



DATA BOOK

INVERTER MULTI-SPLIT SYSTEM RESIDENTIAL AIR-CONDITIONERS (Split system, air to air heat pump type)

(OUTDOOR UNIT)

SCM40ZS-W

45ZS-W

(INDOOR UNIT)

Wall mounted type

SRK20ZSX-W,-WB,-WT

25ZSX-W,-WB,-WT

35ZSX-W,-WB,-WT

Ceiling concealed type

SRR25ZM-W

35ZM-W

SRK20ZS-W,-WB,-WT

25ZS-W,-WB,-WT

35ZS-W,-WB,-WT

4-way ceiling cassette type

FDTC25VH

35VH

SKM20ZSP-W

25ZSP-W

35ZSP-W

CONTENTS

1. OUTDOOR UNITS	4
1.1 Specifications	4
1.2 Exterior dimensions	6
1.3 Electrical wiring	7
1.4 Noise level	8
1.5 Application data	11
2. INDOOR UNITS	15
2.1 Specifications	15
(1) Wall mounted type (SRK, SKM)	15
(2) Ceiling concealed type (SRR)	24
(3) 4-way ceiling cassette type (FDTC)	26
2.2 Exterior dimensions	28
(1) Wall mounted type (SRK, SKM)	28
(2) Ceiling concealed type (SRR)	31
(3) 4-way ceiling cassette type (FDTC)	32
(4) Remote control	33
2.3 Electrical wiring	36
(1) Wall mounted type (SRK, SKM)	36
(2) Ceiling concealed type (SRR)	39
(3) 4-way ceiling cassette type (FDTC)	40
2.4 Noise level	41
(1) Wall mounted type (SRK-ZSX series)	41
(2) Wall mounted type (SRK-ZS series)	49
(3) Wall mounted type (SKM-ZSP series)	57
(4) Ceiling concealed type (SRR)	63
(5) 4-way ceiling cassette type (FDTC)	77
2.5 Characteristics of fan	82
2.6 Application data	83
(1) Wall mounted type (SRK, SKM)	83
(2) Ceiling concealed type (SRR)	95
(3) 4-way ceiling cassette type (FDTC)	99
3. PIPING SYSTEMS	105
4. RANGE OF USAGE & LIMITATIONS	106

5. TABLE OF INDOOR UNIT COMBINATIONS	107
(1) Model SCM40ZS-W	107
(2) Model SCM45ZS-W	108
6. SELECTION CHARTS	110
7. TABLE OF FUNCTIONS CONNECTED WIRED REMOTE CONTROL (RC-E5)	111
8. OPTION PARTS	112
8.1 Wired remote control	112
8.2 Simple wired remote control (RCH-E3)	124
8.3 Wireless kit (FDTC only)	130
8.4 Motion sensor kit (FDTC only)	138
8.5 Interface kit (SC-BIKN2-E)	142
8.6 Superlink E board (SC-ADNA-E)	146
8.7 Ceiling concealed type (SRR) option parts	148
8.8 OA spacer (FDTC only)	151
8.9 Duct joint (FDTC only)	155
9. TECHNICAL INFORMATION	156
(1) Model SCM40ZS-W	156
(2) Model SCM45ZS-W	158

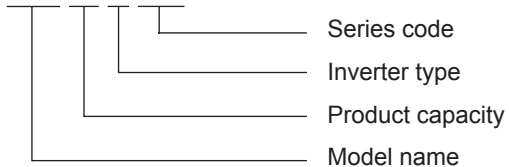
■ Table of models

Model \ Capacity	20	25	35
Wall mounted type (SRK ** ZSX-W)	○	○	○
Wall mounted type (SRK ** ZS-W)	○	○	○
Wall mounted type (SKM ** ZSP-W)	○	○	○
Ceiling concealed type (SRR)		○	○
4-way ceiling cassette type (FDTC)		○	○
Outdoor unit to be combined (SCM)	SCM40ZS-W, 45ZS-W		

■ How to read the model name

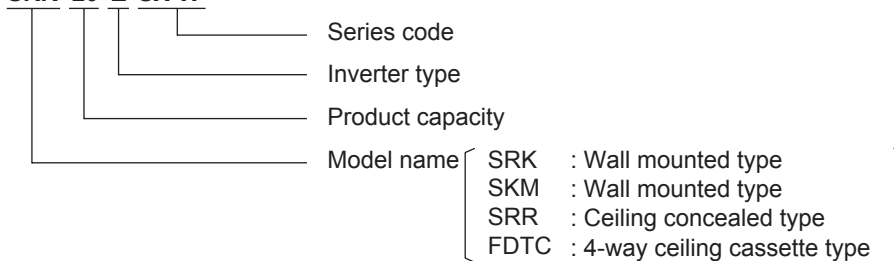
Outdoor unit

Example: **SCM 45 Z S-W**



Indoor unit

Example: **SRK 20 Z SX-W**



1. OUTDOOR UNITS

1.1 Specifications

Item			Model	SCM40ZS-W		
Cooling capacity (1)			W	4000 (1500 (Min.) - 5900 (Max.))		
Heating capacity (1)			W	4500 (1000 (Min.) - 6300 (Max.))		
Heating capacity (H2)			W	—		
Power source				1 Phase, 220 - 240 V, 50Hz/ 220V, 60Hz		
Operation data (1)	Power consumption	Cooling	kW	0.80 (0.34 - 2.10)		
		Heating		0.83 (0.25 - 1.48)		
		Heating (H2)		—		
	Running current	Cooling	A	3.7 / 3.5 / 3.4 (220/ 230/ 240 V)		
		Heating		3.8 / 3.7 / 3.5 (220/ 230/ 240 V)		
	Inrush current, max current			3.7 Max. 14		
	EER	Cooling		5.00		
	COP	Heating		5.42		
		Heating (H2)		—		
	Sound power level	Cooling	dB(A)	62		
		Heating		64		
	Sound pressure level	Cooling		49		
		Heating		51		
	Silent mode	Cooling		44		
		Heating		46		
Exterior dimensions (Height x Width x Depth)			mm	595 x 780(+90) x 290		
Exterior appearance (Equivalent color)				Stucco white (4.2Y 7.5/1.1) , RAL : 7004		
Net weight			kg	40		
Refrigerant equipment	Compressor type & Q'ty			RMT5111SBE1 (Twin rotary type) x 1		
	Motor (Starting method)		kW	1.4 (Line starting)		
	Refrigerant oil		ℓ	0.45 (DIAMOND FREEZE MB75)		
	Refrigerant (4)		kg	R32 1.4 (Pre-Charged up to the piping length of 20m)		
	Heat exchanger			M fins & inner grooved tubing		
	Refrigerant control			Capillary tubes + Electronic expansion valve		
	Device control			Microcomputer control		
Air handling equipment	Fan type & Q'ty			Propeller fan x 1		
	Motor		W	24		
		Air flow	Cooling	m³/min	32.5	
			Heating		32.5	
Shock & vibration absorber				Cushion rubber (for compressor)		
Electric heater				—		
Safety devices				Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Outdoor fan motor error protection, Heating & Cooling overload protection		
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") x 2		
	Connecting method			Gas line: ϕ 9.52 (3/8") x 2		
	Insulation for piping			Flare connecting		
	Length for one indoor unit		m	Necessary (Both sides), independent		
	Total length for all rooms			Max. 25		
	Vertical height difference between outdoor unit and indoor unit			Max. 30		
	Height difference of the indoor units			Max. 15 (Outdoor unit is higher)		
		Max. 15 (Outdoor unit is lower)				
Recommended breaker size			A	Max. 25		
Connection wiring	Size x Core number			25		
	Connecting method			1.5mm² x 4 cores (Including earth cable)		
IP number				Terminal block (Screw fixing type)		
Accessories (included)				IPX4		
Indoor unit to be combined				Installation sheet, Elbow, Grommet		
				SRK20,25,35ZSX-W(-WB,-WT)		
				SRK20,25,35ZS-W(-WB,-WT)		
				SKM20,25,35ZSP-W		
				SRR25,35ZM-W		
				FDTC25,35VH		
Number of connectable indoor units				2		
Total of indoor units			kW	Max. 6		
Notes (1) The data are measured at the following conditions.						
The pipe length for one indoor unit is 5m.						
Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
	Cooling	27°C	19°C	35°C	24°C	ISO15042-T1
	Heating	20°C	—	7°C	6°C	ISO15042-H1
Heating (H2)		20°C	—	2°C	1°C	ISO15042-H2
(2) This air-conditioner is manufactured and tested in conformity with the ISO.						
(3) The operation data are applied to the 220/230/240V districts respectively.						
(4) The refrigerant quantity to be charged includes the refrigerant in 20m connecting piping.						
(Purging is not required even for the short piping.)						

RWC000Z326

Item			Model	SCM45ZS-W		
Cooling capacity (1)			W	4500 (1500 (Min.) - 6400 (Max.))		
Heating capacity (1)			W	5300 (1000 (Min.) - 6500 (Max.))		
Heating capacity (H2)			W	—		
Power source				1 Phase, 220 - 240 V, 50Hz/ 220V, 60Hz		
Operation data (1)	Power consumption	Cooling	kW	0.96 (0.34 - 2.30)		
		Heating		1.06 (0.25 - 1.48)		
		Heating (H2)		—		
	Running current	Cooling	A	4.5 / 4.3 / 4.1 (220/ 230/ 240 V)		
		Heating		4.9 / 4.7 / 4.5 (220/ 230/ 240 V)		
	Inrush current, max current			4.7 Max. 14		
	EER	Cooling		4.69		
		Heating		5.00		
	COP	Heating (H2)		—		
	Sound power level	Cooling	dB	63		
		Heating		65		
	Sound pressure level	Cooling	dB(A)	50		
		Heating		52		
	Silent mode	Cooling		44		
		Heating		46		
Exterior dimensions (Height x Width x Depth)			mm	595 x 780(+90) x 290		
Exterior appearance (Equivalent color)				Stucco white (4.2Y 7.5/1.1) , RAL : 7004		
Net weight			kg	40		
Refrigerant equipment	Compressor type & Q'ty			RMT5111SBE1 (Twin rotary type) x 1		
	Motor (Starting method)		kW	1.4 (Line starting)		
	Refrigerant oil		ℓ	0.45 (DIAMOND FREEZE MB75)		
	Refrigerant (4)		kg	R32 1.4 (Pre-Charged up to the piping length of 20m)		
	Heat exchanger			M fins & inner grooved tubing		
	Refrigerant control			Capillary tubes + Electronic expansion valve		
	Device control			Microcomputer control		
Air handling equipment	Fan type & Q'ty			Propeller fan x 1		
	Motor		W	24		
		Air flow	Cooling	m³/min	32.5	
			Heating		32.5	
Shock & vibration absorber				Cushion rubber (for compressor)		
Electric heater				—		
Safety devices				Compressor overheat protection, Overcurrent protection, Frost protection, Serial signal error protection, Outdoor fan motor error protection, Heating & Cooling overload protection		
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") x 2 Gas line: ϕ 9.52 (3/8") x 2		
	Connecting method			Flare connecting		
	Insulation for piping			Necessary (Both sides), independent		
	Length for one indoor unit		m	Max. 25		
	Total length for all rooms			Max. 30		
	Vertical height difference between outdoor unit and indoor unit			Max. 15 (Outdoor unit is higher) Max. 15 (Outdoor unit is lower)		
	Height difference of the indoor units			Max. 25		
Recommended breaker size			A	25		
Connection wiring	Size x Core number			1.5mm² x 4 cores (Including earth cable)		
	Connecting method			Terminal block (Screw fixing type)		
IP number				IPX4		
Accessories (included)				Installation sheet, Elbow, Grommet		
Indoor unit to be combined				SRK20,25,35ZSX-W(-WB,-WT) SRK20,25,35ZS-W(-WB,-WT) SKM20,25,35ZSP-W SRR25,35ZM-W FDTC25,35VH		
Number of connectable indoor units				2		
Total of indoor units			kW	Max. 7		
Notes (1) The data are measured at the following conditions.						
The pipe length for one indoor unit is 5m.						
Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
	Cooling	27°C	19°C	35°C	24°C	ISO15042-T1
	Heating	20°C	—	7°C	6°C	ISO15042-H1
Heating (H2)		20°C	—	2°C	1°C	ISO15042-H2
(2) This air-conditioner is manufactured and tested in conformity with the ISO.						
(3) The operation data are applied to the 220/230/240V districts respectively.						
(4) The refrigerant quantity to be charged includes the refrigerant in 20m connecting piping. (Purging is not required even for the short piping.)						

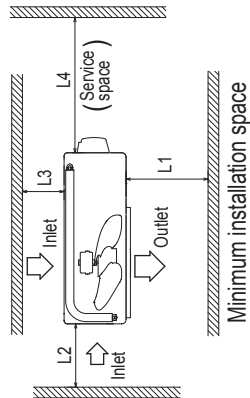
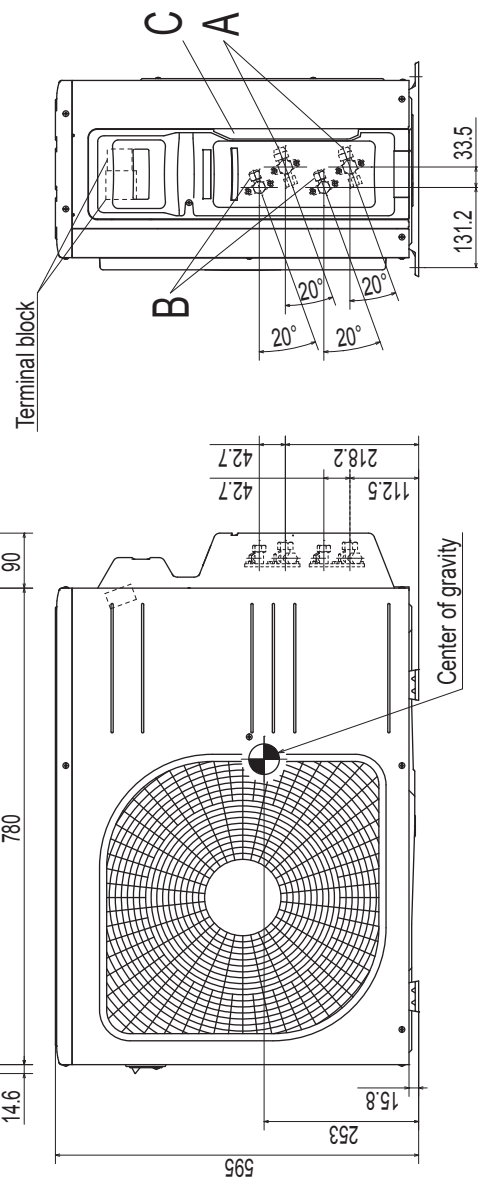
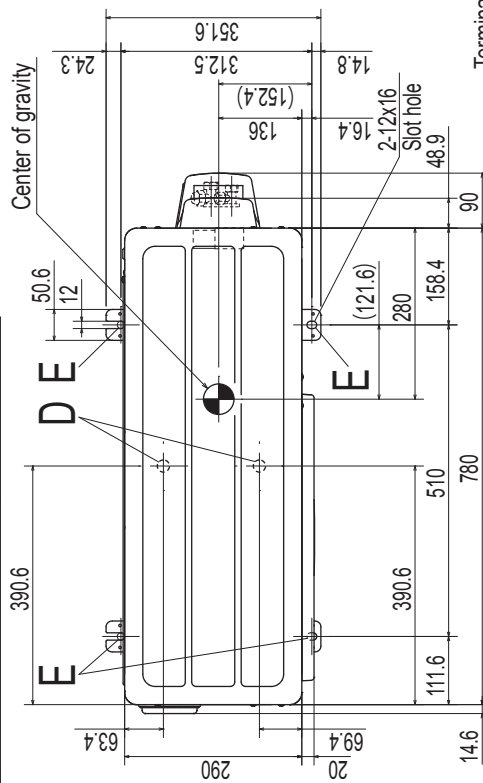
1.2 Exterior dimensions

Models SCM40ZS-W, 45ZS-W

Notes

- (1) The unit must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) If the unit is installed in the location where there is a possibility of strong winds, place the unit such that the direction of air from the outlet gets perpendicular to the wind direction.
- (4) Leave 200mm or more space above the unit.
- (5) The wall height on the outlet side should be 1200mm or less.
- (6) The model name label is attached on the right side of the unit.

Symbol	Content
A	Service valve connection (gas side) $\phi 9.52 (3/8")$ (Flare)
B	Service valve connection (liquid side) $\phi 6.35 (1/4")$ (Flare)
C	Pipe/cable draw-out hole
D	Drain discharge hole $\phi 20 \times 2$ places
E	Anchor bolt hole M10-12 $\times$ 4 places



Installation space	
L1	280 or more
L2	100 or more
L3	80 or more
L4	250 or more

Unit:mm

RWC000Z327

1.3 Electrical wiring

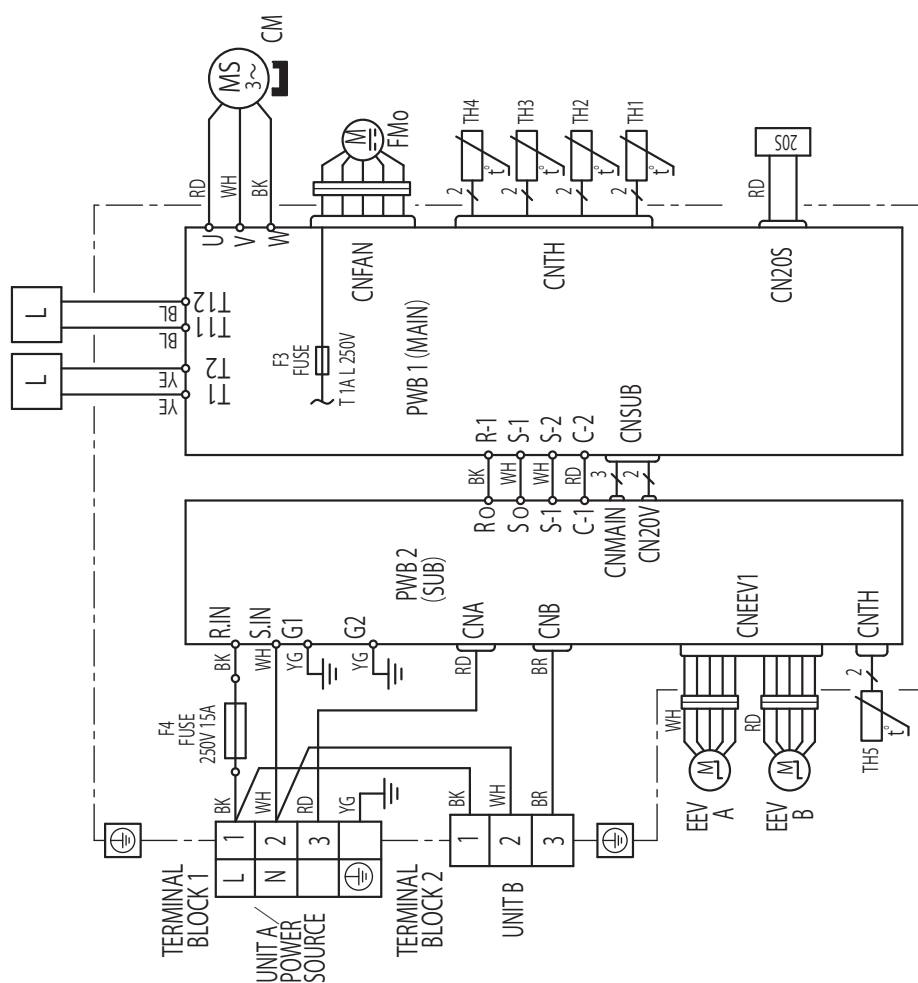
Models SCM40ZS-W, 45ZS-W

Meaning of marks

Item	Description	Item	Description
CN20S	Connector	20S	4-way valve (coil)
CN20V		CM	Compressor motor
CNA		EEVA/EEVB	Electric expansion valve (coil)
CNB		FMo	Fan motor
CNEEV1		L	Reactor
CNFAN		TH1	Heat exchanger temperature sensor 1
CNMAIN		TH2	Outdoor air temperature sensor
CNSUB		TH3	Discharge pipe temperature sensor
CNTH		TH4	Suction pipe temperature sensor
		TH5	Heat exchanger temperature sensor 2

Color marks

Mark	Color	Mark	Color
BK	Black	YE	Yellow
RD	Red	YG	Yellow/Green
WH	White	BR	Brown
BL	Blue		



Power cable, indoor-outdoor connecting wires

Model name	MAX running current (A)	Power cable wire size x number*	Power cable length (m)	Connecting cable wire size x number*
SCM40ZS-W SCM45ZS-W	14	2.5mm ² x 3	18	1.5mm ² x 4

- * The wire numbers include earth wire (Yellow/Green)
- Switchgear or circuit breaker capacity should be chosen according to national or regional electricity regulations.
 - The power cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the national or regional electricity regulations.

RWC000Z328

1.4 Noise level

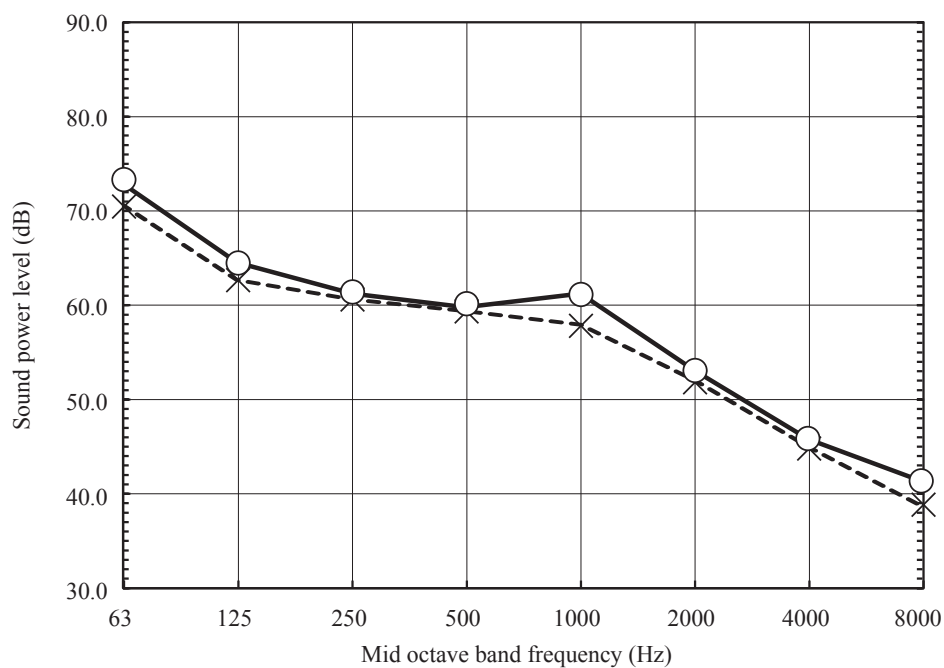
(1) Sound power level

Model SCM40ZS-W

Noise Level	Cooling	62 dB(A)
	Heating	64 dB(A)

Condition	ISO15042 T1/H1
Mode	Rated capacity value

× Cooling, ○ — Heating

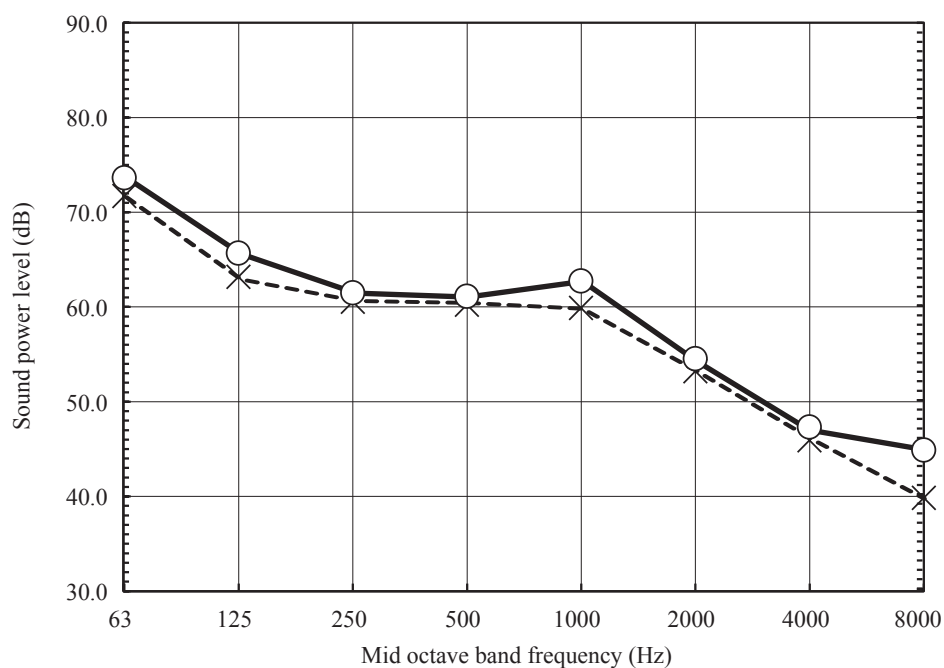


Model SCM45ZS-W

Noise Level	Cooling	63 dB(A)
	Heating	65 dB(A)

Condition	ISO15042 T1/H1
Mode	Rated capacity value

× Cooling, ○ — Heating



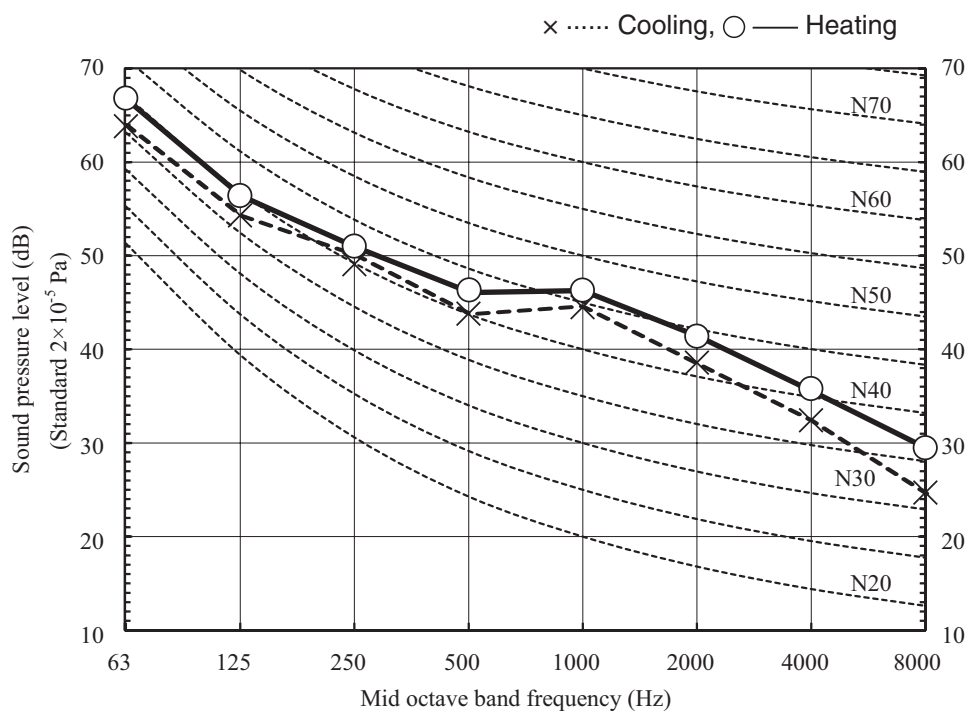
(2) Sound pressure level

(a) Rated capacity value

Model SCM40ZS-W

Noise Level	Cooling	49 dB(A)
	Heating	51 dB(A)

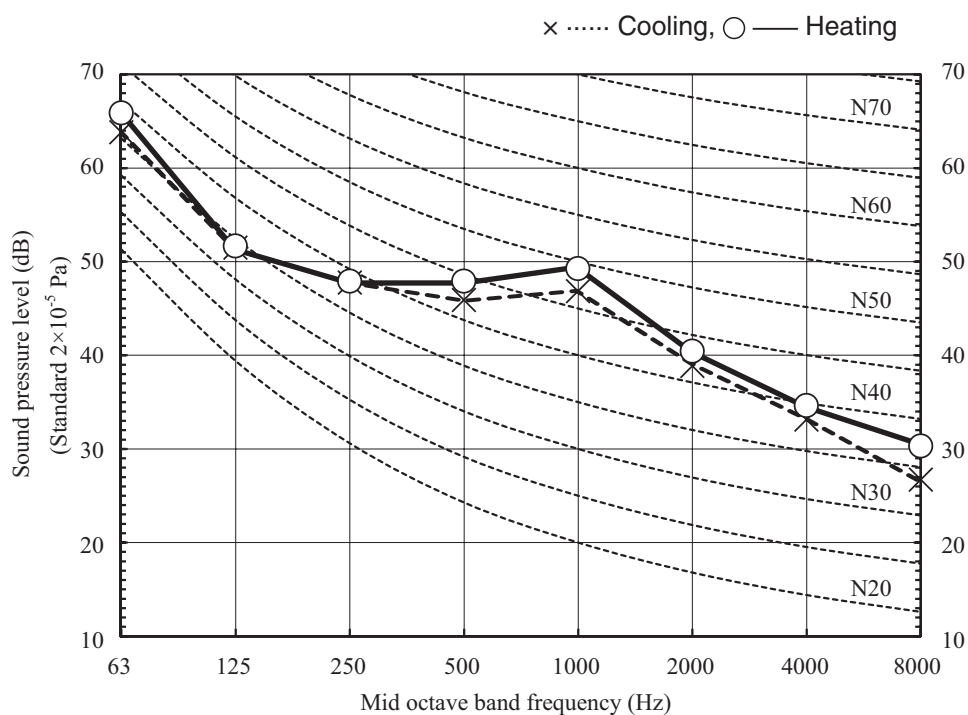
Condition	ISO15042 T1/H1
Mode	Rated capacity value



Model SCM45ZS-W

Noise Level	Cooling	50 dB(A)
	Heating	52 dB(A)

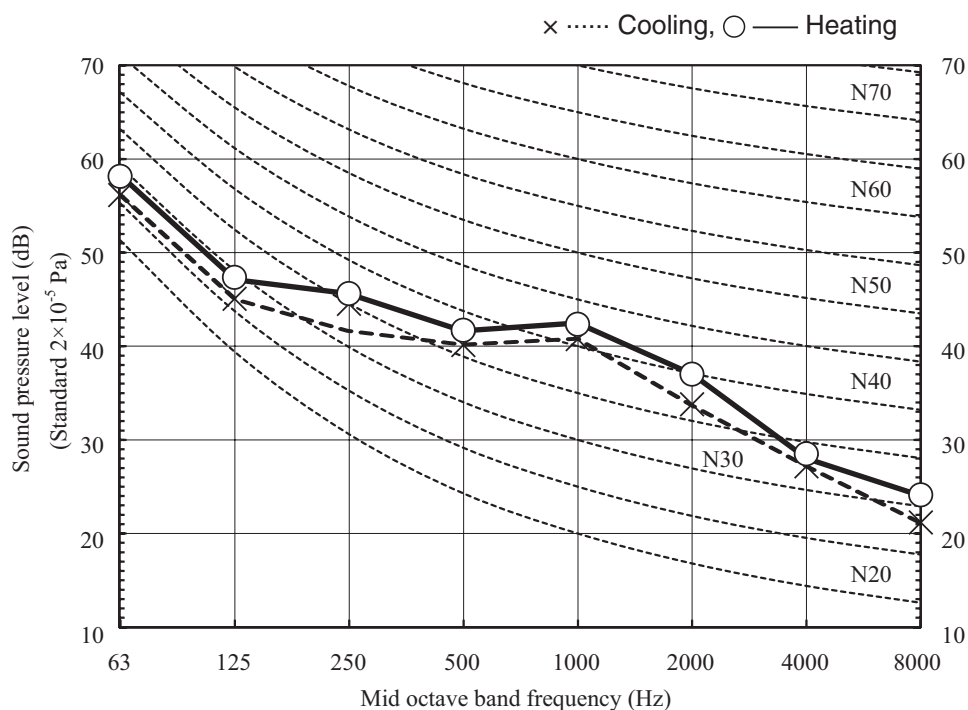
Condition	ISO15042 T1/H1
Mode	Rated capacity value



(b) Silent mode**Model SCM40ZS-W**

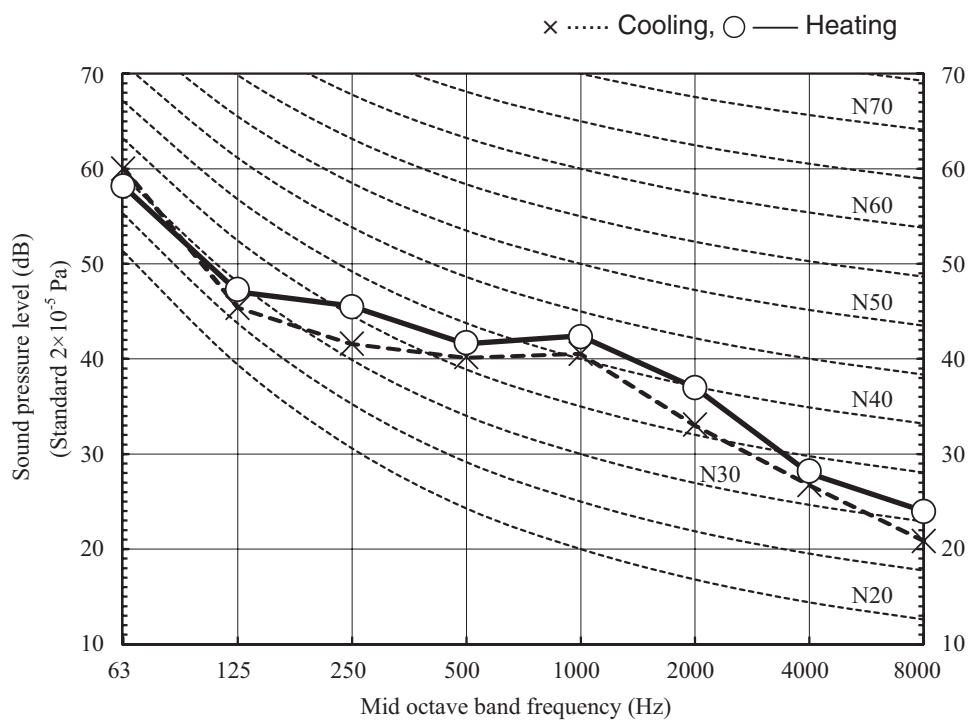
Noise Level	Cooling	44 dB(A)
	Heating	46 dB(A)

Condition	ISO15042 T1/H1
Mode	Silent

**Model SCM45ZS-W**

Noise Level	Cooling	44 dB(A)
	Heating	46 dB(A)

Condition	ISO15042 T1/H1
Mode	Silent



1.5 Application data

Models SCM40ZS-W, 45ZS-W

RPC012A203

Model SCM40,45ZS-W
R32 REFRIGERANT USED

- This installation manual deals with an outdoor unit installation only. For an indoor unit installation, refer to page 83.

SAFETY PRECAUTIONS

- Before installation, read the "SAFETY PRECAUTIONS" carefully and strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, **⚠ WARNING** and **⚠ CAUTION**.

⚠ WARNING Indicates a potentially hazardous situation which, if not avoided, can result in serious consequences such as death or severe injury.

⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, can result in personal injury or property damage.

Both mention the important items to protect your health and safety. Therefore, strictly follow them by any means.

⚠ WARNING

- Be sure to use only for residential purpose.**
If this unit is installed in inferior environment such as machine shop, vehicle (like ship), warehouse, etc., it can malfunction.
- Installation must be carried out by the qualified installer completely in accordance with the installation manual.**
Installation by non qualified person or incorrect installation can cause serious troubles such as water leak, electric shock, fire and personal injury.
- Be sure to wear protective goggles and gloves while performing installation work.**
Improper safety measures can result in personal injury.
- Use the original accessories and the specified components for the installation.**
Using parts other than those prescribed may cause water leak, electric shock, fire and personal injury.
- Do not install the unit near the location where leakage of flammable gases can occur.**
If leaked gases accumulate around the unit, it can cause fire resulting in property damage and personal injury.
- When installing the unit in small rooms, make sure that refrigerant density does not exceed the limit (Reference: ISO5149) in the event of leakage.**
If refrigerant density exceeds the limit, consult the dealer and install the ventilation system. Otherwise lack of oxygen can occur resulting in serious accident.
- Install the unit in a location where unit will remain stable, horizontal and free of any vibration transmission.**
Unsuitable installation location can cause the unit to fall resulting in material damage and personal injury.
- Do not run the unit with removed panels or protections.**
Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shock.
- This unit is designed specifically for R32.**
Using any other refrigerant can cause unit failure and personal injury.
- Do not vent R32 into atmosphere.**
R32 is a fluorinated greenhouse gas with a Global Warming Potential (GWP) = 675.
- Make sure that no air enters the refrigerant circuit when the unit is installed and removed.**
If air enters the refrigerant circuit, the pressure in the refrigerant circuit will become too high, which can cause burst and personal injury.
- Be sure to use the prescribed pipes, flare nuts and tools for R32 or R410A.**
Using existing parts (for R22 or R407C) can cause refrigerant circuit burst resulting in unit failure and personal injury.
- Be sure to connect both liquid and gas connecting pipes properly before operating the compressor.**
Do not open the liquid and gas operation valves before completing piping work, and evacuation.
If the compressor is operated when connecting pipes are not connected and operation valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.
- Be sure to tighten the flare nuts to specified torque using the torque wrench.**
Tightening flare nuts with excess torque can cause burst and refrigerant leakage after a long period.
- During pump down work, be sure to stop the compressor before closing operation valves and removing connecting pipes.**
If the connecting pipes are removed when the compressor is in operation and operation valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.
- In the event of refrigerant leakage during installation, be sure to ventilate the working area properly.**
If the refrigerant comes into contact with naked flames, poisonous gases will be produced.
- Electrical work must be carried out by the qualified electrician, strictly in accordance with national or regional electricity regulations.**
Incorrect installation can cause electric shock, fire or personal injury.
- Make sure that earth leakage breaker and circuit breaker of appropriate capacities are installed.**
Circuit breaker should be able to disconnect all poles under over current. Absence of appropriate breakers can cause electric shock, personal injury or property damage.
- Be sure to switch off the power source in the event of installation, maintenance or service.**
If the power source is not switched off, there is a risk of electric shock, unit failure or personal injury.
- Be sure to tighten the cables securely in terminal block and relieve the cables properly to prevent overloading the terminal blocks.**
Loose connections or cable mountings can cause anomalous heat production or fire.
- Do not process, splice or modify the power cable, or share the socket with other power plugs.**
Improper power cable or power plug can cause fire or electric shock due to poor connection, insufficient insulation or over-current.
- Do not perform any change in protective device or its setup condition yourself.**
Changing protective device specifications can cause electric shock, fire or burst.
- Be sure to clamp the cables properly so that they do not touch any internal component of the unit.**
If cables touch any internal component, it can cause overheating and fire.
- Be sure to install service cover properly.**
Improper installation can cause electric shock or fire due to intrusion of dust or water.
- Be sure to use the prescribed power and connecting cables for electrical work.**
Using improper cables can cause electric leak or fire.
- This appliance must be connected to main power source by means of a circuit breaker or switch with a contact separation of at least 3 mm.**
Improper electrical work can cause unit failure or personal injury.
- When plugging this unit, a plug conforming to the standard IEC60884-1 must be used.**
Using improper plug can cause electric shock or fire.
- Be sure to connect the power source cable with power source properly.**
Improper connection can cause intrusion of dust or water resulting in electric shock or fire.

⚠ CAUTION

- Take care when carrying the unit by hand.**
If the unit weight is more than 20 kg, it must be carried by two or more persons. Do not carry the unit by the plastic straps. Always use the carry handle.
- Do not install the outdoor unit in a location where insects and small animals can inhabit.**
Insects and small animals can enter the electrical parts and cause damage resulting in fire or personal injury. Instruct the user to keep the surroundings clean.
- If the outdoor unit is installed at height, make sure that there is enough space for installation, maintenance and service.**
Insufficient space can result in personal injury due to falling from the height.
- Do not install the unit near the location where neighbours are bothered by noise or air generating from the unit.**
It can affect surrounding environment and cause a claim.
- Do not install in the locations where unit is directly exposed to corrosive gases (like sulphide gas, chloride gas), sea breeze or salty atmosphere.**
It can cause corrosion of heat exchanger and damage to plastic parts.
- Do not install the unit close to the equipments that generate electromagnetic waves and/or high-harmonic waves.**
Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- Do not install the unit in the locations where:**
 - There are heat sources nearby.
 - Unit is directly exposed to rain or sunlight.
 - There is any obstacle which can prevent smooth air circulation from inlet and outlet side of the unit.
 - Unit is directly exposed to oil mist and steam such as kitchen.
 - Chemical substances like ammonia (organic fertilizer), calcium chloride (snow melting agent) and acid (sulfurous acid etc.), which can harm the unit, will generate or accumulate.
 - Drain water can not be discharged properly.
 - TV set or radio receiver is placed within 1 m.
 - Height above sea level is more than 1000 m.
- It can cause performance degradation, corrosion and damage of components, unit malfunction and fire.**
- Dispose of all packing materials properly.**
Packing materials contain nails and wood which can cause personal injury. Keep the polybag away from children to avoid the risk of suffocation.
- Do not put anything on the outdoor unit.**
Object may fall causing property damage or personal injury.
- Do not touch the aluminum fin of the outdoor unit.**
Aluminium fin temperature is high during heating operation. Touching fin can cause burn.
- Do not touch any refrigerant pipe with your hands when the system is in operation.**
During operation the refrigerant pipes become extremely hot or extremely cold depending on the operating condition. Touching pipes can cause personal injury like burn (hot/cold).
- Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations.**
The isolator should be locked in OFF state in accordance with EN60204-1.

1. ACCESSORIES AND TOOLS

Standard accessories (Supplied with outdoor unit)		Q'ty	Locally procured parts		Tools for installation work			
(1)	Drain grommet 	1	(a)	Anchor bolt (M10-M12) × 4 pcs	Plus headed driver	Spanner wrench	Vacuum pump*	
(2)	Drain elbow 	1	(b)	Putty	Knife	Torque wrench [14.0-62.0 N·m (1.4-6.2 kgf·m)]	Gauge manifold *	
			(c)	Electrical tape	Saw	Wrench key (Hexagon) [4 mm]	Charge hose *	
			(d)	Connecting pipe	Tape measure	Flaring tool set *	Vacuum pump adapter* (Anti-reverse flow type)	
			(e)	Connecting cable	Pipe cutter	Flare adjustment gauge	Gas leak detector *	
			(f)	Power cable				
			(g)	Clamp and screw (for finishing work)				
*Designed specifically for R32 or R410A								

*Designed specifically for R32 or R410A

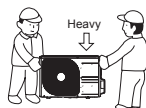
2. OUTDOOR UNIT INSTALLATION

Note as a unit designed for R32

- Do not use any refrigerant other than R32. R32 will rise to pressure about 1.6 times higher than that of a conventional refrigerant. A cylinder containing R32 has a light blue indication mark on the top.
- 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 R32. Check connectable indoor unit models in a catalog, etc. (A wrong indoor unit, if connected into the system, will impair proper system operation)

1. Haulage

- Always carry or move the unit with two or more persons.
 - The right hand side of the unit as viewed from the front (outlet side) is heavier.
- A person carrying the right hand side must take care of this fact. A person carrying the left hand side must hold the handle provided on the front panel of the unit with his right hand and the corner column section of the unit with his left hand.



CAUTION

When a unit is hauled, take care of its gravity center position which is shifted towards right hand side. If the unit is not hauled properly, it can go off balance and fall resulting in serious injury.

2. Selecting the installation location

Select the suitable installation location where:

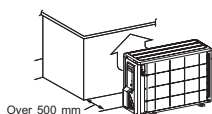
- Unit will be stable, horizontal and free of any vibration transmission.
- There is no obstacle which can prevent smooth air circulation from inlet and outlet side of the unit.
- There is enough space for service and maintenance of unit.
- Neighbours are not bothered by noise or air generating from the unit.
- Outlet air of the unit does not blow directly to animals or plants.
- Drain water can be discharged properly.
- There is no risk of flammable gas leakage.
- There are no other heat sources nearby.
- Unit is not directly exposed to rain or sunlight.
- Unit is not directly exposed to oil mist and steam.
- Chemical substances like ammonia (organic fertilizer), calcium chloride (snow melting agent) and acid (sulfurous acid etc.), which can harm the unit, will not generate or accumulate.
- Unit is not directly exposed to corrosive gases (like sulphide gas, chloride gas), sea breeze or salty atmosphere.
- No TV set or radio receiver is placed within 1 m.
- Unit is not affected by electromagnetic waves and/or high-harmonic waves generated by other equipments.
- Strong wind does not blow against the unit outlet.
- Heavy snowfalls do not occur (If installed, provide proper protection to avoid snow accumulation).

NOTE

If the unit is installed in the area where there is a possibility of strong wind or snow accumulation, the following measures are required.

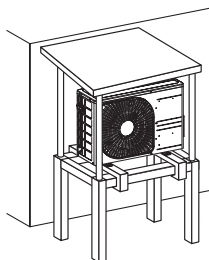
(1) Location of strong wind

- Place the unit with its outlet side facing the wall.
- Place the unit such that the direction of air from the outlet gets perpendicular to the wind direction.



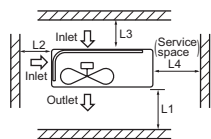
(2) Location of snow accumulation

- Install the unit on the base so that the bottom is higher than snow cover surface.
- Install the unit under eaves or provide the roof on site.



3. Installation space

- There must be 1 m or larger space between the unit and the wall in at least 1 of the 4 sides. Walls surrounding the unit from 4 sides is not acceptable. The wall height on the outlet side should be 1200 mm or less. Refer to the following figure and table for details.



	Installation space (mm)
L1	280 or more
L2	100 or more
L3	80 or more
L4	250 or more

NOTE

When more than one unit are installed side by side, provide a 250 mm or wider interval between them as a service space.

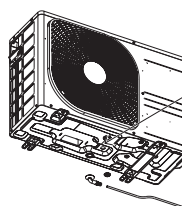
CAUTION

When more than one unit are installed in parallel directions, provide sufficient inlet space so that short-circuiting may not occur.

4. Drain piping work (If necessary)

Carry out drain piping work by using a drain elbow and a drain grommet supplied separately as accessories if condensed water needs to be drained out.

- Install drain elbow and drain grommet.
- Seal around the drain elbow and drain grommet with putty or adequate caulking material.



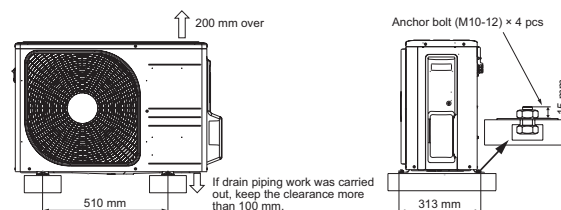
Do not put a grommet on this hole. This is a supplementary drain hole to discharge drain water, when a large amount of it is gathered.

CAUTION

Do not use drain elbow and drain grommet if there is a possibility to have several consecutive days of sub zero temperature. (There is a risk of drain water freezing inside and blocking the drain.)

5. Installation

- Install the unit on a flat level base.
- While installing the unit, keep space and fix the unit's legs with 4 anchor bolts as shown in the figure below. The protrusion of an anchor bolt from the foundation surface must be kept within 15 mm.



CAUTION

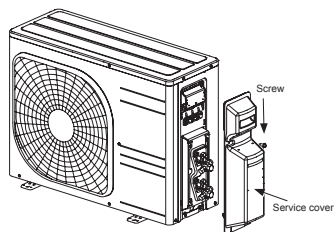
- Install the unit properly so that it does not fall over during earthquake, strong wind, etc.
- Make sure that unit is installed on a flat level base. Installing unit on uneven base may result in unit malfunction.

3. PREPARATION FOR WORK

1. Removing service cover

Remove the screw. Slide service cover downwards and remove it.

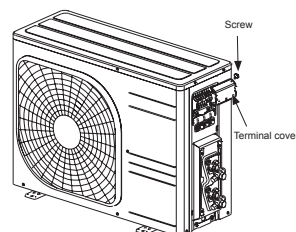
<SCM40/45>



2. Removing terminal cover

Remove the screw and take out terminal cover.

<SCM40/45>



4. CONNECTING PIPING WORK

1. Restrictions on unit installation

Abide by the following restrictions on unit installation.
Improper installation can cause compressor failure or performance degradation.

	Model SCM40/45
pipng length	one indoor unit MAX 25 m all indoor unit MAX 30 m
hight difference	

2. Preparation of connecting pipe

2.1. Selecting connecting pipe

Select connecting pipe according to the following table.

Indoor unit	Model 20/25/35
Gas pipe	φ 9.52
Liquid pipe	φ 6.35

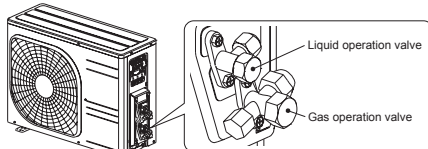
- Pipe wall thickness must be greater than or equal to 0.8 mm.
- Pipe material must be O-type (Phosphorus deoxidized seamless copper pipe ICS 23.040.15, ICS 77.150.30).

2.2. Cutting connecting pipe

- Cut the connecting pipe to the required length with pipe cutter.
- Hold the pipe downward and remove the burrs. Make sure that no foreign material enters the pipe.
- Cover the connecting pipe ends with the tape.

3. Piping work

Check that both liquid and gas operation valves are fully closed.
Carry out the piping work with operation valves fully closed.



3.1. Flaring pipe

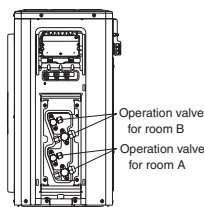
- Take out flare nuts from the operation valves of outdoor unit and engage them onto connecting pipes.
 - Flare the pipes according to table and figure shown below.
- Flare dimensions for R410A are different from those for conventional refrigerant. Although it is recommended to use the flaring tools designed specifically for R410A, conventional flaring tools can also be used by adjusting the dimension B with a flare adjustment gauge.

Copper pipe outer diameter	A		Copper pipe outer diameter	B [Rigid (clutch) type]	
φ 6.35	9.1		φ 6.35	R410A	Conventional
φ 9.52	13.2		φ 6.35	0-0.5	1.0-1.5
			φ 9.52		

3.2. Connecting pipes

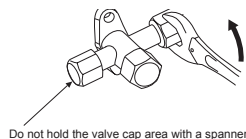
- Connect pipes on both liquid and gas sides.

<SCM40/45>



- Tighten nuts to specified torque shown in the table below.

Operation valve size (mm)	Tightening torque (N·m)
φ 6.35 (1/4")	14-18
φ 9.52 (3/8")	34-42



CAUTION

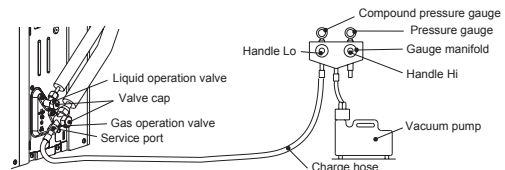
- Do not apply refrigerating machine oil to the flared surface. It can cause refrigerant leakage.
- Do not apply excess torque to the flared nuts. The flared nuts may crack resulting in refrigerant leakage.

4. Evacuation

- Connect vacuum pump to gauge manifold. Connect charge hose of gauge manifold to a service port of outdoor unit.
- Run the vacuum pump for at least one hour after the vacuum gauge shows -0.1 MPa (-76 cm Hg).
- Confirm that the vacuum gauge indicator does not rise even if the system is left for 15 minutes or more. Vacuum gauge indicator will rise if the system has moisture left inside or has a leakage point. Check the system for the leakage point. If leakage point is found, repair it and return to (1) again.
- Close the Handle Lo and stop the vacuum pump. Keep this state for a few minutes to make sure that the compound pressure gauge pointer does not swing back.
- Remove valve caps from liquid operation valve and gas operation valve. Close the Handle Lo and stop the vacuum pump. Turn the liquid operation valve's rod 90 degree counterclockwise with a hexagonal wrench key to open valve. Close it after 5 seconds, and check for gas leakage. Using soapy water, check for gas leakage from indoor unit's flare and outdoor unit's flare and valve rods. Wipe off all the water after completing the check.
- Disconnect charging hose from gas operation valve's service port and fully open liquid and gas operation valves. (Do not attempt to turn valve rod beyond its stop.)
- Tighten operation valve caps and service port cap to the specified torque shown in the table below.

Operation valve size (mm)	Operation valve cap tightening torque (N·m)	Service port cap tightening torque (N·m)
φ 6.35 (1/4")	20-30	10-12
φ 9.52 (3/8")		

- Repeat the above steps (1) to (8) for all connected indoor units.



CAUTION

To prevent vacuum pump oil from entering into the refrigerant system, use a counterflow prevention adapter.

5. Additional refrigerant charge

Additional refrigerant charge is required only when connecting pipe length exceeds 20 m.

5.1 Calculating additional refrigerant charge

Additional refrigerant charge can be calculated using the formula given below.

Additional refrigerant charge (g) = { Connecting pipe length (m) - Factory charged length 20 (m) } x 20 (g/m)

NOTE

- If additional refrigerant charge calculation result is negative, there is no need to remove the refrigerant.
- If refrigerant recharge is required for the unit with connecting pipe length 20 m or shorter, charge the factory charged amount as shown in the table below.

	Model SCM40/45
The factory refrigerant charge amount (kg)	1.4
The maximum refrigerant charge amount (kg)	1.6

5.2 Charging refrigerant

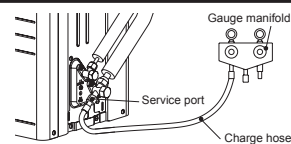
- Charge the R32 refrigerant in liquid phase from service port with both liquid and gas operation valves shut. Since R32 refrigerant must be charged in the liquid phase, make sure that refrigerant is discharged from the cylinder in the liquid phase all the time.
- When it is difficult to charge a required refrigerant amount, fully open both liquid and gas operation valves and charge refrigerant, while running the unit in the cooling mode. When refrigerant is charged with the unit being run, complete the charge operation within 30 minutes.
- Write the additional refrigerant charge calculated from the connecting pipe length on the label attached on the service cover.

CAUTION

- Running the unit with an insufficient quantity of refrigerant for a long time can cause unit malfunction.
- Do not charge more than the maximum refrigerant amount. It can cause unit malfunction.

5. PUMP DOWN

- Connect charge hose of gauge manifold to a service port of outdoor unit.
- Close the liquid operation valves for all connected indoor units with hexagonal wrench key.
- Fully open the gas operation valves with hexagonal wrench key.
- Carry out forced cooling operation for all connected indoor units (For forced cooling operation procedure, refer to indoor unit installation manual).
- When the low pressure gauge becomes 0.01 MPa, close the gas operation valves and stop forced cooling operation.



6. ELECTRICAL WIRING WORK

⚠ WARNING

- Make sure that all the electrical work is carried out in accordance with the national or regional electrical standards.
- Make sure that the earth leakage breaker and circuit breaker of appropriate capacities are installed (Refer to the table given below).
- Do not turn on the power until the electrical work is completed.
- Do not use a condensate capacitor for power factor improvement under any circumstances. (It does not improve power factor. Moreover, it can cause an abnormal overheat accident).

Breaker specifications

Model	Phase	Earth leakage breaker	Circuit breaker
SCM40/45	Single phase	Leakage current: 30 mA, 0.1 sec or less	Over current: 25 A

Main fuse specification

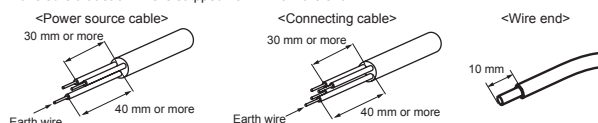
Model	Specification	Parts No.	Code on LABEL, WIRING
SCM40/45	250 V 15 A	SSA564A136	F4

1.Preparing cable

- (1) Selecting cable
Select the power source cable and connecting cable in accordance with the specifications mentioned below.
 - (a) Power source cable
3-core* 2.5 mm² or more, conformed with 60245 IEC57
When selecting the power source cable length, make sure that voltage drop is less than 2 %.
If the wire length gets longer, increase the wire diameter.
 - (b) Connecting cable
4-core* 1.5 mm², conformed with 60245 IEC57
* 1 Earth wire is included (Yellow/Green).

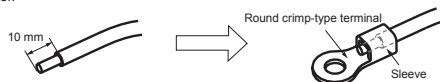
- (2) Arrange each wire length as shown below.

Make sure that each wire is stripped 10 mm from the end.



- (3) Attach round crimp-type terminal to each wire as shown in the below.

Select the size of round crimp-type terminal after considering the specifications of terminal block and wire diameter.



⚠ CAUTION

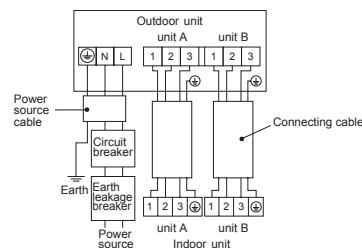
Power source cable and connecting cable must conform to the specifications mentioned in the manual. Using cables with wrong specifications may result in unit malfunction.

2.Connecting cable

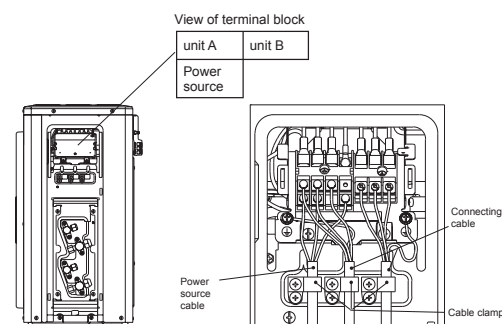
- (1) Remove the service cover and the terminal cover.
- (2) Connect the cables according to the instructions and figures given below.
 - (a) Connect the earth wire of power source cable.
An earth wire must be connected before connecting the other wires of power source cable. Keep the earth wire longer than the remaining two wires of power source cable.
 - (b) Connect the remaining two wires (N and L) of power source cable.
 - (c) Connect the wires of connecting cables. Make sure that for each wire, outdoor and indoor side terminal numbers match. Terminal number A of the outdoor unit is used for A indoor unit and terminal number B for B indoor unit respectively.
Earth wire shall be Yellow/Green (Y/G) in color and longer than other wires for safety reason.
- (3) Fasten the cables properly with cable clamps so that no external force may work on terminal connections.

Moreover, make sure that cables do not touch the piping, etc. When cables are connected, make sure that all electrical components within the electrical component box are free of loose connector coupling or terminal connection.

<Circuit diagram>



<SCM40/45>



7. FINISHING WORK

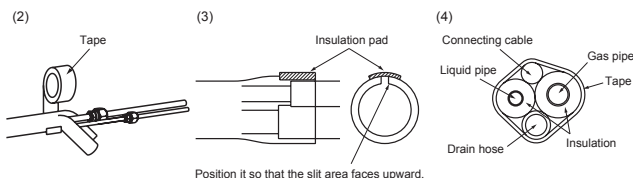
NOTE

- Make sure to match the piping and wiring from each unit to the outdoor unit.
- Be careful because if connections are wrong, normal operation cannot be achieved and may damage the compressor.



1. Heating and condensation prevention

- (1) Dress the connecting pipes (both liquid and gas pipes) with insulation to prevent it from heating and dew condensation.
Use the heat insulating material which can withstand 120 °C or higher temperature. Make sure that insulation is wrapped tightly around the pipes and no gap is left between them.
- (2) Wrap the refrigerant pipings of indoor unit with indoor unit heat insulation using tape.
- (3) Cover the flare-connected joints (indoor side) with the indoor unit heat insulation and wrap it with an insulation pad (standard accessory provided with indoor unit).
- (4) Wrap the connecting pipes, connecting cable and drain hose with the tape.



NOTE

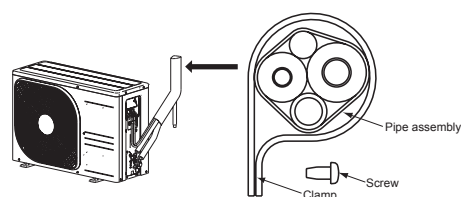
Locations where relative humidity exceeds 70 %, both liquid and gas pipes need to be dressed with 20 mm or thicker heat insulation materials.

⚠ CAUTION

- Improper insulation can cause condensate (water) formation during cooling operation. Condensate can leak or drip causing damage to household property.
- Poor heat insulating capacity can cause pipe outer surface to reach high temperature during heating operation. It can cause cable deterioration and personal injury.

2.Finishing work

- (1) Make sure that the exterior portion of connecting pipes, connecting cable and drain hose is wrapped properly with tape. Shape the connecting pipes to match with the contours of the pipe assembly route.
- (2) Fix the pipe assembly with the wall using clamps and screws. Pipe assembly should be anchored every 1.5 m or less to isolate the vibration.
- (3) Install the terminal cover and the service cover securely. Water may enter the unit if service cover is not installed properly, resulting in unit malfunction and failure.



⚠ CAUTION

Make sure that the connecting pipes do not touch the components within the unit. If pipes touch the internal components, it may generate abnormal sounds and/or vibrations.

8. INSTALLATION TEST CHECK POINTS

After finishing the installation work, check the following points again before turning on the power. Conduct test run (Refer to indoor unit installation manual) and ensure that the unit operates properly.

Power source voltage complies with the rated voltage of air-conditioner.		No gas leaks from the joints of the operation valves.	
Earth leakage breaker and circuit breaker are installed.		Indoor and outdoor side pipe joints have been insulated.	
Power cable and connecting cable are securely fixed to the terminal block.		Drain hose (if installed) is fixed properly.	
Both liquid and gas operation valves are fully open.		Screw of the service cover is tightened properly.	

2. INDOOR UNITS

2.1 Specifications

(1) Wall mounted type (SRK, SKM)

(a) Models SRK20, 25, 35, ZSX-W, -WB, -WT

Adapted to **RoHS** directive

Item			Model	SRK20ZSX-W, -WB, -WT			
Power source				1 Phase, 220–240 V, 50Hz/220V, 60Hz			
Operation data	Nominal cooling capacity (range)		kW	2.0			
	Nominal heating capacity (range)		kW	3.0			
	Sound power level	Cooling	dB(A)	53			
		Heating		55			
	Sound pressure level	Cooling		Hi: 38 Me: 31 Lo: 24 ULo: 19			
		Heating		Hi: 38 Me: 33 Lo: 25 ULo: 19			
Silent mode sound pressure level			—				
Exterior dimensions (Height x Width x Depth)			mm	305 x 920 x 220			
Exterior appearance (4) (Equivalent color)				SRK20ZSX-W : Fine snow (8.0Y 9.3/0.1) , RAL : 9003			
Net weight			kg	13			
Heat exchanger				Louver fins & inner grooved tubing			
Fan type & Q'ty				Tangential fan x 1			
Fan motor (Starting method)			W	42 x1 (Direct drive)			
Air flow		Cooling	m³/min	Hi: 11.3 Me: 9.1 Lo: 6.0 ULo: 5.0			
		Heating		Hi: 12.2 Me: 10.3 Lo: 7.2 ULo: 5.4			
Available external static pressure			Pa	0			
Outside air intake				Not possible			
Air filter, Quality / Quantity				Polypropylene net (washable) x 2			
Shock & vibration absorber				Rubber sleeve (for fan motor)			
Operation control	Remote control			Wireless remote control			
	Room temperature control			Microcomputer thermostat			
	Operation display			RUN: Green, TIMER: Yellow, ECO: Blue			
Safety equipments				Frost protection, Serial signal error protection, Indoor fan motor error protection			
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")			
	Connecting method			Flare connection			
	Attached length of piping		m	Liquid line : 0.55 / Gas line : 0.48			
	Insulation for piping			Necessary (Both sides), independent			
	Drain hose			Hose connectable (VP16)			
Drain pump, max lift height			mm	—			
Interconnecting wires	Size x Core number			1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)			
IP number				IPX0			
Standard accessories				Mounting kit, Clean filter (Allergen clear filter x 1, Photocatalytic washable deodorizing filter x 1)			
Option parts				Interface kit (SC-BIKN2-E)			
Notes (1) The data are measured at the following conditions.				The pipe length is 5m.			
Operation		Indoor air temperature		Outdoor air temperature		Standards	
		DB	WB	DB	WB		
Cooling		27°C	19°C	35°C	24°C	ISO15042-T1	
Heating		20°C	—	7°C	6°C	ISO15042-H1	
(2) This air-conditioner is manufactured and tested in conformity with the ISO.							
(3) Sound level indicates the value in an anechoic chamber.							
During operation these values are somewhat higher due to ambient conditions.							
(4) The difference in appearance color is as follows.							
Item		Model		SRK20ZSX-WB		SRK20ZSX-WT	
Exterior appearance (Equivalent color)		Fine snow (8.0Y 9.3 / 0.1) , RAL : 9003 Black (4.0PB 2.44 / 0.25) , RAL : 9011		Titanium gray (1.6Y 6.59 / 0.63) , RAL : 7048 Black (4.0PB 2.44 / 0.25) , RAL : 9011			

Adapted to **RoHS** directive

Item			Model	SRK25ZSX-W, -WB, -WT			
Power source				1 Phase, 220–240 V, 50Hz/220V, 60Hz			
Operation data	Nominal cooling capacity (range)		kW	2.5			
	Nominal heating capacity (range)		kW	3.4			
	Sound power level	Cooling	dB(A)	55			
		Heating		56			
	Sound pressure level	Cooling		Hi: 39 Me: 33 Lo: 25 ULo: 19			
		Heating		Hi: 40 Me: 34 Lo: 27 ULo: 19			
Silent mode sound pressure level				—			
Exterior dimensions (Height x Width x Depth)			mm	305 x 920 x 220			
Exterior appearance (4) (Equivalent color)				SRK25ZSX-W : Fine snow (8.0Y 9.3/0.1) , RAL : 9003			
Net weight			kg	13			
Heat exchanger				Louver fins & inner grooved tubing			
Fan type & Q'ty				Tangential fan x 1			
Fan motor (Starting method)			W	42 x1 (Direct drive)			
Air flow	Cooling	m³/min	Hi: 12.2 Me: 10.0 Lo: 6.7 ULo: 5.0				
	Heating		Hi: 12.8 Me: 11.0 Lo: 7.8 ULo: 5.4				
Available external static pressure			Pa	0			
Outside air intake				Not possible			
Air filter, Quality / Quantity				Polypropylene net (washable) x 2			
Shock & vibration absorber				Rubber sleeve (for fan motor)			
Operation control	Remote control			Wireless remote control			
	Room temperature control			Microcomputer thermostat			
	Operation display			RUN: Green, TIMER: Yellow, ECO: Blue			
Safety equipments				Frost protection, Serial signal error protection, Indoor fan motor error protection			
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")			
	Connecting method			Flare connection			
	Attached length of piping		m	Liquid line : 0.55 / Gas line : 0.48			
	Insulation for piping			Necessary (Both sides), independent			
	Drain hose			Hose connectable (VP16)			
Drain pump, max lift height			mm	—			
Interconnecting wires	Size x Core number			1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)			
IP number				IPX0			
Standard accessories				Mounting kit, Clean filter (Allergen clear filter x 1, Photocatalytic washable deodorizing filter x 1)			
Option parts				Interface kit (SC-BIKN2-E)			
Notes (1) The data are measured at the following conditions.				The pipe length is 5m.			
Operation	Item	Indoor air temperature		Outdoor air temperature		Standards	
		DB	WB	DB	WB		
	Cooling	27°C	19°C	35°C	24°C	ISO15042-T1	
	Heating	20°C	—	7°C	6°C	ISO15042-H1	
(2) This air-conditioner is manufactured and tested in conformity with the ISO.							
(3) Sound level indicates the value in an anechoic chamber.							
During operation these values are somewhat higher due to ambient conditions.							
(4) The difference in appearance color is as follows.							
Item		Model		SRK25ZSX-WB		SRK25ZSX-WT	
Exterior appearance (Equivalent color)		Fine snow (8.0Y 9.3 / 0.1) , RAL : 9003 Black (4.0PB 2.44 / 0.25) , RAL : 9011		Titanium gray (1.6Y 6.59 / 0.63) , RAL : 7048 Black (4.0PB 2.44 / 0.25) , RAL : 9011			

Adapted to **RoHS** directive

Item			Model	SRK35ZSX-W, -WB, -WT			
Power source				1 Phase, 220–240 V, 50Hz/220V, 60Hz			
Operation data	Nominal cooling capacity (range)		kW	3.5			
	Nominal heating capacity (range)		kW	4.5			
	Sound power level	Cooling	dB(A)	58			
		Heating		58			
	Sound pressure level	Cooling		Hi: 43 Me: 35 Lo: 26 ULo: 19			
		Heating		Hi: 42 Me: 35 Lo: 28 ULo: 19			
Silent mode sound pressure level				—			
Exterior dimensions (Height x Width x Depth)			mm	305 x 920 x 220			
Exterior appearance (4) (Equivalent color)				SRK35ZSX-W : Fine snow (8.0Y 9.3/0.1) , RAL : 9003			
Net weight			kg	13			
Heat exchanger				Louver fins & inner grooved tubing			
Fan type & Q'ty				Tangential fan x 1			
Fan motor (Starting method)			W	42 x1 (Direct drive)			
Air flow	Cooling	m³/min	Hi: 13.1 Me: 10.8 Lo: 7.3 ULo: 5.0				
	Heating		Hi: 13.9 Me: 11.8 Lo: 8.6 ULo: 5.4				
Available external static pressure			Pa	0			
Outside air intake				Not possible			
Air filter, Quality / Quantity				Polypropylene net (washable) x 2			
Shock & vibration absorber				Rubber sleeve (for fan motor)			
Operation control	Remote control			Wireless remote control			
	Room temperature control			Microcomputer thermostat			
	Operation display			RUN: Green, TIMER: Yellow, ECO: Blue			
Safety equipments				Frost protection, Serial signal error protection, Indoor fan motor error protection			
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")			
	Connecting method			Flare connection			
	Attached length of piping		m	Liquid line : 0.55 / Gas line : 0.48			
	Insulation for piping			Necessary (Both sides), independent			
	Drain hose			Hose connectable (VP16)			
Drain pump, max lift height			mm	—			
Interconnecting wires	Size x Core number			1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)			
IP number				IPX0			
Standard accessories				Mounting kit, Clean filter (Allergen clear filter x 1, Photocatalytic washable deodorizing filter x 1)			
Option parts				Interface kit (SC-BIKN2-E)			

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

The pipe length is 5m.

Operation	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27°C	19°C	35°C	24°C	ISO15042-T1
Heating	20°C	—	7°C	6°C	ISO15042-H1

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber.

During operation these values are somewhat higher due to ambient conditions.

(4) The difference in appearance color is as follows.

Item	Model	SRK35ZSX-WB	SRK35ZSX-WT
Exterior appearance (Equivalent color)		Fine snow (8.0Y 9.3 / 0.1) , RAL : 9003 Black (4.0PB 2.44 / 0.25) , RAL : 9011	Titanium gray (1.6Y 6.59 / 0.63) , RAL : 7048 Black (4.0PB 2.44 / 0.25) , RAL : 9011

(b) Models SRK20, 25, 35ZS-W, -WB, -WT

Adapted to RoHS directive

Item			Model	SRK20ZS-W, -WB, -WT			
Power source				1 Phase, 220–240 V, 50Hz/220V, 60Hz			
Operation data	Nominal cooling capacity (range)		kW	2.0			
	Nominal heating capacity (range)		kW	3.0			
	Sound power level	Cooling	dB(A)	48			
		Heating		50			
	Sound pressure level	Cooling		Hi: 34 Me: 25 Lo: 22 ULo: 19			
		Heating		Hi: 36 Me: 29 Lo: 23 ULo: 19			
Silent mode sound pressure level				—			
Exterior dimensions (Height x Width x Depth)			mm	290 x 870 x 230			
Exterior appearance (4) (Equivalent color)				SRK20ZS-W : Fine snow (8.0Y 9.3/0.1) , RAL : 9003			
Net weight			kg	9.5			
Heat exchanger				Louver fins & inner grooved tubing			
Fan type & Q'ty				Tangential fan x 1			
Fan motor (Starting method)			W	30 x1 (Direct drive)			
Air flow	Cooling	m³/min	Hi: 9.3 Me: 7.0 Lo: 5.9 ULo: 5.0				
	Heating		Hi: 10.0 Me: 8.5 Lo: 6.5 ULo: 5.9				
Available external static pressure			Pa	0			
Outside air intake				Not possible			
Air filter, Quality / Quantity				Polypropylene net (washable) x 2			
Shock & vibration absorber				Rubber sleeve (for fan motor)			
Operation control	Remote control			Wireless remote control			
	Room temperature control			Microcomputer thermostat			
	Operation display			RUN: Green, TIMER: Yellow			
Safety equipments				Frost protection, Serial signal error protection, Indoor fan motor error protection			
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")			
	Connecting method			Flare connection			
	Attached length of piping		m	Liquid line : 0.54 / Gas line : 0.47			
	Insulation for piping			Necessary (Both sides), independent			
	Drain hose			Hose connectable (VP16)			
Drain pump, max lift height			mm	—			
Interconnecting wires		Size x Core number		1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)			
IP number				IPX0			
Standard accessories				Mounting kit, Clean filter (Allergen clear filter x 1, Photocatalytic washable deodorizing filter x 1)			
Option parts				Interface kit (SC-BIKN2-E)			

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

The pipe length is 5m.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling		27°C	19°C	35°C	24°C	ISO15042-T1
Heating		20°C	—	7°C	6°C	ISO15042-H1

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber.

During operation these values are somewhat higher due to ambient conditions.

(4) The difference in appearance color is as follows.

Item	Model	SRK20ZS-WB	SRK20ZS-WT
Exterior appearance (Equivalent color)		Fine snow (8.0Y 9.3 / 0.1) , RAL : 9003 Black (4.0PB 2.44 / 0.25) , RAL : 9011	Titanium gray (1.6Y 6.59 / 0.63) , RAL :7048 Black (4.0PB 2.44 / 0.25) , RAL : 9011

Adapted to **RoHS** directive

Item			Model	SRK25ZS-W, -WB, -WT			
Power source				1 Phase, 220–240 V, 50Hz / 220 V, 60Hz			
Operation data	Nominal cooling capacity (range)		kW	2.5			
	Nominal heating capacity (range)		kW	3.4			
	Sound power level	Cooling	dB(A)	50			
		Heating		53			
	Sound pressure level	Cooling		Hi: 36 Me: 28 Lo: 23 ULo: 19			
		Heating		Hi: 39 Me: 30 Lo: 24 ULo: 19			
Silent mode sound pressure level				—			
Exterior dimensions (Height x Width x Depth)			mm	290 x 870 x 230			
Exterior appearance (4) (Equivalent color)				SRK25ZS-W : Fine snow (8.0Y 9.3/0.1) , RAL : 9003			
Net weight			kg	9.5			
Heat exchanger				Louver fins & inner grooved tubing			
Fan type & Q'ty				Tangential fan x 1			
Fan motor (Starting method)			W	30 x1 (Direct drive)			
Air flow	Cooling	m³/min	Hi: 9.9 Me: 8.0 Lo: 5.9 ULo: 5.0				
	Heating		Hi: 11.3 Me: 8.7 Lo: 6.7 ULo: 5.9				
Available external static pressure			Pa	0			
Outside air intake				Not possible			
Air filter, Quality / Quantity				Polypropylene net (washable) x 2			
Shock & vibration absorber				Rubber sleeve (for fan motor)			
Operation control	Remote control			Wireless remote control			
	Room temperature control			Microcomputer thermostat			
	Operation display			RUN: Green, TIMER: Yellow			
Safety equipments				Frost protection, Serial signal error protection, Indoor fan motor error protection			
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")			
	Connecting method			Flare connection			
	Attached length of piping		m	Liquid line : 0.54 / Gas line : 0.47			
	Insulation for piping			Necessary (Both sides), independent			
	Drain hose			Hose connectable (VP16)			
Drain pump, max lift height			mm	—			
Interconnecting wires	Size x Core number			1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)			
IP number				IPX0			
Standard accessories				Mounting kit, Clean filter (Allergen clear filter x 1, Photocatalytic washable deodorizing filter x 1)			
Option parts				Interface kit (SC-BIKN2-E)			

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

The pipe length is 5m.

Operation	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27°C	19°C	35°C	24°C	ISO15042-T1
Heating	20°C	—	7°C	6°C	ISO15042-H1

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber.

During operation these values are somewhat higher due to ambient conditions.

(4) The difference in appearance color is as follows.

Item	Model	SRK25ZS-WB	SRK25ZS-WT
Exterior appearance (Equivalent color)		Fine snow (8.0Y 9.3 / 0.1) , RAL : 9003 Black (4.0PB 2.44 / 0.25) , RAL : 9011	Titanium gray (1.6Y 6.59 / 0.63) , RAL : 7048 Black (4.0PB 2.44 / 0.25) , RAL : 9011

Adapted to **RoHS** directive

Model			SRK35ZS-W, -WB, -WT				
Power source			1 Phase, 220–240 V, 50Hz / 220 V, 60Hz				
Operation data	Nominal cooling capacity (range)		kW	3.5			
	Nominal heating capacity (range)		kW	4.5			
	Sound power level	Cooling	dB(A)	54			
		Heating		56			
	Sound pressure level	Cooling		Hi: 40 Me: 30 Lo: 26 ULo: 19			
		Heating		Hi: 41 Me: 36 Lo: 25 ULo: 19			
Silent mode sound pressure level			—				
Exterior dimensions (Height x Width x Depth)			mm	290 x 870 x 230			
Exterior appearance (4) (Equivalent color)				SRK35ZS-W : Fine snow (8.0Y 9.3/0.1) , RAL : 9003			
Net weight			kg	9.5			
Heat exchanger				Louver fins & inner grooved tubing			
Fan type & Q'ty				Tangential fan x 1			
Fan motor (Starting method)			W	30 x1 (Direct drive)			
Air flow	Cooling	m³/min	Hi: 11.3 Me: 8.7 Lo: 7.0 ULo: 5.0				
	Heating		Hi: 12.3 Me: 11.0 Lo: 7.0 ULo: 5.6				
Available external static pressure			Pa	0			
Outside air intake				Not possible			
Air filter, Quality / Quantity				Polypropylene net (washable) x 2			
Shock & vibration absorber				Rubber sleeve (for fan motor)			
Operation control	Remote control			Wireless remote control			
	Room temperature control			Microcomputer thermostat			
	Operation display			RUN: Green, TIMER: Yellow			
Safety equipments				Frost protection, Serial signal error protection, Indoor fan motor error protection			
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")			
	Connecting method			Flare connection			
	Attached length of piping		m	Liquid line : 0.54 / Gas line : 0.47			
	Insulation for piping			Necessary (Both sides), independent			
	Drain hose			Hose connectable (VP16)			
Drain pump, max lift height			mm	—			
Interconnecting wires	Size x Core number			1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)			
IP number				IPX0			
Standard accessories				Mounting kit, Clean filter (Allergen clear filter x 1, Photocatalytic washable deodorizing filter x 1)			
Option parts				Interface kit (SC-BIKN2-E)			

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

The pipe length is 5m.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling		27°C	19°C	35°C	24°C	ISO15042-T1
Heating		20°C	—	7°C	6°C	ISO15042-H1

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber.

During operation these values are somewhat higher due to ambient conditions.

(4) The difference in appearance color is as follows.

Item	Model	SRK35ZS-WB	SRK35ZS-WT
Exterior appearance (Equivalent color)		Fine snow (8.0Y 9.3 / 0.1) , RAL : 9003 Black (4.0PB 2.44 / 0.25) , RAL : 9011	Titanium gray (1.6Y 6.59 / 0.63) , RAL : 7048 Black (4.0PB 2.44 / 0.25) , RAL : 9011

(c) Models SKM20, 25, 35ZSP-W

Item			Model	SKM20ZSP-W		
Power source				1 Phase, 220~240 V, 50Hz / 220 V, 60Hz		
Operation data	Nominal cooling capacity		kW	2.0		
	Nominal heating capacity		kW	3.0		
	Sound power level	Cooling	dB(A)	57		
		Heating		56		
	Sound pressure level	Cooling		Hi: 42 Me: 35 Lo: 22		
		Heating		Hi: 41 Me: 36 Lo: 26		
Silent mode sound pressure level				—		
Exterior dimensions (Height x Width x Depth)			mm	267 x 783 x 210		
Exterior appearance (Equivalent color)				Fine snow (8.0Y 9.3/0.1) , RAL : 9003		
Net weight			kg	7.5		
Heat exchanger				Louver fins & inner grooved tubing		
Fan type & Q'ty				Tangential fan x 1		
Fan motor (Starting method)			W	30 x1 (Direct drive)		
Air flow	Cooling	m³/min	Hi: 8.5 Me: 7.0 Lo: 5.0			
	Heating		Hi: 8.0 Me: 7.0 Lo: 5.5			
Available external static pressure			Pa	0		
Outside air intake				Not possible		
Air filter, Quality / Quantity				Polypropylene net (washable)		
Shock & vibration absorber				Rubber sleeve (for fan motor)		
Operation control	Remote control			Wireless remote control		
	Room temperature control			Microcomputer thermostat		
	Operation display			RUN: Green , TIMER: Yellow		
Safety equipments				Frost protection, Serial signal error protection, Indoor fan motor error protection		
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")		
	Connecting method			Flare connection		
	Attached length of piping		m	Liquid line : 0.46 / Gas line : 0.39		
	Insulation for piping			Necessary (Both sides), independent		
	Drain hose			Hose connectable (VP16)		
Drain pump, max lift height			mm	—		
Interconnecting wires	Size x Core number			1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)		
IP number				IPX0		
Standard accessories				Mounting kit		
Option parts				—		
Notes (1) The data are measured at the following conditions.				The pipe length is 5m.		
Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
	Cooling	27°C	19°C	35°C	24°C	ISO15042-T1
	Heating	20°C	—	7°C	6°C	ISO15042-H1
(2) This air-conditioner is manufactured and tested in conformity with the ISO.						
(3) Sound level indicates the value in an anechoic chamber.						
During operation these values are somewhat higher due to ambient conditions.						

Item			Model	SKM25ZSP-W		
Power source				1 Phase, 220 - 240V, 50Hz / 220 V, 60Hz		
Operation data	Nominal cooling capacity (range)		kW	2.5		
	Nominal heating capacity (range)		kW	3.4		
	Sound power level	Cooling	dB(A)	57		
		Heating		56		
	Sound pressure level	Cooling		Hi: 43 Me: 36 Lo: 23		
		Heating		Hi: 41 Me: 36 Lo: 27		
Silent mode sound pressure level				—		
Exterior dimensions (Height x Width x Depth)			mm	267 x 783 x 210		
Exterior appearance (Equivalent color)				Fine snow (8.0Y 9.3/0.1) , RAL : 9003		
Net weight			kg	7.5		
Heat exchanger				Louver fins & inner grooved tubing		
Fan type & Q'ty				Tangential fan x 1		
Fan motor (Starting method)			W	30 x1 (Direct drive)		
Air flow		Cooling	m³/min	Hi: 8.5 Me: 7.0 Lo: 5.0		
		Heating		Hi: 8.0 Me: 7.0 Lo: 5.5		
Available external static pressure			Pa	0		
Outside air intake				Not possible		
Air filter, Quality / Quantity				Polypropylene net (washable)		
Shock & vibration absorber				Rubber sleeve (for fan motor)		
Operation control	Remote control			Wireless remote control		
	Room temperature control			Microcomputer thermostat		
	Operation display			RUN: Green , TIMER: Yellow		
Safety equipments				Frost protection, Serial signal error protection, Indoor fan motor error protection		
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")		
	Connecting method			Flare connection		
	Attached length of piping		m	Liquid line : 0.46 / Gas line : 0.39		
	Insulation for piping			Necessary (Both sides), independent		
	Drain hose			Hose connectable (VP16)		
Drain pump, max lift height			mm	—		
Interconnecting wires	Size x Core number			1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)		
IP number				IPX0		
Standard accessories				Mounting kit		
Option parts				—		
Notes (1) The data are measured at the following conditions.						The pipe length is 5m.
Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
	Cooling	27°C	19°C	35°C	24°C	ISO15042-T1
	Heating	20°C	—	7°C	6°C	ISO15042-H1
(2) This air-conditioner is manufactured and tested in conformity with the ISO.						
(3) Sound level indicates the value in an anechoic chamber.						
During operation these values are somewhat higher due to ambient conditions.						

Item			Model	SKM35ZSP-W		
Power source				1 Phase, 220 - 240V, 50Hz / 220 V, 60Hz		
Operation data	Nominal cooling capacity (range)		kW	3.5		
	Nominal heating capacity (range)		kW	4.5		
	Sound power level	Cooling	dB(A)	58		
		Heating		58		
	Sound pressure level	Cooling		Hi: 44 Me: 37 Lo: 25		
		Heating		Hi: 42 Me: 37 Lo: 30		
Silent mode sound pressure level				—		
Exterior dimensions (Height x Width x Depth)			mm	267 x 783 x 210		
Exterior appearance (Equivalent color)				Fine snow (8.0Y 9.3/0.1) , RAL : 9003		
Net weight			kg	7.5		
Heat exchanger				Louver fins & inner grooved tubing		
Fan type & Q'ty				Tangential fan x 1		
Fan motor (Starting method)			W	30 x1 (Direct drive)		
Air flow		Cooling	m³/min	Hi: 9.0 Me: 7.5 Lo: 5.0		
		Heating		Hi: 8.5 Me: 7.0 Lo: 6.0		
Available external static pressure			Pa	0		
Outside air intake				Not possible		
Air filter, Quality / Quantity				Polypropylene net (washable)		
Shock & vibration absorber				Rubber sleeve (for fan motor)		
Operation control	Remote control			Wireless remote control		
	Room temperature control			Microcomputer thermostat		
	Operation display			RUN: Green , TIMER: Yellow		
Safety equipments				Frost protection, Serial signal error protection, Indoor fan motor error protection		
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")		
	Connecting method			Flare connection		
	Attached length of piping		m	Liquid line : 0.46 / Gas line : 0.39		
	Insulation for piping			Necessary (Both sides), independent		
	Drain hose			Hose connectable (VP16)		
Drain pump, max lift height			mm	—		
Interconnecting wires	Size x Core number			1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)		
IP number				IPX0		
Standard accessories				Mounting kit		
Option parts				—		
Notes (1) The data are measured at the following conditions.						The pipe length is 5m.
Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
	Cooling	27°C	19°C	35°C	24°C	ISO15042-T1
	Heating	20°C	—	7°C	6°C	ISO15042-H1
(2) This air-conditioner is manufactured and tested in conformity with the ISO.						
(3) Sound level indicates the value in an anechoic chamber.						
During operation these values are somewhat higher due to ambient conditions.						

(2) Ceiling concealed type (SRR)

Item			Model	SRR25ZM-W
Power source				1 Phase, 220-240 V, 50Hz / 220 V, 60Hz
Operation data	Nominal cooling capacity (range)		kW	2.5
	Nominal heating capacity (range)		kW	3.4
	Sound power level	Cooling	dB(A)	56
		Heating		59
	Sound pressure level ①	Cooling		Hi: 37 Me: 33 Lo: 30 ULo: 24
		Heating		Hi: 40 Me: 37 Lo: 34 ULo: 28
	Sound pressure level ②	Cooling		Hi: 31 Me: 28 Lo: 26 ULo: 21
		Heating		Hi: 33 Me: 30 Lo: 28 ULo: 23
	Sound pressure level ③	Cooling		Hi: 39 Me: 35 Lo: 32 ULo: 25
		Heating		Hi: 44 Me: 41 Lo: 38 ULo: 31
Silent mode sound pressure level				—
Exterior dimensions (Height x Width x Depth)				mm
Exterior appearance (Equivalent color)				—
Net weight			kg	20.5
Heat exchanger				Louver fins & inner grooved tubing
Fan type & Q'ty				Centrifugal fan x 2
Fan motor (Starting method)			W	51 x1 (Direct drive)
Air flow	Cooling	m³/min	Hi: 9.5 Me: 8.0 Lo: 6.5 ULo: 4.5	
	Heating		Hi: 10.0 Me: 9.0 Lo: 8.0 ULo: 6.0	
Available external static pressure			Pa	35 (Initial static pressure with air filter:5Pa)
Outside air intake				Not possible
Air filter, Quality / Quantity				Polypropylene net x 1
Shock & vibration absorber				Cushion rubber (for fan motor)
Operation control	Remote control			Wireless remote control
	Room temperature control			Microcomputer thermostat
	Operation display			RUN: Green, TIMER: Yellow, HI POWER: Green, ECONO: Green
Safety equipments				Drain error protection, Frost protection, Serial signal error protection, Indoor fan motor error protection
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")
	Connecting method			Flare connection
	Insulation for piping			Necessary (Both sides), independent
	Drain hose			Hose connectable (VP25)
Drain pump, max lift height			mm	Built-in, MAX600
Interconnecting wires	Size x Core number			1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)
IP number				IPX0
Standard accessories				Mounting kit, Joint for drain piping
Option parts				Wired remote control, Interface kit (SC-BIKN2-E), Bottom air inlet kit

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

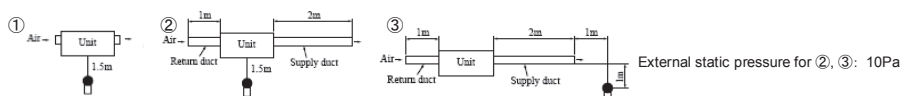
Operation	Indoor air temperature		Outdoor air temperature		Standards	Note
	DB	WB	DB	WB		
Cooling	27°C	19°C	35°C	24°C	ISO15042-T1	Non-duct (with air filter)
Heating	20°C	—	7°C	6°C	ISO15042-H1	

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber.

During operation these values are somewhat higher due to ambient conditions.

(4) Mike positions of measuring sound pressure level of indoor unit is shown below.



Item			Model	SRR35ZM-W	
Power source				1 Phase, 220-240 V, 50Hz / 220 V, 60Hz	
Operation data	Nominal cooling capacity (range)		kW	3.5	
	Nominal heating capacity (range)		kW	4.5	
	Sound power level	Cooling	dB(A)	57	
		Heating		60	
	Sound pressure level ①	Cooling		Hi: 38 Me: 34 Lo: 31 ULo: 25	
		Heating		Hi: 42 Me: 38 Lo: 35 ULo: 29	
	Sound pressure level ②	Cooling		Hi: 33 Me: 30 Lo: 27 ULo: 22	
		Heating		Hi: 34 Me: 32 Lo: 29 ULo: 24	
	Sound pressure level ③	Cooling		Hi: 40 Me: 37 Lo: 33 ULo: 27	
		Heating		Hi: 45 Me: 42 Lo: 39 ULo: 33	
Silent mode sound pressure level				—	
Exterior dimensions (Height x Width x Depth)				mm	200 x 750 x 500
Exterior appearance (Equivalent color)				—	
Net weight			kg	20.5	
Heat exchanger				Louver fins & inner grooved tubing	
Fan type & Q'ty				Centrifugal fan x 2	
Fan motor (Starting method)			W	51 x1 (Direct drive)	
Air flow	Cooling	m³/min	Hi: 10.0 Me: 8.5 Lo: 7.0 ULo: 5.0		
	Heating		Hi: 10.5 Me: 9.5 Lo: 8.5 ULo: 6.5		
Available external static pressure			Pa	35 (Initial static pressure with air filter:5Pa)	
Outside air intake				Not possible	
Air filter, Quality / Quantity				Polypropylene net x 1	
Shock & vibration absorber				Cushion rubber (for fan motor)	
Operation control	Remote control			Wireless remote control	
	Room temperature control			Microcomputer thermostat	
	Operation display			RUN: Green, TIMER: Yellow, HI POWER: Green, ECONO: Green	
Safety equipments				Drain error protection, Frost protection, Serial signal error protection, Indoor fan motor error protection	
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ6.35 (1/4") Gas line: ϕ9.52 (3/8")	
	Connecting method			Flare connection	
	Insulation for piping			Necessary (Both sides), independent	
	Drain hose			Hose connectable (VP25)	
Drain pump, max lift height			mm	Built-in, MAX600	
Interconnecting wires	Size x Core number			1.5mm² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)	
IP number				IPX0	
Standard accessories				Mounting kit, Joint for drain piping	
Option parts				Wired remote control, Interface kit (SC-BIKN2-E), Bottom air inlet kit	

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

The pipe length is 5m.

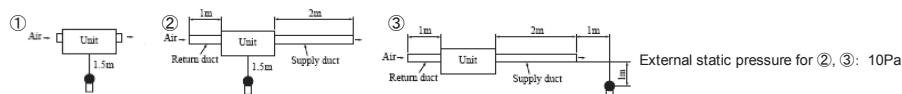
Operation	Indoor air temperature		Outdoor air temperature		Standards	Note
	DB	WB	DB	WB		
Cooling	27°C	19°C	35°C	24°C	ISO15042-T1	Non-duct (with air filter)
Heating	20°C	—	7°C	6°C	ISO15042-H1	

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber.

During operation these values are somewhat higher due to ambient conditions.

(4) Mike positions of measuring sound pressure level of indoor unit is shown below.



(3) 4-way ceiling cassette type (FDTC)

Adapted to RoHS directive

Item			Model	FDTC25VH
				Panel standard : TC-PSA-5AW-E, Draft prevention : TC-PSAE-5AW-E
Power source				1 Phase, 220~240 V, 50Hz/220V, 60Hz
Operation data	Nominal cooling capacity (range)		kW	2.5
	Nominal heating capacity (range)		kW	3.4
	Sound power level	Cooling	dB(A)	51
		Heating		53
	Sound pressure level	Cooling		P-Hi: 38 Hi: 34 Me: 30 Lo: 27
		Heating		P-Hi: 39 Hi: 36 Me: 32 Lo: 28
	Silent mode sound pressure level			—
Exterior dimensions (Height x Width x Depth)			mm	Unit 248 × 570 × 570 Panel 10 × 620 × 620
Exterior appearance (Equivalent color)				Fine snow (8.0Y 9.3/0.1) , RAL : 9003
Net weight			kg	Unit : 14, Panel : 2.5
Heat exchanger				Louver fins & inner grooved tubing
Fan type & Q'ty				Turbo fan x 1
Fan motor (Starting method)			W	50 (Direct drive)
Air flow		Cooling	m³/min	P-Hi: 8.5 Hi: 7.5 Me: 7.0 Lo: 6.0
		Heating		P-Hi: 9.5 Hi: 8.5 Me: 7.5 Lo: 6.5
Available external static pressure			Pa	0
Outside air intake				Possible
Air filter, Quality / Quantity				Pocket plastic net (washable) x 1
Shock & vibration absorber				Rubber sleeve (for fan motor)
Operation control	Remote control			Wired : RC - EX3A, RC - E5, RCH - E3 (option), Wireless : RCN-TC-5AW-E2 (option)
	Room temperature control			Thermostat by electronics
	Operation display			—
Safety equipments				Overload protection for fan motor, Frost protection thermostat
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ 6.35 (1/4") Gas line: ϕ 9.52 (3/8")
	Connecting method			Flare connection
	Attached length of piping		m	—
	Insulation for piping			Necessary (Both sides), independent
	Drain hose			Hose connectable with VP25(O.D.32)
Drain pump, max lift height			mm	Built-in Drain pump, 850
Interconnecting wires	Size x Core number			1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)
IP number				IPX0
Standard accessories				Mounting kit, Drain hose
Option parts				OA spacer : TC-OAS-E2, TC-OAD-E, Motion sensor : LB-TC-5W-E

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

The pipe length is 5m.

Operation \ Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	ISO15042-T1
Heating	20℃	—	7℃	6℃	ISO15042-H1

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber.

During operation these values are somewhat higher due to ambient conditions.

Adapted to **RoHS** directive

Item			Model	FDTC35VH
			Panel standard : TC-PSA-5AW-E, Draft prevention : TC-PSAE-5AW-E	
Power source				1 Phase, 220~240 V, 50Hz/220V, 60Hz
Operation data	Nominal cooling capacity (range)		kW	3.5
	Nominal heating capacity (range)		kW	4.5
	Sound power level	Cooling	dB(A)	52
		Heating		54
	Sound pressure level	Cooling		P-Hi: 39 Hi: 36 Me: 32 Lo: 29
		Heating		P-Hi: 41 Hi: 38 Me: 34 Lo: 30
	Silent mode sound pressure level			—
Exterior dimensions (Height x Width x Depth)			mm	Unit 248 × 570 × 570 Panel 10 × 620 × 620
Exterior appearance (Equivalent color)				Fine snow (8.0Y 9.3/0.1) , RAL : 9003
Net weight			kg	Unit : 14, Panel : 2.5
Heat exchanger				Louver fins & inner grooved tubing
Fan type & Q'ty				Turbo fan x 1
Fan motor (Starting method)			W	50 (Direct drive)
Air flow		Cooling	m³/min	P-Hi: 9.0 Hi: 8.0 Me: 7.5 Lo: 6.5
		Heating		P-Hi: 10.0 Hi: 9.0 Me: 8.0 Lo: 7.0
Available external static pressure			Pa	0
Outside air intake				possible
Air filter, Quality / Quantity				Pocket plastic net (washable) x 1
Shock & vibration absorber				Rubber sleeve (for fan motor)
Operation control	Remote control			Wired : RC - EX3A, RC - E5, RCH - E3 (option), Wireless : RCN-TC-5AW-E2 (option)
	Room temperature control			Thermostat by electronics
	Operation display			—
Safety equipments				Overload protection for fan motor, Frost protection thermostat
Installation data	Refrigerant piping size (O.D)		mm	Liquid line: ϕ6.35 (1/4") Gas line: ϕ9.52 (3/8")
	Connecting method			Flare connection
	Attached length of piping		m	—
	Insulation for piping			Necessary (Both sides), independent
	Drain hose			Hose connectable with VP25(O.D.32)
Drain pump, max lift height			mm	Built-in Drain pump, 850
Interconnecting wires	Size x Core number			1.5mm ² x 4 cores (Including earth cable) / Terminal block (Screw fixing type)
IP number				IPX0
Standard accessories				Mounting kit, Drain hose
Option parts				OA spacer : TC-OAS-E2, TC-OAD-E, Motion sensor : LB-TC-5W-E

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

The pipe length is 5m.

Operation \ Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27℃	19℃	35℃	24℃	ISO15042-T1
Heating	20℃	—	7℃	6℃	ISO15042-H1

(2) This air-conditioner is manufactured and tested in conformity with the ISO.

(3) Sound level indicates the value in an anechoic chamber.

During operation these values are somewhat higher due to ambient conditions.

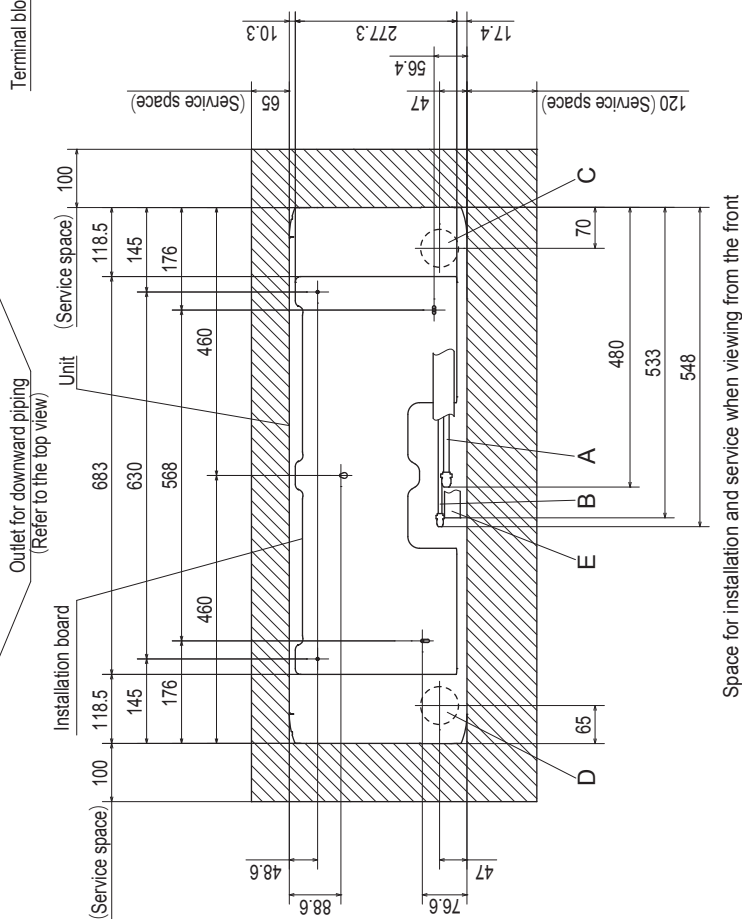
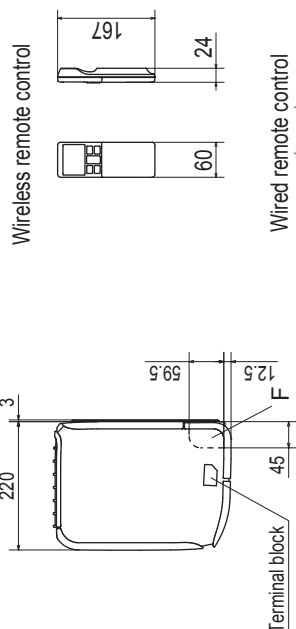
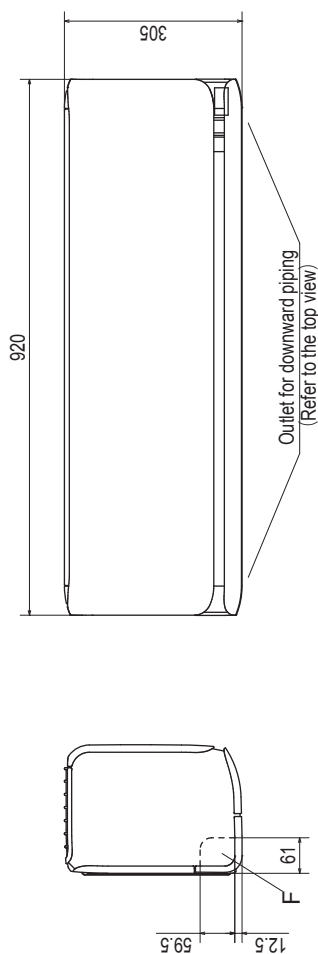
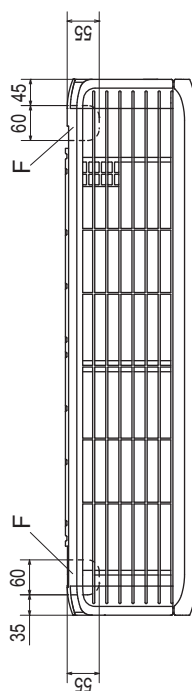
RWA000Z234 

2.2 Exterior dimensions

(1) Wall mounted type (SRK, SKM)

Models SRK20ZSX-W, 25ZSX-W, 35ZSX-W

Symbol	Content
A	Gas piping
B	Liquid piping
C	Hole on wall for right rear piping ($\phi 65$)
D	Hole on wall for left rear piping ($\phi 65$)
E	Drain hose
F	Outlet for piping



Notes

- (1) The model name label is attached on the right side of the unit.
- (2) To connect the wired remote control, the interface kit (SC-B1KN2-E) is required.

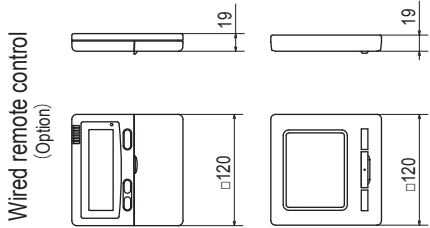
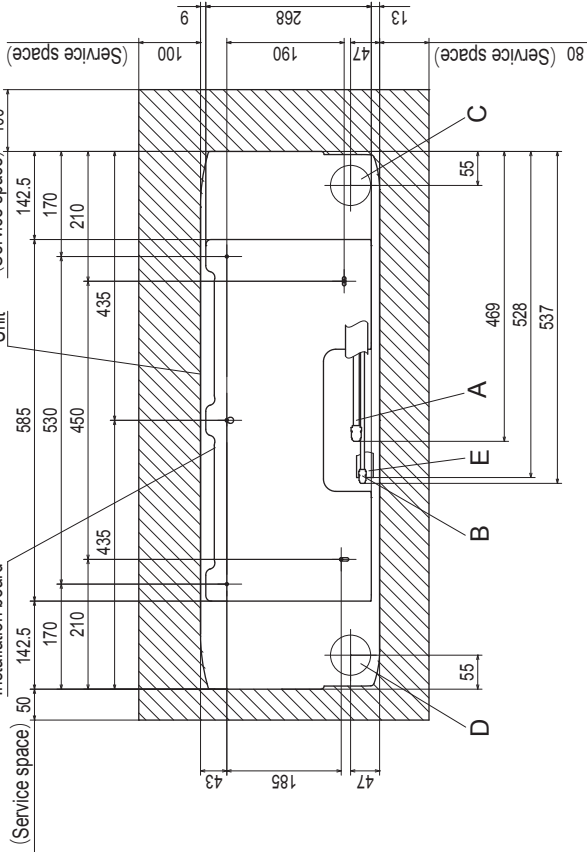
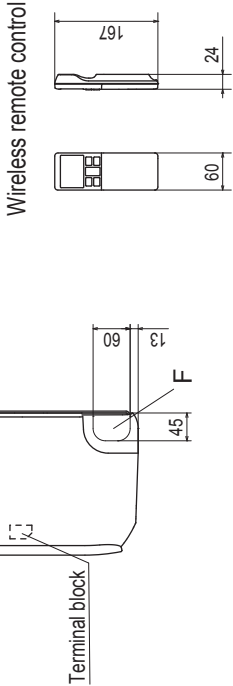
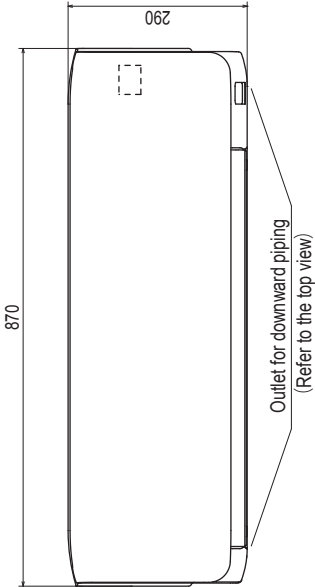
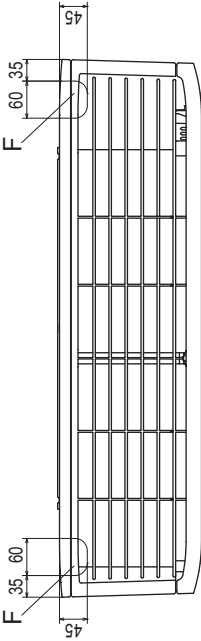
Unit:mm

Space for installation and service when viewing from the front

RLF000Z202

Models SRK20ZS-W, 25ZS-W, 35ZS-W

Symbol	Content		
A	Gas piping	φ 9.52 (3 / 8")	(Flare)
B	Liquid piping	φ 6.35 (1 / 4")	(Flare)
C	Hole on wall for right rear piping	(φ 65)	
D	Hole on wall for left rear piping	(φ 65)	
E	Drain hose	VP16	
F	Outlet for piping (on both side)		



- Notes
- (1) The model name label is attached on the right side of the unit.
 - (2) To connect the wired remote control, the interface kit (SC-BIKN2-E) is required.

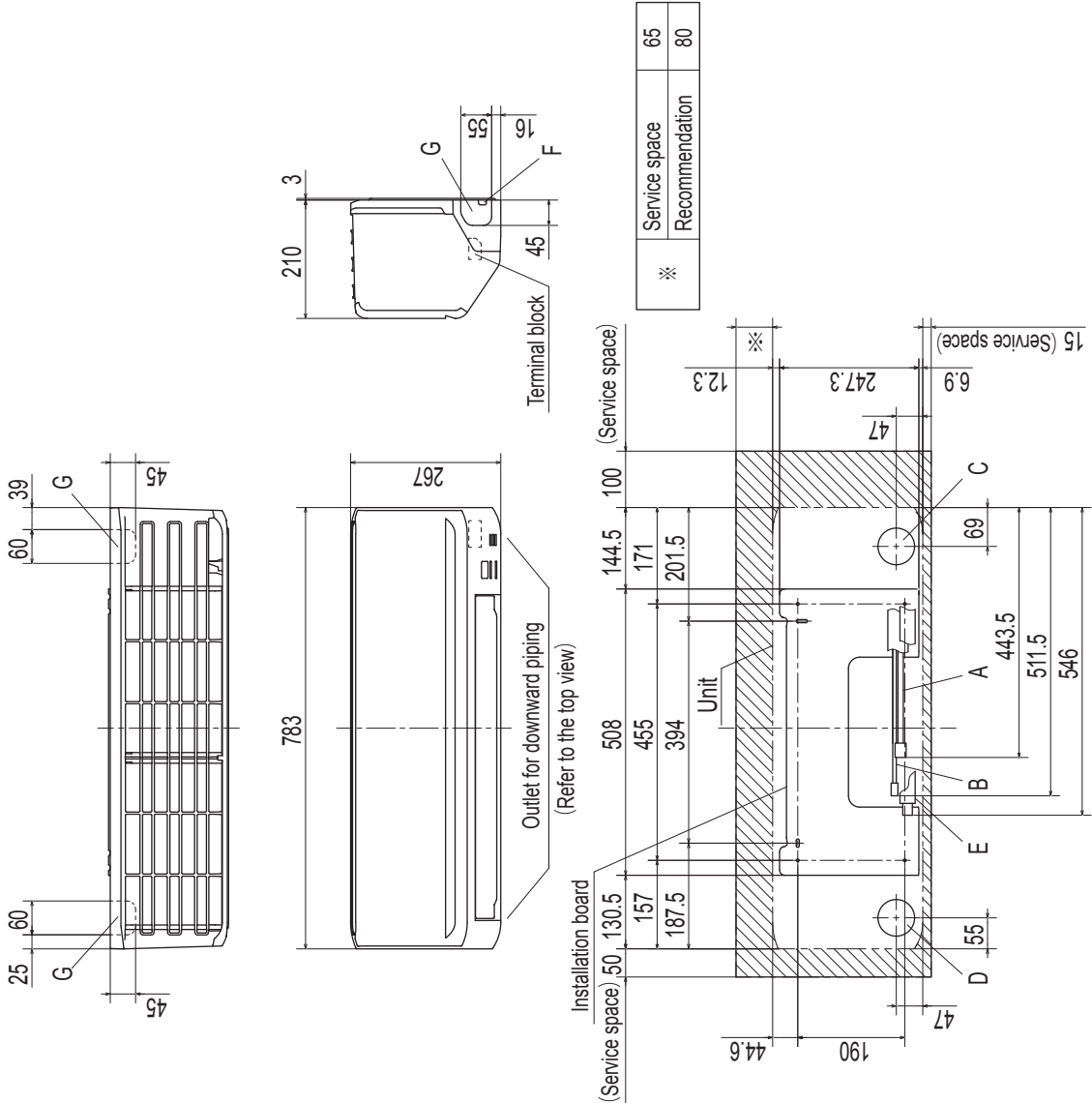
Unit:mm

Space for installation and service when viewing from the front

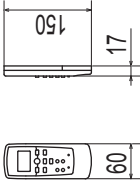
RLF000Z103

Models SKM20ZSP-W, 25ZSP-W, 35ZSP-W

Symbol	Content
A	Gas piping φ9.52 (3/8") (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 hose VP16
F	Outlet for wiring
G	Outlet for piping (on both side)



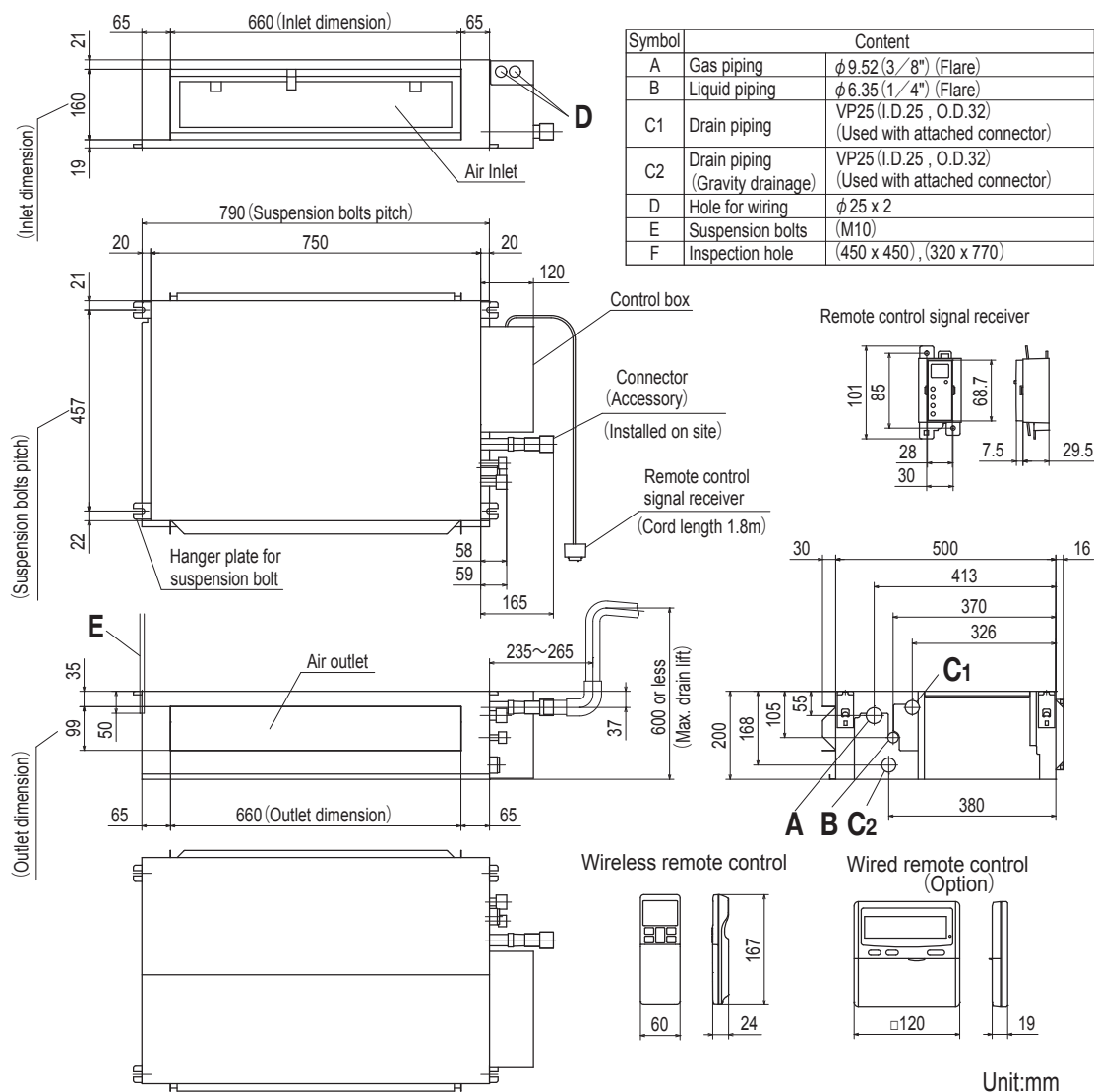
Wireless remote control



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

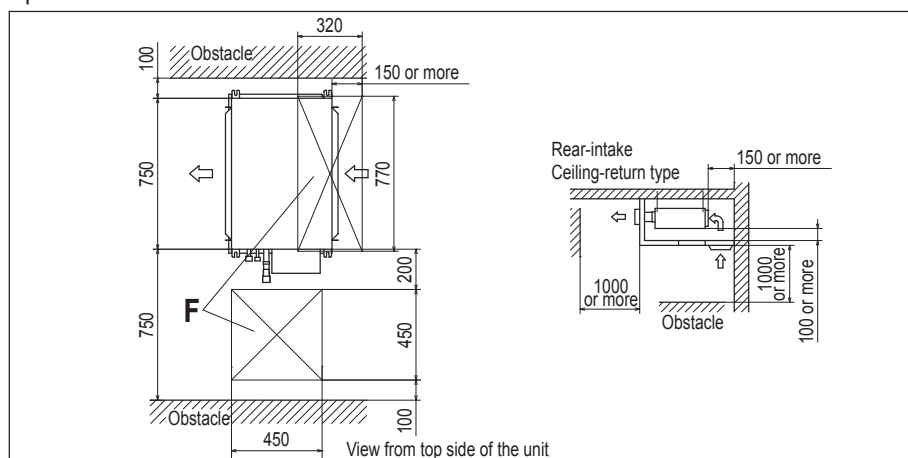
Unit:mm

Space for installation and service when viewing from the front

(2) Ceiling concealed type (SRR)**Models SRR25ZM-W, 35ZM-W**

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

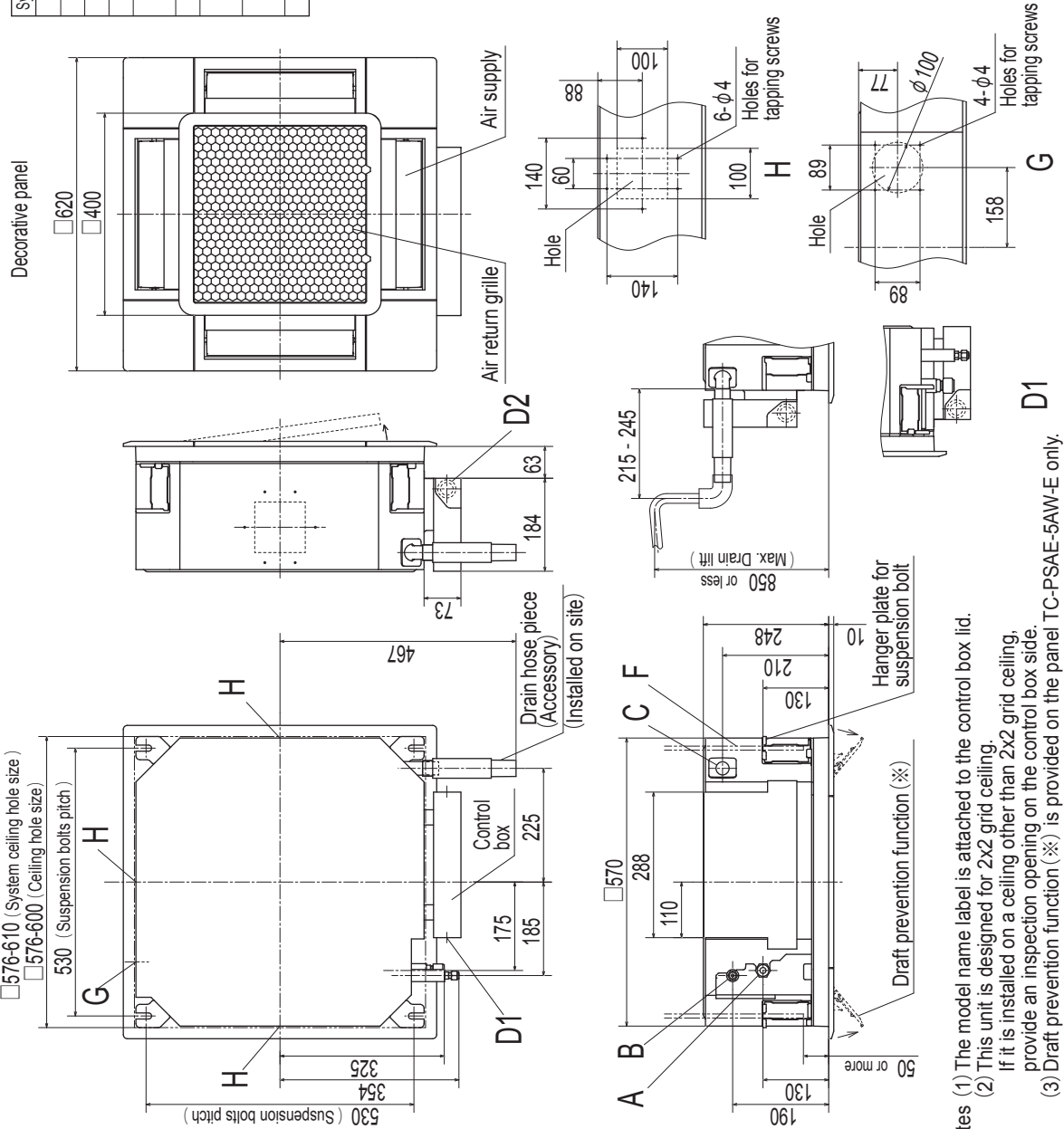
(2) To connect the wired remote control, the interface kit (SC-BIKN2-E) is required.

Space for installation and service

(3) 4-way ceiling compact type (FDTC)

Models FDTC25VH, 35VH

Symbol	Content
A	Gas piping
B	Liquid piping
C	Drain piping
D1	Power source connection
D2	Remote control code and signal wiring connection
F	Suspension bolts
G	Outside air opening for ducting
H	Air outlet opening for ducting
J	Inspection opening



Notes (1) The model name label is attached to the control box lid.
(2) This unit is designed for 2x2 grid ceiling.
If it is installed on a ceiling other than 2x2 grid ceiling,
provide an inspection opening on the control box side.
(3) Draft prevention function (※) is provided on the panel T

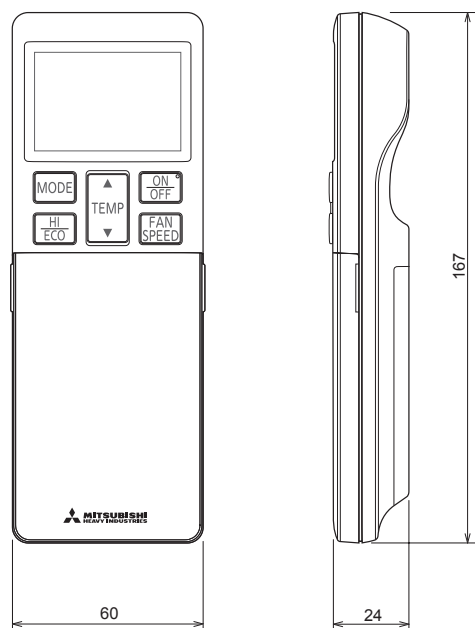
PJF000Z515 

(4) Remote control

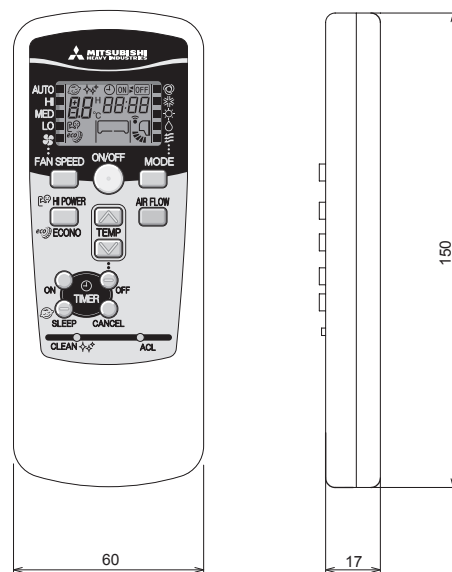
(a) Wireless remote control

Unit:mm

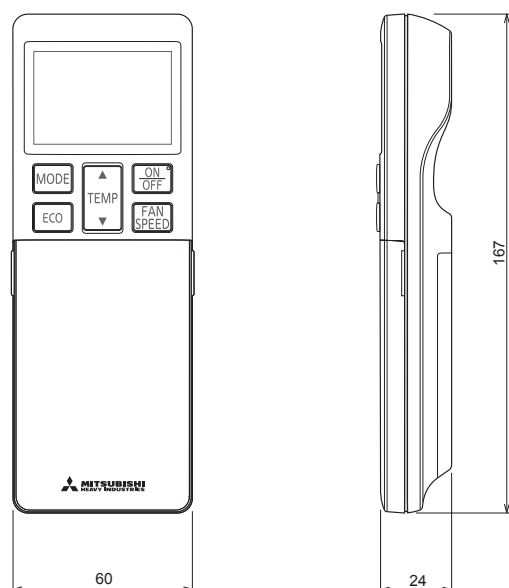
Models SRK, SRR (Standard parts)



Model SKM (Standard parts)

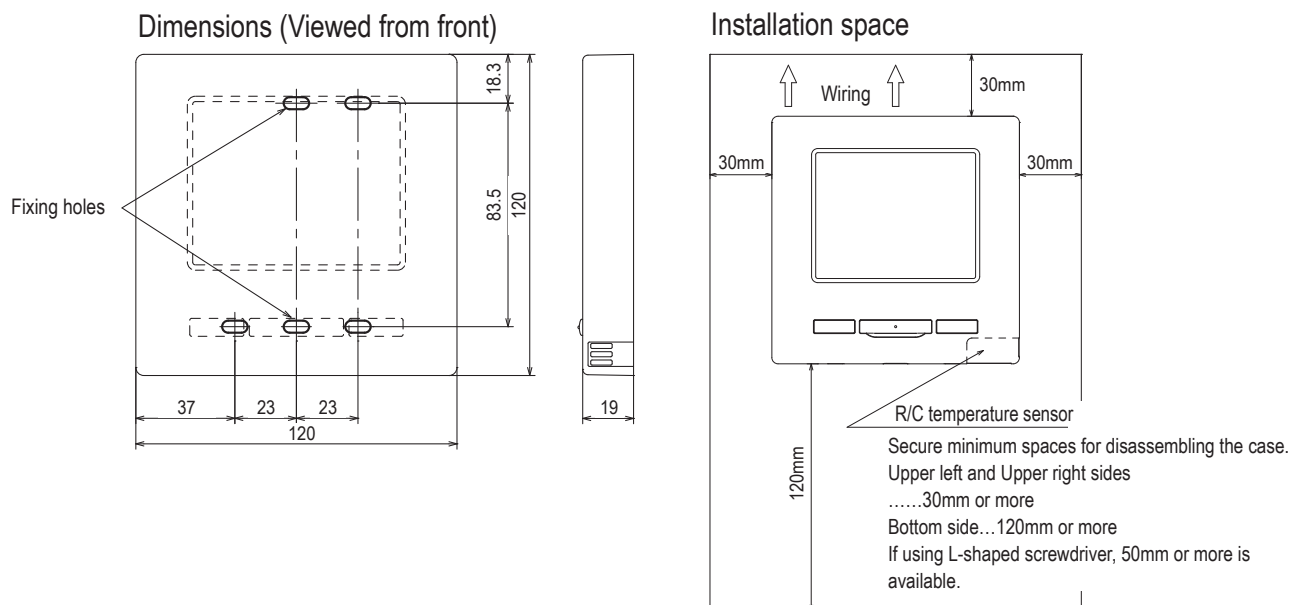


Model FDTC (Option parts)



(b) Wired remote control (Option parts)

Interface kit (SC-BIKN2-E) is required to use the wired remote control.

Model RC-EX3A

• **Do not install the remote control at following places.**

- ① It could cause break-down or deformation of remote control.
 - Where it is exposed to direct sunlight
 - Where the ambient temperature becomes 0 °C or below, or 40 °C or above
 - Where the surface is not flat
 - Where the strength of installation area is insufficient
- ② Moisture may be attached to internal parts of the remote control, resulting in a display failure.
 - Place with high humidity where condensation occurs on the remote control
 - Where the remote control gets wet
- ③ Accurate room temperature may not be detected using the temperature sensor of the remote control.
 - Where the average room temperature cannot be detected
 - Place near the equipment to generate heat
 - Place affected by outside air in opening/closing the door
 - Place exposed to direct sunlight or wind from air-conditioner
 - Where the difference between wall and room temperature is large
- ④ When you are using the automatic grille up and down panel in the IU, you may not be able to confirm the up and down motion.
 - Where the IU cannot be visually confirmed

R/C cable: 0.3mm² x 2 cores

When the cable length is longer than 100 m, the max size for wires used in the R/C case is 0.5 mm². Connect them to wires of larger size near the outside of R/C. When wires are connected, take measures to prevent water, etc. from entering inside.

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

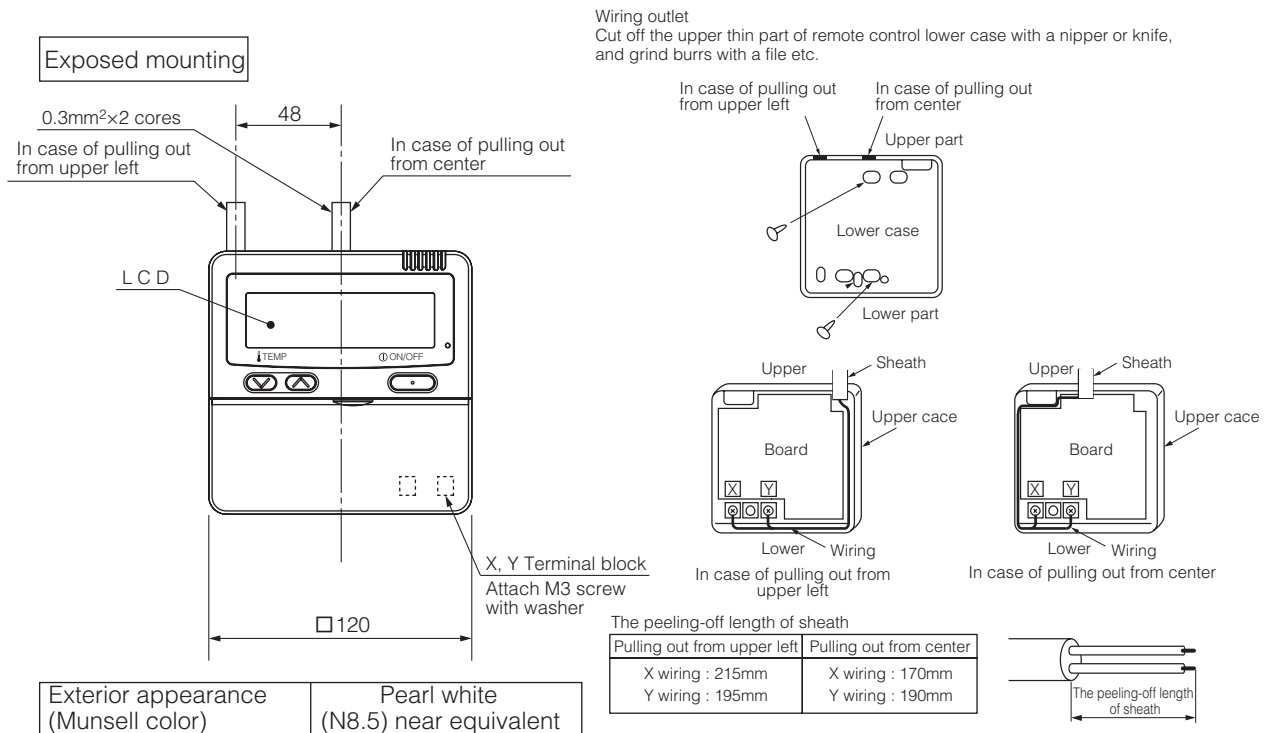
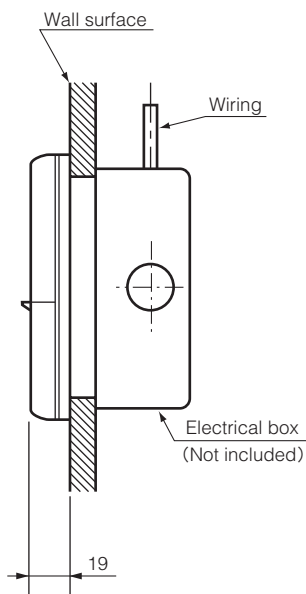
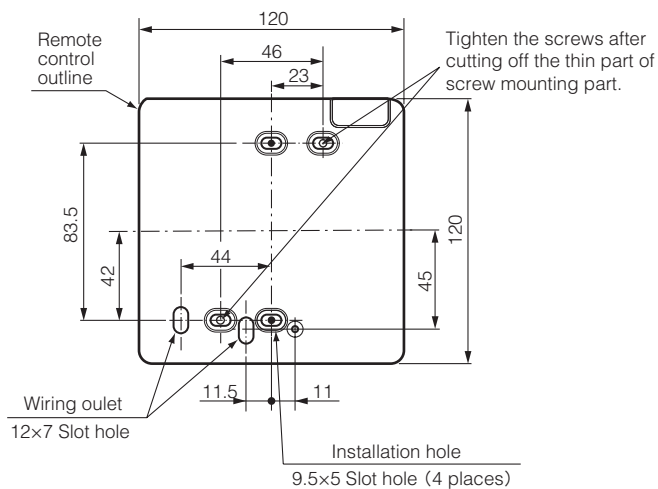
• **When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.**

It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc.

The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.

Adapted RoHS directive

PJZ000Z333

Model RC-E5**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 control case should be under 0.5mm². Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

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

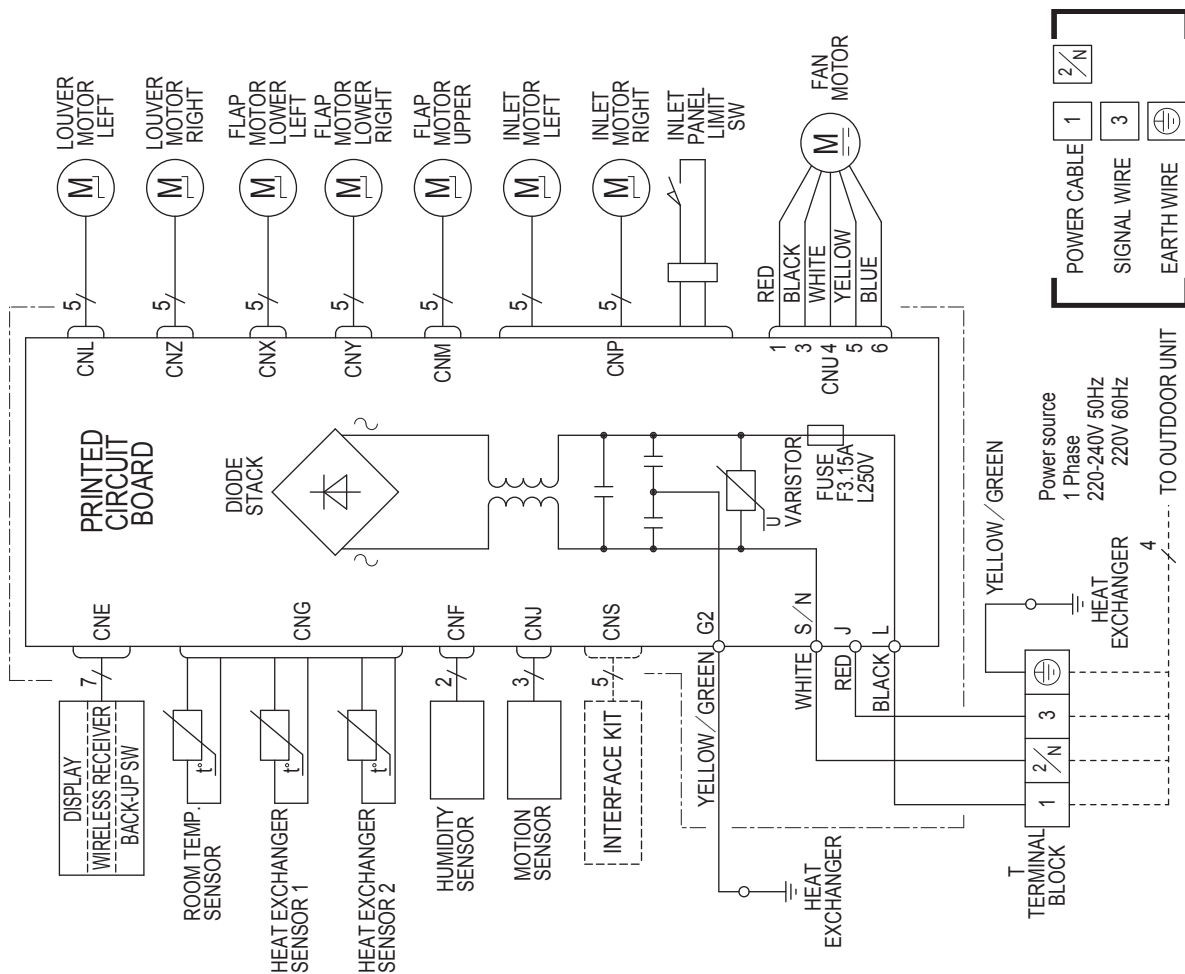
PJZ000Z295

2.3 ELECTRICAL WIRING

(1) Wall mounted type (SRK, SKM)

Models SRK20ZSX-W, 25ZSX-W, 35ZSX-W
SRK20ZSX-WB, 25ZSX-WB, 35ZSX-WB
SRK20ZSX-WT, 25ZSX-WT, 35ZSX-WT

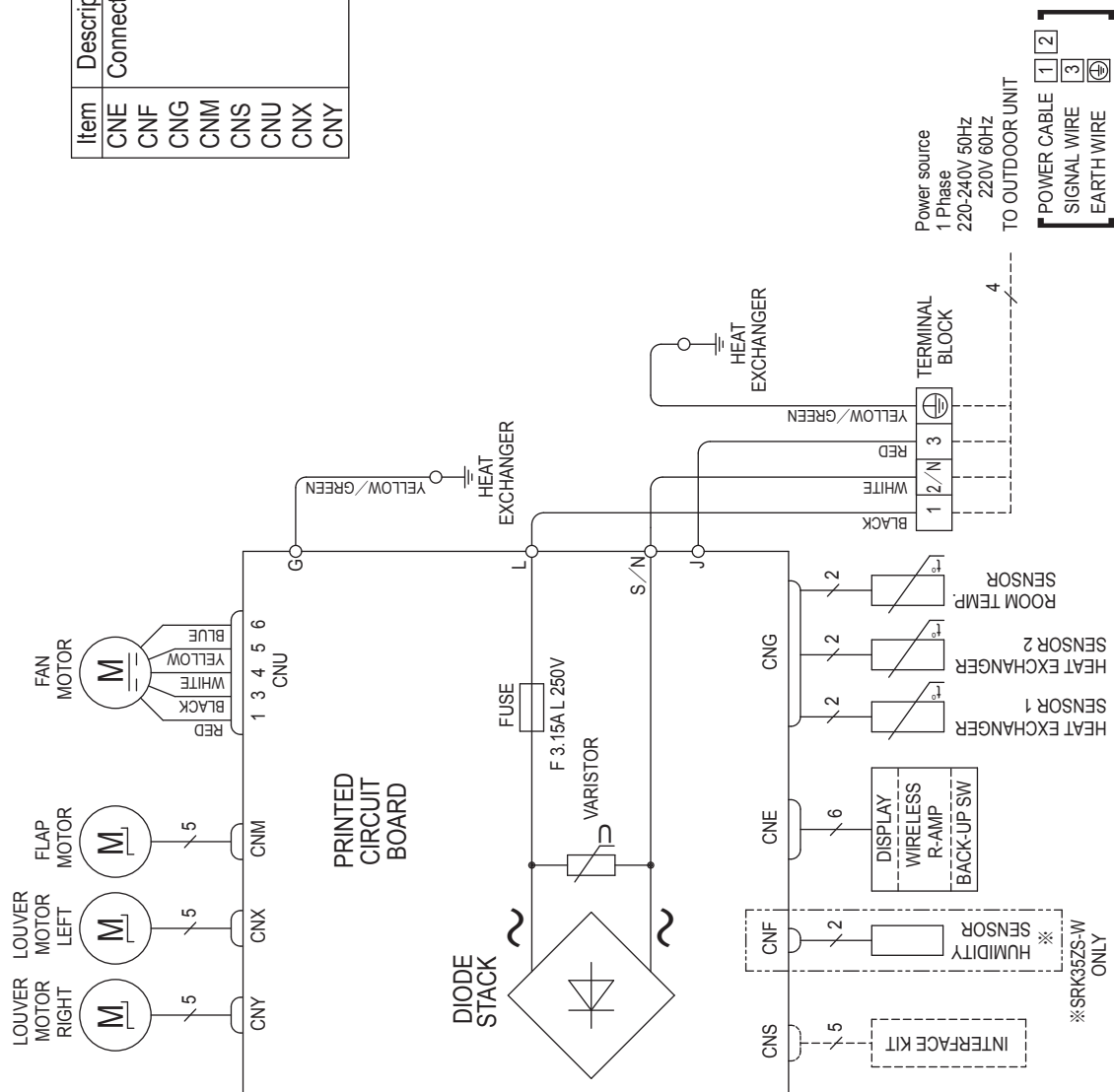
Item	Description
CNE	Connector
CNF	
CNG	
CNJ	
CNL	
CNM	
CNP	
CNS	
CNU	
CNX	
CNY	
CNZ	



RWA000Z413

**Models SRK20ZS-W, 25ZS-W, 35ZS-W
SRK20ZS-WB, 25ZS-WB, 35ZS-WB
SRK20ZS-WT, 25ZS-WT, 35ZS-WT**

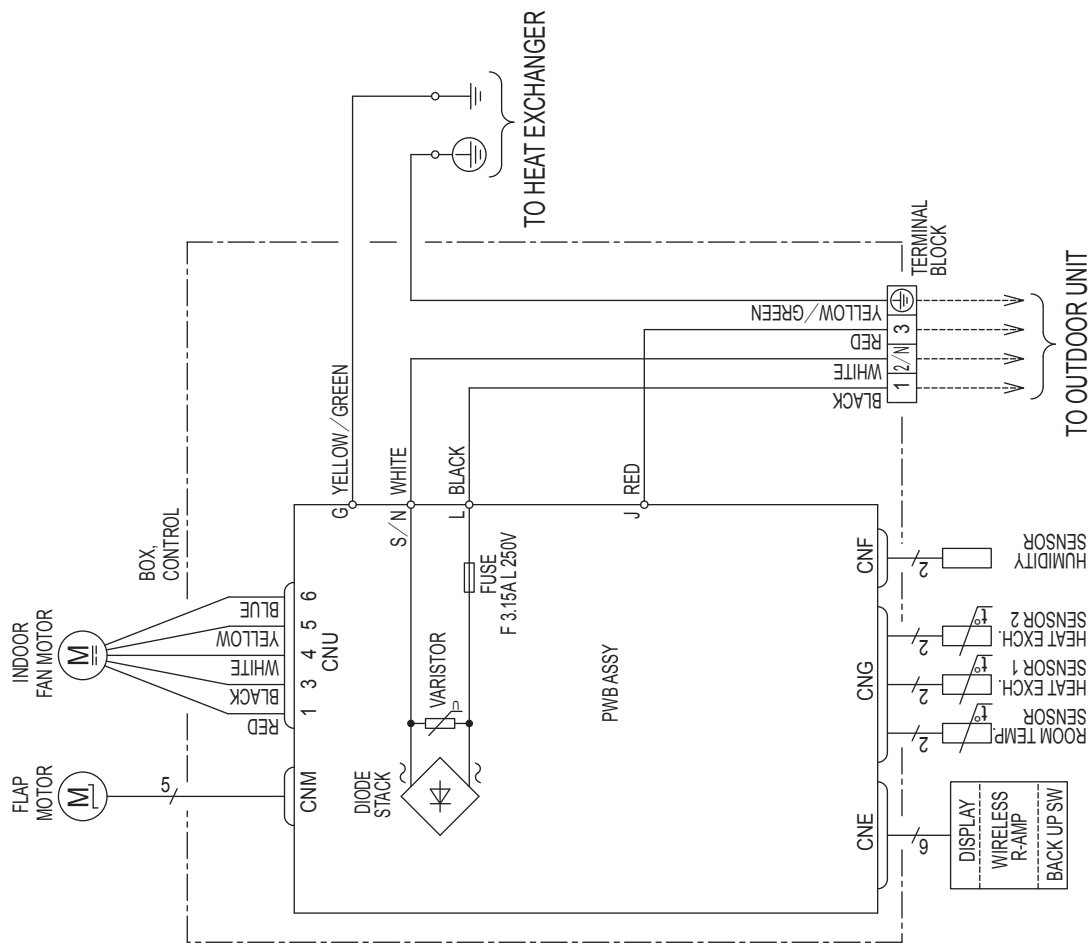
Item	Description
CNE	Connector
CNF	
CNG	
CNM	
CNS	
CNU	
CNX	
CNY	



RWA000Z416

Models SKM20ZSP-W, 25ZSP-W, 35ZSP-W

Item	Description
CNE	Connector
CNF	
CNG	
CNM	
CNU	

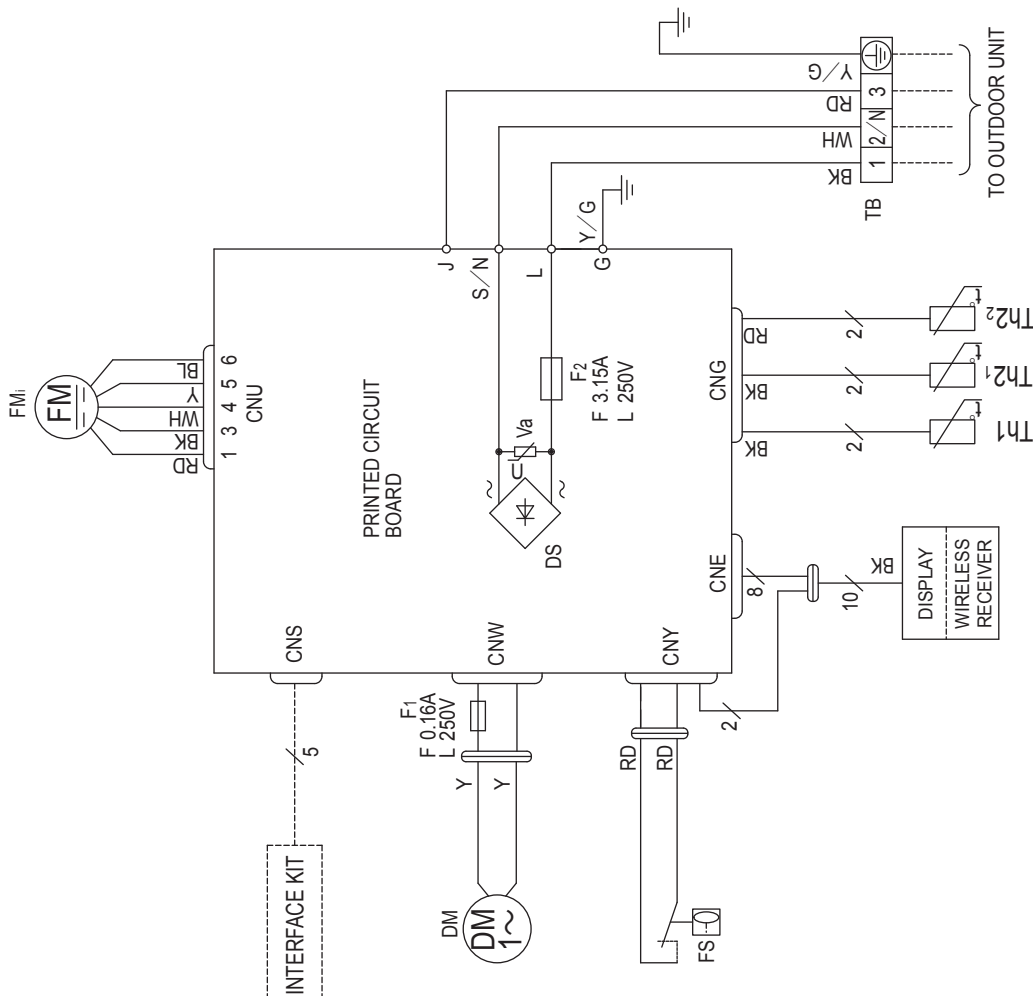


RLC000Z110

(2) Ceiling concealed type

Models SRR25ZM-W, 35ZM-W

Item	Description
CNE	Connector
CNG	
CNS	
CNU	
CNW	
CNY	
FM _i	Fan motor
Th1	Room temperature sensor
Th _{2,12}	Heat exchanger temperature sensor
DS	Diode stack
F _{1,2}	Fuse
TB	Terminal block
DM	Drain motor
FS	Float switch
Va	Varistor



Color Marks	
Mark	Color
BK	Black
BL	Blue
RD	Red
WH	White
Y	Yellow
Y/G	Yellow / Green

POWER SOURCE
1 PHASE 220~240V 50Hz
220V 60Hz
TO OUTDOOR UNIT

POWER WIRES
2/N
1
3

SIGNAL WIRE

EARTH WIRE

(3) 4-way ceiling cassette type (FDTC)

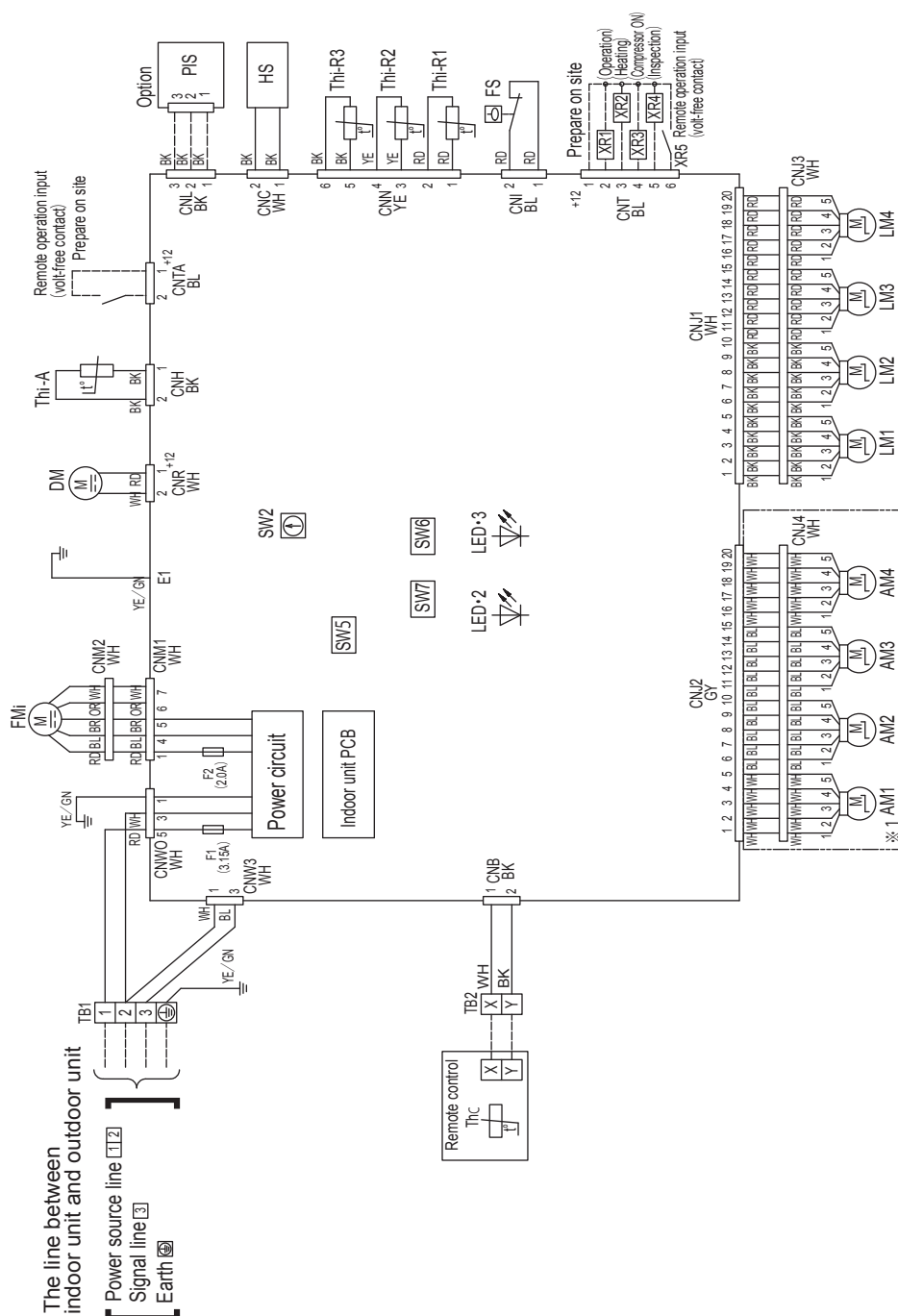
Models FDTC25VH, 35VH

Meaning of marks

Item	Description
AM1 - 4	Draft prevention function motor
CNB - Z	Connector
DM	Drain pump motor
F1,2	Fuse
FMi	Fan motor
FS	Float switch
HS	Humidity sensor
LED•2	Indication lamp (Green-Normal operation)
LED•3	Indication lamp (Red-Inspection)
LM1-4	Louver motor
PIS	Motion sensor
SW2	Remote control communication address
SW5	Plural units Master / Slave setting
SW6	Model capacity setting
SW7-1	Operation check drain pump motor test (run)
TB1	Terminal block (Power source) (□ mark)
TB2	Terminal block (Signal line) (□ mark)
ThC	Temperature sensor (Remote control)
Thi-A	Temperature sensor (Return air)
Thi-R1,2,3	Temperature sensor (Heat exchanger)

Color marks

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



- Notes
1. --- indicates wiring on site.
 2. See the wiring diagram of outdoor unit about the line between indoor unit and outdoor unit.
 3. Use twin core cord (0.3mm²) at remote control line.
 4. See spec sheet of remote control in case that the total length is more than 100m.
 5. Do not put remote control line alongside power source line.
 6. Draft prevention function (※ 1) is provided on the panel TC-PSAE-5AW-E only.

2.4 NOISE LEVEL

(1) Wall mounted type (SRK - ZSX series)

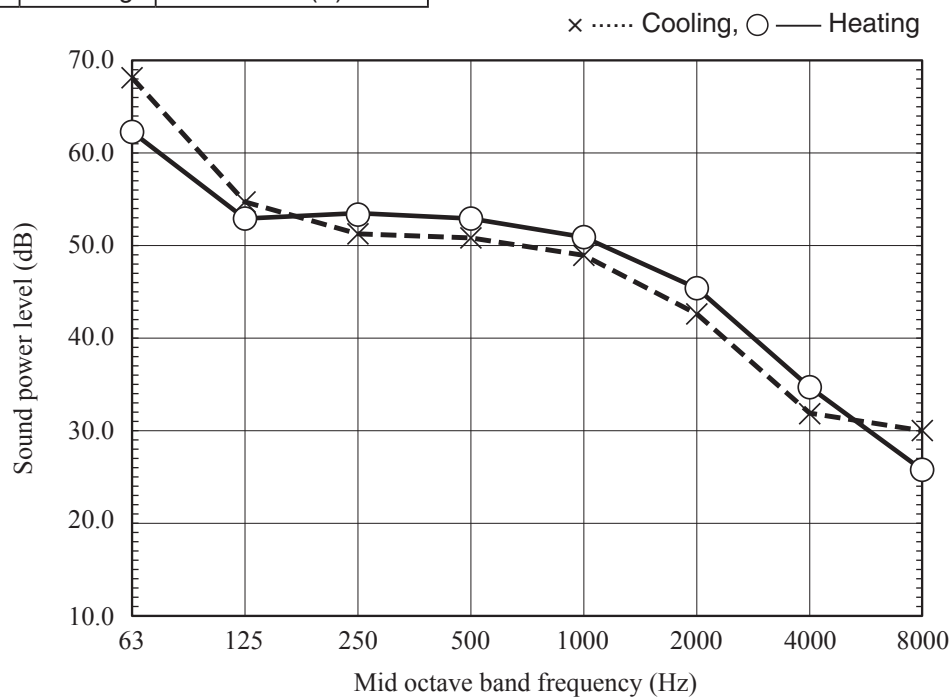
(a) Sound power level

Model SRK20ZSX-W, -WB, -WT

(Indoor unit)

Model	SRK20ZSX-W, -WB, -WT	
Noise	Cooling	53 dB(A)
Level	Heating	55 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

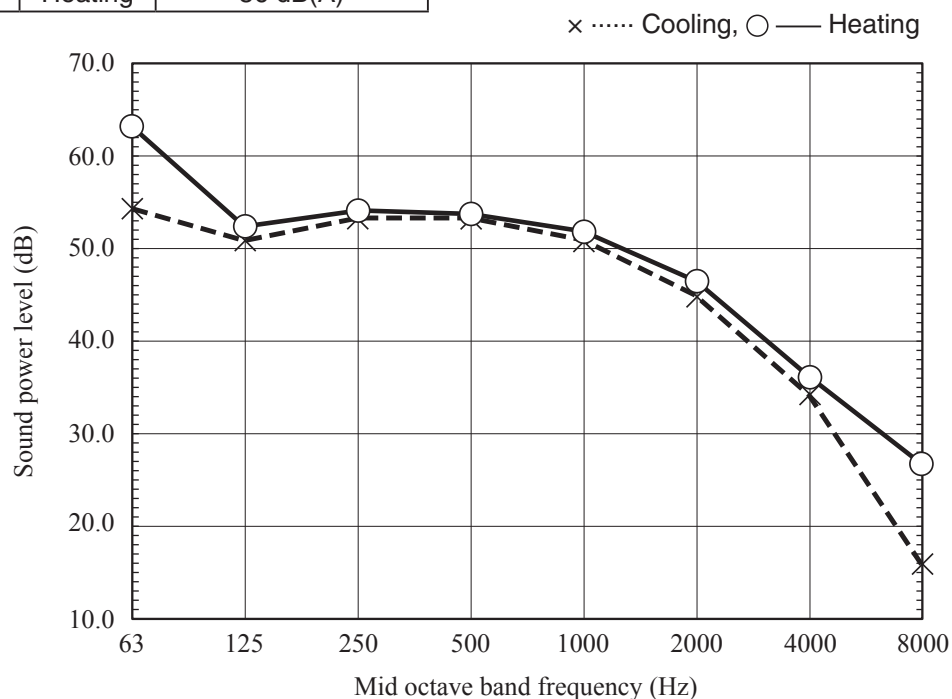


Model SRK25ZSX-W, -WB, -WT

(Indoor unit)

Model	SRK25ZSX-W, -WB, -WT	
Noise	Cooling	55 dB(A)
Level	Heating	56 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

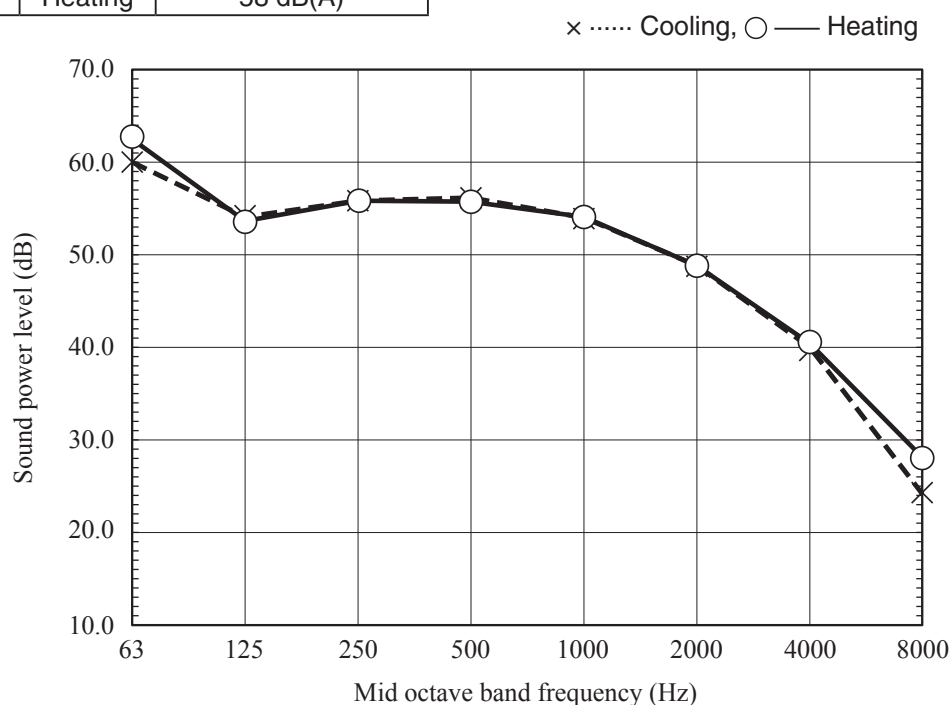


Model SRK35ZSX-W, -WB, -WT

(Indoor unit)

Model	SRK35ZSX-W, -WB, -WT	
Noise Level	Cooling	58 dB(A)
	Heating	58 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

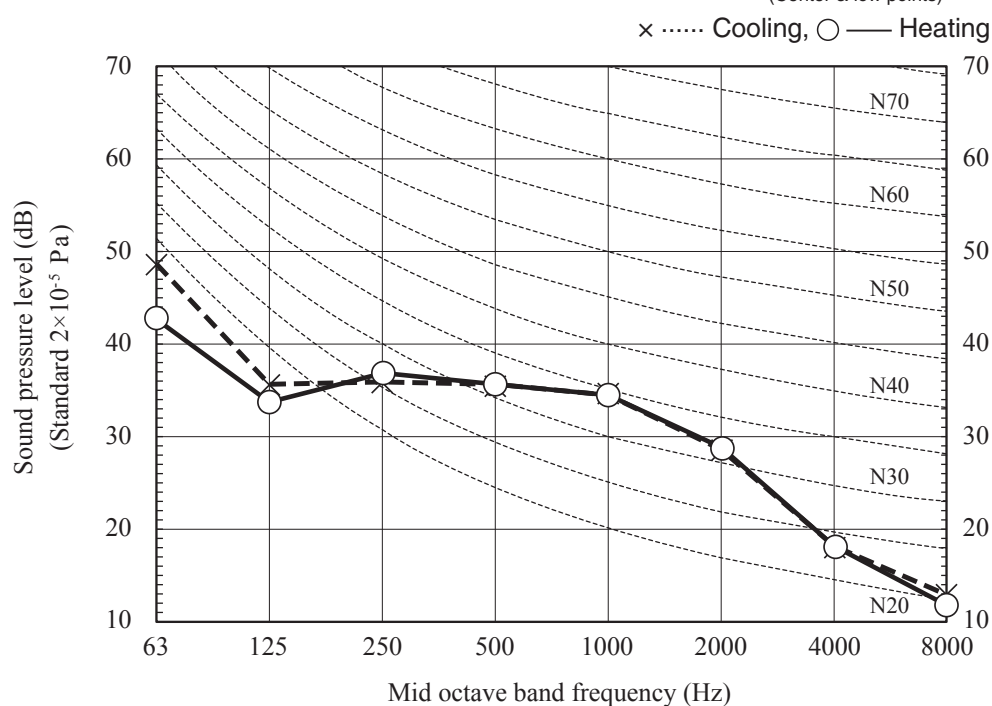
**(b) Sound pressure level****(i) Rated capacity value****Model SRK20ZSX-W, -WB, -WT**

(Indoor unit)

Model	SRK20ZSX-W, -WB, -WT	
Noise Level	Cooling	38 dB(A)
	Heating	38 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

●Mike position



Model SRK25ZSX-W, -WB, -WT
(Indoor unit)

Model	SRK25ZSX-W, -WB, -WT	
Noise Level	Cooling	39 dB(A)
	Heating	40 dB(A)

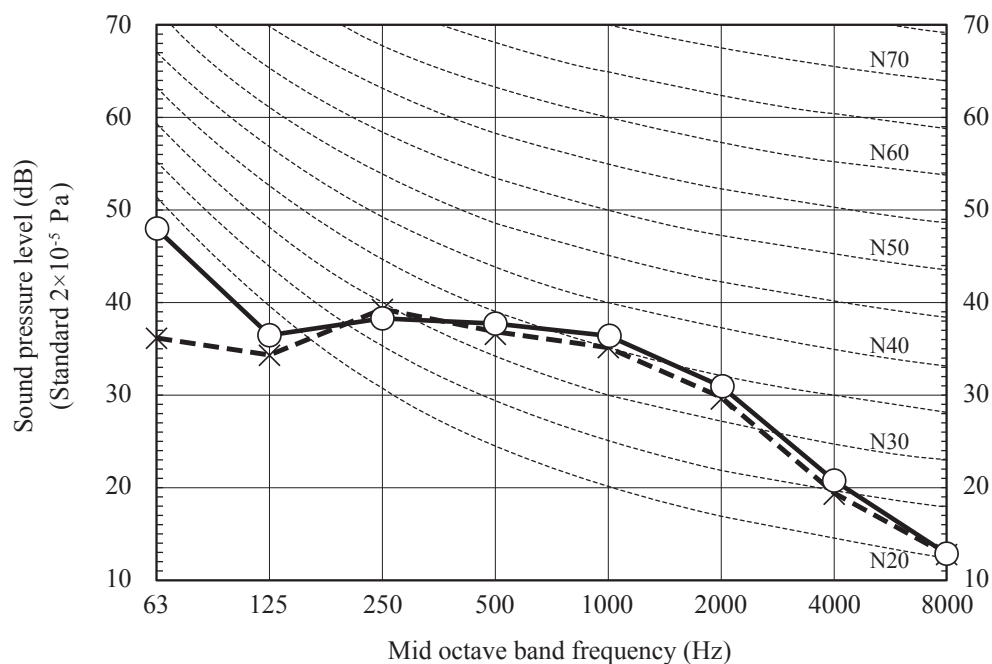
Condition	ISO15042 T1/H1
-----------	----------------

MODE	Rated capacity value (Hi)
------	---------------------------

●Mike position



× Cooling, ○ — Heating



Model SRK35ZSX-W, -WB, -WT
(Indoor unit)

Model	SRK35ZSX-W, -WB, -WT	
Noise Level	Cooling	43 dB(A)
	Heating	42 dB(A)

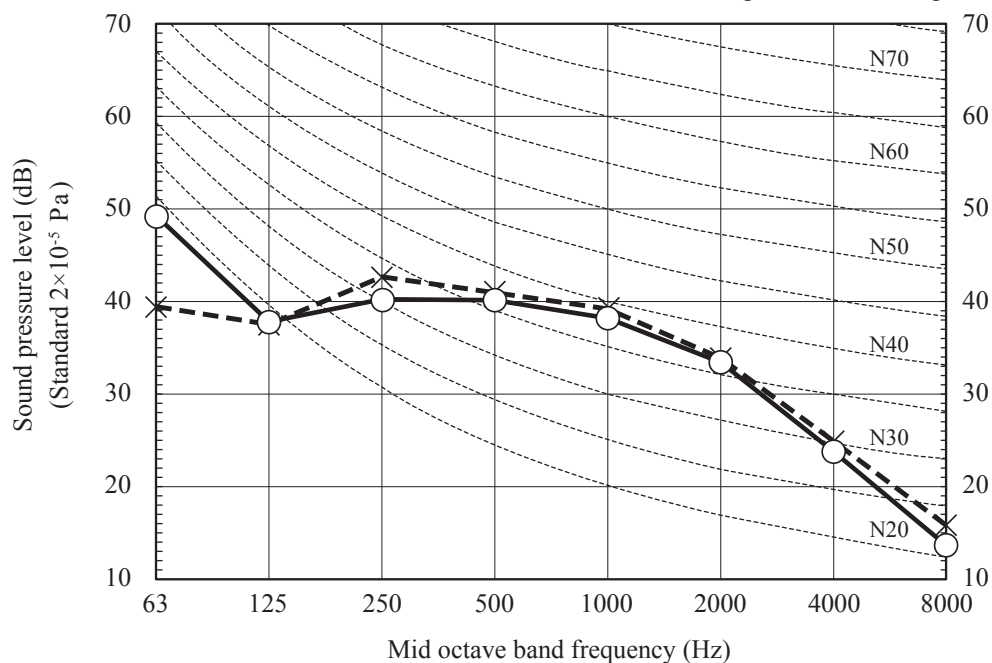
Condition	ISO15042 T1/H1
-----------	----------------

MODE	Rated capacity value (Hi)
------	---------------------------

●Mike position



× Cooling, ○ — Heating



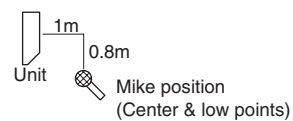
(ii) Each fan speed mode
Model SRK20ZSX-W, -WB, -WT

(Indoor unit)

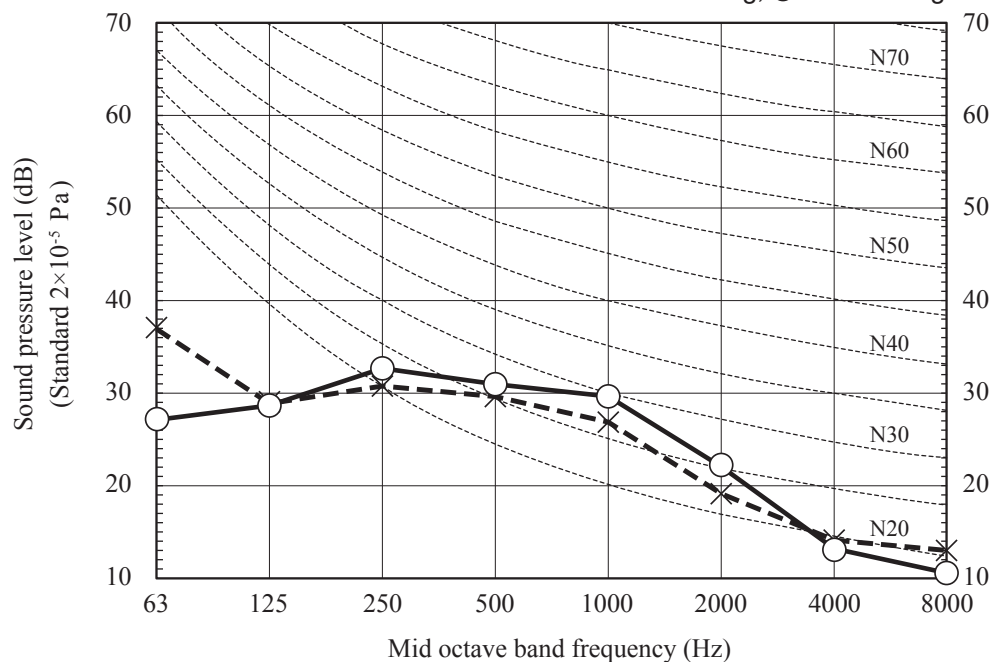
Model	SRK20ZSX-W, -WB, -WT	
Noise	Cooling	31 dB(A)
Level	Heating	33 dB(A)

Condition	ISO15042 T1/H1
MODE	Me

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

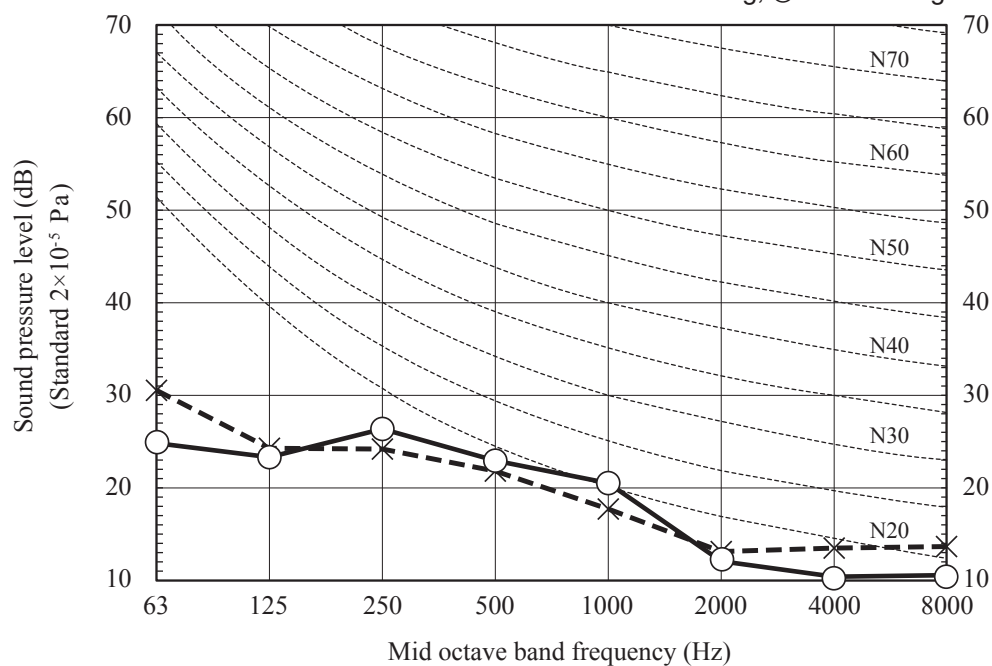
Model	SRK20ZSX-W, -WB, -WT	
Noise	Cooling	24 dB(A)
Level	Heating	25 dB(A)

MODE	Lo
------	----

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

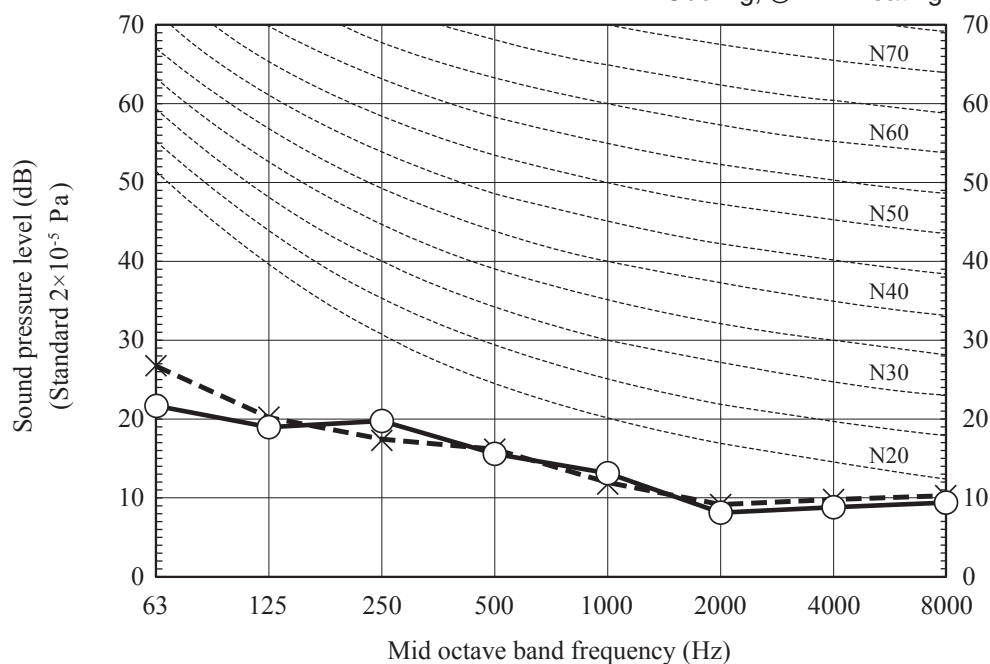
Model	SRK20ZSX-W, -WB, -WT	
Noise Level	Cooling	19 dB(A)
	Heating	19 dB(A)

Condition	ISO15042 T1/H1
MODE	ULo

●Mike position



× Cooling, ○ — Heating

**Model SRK25ZSX-W, -WB, -WT**

(Indoor unit)

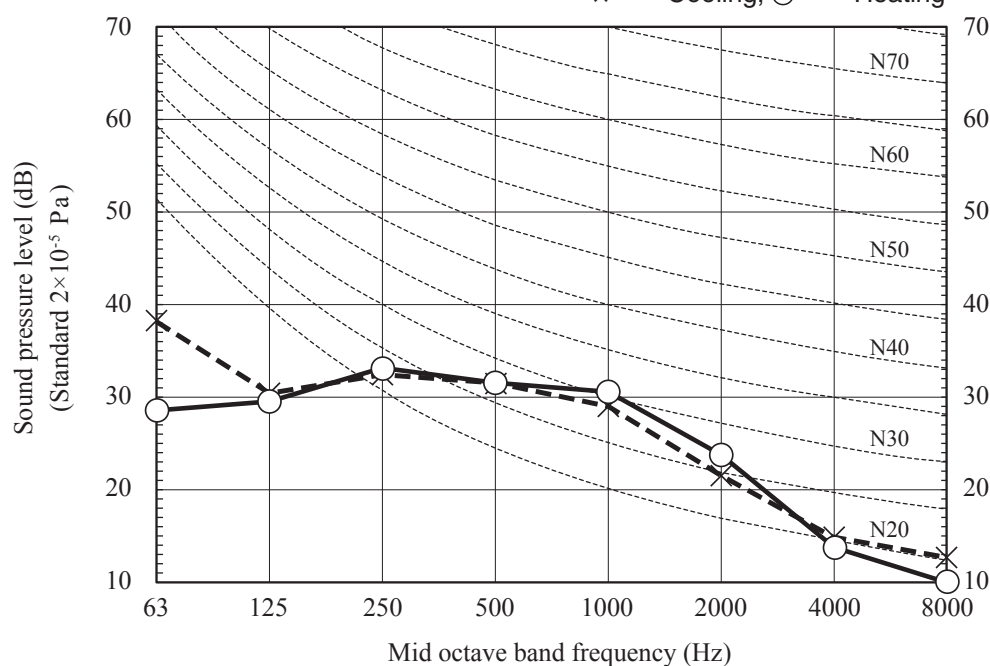
Model	SRK25ZSX-W, -WB, -WT	
Noise Level	Cooling	33 dB(A)
	Heating	34 dB(A)

Condition	ISO15042 T1/H1
MODE	Me

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

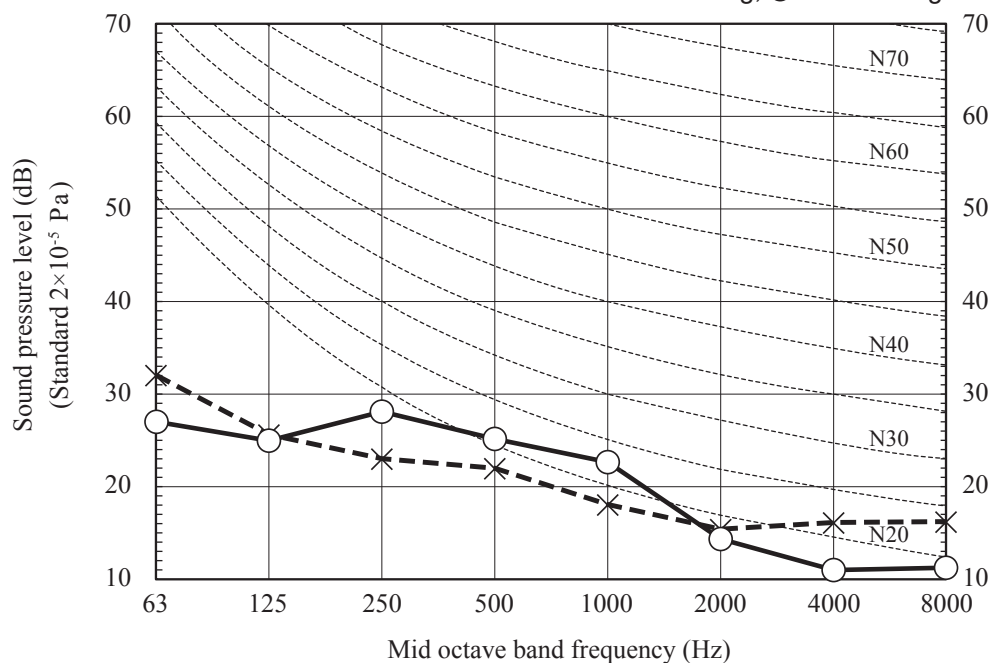
Model	SRK25ZSX-W, -WB, -WT	
Noise	Cooling	25 dB(A)
Level	Heating	27 dB(A)

MODE	Lo
------	----

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

Model	SRK25ZSX-W, -WB, -WT	
Noise	Cooling	19 dB(A)
Level	Heating	19 dB(A)

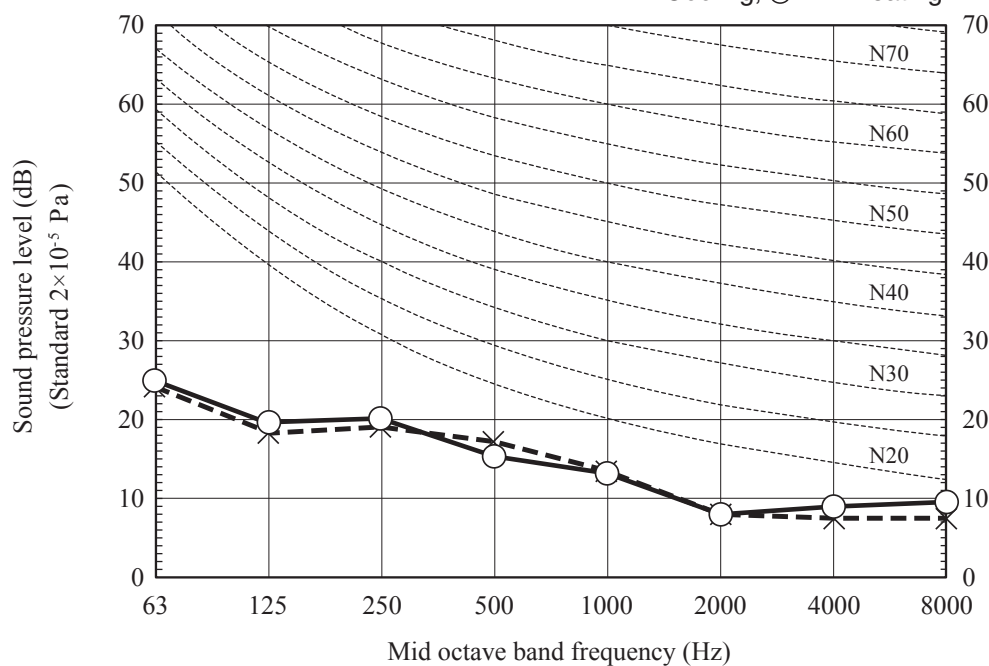
Condition	ISO15042 T1/H1
-----------	----------------

MODE	ULo
------	-----

●Mike position



× Cooling, ○ — Heating

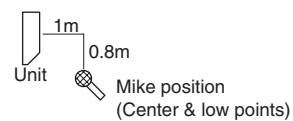


Model SRK35ZSX-W, -WB, -WT
(Indoor unit)

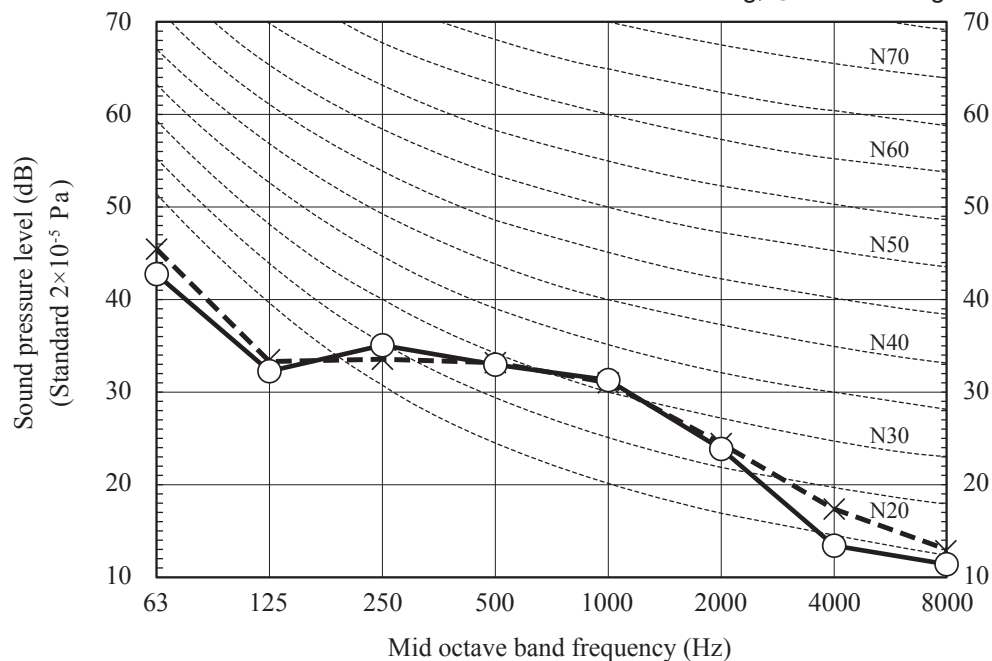
Model	SRK35ZSX-W, -WB, -WT	
Noise	Cooling	35 dB(A)
Level	Heating	35 dB(A)

Condition	ISO15042 T1/H1
MODE	Me

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

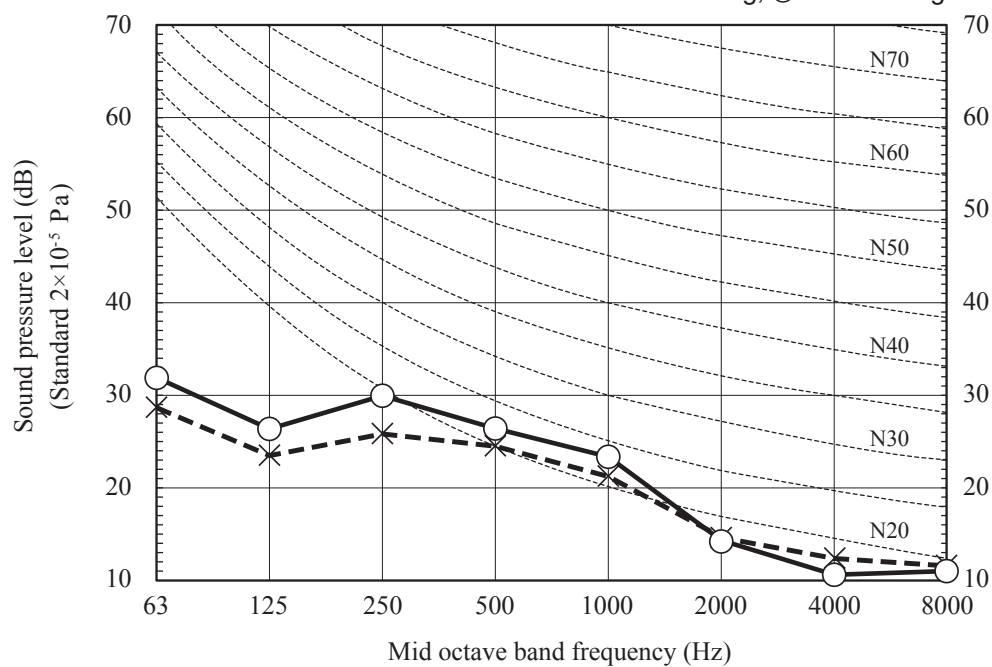
Model	SRK35ZSX-W, -WB, -WT	
Noise	Cooling	26 dB(A)
Level	Heating	28 dB(A)

MODE	Lo
------	----

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

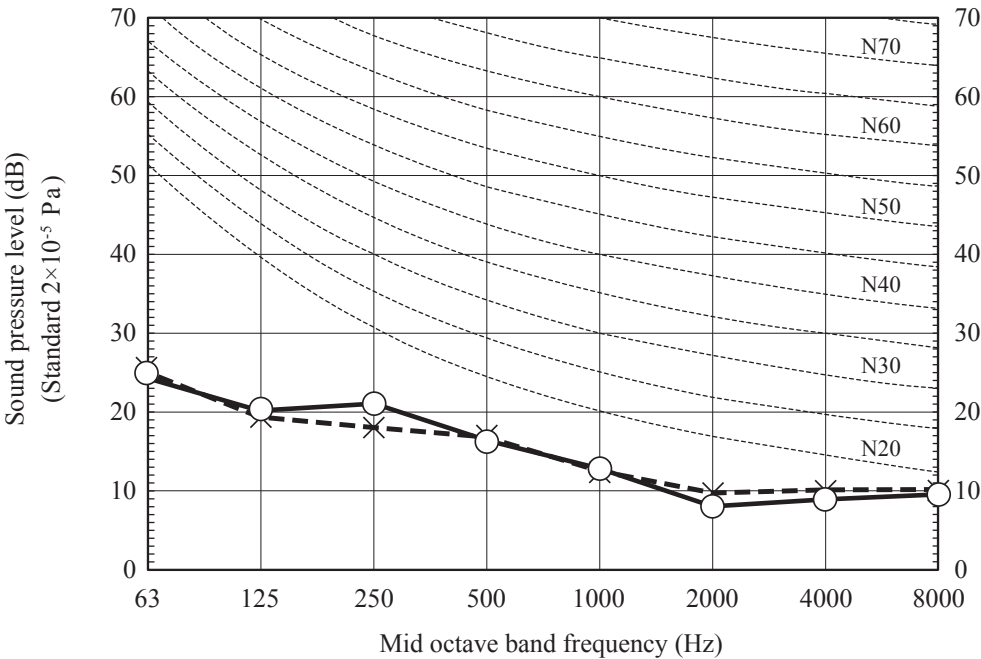
Model	SRK35ZSX-W, -WB, -WT	
Noise Level	Cooling	19 dB(A)
	Heating	19 dB(A)

Condition	ISO15042 T1/H1
MODE	ULo

●Mike position



× Cooling, ○ — Heating



(2) Wall mounted type (SRK-ZS series)

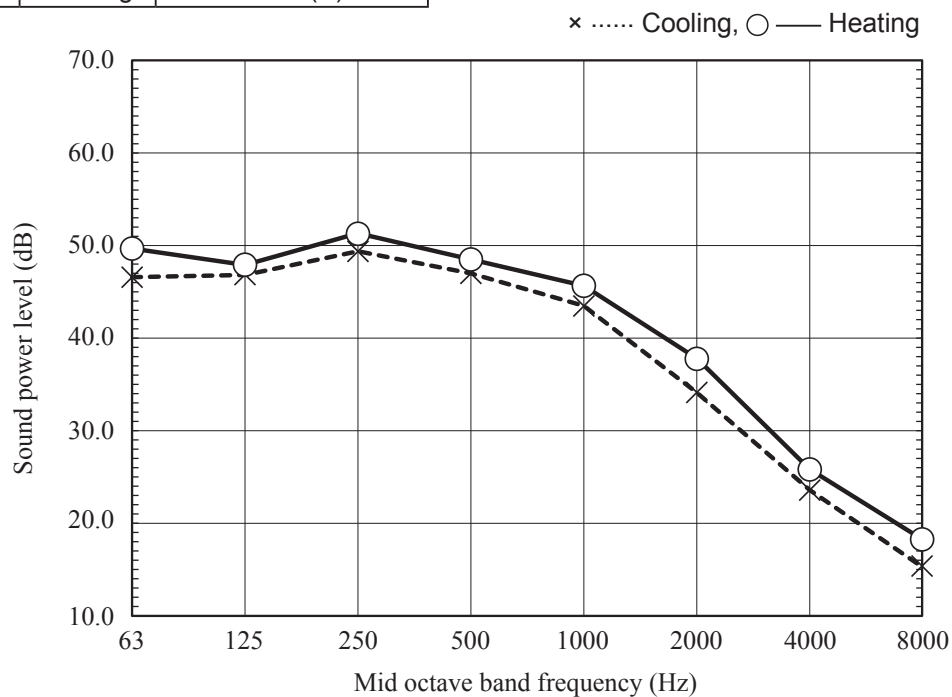
(a) Sound power level

Model SRK20ZS-W, -WB, -WT

(Indoor unit)

Model	SRK20ZS-W, WB, WT	
Noise	Cooling	48 dB(A)
Level	Heating	50 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

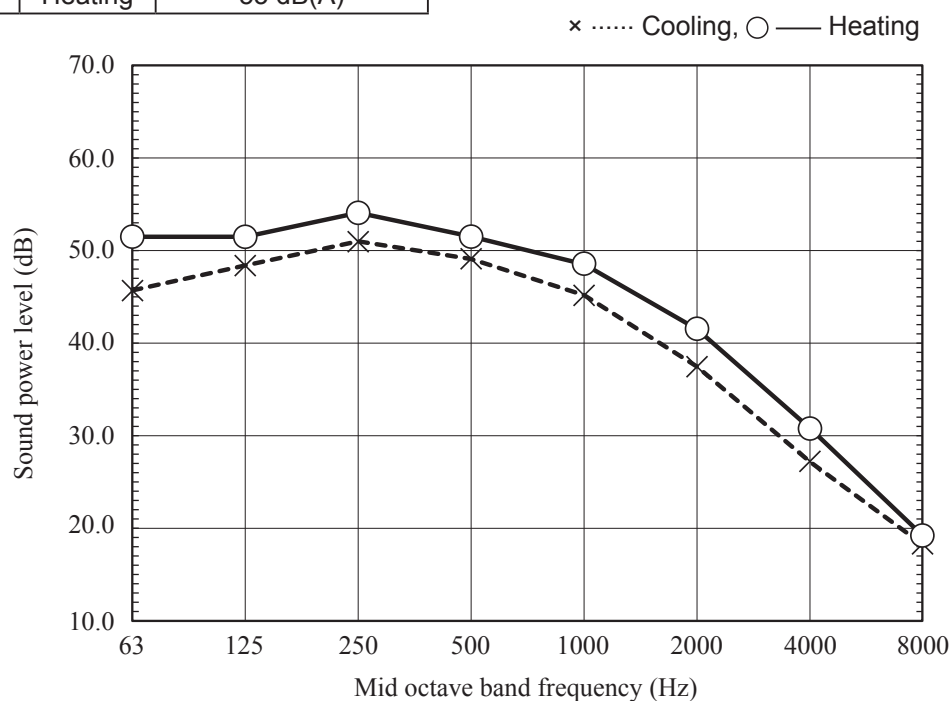


Model SRK25ZS-W, -WB, -WT

(Indoor unit)

Model	SRK25ZS-W, WB, WT	
Noise	Cooling	50 dB(A)
Level	Heating	53 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

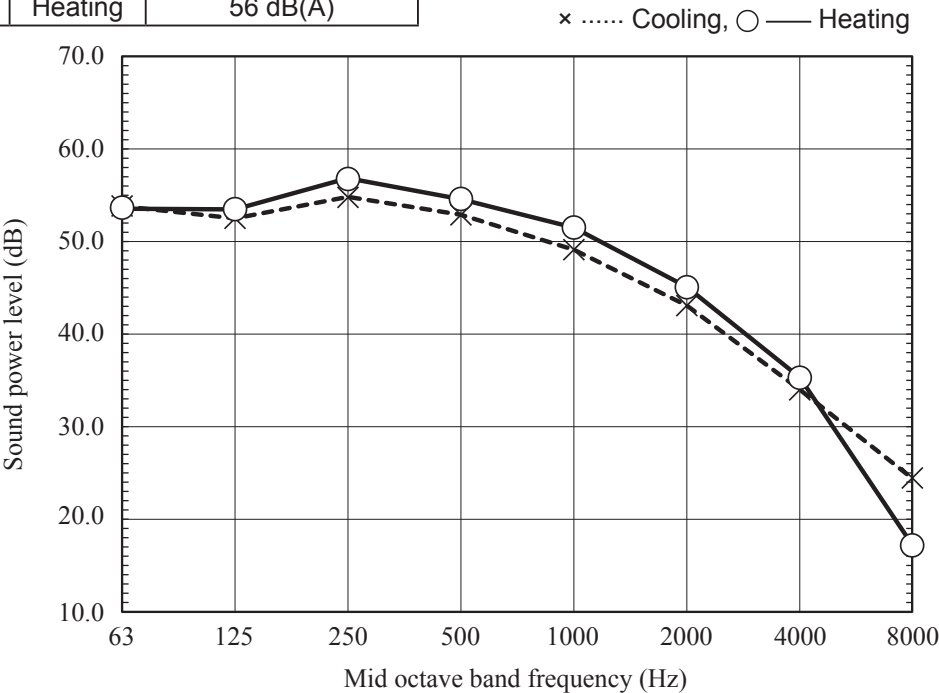


Model SRK35ZS-W, -WB, -WT

(Indoor unit)

Model	SRK35ZS-W, WB, WT	
Noise Level	Cooling	54 dB(A)
	Heating	56 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)



(b) Sound pressure level

(i) Rated capacity value

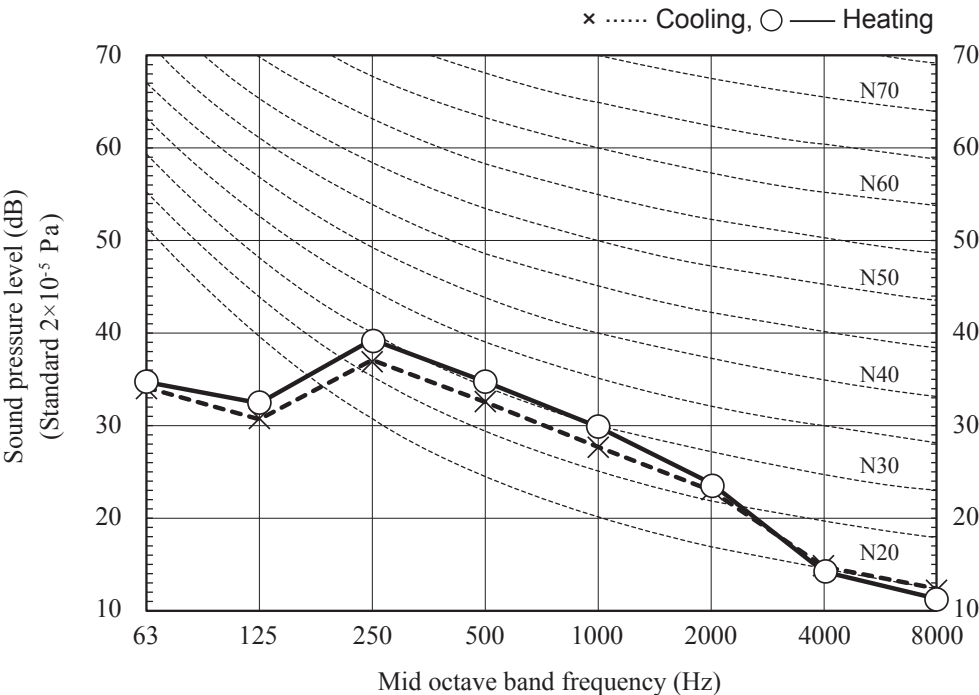
Model SRK20ZS-W, -WB, -WT

(Indoor unit)

Model	SRK20ZS-W, WB, WT	
Noise Level	Cooling	34 dB(A)
	Heating	36 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

●Mike position



Model SRK25ZS-W, -WB, -WT

(Indoor unit)

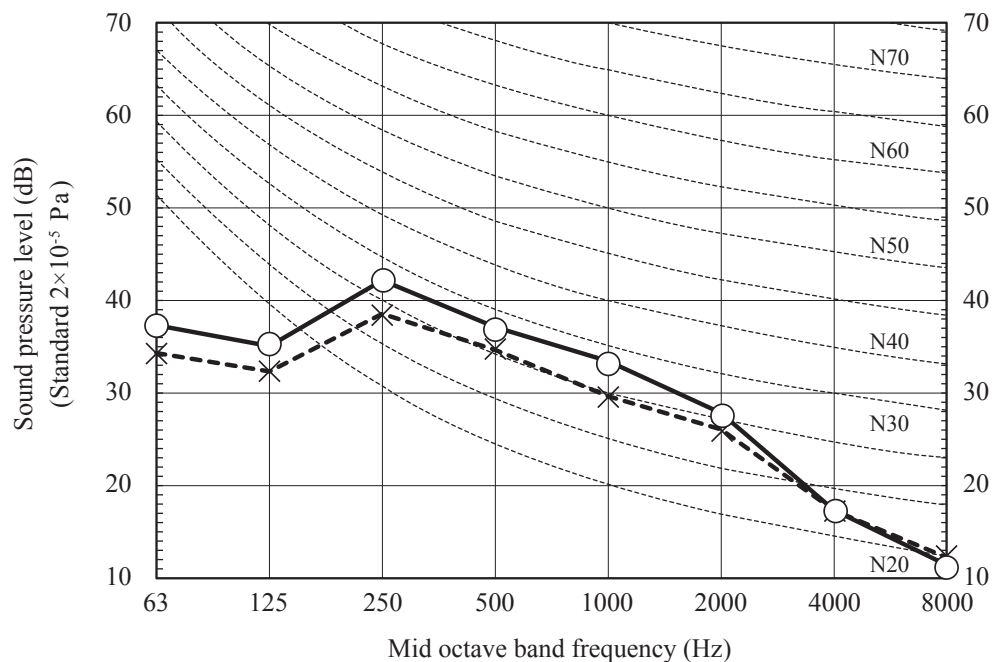
Model	SRK25ZS-W, WB, WT	
Noise	Cooling	36 dB(A)
Level	Heating	39 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

●Mike position



× Cooling, ○ — Heating

**Model SRK35ZS-W, -WB, -WT**

(Indoor unit)

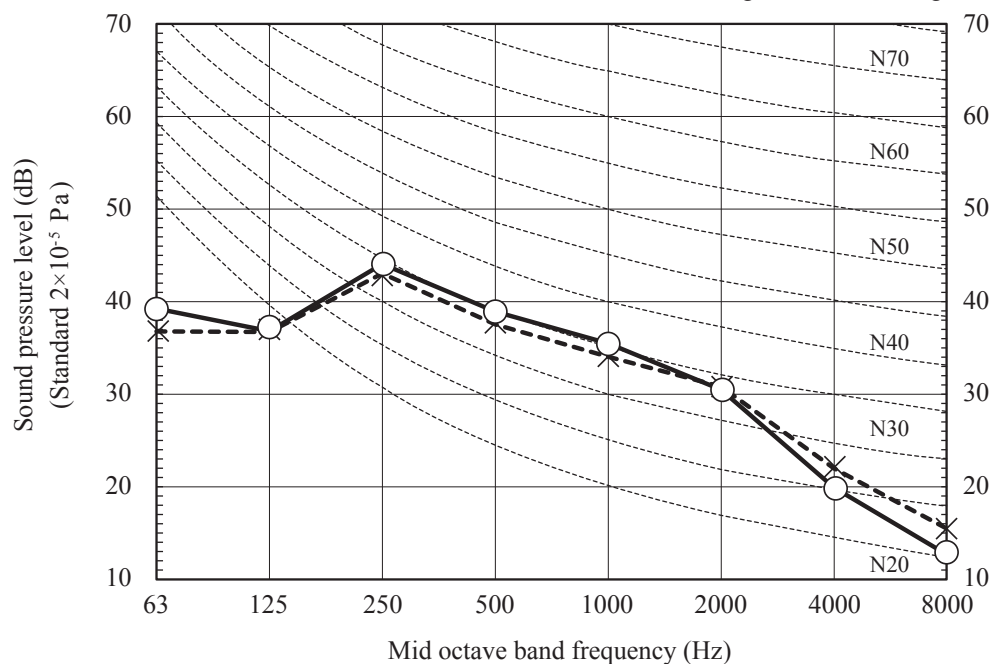
Model	SRK35ZS-W, WB, WT	
Noise	Cooling	40 dB(A)
Level	Heating	41 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

●Mike position



× Cooling, ○ — Heating



(ii) Each fan speed mode

Model SRK20ZS-W, -WB, -WT

(Indoor unit)

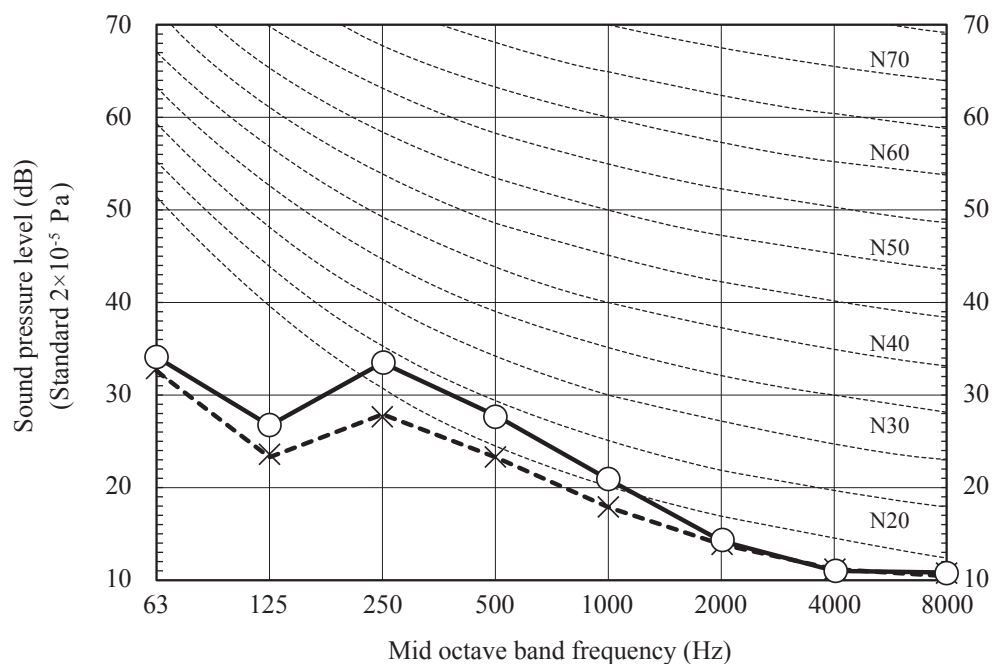
Model	SRK20ZS-W, WB, WT	
Noise	Cooling	25 dB(A)
Level	Heating	29 dB(A)

Condition	ISO15042 T1/H1
MODE	Me

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

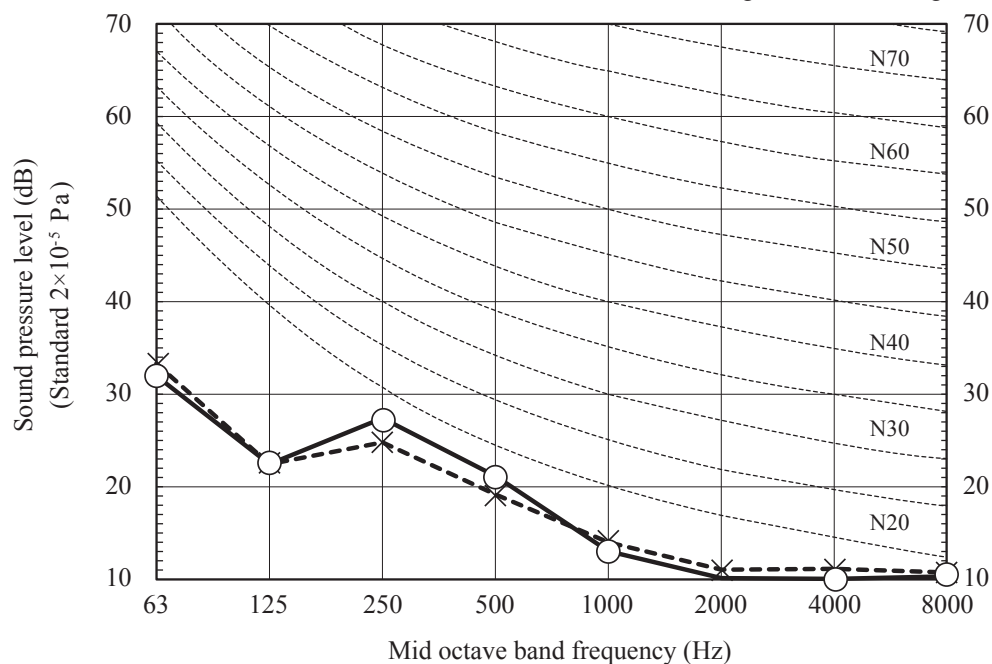
Model	SRK20ZS-W, WB, WT	
Noise	Cooling	22 dB(A)
Level	Heating	23 dB(A)

MODE	Lo
------	----

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

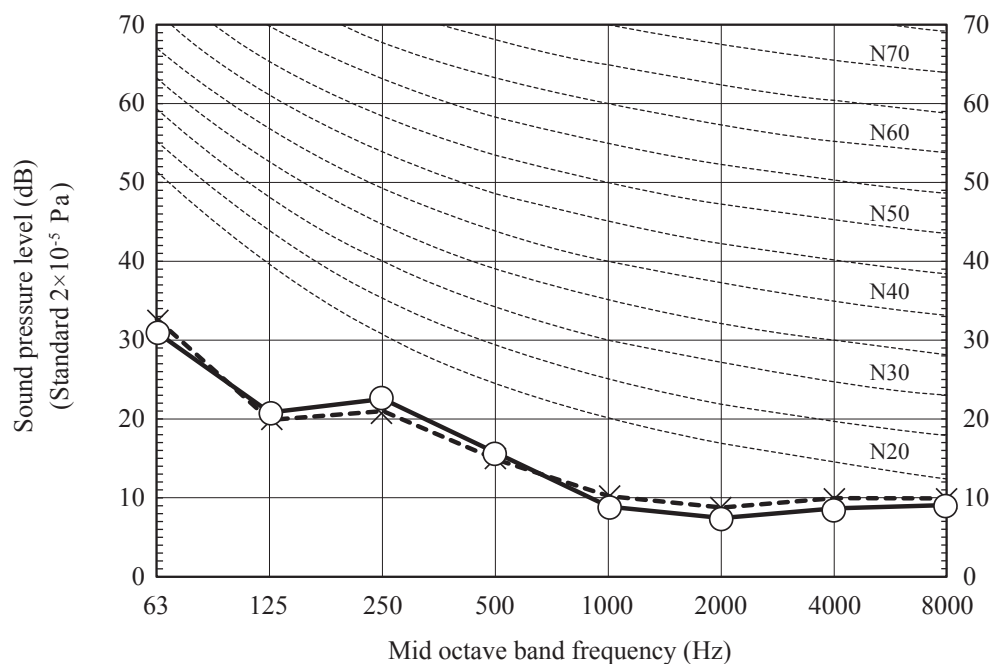
Model	SRK20ZS-W, WB, WT	
Noise	Cooling	19 dB(A)
Level	Heating	19 dB(A)

MODE	ULo
------	-----

●Mike position



× Cooling, ○ — Heating

**Model SRK25ZS-W, -WB, -WT**

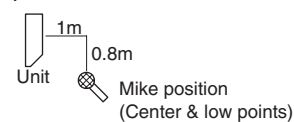
(Indoor unit)

Model	SRK25ZS-W, WB, WT	
Noise	Cooling	28 dB(A)
Level	Heating	30 dB(A)

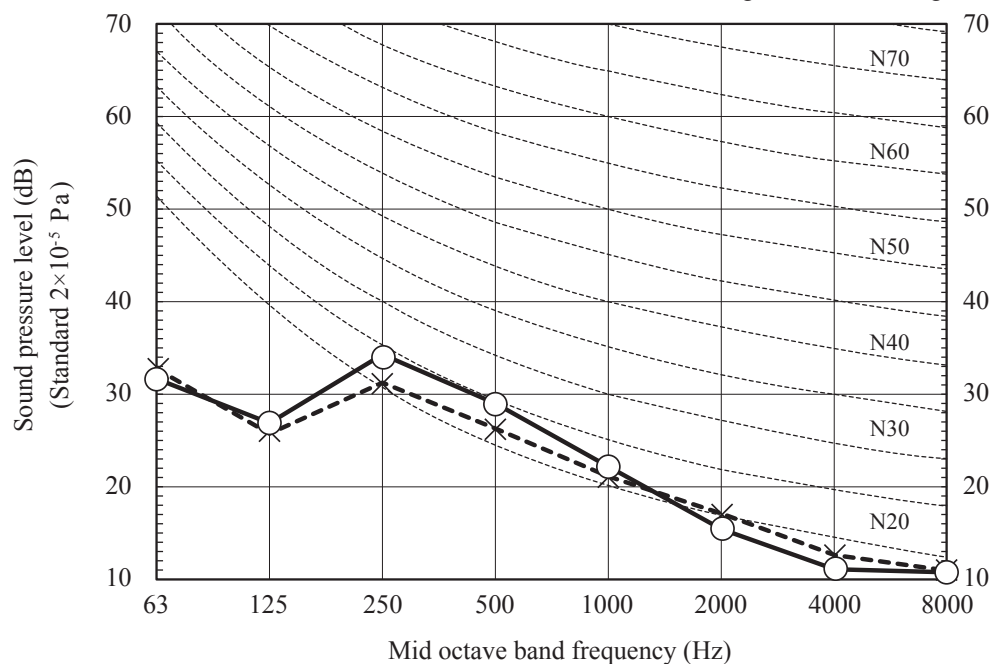
Condition	ISO15042 T1/H1
-----------	----------------

MODE	Me
------	----

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

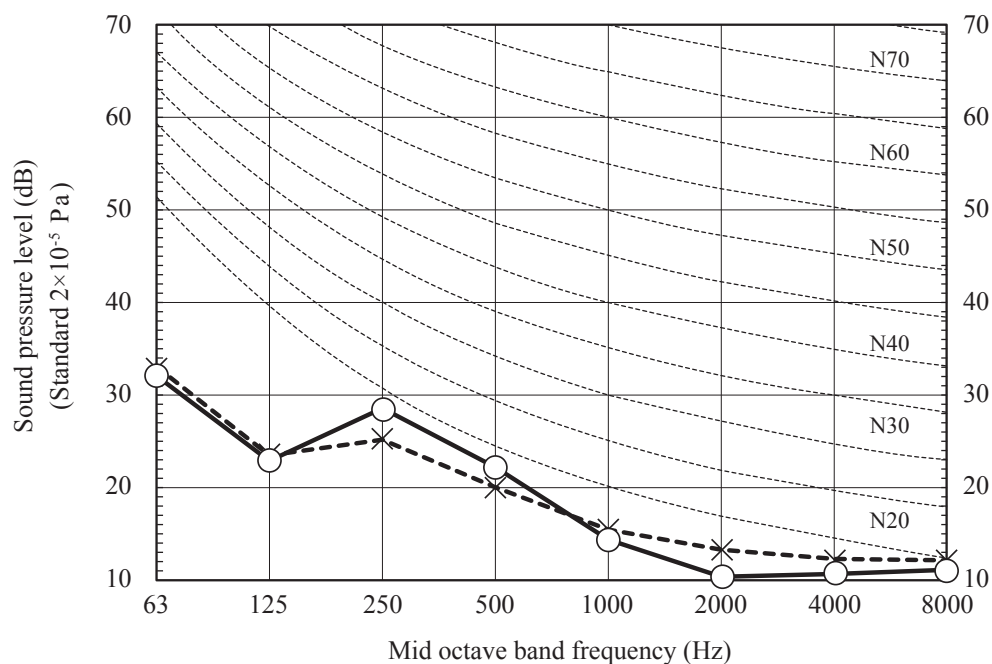
Model	SRK25ZS-W, WB, WT	
Noise	Cooling	23 dB(A)
Level	Heating	24 dB(A)

Condition	ISO15042 T1/H1
MODE	Lo

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

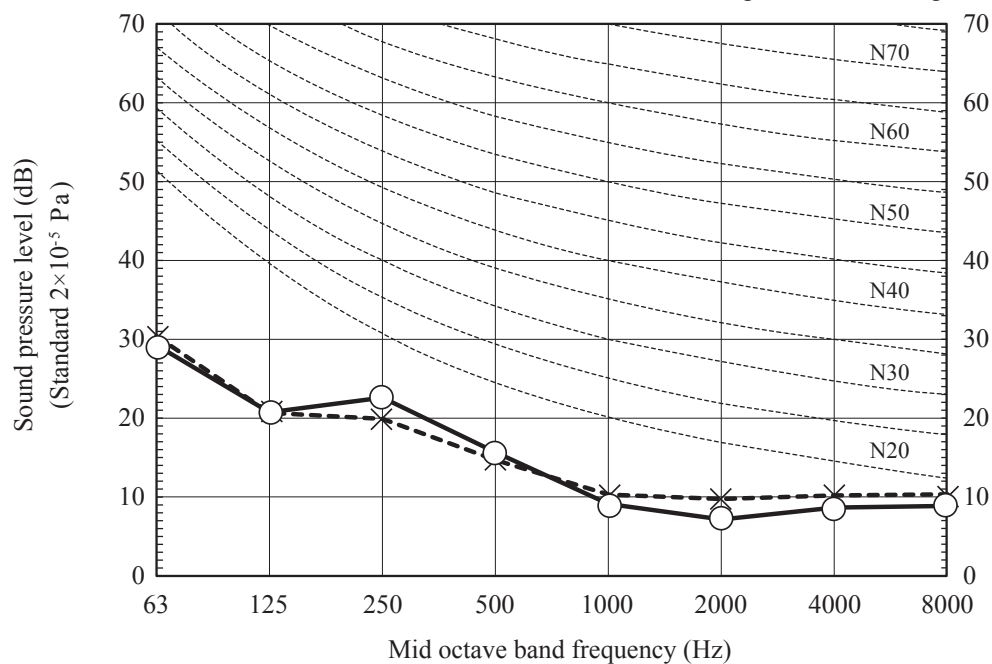
Model	SRK25ZS-W, WB, WT	
Noise	Cooling	19 dB(A)
Level	Heating	19 dB(A)

MODE	ULo
------	-----

●Mike position



× Cooling, ○ — Heating



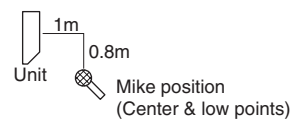
Model SRK35ZS-W, -WB, -WT

(Indoor unit)

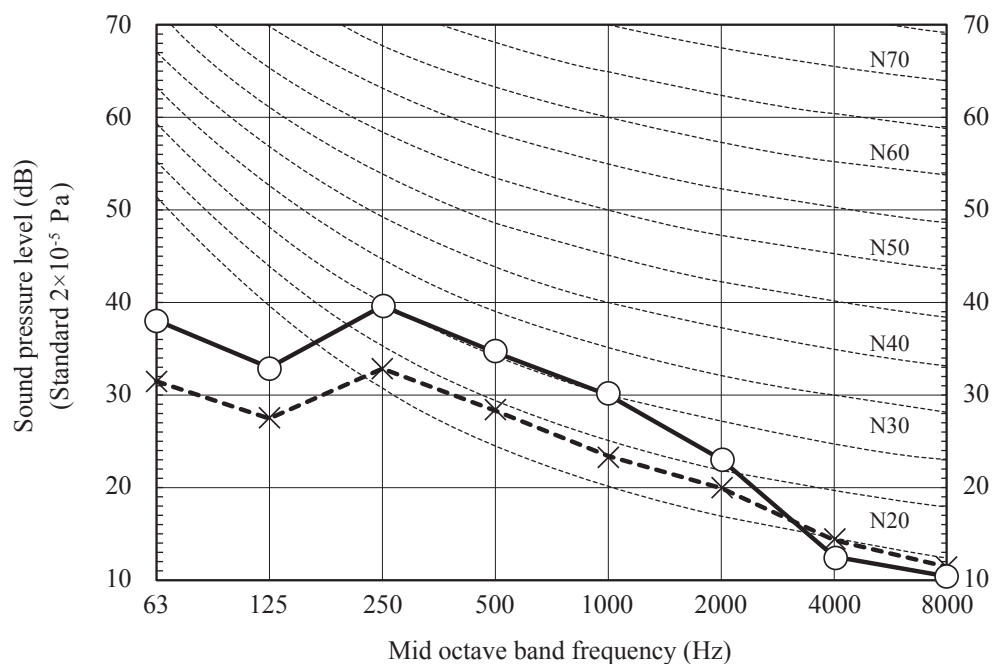
Model	SRK35ZS-W, WB, WT	
Noise	Cooling	30 dB(A)
Level	Heating	36 dB(A)

Condition	ISO15042 T1/H1
MODE	Me

●Mike position



× Cooling, ○ — Heating

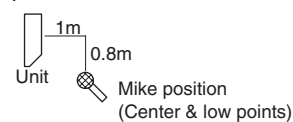


(Indoor unit)

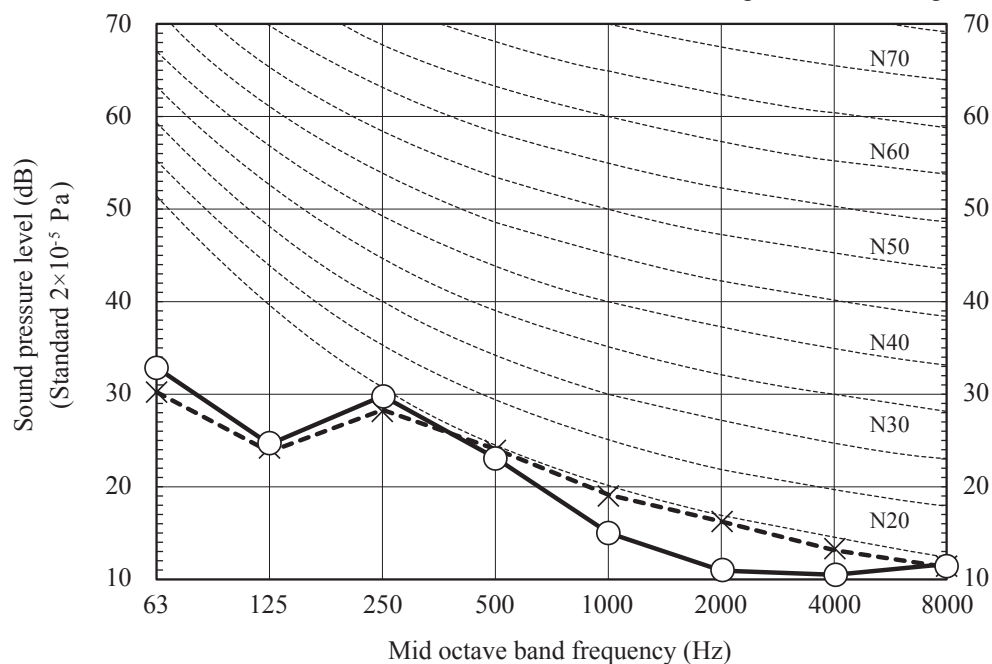
Model	SRK35ZS-W, WB, WT	
Noise	Cooling	26 dB(A)
Level	Heating	25 dB(A)

MODE	Lo
------	----

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

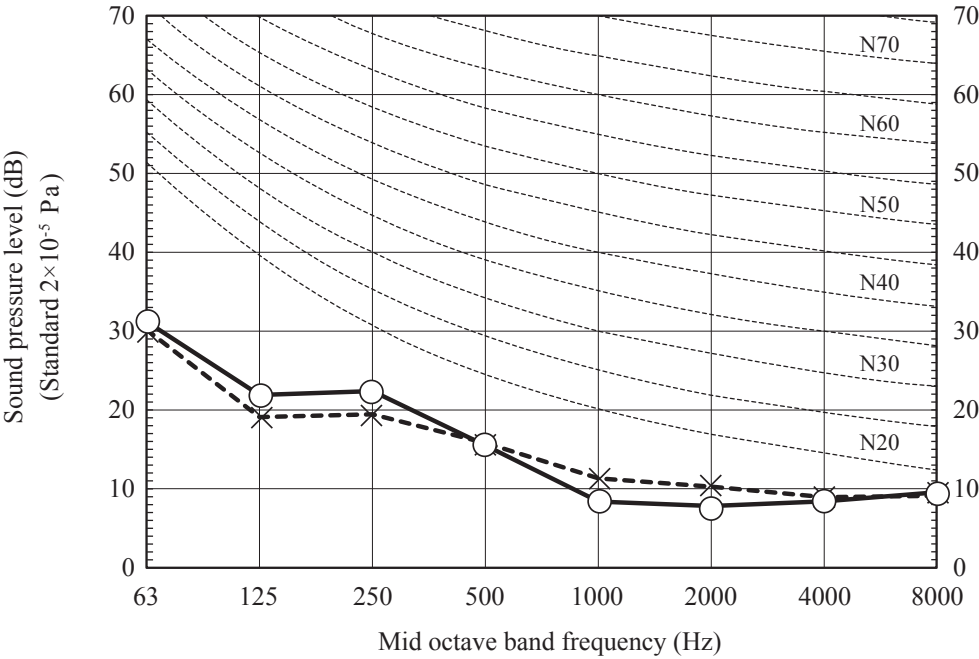
Model	SRK35ZS-W, WB, WT	
Noise	Cooling	19 dB(A)
Level	Heating	19 dB(A)

MODE	ULo
------	-----

●Mike position



× Cooling, ○ — Heating

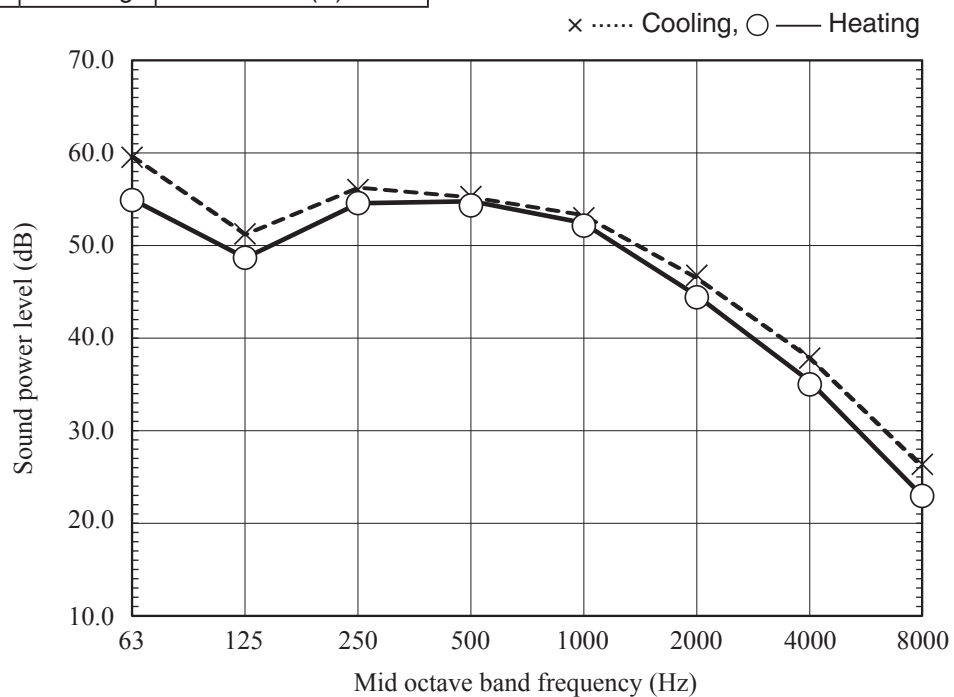


(3) Wall mounted type (SKM - ZSP series)**(a) Sound power level****Model SKM20ZSP-W**

(Indoor unit)

Model	SKM20ZSP-W	
Noise	Cooling	57 dB(A)
Level	Heating	56 dB(A)

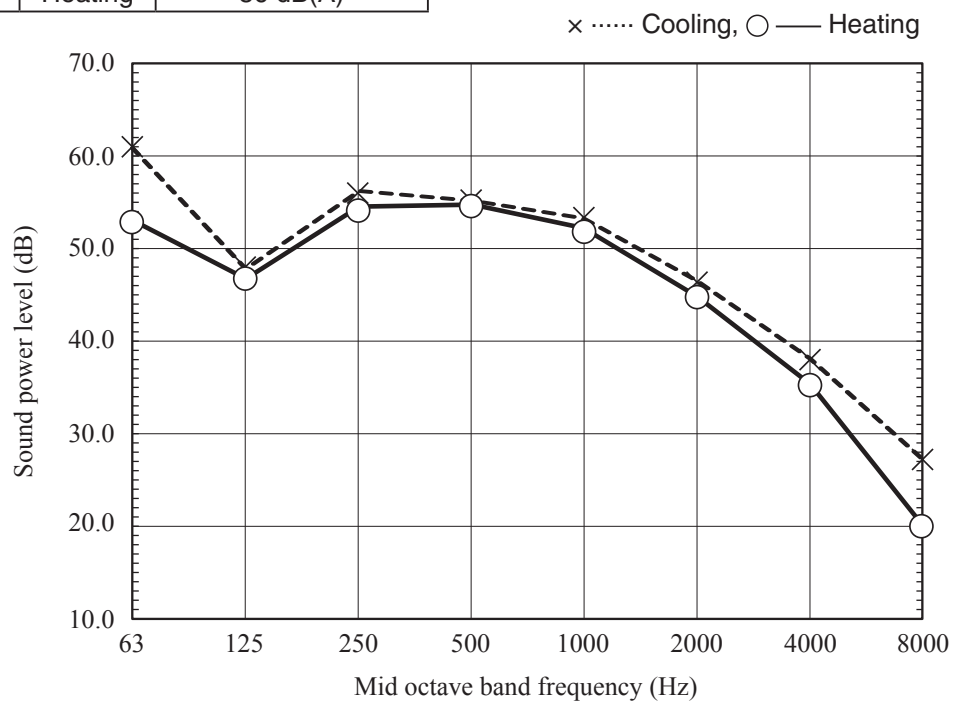
Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

**Model SKM25ZSP-W**

(Indoor unit)

Model	SKM25ZSP-W	
Noise	Cooling	57 dB(A)
Level	Heating	56 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

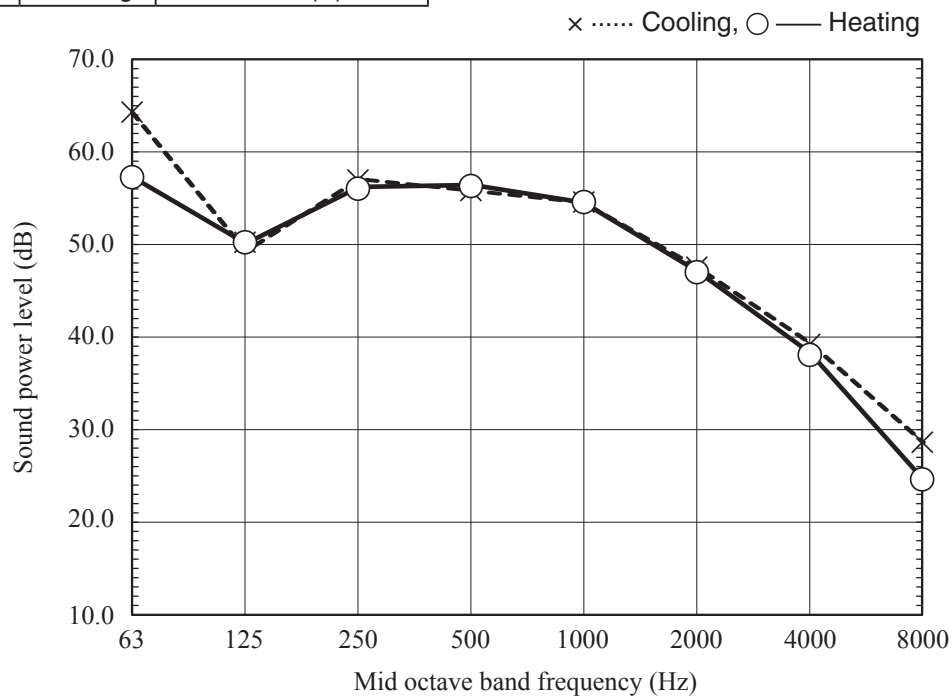


Model SKM35ZSP-W

(Indoor unit)

Model	SKM35ZSP-W	
Noise Level	Cooling	58 dB(A)
	Heating	58 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

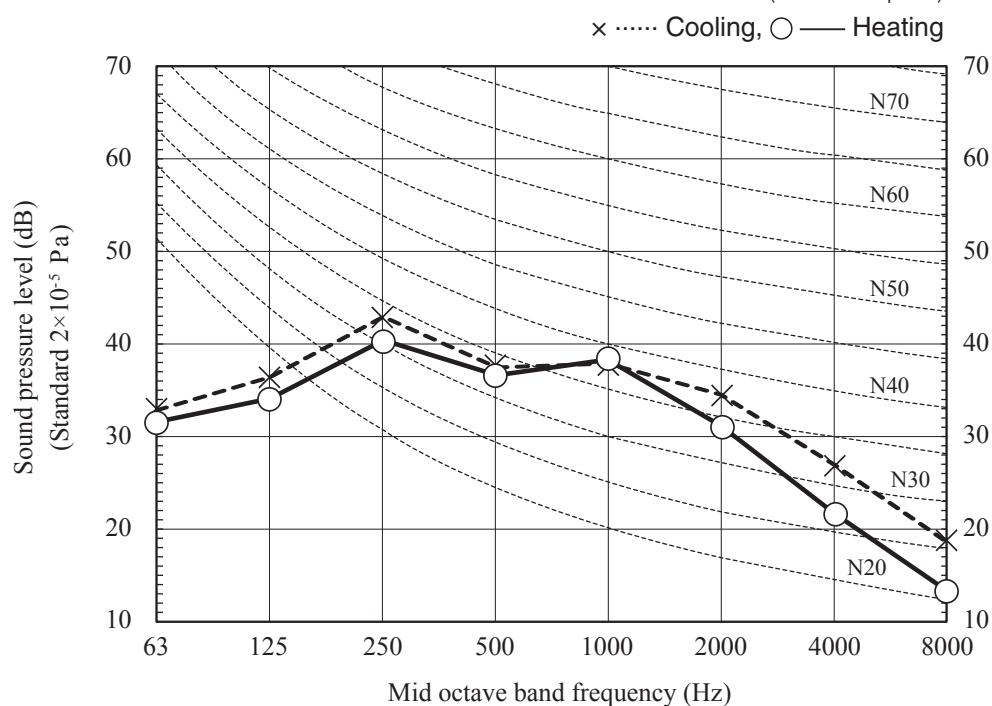
**(b) Sound pressure level****(i) Rated capacity value****Model SKM20ZSP-W**

(Indoor unit)

Model	SKM20ZSP-W	
Noise Level	Cooling	42 dB(A)
	Heating	41 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

●Mike position



Model SKM25ZSP-W

(Indoor unit)

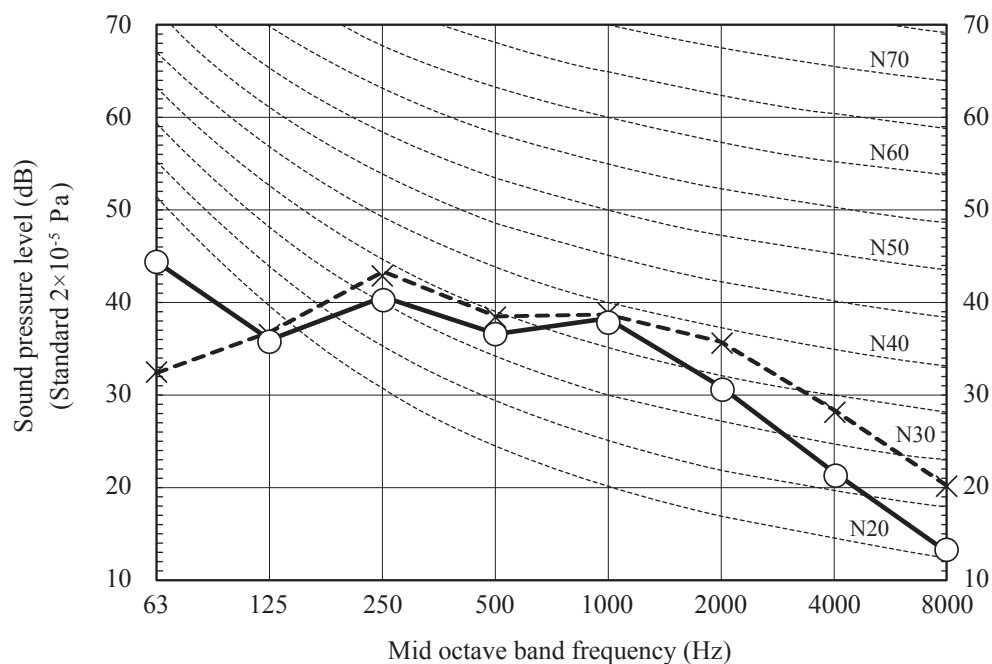
Model	SKM25ZSP-W	
Noise	Cooling	43 dB(A)
Level	Heating	41 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

●Mike position



× Cooling, ○ — Heating

**Model SKM35ZSP-W**

(Indoor unit)

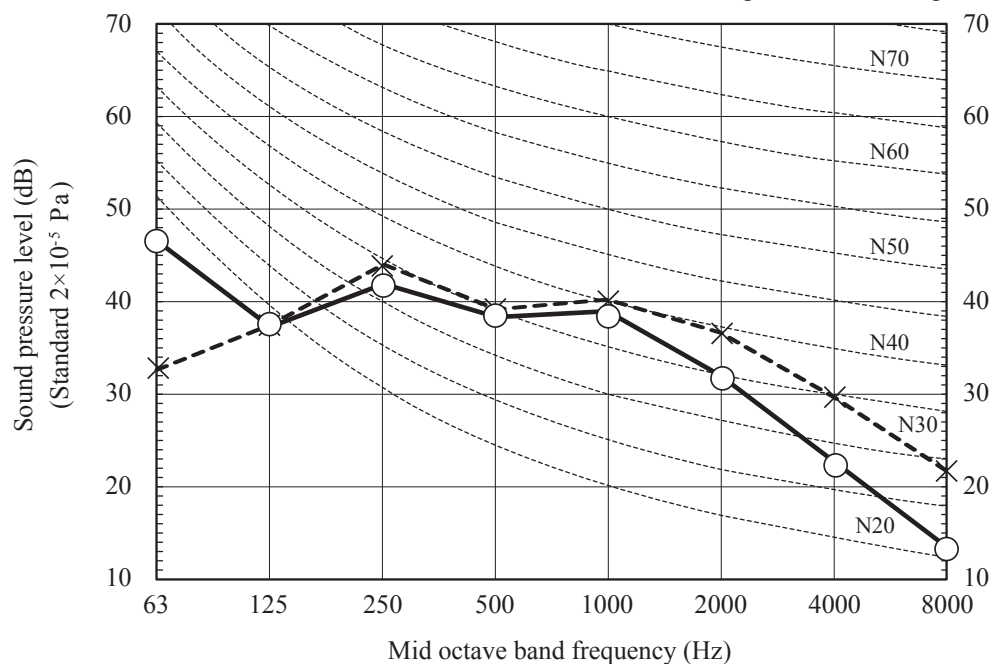
Model	SKM35ZSP-W	
Noise	Cooling	44 dB(A)
Level	Heating	42 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

●Mike position



× Cooling, ○ — Heating



(ii) Each fan speed mode

Model SKM20ZSP-W

(Indoor unit)

Model	SKM20ZSP-W	
Noise	Cooling	35 dB(A)
Level	Heating	36 dB(A)

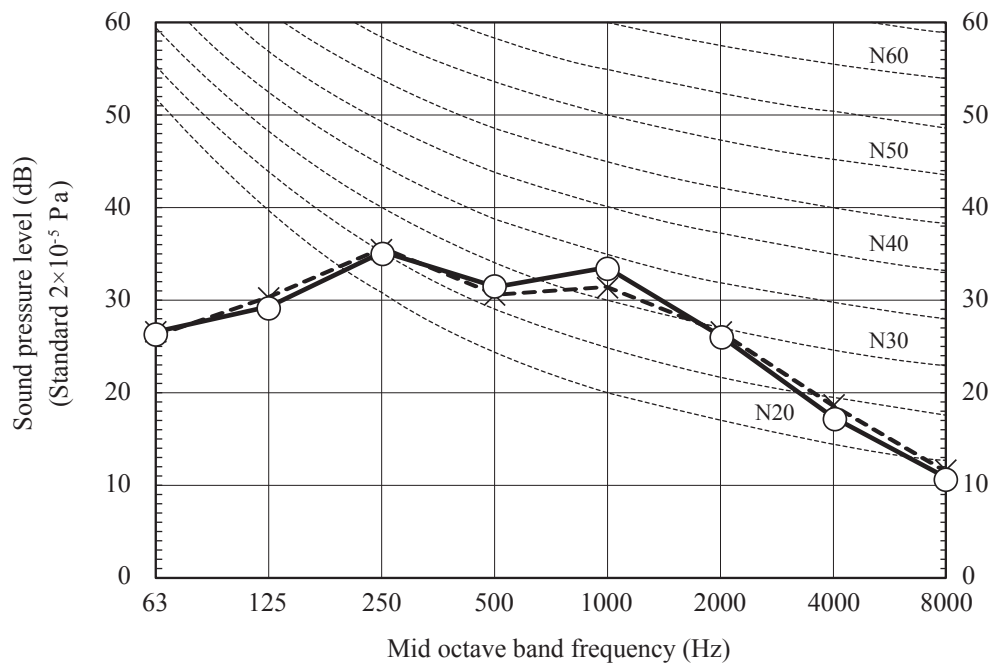
Condition	ISO15042 T1/H1
-----------	----------------

MODE	Me
------	----

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

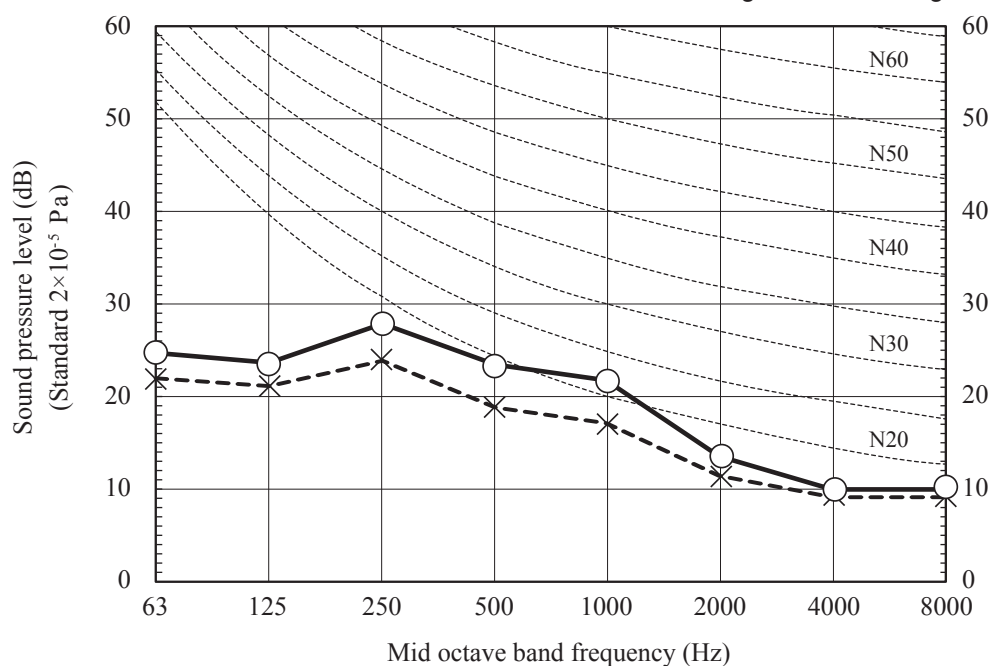
Model	SKM20ZSP-W	
Noise	Cooling	22 dB(A)
Level	Heating	26 dB(A)

MODE	Lo
------	----

●Mike position



× Cooling, ○ — Heating



Model SKM25ZSP-W

(Indoor unit)

Model	SKM25ZSP-W	
Noise	Cooling	36 dB(A)
Level	Heating	36 dB(A)

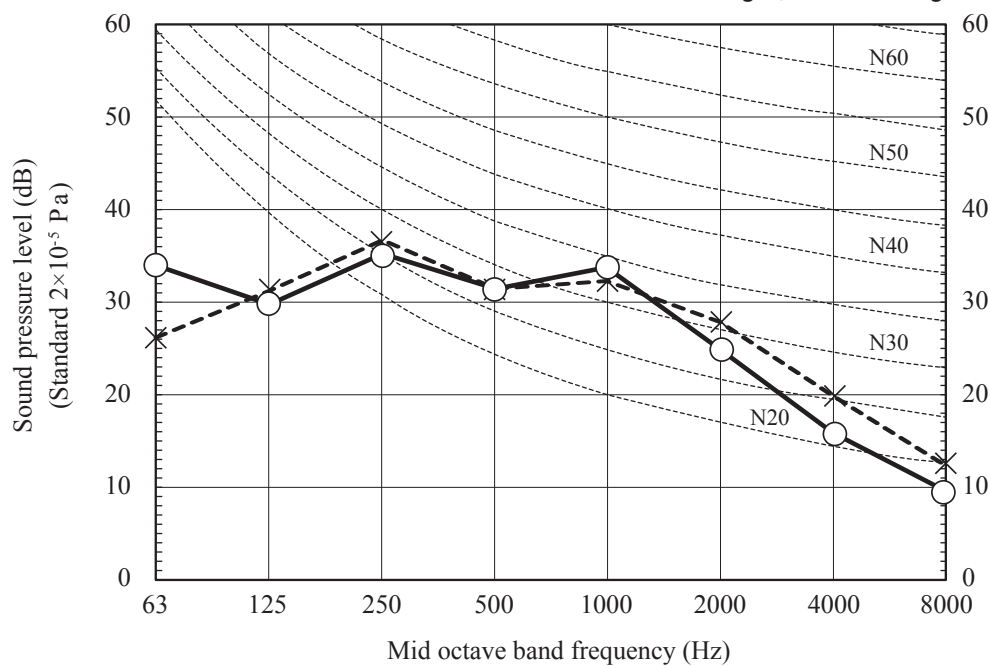
Condition	ISO15042 T1/H1
-----------	----------------

MODE	Me
------	----

●Mike position



× Cooling, ○ — Heating



(Indoor unit)

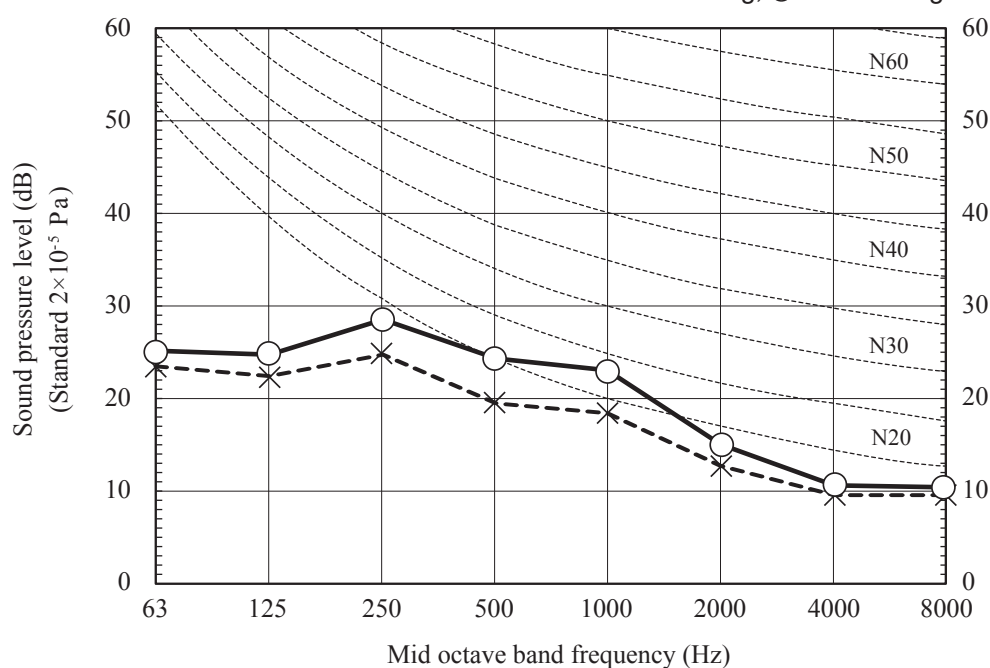
Model	SKM25ZSP-W	
Noise	Cooling	23 dB(A)
Level	Heating	27 dB(A)

MODE	Lo
------	----

●Mike position



× Cooling, ○ — Heating



Model SKM35ZSP-W

(Indoor unit)

Model	SKM35ZSP-W	
Noise	Cooling	37 dB(A)
Level	Heating	37 dB(A)

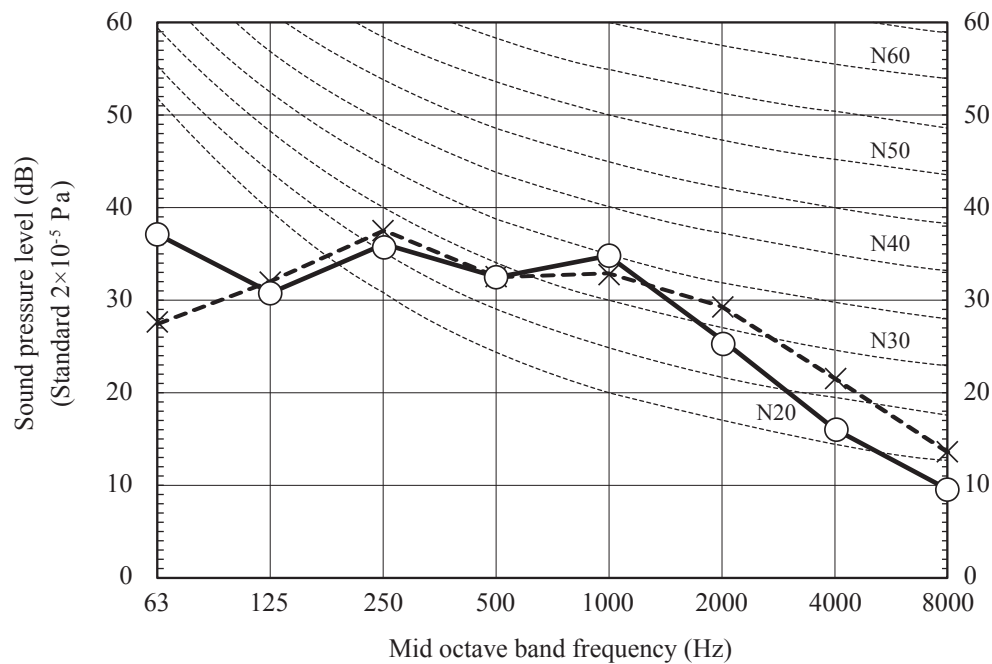
Condition	ISO15042 T1/H1
-----------	----------------

MODE	Me
------	----

●Mike position



× Cooling, ○ — Heating

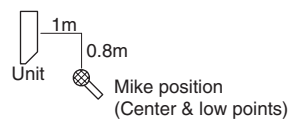


(Indoor unit)

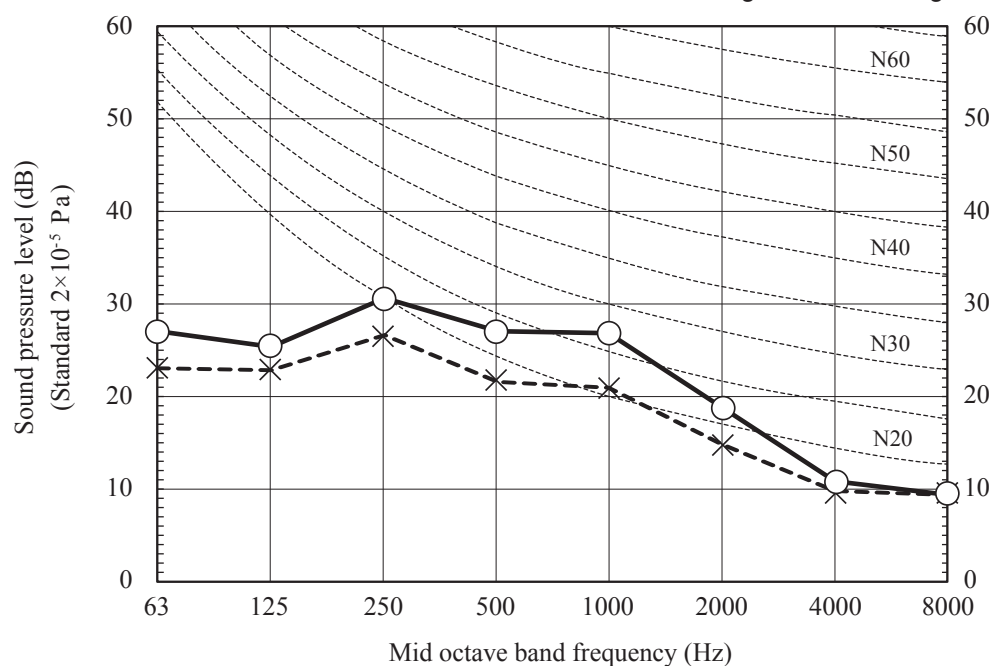
Model	SKM35ZSP-W	
Noise	Cooling	25 dB(A)
Level	Heating	30 dB(A)

MODE	Lo
------	----

●Mike position



× Cooling, ○ — Heating

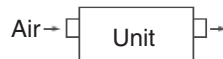


(4) Ceiling concealed type (SRR)**(a) Sound power level****Model SRR25ZM-W****• Non duct**

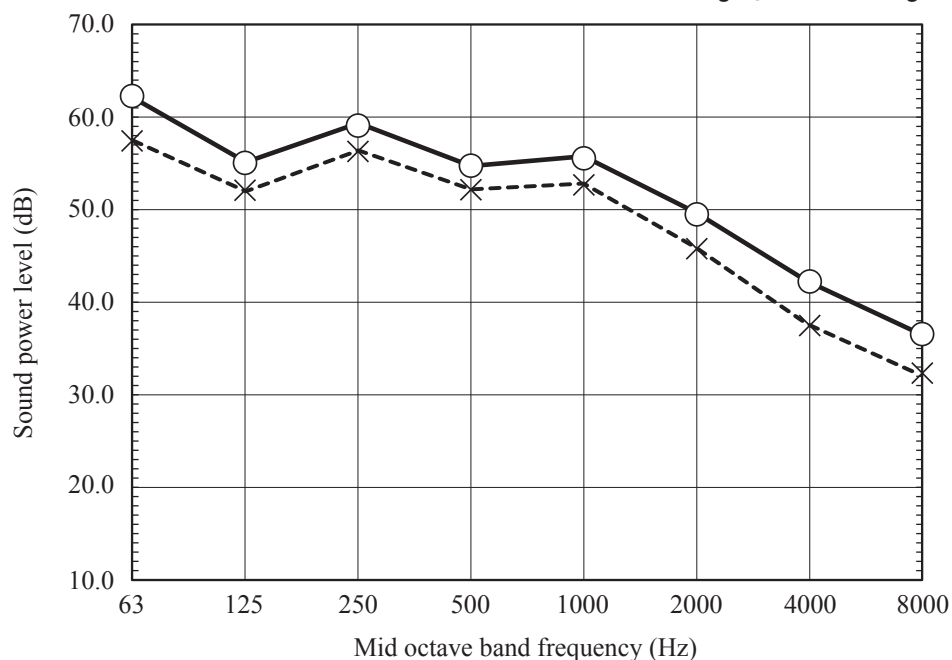
(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	56 dB(A)
Level	Heating	59 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)



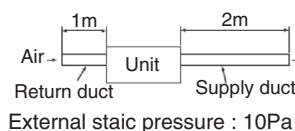
× Cooling, ○ — Heating

**• With duct**

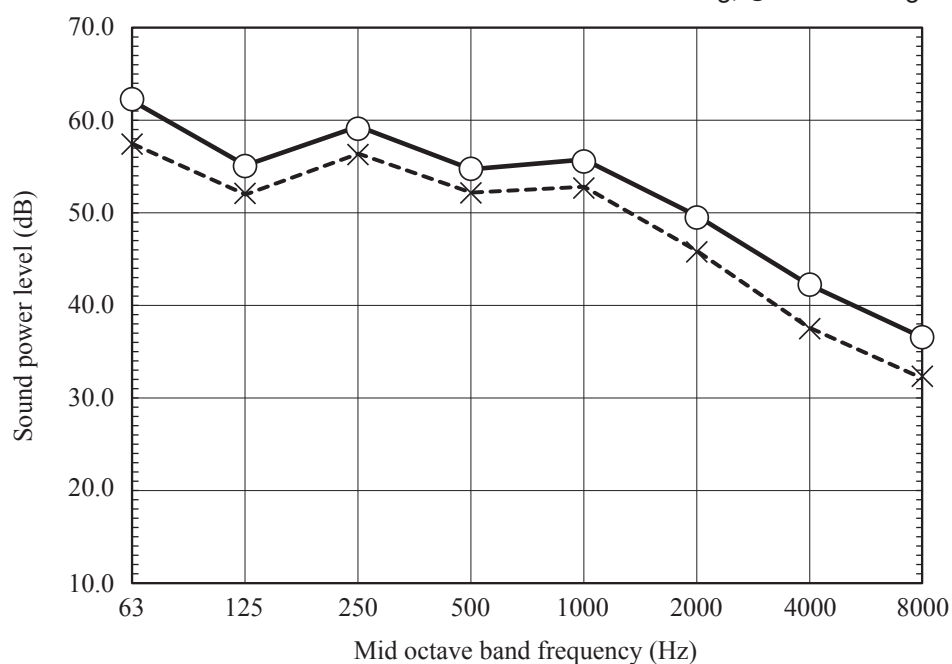
(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	56 dB(A)
Level	Heating	59 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)



× Cooling, ○ — Heating



Model SRR35ZM-W**• Non duct**

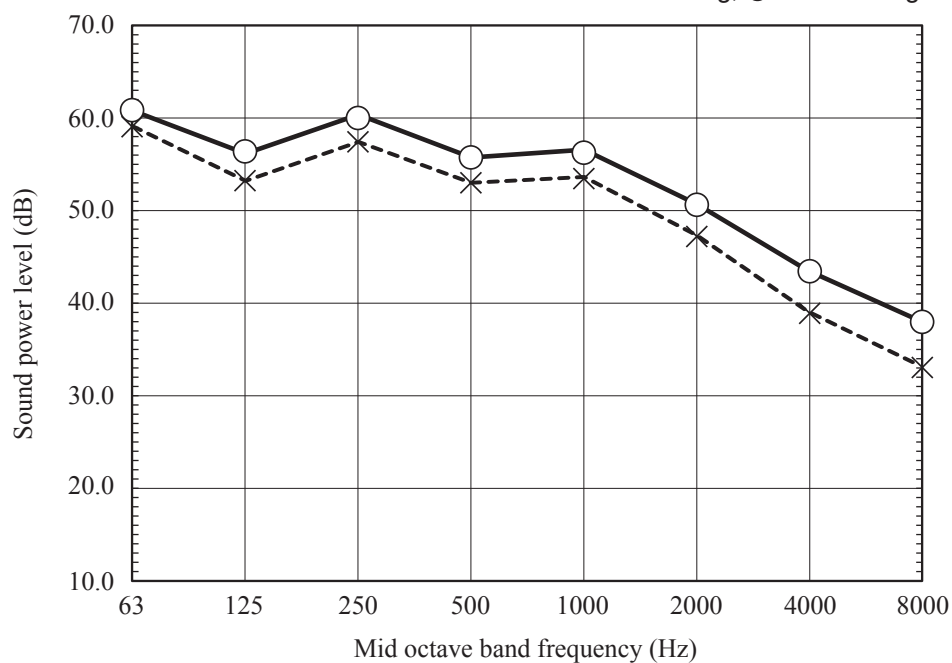
(Indoor unit)

Model	SRR35ZM-W	
Noise Level	Cooling	57 dB(A)
	Heating	60 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)



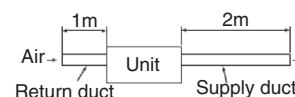
× Cooling, ○ — Heating

**• With duct**

(Indoor unit)

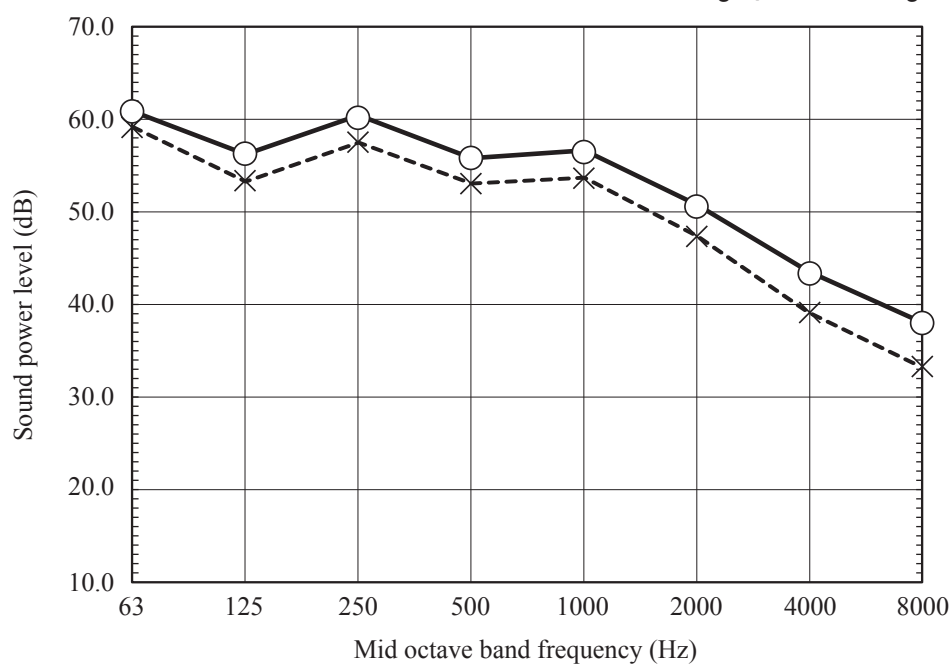
Model	SRR35ZM-W	
Noise Level	Cooling	57 dB(A)
	Heating	60 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)



External static pressure : 10Pa

× Cooling, ○ — Heating



(b) Sound pressure level

(i) Rated capacity value (Hi)

Model SRR25ZM-W

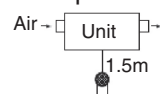
• Sound pressure level ①

(Indoor unit)

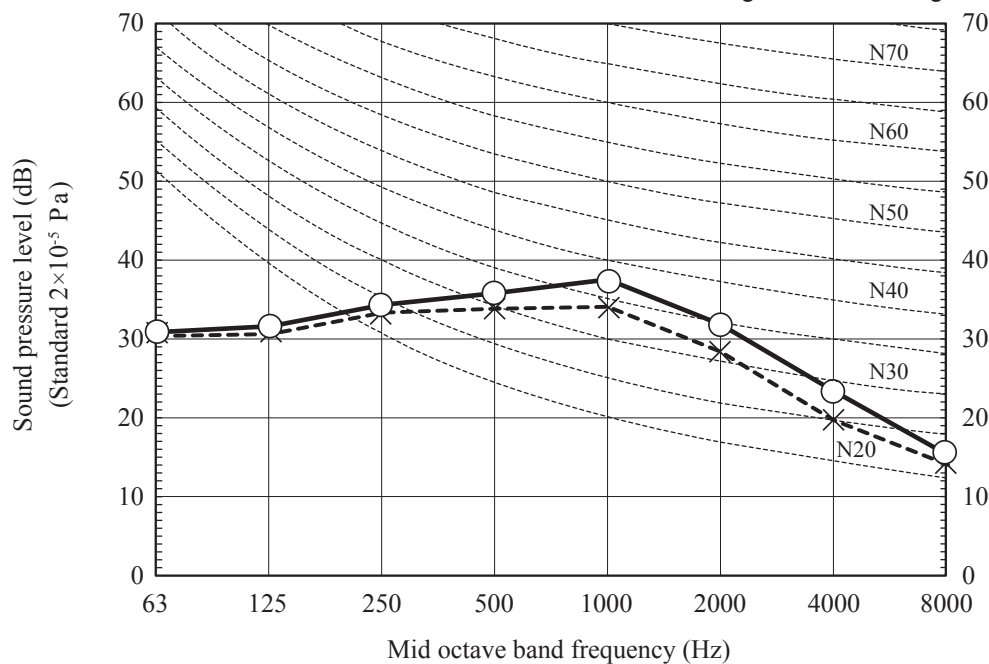
Model	SRR25ZM-W	
Noise	Cooling	37 dB(A)
Level	Heating	40 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

• Mike position



× Cooling, ○ — Heating



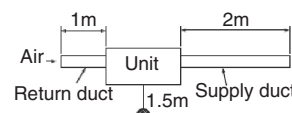
• Sound pressure level ②

(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	31 dB(A)
Level	Heating	33 dB(A)

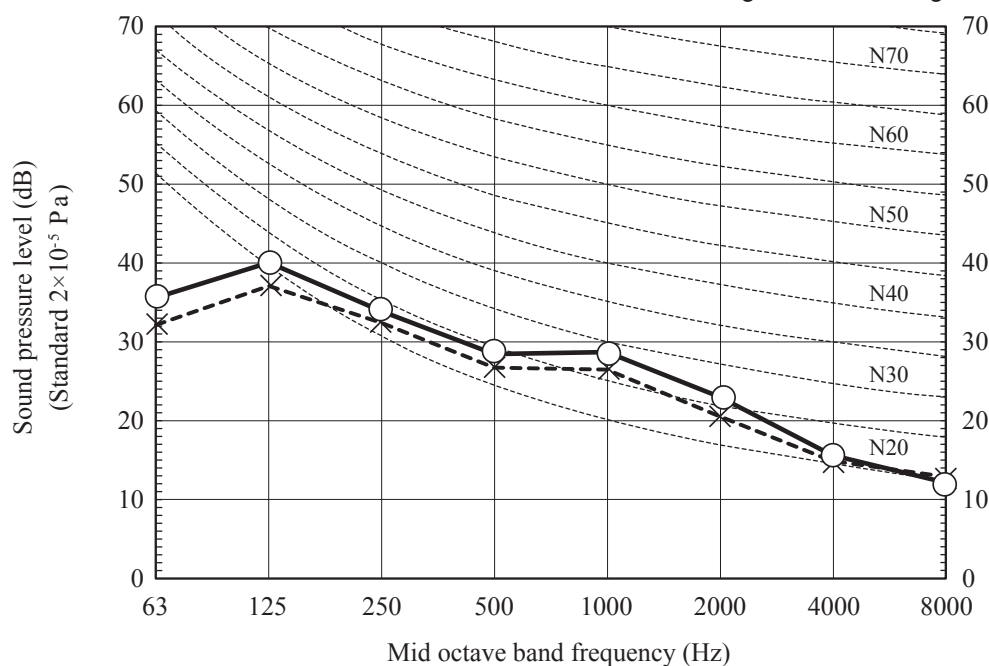
Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

• Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



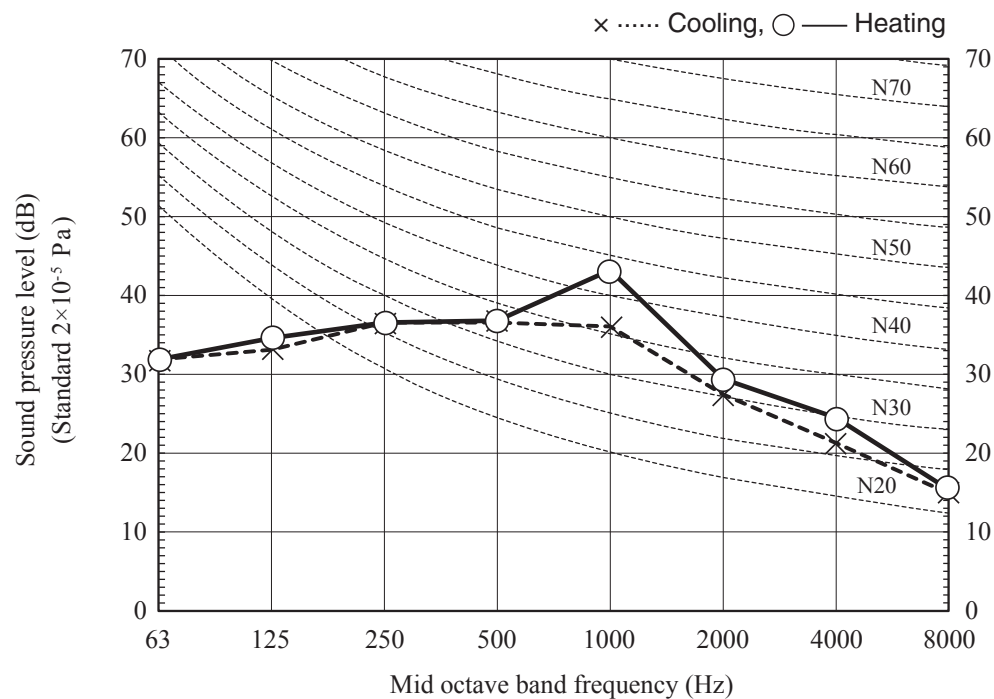
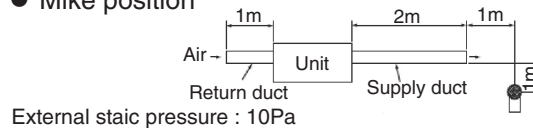
• Sound pressure level ③

(Indoor unit)

Model	SRR25ZM-W	
Noise Level	Cooling	39 dB(A)
	Heating	44 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

● Mike position



Model SRR35ZM-W

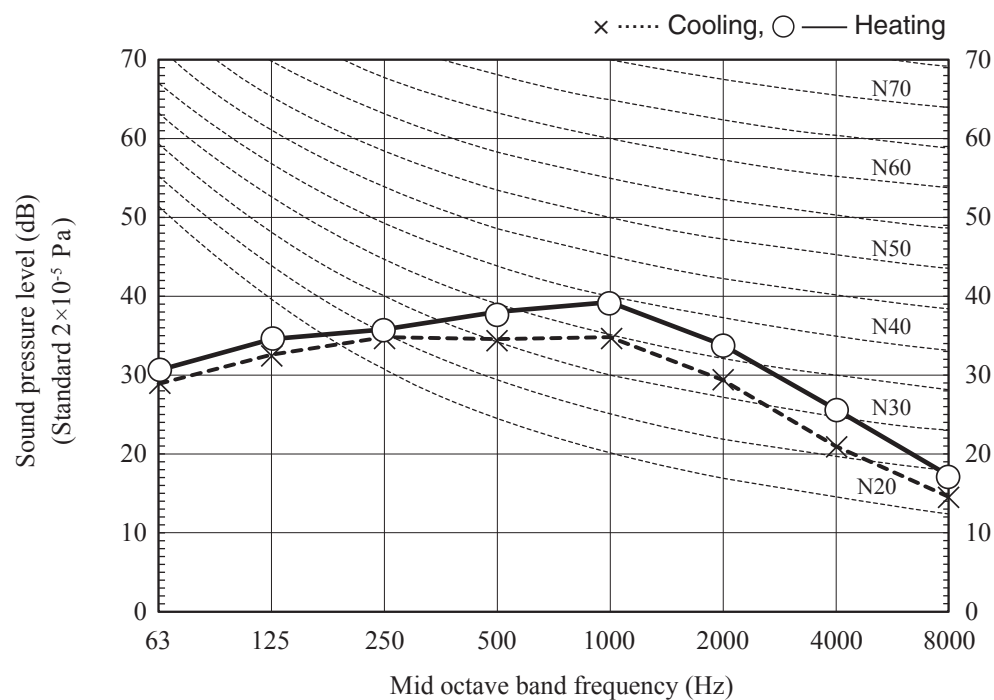
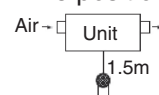
• Sound pressure level ①

(Indoor unit)

Model	SRR35ZM-W	
Noise Level	Cooling	38 dB(A)
	Heating	42 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (Hi)

● Mike position



• Sound pressure level ②

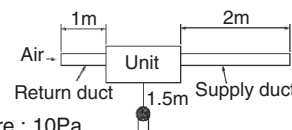
(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	33 dB(A)
Level	Heating	34 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

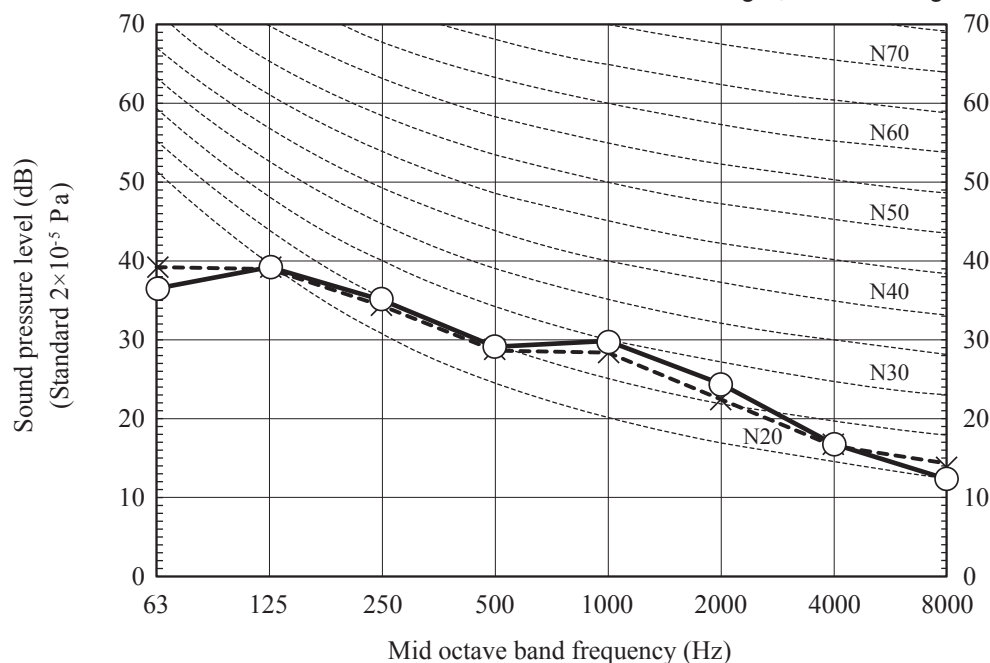
MODE	Rated capacity value (Hi)
------	---------------------------

• Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



• Sound pressure level ③

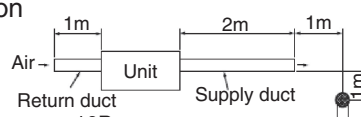
(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	40 dB(A)
Level	Heating	45 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

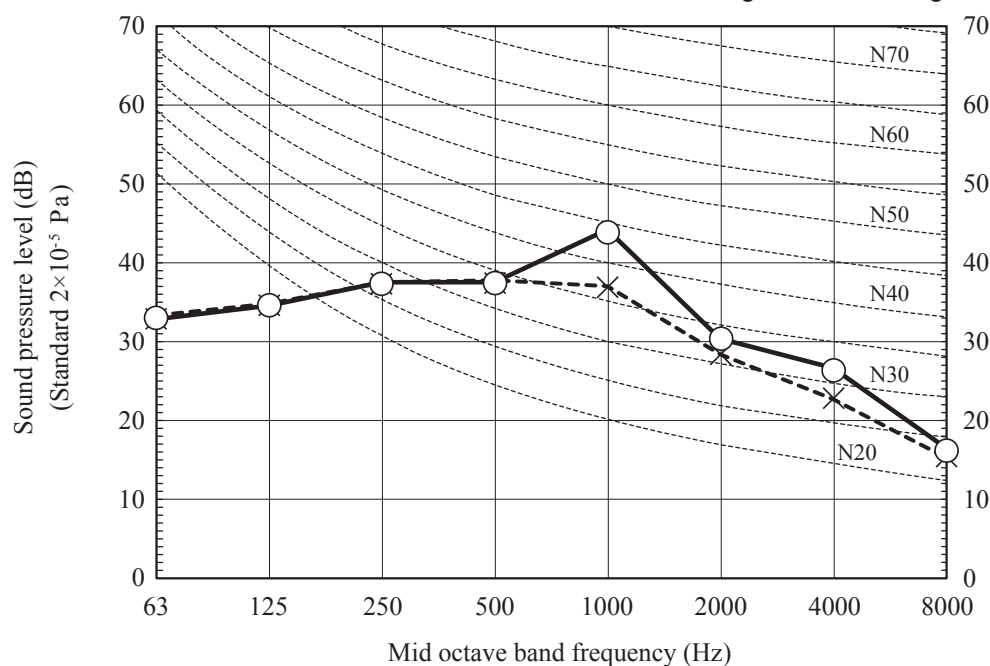
MODE	Rated capacity value (Hi)
------	---------------------------

• Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



(ii) Each fan speed mode

Model SRR25ZM-W

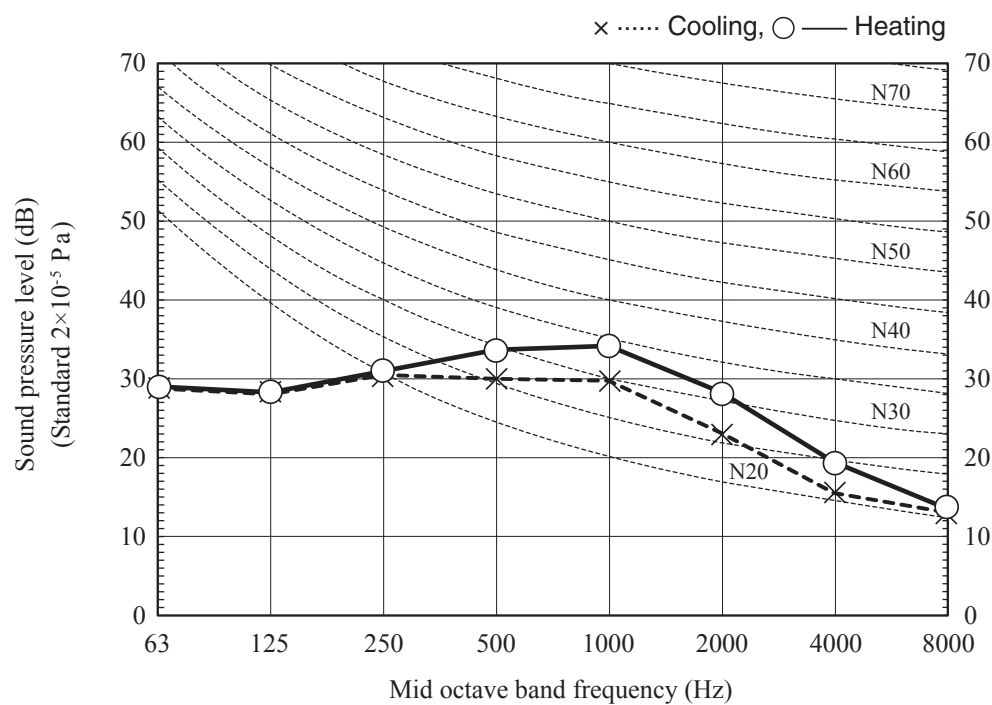
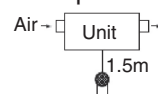
• Sound pressure level ①

(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	33 dB(A)
Level	Heating	37 dB(A)

Condition	ISO15042 T1/H1
MODE	Me

● Mike position

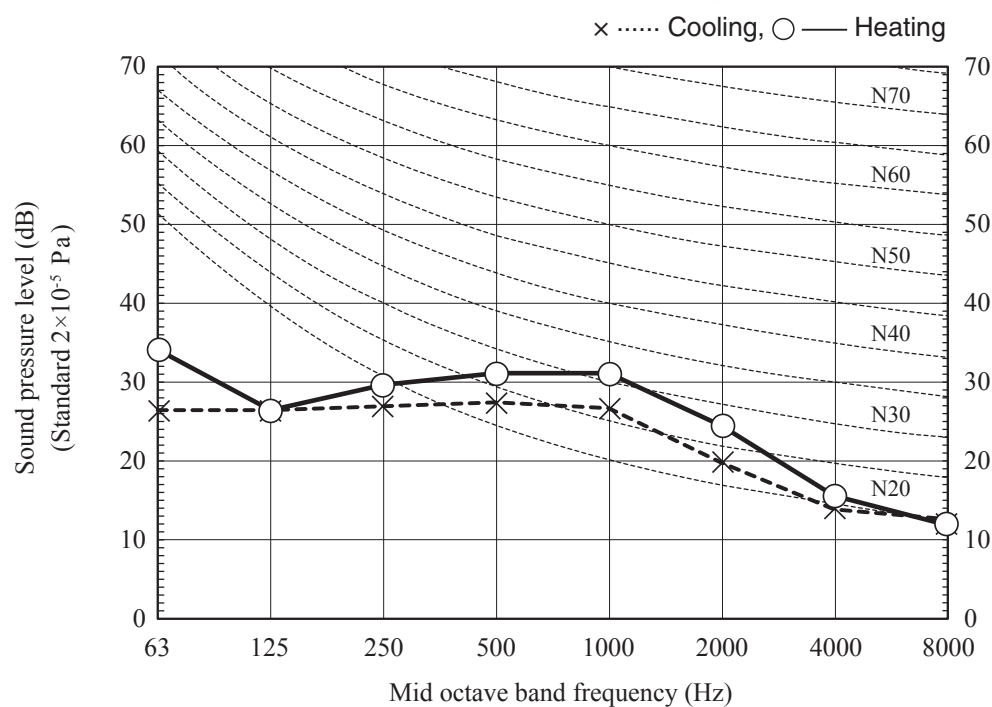
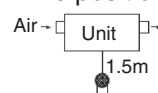


(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	30 dB(A)
Level	Heating	34 dB(A)

Condition	ISO15042 T1/H1
MODE	Lo

● Mike position



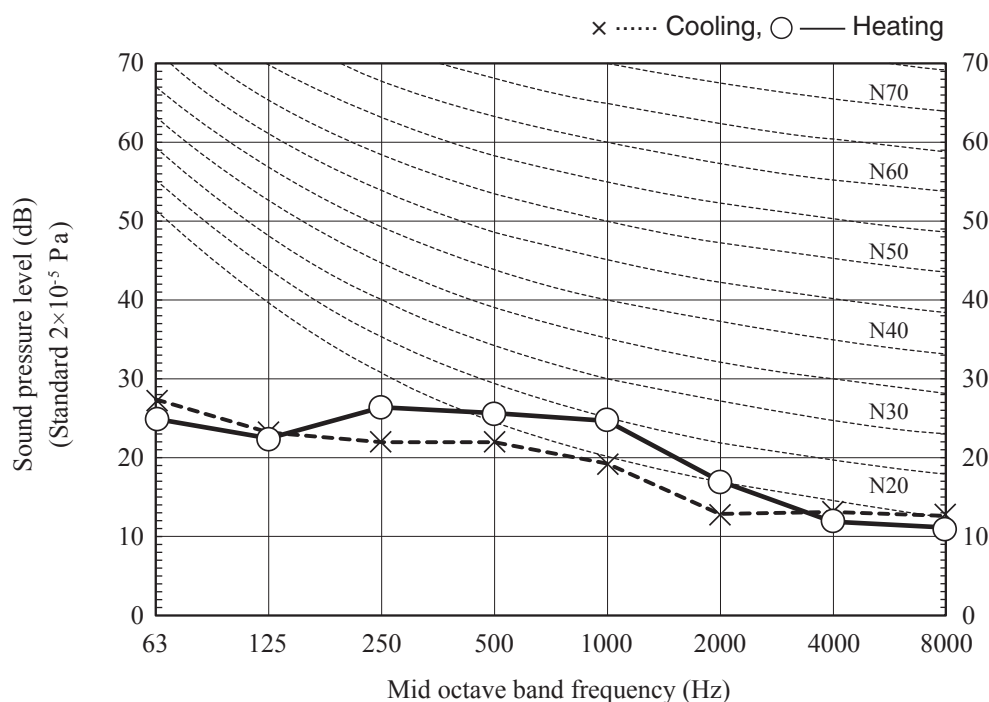
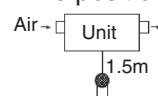
(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	24 dB(A)
Level	Heating	28 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

MODE	ULo
------	-----

● Mike position



● Sound pressure level ②

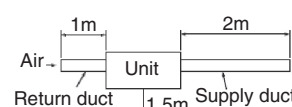
(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	28 dB(A)
Level	Heating	30 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

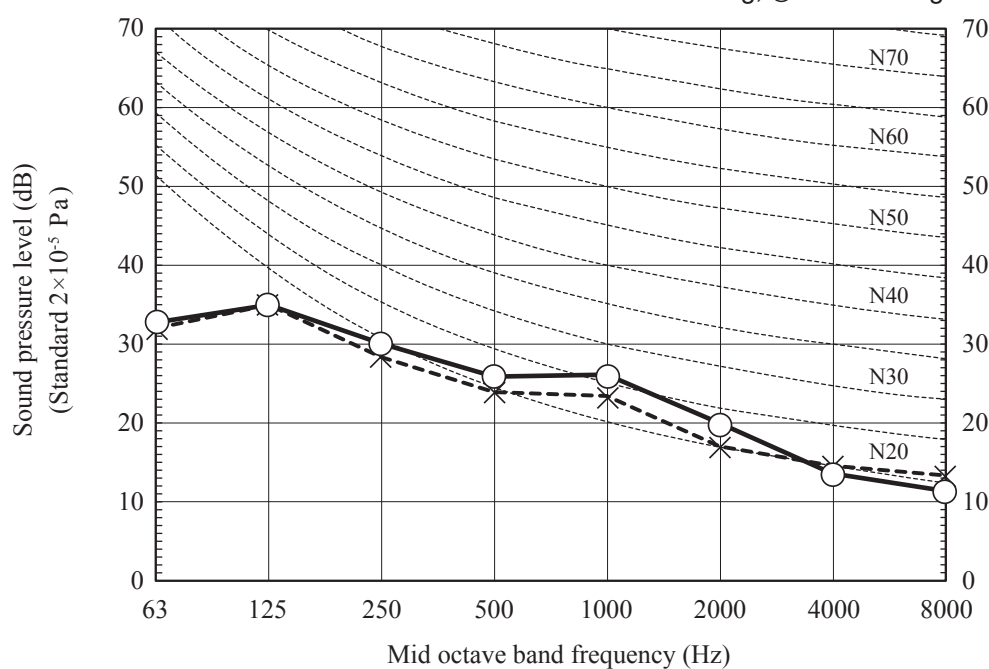
MODE	Me
------	----

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



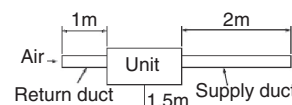
(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	26 dB(A)
Level	Heating	28 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

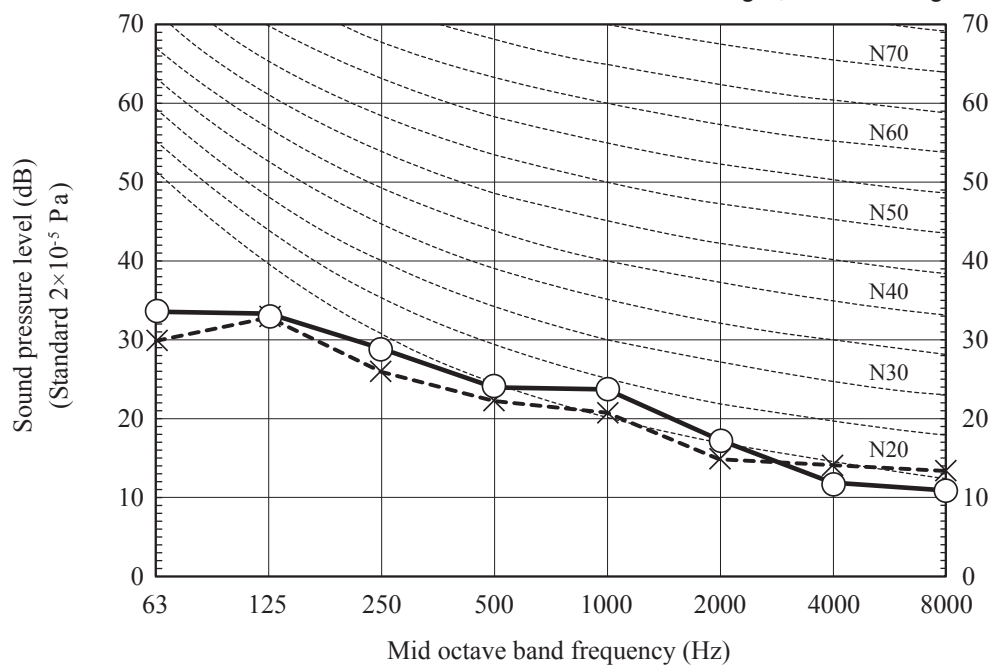
MODE	Lo
------	----

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



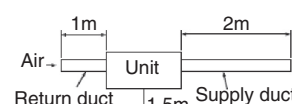
(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	21 dB(A)
Level	Heating	23 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

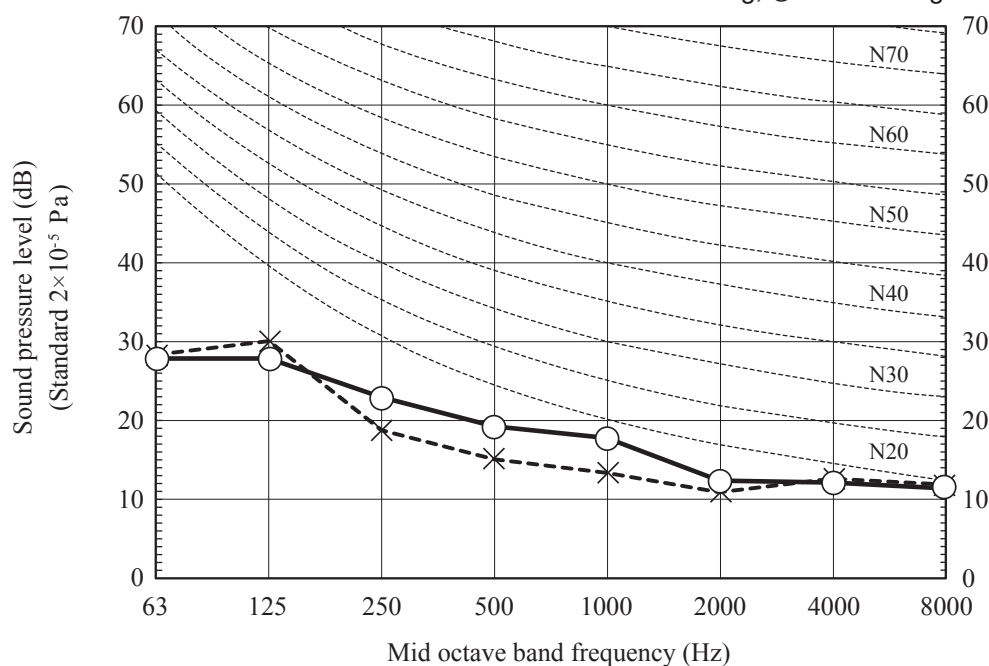
MODE	ULo
------	-----

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



• Sound pressure level ③

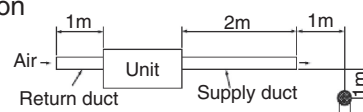
(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	35 dB(A)
Level	Heating	41 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

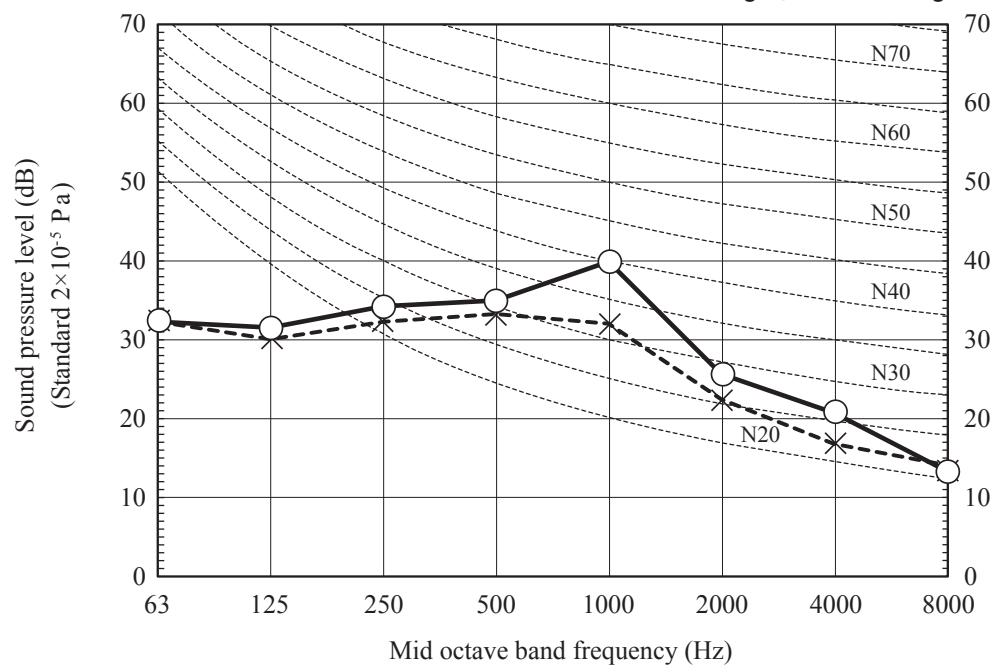
MODE	Me
------	----

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



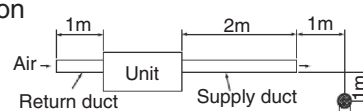
(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	32 dB(A)
Level	Heating	38 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

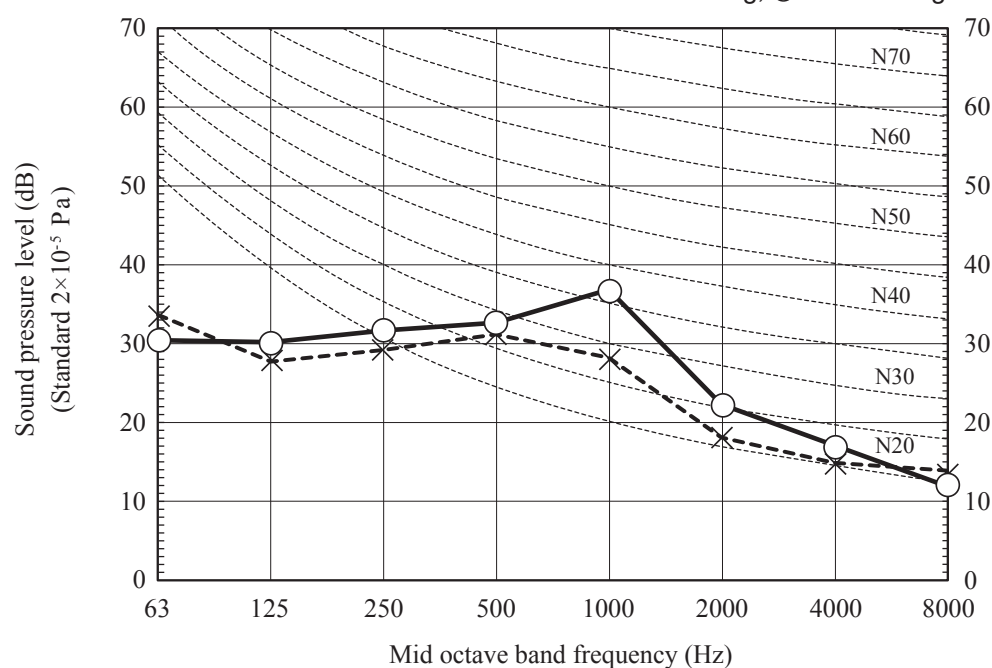
MODE	Lo
------	----

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating

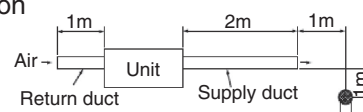


(Indoor unit)

Model	SRR25ZM-W	
Noise	Cooling	25 dB(A)
Level	Heating	31 dB(A)

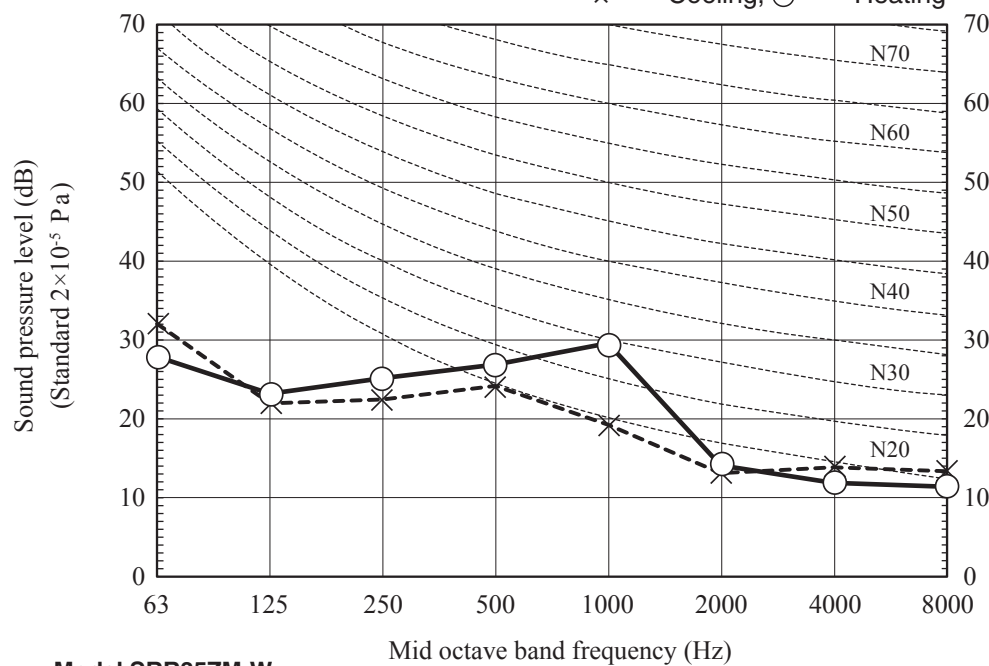
Condition	ISO15042 T1/H1
MODE	ULo

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



Model SRR35ZM-W

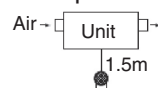
● Sound pressure level ①

(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	34 dB(A)
Level	Heating	38 dB(A)

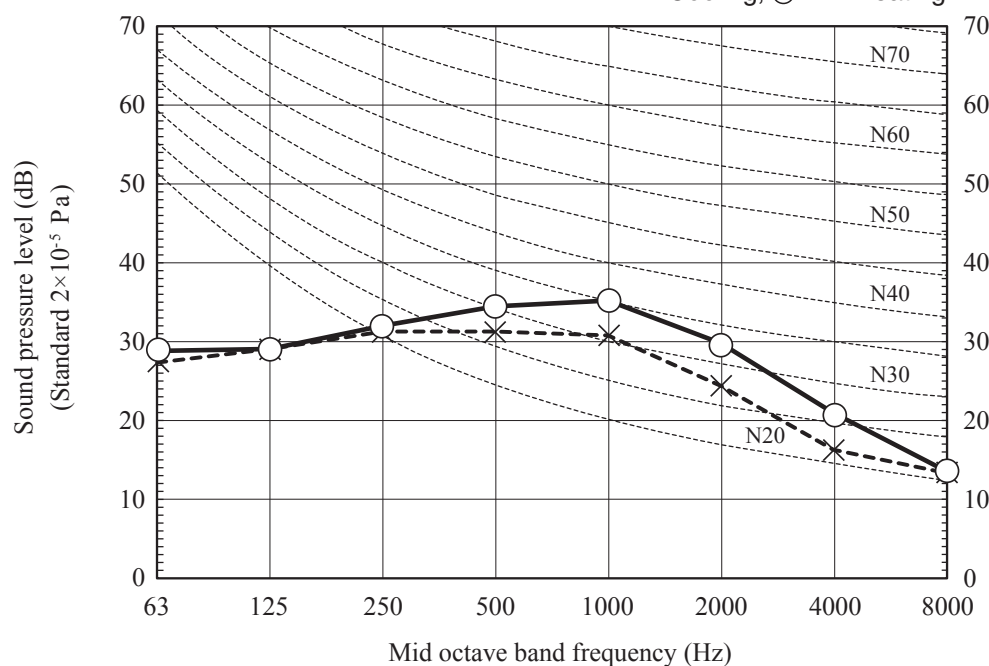
Condition	ISO15042 T1/H1
MODE	Me

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



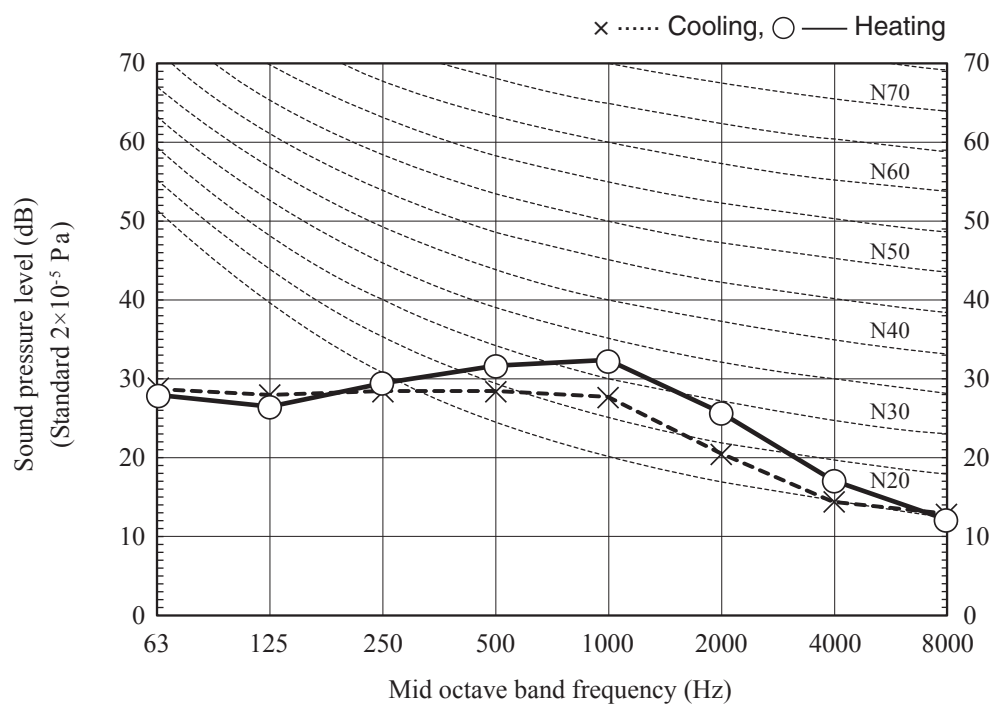
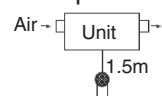
(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	31 dB(A)
Level	Heating	35 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

MODE	Lo
------	----

● Mike position



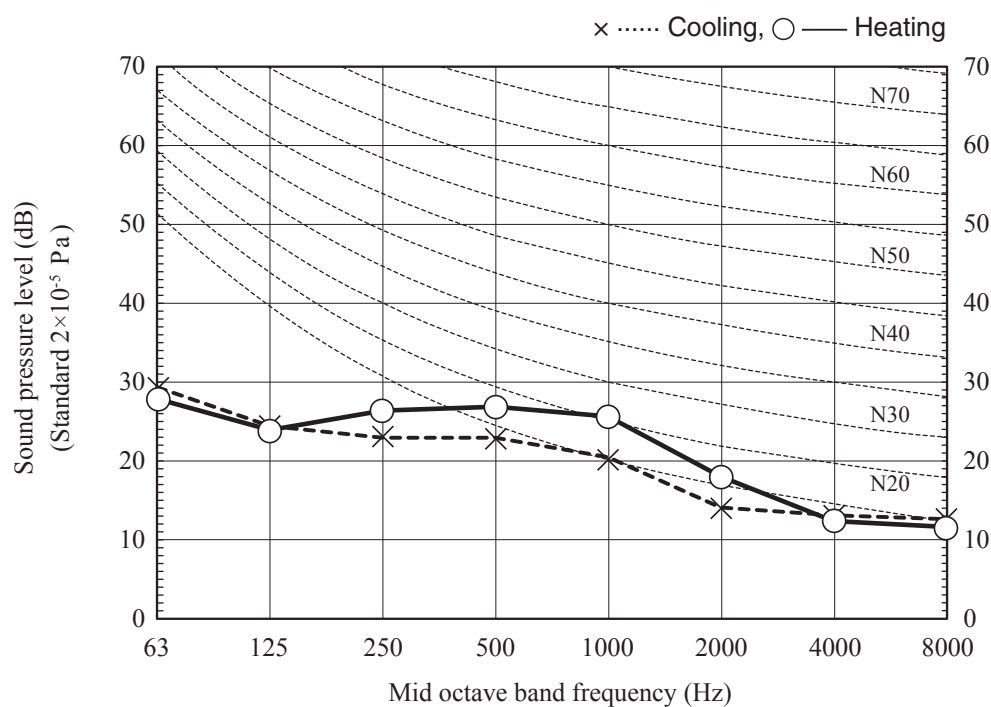
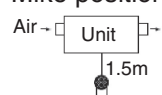
(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	25 dB(A)
Level	Heating	29 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

MODE	ULo
------	-----

● Mike position



• Sound pressure level ②

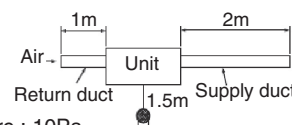
(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	30 dB(A)
Level	Heating	32 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

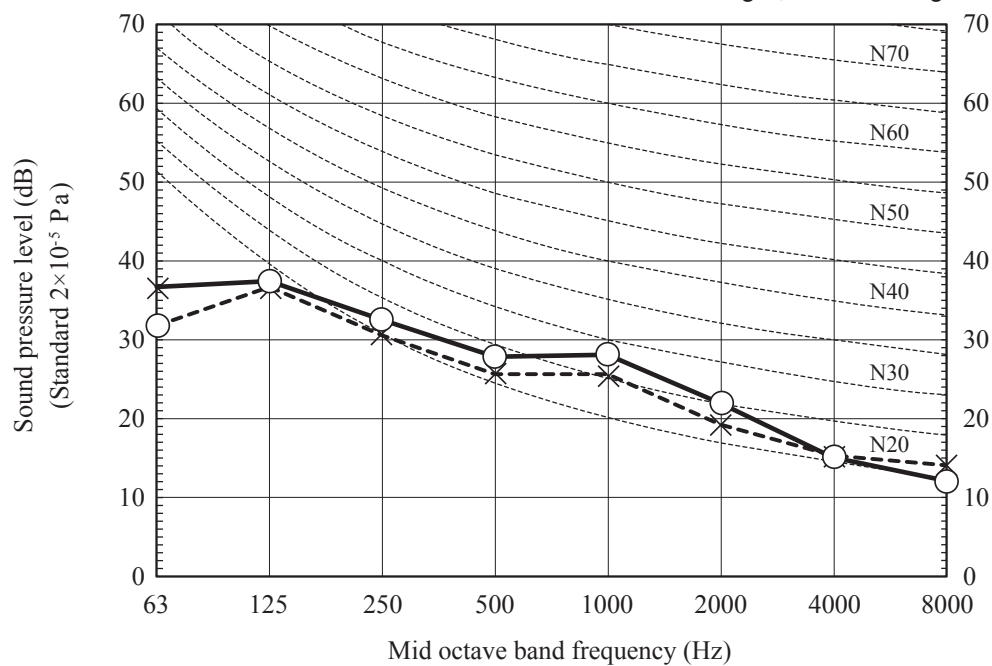
MODE	Me
------	----

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



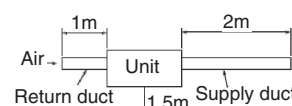
(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	27 dB(A)
Level	Heating	29 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

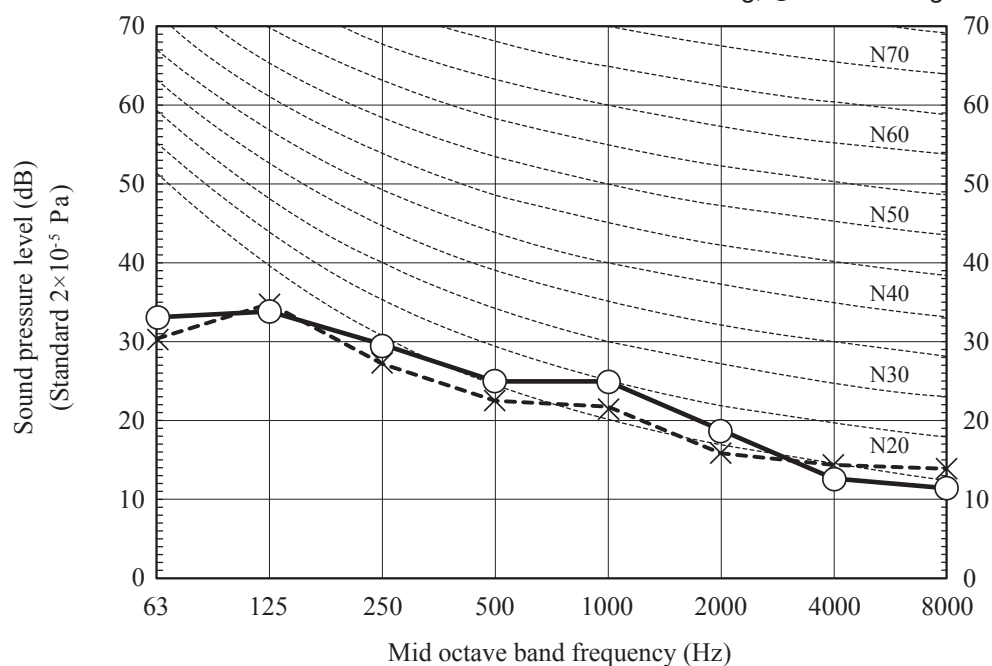
MODE	Lo
------	----

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



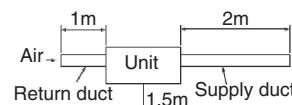
(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	22 dB(A)
Level	Heating	24 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

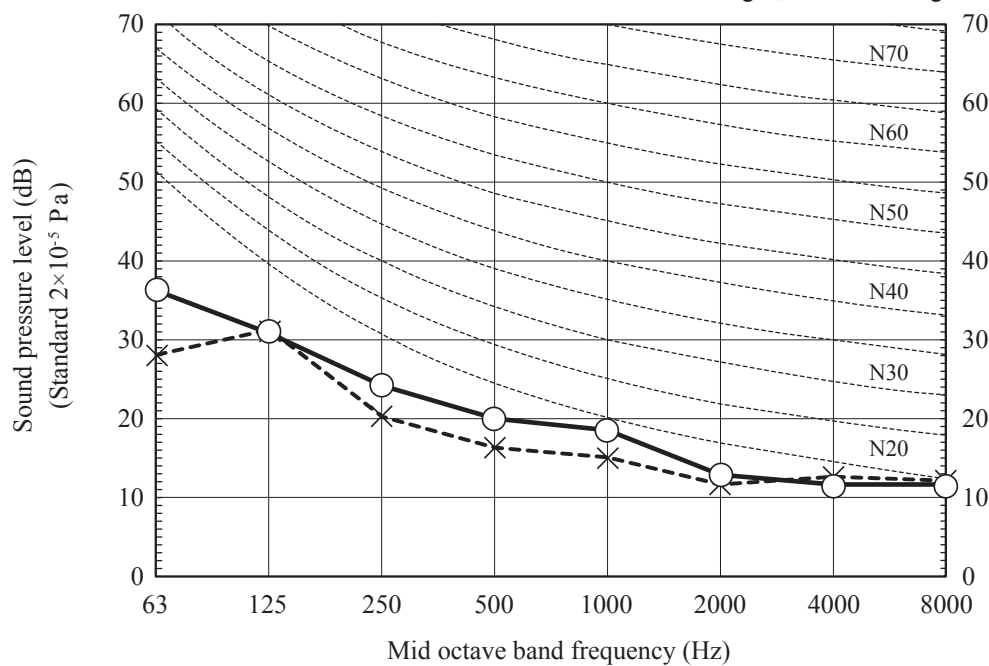
MODE	ULo
------	-----

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating



● Sound pressure level ③

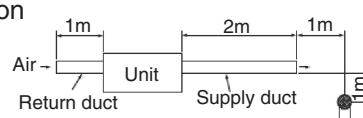
(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	37 dB(A)
Level	Heating	42 dB(A)

Condition	ISO15042 T1/H1
-----------	----------------

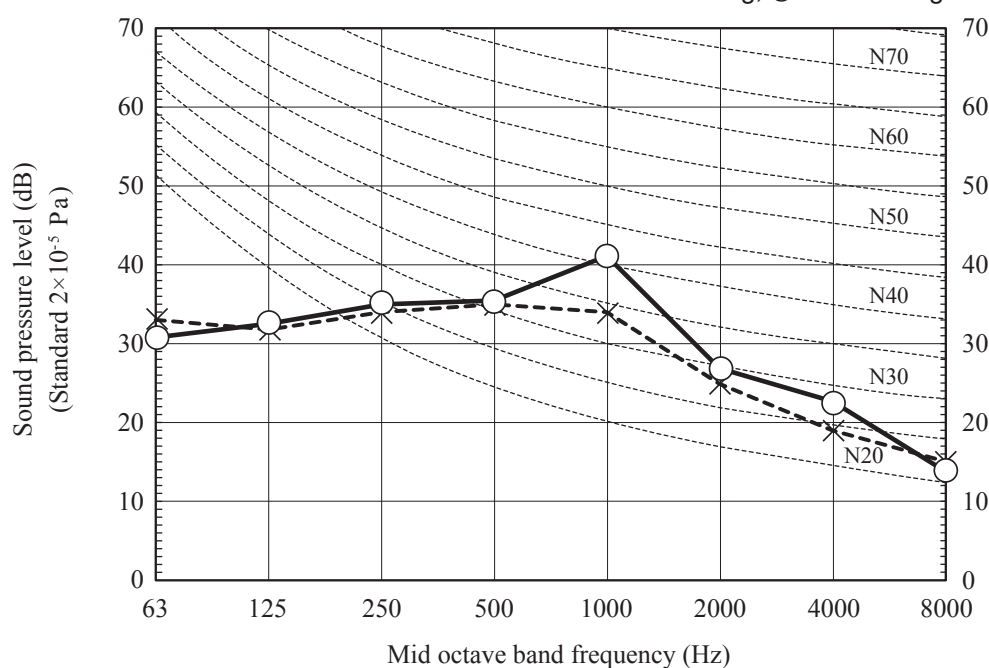
MODE	Me
------	----

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating

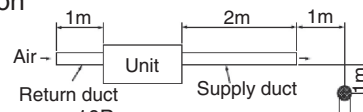


(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	33 dB(A)
Level	Heating	39 dB(A)

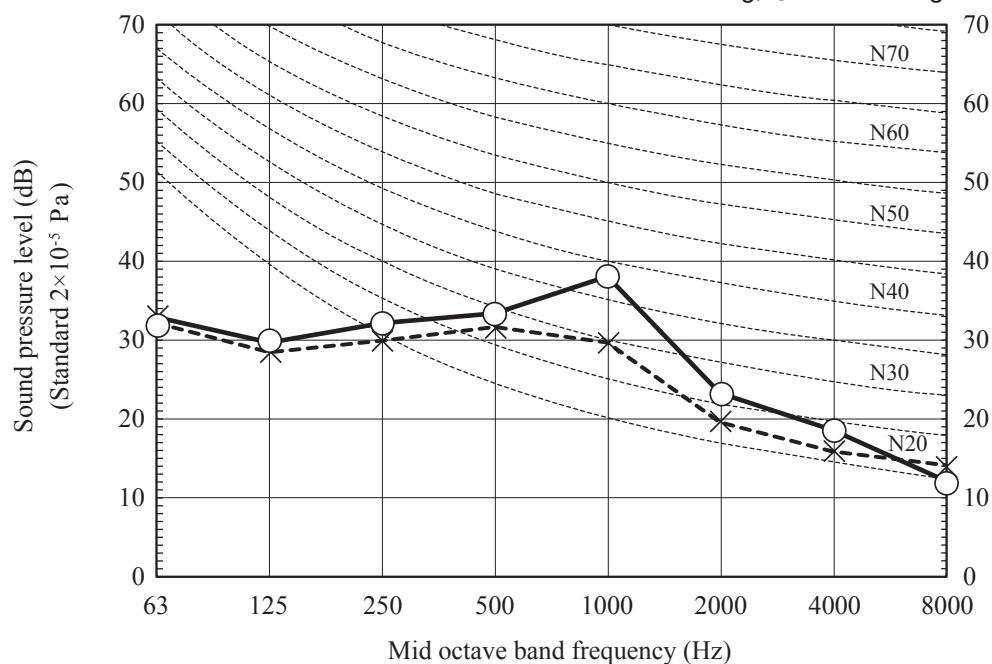
Condition	ISO15042 T1/H1
MODE	Lo

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating

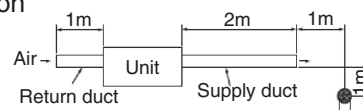


(Indoor unit)

Model	SRR35ZM-W	
Noise	Cooling	27 dB(A)
Level	Heating	33 dB(A)

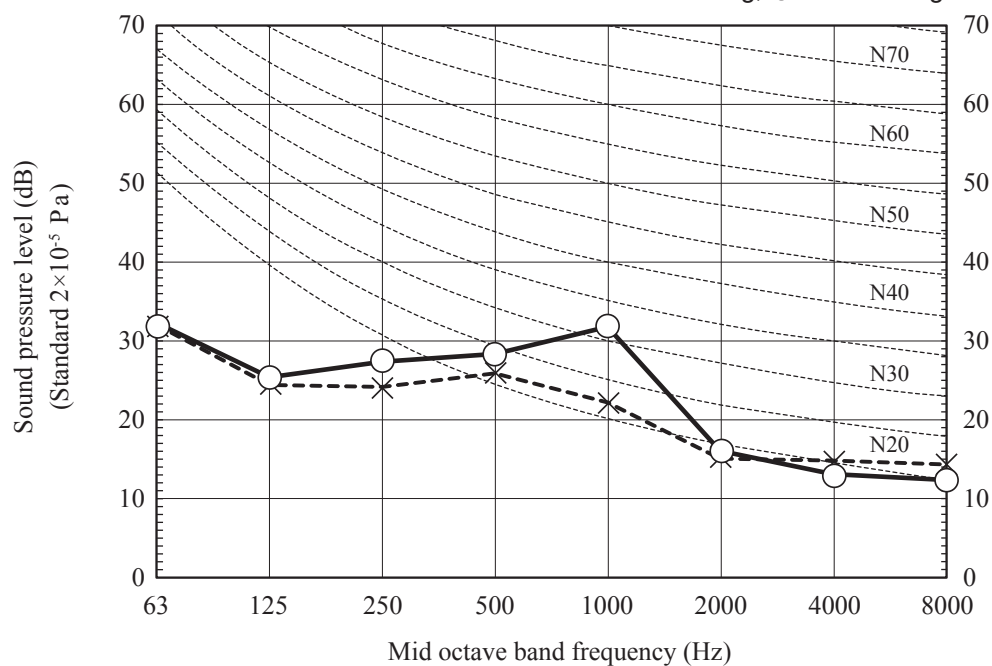
Condition	ISO15042 T1/H1
MODE	ULo

● Mike position



External static pressure : 10Pa

× Cooling, ○ — Heating

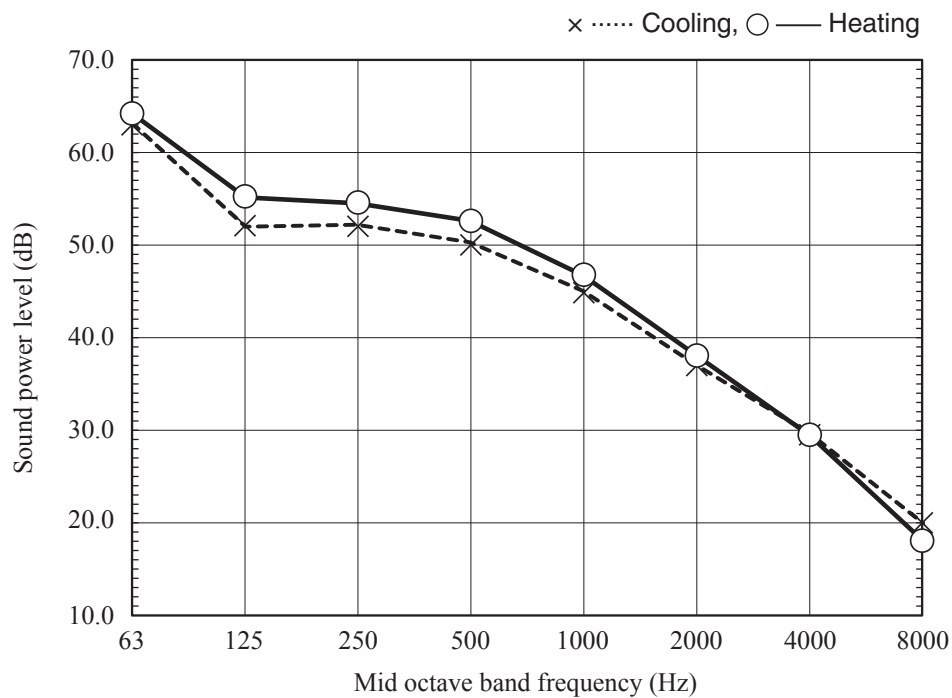


(5) 4-way ceiling cassette type (FDTC)**(a) Sound power level****Model FDTC25VH**

(Indoor unit)

Model	FDTC25VH	
Noise Level	Cooling	51 dB(A)
	Heating	53 dB(A)

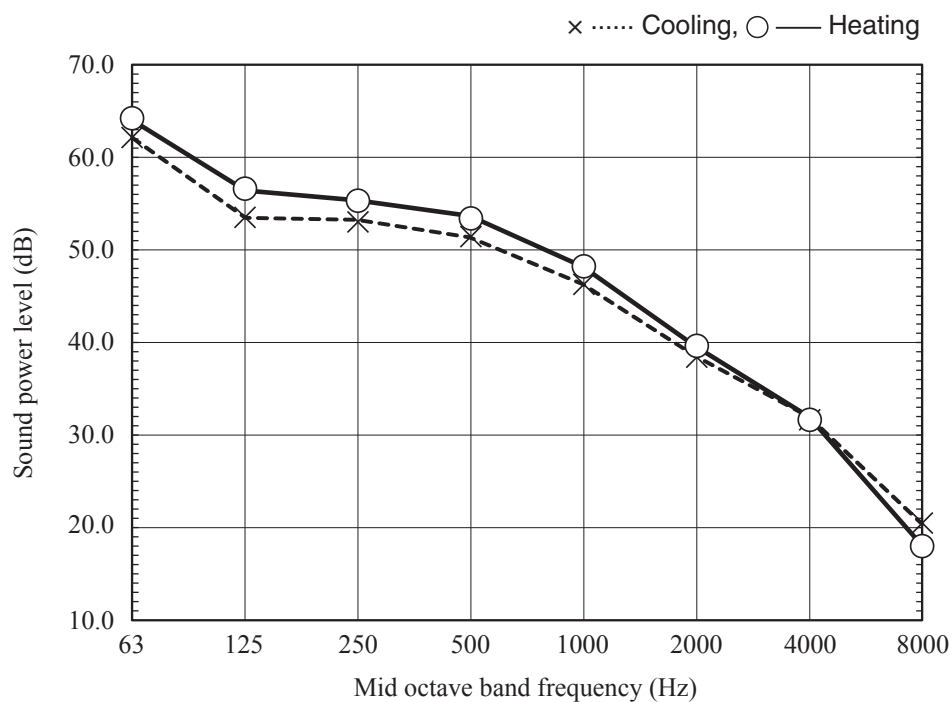
Condition	ISO15042 T1/H1
MODE	Rated capacity value (PHi)

**Model FDTC35VH**

(Indoor unit)

Model	FDTC35VH	
Noise Level	Cooling	52 dB(A)
	Heating	54 dB(A)

Condition	ISO15042 T1/H1
MODE	Rated capacity value (PHi)



(b) Sound pressure level
(i) Rated capacity value
Model FDTC25VH

(Indoor unit)

Model	FDTC25VH	
Noise	Cooling	38 dB(A)
Level	Heating	39 dB(A)

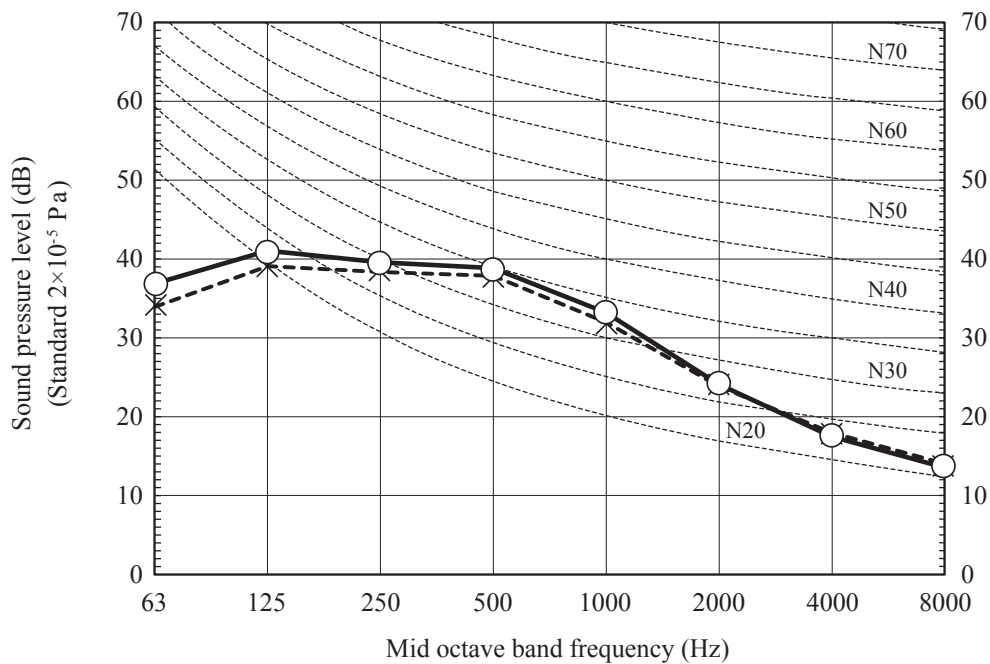
Condition	ISO15042 T1/H1
MODE	Rated capacity value (PHi)

● Mike position



Mike position
(Center & below unit)

× Cooling, ○ — Heating



Model FDTC35VH

(Indoor unit)

Model	FDTC35VH	
Noise	Cooling	39 dB(A)
Level	Heating	41 dB(A)

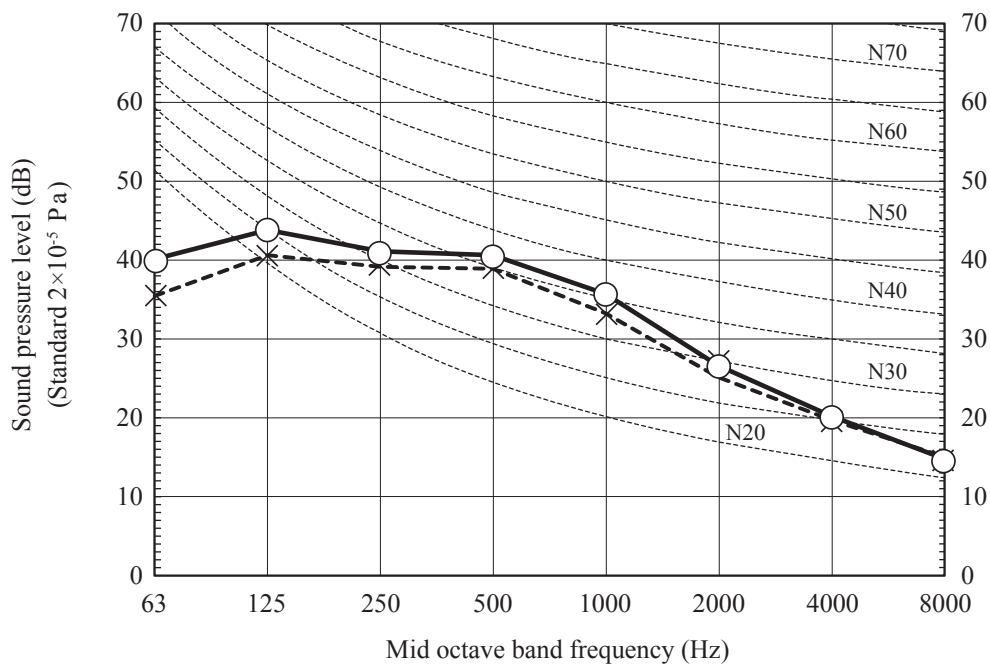
Condition	ISO15042 T1/H1
MODE	Rated capacity value (PHi)

● Mike position



Mike position
(Center & below unit)

× Cooling, ○ — Heating



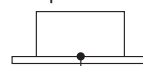
(ii) Each fan speed mode
Model FDTC25VH

(Indoor unit)

Model	FDTC25VH	
Noise	Cooling	34 dB(A)
Level	Heating	36 dB(A)

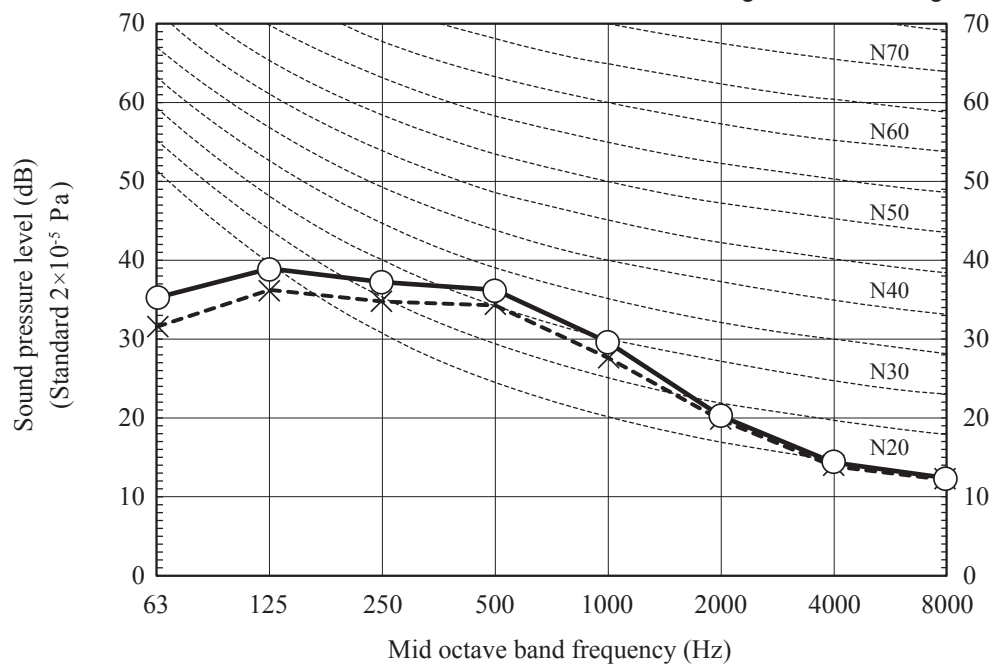
Condition	ISO15042 T1/H1
MODE	Hi

● Mike position



Mike position
(Center & below unit)

× Cooling, ○ — Heating

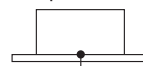


(Indoor unit)

Model	FDTC25VH	
Noise	Cooling	30 dB(A)
Level	Heating	32 dB(A)

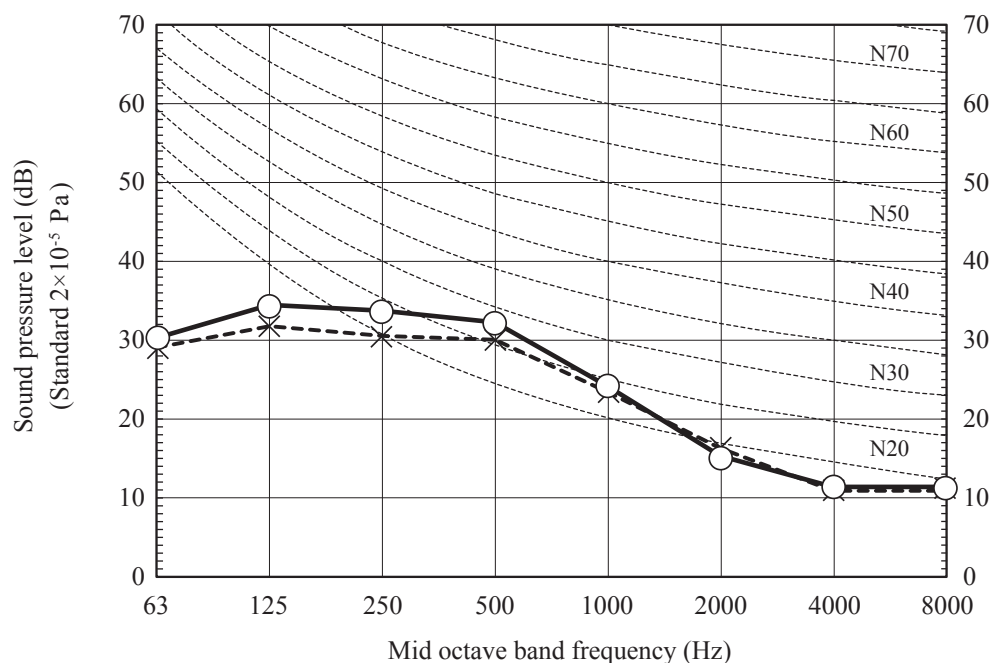
MODE	Me
------	----

● Mike position



Mike position
(Center & below unit)

× Cooling, ○ — Heating



(Indoor unit)

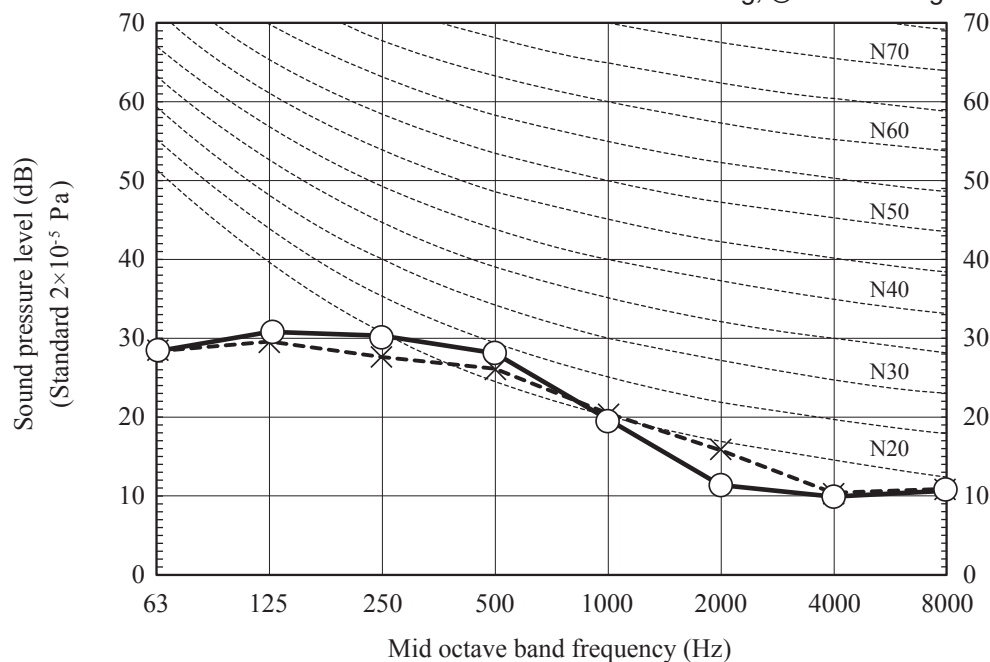
Model	FDTC25VH	
Noise	Cooling	27 dB(A)
Level	Heating	28 dB(A)

MODE	Lo
------	----

● Mike position

Mike position
(Center & below unit)

× Cooling, ○ — Heating

**Model FDTC35VH**

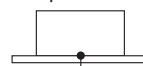
(Indoor unit)

Model	FDTC35VH	
Noise	Cooling	36 dB(A)
Level	Heating	38 dB(A)

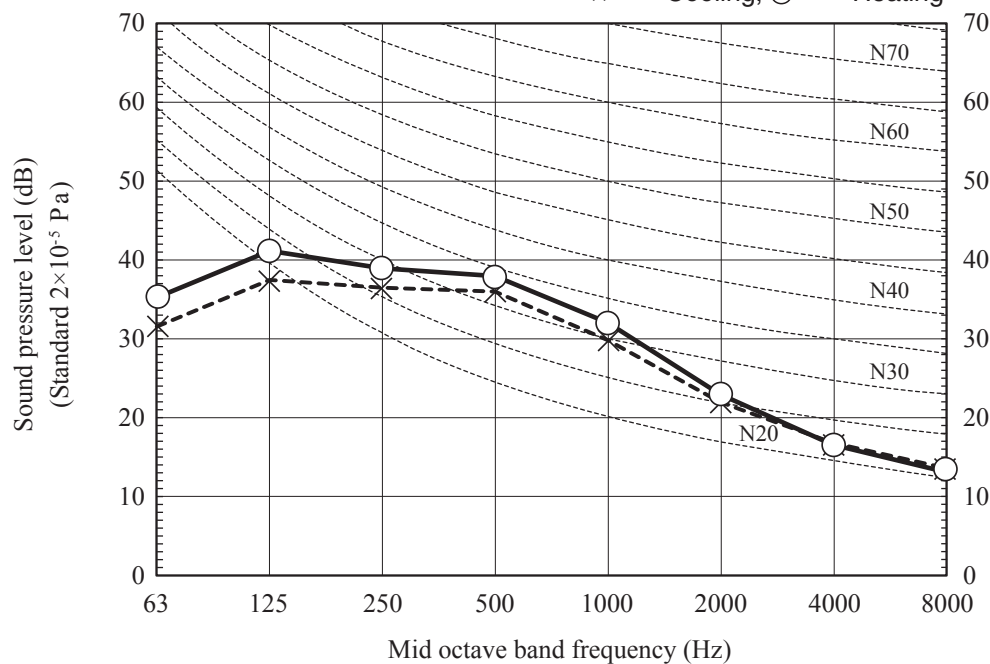
Condition	ISO15042 T1/H1
-----------	----------------

MODE	Hi
------	----

● Mike position

Mike position
(Center & below unit)

× Cooling, ○ — Heating

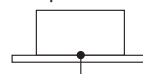


(Indoor unit)

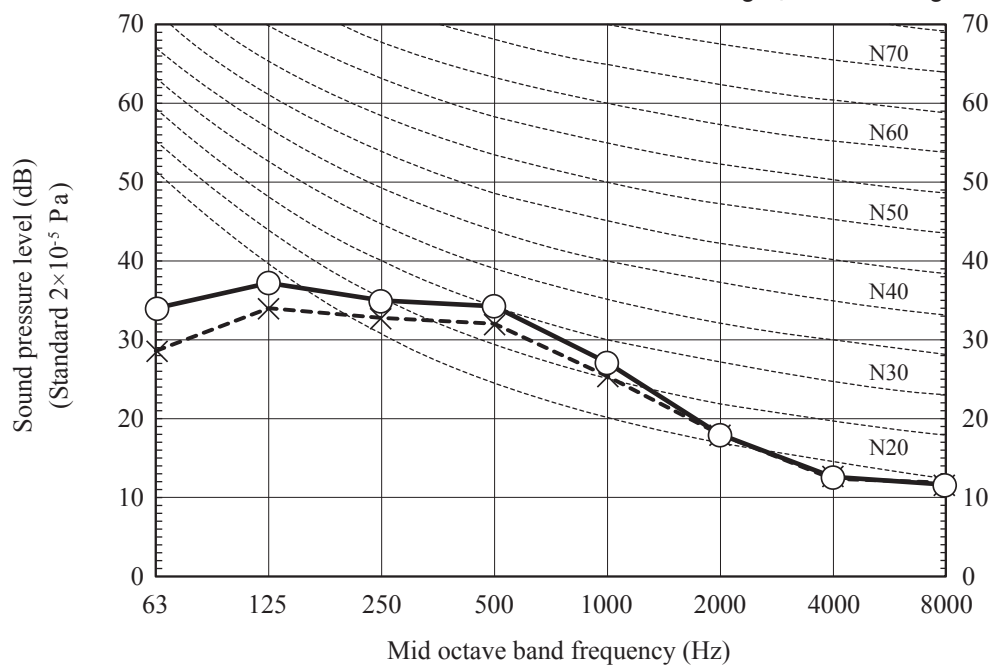
Model	FDTC35VH	
Noise	Cooling	32 dB(A)
Level	Heating	34 dB(A)

MODE	Me
------	----

● Mike position

Mike position
(Center & below unit)

× Cooling, ○ — Heating

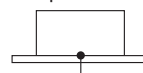


(Indoor unit)

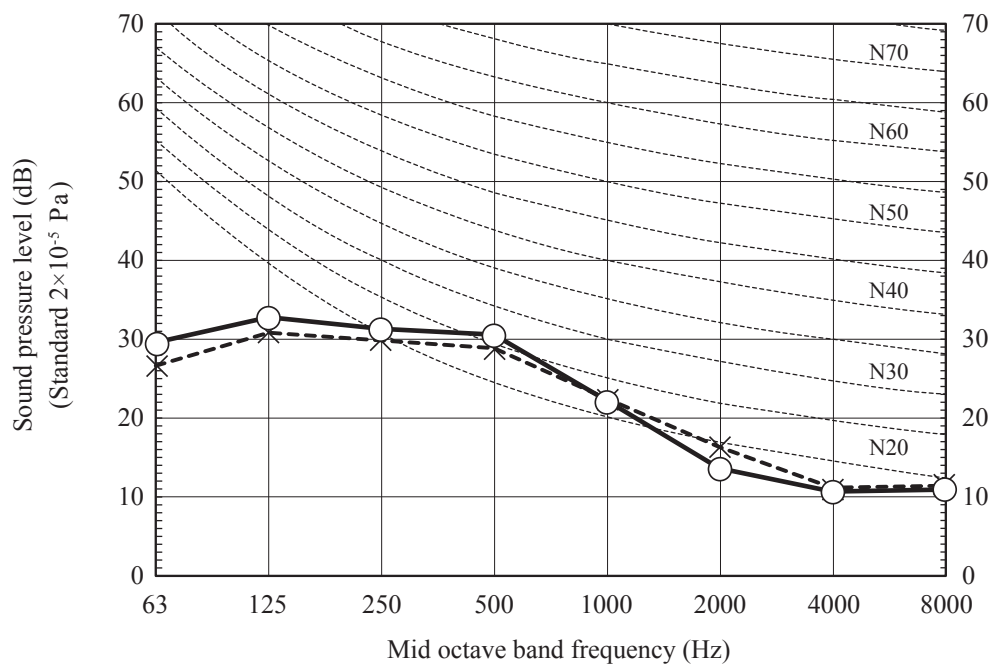
Model	FDTC35VH	
Noise	Cooling	29 dB(A)
Level	Heating	30 dB(A)

MODE	Lo
------	----

● Mike position

Mike position
(Center & below unit)

× Cooling, ○ — Heating

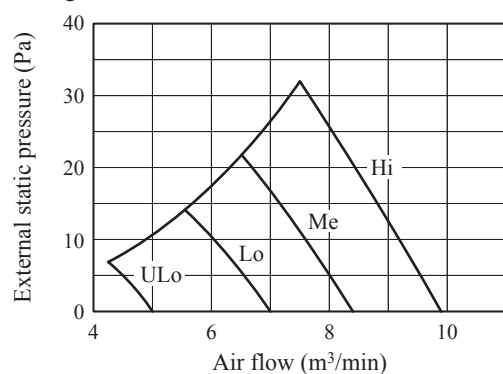


2.5 Characteristics of fan

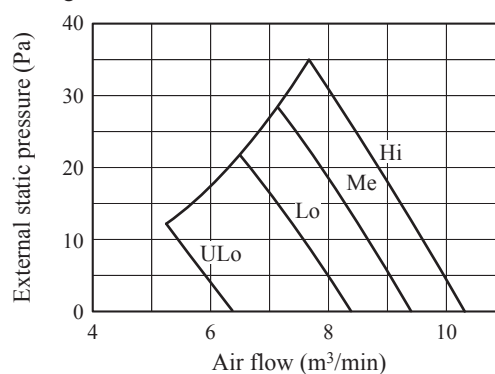
(1) Ceiling concealed type (SRR)

Model SRR25ZM-W

Cooling

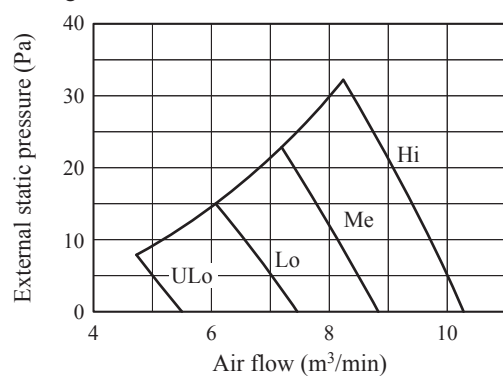


Heating

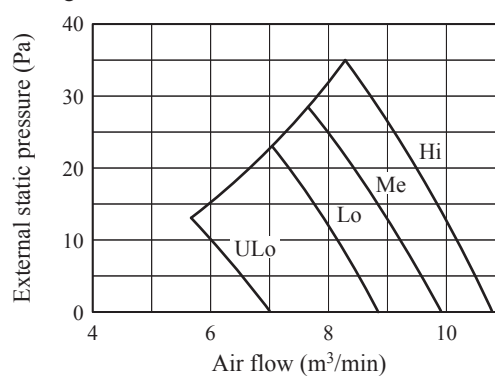


Model SRR35ZM-W

Cooling



Heating



2.6 Application data

(1) Wall mounted type (SRK, SKM)

(a) Models SRK20ZSX, 25ZSX, 35ZSX

- This installation manual deals with an indoor unit installation only. For an outdoor unit installation, refer to page 11.
- This unit is designed for R32 or R410A. See a label on the outdoor unit to check refrigerant information.

SAFETY PRECAUTIONS

- Before installation, read the "SAFETY PRECAUTIONS" carefully and strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, **WARNING** and **CAUTION**.
- WARNING** Indicates a potentially hazardous situation which, if not avoided, can result in serious consequences such as death or severe injury.
- CAUTION** Indicates a potentially hazardous situation which, if not avoided, can result in personal injury or property damage.
- Both mention the important items to protect your health and safety. Therefore, strictly follow them by any means.
- Be sure to confirm no operation problem on the equipment after completing the installation. If unusual noise can be heard during the test run, consult the dealer.
- Be sure to explain the operating methods as well as the maintenance methods of this equipment to the user according to the user's manual.
- Be sure to keep the installation manual together with user's manual at a place where it is easily accessible to the user any time. Moreover, ask the user to hand the manuals to a new user, whenever required.

⚠ WARNING

- **Be sure to use only for residential purpose.**
If this unit is installed in inferior environment such as machine shop, vehicle (like ship), warehouse, etc., it can malfunction.
- **Installation must be carried out by the qualified installer completely in accordance with the installation manual.**
Installation by non qualified person or incorrect installation can cause serious troubles such as water leak, electric shock, fire and personal injury.
- **Be sure to wear protective goggles and gloves while performing installation work.**
Improper safety measures can result in personal injury.
- **Use the original accessories and the specified components for the installation.**
Using parts other than those prescribed may cause water leak, electric shock, fire and personal injury.
- **Do not install the unit near the location where leakage of flammable gases can occur.**
If leaked gases accumulate around the unit, it can cause fire resulting in property damage and personal injury.
- **When installing the unit in small rooms, make sure that refrigerant density does not exceed the limit (Reference: ISO5149) in the event of leakage.**
If refrigerant density exceeds the limit, consult the dealer and install the ventilation system.
Otherwise lack of oxygen can occur resulting in serious accident.
- **Install the unit in a location where unit will remain stable, horizontal and free of any vibration transmission.**
Unsuitable installation location can cause the unit to fall resulting in material damage and personal injury.
- **Do not run the unit with removed panels or protections.**
Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shock.
- **This unit is designed specifically for R32 or R410A.**
Using any other refrigerant can cause unit failure and personal injury.
- **Do not vent R32 or R410A into atmosphere.**
R32 is a fluorinated greenhouse gas with a Global Warming Potential (GWP)=675.
R410A is a fluorinated greenhouse gas with a Global Warming Potential (GWP)=2088.
- **Make sure that no air enters the refrigerant circuit when the unit is installed and removed.**
If air enters the refrigerant circuit, the pressure in the refrigerant circuit will become too high, which can cause burst and personal injury.
- **Be sure to use the prescribed pipes, flare nuts and tools for R32 or R410A.**
Using existing parts (for R22 or R407C) can cause refrigerant circuit burst resulting in unit failure and personal injury.
- **Be sure to connect both liquid and gas connecting pipes properly before operating the compressor.**
Do not open the liquid and gas service valves before completing piping work, and evacuation.
If the compressor is operated when connecting pipes are not connected and service valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.
- **Be sure to tighten the flare nuts to specified torque using the torque wrench.**
Tightening flare nuts with excess torque can cause burst and refrigerant leakage after a long period.
- **Be sure to stop pump down work, be sure to stop the compressor before closing service valves and removing connecting pipes.**
If the connecting pipes are removed when the compressor is in operation and service valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.
- **In the event of refrigerant leakage during installation, be sure to ventilate the working area properly.**
If the refrigerant comes into contact with naked flames, poisonous gases will be produced.
- **Electrical work must be carried out by the qualified electrician, strictly in accordance with national or regional electricity regulations.**
Incorrect installation can cause electric shock, fire or personal injury.
- **Make sure that earth leakage breaker and circuit breaker of appropriate capacities are installed.**
Circuit breaker should be able to disconnect all poles under over current. Absence of appropriate breakers can cause electric shock, personal injury or property damage.
- **Be sure to switch off the power source in the event of installation, maintenance or service.**
If the power source is not switched off, there is a risk of electric shock, unit failure or personal injury.
- **Be sure to tighten the cables securely in terminal block and relieve the cables properly to prevent overloading the terminal blocks.**
Loose connections or cable mountings can cause anomalous heat production or fire.
- **Do not process, splice or modify the power cable, or share the socket with other power plugs.**
Improper power cable or power plug can cause fire or electric shock due to poor connection, insufficient insulation or over-current.
- **Do not perform any change in protective device or its setup condition yourself.**
Changing protective device specifications can cause electric shock, fire or burst.
- **Be sure to clamp the cables properly so that they do not touch any internal component of the unit.**
If cables touch any internal component, it can cause overheating and fire.
- **Be sure to install service cover properly.**
Improper installation can cause electric shock or fire due to intrusion of dust or water.
- **Be sure to use the prescribed power and connecting cables for electrical work.**
Using improper cables can cause electric leak or fire.
- **This appliance must be connected to main power source by means of a circuit breaker or switch with a contact separation of at least 3mm.**
Improper electrical work can cause unit failure or personal injury.
- **When plugging this unit, a plug conforming to the standard IEC60884-1 must be used.**
Using improper plug can cause electric shock or fire.
- **Be sure to connect the power source cable with power source properly.**
Improper connection can cause intrusion of dust or water resulting in electric shock or fire.

CAUTION

- | | |
|--|--|
| <p>• Take care when carrying the unit by hand.
If the unit weight is more than 20kg, it must be carried by two or more persons.
Do not carry the unit by the plastic straps. Always use the carry handle.</p> <p>• Do not install the outdoor unit in a location where insects and small animals can inhabit.
Insects and small animals can enter the electrical parts and cause damage resulting in fire or personal injury. Instruct the user to keep the surroundings clean.</p> <p>• If the outdoor unit is installed at height, make sure that there is enough space for installation, maintenance and service.
Insufficient space can result in personal injury due to falling from the height.</p> <p>• Do not install the unit near the location where neighbours are bothered by noise or air generating from the unit.
It can affect surrounding environment and cause a claim.</p> <p>• Do not install in the locations where unit is directly exposed to corrosive gases (like sulphide gas, chloride gas), sea breeze or salty atmosphere.
It can cause corrosion of heat exchanger and damage to plastic parts.</p> <p>• Do not install the unit close to the equipments that generate electromagnetic waves and/or high-harmonic waves.
Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns.
The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.</p> | <p>• Do not install the unit in the locations where:</p> <ul style="list-style-type: none"> • There are heat sources nearby. • Unit is directly exposed to rain or sunlight. • There is any obstacle which can prevent smooth air circulation from inlet and outlet side of the unit. • Unit is directly exposed to oil mist and steam such as kitchen. • Chemical substances like ammonia (organic fertilizer), calcium chloride (snow melting agent) and acid (sulfurous acid etc.), which can harm the unit, will generate or accumulate. • Drain water can not be discharged properly. • TV set or radio receiver is placed within 1m. • Height above sea level is more than 1000m. <p>It can cause performance degradation, corrosion and damage of components, unit malfunction and fire.</p> <p>• Dispose of all packing materials properly.
Packing materials contain nails and wood which can cause personal injury.
Keep the polybag away from children to avoid the risk of suffocation.</p> <p>• Do not put anything on the outdoor unit.
Object may fall causing property damage or personal injury.</p> <p>• Do not touch the aluminum fin of the outdoor unit.
Aluminium fin temperature is high during heating operation. Touching fin can cause burn.</p> <p>• Do not touch any refrigerant pipe with your hands when the system is in operation.
During operation the refrigerant pipes become extremely hot or extremely cold depending on the operating condition. Touching pipes can cause personal injury like burn (hot/cold).</p> <p>• Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations.
The isolator should be locked in OFF state in accordance with EN60204-1.</p> |
|--|--|

1. ACCESSORIES AND TOOLS

Standard accessories (Supplied with indoor unit)							
(1)	Installation board		1pc	(5)	Wood screws (for remote control holder Ø3.5 X 16mm)		2pcs
(2)	Wireless remote control		1pc	(6)	Batteries [R03 (AAA, Micro) 1.5V]		2pcs
(3)	Remote control holder		1pc	(7)	Air-cleaning filters		2pcs
(4)	Tapping screws (for installation board Ø4 X 25mm)		5pcs	(8)	Insulation (#486 50 X 100 t3)		1pc

Locally procured parts	
(a)	Sleeve (1pc)
(b)	Sealing plate (1pc)
(c)	Inclination plate (1pc)
(d)	Putty
(e)	Connecting cable
(f)	Drain hose (extension hose)
(g)	Piping cover (for insulation of connection piping)
(h)	Clamp and screw (for finishing work)
(i)	Electrical tape

Tools for installation work	
Plus headed driver	Pipe cutter
Knife	Hole core drill (65mm in diameter)
Saw	Wrench key (Hexagon) [4mm]
Tape measure	Flaring tool set*
Torque wrench (14.0-62.0N.m (1.4-6.2kgf.m))	Gas leak detector*
Plier	Pipe bender
	Flare adjustment gauge

* Designed specifically for R32 or R410A

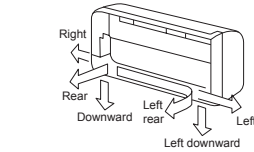
6. FORMING PIPING AND DRAIN HOSE

1. Forming piping

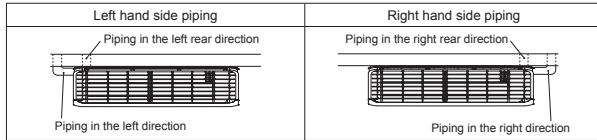
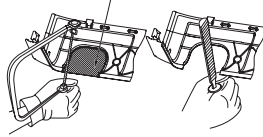
Piping is possible in the right, rear, downward, left, left rear or left downward direction.

NOTE

Sufficient care must be taken not to damage the panels when connecting pipes.

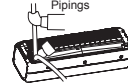


Cut out the panel smoothly along the line in case of side or bottom piping.



Forming of pipings

- Hold the bottom of the piping and fix direction before stretching it and shaping it.



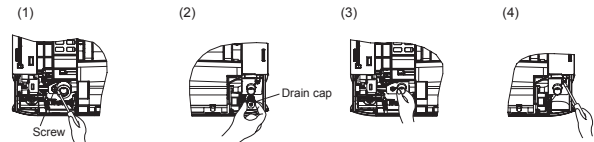
Taping of the exterior

- Tape only the portion that goes through the wall.
- Always tape the wiring with the piping.



2. Drain change procedures

- (1) Remove the screw and drain hose.
- (2) Remove the drain cap by hand or pliers.
- (3) Insert the drain cap which was removed at procedure (2) securely using a hexagonal wrench etc.
- (4) Install the drain hose and screw securely.

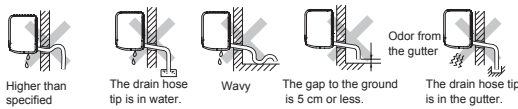


CAUTION

Incorrect installation of drain hose and cap can cause water leakage.

7. DRAINAGE WORK

- Arrange the drain hose in a downward angle.
- Avoid the following drain piping.

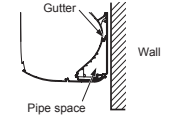


- Pour water to the drain pan located under the heat exchanger, and ensure that the water is discharged outdoor.
- When extended drain hose is present inside the room, insulate it securely with heat insulator available in the market.

Since this air-conditioner is designed to collect dew drops on the rear surface to the drain pan, do not install the connecting wire above the gutter.

CAUTION

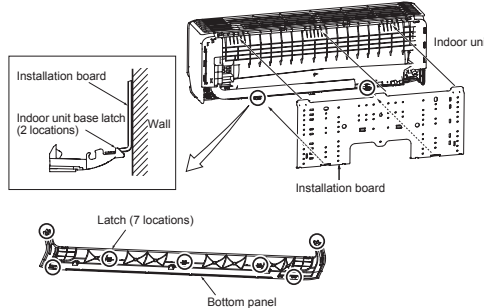
Incorrect drainage work can cause water leakage.



8. INSTALLING INDOOR UNIT

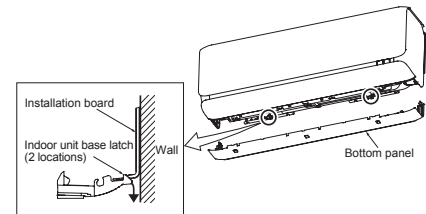
Installing the indoor unit to installation board

- (1) Pass the pipe through the hole in the wall, and hook the upper part of the indoor unit to the installation board.
- (2) Gently push the lower part to fix the indoor unit base lower latch to installation board.
- (3) Install the latches of the bottom panel (7 locations). Secure the bottom panel with the 3 screws (in the cap).



Removing the indoor unit from installation board

- (1) Remove the bottom panel. (Refer to 5.2)
- (2) Pull the indoor unit base latch downward. (both right and left hand sides). (The indoor unit base latch can be removed from the installation board.)
- (3) Push up the indoor unit upward so that it can be removed from installation board.



9. CONNECTING PIPING WORK

1. Preparation of connecting pipe

1.1. Selecting connecting pipe

Select connecting pipe according to the following table.

	Model SRK20/25/35
Gas pipe	Φ9.52
Liquid pipe	Φ6.35

- Pipe wall thickness must be greater than or equal to 0.8 mm.
- Pipe material must be O-type (Phosphorus deoxidized seamless copper pipe ICS 23.040.15, ICS 77.150.30).

1.2. Cutting connecting pipe

- (1) Cut the connecting pipe to the required length with pipe cutter.
- (2) Hold the pipe downward and remove the burrs. Make sure that no foreign material enters the pipe.
- (3) Cover the connecting pipe ends with the tape.

2. Piping work

2.1. Flaring pipe

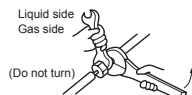
- (1) Take out flare nuts from the service valves of indoor unit and engage them onto connecting pipes.
- (2) Flare the pipes according to table and figure shown below.
Flare dimensions for R32 are different from those for conventional refrigerant. Although it is recommended to use the flaring tools designed specifically for R32 or R410A, conventional flaring tools can also be used by adjusting the measurement of protrusion B with a flare adjustment gauge.

Copper pipe outer diameter	A ₀ A _{-0.4}		Copper pipe outer diameter		Rigid (clutch) type	
					R32 or R410A	Conventional
Φ6.35	9.1		Φ6.35		0-0.5	1.0-1.5
Φ9.52	13.2		Φ9.52			
Φ12.7	16.6		Φ12.7			

2.2 Connecting pipes

- (1) Connect pipes on both liquid and gas sides.
- (2) Tighten nuts to specified torque shown in the table below.

Service valve size (mm)	Tightening torque (N·m)
Φ6.35 (1/4")	14-18
Φ9.52 (3/8")	34-42
Φ12.7 (1/2")	49-61

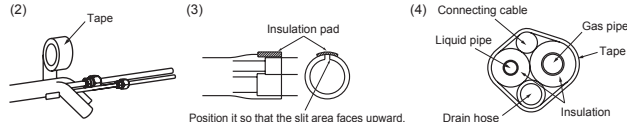


CAUTION

- Do not apply refrigerating machine oil to the flared surface. It can cause refrigerant leakage.
- Do not apply excess torque to the flared nuts. The flared nuts may crack resulting in refrigerant leakage.

3. Heating and condensation prevention

- (1) Dress the connecting pipes (both liquid and gas pipes) with insulation to prevent it from heating and dew condensation. Use the heat insulating material which can withstand 120°C or higher temperature. Make sure that insulation is wrapped tightly around the pipes and no gap is left between them.
- (2) Wrap the refrigerant pipings of indoor unit with indoor unit heat insulation using tape.
- (3) Cover the flare-connected joints (indoor side) with the indoor unit heat insulation and wrap it with an insulation pad (standard accessory provided with indoor unit).
- (4) Wrap the connecting pipes, connecting cable and drain hose with the tape.



NOTE

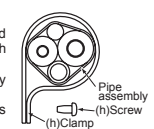
Locations where relative humidity exceeds 70%, both liquid and gas pipes need to be dressed with 20mm or thicker heat insulation materials.

CAUTION

- Improper insulation can cause condensate(water) formation during cooling operation. Condensate can leak or drip causing damage to household property.
- Poor heat insulating capacity can cause pipe outer surface to reach high temperature during heating operation. It can cause cable deterioration and personal injury.

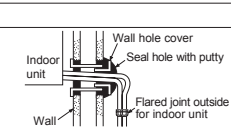
4. Finishing work

- (1) Make sure that the exterior portion of connecting pipes, connecting cable and drain hose is wrapped properly with tape. Shape the connecting pipes to match with the contours of the pipe assembly route.
- (2) Fix the pipe assembly with the wall using clamps and screws. Pipe assembly should be anchored every 1.5m or less to isolate the vibration.
- (3) Install the service cover securely. Water may enter the unit if service cover is not installed properly, resulting in unit malfunction and failure.



WARNING (only for R32)

- To avoid the risk of fire or explosion, the flared connection must/shall be installed outdoors.
- Reusable mechanical connectors and flared joints are not allowed indoors.



CAUTION

Make sure that the connecting pipes do not touch the components within the unit. If pipes touch the internal components, it may generate abnormal sounds and/or vibrations.

10. HOW TO OPEN, CLOSE, REMOVE AND INSTALL THE AIR INLET PANEL

1. Open

Pull the air inlet panel at both ends of lower part and release latches, then pull up the panel until you feel resistance.
(The panel stops at approx. 60° open position)

2. Close

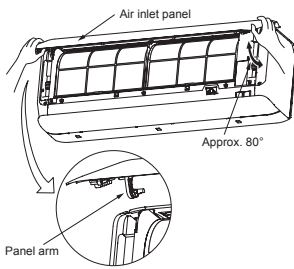
Hold the panel at both ends of lower part, lower it downward slowly, then push it slightly until the latch works.

3. Removing

Open the panel by 80° (as shown in the right illustration) and then pull it forward.

4. Installing

Insert the panel arm into the slot on the front panel from the position shown in right illustration, hold the panel at both ends of lower part, lower it downward slowly, then push it slightly until the latch works.



NOTE

- When carrying out maintenance, handle the air inlet panel with care.

11. HOW TO REMOVE AND INSTALL THE SIDE AND FRONT PANEL

1. Side panel (R/L)

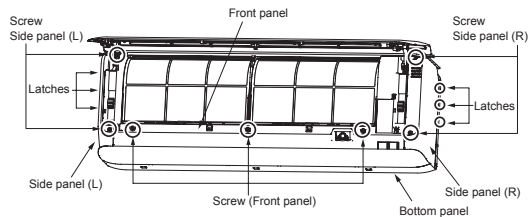
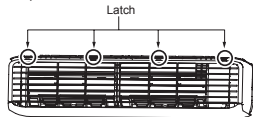
1.1. Removing

- Remove the 2 screws.
- Remove the 3 latches and then side panel can be removed.

1.2. Installing

- Cover the unit with the side panel and fix 3 latches.
- Secure the side panel with the 2 screws.

<Top view>



2. Front panel

2.1. Removing

- Remove the side panel (R/L), the air inlet panel, the air filters and the bottom panel.
- Remove the 3 screws.
- Remove the 4 upper latches and then front panel can be removed.

2.2. Installing

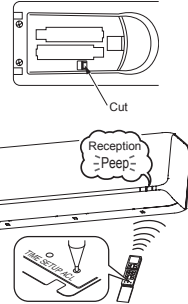
- Cover the unit with the front panel and fix 4 upper latches.
- Secure the front panel with the 3 screws.
- Install the bottom panel, the side panel (R/L), the air inlet panel and the air filters.

13. INSTALLING TWO AIR-CONDITIONERS IN THE SAME ROOM

In case two air-conditioners are installed in the same room, apply this setting so that one unit can be operated with only one wireless remote control.

Setting one wireless remote control

- Slide and take out the cover and batteries.
 - Cut the switching line next to the battery with wire cutters.
 - Set the batteries and cover again.
- Setting one indoor unit**
- Turn off the power source and turn it on after 1 minute.
 - Send the signal by pressing the ACL switch on the wireless remote control that was set according to the procedure described on the above side.
 - Check that the reception buzzer sound "Peep" is emitted from the indoor unit. Since the signal is sent about 6 seconds after the ACL switch is pressed, point the wireless remote control to the indoor unit for a while.



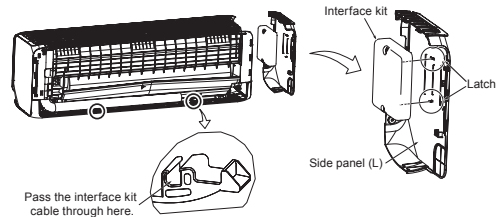
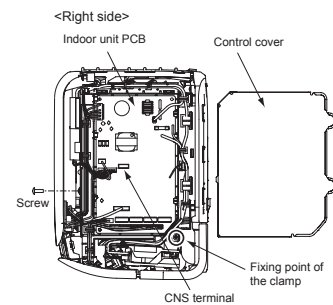
NOTE

If no reception buzzer is emitted, restart the setting from the beginning.

14. TERMINAL CONNECTION FOR AN INTERFACE

To install wired remote control, superlink etc., interface kit is needed.

- Remove the air inlet panel, bottom panel and side panel (R).
- Remove the control cover. (Remove the screw.)
- There is a terminal (respectively marked with CNS) for the indoor control board. While connecting an interface, connect to the respective terminal securely with the connection harness supplied with an option "Interface kit SC-BIKN-E and SC-BIKN2-E" and fasten the connection harness onto the indoor control box with the clamp and screw supplied with the kit.
- Hook to fix the interface kit to the 2 latches on side panel (L).
For more details, refer to the user's manual of "Interface kit SC-BIKN-E and SC-BIKN2-E".



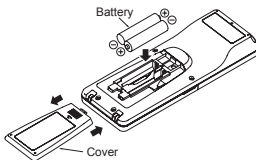
12. INSTALLING WIRELESS REMOTE CONTROL

Mount the batteries

- Slide and take out the cover of backside.
- Mount the batteries [R03 (AAA, Micro), x2 pieces] in the body properly.
(Fit the poles with the indication marks + & -)
- Set the cover again.

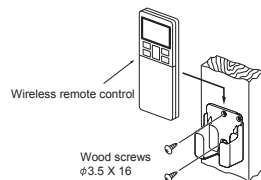
NOTE

- Do not use new and old batteries together.
- In case the unit is not operated for a long time, take out the batteries



Installing remote control holder

- Select the place where the unit can receive signals.
- Fix the holder to pillar or wall with wood screws.

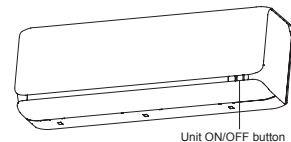


15. PUMP DOWN WORK

For the environmental protection, be sure to pump down when relocating or disposing of the unit. Pump down is the method of recovering refrigerant from the indoor unit to the outdoor unit before the connecting pipes are removed from the unit. When pump down is carried out, forced cooling operation is needed.

Forced cooling operation

- Turn off the power source and turn it on again after 1 minute. The air inlet panel and flap open and close.
- After the air inlet panel closes, press the ON/OFF button continuously for at least 5 seconds. Then operation will start.



For the detail of pump down, refer to the installation manual of outdoor unit.

16. INSTALLATION CHECK AND TEST RUN

After finishing the installation work, check the following points again before turning on the power. Conduct a test run and ensure that the unit operates properly. At the same time, explain to the customer how to use the unit and how to take care of the unit following the user's manual.

Before test run

Before test run, check following points.

Power source voltage complies with the rated voltage of air-conditioner.	
Earth leakage breaker and circuit breaker are installed.	
Power cable and connecting cable are securely fixed to the terminal block.	
Both liquid and gas service valves are fully open.	
No gas leaks from the joints of the service valves.	
Indoor and outdoor side pipe joints have been insulated.	
Hole on the wall is completely sealed with putty.	
Drain hose and cap are installed properly.	
Screw of the terminal cover is tightened securely.	

Test run

Check following points during test run.

Indoor unit receives signal of wireless remote control.	
Air-conditioning operation is normal.	
There is no abnormal noise.	
Water drains out smoothly.	
Display of wireless remote control is normal.	

After test run

Explain the operating and maintenance methods to the user according to the user's manual.	
Keep this installation manual together with user's manual.	

NOTE

During restart or change in operation mode, the unit will not start operating for approximately 3 minutes. This is to protect the unit and it is not malfunction.

(b) Models SRK20ZS, 25ZS, 35ZS

RLF012A105

Model SRK20,25,35ZS**R32/R410A REFRIGERANT USED**

- This installation manual deals with an indoor unit installation only. For an outdoor unit installation, refer to page 11.
- This unit is designed for R32 or R410A. See a label on the outdoor unit to check refrigerant information.

SAFETY PRECAUTIONS

- Before installation, read the "SAFETY PRECAUTIONS" carefully and strictly follow it during the installation work in order to protect yourself.
 - The precautionary items mentioned below are distinguished into two levels. **[WARNING]** and **[CAUTION]**.
 - [WARNING]** Indicates a potentially hazardous situation which, if not avoided, can result in serious consequences such as death or severe injury.
 - [CAUTION]** Indicates a potentially hazardous situation which, if not avoided, can result in personal injury or property damage.
- Both mention the important items to protect your health and safety. Therefore, strictly follow them by any means.

- Be sure to confirm no operation problem on the equipment after completing the installation. If unusual noise can be heard during the test run, consult the dealer.
- Be sure to explain the operating methods as well as the maintenance methods of this equipment to the user according to the user's manual.
- Be sure to keep the installation manual together with user's manual at a place where it is easily accessible to the user any time. Moreover, ask the user to hand the manuals to a new user, whenever required.

⚠ WARNING

- **Be sure to use only for residential purpose.**
If this unit is installed in inferior environment such as machine shop, vehicle (like ship), warehouse, etc., it can malfunction.
- **Installation must be carried out by the qualified installer completely in accordance with the installation manual.**
Installation by non qualified person or incorrect installation can cause serious troubles such as water leak, electric shock, fire and personal injury.
- **Be sure to wear protective goggles and gloves while performing installation work.**
Improper safety measures can result in personal injury.
- **Use the original accessories and the specified components for the installation.**
Using parts other than those prescribed may cause water leak, electric shock, fire and personal injury.
- **Do not install the unit near the location where leakage of flammable gases can occur.**
If leaked gases accumulate around the unit, it can cause fire resulting in property damage and personal injury.
- **When installing the unit in small rooms, make sure that refrigerant density does not exceed the limit (Reference: ISO5149) in the event of leakage.**
If refrigerant density exceeds the limit, consult the dealer and install the ventilation system. Otherwise lack of oxygen can occur resulting in serious accident.
- **Install the unit in a location where unit will remain stable, horizontal and free of any vibration transmission.**
Unsuitable installation location can cause the unit to fall resulting in material damage and personal injury.
- **Do not run the unit with removed panels or protections.**
Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shock.
- **This unit is designed specifically for R32 or R410A.**
Using any other refrigerant can cause unit failure and personal injury.
- **Do not vent R32 or R410A into atmosphere.**
R32 is a fluorinated greenhouse gas with a Global Warming Potential(GWP)=675.
R410A is a fluorinated greenhouse gas with a Global Warming Potential(GWP)=2088.
- **Make sure that no air enters the refrigerant circuit when the unit is installed and removed.**
If air enters the refrigerant circuit, the pressure in the refrigerant circuit will become too high, which can cause burst and personal injury.
- **Be sure to use the prescribed pipes, flare nuts and tools for R32 or R410A.**
Using existing parts (for R22 or R407C) can cause refrigerant circuit burst resulting in unit failure and personal injury.
- **Be sure to connect both liquid and gas connecting pipes properly before operating the compressor.**
Do not open the liquid and gas operation valves before completing piping work, and evacuation.
If the compressor is operated when connecting pipes are not connected and operation valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.
- **Be sure to tighten the flare nuts to specified torque using the torque wrench.**
Tightening flare nuts with excess torque can cause burst and refrigerant leakage after a long period.
- **During pump down work, be sure to stop the compressor before closing operation valves and removing connecting pipes.**
If the connecting pipes are removed when the compressor is in operation and operation valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.
- **In the event of refrigerant leakage during installation, be sure to ventilate the working area properly.**
If the refrigerant comes into contact with naked flames, poisonous gases will be produced.
- **Electrical work must be carried out by the qualified electrician, strictly in accordance with national or regional electricity regulations.**
Incorrect installation can cause electric shock, fire or personal injury.
- **Make sure that earth leakage breaker and circuit breaker of appropriate capacities are installed.**
Circuit breaker should be able to disconnect all poles under over current. Absence of appropriate breakers can cause electric shock, personal injury or property damage.
- **Be sure to switch off the power source in the event of installation, maintenance or service.**
If the power source is not switched off, there is a risk of electric shock, unit failure or personal injury.
- **Be sure to tighten the cables securely in terminal block and relieve the cables properly to prevent overloading the terminal blocks.**
Loose connections or cable mountings can cause anomalous heat production or fire.
- **Do not process, splice or modify the power cable, or share the socket with other power plugs.**
Improper power cable or power plug can cause fire or electric shock due to poor connection, insufficient insulation or over-current.
- **Do not perform any change in protective device or its setup condition yourself.**
Changing protective device specifications can cause electric shock, fire or burst.
- **Be sure to clamp the cables properly so that they do not touch any internal component of the unit.**
If cables touch any internal component, it can cause overheating and fire.
- **Be sure to install service cover properly.**
Improper installation can cause electric shock or fire due to intrusion of dust or water.
- **Be sure to use the prescribed power and connecting cables for electrical work.**
Using improper cables can cause electric leak or fire.
- **This appliance must be connected to main power source by means of a circuit breaker or switch with a contact separation of at least 3mm.**
Improper electrical work can cause unit failure or personal injury.
- **When plugging this unit, a plug conforming to the standard IEC60884-1 must be used.**
Using improper plug can cause electric shock or fire.
- **Be sure to connect the power source cable with power source properly.**
Improper connection can cause intrusion of dust or water resulting in electric shock or fire.

⚠ CAUTION

- **Take care when carrying the unit by hand.**
If the unit weight is more than 20kg, it must be carried by two or more persons.
Do not carry the unit by the plastic straps. Always use the carry handle.
- **Do not install the outdoor unit in a location where insects and small animals can inhabit.**
Insects and small animals can enter the electrical parts and cause damage resulting in fire or personal injury. Instruct the user to keep the surroundings clean.
- **If the outdoor unit is installed at height, make sure that there is enough space for installation, maintenance and service.**
Insufficient space can result in personal injury due to falling from the height.
- **Do not install the unit near the location where neighbours are bothered by noise or air generating from the unit.**
It can affect surrounding environment and cause a claim.
- **Do not install in the locations where unit is directly exposed to corrosive gases (like sulphide gas, chloride gas), sea breeze or salty atmosphere.**
It can cause corrosion of heat exchanger and damage to plastic parts.
- **Do not install the unit close to the equipments that generate electromagnetic waves and/or high-harmonic waves.**
Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns.
The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- **Do not install the unit in the locations where:**
 - There are heat sources nearby.
 - Unit is directly exposed to rain or sunlight.
 - There is any obstacle which can prevent smooth air circulation from inlet and outlet side of the unit.
 - Unit is directly exposed to oil mist and steam such as kitchen.
 - Chemical substances like ammonia (organic fertilizer), calcium chloride (snow melting agent) and acid (sulfurous acid etc.), which can harm the unit, will generate or accumulate.
 - Drain water can not be discharged properly.
 - TV set or radio receiver is placed within 1m.
 - Height above sea level is more than 1000m.
It can cause performance degradation, corrosion and damage of components, unit malfunction and fire.
- **Dispose of all packing materials properly.**
Packing materials contain nails and wood which can cause personal injury.
Keep the polybag away from children to avoid the risk of suffocation.
- **Do not put anything on the outdoor unit.**
Object may fall causing property damage or personal injury.
- **Do not touch the aluminum fin of the outdoor unit.**
Aluminum fin temperature is high during heating operation. Touching fin can cause burn.
- **Do not touch any refrigerant pipe with your hands when the system is in operation.**
During operation the refrigerant pipes become extremely hot or extremely cold depending on the operating condition. Touching pipes can cause personal injury like burn (hot/cold).
- **Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations.**
The isolator should be locked in OFF state in accordance with EN60204-1.

1. ACCESSORIES AND TOOLS

Standard accessories (supplied with indoor unit)				Locally procured parts		Tools for installation Work	
(1) Installation board		1pc	(6) Batteries [R03 (AAA, Micro) 1.5V]		2pcs	Plus headed driver	Hole core drill (65mm in diameter)
(2) Wireless remote control		1pc	(7) Air-cleaning filters		2pcs	Knife	Wrench key (Hexagon) [4mm]
(3) Remote control holder		1pc	(8) Filter holders		2pcs	Saw	Flaring tool set*
(4) Tapping screws (for installation board Φ4 X 25mm)		5pcs	(9) Insulation (#486 50 X 100 t3)		1pc	Tape measure	Gas leak detector*
(5) Wood screws (for remote control holder Φ3.5 X 16mm)		2pcs				Torque wrench (14.0-62.0N·m (1.4-6.2kgf·m))	Pipe bender
						Plier	Gauge for projection adjustment (Used when flare is made by using conventional flare tool)
						Pipe cutter	
							* Designed specifically for R32 or R410A

2. SELECTING INSTALLATION LOCATION

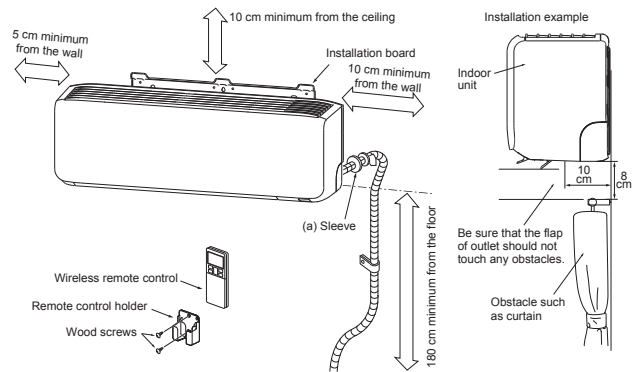
After getting customer's approval, select installation location according to following guidelines.

1. Indoor unit

- Where there is no obstruction to the airflow and where the cooled and heated air can be evenly distributed.
- A solid place where the unit or the wall will not vibrate.
- A place where there will be enough space for servicing. (Where space mentioned on the right side can be secured.)
- Where it is easy to conduct wiring and piping work.
- A place where unit is not directly exposed to sunlight or street light.
- A place where it can be easily drained.
- A place separated at least 1m away from the television or the radio. (To prevent interference to images and sounds.)
- A place where this unit is not affected by the high frequency equipment or electric equipment.
- Avoid installing this unit in place where there is much oil mist.
- A place where there is no electric equipment or household.
- Install the indoor unit on the wall where the height from the floor to the bottom of the unit is more than 180 cm.

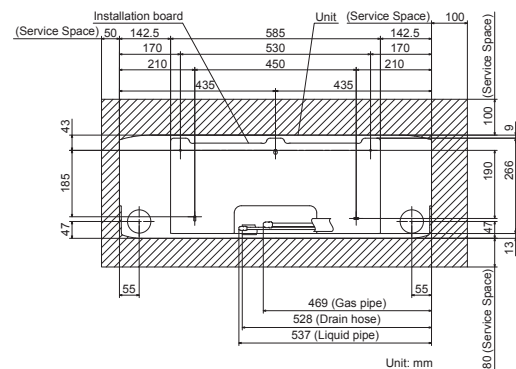
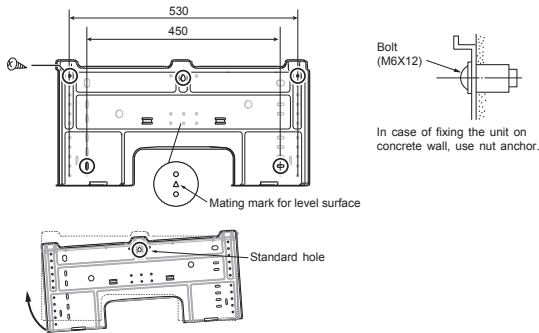
2. Remote control

- A place where the air-conditioner can receive the signal surely during operating the remote control.
- A place where it is not affected by the TV, radio etc.
- Do not place where it is exposed to direct sunlight or near heat devices such as a stove.



3. INSTALLING INSTALLATION BOARD

- Installation board should be installed on the wall which can support the weight of the indoor unit.
- Adjustment of the installation board in the horizontal direction is to be conducted with five screws in a temporary tightened state.
- With the standard hole as a center, adjust the board and level it.

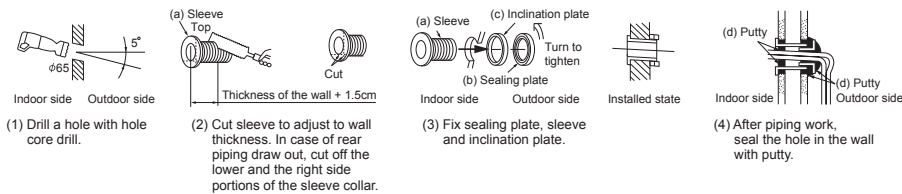


CAUTION

Improper adjustment of the installation board can cause water leakage.

4. DRILLING HOLE AND FIXTURE OF SLEEVE

When drilling the wall that contains a metal lath, wire lath or metal plate, be sure to use sealing plate, sleeve and inclination plate (Locally procured parts).



WARNING

Completely seal the hole in the wall with putty. If not sealed properly, dust, insects, small animals, and highly humid air may enter the room from outside, which could result in fire or other hazards.

CAUTION

Completely seal the hole in the wall with putty. If not sealed properly, furniture and other fixtures may be damaged by water leakage or condensation.

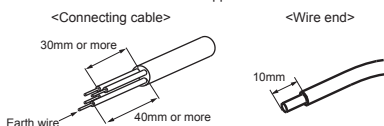
5. ELECTRICAL WIRING WORK

- Before installation, make sure that the power source complies with the air-conditioner's power specification.
- Carry out electrical wiring work according to following guidelines.

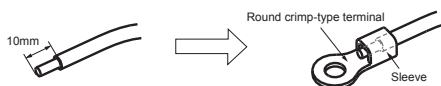
1. Preparing cable

- (1) Selecting cable
Select the connecting cable in accordance with the specifications mentioned below.
4-core* 1.5mm² conformed with 60245 IEC57
* 1 Earth wire is included (Yellow/Green).

- (2) Arrange each wire length as shown below.
Make sure that each wire is stripped 10mm from the end.



- (3) Attach round crimp-type terminal to each wire as shown in the below.
Select the size of round crimp-type terminal after considering the specifications of terminal block and wire diameter.

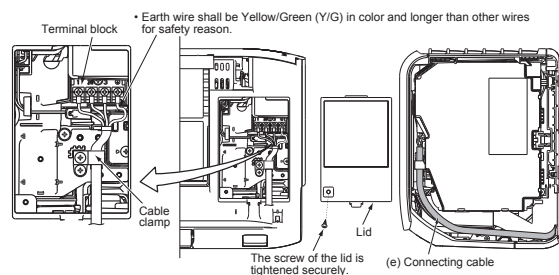


2. Connecting cable

- (1) Open the air inlet panel.
- (2) Remove the lid.
- (3) Remove the cable clamp.
- (4) Connect the connecting wires to the terminal block.
- (5) Fix the connecting cable by cable clamp.
- (6) Fix the lid.
- (7) Close the air inlet panel.

NOTE

Take care not to confuse the terminal numbers for indoor and outdoor connections.



WARNING

Incorrect wiring connection can cause malfunction or fire.

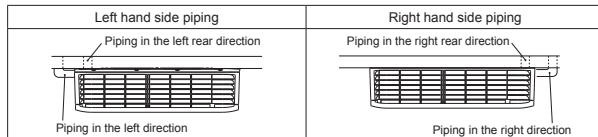
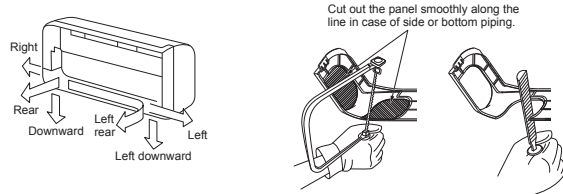
6. FORMING PIPING AND DRAIN HOSE

1. Forming piping

Piping is possible in the right, rear, downward, left, left rear or left downward direction.

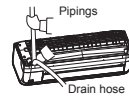
NOTE

Sufficient care must be taken not to damage the panels when connecting pipes.



Forming of pipings.

- Hold the bottom of the piping and fix direction before stretching it and shaping it.



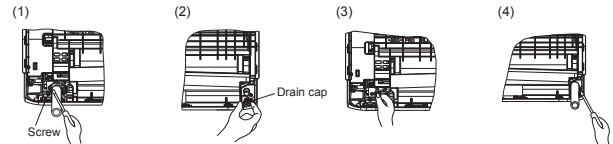
Taping of the exterior

- Tape only the portion that goes through the wall.
- Always tape the wiring with the piping.



2. Drain change procedures

- (1) Remove the screw and drain hose.
- (2) Remove the drain cap by hand or pliers.
- (3) Insert the drain cap which was removed at procedure (2) securely using a hexagonal wrench etc.
- (4) Install the drain hose and screw securely.

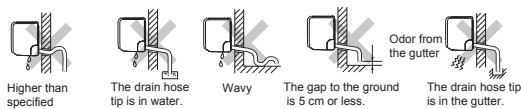


CAUTION

Incorrect installation of drain hose and cap can cause water leakage.

7. DRAINAGE WORK

- Arrange the drain hose in a downward angle.
- Avoid the following drain piping.

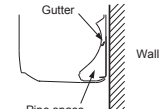


- Pour water to the drain pan located under the heat exchanger, and ensure that the water is discharged outdoor.
- When extended drain hose is present inside the room, insulate it securely with heat insulator available in the market.

Since this air-conditioner is designed to collect dew drops on the rear surface to the drain pan, do not install the connecting wire above the gutter.

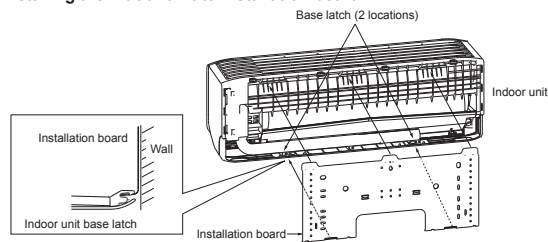
CAUTION

Incorrect drainage work can cause water leakage.



8. INSTALLING INDOOR UNIT

Installing the indoor unit to installation board



- (1) Pass the pipe through the hole in the wall, and hook the upper part of the indoor unit to the installation board.

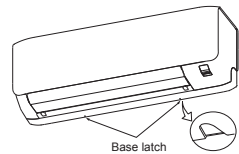


- (2) Gently push the lower part to fix the indoor unit base lower latch to installation board.



Removing the indoor unit from installation board

- (1) Push up at the marked portion of the indoor unit base latch, and slightly pull it toward you (both right and left hand sides). (The indoor unit base latch can be removed from the installation board.)
- (2) Push up the indoor unit upward so that it can be removed from installation board.



9. CONNECTING PIPING WORK

1. Preparation of connecting pipe

1.1. Selecting connecting pipe

Select connecting pipe according to the following table.

	Model SRK20/25/35
Gas pipe	Φ9.52
Liquid pipe	Φ6.35

- Pipe wall thickness must be greater than or equal to 0.8 mm.
- Pipe material must be O-type (Phosphorus deoxidized seamless copper pipe ICS 23.040.15, ICS 77.150.30).

1.2. Cutting connecting pipe

- (1) Cut the connecting pipe to the required length with pipe cutter.
- (2) Hold the pipe downward and remove the burrs. Make sure that no foreign material enters the pipe.
- (3) Cover the connecting pipe ends with the tape.

2. Piping work

2.1. Flaring pipe

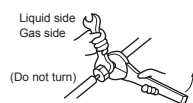
- (1) Take out flare nuts from the service valves of indoor unit and engage them onto connecting pipes.
- (2) Flare the pipes according to table and figure shown below.
Flare dimensions for R32 are different from those for conventional refrigerant. Although it is recommended to use the flaring tools designed specifically for R32 or R410A, conventional flaring tools can also be used by adjusting the dimension B with a flare adjustment gauge.

Copper pipe outer diameter	A		B [Rigid (clutch) type]	
			R32 or R410A	Conventional
Φ6.35	9.1		0-0.5	1.0-1.5
Φ9.52	13.2			
Φ12.7	16.6			

2.2 Connecting pipes

- (1) Connect pipes on both liquid and gas sides.
- (2) Tighten nuts to specified torque shown in the table below.

Service valve size (mm)	Tightening torque (N·m)
Φ6.35 (1/4")	14-18
Φ9.52 (3/8")	34-42
Φ12.7 (1/2")	49-61

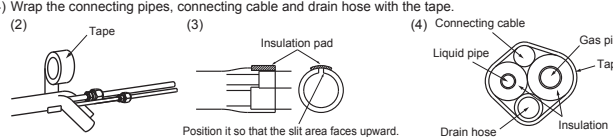


CAUTION

- Do not apply refrigerating machine oil to the flared surface. It can cause refrigerant leakage.
- Do not apply excess torque to the flared nuts. The flared nuts may crack resulting in refrigerant leakage.

3. Heating and condensation prevention

- (1) Dress the connecting pipes (both liquid and gas pipes) with insulation to prevent it from heating and dew condensation.
Use the heat insulating material which can withstand 120°C or higher temperature. Make sure that insulation is wrapped tightly around the pipes and no gap is left between them.
- (2) Wrap the refrigerant pipings of indoor unit with indoor unit heat insulation using tape.
- (3) Cover the flare-connected joints (indoor side) with the indoor unit heat insulation and wrap it with an insulation pad (standard accessory provided with indoor unit).
- (4) Wrap the connecting pipes, connecting cable and drain hose with the tape.



NOTE

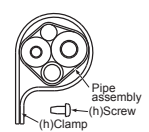
Locations where relative humidity exceeds 70%, both liquid and gas pipes need to be dressed with 20mm or thicker heat insulation materials.

CAUTION

- Improper insulation can cause condensate(water) formation during cooling operation. Condensate can leak or drip causing damage to household property.
- Poor heat insulating capacity can cause pipe outer surface to reach high temperature during heating operation. It can cause cable deterioration and personal injury.

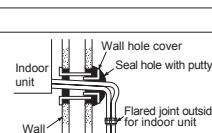
4. Finishing work

- (1) Make sure that the exterior portion of connecting pipes, connecting cable and drain hose is wrapped properly with tape. Shape the connecting pipes to match with the contours of the pipe assembly route.
- (2) Fix the pipe assembly with the wall using clamps and screws. Pipe assembly should be anchored every 1.5m or less to isolate the vibration.
- (3) Install the service cover securely. Water may enter the unit if service cover is not installed properly, resulting in unit malfunction and failure.



WARNING (only for R32)

- To avoid the risk of fire or explosion, the flared connection must/shall be installed outdoors.
- Reusable mechanical connectors and flared joints are not allowed indoors.



CAUTION

Make sure that the connecting pipes do not touch the components within the unit. If pipes touch the internal components, it may generate abnormal sounds and/or vibrations.

10. HOW TO OPEN, CLOSE, REMOVE AND INSTALL THE AIR INLET PANEL

1. Open

Pull the air inlet panel at both ends of lower part and release latches, then pull up the panel until you feel resistance.
(The panel stops at approx. 70° open position)

2. Close

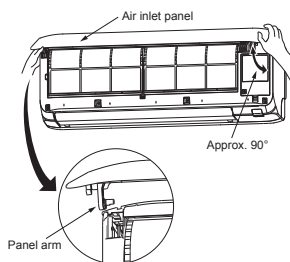
Hold the panel at both ends of lower part, lower it downward slowly, then push it slightly until the latch works.

3. Removing

Open the panel by 90° (as shown in the right illustration) and then pull it forward.

4. Installing

Insert the panel arm into the slot on the front panel from the position shown in right illustration, hold the panel at both ends of lower part, lower it downward slowly, then push it slightly until the latch works.



11. HOW TO REMOVE AND INSTALL THE BOTTOM AND FRONT PANEL

1. Bottom panel

1.1. Removing

(1) Remove the 2 screws (in the cap).
(2) Remove the 2 hooks of left and right side and then bottom panel can be removed.

1.2. Installing

(1) Install the 2 hooks of left and right side.
(2) Secure the bottom panel with the 2 screws (in the cap).

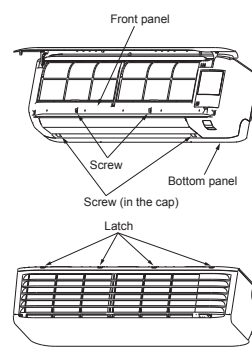
2. Front panel

2.1. Removing

(1) Remove the air inlet panel, the air filters and the bottom panel.
(2) Remove the 2 screws.
(3) Remove the 4 upper latches and then front panel can be removed.

2.2. Installing

(1) Cover the unit with the front panel and fix 4 upper latches.
(2) Secure the front panel with the 2 screws.
(3) Install the bottom panel, the air inlet panel and the air filters.



12. INSTALLING WIRELESS REMOTE CONTROL

Mount the batteries

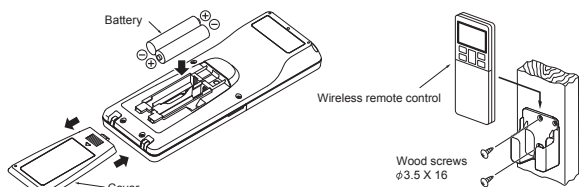
(1) Slide and take out the cover of backside.
(2) Mount the batteries [R03 (AAA, Micro), ×2 pieces] in the body properly.
(Fit the poles with the indication marks + & -)
(3) Set the cover again.

NOTE

- Do not use new and old batteries together.
- In case the unit is not operated for a long time, take out the batteries

Installing remote control holder

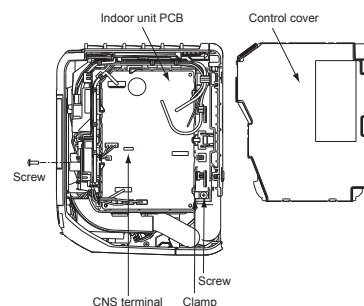
(1) Select the place where the unit can receive signals.
(2) Fix the holder to pillar or wall with wood screws.



13. TERMINAL CONNECTION FOR AN INTERFACE

To install wired remote control, superlink etc., interface kit is needed.

(1) Remove the air inlet panel, bottom panel and front panel.
(2) Remove the control cover. (Remove the screw.)
(3) There is a terminal (respectively marked with CNS) for the indoor control board. While connecting an interface, connect to the respective terminal securely with the connection harness supplied with an optional "Interface connection kit SC-BIKN-E and SC-BIKN2-E" and fasten the connection harness onto the indoor control box with the clamp and screw supplied with the kit.
For more details, refer to the user's manual of "Interface connection kit SC-BIKN-E and SC-BIKN2-E".

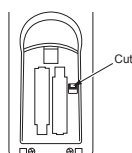


14. INSTALLING TWO AIR-CONDITIONERS IN THE SAME ROOM

In case two air-conditioners are installed in the same room, apply this setting so that one unit can be operated with only one wireless remote control.

Setting one wireless remote control

(1) Slide and take out the cover and batteries.
(2) Cut the switching line next to the battery with wire cutters.
(3) Set the batteries and cover again.

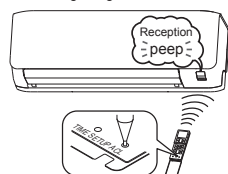


Setting one indoor unit

(1) Turn off the power source and turn it on after 1 minute.
(2) Send the signal by pressing the ACL switch on the remote control that was set according to the procedure described on the left side.
(3) Check that the reception buzzer sound "peep" is emitted from the indoor unit. Since the signal is sent about 6 seconds after the ACL switch is pressed, point the remote control to the indoor unit for a while.

NOTE

If no reception buzzer is emitted, restart the setting from the beginning.



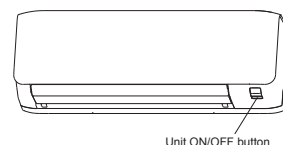
15. PUMP DOWN WORK

For the environmental protection, be sure to pump down when relocating or disposing of the unit. Pump down is the method of recovering refrigerant from the indoor unit to the outdoor unit before the connecting pipes are removed from the unit. When pump down is carried out, forced cooling operation is needed.

Forced cooling operation

(1) Turn off the power source and turn it on again after 1 minute.
(2) Press the ON/OFF button continuously for at least 5 seconds. Then operation will start.

For the detail of pump down, refer to the installation manual of outdoor unit.



16. INSTALLATION CHECK AND TEST RUN

After finishing the installation work, check the following points again before turning on the power. Conduct a test run and ensure that the unit operates properly. At the same time, explain to the customer how to use the unit and how to take care of the unit following the user's manual.

Before test run

Before test run, check following points.

Power source voltage complies with the rated voltage of air-conditioner.	
Earth leakage breaker and circuit breaker are installed.	
Power cable and connecting cable are securely fixed to the terminal block.	
Both liquid and gas service valves are fully open.	
No gas leaks from the joints of the service valves.	
Indoor and outdoor side pipe joints have been insulated.	
Hole on the wall is completely sealed with putty.	
Drain hose and cap are installed properly.	
Screw of the lid is tightened securely.	

Test run

Check following points during test run.

Indoor unit receives signal of remote control.	
Air-conditioning operation is normal.	
There is no abnormal noise.	
Water drains out smoothly.	
Display of remote control is normal.	

After test run

Explain the operating and maintenance methods to the user according to the user's manual.	
Keep this installation manual together with user's manual.	

NOTE

During restart or change in operation mode, the unit will not start operating for approximately 3 minutes. This is to protect the unit and it is not malfunction.

(c) Models SKM20ZSP-W, 25ZSP-W, 35ZSP-W

RLC012A106

Model SKM20,25,35ZSP

R32/R410A REFRIGERANT USED

- This installation manual deals with an indoor unit installation only. For an outdoor unit installation, refer to page 11.
- This unit is designed for R32 or R410A. See a label on the outdoor unit to check refrigerant information.

SAFETY PRECAUTIONS

- Before installation, read the "SAFETY PRECAUTIONS" carefully and strictly follow it during the installation work in order to protect yourself.
 - The precautionary items mentioned below are distinguished into two levels, **⚠ WARNING** and **⚠ CAUTION**.
 - ⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, can result in serious consequences such as death or severe injury.
 - ⚠ CAUTION** Indicates a potentially hazardous situation which, if not avoided, can result in personal injury or property damage.
- Both mention the important items to protect your health and safety. Therefore, strictly follow them by any means.

- Be sure to confirm no operation problem on the equipment after completing the installation. If unusual noise can be heard during the test run, consult the dealer.
- Be sure to explain the operating methods as well as the maintenance methods of this equipment to the user according to the user's manual.
- Be sure to keep the installation manual together with user's manual at a place where it is easily accessible to the user any time. Moreover, ask the user to hand the manuals to a new user, whenever required.

⚠ WARNING

- **Be sure to use only for residential purpose.**
If this unit is installed in inferior environment such as machine shop, vehicle (like ship), warehouse, etc., it can malfunction.
- **Installation must be carried out by the qualified installer completely in accordance with the installation manual.**
Installation by non qualified person or incorrect installation can cause serious troubles such as water leak, electric shock, fire and personal injury.
- **Be sure to wear protective goggles and gloves while performing installation work.**
Improper safety measures can result in personal injury.
- **Use the original accessories and the specified components for the installation.**
Using parts other than those prescribed may cause water leak, electric shock, fire and personal injury.
- **Do not install the unit near the location where leakage of flammable gases can occur.**
If leaked gases accumulate around the unit, it can cause fire resulting in property damage and personal injury.
- **When installing the unit in small rooms, make sure that refrigerant density does not exceed the limit (Reference: ISO5149) in the event of leakage.**
If refrigerant density exceeds the limit, consult the dealer and install the ventilation system. Otherwise lack of oxygen can occur resulting in serious accident.
- **Install the unit in a location where unit will remain stable, horizontal and free of any vibration transmission.**
Unsuitable installation location can cause the unit to fall resulting in material damage and personal injury.
- **Do not run the unit with removed panels or protections.**
Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shock.
- **This unit is designed specifically for R32 or R410A.**
Using any other refrigerant can cause unit failure and personal injury.
- **Do not vent R32 or R410A into atmosphere.**
R32 is a fluorinated greenhouse gas with a Global Warming Potential (GWP) = 675.
R410A is a fluorinated greenhouse gas with a Global Warming Potential (GWP) = 2088.
- **Make sure that no air enters the refrigerant circuit when the unit is installed and removed.**
If air enters the refrigerant circuit, the pressure in the refrigerant circuit will become too high, which can cause burst and personal injury.
- **Be sure to use the prescribed pipes, flare nuts and tools for R32 or R410A.**
Using existing parts (for R22 or R407C) can cause refrigerant circuit burst resulting in unit failure and personal injury.
- **Be sure to connect both liquid and gas connecting pipes properly before operating the compressor.**
Do not open the liquid and gas operation valves before completing piping work, and evacuation.
If the compressor is operated when connecting pipes are not connected and operation valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.
- **Be sure to tighten the flare nuts to specified torque using the torque wrench.**
Tightening flare nuts with excess torque can cause burst and refrigerant leakage after a long period.
- **During pump down work, be sure to stop the compressor before closing operation valves and removing connecting pipes.**
If the connecting pipes are removed when the compressor is in operation and operation valves are open, air can be sucked into the refrigerant circuit which can cause anomalous high pressure resulting in burst or personal injury.
- **In the event of refrigerant leakage during installation, be sure to ventilate the working area properly.**
If the refrigerant comes into contact with naked flames, poisonous gases will be produced.
- **Electrical work must be carried out by the qualified electrician, strictly in accordance with national or regional electricity regulations.**
Incorrect installation can cause electric shock, fire or personal injury.
- **Make sure that earth leakage breaker and circuit breaker of appropriate capacities are installed.**
Circuit breaker should be able to disconnect all poles under over current. Absence of appropriate breakers can cause electric shock, personal injury or property damage.
- **Be sure to switch off the power source in the event of installation, maintenance or service.**
If the power source is not switched off, there is a risk of electric shock, unit failure or personal injury.
- **Be sure to tighten the cables securely in terminal block and relieve the cables properly to prevent overloading the terminal blocks.**
Loose connections or cable mountings can cause anomalous heat production or fire.
- **Do not process, splice or modify the power cable, or share the socket with other power plugs.**
Improper power cable or power plug can cause fire or electric shock due to poor connection, insufficient insulation or over-current.
- **Do not perform any change in protective device or its setup condition yourself.**
Changing protective device specifications can cause electric shock, fire or burst.
- **Be sure to clamp the cables properly so that they do not touch any internal component of the unit.**
If cables touch any internal component, it can cause overheating and fire.
- **Be sure to install service cover properly.**
Improper installation can cause electric shock or fire due to intrusion of dust or water.
- **Be sure to use the prescribed power and connecting cables for electrical work.**
Using improper cables can cause electric leak or fire.
- **This appliance must be connected to main power source by means of a circuit breaker or switch with a contact separation of at least 3 mm.**
Improper electrical work can cause unit failure or personal injury.
- **Be sure to connect the power source cable with power source properly.**
Improper connection can cause intrusion of dust or water resulting in electric shock or fire.

⚠ CAUTION

- **Take care when carrying the unit by hand.**
If the unit weight is more than 20 kg, it must be carried by two or more persons.
Do not carry the unit by the plastic straps. Always use the carry handle.
- **Do not install the outdoor unit in a location where insects and small animals can inhabit.**
Insects and small animals can enter the electrical parts and cause damage resulting in fire or personal injury. Instruct the user to keep the surroundings clean.
- **If the outdoor unit is installed at height, make sure that there is enough space for installation, maintenance and service.**
Insufficient space can result in personal injury due to falling from the height.
- **Do not install the unit near the location where neighbours are bothered by noise or air generating from the unit.**
It can affect surrounding environment and cause a claim.
- **Do not install in the locations where unit is directly exposed to corrosive gases (like sulphide gas, chloride gas), sea breeze or salty atmosphere.**
It can cause corrosion of heat exchanger and damage to plastic parts.
- **Do not install the unit close to the equipments that generate electromagnetic waves and/or high-harmonic waves.**
Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- **Do not install the unit in the locations where:**
 - There are heat sources nearby.
 - Unit is directly exposed to rain or sunlight.
 - There is any obstacle which can prevent smooth air circulation from inlet and outlet side of the unit.
 - Unit is directly exposed to oil mist and steam such as kitchen.
 - Chemical substances like ammonia (organic fertilizer), calcium chloride (snow melting agent) and acid (sulfurous acid etc.), which can harm the unit, will generate or accumulate.
 - Drain water can not be discharged properly.
 - TV set or radio receiver is placed within 1 m.
 - Height above sea level is more than 1000 m.
It can cause performance degradation, corrosion and damage of components, unit malfunction and fire.
- **Dispose of all packing materials properly.**
Packing materials contain nails and wood which can cause personal injury.
Keep the polybag away from children to avoid the risk of suffocation.
- **Do not put anything on the outdoor unit.**
Object may fall causing property damage or personal injury.
- **Do not touch the aluminum fin of the outdoor unit.**
Aluminium fin temperature is high during heating operation. Touching fin can cause burn.
- **Do not touch any refrigerant pipe with your hands when the system is in operation.**
During operation the refrigerant pipes become extremely hot or extremely cold depending on the operating condition. Touching pipes can cause personal injury like burn (hot/cold).
- **Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations.**
The isolator should be locked in OFF state in accordance with EN60204-1.

1. ACCESSORIES AND TOOLS

Standard accessories (supplied with indoor unit)				Locally procured parts		Tools for installation Work	
(1) Installation board		1pc	(5) Wood screws (for remote control holder Ø3.5 X 16 mm)		2pcs	Plus headed driver	Hole core drill (65 mm in diameter)
(2) Wireless remote control		1pc	(6) Batteries [R03 (AAA, Micro) 1.5 V]		2pcs	Knife	Wrench key (Hexagon) [4 mm]
(3) Remote control holder		1pc	(7) Insulation (#486 50 X 100 t3)		1pc	Saw	Flaring tool set*
(4) Tapping screws (for installation board Ø4 X 25 mm)		10pcs				Tape measure	Gas leak detector*
						Torque wrench (14.0-62.0 N·m (1.4-6.2 kgf·m))	Pipe bender
						Plier	Gauge for projection adjustment (Used when flare is made by using conventional flare tool)
						Pipe cutter	
						* Designed specifically for R32 or R410A	
				(a) Sleeve (1pc)			
				(b) Sealing plate (1pc)			
				(c) Inclination plate (1pc)			
				(d) Putty			
				(e) Connecting cable			
				(f) Drain hose (extension hose)			
				(g) Flaring cover (for insulation of connection piping)			
				(h) Clamp and screw (for finishing work)			
				(i) Electrical tape			

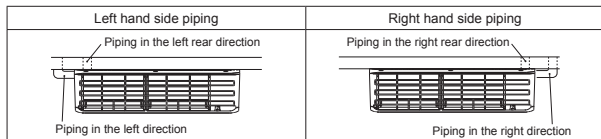
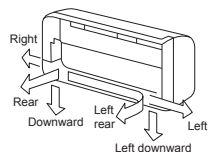
6. FORMING PIPING AND DRAIN HOSE

1. Forming piping

Piping is possible in the right, rear, downward, left, left rear or left downward direction.

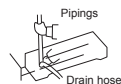
NOTE

Sufficient care must be taken not to damage the panels when connecting pipes.



Forming of pipings.

- Hold the bottom of the piping and fix direction before stretching it and shaping it.



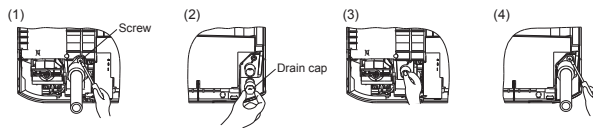
Taping of the exterior

- Tape only the portion that goes through the wall.
- Always tape the wiring with the piping.



2. Drain change procedures

- Remove the screw and drain hose.
- Remove the drain cap by hand or pliers.
- Insert the drain cap which was removed at procedure (2) securely using a hexagonal wrench etc.
- Install the drain hose and screw securely.

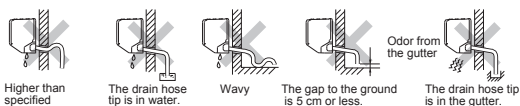


CAUTION

Incorrect installation of drain hose and cap can cause water leakage.

7. DRAINAGE WORK

- Arrange the drain hose in a downward angle.
- Avoid the following drain piping.

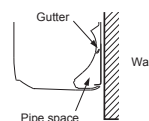


- Pour water to the drain pan located under the heat exchanger, and ensure that the water is discharged outdoor.
- When extended drain hose is present inside the room, insulate it securely with heat insulator available in the market.

Since this air-conditioner is designed to collect dew drops on the rear surface to the drain pan, do not install the connecting wire above the gutter.

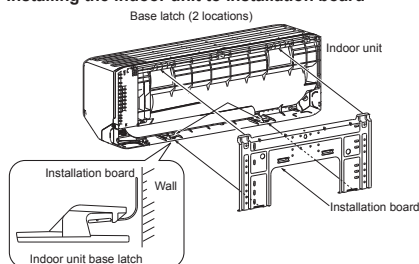
CAUTION

Incorrect drainage work can cause water leakage.



8. INSTALLING INDOOR UNIT

Installing the indoor unit to installation board



- Pass the pipe through the hole in the wall, and hook the upper part of the indoor unit to the installation board.

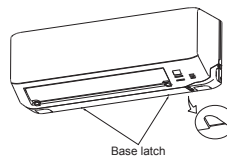


- Gently push the lower part to fix the indoor unit base lower latch to installation board.



Removing the indoor unit from installation board

- Push up at the marked portion of the indoor unit base latch, and slightly pull it toward you (both right and left hand sides). (The indoor unit base latch can be removed from the installation board.)
- Push up the indoor unit upward so that it can be removed from installation board.



9. CONNECTING PIPING WORK

1. Preparation of connecting pipe

1.1. Selecting connecting pipe

Select connecting pipe according to the following table.

Gas pipe	Φ9.52
Liquid pipe	Φ6.35

- Pipe wall thickness must be greater than or equal to 0.8 mm.
- Pipe material must be O-type (Phosphorus deoxidized seamless copper pipe ICS 23.040.15, ICS 77.150.30).

1.2. Cutting connecting pipe

- Cut the connecting pipe to the required length with pipe cutter.
- Hold the pipe downward and remove the burrs. Make sure that no foreign material enters the pipe.
- Cover the connecting pipe ends with the tape.

2. Piping work

2.1. Flaring pipe

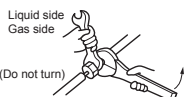
- Take out flare nuts from the operation valves of indoor unit and engage them onto connecting pipes.
 - Flare the pipes according to table and figure shown below.
- Flare dimensions for R32 are different from those for conventional refrigerant. Although it is recommended to use the flaring tools designed specifically for R32 or R410A, conventional flaring tools can also be used by adjusting the dimension B with a flare adjustment gauge.

Copper pipe outer diameter	A		Copper pipe outer diameter	B [Rigid (clutch) type]	
				R32 or R410A	Conventional
Φ6.35	9.1		Φ6.35	0.0-5	1.0-1.5
Φ9.52	13.2		Φ9.52		

2.2 Connecting pipes

- Connect pipes on both liquid and gas sides.
- Tighten nuts to specified torque shown in the table below.

Operation valve size (mm)	Tightening torque (N·m)
Φ6.35 (1/4")	14-18
Φ9.52 (3/8")	34-42



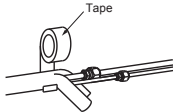
CAUTION

- Do not apply refrigerating machine oil to the flared surface. It can cause refrigerant leakage.
- Do not apply excess torque to the flared nuts. The flared nuts may crack resulting in refrigerant leakage.

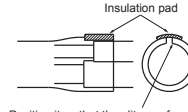
3. Heating and condensation prevention

- Dress the connecting pipes (both liquid and gas pipes) with insulation to prevent it from heating and dew condensation. Use the heat insulating material which can withstand 120 °C or higher temperature. Make sure that insulation is wrapped tightly around the pipes and no gap is left between them.
- Wrap the refrigerant pipings of indoor unit with indoor unit heat insulation using tape.
- Cover the flare-connected joints (indoor side) with the indoor unit heat insulation and wrap it with an insulation pad (standard accessory provided with indoor unit).
- Wrap the connecting pipes, connecting cable and drain hose with the tape.

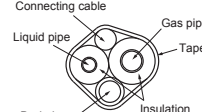
(2)



(3)



(4)



NOTE

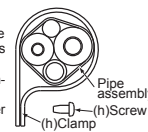
Locations where relative humidity exceeds 70 %, both liquid and gas pipes need to be dressed with 20 mm or thicker heat insulation materials.

CAUTION

- Improper insulation can cause condensate(water) formation during cooling operation. Condensate can leak or drip causing damage to household property.
- Poor heat insulating capacity can cause pipe outer surface to reach high temperature during heating operation. It can cause cable deterioration and personal injury.

4. Finishing work

- Make sure that the exterior portion of connecting pipes, connecting cable and drain hose is wrapped properly with tape. Shape the connecting pipes to match with the contours of the pipe assembly route.
- Fix the pipe assembly with the wall using clamps and screws. Pipe assembly should be anchored every 1.5 m or less to isolate the vibration.
- Install the service cover securely. Water may enter the unit if service cover is not installed properly, resulting in unit malfunction and failure.



CAUTION

Make sure that the connecting pipes do not touch the components within the unit. If pipes touch the internal components, it may generate abnormal sounds and/or vibrations.

RLC012A106

10. HOW TO OPEN, CLOSE, REMOVE AND INSTALL THE AIR INLET PANEL

1. Open

Pull the air inlet panel at both ends of lower part and release latches, then pull up the panel until you feel resistance.
(The panel stops at approx. 70° open position)

2. Close

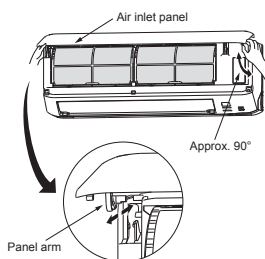
Hold the panel at both ends of lower part, lower it downward slowly, then push it slightly until the latch works.

3. Removing

Open the panel by 90° (as shown in the right illustration) and then pull it forward.

4. Installing

Insert the panel arm into the slot on the front panel from the position shown in right illustration, hold the panel at both ends of lower part, lower it downward slowly, then push it slightly until the latch works.



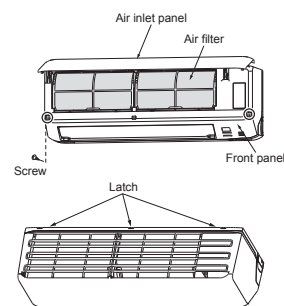
11. HOW TO REMOVE AND INSTALL FRONT PANEL

1. Removing

- (1) Remove the air inlet panel and the air filters.
- (2) Remove the 2 screws.
- (3) Remove the 3 upper latches and then front panel can be removed.

2. Installing

- (1) Cover the unit with the front panel and fix 3 upper latches.
- (2) Secure the front panel with the 2 screws.
- (3) Install the air inlet panel and the air filters.



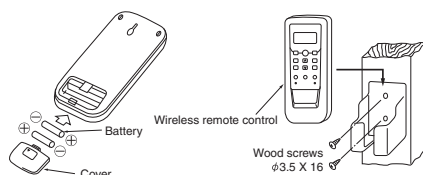
12. INSTALLING WIRELESS REMOTE CONTROL

Mount the batteries

- (1) Slide and take out the cover of backside.
- (2) Mount the batteries [R03 (AAA, Micro), × 2 pieces] in the body properly.
(Fit the poles with the indication marks + & -)
- (3) Set the cover again.

NOTE

- Do not use new and old batteries together.
- In case the unit is not operated for a long time, take out the batteries



Installing remote control holder

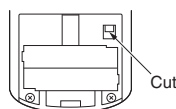
- (1) Select the place where the unit can receive signals.
- (2) Fix the holder to pillar or wall with wood screws.

13. INSTALLING TWO AIR-CONDITIONERS IN THE SAME ROOM

In case two air-conditioners are installed in the same room, apply this setting so that one unit can be operated with only one wireless remote control.

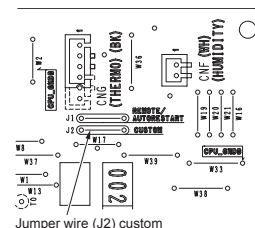
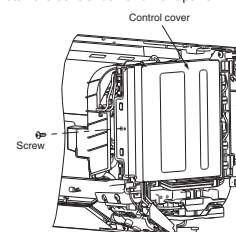
Setting one wireless remote control

- (1) Slide and take out the cover and batteries.
- (2) Cut the switching line next to the battery with wire cutters.
- (3) Set the batteries and cover again.



Setting one indoor unit

- (1) Remove the front panel.
- (2) Remove the control cover. (Remove the screw.)
- (3) Cut jumper wire J2 (marked CUSTOM on the PCB) on the indoor control board. Do not allow the cut wires to contact any other wiring.
- (4) Install the control box and front panel.



Jumper wire (J2) custom

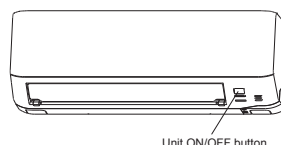
14. PUMP DOWN WORK

For the environmental protection, be sure to pump down when relocating or disposing of the unit. Pump down is the method of recovering refrigerant from the indoor unit to the outdoor unit before the connecting pipes are removed from the unit. When pump down is carried out, forced cooling operation is needed.

Forced cooling operation

- (1) Turn off the power source and turn it on again after 1 minute.
- (2) Press the ON/OFF button continuously for at least 5 seconds. Then operation will start.

For the detail of pump down, refer to the installation manual of outdoor unit.



15. INSTALLATION CHECK AND TEST RUN

After finishing the installation work, check the following points again before turning on the power. Conduct a test run and ensure that the unit operates properly. At the same time, explain to the customer how to use the unit and how to take care of the unit following the user's manual.

Before test run

Before test run, check following points.

Power source voltage complies with the rated voltage of air-conditioner.	
Earth leakage breaker and circuit breaker are installed.	
Power cable and connecting cable are securely fixed to the terminal block.	
Both liquid and gas operation valves are fully open.	
No gas leaks from the joints of the operation valves.	
Indoor and outdoor side pipe joints have been insulated.	
Hole on the wall is completely sealed with putty.	
Drain hose and cap are installed properly.	
Screw of the lid is tightened securely.	

Test run

Check following points during test run.

Indoor unit receives signal of remote control.	
Air-conditioning operation is normal.	
There is no abnormal noise.	
Water drains out smoothly.	
Display of remote control is normal.	

After test run

Explain the operating and maintenance methods to the user according to the user's manual.	
Keep this installation manual together with user's manual.	

NOTE

During restart or change in operation mode, the unit will not start operating for approximately 3 minutes. This is to protect the unit and it is not malfunction.

(2) Ceiling concealed type (SRR)
Models SRR25ZM-W, 35ZM-W

RJ012A003F	
FOR MODEL SRR SERIES R32/R410A REFRIGERANT USED	
• This installation manual illustrates the method of installing an indoor unit. • For electrical wiring work, see instructions set out on the backside. • For outdoor unit installation and refrigerant piping, refer to Page 11.	• A wired remote control unit is supplied separately as an optional part. • While installing the unit, be sure to check the selection of installation place, power source specifications, usage limitation (piping length, height differences between indoor and outdoor units, power source voltage etc.) and the installation method. • Keep the installation manual together with owner's manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user. • Before starting the installation work, proper precautions (using suitable protective clothing, gloves etc.) should be taken by qualified installer. • Pay attention not to fall down the tools, etc. when installing the unit at the high position. • Personal usage can be heard during operation, consult the dealer. • The meanings of "Marks" used here are shown as follows.

SAFETY PRECAUTIONS

- Before installation, read the "SAFETY PRECAUTIONS" carefully and strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, **[WARNING]** and **[CAUTION]**.

- [WARNING]** Wrong installation might cause serious consequences such as injuries or death.
- [CAUTION]** Wrong installation might cause serious consequences as follows.
- Both mention the important items to protect your health and safety so strictly follow them by any means.
- Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the owner's manual.

⚠ WARNING

- **Installation must be carried out by the qualified installer.**
If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction. Do not carry out the installation and maintenance work except the by qualified installer.
- **Install the system in full accordance with the installation manual.**
Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire.
- **Do not install in a place where the unit is exposed to direct sunlight, rain, etc.**
If this appliance is installed in inferior environment such as machine shop and etc., it can cause malfunction.
- **Use the original accessories and the specified components for installation.**
If parts other than those prescribed by us are used, it may cause water leaks, electric shocks, fire and personal injury.
- **Install the unit in a location with good support.**
If the unit is not supported properly, it may cause the unit to fall resulting in material damage and personal injury.
- **Ventilate the working area well in the event of refrigerant leakage.**
If the refrigerant comes into contact with naked flames, poisonous gas is produced.
- **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage.**
If the density of refrigerant exceeds the limit, it may cause the death and serious accidents due to asphyxiation.
- **After completing installation, check that no refrigerant leaks from the system.**
If refrigerant leaks into the room and comes into contact with an oven or other hot surface, poisonous gas is produced.
- **Use the prescribed piping and tools for R32 or R410A.**
Use of R32 or R410A requires special tools. If the unit is installed with the wrong tools, it may cause the unit failure and serious accidents due to burst of the refrigerant circuit.

- **Do not put the drainage pipe directly into drainage channels where the drain water can be collected.**
Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- **Ensure that no air enters in the refrigerant circuit when the unit is installed and removed.**
If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury.
- **Do not replace the power cord, or share the socket with other power plugs.**
This may cause fire or electric shock due to deflecting contact, deflection insulation and over-current etc.

⚠ CAUTION	
• Carry out the electrical work for ground lead with care. Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting. • Use the circuit breaker of correct capacity. Circuit breaker should be able to disconnect all poles under over current. • Install isolator or disconnect switch on the power source wiring in accordance with the local codes and regulations. The isolator should be located in OFF state in accordance with EN60241-1. • Be sure to install indoor unit properly according to instruction manual so that drainage can run off smoothly. Improper installation of indoor unit can cause dropping water into the room and damaging personal property. • Install the drainage pipe to run off drainage securely according to the installation manual. Correct installation of the drainage pipe can cause dropping water into the room and damaging personal property. • Be sure to install the drainage pipe with descending slope of 1/100 or more, and not to make traps and air-bendings. Check if the drainage runs off securely during commissioning and ensure the space for inspection and maintenance. • After maintenance, all wiring, wiring tie and the like, should be returned to their original state and wiring route, and the necessary clearance from all metal parts should be secured. • Take care when carrying the unit by hand. If the unit weights more than 20kg, it must be carried by two or more persons. Do not carry by the plastic steps, always use the carry handle.	• When carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins. • Dispose of any packing materials correctly. Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of asphyxiation, be sure to keep the packing materials away from children and to dispose after they are up. • For installation work, be careful not to be injured with the heat exchanger, piping flare portion or screws etc. • Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them. Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables. • When perform the air-conditioner operation (cooling or drying operation) in which ventilator is started in the room. In this case, the possibility that drain water may backflow in accordance with the room lapse into the negative pressure status. Therefore, set up the opening port such as incorporate the air into the room that may appropriate to ventilation (For example; Open the door a little). In addition, just as above, so set up the opening port if the room lapse into negative pressure status due to register of the wind for the high rise apartment etc. • Do not use air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work. If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
• Do not install the unit in the locations listed below. • Locations where carbon fiber, metal powder or any powder is floating. • Locations where any substances that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur. • Vehicles and ships. • Locations where cosmetic or special sprays are often used. • Locations with direct exposure of oil mist and steam such as kitchen and machine plant. • Locations where any machines which generate high frequency harmonics are used. • Locations with salty atmospheres such as coastlines. • Locations with heavy snow (if installed, be sure to provide base flame and snow hood mentioned in the manual). • Locations where the unit is exposed to chimney smoke. • Locations at high altitude (more than 1000m high). • Locations with ammoniac atmospheres (e.g. organic fertilizer). • Locations with calcium chloride (e.g. snow melting agent). • Locations without good air circulation. • Locations with any obstacles which can prevent inlet and outlet air of the unit. • Locations where short circuit of air can occur (in case of multiple units installation). • Locations where strong air blows against the air outlet of outdoor unit. • Locations where something located above the unit could fall. • It can cause remarkable decrease in performance, corrosion and damage of components, malfunction and fire. • Do not install the indoor unit in the locations listed below (Be sure to model because each indoor unit has each limitation). • Locations where the unit is installed near the manual for each unit. • Locations with any obstacles which can prevent inlet and outlet air of the unit. • Locations where vibration can be amplified due to insufficient strength of structure. • Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam (in case of the infrared specification unit). • Locations where an equipment affected by high harmonics is placed (TV set, etc.) • Locations where the unit is placed near the fire alarm control panel. • Locations where the unit is placed near the fire alarm control panel. • Locations where the unit is placed near the fire alarm control panel. • Do not install the unit near the location where leakage of combustible gases can occur. If leaked gases accumulate around the unit, it can cause fire.	• Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire. • Do not use the indoor unit at the place where water splashes may occur such as in laundries. If the unit is installed in a place where water splashes may occur, it can cause electric shocks and fire. • Do not install nor use the system close to the equipment that generates electromagnetic fields or high frequency harmonics. Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming. • Do not place any variables which will be damaged by getting wet. When the relative humidity is higher than 80%, or drainage pipe is clogged, condensation or drainage water can drop and it can cause the damage of variables. • Do not install the remote control at the direct sunlight. It can cause malfunction or deformation of the remote control. • Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art. • I can cause the damage of the items. The location where fuses are to be used, the location where fuses are to be used, the location where fuses are to be used. • Do not touch any buttons with wet hands. Connecting the circuit with copper wire or other metal thread can cause unit failure and fire. • Do not touch any refrigerant pipes with your hands when the system is in operation. During operation the refrigerant pipes become extremely hot or extremely cold depending the operating condition, and it can cause burn injury or frost. • Do not wash the inside of the air-conditioner. Water leakage and permanent damage may result. • Electrical hazard exists.

Check before installation work

- Model name and power source
- Required tools
- Piping, wiring and miscellaneous small parts

Standard accessories (Installation kit)	
Accessories for indoor unit	
① Wireless remote control	Qty
② Remote control holder	1
③ Remote control signal receiver	1
④ Installation frame (for remote control signal receiver)	1
⑤ Wood screws (for remote control holder ø3.5 X 16mm)	2
⑥ Battery (R03 (AAA, Micro 1.5V))	2
⑦ Joint (for drain hose)	1
⑧ Clamp (for drain hose) (big: 1, small: 1)	2
⑨ Washer (for suspension bolt M10)	8
⑩ Flat head machine screw (for remote control signal receiver M3.5x10)	2
⑪ Plate (display)	1
⑫ Pipe cover (big: 1, small: 1)	2
⑬ Band	4

Locally procured parts	
① Sealing plate	Qty
② Sleeve	1
③ Inclination plate	1
④ Putty	1
⑤ Drain hose (VP25)	1
⑥ Suspension bolts (M10)	4
⑦ Nuts (M10)	8
⑧ Spring lock washers (M10)	4

Option parts (Separately sold parts)	
Bottom air inlet kit (25, 35 models : UT-BAT1IEF (50, 60 models : UT-BAT2IEF)	Qty
	1

Necessary tools for the installation work

1	Plus headed driver
2	Knife
3	Saw
4	Tape measure
5	Hammer
6	Spanner wrench
7	Torque wrench (14.0-62.0N·m (1.4-6.2kgf·m))
8	Hole core drill (ø5mm in diameter)
9	Wrench key (Hexagon) [4mm]
10	Flaring tool set (Designed specifically for R32 or R410A)
11	Gas leak detector (Designed specifically for R32 or R410A)
12	Gauge for projection adjustment (Used when flare is made by using conventional flare tool)
13	Pipe bender

SELECTION OF INSTALLATION LOCATION

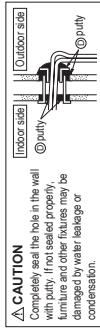
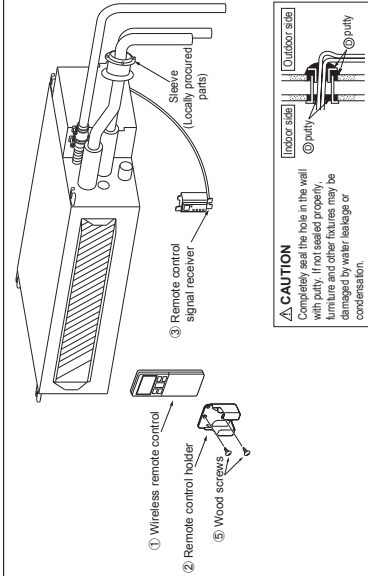
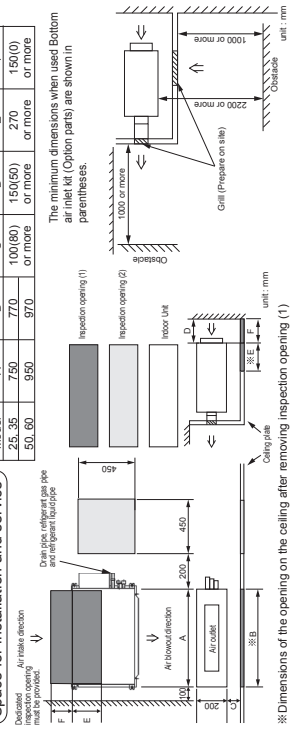
(Install at location that meets the following conditions, after getting approval from the customer)

- Indoor unit**
- Where there is no obstruction to the air flow and where the cooled and heated air can be evenly distributed.
 - A firm location that may sustain the weight of the unit, and do not cause the unit or the ceiling to vibrate.
 - A place where there will be enough space for servicing. (Where space mentioned below can be secured)
 - The piping and wiring must be easy to conduct.
 - The place where the unit is not exposed to the direct rays of the sun or the strong rays of the street lighting.
 - A place where it can be easily drained.
 - A place separated at least 1m away from the television or the radio. (To prevent interference to images and sounds.)
 - Places where this unit is not affected by the high frequency equipment or electric equipment.
 - Places where there is no electric equipment or household under the installing unit.
 - Where the suction inlet of the unit is located far from the air inlet on the ceiling, the entire inside of ceiling acts as an air suction duct so that the capacity is reduced at the startup.
 - Areas where dew point is lower than around 28 °C and relative humidity is lower than 80%.
 - Places where the indoor unit is not exposed to direct sunlight or heat from other heat sources.
 - Confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above.
 - If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.
 - The product is able to be used with small external static pressure. Excessive static pressure can cause the trouble of insufficient air flow due to static air flow. It is better to use the products with a few meters straight duct connected to either air intake or air blowout part only at maximum. (As for the permitted external static pressure, please confirm the technical manual.)

Wireless remote control

- A place where the air-conditioner can be received the signal surely during operating the wireless remote control.
- Places where there is no affected by the TV and radio etc.
- Do not place where exposed to direct sunlight or near heat devices such as a stove.

Space for installation and service

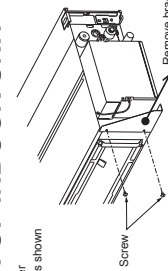


Inspection opening for services

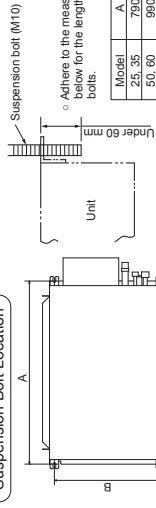
Service	Inspection opening (1)	Inspection opening (2)
Clamping of the flare of required and gas refrigerant pipe	Not Use	Use
Drain pipe connection	Not Use	Use
Installation and removal of blower	Use	Not Use
Control box	Not Use	Use
Connecting wire (between indoor and outdoor)	Not Use	Use
Unit display section (Remote control signal receiver)	Not Use	Use
Replace drain pump	Not Use	Use
Replace heat exch sensor	Not Use	Use
Replace air filter	Use	Not Use

INSTALLATION OF INDOOR UNIT

- Remove bracket from the unit after unpacking according to process as shown below.
- (1) Loosen 2 screws.
- (2) Remove bracket.
- (3) Tighten the screws.

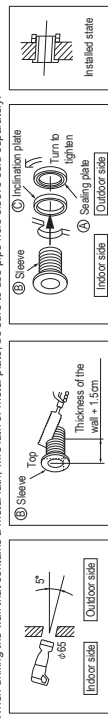


Suspension Bolt Location



Drilling of hole and fixture of sleeve (Locally procured parts)

When drilling the wall that contains a metal lath, wire lath or metal plate, be sure to use pipe hole sleeve sold separately.

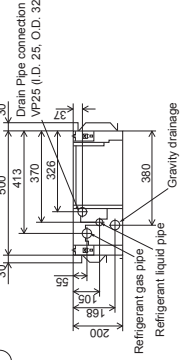


In case of rear piping draw out, cut off the lower and the right side portions of the sleeve collar.

• Sleeve is for use in refrigerant piping work. Please install another pipe separately for drain piping work.

Pipe locations

All models



- Attach the washers and nuts to the suspension bolts.
- Attach the hanging tool to the above nuts, and tighten the nuts.

- ## Securing the suspension bolts

- Secure the suspension bolts firmly following the illustrations and other instructions.

Prenatal

Keep the openings of the pipes covered with tapes etc. to prevent dust, sand, etc. from entering them.

- Remove the flared nuts. (on both liquid and gas sides)

Copper pipe diameter	ø6.35
	ø9.52
	ø12.7
Use a flare tool (see Note that measures a flare tool in use, if a conventional flare tool is used, the protrusion so that it	

	Copper fibre diameter	Clutch fibre fare tool for R32 or R410A	Measurement R32 (mm)
	φ6.35	0.0 - 0.5	Conventional (R32) fibre tool
	φ5.62	0.0 - 0.5	Clutch type
	φ5.62	1.5 - 2.0	Wring nut
	φ5.20	1.0 - 1.5	1.5 - 2.0
	φ4.77	0.0 - 0.5	2.0 - 2.5

Use a fibre tool designed for R32, R410A or a conventional fibre tool.

Note that measurement B (pronoun from the flaring body) will vary depending on the type of flare tool you use.

If the flare tool is used, use a copper pipe plange or a similar instrument to check protrusion so that you can keep measurement B to a correct value.

Note that measurement B (protrusion from the flaring block) will vary depending on the type of a flare tool in use.

• Install the drain pipe according to the installation manual in order to drain properly.

- Impaction in draining may cause food indigestion and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gases such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Install the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.

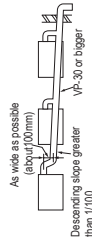
(1) Insert the joint to the drain hose on the indoor unit and fix it securely with the clamp (small).

- Do not apply adhesives on this end

- 2) Connect the drain pipe (VP25) to the joint and fix it securely with the clamp (fig.).
- 3) Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
 - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
 - Do not set up air vent.



- When sharing a drain pipe for more than one unit, lay the main pipe 100mm below the drain outlet of the unit. In addition, select VP-30 or bigger size for main drain pipe.



- 4) Insulate the drain pipe.
- Be sure to insulate the joint and the drain pipe installed indoor otherwise it may cause dew condensation and water leakage.

Either use a level vial, or adjust the level according to the method below.

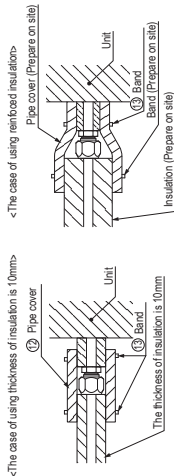
-
- Adjust so the bottom side of the unit will be leveled with the water surface as illustrated below.
- Pipe side
- Pour water
- Water surface
- 0.5mm
- Vinyl hose
- Let the pipe side be slightly sloped.
- If the unit is not leveled, it may cause malfunctions or no operation of the float switch.

Indoor

- Connect the pipes on both liquid and gas sides.
 - Tighten the nuts to the following torque.
- | | |
|-------------|---|
| Liquid side | ($\phi 6.35$) : 14.0 - 18.0 N·m (1.4 - 1.8 kgf·m) |
| Gas side | ($\phi 9.52$) : 34.0 - 42.0 N·m (3.4 - 4.2 kgf·m) |
| | ($\phi 12.7$) : 49.0 - 61.0 N·m (4.9 - 6.1 kgf·m) |

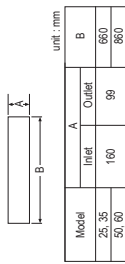
Do not apply excess torque to the flared nuts. Otherwise, the flared nuts may crack.

- Do not apply excess torque to the flared nuts. Otherwise, the flared nuts may crack.



- Cover the flare connector part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached bands.
 - Make sure to insulate both gas pipes and liquid pipes completely.
 - ※ Incomplete insulation may cause dew condensation or water dripping.
 - Use heat-resistant (20 °C or more) insulations on the gas side pipes.
 - In case of using at high humidity condition, reinforce insulation of refrigerant pipes.
- Surfaces of insulation may cause dew condition or water dripping, if insulations are not reinforced.

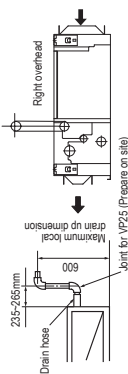
- Size of air inlet and outlet of the plate.



- Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached bands.

- Make sure to insulate both gas pipes and liquid pipes completely.
- ※ Incomplete insulation may cause dew condensation or water dropping.
 - Use heat-resistant (120 °C or more) insulations on the gas side pipes.
- In case of using at high humidity condition, reinforce insulation of refrigerant pipes.
- Surface of insulation may cause dew condensation or water dropping, if insulation is not completely installed.

The position for drain pipe outlet can be raised up to 600mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water from the drain pan on the indoor unit. In order to avoid overflow, keep the horizontal pipe length and offset of the pipe within the limit shown in the figure below.

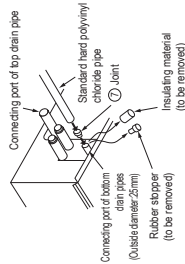


- Conduct a drainage test after completion of the electrical work and piping work.
- During the trial, make sure that drain flows properly through the piping and that no water leaks from connections.
- In case of a new building, conduct the test before it is furnished with the ceiling.
- Be sure to conduct this test even when the unit is installed in the heating season.

- 1) Supply about 1000 cc of water to the unit through the air outlet by using a feed water pump.
- 2) Check the drain while cooling operation.

- 1) Supply about 1000 cc of water to the unit through the air outlet by using a feed water pump.
- 2) Check the drain while cooling operation.

- If the bottom drain piping can be done with a descending gradient ($150\text{-}1/100$), it is possible to connect the pipes as shown in the drawing below:



ELECTRICAL WIRING WORK

Preparation of indoor unit

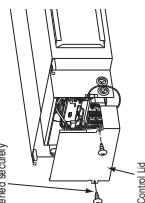
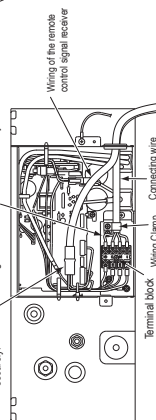
- does not operate. Then, run lamp turns on and timer lamp blinks.

Mounting of connecting wires

- (1) Remove the control lid.
- (2) Remove the wiring clamp.
- (3) Connect the connecting wire to the terminal block.
 - 1) Connect the connection wire securely. If the wire is not affixed completely, contact will be poor, and it is dangerous as the terminal block may heat up and catch fire.
 - 2) Take care not to confuse the terminal numbers for indoor and outdoor connections.
- (4) Fix the connecting wire by wiring clamp.
- (5) Connect the connector of the remote control signal receiver to the relay wiring.
- (6) Attach the control lid.

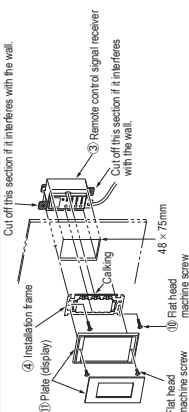
Use cables for interconnection wiring to avoid loosening of the wires.
CENELEC code for cables Required field cables.

H05NRNG1.5 (example) or 245EC57
H Harmonized cable type
05 300/500 volts
R Natural-and/or synth. rubber wire insulation
N Polychloroprene rubber conductors insulation
N Stranded core
40/5 Number of conductors
G One conductor of the cable is the earth conductor (yellow/green)
1.5 Section of copper wire (mm ²)



Securing the remote control signal receiver

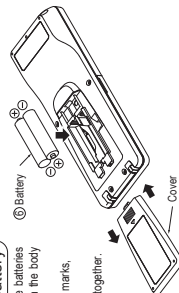
-
- (1) Open a through-hole on the wall to install the reception face for the remote control signal receiver (3).
- (2) Insert the remote control signal receiver (3) in the installation frame (4), and fix the cabling section.
- (3) Fix the installation frame (4) on the wall using the flail head machine screws (1).
- (4) Fix the plate (display) (2) on the installation frame (4) using the flail head machine screws packed together with the plate (display) (2).



INSTALLATION OF WIRELESS REMOTE CONTROL

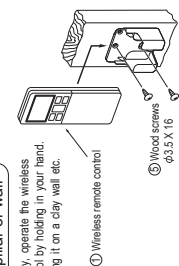
Mounting method of battery

- Pull out the cover and mount the batteries [R03 (AAA, Micro), x2 pieces] in the body regularly.
(Fit the poles with the indication marks, $\oplus$ & $\ominus$ without fail)
Do not use new and old batteries together.



Fixing to pillar or wall

- Conventionally, operate the wireless remote control by holding in your hand. Avoid installing it on a clay wall etc.

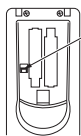


INSTALLING TWO AIR-CONDITIONERS IN THE SAME ROOM

When two air-conditioners are installed in the same room, use this setting when the two air-conditioners are not operated with one remote control. Set the remote control and indoor unit.

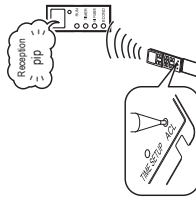
Setting the remote control

- (1) Pull out the cover and take out batteries.
- (2) Disconnect the switching line next to the battery with wire cutters.



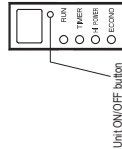
Setting an indoor unit

- (1) Turn off the power source, and turn it on after 1 minute.
- (2) Point the remote control that was set according to the procedure described on the left side at the unit display section and send a signal by pressing the ACL switch on the remote control.
Since the signal is sent in about 5 seconds after the ACL switch is pressed, point the remote control at the unit display section for some time.
- (3) Check that the reception buzzer sound "pip" is emitted from the indoor unit.
At completion of the setting, the indoor unit emits a buzzer sound "beep" (no reception tone is emitted, start the setting from the beginning again).



HOW TO RELOCATE OR DISPOSE OF THE UNIT

- In order to protect the environment, be sure to pump down (recovery of refrigerant).
- Pump down is the method of recovering refrigerant from the indoor unit to the outdoor unit when the pipes are removed from the unit.
- Forced cooling operation
Turn off power source. Turn on power source again after a while. Then, press the ON/OFF button continuously for at least 5 seconds. (The operation will start.)



TERMINAL CONNECTION FOR AN INTERFACE

- (1) Remove the control lid. (Remove the screw.)
- (2) There is a terminal (respectively marked with CNS) for the rotor control board.
In connecting an interface, connect to the respective terminal securely with an optional "Interface connection kit SC-BK1NE and SC-BK2NE" and fasten the connection harness onto the rotor control box with the clamp supplied with the kit.
For more details, please refer to the user's manual of your "Interface connection kit SC-BK1NE and SC-BK2NE".

INSTALLATION TEST CHECK POINTS

Check the following points again after completion of the installation, and before turning on the power. Conduct a test run again and ensure that the unit operates properly. Explain to the customer how to use the unit and how to take care of the unit following the installation manual.

After installation

- | | | | |
|--------------------------|---|--------------------------|---|
| ☐ | Power cables and connecting wires are securely fixed to the terminal block. (Both indoor and outdoor) | ☐ | No gas leaks from the joints of the operation valve. |
| ☐ | The power source voltage is correct as the rating. | ☐ | The pipe joints for indoor and outdoor pipes have been insulated. |
| ☐ | The drain hose is fixed securely. | ☐ | The screw of the control lid is tightened securely. |

Test run

- | | |
|--------------------------|---|
| ☐ | Operation of the unit has been explained to the customer. (Three-minutes restart preventive time) |
| ☐ | When the air conditioner is restarted or when changing the operation, the unit will not start operating for approximately 3 minutes. This is to protect the unit and it is not a malfunction. |
| ☐ | AI-cooling operation is normal. |
| ☐ | No abnormal noise. |
| ☐ | Water drains smoothly. |
| ☐ | Protective functions are not working. |
| ☐ | The remote control is normal. |

(3) 4-way ceiling compact type(FDTC) Models FDTC25VH, 35VH

PJF012D509

This manual is for the installation of the indoor unit.

For wired remote control installation, refer to page 112. For wireless kit installation, refer to page 130. For electrical wiring work (Outdoor unit) and refrigerant pipe work installation for outdoor unit, refer to page 11. For motion sensor kit installation, refer to page 138. This unit must always be used with the panel.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, **⚠ WARNING** and **⚡ CAUTION**.
⚠ WARNING: Wrong installation would cause serious consequences such as injuries or death.
⚡ CAUTION: Wrong installation might cause serious consequences depending on circumstances.
 Both mentions the important items to protect your health and safety so strictly follow them by any means.
- The meanings of "Marks" used here are as shown on the right:
 ⓧ Never do it under any circumstances. Ⓜ Always do it according to the instruction.
- After completing the installation, do commissioning to confirm there are no abnormalities, and explain to the customers about "SAFETY PRECAUTIONS", correct operation method and maintenance method (air filter cleaning, operation method and temperature setting method) with user's manual of this unit.
 Ask your customers to keep this installation manual together with the user's manual. Also, ask them to hand over the user's manual to the new user when the owner is changed.

⚠ WARNING

- Installation should be performed by the specialist.** Ⓜ
If you install the unit by yourself, it may lead to serious trouble such as water leakage, electric shock, fire, and injury due to overturn of the unit.
- Install the system correctly according to these installation manuals.** Ⓜ
Improper installation may cause explosion, injury, water leakage, electric shock, and fire.
- Check the density referred by the formula (accordance with ISO5149).** Ⓜ
If the density exceeds the limit density, please consult the dealer and install the ventilation system.
- Use the genuine accessories and the specified parts for installation.** Ⓜ
If parts unspecified by our company are used it could cause water leakage, electric shock, fire, and injury due to overturn of the unit.
- Ventilate the working area well in case the refrigerant leaks during installation.** Ⓜ
If the refrigerant contacts the fire, toxic gas is produced.
In case of R32, the refrigerant could be ignited because of its flammability.
- Install the unit in a location that can hold heavy weight.** Ⓜ
Improper installation may cause the unit to fall leading to accidents.
- Install the unit properly in order to be able to withstand strong winds such as typhoons, and earthquakes.** Ⓜ
Improper installation may cause the unit to fall leading to accidents.
- Do not mix air in to the cooling cycle on installation or removal of the air-conditioner.** ⓧ
If air is mixed in, the pressure in the cooling cycle will rise abnormally and may cause explosion and injuries.
- Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.** Ⓜ
Power source with insufficient capacity and improper work can cause electric shock and fire.
- Use specified wire for electrical wiring, fasten the wiring to the terminal securely, and hold the cable securely in order not to apply unexpected stress on the terminal.** Ⓜ
Loose connections or hold could result in abnormal heat generation or fire.
- Arrange the electrical wires in the control box properly to prevent them from rising. Fit the lid of the services panel properly.** Ⓜ
Improper fitting may cause abnormal heat and fire.
- Check for refrigerant gas leakage after installation is completed.** Ⓜ
If the refrigerant gas leaks into the house and comes in contact with a fan heater, a stove, or an oven, toxic gas is produced.
- Use the specified pipe, flare nut, and tools for R32 or R410A.** Ⓜ
Using existing parts (R22) could cause the unit failure and serious accident due to explosion of the cooling cycle.
- Tighten the flare nut according to the specified method by with torque wrench.** Ⓜ
If the flare nut were tightened with excess torque, it could cause burst and refrigerant leakage after a long period.
- Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulfide gas can occur.** ⓧ
Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- Connect the pipes for refrigeration circuit securely in installation work before compressor is operated.** Ⓜ
If the compressor is operated when the service valve is open without connecting the pipe, it could cause explosion and injuries due to abnormal high pressure in the system.
- Stop the compressor before removing the pipe after shutting the service valve on pump down work.** Ⓜ
If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- Only use prescribed optional parts. The installation must be carried out by the qualified installer.** Ⓜ
If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- Do not repair by yourself. And consult with the dealer about repair.** ⓧ
Improper repair may cause water leakage, electric shock or fire.
- Consult the dealer or a specialist about removal of the air-conditioner.** Ⓜ
Improper installation may cause water leakage, electric shock or fire.
- Turn off the power source during servicing or inspection work.** Ⓜ
If the power is supplied during servicing or inspection work, it could cause electric shock and injury by the operating fan.
- Do not run the unit when the panel or protection guard are taken off.** ⓧ
Touching the rotating equipment, hot surface, or high voltage section could cause an injury to be caught in the machine, to get burned, or electric shock.
- Shut off the power before electrical wiring work.** Ⓜ
It could cause electric shock, unit failure and improper running.

⚠ CAUTION

- Perform earth wiring surely.** Ⓜ
Do not connect the earth wiring to the gas pipe, water pipe, lightning rod and telephone earth wiring. Improper earth could cause unit failure and electric shock due to a short-circuit.
- Earth leakage breaker must be installed.** Ⓜ
If the earth leakage breaker is not installed, it can cause electric shocks.
- Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.** Ⓜ
Using the incorrect one could cause the system failure and fire.
- Do not use any materials other than a fuse of correct capacity where a fuse should be used.** ⓧ
Connecting the circuit by wire or copper wire could cause unit failure and fire.
- Do not install the indoor unit near the location where there is possibility of flammable gas leakages.** ⓧ
If the gas leaks and gathers around the unit, it could cause fire.
- Do not install and use the unit where corrosive gas (such as sulfurous acid gas etc.) or flammable gas (such as thinner, petroleum etc.) may be generated or accumulated, or volatile flammable substances are handled.** ⓧ
It could cause the corrosion of heat exchanger, breakage of plastic parts etc. And inflammable gas could cause fire.
- Secure a space for installation, inspection and maintenance specified in the manual.** Ⓜ
Insufficient space can result in accident such as personal injury due to falling from the installation place.
- Do not use the indoor unit at the place where water splashes such as laundry.** ⓧ
Indoor unit is not waterproof. It could cause electric shock and fire.
- Do not use the indoor unit for a special purpose such as food storage, cooling for precision instrument, preservation of animals, plants, and a work of art.** ⓧ
It could cause the damage of the items.
- Do not install nor use the system near equipments which generate electromagnetic wave or high harmonics.** ⓧ
Equipments like inverter equipment, private power generator, high-frequency medical equipment, or telecommunication equipment might influence the air-conditioner and cause a malfunction and breakdown. Or the air-conditioner might influence medical equipments or telecommunication equipments, and obstruct their medical activity or cause jamming.
- Do not install the remote control at the direct sunlight.** ⓧ
It could cause breakdown or deformation of the remote control.
- Do not install the indoor unit at the place listed below.** ⓧ
 • Places where flammable gas could leak.
 • Places where carbon fiber, metal powder or any powder is floated.
 • Place where the substances which affect the air conditioner are generated such as sulfide gas, chloride gas, acid, alkali or ammoniac atmospheres.
 • Places exposed to oil mist or steam directly.
 • On vehicles and ships
 • Places where machinery which generates high harmonics is used.
 • Places where cosmetics or special sprays are frequently used.
 • Highly salted area such as beach.
 • Heavy snow area
 • Places where the system is affected by smoke from a chimney.
 • Altitude over 1000m
- Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation)** ⓧ
 • Locations with any obstacles which can prevent inlet and outlet air of the unit.
 • Locations where vibration can be amplified due to insufficient strength of structure.
 • Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam. (in case of the infrared specification unit)
 • Locations where an equipment affected by high harmonics is placed. (TV set or radio receiver is placed within 5m)
 • Locations where drainage cannot run off safely.
 • It can affect performance or function and etc..
 Do not install the motion sensor mounting panel at following places.
 It could cause detection error, incapacity of detection, or characteristic degradation.
 • Place where vibration is applied to it for a long period of time.
 • Place where static electricity or electromagnetic wave generates.
 • Place where it is exposed to high temperature or humidity for a long period of time.
 • Dusty place or where the lens face could be fouled or damaged.
- Do not put any valuables which will break down by getting wet under the air-conditioner.** ⓧ
Condensation could drop when the relative humidity is higher than 80% or drain pipe is clogged, and it damages user's belongings.
- Do not use the base frame for the outdoor unit which is corroded or damaged after a long period of use.** ⓧ
It could cause the unit falling down and injury.
- Pay attention not to damage the drain pan by weld sputter when brazing work is done near the unit.** Ⓜ
If sputter entered into the unit during brazing work, it could cause damage (pinhole) of drain pan and leakage of water. To avoid damaging, keep the indoor unit packed or cover the indoor unit.
- Install the drain pipe to drain the water surely according to the installation manual.** Ⓜ
Improper connection of the drain pipe may cause dropping water into room and damaging user's belongings.
- Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.** Ⓜ
If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.
- For drain pipe installation, be sure to make descending slope of greater than 1/100, not to make traps, and not to make air-bleeding.** Ⓜ
Check if the drainage is correctly done during commissioning and ensure the space for inspection and maintenance.
- Ensure the insulation on the pipes for refrigeration circuit so as not to condense water.** Ⓜ
Incomplete insulation could cause condensation and it would wet ceiling, floor, and any other valuables.
- Do not install the outdoor unit where is likely to be a nest for insects and small animals.** ⓧ
Insects and small animals could come into the electronic components and cause breakdown and fire. Instruct the user to keep the surroundings clean.
- Pay extra attention, carrying the unit by hand.** Ⓜ
Carry the unit with 2 people if it is heavier than 20kg. Do not use the plastic straps but the grabbing place, moving the unit by hand. Use protective gloves in order to avoid injury by the aluminum fin.
- Make sure to dispose of the packaging material.** Ⓜ
Leaving the materials may cause injury as metals like nail and woods are used in the package.
- Do not operate the system without the air filter.** ⓧ
It may cause the breakdown of the system due to clogging of the heat exchanger.
- Do not touch any button with wet hands.** ⓧ
It could cause electric shock.
- Do not touch the refrigerant piping with bare hands when in operation.** ⓧ
The pipe during operation would become very hot or cold according to the operating condition, and it could cause a burn or frostbite.
- Do not clean up the air-conditioner with water.** ⓧ
It could cause electric shock.
- Do not turn off the power source immediately after stopping the operation.** ⓧ
Be sure to wait for more than 5 minutes. Otherwise it could cause water leakage or breakdown.
- Do not control the operation with the circuit breaker.** ⓧ
It could cause fire or water leakage. In addition, the fan may start operation unexpectedly and it may cause injury.

① Before installation

- Install correctly according to the installation manual.
- Confirm the following points:
 - Unit type/Power source specification
 - Pipes/Wires/Small parts
 - Accessory items

Accessory item

For unit hanging		For refrigerant pipe		For drain pipe			
Flat washer (M10)	Level gauge	Pipe cover(big)	Pipe cover (small)	Strap	Pipe cover(big)	Pipe cover(small)	Drain hose
1	1	1	1	4	1	1	1
For unit hanging	For height adjustment and leveling	For heat insulation of gas pipe	For heat insulation of liquid tube	For pipe cover fixing of drain socket	For heat insulation of drain socket	For drain pipe connecting	For drain hose mounting

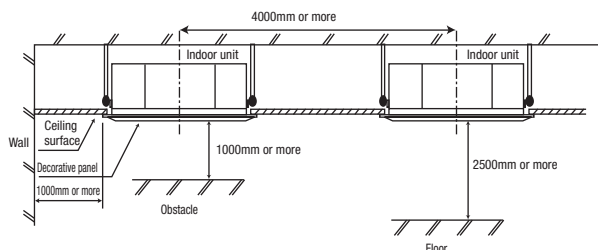
When moving the indoor unit, hold only the hanging hardware (4 places) only, with care not to apply forces to any other parts of the unit (particularly the refrigerant pipe, drain pipe, and resin parts).

② Selection of installation location for the indoor unit

- Select the suitable areas to install the unit under approval of the user.
 - Areas where the indoor unit can deliver hot and cold wind sufficiently. Suggest to the user to use a circulator if the ceiling height is over 3m to avoid warm air being accumulated on the ceiling.
 - In case of the panel having the motion sensor, the installation height must be no higher than 4 m. It could reduce the sensitivity of motion sensor, disabling the detection.
 - Areas where there is enough space to install and service.
 - Areas where it can be drained properly. Areas where drain pipe descending slope can be taken.
 - Areas where there is no obstruction of air flow on both air return grille and air supply port.
 - Areas where fire alarm will not be accidentally activated by the air-conditioner.
 - Areas where the supply air does not short-circuit.
 - Areas where it is not influenced by draft air.
 - Areas not exposed to direct sunlight.
 - Areas where dew point is lower than around 28°C and relative humidity is lower than 80%. This indoor unit is tested under the condition of JIS (Japan Industrial Standard) high humidity condition and confirmed there is no problem. However, there is some risk of condensation drop if the air-conditioner is operated under the severer condition than mentioned above. If there is a possibility to use it under such a condition, attach additional insulation of 10 to 20mm thick for entire surface of indoor unit, refrigeration pipe and drain pipe.
 - Areas where TV and radio stays away more than 1m. (It could cause jamming and noise.)
 - Areas where any items which will be damaged by getting wet are not placed such as food, table wares, server, or medical equipment under the unit.
 - Areas where there is no influence by the heat which cookware generates.
 - Areas where not exposed to oil mist, powder and/or steam directly such as above fryer.
 - Areas where lighting device such as fluorescent light or incandescent light doesn't affect the operation.
(A beam from lighting device sometimes affects the infrared receiver for the wireless remote control and the air-conditioner might not work properly.)
- Check if the place where the air-conditioner is installed can hold the weight of the unit. If it is not able to hold, reinforce the structure with boards and beams strong enough to hold it. If the strength is not enough, it could cause injury due to unit falling.
- If there are 2 units of wireless type, keep them away for more than 6m to avoid malfunction due to cross communication.
- When plural indoor units are installed nearby, keep them away for more than 4m.

Space for installation and service

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



Set blow-out pattern

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

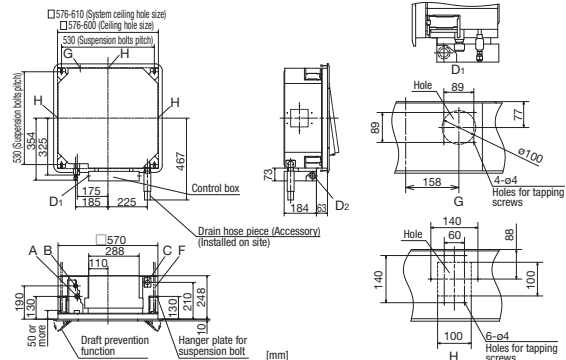
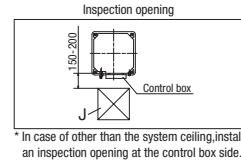
Where there are pipe joints on the way of embedded piping, provide adequate openings for inspection of the joints.

③ Preparation before installation

- If suspension bolt becomes longer, do reinforcement of earthquake resistant.
 - For grid ceiling
 - When suspension bolt length is over 500mm, or the gap between the ceiling and roof is over 700mm, apply earthquake resistant brace to the bolt.
 - In case the unit is hanged directly from the slab and is installed on the ceiling plane which has enough strength.
 - When suspension bolt length is over 1000mm, apply the earthquake resistant brace to the bolt.
- Prepare four (4) sets of suspension bolt, nut and spring washer (M10 or M8) on site.

Ceiling opening, Suspension bolts pitch, Pipe position

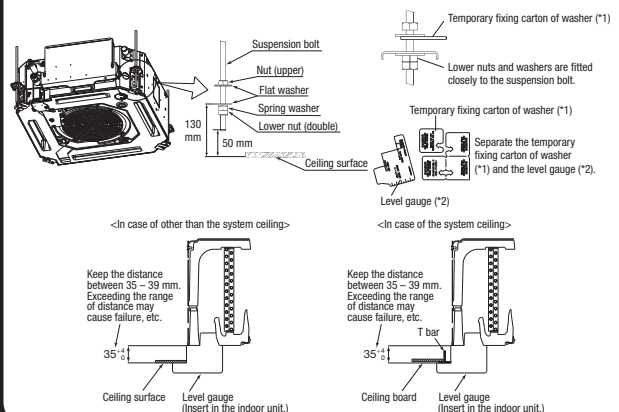
Symbol	Content
A	Gas piping
B	Liquid piping
C	Drain piping
D1	Power source connection
D2	Remote control code and signal wiring connection
F	Suspension bolts
G	Outside air opening for ducting
H	Air outlet opening for ducting
J	Inspection opening



④ Installation of indoor unit

Work procedure

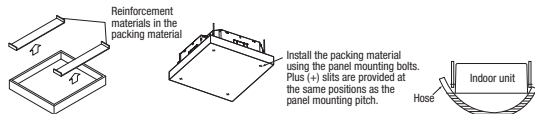
- This unit is designed to install on a system ceiling. If necessary, remove T bars temporarily before installing the unit. When it is installed on a ceiling other than the system ceiling, install an inspection port at the control box side.
- Determine the position of suspension bolts (530 mm × 530 mm).
- Use 4 suspension bolts, and fix them such that each bolt can withstand a pull-out load of 500 N.
- Set the suspension bolt length to about 50 mm from the ceiling.
- Temporarily locate the lower nuts of the suspension bolts (4 places) at a position approximately 130 mm from the ceiling.
- Temporarily locate the upper nuts of the suspension bolts (4 places) at positions sufficiently distance from the lower nuts so that they do not interfere with the suspension of the indoor unit and with its height adjustment.
- Set the upper nuts of the suspension bolts and upper washers (4 places) at positions sufficiently distance from the lower nuts. Then, push and insert the temporary fixing carton of washers (*) onto suspension bolts. Make sure that the upper washers do not slide down.
- Suspend the indoor unit.
- After suspending the indoor unit, mount the level gauge (*) to the air outlet of the indoor unit, and adjust the suspension height of the indoor unit. Loosen the upper nuts (4 places), and adjust the suspension height using the lower nuts (4 places). Confirm there is no slack between the lower nuts and flat washers of the indoor unit hanger plate (4 places).
- Remove the temporary fixing carton of washers (from all 4 places).
- Make sure that the indoor unit is installed horizontally. Confirm the levelness of the indoor unit using a level gauge or transparent hose filled with water. (Keep the height difference at both ends of the indoor unit within 3 mm.)
- Tighten the upper nuts of the suspension bolts (4 places).



④ Installation of indoor unit (continued)

Protection of the indoor unit

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



Caution

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

⑤ Refrigerant pipe

Caution

- Be sure to use new pipes for the refrigerant pipes. Use the flare nut attached to the product. Regarding whether existing pipes can be reused or not, and the washing method, refer to the instruction manual of the outdoor unit, catalogue or technical data.
- 1) In case of reuse: Do not use old flare nut, but use the nut attached to the unit.
- 2) In case of reuse: Flare the end of pipe replaced partially for R32 or R410A.

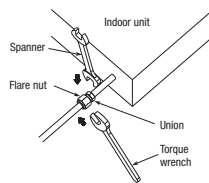
▲WARNING : When flared joints are reused indoors, the flare part shall be re-fabricated. (only for R32)

Pipe dia. d mm	Min. pipe wall thickness mm	Protruding dimension for flare, mm		Flare O.D. D mm	Flare nut tightening torque N·m
		Rigid (Clutch type) For R32 For R410A	Conventional tool		
6.35	0.8	0 - 0.5	0.7 - 1.3	8.9 - 9.1	14 - 18
9.52	0.8			12.8 - 13.2	34 - 42
12.7	0.8			16.2 - 16.6	49 - 61
15.88	1			19.3 - 19.7	68 - 82
19.05	1.2			23.6 - 24.0	100 - 120

- Use phosphorus deoxidized copper alloy seamless pipe (C1220T) for refrigeration pipe installation. In addition, make sure there is no damage both inside and outside of the pipe, and no harmful substances such as sulfur, oxide, dust or a contaminant stuck on the pipes.
- Do not use any refrigerant other than the designated refrigerant.
- Using other refrigerant except the designated refrigerant, may degrade inside refrigeration oil. And air getting into refrigeration circuit may cause over-pressure and resultant it may result in bursting, etc.
- Store the copper pipes indoors and seal the both end of them until they are brazed in order to avoid any dust, dirt or water getting into pipe. Otherwise it will cause degradation of refrigeration oil and compressor breakdown, etc.
- Use special tools for R32 or R410A refrigerant.

Work procedure

- Remove the flare nut and blind flanges on the pipe of the indoor unit.
 - ※ Make sure to loosen the flare nut with holding the nut on pipe side with a spanner and giving torque to the nut with another spanner in order to avoid unexpected stress to the copper pipe, and then remove them. (Gas may come out at this time, but it is not abnormal.)
 - Pay attention whether the flare nut pops out. (as the indoor unit is sometimes pressured.)
- Make a flare on liquid pipe and gas pipe, and connect the refrigeration pipes on the indoor unit.
 - ※ Bend radius of pipe must be 4D or larger. Once a pipe is bent, do not readjust the bending. Do not twist a pipe or collapse to 2/3D or smaller.
 - Make sure to use flare nuts assembled on the unions.
 - Usage of other flare nuts could cause refrigerant leakage.
 - ※ Do a flare connection as follows:
 - Make sure to hold the nut on indoor unit pipe side using double spanner method as indicated when fastening / loosening flare nuts in order to prevent unintentional twisting of the copper pipe.
 - When fastening the flare nut, align the refrigeration pipe with the center of flare nut, screw the nut for 3-4 times by hand and then tighten it by spanner with the specified torque mentioned in the table above.
- Cover the flare connection part of the indoor unit with attached insulation material after a gas leakage inspection, and tighten both ends with attached straps.
 - Make sure to insulate both gas pipes and liquid pipes completely.
 - ※ Incomplete insulation may cause dew condensation or water dropping.
 - Use heat-resistant (120 °C or more) insulations on the gas side pipes.
 - In case of using at high humidity condition, reinforce insulation of refrigerant pipes.
 - Surface of insulation may cause dew condition or water dropping, if insulations are not reinforced.
- Refrigerant is charged in the outdoor unit. As for the additional refrigerant charge for the indoor unit and piping, refer to the installation manual attached to the outdoor unit.

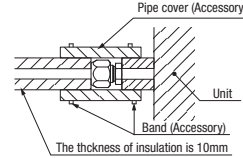


⑤ Refrigerant pipe (continued)

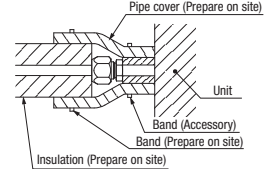
Caution:

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

<The case of using thickness of insulation is 10mm>



<The case of using reinforced insulation>



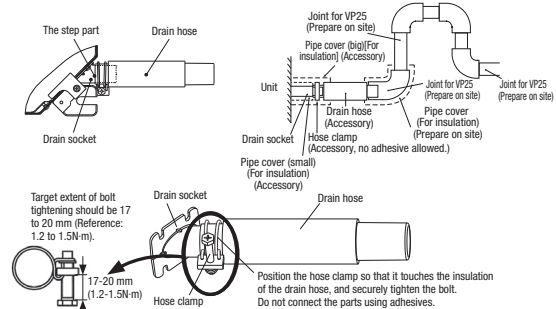
⑥ Drain pipe

Caution

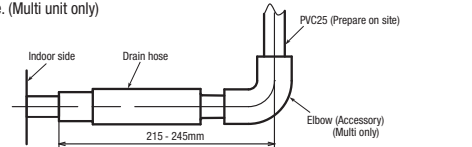
- Install the drain pipe according to the installation manual in order to drain properly. Imperfection in draining may cause flood indoors and wetting the household goods, etc.
- Do not put the drain pipe directly into the ditch where toxic gas such as sulfur, the other harmful and inflammable gas is generated. Toxic gas would flow into the room and it would cause serious damage to user's health and safety (some poisoning or deficiency of oxygen). In addition, it may cause corrosion of heat exchanger and bad smell.
- Connect the pipe securely to avoid water leakage from the joint.
- Insulate the pipe properly to avoid condensation drop.
- Check if the water can flow out properly from both the drain outlet on the indoor unit and the end of the drain pipe after installation.
- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway. In addition, do not put air vent on the drain pipe. Check if water is drained out properly from the pipe during commissioning. Also, keep sufficient space for inspection and maintenance.

Work procedure

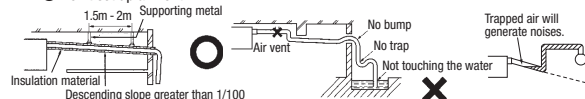
- Make sure that the drain hose (the soft PVC side) is inserted into the end of the step part of the drain socket.
 - Fix the hose clamp so that its bolt is located on the outside of the indoor unit, and the bolt are fastened in a vertical orientation.
 - Do not apply adhesives on this end.
- Position the hose clamp so that it touches the insulation of the drain hose, and then tighten the bolt.
- Turn the bolt several times until it is securely tightened, but do not tighten it excessively.



- Prepare a joint for connecting VP25 pipe, adhere and connect the joint to the drain hose (the rigid PVC side), and adhere and connect VP25 pipe (prepare on site).
 - ※ As for drain pipe, apply VP25 made of rigid PVC which is on the market.
 - Make sure that the adhesive will not get into the supplied drain hose.
 - It may cause the flexible part broken after the adhesive is dried up and gets rigid.
 - The flexible drain hose is intended to absorb a small difference at installation of the unit or drain pipes. Intentional bending, expanding may cause the flexible hose broken and water leakage.
 - As for drain pipe, apply VP25 (OD32).
 - If apply PVC25 (OD25), connect the expanded connector to the drain hose, with adhesive. (Multi unit only)

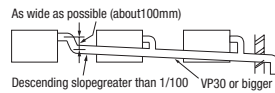


- Make sure to make descending slope of greater than 1/100 and do not make up-down bend and/or trap in the midway.
 - Pay attention not to give stress on the pipe on the indoor unit side, and support and fix the pipe as close place to the unit as possible when connecting the drain pipe.
 - Do not set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



⑥ Drain pipe (continued)

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

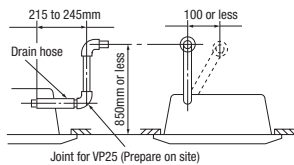


6. Insulate the drain pipe.

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

Drain up

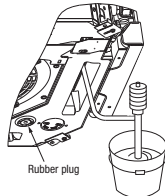
- The position for drain pipe outlet can be raised up to 850mm above the ceiling. Use elbows for installation to avoid obstacles inside ceiling. If the horizontal drain pipe is too long before vertical pipe, the backflow of water will increase when the unit is stopped, and it may cause overflow of water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



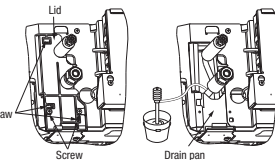
Drain test

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

- In case of pouring water from the air outlet



- In case of pouring water from the pipe lid
- Remove screws at 2 places.
 - Release the claws, and remove the lid.



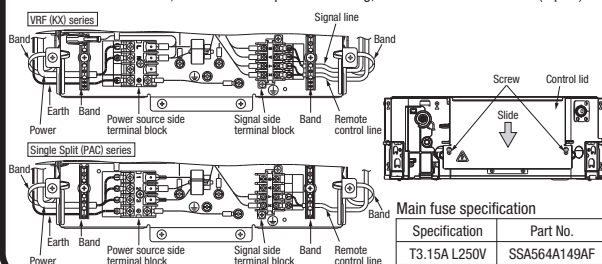
- Make sure that water drains out completely and that no water leaks from any joints of the drain pipe during the test. Test to confirm that the water drains out correctly while listening to the drain pump motor operating sound. At the drain socket (transparent), it is possible to check whether the water drains out correctly.
- Unplug the rubber plug on the indoor unit so that the remaining water drains from the drain pan after the draining test. After checking the water drainage, fix the rubber plug correctly. Installation work for the drain pipe must be performed for the entire drain pipe up to the indoor unit. If the pipe lid has been removed in order to pour water, mount the pipe lid again.

Drain pump operation

- In case electrical wiring work completed
Drain pump can be operated by the wired remote control. For the operation method, refer to [Operation for drain pump] in the installation manual for wiring work.
- In case electrical wiring work not completed
Drain pump will run continuously when the dip switch "SW7-1" on the indoor unit PCB is turned ON, the connector CnB is disconnected, and then the power source (230VAC on the terminal block ① and ②) is turned ON. Make sure to turn OFF "SW7-1" and reconnect the connector CnB after the test.

⑦ Wiring-out position and wiring connection

- Electrical installation work must be performed according to the installation manual by an electrical installation service provider qualified by a power provider of the country, and be executed according to the technical standards and other regulations applicable to electrical installation in the country.
 - Be sure to use an exclusive circuit.
 - Use specified cord, fasten the wiring to the terminal securely, and hold the cord securely in order not to apply unexpected stress on the terminal.
 - Do not put both power source line and signal line on the same route. It may cause miscommunication and malfunction.
 - Be sure to do D type earth work.
 - For the details of electrical wiring work, see attached instruction manual for electrical wiring work.
- Loosen screws (2 pcs.) on the control box of the unit.
 - Remove the control lid by sliding it in the arrow direction in the figure.
 - Introduce the wiring in the control box, and connect it securely to the terminal block.
 - Fix the wiring with bands as shown below.
 - Install the control lid, with care not to pinch the wiring, and fix the lid with screws (2 pcs.).



⑧ Panel installation

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

⑨ Check list after installation

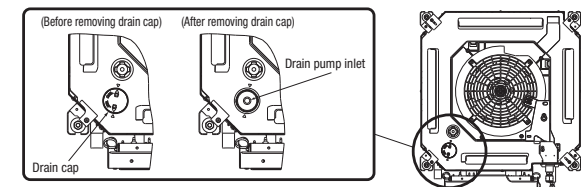
- Check the following items after all installation work completed.

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

⑩ How to check the dirt of drain pan and cleaning the inlet of the drain pump. (Maintenance)

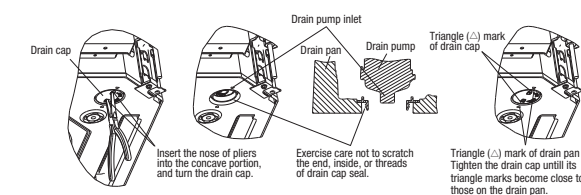
The method of checking the dirt of drain pan

- Remove the panel according to the installation manual of the panel.
- Check the dirt on the drain pan from the drain cap, and check the drain pump inlet. If the drain pan is very dirty, remove the drain pan and clean it.



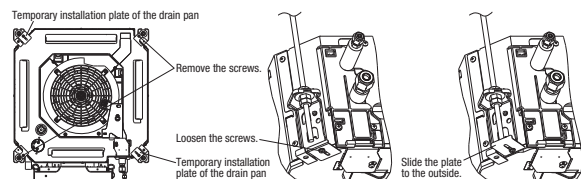
Cleaning of drain pump inlet

- It is possible to clean the drain pump inlet and surrounding area by removing the drain cap only; it is not necessary to remove the drain pan.
 - Before removing the drain cap, remove the rubber plug and drain water from the drain pan.
- Insert the nose of the pliers into the concave portions (2 places) of the drain cap, and rotate the pliers about 1 turn in the CCW direction. The drain cap is removed.
 - When cleaning the drain pump inlet, use a soft plastic tool. If a metallic tool is used, the drain cap mounting portion may be scratched and water may leak.
 - Before mounting the drain cap, rinse it and **remove any foreign material from the inside of the cap**. If the drain cap is installed with foreign material inside it, it may cause water to leak.
 - Insert the nose of the pliers into the concave portions of the drain cap and rotate the pliers to install the drain cap. Rotate the drain cap about 1 turn in the CW direction until it stops rotating. If the drain cap is not rotated for 1 or more turns, the cap will not have been installed correctly. Remove the drain cap, and then install it again correctly.
 - After tightening the drain cap, make sure the triangle (Δ) mark of the drain cap comes close to the triangle mark on the drain pan. If these triangle marks are not close to each other, tighten the drain cap further.
 - Refix the rubber plug securely. If the cover is not refixed correctly, it may cause condensation to form and/or water to leak.



Notes for removing the drain pan

- Before removing the drain pan, drain water from the drain pan. Remove the rubber plug and drain water.
- The drain pan is installed by the temporary installation plate. Remove the 2 drain pan fixing screws, and loosen the 2 screws of the temporary installation plate. Slide the temporary installation plate to the outside of the drain pan. And then, it is possible to remove the drain pan.
- When reinstalling the drain pan, slide the temporary installation plate to the inside and temporarily fix the drain pan. Then, tighten the 2 drain pan fixing screws and the 2 screws of the temporary installation plate. Also, refix the rubber plug securely.



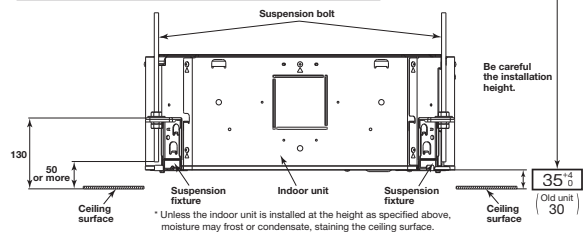
• Panel installation

PJF012D503

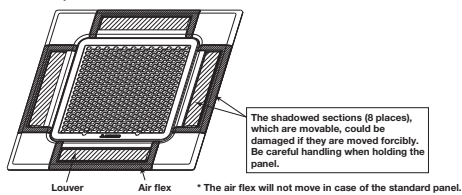
Read this manual together with the indoor unit's installation manual.

* Caution before use

- Be careful the installation height when installing the indoor unit.
Also note that the installation height of this indoor unit is different from that of current (old) unit.
Installation height from the ceiling surface to the indoor unit:
• Old unit: 30 mm $\Rightarrow$ This unit: 35 $\frac{1}{2}$ mm



- Do not attempt to move forcibly the louver and the air flex.



WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connection or hold will cause abnormal heat generation or fire.
- Make sure the power source is turned off when electric wiring work.
Otherwise, electric shock, malfunction and improper running may occur.

Function

The draft prevention panel has the draft prevention mechanism. If the draft prevention panel is installed and the draft prevention function is set, the draft prevention function will be operated and reduce the draft feeling. (Refer to **Panel setting** for details.)

- Standard panel : without the draft prevention mechanism
- Draft prevention panel : with the draft prevention mechanism

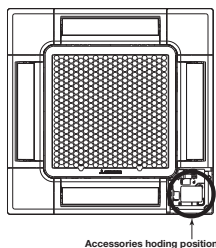
① Before installation

- Follow installation manual carefully, and install the panel properly.
- Check the following items.

○ Accessories

Bolt	4 pieces	For panel installation
Strap	4 pieces	For avoiding the corner panel from falling
Grille hook	1 piece	For avoiding the grille from falling
Screw	4 pieces	For fixing the corner panel

Note: Accessories are laid in the position removing the corner lid.

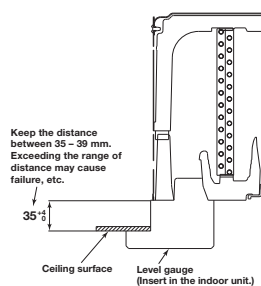


② Checking the indoor unit installation height

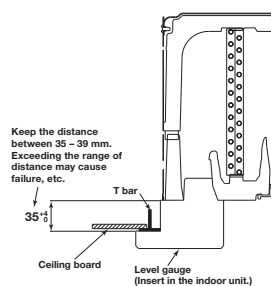
- Read this manual together with the air-conditioner installation manual carefully.
- Check if the opening size for the indoor unit is correct with the level gauge supplied in the indoor unit.
- Check if the gap between the plane and the indoor unit is correct by inserting the level gauge into the air outlet port of the indoor unit. (See below drawing)
- Adjust the installation elevation if necessary.
- Remove the level gauge before installing the panel.

Caution
If there is a height difference beyond the design limit between the installation level of the indoor unit and the panel, the panel may be subject to excessive stress during installation and it may cause distortion and damage.

<In case of other than the system ceilings>

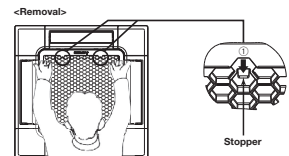


<In case of the system ceiling>



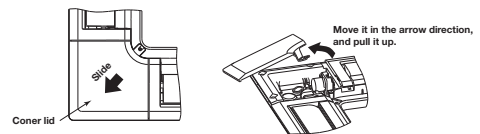
③ Removing the inlet grille

- While placing a finger behind the stopper (2 places) and pressing it in the direction of arrow ①, pull the grille downward to open the grille.
- Release the hooks of the inlet grille from the panel while it is in the open position.



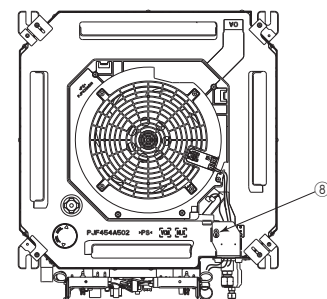
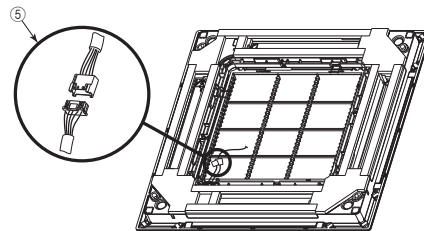
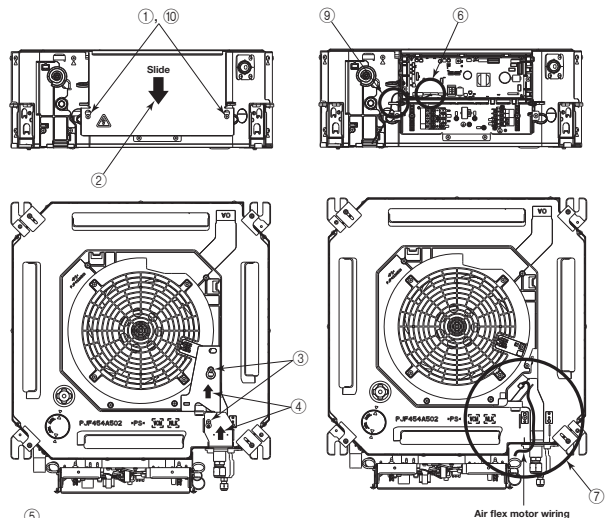
④ Removing the corner lid

- Pull the corner lid toward the direction indicated by the arrow and remove it. (Same way for all 4 corner lids)



⑤ Before installing the panel <Only Draft prevention panel>

- Loosen screws (2 pcs.) on the control lid of the unit.
- Slide the control lid in the arrow direction in the figure, and remove it.
- Loosen screws on the wiring cover (2 places).
- Slide the wiring cover (2 places) in the arrow direction in the figure, and remove it.
- Disconnect the relay connector of the air flex motor wiring attached to the panel.
- Connect the air flex motor wiring to CNJ2 (20 P, gray) on PCB in the control box of the unit.
- Pass the air flex motor wiring as shown in the figure.
- Install the wiring cover (1 place) with care not to pinch wiring, and fix it with a screw.
- Fix the air flex motor wiring with a band as shown in the figure.
- Install the control lid with care not to pinch wiring, and fix with screws (2 places.).

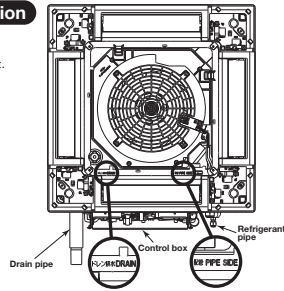


⑥ Orientation of the panel installation

- Take note that there is an orientation to install the panel.
- Install the panel with the orientation shown on the right.
 - Align the "PIPE SIDE" mark (on the panel) with the refrigerant pipes on the indoor unit.
 - Align the "DRAIN" mark (on the panel) with the drain pipe on the indoor unit.

CAUTION

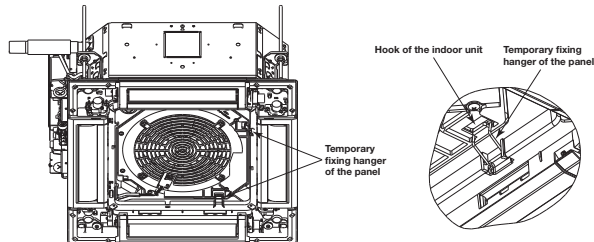
In case the orientation of the panel is not correct, it will lead to air leakage and also it is not possible to connect the motor wiring.



⑦ Installing the panel

1. Temporary hanging

- Lift up the hanger (2 places) on the panel for temporary support.
- Hang the panel on the hook on the indoor unit.



2. Fix the panel on the indoor unit

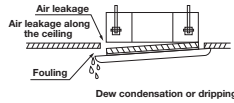
- Fasten the panel on the indoor unit with the 4 bolts supplied with the panel.

Caution

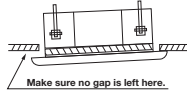
Be careful not to pinch the motion sensor wiring.

Caution

- Improperly tightened fixing bolts cause the problems listed below, so make sure that bolts are securely tightened.



- If there is a gap between the ceiling and the panel even after the fixing bolts are tightened, adjust the installation level of the indoor unit again.



Bolt for installing the panel

Caution

Do not give any stress on the panel when adjusting the height of the indoor unit to avoid unexpected distortion. It may cause the distortion of panel or failing to close the inlet grille, and the parts of the draft prevention mechanism.

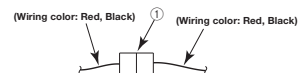
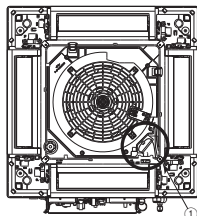
⑧ Electrical wiring

The wiring work varies depending on the panel type. Select the wiring work appropriate for the panel type.

<For the standard panel>

- ① Connect the connector of the lower motor wiring (Wiring color: Red, Black) at the panel side to the connector CnJ3 (20 P, White) of the lower motor wiring (Wiring color: Red, Black) at the unit side.

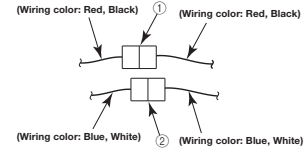
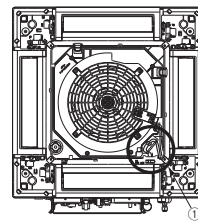
For the Standard panel



<For the draft prevention panel>

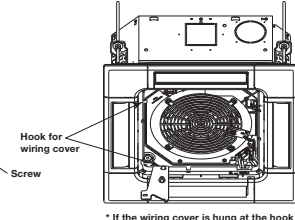
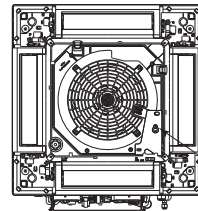
- ① Connect the connector of the lower motor wiring (Wiring color: Red, Black) at the panel side to the connector CnJ3 (20 P, White) of the lower motor wiring (Wiring color: Red, Black) at the unit side.
- ② Connect the connector of the air flex motor wiring (Wiring color: Blue, White) at the panel side to the connector CnJ4 (20 P, White) of the air flex motor wiring (Wiring color: Blue, White) at the unit side.

For the Draft prevention panel



Motor wiring connection - Detail view

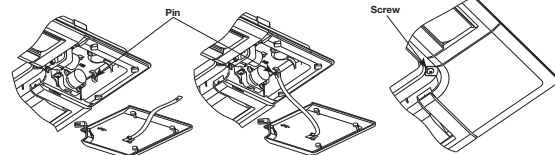
Install the wiring cover with care not to pinch wiring, and fix it with screws.



* If the wiring cover is hung at the hook on panel, it will become easier to work.

⑨ Installing a corner lid

1. To avoid unexpected falling of the corner lid, put the strap onto the corner lid's pin with turning the strap up.
2. Then hang the strap of a corner lid onto the panel's pin.
3. Hook the corner lid claws at 3 places, and fix the corner lid with attached screws.



⑩ Installing the inlet grille

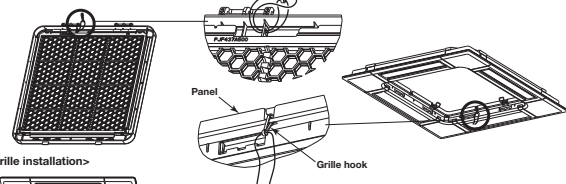
The panel and the inlet grille have no directional limitation to install. (Hinges of the inlet grille can be hooked at any side.)

Install the inlet grille in the reverse order of the steps described at ⑤ **Removing the inlet grille**.

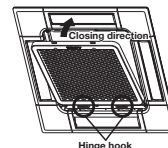
- ① Attach the fall grille hook to the panel.
- ② Insert the hinges of inlet grille in the insert holes on the panel.

Close then the inlet grille while pressing the stoppers (2 places). Confirm that both stoppers are inserted securely in the panel.

<① Installation of the grille hook>



<② Grille installation>



Caution

- Install the grille hook securely at the panel.
- The inlet grille must be installed starting from the hinge side.
- Install the inlet grille securely. It may drop if it is installed insecurely.
- When the stoppers have been deformed or damaged, repair them immediately. Unless they are repaired properly, the inlet grille may drop off.

⑪ Panel setting

<Louver swing range setting (Individual louver control setting)>

It is possible to change the swing range of the louver by the wired remote control. Once the upper and lower limit positions are set, the louver will swing within the set range. It is also possible to set the different range to each louver.

<Draft prevention setting>

The draft prevention function will not be operated if the draft prevention panel is installed and its wirings are only connected. To operate the draft prevention function, enable the draft prevention setting by using the wired or wireless remote control.

Note: It is not possible to set by the following remote control models or older.

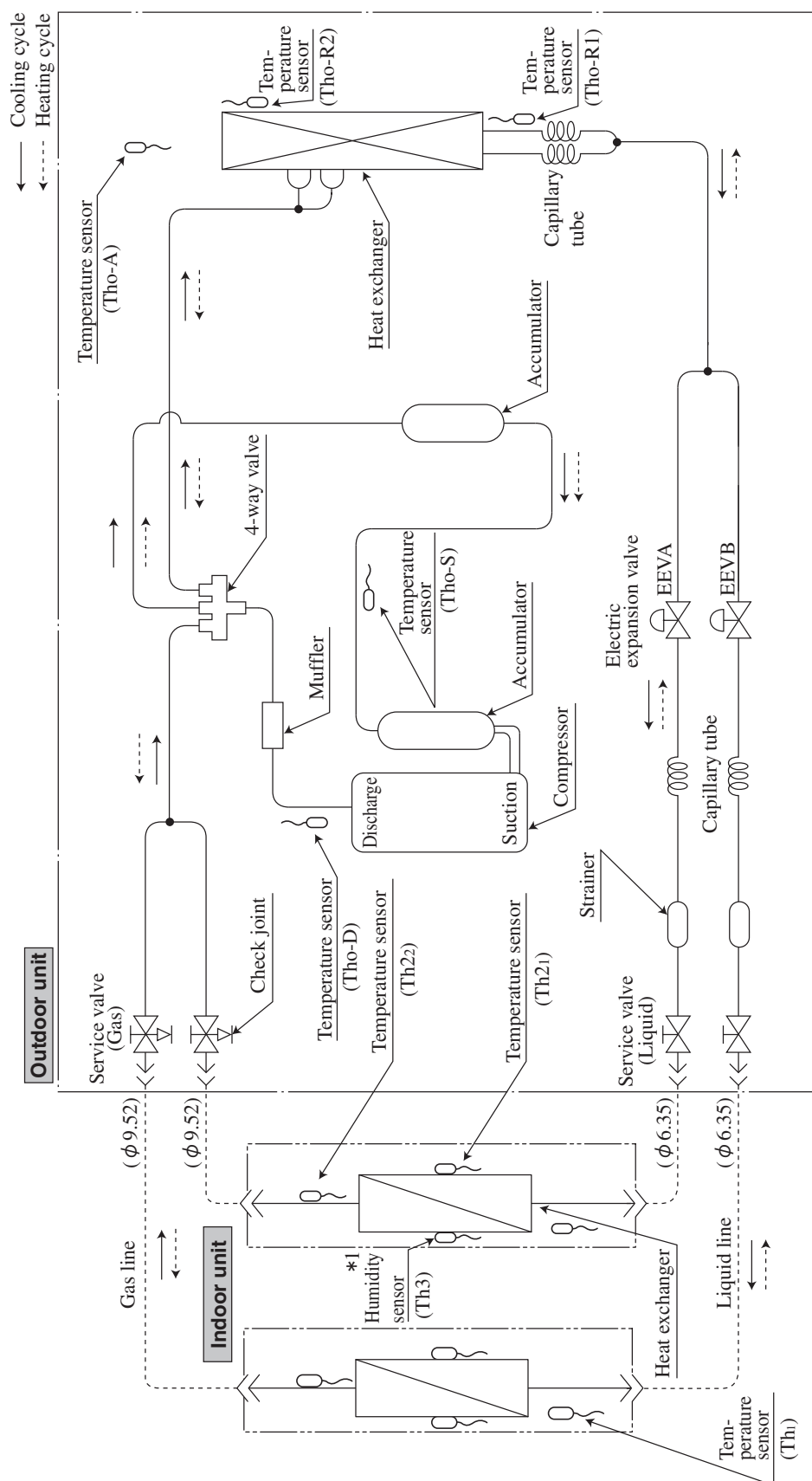
Wired: RC-EX3, RC-E5, RCH-E3
Wireless: RCN-E1R

Once you have enabled the settings in this mode, the draft prevention function is operated when the air-conditioner is started, and the parts of the draft prevention mechanism are always open when the air-conditioner is operating. When the air-conditioner is stopped, they are closed. It is possible to enable or disabled the draft prevention function for each air outlet.

For the setting details, refer to the user's manual supplied with the remote control.

3. PIPING SYSTEMS

Models SCM40ZS-W, 45ZS-W

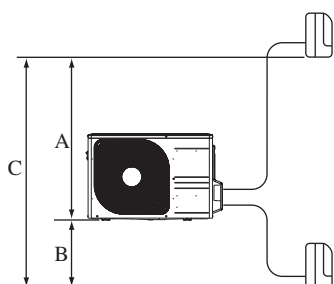


*1 Humidity sensor
SRK-ZSX-W series, SRK35ZS-W, SKM-ZSP-W series and FDTC series only.

4. RANGE OF USAGE & LIMITATIONS

Model		SCM40ZS-W	SCM45ZS-W
Item			
Indoor intake air temperature (Upper, lower limits)	Cooling	Approximately 18 to 32°C	
	Heating	Approximately 15 to 30°C	
Outdoor air temperature (Upper, lower limits)	Cooling	Approximately -15 to 46°C	
	Heating	Approximately -15 to 24°C	
Indoor units that can be used in combination	Number of connected units	2 units	
	Total of indoor Units (class kW)	4.0-6.0kW	4.5-7.0kW
Total length for all rooms		Max. 30m	
Length for one indoor unit		Max. 25m	
Difference in height between indoor and outdoor units	When indoor unit is above outdoor unit (A)	Max. 15m	
	When indoor unit is below outdoor unit (B)	Max. 15m	
Difference in height between indoor units (C)		Max. 25m	
Compressor stop/start frequency	1 cycle time	6 min. or more (from stop to stop or from start to start)	
	Stop time	3 min. or more	
Power source voltage	Voltage fluctuation	Within $\pm 10\%$ of rated voltage	
	Voltage drop during start	Within $\pm 15\%$ of rated voltage	
	Interval unbalance	Within $\pm 3\%$ of rated voltage	
Power cable length		18m ⁽¹⁾	

Note(1) The cable specifications are based on the assumption that a metal or plastic conduit is used with no more than three cables contained in a conduit and a voltage drop is 2%. For an installation falling outside of these conditions, please follow the internal cabling regulations. Adapt it to the regulation in effect in each country.



5. TABLE OF INDOOR UNIT COMBINATIONS

- The combinations of the indoor units is indicated by numbers. They are read as follows.
(Example) SRK20ZSX-W → 20 SRK25ZSX-W → 25
- The capacity of the indoor units is shown by rooms. If this exceeds the maximum capacity of the outdoor unit, the demand capacity will be proportionally distributed.
- If units are to be combined, use the table below to make the proper selection.

• Number of connectable indoor units

	SCM40ZS-W,45ZS-W
MIN	2
MAX	2

(1) Model SCM40ZS-W

(a) Indoor unit SRK * * ZSX-W models only

<Cooling>

Indoor unit combination		Cooling capacity (kW)					Power consumption (W)			Standard current (A)		
		Indoor unit capacity (kW)		Total capacity (kW)			Min.	Standard	Max.	220V	230V	240V
		A	B	Min.	Standard	Max.						
1 unit	20	2.00	-	1.5	2.0	3.4	340	430	930	2.2	2.1	2.0
	25	2.50	-	1.5	2.5	3.8	340	600	1110	3.0	2.9	2.8
	35	3.50	-	1.5	3.5	4.5	340	1000	1470	4.7	4.5	4.3
2 units	20 + 20	2.00	2.00	1.7	4.0	5.9	340	800	2100	3.7	3.5	3.4
	20 + 25	1.78	2.22	1.7	4.0	5.9	340	800	2100	3.7	3.5	3.4
	20 + 35	1.45	2.55	1.7	4.0	5.9	340	800	2100	3.7	3.5	3.4
	25 + 25	2.00	2.00	1.7	4.0	5.9	340	800	2100	3.7	3.5	3.4
	25 + 35	1.67	2.33	1.7	4.0	5.9	340	800	2100	3.7	3.5	3.4

<Heating>

Indoor unit combination		Heating capacity (kW)					Power consumption (W)			Standard current (A)		
		Indoor unit capacity (kW)		Total capacity (kW)			Min.	Standard	Max.	220V	230V	240V
		A	B	Min.	Standard	Max.						
1 unit	20	3.0	-	1.0	3.0	4.5	250	680	1140	3.2	3.1	3.0
	25	3.4	-	1.0	3.4	4.9	250	790	1270	3.7	3.5	3.4
	35	4.5	-	1.0	4.5	5.4	250	1140	1470	5.3	5.1	4.8
2 units	20 + 20	2.25	2.25	1.2	4.5	6.3	250	830	1480	3.8	3.7	3.5
	20 + 25	2.00	2.50	1.2	4.5	6.3	250	830	1480	3.8	3.7	3.5
	20 + 35	1.64	2.86	1.2	4.5	6.3	250	830	1480	3.8	3.7	3.5
	25 + 25	2.25	2.25	1.2	4.5	6.3	250	830	1480	3.8	3.7	3.5
	25 + 35	1.88	2.63	1.2	4.5	6.3	250	830	1480	3.8	3.7	3.5

(b) Indoor unit except SRK * * ZSX-W models

<Cooling>

Indoor unit combination		Cooling capacity (kW)					Power consumption (W)			Standard current (A)		
		Indoor unit capacity (kW)		Total capacity (kW)			Min.	Standard	Max.	220V	230V	240V
		A	B	Min.	Standard	Max.						
1 unit	20	2.00	-	1.5	2.0	3.1	340	510	990	2.5	2.4	2.3
	25	2.50	-	1.5	2.5	3.4	340	710	1120	3.4	3.2	3.1
	35	3.50	-	1.5	3.5	4.1	340	1190	1570	5.5	5.3	5.0
2 units	20 + 20	2.00	2.00	1.7	4.0	5.4	340	1000	1920	4.6	4.4	4.2
	20 + 25	1.78	2.22	1.7	4.0	5.6	340	1000	2100	4.6	4.4	4.2
	20 + 35	1.45	2.55	1.7	4.0	5.6	340	1000	2100	4.6	4.4	4.2
	25 + 25	2.00	2.00	1.7	4.0	5.6	340	1000	2100	4.6	4.4	4.2
	25 + 35	1.67	2.33	1.7	4.0	5.6	340	1000	2100	4.6	4.4	4.2

<Heating>

Indoor unit combination		Heating capacity (kW)					Power consumption (W)			Standard current (A)		
		Indoor unit capacity (kW)		Total capacity (kW)			Min.	Standard	Max.	220V	230V	240V
		A	B	Min.	Standard	Max.						
1 unit	20	3.00	-	1.0	3.0	3.5	250	780	940	3.8	3.6	3.5
	25	3.40	-	1.0	3.4	4.0	250	910	1120	4.4	4.2	4.1
	35	4.50	-	1.0	4.5	4.8	250	1310	1350	6.4	6.1	5.9
2 units	20 + 20	2.25	2.25	1.2	4.5	5.5	250	990	1270	4.8	4.6	4.4
	20 + 25	2.00	2.50	1.2	4.5	6.3	250	990	1630	4.7	4.5	4.3
	20 + 35	1.64	2.86	1.2	4.5	6.3	250	990	1630	4.6	4.4	4.2
	25 + 25	2.25	2.25	1.2	4.5	6.3	250	990	1630	4.6	4.4	4.2
	25 + 35	1.88	2.63	1.2	4.5	6.3	250	990	1630	4.6	4.4	4.2

(2) Model SCM45ZS-W

(a) Indoor unit SRK * * ZSX-W models only

<Cooling>

Indoor unit combination		Cooling capacity (kW)					Power consumption (W)			Standard current (A)		
		Indoor unit capacity (kW)		Total capacity (kW)			Min.	Standard	Max.	220V	230V	240V
		A	B	Min.	Standard	Max.						
1 unit	20	2.00	-	1.5	2.0	3.4	340	430	930	2.2	2.1	2.0
	25	2.50	-	1.5	2.5	3.8	340	600	1110	3.0	2.9	2.8
	35	3.50	-	1.5	3.5	4.5	340	1000	1470	4.7	4.5	4.3
2 units	20 + 20	2.00	2.00	1.7	4.0	6.2	340	860	2100	4.0	3.8	3.7
	20 + 25	2.00	2.50	1.7	4.5	6.4	340	960	2300	4.5	4.3	4.1
	20 + 35	1.64	2.86	1.7	4.5	6.4	340	960	2300	4.5	4.3	4.1
	25 + 25	2.25	2.25	1.7	4.5	6.4	340	960	2300	4.5	4.3	4.1
	25 + 35	1.88	2.63	1.7	4.5	6.4	340	960	2300	4.5	4.3	4.1
	35 + 35	2.25	2.25	1.7	4.5	6.4	340	960	2300	4.5	4.3	4.1

<Heating>

Indoor unit combination		Heating capacity (kW)					Power consumption (W)			Standard current (A)		
		Indoor unit capacity (kW)		Total capacity (kW)			Min.	Standard	Max.	220V	230V	240V
		A	B	Min.	Standard	Max.						
1 unit	20	3.0	-	1.0	3.0	4.5	250	680	1140	3.2	3.1	3.0
	25	3.4	-	1.0	3.4	4.9	250	790	1270	3.7	3.5	3.4
	35	4.5	-	1.0	4.5	5.4	250	1140	1470	5.3	5.1	4.8
2 units	20 + 20	2.25	2.25	1.2	4.5	6.5	250	830	1480	3.8	3.7	3.5
	20 + 25	2.36	2.94	1.2	5.3	6.5	250	1060	1480	4.9	4.7	4.5
	20 + 35	1.93	3.37	1.2	5.3	6.5	250	1060	1480	4.9	4.7	4.5
	25 + 25	2.65	2.65	1.2	5.3	6.5	250	1060	1480	4.9	4.7	4.5
	25 + 35	2.21	3.09	1.2	5.3	6.5	250	1060	1480	4.9	4.7	4.5
	35 + 35	2.65	2.65	1.2	5.3	6.5	250	1060	1480	4.9	4.7	4.5

(b) Indoor unit except SRK * * ZSX-W models

<Cooling>

Indoor unit combination		Cooling capacity (kW)					Power consumption (W)			Standard current (A)		
		Indoor unit capacity (kW)		Total capacity (kW)			Min.	Standard	Max.	220V	230V	240V
		A	B	Min.	Standard	Max.						
1 unit	20	2.00	-	1.5	2.0	3.1	340	510	990	2.5	2.4	2.3
	25	2.50	-	1.5	2.5	3.4	340	710	1120	3.4	3.2	3.1
	35	3.50	-	1.5	3.5	4.1	340	1190	1570	5.5	5.3	5.0
2 units	20 + 20	2.00	2.00	1.7	4.0	5.4	340	1050	1920	4.8	4.6	4.4
	20 + 25	2.00	2.50	1.7	4.5	5.6	340	1200	2300	5.5	5.3	5.1
	20 + 35	1.64	2.86	1.7	4.5	5.6	340	1200	2300	5.5	5.3	5.1
	25 + 25	2.25	2.25	1.7	4.5	5.6	340	1200	2300	5.5	5.3	5.1
	25 + 35	1.88	2.63	1.7	4.5	5.6	340	1200	2300	5.5	5.3	5.1
	35 + 35	2.25	2.25	1.7	4.5	5.6	340	1200	2300	5.5	5.3	5.1

<Heating>

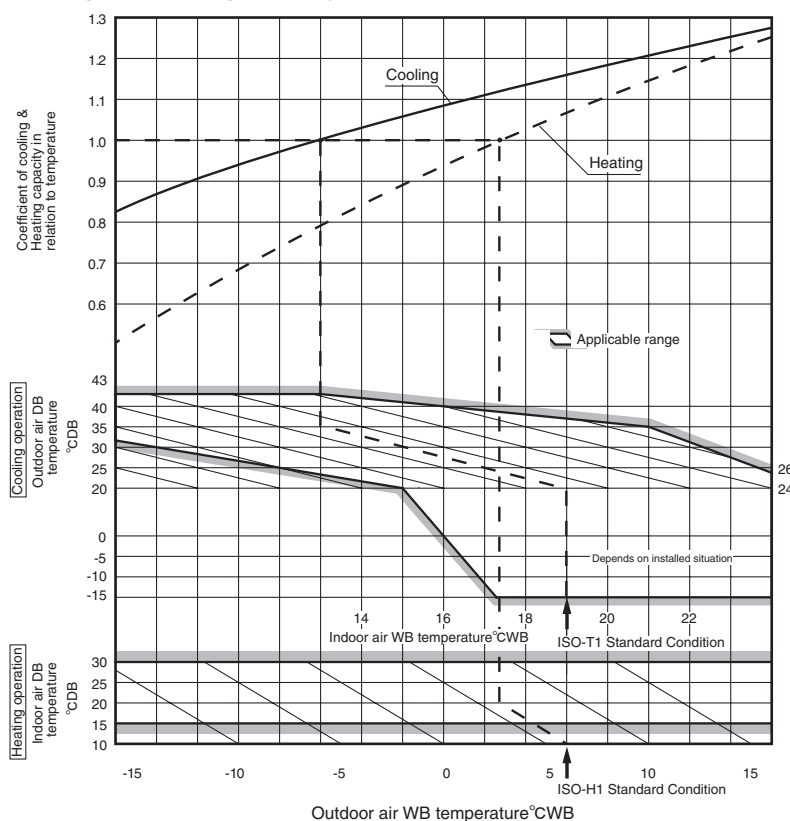
Indoor unit combination		Heating capacity (kW)					Power consumption (W)			Standard current (A)		
		Indoor unit capacity (kW)		Total capacity (kW)			Min.	Standard	Max.	220V	230V	240V
		A	B	Min.	Standard	Max.						
1 unit	20	3.00	-	1.0	3.0	3.5	250	780	940	3.7	3.5	3.4
	25	3.40	-	1.0	3.4	4.0	250	910	1120	4.3	4.1	3.9
	35	4.50	-	1.0	4.5	4.8	250	1310	1350	6.1	5.8	5.6
2 units	20 + 20	2.25	2.25	1.2	4.5	5.5	250	990	1270	4.6	4.4	4.2
	20 + 25	2.36	2.94	1.2	5.3	6.5	250	1280	1630	5.9	5.7	5.4
	20 + 35	1.93	3.37	1.2	5.3	6.5	250	1280	1630	5.9	5.7	5.4
	25 + 25	2.65	2.65	1.2	5.3	6.5	250	1280	1630	5.9	5.7	5.4
	25 + 35	2.21	3.09	1.2	5.3	6.5	250	1280	1630	5.9	5.7	5.4
	35 + 35	2.65	2.65	1.2	5.3	6.5	250	1280	1630	5.9	5.7	5.4

6. SELECTION CHARTS

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

Net capacity = Capacity shown on specification × Correction factors as follows.

(1) Coefficient of cooling and heating capacity in relation to temperatures



(2) Correction of cooling and heating capacity in relation to one way length of refrigerant piping

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

Piping length [m]	7	10	15	20	25
Cooling	1.0	0.99	0.975	0.965	0.95
Heating	1.0	1.0	1.0	1.0	1.0

(3) Correction relative to frosting on outdoor heat exchanger during heating

In additions to the foregoing corrections (1), (2) the heating capacity needs to be adjusted also with respect to the frosting on the outdoor heat exchanger.

Air inlet temperature of outdoor unit in °CWB	-15	-10	-9	-7	-5	-3	-1	1	3	5 or more
Adjustment coefficient	0.95	0.95	0.94	0.93	0.91	0.88	0.86	0.87	0.92	1.00

How to obtain the cooling and heating capacity

Example : The net cooling capacity of the model SCM45ZS-W (SRK25ZSX-W : 2 units) with the piping length of 10m, indoor wet-bulb temperature at 19.0°C and outdoor dry-bulb temperature 35°C is

$$\text{Net cooling capacity} = \underbrace{(2.25 \times 2)}_{\substack{\text{Table of indoor unit combination (Refer to page 99)} \\ \text{Outdoor unit SCM45ZS-W} \\ \text{Indoor unit SRK25ZSX-W} \times 2 \text{ units}}} \times \underbrace{0.99}_{\substack{\text{Length 10m}}} \times \underbrace{1.0}_{\substack{\text{Factor by air} \\ \text{temperatures}}} \doteq 4.46\text{kW}$$

7. TABLE OF FUNCTIONS CONNECTED WIRED REMOTE CONTROL (RC-E5)

If wired remote control (option part) is connected to the following indoor units, some of the functions cannot be used. Please see following table for details.

- Wall mounted type : SRK**ZSX-W, ZS-W, SKM**ZSP-W
- Ceiling concealed type : SRR**ZM-W

○ : OK, △ : Conditionally OK, × : N/A

No.	Functions	SRK	SRR	Outline of function	Remarks
1	Several remote controls for 1 unit	○	○	Indoor unit can be connected max. 2 remote controls.	
2	Control of several indoor units	○	○	One remote control can be connected to max. of 16 indoor units.	
3	Central control	○	○	Signal of center mode from central control can be restricted to operation of remote control.	
4	Run/Stop	○	○		
5	Change operation mode	○	○	Display of operation mode range is automatically decided from the indoor unit's information.	
6	Adjust fan speed	○	○	Display of airflow range is automatically decided from the indoor unit's information.	
7	Auto swing of flap	○	×	Display of air flow direction ON/OFF is automatically decided from the indoor unit's information.	Flap control only. Louver cannot be controlled.
8	Setting of air flow direction	×	×	Setting of air flow direction for indoor unit that can be changed air flow direction.	
9	Setting of temperature	△	△		Temperature range can be set from 18 degree to 30 degree. Carving 0.5°C is rounded up.
10	Timer operation	○	○	Sleep timer mode, Off timer mode, On timer mode, Weekly timer mode.	Warm up timer and sleep control of on timer mode is impossible.
11	Ventilation control	×	×	Air infiltration can be controlled by the indoor unit that has this function.	RAC unit does not have this function.
12	Display of unit number	○	○	Display address number of remote control.	Address set by SC-BIKN2-E for RAC
13	Service switch-1: Display of error data	△	△	Display and memorize the error code data that are checked finally.	Only error code is used in the RAC unit.
14	Service switch -2 display of operation data	△	△	Display operation data.	RAC unit can be displayed some data.
15	Trial run	○	○	Cooling operation signal is sent to the indoor unit.	
16	Forced operation of drain pump	×	×	Forced operation of drain pump is sent to the indoor unit.	
17	Setting of compressor frequency	○	○	Fixing compressor frequency.	
18	Quiet mode	×	×	On timer in order to start quiet mode.	RAC unit does not have this function.
19	Auto address change from remote control	×	×	Auto address can be changed from remote control.	RAC unit does not have this function.
20	Indoor unit's address set of master	×	×	Adapt control for 3 pipe system.	RAC unit does not have this function.
21	Filter reset	×	×	Turning off signal display of filter sign and sending reset signal of operating time.	RAC unit does not have this function.
22	Clear memory of error code in remote control	○	○	Reset memory that remote control has the error code.	
23	Clear memory of error code in the indoor unit	○	○	Reset memory of error for the indoor unit.	
24	Clear address in indoor unit	×	×	Reset memory of address for the indoor unit.	RAC unit does not have this function.
25	Reset CPU	○	○	Reset outdoor or indoor CPU.	
26	Function setting	△	△	It is possible to set the function of remote control and indoor unit.	RAC unit can be set a part of function.
27	Setting of temperature range	△	△	Set Max and Min temperature.	For RAC models, only the range from 18°C to 30°C is available.
28	External input	○	○	External input from ChT terminal can be switched between all unit operation and individual operation.	
29	Auto adjustment of static pressure	×	×	Change auto adjustment of static pressure.	RAC unit does not have this function.
30	Setting of static pressure	×	×	Displayed part blinks on and off when it receives a signal about auto adjustment of static pressure mode.	RAC unit does not have this function.
31	Filter sign	×	×	Displays filter sign via signal from indoor unit when counting time achieves target time.	RAC unit does not have this function.

8. OPTION PARTS

8.1 Wired remote control

(1) Model RC-EX3A

1. Safety precautions

- Please read this manual carefully before starting installation work to install the unit properly. Every one of the followings is important information to be observed strictly.

 WARNING	Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc.
 CAUTION	Failure to follow these instructions properly may cause injury or property damage.

It could have serious consequences depending on the circumstances.

- The following pictograms are used in the text.

	Never do.		Always follow the instructions given.
---	-----------	---	---------------------------------------

- Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to a new owner.

WARNING

-  **Consult your dealer or a professional contractor to install the unit.**
Improper installation made on your own may cause electric shocks, fire or dropping of the unit.
-  **Installation work should be performed properly according to this installation manual.**
Improper installation work may result in electric shocks, fire or break-down.
-  **Be sure to use accessories and specified parts for installation work.**
Use of unspecified parts may result in drop, fire or electric shocks.
-  **Install the unit properly to a place with sufficient strength to hold the weight.**
If the place is not strong enough, the unit may drop and cause injury.
-  **Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.**
Power source with insufficient and improper work can cause electric shock and fire.
-  **Shut OFF the main power source before starting electrical work.**
Otherwise, it could result in electric shocks, break-down or malfunction.
-  **Do not modify the unit.**
It could cause electric shocks, fire, or break-down.
-  **Be sure to turn OFF the power circuit breaker before repairing/inspecting the unit.**
Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury.

⚠ WARNING**Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak.**

If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of significant deterioration of its performance or corrosion.

Do not install the unit where water vapor is generated excessively or condensation occurs.

It could cause electric shocks, fire, or break-down.

Do not use the unit in a place where it gets wet, such as laundry room.

It could cause electric shocks, fire, or break-down.

Do not operate the unit with wet hands.

It could cause electric shocks.

Do not wash the unit with water.

It could cause electric shocks, fire, or break-down.

Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.

Improper connections or fixing could cause heat generation, fire, etc.

Seal the inlet hole for remote control cable with putty.

If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

If dew or water enters the unit, it may cause screen display anomalies.

When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.

It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc.

The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.

Do not leave the remote control with its upper case removed.

If dew, water, insect, etc. enters through the hole, it could cause electric shocks, fire or break-down.

 CAUTION

Do not install the remote control at following places.

- (1) It could cause break-down or deformation of remote control.
- Where it is exposed to direct sunlight
 - Where the ambient temperature becomes 0 °C or below, or 40 °C or above
 - Where the surface is not flat
 - Where the strength of installation area is insufficient
- (2) Moisture may be attached to internal parts of the remote control, resulting in a display failure.
- Place with high humidity where condensation occurs on the remote control
 - Where the remote control gets wet
- (3) Accurate room temperature may not be detected using the temperature sensor of the remote control.
- Where the average room temperature cannot be detected
 - Place near the equipment to generate heat
 - Place affected by outside air in opening/closing the door
 - Place exposed to direct sunlight or wind from air-conditioner
 - Where the difference between wall and room temperature is large



To connect to a personal computer via USB, use the dedicated software.



Do not connect other USB devices and the remote control at the same time.

It could cause malfunction or break-down of the remote control/personal computer.

2 . Accessories & Prepare on site

Following parts are provided.

Accessories	R/C main unit, wood screw (Φ3.5 x 16) 2 pcs, Quick reference
-------------	--

Following parts are arranged at site. Prepare them according to the respective installation procedures.

Item name	Q'ty	Remark
Switch box For 1 piece or 2 pieces (JIS C 8340 or equivalent)	1	These are not required when installing directly on a wall.
Thin wall steel pipe for electric appliance directly on a wall. (JIS C 8305 or equivalent)	As required	
Lock nut, bushing (JIS C 8330 or equivalent)	As required	
Lacing (JIS C 8425 or equivalent)	As required	Necessary to run R/C cable on the wall.
Putty	Suitably	For sealing gaps
Molly anchor	As required	
R/C cable (0.3 mm ² x 2 pcs)	As required	See right table when longer than 100 m

When the cable length is longer than 100 m, the max size for wires used in the R/C case is 0.5 mm². Connect them to wires of larger size near the outside of R/C. When wires are connected, take measures to prevent water, etc. from entering inside.

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

3 . Installation place

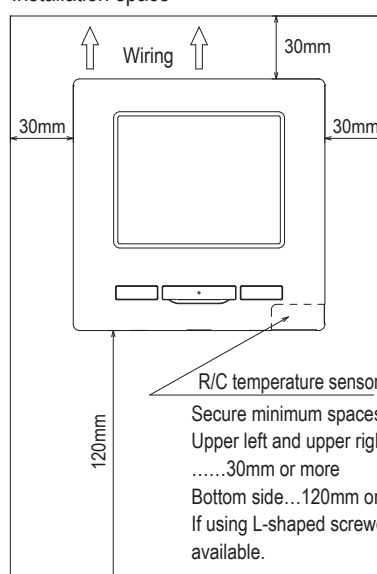
Secure the installation space shown in the figure.

For the installation method, "embedding wiring" or "exposing wiring" can be selected.

For the wiring direction, "Backward", "Upper center" or "Upper left" can be selected.

Determine the installation place in consideration of the installation method and wiring direction.

Installation space

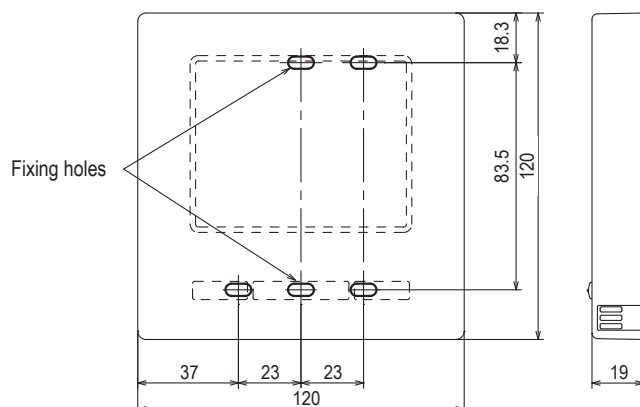


Secure minimum spaces for disassembling the case.
Upper left and upper right sides
.....30mm or more
Bottom side...120mm or more
If using L-shaped screwdriver, 50mm or more is available.

4 . Installation procedure

Perform installation and wiring work for the remote control according to the following procedure.

Dimensions (Viewed from front)



To disassemble the R/C case into the upper and lower pieces after assembling them once

- Insert the tip of flat head screwdriver or the like in the recess at the lower part of R/C and twist it lightly to remove. It is recommended that the tip of the screwdriver be wrapped with tape to avoid damaging the case.

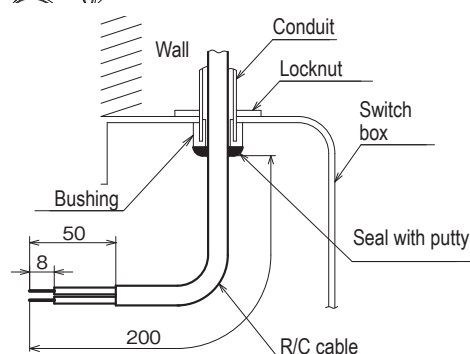
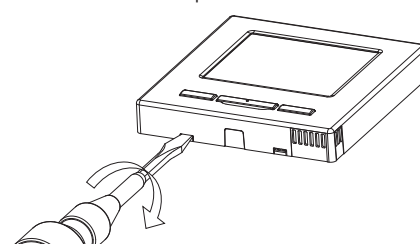
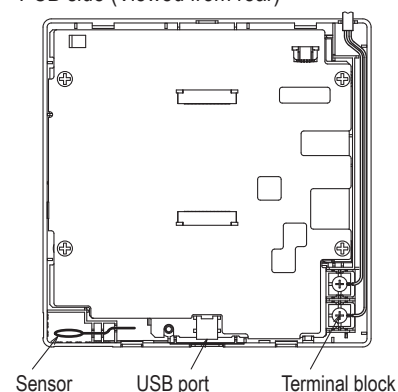
Take care to protect the removed upper case from moisture or dust.

In case of embedding wiring

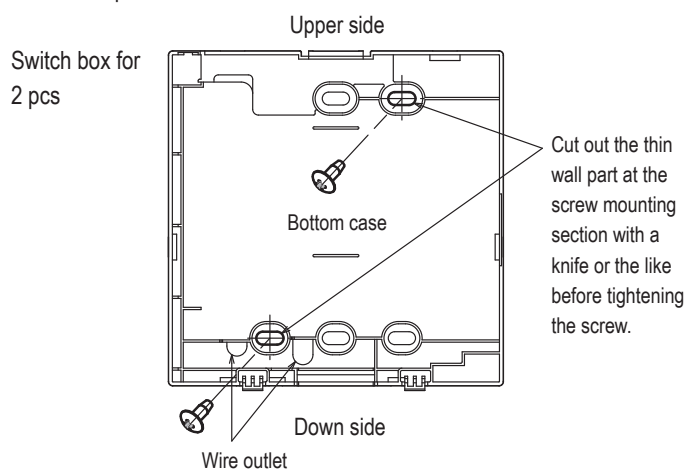
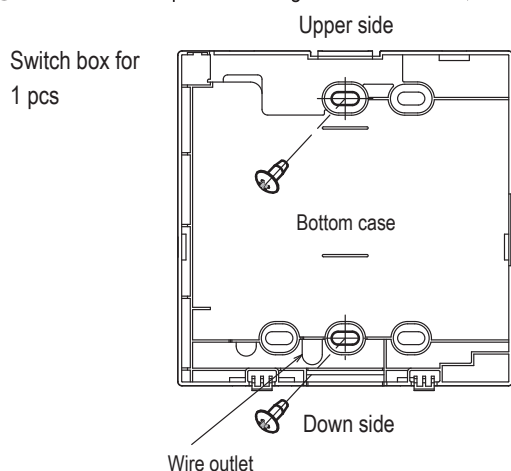
(When the wiring is retrieved "Backward")

- ① Embed the switch box and the R/C wires beforehand.
Seal the inlet hole for the R/C wiring with putty

PCB side (Viewed from rear)



- ② When wires are passed through the bottom case, fix the bottom case at 2 places on the switch box.



- ③ Connect wires from X and Y terminals of R/C to X and Y terminals of indoor unit. R/C wires (X, Y) have no polarity. Fix wires such that the wires will run around the terminal screws on the top case of R/C.

- ④ Install the upper case with care not to pinch wires of R/C.

Cautions for wire connection

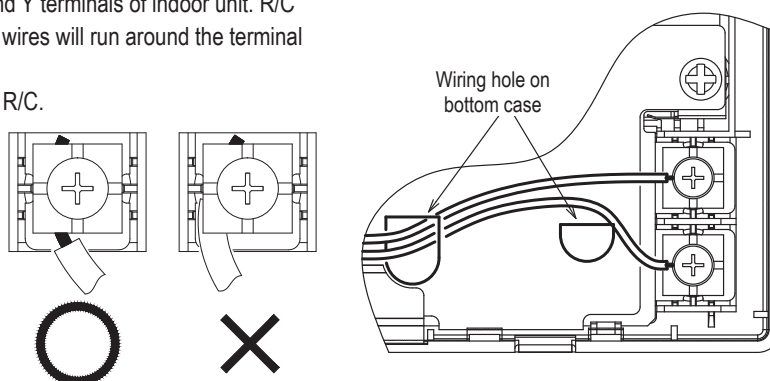
Use wires of no larger than 0.5 mm² for wiring running through the remote control case. Take care not to pinch the sheath.

Tighten by hand (0.7 N·m or less) the wire connection. If the wire is connected using an electric driver, it may cause failure or deformation.

In case of exposing wiring

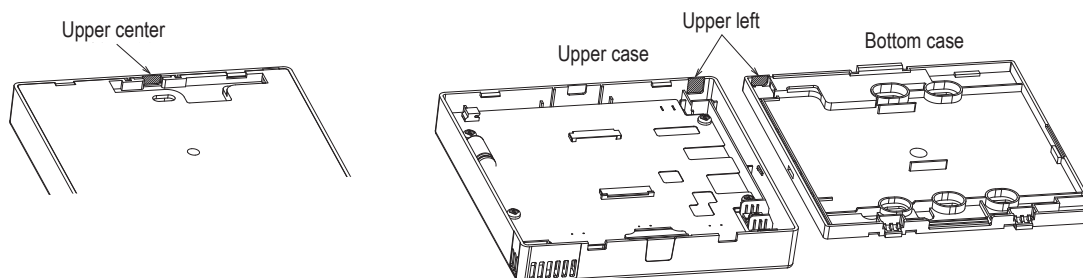
(When the wiring is taken out from the “upper center” or “upper left” of R/C)

- ① Cut out the thin wall sections on the cases for the size of wire.

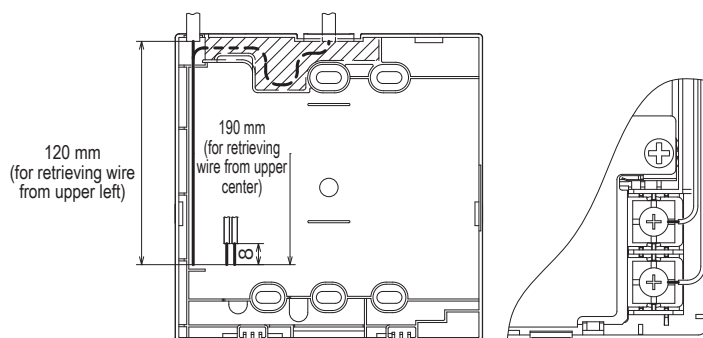


When taking the wiring out from the upper center, open a hole before separating the upper and bottom cases. This will reduce risk of damaging the PCB and facilitate subsequent work.

When taking the wiring out from the upper left, take care not to damage the PCB and not to leave any chips of cut thin wall inside.



- ② Fix the bottom R/C case on a flat surface with two wood screws.
- ③ In case of the upper center, pass the wiring behind the bottom case. (Hatched section)
- ④ Connect wires from X and Y terminals of R/C to X and Y terminals of indoor unit. R/C wires (X, Y) have no polarity. Fix wires such that the wires will run around the terminal screws on the top case of R/C.
- ⑤ Install the top case with care not to pinch wires of R/C.
- ⑥ Seal the area cut in ① with putty.

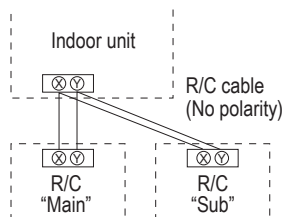


5 . Main/Sub setting when more than one remote control are used

Up to two units of R/C can be used at the maximum for 1 indoor unit or 1 group.

One is main R/C and the other is sub R/C.

Operating range is different depending on the main or sub R/C.



R/C operations			Main	Sub
Run/Stop, Change set temp., Change flap direction, Auto swing, Change fan speed operations			○	○
High power operation, Energy-saving operation			○	○
Silent mode control			○	×
Useful functions	Individual flap control		○	×
	Anti draft setting		○	×
	Timer		○	○
	Favorite setting		○	○
	Weekly timer		○	×
	Home leave mode		○	×
	External ventilation		○	○
	Select the language		○	○
Silent mode control		○	×	
Energy-saving setting			○	×
Filter	Filter sign reset		○	○
User setting	Initial settings		○	○
	Administrator settings	Permission/ Prohibition setting	○	×
		Outdoor unit silent mode timer	○	×
		Setting temp. range	○	×
		Temp increment setting	○	×
		Set temp. display	○	○
		R/C display setting	○	○
		Change administrator password	○	○
		F1/F2 function setting	○	○

○ : operable × : not operable

R/C operations			Main	Sub	
Service setting	Installation settings	Installation date	○	×	
		Company information	○	○	
		Test run	○	×	
		Static pressure adjustment	○	×	
		Change auto-address	○	×	
		Address setting of main IU	○	×	
		IU back-up function	○	×	
	Motion sensor setting	○	×		
	R/C function settings	Main/Sub of R/C	○	○	
		Return air temp.	○	×	
		R/C sensor	○	×	
		R/C sensor adjustment	○	×	
		Operation mode	○	×	
		°C / °F	○	×	
		Fan speed	○	×	
		External input	○	×	
		Upper/lower flap control	○	×	
		Left/right flap control	○	×	
		Ventilation setting	○	×	
		Auto-restart	○	×	
		Auto temp. setting	○	×	
Auto fan speed		○	×		
IU settings		○	×		
Service & Maintenance	IU address	IU address	○	○	
		Next service date	○	×	
	Operation data	Error display	Error history	○	○
			Display/erase anomaly data	○	×
			Reset periodical check	○	○
			Saving IU settings	○	×
	Special settings	Erase IU address	○	×	
		CPU reset	○	○	
		Restore of default setting	○	×	
		Touch panel calibration	○	○	
Indoor unit capacity display		○	×		

Advice: Connection to personal computer

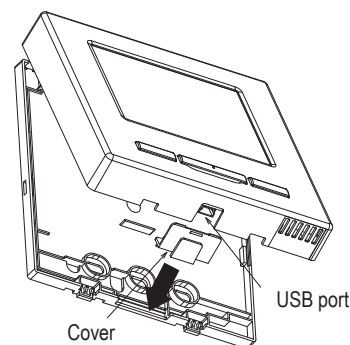
It can be set from a personal computer via the USB port (mini-B).

Connect after removing the cover for USB port of upper case.

Replace the cover after use.

Special software is necessary for the connection.

For details, view the web site.



Advice: Initializing of password

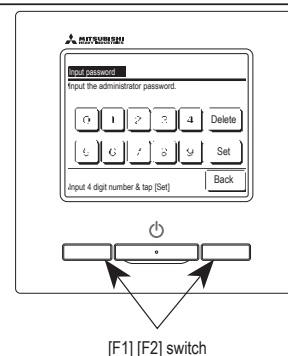
Administrator password (for daily setting items) and service password (for installation, test run and maintenance) are used.

- The administrator password at factory default is "0000". This setting can be changed (Refer to User's Manual).

If the administrator password is forgotten, it can be initialized by holding down the [F1] and [F2] switches together for five seconds on the administrator password input screen.

- Service password is "9999", which cannot be changed.

When the administrator password is input, the service password is also accepted.



Advice

When connecting two or more FDT/FDTC to one R/C, unify the panel type either to a panel with anti draft function or a standard panel.

(2) Model RC-E5

PJA012D730 

Read together with indoor unit's installation manual.

⚠ WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connection or hold will cause abnormal heat generation or fire. 
- Make sure the power source is turned off when electric wiring work.
Otherwise, electric shock, malfunction and improper running may occur. 

⚠ CAUTION

- Do not install the remote control at the following places in order to avoid malfunction.

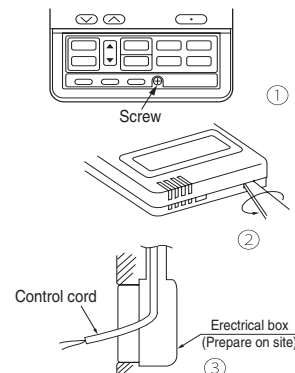
(1) Places exposed to direct sunlight	(4) Hot surface or cold surface enough to generate condensation
(2) Places near heat devices	(5) Places exposed to oil mist or steam directly
(3) High humidity places	(6) Uneven surface


- Do not leave the remote control without the upper case.
In case the upper case needs to be detached, protect the remote control with a packaging box or bag in order to keep it away from water and dust. 

Accessories	Remote control, wood screw (ø3.5×16) 2 pieces
Prepare on site	Remote control cord (2 cores) the insulated thickness in 1mm or more. [In case of embedding cord] Electrical box, M4 screw (2 pieces) [In case of exposing cord] Cord clamp (if needed)

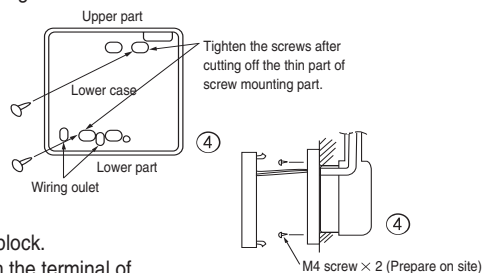
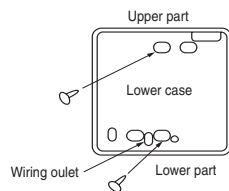
Installation procedure

- ① Open the cover of remote control, and remove the screw under the buttons without fail.
- ② Remove the upper case of remote control.
Insert a flat-blade screwdriver into the dented part of the upper part of the remote control, and wrench slightly.

**[In case of embedding cord]**

- ③ Embed the electrical box and remote control cord beforehand.

- ④ Prepare two M4 screws (recommended length is 12-16mm) on site, and install the lower case to electrical box. Choose either of the following two positions in fixing it with screws.



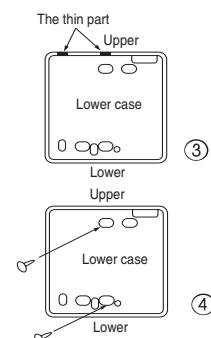
- ⑤ Connect the remote control cord to the terminal block.
Connect the terminal of remote control (X,Y) with the terminal of indoor unit (X,Y). (X and Y are no polarity)

- ⑥ Install the upper case as before so as not to catch up the remote control cord, and tighten with the screws.

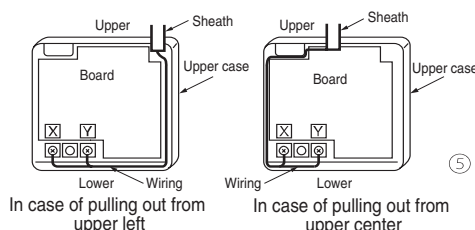
[In case of exposing cord]

- ③ You can pull out the remote control cord from left upper part or center upper part.
Cut off the upper thin part of remote control lower case with a nipper or knife, and grind burrs with a file etc.

- ④ Install the lower case to the flat wall with attached two wooden screws.



- ⑤ Connect the remote control cord to the terminal block.
Connect the terminal of remote control (X,Y) with the terminal of indoor unit (X,Y).
(X and Y are no polarity)
Wiring route is as shown in the right diagram depending on the pulling out direction.

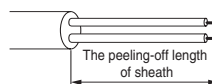


The wiring inside the remote control case should be within 0.3mm^2 (recommended) to 0.5mm^2 .

The sheath should be peeled off inside the remote control case.

The peeling-off length of each wire is as below.

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



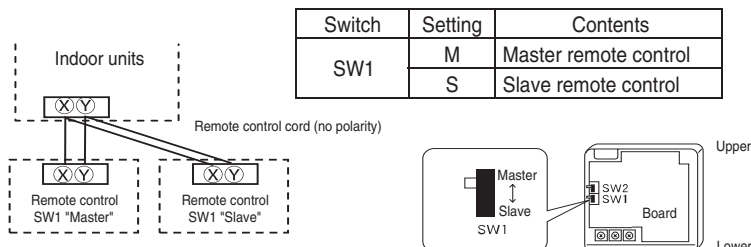
- ⑥ Install the upper case as before so as not to catch up the remote control cord, and tighten with the screws.
⑦ In case of exposing cord, fix the cord on the wall with cord clamp so as not to slack.

Installation and wiring of remote control

- ① Wiring of remote control should use $0.3\text{mm}^2 \times 2$ cores wires or cables. (on-site configuration)
② Maximum prolongation of remote control wiring is 600 m.
If the prolongation is over 100m, change to the size below.
But, wiring in the remote control case should be under 0.5mm^2 . Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.
- | | |
|------------|----------------------------------|
| 100 - 200m | $0.5\text{mm}^2 \times 2$ cores |
| Under 300m | $0.75\text{mm}^2 \times 2$ cores |
| Under 400m | $1.25\text{mm}^2 \times 2$ cores |
| Under 600m | $2.0\text{mm}^2 \times 2$ cores |

Master/ slave setting when more than one remote controls are used

A maximum of two remote controls can be connected to one indoor unit (or one group of indoor units.)



Set SW1 to "Slave" for the slave remote control. It was factory set to "Master" for shipment.

Note: The setting "Remote control sensor enabled" is only selectable with the master remote control in the position where you want to check room temperature.

The air-conditioner operation follows the last operation of the remote control regardless of the master/ slave setting of it.

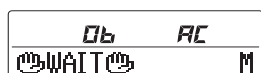
The indication when power source is supplied

When power source is turned on, the following is displayed on the remote control until the communication between the remote control and indoor unit settled.

Master remote control : " WAIT M"
Slave remote control : " WAIT S"

At the same time, a mark or a number will be displayed for two seconds first.

This is the software's administration number of the remote control, not an error cord.



※ The left mark is only an example. Other marks may appear.

When remote control cannot communicate with the indoor unit for half an hour, the below indication will appear.

Check wiring of the indoor unit and the outdoor unit etc.



The range of temperature setting

When shipped, the range of set temperature differs depending on the operation mode as below.

Heating : 16-30°C (55-86°F)

Except heating (cooling, fan, dry, automatic) : 18-30°C (62-86°F)

●Upper limit and lower limit of set temperature can be changed with remote control.

Upper limit setting: valid during heating operation. Possible to set in the range of 20 to 30°C (68 to 86°F).

Lower limit setting: valid except heating (automatic, cooling, fan, dry) Possible to set in the range of 18 to 26°C (62 to 79°F).

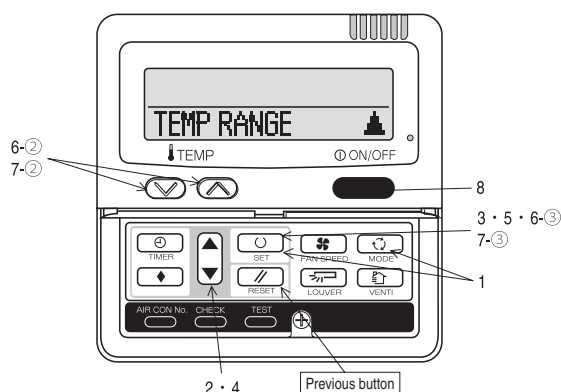
When you set upper and lower limit by this function, control as below.

- When ⑫ TEMP RANGE SET, remote control function of function setting mode is "INDN CHANGE" (factory setting),
 [If upper limit value is set]
 During heating, you cannot set the value exceeding the upper limit.
 [If lower limit value is set]
 During operation mode except heating, you cannot set the value below the lower limit.
- When ⑫ TEMP RANGE SET, remote control function of function setting mode is "NO INDN CHANGE"
 [If upper limit value is set]
 During heating, even if the value exceeding the upper limit is set, upper limit value will be sent to the indoor unit.
 But, the indication is the same as the temperature set.
 [If lower limit value is set]
 During except heating, even if the value lower than the lower limit is set, lower limit value will be sent to the indoor unit.
 But, the indication is the same as the temperature set.

●How to set upper and lower limit value

- Stop the air-conditioner, and press (SET) and (MODE) button at the same time for over three seconds.
 The indication changes to "FUNCTION SET ▼".
- Press button once, and change to the "TEMP RANGE ▲" indication.
- Press (SET) button, and enter the temperature range setting mode.
- Select "UPPER LIMIT ▼" or "LOWER LIMIT ▲" by using button.
- Press (SET) button to fix.
- When "UPPER LIMIT ▼" is selected (valid during heating)
 - ① Indication: "▼ SET UP" → "UPPER 30°C ▼"
 - ② Select the upper limit value with temperature setting button . Indication example: "UPPER 26°C ▼" (blinking)
 - ③ Press (SET) button to fix. Indication example: "UPPER 26°C" (Displayed for two seconds)
 After the fixed upper limit value displayed for two seconds, the indication will return to "UPPER LIMIT ▼".
- When "LOWER LIMIT ▲" is selected (valid during cooling, dry, fan, automatic)
 - ① Indication: "▼ SET UP" → "LOWER 18°C ▲"
 - ② Select the lower limit value with temperature setting button . Indication example: "LOWER 24°C ▲" (blinking)
 - ③ Press (SET) button to fix. Indication for example: "LOWER 24°C" (Displayed for two seconds)
 After the fixed lower limit value displayed for two seconds, the indication will return to "LOWER LIMIT ▼".
- Press button to finish.

- It is possible to finish by pressing button on the way, but unfinished change of setting is unavailable.
- During setting, if you press (RESET) button, you return to the previous screen.



The functional setting

- The initial function setting for typical using is performed automatically by the indoor unit connected, when remote control and indoor unit are connected.
- As long as they are used in a typical manner, there will be no need to change the initial settings.
- If you would like to change the initial setting marked "○", set your desired setting as for the selected item.
- The procedure of functional setting is shown as the following diagram.

[Flow of function setting]

Start : Stop air-conditioner and press " " (SET) and " " (MODE) buttons at the same time for over three seconds.

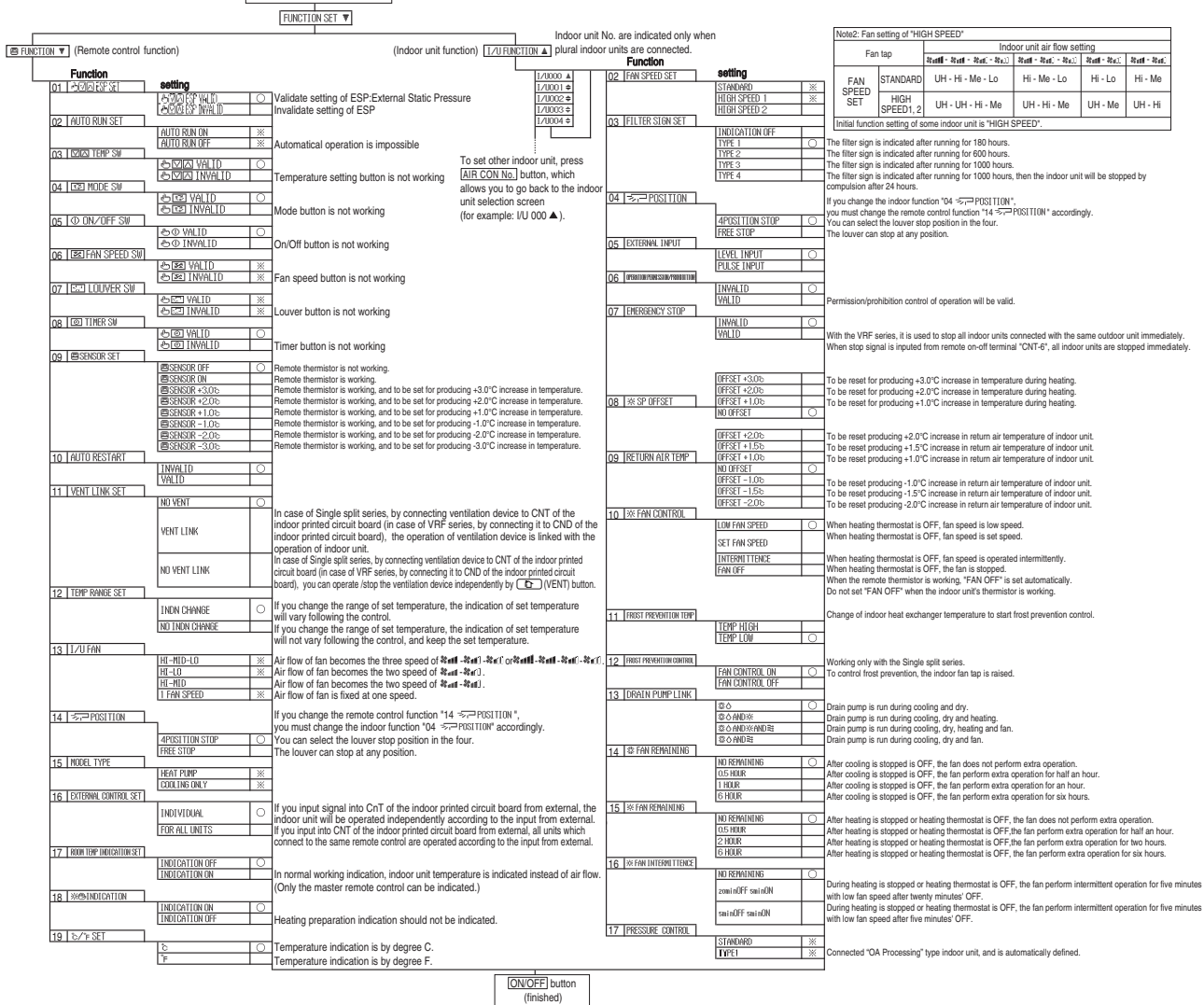
Finalize : Press " (SET) button.

Reset : Press " (RESET) button.

Select : Press   button.
End : Press button.

It is possible to finish above setting on the way,
and unfinished chance of setting is unavailable

* ○ : Initial settings

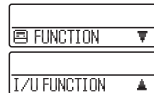
^a ※[†] : Automatic criterion

How to set function

1. Stop air-conditioner and press (SET) (MODE) buttons at the same time for over three seconds, and the "FUNCTION SET ▼" will be displayed.



2. Press (SET) button.
3. Make sure which do you want to set, "FUNCTION ▼" (remote control function) or "I/U FUNCTION ▲" (indoor unit function).
4. Press or button.
Select "FUNCTION ▼" (remote control function) or "I/U FUNCTION ▲" (indoor unit function).



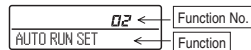
5. Press (SET) button.

6. 【On the occasion of remote control function selection】

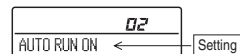
- ① "DATA LOADING" (Indication with blinking)

Display is changed to "01 ESP SET".

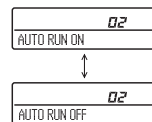
- ② Press or button.
"No. and function" are indicated by turns on the remote control function table, then you can select from them.
(For example)



- ③ Press (SET) button.
The current setting of selected function is indicated.
(for example) "AUTO RUN ON" ← If "02 AUTO RUN SET" is selected



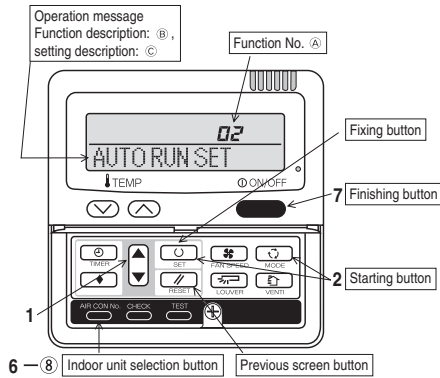
- ④ Press or button.
Select the setting.



- ⑤ Press (SET)
"SET COMPLETE" will be indicated, and the setting will be completed.
Then after "No. and function" indication returns, Set as the same procedure if you want to set continuously, and if to finish, go to 7.



7. Press (ON/OFF) button.
Setting is finished.

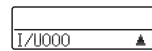
**【On the occasion of indoor unit function selection】**

- ① "DATA LOADING" (Blinking for 2 to 23 seconds to read the data)

Indication is changed to "02 FAN SPEED SET".
Go to ②.

[Note]

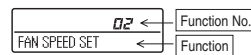
- (1) If plural indoor units are connected to a remote control, the indication is "I/U 000" (blinking) ← The lowest number of the indoor unit connected is indicated.



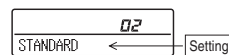
- (2) Press or button.
Select the number of the indoor unit you are to set
If you select "ALL UNIT ▼", you can set the same setting with all units.

- (3) Press (SET) button.

- ② Press or button.
"No. and function" are indicated by turns on the indoor unit function table, then you can select from them.
(For example)



- ③ Press (SET) button.
The current setting of selected function is indicated.
(For example) "STANDARD" ← If "02 FAN SPEED SET" is selected.



- ④ Press or button.
Select the setting.

- ⑤ Press (SET) button.
"SET COMPLETE" will be indicated, and the setting will be completed.
Then after "No. and function" indication returns, set as the same procedure if you want to set continuously, and if to finish, go to 7.



※ When plural indoor units are connected to a remote control, press the (AIR CON No.) button, which allows you to go back to the indoor unit selection screen. (example "I/U 000 ▲")

- It is possible to finish by pressing (ON/OFF) button on the way, but unfinished change of setting is unavailable.
- During setting, if you press (RESET) button, you return to the previous screen.
- Setting is memorized in the control and it is saved independently of power failure.

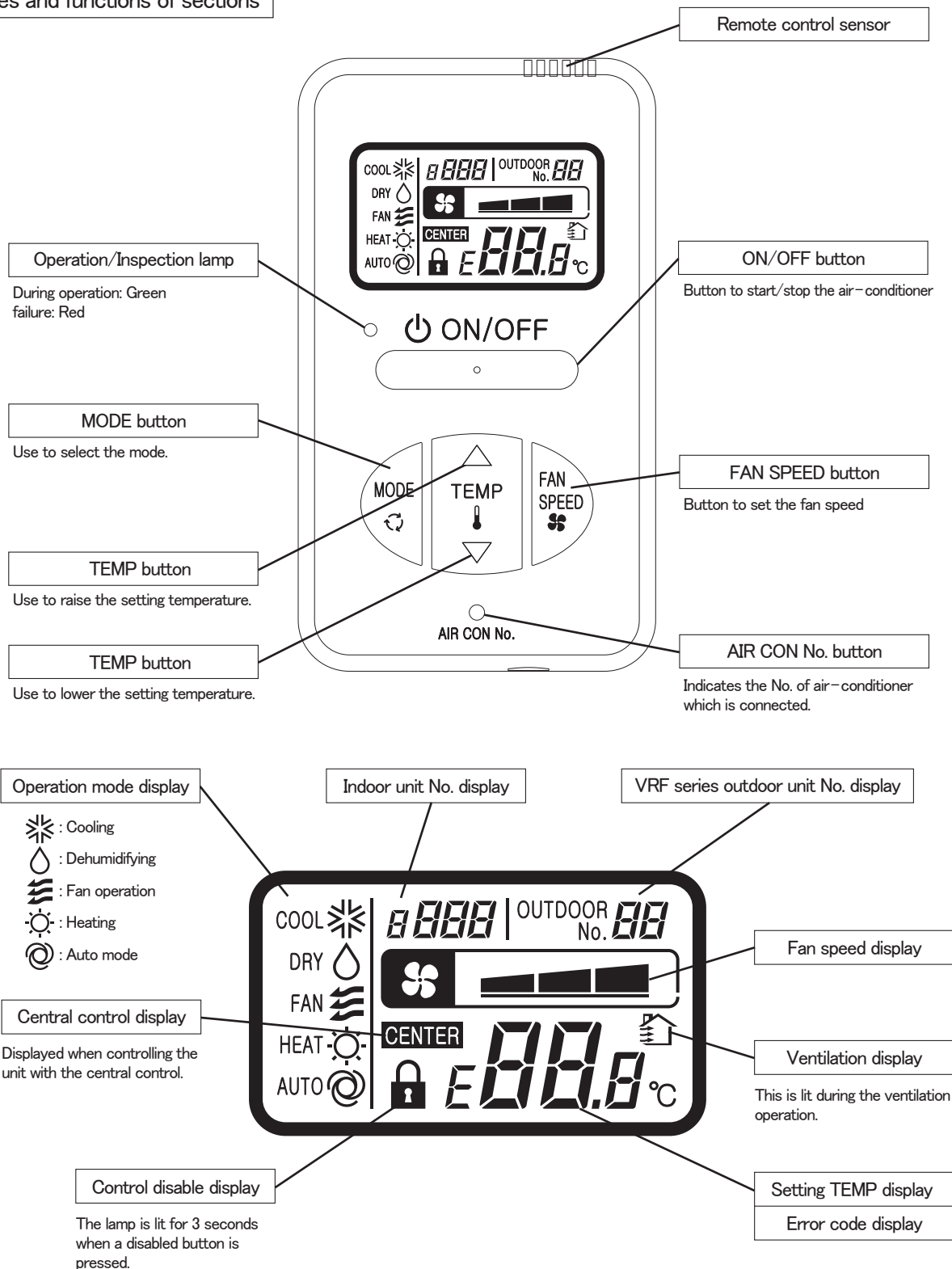
【How to check the current setting】

When you select from "No. and function" and press set button by the previous operation, the "Setting" displayed first is the current setting.
(But, if you select "ALL UNIT ▼", the setting of the lowest number indoor unit is displayed.)

8.2 Simple wired remote control (RCH-E3)

PJZ000Z272

Names and functions of sections

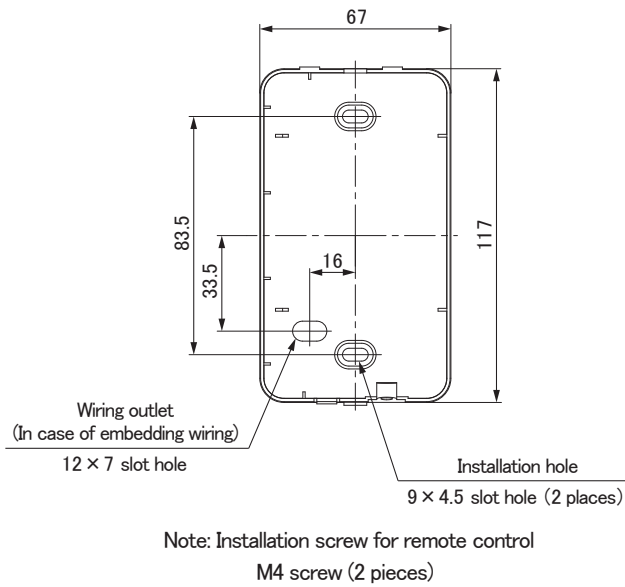


Installation of remote control

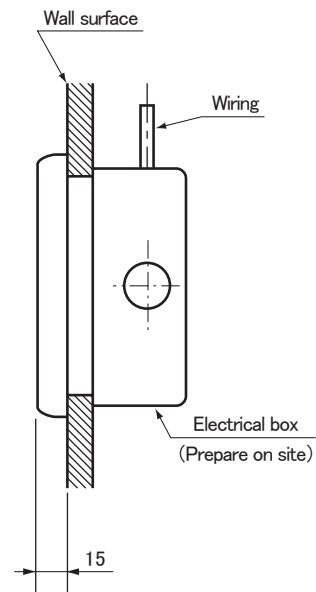
Do not install the remote control at the following places in order to avoid malfunction.

- (1) Places exposed to direct sunlight
- (2) Places near heat devices
- (3) High humidity places
- (4) Hot surface or cold surface enough to generate condensation
- (5) Places exposed to oil mist or steam directly
- (6) Uneven surface

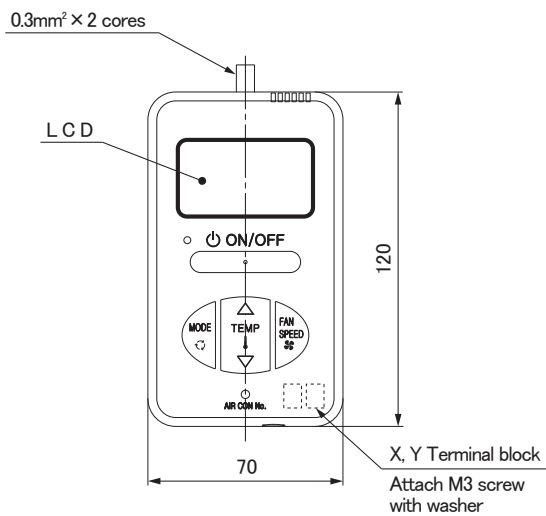
Remote control installation dimensions



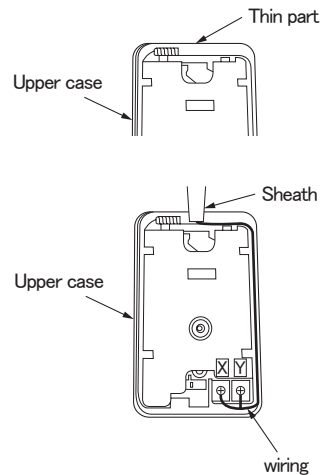
In case of embedding wiring



In case of exposing wiring

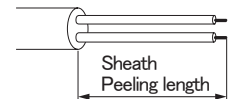


The remote control wiring can be extracted from the upper center.
After the thin part in the upper side of the remote control upper case is scraped with a nipper or knife, remove burr with a file.



The peeling length of each wiring is as follows:

X wiring : 160mm
Y wiring : 150mm



Wiring specifications

- (1) Wiring of remote control should use 0.3mm² × 2 cores wires or cables. (on-site configuration)
- (2) Maximum prolongation of remote control wiring is 600m.
If the prolongation is over 100m, change to the size below.
But, the wiring in the remote control case should be 0.3mm² (recommended) to 0.5mm².
Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

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

Unit:mm

Adapted to **RoHS** directive

Simple Remote Control Installation Manual

PJZ012D069

Read together with indoor unit's installation manual.

⚠ WARNING

- **Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.**
Loose connection or hold will cause abnormal heat generation or fire.
- **Make sure the power source is turned off when electric wiring work.**
Otherwise, electric shock, malfunction and improper running may occur.

⚠ CAUTION

- **Do not install the remote control at the following places in order to avoid malfunction.**
 - (1) Places exposed to direct sunlight
 - (2) Places near heat devices
 - (3) High humidity places
 - (4) Hot surface or cold surface enough to generate condensation
 - (5) Places exposed to oil mist or steam directly
 - (6) Uneven surface
- **Do not leave the remote control without the upper case.**
In case the upper case needs to be detached, protect the remote control with a packaging box or bag in order to keep it away from water and dust.

Accessories	Remote control, wood screw (φ 3.5 × 16) 2 pieces
Prepare on site	Remote control cord (2 cores) (Refer to [2. Installation and wiring of remote control]) [In case of embedding cord] Electrical box, M4 screw (2 pieces) [In case of exposing cord] Cord clamp (if needed)

1. Installation procedure

In case of embedding cord

- (1) **Make certain to remove** the screw on the bottom surface of the remote control.
- (2) Remove the upper case of the remote control.
Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote control and slightly twist it, and the case is removed.
- (3) Pre-bury the electrical box and remote control cord.
- (4) Prepare two M4 screws (recommended length: 12 – 16mm), and install the lower case to the electrical box.
Do not use a screw whose screw head is larger than the height of the wall around the screw hole.
- (5) Connect the remote control cord to the terminal block.
Connect the terminals (X and Y) of the remote control and the terminals (X and Y) of the indoor unit. (No polarity of X and Y)
- (6) Mount the upper case for restoring to its former state so as not to crimp the remote control cord, and secure with the removed screw.

In case of exposing cord

- (1) **Make certain to remove** a screw on the bottom surface of the remote control.
- (2) Remove the upper case of the remote control.
Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote control and slightly twist it, and the case is removed.
- (3) The remote control cord can be extracted from the upper center.
After the thin part in the upper side of the remote control upper case is scraped with a nipper or knife, remove burr with a file.
- (4) The lower case of the remote control is mounted to a flat wall with two accessory wood screws.
- (5) Connect the remote control cord to the terminal block.
Connect the terminals (X and Y) of the remote control and the terminals (X and Y) of the indoor unit. (No polarity of X and Y)
The wiring route is as shown in the right.

The wiring in the remote control case should be 0.3 mm² (recommended) to 0.5 mm² at maximum.

Further, peel off the sheath.

The peeling length of each wiring is as follows:

X wiring : 160mm
Y wiring : 150mm

- (6) Mount the upper case for restoring to its former state so as not to crimp the remote control cord, and secure with the removed screw.
- (7) In the case of exposing installation, secure the remote control cord to the wall surface with a cord clamp so as not to loosen the remote control cord.

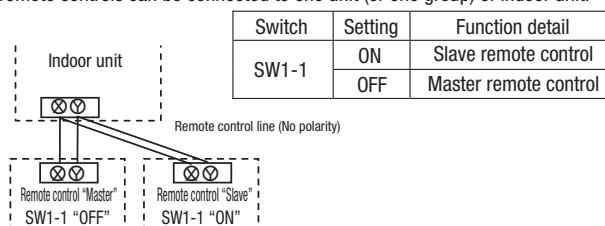
2. Installation and wiring of remote control

- (1) Wiring of remote control should use 0.3mm² × 2 cores wires or cables. (on-site configuration)
- (2) Maximum prolongation of remote control wiring is 600 m.
If the prolongation is over 100m, change to the size below.
But, the wiring in the remote control case should be 0.3mm² (recommended) to 0.5mm².
Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

100 - 200m 0.5mm² × 2 cores
Under 300m 0.75mm² × 2 cores
Under 400m 1.25mm² × 2 cores
Under 600m 2.0mm² × 2 cores

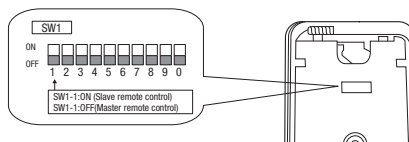
3. Master/ slave setting when more than one remote control are used

- (1) Up to two remote controls can be connected to one unit (or one group) of indoor unit.



- (2) Set the switch SW1-1 of the slave remote control is "Slave" (ON). The factory default is set as "Master" (OFF).

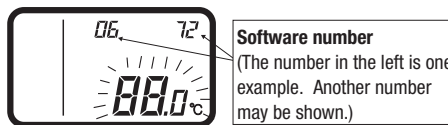
- (Note) • The remote control thermistor enabled setting can be set only to the master remote control.
 • Install the master remote control at the position to detect room temperature.
 • The air-conditioner operation follows the last operation of the remote control in case of the master / slave setting.



4. The indication when power source is supplied

- (1) At the time of turning the power source on, after the light is on for the first 2 seconds, the display becomes as shown below.

The number displayed on the upper side of LCD in the remote control is the software number, and this is not an error code.



- (2) Then, "88.0 °C" blinks on the remote control until the communication between the remote control and the indoor unit is established.
 (3) In the case of connecting one remote control with one unit (or one group) of indoor unit, make certain to set the master remote control (factory default).
 If the slave remote control is set, a communication cannot be established.
 (4) If a state where the communication between the remote control and the indoor unit cannot be established continues about for 30 minutes, "E" is displayed. Confirm the wiring of the indoor unit and the outdoor unit and master/slave setting of the remote control.



5. Confirmation method for return air temperature

Return air temperature can be confirmed by the remote control operation.

- (1) Press **AIR CON No.** button for over 5 seconds.

"88" blinks on the temperature setting indicator.

("88" blinks for approximately 2 seconds while data are read.)

Then, the return air temperature is displayed.

(Example) return air temperature: "27 °C" (blinking)

(Note) For the return air temperature, in the normal case, the return air temperature of the indoor unit is displayed; however, in the case that the remote control thermistor is effective, detected temperature by the remote control thermistor is displayed.



- (2) Press **ON/OFF** button.
 End.

[In the case that the remote thermistor is ineffective and plural indoor units are connected to one remote control]

- (1) Press **AIR CON No.** button for over 5 seconds.

Indoor unit No. indicator: "U 000" (blinking)

(Among the connected indoor units, the lowest number is displayed.)

- (2) Press **TEMP△** or **TEMP▽** button.

Select the indoor unit No.

- (3) Press **MODE** button.

Select the indoor unit No.

(Example) Indoor unit No. indicator: "U 000"

"88" blinks on the temperature setting indicator. (blinking for approximately 2 to 10 seconds while data are read) Then, the return air temperature is displayed. When **AIR CON No.** is pressed, return to the indoor unit selection display (example, "U 000").



- (4) Press **ON/OFF** button.
 End.

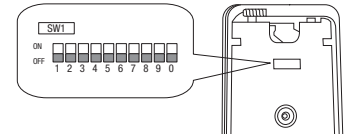
6. Function setting

Each function of the remote control and the indoor unit is automatically set to the initial setting, which is the standard use, on the occasion of connecting the remote control with the indoor unit. In the case of the standard use, the setting change is unnecessary. However, if you would like to change the initial setting "○", change the setting for only the item of the function number. **Record the setting contents and stored them.**

(1) Function setting item by switch on PCB

Switch No.	Setting	Setting detail	Initial setting
SW1-1	ON	Slave remote control	○
	OFF	Master remote control	
SW1-2	ON	Remote control thermistor enabled	○
	OFF	Remote control thermistor disabled	
SW1-3	ON	"MODE" button prohibited	○
	OFF	"MODE" button enabled	
SW1-4	ON	"ON/OFF" button prohibited	○
	OFF	"ON/OFF" button enabled	

Switch No.	Setting	Setting detail	Initial setting
SW1-5	ON	"TEMP" button prohibited	○
	OFF	"TEMP" button enabled	
SW1-6	ON	"FAN SPEED" button prohibited	※ Note 1
	OFF	"FAN SPEED" button enabled	
SW1-7	ON	Auto restart function enabled	○
	OFF	Auto restart function disabled	
SW1-8, 9, 0	ON	Not used	○
	OFF	Not used	



- As for the slave remote control, function setting is impossible other than SW1-1.
- In the indoor unit with only one fan speed, "FAN SPEED" button cannot be enabled.

(2) Function setting item by button operation

Classification	Function No.	Function	Setting No.	Setting	Initial setting	Remarks
Remote control function	01	Indoor unit fan speed	01	Fan speed: three steps	※ Note 1	The fan speed is three steps, ■ ■ ■ - ■ ■ - ■ .
			02	Fan speed: two steps (Hi-Lo)	※ Note 1	The fan speed is two steps, ■ ■ ■ - ■ .
			03	Fan speed: two steps (Hi-Me)		The fan speed is two steps, ■ ■ ■ - ■ ■ .
			04	Fan: one step	※ Note 1	The fan speed is fixed to one step.
	03	Remote control thermistor at the time of cooling	01	Remote control thermistor: no offset	○	
			02	Remote control thermistor: +3.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at +3.0°C.
			03	Remote control thermistor: +2.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at +2.0°C.
			04	Remote control thermistor: +1.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at +1.0°C.
			05	Remote control thermistor: -1.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at -1.0°C.
			06	Remote control thermistor: -2.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at -2.0°C.
			07	Remote control thermistor: -3.0 °C		At the time of cooling, in the case of remote control thermistor enabled, offset temperature at -3.0°C.
	04	Remote control thermistor at the time of heating	01	Remote control thermistor: no offset	○	
			02	Remote control thermistor: +3.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at +3.0°C.
			03	Remote control thermistor: +2.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at +2.0°C.
			04	Remote control thermistor: +1.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at +1.0°C.
			05	Remote control thermistor: -1.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at -1.0°C.
			06	Remote control thermistor: -2.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at -2.0°C.
			07	Remote control thermistor: -3.0 °C		At the time of heating, in the case of remote control thermistor enabled, offset temperature at -3.0°C.
	05	Ventilation setting	01	No ventilator connection	○	
			02	Ventilator links air-conditioner		In case of Single split series, by connecting ventilation device to CnT of the indoor printed circuit board (in case of VRF series, by connecting it to CnD of the indoor printed circuit board), the operation of ventilation device is linked with the operation of indoor unit.
	06	"Auto" operation setting	01	"Auto" operation enabled	※ Note 1	
			02	"Auto" operation disabled	※ Note 1	"Auto" operation disabled
Indoor unit function	07	Operation permission/prohibition	01	Disabled	○	
			02	Enabled		Operation permission/prohibition control is enabled.
	08	External input	01	Level input	○	
			02	Pulse input		
	09	Fan speed setting	01	Standard	Note2	
			02	High speed 1	Note2	
			03	High speed 2	Note2	
	10	Fan remaining operation at the time of cooling	01	No remaining operation	○	After cooling stopped, no fan remaining operation
			02	0.5 hours		After cooling stopped, fan remaining operation for 0.5 hours
			03	1 hour		After cooling stopped, fan remaining operation for 1 hour
			04	6 hours		After cooling stopped, fan remaining operation for 6 hours
	11	Fan remaining operation at the time of heating	01	No remaining operation	○	After heating stopped or after heating thermostat OFF, no fan remaining operation
			02	0.5 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 0.5 hours
			03	2 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 2 hours
			04	6 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 6 hours
	12	Setting temperature offset at the time of heating	01	No offset	○	
			02	Setting temperature offset + 3.0 °C		The setting temperature at the time of heating is offset by +3.0 °C.
			03	Setting temperature offset + 2.0 °C		The setting temperature at the time of heating is offset by +2.0 °C.
			04	Setting temperature offset + 1.0 °C		The setting temperature at the time of heating is offset by +1.0 °C.
	13	Heating fan controller	01	Low fan speed	※ Note 1	At the time of heating thermostat OFF, operate with low fan speed.
			02	Setting fan speed		At the time of heating thermostat OFF, operate with the setting fan speed.
			03	Intermittent operation	※ Note 1	At the time of heating thermostat OFF, intermittently operate.
			04	Fan off		At the time of heating thermostat OFF, a fan will be stopped. When the remote control thermistor is enabled, automatically set to "Fan off". Do not set at the time of the indoor unit thermistor.
	14	Return air temperature offset	01	No offset	○	
			02	Return air temperature offset +2.0 °C		Offset the return air temperature of the indoor unit by +2.0 °C.
			03	Return air temperature offset +1.5 °C		Offset the return air temperature of the indoor unit by +1.5 °C.
			04	Return air temperature offset +1.0 °C		Offset the return air temperature of the indoor unit by +1.0 °C.
			05	Return air temperature offset -1.0 °C		Offset the return air temperature of the indoor unit by -1.0 °C.
			06	Return air temperature offset -1.5 °C		Offset the return air temperature of the indoor unit by -1.5 °C.
			07	Return air temperature offset -2.0 °C		Offset the return air temperature of the indoor unit by -2.0 °C.

Note 1: The symbol "※" in the initial setting varies depending upon the indoor unit and the outdoor unit to be connected, and this is automatically determined as follows.

Switch No. Function No.	Function	Setting	Product model
SW1-6	"FAN SPEED" button	"FAN SPEED" button prohibited	Product model whose indoor fan speed is only one step
		"FAN SPEED" button enabled	Product model whose indoor fan speed is two steps or three steps
Remote control function 01	Indoor unit fan speed	Fan speed: three steps	Product model whose indoor unit fan speed is three steps
		Fan speed: two steps (Hi-Lo)	Product model whose indoor unit fan speed is two steps
		Fan: one step	Product model whose indoor unit fan speed is only one step
Remote control function 06	"Auto" operation setting	"Auto" operation enabled	Product model where "Auto" mode is selectable
		"Auto" operation disabled	Product model without "Auto" mode
Indoor unit function 13	Heating fan control	Low fan speed	Product model except FDUS
		Intermittent operation	FDUS

Note 2: Fan speed of "High speed" setting

Fan speed setting	Indoor unit fan speed setting		
Standard	Hi — Mid — Lo	Hi — Lo	Hi — Mid
High speed 1・2	UHI — Hi — Mid	UHI — Mid	UHI — Hi

Initial setting of some indoor unit is "High speed".

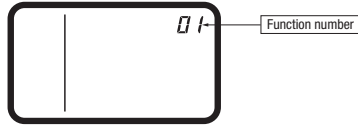
Note 3: As for plural indoor unit, set indoor functions to each master and slave indoor unit.

But only master indoor unit is received the setting change of indoor unit function "07 Operation permission/prohibition" and "08 External input".

7. How to set functions by button operation

- (1) Stop air-conditioning, and simultaneously press **AIR CON No.** and **MODE** buttons at the same time for over three seconds.

The function number "01" blinks in the upper right.

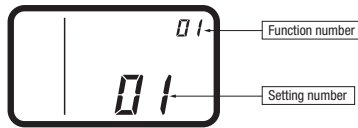


- (2) Press **TEMP▲** or **TEMP▼** button.
Select the function number.

- (3) Press **MODE** button.
Decide the function number.

- (4) [In the case of selecting the remote control function (01-06)]

- ① The current setting number of the selected function number blinks.
(Example)
Function number: "01" (lighting)
Setting number: "01" (blinking)



- ② Press **TEMP▲** or **TEMP▼** button.
Select the setting number.

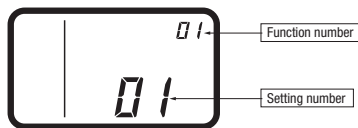
- ③ Press **MODE** button.

The setting is completed.

Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.

(Example)

Function number: "01" (lighting for 3 to 20 seconds)
Setting number: "01" (lighting for 3 to 20 seconds)



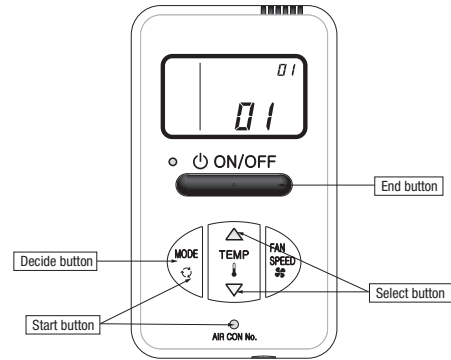
Then, the screen goes back to the function number blinking indication (1), if the setting is sequentially conducted, continue with the same procedures. If the setting is finished, proceed to (5).

- (5) Press **ON/OFF** button.
The setting is completed.

- Even if **ON/OFF** button is pressed during setting, the setting is ended. However, any details where the setting has not been completed will be ineffective.
- The setting contents are stored in the control, and even if the power failure occur, this will not be lost.

[Confirmation method for current setting]

According to the operation, the "setting number" displayed first after selecting "function number" and pressing **MODE** button is the currently set content. (However, in the case of selecting "U ALL" (all units), the setting number of the lowest number among the indoor units is displayed.)



[In the case of selecting the indoor unit function (07-14)]

- ① "88" blinks on the temperature setting indicators.

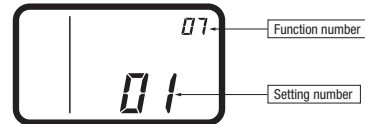
(blinking for approximately 2 to 10 seconds while data are read)



After that, the current setting number of the selected function number blinks.

(Example)

Function number: "07" (lighting)
Setting number: "01" (blinking)



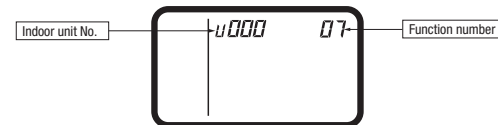
Proceed to ②.

[Note]

- a. In the case of connecting one remote control to plural indoor units, the display will be as follows:

Indoor unit No. display: "U 000" (blinking)

(Display the lowest number among the connected indoor units.)



- b. Press **TEMP▲** or **TEMP▼** button.

Select the indoor unit No. to be set.

If "U ALL" is selected, the same setting can be set to all units.

- c. Press **MODE** button.

Decide the indoor unit No.

"88" blinks on the temperature setting indicators. (blinking for 2 to 10 seconds while data are read)

When **AIR CON No.** button is pressed, go back to the indoor unit selection display (for example, "U 000" blinking).

- ② Press **TEMP▲** or **TEMP▼** button.
Select the setting number

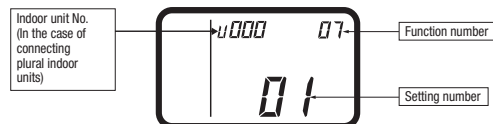
- ③ Press **MODE** button.

The setting is completed.

Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.

(Example)

Indoor unit No.: "U 000" (lighting for 3 to 20 seconds)
Function number: "07" (lighting for 3 to 20 seconds)
Setting number: "01" (lighting for 3 to 20 seconds)



Then, the screen goes back to the function number blinking indication (1), if the setting is sequentially conducted, continue with the same procedures. If the setting is finished, proceed to (5).

8.3 Wireless kit (FDTC only)

Model : RCN-TC-5AW-E2

PJF012D506

Safety precautions

• Please read this manual carefully before starting installation work to install the unit properly. All of the following are important information to be observed strictly.

 **WARNING** Failure to follow these instructions properly may result in serious consequences such as death, severe injury, etc.

 **CAUTION** Failure to follow these instructions properly may cause injury or property damage. It could have serious consequences depending on the circumstances.

• The following symbols are used in the text.

	Never do.		Always follow the instructions given.
---	-----------	---	---------------------------------------

• Keep this manual at a safe place where you can consult with whenever necessary. Show this manual to installers when moving or repairing the unit. When the ownership of the unit is transferred, this manual should be given to the new owner.

WARNING

- | | |
|---|---|
|  | <ul style="list-style-type: none"> • Consult your dealer or a professional contractor to install the unit.
Improper installation made on your own may cause electric shocks, fire or dropping of the unit. |
|  | <ul style="list-style-type: none"> • Installation work should be performed properly according to this installation manual.
Improper installation work may result in electric shocks, fire or break-down. |
|  | <ul style="list-style-type: none"> • Be sure to use accessories and specified parts for installation work.
Use of unspecified parts may result in drop, fire or electric shocks. |
|  | <ul style="list-style-type: none"> • Install the unit properly to a place with sufficient strength to hold the weight.
If the place is not strong enough, the unit may drop and cause injury. |
|  | <ul style="list-style-type: none"> • Be sure to have the electrical wiring work done by qualified electrical installer, and use exclusive circuit.
Power source with insufficient and improper work can cause electric shock and fire. |
|  | <ul style="list-style-type: none"> • Shut OFF the main power source before starting electrical work.
Otherwise, it could result in electric shocks, break-down or malfunction. |
|  | <ul style="list-style-type: none"> • Do not modify the unit.
It could cause electric shocks, fire, or break-down. |
|  | <ul style="list-style-type: none"> • Be sure to turn OFF the power circuit breaker before repairing/inspecting the unit.
Repairing/inspecting the unit with the power circuit breaker turned ON could cause electric shocks or injury. |
|  | <ul style="list-style-type: none"> • Do not install the unit in appropriate environment or where inflammable gas could generate, flow in, accumulate or leak.
If the unit is used at places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas (ammonium, sulfuric compound, acid, etc) or where acidic or alkaline solution, special spray, etc. are used, it could cause electric shocks, break-down, smoke or fire as a result of significant deterioration of its performance or corrosion. |
|  | <ul style="list-style-type: none"> • Do not install the unit where water vapor is generated excessively or condensation occurs.
It could cause electric shocks, fire, or break-down. |
|  | <ul style="list-style-type: none"> • Do not use the unit in a place where it gets wet, such as laundry room.
It could cause electric shocks, fire, or break-down. |
|  | <ul style="list-style-type: none"> • Do not operate the unit with wet hands.
It could cause electric shocks. |

⚠ WARNING• **Do not wash the unit with water.**

It could cause electric shocks, fire, or break-down.

• **Use the specified cables for wiring, and connect them securely with care to protect electronic parts from external forces.**

Improper connections or fixing could cause heat generation, fire, etc.

• **When installing the unit at a hospital, telecommunication facility, etc., take measures to suppress electric noises.**

It could cause malfunction or break-down due to hazardous effects on the inverter, private power generator, high frequency medical equipment, radio communication equipment, etc. The influences transmitted from the remote control to medical or communication equipment could disrupt medical activities, video broadcasting or cause noise interference.

• **Do not leave the remote control with its PCB case removed.**

If dew, water, insect, etc. enter through the hole, it could cause electric shocks, fire or break-down.

⚠ CAUTION• **Do not install the wireless kit at the following places in order to avoid malfunction.**
It could cause break-down or deformation of remote control.

- | | |
|---|--|
| (1) Places exposed to direct sunlight | (8) Places where the receiver is influenced by fluorescent lamp (especially inverter type) or sunlight |
| (2) Places near heat-generating devices | (9) Places where the receiver is affected by infrared rays of any other communication devices |
| (3) High humidity places | (10) Places where some object may obstruct the communication with the remote control |
| (4) Hot surface or cold surface enough to generate condensation | |
| (5) Places exposed to oil mist or steam directly | |
| (6) Uneven surface | |
| (7) Places affected by the direct air flow of the AC unit | |

① Accessories

Please make sure that you have all of the following accessories.

① Receiver		1	⑤ Bracket mounting screw		1	① Wireless remote control		1
② PCB		1	⑥ Wiring (For communication)		1	② Remote control holder		1
③ PCB mounting support		2	⑦ Wiring (For receiving)		1	③ Screw for holder		2
④ Bracket (Sheet metal)		1	⑧ Installation manual		1	④ AAA dry cell battery (LR03)		2
			⑨ Parts set		1	⑤ User's manual		1

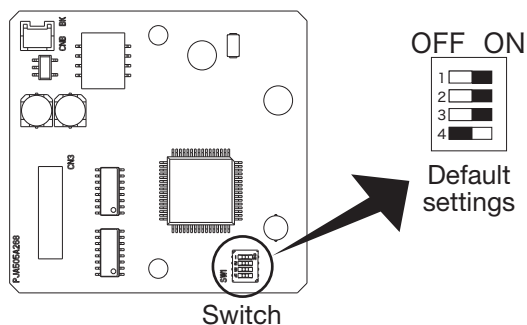
② Preparation before installation**Setting of PCB**Accessory PCB has the following switches to set the functions. Default setting is shown with ☐ mark.

SW1	Prevents interference during multiple setting	☐ ON : Normal	☐ OFF : Remote
SW2	Receiver master/slave setting	☐ ON : Master	☐ OFF : Slave
SW3	Buzzer	☐ ON : Valid	☐ OFF : Invalid
SW4	Auto restart	☐ ON : Valid	☐ OFF : Invalid

② Preparation before installation (continued)

To change setting

1. Change the setting of switches on the accessory PCB.



Master/Slave setting when using multiple remote controls

Up to two receivers or wired remote controls can be installed on one indoor unit group. In such occasion, it is necessary to change the setting to slave on either one.

To change the setting on the receiver, refer to the instruction manual of the receiver.

2. When SW1 is turned to OFF position, change the wireless remote control setting.

For the method of changing the setting, refer to **Setting to avoid mixed communication** of

④ Wireless remote control.

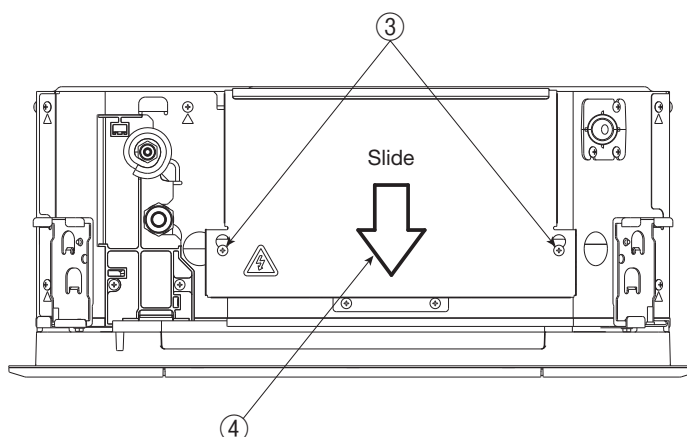
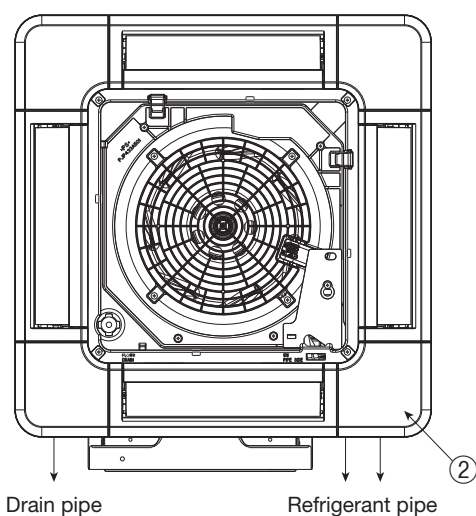
*For the receivable area of the signal, refer to **⑤ Receiver**.

③ How to install the receiver

It is possible to install the receiver by replacing the corner lid on the panel.

Preparation before installation

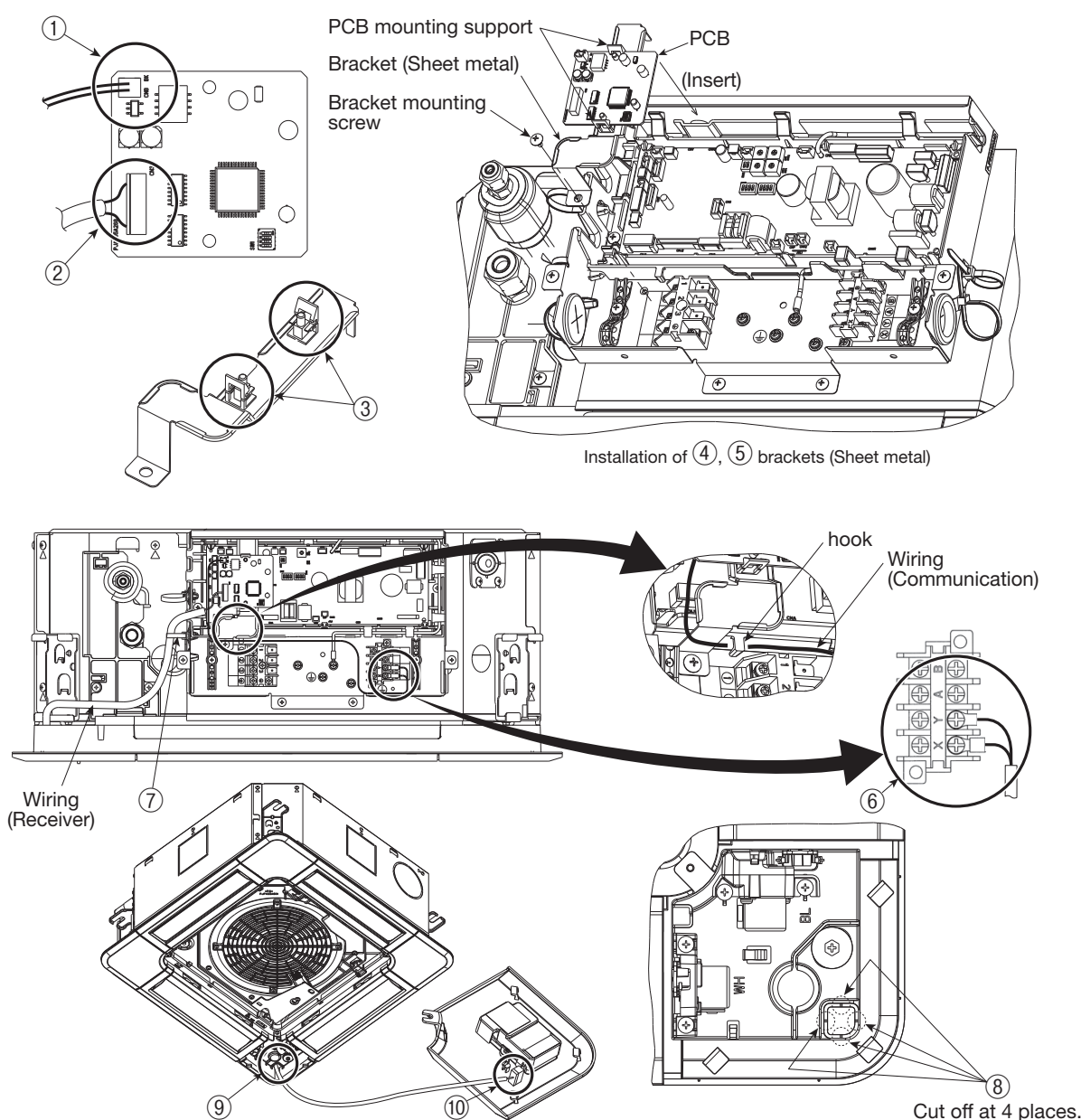
- ① Remove the inlet grille according to the installation manual of the panel.
- ② Remove the corner lid at the refrigerant pipe side.
- ③ Loosen screws (2 pcs) on the control box of the unit.
- ④ Slide the control lid in the arrow direction, and remove it.



③ How to install the receiver(continued)

Installation of the receiver

- ① Connect the wire connector (Communication) to CNB on PCB.
- ② Connect the wire connector (Receiver) to CN3 on PCB.
- ③ Install the PCB mounting supports on the bracket (Sheet metal).
- ④ Install PCB on the PCB mounting supports.
- ⑤ Insert the bracket (Sheet metal) in one side of control box, and fix the other side with screws as shown in the figure.
- ⑥ Connect round terminals of wires (Communication) to the terminal block (X, Y) in the control box. The wires have no polarity.
- ⑦ Fix wires with bands as shown in the figure.
- ⑧ Cut off the half-blanks on the panel (at 4 places) as shown in the figure.
- ⑨ Pass the wiring (Communication) through the opening on the panel.
- ⑩ Connect connectors of the wiring (Communication) and the receiver.
- ⑪ Install the receiver on the panel according to the installation manual of the panel.
- ⑫ Install the control box lid with care not to pinch wires, and fix with screws (2 pcs).



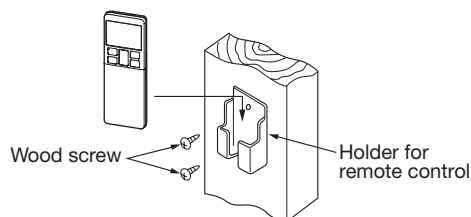
④ Wireless remote control

Installation tips for the remote control holder

Fix the remote control holder using the screws supplied with this product.

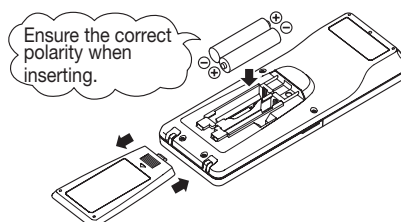
* Precautions for installing the holder

- Adjust the position so that it is upright.
- Ensure that the screw heads are not protruding.
- Do not attach the holder on plaster wall.



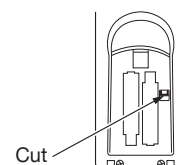
How to insert batteries

1. Detach the back lid.
2. Insert the batteries. (two AAA batteries)
3. Reattach the back lid.



Setting to avoid mixed communication

1. Detach the back lid, and remove the batteries.
2. Cut off the switching wire in the battery compartment using nippers.
3. Insert the batteries, and attach the back lid.



Changing the remote control setting

How to change the Auto Run setting

The Auto Run mode is not available on the building air-conditioning and gas heat pump series (excluding the cooling/heating free multi system).

When using the remote control to operate those models, set the remote control to disable the Auto Run mode.

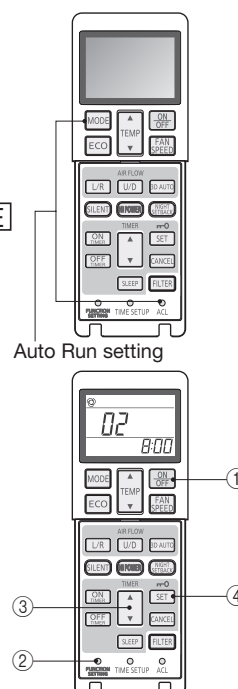
To disable the Auto Run mode, press the **[ACL]** switch while holding down the **[MODE]** button, or insert batteries while holding down the **[MODE]** button.

* Note: Once the batteries are removed, the setting is reset to the factory default.
When the batteries are removed, repeat the steps described above.

Indoor function settings

1. How to set indoor functions
 - ① Press the ON/OFF button to stop the unit.
 - ② Press the desired one of the buttons shown item 2. while holding down the FUNCTION SETTING switch.
 - ③ Use the selection buttons ▲ and ▼ to change the setting.
 - ④ Press the SET button.

The buzzer on the remote control signal receiver beeps twice, and the LED lamp flashes four times at two-second intervals.



④ Wireless remote control (continued)

2. Setting details

The following functions can be set.

Button	Number indicator	Function setting
FAN SPEED	00	Fun speed setting : Standard
	01	Fun speed setting : Setting 1 *
	02	Fun speed setting : Setting 2 *
MODE	00	Room heating temperature adjustment : Disable
	01	Room heating temperature adjustment : +1°C
	02	Room heating temperature adjustment : +2°C
	03	Room heating temperature adjustment : +3°C
FILTER	00	Filter sign display : OFF
	01	Filter sign display : 180 hours
	02	Filter sign display : 600 hours
	03	Filter sign display : 1000 hours
	04	Filter sign display : Operation stop after 1000 hours have elapsed
U/P (Up/Down)	00	Anti draft setting : Disable
	01	Anti draft setting : Enable
SILENT	00	Infrared sensor setting (Motion sensor setting) : Disable
	01	Infrared sensor setting (Motion sensor setting) : Enable
HI POWER	00	Infrared sensor control (Motion sensor control) : Disable
	01	Infrared sensor control (Motion sensor control) : Power control only
	02	Infrared sensor control (Motion sensor control) : Auto OFF only
	03	Infrared sensor control (Motion sensor control) : Power control + Auto OFF
ON TIMER	00	Cooling fan residual-period running : Disable
	01	Cooling fan residual-period running : 0.5 hours
	02	Cooling fan residual-period running : 2 hours
	03	Cooling fan residual-period running : 6 hours
OFF TIMER	00	Heating fan residual-period running : Disable
	01	Heating fan residual-period running : 0.5 hours
	02	Heating fan residual-period running : 2 hours
	03	Heating fan residual-period running : 6 hours
NIGHT SETBACK	00	Remote control signal receiver LED : Brightness High
	01	Remote control signal receiver LED : Brightness Low
	02	Remote control signal receiver LED : OFF

* Refer to technical data.

⑤ Receiver

1 Control multiple indoor units with one remote control

Up to 16 indoor units can be connected.

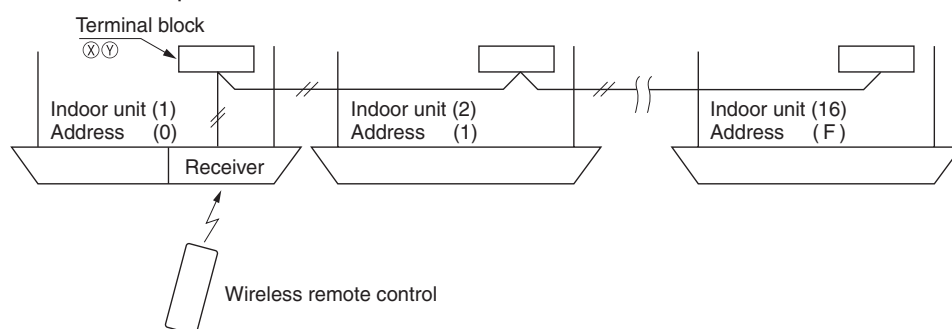
1. Connect the XY terminal with 2 cores wire. As for the size, refer to the note on the right.
2. For Packaged air-conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [1] to [F] so as not to duplicate.

Restrictions on the thickness and length of wire
(Maximum length is 600m.)

Standard	Within	0.3 mm ² × 100m
	Within	0.5 mm ² × 200m
	Within	0.75mm ² × 300m
	Within	1.25mm ² × 400m
	Within	2.0 mm ² × 600m

For the shop series

For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.



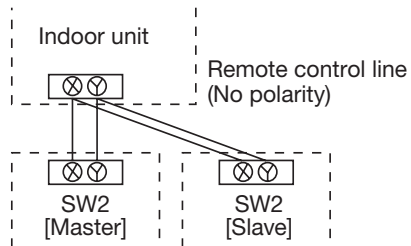
For the building air-conditioning and gas heat pump series

Set the indoor unit and outdoor unit numbers by manually specifying the addresses.

Use the rotary switches SW1 and SW2 provided on the indoor unit PCB (printed circuit board) to set the indoor unit numbers so that they are not duplicated.

Master/Slave setting when using multiple remote control

Up to two receivers can be installed in one indoor unit group.



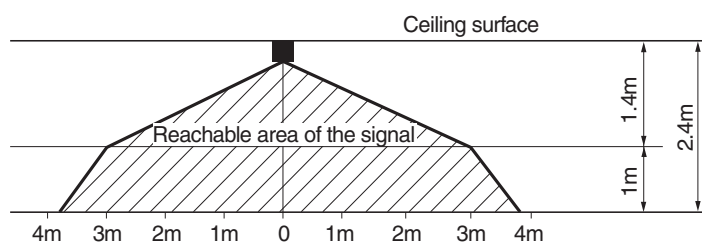
Switch	Setting	Function
SW2	ON	Master
	OFF	Slave

Wireless remote control's operable area

1. Standard reachable area of the signal

[Condition] Illuminance at the receiver: 300lux

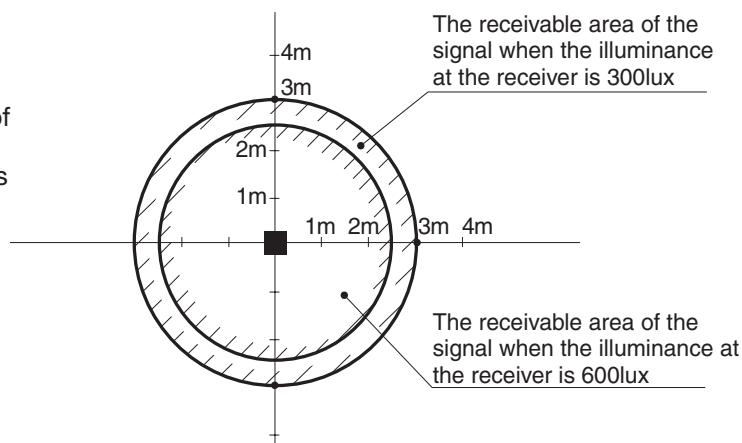
(When no lighting is installed within 1m of the receiver in an ordinary office)



⑤ Receiver (continued)

2. Correlation between illuminance at the receiver and reachable area of the signal in a plain view.

The drawing in the right shows the correlation between the reachable area of the signal and illuminance at the receiver when the remote control is operated at 1m high under the condition of ceiling height of 2.4m. When the illuminance becomes double, the area is narrowed down to two thirds.



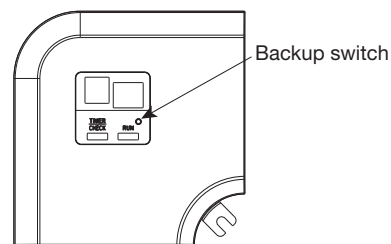
3. Installation tips when several receivers are installed close to one another.
Minimum distance between the indoor units which can avoid cross communication is 5m under the condition of 300lux of illuminance at the receiver.
(When no lighting is installed within 1m of the receiver in an ordinary office)

Backup switch

A backup switch is provided on the receiver section of the panel surface.

When operation from the wireless remote control unit is not possible (due to flat batteries, a mislaid unit, a unit failure), you can use it as an emergency means. You should operate this switch manually.

1. If pressed while the air-conditioner is in a halt, it will cause the air-conditioner to start operation in the automatic mode (In case of cooling only, it is in the cooling mode).
Wind speed: Hi fan, Temperature setting: 23°C, Louver: horizontal
2. If pressed while the air-conditioner is in operation, it will stop the air-conditioner.



Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with the wireless remote control unit, while the backup switch on the receiver is pressed.
- If the backup switch on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check wiring by consulting with inspection guides.

How to read the two-digit display

On the receiver of a wireless kit, a two-digit (7-segment) display is provided.

1. An indication will be displayed for one hour after power on.
2. An indication will be displayed for 3.5 seconds after transmitting a "STOP" command from the wireless remote control or the operation of the backup switch to stop the unit.
3. An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
4. When there are no error records to indicate, addresses of all the connected units are displayed.
5. When there are some error records remaining, the error records are displayed.
6. Error records can be cleared by transmitting a "STOP" command from the wireless remote control, while the backup button is pressed.

8.4 Motion sensor kit (FDTC only)

Model : LB-TC-SW-E

PJF012D504

⚠ WARNING

- Connect the wiring to the PCB in the control box on the indoor unit and fix the wiring securely so as not to apply unexpected stress on the PCB.
Loose connection or fixing will cause abnormal heat generation or fire. 
- Make sure the power source is turned off during electrical wiring work.
Otherwise, electric shock, malfunction and abnormal operation may occur. 

⚠ CAUTION

- Do not install the motion sensor kit at the following places in order to avoid malfunction.

(1) Places exposed to direct sunlight (2) Places near heat-generating devices (3) High humidity places (4) Hot surface or cold surface enough to generate condensation (5) Places directly exposed to oil mist or steam (6) Places affected by the direct air flow of the indoor unit (7) Places where the motion sensor may be influenced by fluorescent lamp or sunlight	(8) Places where the motion sensor may be affected by infrared rays of any other communication devices (9) Places where some object may obstruct the motion sensor (10) Places where there may be impact on the motion sensor (11) Places with strong radio wave or static electricity (12) Dusty place where the motion sensor lens may become tainted or be damaged
--	---

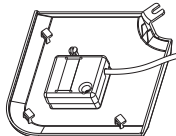

- Do not leave the motion sensor without the cover.
In case the cover needs to be detached, protect the motion sensor with a packaging or bag in order to keep it away from water and dust. 

Attention

- Instruct the customer how to operate the motion sensor kit correctly by referring to the instruction manual.
- For the installation method of the air-conditioner itself, refer to the installation manual enclosed in the package.

① Accessories

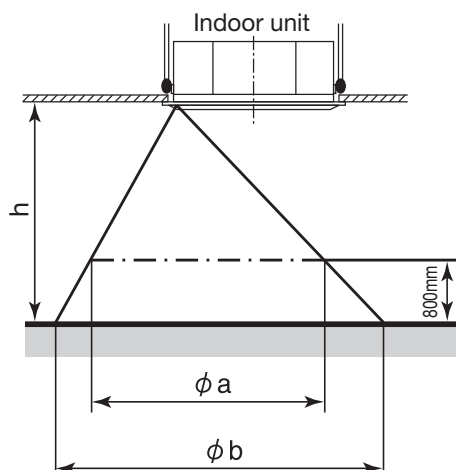
Please make sure that all components are in the package.

Motion sensor		1
---------------	---	---

② Installing the motion sensor

It is possible to install the motion sensor by replacing the corner lid on the panel.

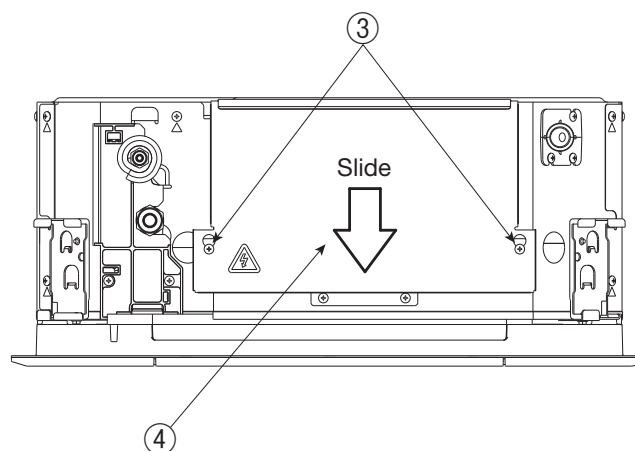
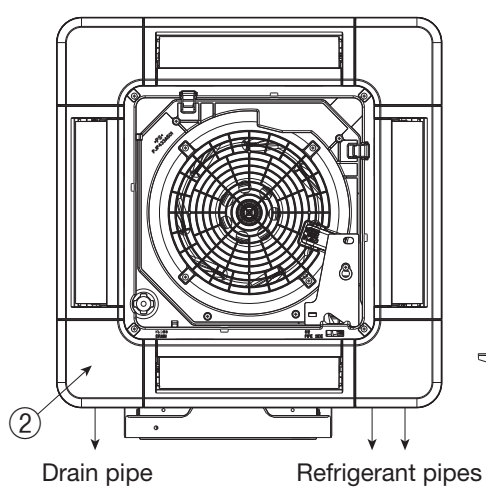
The detectable area



Height of the ceiling	$h[m]$	2.7	3.5	4.0
Detectable area①	$\phi a[m]$	about 4.5	about 6.4	about 7.6
Detectable area②	$\phi b[m]$	about 6.4	about 8.3	about 9.5

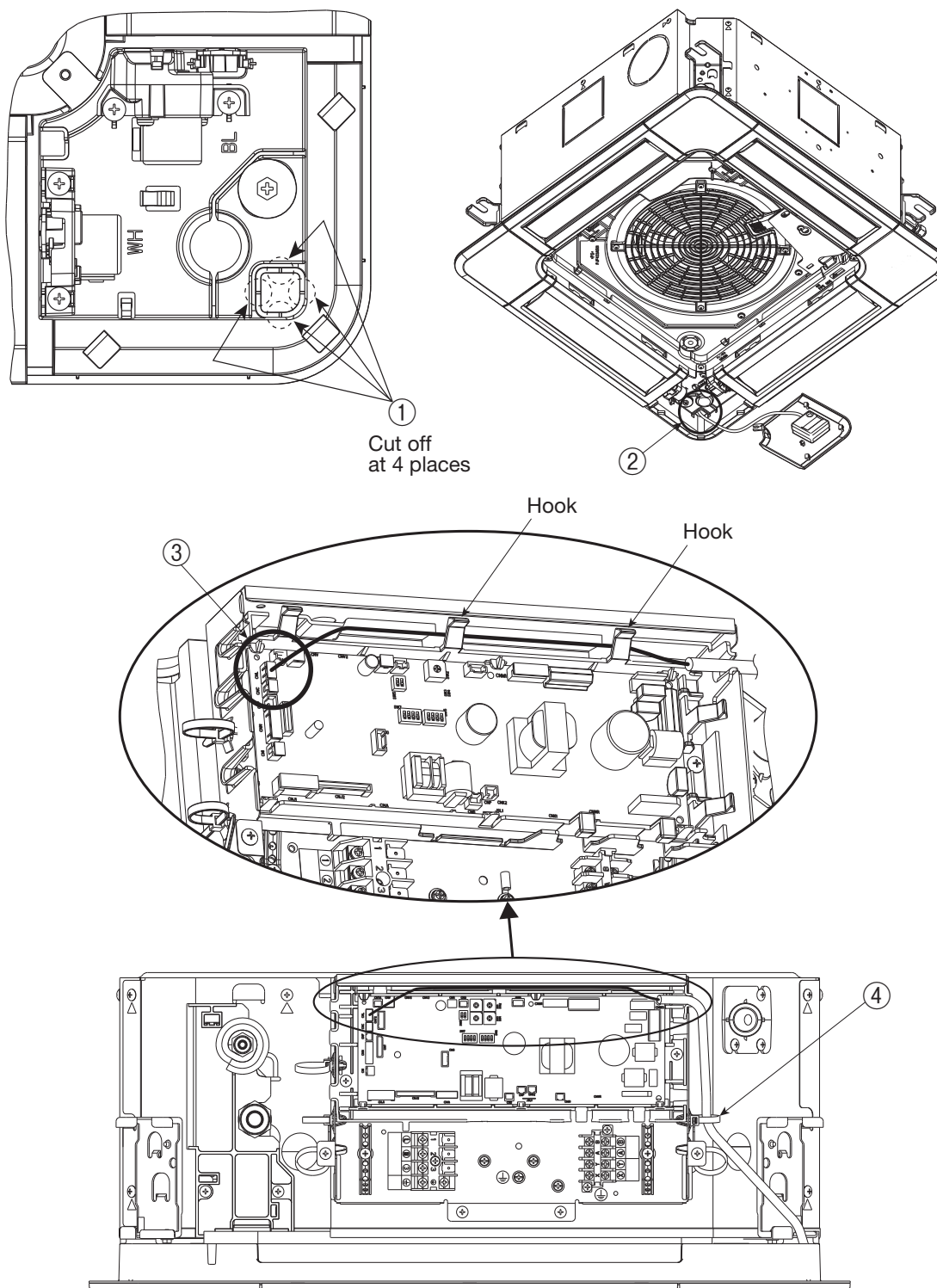
Preparation before installation

- ① Remove the inlet grille according to the installation manual of the panel.
- ② Remove the corner lid at the drain pipe side.
- ③ Loosen screws (2 pcs) on the control box of the unit. (It is not necessary to remove the screws.)
- ④ Slide the control lid in the arrow direction, and remove it.



Installation of the motion sensor

- ① Cut the half blanking (4 sections) of the panel as shown in the following figure.
- ② Pass the motion sensor wiring through the opening of the panel.
- ③ Connect the wiring connector to CNL (3P, black) on the PCB in the control box.
- ④ Fix the wiring with a band as shown below.
- ⑤ Install the motion sensor on the panel according to the installation manual of the panel.
- ⑥ Install the control lid with care not to pinch the wiring, and reinstall the control lid with screws (2 pcs.).



③ Setting the motion sensor

The motion sensor will not function if it is only installed.

Set the function of the motion sensor by the wired or wireless remote control.

Refer to the manual instruction of each remote control for the setting procedure.

Note: It is not possible to set by the following remote control models or older ones.

Wired: RC-EX1A, RC-E5, RCH-E3

Wireless: RCN-E1R

8.5 Interface kit (SC-BIKN2-E)

※ When RC-EX3A is connected, please use SC-BIKN2-E by all means.

RKZ012A099

Accessories included in package

Be sure to check all the accessories included in package.

No.	Part name	Quantity
①	Indoor unit's connection cable (cable length: 1.8m)	1
②	Wood screws (for mounting the interface: $\phi 4 \times 25$)	2
③	Tapping screws (for the cable clamp and the interface mounting bracket)	3
④	Interface mounting bracket	1
⑤	Cable clamp (for the indoor unit's connection cable)	1
⑥	CnT terminal connection cable (total cable length: 0.5m)	1

Safety precautions

Before use, please read these Safety precautions thoroughly before installation.

- All the cautionary items mentioned below are important safety related items to be taken into consideration, so be sure to observe them at all times.

⚠ Warning Incorrect installation could lead to serious consequences such as death, major injury or environmental destruction.

- Symbols used in these precautions



Always go along these instruction.

- After completed installation, carry out trial operation to confirm no anomaly, and ask the user to keep this installation manual in a good place for future reference.



Warnings



- **Installation must be carried out by a qualified installer.**

If you install it by yourself, it may cause an electric shock, fire and personal injury, as a result of a system malfunction.

- **Install it in full accordance with the installation manual.**

Incorrect installation may cause an electric shock, fire and personal injury.

- **Electrical work must be carried out by a qualified electrician in accordance with the technical standard for electrical equipment, the indoor wiring standard and this installation manual.**

Incorrect installation may cause an electric shock, fire and personal injury.

- **Use the specific cables for wiring. And connect all the cables to terminals or connectors securely and clamp them with cable clamps in order for external forces not to be transmitted to the terminals directly.**

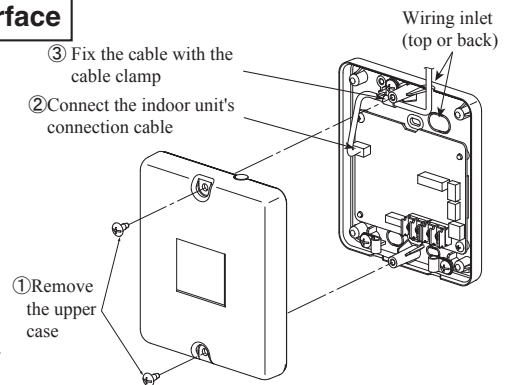
Incomplete connection may cause malfunction, and lead to heat generation and fire.

- **Use the original accessories and specified components for installation.**

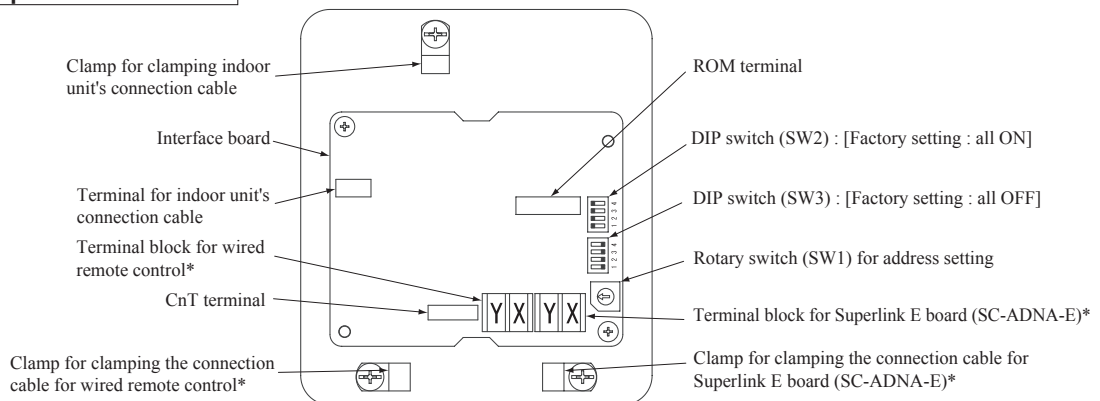
If the parts other than those prescribed by us are used, it may cause an electric shock, fire and personal injury.

Connecting the indoor unit's connection cable to the interface

- ① Remove the upper case of the interface.
 - Remove 2 screws from the interface casing before removal of upper casing.
- ② Connect the indoor unit's connection cable to the interface.
 - Connect the connector of the indoor unit connection cable to the connector on the interface's circuit board.
- ③ Fix the indoor unit's connection cable with the cable clamp.
 - Cable can be brought in from the top or from the back.
 - Cut out the punch-outs for the connection cables running into the casing with cutter.
- ④ Connect the indoor unit's connection cable to the indoor control PCB.
 - Connect the indoor unit's connection cable to the indoor control PCB securely.
 - Clamp the connection cable to the indoor control box securely with the cable clamp provided as an accessory.
 - Regarding the cable connection to the indoor unit, refer to the installation manual for indoor unit.



Name of each part of the interface



*Either the connection cables of Superlink E board (SC-ADNA-E) or of wired remote control is connectable.

Switch	Setting	Function	Switch	Setting	Function
SW2-1	ON**	CnT level input	SW2-3	ON**	External input (CnT input)
	OFF	CnT pulse input		OFF	Operation permission/prohibition (CnT input)
SW2-2	ON**	Wired remote control : Enable	SW2-4	ON**	Annual cooling : Enable***
	OFF	Wired remote control : Disable		OFF	Annual cooling : Disable***

** Factory setting

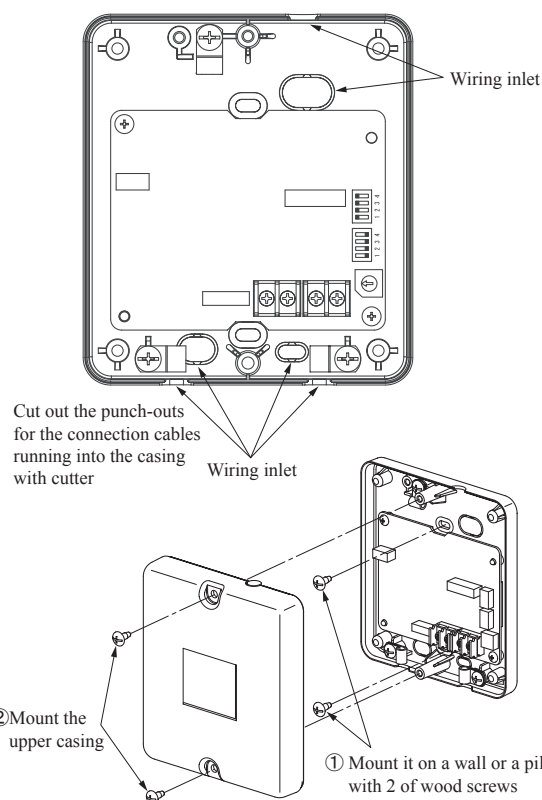
*** Indoor fan control at low outdoor air temperature in cooling

Installation of the interface

- Install the interface within the range of the connection cable length (approximately 1.3m) from the indoor unit.
- Be sure not to extend the connection cable on site. If the connection cable is extended, malfunction may occur.
- Fix the interface on the wall, pillar or the like.
- Don't install the interface and wired remote control at the following places.
 - Places exposed to direct sunlight
 - Places near heating devices
 - High humidity places
 - Surfaces where are enough hot or cold to generate condensation
 - Places exposed to oil mist or steam directly
 - Uneven surface

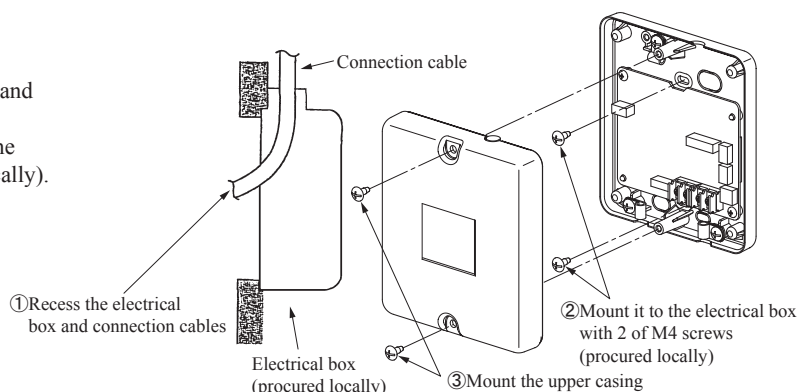
Mounting the interface directly on a wall

- ① Mount the lower casing of the interface on a flat surface with wood screws provided as standard accessory.
- ② Mount the upper casing.



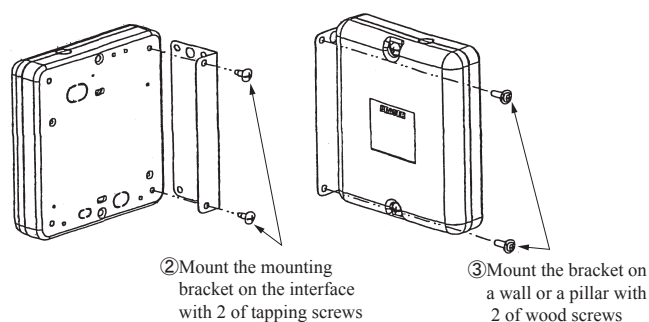
Recessing the interface in the wall

- ① Recess the electrical box (procured locally) and connection cables in the wall.
- ② Mount the lower casing of the interface to the electrical box with M4 screws (procured locally).
- ③ Mount the upper casing.



Mounting the interface with the mounting bracket

- ① Mount the upper casing.
- ② Mount the mounting bracket to the interface with tapping screws provided as standard accessory.
- ③ Mount the mounting bracket on wall or the like with wood screws provided as standard accessory.



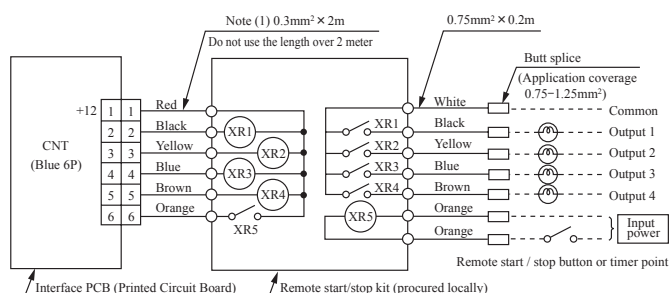
Installation check items

- ☐ Are the connection cables connected securely to the terminal blocks and connectors?
- ☐ Are the thickness and length of the connection cables conformed with the standard?

Functions of CnT connector

It is available to operate the air-conditioner and to monitor the operation status with the external control unit (remote display) by sending the input/output signal through CnT connector on the indoor control PCB.

- ① Connect a external remote control unit (procured locally) to CnT terminal.
- ② In case of the pulse input, switch OFF the DIP switch SW2-1 on the interface PCB.
- ③ When setting operation permission/prohibition mode, switch OFF the DIP switch SW2-3 on the interface PCB.



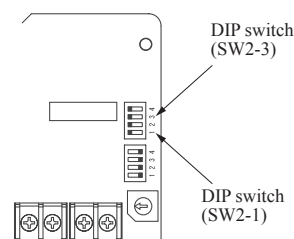
Input/Output	Function	Output signal		Content
		Relay	ON/OFF	
Output 1	Operation output	XR ₁	ON	During air-conditioner operation
Output 2	Heating output	XR ₂	ON	During heating operation
Output 3	Compressor operation output	XR ₃	ON	During compressor running
Output 4	Malfunction output	XR ₄	ON	During anomalous stop

- XR₁-4 are for the DC 12V relay
- XR₅ is a DC 12/24V or AC 220-240V relay
- CnT connector (local) maker, model

Connector	Molex	5264-06
Terminals	Molex	5263T

Input/Output	Function	SW2-1		SW2-3		Air-conditioner	Operation by remote control
		Setting		Setting	Input signal		
Input	External control input	ON*	Level input	ON*	Level	OFF→ON	External input
					Level	ON→OFF	Operation permission
					Level	OFF→ON	Operation prohibition
		OFF	Pulse input	ON*	Pulse	OFF→ON	External input
					Pulse	ON→OFF	Operation permission
					Pulse	OFF→ON	Operation prohibition

* Factory setting



In case of the remote control (RC-EX3 or later model), the external outputs (1 – 4) and the external input can be changed using the function setting of remote control. For the setting method, refer to the installation manual. Also refer to the technical manual to know how it is adapted to the function setting for the external outputs and input, at the indoor unit side.

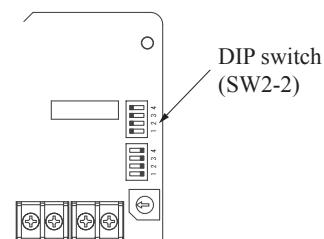
Connection of Superlink E board

Regarding the connection of Superlink E board, refer to the installation manual of Superlink E board.

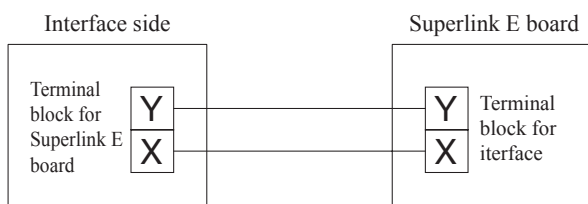
For electrical work, power source for all of units in the Superlink system must be turned OFF.

- ① Switch ON the DIP switch SW2-2 (Factory setting: ON) on the interface PCB.

Caution: Wireless remote control attached to the indoor unit can be used in parallel, after connecting the wired remote control. However, some of functions other than the basic functions such as RUN/STOP, temperature setting, etc. may not work properly and may have a mismatch between the display and the actual behavior.



- ② Wiring connection between the interface and the Superlink E board.



No.	Names of recommended signal wires
1	Shielded wire
2	Vinyl cabtyre round cord
3	Vinyl cabtyre round cable
4	Vinyl insulated wire vinyl sheathed cable for control

Within 200 m 0.5 mm² × 2 cores
 Within 300 m 0.75 mm² × 2 cores
 Within 400 m 1.25 mm² × 2 cores
 Within 600 m 2.0 mm² × 2 cores

- ③ Clamp the connection cables with cable clamps.

Connection of wired remote control

Regarding the connection of wired remote control, refer to the installation manual of wired remote control.

① Switch ON the DIP switch SW2-2 (Factory setting : ON) on the interface PCB.

Caution: Wireless remote control attached to the indoor unit can be used in parallel, after connecting the wired remote control. However, some of functions other than the basic functions such as RUN/STOP, temperature setting, etc. may not work properly and may have a mismatch between the display and the actual behavior.

② Wiring connection between the interface and the wired remote control.

Installation and wiring of wired remote control

Ⓐ Install the wired remote control with reference to the attached installation manual of wired remote control.

Ⓑ 0.3mm² × 2 cores cable should be used for the wiring of wired remote control.

Ⓒ Maximum length of wiring is 600m.

If the length of wiring exceeds 100m, change the size of cable as mentioned below.

100m-200m: 0.5mm² × 2 cores, 300m or less: 0.75mm² × 2 cores, 400m or less: 1.25mm² × 2 cores, 600m or less: 2.0mm² × 2 cores

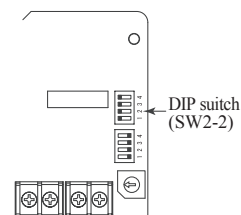
However, cable size connecting to the terminal of wired remote control should not exceed 0.5mm². Accordingly if the size of connection cable exceeds 0.5mm², be sure to downsize it to 0.5mm² at the nearest section of the wired remote control and waterproof treatment should be done at the connecting section in order to avoid contact failure.

Ⓓ Don't use the multi-core cable to avoid malfunction.

Ⓔ Keep the wiring of wired remote control away from grounding (Don't touch it to any metal frame of building, etc.).

Ⓕ Connect the connection cables to the terminal blocks of the wired remote control and the interface securely (No polarity).

③ Clamp the connection cables with cable clamps.



Control of multiple units by a single wired remote control

Multiple units (up to 16) can be controlled by a single wired remote control. In this case, all units connected with a single wired remote control will operate under the same mode and same setting temperature.

① Connect all the interface with 2 cores cables of wired remote control line.

② Set the address of indoor unit for remote control communication from "0" to "F" with the rotary switch SW1 on the interface PCB.

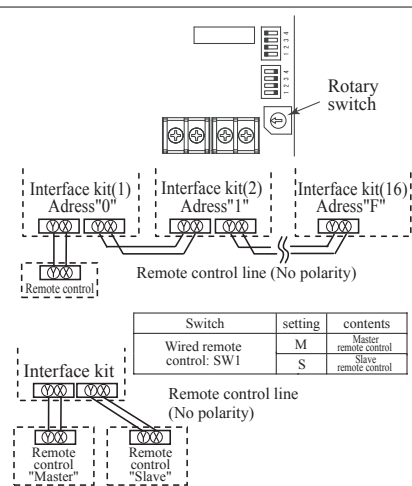
③ After turning the power ON, the address of indoor unit can be displayed by pressing [AIR CON No.] button on the wired remote control. Make sure all indoor units connected are displayed in order by pressing Δ or ∇ button.

Master/Slave setting wired when 2 of wired remote control are used

Maximum two wired remote control can be connected to one indoor unit (or one group of indoor units)

① Set the DIP switch SW1 on the wired remote control to "Slave" for the slave remote control. (Factory setting : Master)

○ Caution : Remote control sensor of the slave remote control is invalid.



● When using the wireless remote control in parallel with the wired remote control;

Since temperature setting range of wired remote control is different from that of wireless remote control, please adjust the setting range of wired remote control to be the same setting range of wireless remote control by following procedure. (The set temperature may not be displayed correctly on the wireless remote control, unless change of temperature setting range is done.)

Changing procedure of temperature setting range is as follows.

How to set upper and lower limit of temperature setting range

1. Stop the air-conditioner, and press $\square$ (SET) and $\square$ (MODE) button at the same time for 3 seconds or more.

The indication changes to "FUNCTION SET $\blacktriangledown$ "

2. Press $\blacktriangledown$ button once, and change to the "TEMP RANGE $\blacktriangle$ " indication.

3. Press $\square$ (SET) button, and enter the temperature range setting mode.

4. Confirm that the "Upper limit $\blacktriangledown$ " is shown on the display.

5. Press $\square$ (SET) button to fix.

6. ① Indication: " $\blacktriangledown$ $\vee$ $\wedge$ SET UP " $\rightarrow$ "UPPER 28 $^{\circ}$ C $\vee$ $\wedge$ "

② Select the upper limit value 30 $^{\circ}$ C with temperature setting button $\boxplus$. "UPPER 30 $^{\circ}$ C $\vee$ " (blinking)

③ Press $\square$ (SET) button to fix. "UPPER 30 $^{\circ}$ C" (Displayed for two seconds)

After the fixed upper limit value displayed for two seconds, the indication will return to "UPPER LIMIT $\blacktriangledown$ ".

7. Press $\blacktriangledown$ button once, "LOWER LIMIT $\blacktriangle$ " is selected, press $\square$ (SET) button to fix.

① Indication: " $\blacktriangledown$ $\vee$ $\wedge$ SET UP " $\rightarrow$ "LOWER 20 $^{\circ}$ C $\vee$ $\wedge$ "

② Select the lower limit value 18 $^{\circ}$ C with temperature setting button $\boxplus$. "LOWER 18 $^{\circ}$ C $\vee$ " (blinking)

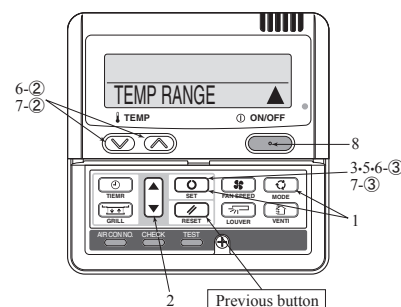
③ Press $\square$ (SET) button to fix. "LOWER 18 $^{\circ}$ C" (Displayed for two seconds)

After the fixed lower limit value displayed for two seconds, the indication will return to "LOWER LIMIT $\blacktriangledown$ ".

8. Press [ON/OFF] button to finish.

Temperature setting range

Mode	Temperature setting range
Cooling, Heating, Dry, Auto	18-30 $^{\circ}$ C



• It is possible to quit in the middle by pressing [ON/OFF] button, but the change of setting is incomplete.

• During setting, if pressing [RESET] button, it returns to the previous screen.

8.6 Superlink E board (SC-ADNA-E)

PJZ012D029K 

- Read and understand the instructions completely before starting installation.
- Refer to the instructions for both indoor and outdoor units.

Safety precautions

- Carefully read "Safety precautions" first. Follow the instructions for installation.
- Precautions are grouped into "Warning⚠" and "Caution⚠". The "Warning⚠" group includes items that may lead to serious injury or death if not observed. The items included in the "Caution⚠" group also may lead to serious results under certain conditions. Both groups are crucial for safety installation. Read and understand them carefully.
- After installation, conduct the test operation of the device to check for any abnormalities. Describe how to operate the device to the customer following the installation instruction manual. Instruct the customer to keep this installation instruction for future reference.

⚠ Warning

- This device should be installed by the dealer where you purchase the device or a licensed professional shop. If the device is incorrectly installed by the customer, it may result in electric shock or fire.
- Install the device carefully following the installation instruction. If the device is incorrectly installed, it may result in electric shock or fire.
- Use the accessory parts and specified parts for installation. If any parts that do not match the specifications are used, it may result in electric shock or fire.
- A person with the electrical service certification should conduct the service based on the "Technical standards for electrical facilities", "Electrical Wiring Code", and the installation instruction. If the work is done incorrectly, it may result in electric shock or fire.
- Wiring should be securely connected using the specified types of wire. No external force on the wire should be applied to any terminals. If a secure connection is not achieved, it may result in electric shock or fire.

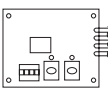
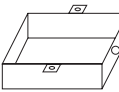
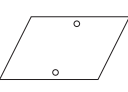
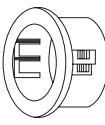
⚠ Caution

- Provide ground connection.
The ground line should never be connected to the gas supply piping, the water supply piping, the lightning conductor rod, nor the telephone ground. If the grounding is improper, it may result in electric shock.
- Do not install the device in the following locations.
 1. Where there is mist/spray of oil or steam such as kitchens.
 2. Where there is corrosive gases such as sulfurous acid gas.
 3. Where there is a device generating electromagnetic waves.
These may interfere with the control system resulting in the device becoming uncontrollable.
 4. Where flammable volatile materials such as paint thinner and gasoline may exist or where they are handled. This may cause a fire.

1 Application

Indoor-to-outdoor three core communication specification type 3 (since October 2007)

2 Accessories

SL E board 	Metal box 	Metal cover 	Screw for ground M4x8L 2 pieces 
Pan head screws φ4x8L 2 pieces 	Locking supports To secure the print board and the metal box Made of nylon 4 pieces 	Binding band 	Grommet 

3 Function

Allowing the central control SL1N-E, SL2NA-E, and SL4-AE/BE to control and monitor the commercial air-conditioner unit.

4 Control switching

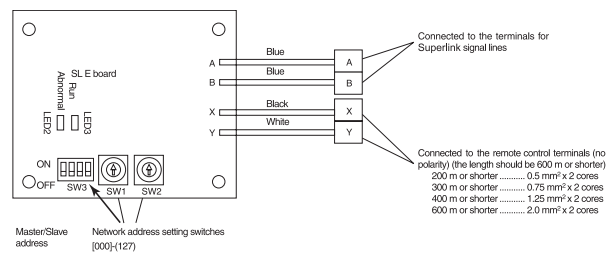
Settings can be changed by the DIP switch SW3 on the SL E board as in the following.

Switch	Symbol	Switch	Remarks
SW3	1	ON	Master
		OFF (default)	Slave
	2	ON	Fixed previous protocol
		OFF (default)	Automatic adjustment of Superlink protocol
	3	ON	Indicates the forced operation stop when abnormality has occurred.
		OFF (default)	Indicates the status of running/stop as it is, when abnormality has occurred.
	4	ON	The hundredth address activated "1"
		OFF (default)	The hundredth address activated "0"

5 Connection outline

Note for setting the address

- Set the address between 00 and 47 for the previous Superlink connection and between 000 and 127 for the new Superlink connection. (*1)
- Do not set the address overlapping with those of the other devices in the network. (The default is 000)



(*1) Whether the actual link is either the new Superlink or the previous Superlink depends on the models of the connected outdoor and indoor units. Consult the agent or the dealer.

Signal line specification

Communication method	Previous Superlink	New Superlink
Line type	MVVS	MVVS
Line diameter	0.75 - 1.25mm ²	0.75/1.25mm ²
Signal line (total length)	up to 1000m	up to 1500/1000m (*2)
Signal line (maximum length)	up to 1000m	up to 1000m

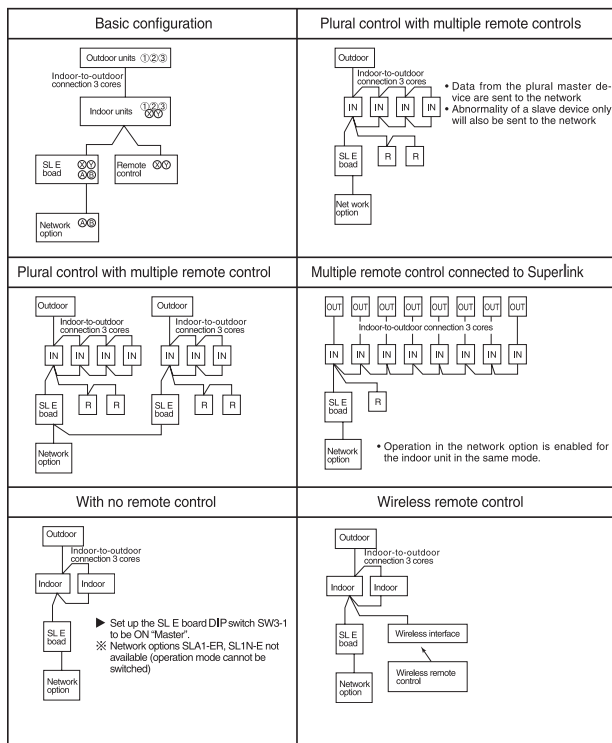
(*2) Up to 1500m for 0.75mm², and up to 1000m for 1.25mm².

Do not use 2.0mm². It may cause an error.

(*3) Connect grounding on both ends of the shielding wire.

For the grounding method, refer to the section "6 Installation".

- (1) Set the Superlink network address with SW1 (tens place), SW2 (ones place), and SW3 (hundreds place).
- (2) Set the SL E board SW3-1 to be ON (Master) when using this without any remote control (no wired remote controller nor wireless remote control).
- (3) Set up the plural master/slave device using the DIP switches on the indoor unit board.
- (4) Set up the remote control master/slave device using the slide switch on the remote control board.
- (5) Set up "0" to "F" using the address rotary switch on the indoor unit board when controlling the indoor unit with the multiple remote control.

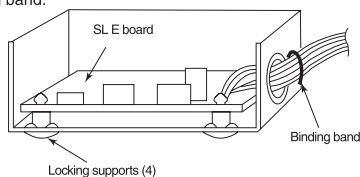


6 Installation

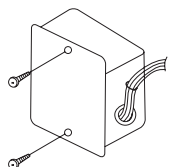
- When using the metal box (mounted on the indoor unit / mounted on the back of the remote control):

- (1) Mount the SL E board in the metal box using the locking supports.
- (2) Wiring should go through the provided grommet since then through the wiring to the hole on the Metal box.

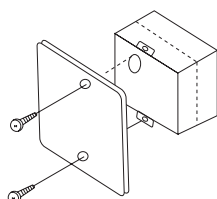
Secure the grommet after inserting the grommet into the Metal box as shown in below figure, then tie the wiring at the outlet of the unit using a binding band.



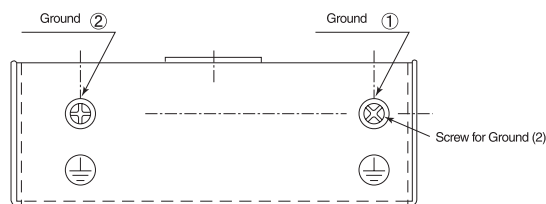
- ▲ When installed outside the indoor unit, put the metal cover on.



- ▲ When installed on the back of the remote control, mount it directly on the remote control bottom case.

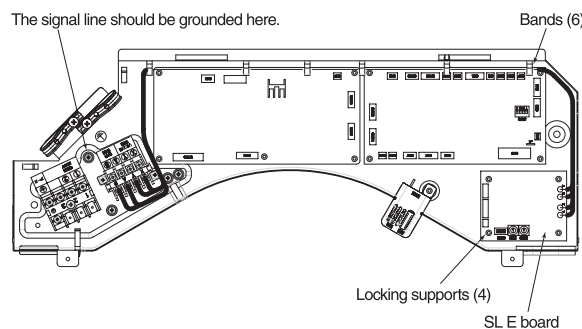


Connect grounding. Connect grounding for the power line to Ground ①, and grounding for the signal line to Ground ② or to the Ground on the indoor unit control box.



- When connecting to the indoor unit control box (ceiling-concealed type and FDT type only):

- (1) Mount the SL E board in the control box using the locking supports.
- (2) Remove 6 bands from the box and put the wiring through the bands to be secured.



Electrical shock hazard! make sure to turn the power off for servicing. Be cautious so that no abnormal force should be applied to the wiring. Do not let the SL E board hung by the wiring. Do not damage the board with a screw driver.

The board is sensitive to static electricity. Release the static electricity of your body before servicing.

(You can do this by touching the control board which is grounded).

Location of installation

Install the device at the location where there are no electromagnetic waves nor where there is water and dust. The specified temperature range of the device is 0 to 40°C. Install the device at the location where the ambient temperature stays within the range. If it exceeds the specification, make sure to provide solution such as installing a cooling fan. When used outside of the range, it may cause abnormal operation.

7 Indicator display

Check the LED 3 (green) and LED 2 (red) on the SL E board for flashing.

SL E board LEDs		Inspection mode	Display on the integrated network control device
Red	Green		
Off	Flashing	Normal communication	
Off	Off	- Disconnection in the remote control communication line (X or Y) - Short-circuit in the remote control communication line (between X and Y) - Faulty indoor unit remote control power - Faulty remote control communication circuit - Faulty CPU on SL E board	No corresponding unit number
One flash	Flashing	- Disconnection in the Superlink signal line (A or B) - Short-circuit in the Superlink signal line (between A and B) - Faulty Superlink signal circuit	
Two flashes	Flashing	Faulty address setting for the SL E board (Set up the address for previous SL E board : more than 48 new SL E board : more than 128)	
Three flashes	Flashing	- SL E board parent not set up when used without a remote control - Faulty remote control communication circuit	E1
Four flashes	Flashing	Address overlapping for the SL E board and the Superlink network connected indoor unit	E2
Off	Flashing	Number of connected devices exceeds the specification for the multiple indoor unit control	E10

8.7 Ceiling concealed type (SRR) option parts

(1) Bottom air inlet kit

This manual contains installation points for BOTTOM AIR INLET KIT manufactured by MHI.
Carry out the work following the instructions below.
Keep this manual properly with USER'S MANUAL provided with the indoor unit.

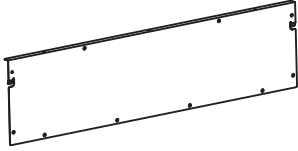
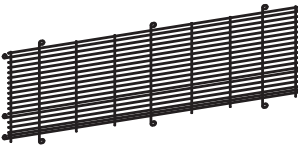
CAUTION

- After unpacking, carry out this work on the ground.
- Do not carry out the work during operation, or there is a danger of being entangled in the rotating parts and getting injured.
- Be sure to cut off the power and stop the unit before maintenance.

1) Applicable model of unit and type of BOTTOM AIR INLET KIT

BOTTOM AIR INLET KIT		UT-BAT1EF	UT-BAT2EF	UT-BAT3EF
Model	for FDUT	15,22,28,36	45,56	71
	for SRR	25,35	50,60	

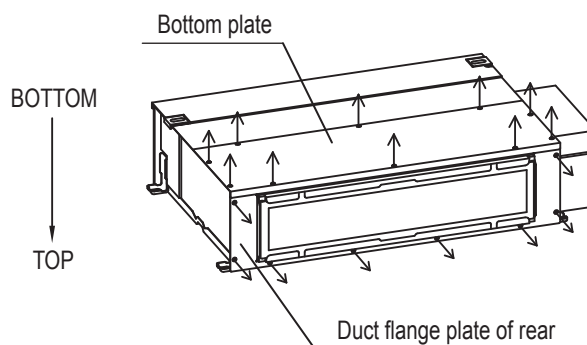
2) Parts list of BOTTOM AIR INLET KIT

Rear panel	Fan guard	Parts set (Tapping screw)
 1pc.	 1pc.	4mm(dia)X12mm(length) UT-BAT1EF 12pcs. UT-BAT2EF 12pcs. UT-BAT3EF 14pcs.

3) Installation Points

(Figure shows the state that the unit is placed on a floor. Top and bottom are inverted after installing the unit.)

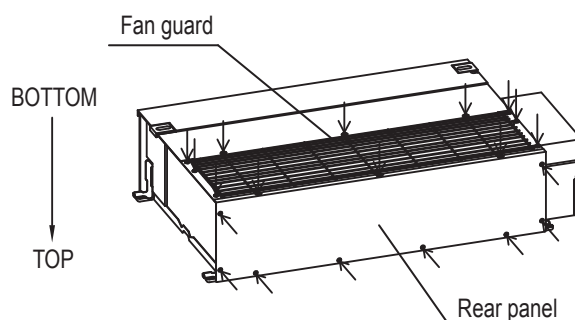
- Place the unit as shown below.
- Remove the bottom plate and duct flange plate of rear from the unit. Keep the removed tapping screws to reuse later.



◆The number of tapping screws to be removed

	Model	Bottom	Rear
FDUT	15,22,28,36	10 pcs.	8 pcs.
	45,56	10 pcs.	9 pcs.
	71	12 pcs.	8 pcs.
SRR	25,35	10 pcs.	8 pcs.
	50,60	10 pcs.	9 pcs.

- Install rear panel by using removed tapping screws in process(2). Install fan guard by using tapping screws in parts set.



◆The number of tapping screws to be tightened

	Model	Fan guard	Rear panel
FDUT	15,22,28,36	12 pcs.	8 pcs.
	45,56	12 pcs.	9 pcs.
	71	14 pcs.	8 pcs.
SRR	25,35	12 pcs.	8 pcs.
	50,60	12 pcs.	9 pcs.

(2) Remote sensor kit (SC-THB-E3)

Sensor for return air temperature detection is located in the air inlet of the indoor unit.

Use the remote sensor kit SC-THB-E3, and install it on the suitable wall so the temperature of the room can be accurately detected.

This remote sensor kit is to be used as an alternative to the pre-installed sensor of the indoor unit.

1) Accessory parts

No.	Part name	Q'ty	No.	Part name	Q'ty
①	Sensor box	1	④	Band	1
②	Cable (8m)	1	⑤	Screw (4X16)	2
③	Tape (Double -stick)	1			

※Installation manual in the SC-THB-E3 is not it for SRR_ZM-S.

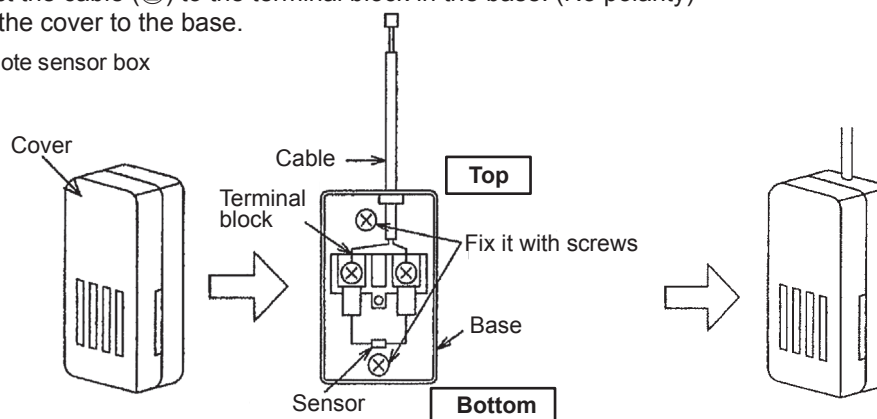
2) Selection of installation position

- The thermistor for detecting room temperature is located inside the remote sensor box.
- Do not install the remote sensor in places where.
 - Average room temperature can not be detected.
 - A heat source is located nearby.
 - The wall temperature is different from average room temperature.
 - Affected by the outdoor air when opening / closing the door, etc.
 - The discharge air from indoor unit blows directly.
 - Covered by curtains or other obstacles.
 - Exposed to the sun.
 - Exposed to water, humidity or dew.
- Mount the remote sensor vertically on the wall surface, etc.
- Run the sensor cable in a place where the power cable or electrical noise will not cause any abnormal operation.

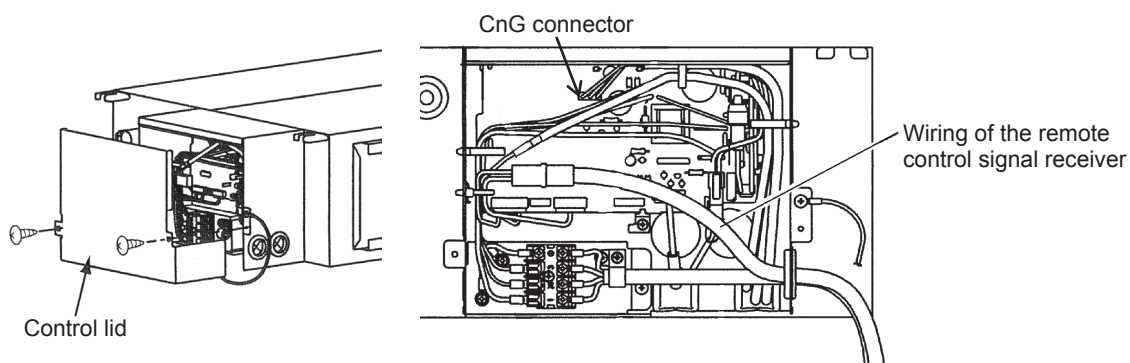
3) Installation procedure

- (a) Insert the tip of slotted screwdriver to the gap between the cover and base of the sensor box (①), and twist it to disassemble.
- (b) Fix the base to the wall with screws (⑤).
- (c) Connect the cable (②) to the terminal block in the base. (No polarity)
- (d) Attach the cover to the base.

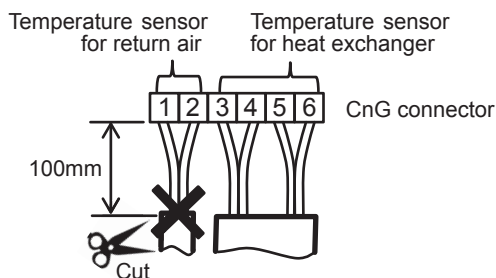
Remote sensor box



- (e) Remove the control lid of the indoor unit. Take off CnG connector from PCB of the indoor unit .

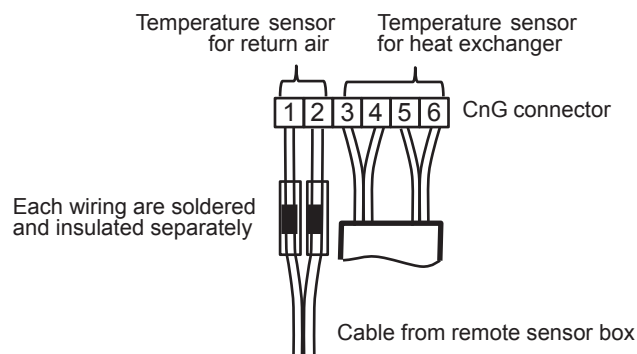


- (f) Cut wiring from 1 & 2 pins of CnG connector. (wiring length : about 100 mm from the connector)
If the pre-installed return air temperature sensor ASSY is not removed, the end of the sensor wiring should prevent a short circuit by insulating tape etc.



- (g) Insert the cable from remote sensor box to the control box of the indoor unit through the grommet of the remote control signal receiver side.
(h) Adjust the length of the cable and cut it off. (Connector cable is not need.)
(i) Connect the cable from remote sensor box and the cut wiring (procedure (f)) of CnG connector. (No polarity)

Be sure to connect the wirings by solder separately. Then, wirings should prevent a short circuit separately by insulating tapes etc. In case of faulty wiring connection, it can cause electrical shock and fire.



- (j) Put CnG connector back on the indoor unit PCB.
(k) Attach the control lid of the indoor unit.

8.8 OA spacer (FDTC only)

This manual describes the installation methods for OA spacer (TC-OAS-E2) and the duct joint (TC-OAD-E).

○ This OA spacer is designed for assembling on the indoor unit (FDTC Series), not for be using independently.

PJZ012D125

Application model	FDTC15-56KXZE1 FDTC25-60VH
-------------------	-------------------------------

○ Prepare the duct (size: $\phi 75$) and the booster fan at site.

○ For the installation of indoor unit, refer to the installation manual attached to the indoor unit.

SAFETY PRECAUTIONS

- Read the "SAFETY PRECAUTIONS" carefully first of all and then strictly follow it during the installation work in order to protect yourself.

⚠ WARNING

- **Installation should be performed by the specialist.**

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



- **Install the system correctly according to these installation manuals.**

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



- **Use the genuine accessories and the specified parts for installation.**

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



- **Turn off the power source during servicing or inspection work.**

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



- **Shut off the power before electrical wiring work.**

It could cause electric shock, unit failure and improper running.



⚠ CAUTION

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

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



① Before installation

- Confirm the following parts are included:

OA spacer (TC-OAS-E2)

Spacer	Bracket 1	Bracket 2	Bracket 3	Bracket 4	Bolt
1	2	2	2	2	8

Duct joint (TC-OAD-E)

Duct Joint	Screw	Insulation 1 (120 × 54)	Insulation 2 (40 × 60)
1	6	1	2

② Prior study before installation (Usage limitation)

(1) Temperature conditions for OA spacer

- Adjust the temperature conditions of mixed air with outdoor air and indoor air within the usage range of suction air temperature for the air-conditioner.
- The usage temperature conditions of intake outdoor air and indoor air around the ducts are shown in the following table.
- If the temperature conditions of intake outdoor air do not meet, process the outdoor air before intaking.

Operation mode	Usage temperature conditions	
	Intake outdoor air	Indoor air around the ducts
In heating	5°C DB or higher	18.5°C WB or lower and 60% RH or lower
In cooling	29°C DB or lower and 80% RH or lower	20°C DB or higher

(2) Intake outdoor air volume

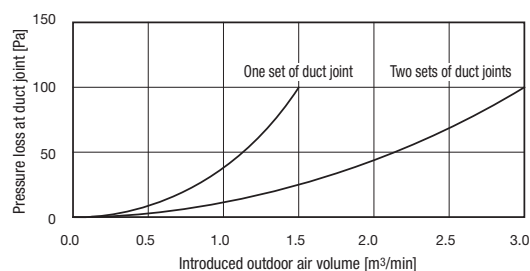
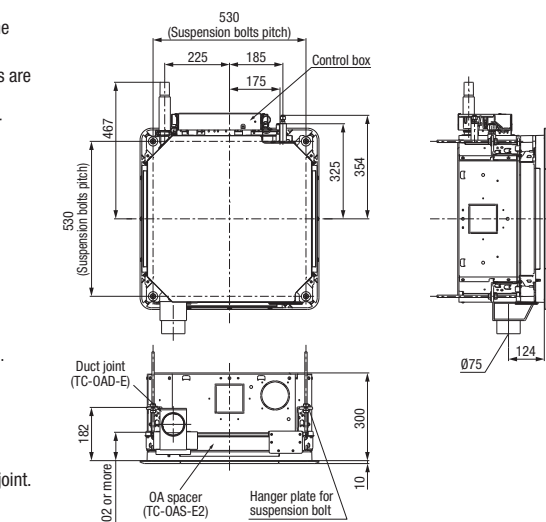
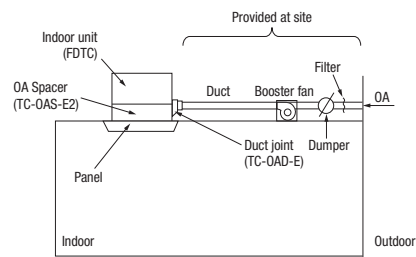
- Intake outdoor air volume is 3.0 m³/min at the maximum (when two sets of duct joints are used). Up to two sets of duct joint can be installed on OA spacer.
- In case one set of duct joint is installed: 1.5 m³/min max.
- In case two sets of duct joint is installed: 3.0 m³/min max.

(3) Selection of booster fan

- Select the booster fan based on the duct resistance plus the pressure loss at the duct joint. (See the figure)

(4) Other conditions

- Determine the capacity of air conditioner based on the calculation of air-conditioning load including the heat load of intake outdoor air.
- Install the filter for the intake outdoor air and the reverse flow prevention dumper during the duct work at site.
- Insulate the duct and duct joint in order to prevent dewing.
- Interlock the operation of booster fan with ON/OFF operation of the indoor unit. (See Section 7.)

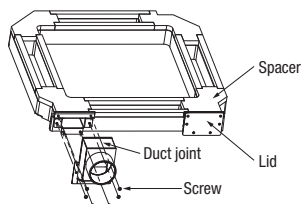


③ Installation of duct joint (TC-OAD-E) onto OA spacer

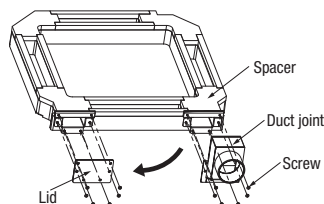
- There are two places where the duct joint can be installed.

When installing one duct joint

Install OA spacer at either one of two installation places on the duct joint.

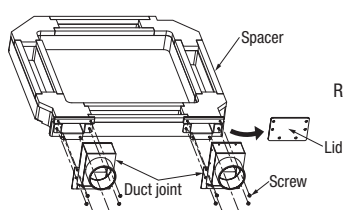


To install the duct joint, screw it in as shown at left.



When installing the duct joint at the lid side, remove the lid and reinstall it at the other end before installing the duct joint.

When installing two duct joints



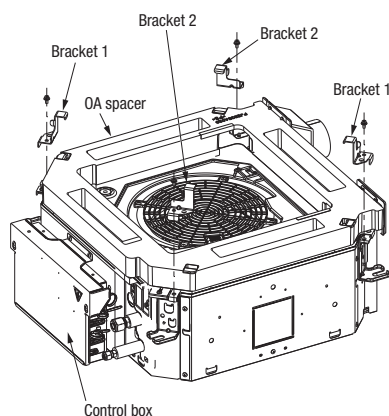
Remove the lid and then install two pieces of duct joint.

④ Installation of OA spacer on the indoor unit

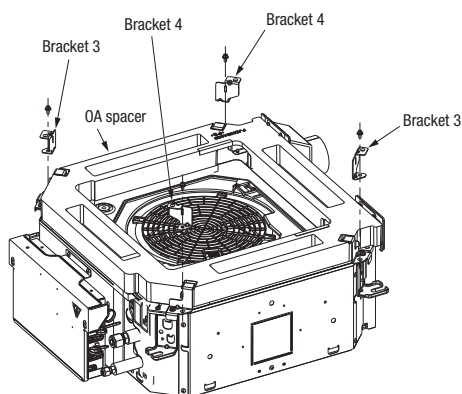
OA spacer can be installed regardless whether the indoor unit has already been hanged or not.
(It is recommended to install before hanging the unit for convenience of installation.)

1-1. When installing OA spacer before hanging the indoor unit

- ① Placing OA spacer on the indoor unit, fix the brackets 1 and 2 (2 pieces each) with bolts.
Install OA spacer in the appropriate position that the duct joint side of OA spacer becomes opposite to the control box of indoor unit (FDTC).



- ② Fix the brackets 3 and 4 (2 pieces each) with bolts.

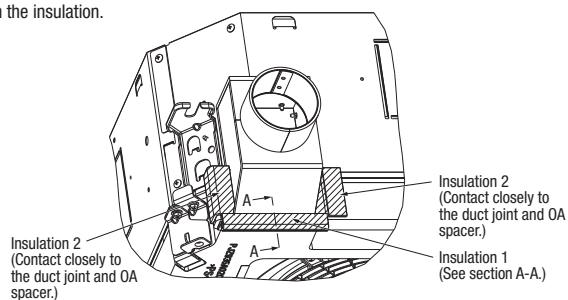
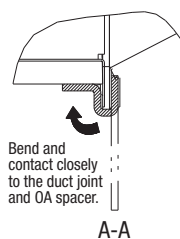


2. Applying insulation

Applying the insulation attached to duct joint set (TC-OAD-E)

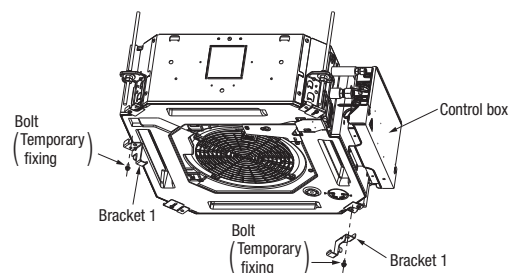
- ① Applying the insulation 1 as shown in the figure.
- ② Applying the insulation 2 as shown in the figure.

* Be sure to cover the entire surface of sheet metal of the duct joint with the insulation.

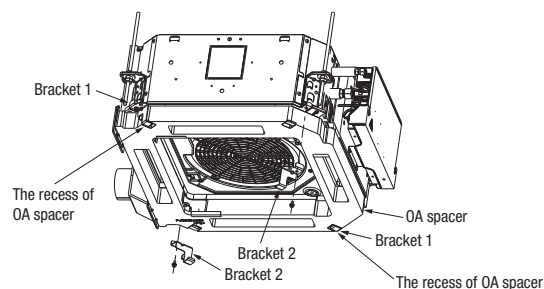


1-2. When installing OA spacer after hanging the indoor unit

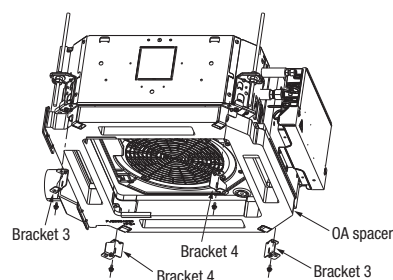
- ① After hanging the indoor unit (*), fix the bracket 1 (2 pieces) temporarily with bolt by 2 turns as shown in the figure.
* For the height (position) of hanging the indoor unit, refer to Section 5.



- ② Install OA spacer.
 - i. Install it in the way that the recess of OA spacer will fit on the bracket 1 fixed temporarily at the step ①.
 - ii. Tighten the bolt of bracket 1.
 - iii. Fix the bracket 2 with bolt. (Tighten up)



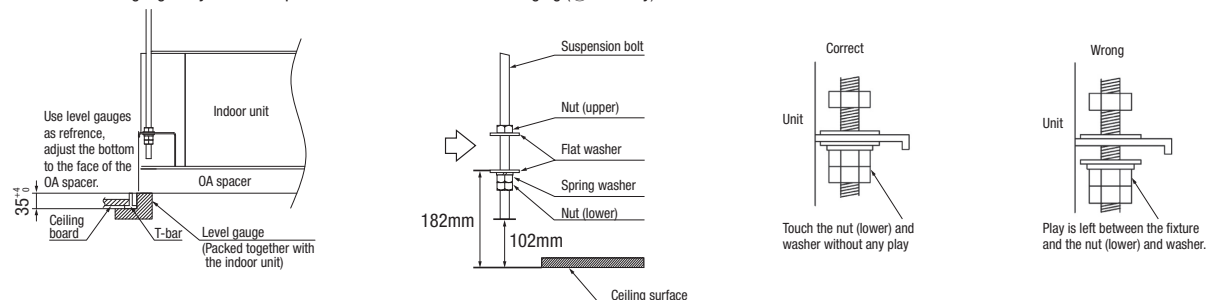
- ③ Fix the brackets 3 and 4 (2 pieces each) with bolts.



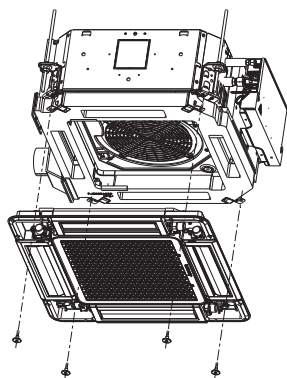
⑤ Installation of indoor unit

Work procedure

- This unit is designed for 2×2 grid ceiling.
If necessary, please detach the T bar temporarily before you install it.
If it is installed on a ceiling other than 2×2 grid ceiling, provide an inspection port on the control box side.
 - Arrange the suspension bolt at the right position (530mm/530mm).
 - Make sure to use four suspension bolts and fix them so as to be able to hold 500N load.
 - Ensure that the lower end of the suspension bolt should be 102mm above the ceiling plane. Temporarily put the four lower nuts 182mm above the ceiling plane and the upper nuts on distant place from the lower nuts in order not to obstruct hanging the indoor unit or adjust the indoor unit position, and then hang the indoor unit.
 - Adjust the indoor unit position after hanging it by inserting the level gauge (Packed together with the indoor unit.) attached on the package into the air supply port and checking if the gap between the ceiling plane and the indoor unit is appropriate. (*) In order to adjust the indoor unit position, adjust the lower nuts while the upper nuts are put on distant place. Confirm there is no backlash between the hanger plate for suspension bolt and the lower nut and washer.
- * Use the level gauge only when OA spacer has been installed before hanging (④ 1-1 only).



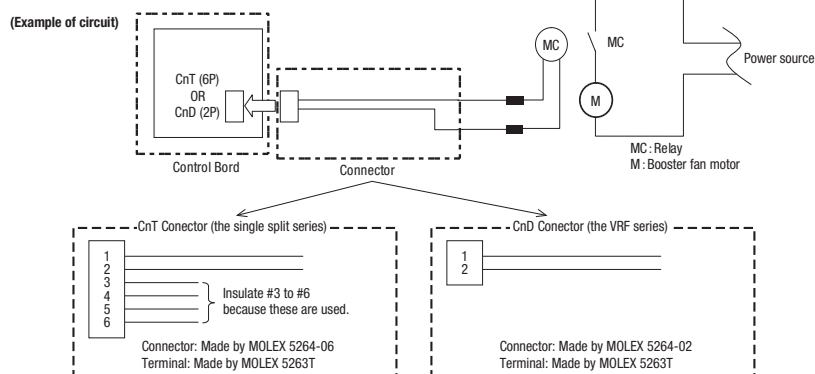
⑥ Installation of panel



Tighten the panels to the brackets 3 and 4 with bolts.
For further details, refer to the installation manual of panel.
(Caution) Connect the connector of lower motor within the control box.

⑦ Interlocking with the indoor unit fan

- ③ Connect the single split series and the VRF series to CnT on the indoor PCB and to CnD on the indoor PCB respectively. If a ventilation device is connected been geared with the motion of indoor device (ON: DC12V output, OFF: 0V output), the ventilation device is operated/stopped.
- ④ Set it at "VENT LINK" by selecting "No. 11 VENT LINK SET" from the functional setting by remote control. For details, refer to the "ELECTRIC WIRING WORK INSTRUCTION" of indoor unit.



(Caution) Although the indoor unit fan stops during the defrosting or oil return operation, the booster fan is operating.
Use a total heat exchanger, if necessary.

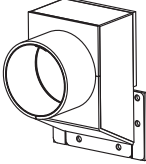
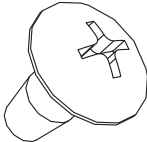
8.9 Duct joint (FDTC only)

PJZ012D073

● This product is used by assembling on the spacer (TC-OAS-E2)

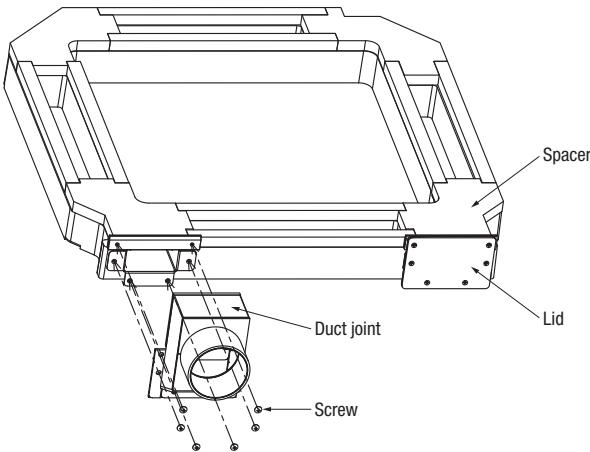
1.Before installation

● Confirm the following parts are included:

Duct joint	Screw	Insulation 1 (120 × 54)	Insulation 2 (40 × 60)
			
1	6	1	2

2.Regarding the use of this product

- Fix the product on the spacer (TC-OAS-E2) as shown below.
- For the installation method, refer to the installation manual of the spacer.



9. TECHNICAL INFORMATION

(1) Model SCM40ZS-W

Information to identify the model(s) to which the information relates to:				If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'.			
Indoor unit model name		SRK20ZSX-W + SRK20ZSX-W					
Outdoor unit model name		SCM40ZS-W					
Function(indicate if present)				Average(mandatory)			
cooling		Yes		Warmer(if designated)		Yes	
heating		Yes		Colder(if designated)		No	
Item	symbol	value	unit	Item	symbol	value	class
Design load				Seasonal efficiency and energy efficiency class			
cooling	Pdesignc	4.00	kW	cooling	SEER	9.10	A+++
heating / Average	Pdesignh	4.10	kW	heating / Average	SCOP/A	4.70	A++
heating / Warmer	Pdesignh	5.70	kW	heating / Warmer	SCOP/W	6.40	A+++
heating / Colder	Pdesignh	-	kW	heating / Colder	SCOP/C	-	-
				unit			
Declared capacity at outdoor temperature Tdesignh				Back up heating capacity at outdoor temperature Tdesignh			
heating / Average (-10°C)	Pdh	4.10	kW	heating / Average (-10°C)	elbu	0	kW
heating / Warmer (2°C)	Pdh	5.70	kW	heating / Warmer (2°C)	elbu	0	kW
heating / Colder (-22°C)	Pdh	-	kW	heating / Colder (-22°C)	elbu	-	kW
Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature TJ				Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature TJ			
TJ=35°C	Pdc	4.00	kW	TJ=35°C	EERd	5.15	-
TJ=30°C	Pdc	2.95	kW	TJ=30°C	EERd	7.50	-
TJ=25°C	Pdc	2.25	kW	TJ=25°C	EERd	12.65	-
TJ=20°C	Pdc	2.30	kW	TJ=20°C	EERd	17.60	-
Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=-7°C	Pdh	3.65	kW	TJ=-7°C	COPd	3.20	-
TJ=2°C	Pdh	2.15	kW	TJ=2°C	COPd	4.60	-
TJ=7°C	Pdh	1.40	kW	TJ=7°C	COPd	5.90	-
TJ=12°C	Pdh	1.50	kW	TJ=12°C	COPd	7.85	-
TJ=bivalent temperature	Pdh	4.10	kW	TJ=bivalent temperature	COPd	2.60	-
TJ=operating limit	Pdh	3.60	kW	TJ=operating limit	COPd	2.40	-
Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=2°C	Pdh	5.70	kW	TJ=2°C	COPd	3.40	-
TJ=7°C	Pdh	3.70	kW	TJ=7°C	COPd	5.90	-
TJ=12°C	Pdh	1.50	kW	TJ=12°C	COPd	7.85	-
TJ=bivalent temperature	Pdh	5.70	kW	TJ=bivalent temperature	COPd	3.40	-
TJ=operating limit	Pdh	3.60	kW	TJ=operating limit	COPd	2.40	-
Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=-7°C	Pdh	-	kW	TJ=-7°C	COPd	-	-
TJ=2°C	Pdh	-	kW	TJ=2°C	COPd	-	-
TJ=7°C	Pdh	-	kW	TJ=7°C	COPd	-	-
TJ=12°C	Pdh	-	kW	TJ=12°C	COPd	-	-
TJ=bivalent temperature	Pdh	-	kW	TJ=bivalent temperature	COPd	-	-
TJ=operating limit	Pdh	-	kW	TJ=operating limit	COPd	-	-
TJ=-15°C	Pdh	-	kW	TJ=-15°C	COPd	-	-
Bivalent temperature				Operating limit temperature			
heating / Average	Tbiv	-10	°C	heating / Average	Tol	-15	°C
heating / Warmer	Tbiv	2	°C	heating / Warmer	Tol	-15	°C
heating / Colder	Tbiv	-	°C	heating / Colder	Tol	-	°C
Cycling interval capacity				Cycling interval efficiency			
for cooling	Pcycc	-	kW	for cooling	EERcyc	-	-
for heating	Pcyhc	-	kW	for heating	COPcyc	-	-
Degradation coefficient				Degradation coefficient			
cooling	Cdc	0.25	-	heating	Cdh	0.25	-
Electric power input in power modes other than 'active mode'				Annual electricity consumption			
off mode	Poff	6	W	cooling	Qce	154	kWh/a
standby mode	Psb	6	W	heating / Average	Qhe	1222	kWh/a
thermostat-off mode	Plto(cooling)	20	W	heating / Warmer	Qhe	1247	kWh/a
	Plto(heating)	30	W	heating / colder	Qhe	-	kWh/a
crankcase heater mode	Pck	0	W				
Capacity control(indicate one of three options)				Other items			
fixed		No		Sound power level(indoor)	Lwa	53	dB(A)
staged		No		Sound power level(outdoor)	Lwa	62	dB(A)
variable		Yes		Global warming potential	GWP	675	kgCO ₂ eq.
				Rated air flow(indoor)	-	678	m ³ /h
				Rated air flow(outdoor)	-	1950	m ³ /h
Contact details for obtaining more information	Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United kingdom						

RWC000Z326

Information to identify the model(s) to which the information relates to:				If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'.			
Indoor unit model name		SKM20ZSP-W + SKM20ZSP-W		Average(mandatory)		Yes	
Outdoor unit model name		SCM40ZS-W		Warmer(if designated)		Yes	
Function(indicate if present)				Colder(if designated)		No	
cooling		Yes					
heating		Yes					
Item	symbol	value	unit	Item	symbol	value	class
Design load				Seasonal efficiency and energy efficiency class			
cooling	Pdesignc	4.00	kW	cooling	SEER	7.60	A++
heating / Average	Pdesignh	4.40	kW	heating / Average	SCOP/A	4.50	A+
heating / Warmer	Pdesignh	5.80	kW	heating / Warmer	SCOP/W	5.70	A+++
heating / Colder	Pdesignh	-	kW	heating / Colder	SCOP/C	-	-
				unit			
Declared capacity at outdoor temperature Tdesignh				Back up heating capacity at outdoor temperature Tdesignh			
heating / Average (-10°C)	Pdh	4.40	kW	heating / Average (-10°C)	elbu	0	kW
heating / Warmer (2°C)	Pdh	5.80	kW	heating / Warmer (2°C)	elbu	0	kW
heating / Colder (-22°C)	Pdh	-	kW	heating / Colder (-22°C)	elbu	-	kW
Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature TJ				Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature TJ			
TJ=35°C	Pdc	4.00	kW	TJ=35°C	EERd	4.00	-
TJ=30°C	Pdc	3.00	kW	TJ=30°C	EERd	6.40	-
TJ=25°C	Pdc	2.10	kW	TJ=25°C	EERd	10.50	-
TJ=20°C	Pdc	2.20	kW	TJ=20°C	EERd	14.10	-
Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=-7°C	Pdh	3.80	kW	TJ=-7°C	COPd	3.00	-
TJ=2°C	Pdh	2.30	kW	TJ=2°C	COPd	4.55	-
TJ=7°C	Pdh	1.50	kW	TJ=7°C	COPd	5.40	-
TJ=12°C	Pdh	1.60	kW	TJ=12°C	COPd	7.30	-
TJ=bivalent temperature	Pdh	4.40	kW	TJ=bivalent temperature	COPd	2.40	-
TJ=operating limit	Pdh	3.50	kW	TJ=operating limit	COPd	2.10	-
Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=2°C	Pdh	5.80	kW	TJ=2°C	COPd	2.85	-
TJ=7°C	Pdh	3.60	kW	TJ=7°C	COPd	5.05	-
TJ=12°C	Pdh	1.60	kW	TJ=12°C	COPd	7.30	-
TJ=bivalent temperature	Pdh	5.80	kW	TJ=bivalent temperature	COPd	2.85	-
TJ=operating limit	Pdh	3.50	kW	TJ=operating limit	COPd	2.10	-
Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=-7°C	Pdh	-	kW	TJ=-7°C	COPd	-	-
TJ=2°C	Pdh	-	kW	TJ=2°C	COPd	-	-
TJ=7°C	Pdh	-	kW	TJ=7°C	COPd	-	-
TJ=12°C	Pdh	-	kW	TJ=12°C	COPd	-	-
TJ=bivalent temperature	Pdh	-	kW	TJ=bivalent temperature	COPd	-	-
TJ=operating limit	Pdh	-	kW	TJ=operating limit	COPd	-	-
TJ=-15°C	Pdh	-	kW	TJ=-15°C	COPd	-	-
Bivalent temperature				Operating limit temperature			
heating / Average	Tbiv	-10	°C	heating / Average	Tol	-15	°C
heating / Warmer	Tbiv	2	°C	heating / Warmer	Tol	-15	°C
heating / Colder	Tbiv	-	°C	heating / Colder	Tol	-	°C
Cycling interval capacity				Cycling interval efficiency			
for cooling	Pcycc	-	kW	for cooling	EERcyc	-	-
for heating	Pcyhc	-	kW	for heating	COPcyc	-	-
Degradation coefficient				Degradation coefficient			
cooling	Cdc	0.25	-	heating	Cdh	0.25	-
Electric power input in power modes other than 'active mode'				Annual electricity consumption			
off mode	Poff	6	W	cooling	Qce	185	kWh/a
standby mode	Psb	6	W	heating / Average	Qhe	1370	kWh/a
thermostat-off mode	Pto(cooling)	30	W	heating / Warmer	Qhe	1425	kWh/a
	Pto(heating)	30	W	heating / colder	Qhe	-	kWh/a
crankcase heater mode	Pck	0	W				
Capacity control(indicate one of three options)				Other items			
fixed	No			Sound power level(indoor)	Lwa	57	dB(A)
staged	No			Sound power level(outdoor)	Lwa	64	dB(A)
variable	Yes			Global warming potential	GWp	675	kgCO ₂ eq.
				Rated air flow(indoor)	-	510	m ³ /h
				Rated air flow(outdoor)	-	1950	m ³ /h
Contact details for obtaining more information	Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United kingdom						

RWC000Z326

(2) SCM45ZS-W

Information to identify the model(s) to which the information relates to:				If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'.			
Indoor unit model name		SRK20ZSX-W + SRK25ZSX-W		Average(mandatory)		Yes	
Outdoor unit model name		SCM45ZS-W		Warmer(if designated)		Yes	
Function(indicate if present)				Colder(if designated)		No	
cooling		Yes					
heating		Yes					
Item	symbol	value	unit	Item	symbol	value	class
Design load				Seasonal efficiency and energy efficiency class			
cooling	Pdesignc	4.50	kW	cooling	SEER	9.10	A+++
heating / Average	Pdesignh	4.10	kW	heating / Average	SCOP/A	4.70	A++
heating / Warmer (2°C)	Pdesignh	5.70	kW	heating / Warmer	SCOP/W	6.40	A+++
heating / Colder	Pdesignh	-	kW	heating / Colder	SCOP/C	-	-
				unit			
Declared capacity at outdoor temperature Tdesignh				Back up heating capacity at outdoor temperature Tdesignh			
heating / Average (-10°C)	Pdh	4.10	kW	heating / Average (-10°C)	elbu	0	kW
heating / Warmer (2°C)	Pdh	5.70	kW	heating / Warmer (2°C)	elbu	0	kW
heating / Colder (-22°C)	Pdh	-	kW	heating / Colder (-22°C)	elbu	-	kW
Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature TJ				Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature TJ			
TJ=35°C	Pdc	4.50	kW	TJ=35°C	EERd	4.80	-
TJ=30°C	Pdc	3.30	kW	TJ=30°C	EERd	7.05	-
TJ=25°C	Pdc	2.30	kW	TJ=25°C	EERd	12.70	-
TJ=20°C	Pdc	2.30	kW	TJ=20°C	EERd	17.10	-
Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=-7°C	Pdh	3.65	kW	TJ=-7°C	COPd	3.20	-
TJ=2°C	Pdh	2.15	kW	TJ=2°C	COPd	4.60	-
TJ=7°C	Pdh	1.40	kW	TJ=7°C	COPd	5.90	-
TJ=12°C	Pdh	1.50	kW	TJ=12°C	COPd	7.85	-
TJ=bivalent temperature	Pdh	4.10	kW	TJ=bivalent temperature	COPd	2.60	-
TJ=operating limit	Pdh	3.60	kW	TJ=operating limit	COPd	2.40	-
Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=2°C	Pdh	5.70	kW	TJ=2°C	COPd	3.40	-
TJ=7°C	Pdh	3.70	kW	TJ=7°C	COPd	5.90	-
TJ=12°C	Pdh	1.50	kW	TJ=12°C	COPd	7.85	-
TJ=bivalent temperature	Pdh	5.70	kW	TJ=bivalent temperature	COPd	3.40	-
TJ=operating limit	Pdh	3.60	kW	TJ=operating limit	COPd	2.40	-
Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=-7°C	Pdh	-	kW	TJ=-7°C	COPd	-	-
TJ=2°C	Pdh	-	kW	TJ=2°C	COPd	-	-
TJ=7°C	Pdh	-	kW	TJ=7°C	COPd	-	-
TJ=12°C	Pdh	-	kW	TJ=12°C	COPd	-	-
TJ=bivalent temperature	Pdh	-	kW	TJ=bivalent temperature	COPd	-	-
TJ=operating limit	Pdh	-	kW	TJ=operating limit	COPd	-	-
TJ=-15°C	Pdh	-	kW	TJ=-15°C	COPd	-	-
Bivalent temperature				Operating limit temperature			
heating / Average	Tbiv	-10	°C	heating / Average	Tol	-15	°C
heating / Warmer	Tbiv	2	°C	heating / Warmer	Tol	-15	°C
heating / Colder	Tbiv	-	°C	heating / Colder	Tol	-	°C
Cycling interval capacity				Cycling interval efficiency			
for cooling	Pcycc	-	kW	for cooling	EERcyc	-	-
for heating	Pcyhc	-	kW	for heating	COPcyc	-	-
Degradation coefficient				Degradation coefficient			
cooling	Cdc	0.25	-	heating	Cdh	0.25	-
Electric power input in power modes other than 'active mode'				Annual electricity consumption			
off mode	Poff	6	W	cooling	Qce	174	kWh/a
standby mode	Psb	6	W	heating / Average	Qhe	1222	kWh/a
thermostat-off mode	Pto(cooling)	20	W	heating / Warmer	Qhe	1247	kWh/a
	Pto(heating)	30	W	heating / colder	Qhe	-	kWh/a
crankcase heater mode	Pck	0	W				
Capacity control(indicate one of three options)				Other items			
fixed		No		Sound power level(indoor)	Lwa	55	dB(A)
staged		No		Sound power level(outdoor)	Lwa	63	dB(A)
variable		Yes		Global warming potential	GWp	675	kgCO ₂ eq.
				Rated air flow(indoor)	-	732	m ³ /h
				Rated air flow(outdoor)	-	1950	m ³ /h
Contact details for obtaining more information	Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United kingdom						

RWC000Z326

Information to identify the model(s) to which the information relates to:				If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'.			
Indoor unit model name		SKM20ZSP-W + SKM25ZSP-W		Average(mandatory)		Yes	
Outdoor unit model name		SCM45ZS-W		Warmer(if designated)		Yes	
Function(indicate if present)				Colder(if designated)		No	
cooling		Yes					
heating		Yes					
Item	symbol	value	unit	Item	symbol	value	class
Design load				Seasonal efficiency and energy efficiency class			
cooling	Pdesignc	4.50	kW	cooling	SEER	7.60	A++
heating / Average	Pdesignh	4.40	kW	heating / Average	SCOP/A	4.50	A+
heating / Warmer	Pdesignh	5.80	kW	heating / Warmer	SCOP/W	5.70	A+++
heating / Colder	Pdesignh	-	kW	heating / Colder	SCOP/C	-	-
				unit			
Declared capacity at outdoor temperature Tdesignh				Back up heating capacity at outdoor temperature Tdesignh			
heating / Average (-10°C)	Pdh	4.40	kW	heating / Average (-10°C)	elbu	0	kW
heating / Warmer (2°C)	Pdh	5.80	kW	heating / Warmer (2°C)	elbu	0	kW
heating / Colder (-22°C)	Pdh	-	kW	heating / Colder (-22°C)	elbu	-	kW
Declared capacity for cooling, at indoor temperature 27(19)°C and outdoor temperature TJ				Declared energy efficiency ratio, at indoor temperature 27(19)°C and outdoor temperature TJ			
TJ=-7°C	Pdc	4.50	kW	TJ=35°C	EERd	3.75	-
TJ=30°C	Pdc	3.30	kW	TJ=30°C	EERd	6.05	-
TJ=25°C	Pdc	2.10	kW	TJ=25°C	EERd	10.50	-
TJ=20°C	Pdc	2.20	kW	TJ=20°C	EERd	14.10	-
Declared capacity for heating / Average season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Average season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=-7°C	Pdh	3.80	kW	TJ=-7°C	COPd	3.00	-
TJ=2°C	Pdh	2.30	kW	TJ=2°C	COPd	4.55	-
TJ=7°C	Pdh	1.50	kW	TJ=7°C	COPd	5.40	-
TJ=12°C	Pdh	1.60	kW	TJ=12°C	COPd	7.30	-
TJ=bivalent temperature	Pdh	4.40	kW	TJ=bivalent temperature	COPd	2.40	-
TJ=operating limit	Pdh	3.50	kW	TJ=operating limit	COPd	2.10	-
Declared capacity for heating / Warmer season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Warmer season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=2°C	Pdh	5.80	kW	TJ=2°C	COPd	2.85	-
TJ=7°C	Pdh	3.60	kW	TJ=7°C	COPd	5.05	-
TJ=12°C	Pdh	1.60	kW	TJ=12°C	COPd	7.30	-
TJ=bivalent temperature	Pdh	5.80	kW	TJ=bivalent temperature	COPd	2.85	-
TJ=operating limit	Pdh	3.50	kW	TJ=operating limit	COPd	2.10	-
Declared capacity for heating / Colder season, at indoor temperature 20°C and outdoor temperature TJ				Declared coefficient of performance / Colder season, at indoor temperature 20°C and outdoor temperature TJ			
TJ=-7°C	Pdh	-	kW	TJ=-7°C	COPd	-	-
TJ=2°C	Pdh	-	kW	TJ=2°C	COPd	-	-
TJ=7°C	Pdh	-	kW	TJ=7°C	COPd	-	-
TJ=12°C	Pdh	-	kW	TJ=12°C	COPd	-	-
TJ=bivalent temperature	Pdh	-	kW	TJ=bivalent temperature	COPd	-	-
TJ=operating limit	Pdh	-	kW	TJ=operating limit	COPd	-	-
TJ=-15°C	Pdh	-	kW	TJ=-15°C	COPd	-	-
Bivalent temperature				Operating limit temperature			
heating / Average	Tbiv	-10	°C	heating / Average	Tol	-15	°C
heating / Warmer	Tbiv	2	°C	heating / Warmer	Tol	-15	°C
heating / Colder	Tbiv	-	°C	heating / Colder	Tol	-	°C
Cycling interval capacity				Cycling interval efficiency			
for cooling	Pcycc	-	kW	for cooling	EERcyc	-	-
for heating	Pcyhc	-	kW	for heating	COPcyc	-	-
Degradation coefficient				Degradation coefficient			
cooling	Cdc	0.25	-	heating	Cdh	0.25	-
Electric power input in power modes other than 'active mode'				Annual electricity consumption			
off mode	Poff	6	W	cooling	Qce	208	kWh/a
standby mode	Psb	6	W	heating / Average	Qhe	1370	kWh/a
thermostat-off mode	Pto(cooling)	30	W	heating / Warmer	Qhe	1425	kWh/a
	Pto(heating)	30	W	heating / colder	Qhe	-	kWh/a
crankcase heater mode	Pck	0	W				
Capacity control(indicate one of three options)				Other items			
fixed	No			Sound power level(indoor)	Lwa	57	dB(A)
staged	No			Sound power level(outdoor)	Lwa	65	dB(A)
variable	Yes			Global warming potential	GWp	675	kgCO ₂ eq.
				Rated air flow(indoor)	-	510	m³/h
				Rated air flow(outdoor)	-	1950	m³/h
Contact details for obtaining more information	Name and address of the manufacturer or of its authorised representative. Mitsubishi Heavy Industries Air-Conditioning Europe, Ltd. 5 The Square, Stockley Park, Uxbridge, Middlesex, UB11 1ET, United kingdom						

RWC000Z326

INVERTER MULTI-SPLIT SYSTEM RESIDENTIAL AIR-CONDITIONERS



MITSUBISHI HEAVY INDUSTRIES THERMAL SYSTEMS, LTD.

16-5 Konan 2-chome, Minato-ku, Tokyo, 108-8215, Japan

<http://www.mhi-mth.co.jp/en/>

Because of our policy of continuous improvement, we reserve the right to make changes in all specifications without notice.

© Copyright MITSUBISHI HEAVY INDUSTRIES THERMAL SYSTEMS, LTD.