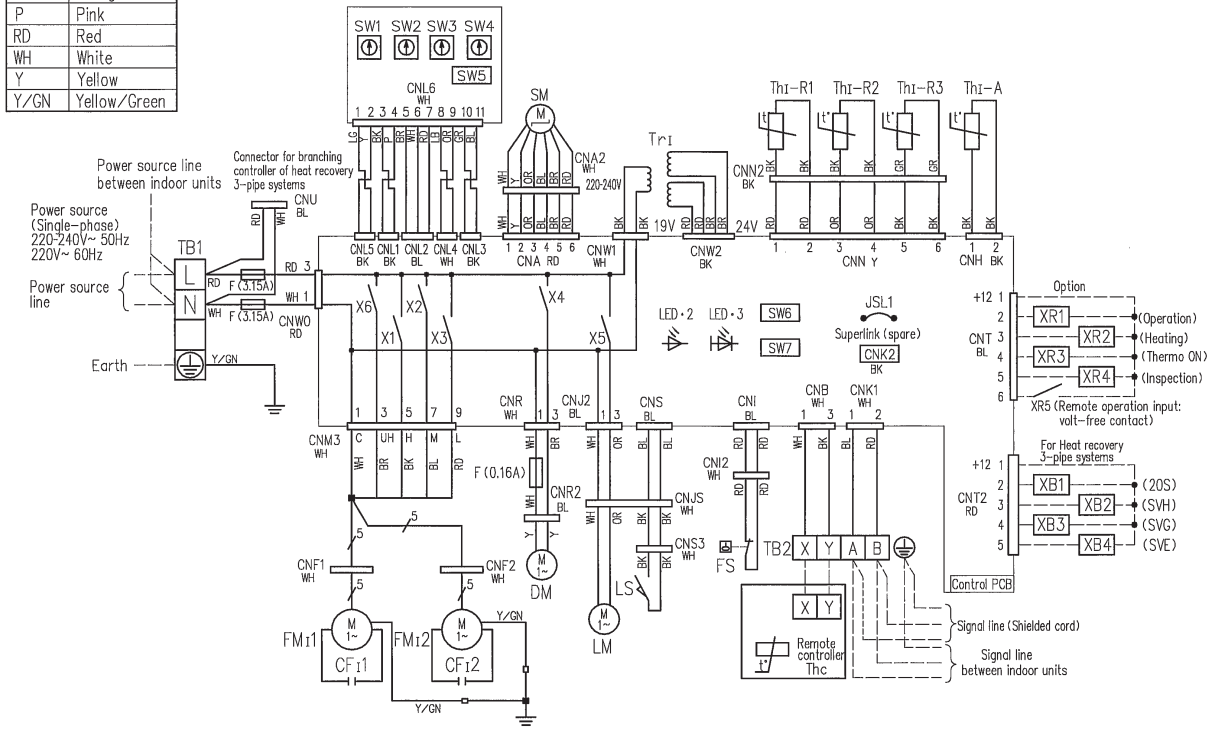


Notes 1. — indicates wiring on site.
2. Use twin core cable (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PJC001Z195

Color Marks

Mark	Color
BK	Black
BL	Blue
BR	Brown
GR	Gray
LB	Light Blue
LG	Light Green
OR	Orange
P	Pink
RD	Red
WH	White
Y	Yellow
Y/GN	Yellow/Green



Notes 1. — — indicates wiring on site.

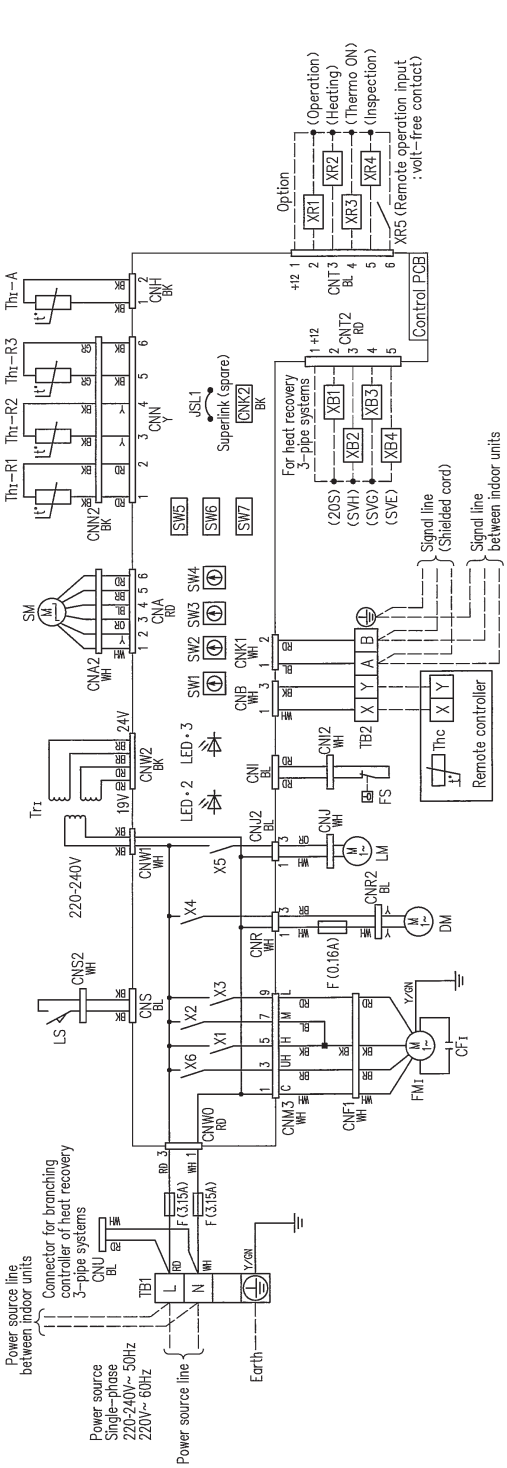
2. Use twin core cable (0.75~1.25mm^2) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm^2) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

CFI1,2	Capacitor for FMI
CNA~Z	Connector
DM	Drain motor
F	Fuse
FMI1,2	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED・2	Indication lamp (Green—Normal operation)
LED・3	Indication lamp (Red—Inspection)
LM	Louver motor
LS	Louver switch
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
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 controller)
ThI-A	Thermistor (Return air)
ThI-R1, 2, 3	Thermistor (Heat exchanger)
TrI	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
X5	Relay for LM
■mark	Closed-end connector

PJC001Z196

(e) Ceiling cassette-1 way compact type (FDTQ)

Models All models



Notes
1. ——indicates wiring on site.
2. Use twin core cord (0.75~1.25mm^2) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cord (0.3mm^2) at remote controller line.
   See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

CF1	Capacitor for FM1
CNA~Z	Connector
DM	Drain motor
F	Fuse
FM1	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED・2	Indication lamp (Green-Normal operation)
LED・3	Indication lamp (Red-Inspection)
LM	Louver motor
LS	Louver switch

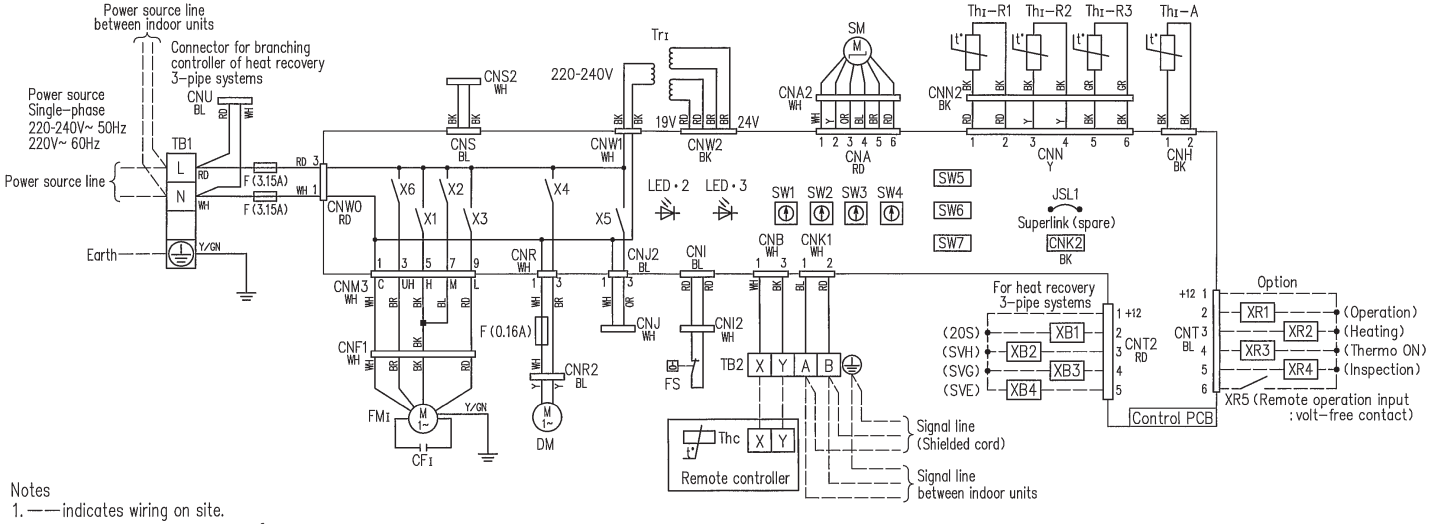
SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed preivious version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
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 controller)
Th1-A	Thermistor (Return air)
Th1-R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
X5	Relay for LM
■mark	Closed-end connector

Color Marks

Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	WH	White
BR	Brown	Y	Yellow
GR	Gray	Y/GN	Yellow/Green
OR	Orange		

PJC001Z190



Notes

1. ——indicates wiring on site.
2. Use twin core cord (0.75~1.25mm^2) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cord (0.3mm^2) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

Color Marks

Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	WH	White
BR	Brown	Y	Yellow
GR	Gray	Y/GN	Yellow/Green
OR	Orange		

CF1	Capacitor for FM1
CNA~Z	Connector
DM	Drain motor
F	Fuse
FM1	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green—Normal operation)
LED • 3	Indication lamp (Red—Inspection)

SM	Stepping motor (For electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed preivious version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
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 controller)
Th1-A	Thermistor (Return air)
Th1-R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
X5	Relay for LM
■mark	Closed-end connector

Changing the fan tap

The factory setting of the fan tap is "Standard".
Change the fan tap to "High Speed 1" by using the function setting of the wired remote controller.

CATEGORY	NUMBER	FUNCTION	SETTING
I/U FUNCTION	02	FAN SPEED SET	HIGH SPEED 1

Invalidating the louver button

The factory setting of the louver button is "Valid".
Change the louver button to "Invalid" by using the function setting of the wired remote controller.

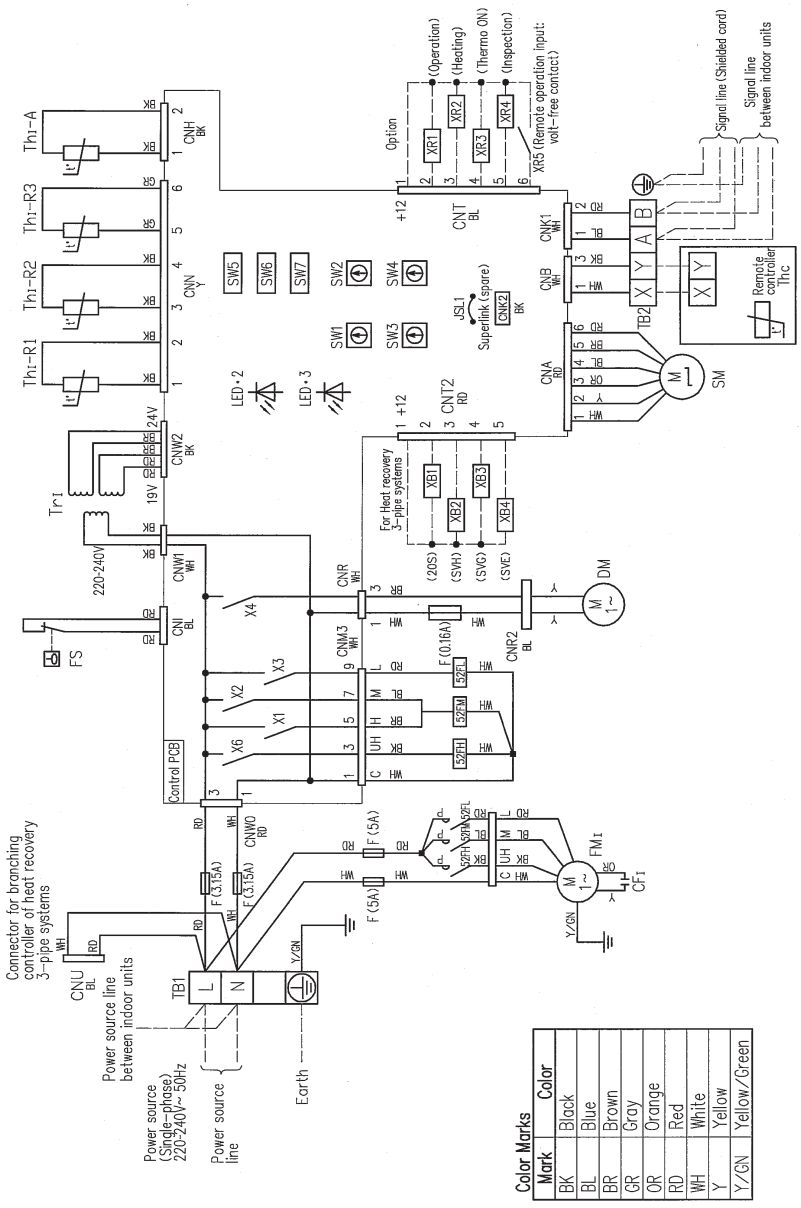
CATEGORY	NUMBER	FUNCTION	SETTING
FUNCTION (REMOTE CONTROLLER FUNCTION)	07	LOUVER SW	INVALID

PJC001Z240

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

Models FDU71KXE6, 90KXE6, 112KXE6, 140KXE6

CF1	Capacitor for FM1
CNA~Z	Connector
DM	Drain motor
F	Fuse
FM1	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED・2	Indication lamp (Green-Normal operation)
LED・3	Indication lamp (Red-Inspection)
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
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 controller)
Th1-A	Thermistor (Return air)
Th1-R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
■mark	Closed-end connector
52FL,FM,FH	Electromagnetic contactor for FM1



Color Marks

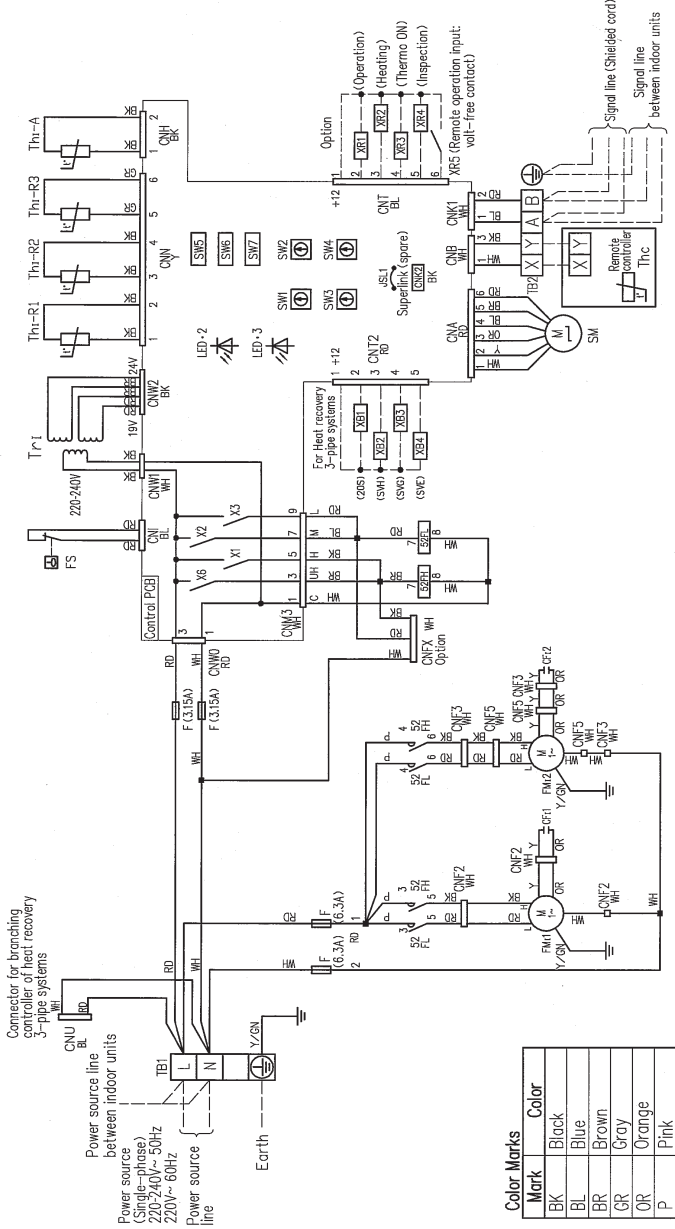
Mark	Color
BK	Black
BL	Blue
BR	Brown
GR	Gray
OR	Orange
RD	Red
WH	White
Y	Yellow
Y/GN	Yellow/Green

Notes 1. ---- indicates wiring on site.
2. Use twin core cable (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PJD001Z229 A

Models FDU224KXE6, 280KXE6

CF11,2	Capacitor for FMI
CNA~Z	Connector
F	Fuse
FM11,2	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED・2	Indication lamp (Green–Normal operation)
LED・3	Indication lamp (Red–Inspection)
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5–1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5–2	Indoor unit address: hundreds place
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 controller)
Th1–A	Thermistor (Return air)
Th1–R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1–3,6	Relay for FM
■mark	Closed–end connector
52FL,FH	Electromagnetic contactor for FMI



Color Marks

Mark	Color
BK	Black
BL	Blue
BR	Brown
GR	Gray
OR	Orange
P	Pink
RD	Red
WH	White
Y	Yellow
Y/GN	Yellow/Green

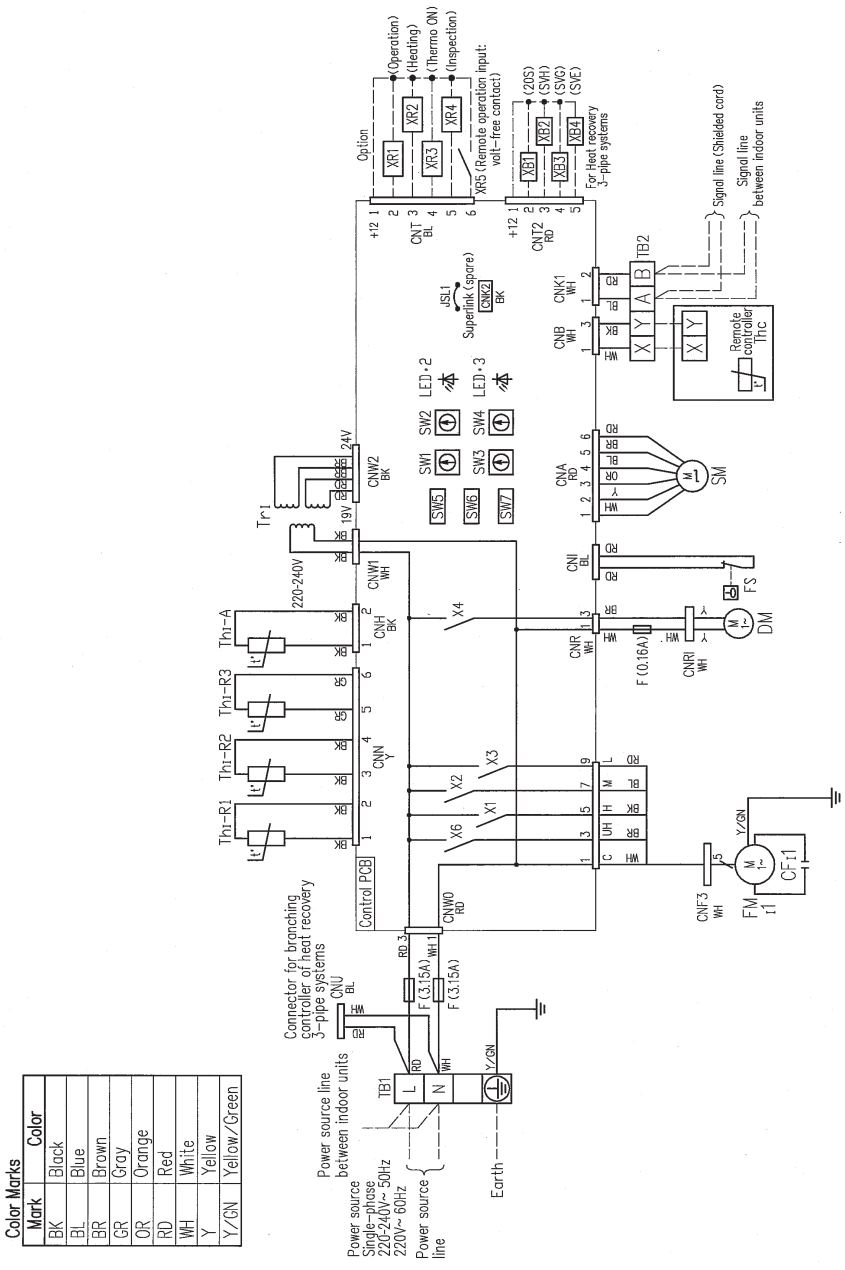
Notes 1. — indicates wiring on site.
2. Use twin core cable (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PJD001Z230 A

(g) Duct connected-Middle static pressure type (FDUM)

Models FDUM22KXE6, 28KXE6, 36KXE6, 45KXE6, 56KXE6, 71KXE6, 90KXE6

CFt1	Capacitor for FMt
CNA~Z	Connector
DM	Drain motor
F	Fuse
FMt1	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED・2	Indication lamp (Green—Normal operation)
LED・3	Indication lamp (Red—Inspection)
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
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 controller)
Tht-A	Thermistor (Return air)
Tht-R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
■mark	Closed-end connector

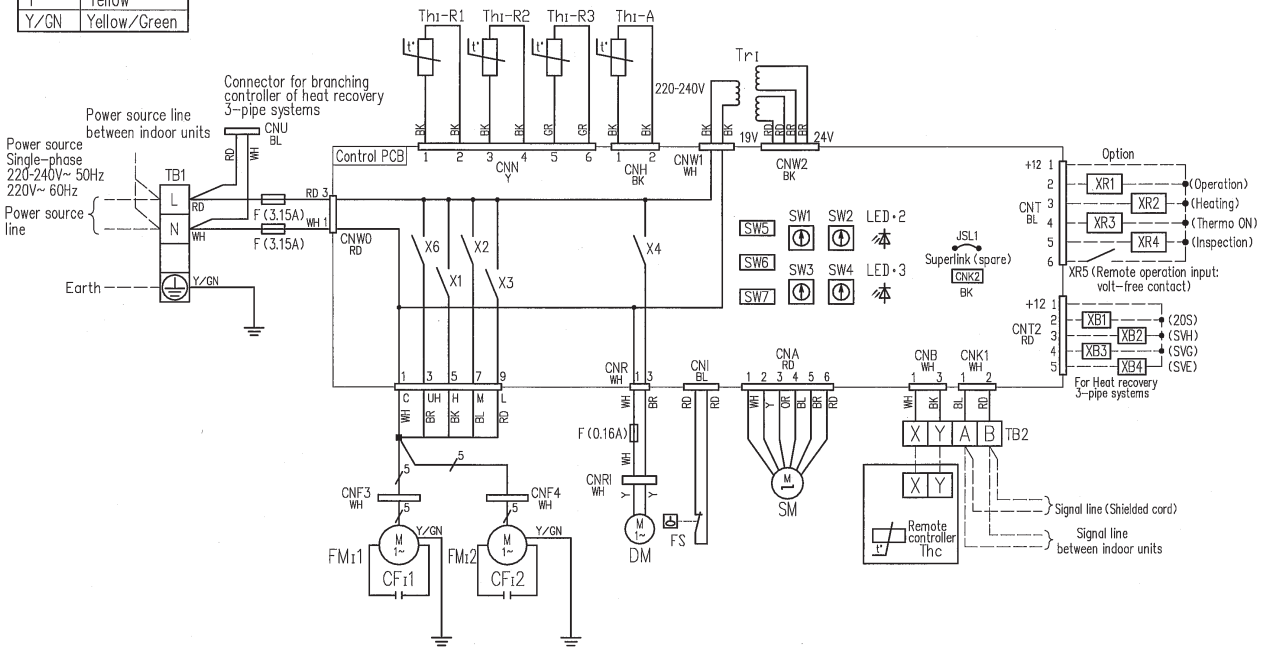


Notes 1. —— indicates wiring on site.
2. Use twin core cable (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PJR002Z258 A

Color Marks

Mark	Color
BK	Black
BL	Blue
BR	Brown
GR	Gray
OR	Orange
RD	Red
WH	White
Y	Yellow
Y/GN	Yellow/Green



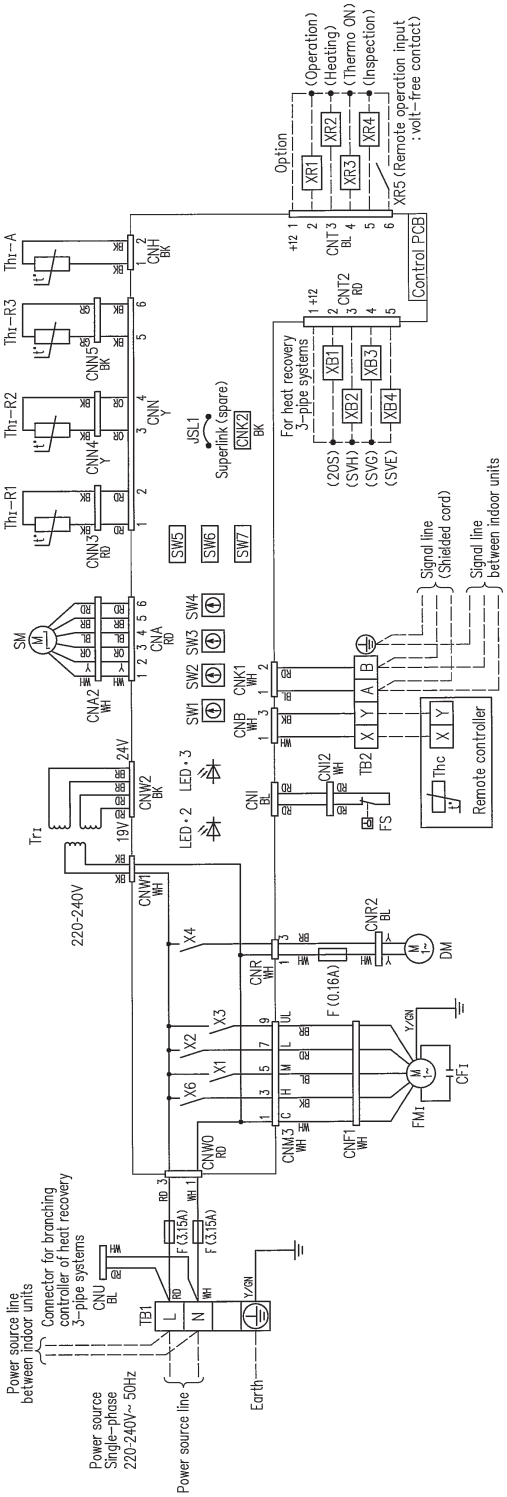
CF1 1,2	Capacitor for FM1
CNA~Z	Connector
DM	Drain motor
F	Fuse
FM 1 1,2	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED·2	Indication lamp (Green-Normal operation)
LED·3	Indication lamp (Red-Inspection)
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
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 controller)
Th1-A	Thermistor (Return air)
Th1-R1,2,3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
■mark	Closed-end connector

Notes 1. — — indicates wiring on site.
2. Use twin core cable (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PJR002Z259 A

(h) Duct connected (Ultra thin)-Low static pressure type (FDQS)

Models All models



Notes
1. —— indicates wiring on site.
2. Use twin core cord (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cord (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

CF1	Capacitor for FM1
CNA~Z	Connector
DM	Drain motor
F	Fuse
FM1	Fan motor (with thermostat)
FS	Float switch
JSL1	Live Superlink terminal setting (for spare)
LED • 2	Indication lamp (Green—Normal operation)
LED • 3	Indication lamp (Red—Inspection)

SM	Stepping motor (For electronic expansion valve)	
SW1	Indoor unit address: tens place	
SW2	Indoor unit address: ones place	
SW3	Outdoor unit address: tens place	
SW4	Outdoor unit address: ones place	
SW5-1	Automatic adjustment/Fixed preiwious version of Superlink protocol	
SW5-2	Indoor unit address: hundreds place	
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 controller)	
Th1-A	Thermistor (Return air)	
Th1-R1, 2, 3	Thermistor (Heat exchanger)	
Tr1	Transformer	
X1~3,6	Relay for FM	
X4	Relay for DM	

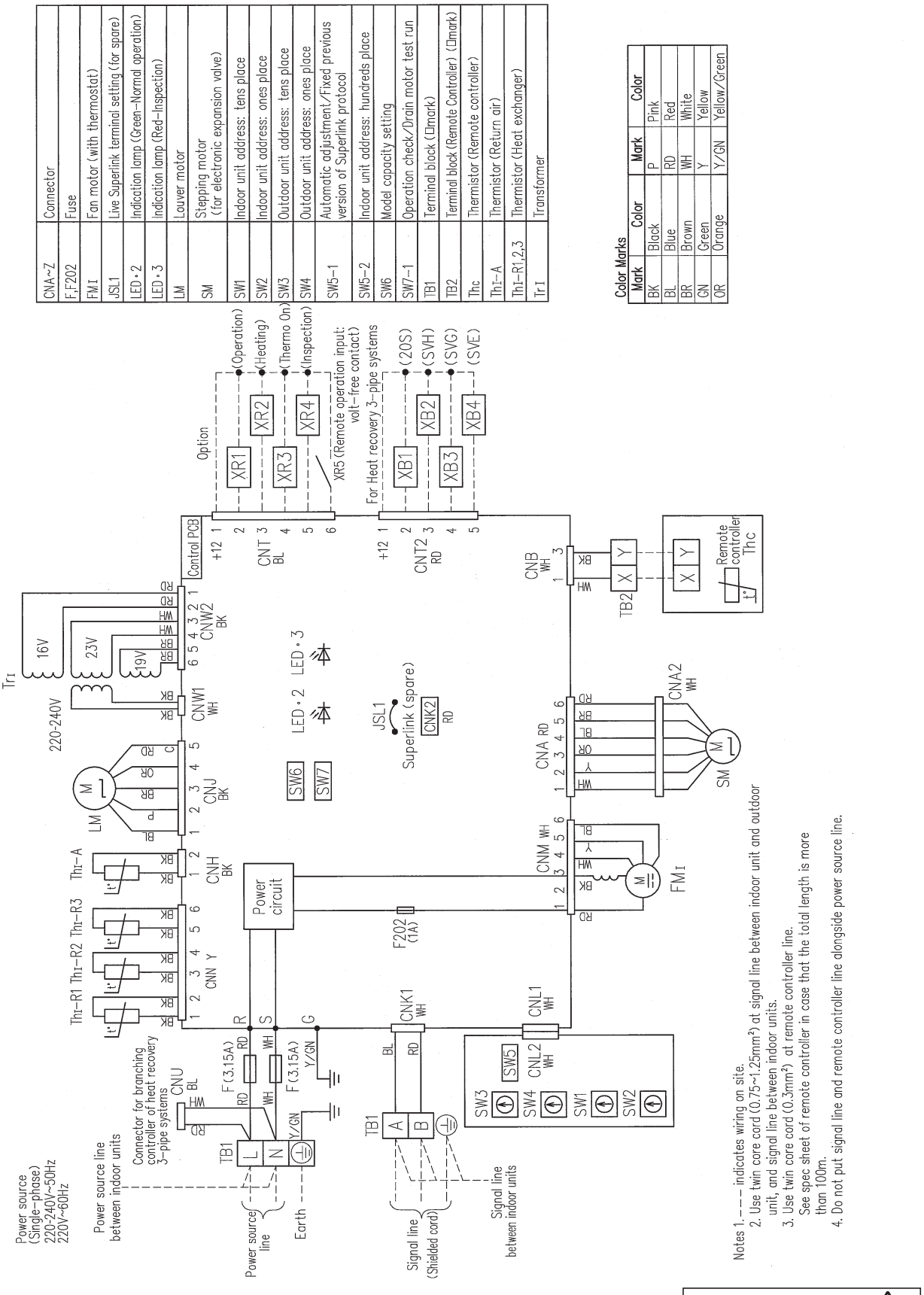
Color Marks

Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	WH	White
BR	Brown	Y	Yellow
GR	Gray	Y/GN	Yellow/Green
OR	Orange		

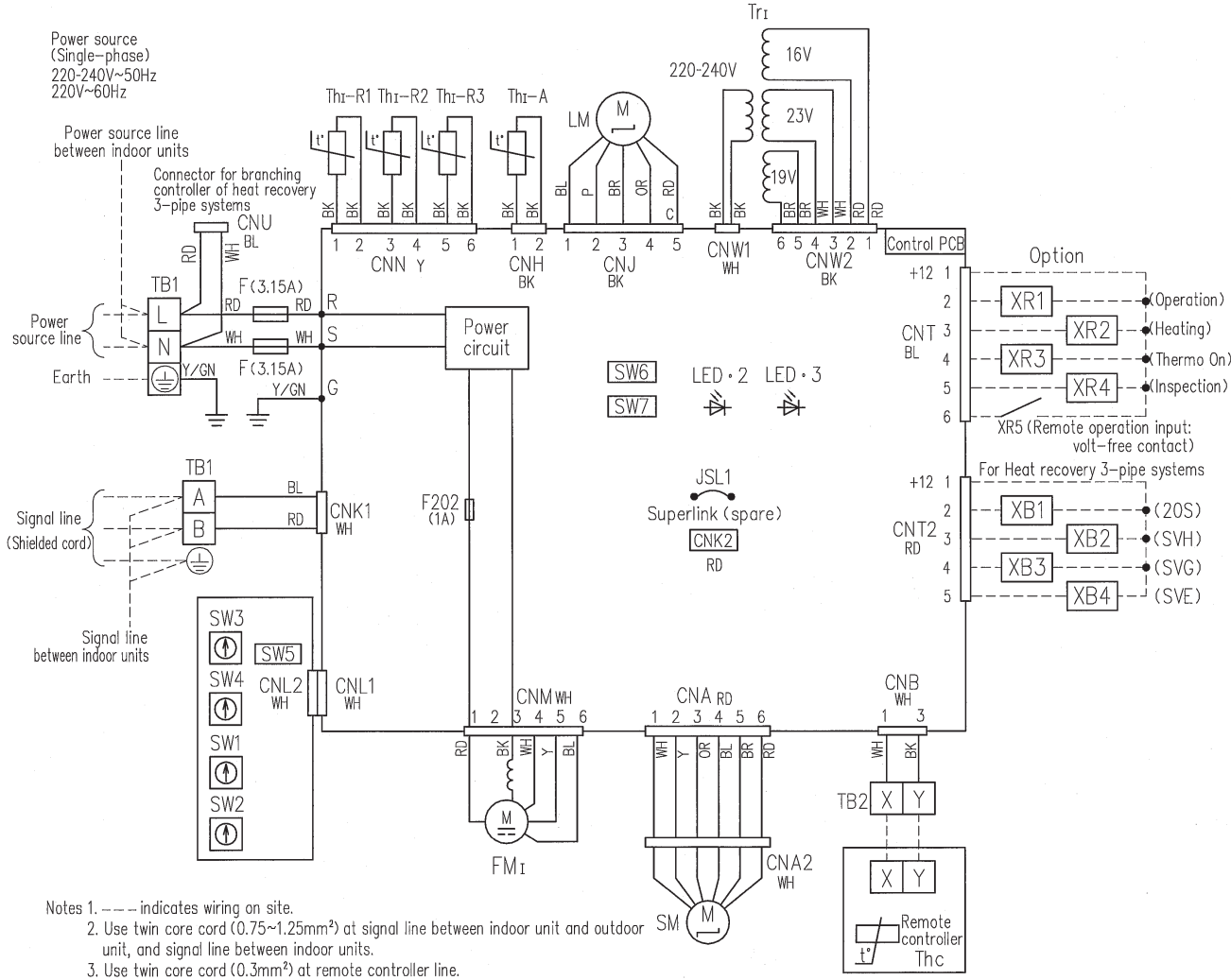
PJC001Z200 B

(i) Wall mounted type (FDK)

Models FDK22KXE6, 28KXE6, 36KXE6, 45KXE6, 56KXE6



PHA000Z983A



Notes 1. ---- indicates wiring on site.
2. Use twin core cord (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cord (0.3mm²) at remote controller line.
See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

CNA~Z	Connector
F,F202	Fuse
FMı	Fan motor (with thermostat)
JSL1	Live Superlink terminal setting (for spare)
LED・2	Indication lamp (Green-Normal operation)
LED・3	Indication lamp (Red-Inspection)
LM	Louver motor
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
SW6	Model capacity setting
SW7-1	Operation check/Drain motor test run
TB1	Terminal block (□mark)
TB2	Terminal block (Remote Controller) (□mark)
Thc	Thermistor (Remote controller)
Thı-A	Thermistor (Return air)
Thı-R1,2,3	Thermistor (Heat exchanger)
Trı	Transformer

Color Marks

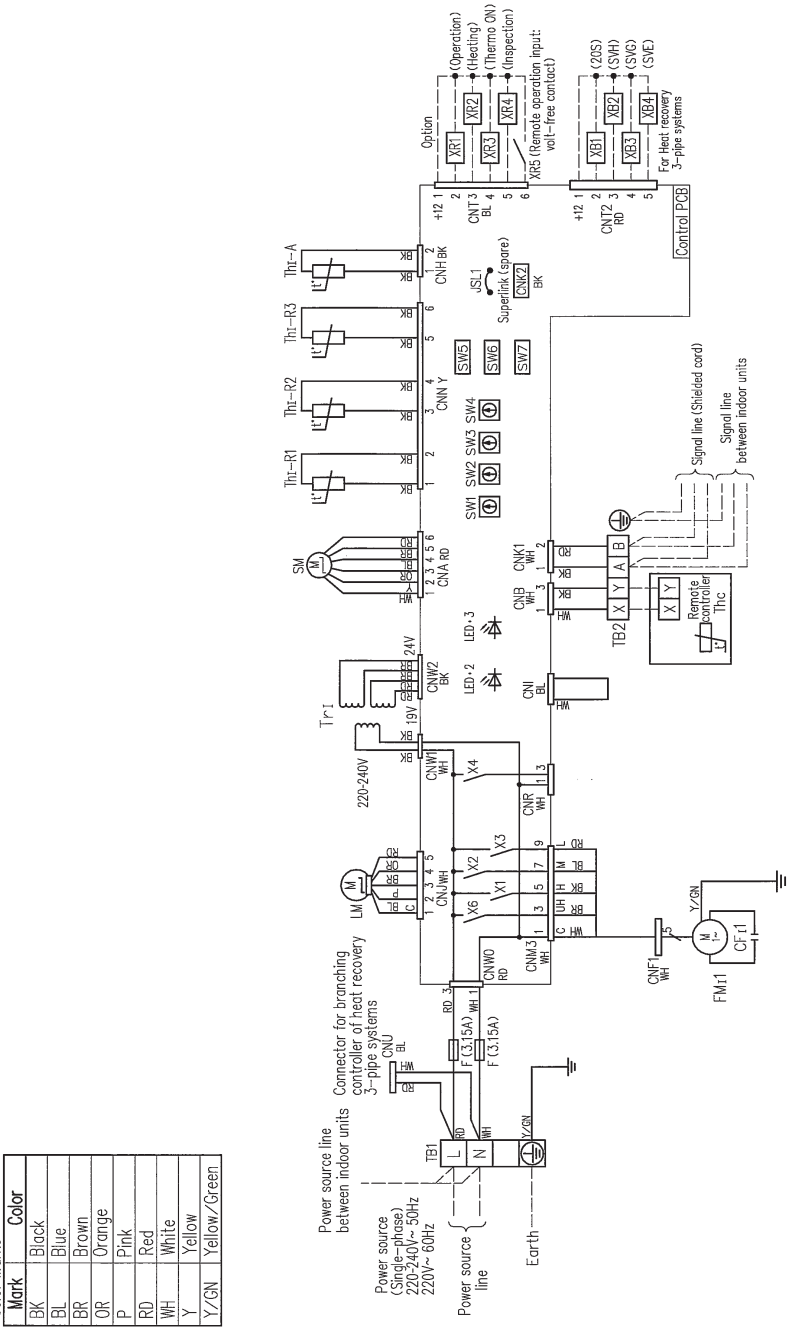
Mark	Color	Mark	Color
BK	Black	P	Pink
BL	Blue	RD	Red
BR	Brown	WH	White
GN	Green	Y	Yellow
OR	Orange	Y/GN	Yellow/Green

PHA000Z984A

(j) Ceiling suspended type (FDE)

Models FDE36KXE6A, 45KXE6A, 56KXE6A

CF1,2	Capacitor for FM1
CNA~Z	Connector
F	Fuse
FM1,2	Fan motor (with thermostat)
JSL1	Live Superlink terminal setting (for spare)
LED•2	Indication lamp (Green—Normal operation)
LED•3	Indication lamp (Red—Inspection)
LM	Louver motor
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment:/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
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 controller)
Tht-A	Thermistor (Return air)
Tht-R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM



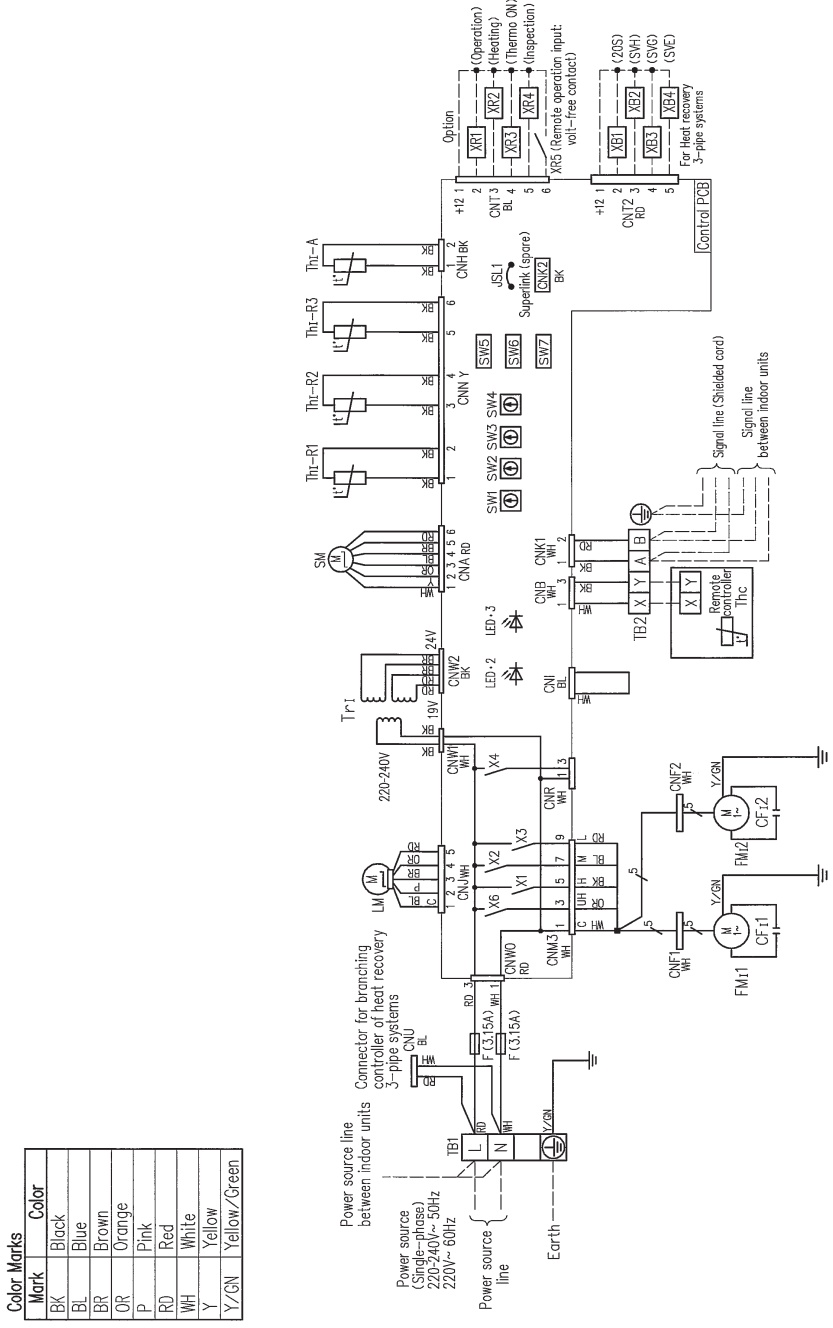
Color Marks	
Mark	Color
BK	Black
BL	Blue
BR	Brown
OR	Orange
P	Pink
RD	Red
WH	White
Y	Yellow
Y/GN	Yellow/Green

Notes 1. — indicates wiring on site.
2. Use twin core cable (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PFA003Z826

Models FDE71KXE6A, 112KXE6A, 140KXE6A

CF1,2	Capacitor for FM1
CNA~Z	Connector
F	Fuse
FM1,2	Fan motor (with thermostat)
JSL1	Live Superlink terminal setting (for spare)
LED・2	Indication lamp (Green-Normal operation)
LED・3	Indication lamp (Red-Inspection)
LM	Louver motor
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
SW6	Model capacity setting
SW7-1	Operation check, Drain motor test run
TB1	Terminal block (Power source) (CEmark.)
TB2	Terminal block (Signal line) (CEmark.)
Thc	Thermistor (Remote controller)
Th1-A	Thermistor (Return air)
Th1-R1, 2, 3	Thermistor (Heat exchanger)
Tr1	Transformer
X1~3,6	Relay for FM
X4	Relay for DM
■mark	Closed-end connector



Color Marks

Mark	Color
BK	Black
BL	Blue
BR	Brown
OR	Orange
P	Pink
RD	Red
WH	White
Y	Yellow
Y/GN	Yellow/Green

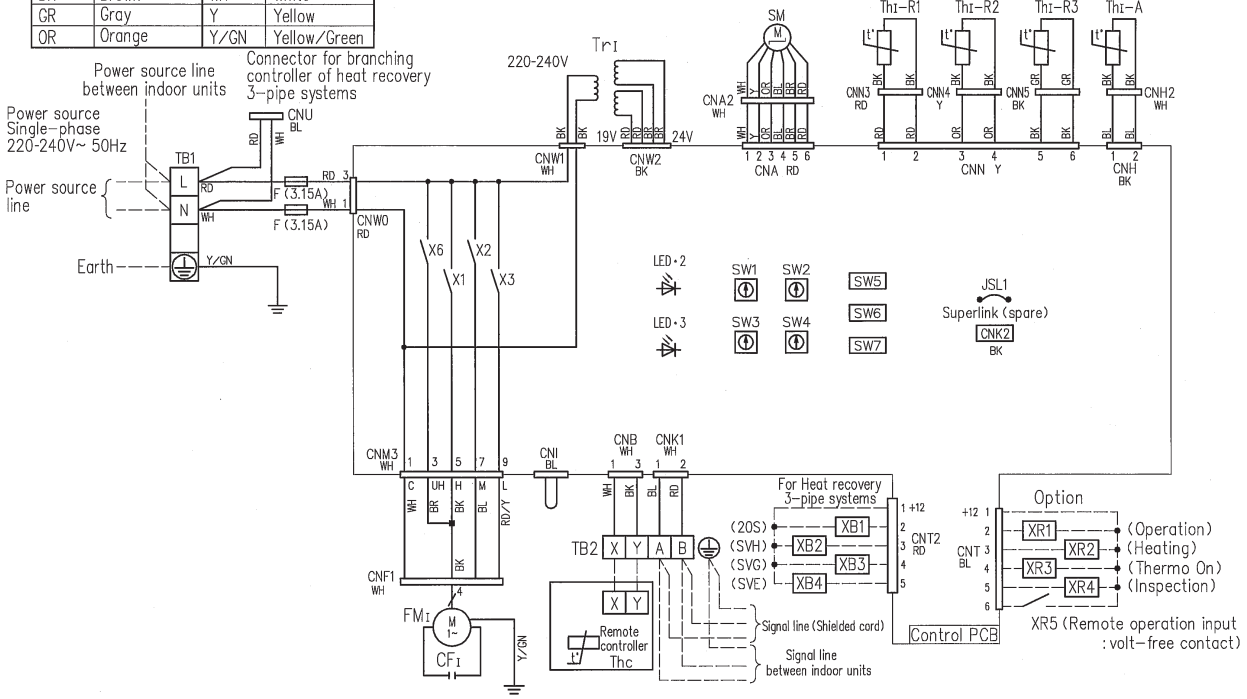
Notes 1. — indicates wiring on site.
2. Use twin core cable (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PFA003Z827

(k) Floor standing (with casing) type (FDFL)

Models All models

Color Marks			
Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	RD/Y	Red/Yellow
BR	Brown	WH	White
GR	Gray	Y	Yellow
OR	Orange	Y/GN	Yellow/Green



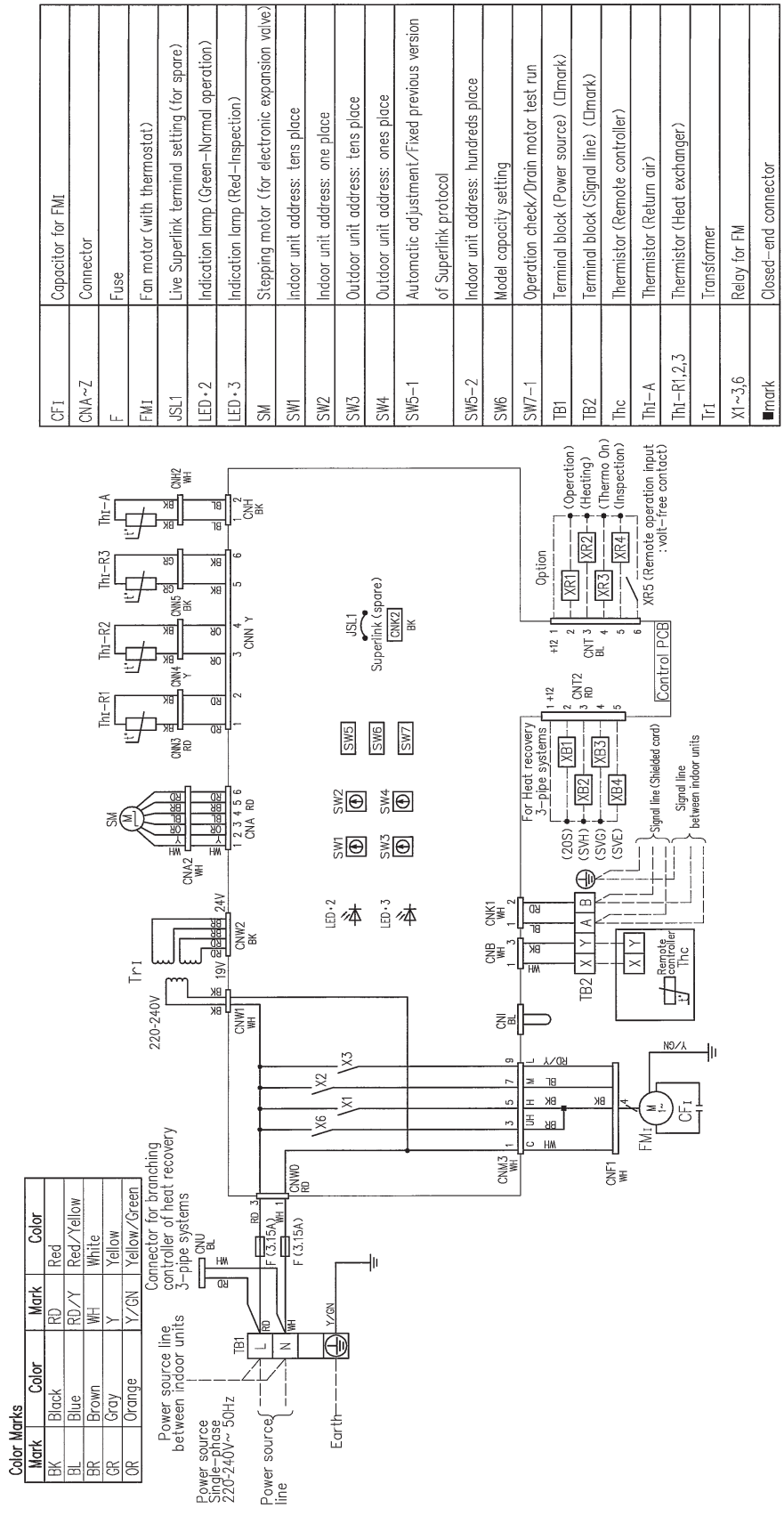
CFI	Capacitor for FMI
CNA~Z	Connector
F	Fuse
FMI	Fan motor (with thermostat)
JSL1	Live Superlink terminal setting (for spare)
LED・2	Indication lamp(Green-Normal operation)
LED・3	Indication lamp (Red-Inspection)
SM	Stepping motor (for electronic expansion valve)
SW1	Indoor unit address: tens place
SW2	Indoor unit address: ones place
SW3	Outdoor unit address: tens place
SW4	Outdoor unit address: ones place
SW5-1	Automatic adjustment/Fixed previous version of Superlink protocol
SW5-2	Indoor unit address: hundreds place
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 controller)
ThI-A	Thermistor (Return air)
ThI-R1,2,3	Thermistor (Heat exchanger)
TrI	Transformer
X1~3,6	Relay for FM
■mark	Closed-end connector

Notes 1.—— indicates wiring on site.
2. Use twin core cord (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cord (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PGD000Z053

(I) Floor standing (without casing) type (FDFU)

Models All models

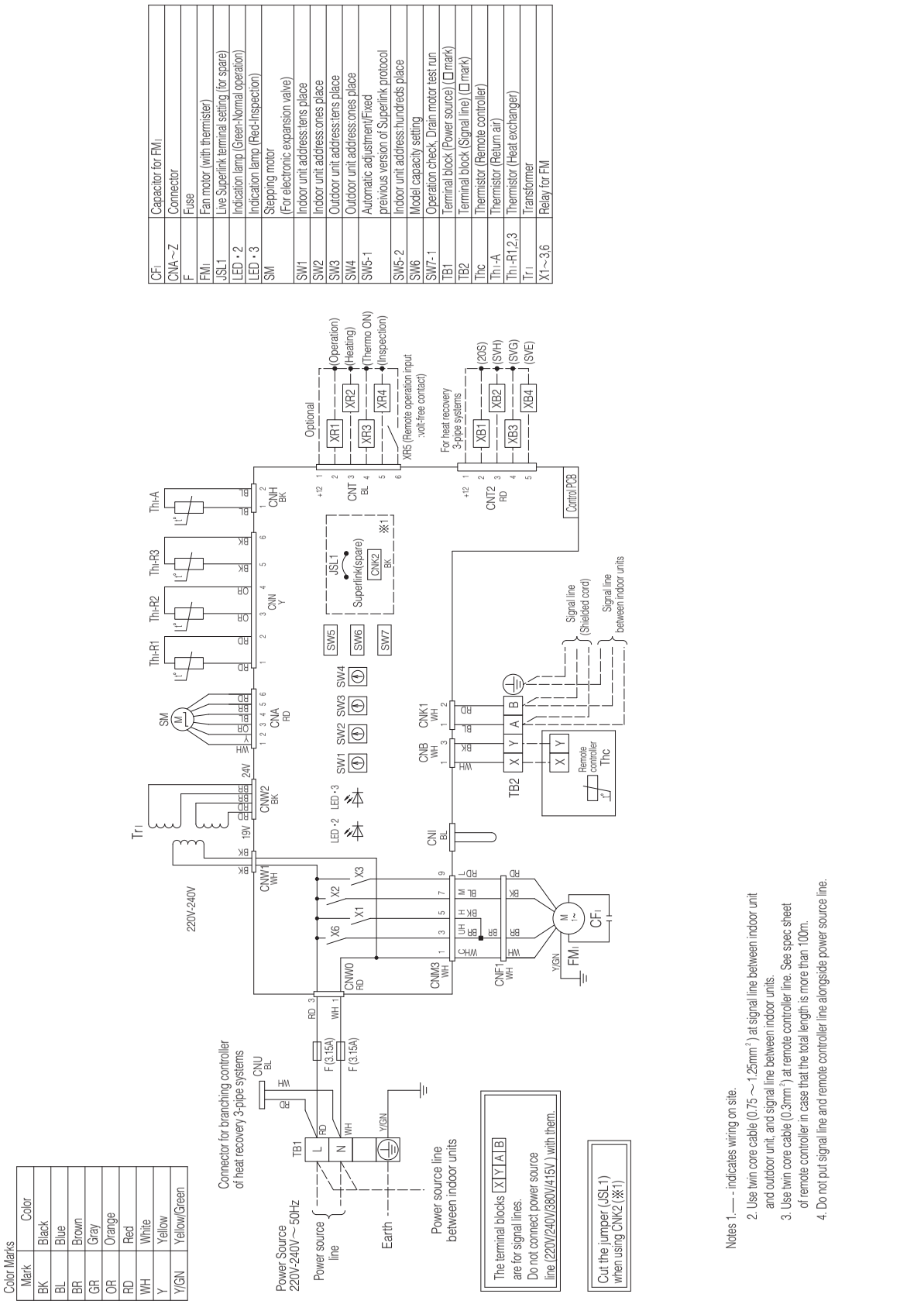


Notes 1.— indicates wiring on site
2.Use twin core cord (0.75~1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3.Use twin core cord (0.3mm²) at remote controller line.
See spec sheet of remote controller in case that the total length is more than 100m.
4.Do not put signal line and remote controller line alongside power source line.

PGD000Z058

(m) Duct Connected-Compact and Flexible type (FDUH)

Models All models



Notes 1.— - indicates wiring on site.
2. Use twin core cable (0.75 ~ 1.25mm²) at signal line between indoor unit and outdoor unit, and signal line between indoor units.
3. Use twin core cable (0.3mm²) at remote controller line. See spec sheet of remote controller in case that the total length is more than 100m.
4. Do not put signal line and remote controller line alongside power source line.

PJC001Z255

3.4 Noise level

Note (1) The data are based on the following conditions.

Ambient air tempetature: Indoor unit 27˚C DB, 19˚C WB. Outdoor unit 35˚C DB

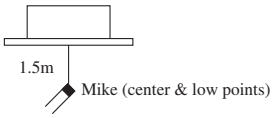
(2) The data in the chart are measuted in an unechonic room.

(3) The noise levels measured in the field are usually higher than the data because of reflection.

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

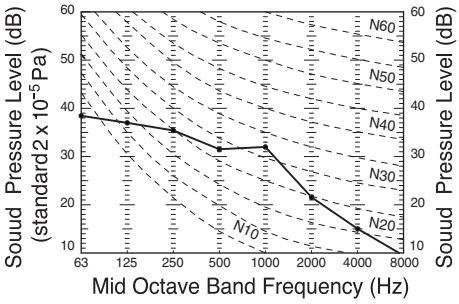
Measured based on JIS B 8616

Mike position as right



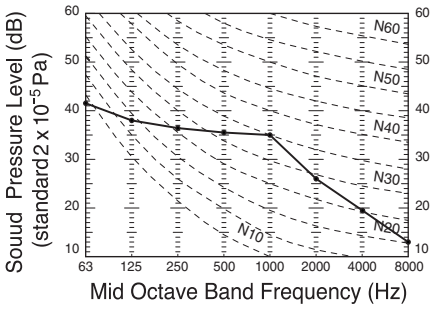
Models FDTC22KXE6A, 28KXE6A

Noise level 35 dB (A) at HIGH
33 dB (A) at MEDIUM
32 dB (A) at LOW



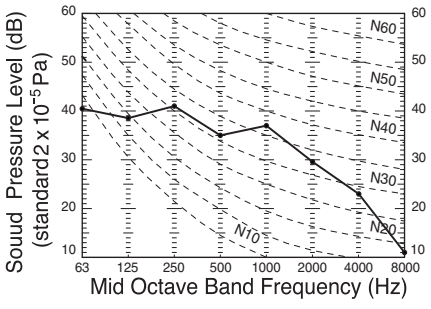
Model FDTC36KXE6A

Noise level 38 dB (A) at HIGH
36 dB (A) at MEDIUM
34 dB (A) at LOW



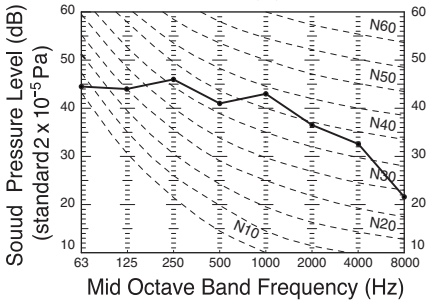
Model FDTC45KXE6A

Noise level 40 dB (A) at HIGH
38 dB (A) at MEDIUM
36 dB (A) at LOW



Model FDTC56KXE6A

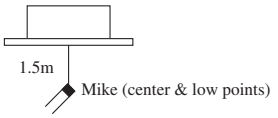
Noise level 45 dB (A) at HIGH
42 dB (A) at MEDIUM
39 dB (A) at LOW



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

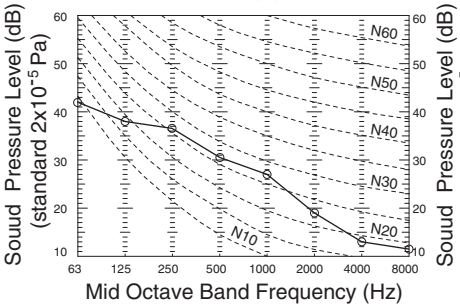
Measured based on JIS B 8616

Mike position as right



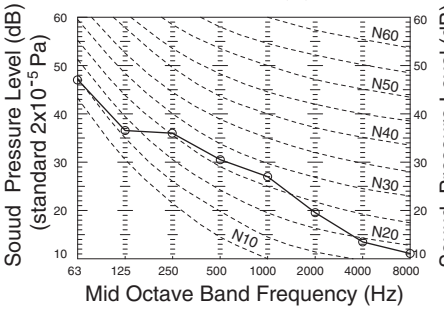
Models FDT28KXE6A, 36KXE6A, 45KXE6A

Noise level 33 dB (A) at HIGH
31 dB (A) at MEDIUM
30 dB (A) at LOW



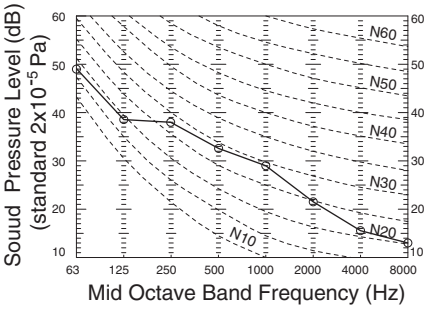
Model FDT56KXE6A

Noise level 33 dB (A) at HIGH
31 dB (A) at MEDIUM
30 dB (A) at LOW



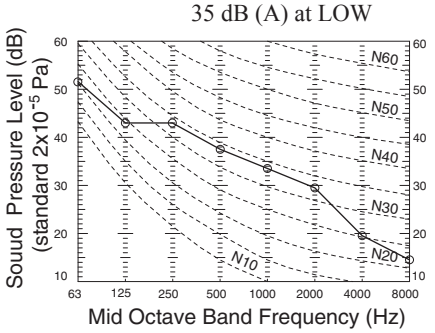
Model FDT71KXE6A

Noise level 33 dB (A) at HIGH
31 dB (A) at MEDIUM
30 dB (A) at LOW



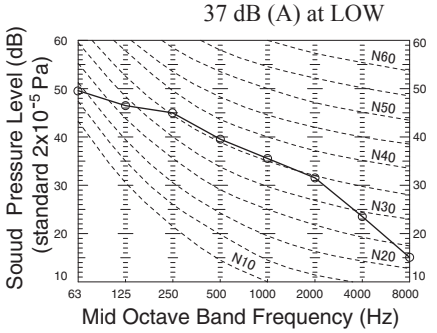
Model FDT90KXE6A, 112KXE6A

Noise level 40 dB (A) at HIGH
37 dB (A) at MEDIUM
35 dB (A) at LOW



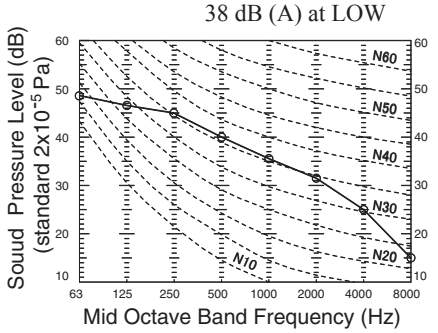
Model FDT140KXE6A

Noise level 42 dB (A) at HIGH
40 dB (A) at MEDIUM
37 dB (A) at LOW



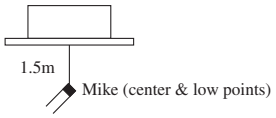
Model FDT160KXE6A

Noise level 43 dB (A) at HIGH
41 dB (A) at MEDIUM
38 dB (A) at LOW



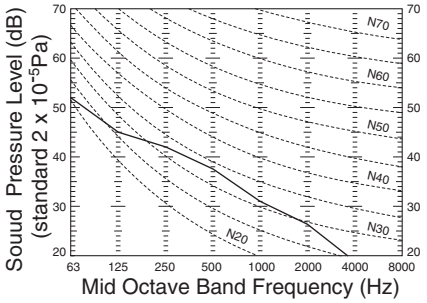
(c) Ceiling cassette-2 way type (FDTW)

Measured based on JIS B 8616
Mike position as below



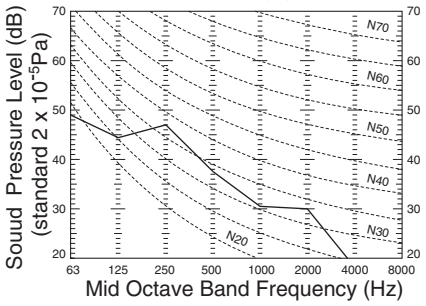
Models FDTW28KXE6, 45KXE6, 56KXE6

Noise level 39 dB (A) at HIGH
34 dB (A) at MEDIUM
32 dB (A) at LOW



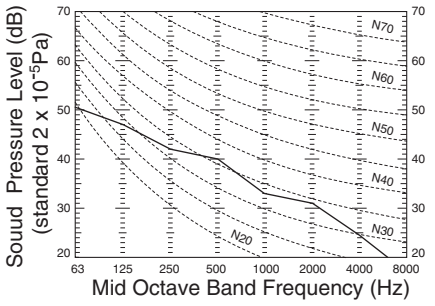
Model FDTW71KXE6

Noise level 41 dB (A) at HIGH
36 dB (A) at MEDIUM
35 dB (A) at LOW



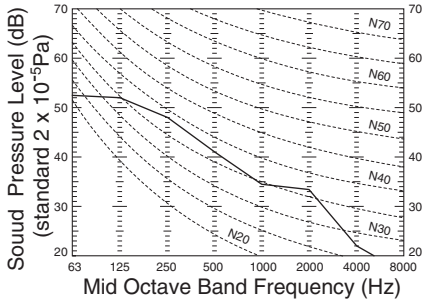
Model FDTW90KXE6

Noise level 41 dB (A) at HIGH
37 dB (A) at MEDIUM
36 dB (A) at LOW



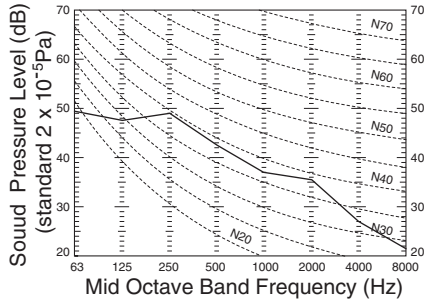
Model FDTW112KXE6

Noise level 44 dB (A) at HIGH
38 dB (A) at MEDIUM
37 dB (A) at LOW



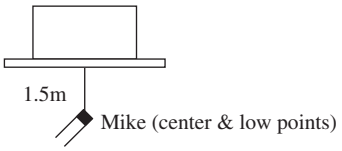
Model FDTW140KXE6

Noise level 45 dB (A) at HIGH
41 dB (A) at MEDIUM
39 dB (A) at LOW



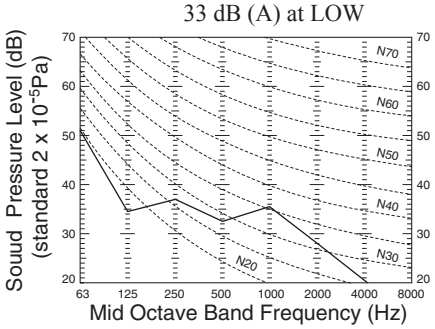
(d) Ceiling cassette-1 way compact type (FDTQ)

Measured based on JIS B 8616
Mike position as below



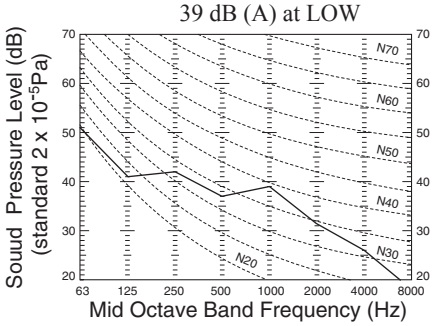
Models FDTQ22KXE6, 28KXE6
36KXE6

Noise level 38 dB (A) at HIGH
33 dB (A) at LOW



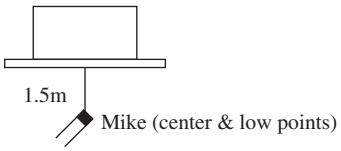
When used as the Duct panel type
Models FDTQ22KXE6, 28KXE6
36KXE6

Noise level 42 dB (A) at HIGH
39 dB (A) at LOW



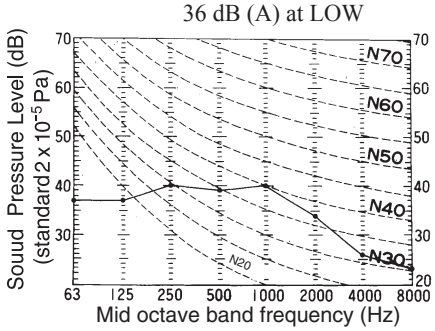
(e) Ceiling cassette-1 way type (FDTS)

Measured based on JIS B 8616
Mike position as below



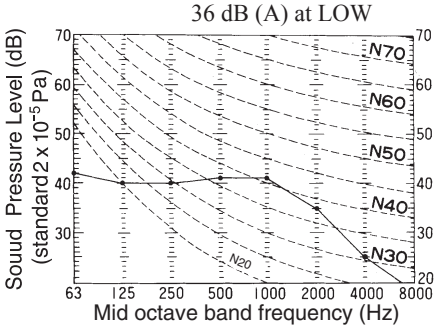
Model FDTS45KXE6

Noise level 43 dB (A) at HIGH
38 dB (A) at MEDIUM
36 dB (A) at LOW



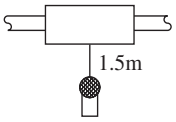
Model FDTS71KXE6

Noise level 44 dB (A) at HIGH
38 dB (A) at MEDIUM
36 dB (A) at LOW



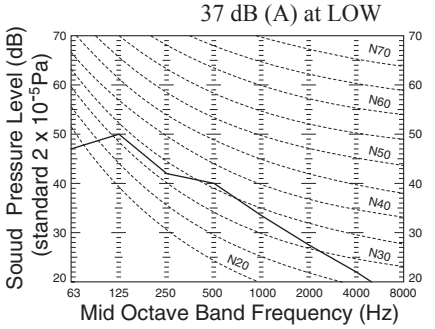
(f) Duct connected-High static pressure type (FDU)

Measured based on JIS B 8616
Mike position as right



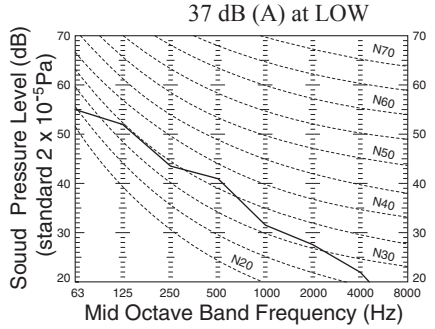
Model FDU71KXE6

Noise level 41 dB (A) at HIGH
37 dB (A) at LOW



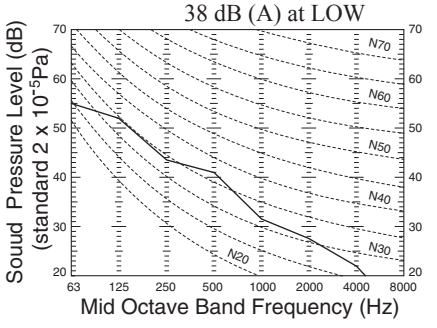
Model FDU90KXE6

Noise level 42 dB (A) at HIGH
37 dB (A) at LOW

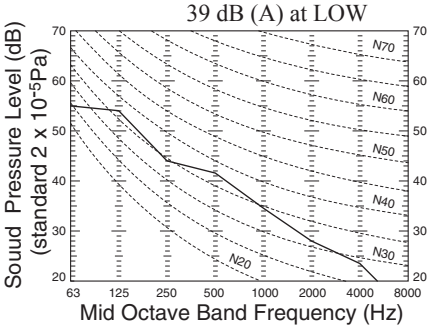


Model FDU112KXE6

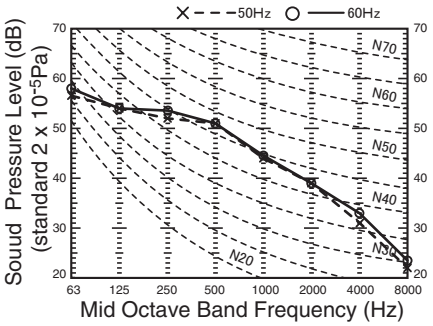
Noise level 42 dB (A) at HIGH
38 dB (A) at LOW



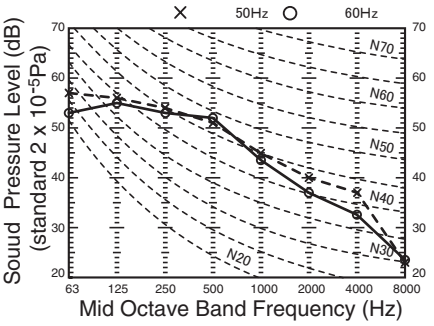
Model FDU140KXE6
Noise level 43 dB (A) at HIGH
39 dB (A) at LOW



Model FDU224KXE6
Noise level 51/60 dB (A) at HIGH



Model FDU280KXE6
Noise level 68/80 dB (A) at HIGH



• Power level
(Measurement conditions: JIS-B8616,
measurement location: reverberation chamber)

(Unit: dB)

MODEL	Outlet side	Inlet side
FDU71KXE6	65	65
FDU90, 112KXE6	66	66
FDU140KXE6	67	67

Note (1) Values are for external static pressure of 50Pa

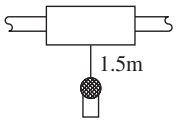
(Unit: dB)

MODEL	Outlet side	Inlet side
FDU224KXE6	75	64
FDU280KXE6	76	65

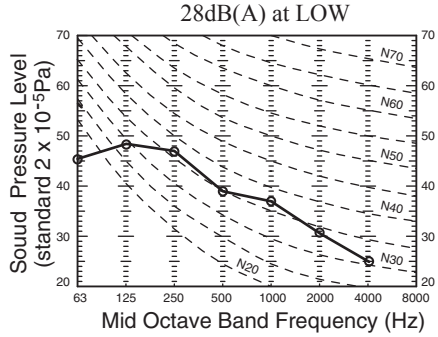
Note (1) Values are for external static pressure of 200Pa

(g) Duct connected-Middle static pressure type (FDUM)

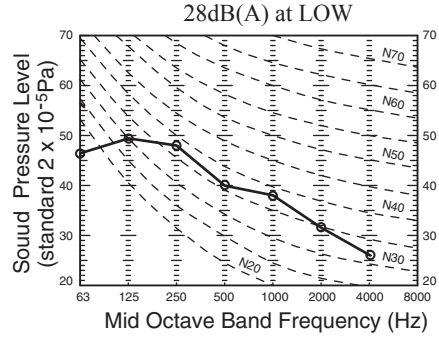
Measured based on JIS B 8616
Mike position as right



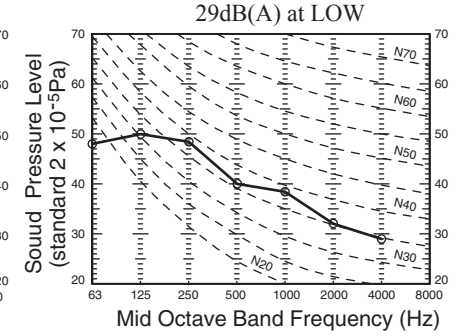
Model FDUM22KXE6
Noise level 33dB(A) at HIGH
31dB(A) at MEDIUM
28dB(A) at LOW



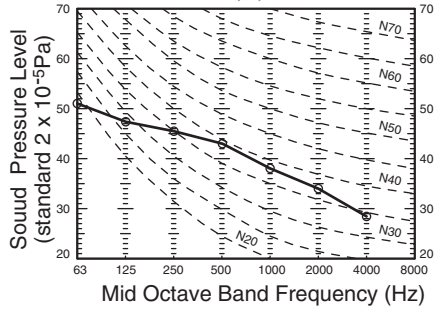
Models FDUM28KXE6,36KXE6
Noise level 34dB(A) at HIGH
31dB(A) at MEDIUM
28dB(A) at LOW



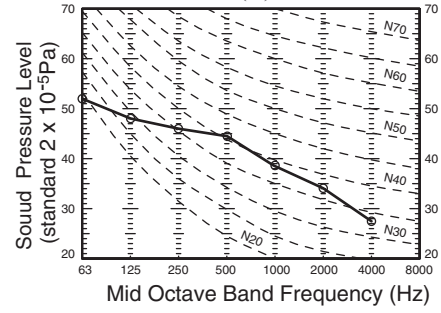
Models FDUM45KXE6,56KXE6
Noise level 35dB(A) at HIGH
32dB(A) at MEDIUM
29dB(A) at LOW



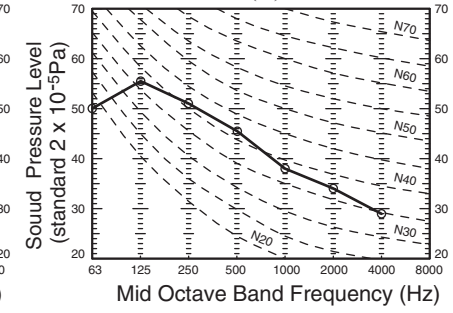
Model FDUM71KXE6
Noise level 35dB(A) at HIGH
32dB(A) at MEDIUM
29dB(A) at LOW



Model FDUM90KXE6
Noise level 36dB(A) at HIGH
33dB(A) at MEDIUM
30dB(A) at LOW

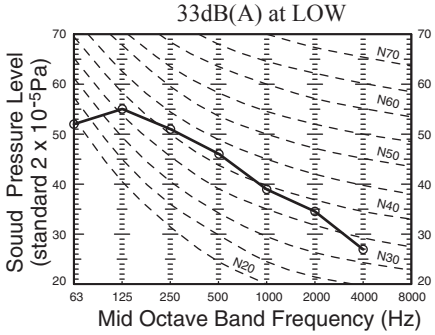


Model FDUM112KXE6
Noise level 37dB(A) at HIGH
35dB(A) at MEDIUM
32dB(A) at LOW

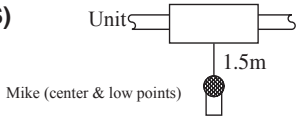


Model FDUM140KXE6

Noise level 38dB(A) at HIGH
36dB(A) at MEDIUM
33dB(A) at LOW



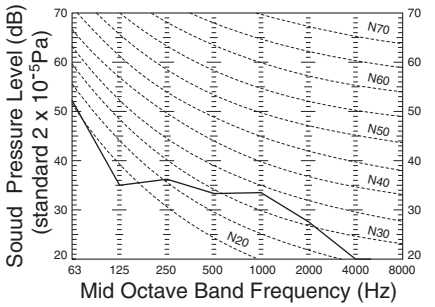
(h) Duct connected (Ultra thin)-Low static pressure type (FDQS)



Measured based on JIS B 8616
Mike position as right

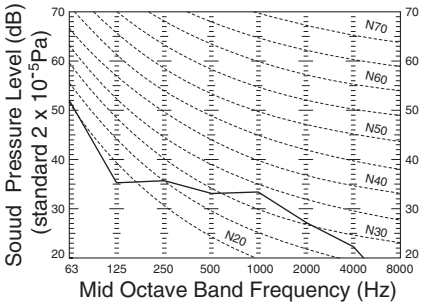
Model FDQS22, 28, 36KXE6

Noise level (Rear air return)
37 dB (A) at HIGH
35 dB (A) at MEDIUM
33 dB (A) at LOW



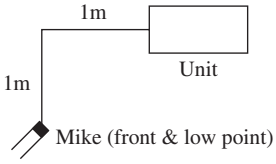
Model FDQS45, 56KXE6

Noise level (Rear air return)
37 dB (A) at HIGH
35 dB (A) at MEDIUM
33 dB (A) at LOW



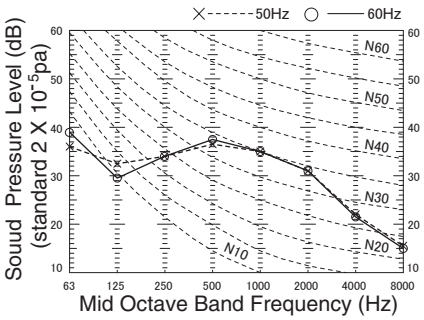
(i) Ceiling suspended type (FDE)

Measured based on JIS B 8616
Mike position as below



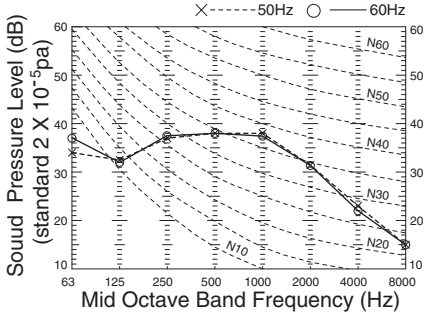
Models FDE36KXE6A, 45KXE6A, 56KXE6A

Noise level 39 dB (A) at HIGH
38 dB (A) at MEDIUM
36 dB (A) at LOW



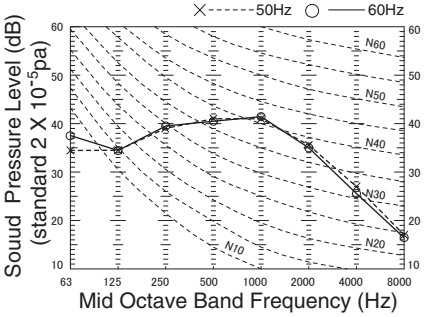
Model FDE71KXE6A

Noise level 41 dB (A) at HIGH
39 dB (A) at MEDIUM
37 dB (A) at LOW



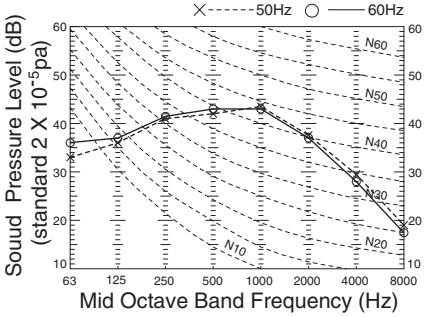
Model FDE112KXE6A

Noise level 44 dB (A) at HIGH
41 dB (A) at MEDIUM
39 dB (A) at LOW



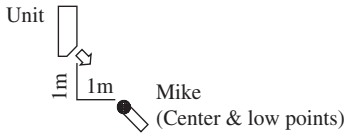
Model FDE140KXE6A

Noise level 46 dB (A) at HIGH
44 dB (A) at MEDIUM
43 dB (A) at LOW

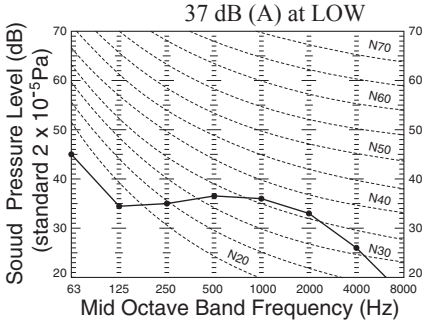


(j) Wall mounted type (FDK)

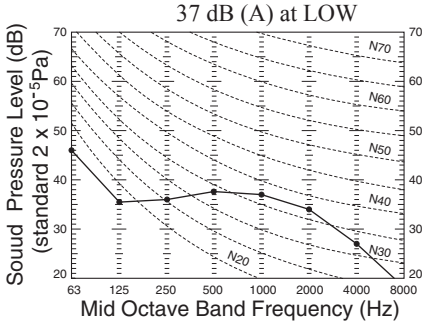
Measured based on JIS B 8616
Mike position as right



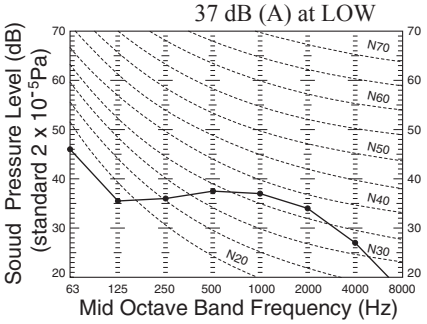
Models FDK22KXE6, 28KXE6
Noise level 40 dB (A) at HIGH
39 dB (A) at MEDIUM
37 dB (A) at LOW



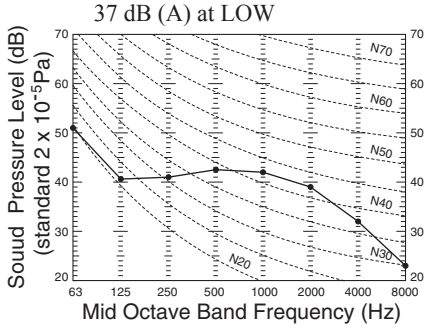
Model FDK36KXE6
Noise level 41 dB (A) at HIGH
39 dB (A) at MEDIUM
37 dB (A) at LOW



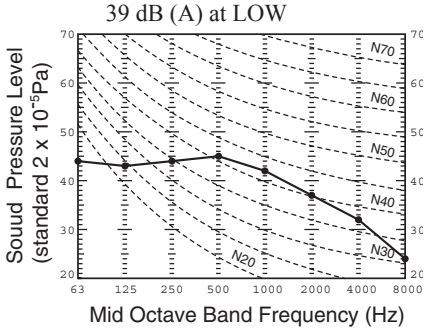
Model FDK45KXE6
Noise level 46 dB (A) at HIGH
39 dB (A) at MEDIUM
37 dB (A) at LOW



Model FDK56KXE6
Noise level 46 dB (A) at HIGH
39 dB (A) at MEDIUM
37 dB (A) at LOW

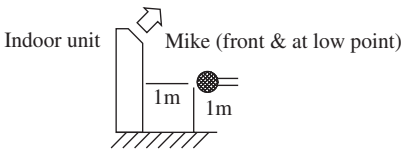


Model FDK71KXE6
Noise level 47 dB (A) at HIGH
43 dB (A) at MEDIUM
39 dB (A) at LOW

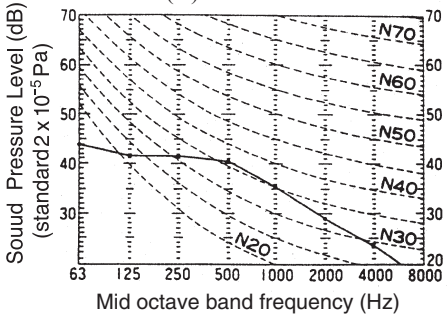


(k) Floor standing type (FDFL, FDFU))

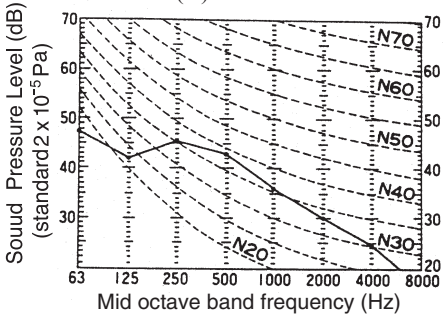
Measured based on JIS B 8616
Mike position as right



Models FDFL28KXE6, FDFU28KXE6
Noise level 41 dB (A) at HIGH
38 dB (A) at MEDIUM
36 dB (A) at LOW



Models FDFL45KXE6, 71KXE6
FDFU45KXE6, 56KXE6, 71KXE6
Noise level 43 dB (A) at HIGH
41 dB (A) at MEDIUM
40 dB (A) at LOW

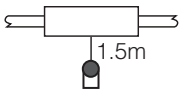


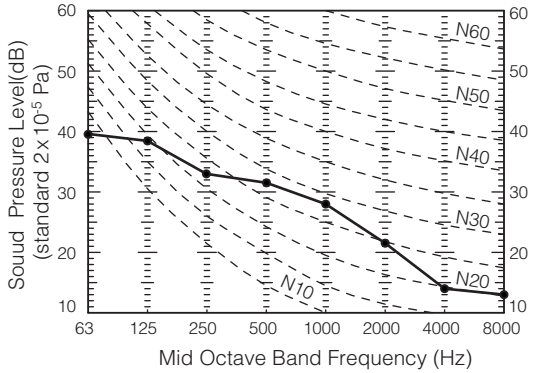
(I) Duct connected-compact and Flexible type (FDUH)

(1) Condition1

Measured based on JIS B8616

Mike position as right





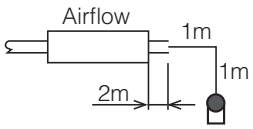
dB(A)

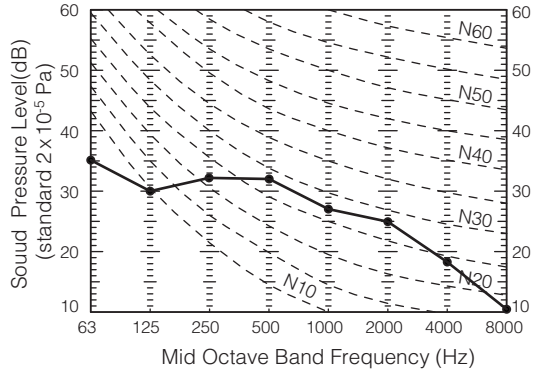
Hi	Me	Lo
33	30	27

(2) Condition2 (For Reference)

Measured based on JIS B8616 ANNEX 3 {Duct Setting}

Mike position as right





dB(A)

Hi	Me	Lo
35	31	28

If blowout duct is shorter than above length (2m), sound pressure level will increase.

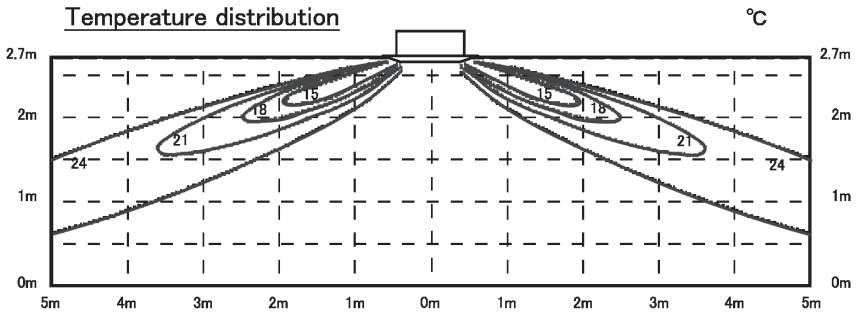
3.5 Temperature and velocity distribution

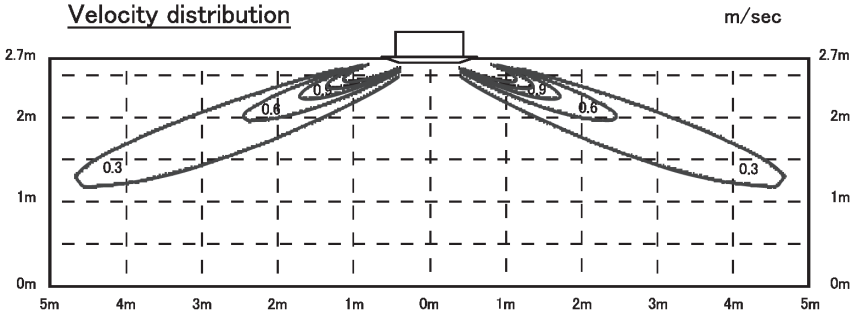
(a) Ceiling cassett-4 way type (FDT)

Models FDT28, 36, 45, 56, 71KXE6A

Cooling Air flow Hi

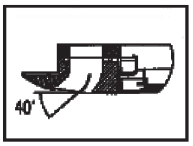
Louver position

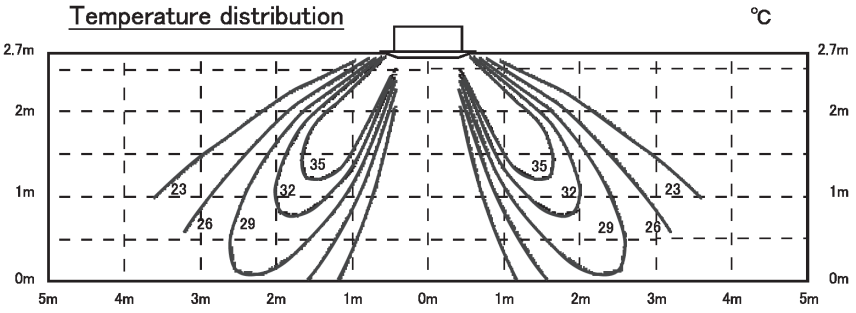


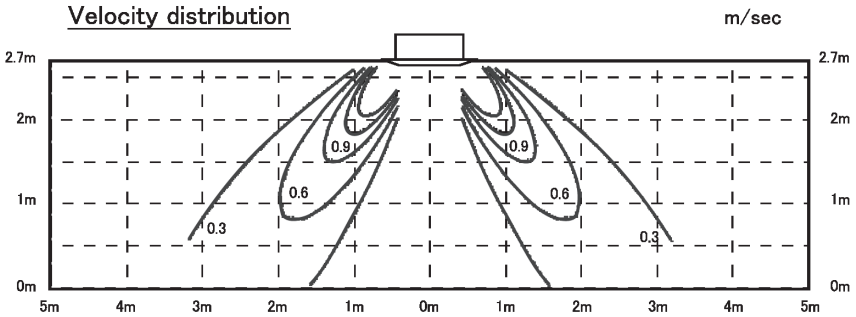


Heating Air flow Hi

Louver position



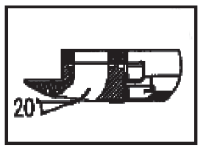


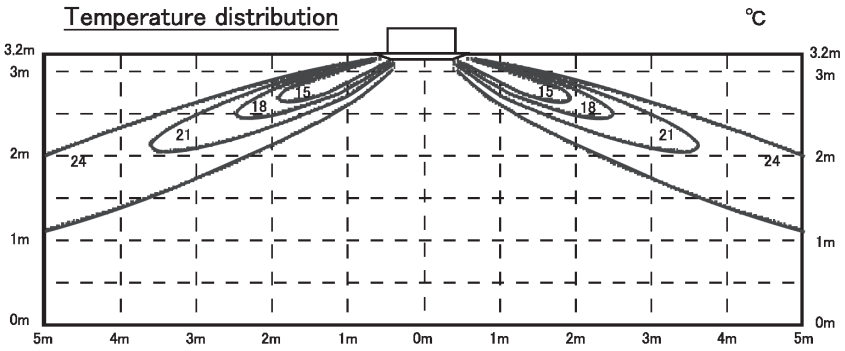


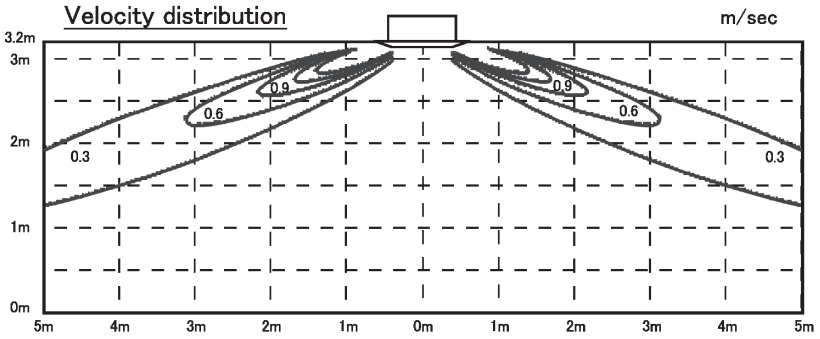
Models FDT90, 112KXE6A

Cooling Air flow Hi

Louver position

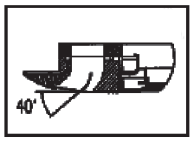


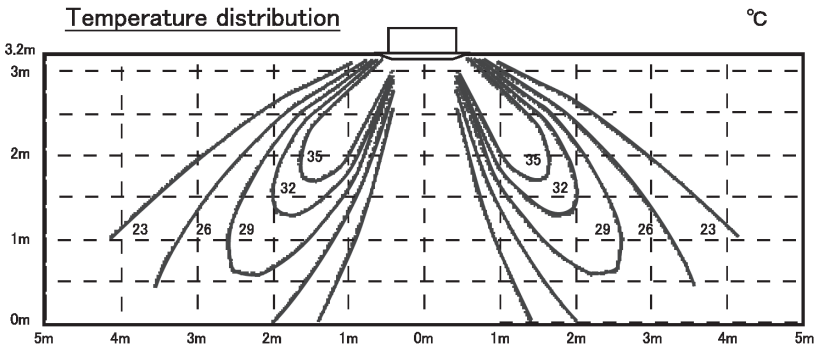


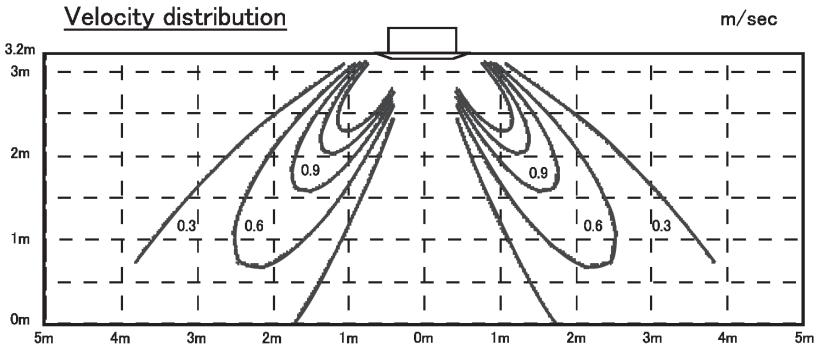


Heating Air flow Hi

Louver position



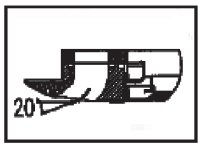




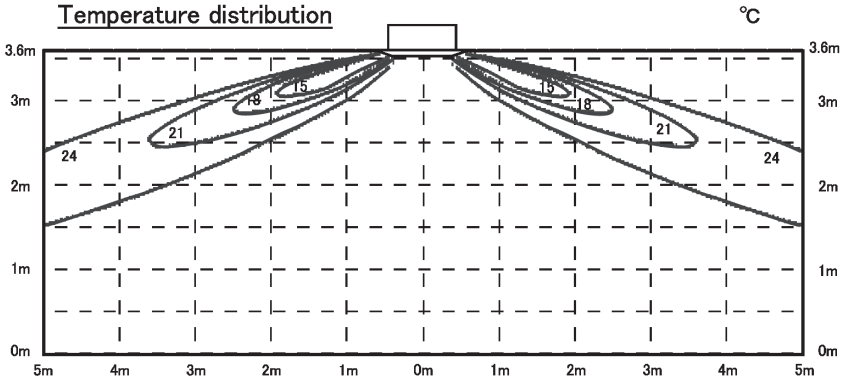
Models FDT140, 160KXE6

Cooling Air flow Hi

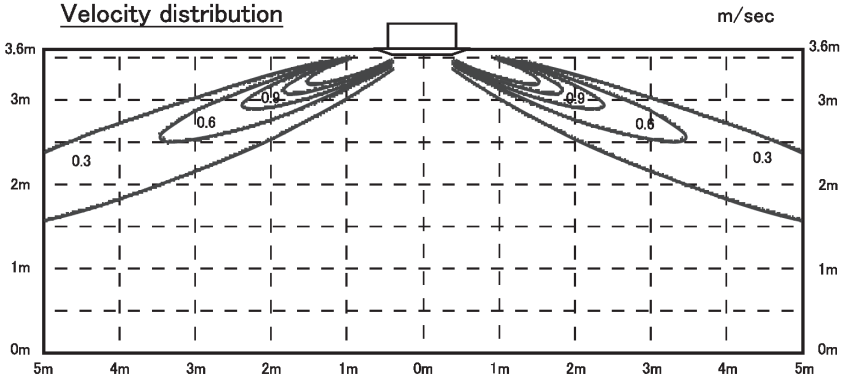
Louver position



Temperature distribution ℃



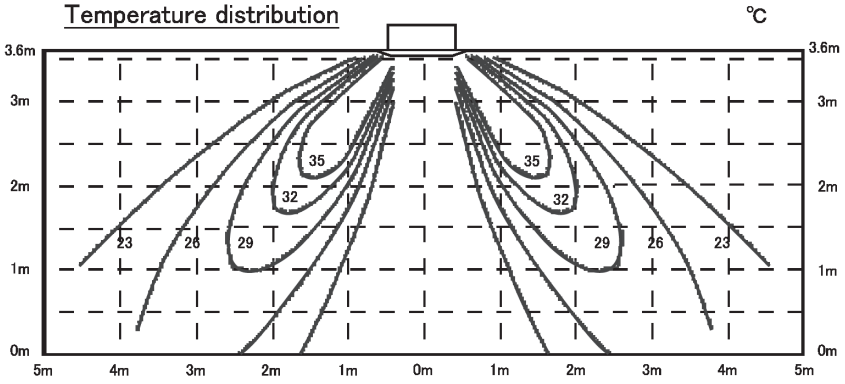
Velocity distribution m/sec



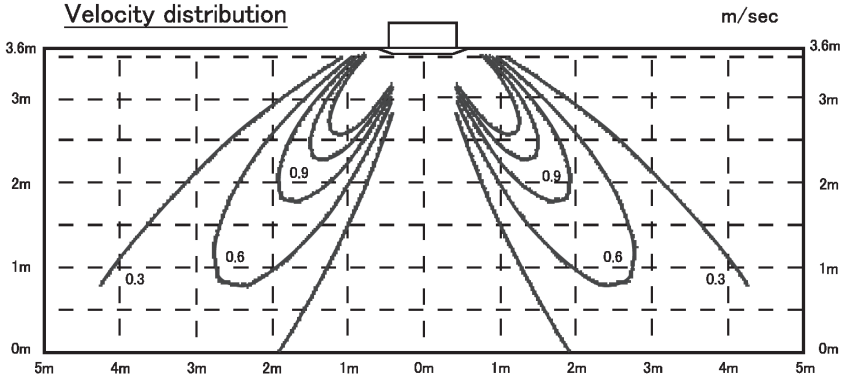
Heating Air flow Hi

Louver position

Temperature distribution ℃



Velocity distribution m/sec

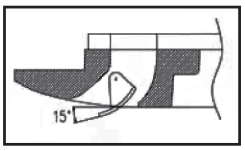


(b) Ceiling cassette-4 way-compact type (FDTC)

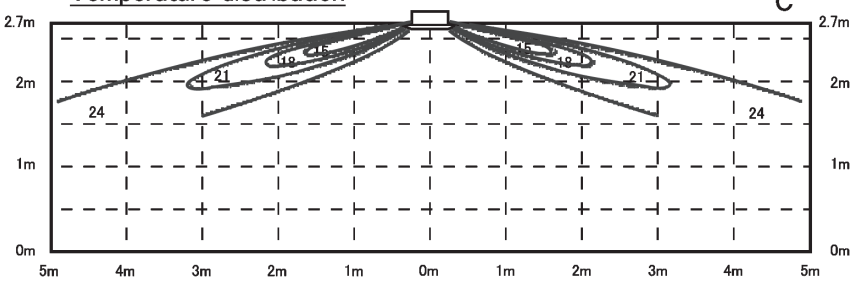
Models FDTC22, 28KXE6A

Cooling Air flow Hi

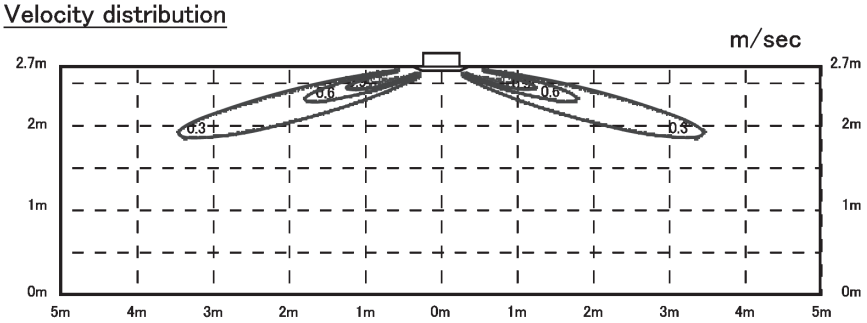
Louver position



Temperature distribution

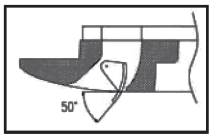


Velocity distribution

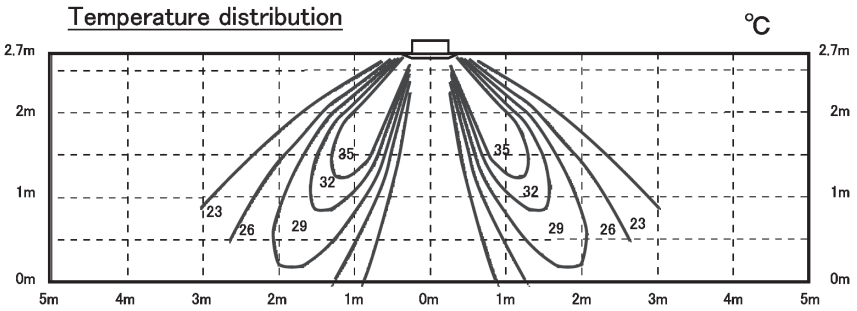


Heating Air flow Hi

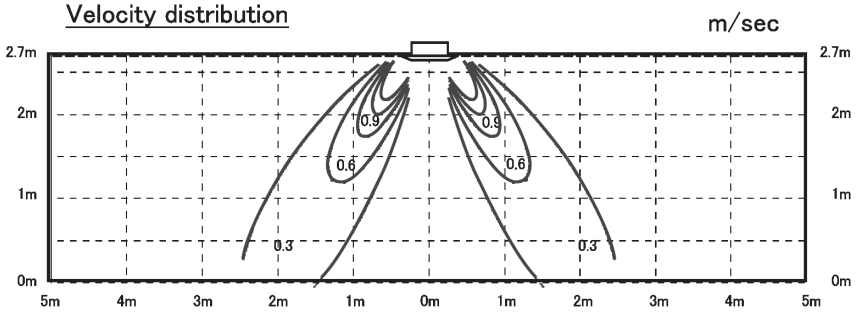
Louver position



Temperature distribution



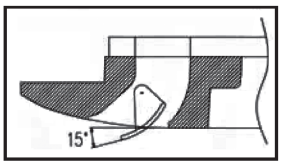
Velocity distribution

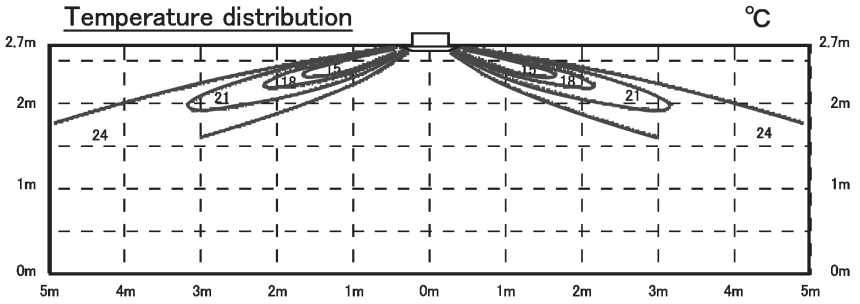


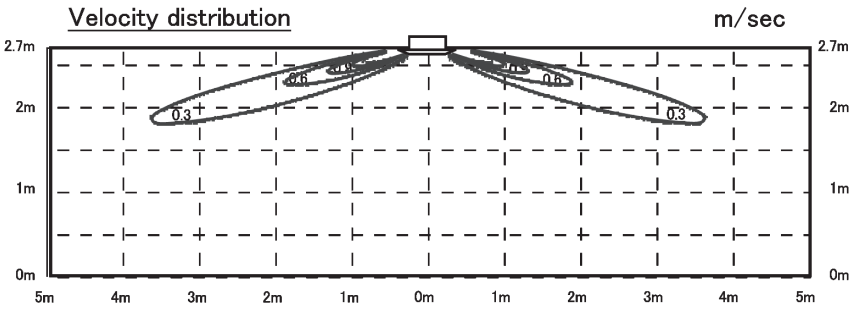
Model FDTC36KXE6A

Cooling Air flow Hi

Louver position

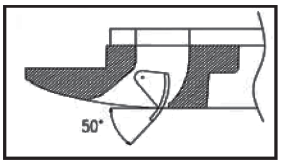


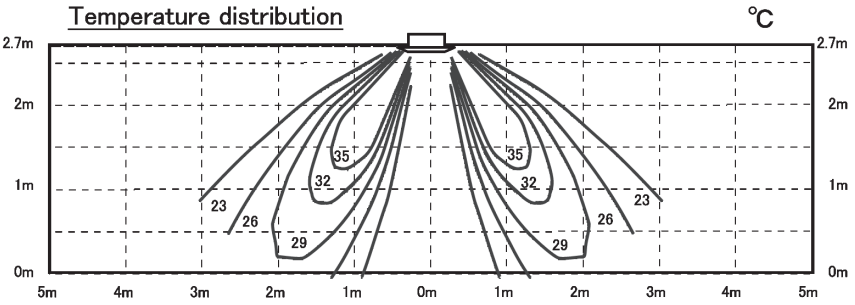


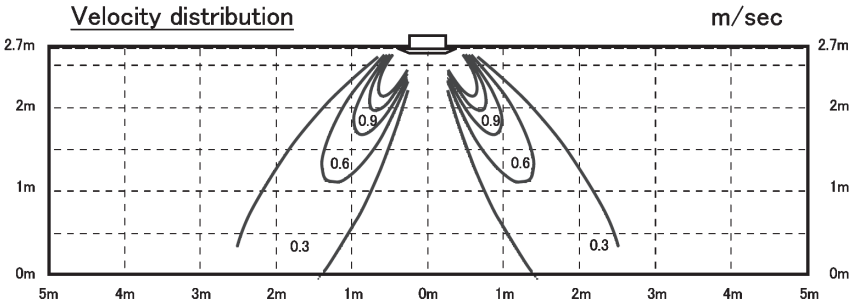


Heating Air flow Hi

Louver position



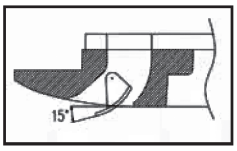




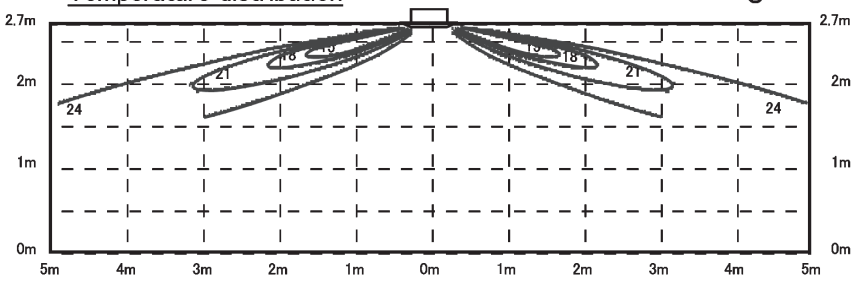
Model FDTC45KXE6A

Cooling Air flow Hi

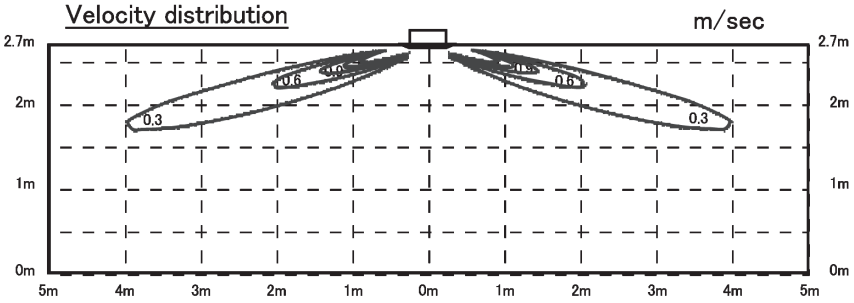
Louver position



Temperature distribution ℃

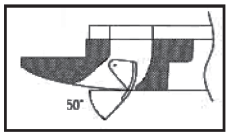


Velocity distribution m/sec

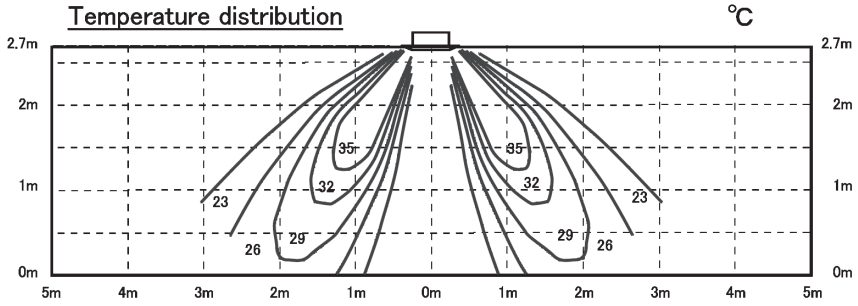


Heating Air flow Hi

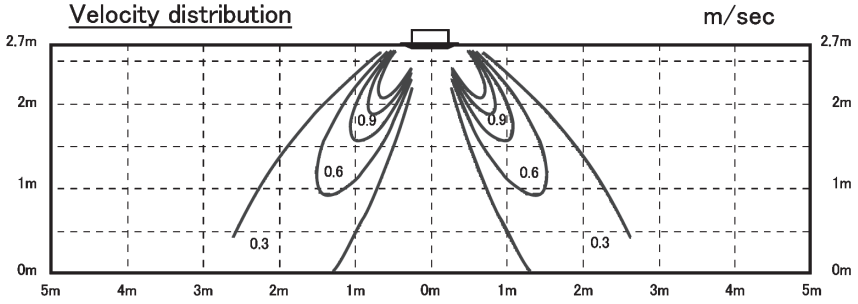
Louver position



Temperature distribution ℃



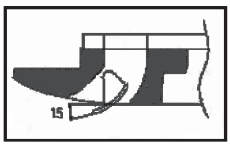
Velocity distribution m/sec



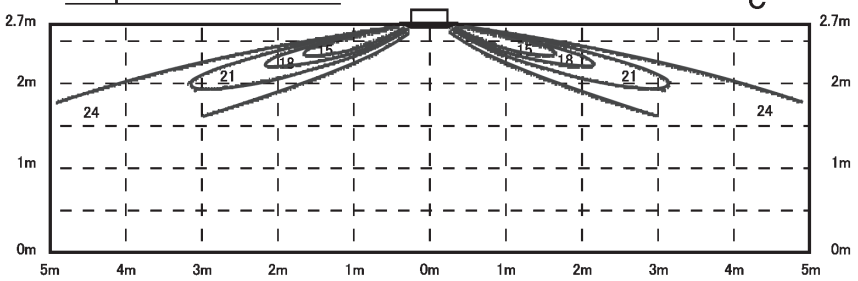
Model FDTC56KXE6A

Cooling Air flow Hi

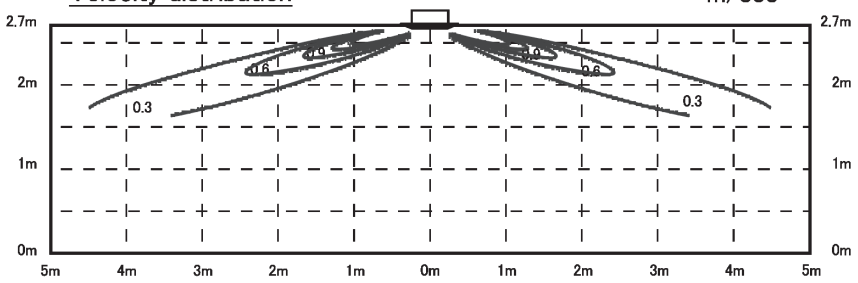
Louver position



Temperature distribution ℃

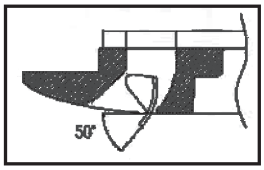


Velocity distribution m/sec

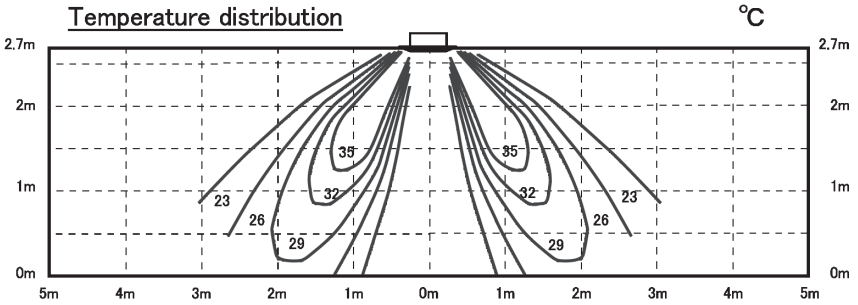


Heating Air flow Hi

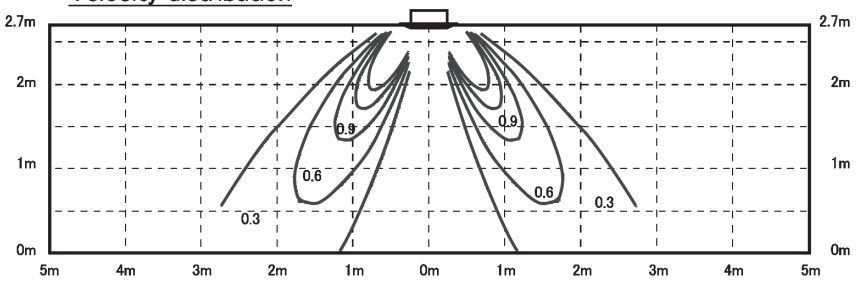
Louver position



Temperature distribution ℃



Velocity distribution m/sec

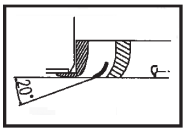


(c) Ceiling cassette-2 way type (FDTW)

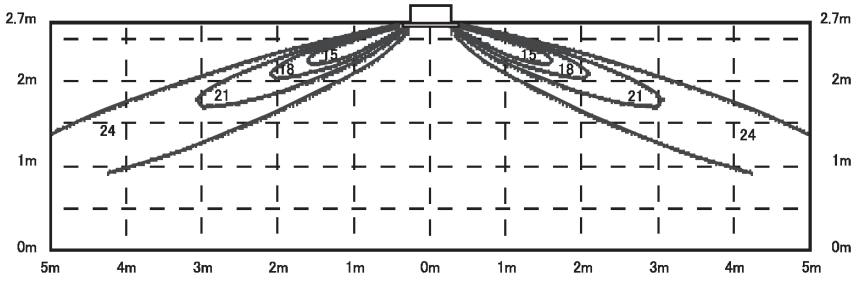
Models FDTW28, 45, 56KXE6

Cooling Air flow Hi

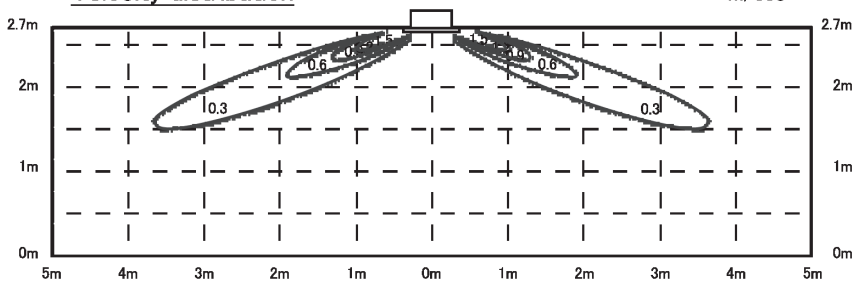
Louver position



Temperature distribution ℃

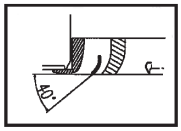


Velocity distribution m/sec

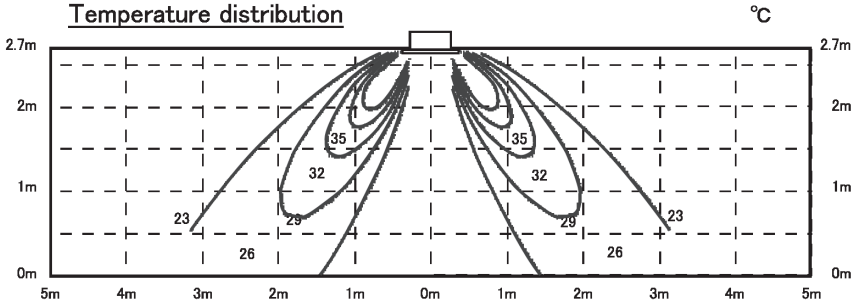


Heating Air flow Hi

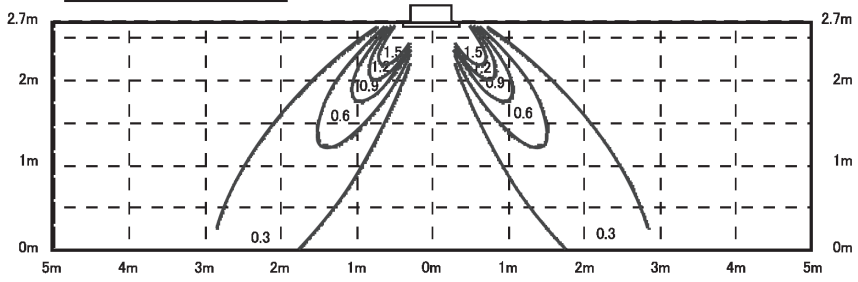
Louver position



Temperature distribution ℃



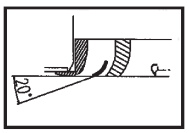
Velocity distribution m/sec



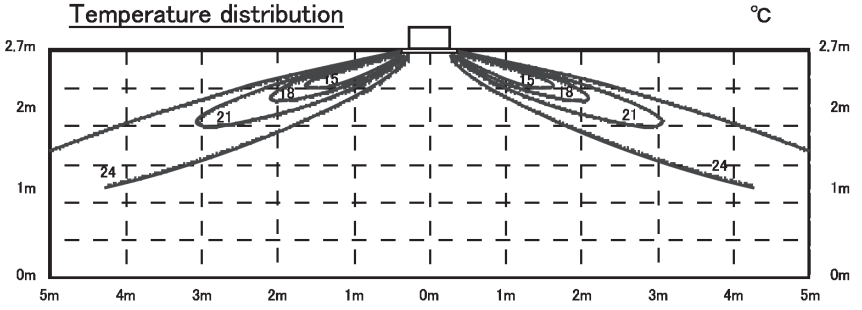
Model FDTW71KXE6

Cooling Air flow Hi

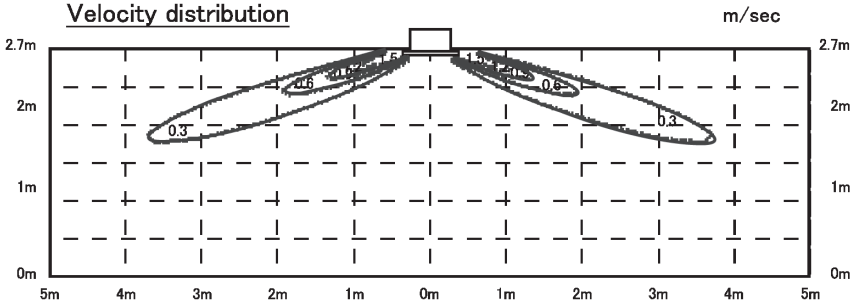
Louver position



Temperature distribution ℃

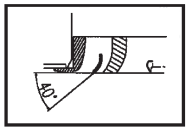


Velocity distribution m/sec

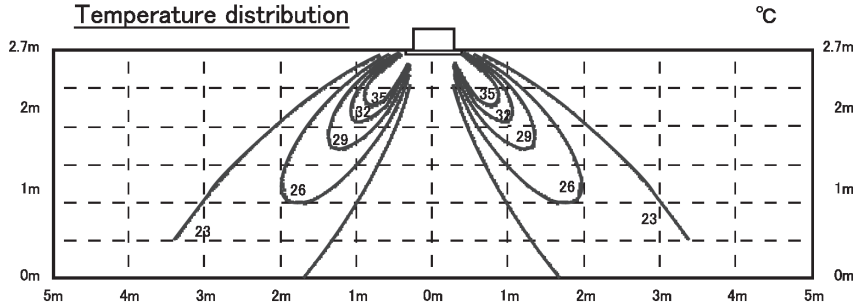


Heating Air flow Hi

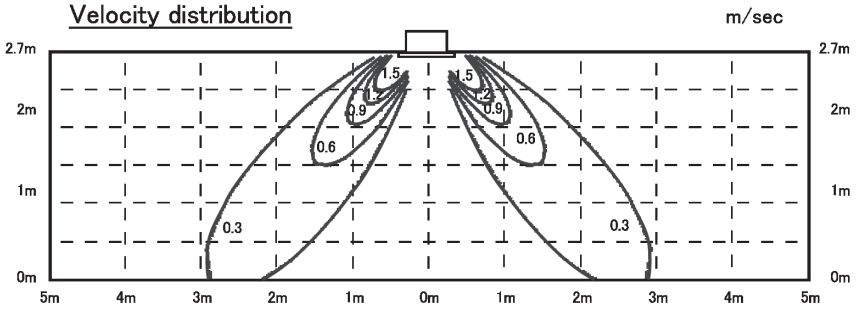
Louver position



Temperature distribution ℃



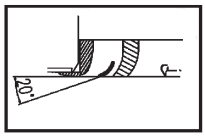
Velocity distribution m/sec



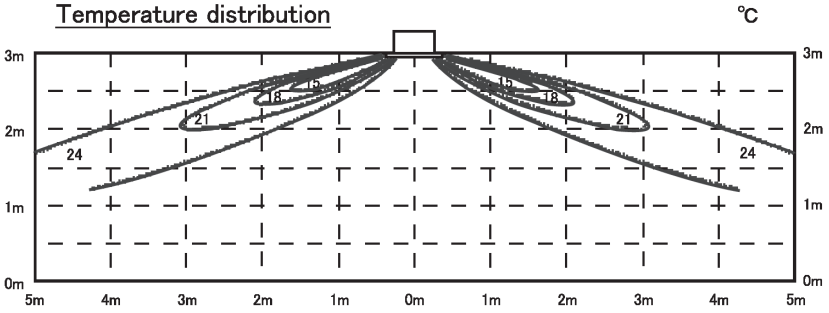
Model FDTW90KXE6

Cooling Air flow Hi

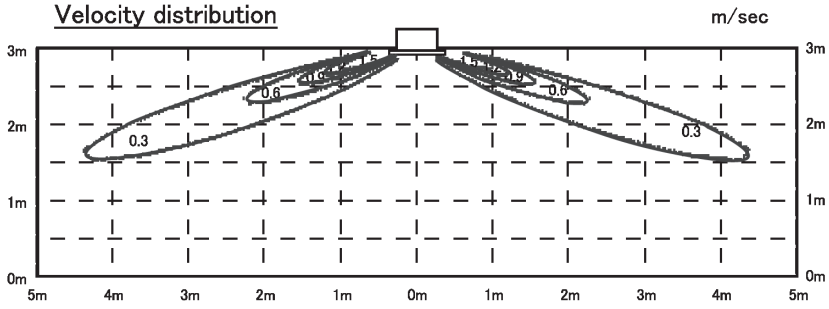
Louver position



Temperature distribution ℃

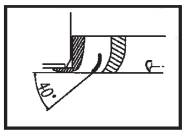


Velocity distribution m/sec

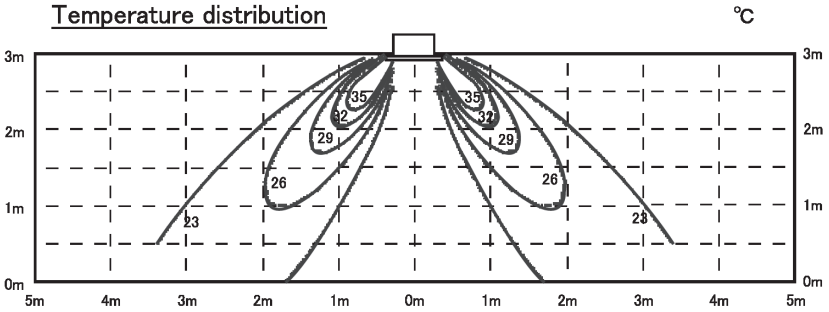


Heating Air flow Hi

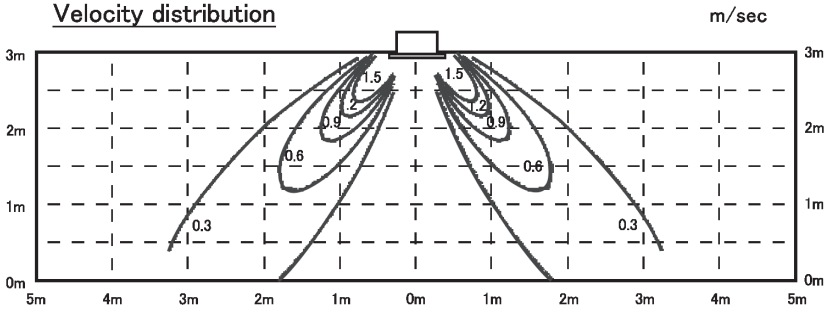
Louver position



Temperature distribution ℃



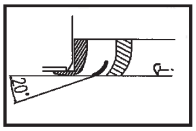
Velocity distribution m/sec



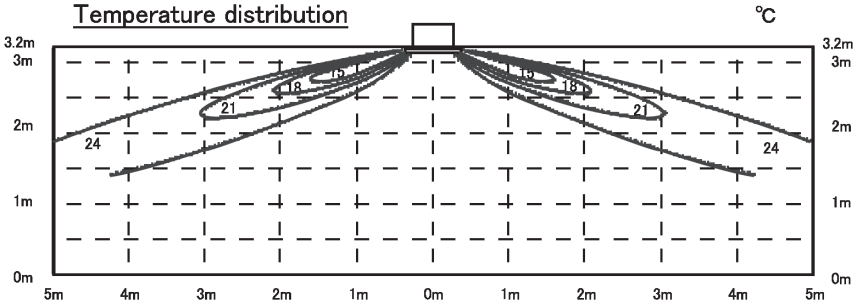
Model FDTW112KXE6

Cooling Air flow Hi

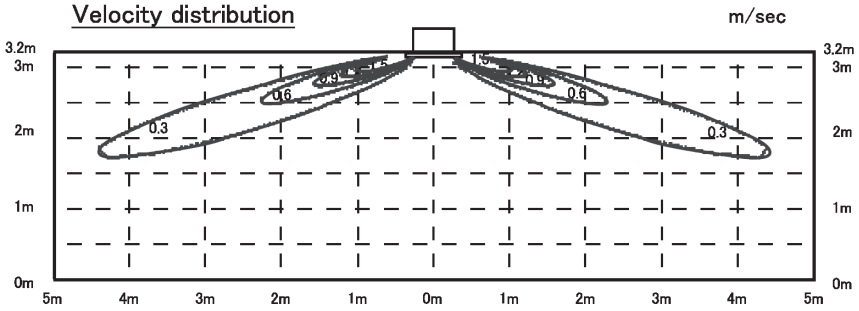
Louver position



Temperature distribution ℃

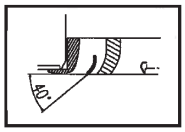


Velocity distribution m/sec

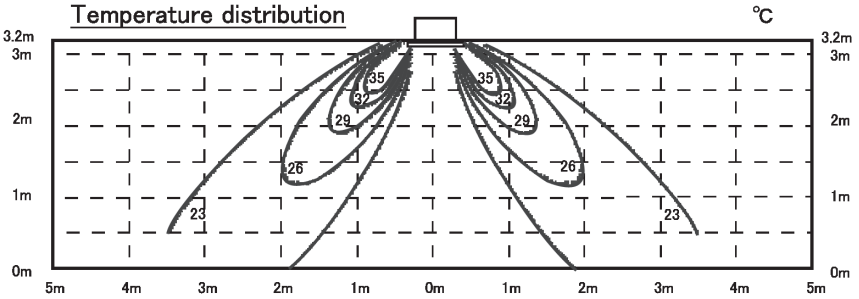


Heating Air flow Hi

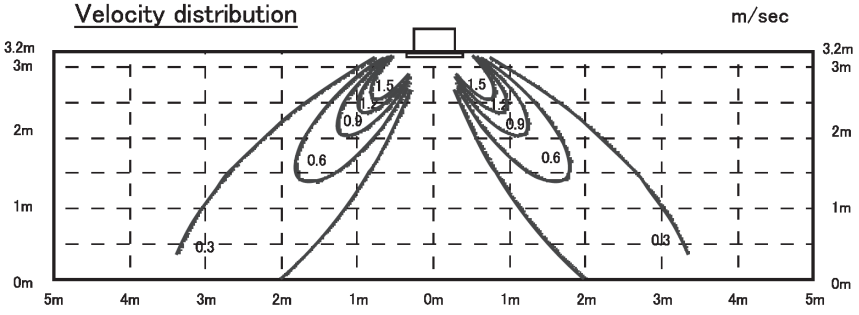
Louver position



Temperature distribution ℃



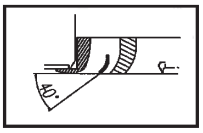
Velocity distribution m/sec



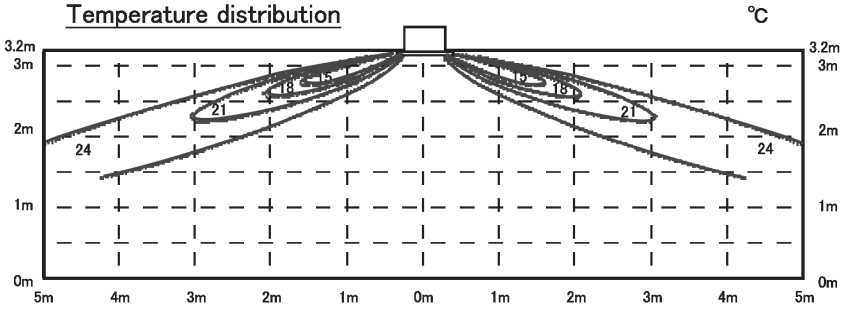
Model FDTW140KXE6

Cooling Air flow Hi

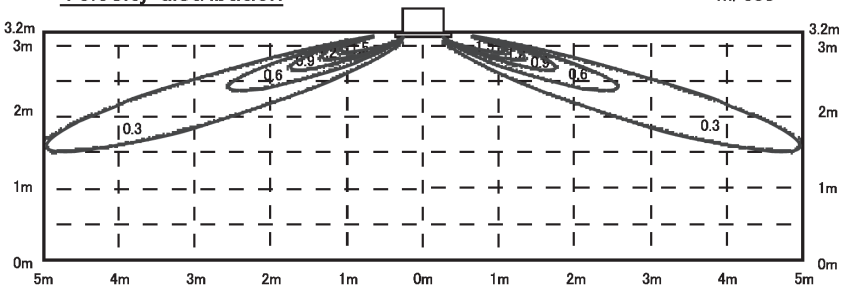
Louver position



Temperature distribution ℃

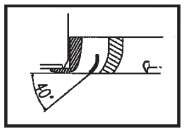


Velocity distribution m/sec

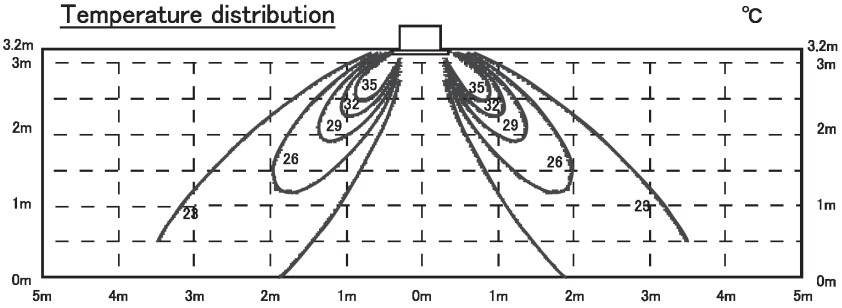


Heating Air flow Hi

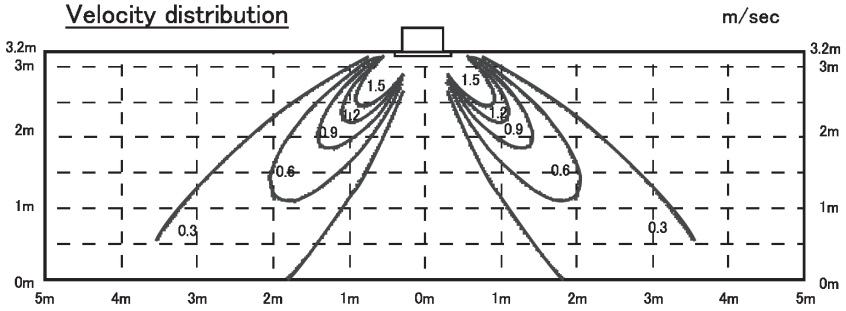
Louver position



Temperature distribution ℃



Velocity distribution m/sec

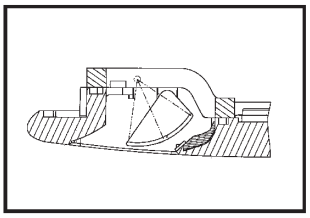


(d) Ceiling cassette-1 way compact type (FDTQ)

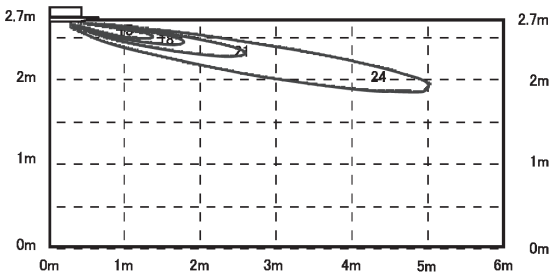
Models FDTQ22, 28, 36KXE6

Cooling Air flow Hi

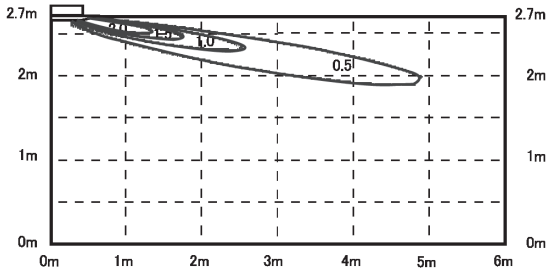
Louver position



Temperature distribution ℃

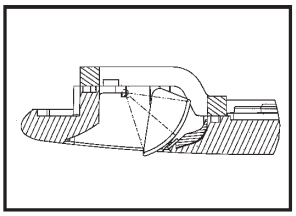


Velocity distribution m/sec

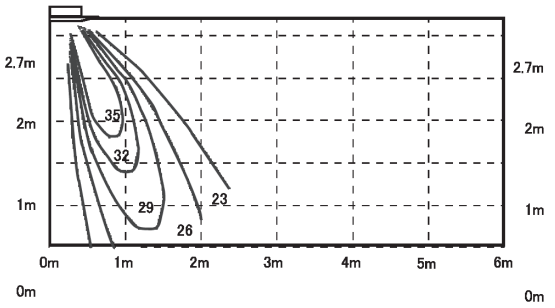


Heating Air flow Hi

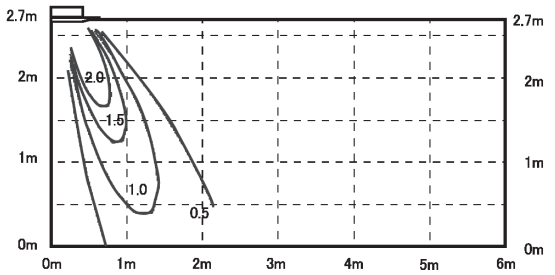
Louver position



Temperature distribution ℃



Velocity distribution m/sec

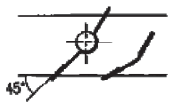


(e) Ceiling cassette-1 way type (FDTS)

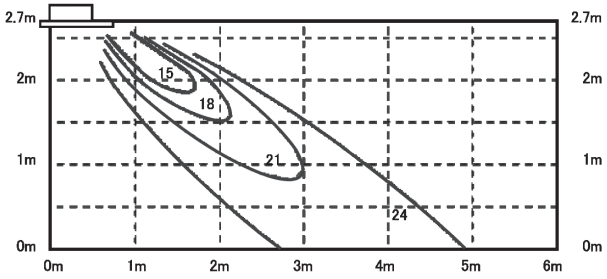
Model FDTS45KXE6

Cooling Air flow Hi

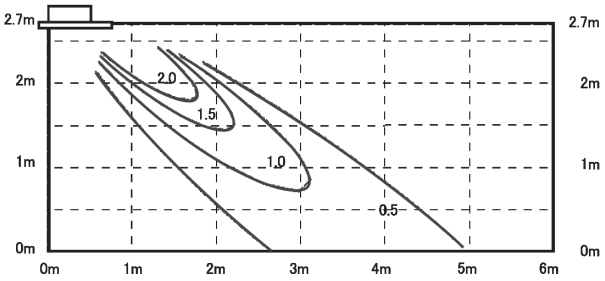
Louver position



Temperature distribution ℃

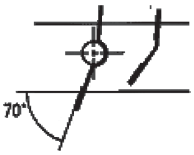


Velocity distribution m/sec

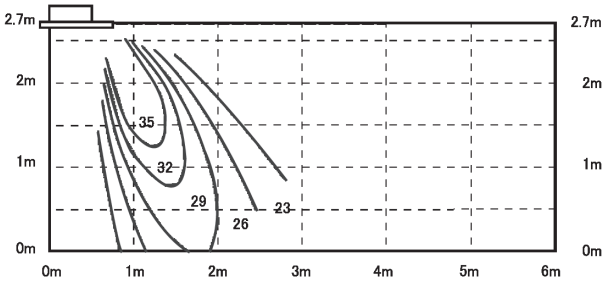


Heating Air flow Hi

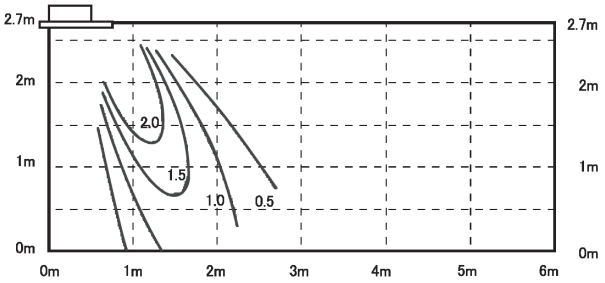
Louver position



Temperature distribution ℃



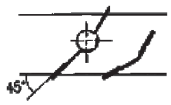
Velocity distribution m/sec



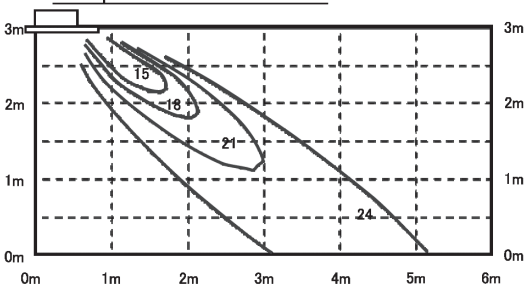
Model FDTS71KXE6

Cooling Air flow Hi

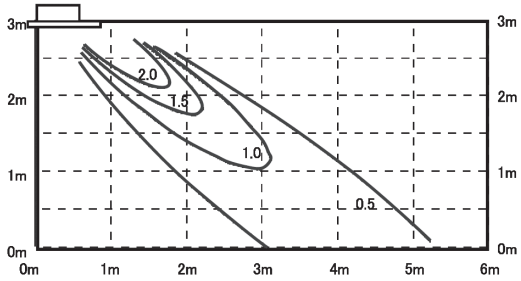
Louver position



Temperature distribution ℃

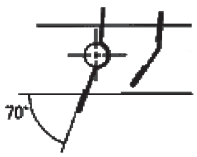


Velocity distribution m/sec

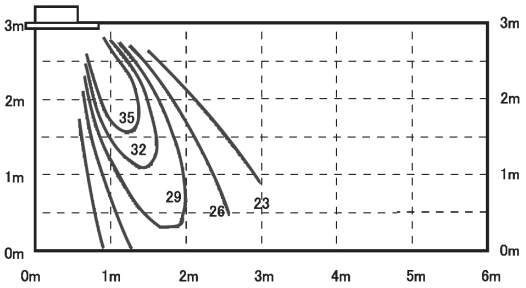


Heating Air flow Hi

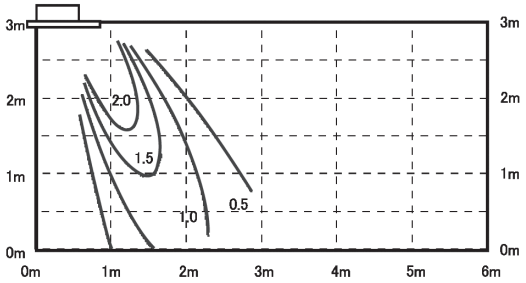
Louver position



Temperature distribution ℃



Velocity distribution m/sec

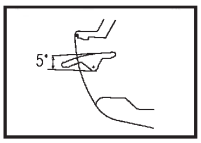


(f) Ceiling Suspended type (FDE)

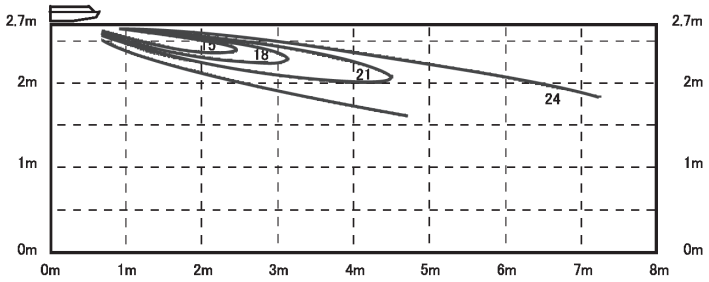
Models FDE36, 45, 56KXE6A

Cooling Air flow Hi

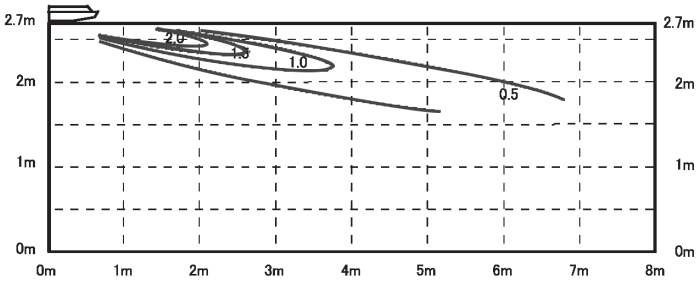
Louver position



Temperature distribution ℃

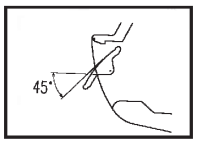


Velocity distribution m/sec

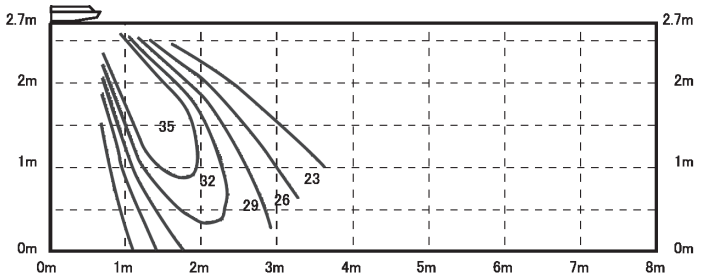


Heating Air flow Hi

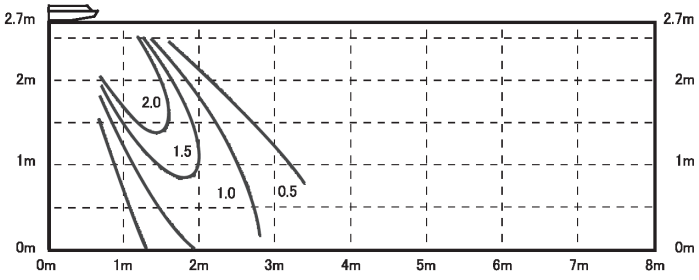
Louver position



Temperature distribution ℃



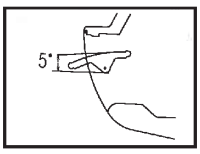
Velocity distribution m/sec



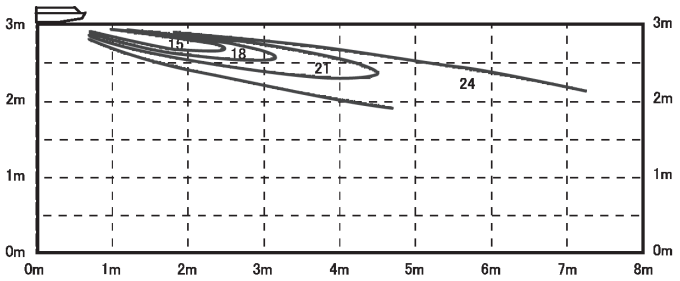
Models FDE71, 90KXE6A

Cooling Air flow Hi

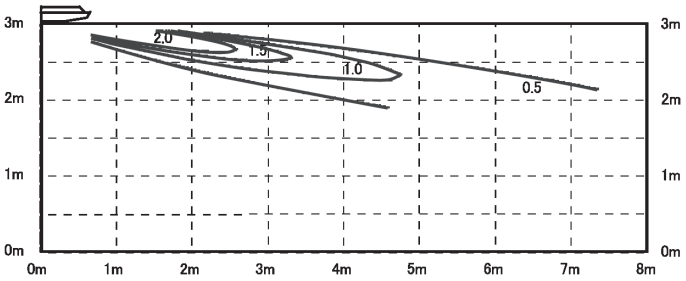
Louver position



Temperature distribution ℃

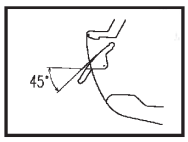


Velocity distribution m/sec

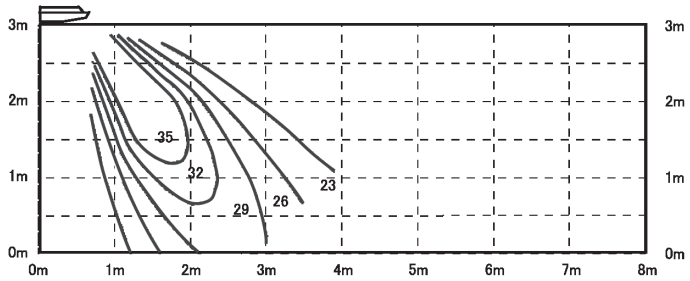


Heating Air flow Hi

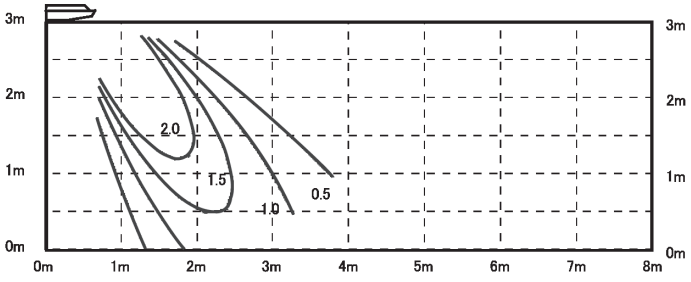
Louver position



Temperature distribution ℃



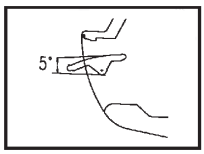
Velocity distribution m/sec



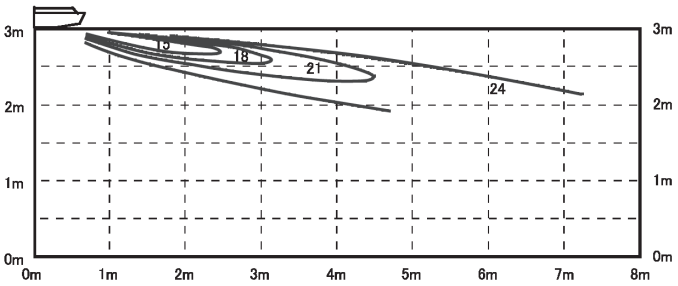
Model FDE112KXE6A

Cooling Air flow Hi

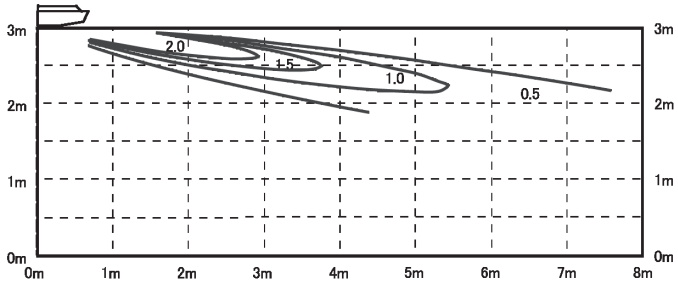
Louver position



Temperature distribution ℃

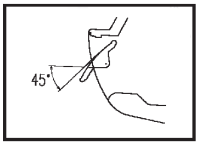


Velocity distribution m/sec

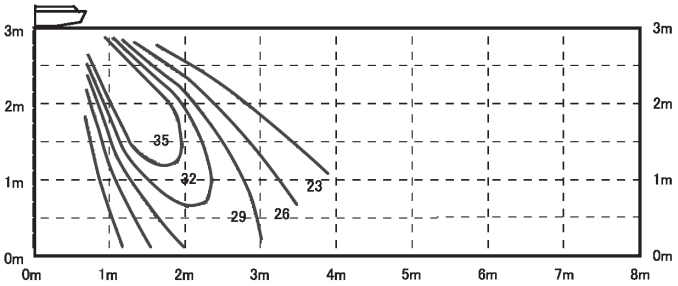


Heating Air flow Hi

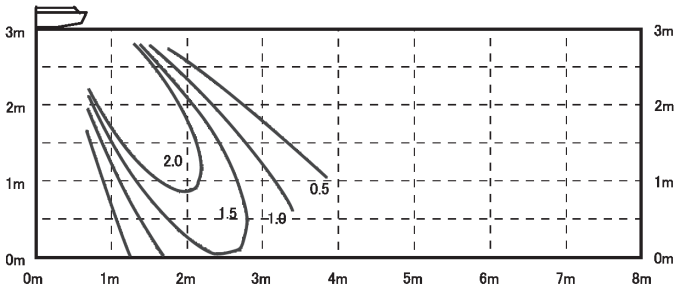
Louver position



Temperature distribution ℃



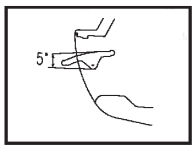
Velocity distribution m/sec



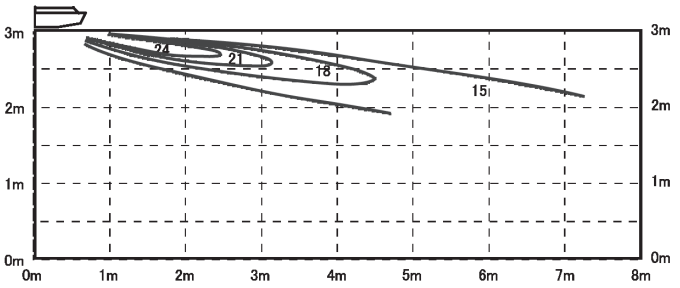
Model FDE140KXE6A

Cooling Air flow Hi

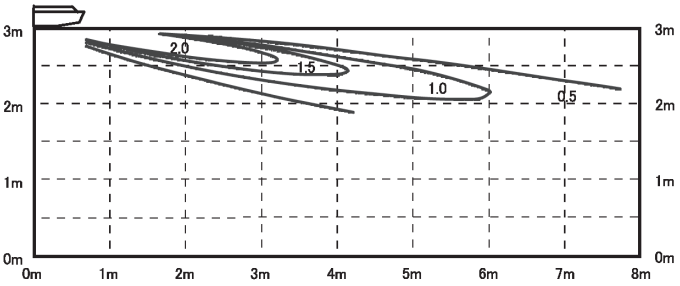
Louver position



Temperature distribution ℃

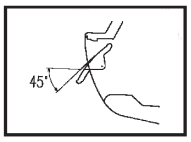


Velocity distribution m/sec

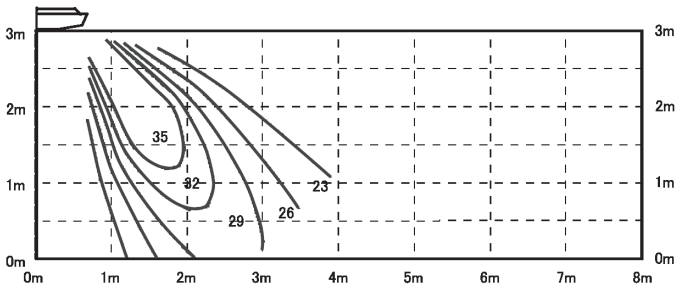


Heating Air flow Hi

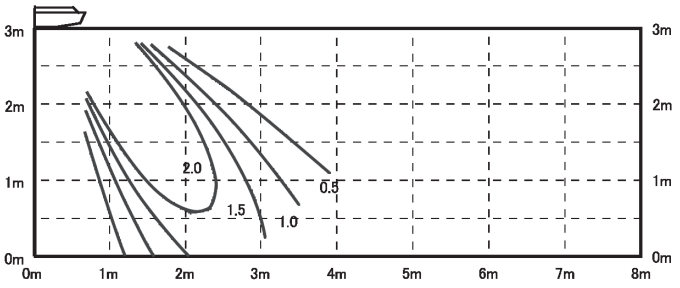
Louver position



Temperature distribution ℃



Velocity distribution m/sec

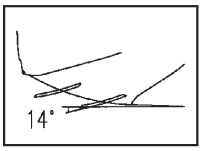


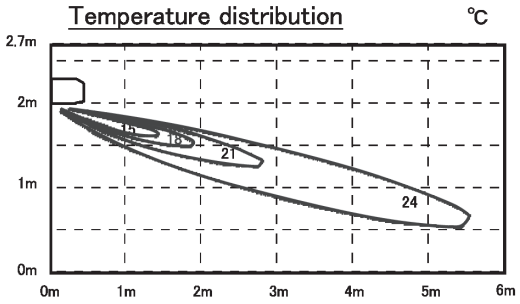
(g) Wall Mounded type (FDK)

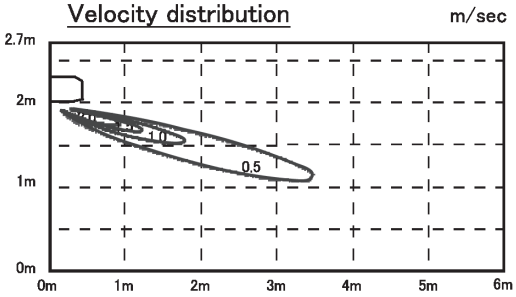
Models FDK22, 28KXE6

Cooling Air flow Hi

Louver position

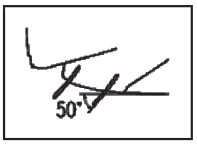


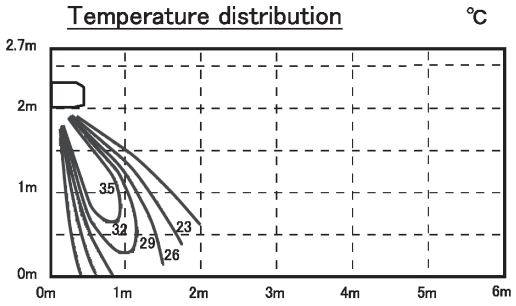


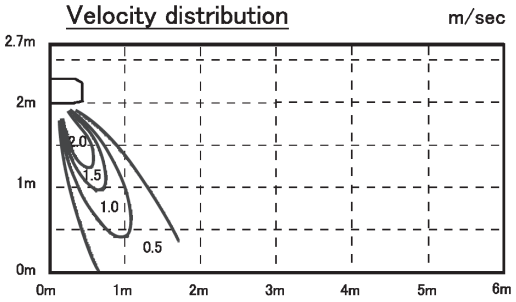


Heating Air flow Hi

Louver position



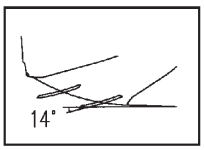




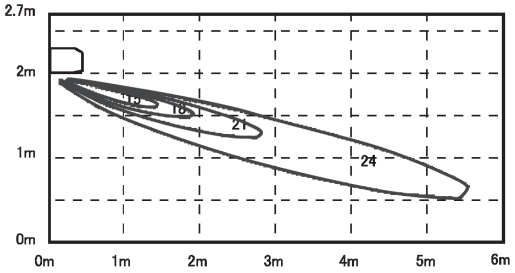
Model FDK36KXE6

Cooling Air flow Hi

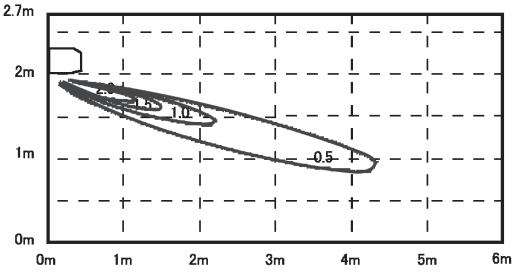
Louver position



Temperature distribution ℃

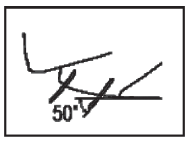


Velocity distribution m/sec

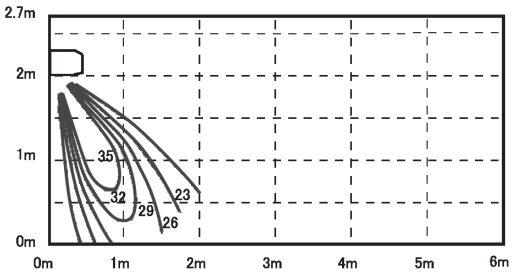


Heating Air flow Hi

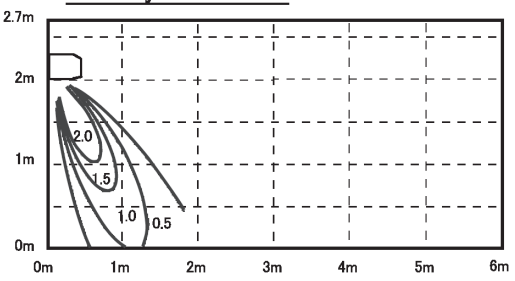
Louver position



Temperature distribution ℃



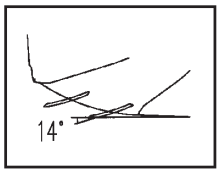
Velocity distribution m/sec



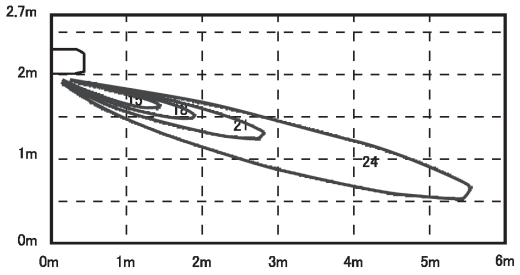
Model FDK45KXE6

Cooling Air flow Hi

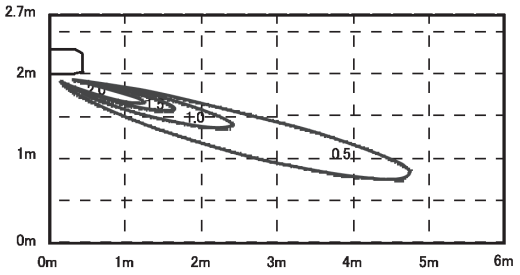
Louver position



Temperature distribution ℃

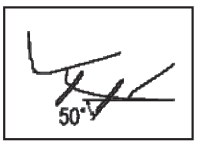


Velocity distribution

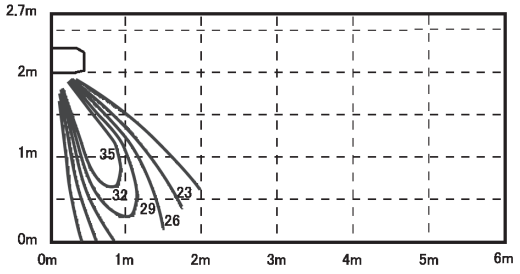


Heating Air flow Hi

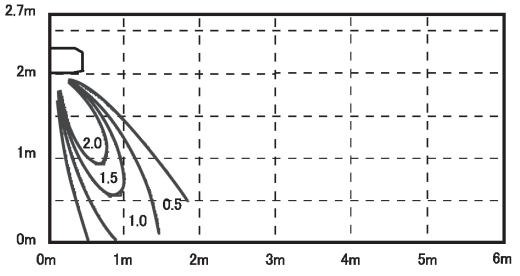
Louver position



Temperature distribution ℃



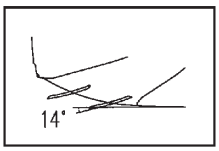
Velocity distribution



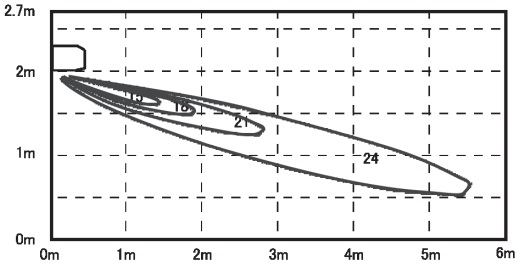
Model FDK56KXE6

Cooling Air flow Hi

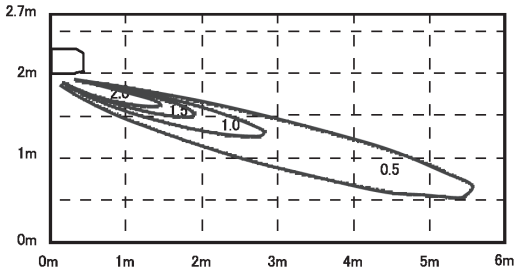
Louver position



Temperature distribution ℃

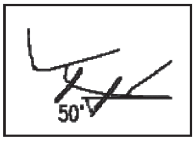


Velocity distribution

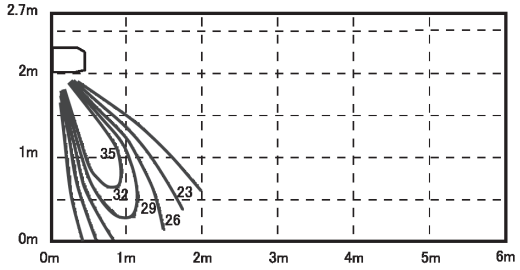


Heating Air flow Hi

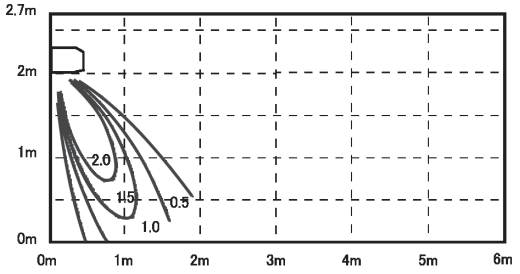
Louver position



Temperature distribution ℃



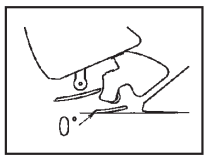
Velocity distribution



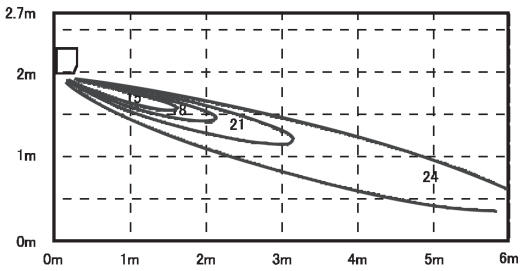
Model FDK71KXE6

Cooling Air flow Hi

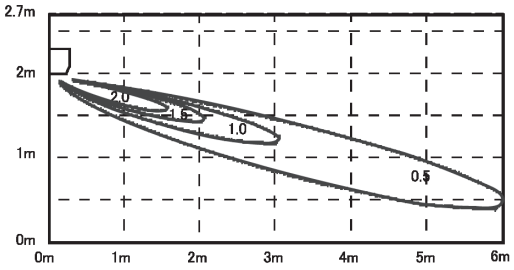
Louver position



Temperature distribution ℃

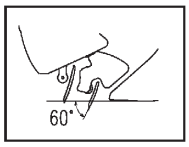


Velocity distribution

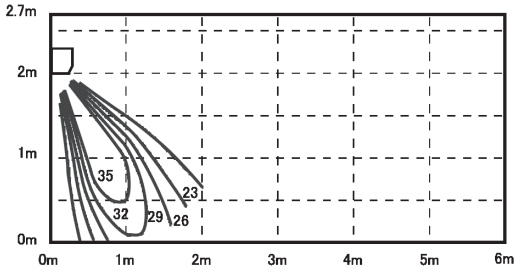


Heating Air flow Hi

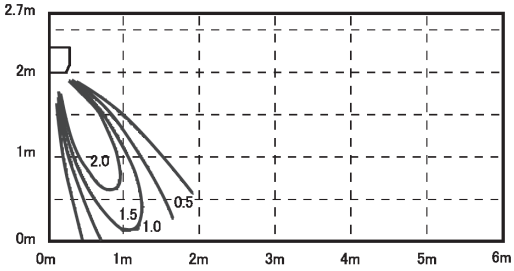
Louver position



Temperature distribution ℃



Velocity distribution



4. Iustallation of outdoor unit

MITSUBISHI HEAVY INDUSTRIES, LTD. MULTI AIR CONDITIONER OUTDOOR UNIT FOR BUILDINGS

KX SERIES INSTALLATION MANUAL

PCB012D015C H

Outdoor unit capacity
FDC224～335

◎This installation manual deals with outdoor units and general installation specifications only. For indoor units, please refer to the respective installation manuals supplied with your units.
◎Please read this manual carefully before you set to installation work and carry it out according to the instructions contained in this manual.

Precautions for safety

●Read these "Precautions for safty" carefully before starting installation work and do it in the proper way.
●Safety instructions listed here are grouped into ⚠ Warnings and ⚠Cautions. If a non-compliant installation method is likely to result in a serious consequence such as death or major injury, the instruction is grouped into ⚠ Warnings to emphasize its importance. However, a failure to observe a safety instruction listed under ⚠Cautions can also result in a serious consequence depending on the circumstances. Please observe all these instructions, because they include important points concerning safety.
●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.**
●When you have completed installation work, perform a test run and make sure that the installation is working properly. Then, explain the customer how to operate and how to take care of the air-conditioner according to the user's manual. Please ask the customer to keep this installation manual together with the user's manual.
● This unit complies with EN61000-3-3.
For outdoor unit, EN61000-3-2 is not applicable as consent by the utillty company or notiffcation to the utillty company is given before usage. (Only 224, 280)
For outdoor unit, EN61000-3-12 is not applicable as consant by the utillty company or notiffication to the utllity company is given before usage. (Only 335)

⚠WARNING

●Carry out installation work properly according to this installation manual.
Improper installation work can result in a water leak, an electric shock, a fire, or injury from a fall of the unit.
●Ask your dealer or a specialized service provider to install the unit.
Improper installation work performed on the part of a user can result in a water leak, an electric shock, a fire or injury from a fall of the unit.
●Always turn off power before you work inside the unit such as for installation or servicing.
A failure to observe this instruction can result in an electric shock.
●When an indoor unit is installed in a small room, it is necessary to take some safety precaution to keep refrigerant gas from building up beyond the upper limit concentration even if it leaks in the room. For safety precautions to prevent a concentration build-up beyond the upper limit, please consult with the dealer.
If refrigerant leaks and its concentration builds up beyond the upper limit, it can cause a lack-of-oxygen accident.
●Install the unit securely onto a structure that is strong enough to sustain its weight.
Insufficient strength can cause a drop or fall of the unit and resultant injury.
●Install the unit according to the prescribed installation specifications so that it can withstand strong winds, such as typhoons, and earthquakes.
Improper installation work can cause an accident such as from a fall of the unit.
●Wrap the unit with ropes properly rated for its weight at the specified points in hoisting it for haulage.
An improper hauling method can cause a fall of the unit and resultant death or major injury.
●Use only parts supplied with the unit and approved supply parts for installation work.
A failure to use genuine parts approved by the manufacturer may result in a fall of the unit, a water leak, a fire, an electric shock, a refrigerant leak, substandard performance or a control failure.
●Ask your dealer or a specialized service provider to install them.
Improper installation work performed on the part of a user can result in a water leak, electric shock or fire.
●Electrical installation work must be performed by an electrical installation service provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
A defect in power supply circuits such as insufficient capacity or improper installation can cause an electrical shock or fire.
●Always use specified cables and connect them securely. Fasten cables securely so that the terminal connections may not be subject to external force working through the cables.
Improper connection or fastening can cause heat generation, a fire or an electric shock.
●In connecting the power cable, make sure that no anomalies such as dust deposits, socket clogging or wobble are found and insert the plug securely.
Dust deposits, clogging or wobble can result in an electric shock or fire.
●Neatly arrange the cables so that they may not get loose, and put on the service panel securely. Improper installation can cause heat generation, a fire or an electric shock.
●In installing the unit, be sure to connect the refrigerant pipe before operating the compressor.
If you run the compressor without connecting the refrigerant pipe and with the service valves open, you may incur frost bite or injury from an abrupt refrigerant outflow. An abnormal pressure build-up may also occur in the refrigeration cycle as a result of the inhalation of air, which can result in pipe rupture or injury.
●Never open the service valves (either liquid or gas side) until refrigerant pipe installation work, an air-tightness test and evacuation are completed.
A failure to observe this instruction can result in frost bite or injury from an abrupt refrigerant outflow. If refrigerant gas leaks during installation work, immediately stop pipe blazing and other work and ventilate the room. Refrigerant gas, if it comes into contact with bare fire, can cause the generation of a toxic gas.
●Use pipes, flare nuts and tools specifically designed for R410A.
The use of existing materials (designed for refrigerant other than R410A) can result in a unit failure as well as a serious accident such as refrigeration cycle rupture or injury.
●Tighten a flare nut to a specified torque with two torque wrenches used together as a set. Over-tightening a flare nut can cause a refrigerant gas leak from flare nut breakage after years of operation. If a flare gets loose or breaks off, refrigerant gas will leak, which can cause a lack-of-oxygen accident.
●In carrying out a pump-down process, stop the compressor before you detach the refrigerant pipe.
If you detach the refrigerant pipe with the compressor running and the valves open, you may incur frost bite or injury from an abrupt refrigerant outflow. An abnormal pressure build-up may also occur in the refrigeration cycle as a result of the inhalation of air into the compressor, which can result in pipe rupture or injury.
●If refrigerant gas leaks during installation work, ventilate the room.
Refrigerant gas, if it comes into contact with bare fire, can cause the generation of a toxic gas.
●When installation work is completed, check the system for refrigerant gas leaks.
If refrigerant gas leaks indoors and comes into contact with bare fire such as of a fan heater, stove or cooking stove, it can cause the generation of a toxic gas.

●Don't open the operation valves (both for gas and fluid) till the refrigerant piping work, air tightness test and air purge are completed.
It could cause frostbite or injury due to sudden leakage of refrigerant.
●Do not run the drain piping directly into the sewer where a toxic gas such as sulfuric gas is generated.
This will pose a risk of a toxic gas flowing back into the room. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
●In installing or transferring an air conditioning system, never allow air or other foreign matters than specified refrigerant (R410A) to get into the refrigerant cycle. If air or other foreign matters gets into the refrigerant cycle, an abnormal pressure build-up will occur, which can result in pipe rupture or injury.

⚠CAUTION

●Secure a service space for inspection and maintenance as specified in the manual.
An insufficient service space can result in a fall from the installation point and resultant injury.
●When the outdoor unit is installed on a roof top or in an elevated position, provide permanent ladders and handrails along the access path and fences or handrails surrounding the outdoor unit to prevent an accidental fall.
●Perform installation work properly according to this installation manual.
Improper installation can cause abnormal vibrations or increased noise generation.
●When refrigerant pipe installation is completed, check the system for leaks by conducting an air-tightness test with nitrogen gas.
Should refrigerant gas leak in a small room and exceed the upper limit concentration, it can cause a lack-of-oxygen accident.
●Dress the refrigerant piping with a heat insulation material to prevent condensation.
Improper heat insulation given to refrigerant piping for condensation prevention can result in leaking or dripping water soaking household effects.
●Install an earth leakage breaker.
A failure to install an earth leakage breaker can cause a fire or electric shock.
●Install drain piping according to the installation manual to ensure good drainage, and give it heat insulation to prevent condensation. Improper installation can result in a flood of water in the room and soaked household effects.

●Ensure that the unit is properly grounded. Do not connect the grounding wire to a gas pipe, a water pipe, a lightning rod, the grounding wire of a telephone or other appliances. Improper grounding can result in electric shocks or fire when any trouble or earth leakage occurs.

●Don't use for any special purposes such as for storing of foods, animals or plants, precision devices or objects of art.
It could deteriorate the quality of stored items.
●Do not install the outdoor unit in a place where small animals are likely to inhabit.
If they enter the unit and touch electrical parts inside, they may cause a unit failure, smoke generation or ignition. Please ask the customer to keep the surroundings clean.
●Do not handle the package by holding a packing band.
●Do not handle wooden packaging materials with bare hands.
●Do not install the unit in a place with a risk of inflammable gas leaks or where an inflammable material exists. It can cause a fire where an inflammable gas leaks, flows out or in, or stagnates or where carbon fibers are suspended in the air.
●Do not install the outdoor unit where its fan winds directly hit an animal or plant. Fan winds can affect adversely to the plant etc.
●Do not operate the outdoor unit with any article placed on it, or you may incur property damage or personal injury from a fall of the article.
●Do not step onto the outdoor unit, or you may incur injury from a drop or fall.

Notabilia as a unit designed for R410A

● Do not use any refrigerant other than R410A. R410A will rise to pressure about 1.6 times higher than that of a conventional refrigerant.
● A unit designed for R410A has adopted a different size outdoor unit service valve charge port and a different size check joint provided in the unit to prevent the charging of a wrong refrigerant by mistake. The processed dimension of the flared part of a refrigerant pipe and a flare nut's parallel side measurement have also been altered to raise strength against pressure. Accordingly, you are required to arrange dedicated R410A tools listed in the table on the right before installing or servicing this unit.
● Do not use a charge cylinder. The use of a charge cylinder will cause the refrigerant composition to change, which results in performance degradation.
● In charging refrigerant, always take it out from a cylinder in the liquid phase.
● All indoor units must be models designed exclusively for R410A. Please check connectable indoor unit models in a catalog, etc.
(A wrong indoor unit, if connected into the system, will impair proper system operation)

	Dedicated R410A tools
a)	Gauge manifold
b)	Charge hose
c)	Electronic scale for refrigerant charging
d)	Torque wrench
e)	Flare tool
f)	Protrusion control copper pipe gauge
g)	Vacuum pump adapter
h)	Gas leak detector

1. BEFORE BEGINNING INSTALLATION (Check that the models, power supply specifications, piping, wiring are correct.)

Caution

- ●Be sure to read this manual before installation to follow the proper installation methods.
- ●When installing the indoor unit, read the installation manual of indoor unit.
- ●Optional distribution parts are required for the piping (Branch pipe set, header set). For details, refer to the catalog, etc.
- ●Make sure to install the earth leakage breaker. (Select a product compatible with high frequency.)
- ●There is risk of damaging the compressor if the unit is operated while the discharge pipe thermistor, suction pipe thermistor, pressure sensor, etc. are removed. Never attempt to operation in such condition.

Accessory

Name	Quantity	Location of use	
Wire 	2	Insert this in CNG on the outdoor unit PCB when using the silencing mode or forced cooling mode	Secured in the control box with adhesive tape.
Edging 	1	Use it for protection of a knock-out hole.	It is attached to the bracket with an adhesive tape in the proximity of the service valve.
Attached wire 	1	Use this when connecting gas pipe.	Attached on the base below the operation valve.
Instruction manual	1	When the installation work is completed, give instructions to the customer and ask him/her to keep it.	Attached on the base below the operation valve.

Combination pattern

- ●Combination pattern of outdoor units, number of indoor units connected and capacity of connection are as show in the table at right.
- ●It can be used in combination with the following indoor unit.

Indoor unit	Remote controller	Connection OK/NO
FD○△△KXE6	RC-E3(2 cores)	OK
FD○A△△KXE4	RC-E1R(3 cores)	OK

Outdoor unit		Indoor unit	
Capacity	Combination pattern	Number of units connected (unit)	Range of total capacity of connected indoor units
224	Single	1～15	112～336
280	Single	1～19	140～420
335	Single	1～22	167～502

[Items sold separately]

Refrigerant pipe distribution parts, which are not contained in the package, will be required for installation.
As for refrigerant pipe distribution parts, we offer branching pipe sets (Model type: DIS) and header sets (Model type: HEAD) as parts used on the indoor side of piping.
Please select one suiting your application. In selecting distribution parts, please also refer to "4. REFRIGERANT PIPING."
Where the state of outdoor air temperature below 0ºC may continue for more than 12 hours, it is necessary to install the drain pan heater (optional item).If you are not sure which parts to select, please consult with your dealer or the manufacturer.
If you are not sure which parts to select, please consult with your dealer or the manufacture.
Use refrigerant branching pipe sets and header sets designed exclusively for R410A without fail.

2. INSTALLATION LOCATION (Obtain approval from the customer when selecting the installation area.)

2-1. Selecting the installation location

- ○ Where air is not trapped.
- ○ Where the installation fittings can be firmly installed.
- ○ Where any object does not prevent inlet or outlet air.
- ○ Out of the heat range of other heat sources.
- ○ Where strong winds will not blow against the outlet air.
- ○ A place where stringent regulation of electric noises is applicable.
- ○ Where it is safe for the drain water to be discharged.
- ○ Where noise and hot air will not bother neighboring residents.
- ○ Where snow will not accumulate.
- ○ A place where no TV set or radio receiver is placed within 5m.
  (If electrical interference is caused, seek a place less likely to cause the problem)

Please note

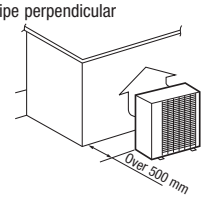
a) If there is a possibility of a short-circuit, then install a flex flow adapter.
b) When installing multiple units, provide sufficient intake space so that a short-circuit does not occur.
c) In areas where there is snowfall, install the unit in a frame or under a snow hood to prevent snow from accumulating on it.
(Inhibition of collective drain discharge in a snowy country)
d) Do not install the equipment in areas where there is a danger for potential explosive atmosphere.
e) Install the equipment in a location that can sufficiently support the weight of the equipment.
f) If a unit is installed into a special environment as shown below, there will be a danger that the corrosion of the outdoor unit or its malfunctioning is caused. If this is the case, please consult with the distributor from whom you have purchased the unit.
- ・Where corrosive gas is generated (such as a hot-spring resort area).
- ・Where the unit is subject to sea breezes (coastal area).
- ・Where the unit is subject to oil mists.
- ・Where equipment generating electromagnetic waves exists in the vicinity.

g) When strong winds occur
- ● Where it is likely that the unit is subjected to strong winds, provide wind guards according to the following guidelines.
  Strong winds can cause performance degradation, an accidental stop due to a rise of high pressure and a broken fan.

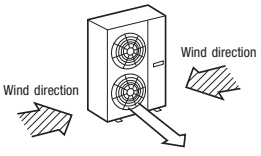
CAUTION
Please leave sufficient clearance around the unit without fail.
Otherwise, a risk of compressor and/or electric component failure may arise.

①Place the unit outlet pipe perpendicular to the wind direction.

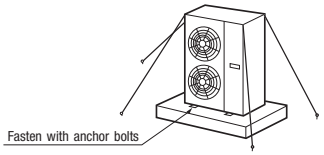
When installing units side by side, install the flex flow adaptor. (This is not required if a distance of 1,500 mm may be secured between the blowing outlet and the wall.)



②Please install so the direction of the air from the blowing outlet will be perpendicular to the direction of the wind.

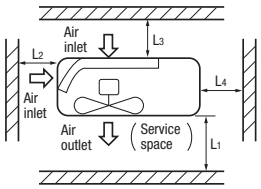


③When the foundation is not level, use wires to tie down the unit.



2-2. Installation space (Ex. servicing space)

a) Minimum installation space
(Please select an installation point with due attention to the direction of installation of the refrigerant pipe)
(If the installation conditions shown in this drawing are not satisfied, please consult with your dealer or the manufacturer.)
b) When units are installed side by side, leave a 10 mm or wider service space between the units.
c) Don't install at a place where it will be surrounded with walls in four directions.
Even when it is not surrounded with walls in four directions and it is met the installation conditions as shown by this figure, if there is risk of short-circuit, install the flex flow adaptor to prevent the short-circuit.
d) There must be a 1-meter or larger space in the above.
e) A barrier wall placed in front of the exhaust diffuser must not be higher than the unit.



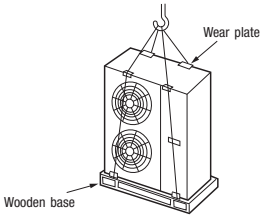
(Unit : mm)

Size \ Sample	I	II	III
L 1	Open	Open	1500(500)
L 2	300	5	Open
L 3	300	300	300
L 4	5	5	5

Figure in ( ) shows the value applicable when the flex flow adaptor is installed.

3. Unit delivery and installation

⚠ **Caution** Attach the ropes on the unit and carry it in avoiding displacement of gravity center. Improper slinging may cause the unit to lose balance and fall.



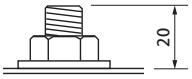
3-1. Delivery

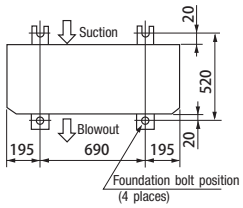
- Deliver the unit in the packing to the specified installation place.
- To hoist the unit, attach a pair of textile ropes with cushion materials attached to protect it.

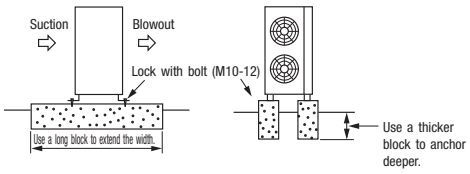
Request
Put cushion materials between the unit and the ropes to avoid damages.

3-2. Cautions for installation

- Make sure to lock the fixing legs of outdoor unit with 4 pieces of anchor bolt (M10). Best margin of protrusion for bolt above the floor is 20 mm.
- When installing the unit, make sure to lock its legs with the following bolts.







- The protrusion of an anchor bolt on the front side must be kept within 15 mm.
- Securely install the unit so that it does not fall over during earthquakes or strong winds, etc.
- Refer to the above illustrations for information regarding concrete foundations.
- Install the unit in a level area. (With a gradient of 5 mm or less.)
Improper installation can result in a compressor failure, broken piping within the unit and abnormal noise generation.

⚠ **Important** **In case that the unit operates in cooling mode, when the outdoor temperature is –5°C or lower, please equip a flex flow adapter and a snow guard hood (option) on the unit.**

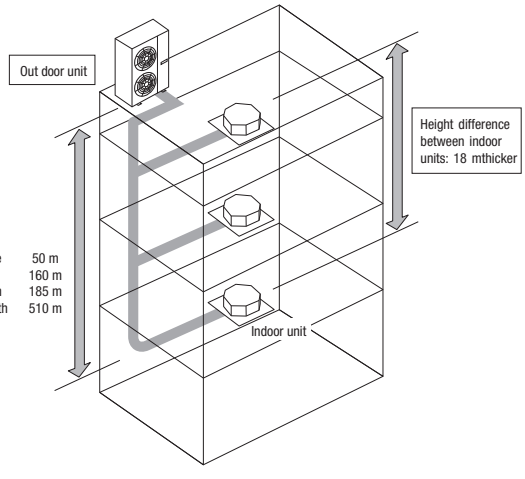
4. REFRIGERANT PIPING

4-1. Determination of piping specifications (Please select from the following matrix according to indoor unit specifications and installation site conditions)

(1) Limitation on use of pipes

CAUTION
Make sure to install within the range of limitation. Otherwise, resulting malfunction of compressor may not be warranted. Observe always the limitation of use during installation.

- When arranging pipes, observe the restrictions on use concerning the longest distance of (1), total piping length, allowable pipe length from initial branching and allowable difference of height (difference between heads).
- Avoid any trap ( ) or bump ( ) in piping as they can cause fluid stagnation.
- Maximum length (To the furthest indoor unit) ... Actual length Less than 160 m (Actual length less than 185 m)
It is required to change the pipe diameter when the actual length exceeds 90 m.
Determine the size of main pipe, referring to the table of main pipe selection table of (3) (a).
- Total piping length ..... 510 m or less
- Length of main pipe ..... 130 m or less
- Allowable pipe length from initial branching ..... 90 m or less
Difference in pipe lengths between indoor units, however, is 40 m or less.
- Allowable difference in height (Difference of heads)
(a) When an indoor unit is positioned at a higher place ..... 50 m or less
(b) When an outdoor unit is positioned at a lower place ..... 40 m or less
(c) Difference of heights between indoor units in a system ..... 18 m or less
(d) Difference of heights between initial branching and indoor unit ... 18 m or less



Height difference 50 m
Actual length 160 m
Equivalent length 185 m
Total piping length 510 m

(2) Selection of pipe material
- Use pipes with the inside clean and free from any harmful sulfur, oxides, dirt, chips & oil, or moisture (contamination).
- Use following refrigerant pipes.
Material ... Phosphate deoxidation treated seamless pipe (C1220T-O, 1/2H, JIS H3300)
C1220T-1/2H for O.D. ø19.05 or more, or C1220T-O for ø15.8 or less
- Wall thickness and size - Select according to the guide for pipe size selection
(This product uses R410A. Since, in case of pipes in the size of ø19.05 or more, materials of -O lacks sufficient capacity to withstand pressure, make sure to use pipes of 1/2H material and thickness larger than the minimum thickness.)
- When a pipe is branched, make sure to use our branching set or header set.
- When setting branching pipes, take care of the mounting direction and consult carefully with the instruction manual.
- Regarding the handling of operation valve, refer to 4-3 (1) Operating method of operation valve.

(3) Pipe size selection

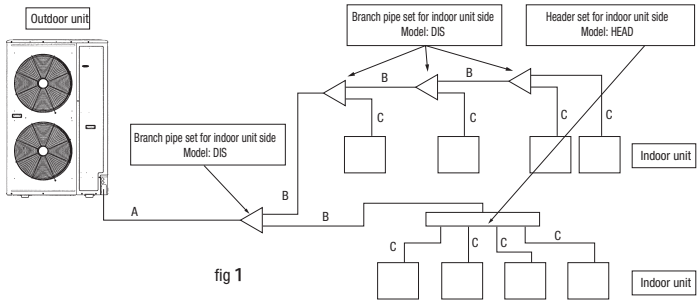


fig 1

(a) Main pipe (Between branch at outdoor unit side - initial branch at indoor unit side): Section A in Fig. 1

When the maximum length (to the furthest indoor unit from outdoor unit) is 90 m or more (actual length), change the size of main pipe as shown by the following table.

Outdoor unit	Main pipe size (Ordinary)		Pipe size for actual length longer than 90 m	
	Gas pipe	Liquid pipe	Gas pipe	Liquid pipe
224	ø19.5×t1.0	ø9.52×t0.8	ø22.22×t1.0	ø12.7×t0.80
280	ø22.22×t1.0		ø25.4×t1.0	
335	ø25.4×t1.0	ø12.7×t0.8		

Make sure to use the attached pipes in the length as shown at left.

For ø19.05 or larger, use C1220T-1/2H material.

(b) Between initial branch at indoor unit side- indoor unit side: Section B in Fig. 1

Select from following table based on the total capacity of indoor units connected at the downstream side. However, it should never exceed the size of main pipe (Section A in Fig. 1).

Total capacity of indoor units	Gas pipe	Liquid pipe
Less than 70	ø12.7 ×t1.0	ø 9.52×t0.8
70 - 180	ø15.88×t1.0	
180 - 371	ø19.05×t1.0 *1	ø12.7×t0.8
371 - 540	ø19.05×t1.0	ø15.88×t1.0

For ø19.05 or larger, use C1220T-1/2H material.

*1: When connecting indoor units of 280 at the downstream and the main gas pipe is of ø22.22 or larger, use the pipe of ø22.22x t1

(c) Between branching at indoor unit side - indoor unit side: Section C in Fig. 1

According to the table of pipe size for indoor unit. However, it should never exceed the size of main pipe (Section A in Fig. 1).

Capacity		Gas pipe	Liquid pipe
Indoor unit	22, 28	ø 9.52×t0.8	ø6.35×t0.8
	36, 45, 56	ø 12.7×t0.8	
	71, 80, 90, 112, 140, 160	ø15.88×t1.0	ø9.52×t0.8
	224	ø19.05×t1.0	
	280	ø22.22×t1.0	

For ø19.05 or larger, use C1220T-1/2H material.

(4) Selection of the branch set for indoor unit side

Total capacity at downstream	Branch pipe set
Less than 180	DIS-22-1
180 - 371	DIS-180-1
371 - 540	DIS-371-1

(a) Selection of the branch pipe set

- Size of branch pipe varies depending on the capacity of connected indoor units (total capacity at downstream). Select it from the table at right.

Request

- Adjust the indoor unit and the size of branch pipe at the indoor unit side according to the size of pipe connected to indoor unit.
- Install the branch joint (both of gas and fluid) so that it will become “Horizontal branching” or “Vertical branching”.

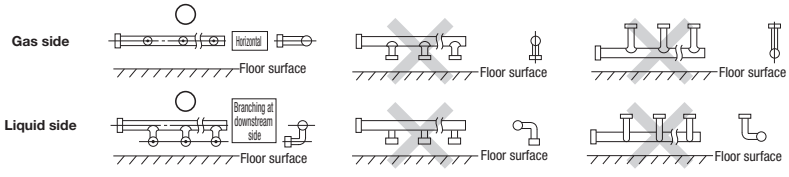
(b) Selection of the header set

- Connect a plugged pipe (field provided) at the branch point (indoor unit connecting side) depending on he number of units connected.
- For the size of plugged pipe, refer to the header set (optional item).

Request

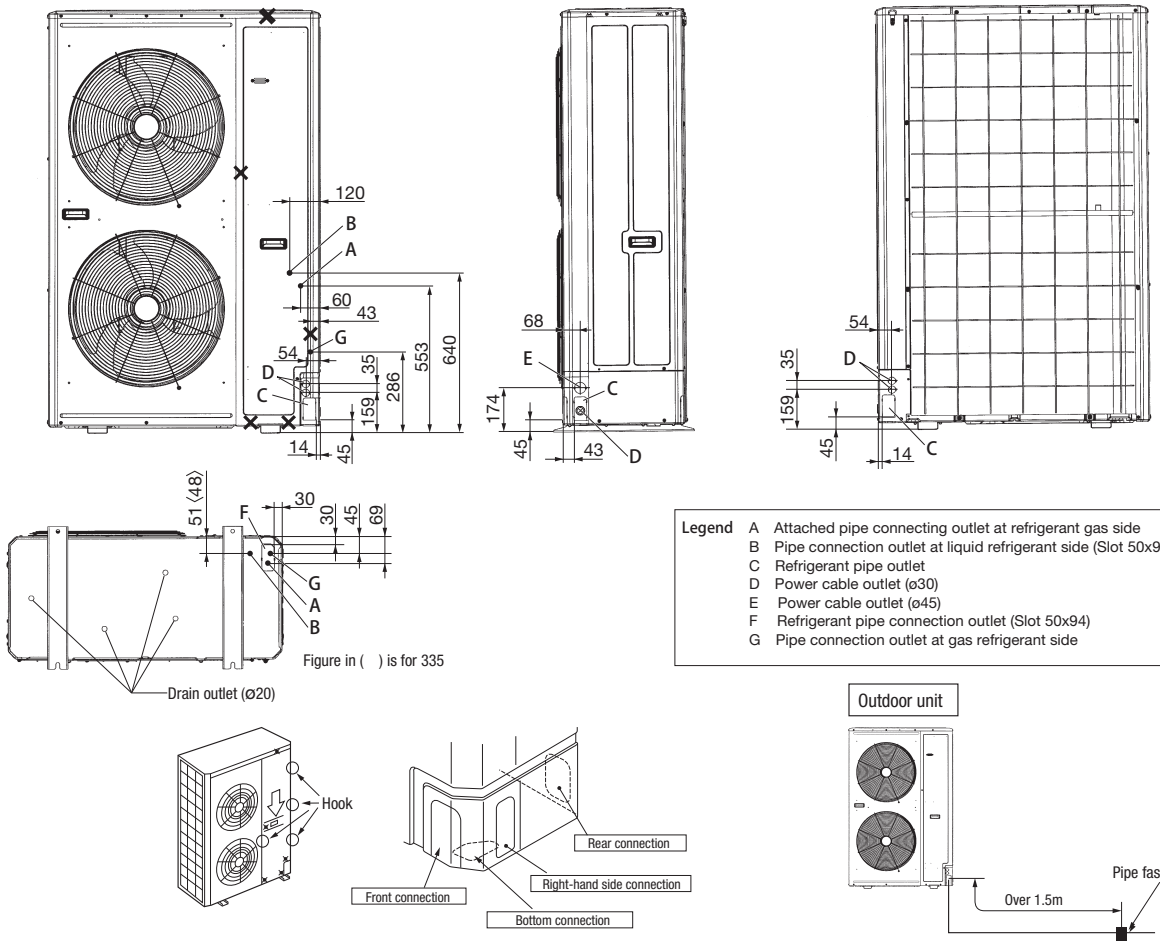
- Adjust the header and indoor unit pipes to the size of pipes for connected indoor units.
- Install the header at the gas side to be “Horizontal branching” and, at the fluid side, that the branch is provided at the downstream side.
- Header is not allowed to receive indoor units of 224 or 280.

Total capacity at downstream	Header set model	Number of branches
Less than 180	HEAD4-22-1	Max. 4 branches
180 - 371	HEAD6-180-1	Max. 6 branches
371 - 540	HEAD8-371-1	Max. 6 branches



4-2. Piping work

(1) Pipe connecting position and pipe outgoing direction



Legend		
	A	Attached pipe connecting outlet at refrigerant gas side
	B	Pipe connection outlet at liquid refrigerant side (Slot 50x94)
	C	Refrigerant pipe outlet
	D	Power cable outlet (ø30)
	E	Power cable outlet (ø45)
	F	Refrigerant pipe connection outlet (Slot 50x94)
	G	Pipe connection outlet at gas refrigerant side

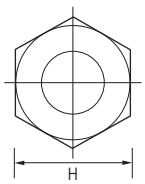
- First remove the five screws (✕ mark) of the service panel and push it down into the direction of the arrow mark and then remove it by pulling it toward you.
- The pipe can be laid in any of the following directions: side right, front, rear and downward.
- Remove a knock-out plate provided on the pipe penetration to open a minimum necessary area and attach an edging material supplied as an accessory by cutting it to an appropriate length before laying a pipe.
- In laying pipes on the installation site, cut off the casing's half blank that covers a hole for pipe penetration with nippers.
- If there is a risk of small animals entering from the pipe penetration part, close the part with some sealing material or the like (to be arranged on the installer's part).
- In the case of an installation using a collective drain system, use a port other than the bottom one to take out cables and pipes. If the bottom port is used, seal it thoroughly so that drain water may not spill out.
- Use an elbow (to be arranged on the user's part) to connect control valves to the piping.
- In anchoring piping on the installation site, give 1.5m or a longer distance between an outdoor unit and an anchoring point where the piping is secured as illustrated below. (A failure to observe this instruction may result in a pipe fracture depending on a method of isolating vibrations employed.)

(2) Field piping work

Important

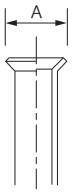
CAUTION
If you tighten it without using double spanners, you may deform the service valve, which can cause an inflow of nitrogen gas into the outdoor unit.

- Please take care so that installed pipes may not touch components within a unit.
- **During the pipe installation at site, keep the service valves shut all the time**.
- Give **sufficient protections** (compressed and brazed or by an adhesive tape) **to pipe ends so that any water or foreign matters may not enter the pipes**.
- In bending a pipe, bend it **to the largest possible radius (at least four times the pipe diameter)**. Do not bend a pipe repeatedly to correct its form.
- An outdoor unit's pipe and refrigerant piping are to be flare connected. Flare a pipe after engaging a flare nut onto it. A flare size for R410A is different from that for conventional R407C. Although we recommend the use of flaring tools developed specifically for R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a protrusion control gauge.
- Be sure to use the accessory pipe for connection to the gas operation valve. For details, refer to the installation manual of the accessory pipe.
- Tighten a flare joint securely **with two spanners**. Observe flare nut tightening torque specified in the table below.



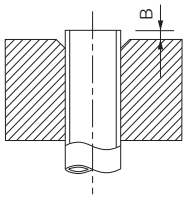
Flare nut parallel side measurement: H (mm)

Copper pipe outer diameter	H
ϕ6.35	17
ϕ9.52	22
ϕ12.7	26
ϕ15.88	29



Flared pipe end: A (mm)

Copper pipe outer diameter	A 0 −0.4
ϕ6.35	9.1
ϕ9.52	13.2
ϕ12.7	16.6
ϕ15.88	19.7

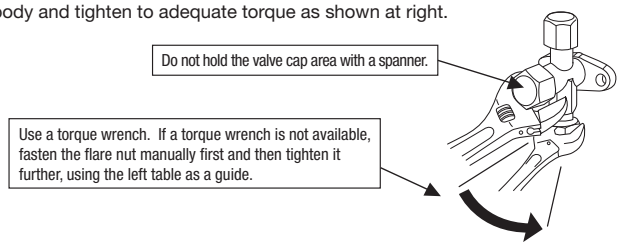


Copper pipe protrusion for flaring: B (mm)

Copper pipe outer diameter	In the case of a rigid (clutch) type	
	With an R410A tool	With a conventional tool
ϕ6.35	0〜0.5	0.7〜1.3
ϕ9.52		
ϕ12.7		
ϕ15.88		

For operation valves both at the fluid and gas sides, fix the valve body and tighten to adequate torque as shown at right.

Operation valve size (mm)	Tightening torque (N•m)	Tightening angle (°)	Recommended length of tool handle (mm)
Ø6.35 (1/4")	14～18	45～60	150
Ø9.52 (3/8")	34～42	30～45	200
Ø12.7 (1/2")	49～61	30～45	250
Ø15.88(5/8")	68～82	15～20	300
Ø19.05 (3/4")	100～120	15～20	450

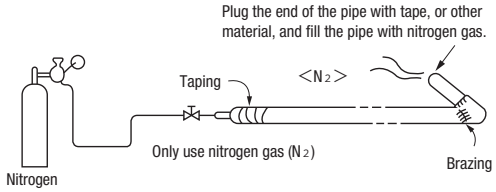


- Do not apply any oil on a flare joint.
- **Blazing must be performed under a nitrogen gas flow**. Without nitrogen gas, a large quantity of foreign matters (oxidized film) are created, causing a critical failure from capillary tube or expansion valve clogging.
- Brazing of the service valve and the pipes should be performed while cooling the valve body with a wet towel.
- Perform flushing. To flush the piping, charge nitrogen gas at about 0.02MPa with a pipe end closed with a hand. When pressure inside builds up to a sufficient level, remove the hand to flush. (in flushing a pipe, close the other end of the pipe with a plug).

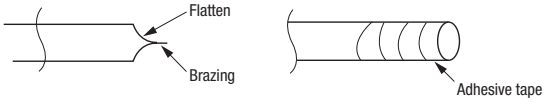
Operation procedure

① **During the pipe installation at site, keep the service valves shut all the time**.

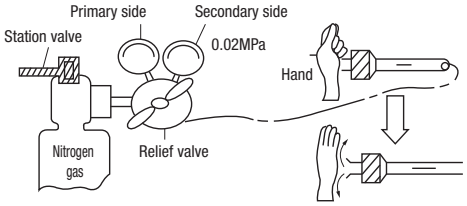
② **Blazing must be performed under a nitrogen gas flow**. Without nitrogen gas, a large quantity of foreign matters (oxidized film) are created, causing a critical failure from capillary tube or expansion valve clogging.



③ Give **sufficient protections** (compressed and brazed or with an adhesive tape) **so that water or foreign matters may not enter the piping**.



④ Perform flushing. To flush the piping, charge nitrogen gas at about 0.02MPa with a pipe end closed with a hand. When pressure inside builds up to a sufficient level, remove the hand to flush. (in flushing a pipe, close the other end of the pipe with a plug).



4-3. Air tightness test and air purge

(1) Air tightness test

① Although an outdoor unit itself has been tested for air tightness at the factory, please check the connected pipes and indoor units for air tightness from the check joint of the service valve on the outdoor unit side. While conducting a test, **keep the service valve shut all the time**.

② Since refrigerant piping is pressurized to the design pressure of a unit with nitrogen gas for testing air tightness, please connect instruments according the drawing below. Under no circumstances should chlorine-based refrigerant, oxygen or any other combustible gas be used to pressurize a system

Keep the service valve shut all the time. Do not open it under any circumstances.

Be sure to pressurize all of the liquid, gas pipes.

③ In pressurizing the piping, do not apply the specified level of pressure all at once, but gradually raise pressure.

a) **Raise the pressure to 0.5 MPa, and then stop. Leave it for five minutes or more** to see if the pressure drops.

b) **Then raise the pressure to 1.5 MPa, and stop. 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.

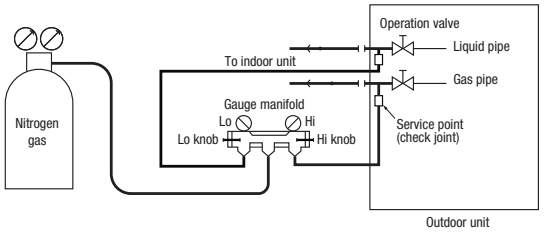
d) **If no pressure drop is observed with an installation pressurized to** the specified level **and left for about one day**, **it is acceptable**. When the ambient temperature changes 1℃, the pressure also changes approximately 0.01 MPa. The pressure, if changed, should be compensated for.

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-tightness test again.

④Always pull air from the pipes after the airtightness test.

CAUTION

Applying excessive pressure can cause an inflow of nitrogen gas into an outdoor unit.

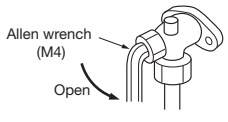


Standard torque at sections on operation valve

Operation valve size (mm)	Shaft tightening torque (N•m)	Cap tightening torque (N•m)	Check joint blind nut tightening torque (N • m)
Ø9.52 (3/8")	6～8	20～30	10～12
Ø12.7 (1/2")	14～16	25～35	10～12
Ø19.05 (3/4")	3	25～35	12～14

Securely tighten the cap and the blind nut after the adjustment.
Avoid applying any excessive force when operating the shaft or when tightening the cap or blind nut. Otherwise, it could cause malfunction or leakage from the shaft, cap or blind nut.

▶Allen wrench type

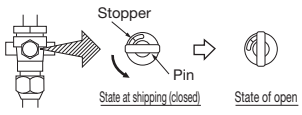


Fluid/gas operation valve

- Open the valve stem till it hits the stopper. No need to apply force more than that.
- After the adjustment, replace the blind nut as it was.

▶Pin type

Remove the cap and adjust as shown below



- After the adjustment, replace the cap as it was.

(2) Air purge

Perform the air purge from both the operation check joints at fluid side and gas side.

<Work flow>

Completion of air tightness test → Start of air purge → Operate the vacuum pump for more than 1 hour after achieving -10 kPa or under (-765 mmHg or under. → Completion of air purge → After letting it alone for more than 1 hour, the pointer needle of vacuum gauge should not creep up. → Degree of vacuum check → Refrigerant charge

When the needle pointer of vacuum gauge has crept up, it means that there is moisture in or leakage from the system. Identify and repair the leaking position and then perform the air purge again.

CAUTION

Insufficient degree of vacuum causes a capacity shortage, clogging by remaining moisture or malfunction of compressor

This product uses R410A. Take care of the following points.

○ To avoid contamination with different type of oil, use separate tools depending on the type of refrigerant. It is prohibited especially to use the gauge manifold and the charge hose for different types of refrigerant (R22, R407C).

○ Use a reverse flow prevention adaptor to prevent the contamination of refrigerant system with vacuum pump oil.

4-4. Additional charge of refrigerant

●Refrigerant must be in the state of fluid when charging.

●Make sure to use a measuring device when charging the refrigerant.
When it cannot charge whole required quantity because the outdoor unit is stopped, operate the unit in the test run mode and charge. (See Section 8 for the method of test run.)
Operating the unit for a long period of time with insufficient quantity of refrigerant could cause malfunction on the compressor. (When charging while operating the unit, especially, complete the charge within 30 minutes.)
This unit contains 11.5 kg of refrigerant.
Calculate necessary quantity of additional charge with the following formula, and record the quantity of additionally charged refrigerant on the refrigerant quantity list provided on the back of service panel.

●Charge the additional refrigerant depending on the size and length of fluid pipe. Determine the quantity of additional charge by rounding the second place after decimal point, which means in the unit of 0.1 kg.

Additional charge quantity (kg) = 2.5 + (L3×0.17) + (L4×0.11) + (L5×0.054) + (L6×0.022)

2.5: Standard additional refrigerant quantity
Make sure to charge this quantity in addition to the charge quantity for the refrigerant piping.

(L3×0.17) + (L4×0.11) + (L5×0.054) + (L6×0.022): Charge quantity for the refrigerant piping

L3: Tot al length of ø15.88 pipes (m), L4: Total length of ø12.7 pipes (m)
L5: Total length of ø0.952 pipes (m), L6: Total length of ø6.35 pipes (m)

Refrigerant pipe size	ø15.88	ø12.7	ø9.52	ø6.35	Remark
Additional charge quantity(kg/m)	0.17	0.11	0.054	0.022	

●This product uses R410A. Take care of the following points.

· To avoid contamination with different type of oil, use separate tools depending on the type of refrigerant. It is prohibited especially to use the gauge manifold and the charge hose for different types of refrigerant (R22, R407C).

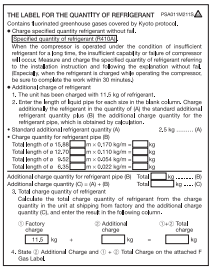
· Type of refrigerant is indicated with the color painted on the container (Yellow for R140A). Sufficient care must be taken to use correct refrigerant only.

· Never use a charge cylinder. Otherwise, the composition of refrigerant may change when introducing R410A into the cylinder.

· Make sure to charge the refrigerant in the state of fluid.

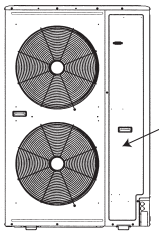
●Request

Record the refrigerant quantity calculated based on the piping length in the refrigerant quantity list provided on the back of service panel.



CAUTION

Make sure to enter the data. The data is required at maintenance or service.



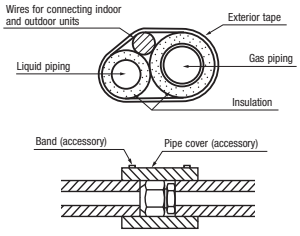
Attached on the back of service panel.

4-5. Heat insulation and moisture condensation proof

(1) Dress refrigerant pipes (both gas and liquid pipes) for heat insulation and prevention of dew condensation.
Improper heat insulation/anti-dew dressing can result in a water leak or dripping causing damage to household effects, etc.

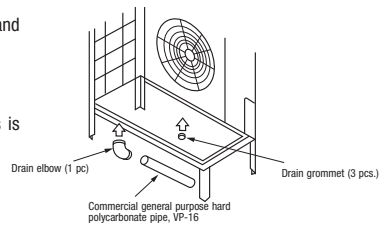
(2) Use a heat insulating material that can withstand 120℃ or a higher temperature. Poor heat insulating capacity can cause heat insulation problems or cable deterioration.

- All gas pipes must be securely heat insulated in order to prevent damage from dripping water that comes from the condensation formed on them during a cooling operation or personal injury from burns because their surface can reach quite a high temperature due to discharged gas flowing inside during a heating operation.
- Wrap indoor units' flare joints with heat insulating parts (pipe cover) for heat insulation (both gas and liquid pipes).
- Give heat insulation to both gas and liquid side pipes. Bundle a 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 tape.
- Although it is verified in a test that this air conditioning unit shows satisfactory performance under JIS condensation test conditions, both gas and liquid pipes need to be dressed with 20mm, or over, heat insulation materials additionally above the ceiling where relative humidity exceeds 70%.



5. Drainage

- Where water drained from the outdoor unit may freeze, connect the drain pipe using optional drain elbow and drain grommet.
- Outdoor unit has 4 drain outlets on the bottom.
- When guiding drain water to a scupper, etc, install the parts on a flat stand (optional item), blocks, or other.
- Connect the drain elbow as shown by the figure. Seal remaining holes with grommets.
- When draining water collectively, use holes for wires and pipes opened other than on the bottom. When this is impracticable, sufficiently seal the drain pipe to prevent water leakage.



6. Electric wiring

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

⚠ **Please install an earth leakage breaker without fail**. The installation of an earth leakage breaker is compulsory in order to prevent electric shocks or fire accidents.
(Since this unit employs inverter control, please **use an impulse withstanding type** to prevent an earth leakage breaker's false actuation.)

Please note

a) Use only copper wires.
Do not use any supply cord lighter than one specified in parentheses for each type below.
- braided cord (code designation 60245 IEC 51), if allowed in the relevant part 2;
- ordinary tough rubber sheathed cord (code designation 60245 IEC 53);
- flat twin tinsel cord (code designation 60227 IEC 41)
- ordinary polyvinyl chloride sheathed cord (code designation 60227 IEC 53).

Please do not use anything lighter than polychloroprene sheathed flexible cord (cord designation 60245 IEC57) for supply cords of parts of appliances for outdoor use.

b) **Use separate power supplies for the indoor and outdoor units**.

c) **The power supplies for indoor units in the same system should turn on and off simultaneously**.

d) Ground the unit. Do not connect the grounding wire to a gas pipe, water pipe, lightning rod or telephone grounding wire.
A grounding wire must be connected before connecting the power cable. Provide a grounding wire longer than the power cable.
If improperly grounded, an electric shock or malfunction may result.

e) **The installation of an impulse with standing type earth leakage breaker is necessary**. A failure to install an earth leakage breaker can result in an accident such as an electric shock or a fire. Do not turn on the power until the electrical work is completed. Be sure to turn off the power when servicing.

f) Please do not use a condensive capacitor for power factor improvement under any circumstances. (It does not improve power factor, while it can cause an abnormal overheat accident)

g) For power supply cables, use conduits.

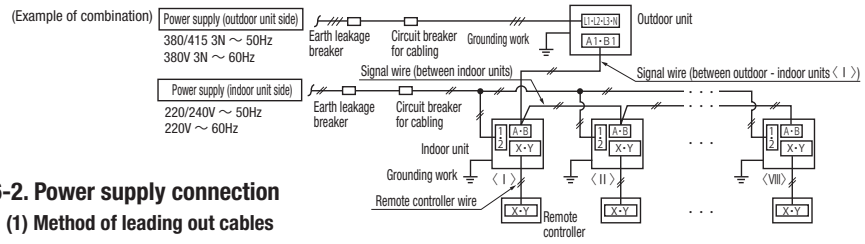
h) Please **do not lay electronic control cables (remote control and signaling lines) and other high current cables together outside the unit**. Laying them together can result in malfunctioning or a failure of the unit due to electric noises.

i) Power cables and signaling lines must always be connected to the terminal block and secured by cable fastening clamps provided in the unit.

j) Fasten cables so that they may not touch the piping, etc.

k) **When cables are connected, please make sure that all electrical components within the electrical component box are not free or not loose on the terminal connection** and then attach the cover securely. (Improper cover attachment can result in malfunctioning or a failure of the unit, if water penetrates into the box.)

6-1. Wiring system drawing



CAUTION
If the earth leakage breaker is exclusively for ground fault protection, then you will need to install a circuit breaker for wiring work.

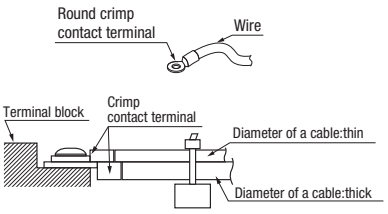
6-2. Power supply connection

(1) Method of leading out cables

- As shown on the drawing in Section 4-2, cables can be laid through the front, right, left or bottom casing.
- In wiring on the installation site, cut off a half-blank covering a penetration of the casing with nippers.
- In the case of an installation using a collective drain system, use a port other than the bottom one to take out cables and pipes. If the bottom port is used, seal it thoroughly so that drain water may not spill out.

(2) Notabilia in connecting power cables

- Connect the ground wire before you connect the power cable. When you connect a grounding wire to a terminal block, use a grounding wire longer than the power cable so that it may not be subject to tension.
- Do not turn on power until installation work is completed. Turn off power to the unit before you service the unit.
- Ensure that the unit is properly grounded.
- Always connect power cables to the power terminal block.
- To connect a cable to the power terminal block, use a round crimp contact terminal.
  If two cables are to be connected to one terminal, arrange cables in such a manner that you put their crimp contact terminals together back to back. Further, put the thinner cable above the thicker one in arranging cables for such connection.
- Use specified wires in wiring, and fasten them securely in such a manner that the terminal blocks are not subject to external force.
- In fastening a screw of a terminal block, use a correct-size driver.
  Fastening a screw of a terminal block with excessive force can break the screw.
- When electrical installation work is completed, make sure that all electrical components within the electrical component box are free of loose connector coupling or terminal connection.



(3) Outdoor unit power supply specification: 380/415V 3N~ 50Hz 380V 3N~ 60Hz

Model	Power source	Cable size for power source (mm²)	Wire length (m)	Moulded-case circuit breaker (A)		Earth leakage breaker	Earth wire	
				Rated current	Switch capacity		Size (mm²)	Screw type
224KXE6 280KXE6	Three-phase 380/415V 50Hz 380V 60Hz	5.5	28	30	30	30A, 30mA less than 0.1 sec	2	M5
335KXE6		8	36	30	30	30A, 30mA less than 0.1 sec	2	M5

Please note

a) The method of laying cables has been determined pursuant to the Japanese indoor wiring regulations (JEAC8001).
(Please adapt it to the regulations in effect in each country)

b) Wire length in the table above is the value for when the indoor unit is connect to the power cable in series also the wire size and minimum length when the power drop is less than 2% are shown. If the current exceeds the value in the table above, change the wire size according to the indoor wiring regulations.
(Please adapt it to the regulations in effect in each country)

c) For details, please refer to the installation manual supplied with the indoor unit.

(4) Indoor unit power source (Outdoor unit is another power source.) & signal line

Combined total capacity of indoor units	Cable size for power source(mm²)	Wire length(m)	Moulded-case circuit breaker (A)		Earth leakage breaker	Signal line (mm²)	
			Rated current	Switch capacity		outdoor-indoor	indoor-indoor
less than 7A	2	21	20	30	20A, 30mA less than 0.1 sec	2 core × 0.75 ※	
less than 11A	3.5						
less than 12A	5.5	33	20		30A, 30mA less than 0.1 sec		
less than 16A	5.5	24	30				

※ Please use a shielded cable.

Request

(a) Table at left shows the standard specification. Use the power supply of single phase 220/240V.
(b) Distance in the table shows the value obtained when indoor units are connected in series. The table shows the wire size and the distance provided voltage drop is within 2% for each total current of indoor unit. Where the current exceeds the values in the table, change the wire size according to the extension wiring regulations.
(c) Wires connected to indoor units are allowed up to 5.5 mm2. For 8 mm2 or more, use a dedicated pull box and branch to indoor units with 5.5 mm2 or less.
(d) Values in the table don't include electric heaters. When any electric heater is assembled, both the power supply specification and the wiring specification become different.
(e) ③ terminal on the terminal block is specified to connect only an optional auxiliary heater (power supply for heater).

6-3. How to connect signal cables

The communication protocol can be choosen from following two types. One of them is the conventional Superlink (hereinafter previous SL) and the other is the new Superlink Ⅱ (hereinafter new SL) . These two communication protocols have the following advantages and restrictions, so please choose a desirable one meeting your installation conditions such as connected indoor units and centralized controller. When signal cables are connected into a network involving outdoor units, indoor units or centralized control equipment that do not support new SL, please select communications in the previous SL mode, even if the refrigerant system is separated from theirs.

Communication protocol	Conventional communication protocol (previous SL)	New communication protocol (new SL)
Outdoor unit setting (SW5-5)	ON	OFF (Factory default)
No. of connectable indoor units	Max. 48	Max. 128
No. of connectable outdoor unitsin a network	Max. 48	Max. 32
No. of connectable outdoor units	Up to 1000m	Up to 2,000 m for wires other than shielding wire Up to 1,500 m for 0.75 mm² shielding wire (MVVS) Up to 1,000 m for 1.25 mm² shielding wire (MVVS)
Signal cable (furthest length)	Up to 1000m	Up to 1000m
Connectable units to a network	Units not supporting new SL (FD○A△△KXE4 series) Units supporting new SL (FD○△△KXE6 series) Can be used together.	Units supporting new SL (FD○△△KXE6 series)

Note: For FDT224 and 280 models, calculate the number of units taking 1 indoor unit as 2 units for the sake of communication.

● **Signal cables are for DC 5 V. Never connect wires for 220/240 V or 380/415 V.** Protective fuse on the PCB will trip.

① Confirm that signal cables are prevented from applying 220/240 V or 380/415 V

② Before turning the power on, check the resistance on the signal cable terminal block. If it is less than 100Ω, power supply cables may be connected to the signal cable terminal block.

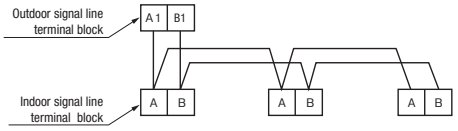
Standard resistance value = 46,000/(Number of FD○A△△KXE4 Series units connected × 5) + (Number of FD○△△KXE6 Series units connected x 9)

If the resistance value is less than 100Ω, disconnect the signal cables temporarily to divide to more than one network, to reduce the number of indoor units on the same network, and check each network

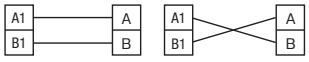
Indoor and outdoor units signal cables

- Connect the signal line between indoor unit and outdoor unit to A1 and B1.
- Connect the signal line between outdoor units to A2 and B2.
- Please use a shielded cable for a signal line and connect a shielding earth at all the indoor units and outdoor units.

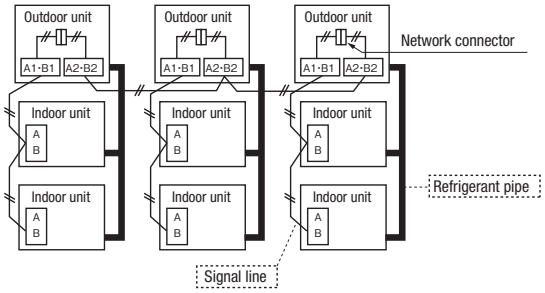
(1) When one outdoor unit is used.



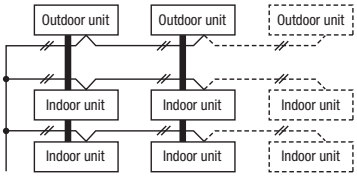
○Indoor and outdoor signal lines do not have a polarity.
Any of the connections in the following illustration can be made.



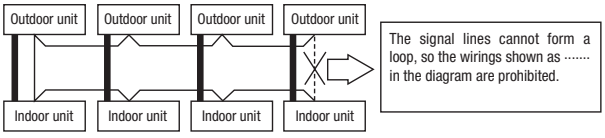
(2) When plural outdoor units are used



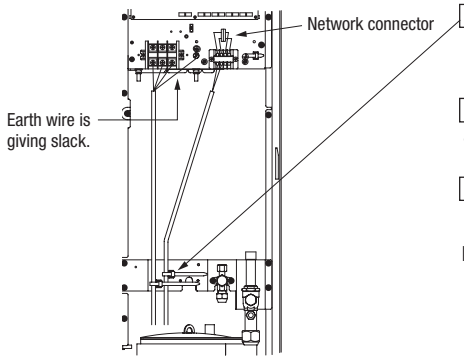
(1) The signal lines can also be connected using the method shown below.



⚠ Important ○Loop wiring prohibited.



Power cable and signal cable connection



Wiring clamp

- Fix the cables not to exert external force to the terminal connection.
- Give adequate slack to cables in fastening them.
- Fix power cables separately from signal cables.

Outgoing cable direction

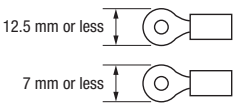
- As like the refrigerant pipe, it can be let out in any of 4 directions of right-hand side, front, rear and bottom.

Wiring label

- The wiring label is attached on the back of the service panel.

Request

- When connecting to the power supply terminal block, use the crimp terminals for M5 as shown at right.
- When connecting to the signal terminal block, use the crimp terminals for M3.5 as shown at right.



Remote controller wiring specifications

- For the remote controller the standard wire is 0.3 mm². The max. length is up to 600 m. When the wire is more than 100 m long, use the wire shown in the table.
- Use 3-core wires for FD○A△△KXE4 or 2-core wires for FD○△△KXE6.

Length (m)	Wire size
Within 100 - 200	0.5mm²
Within - 300	0.75mm²
Within - 400	1.25mm²
Within - 600	2.0mm²

7. CONTROLLER SETTINGS

7-1. Unit address setting

This control system controls the controllers of more than one air conditioner's outdoor unit, indoor unit and remote control unit through communication control, using the microcomputers built in the respective controllers. Address setting needs to be done for both outdoor and indoor units. Turn on power in the order of the outdoor units and then the indoor units.

Use 1 minute as the rule of thumb for an interval between them.

The communication protocol can be chosen from following two types. One of them is the conventional communication protocol (previous SL) and the other is the new communication protocol (new SL). These two communication protocols have their own features and restrictions as shown by Table 6-3. Select them according the indoor units and the centralized control to be connected.

When signal cables are connected into a network involving outdoor units, indoor units or centralized control equipment that do not support new SL, please select communications in the previous SL mode, even if the refrigerant system is separated from theirs.

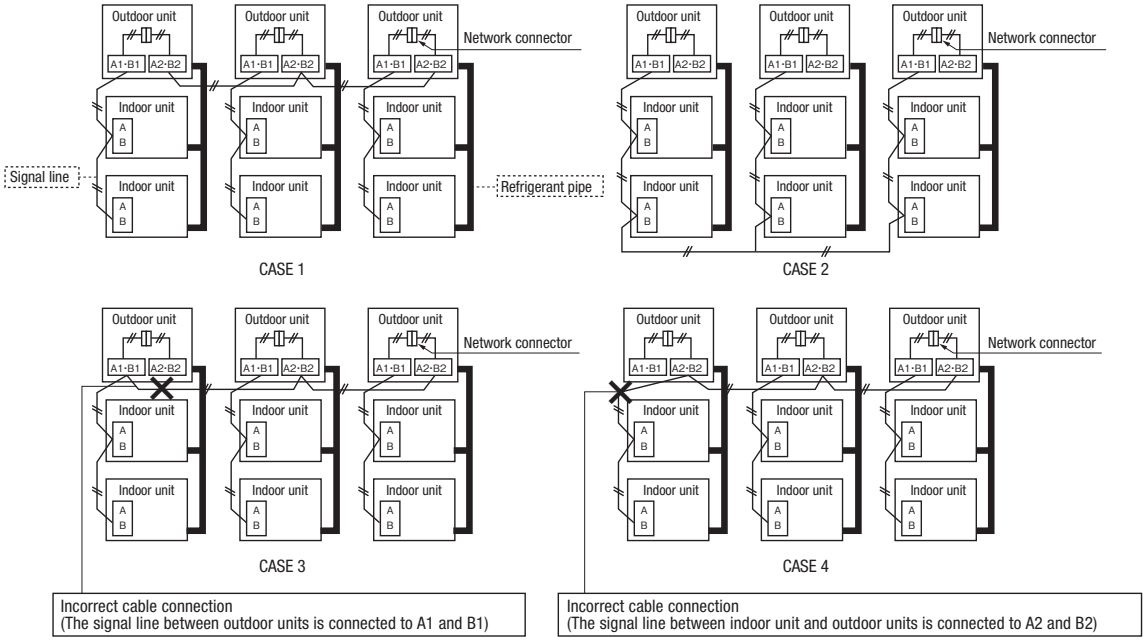
When communication is established after setting addresses, check the communication protocol with the 7 segment display panel of the outdoor unit.

●Address setting methods

The following address setting methods can be used. The procedure for automatic address setting is different from the conventional one.
Please use the automatic address setting function after reading this manual carefully.

Communication protocol		new SL		previous SL	
Address setting method		Automatic	Manual	Automatic	Manual
When plural refrigerant systems are linked with signal lines (e.g., to implement centralized control)	Case 1 When signal lines linking plural refrigerant systems are provided between outdoor units. (When the network connector is disconnected, refrigerant systems are separated each other)	OK※1	OK	×	OK
	Case 2 When signal lines linking plural refrigerant systems are provided between indoor units.	×※2	OK	×	OK
When only one refrigerant system is involved (signal lines do not link plural refrigerant systems)		OK	OK	OK	OK

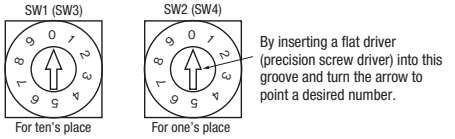
※1 Do not connect the signal line between outdoor units to A1 and B1. This may interrupt proper address setting. (Case 3)
Do not connect the signal line between indoor unit and outdoor unit to A2 and B2. This may interrupt proper address setting. (Case 4)
※2 In Case 2, automatic address setting is not available. Set addresses manually.



●Address No. setting

Set SW1 through 4 and SW5-2 provided on the PCB and SW1 & 2 provided on the outdoor unit PCB as shown in the drawings below.

Indoor PCB	SW1, 2 (blue)	For setting indoor No. (The ten's and one's)
	SW3, 4 (green)	For setting outdoor No. (The ten's and one's)
	SW5-2	Indoor No. switch (The hundred's Place) [OFF : 0, ON : 1]
Outdoor PCB	SW1, 2 (green)	For setting outdoor No. (The ten's and one's)



●Summary of address setting methods (figures in [ ] should be used with previous SL)

	Units supporting new SL			Units NOT supporting new SL		
	Indoor unit address setting		Outdoor unit address setting	Indoor unit address setting		Outdoor unit address setting
	Indoor No. switch	Outdoor No. switch	Outdoor No. switch	Indoor No. switch	Outdoor No. switch	Outdoor No. switch
Manual address setting (previous SL/new SL)	000～127[47]	00～31[47]	00～31[47]	00～47	00～47	00～47
Automatic address setting for single refrigerant system installation (previous SL/new SL)	000	49	49	49	49	49
Automatic address setting for multiple refrigerant systems installation (with new SL only)	000	49	00～31	×	×	×

Do not set numbers other than those shown in the table, or an error may be generated.

Note: When units supporting new SL are added to a network using previous SL such as one involving FD◯A△△KXE4 series units, choose previous SL for the communication protocol and set addresses manually. Since the models FDT224 and 280 have 2 PCBs per unit, set different indoor unit No. and SW on each PCB.

- An outdoor unit No., which is used to identify which outdoor unit and indoor units are connected in a refrigerant system, is set on outdoor unit PCB and indoor unit PCB. Give the same outdoor unit No. to all outdoor unit and indoor units connected in same refrigerant system.
- An indoor unit No. is used to identify individual indoor units. Assign a unique number that is not assigned to any other indoor units on the network.

Unless stated otherwise, the following procedures apply, when new SL is chosen for the communication protocol.
When previous SL is chosen, use figures shown in [ ] in carrying out these procedures.

Manual address setting Generally applicable to new SL/previous SL, use figures in [ ] with previous SL.

① Outdoor unit address setting
Set as follows before you turn on power. Upon turning on power, the outdoor unit address is registered.
Set **the Outdoor Unit No. switch to a number 00 - 31 [in the case of previous SL: 00 - 47]**.
Set a unique number by avoiding the numbers assigned to other outdoor units on the network.

② Indoor unit address setting
Set as follows before you turn on power. Upon turning on power, the indoor unit address is registered.
Set **the Indoor Unit No. switch to a number 000 - 127 [in the case of previous SL: 00 - 47]**.
Set **the Outdoor Unit No. switch** to the outdoor unit No. of the associated outdoor unit within the range of **00 - 31 [in the case of previous SL: 00 - 47].**
Set a unique number by avoiding the numbers assigned to other indoor units on the network.

③ Turn on power in order from the outdoor unit to indoor units. Give a one-minute or longer interval for them.
* When there are some units not supporting new SL connected in the network, set SW5-5 to ON to choose the previous SL communication mode.
In the case of previous SL, the maximum number of indoor units connectable in a network is 48.

Automatic address setting Generally applicable to new SL/previous SL, use figures in [ ] with previous SL.

With new SL, you can set indoor unit addresses automatically even for an installation involving multiple refrigerant systems connected with same network, in addition to the conventional automatic address setting of a single refrigerant system installation.
However, an installation must satisfy some additional requirements such as for wiring methods, so please read this manual carefully before you carry out automatic address setting.

(1) In the case of a single refrigerant system installation (Generally applicable to new SL/previous SL, use figures in [ ] with previous SL.)

① Outdoor unit address setting
Set as follows before you turn on power.
Make sure that the **Outdoor Unit No. switch** is set to **49 (factory setting)**

② Indoor unit address setting
Set as follows before you turn on power.
Make sure that the **Indoor Unit No. switch** is set to **000 [in the case of previous SL: 49] (factory setting)**
Make sure that the **Outdoor Unit No. switch** is set to **49 (factory setting)**

③ Turn on power in order from the outdoor unit to indoor units. Give a one-minute or longer interval for them. Unlike the procedure set out in (2) below, you need not change settings from the 7 segment display panel.

④ Make sure that the number of indoor units indicated on the 7 segment display panel agrees with the number of the indoor units that are actually connected to the refrigerant system.

(2) In the case of a multiple refrigerant systems installation (Applicable to new SL only. In the case of previous SL, set addresses with some other method.)

(This option is available when the interconnection wiring among refrigerant systems is on the outdoor side and new SL is chosen as the communication protocol.)

Address setting procedure (perform these steps for each outdoor unit)

[STEP1] (Items set before turning on power)

① Outdoor unit address setting
Set as follows before you turn on power.
Set the **Outdoor Unit No. switch** to a number **00 - 31**. Set a unique number by avoiding the numbers assigned to other outdoor units on the network.

② Indoor unit address setting
Set as follows before you turn on power.
Make sure that the **Indoor Unit No. switch** is set to **000 (factory setting)**
Make sure that the **Outdoor Unit No. switch** is set to **49 (factory setting)**

③ Isolate the present refrigerant system from the network.
Disengage the **network connectors (white 2P)** of the outdoor units. (Turning on power without isolating each refrigerant system will result in erroneous address setting.)

[STEP2] (Power on and automatic address setting)

④ Turn on power to the outdoor unit
Turn on power in order from the outdoor unit to indoor units. Give a one-minute or longer interval for them.

⑤ Select and enter "1" in P31 on the 7 segment display panel of each outdoor unit to input "Automatic address start."

⑥ Input a starting address and the number of connected indoor units.
Input a starting address in P32 on the 7 segment display panel of each outdoor unit.

⑦ When a starting address is entered, the display indication will switch back to the "Number of Connected Indoor Units Input" screen.
Input the number of connected indoor units from the 7 segment display panel of each outdoor unit. Please input the number of connected indoor units for each outdoor unit. (You can input it from P33 on the 7 segment display panel.)When the number of connected indoor units is entered, the 7 segment display panel indication will switch to "AUX" and start flickering.

[STEP3] (Automatic address setting completion check)

⑧ Indoor unit address determination

When the indoor unit addresses are all set, the 7 segment display panel indication will switch to "AUE" and start flickering.
If an error is detected in this process, the display will show "A○○."
Check the 7 segment display panel of each outdoor unit.
Depending on the number of connected indoor units, it may take **about 10 minutes** before the indoor unit addresses are all set.

[STEP4] (Network definition setting)

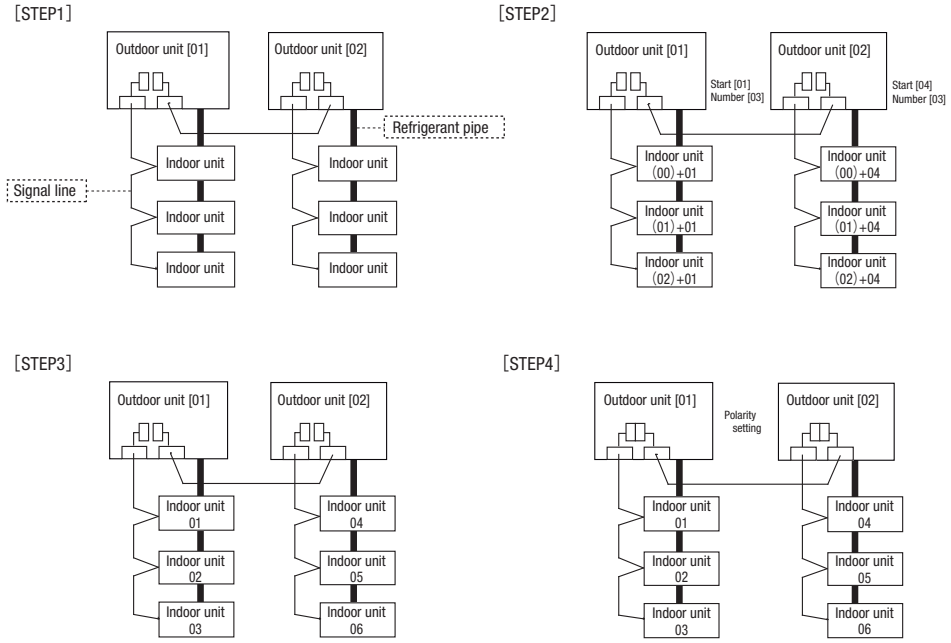
⑨ Network connection
When you have confirmed an "AUE" indication on the display of each outdoor unit, **engage the network connectors** again.

⑩ Network polarity setting

After you have made sure that the network connectors are engaged in ⑧, select and enter "1" in P34 on the 7 segment display panel of **any outdoor unit (on only 1 unit)** to specify network polarity.

⑪ Network setting completion check
When the network is defined, "End" will appear on the 7 segment display panel. An "End" indication will go off, when some operation is made from the 7 segment display panel or 3 minutes after.

	STEP1	STEP2	STEP3	STEP4
Indoor unit power source	②OFF	④ON	—	—
Outdoor unit power source	①OFF	④ON	—	—
Indoor unit (indoor/outdoor No.SW)	②indoor000/outdoor 49 (factory setting)	—	—	—
Outdoor unit (outdoor No.SW)	①01,02(Ex)	—	—	—
Network connectors	③Disconnect(each outdoor unit)	—	—	⑨Connect(each outdoor unit)
Start automatic address setting		⑤ Select "Automatic Address Start" on each outdoor unit.		
Set starting address		⑥outdoor 01:「01」(Ex) outdoor 02:「04」(Ex)	—	—
Set the number of indoor unit		⑦outdoor 01:「03」(Ex) outdoor 02:「03」(Ex)	—	—
Polarity setting		—	—	⑩ Set in P34 on the 7 segment display panel of any outdoor unit.
7 segment display		⑦ 「AUX」(Blink)	⑧ "AUE"(blink), or "A○○" in error events.	⑪ 「End」



- Within a refrigerant system, indoor units are assigned addresses in the order they are recognized by the outdoor unit. Therefore, they are not necessarily assigned addresses in order from the nearest to the outdoor unit first as depicted in drawings above.
- Make sure that power has been turned on to all indoor units.
- When addresses are set, you can have the registered indoor unit address No.'s and the outdoor unit address No. displayed on the remote control unit by pressing its Inspection switch.
- Automatic address setting can be used for an installation in which prulal indoor units are controlled from one remote control unit.
- Once they are registered, addresses are stored in microcomputers, even if power is turned off.
- If you want to change an address after automatic address setting, you can change it from the remote control unit with its "Address Change" function or by means of manual setting. Set a unique address by avoiding the address assigned to other indoor unit on the network when the address is changed.
- Do not turn on power to centralized control equipment until automatic address setting is completed.
- When addresses are set, be sure to perform a test run and ensure that you can operate all indoor and outdoor units normally. Also check the addresses assigned to the indoor units.

Address change (available only with new SL)

"Address Change" is used, **when you want to change an indoor unit address assigned with the "Automatic Address Setting" function from a remote control unit**.
Accordingly, the conditions that permit an address change from a remote control unit are as follows.

	Indoor unit address setting		Outdoor unit address setting
	Indoor No.SW	Outdoor No.SW	Outdoor No.SW
Automatic address setting forsingle refrigerant system installation	000	49	49
Automatic address setting for multiple refrigerant systems installation	000	49	00～31

If "CHANGE ADD. ▼" is selected with some addresses falling outside these conditions, the following indication will appear for 3 seconds on the remote controller "INVALID OPER" .

Operating procedure

(1) When single indoor unit is connected to the remote controller.

	Item	Operation	Display
1	Address change mode	① Press the AIR CON No. switch for 3 seconds or longer.	[CHANGE ADD.▼]
		② Each time when you press the ▲▼ switch, the display indication will be switched.	[CHANGE ADD.▼] ⇔[MASTER I/U▲]
		③ Press the Set switch when the display shows "CHANGE ADD. ▼" and then start the address change mode, changing the display indication to the "Indoor Unit No. Setting" screen from the currently assigned address.	[I/U 001 O/U 01] (1sec) →[▲▼ SET I/U ADD.] (1sec) →[I/U 001 ▲▼] (Blink)
2	To set a new indoor unit No.	④ Set a new indoor unit No. with the ▲▼ switch. A number indicated on the display will increase or decrease by 1 upon pressing the ▲ or ▼ switch respectively.	[I/U 000▲] ⇔[I/U 001 ▲▼] ⇔[I/U 002 ▲▼] ⇔ ・・・ ⇔[I/U 127▼]
		⑤ After selecting an address, press the Set switch, and then the indoor unit address No. is defined.	[I/U 002] (2sec)
3	To set a new outdoor unit No.	⑥ After showing the defined indoor address No. for 2 seconds, the display will change to the "Outdoor Address No. Setting" screen. The currently assigned address is shown as a default value.	[I/U 002] (2sec Lighting) →[▲▼SET O/U ADD.] (1sec) →[O/U 01 ▲▼] (Blink)
		⑦Set a new outdoor unit No. with the ▲▼ switch. A number indicated on the display will increase or decrease by 1 upon pressing the ▲ or ▼ switch respectively.	[O/U 00▲] ⇔[O/U 01 ▲▼] ⇔[O/U 02 ▲▼] ⇔ ・・・ ⇔[O/U 31▼]
		⑧ After selecting an address, press the Set switch, and then the outdoor unit No. and the indoor unit No. are defined.	[I/U 002 O/U 02] (2sec Lighting) →[SET COMPLETE] (2sec Lighting) →Returns to normal condition.

(2) When plural indoor units are connected to the remote controller.

When plural indoor units are connected, you can change their addresses without altering their cable connection.

	Item	Operation	Display
1	Address change mode	① Press the AIR CON Unit No. switch for 3 seconds or longer.	[CHANGE ADD▼]
		② Each time when you press the ▲▼ switch, the display indication will be switched.	[CHANGE ADD▼] ⇔[MASTER I/U▲]
		③ Press the Set switch when the display shows "CHANGE ADD. ▼" The lowest indoor unit No. among the indoor units connected to the remote control unit will be shown.	[▲▼SELECT I/U] (1sec) →[I/U 001 O/U 01▲] (Blink)
2	Selecting an indoor unit to be changed address	④ Pressing the ▲▼ switch will change the display indication cyclically to show the unit No.'s of the indoor units connected to the remote controller and the unit No.'s of the outdoor units connected with them.	[I/U 001 O/U 01▲] ⇔[I/U 002 O/U 01 ▲▼] ⇔[I/U 003 O/U 01 ▲▼] ⇔ ・・・ ⇔[I/U 016 O/U 01▼]
		⑤ Then the address No. of the indoor unit to be changed is determined and the screen switches to the display " ▲▼ SET I/U ADD."	[▲▼ SET I/U ADD.] (1sec) →[I/U 001 ▲▼](Blink)
3	Setting a new indoor unit No.	⑥ Set a new indoor unit No. with the ▲▼ switch. A number indicated on the display will increase or decrease by 1 upon pressing the ▲ or ▼ switch respectively.	[I/U 000▲] ⇔[I/U 001 ▲▼] ⇔[I/U 002 ▲▼] ⇔ ・・・ ⇔[I/U 127▼]
		⑦ After selecting an address, press the Set switch. Then the address No.of the indoor unit is determined.	[I/U 002] (2sec)
4	Setting a new outdoor unit No.	⑧ The display will indicate the determined indoor address No. for 2 seconds and then switch to the " ▲▼ SET O/U ADD." screen. A default value shown on the display is the current address.	[I/U 002] (2sec lighting) ⇔[▲▼ SET O/U ADD.](1sec) ⇔[O/U 01 ▲▼] (Blink)
		⑨ Set a new outdoor unit No. with the ▲▼ switch. A number indicated on the display will increase or decrease by 1 upon pressing the ▲ or ▼ switch respectively.	[O/U 00▲] ⇔[O/U 01 ▲▼] ⇔[O/U 02 ▲▼] ⇔ ・・・ ⇔[O/U 31▼]
		⑩ After selecting an address, press the Set switch. Then the address of the indoor unit and outdoor unit are determined.	[I/U 002 O/U 02](2sec lighting) →[▲▼ SELECT](1sec lighting) →[I/U SELECTION▼](lighting)
		⑪ If you want to continue to change addresses, return to step ④.	[Press the ▲▼switch](1sec) →[SET COMPLETE] (2～10sec lighting)
5	Ending the session	⑫ If you want to end the session (and reflect new address settings) In Step ⑩, press the ▼ switch to select "END ▲." If you have finished changing addresses, press the Set switch while "END ▲" is shown. While new settings are being transmitted, "SET COMPLETE" will be indicated. Then the remote controller display will change to the normal state.	[END▲] →[SET COMPLETE] (2～10sec lighting) →Normal state
		⑬ If you want to end the session (without reflecting new address settings) Before you complete the present address setting session, press the "ON/OFF" switch. Then the display is change to exit from this mode and switch the display to the normal state. All address settings changed in the session will be aborted and not reflected.	[ON/OFF] →Forced termination

The ▲▼switch will continuously change the display indication to the next one in every 0.25 seconds when it is pressed for 0.75 seconds or longer.
If the Reset switch is pressed during an operation, the display indication returns to the one that was shown before the last Set switch operation.
Even if an indoor unit No. is changed in this mode, the registered indoor unit No. before address change mode is displayed when [I/U SELECTION▼] is shown.
When "SET COMPLETE" is shown, indoor unit No.'s are registered.

NOTICE Turn on power to centralized control equipment after the addresses are determined.
Turning on power in wrong order may result in a failure to recognize addresses.

● 7 segment display indication in automatic address setting

Items that are to be set by the customer

Code	Contents of a display
P30	Communication protocol 0: Previos SL mode 1: New SL mode (The communication plotocol is displayed ; display only)
P31	Automatic address start
P32	Input starting address Specify a starting indoor unit address in automatic address setting.
P33	Input number of connected indoor units Specify the number of indoor units connected in the refrigerant system in automatic address setting.
P34	Polarity difinition 0: Network polarity not defined. 1: Network polarity defined.

7 segment display indication in automatic address setting.

Code	Contents of a display
AUX	During automatic address setting. X: The number of indoor units recognized by the outdoor unit.
AUE	Indoor unit address setting is completed normally.
End	Polarity is defined. (Automatic address) Completed normally.

Address setting failure indication

Code	Contents of a display	Please check
A00	Unable to find any indoor unit that can be actually communicated with.	Are signal lines connected properly without any loose connections? Is power for indoor units all turned on?
A01	The number of the indoor units that can be actually communicated with is less than the number specified in P33 on the 7 segment display panel.	Are signal lines connected properly without any loose connections? Input the number of connected indoor units again.
A02	The number of the indoor units that can be actually communicated with is more than the number specified in P33 on the 7 segment display panel.	Are signal lines connected properly without any loose connections? Are the network connectors coupled properly? Input the number of connected indoor units again.
A03	Starting address (P32) + Number of connected indoor units (P33) > 128	Input the starting address again. Input the number of connected indoor units again.
A04	While some units are operating in the previous SL mode on the network, the automatic address setting on multiple refrigerant systems is attempted.	Perform manual address setting. Separate old SL setting unit from the network Arrange all units to operate in the new SL.

Error indication

Code	Contents of a display	Cause
E2	Duplicating indoor unit address.	・Incorrect manual address setting
E3	Incorrect pairing of indoor-outdoor units.	・An outdoor unit number that does not exist in the network is specified ・No master unit exists in combination outdoor unit.
E11	Address setting for plural remote controllers.	・Indoor unit address is set from plural remote controllers.
E12	Incorrect adderess setting of indoor units.	・Automatic address setting and manual address setting are mixed.
E31	Duplicating outdoor unit address.	・Plural outdoor units are exist as same address in same network.
E46	Incorrect setting.	・Automatic address setting and manual address setting are mixed.

7-2. Selection of controls

Controls of outdoor unit may be selected as follows using the dip switches on the PCB and P○○ on the 7-segment.
To change P○○ on the 7-segment, hold down SW8 (7-segement display increment up: 1-digit), SW9 (7-segment increment up: 10-digit) and SW7 (Data write/Enter).

Control selecting method		Content of control
SW setting on PCB	P○○ on 7-segment	
SW3-7 to ON=1 *1	Set external input function allocation to “2” *1	Forced cooling mode (It can be fixed at cooling with external input terminals open, or at heating with them short-circuited.)
SW5-1 to ON + SW5-2 to ON	—	Cooling test run
SW5-1 to ON + SW5-2 to OFF	—	Heating test run
Close the fluid operation valve on outdoor unit and set as follows: (1) SW5-2 on PCB to ON (2) SW5-3 on PCB to ON (3) SW5-1 on PCB to ON	—	Pump down operation
SW4-5:OFF, SW4-6:OFF*1 80% (Factory default) SW4-5:ON , SW4-6:OFF*1 60% SW4-5:OFF, SW4-6:ON*1 40% SW4-5:ON , SW4-6:ON*1 00%	Set allocation of external input function to “1” *1	Inputting signals to external input terminals selects the demand mode. (J13 short-circuited: Level input, J13 open: Pulse input)
SW5-5	—	Communication method selection ON: Previous SL communication, OFF: New SL communication
J13: Short-circuited (Factory default), J13: Open	—	External input selection (CnS1, CnS2 only) Short-circuited: Level input, Open: Pulse input)
J15: Short-circuited (Factory default), J15: Open	—	Defrost selection Short-circuited: Normal defrosting, Open: Forced defrosting
—	P01	Operation priority selection 0: First push priority (at shipping) 1: Last push priority
—	P02	Outdoor unit fan snow protection control 0: Control disabled (at shipping) 1: Control enabled
—	P03	Outdoor unit fan snow protection control ON time setting - 30 sec (at shipping) 10, 30-600 sec
—	P04	Energy saving mode *2 OFF: Disabled (at shipping) 000, 040, 060, 080 [%]
—	P05	Silencing mode setting 0 (at shipping) - 3: Larger values for larger effect
—	P06	Allocation of external output (CnZ1)
—	P07	Allocation of external output (CnS1)
—	P08	Allocation of external output (CnS2)
—	P09	Allocation of external output (CnG1)
—	P10	Allocation of external output (CnG2)
—	P11～	Spare

*1 Control is switched when both the allocation of external input function (P07-10) and SW are changed.
(Example: To use CnS1 for the input of forced cooling mode, set P07 at 2 and SW3-7 at ON. To use CnS2 for the input of forced cooling mode, set P08 at 2 and SW3-7 at ON.)
*2 In the energy saving mode, the capacity restriction becomes effective even if no signals are input at external input terminals.

By changing the allocation of external input functions (P07-19) on the 7-segment, functions of external input terminals may be selected. Inputting signals to external input terminals enable the following functions.

Setting value for allocation of external input function	With external input terminals short-circuited	With external input terminals open
"0" : External operation input	Invalid	Valid
"1" : Demand input	Invalid	Valid
"2" : Cooling/heating forced input	Valid	Invalid
"3" : Silent mode input	Valid	Invalid
"4" : Spare		
"5" : Outdoor fan snow guard control input	Valid	Invalid
"6" : Test run external input 1 (equivalent to SW5-1)	Test run start	Normal
"7" : Test run external input 2 (equivalent to SW5-2)	Cooling	Heating
"8" : Silent mode 2	Valid	Invalid
"9" : Spare		

The external output function of CnZ1 can be changed by changing the setting in P06 on the 7 segment display panel.

"0" : Operation output
"1" : Error output
"2" : Compressor ON output
"3" : Fan ON output
"4 – 9" : Spare

7-3. External input and output terminals specifications

Name	Purpose (Factory default)	Specification	Operating side connector
External input CnS1	External operation input (Short-circuited at shipping)	Non-voltage contactor (DC12V)	NICHIATSU B02B-XAMK-1 (LF) (SN)
External input CnS2	Demand input (Short-circuited at shipping)	Non-voltage contactor (DC12V)	NICHIATSU B02B-XARK-1 (LF) (SN)
External input CnG1	Forced refrigerant input (Open at shipping)	Non-voltage contactor (DC12V)	NICHIATSU B02B-XAEK-1 (LF) (SN)
External input CnG2	Silencing mode input (Open at shipping)	Non-voltage contactor (DC12V)	NICHIATSU B02B-XASK-1 (LF) (SN)
External output CnZ1	Spare output (External output)	DC12V output	MOLEX 5566-02A-RE
External output CnH	Operation output	DC12V output	MOLEX 5286-02A-BU
External output CnY	Error output	DC12V output	MOLEX 5266-02A

8. TEST OPERATION AND TRANSFER

8-1. Before starting operation

(1) **Make sure that a measurement between the power supply terminal block and ground, when measured with a 500V megger tester, is greater than 1 MΩ.**

(2) When the resistance of the signaling line terminal block is 100Ω or less before turning the power on, the power cables may be connected to the signaling line terminal block. Check the wiring referring to the standard resistance value of 6-3.

(3) **Be sure turn ON the power supply to supply power to the crank case heater 6 hours before operation.**
After supplying the power to the crank case heater, the compressor may not start unless the time mentioned above elapses. (For protection of compressor)
In such occasion, the 7-segment LED shows "dL○○○○". Wait till the temperature in the compressor rises sufficiently after turning power on to the crank case heater, before starting the test run.

(4) **Make sure that the bottom of the compressor casing is warm.**

(5) Be sure to fully open the service valves (liquid, gas) for the outdoor unit.
Operating the outdoor unit with the valves closed may damage the compressor.

(6) **Confirm that the power is supplied to all indoor units. It could cause trouble if there is any indoor unit which is not powered.**

> **CAUTION**
> Please make sure that the service valves (gas, liquid) are full open before a test run. Conducing a test run with any of them in a closed position can result in a compressor failure.

8-2. Test run

(1) Test run from an outdoor unit.

Whether CnS1 is set to ON or OFF, you can start a test run by using the SW5-1 and SW5-2 switches provided on the outdoor unit PCB.
Select the test run mode first.
Please set SW5-2 to ON for a cooling test run or OFF for a heating test run. (It is set to OFF at the factory for shipment)
Turning SW5-1 from OFF to ON next will cause all connected indoor units to start.
When a test run is completed, please set SW5-1 to OFF.
Note: During a test run, an indoor unit cannot be operated from the remote control unit (to change settings). ("Under centralized control" is indicated)

(2) Method of starting a test run for a cooling operation from an outdoor unit: please operate a remote control unit according to the following steps.

(a) Start of a cooling test run
○Operate the unit by pressing the [START/STOP] button.
○Select the "COOLING" mode with the [MODE] button.
○Press the [TEST RUN] button for 3 seconds or longer.
The screen display will be switched from "Select with ITEM ▲▼"→"Determine with [SET] "→"Cooling test run▼."
○When the [SET] button is pressed while "Cooling test run▼ " is displayed, a cooling test run will start. The screen display will be switched to "COOLING TEST RUN."

(b) Termination of a cooling test run
○When the [START/STOP] button or the "TEMP SET [▽] [△] " button is pressed, a cooling test run will be terminated.

8-3. Transfer

- After completing the installation and test run, explain methods of use and maintenance to the customer, referring to the Instruction Manual. Ask the customer to keep the installation manual safely together with the Instruction Manual.
- Instruct the customer that the power should not be turned off even if the unit is not to be used for a long time. This will enable operation of the air conditioner any time. (Since the compressor bottom is warmed by the crank case heater, seasonal compressor trouble can be prevented.)

9. CAUTIONS FOR SERVICING (for R410A and compatible machines)

(1) To avoid mixing of different types of oil, use separate tools for each type of refrigerant.

(2) To avoid moisture from being absorbed by the ice machine oil, the time for when the refrigerant circuit is open should be kept as short as possible. (Within 10 min. is ideal.)

(3) For other piping work, airtighteness testing , vacuuming, and refrigerant charging, refer to section 4, REFRIGERANT PIPING.

(4) Diagnostic Inspection Procedures
For the meanings of failure diagnosis messages, please refer to the technical manual.

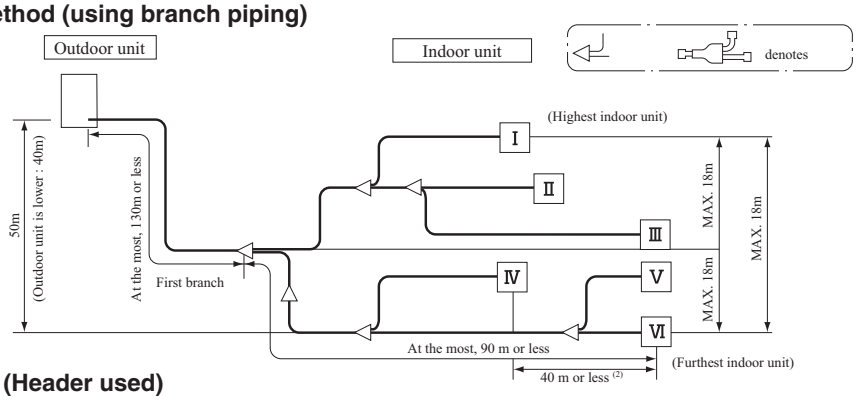
(5) 7-segment LED indication
Data are indicated when so chosen with the indication selector switch. For the details of indication, please refer to the technical manual.

5 Range of usage & limitations

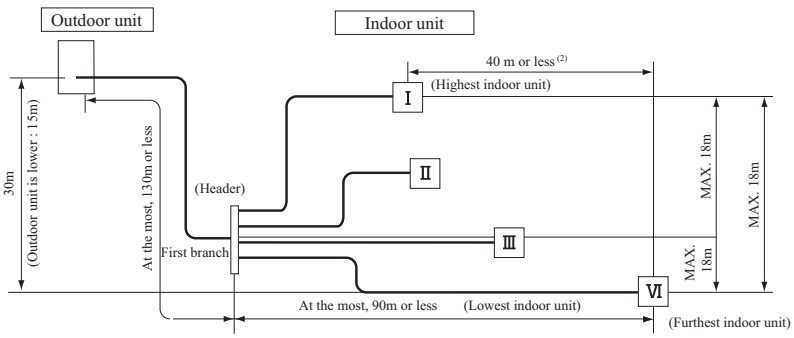
Item \ System		FDC224KXE6	FDC280KXE6	FDC335KXE6
Indoor intake air temperature (Upper, lower limits)		Please see the next page.		
Outdoor air temperature (Upper, lower limits)				
Indoor units that can be used in combination	Number of connected units	1 to 15 unit	1 to 19 unit	1 to 22 unit
	Connectable capacity (1)	112 ~ 336	140 ~ 420	167 ~ 502
Total piping length		510m or less		
Main pipe length		130m or less		
Single direction piping length		Actual length : 160m or less, Eguivalent length : 185m or less		
Allowable pipe length from the first branching		90m or less (However, difference between the longest and shortest piping : 40m or less)		
Elevation difference between the first branching point and the indoor unit		18m or less		
Difference in height between indoor and outdoor units	Outdoor unit is higher	50m or less		
	Outdoor unit is lower	40m or less		
Difference in the elevation of indoor units in a system		18m or less		
Indoor unit atmosphere (behind ceiling) temperature and humidity (Only models FDT, FDTC, FDTW, FDTS, FDTQ, FDU, FDUM, FDQS, FDUH)		Dew point temperature 28 ℃ or less, relative humidity 80% or less (FDE, FDK, FDFL, FDFU : Dew point temperature 23℃ or less, relative humidity 80% or less)		
Compressor stop/start frequency	1 cycle time	6 min or more (3 minutes or more from start to stop or 3 minutes or more from stop to start)		
	Stop time	3 min or more		
Power source voltage	Voltage fluctuation	Within ±10% of rated voltage		
	Voltage drop during start	Within ±15% of rated voltage		
	Phase unbalance	Within ±3% of rated voltage		

Allowable length of refrigerant piping, height difference between indoor and outdoor unit

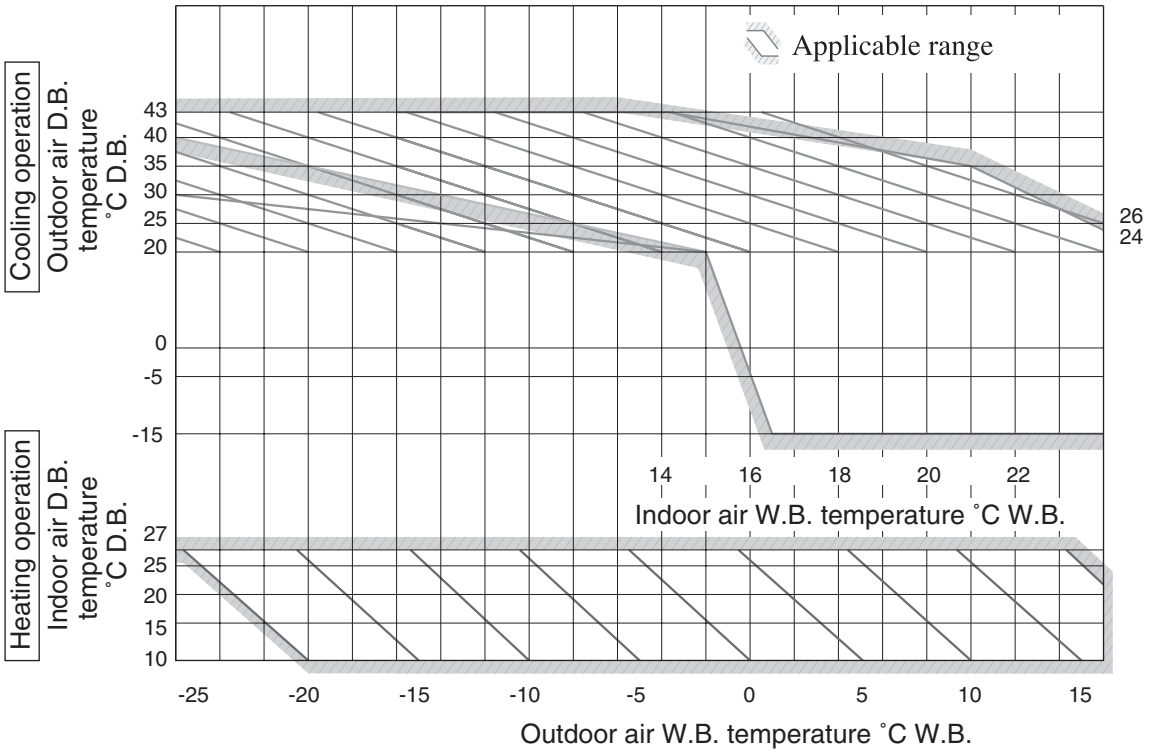
(1) Branch pipe method (using branch piping)



(2) Header System (Header used)



Note (1) A branch piping system cannot be connected after a header system.
(2) 90m or less (However, difference between the longest and shortest piping : 40m or less)



"CAUTION" Cooling operation under low outdoor air temperature conditions

KXE6 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, prepare a windbreak fence or something like that locally in order to divert the strong wind from the outdoor unit.

[Reason]

Under the low outdoor air temperature conditions of -5℃ or lower, if strong wind directly blow into the outdoor unit, the outdoor heat exchanger temperature will drop, even though the outdoor fan is stopped by outdoor fan control. 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.

INVERTER DRIVEN MULTI-INDOOR-UNIT CLIMATE CONTROL SYSTEM

MITSUBISHI HEAVY INDUSTRIES, LTD.

Air-Conditioning & Refrigeration Systems Headquarters
16-5, 2-chome, Kounan, Minato-ku, Tokyo, 108-8215, Japan
Fax : (03) 6716-5926