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Optional Parts

Model Name

● Optional Parts for indoor unit

● Optional Parts for outdoor unit

Optional Parts List <Indoor>

		Option	Filter															Soft-dry cloth	i-see Sensor Corner Panel	i-see Sensor	Shutter Plate	Multi func-tional Case-ment	Fresh-air Intake Duct Flange		Space Panel
			Silver-ionized Air Purifier Filter				Deodourising Filter	Air Purifying Filter	Oil Mist Filter Element	High-efficiency Filter Element				Filter Box											
		Indoor unit	MAC-2360FT-E	MAC-2370FT-E	MAC-2380FT-E	MAC-172FT-E	MAC-3000FT-E	MAC-3005CF-E	PAC-SG38KF-E	PAC-SH59KF-E	PAC-SH88KF-E	PAC-SH89KF-E	PAC-SH90KF-E	PAC-KE92TB-E	PAC-KE93TB-E	PAC-KE94TB-E	PAC-KE95TB-E	MAC-1001CL-E	PAC-SA1ME-E	PAC-SF1ME-E	PAC-SH51SP-E	PAC-SH53TM-E	PAC-SH65OF-E	PAC-SF28OF-E	PAC-SH48AS-E
M SERIES	Wall - mounted	MSZ-FH25VE2			●		●																		
		MSZ-FH35VE2			●		●																		
		MSZ-FH50VE2			●		●																		
		MSZ-EF18VE3(W)(B)(S)		●														●							
		MSZ-EF22VE3(W)(B)(S)		●														●							
		MSZ-EF25VE3(W)(B)(S)		●														●							
		MSZ-EF35VE3(W)(B)(S)		●														●							
		MSZ-EF42VE3(W)(B)(S)		●														●							
		MSZ-EF50VE3(W)(B)(S)		●														●							
		MSZ-SF15VA																							
		MSZ-SF20VA																							
		MSZ-SF25VE3		●																					
		MSZ-SF35VE3		●																					
		MSZ-SF42VE3		●																					
		MSZ-SF50VE3		●																					
		MSZ-GF60VE2	●																						
		MSZ-GF71VE2	●																						
		MSZ-DM25VA		●																					
		MSZ-DM35VA		●																					
		MSZ-HJ25VA		●																					
		MSZ-HJ35VA		●																					
		MSZ-HJ50VA		●																					
		MSZ-HJ60VA		●																					
		MSZ-HJ71VA		●																					
	Floor - standing	MFZ-KJ25VE2		●																					
		MFZ-KJ35VE2		●																					
		MFZ-KJ50VE2		●																					
	1-way cassette	MLZ-KA25VA				●		●																	
		MLZ-KA35VA				●		●																	
		MLZ-KA50VA				●		●																	
S SERIES	4-way cassette	SLZ-KF25VA2																		●					
		SLZ-KF35VA2																		●					
		SLZ-KF50VA2																		●					
		SLZ-KF60VA2																		●					
	Ceiling - conceald	SEZ-KD25VAQ/VAL																							
		SEZ-KD35VAQ/VAL																							
		SEZ-KD50VAQ/VAL																							
		SEZ-KD60VAQ/VAL																							
		SEZ-KD71VAQ/VAL																							
P SERIES	4-way cassette	PLA-RP35BA								●									●		●	●	●		●
		PLA-RP50BA								●									●		●	●	●		●
		PLA-RP60BA								●									●		●	●	●		●
		PLA-RP71BA								●									●		●	●	●		●
		PLA-RP100BA								●									●		●	●	●		●
		PLA-RP125BA								●									●		●	●	●		●
		PLA-RP140BA2								●									●		●	●	●		●
		PLA-ZRP35BA								●									●		●	●	●		●
		PLA-ZRP50BA								●									●		●	●	●		●
		PLA-ZRP60BA								●									●		●	●	●		●
		PLA-ZRP71BA								●									●		●	●	●		●
		PLA-ZRP100BA								●									●		●	●	●		●
		PLA-ZRP125BA								●									●		●	●	●		●
		PLA-ZRP140BA								●									●		●	●	●		●
	Ceiling - conceald	PEAD-RP35JAQ												●											
		PEAD-RP35JALQ												●											
		PEAD-RP50JAQ												●											
		PEAD-RP50JALQ												●											
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		PEAD-RP71JAQ													●										
		PEAD-RP71JALQ													●										
		PEAD-RP100JAQ														●									
		PEAD-RP100JALQ														●									
		PEAD-RP125JAQ														●									
		PEAD-RP125JALQ														●									
		PEAD-RP140JAQ															●								
		PEAD-RP140JALQ															●								
		PEA-RP200GAQ																							
		PEA-RP250GAQ																							
		PEA-RP400GAQ																							
		PEA-RP500GAQ																							
	Wall - mounted	PKA-RP35HAL																							
		PKA-RP50HAL																							
		PKA-RP60KAL																							
		PKA-RP71KAL																							
		PKA-RP100KAL																							
	Ceiling - suspend-ed	PCA-RP35KAQ									●														
		PCA-RP50KAQ									●														
		PCA-RP60KAQ										●													
		PCA-RP71KAQ										●													
		PCA-RP100KAQ											●												
		PCA-RP125KAQ											●												
		PCA-RP140KAQ											●												
		PCA-RP71HAQ							●															●	
	Floor - standing	PSA-RP71KA																							
		PSA-RP100KA																							
		PSA-RP125KA																							
		PSA-RP140KA																							

*1 P Series indoor units can be used in combination with SUZ or MXZ outdoor units. *2 MAC-333IF-E or MAC-397IF-E is required. *3 Unable to use with wireless remote controller.
*4 Two interface components required for each indoor unit. *5 Refrigerant address must be set to 00. *6 PAC-SH29TC-E is required. *7. Groupe control cannot be used.

Drain Pump						Decorative Cover	System Control Interface	MA & Contact Terminal Interface	Wi-Fi Interface	Connector Cable		Power Supply Terminal Kit				Wired Remote Controller			Wireless Remote Controller							Remote Sensor	Remote On/Off Adapter	Remote Operation Adapter	Connector Cable for Remote Display
																Controller		Terminal Block kit for PKA	Signal Sender	Wireless Remote Control-ler	Signal Receiver			Controller Kit (Sender & Receiver)	Controller Holder				
PAC-SH94DM-E	PAC-SH75DM-E	PAC-SH83DM-E	PAC-SH84DM-E	PAC-SH85DM-E	PAC-KE07DM-E	PAC SF81 KC-E	MAC-333 IF-E	MAC-397 IF-E	MAC-557 IF-E	MAC-1702 RA-E	MAC-1710 RA-E	PAC-SG94 HR-E	PAC-SG96 HR-E	PAC-SG97 HR-E	PAC-SH52 HR-E	PAR-32 MAA	PAC-YT52 CRA	PAC-SH29 TC-E	PAR-SL97 A-E	PAR-SL100 A-E	PAR-SA9C A-E	PAR-SF9 FA	PAR-SA9F A-E	PAR-SL94 B-E	MAC-1200 RC	PAC-SE41 TS-E	PAC-SE55 RA-E	PAC-SF40 RM-E	PAC-SA88 HA-E
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*1 P Series indoor units can be used in combination with SUZ or MXZ outdoor units. *2 MAC-333IF-E or MAC-397IF-E is required. *3 Unable to use with wireless remote controller.
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Optional Parts List <Outdoor>

Outdoor unit		Option	Distribution Pipe				Joint Pipe								Liquid Refrigerant Dryer		
			For Twin (50:50)		For Triple (33:33:33)	For Quadruple (25:25:25:25)	Unit ø6.35 --> Pipe ø9.52	Unit ø9.52 --> Pipe ø12.7	Unit ø15.88 --> Pipe ø19.05	Unit ø9.52 --> Pipe ø15.88	Unit ø6.35 --> Pipe ø9.52	Unit ø9.52 --> Pipe ø12.7	Unit ø12.7 --> Pipe ø9.52	Unit ø12.7 --> Pipe ø15.88	For pipe ø6.35	For pipe ø9.52	For pipe ø12.7
			MSDD-50 TR-E	MSDD-50 WR-E	MSDT-111R-E	MSDF-1111R-E	PAC-SG72 RJ-E	PAC-SG73 RJ-E	PAC-SG75 RJ-E	Flare PAC-SG76 RJ-E	Flare PAC-493 PI	Flare MAC-A454 JP-E	Flare MAC-A455 JP-E	Flare MAC-A456 JP-E	PAC-SG81 DR-E	PAC-SG82 DR-E	PAC-SG85 DR-E
M SERIES	F Series	MUZ-FH25VE															
		MUZ-FH25VEHZ															
		MUZ-FH35VE															
		MUZ-FH35VEHZ															
		MUZ-FH50VE															
		MUZ-FH50VEHZ															
	E Series	MUZ-EF25VE															
		MUZ-EF25VEH															
		MUZ-EF35VE															
		MUZ-EF35VEH															
		MUZ-EF42VE															
		MUZ-EF50VE															
	S Series	MUZ-SF25VE															
		MUZ-SF25VEH															
		MUZ-SF35VE															
		MUZ-SF35VEH															
		MUZ-SF42VE															
		MUZ-SF42VEH															
		MUZ-SF50VE															
		MUZ-SF50VEH															
	G Series	MUZ-GF60VE															
		MUZ-GF71VE															
	D Series	MUZ-DM25VA															
		MUZ-DM35VA															
	H Series	MUZ-HJ25VA															
		MUZ-HJ35VA															
		MUZ-HJ50VA															
		MUZ-HJ60VA															
		MUZ-HJ71VA															
	Compact floor	MUFZ-KJ25VE															
		MUFZ-KJ25VEHZ															
		MUFZ-KJ35VE															
		MUFZ-KJ35VEHZ															
		MUFZ-KJ50VE															
		MUFZ-KJ50VEHZ															
S SERIES		SUZ-KA25VA5						●									
		SUZ-KA35VA5						●									
		SUZ-KA50VA5															
		SUZ-KA60VA5															
		SUZ-KA71VA5															
POWERFUL HEATING		PUHZ-SHW112VHA	●													●	
		PUHZ-SHW112YHA	●													●	
		PUHZ-SHW140YHA	●													●	
P SERIES	Power Inverter	PUHZ-ZRP35VKA					●								●		
		PUHZ-ZRP50VKA					●								●		
		PUHZ-ZRP60VHA						●	●							●	
		PUHZ-ZRP71VHA	●					●	●							●	
		PUHZ-ZRP100VKA2	●					●	●							●	
		PUHZ-ZRP100YKA2	●					●	●							●	
		PUHZ-ZRP125VKA2	●					●	●							●	
		PUHZ-ZRP125YKA2	●					●	●							●	
		PUHZ-ZRP140VKA2	●		●			●	●							●	
		PUHZ-ZRP140YKA2	●		●			●	●							●	
		PUHZ-ZRP200YKA		●	●	●		●								●	
		PUHZ-ZRP250YKA		●	●	●											●
	Standard Inverter	PUHZ-P100VHA4	●													●	
		PUHZ-P125VHA3	●													●	
		PUHZ-P140VHA3	●		●											●	
		PUHZ-P200YKA		●	●	●										●	
		PUHZ-P250YKA		●	●	●											●
		PUHZ-P100YHA2	●													●	
		PUHZ-P125YHA	●													●	
		PUHZ-P140YHA	●		●											●	
MXZ SERIES		MXZ-2D33VA															
		MXZ-2D42VA2															
		MXZ-2D53VA(H)2										●					
		MXZ-2E53VAHZ										●					
		MXZ-3E54VA										●					
		MXZ-3E68VA								●		●					
		MXZ-4E72VA								●		●	●	●			
		MXZ-4E83VA								●	●	●	●	●			
		MXZ-4E83VAHZ								●	●	●	●	●			
		MXZ-5E102VA								●	●	●	●	●			
		MXZ-6D122VA								●	●	●	●	●			
		MXZ-2DM40VA															
		MXZ-3DM50VA										●					

*1 Operation in “AUTO” step mode only: make sure to turn OFF “SW2-6” and put “TH5” (2 phose pipe thermistor) at the appropriate position.

*1. Operation in "AUTO" step mode only: make sure to turn OFF "SW2-6" and put "TH5" (2 phases pipe thermistor) at the appropriate position.

	Air Outlet Guide								Air Protection Guide			Drain Socket			Freezeprevention Heater (for Drain Pan)			Centralized Drain Pan			M-NET Converter			Control/ Service Tool	Step Interface: 1 PC board w / attachment kit attachment kit	Insulation for Accumulator	
	MAC-889SG	MAC-881SG	MAC-856SG	MAC-886SG-E	MAC-883SG	PAC-SJ07SG-E	PAC-SG59SG-E	PAC-SH96SG-E	PAC-SJ06AG-E	PAC-SH63AG-E	PAC-SH95AG-E	PAC-SJ08DS-E	PAC-SG60DS-E	PAC-SG61DS-E	MAC-643BH-E	MAC-644BH-E	PAC-645BH-E	PAC-SG63DP-E	PAC-SG64DP-E	PAC-SH97DP-E	PAC-IF01MNT-E	PAC-SJ19MA-E	PAC-SF83MA-E	PAC-SK52ST	PAC-IF012B-E	MAC-892INS-E	MAC-893INS-E
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							●			●				●					●				●	●	●*1		
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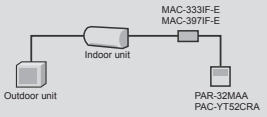
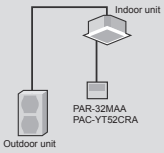
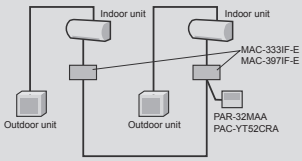
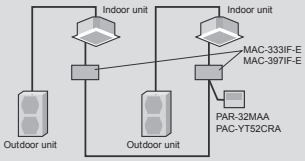
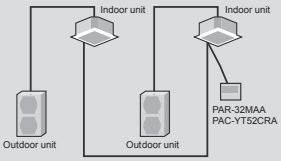
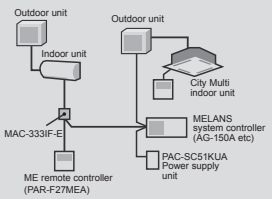
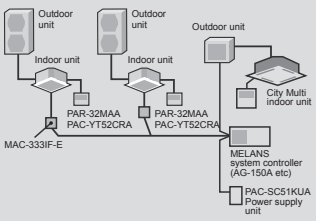
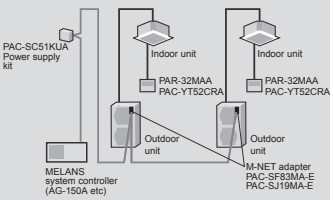
*1 Operation in “AUTO” step mode only: make sure to turn OFF “SW2-6” and put “TH5” (2 phose pipe thermistor) at the appropriate position.

SYSTEM CONTROL

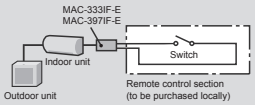
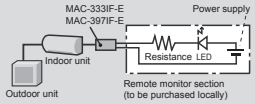
Versatile system controls can be realised using optional parts, relay circuits, control panels, etc.

MAJOR SYSTEM CONTROL

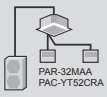
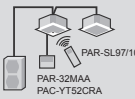
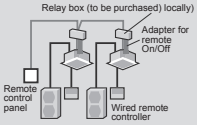
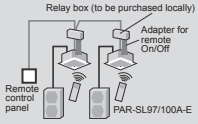
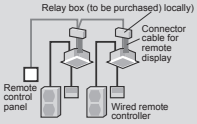
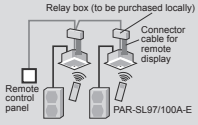
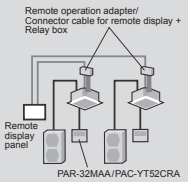
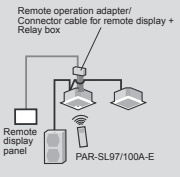
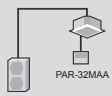
	System Examples		
Indoor Unit	**M Series Indoor Unit**	**S Series & P Series Indoor Unit**	**P Series Indoor Unit**
Outdoor Unit	**M Series and MXZ Series Outdoor**	**S Series and MXZ Series Outdoor**	**P Series Outdoor**
PAR-32MAA Control **PAC-YT52CRA Control**			
Details	• Wired remote controller can be connected to indoor unit	Standard equipment (for indoor units compatible with wired remote controllers)	
Major Optional Parts Required	• MAC-333IF-E or MAC-397IF-E (Interface) • PAR-32MAA (Wired remote controller) • PAC-YT52CRA (Wired remote controller)	• PAR-32MAA (Wired remote controller) • PAC-YT52CRA (Wired remote controller)	
System Group Control			
Details	• One remote controller can control plural air conditioners with the same settings simultaneously. • One remote controller can control up to 16 refrigerant systems. (When connected to a MXZ unit, MAC-333IF-E or MAC-397IF-E is counted as one system.) • Up to two remote controller can be connected. • PAR-SL100A cannot be used when connected through the MAC-333IF-E or MAC-397IF-E, or when group control is used.		
Major Optional Parts Required	• MAC-333IF-E or MAC-397IF-E (Interface) • PAR-32MAA (Wired remote controller) • PAC-YT52CRA (Wired remote controller)		• PAR-32MAA (Wired remote controller) • PAC-YT52CRA (Wired remote controller)
M-NET Connections			
Details	• Group of air conditioners can be controlled by MELANS system controller (M-NET).		
Major Optional Parts Required	• MAC-333IF-E (M-NET Interface) • MELANS System controller • PAC-SC51KUA (power supply unit)		• PAC-SF83MA-E or PAC-SJ19MA-E (M-NET converter) • MELANS System controller • PAC-SC51KUA (power supply unit)

OTHERS

For M Series Indoor Units (New A-control Models Only)

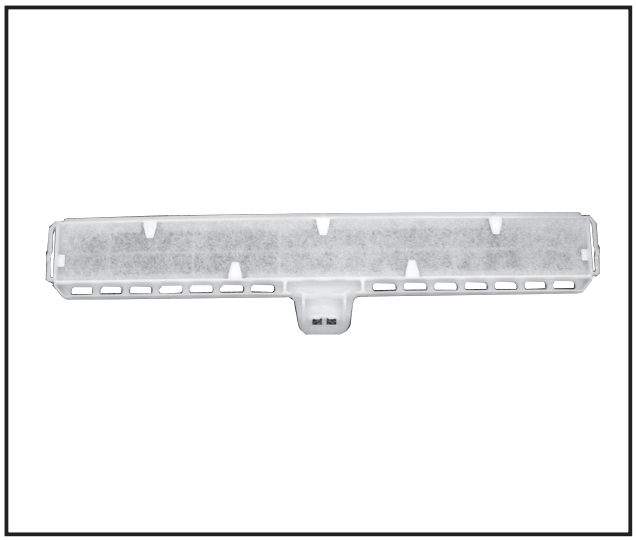
	System Examples	Connection Details	Control Details	Major Optional Parts Required
1 Remote On/Off Operation • Air conditioner can be started/ stopped remotely. (1 and 2 can be used in combination)		Connect the interface to the air conditioner. Then connect the locally purchased remote controller to the terminal in the interface.	On/Off operation is possible from a remote location.	• MAC-333IF-E or MAC-397IF-E (Interface) • Parts for circuit such as relay box, lead wire, etc. (to be purchased locally)
2 Remote Display of Operation Status • The On/Off status of air conditioners can be confirmed remotely. (1 and 2 can be used in combination)		Connect the interface to the air conditioner. Then connect the locally purchased remote controller to the terminal in the interface.	The operation status (On/Off) or error signals can be monitored from a remote location.	• MAC-333IF-E or MAC-397IF-E (Interface) • Parts for circuit to be purchased locally (DC power source needed) • External power source (12V DC) is required when using MAC-333IF-E.

For P Series and S Series Indoor Units

	System Examples		Details	Major Optional Parts Required
	Wired remote controller	Wireless remote controller		
A 2-remote Controller Control With two remote controllers, control can be performed locally and remotely from two locations.	 * Set "Main" and "Sub" remote controllers. (Example of 1 : 1 system)	 * When using wired and wireless remote controllers (Example of Simultaneous Twin)	• Up to two remote controllers can be connected to one group. • Both wired and wireless remote controllers can be used in combination.	• Wired Remote Controller PAR-32MAA PAC-YT52CRA (for PKA, PAC-SH29TC-E is required) • Wireless Remote Controller PAR-SL97A-E / PAR-SL100A-E (only for SLZ) • Wireless Remote Controller Kit for PCA PAR-SL99B-E
B Operation Control by Level Signal Air conditioner can be started/ stopped remotely. In addition, On/Off operation by local remote controller can be prohibited/permitted.	 (Example of 1 : 1 system x 2)	 (Example of 1 : 1 system x 2)	• Operation other than On/Off (e.g., adjustment of temperature, fan speed, and airflow) can be performed even when remote controller operation is prohibited. • Timer control is possible with an external timer.	• Adapter for remote On/Off PAC-SE55RA-E • Relay box (to be purchased locally) • Remote control panel (to be purchased locally)
C Operation Control by Pulse Signal	 (Example of 1 : 1 system x 2)	 (Example of 1 : 1 system x 2)	• The pulse signal can be turned On/Off. • Operation/emergency signal can be received at a remote location.	• Connector cable for remote display PAC-SA88HA-E / PAC-725AD (10 pcs. x PAC-SA88HA-E) • Relay box (to be purchased locally) • Remote control panel (to be purchased locally)
D Remote Display of Operating Status Operating status can be displayed at a remote location.	 (Example of 1 : 1 system)	 (Example of Simultaneous Twin)	• Operation/emergency signal can be received at a remote location (when channeled through the PAC-SF40RM-E → no-voltage signal, when channeled through the PAC-SA88HA-E → DC 12V signal).	• Remote display panel (to be purchased locally) • Connector cable for remote display PAC-SA88HA-E / PAC-725AD (10 pcs. x PAC-SA88HA-E) • Relay box (to be purchased locally) • Remote operation adapter PAC-SF40RM-E *Unable to use with wireless remote controller
E Timer Operation Allows On/Off operation with timer *For control by an external timer, refer to B Operation Control by Level Signal.	 (Example of 1 : 1 system)		• Weekly Timer: On/Off and up to 8 pattern temperatures can be set for each calendar day. (Initial setting) • On/Off Timer: On/Off can be set once each within 72 hr in intervals of 5-minute units. • Auto-off Timer: Operation will be switched off after a certain time elapse. Set time can be changed from 30 min. to 4 hr. at 10 min. intervals. *Simple Timer and Auto-off Timer cannot be used at the same time.	Standard functions of PAR-32MAA

Silver-ionized Air Purifier Filter MAC-2360FT-E

Photo



Descriptions

This filter catches dead mites and their droppings, pollen and other allergens on the filter filament, then decomposes them with artificial enzymes.
(Artificial enzyme catalyst on the filament catches the allergens and helps the chemical reaction with oxygen and severs the S-S* bonds. *S=Sulfur atoms)

Applicable Models

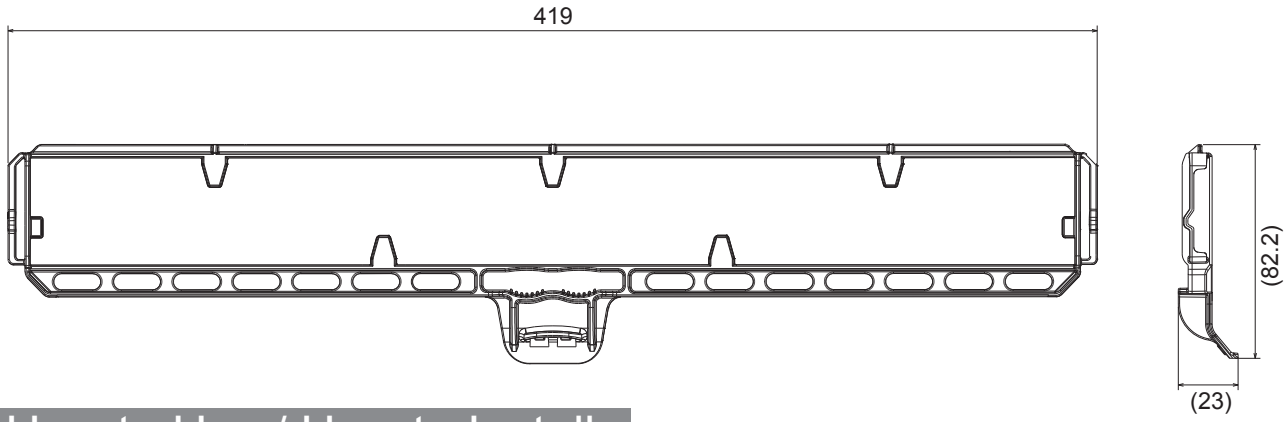
- MSZ-GF60VE2
- MSZ-GF71VE2

Specifications

Color	Frame: White, Filter: Blue
Material	Frame: PP, Filter: Polyester, rayon
Weight	40 g

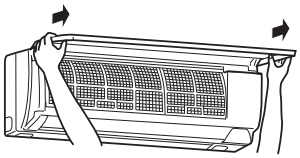
Dimensions

Unit : mm

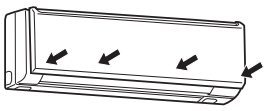


How to Use / How to Install

Replacement of the air cleaning filter



1. Lift the front panel until a “click” is heard.
2. (1) Remove the air filter.
   (2) Remove the air cleaning filter.
   (3) Install a new air cleaning filter.
   (4) Install the air filter.
3. Close the front panel securely and press the positions indicated by the arrows.



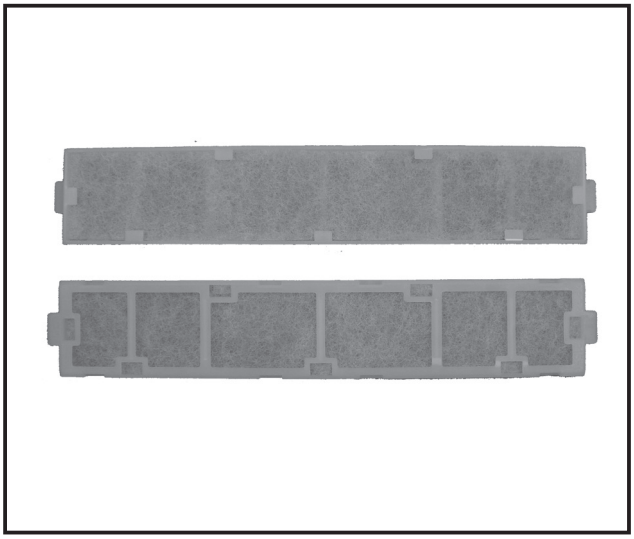
Every 3 months:
- Remove dirt by a vacuum cleaner.

When dirt cannot be removed by vacuum cleaning:
- Soak the filter and its frame in lukewarm water before rinsing it.
- After washing, dry it well in shade.

Every year:
- Replace it with a new air cleaning filter for best performance.

Silver-ionized Air Purifier Filter MAC-2370FT-E

Photo



Descriptions

This air cleaning filter catches dead mites and their droppings, pollen and other allergens on the filter filament, then decomposes them with artificial enzymes.
(Artificial enzyme catalyst on the filament catches the allergens and helps the chemical reaction with oxygen and severs the S-S* bonds. *S= Sulfur atoms)

Applicable Models

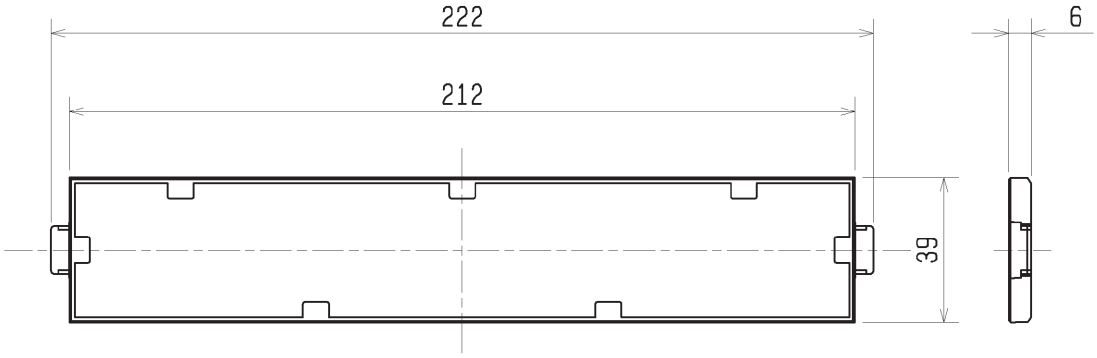
- MSZ-EF18VE3W
- MSZ-EF18VE3B
- MSZ-EF18VE3S
- MSZ-EF22VE3W
- MSZ-EF22VE3B
- MSZ-EF22VE3S
- MSZ-EF25VE3W
- MSZ-EF25VE3B
- MSZ-EF25VE3S
- MSZ-EF35VE3W
- MSZ-EF35VE3B
- MSZ-EF35VE3S
- MSZ-EF42VE3W
- MSZ-EF42VE3B
- MSZ-EF42VE3S
- MSZ-EF50VE3W
- MSZ-EF50VE3B
- MSZ-EF50VE3S
- MSZ-SF25VE3
- MSZ-SF35VE3
- MSZ-SF42VE3
- MSZ-SF50VE3
- MSZ-DM25VA
- MSZ-DM35VA
- MSZ-HJ25VA
- MSZ-HJ35VA
- MSZ-HJ50VA
- MSZ-HJ60VA
- MSZ-HJ71VA
- MFZ-KJ25VE2
- MFZ-KJ35VE2
- MFZ-KJ50VE2

Specifications

Material	Filter: Polyester, rayon, actylic resin Frame: Polypropylen
Color (Filter)	Blue

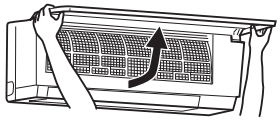
Dimensions

Unit : mm



How to Use / How to Install

Replacement of the air cleaning filter
<MSZ Type>

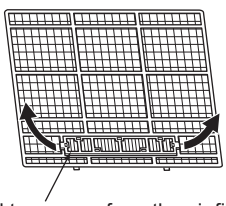


1. Lift the front panel until a “click” is heard.
2. (1) Remove the air filter.
   (2) Remove the air cleaning filter.
   (3) Install a new air cleaning filter.
   (4) Install the air filter.
3. Close the front panel securely and press the positions indicated by the arrows.

Every 3 months:
- Remove dirt by a vacuum cleaner.

When dirt cannot be removed by vacuum cleaning:
- Soak the filter and its frame in lukewarm water before rinsing it.
- After washing, dry it well in shade. Install all tabs of the air filter.

Every year:
- Replace it with a new air cleaning filter for best performance.



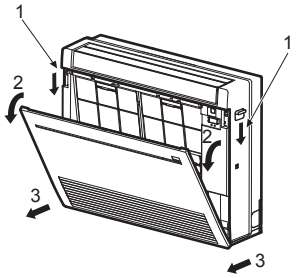
Pull to remove from the air filter

OPTIONAL PARTS

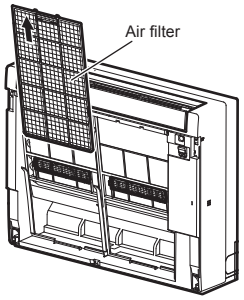
Replacement of the air cleaning filter
<MFZ Type>

(1) Remove the front panel.

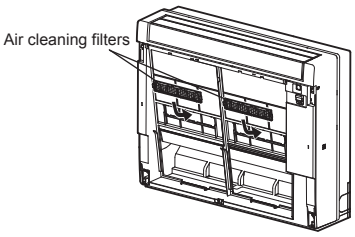
1. Push down the tab on the both sides of the unit to open the front panel.
2. Pull the front panel toward you to remove it.
3. Open the front panel completely and remove it.



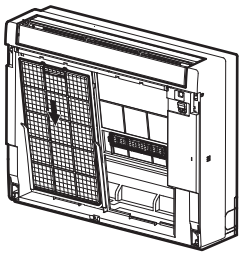
(2) Remove the air filter.



(3) Replace the air cleaning filter.
Fix the filter with the tabs securely.



(4) Install the air filter.



(5) Securely close the front panel.
Install the front panel by the removal procedure in reverse. Refer to (1) 1-3.

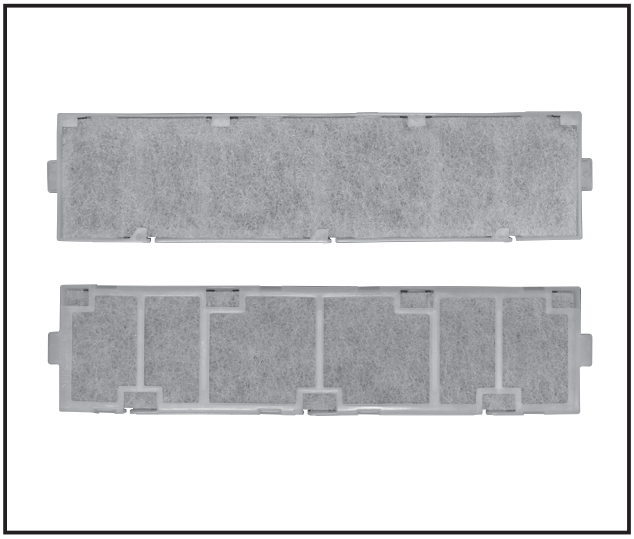
Every 3 months:
- Remove dirt by a vacuum cleaner.

When dirt cannot be removed by vacuum cleaning:
- Soak the filter and its frame in lukewarm water before rinsing it.
- After washing, dry it well in shade. Install all tabs of the air filter.

Every year:
- Replace it with a new air cleaning filter for best performance.

Silver-ionized Air Purifier Filter MAC-2380FT-E

Photo



Descriptions

This air cleaning filter catches dead mites and their droppings, pollen and other allergens on the filter filament, then decomposes them with artificial enzymes.
(Artificial enzyme catalyst on the filament catches the allergens and helps the chemical reaction with oxygen and severs the S-S* bonds. *S= Sulfur atoms)

Applicable Models

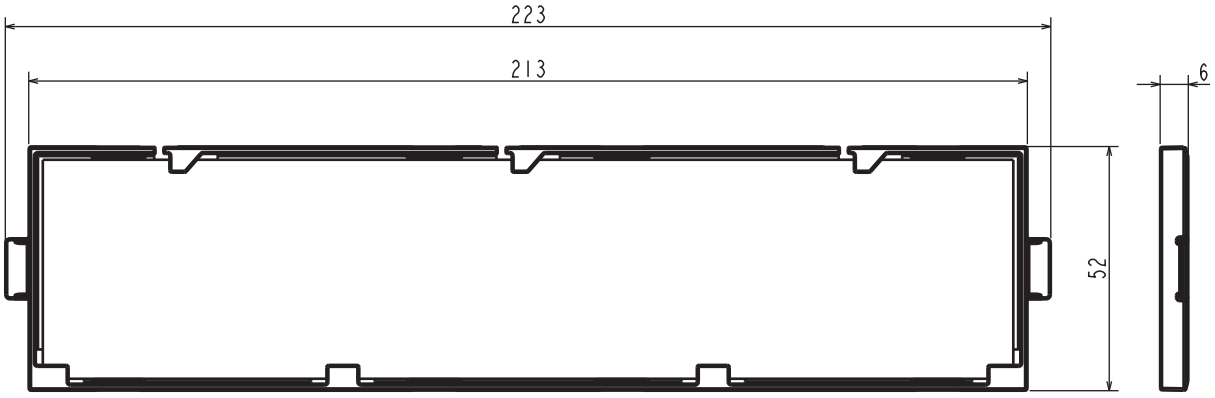
- MSZ-FH25VE2
- MSZ-FH35VE2
- MSZ-FH50VE2

Specifications

Material	Filter: Polyester, rayon, actylicresin Frame: Polypropylen
Color (Filter)	Blue

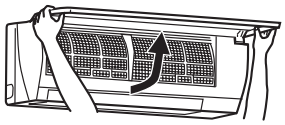
Dimensions

Unit : mm

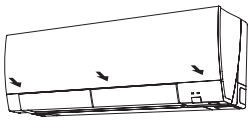


How to Use / How to Install

Replacement of the air cleaning filter



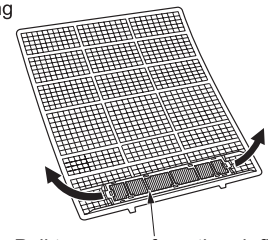
1. Lift the front panel until a “click” is heard.
2. (1) Remove the air filter.
   (2) Remove the air cleaning filter.
   (3) Install a new air cleaning filter.
   (4) Install the air filter.
3. Close the front panel securely and press the positions indicated by the arrows.



Every 3 months:
- Remove dirt by a vacuum cleaner.

When dirt cannot be removed by vacuum cleaning:
- Soak the filter and its frame in lukewarm water before rinsing it.
- After washing, dry it well in shade. Install all tabs of the air filter.

Every year:
- Replace it with a new air cleaning filter for best performance.

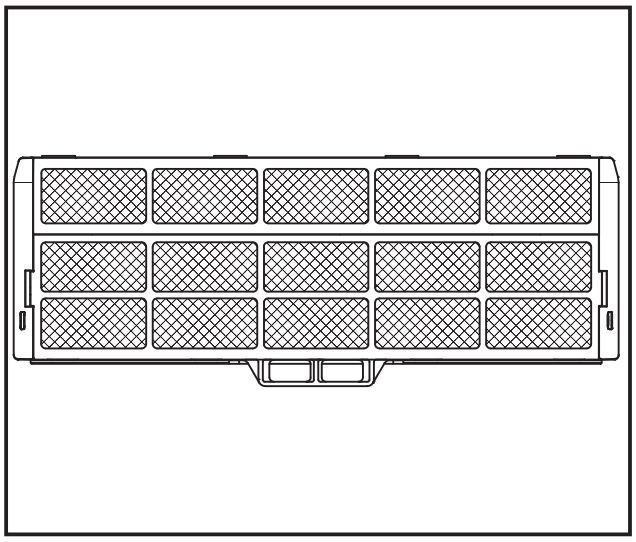


Pull to remove from the air filter

OPTIONAL PARTS

Silver-ionized Air Purifier Filter MAC-172FT-E

Figure



Descriptions

This air cleaning filter catches dead mites and their droppings, pollen and other allergens on the filter filament, then decomposes them with artificial enzymes.
(Artificial enzyme catalyst on the filament catches the allergens and helps the chemical reaction with oxygen and severs the S-S* bonds. *S= Sulfur atoms)

Applicable Models

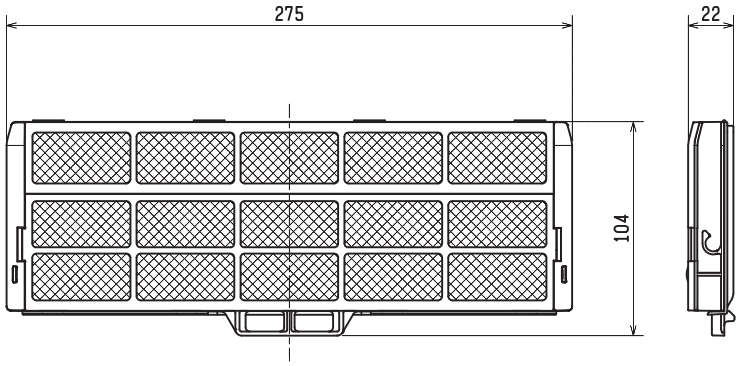
- MLZ-KA25VA
- MLZ-KA35VA
- MLZ-KA50VA

Specifications

Material	Frame: PP resin Filter: Polyester and others, Anti-allergen unwoven cloth.
Color (Filter)	White

Dimensions

Unit : mm



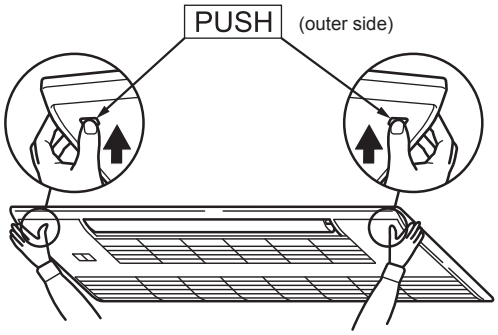
How to Use / How to Install

- **Clean every 3 months.**
- Soak the filter together with its frame in lukewarm water and wash it.
- After washing, dry it well in shade and put it back to its original position. Install all tabs of the air filter.

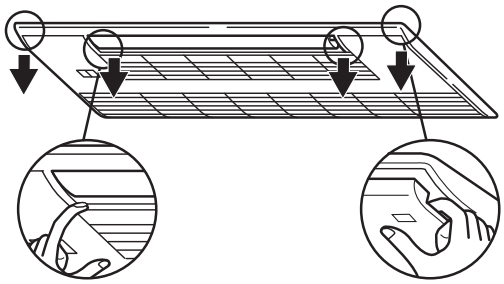
Every year:
- Replace it with a new air cleaning filter for best performance.

Replacement of the air cleaning filter

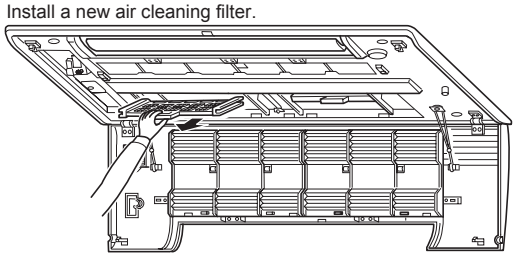
1. Press PUSH (outer side) on the intake grille.



2. When a "**click**" is heard, hook your fingers on the intake grille and pull down to open it.

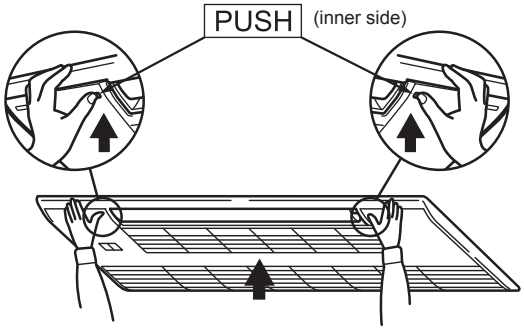


3. Remove the air cleaning filter.
4. Install a new air cleaning filter.

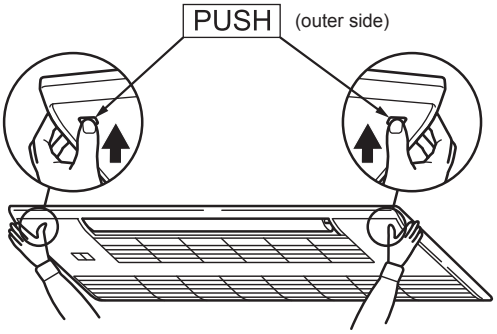


5. Close the intake grille.
   • The intake grille will be temporarily secured with magnets.
   • Make sure that the safety strings do not hang outside of the intake grille.

6. Press PUSH (inner side) on the intake grille until a "click" is heard, and then press the center of the grille at the location indicated by the arrow.



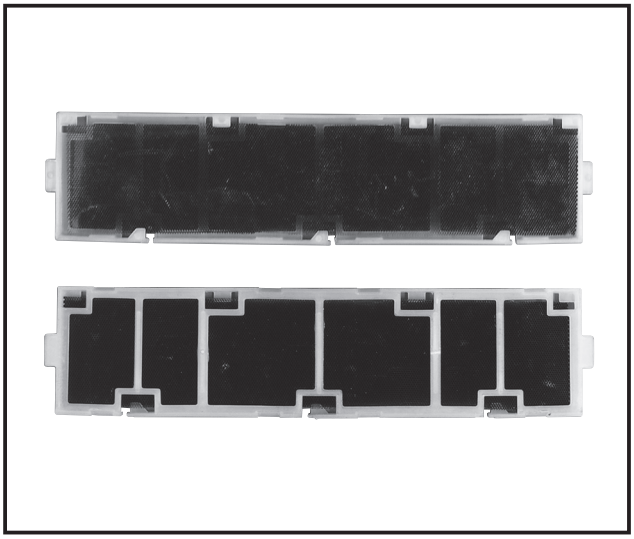
7. Press PUSH (outer side) on the intake grille until a "**click**" is heard.
   • Make sure that the intake grille is securely closed. If the intake grille is not closed, open the grille and perform the closing procedure again.



Deodourising Filter

MAC-3000FT-E

Photo



Descriptions

The catalyst coating on the honeycomb-structured frame captures small foul-smelling substances in the air, then breaks down the source of the odors with the power of the ozone generated in a plasma electrode unit.

Applicable Models

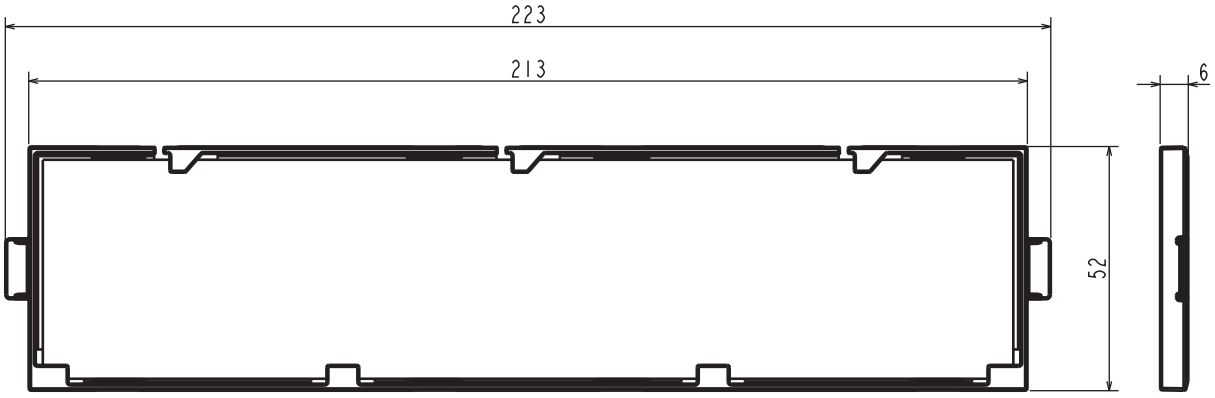
- MSZ-FH25VE2
- MSZ-FH35VE2
- MSZ-FH50VE2

Specifications

Material	Filter: Aluminium Catalyst: MnO_2, SiO_2 Frame: Polypropylen
Color (Filter)	Black

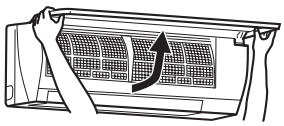
Dimensions

Unit : mm

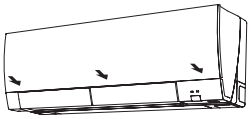


How to Use / How to Install

Replacement of the air cleaning filter



1. Lift the front panel until a “click” is heard.
2. (1) Remove the air filter.
   (2) Remove the air cleaning filter.
   (3) Install a new air cleaning filter.
   (4) Install the air filter.
3. Close the front panel securely and press the positions indicated by the arrows.

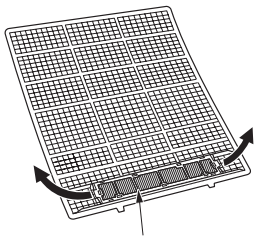


Every 3 months:

- Remove dirt by a vacuum cleaner, or soak the framed filter in lukewarm water (30 to 40°C) for about 15 minutes. Rinse well.
- After washing, dry it well in shade.
- Deodorizing feature recovers by cleaning the filter.

When dirt or smell cannot be removed by cleaning:

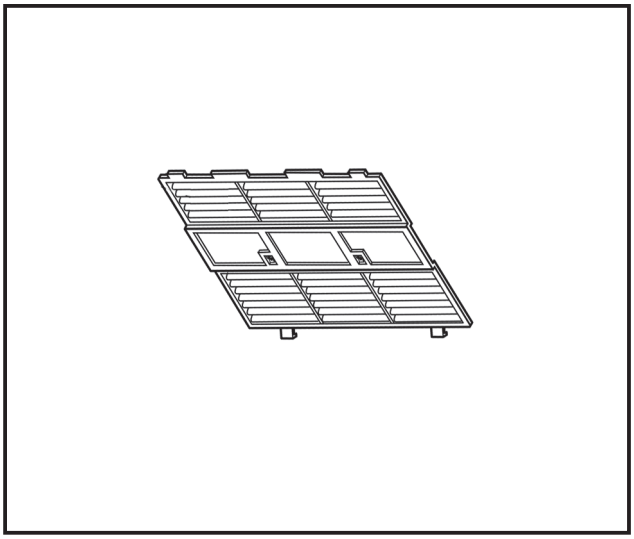
- Replace it with a new air cleaning filter.



Pull to remove from the air filter

OPTIONAL PARTS

Figure



Descriptions

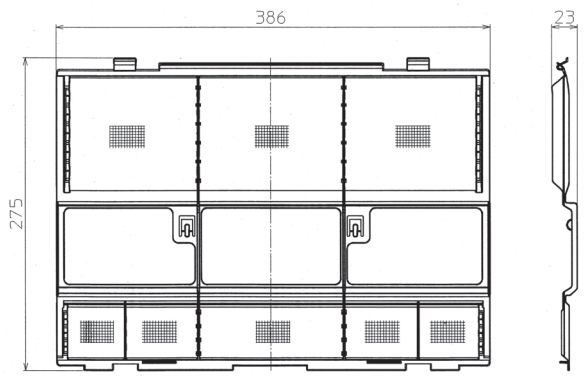
The air filter prevents the spread of viruses in the room and improves air quality.

Applicable Models

- MLZ-KA25VA
- MLZ-KA35VA
- MLZ-KA50VA

Dimensions

Unit : mm



Specifications

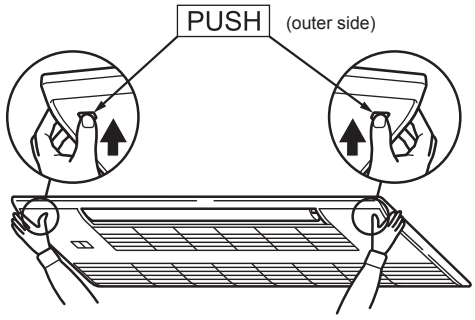
Material	Frame: Polypropylene Net: Polypropylene (Honey comb. 30 x 30 mesh)
Color (Filter)	Black

How to Use / How to Install

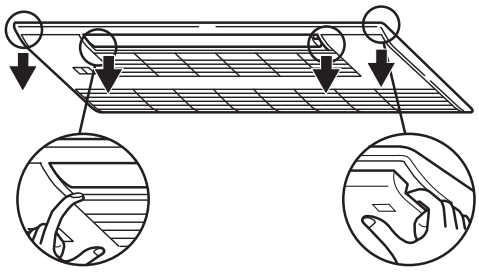
- **Clean every 2 weeks**
- Remove dirt by a vacuum cleaner, or wash with water.
- Dry it well in shade before installing it.

Replacement of the air filter

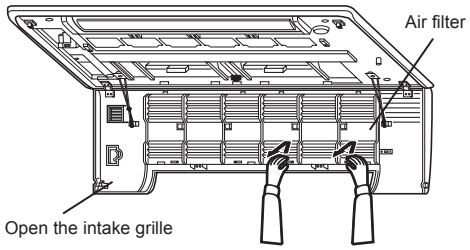
1. Press PUSH (outer side) on the intake grille.



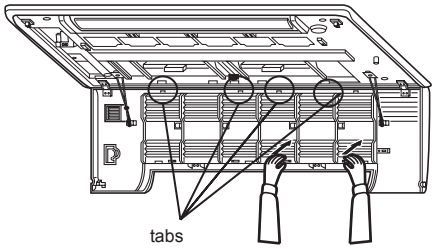
2. When a "**click**" is heard, hook your fingers on the intake grille and pull down to open it.



3. Remove the air filter.

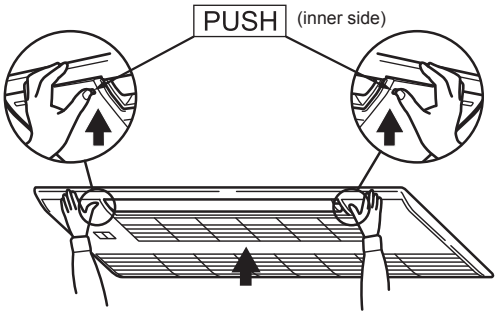


4. Install a new air filter.
   Be sure to install the tabs into the intake grille hole.

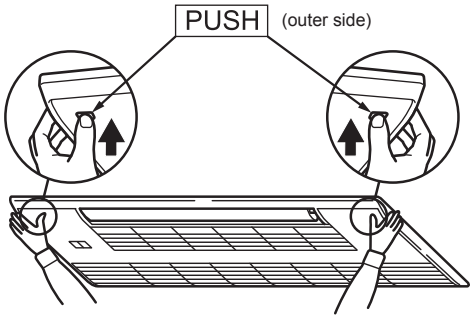


5. Close the intake grille.
   • The intake grille will be temporarily secured with magnets.
   • Make sure that the safety strings do not hang outside of the intake grille.

6. Press PUSH (inner side) on the intake grille until a "click" is heard, and then press the center of the grille at the location indicated by the arrow.



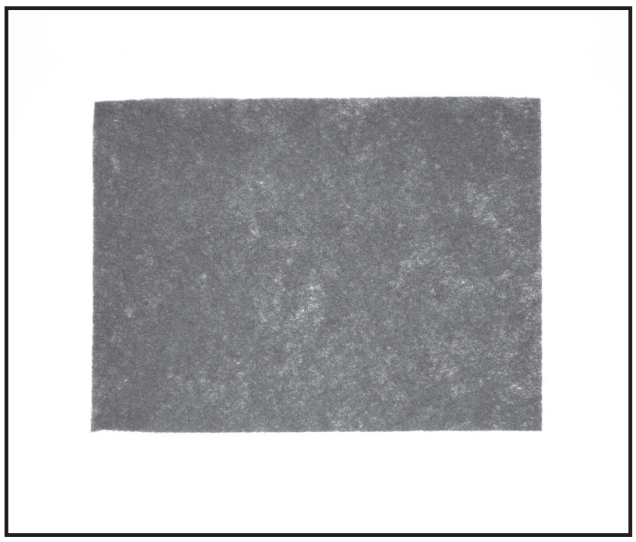
7. Press PUSH (outer side) on the intake grille until a "**click**" is heard.
   • Make sure that the intake grille is securely closed. If the intake grille is not closed, open the grille and perform the closing procedure again.



OPTIONAL PARTS

Oil Mist Filter Element (12 pieces) PAC-SG38KF-E

Photo



Descriptions

Filter Element (12 Pieces) for ceiling suspended models for professional kitchen use.

Applicable Models

■ PCA-RP71HAQ

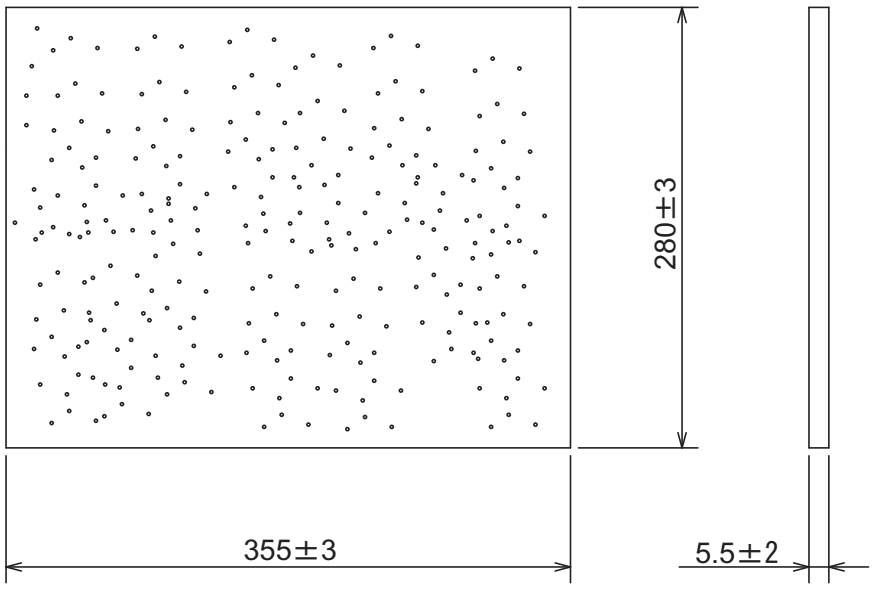
Specifications

Material	Modacrylic fiber / Polyester
Color	Black
Temperature	60℃ or less
Reproduction	Disposable (Reproduction not possible)
Packing	12 elements per bag

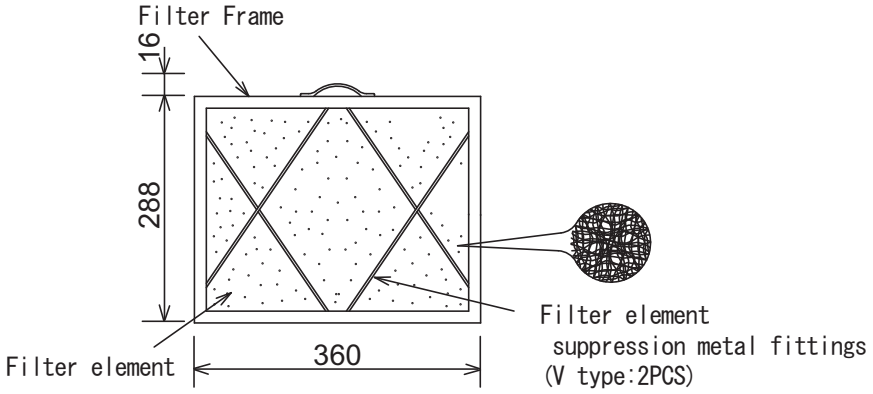
Note: Only the filter element must be replaced
(the filter frame provided on the main body must be used)

Dimensions

Unit : mm



State of installation to filter frame



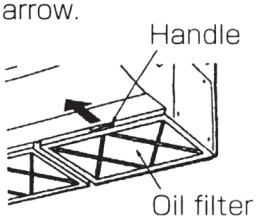
OPTIONAL PARTS

How to Use / How to Install

Cleaning the oil filter

1) Removing the oil filter

①Remove the filter by sliding it in the direction of an arrow.



RP71 → 3pieces
RP125 → 4pieces

2) Replacing the filter element

①Remove the oil filter by sliding it in the direction of an arrow.

②Remove the two metal fittings for filter element according to the following procedure. Bend the metal fittings towards ① side(inside)and then slide them in the direction of ② to remove.

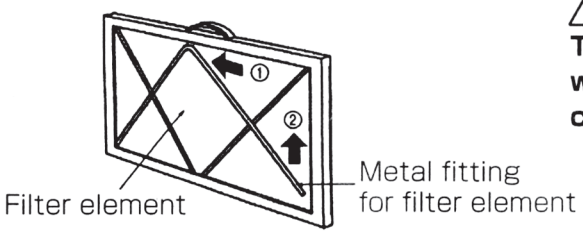
③Replace the filter element (disposable).

Note:

Install the filter element within the frame securely.

④Install the metal fittings for filter element in their original positions.

⑤Turn the side of oil filter that the metal fittings are installed downward and install the filter in the unit.



3) Cleaning the frame of the oil filter

Tools to be prepared

· Protective goods such as a rubber glove
· Scrubbing brush or brush

Note:

Avoid using a metal scrubbing brush or brush since the aluminum materials could be damaged.

· Household neutral detergent or alkalescent detergent(for washing dishes or clothes)

Note:

If alkaline detergent is used for cleaning, the part made of aluminum could discolor.

Make sure the filter element is removed when cleaning the oil filter.

①If the filter is not so dirty.(If the filter is cleaned once a week(once per 100 operating hours).)
Wash the filter with water and above-mentioned detergent using a scrubbing brush or brush, etc. (It is more effective to wash the filter with lukewarm water.)

②If the filter is extremely dirty.
Put the previously-mentioned detergent (its strength should be about 1/10 of undi-luted solution)into hot water whose temperature is 50℃ or less, and soak the filter for 1 hour or more before washing.

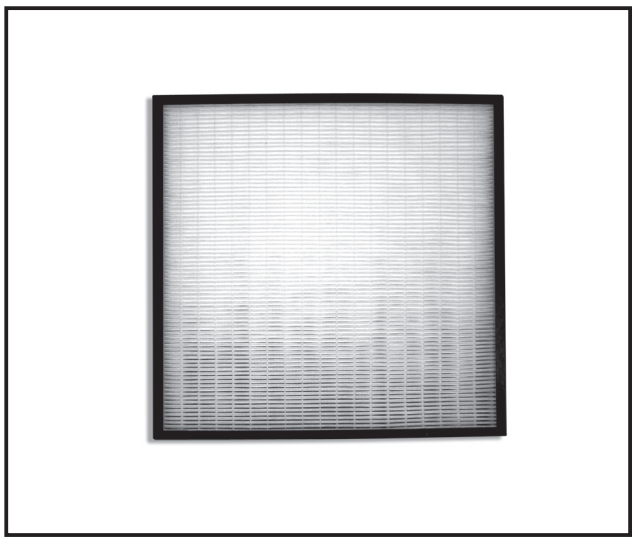
⚠Warning:

To prevent your hand from burning, start washing the filter after the hot water gets cold.

OPTIONAL PARTS

High-efficiency Filter Element PAC-SH59KF-E

Photo



Descriptions

High Efficiency Filter is part that remove dust in air.
PAC-SH53TM-E (multi-function casement) is required for installation.

Applicable Models

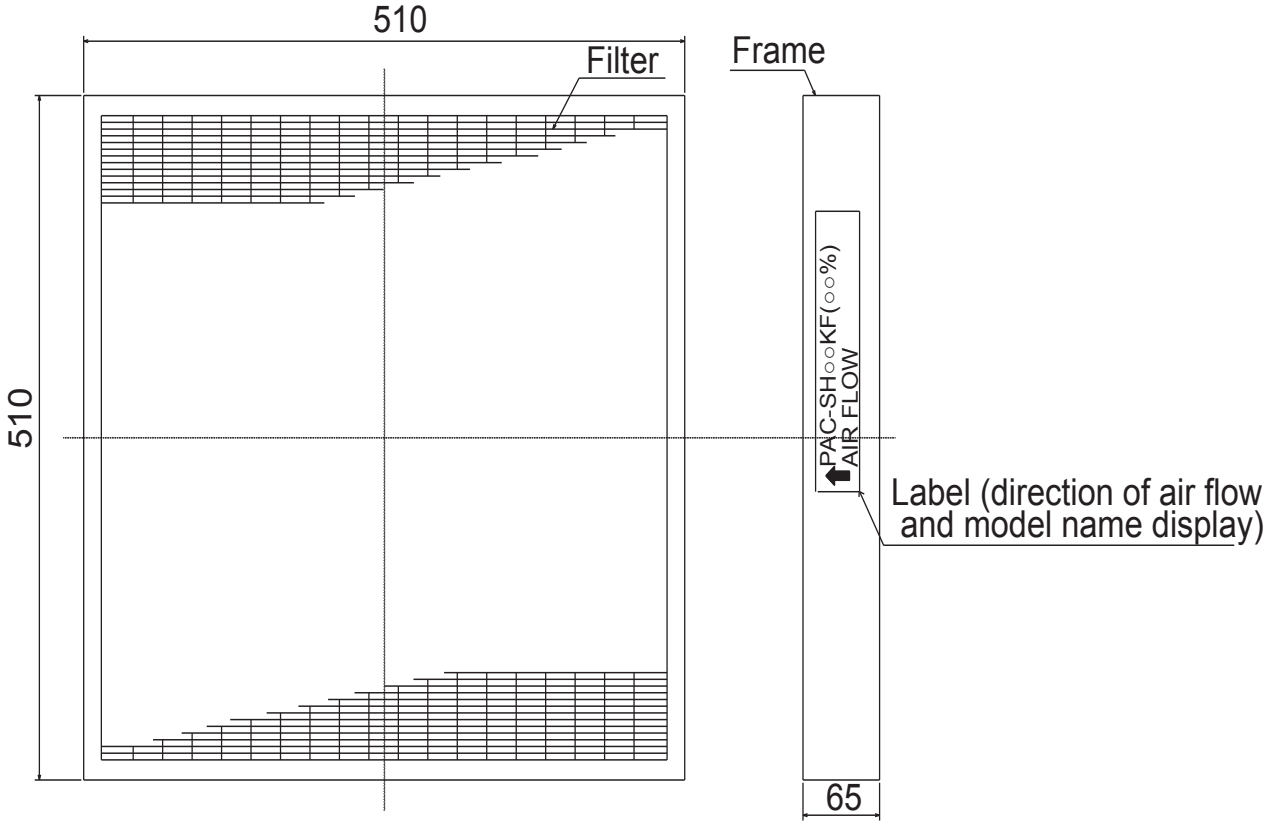
- PLA-ZRP·BA
- PLA-RP·BA(2)

Specifications

Dust collection efficiency	Colorimetric method 65% (JIS 11 class)
Filter element ,aterial	Electrrostatic polyolefin fiber
Life	Approx. 2,500 hours (at dust density 0.15 mg/m^3) *Reproduction not possible
Parts composition	This element x 1

Dimensions

Unit : mm

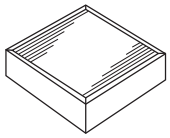


OPTIONAL PARTS

How to Use / How to Install

1 Parts check.

(The unit is provided with this manual and following parts in the box.)

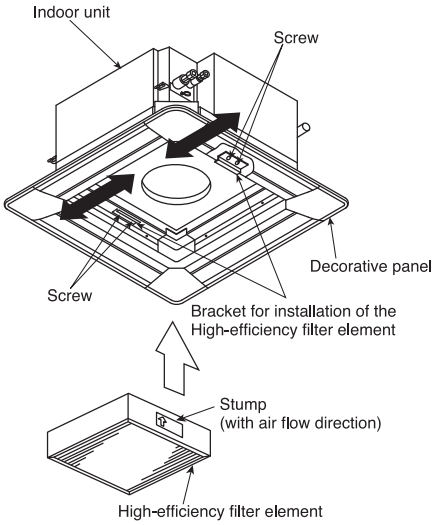
Part #, Name	High-efficiency filter element
Q'ty	1
Figure	

NOTICE

(1) In case that the High-efficiency filter element is installed, it should be installed on the Multi-functional casement which is option.
Be sure to purchase the Multi-functional casement.

2 Installation of High-efficiency filter element (same procedure for replacement)

- ●Remove the intake grille of the Decorative panel in advance.
  (See the "installation instructions of decoration panel" for details.)
- ●Loosen the four screws of bracket for installation of the High-efficiency filter element of the Multi-functional casement as shown right. Then, slide them outside.
- ●Set the High-efficiency filter element in Multi-functional casement, slide the plate inward, and then tighten the four screws securely.
- ※When the indoor unit is used with "2 ways" air outlet, the High-efficiency filter element is not available.
- ※When the High-efficiency filter element is installed, the operation noise can be larger.
- ※When attaching the High-efficiency filter element, check the direction of air flow, referring to the stamp on the side.

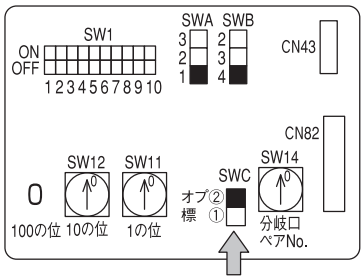


3 Air flow volume setting when High-efficiency filter element is installed

※When the High-efficiency filter element is attached for the first time, the setting for increase in airflow rate must be performed.
※This setting is necessary only when the element is newly attached: No setting is required when the filter is replaced.

⚠CAUTION	Set up for increasing air flow volume
	●If the set up is not done correctly, the air flow volume will decrease and it can lower the performance and cause dew drop.

〈Address board〉



1） If the indoor unit to be combined is BA series:
- ●Setting must be performed from the remote control: See the pages of "Function Selection" in the installation manual provided with the remote control. (Set optional assembly to "Yes".)

2） If the indoor unit to be combined is other than above:
- ●Set switch "SWC" on the address board in indoor unit to the "option" ② side ("standard" at the factory).

4 Replacement Period

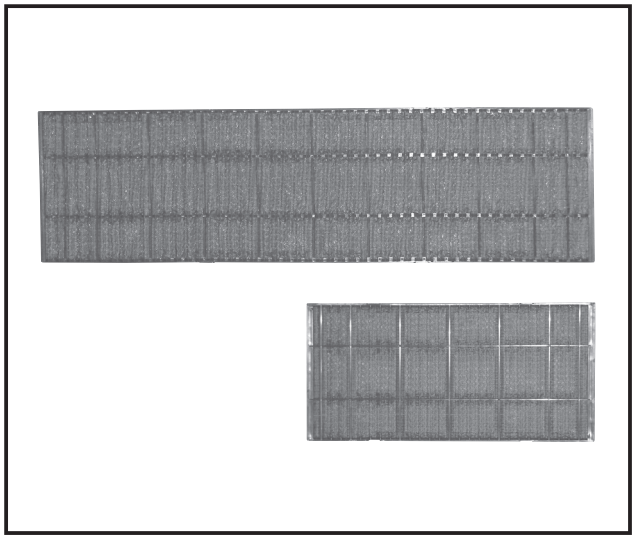
- ●The High-efficiency filter element is single-use (not recyclable).
- ●The reference for operation time is 2,500 hours (depending on the environment in which the air-conditioner is installed).

⚠CAUTION	Do not wash with water.
	●Washing with water will degrade the performance and could cause the element to become unusable.

OPTIONAL PARTS

High-efficiency Filter Element PAC-SH88/89/90KF-E

Photo



Descriptions

- High Efficiency Filter is part that remove dust in air.
  Dust collection efficiency: 70% (Weighing method)
- It is the best for the air-conditioning of the stove where a lot of going of the person in and out exists.

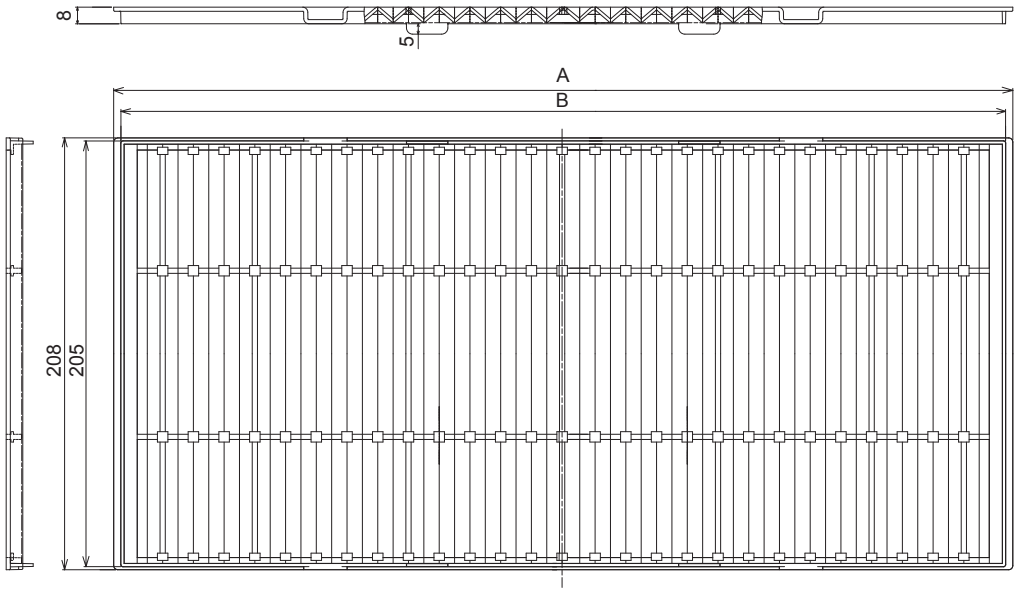
Applicable Models and Specifications

Model		PAC-SH88KF-E	PAC-SH89KF-E	PAC-SH90KF-E
Dust collection efficiency		70% (weighing method)		
Filter material		PP fiber (antibacterial + mildew-proof), honeycomb weave (Identification: gray yarn woven)		
Maintenance		Approx. 2,500 hours (varies with operating conditions)		
Parts composition	Filter (large)	—	1	2
	Filter (small)	2	1	—
Applicable models		PCA-RP35,50KAQ	PCA-RP60,71KAQ	PCA-RP100,125,140KAQ

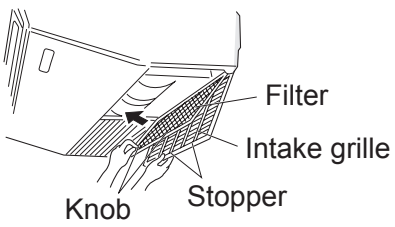
Dimensions

Unit : mm

	A	B
Small	432	425
Large	752	745

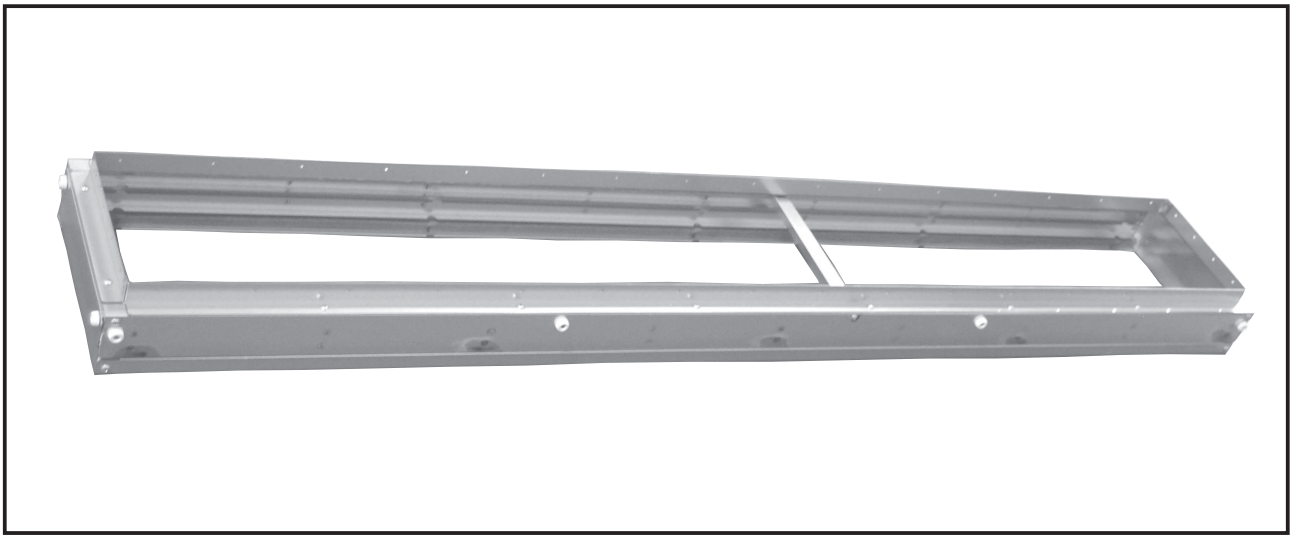


How to Use / How to Install



1 Open the intake grille.
2 Hold the knob on the filter then pull the filter up in the direction of an arrow. To replace the high efficiency filter, be sure to insert the filter far enough until it fits into the stopper.

Photo



Applicable Models

Model	PAC-KE92TB-E	PAC-KE93TB-E	PAC-KE94TB-E	PAC-KE95TB-E
Applicable models	PEAD-RP35JA(L)Q PEAD-RP50JA(L)Q	PEAD-RP60JA(L)Q PEAD-RP71JA(L)Q	PEAD-RP100JA(L)Q PEAD-RP125JA(L)Q	PEAD-RP140JA(L)Q

How to Use / How to Install

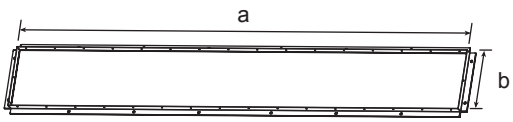
1 Confirming the Supplied Parts

1. Model names and applicable models

Model name	Applicable types	Applicable filter	
		Size	Q'ty
PAC-KE92TB-E	PEAD-RP35·50JA(L)Q	900×240	1
PAC-KE93TB-E	PEAD-RP60·71JA(L)Q	550×240	2
PAC-KE94TB-E	PEAD-RP100·125JA(L)Q	700×240	2
PAC-KE95TB-E	PEAD-RP140JA(L)Q	700×240	1
		+	
		900×240	1

2. Provided parts

Check that the packet includes the following parts in addition to this installation manual.

PARTS	SHAPE		Q'ty	Model name
① SCREW(4 × 10)			24	PAC-KE92·93TB-E
			30	PAC-KE94·95TB-E
② SUCTION FLANGE		a × b	-	-
		857×208	1	PAC-KE92TB-E
		1057×208	1	PAC-KE93TB-E
		1357×208	1	PAC-KE94TB-E
		1557×208	1	PAC-KE95TB-E

2 Attach the filter box

Attach the filter box before installalling the indoor unit.

1. Remove the filter on the indoor unit. (Fig. 2-1)

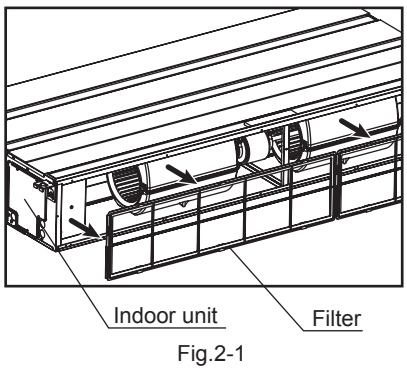


Fig.2-1

2. Install the filter box on the indoor unit with the supplied screws. (Fig. 2-2)

PAC-KE92·93TB-E ····· 10 pcs.
PAC-KE94·95TB-E ····· 12 pcs.

Note) Failure to firmly tightened the screws will cause air leakage. Make sure the screws are firmly tightened.

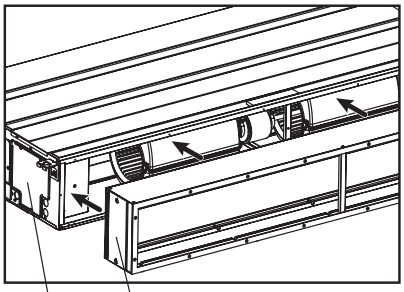


Fig.2-2

3. Install the supplied suction flange on the filter box with the supplied screws. (Fig. 2-3)

PAC-KE92·93TB-E ····· 12 pcs.
PAC-KE94·95TB-E ····· 16 pcs.

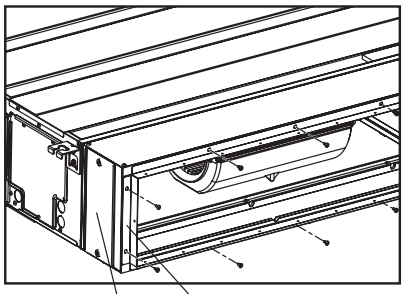


Fig.2-3

3 Installing the filter

1. Installation that allows for maintenance from the side

(1) Remove the side panel from the filter box. (Fig. 3-1-1)

(2) Insert the filter that was removed in step 2-1 above along the top and bottom rails. (Fig. 3-1-2)
When using the PAC-KE93, 94, or 95TB model, join the two filters before inserting them. (Fig. 3-1-3)

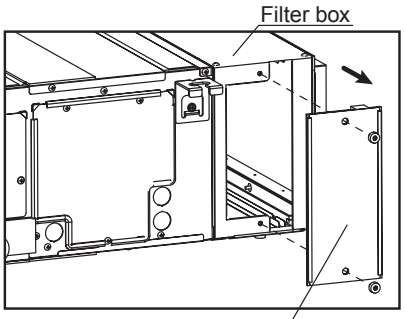


Fig.3-1-1

If the two filters are inserted without them being joined together, it will render the one in the back difficult to remove.

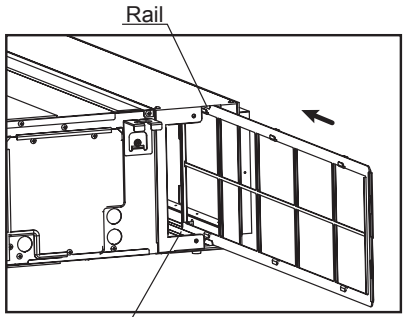


Fig.3-1-2

OPTIONAL PARTS

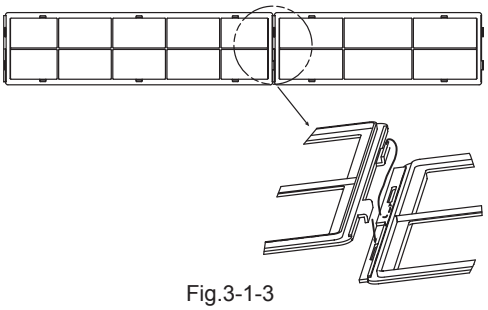


Fig.3-1-3

⚠ CAUTION

Never place your hand inside the filter box during maintenance. If the filter tabs become caught when the filter is removed for maintenance, use a long stick or similar item to remove the remaining filter.

2. Installation that allows for maintenance from the bottom

(1) Remove the under panel from the filter box. (Fig. 3-2-1)

(2) Insert the filter that was removed in step 3-1 above through the bottom of the filter box. (Fig. 3-2-2)

(3) Insert the filter between the insulators on the top plate of the filter box until the filter is completely inside the filter box, and place the filter on the under frame of the filter box. (Fig. 3-2-3)

(4) Install the under panel.

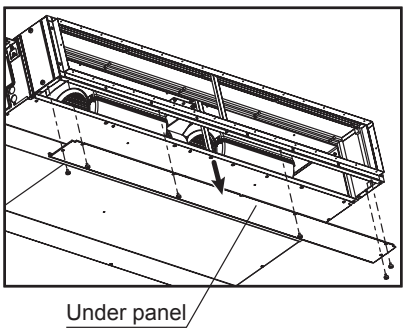


Fig.3-2-1

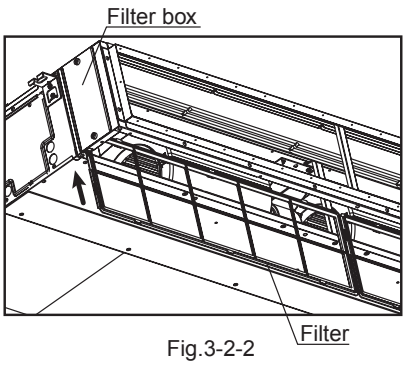


Fig.3-2-2

Final Check

The last step of the procedure is to make sure that nothing has been overlooked during the procedure. In addition, once the filter box has been mounted and the above procedure has been completed, carefully check for air leakage at the connections of the indoor unit.

For more detailed information, please consult your dealer.

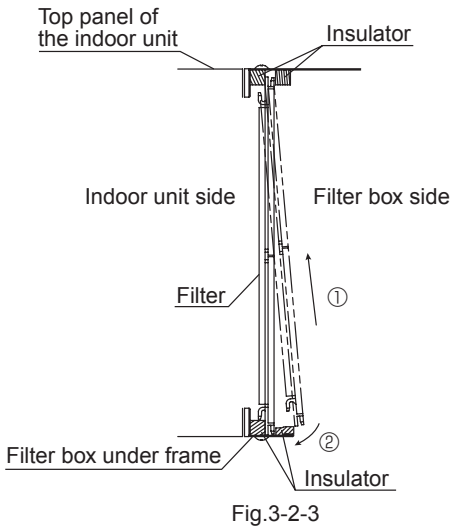
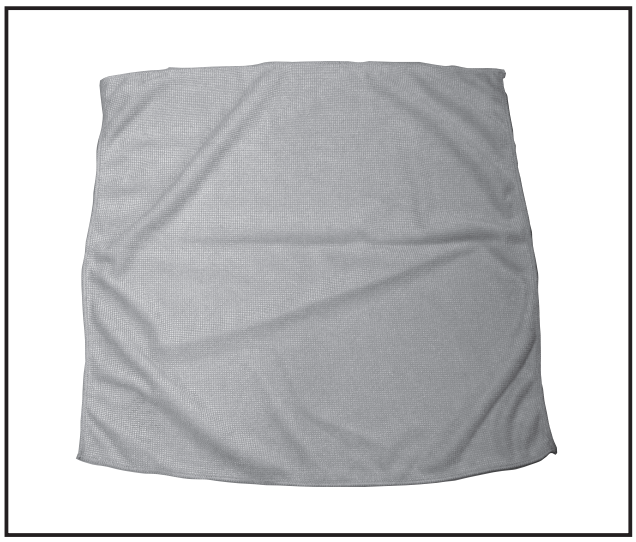


Fig.3-2-3

Soft dry cloth

MAC-1001CL-E

Photo



Descriptions

The SOFT DRY CLOTH must be used when wiping the surfaces of indoor units of the air conditioners as it offers gentle cleaning with minimum abrasion.
Wash the SOFT DRY CLOTH with water at temperatures of 60 °C or below.

Applicable Models

■ MSZ-EF18VE3W ■ MSZ-EF25VE3W ■ MSZ-EF42VE3W
■ MSZ-EF18VE3B ■ MSZ-EF25VE3B ■ MSZ-EF42VE3B
■ MSZ-EF18VE3S ■ MSZ-EF25VE3S ■ MSZ-EF42VE3S
■ MSZ-EF22VE3W ■ MSZ-EF35VE3W ■ MSZ-EF50VE3W
■ MSZ-EF22VE3B ■ MSZ-EF35VE3B ■ MSZ-EF50VE3B
■ MSZ-EF22VE3S ■ MSZ-EF35VE3S ■ MSZ-EF50VE3S

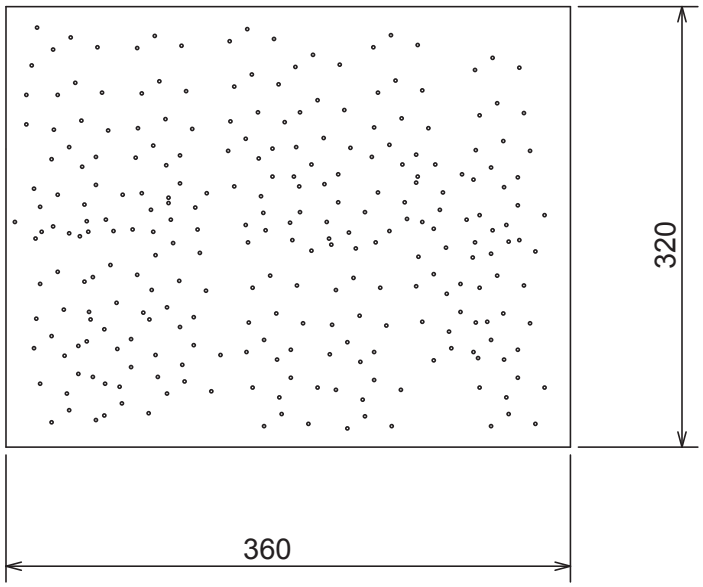
※ "MAC-1001CL-E" is provided with MSZ-EF18/22/25/35/42/50VE3B as a standard component.

Specifications

Fiber Composition	87% PET, 13% Nylon
Thickness	0.75mm
Weight	218 gsm
Total Absorption (%) Effective Absorption (%) **Tensile and Elongation** Tensile Machine Direction Tensile Cross Direction	575 450 19Kgf 13Kgf
Elongation Machine Direction Elongation Cross Direction	85% 100%
Laundering	Launderable to 60 °C
Shrinkage after 20 MW	9% or less

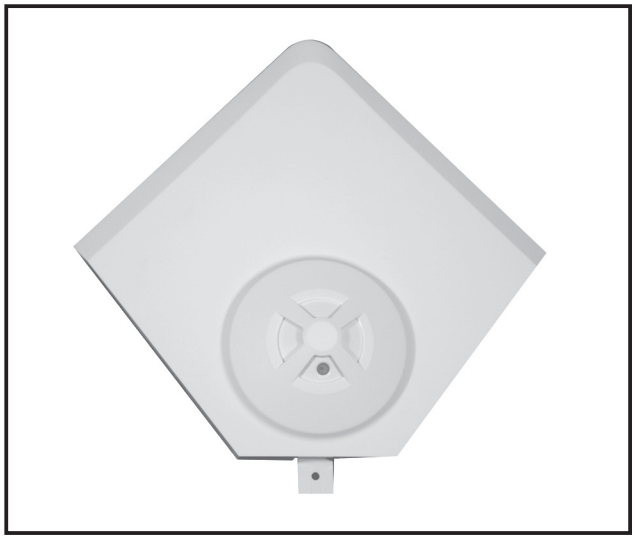
Dimensions

Unit : mm



OPTIONAL PARTS

Photo



Descriptions

- Both floor and inlet temperatures are measured to provide a comfort sensation fully in a room covering from the ceiling to the floor surfaces.
- Install the I-SEE sensor corner panel to the corner of the decorative panel (the opposite side of refrigerant piping).

Applicable Models

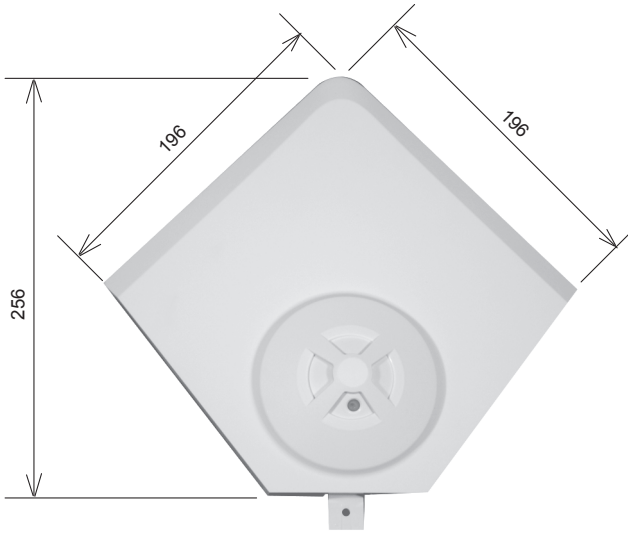
- PLA-ZRP·BA
- PLA-RP·BA(2)

Specifications

Adapter wiring	Connect the 9-core cord with connector to the indoor controller board of the indoor unit.
Exterior	ABS resin (Munsell No.6.4Y8.9/0.4)
I-SEE sensor operation	When these is great difference between the room temperature and the set temperature, temperatures of four areas are measured once in two minutes.When the room temperature is stable, the i-see sensor rotates.

Dimensions

Unit : mm

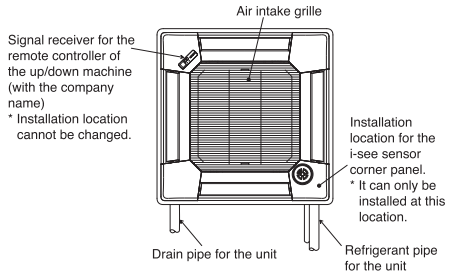


How to Use / How to Install

1. Included parts (This manual and following parts are included.)

Part Number/ Name	① i-see sensor corner panel	② Plastic fastener
Quantity	1	2
Shapes/ Sizes		

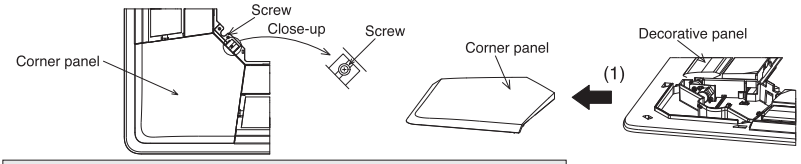
2. Preparation before installing the decorative panel



⚠ Warning **Turn off the main power.**
• If the main power is not turned off, injury or electric shock may result.

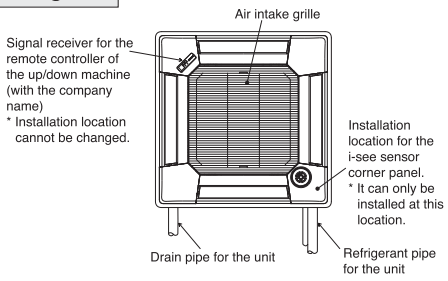
Removing the corner panel

- It can only be installed at this location with corner panel.
  * If the corner panel with sensor is removed, a problem may occur when installing the decorative panel.
- Remove the screw on the corner, slide the panel in the direction of the arrow (1) in the figure and remove the corner panel.



3. Installation of corner panels and air intake grille

* You can set the direction of the air intake grille such as grids when installing multiple units as desired. If forced to be set at other than the position shown in the figure, failure may result.



Installation of i-see sensor corner panel

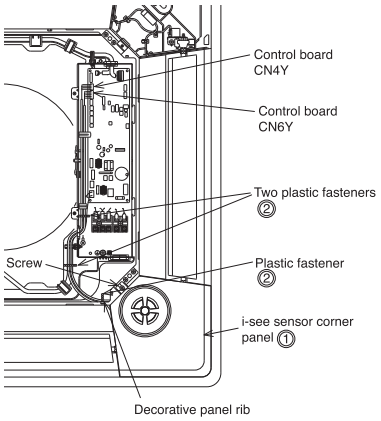
Optional part: PAC-SA1ME-E

- Take CN4Y (white) and CN6Y (red), lead wires of the i-see sensor corner panel ① from the side of the electric box on the unit and make sure to connect them to the connector of the control board.
- Lead wires of the i-see sensor corner panel ① should be fixed at the rib of the decorative panel with the plastic fastener ② so that there is no slack.
- Lead wires should be held together with the lead wires of the unit and fixed with two of the plastic fastener ② so that there is no slack.
- Put the cover back on the electric box with three screws.

* Make sure wires are not caught in the cover of electric box. If they get caught, they will be cut off.

- Adverse procedure of “Preparation before installing the decorative panel” in the Section 2 will be taken for installing the i-see sensor corner panels.

* The i-see sensor corner panel should be fixed onto the decorative panel with screw.



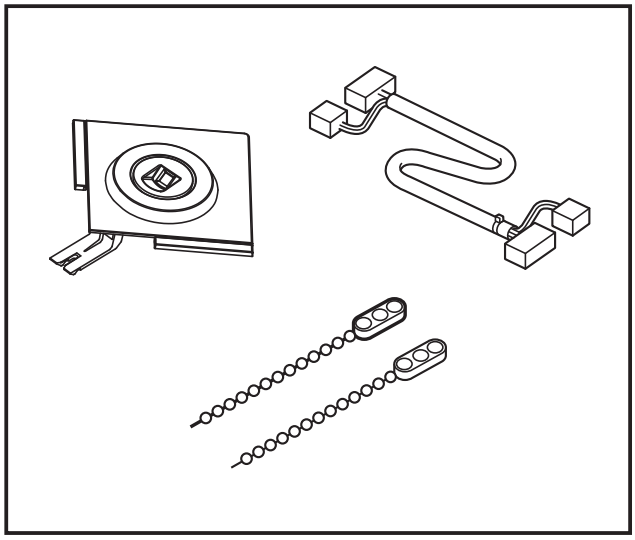
4. Verification

- For optional part PAC-SA1ME-E, check the rotating movement of the i-see sensor. If the i-see sensor does not rotate, review the procedure in “installation of i-see sensor corner panel” in section 3.

After verifying all the items above, hand all the documents including this manual and the manuals for the unit and separately sold parts to the user. Be sure to explain the descriptions of cleaning the filters and how to use the air intake grille up/down function (remote controller operation) in the operation manual of the decorative panel to the user.

OPTIONAL PARTS

Figure



Descriptions

- Both floor and inlet temperatures are measured to provide a comfort sensation fully in a room covering from the ceiling to the floor surfaces.
- The i-see Sensor detects persons in the room and performs various control functions according to the remote controller settings.
- Install the i-see Sensor corner panel to the corner of the decorative panel.

Applicable Models

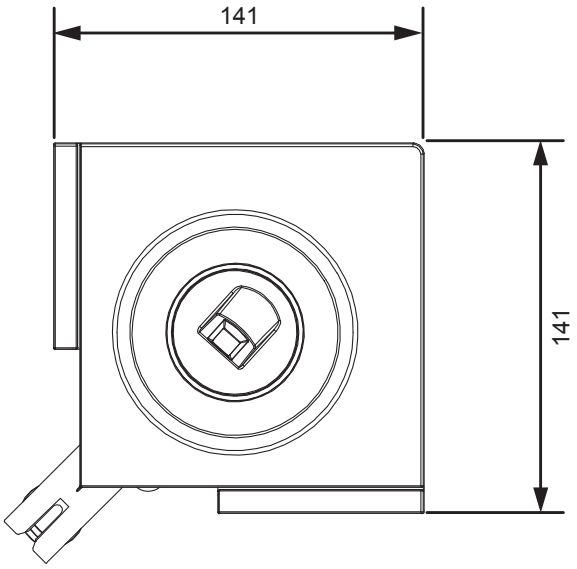
■ SLZ-KF·VA2

Specifications

Adapter wiring	Connect the 9-core cord with connector to the indoor controller board of the indoor unit.
Exterior	ABS resin (Munsell No.1.0Y9.2/0.2)
i-see Sensor operation	The i-see Sensor rotates for approximately one minute once every three minutes.

Dimensions

Unit : mm



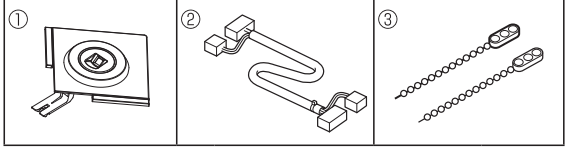
OPTIONAL PARTS

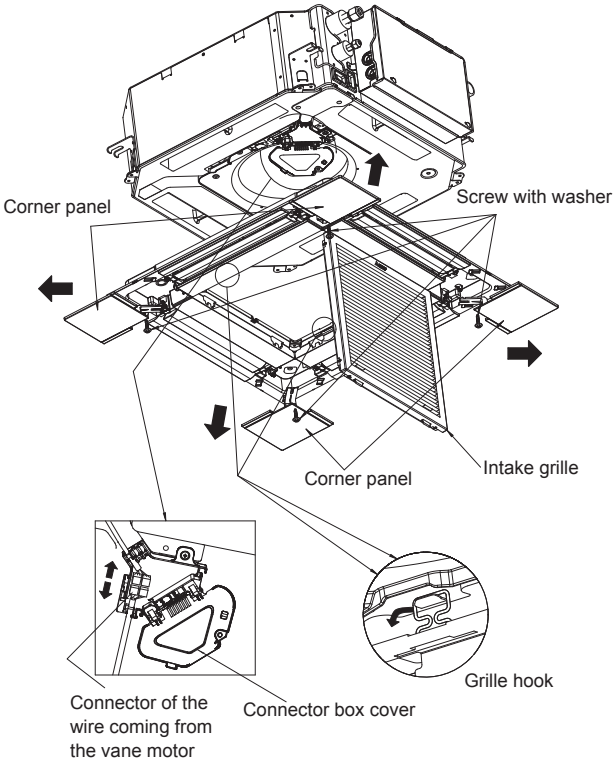
How to Use / How to Install

1. Accessories

Make sure that all the following accessories besides this installation manual are contained in the package.

Model	Accessory name		Q'ty
PAC-SF1ME-E	①	i-see Sensor	1
	②	Junction wire	1
	③	Fastener	2





2. Preparation for mounting i-see Sensor

(The junction wire ② needs to be connected to the indoor unit.)

Note 1: Turn off main power supply to the indoor unit before installation.

Note 2: See the installation manual of the indoor unit in addition to this manual.

- Remove the grille from the indoor unit as described in the following procedure.
  1) Open the intake grille, loosen the screws for the corner panels, and remove the corner panels.
  2) Remove the screw for the connector box cover, and open the connector box cover. Disconnect the connector of the wire coming from the vane motor.
  3) Remove the 4 screws fastened on the corners of the grille.
  4) Disengage the 2 hooks of the grille from the indoor unit, and remove the grille.

- Perform the electrical work of the junction wire ② by referring to [Electrical work] in the installation manual of the indoor unit.

3. Mounting i-see Sensor

- Mount the i-see Sensor ① on either corner of the grille, which is marked with "○" or "□" by referring to [Installing the grille] in the installation manual of the indoor unit.

  Note 1: "○" stamp : default i-see Sensor position.

  Note 2: Discard the corner panel removed from the position indicated with "○" or "□".

  Note 3: To change the position of the i-see Sensor from the position indicated with "○" to that indicated with "□", change the function setting (SLZ) or the switch (SW3-4) setting (PLFY).
- After mounting the i-see Sensor ①, close the connector box cover. Replace the 3 corner panels, the intake grille, in the reverse order of the removal described above.

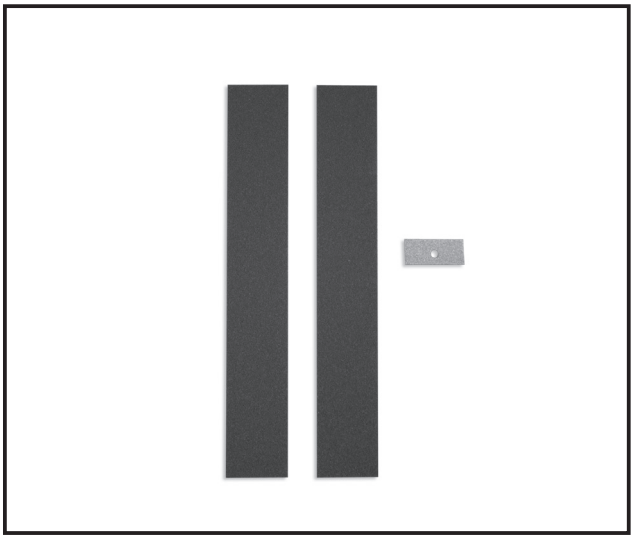
4. Check

- Make sure that there is no gap either between the body of indoor unit and the grille or between the ceiling surface and the grille. The gap may cause dew formation.
- Make sure that the wires are connected properly.
- For i-see Sensor corner panel, check the rotating movement. If the i-see Sensor does not rotate, see the procedure in [installing the grille] in the installation manual of the indoor unit again.

Air Outlet Shutter Plate

PAC-SH51SP-E

Photo



Descriptions

Part to block the air outlet of a cassette-type indoor unit.

Applicable Models

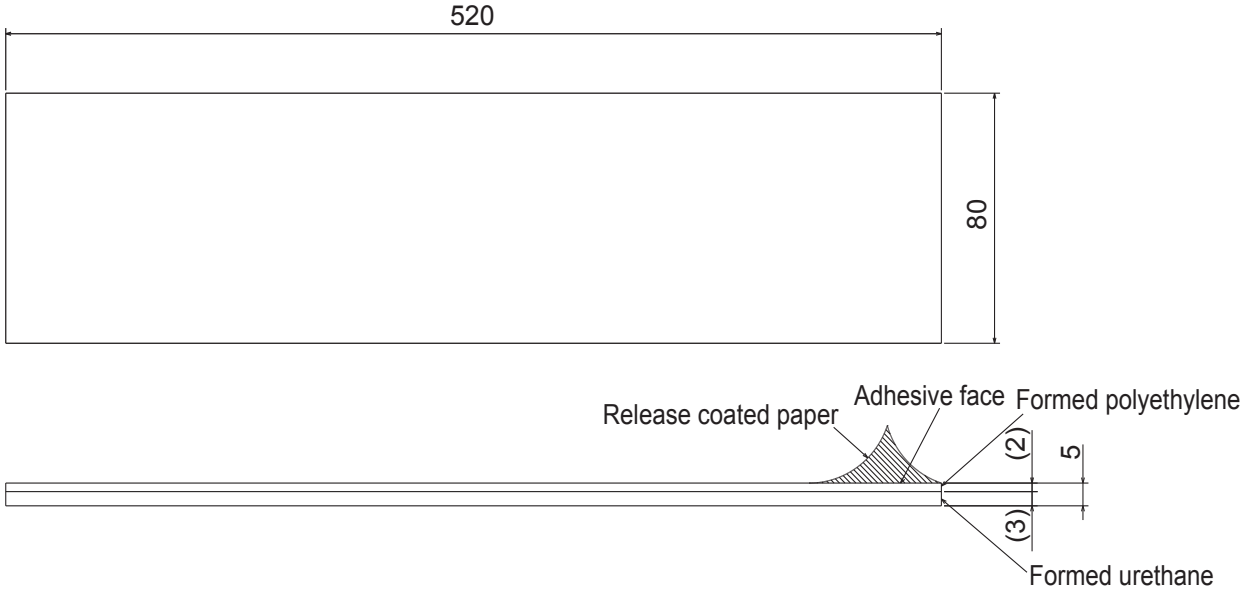
- PLA-ZRP·BA
- PLA-RP·BA(2)

Specifications

Air outlet pattern		Number of shutter plates
	4 directions → 3 directions	1
	4 directions → 2 directions	2
	(Change to 1 direction is not possible.) Note 1: Selecting "2 directions" requires cleaning of the filter approximately once. (Filter clogging may cause cooling/heating performance to drop.) Note 2: Selecting "3 directions" or "2 directions" may increase operating sound. Note 3: "2 directions" should not be selected when operating in high-temperature/high-humidity environment. (Dew formation or dewdrop may result.)	
Material	Foamed polyethylene + Foamed urethane	
Color	Black	
Installation method	Glued to the air outlet of the indoor unit.	

Dimensions

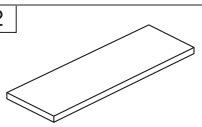
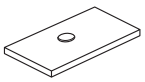
Unit : mm



How to Use / How to Install

Checking for provided parts

Make sure that the parts shown on the right are in this bag, along with the instruction sheet.

Part No., Name	①Shutter plate	②Insulator
Q'ty	2	1
Figure		

Air-outlet shutter plate Installation Manual

1. Locate the Shutter Plate installation position

●This is a part which is used to convert the number of air-outlet from "4 ways" to "3 ways" or "2 ways".
(Convert to "1 way" is not available.)

●Select the outlet direction and decide the outlet to be closed (Indoor unit).

※When the number of outlet is selected to "2 ways", be sure to explain to the customer that the filter should be cleaned once a month. (Otherwise, the filter will be clogged, and the performance of the cooling and heating can be lower.)

※When the number of outlet is selected to "3 ways" or "2 ways", the operation noise can be larger.

※Never to select "2 ways" in the environment of high temperature and high humidity. (It can cause dew.)

2. Installation of shutter plate (fig.1)

●Install the shutter plate to the indoor unit so that it can fit the air-outlet concave portion.

※Install one piece of shutter plate per one air-outlet.

※The installation should be done before the decorative panel is installed.

※The shutter plate must be installed not to cause wrinkle or gap. (It can cause dew drops.)

※When attaching the duct flange to the blow outlet (marked *) between the refrigerant pipe and drain pipe, cut off the shutter plate at the slip portion of release paper, and then attach it.

3. Function selection

●When the number of air-outlet is changed, it is necessary to make function selection. For the selection method, refer to the manual for installation of the indoor unit.

4. Setting of the auto vane (fig.2)

●It is possible to fix the auto vane of the decorative panel to the totally closed position, which is applied to the air-outlet installed on the shutter plate.
Once the auto vane is fixed, the operation of a remote control and all of automatic control will not be available. Also, the LCD of the remote control will not work.

fig.1

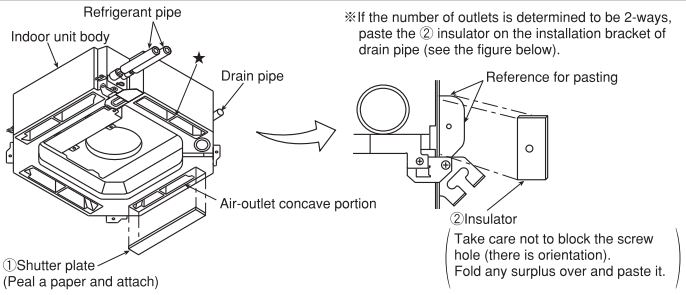
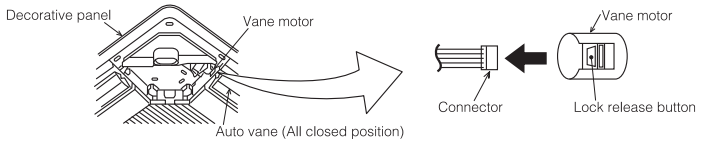


fig.2

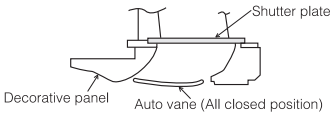
1) Shut the main power (circuit breaker) off.

⚠Warning: Shut the main power off.
●The fan of the unit will run, which can cause accident or electric shock.

2) Disconnect a connector of the vane motor of the decorative panel which is applied the air-outlet installed on the shutter plate.
(Disconnect the connector to arrow direction with keep depressing the lock release button as shown below.)
Insulate the connector which was disconnected with an electric tape.



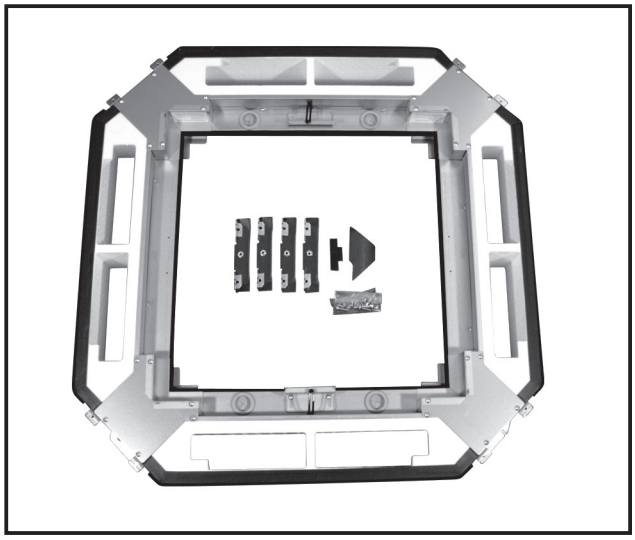
3) Move the auto vane of the air-outlet which is equipped with the shutter plate slowly by manual and bring it to totally closed position.



⚠Caution: Do not totally close the vertical air flow control vane of the air-outlet which is not equipped with the shutter plate.
●The dew or dew drop can be caused, and the unit cannot work correctly.

OPTIONAL PARTS

Photo



Descriptions

A part required installation of a high-efficiency filter element.
Can also be used for introducing fresh air from outdoor.

Applicable Models

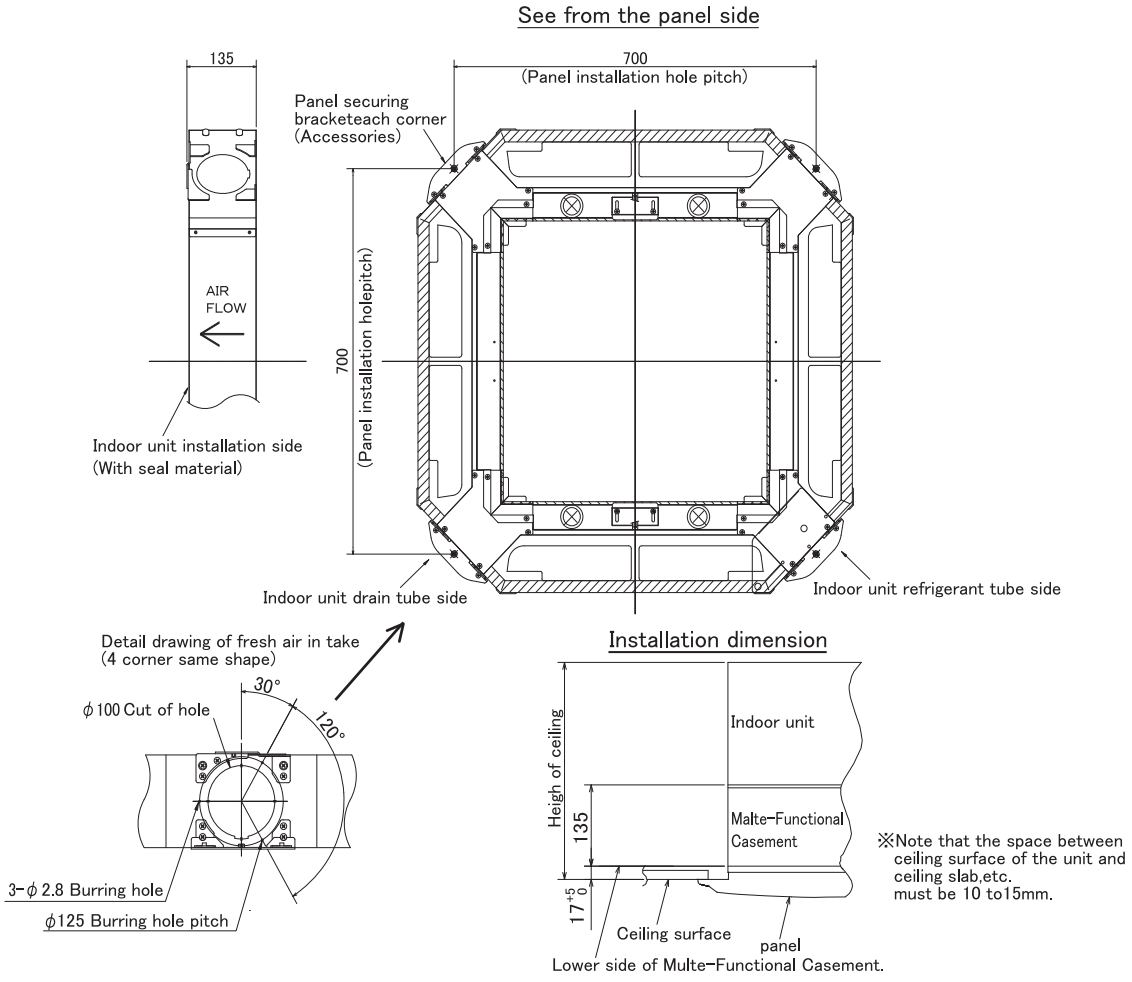
- PLA-ZRP·BA
- PLA-RP·BA(2)

Specifications

Connected duct diameter (mm)		
Fresh air intake	Number of intakes	Any 2 corners or less (among four corners)
	Input volume	20% or less of indoor units air volume
High-performance filter element		Colorimetric method (65%)

Dimensions

Unit : mm



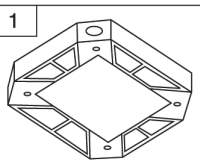
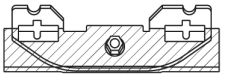
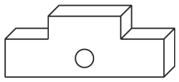
OPTIONAL PARTS

How to Use / How to Install

1 Parts check.

(The unit is provided with this manual and following parts in the box.)

MULTI-FUNCTIONAL CASEMENT

Part No. / Name	① Multi-functional casement	② Screw with washer (black)	③ Screw	④ Decorative panel securing bracket	⑤ Insulator A for Decorative panel	⑥ Insulator B for Decorative panel
Q'ty	1	4 M5×0.8×25	8 M5×0.8×12	4 With insulator	1	1
Figure						

NOTICE

(1) When taking in external air, use the PAC-SH65OF-E duct flange (optional) and duct (to be procured at local site).
※It is available of fresh-air intake even when the High-efficiency filter element is installed.
(2) Follow the procedure in this manual for installation of the Multi-functional casement ① .
Otherwise, it is possible that installation of refrigerant tubes, drain tubes, and electrical wiring will not be available.

2 Installation of Indoor unit.

●Follow the description in the installation manual which is attached to the indoor unit.

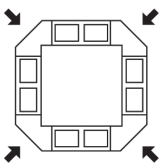
3 Installation of Multi-functional casement.

Preparation before installation

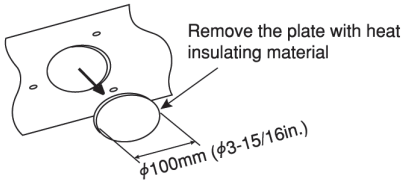
●If it is necessary to change the number of air outlet, the optional parts Air Outlet Shutter Plate should be installed on the indoor unit.
Therefore, the installation should be done before the Multi-functional casement ① is installed on the indoor unit.

●The Multi-functional casement ① has four knockout on each side so that the air can be taken from any of four sides.
Select any one or two sides in advance and make knockout holes on the Multi-functional casement ① .

——Knockout hole position for fresh-air intake.——



—— Making knockout holes ——



●Be sure to use the PAC-SH65OF-E (optional) for duct flange.

OPTIONAL PARTS

3 Installation of Multi-functional casement.

Wiring indoor unit

●Be sure to do the wiring (indoor/outdoor connection cables, remote control cable, etc.) before attaching the Multi-functional casement:
※Wiring after attaching the Multi-functional casement will be difficult.

Hand tightening

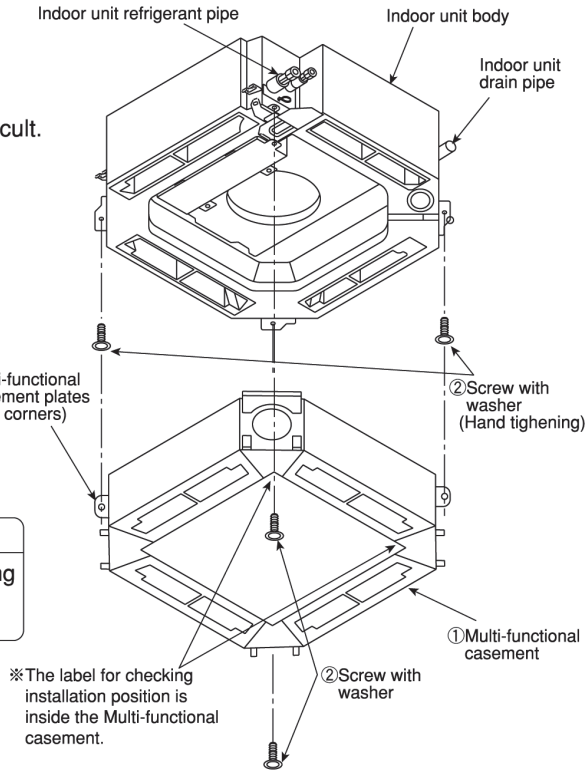
※Be sure to use two persons for this work.

●Fix the two screw with washer (black) ② to each position. (drain tube corner position and to its opposite angle).
●Hook the hole of the Multi-functional casement ① to the screw with washer (black) ② and hand tight.

Fixing

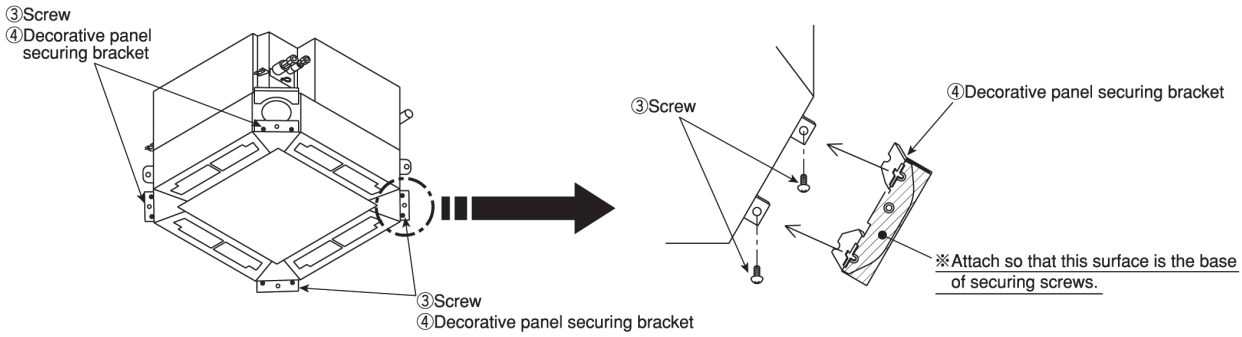
●Temporarily secure the two screws with washers ②, and also the other two screws with washers ②, and then tighten these screws with washers ② after making sure that the position of Multi-functional casement ① is correct.

⚠Caution	Temporarily secure the four screws with washers.
	●Tightening the screws without temporarily securing them could damage the screws with washers, or cause air leak.



Attaching bracket for securing decorative panel

●Use eight screws ③ to secure the four brackets for securing decorative panel ④ to each corner of Multi-functional casement ①. (See the figure below.)

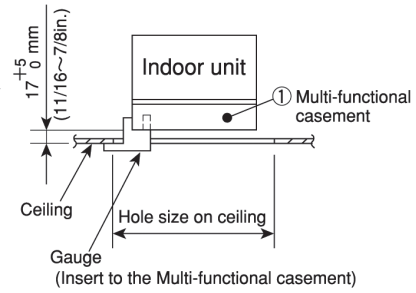


Height adjustment

※It is recommended to make this adjustment before installation of duct when fresh air intake.

●Readjust the height of the Multi-functional casement ① with the gauge which is attached to the decorative panel as show right.

The gap must be in a range from 17mm(11/16in.) to 22mm(7/8in.). If out of range, it can cause malfunction.



OPTIONAL PARTS

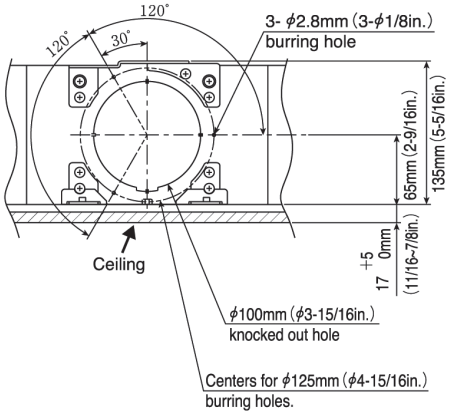
4 Installation of duct (in case of fresh air intake)

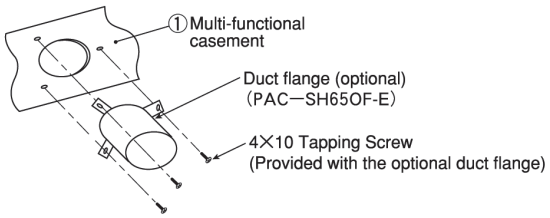
Installation of duct flange

●Install the optional duct flange referring to the installation manual provided with it.

⚠Caution	Linkage of duct fan and air conditioner
	●In case that a duct fan is used, be sure to make it linked with the air conditioner when outside air is taken. Do not run the duct fan only. It can cause dew drop.

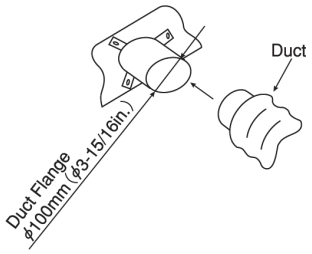
Details of air inlet (Example)





Installation of duct (should be prepared locally)

●Prepare a duct of which inner diameter fits into the outer diameter of the duct flange.
●In case that the environment above the ceiling is high temperature and high humidity, wrap the duct in a heat insulator to avoid causing dew drop on the wall.



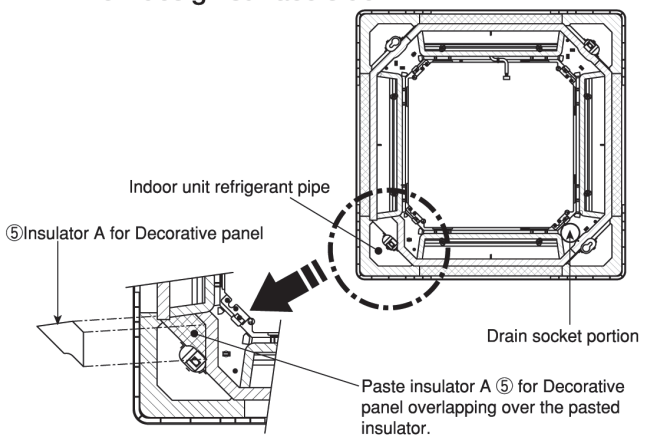
5 Installation of Decorative panel

Preparation for installation

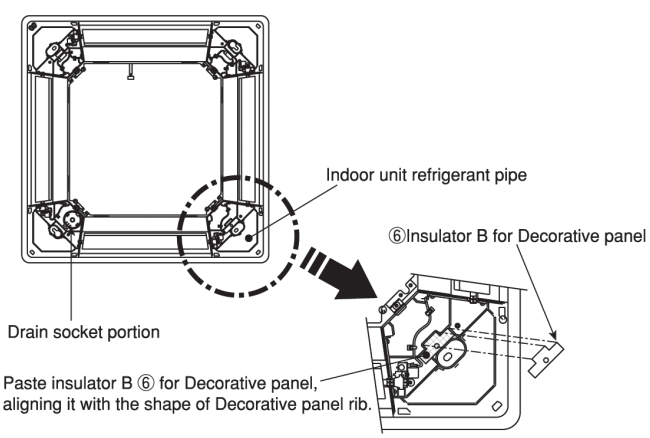
●Paste insulator A ⑤ and insulator B ⑥ on the Decorative panel as shown in the figure.
See the installation manual provided with the Decorative panel for how to remove the corner panel, etc.

⚠Caution	Paste insulators on Decorative panel.
	●Be sure to paste on insulators A and B: Operation without pasting the insulators could cause dripping of water.

＜Non-design surface side＞



＜Design surface side＞



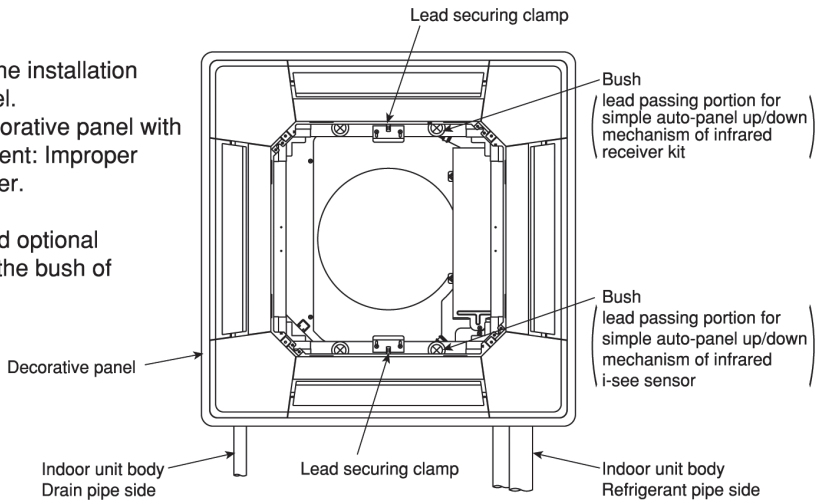
OPTIONAL PARTS

5 Installation of Decorative panel

Attaching Decorative panel

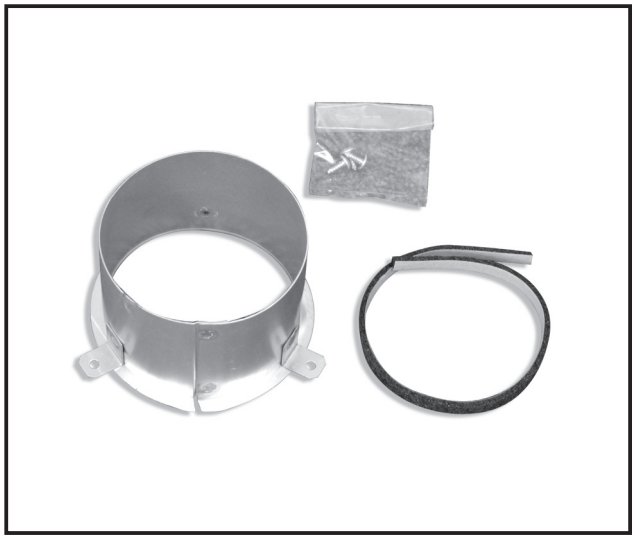
●Attach the Decorative panel, referring to the installation manual provided with the Decorative panel.
※Be sure to align the drain socket of Decorative panel with the drain pipe of indoor unit for attachment: Improper attachment could cause dripping of water.

●Connect the leads of Decorative panel and optional Signal receiver to the indoor unit through the bush of Multi-functional casement.



Duct Flange for Fresh Air Intake PAC-SH65OF-E

Photo



Descriptions

Part to attach a duct to take in fresh air from outdoors.

Applicable Models

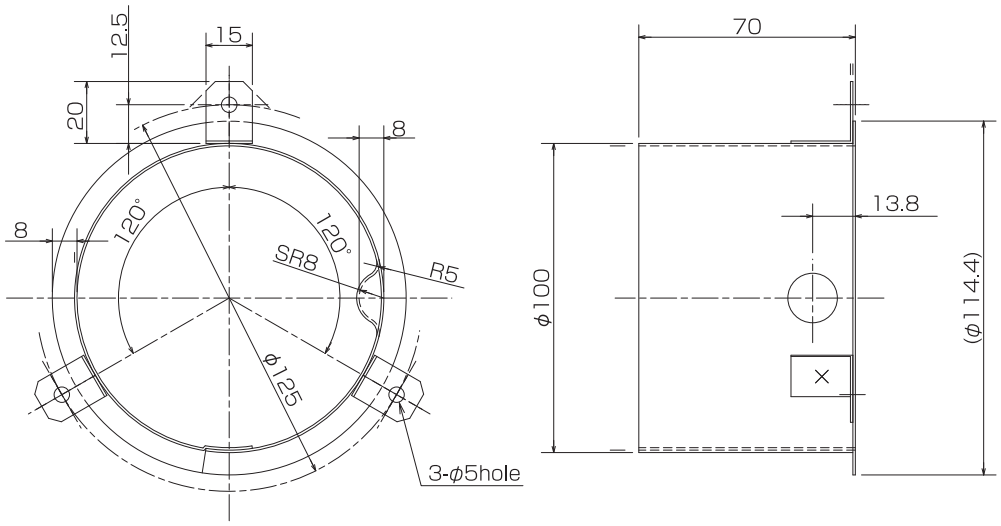
- PLA-ZRP•BA
- PLA-RP·BA(2)

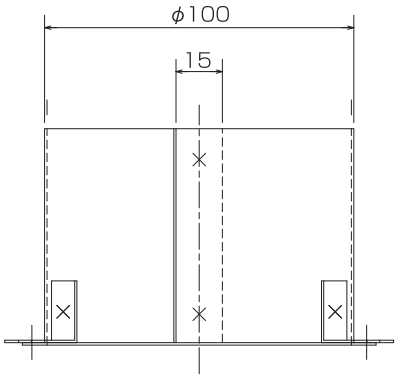
Specifications

Connection duct diameter (mm)	Φ200
Material	Hot-dip zinc-coated carbon steel sheet (t0.8)
Accessory	Insulator Fixing screw (ST4x10)x3

Dimensions

Unit : mm



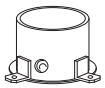
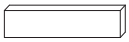


OPTIONAL PARTS

How to Use / How to Install

1. Checking Parts

(This box contains the instruction sheet and the following parts)

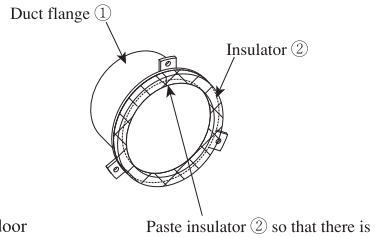
Part	①Duct flange	②Insulator	③Screws(M4×10)
Qty	1	1	3
Shape			

2. Attaching Duct Flange for External Air Input

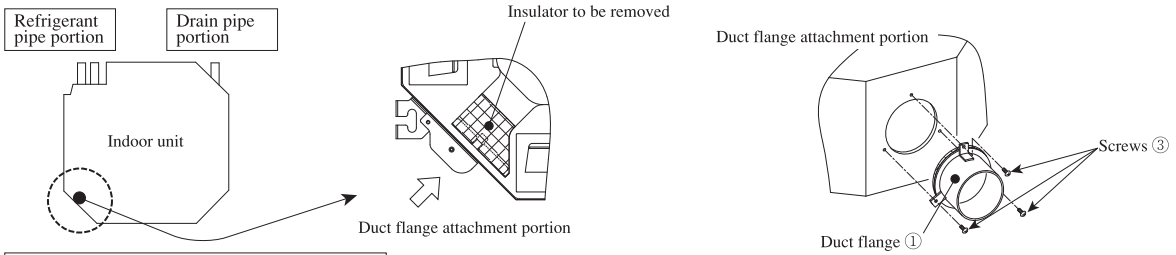
1) Punch an opening for the duct flange.
〈When attaching to indoor unit〉
- Cut the slit of the ϕ100 cut-out hole to which the duct flange is to be attached.
- Cut out enough internal polystyrene foam to match the ϕ100 hole. (Remove the cut powder completely: Neglecting this could cause a fault.)

〈When attaching to multi-functional casement〉
- Remove the ϕ100 knockout hole to which the duct flange is to be attached.

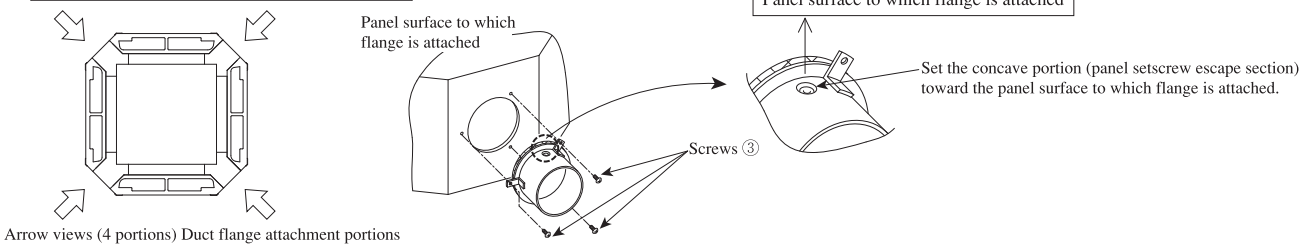
2) Paste insulator ② on the duct flange ① (see the figure on the right).
3) Use three screws ③ to attach duct flange ① (see the figure below).
※When attaching to the indoor unit, be sure to remove the insulator that is pasted on the location of indoor unit (shown in the figure below).
※When attaching to multi-functional casement, be sure to set the concave portion of duct flange ① toward the panel attachment surface when attaching it. (If the duct flange is attached to a location other than the specified one, the decoration panel cannot be attached.)



When attaching to indoor unit



When attaching to multi-functional casement



OPTIONAL PARTS

Duct Flange for Fresh Air Intake PAC-SF28OF-E

Photo

Descriptions

Part to attach a duct to take in fresh air from outdoors.

Applicable Models

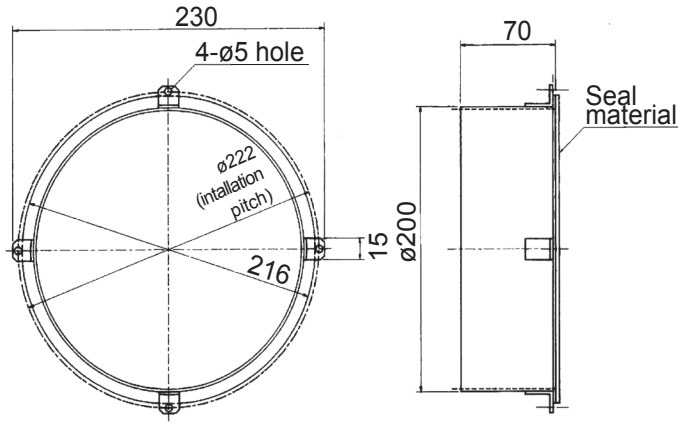
■ PCA-RP71HAQ

Specifications

Connecting duct diameter (mm)	200
Material	Hot-dip zinc-coated carbon steel sheet (t0.8)
Accessory	Fixing screw (ST4x10) x 4

Dimensions

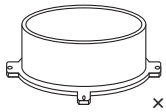
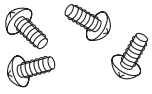
Unit : mm



How to Use / How to Install

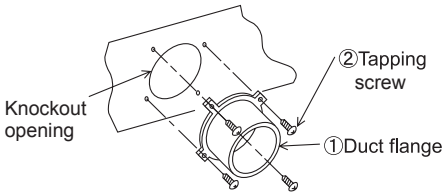
1. Checking Provided Parts

※Make sure that you have all the following parts before installation:

①Duct flange	②Tapping screws (4x10)
 ×1	 ×4

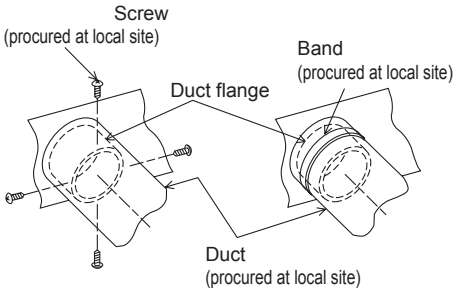
2. Duct Flange Installation Procedure

1. Punch out the knockout opening for installing duct on indoor unit.
2. Use the provided tapping screws ② to secure duct flange ①.



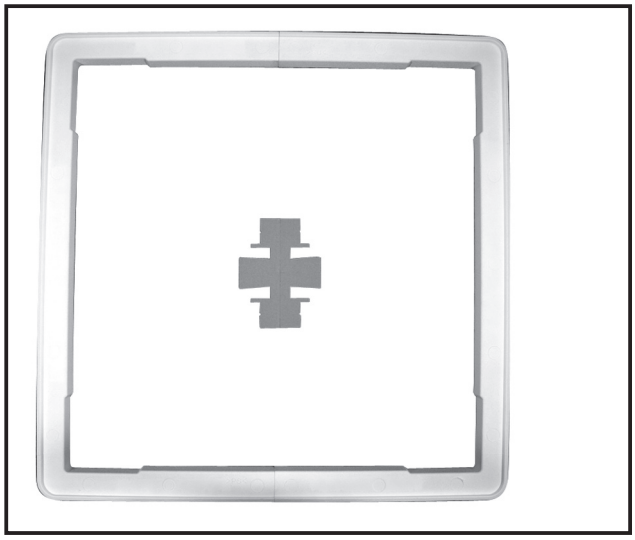
3. Duct Installation Procedure

1. Securely fix the duct (with inner diameter 200 mm) procured at local site to the duct flange, using screws or band.



OPTIONAL PARTS

Photo



Descriptions

Enables to install cassete-type indoor units even if the ceiling height is low.
A part to the panel 40 mm lower than the ceiling surface.

Applicable Models

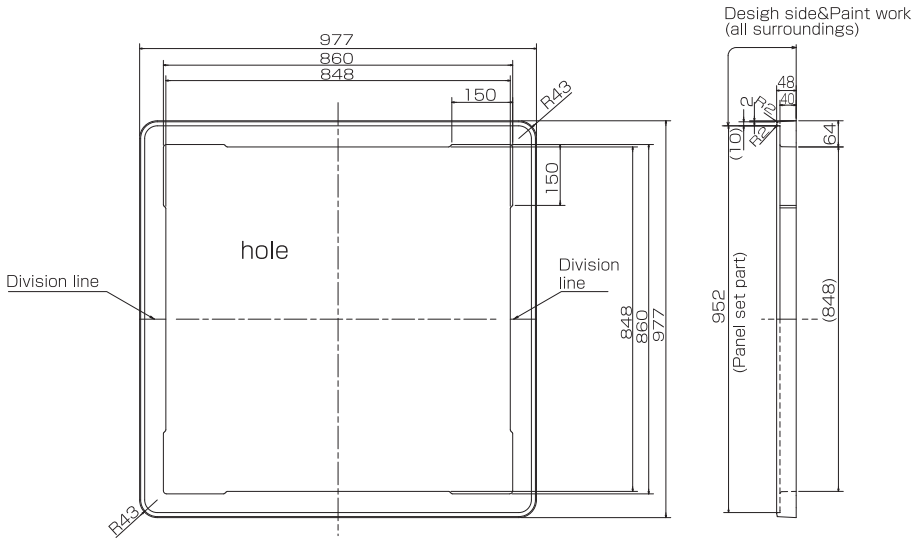
- PLA-ZRP·BA
- PLA-RP·BA(2)

Specifications

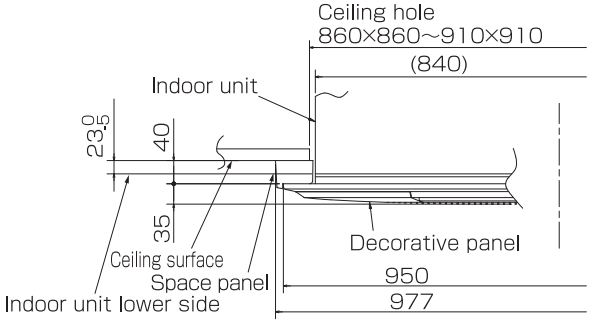
Exterior	Color (Mansell No.)	Pure White (6.4Y 8.9/0.4)
	Surface treatment	Coating
	Material	Styrofoam

Dimensions

Unit : mm



Installation dimension

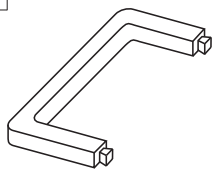
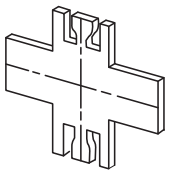


OPTIONAL PARTS

How to Use / How to Install

1. Checking packed parts

Make sure that you have all the following parts, in addition to this manual in this box:

Part No. /Part name	① Space panel	② Gauge for installation
Quantity	2	1 (Split this into four pieces)
Shape		

2. Installing space panel

- Install before installing decorative panel.
- This space panel is to be installed on decorative panel before installing on unit body.
  (If decorative panel has already been installed, remove it.)

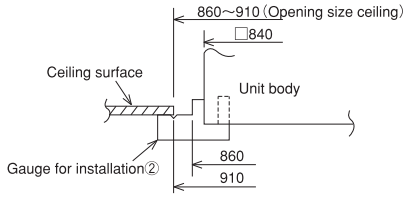
Preparation for installation

(1) Checking size of opening in ceiling

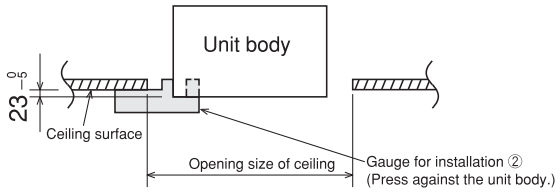
- Make sure that opening in ceiling is within the range shown below:
  860×860～910×910

(2) Positioning of ceiling surface and unit body

- Divide the provided gauge for installation ② into four parts, and insert it into the unit or outlet of Multi-functional casement.
  Place the unit in the center of opening in ceiling, referring to the figure below.



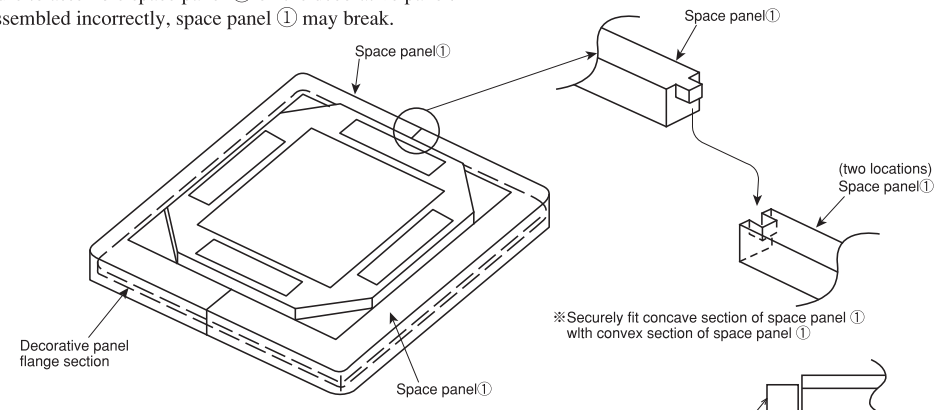
- Using provided gauge for installation ②, position the ceiling surface and unit body.
  If position of ceiling surface and unit body does not match, it may result in leak of draft, drip of dewdrops and incorrect operation of horizontal vane of decorative panel, etc.



Setting the decorative panel and space panel

- Place the space panel ① (two locations), matching the flange section of decorative panel, and assemble space panel ① on the decorative panel and then set them.

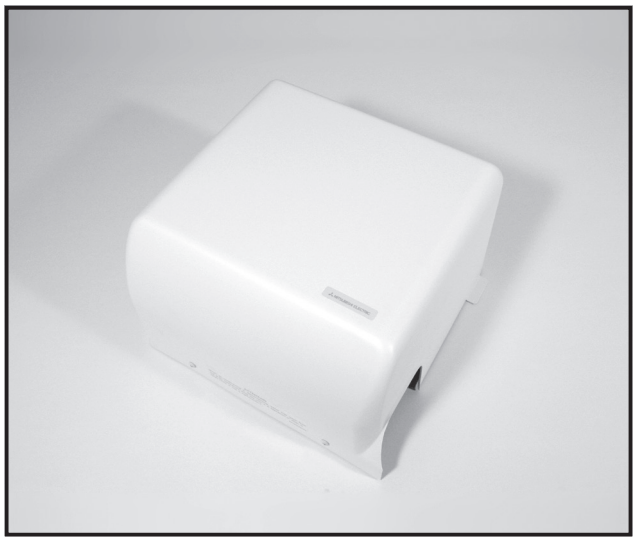
※Be sure to assemble space panel ① on the decorative panel:
If assembled incorrectly, space panel ① may break.



Installing on the unit body

- The procedures are the same as those for decorative panel.
  Install the assembled set, referring to the installation manual for decorative panel.

Photo



Descriptions

Raises drain generated during unit's operation to secure the appropriate angle of the drain pipe.

Applicable Models

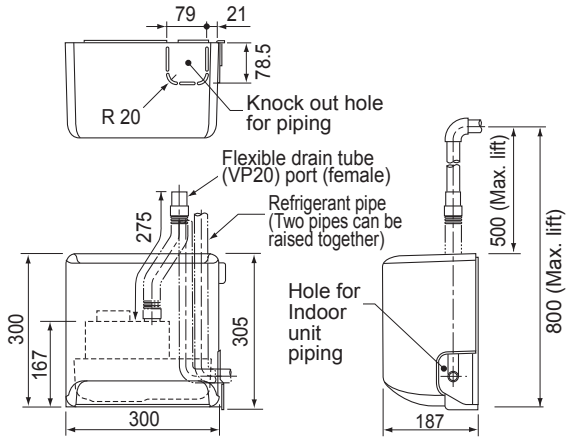
- PKA-RP60KAL
- PKA-RP71KAL
- PKA-RP100KAL

Specifications

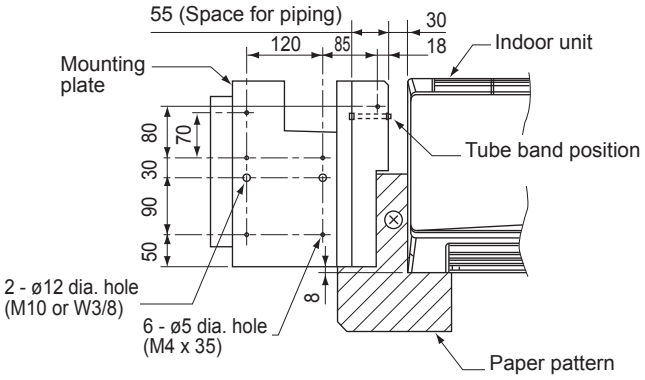
Rated voltage	220-240V 50Hz / 60Hz
Power consumption	12 / 10.8W
Operating current	0.114 / 0.092A
Discharge lift	Max. 500 mm from drain pump's top surface
Discharge rate	24ℓ/h or more
External dimensions (mm)	300 (H) x 300 (W) x 187 (D)
Exterior	Cover : ABS resin (Munsell 6.4Y 8.9/0.4)
Driving motor	Single, shading type (Class E insulation)
Drain piping	Connected to drain outlet. PVC pipe VP-20 (O.D. 26) can be used

Dimensions

Unit : mm



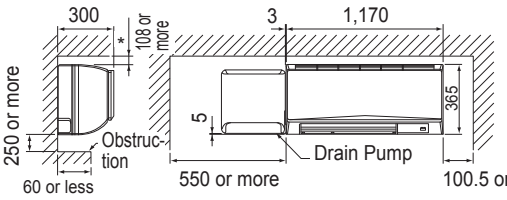
Dimension of Mounting plate



Required space for installation of Drain Pump

[Maintenance space]

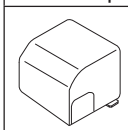
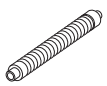
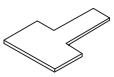
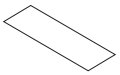
* In case that there is a rim at the corner of ceiling, consider the dimension of the rim before installation.



* The same space is required for the left front and rear piping.

Accessories

(Make sure of the following items attached with the Drain Pump before installation.)

(A) Drain Pump	(B) Screw	(C) Drain tube	(D) Drain tube cover	(E) Tube clip	(F) Pull tight	(G) Paper pattern	(H) Wiring plate
 x 1	 (M4 x 16) x 1 (M4 x 35) x 6	 x 1	 x 1	 x 1	 x 1	 x 1	 x 1

* The items (B) – (F) are packed between main body and cover of the Drain Pump. Take them out after the cover removed.

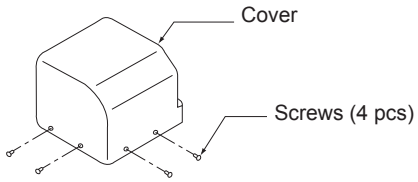
OPTIONAL PARTS

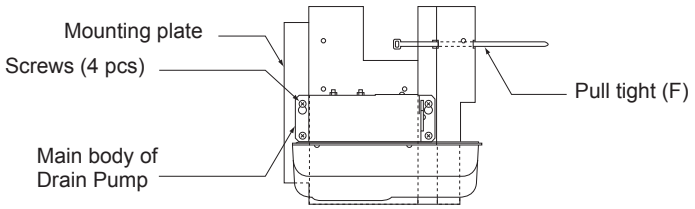
How to Use / How to Install

1. Before installation of the Drain Pump (* Position the indoor unit first.)

1-1 Set up of the Drain Pump

- Remove the cover and the mounting plate which is fixed on the back of the Drain Pump each.
  * The packaging material which is put between the cover and the main body of Drain Pump is only for cushion for transportation. Take it out as it is unnecessary.
  * Take out the accessories.
- Run the pull tight (F) attached through the square hole on the mounting plate.
- Cut the knock out hole on the cover with a nipper and etc.



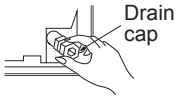


* The screws removed will be used later. Keep them not to lose.

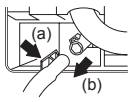
1-2 Set up and installation of the indoor unit (* See the item of piping connection set up in the installation manual of the indoor unit.)

(1) Make the knock out hole for left side piping on the left side panel of the indoor unit.

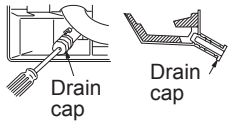
(2) Pull out the drain cap from the left drain outlet.
- Hold the convex section at the end and pull the drain cap.



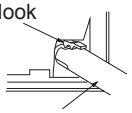
(3) Remove the drain hose from the indoor unit.
- Hold the end of the drain hose (a) (marked by the arrow) and pull the drain hose out (b).



(4) Insert the drain cap into the right drain outlet.
- Insert a screwdriver or similar tool into the hole at the end of the cap and insert the cap fully into the outlet.



(5) Insert the accessory drain hose (C) into the left drain outlet.
- Insert the hose up to the base of the drain pipe connection opening.
* Make sure that the hook on the drain hose is securely caught on the projection in the opening in the drain pan.



(6) Install the indoor unit.

⚠ CAUTION	**The indoor unit must be installed horizontally.**
	Otherwise, the water can leak and it will make the wall dirty.

2. Installation of the Drain Pump

2-1 Fixing of the mounting plate

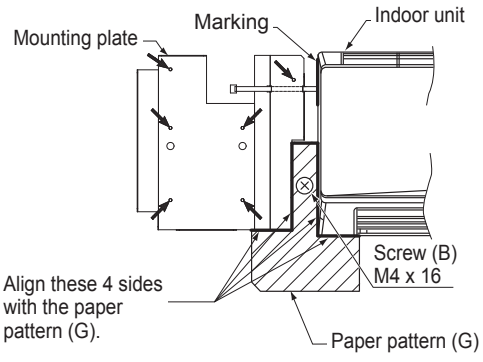
- The installation place should be carefully considered if it is proper for installation. If it is not strong enough to hole the unit, make it stronger by using board or beam before installation.

(1) Decide the installation position of the mounting plate by using the paper pattern (G) attached.
(* The left end of the indoor unit should be marked in advance.)
  1) Fix the paper pattern on the wall with the screw (B) (M4 × 16) attached with putting it to the left end of the indoor unit for positioning of the Drain Pump as shown in the drawing.
  2) Position the mounting plate with pushing it against the paper pattern.

(2) Fix the mounting plate with the screws (B) (M4 × 35) attached. Fix the mounting plate using the 5 dia. holes.
(6 locations pointed by arrows in the drawing.)
In case that the mounting plate is fixed by fixing bolts (through bolts, bolt anchors, or nut anchors), get M10 or W3/8 screws locally and put them into two ø 12 holes of the mounting plate to fix it.

(3) When the mounting plates is installed, remove the paper pattern.

(4) Check that the mounting plate is level and positioned correctly with the indoor unit. (Refer to Dimensions)



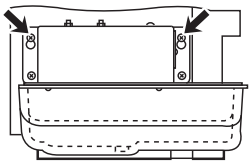
OPTIONAL PARTS

2-2 Installation of the Drain Pump

- Fix the Drain Pump on the mounting plate

(1) Install the screws to the 2 upper holes (indicated by the arrows shown in right figure) of the mounting plate by hand tightening them about halfway, and then hook the Drain Pump on the screws.

(2) Level the Drain Pump by using a spirit level. Then tighten the 4 screws securely to fix the Drain Pump.



⚠ CAUTION	**The Drain Pump must be leveled.**
	Otherwise, the water leaks and it makes wall dirty.

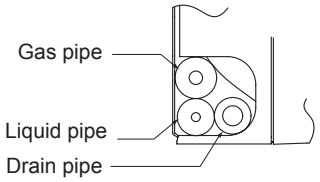
3. Installation of refrigerant piping (* See the item of refrigerant piping connection in the Installation of the indoor unit.)

(1) Install the refrigerant piping using the left piping method.

(2) When the refrigerant piping and drain pipe are routed vertically together, route the piping through the space in the mounting plate.

- Be sure that the indoor unit must be positioned at the place where was marked at 2-1.
- The bending radius of the refrigerant pipe must be R80 or less.
- The tube raised should be fixed with the pull tight which was put through the square hole of the mounting plate.

(3) Position the refrigerant piping in the left piping space of the indoor unit as shown in right figure.



4. Installation of drain piping

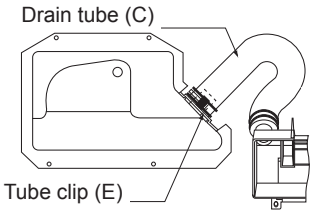
4-1 Connection of drain tube

(1) Connect the drain tube (C) which is installed to the left side drain port of the indoor unit to the drain port of the Drain Pump.

(2) Fix the connection port securely with the tube clip (E) attached.

(3) Connect the flexible drain tube, which is run from the top panel of the Drain Pump, to the local drain piping. The part connected must be closed by vinyl chloride type glue.

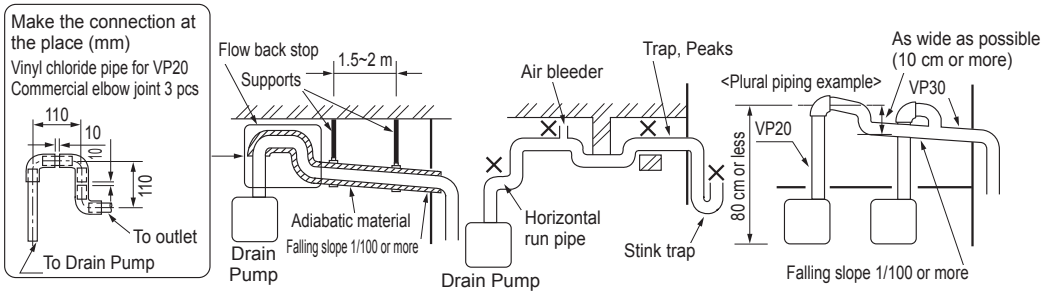
(4) Insulate the flexible drain tube which is run from top panel of Drain Pump with the drain tube cover (D) attached.



4-2 Installation of drain piping

(1) The drain pipe should be installed in accordance with the following procedure.

- The drain pipe should be installed so that the outdoor side (drain side) becomes falling slope (1/100 or more) and do not make trap or peaks.
- The horizontal run of the drain pipe should be 20 m or less. In case that the tube is crosscut sawing for long distance, some support brackets should be installed to prevent the pipe from being wavy. Never install the air bleeder. The drain will blow out.
- The hard vinyl chloride pipe VP20 (outer dia. 26 mm) should be used for the drain pipe. And the part connected must be closed by vinyl chloride type glue to prevent water leak.
- Be sure to wrap the drain pipe with adiabatic material (foam polyethylene: specific gravity 0.03, thickness 9 mm or more) available on the market.
- Do not install stink trap to the outlet of the drain pipe.
- The outlet of the drain pipe should be installed the place where it is not possible to cause stink.
- In case that plural drain pipes are installed, install the main pipe so that it comes approximately 10 cm lower than the drain outlet and the pipes must be made of material of VP30 or similar and they should be falling slope (1/100 or more).
- It is possible to raise the outlet of the drain pipe to 80 cm (max. lift) from bottom face of Drain Pump. However, if there is a horizontal run pipe connected to the vertical section of the drain pipe, water will overflow from the drain pan. This is because too much water will flow back when the operation stops. Therefore, the drain pipe must be raised vertically. Also, install the flow back stop at the highest point to prevent the water from flow back from horizontal part of the pipe. See the drawing below.



OPTIONAL PARTS

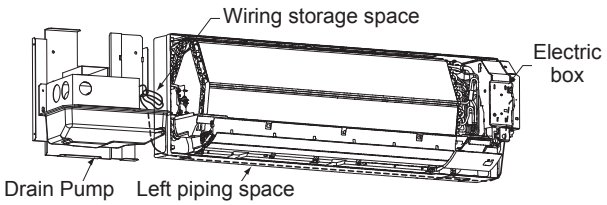
5. Electric wiring

5-1 Set up of the indoor unit (* Confirm that the power is off before starting the installation work.)

(1) Remove the panel of indoor unit and the electric box cover. (* See the indoor unit installation section in the installation manual of the indoor unit.)

5-2 Electric wiring

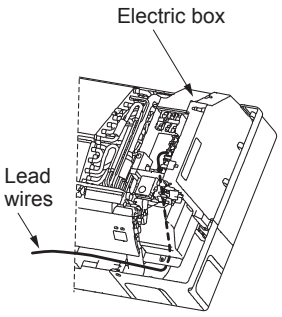
- Route the wiring through the left piping space of the indoor unit to the electric box as shown in right figure.
- Connect the lead wires to the connectors of the indoor unit control board, and then place the slack in the wires in the wiring storage space of the Drain Pump. (Fix the lead wires with the clamps.)



5-3 Electric wiring operation

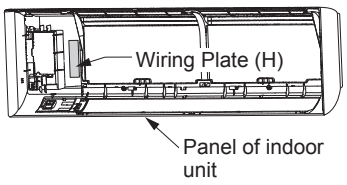
- Pull out the electric box as far as necessary to connect the lead wires to the control board connectors “CNP” and “CN4F”.
- Connect the lead wires with connectors to the control board connectors “CNP” and “CN4F”. At this time, remove the bypass connector (will be unused) from the terminal CN4F of the control board.
- Be sure not to have the lead wires touch the heat generator (heat sink) on the control board.

Electric wiring operation

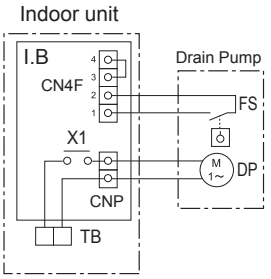


Wiring plate

- Affix the wiring plate (H) to the rear of the panel.



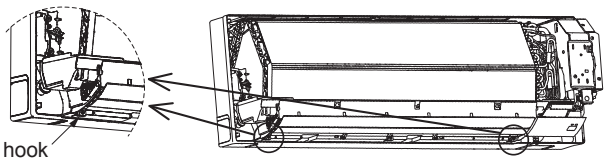
Electric circuit diagram



Symbol	Name
TB	Terminal block (indoor/outdoor connecting line)
I.B	Indoor control board
CNP	Connector (Drain Pump)
CN4F	Connector (Float switch)
DP	Drain Pump
FS	Float switch
X1	Relay (Drain Pump)

Note: □ stands for terminal connection.
⊡ stands for connector joint.

- After completing the electric wiring operation, make sure that the hooks are securely caught on the unit, and then put the electric box cover and panel back in place.



6. Test run

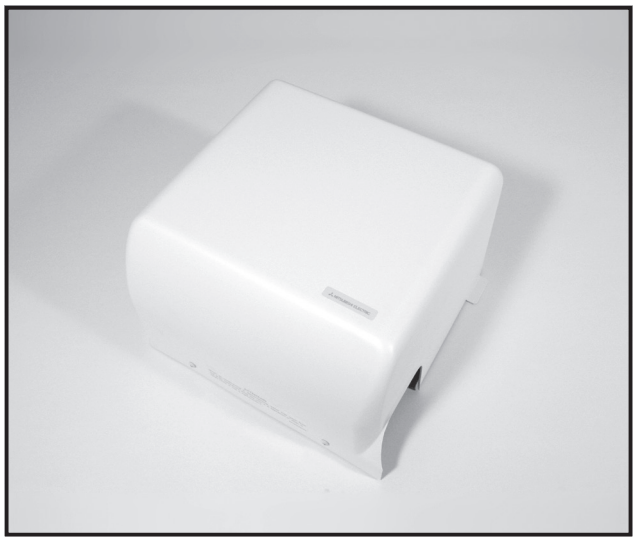
- After the installation of the Drain Pump has been completed, make sure that the drain works correctly and the water does not leak from any part of connection.

(1) Pour water
Pour water approximately 800 cc to the drain pan. (* See the drain pipe [checking the drain flow] section in the installation manual of the indoor unit.)
(* If the water is poured too much, it is possible that the drainage does not work due to alarm stop by activation of drain over flow protection device.)

(2) Test run
In accordance with the procedure for test run in the installation manual for the indoor unit, operate the air cooling and make sure that the drainage works and the water does not leak.
* When the Drain Pump is installed in winter season, the water must be drained.
To drain water, remove the drain plug under the Drain Pump. Prepare the pan to receive drain.
When the drainage has been completed, put the drain plug back in place.

(3) After checking, put the cover back in place.
* Make sure that the left end of the indoor unit perfectly comes on the point marked at 2-1. (If they do not match, the cover will not be able to be installed or there will be a gap between the cover and the indoor unit.)

Photo



Descriptions

Raises drain generated during unit's operation to secure the appropriate angle of the drain pipe.

Applicable Models

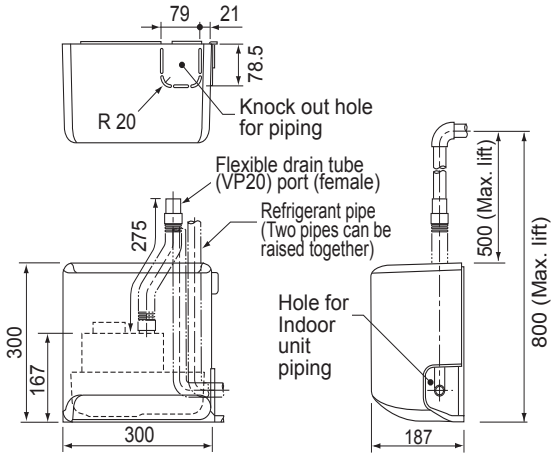
- PKA-RP35HAL
- PKA-RP50HAL

Specifications

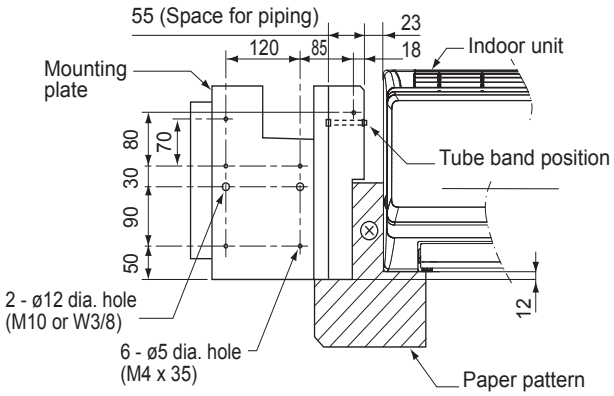
Rated voltage	220-240V 50Hz / 60Hz
Power consumption	12 / 10.8W
Operating current	0.114 / 0.092A
Discharge lift	Max. 500 mm from drain pump's top surface
Discharge rate	24ℓ/h or more
External dimensions (mm)	300 (H) x 300 (W) x 187 (D)
Exterior	Cover : ABS resin (Munsell 6.4Y 8.9/0.4)
Driving motor	Single, shading type (Class E insulation)
Drain piping	Connected to drain outlet. PVC pipe VP-20 (O.D. 26) can be used

Dimensions

Unit : mm



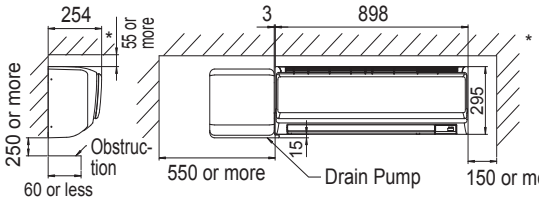
Dimension of Mounting plate



Required space for installation of Drain Pump

[Maintenance space]

* In case that there is a rim at the corner of ceiling, consider the dimension of the rim before installation.



* The same space is required for the left front and rear piping.

Accessories

(Make sure of the following items attached with the Drain Pump before installation.)

(A) Drain Pump	(B) Screw	(C) Drain tube	(D) Drain tube cover	(E) Tube clip	(F) Pull tight	(G) Paper pattern	(H) Wiring plate
x 1	(M4 x 16) x 1 (M4 x 35) x 6	x 1	x 1	x 1	x 1	x 1	x 1

* The items (B) – (F) are packed between main body and cover of the Drain Pump. Take them out after the cover removed.

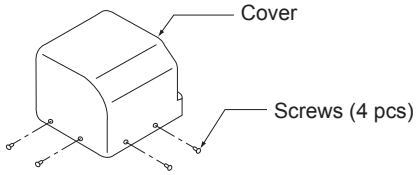
OPTIONAL PARTS

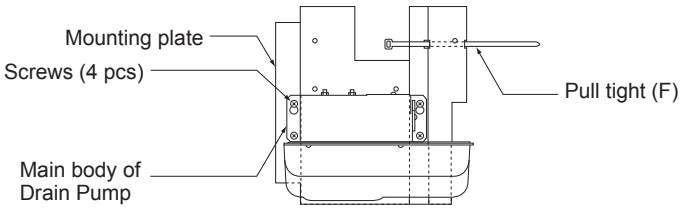
How to Use / How to Install

1. Before installation of the Drain Pump (* Position the indoor unit first.)

1-1 Set up of the Drain Pump

- Remove the cover and the mounting plate which is fixed on the back of the Drain Pump each.
  * The packaging material which is put between the cover and the main body of Drain Pump is only for cushion for transportation. Take it out as it is unnecessary.
  * Take out the accessories.
- Run the pull tight (F) attached through the square hole on the mounting plate.
- Cut the knock out hole on the cover with a nipper and etc.



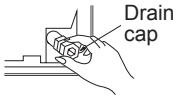


* The screws removed will be used later. Keep them not to lose.

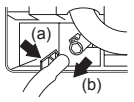
1-2 Set up and installation of the indoor unit (* See the item of piping connection set up in the installation manual of the indoor unit.)

(1) Make the knock out hole for left side piping on the left side panel of the indoor unit.

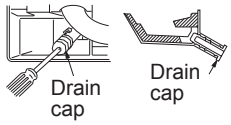
(2) Pull out the drain cap from the left drain outlet.
- Hold the convex section at the end and pull the drain cap.



(3) Remove the drain hose from the indoor unit.
- Hold the end of the drain hose (a) (marked by the arrow) and pull the drain hose out (b).

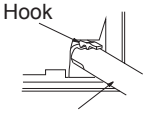


(4) Insert the drain cap into the right drain outlet.
- Insert a screwdriver or similar tool into the hole at the end of the cap and insert the cap fully into the outlet.



(5) Insert the accessory drain hose (C) into the left drain outlet.
- Insert the hose up to the base of the drain pipe connection opening.

* Make sure that the hook on the drain hose is securely caught on the projection in the opening in the drain pan.



(6) Install the indoor unit.

⚠ CAUTION	**The indoor unit must be installed horizontally.**
	Otherwise, the water can leak and it will make the wall dirty.

2. Installation of the Drain Pump

2-1 Fixing of the mounting plate

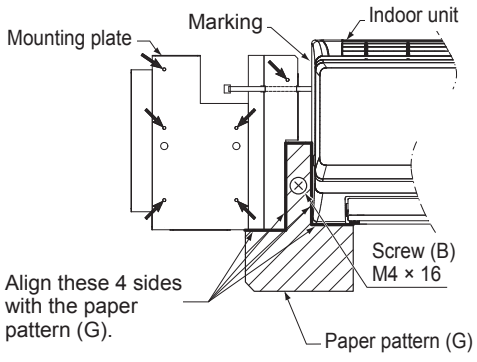
- The installation place should be carefully considered if it is proper for installation. If it is not strong enough to hole the unit, make it stronger by using board or beam before installation.

(1) Decide the installation position of the mounting plate by using the paper pattern (G) attached.
(* The left end of the indoor unit should be marked in advance.)
  1) Fix the paper pattern on the wall with the screw (B) (M4 × 16) attached with putting it to the left end of the indoor unit for positioning of the Drain Pump as shown in the drawing.
  2) Position the mounting plate with pushing it against the paper pattern.

(2) Fix the mounting plate with the screws (B) (M4 × 35) attached. Fix the mounting plate using the 5 dia. holes.
(6 locations pointed by arrows in the drawing.)
In case that the mounting plate is fixed by fixing bolts (through bolts, bolt anchors, or nut anchors), get M10 or W3/8 screws locally and put them into two ø 12 holes of the mounting plate to fix it.

(3) When the mounting plates is installed, remove the paper pattern.

(4) Check that the mounting plate is level and positioned correctly with the indoor unit. (Refer to Dimensions)



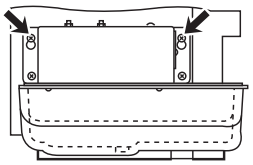
OPTIONAL PARTS

2-2 Installation of the Drain Pump

- Fix the Drain Pump on the mounting plate.

(1) Install the screws to the 2 upper holes (indicated by the arrows shown in right figure) of the mounting plate by hand tightening them about halfway, and then hook the Drain Pump on the screws.

(2) Level the Drain Pump by using a spirit level. Then tighten the 4 screws securely to fix the Drain Pump.



⚠ CAUTION	**The Drain Pump must be leveled.**
	Otherwise, the water leaks and it makes wall dirty.

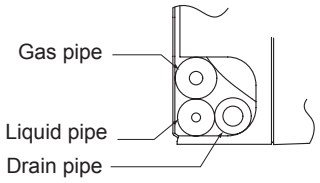
3. Installation of refrigerant piping (* See the item of refrigerant piping connection in the Installation of the indoor unit.)

(1) Install the refrigerant piping using the left piping method.

(2) When the refrigerant piping and drain pipe are routed vertically together, route the piping through the space in the mounting plate.

- Be sure that the indoor unit must be positioned at the place where was marked at 4-1.
- The bending radius of the refrigerant pipe must be R80 or less.
- The tube raised should be fixed with the pull tight which was put through the square hole of the mounting plate.

(3) Position the refrigerant piping in the left piping space of the indoor unit as shown in right figure



4. Installation of drain piping

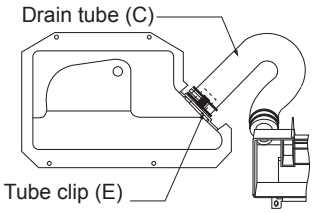
4-1 Connection of drain tube

(1) Connect the drain tube (C) which is installed to the left side drain port of the indoor unit to the drain port of the Drain Pump.

(2) Fix the connection port securely with the tube clip (E) attached.

(3) Connect the flexible drain tube, which is run from the top panel of the Drain Pump, to the local drain piping. The part connected must be closed by vinyl chloride type glue.

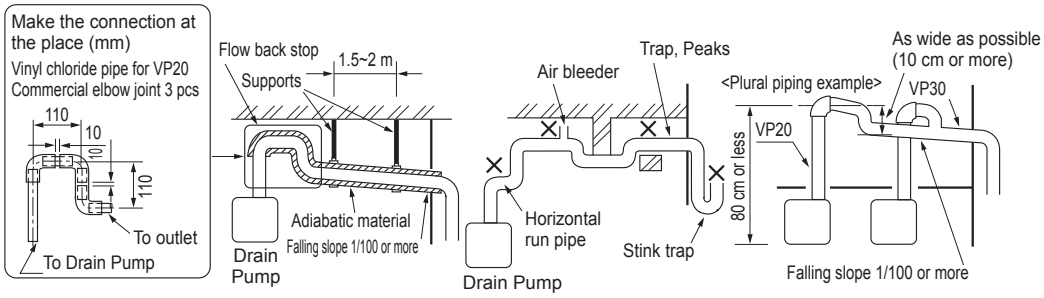
(4) Insulate the flexible drain tube which is run from top panel of Drain Pump with the drain tube cover (D) attached.



4-2 Installation of drain piping

(1) The drain pipe should be installed in accordance with the following procedure.

- The drain pipe should be installed so that the outdoor side (drain side) becomes falling slope (1/100 or more) and do not make trap or peaks.
- The horizontal run of the drain pipe should be 20 m or less. In case that the tube is horizontally run for long distance, some support brackets should be installed to prevent the pipe from being wavy. Never install the air bleeder. The drain will blow out.
- The hard vinyl chloride pipe VP20 (outer dia. 26 mm) should be used for the drain pipe. And the part connected must be closed by vinyl chloride type glue to prevent water leak.
- Be sure to wrap the drain pipe with adiabatic material (foam polyethylene: specific gravity 0.03, thickness 9 mm or more) available on the market.
- Do not install stink trap to the outlet of the drain pipe.
- The outlet of the drain pipe should be installed the place where it is not possible to cause stink.
- In case that plural drain pipes are installed, install the main pipe so that it comes approximately 10 cm lower than the drain outlet and the pipes must be made of material of VP30 or similar and they should be falling slope (1/100 or more).
- It is possible to raise the outlet of the drain pipe to 80 cm (max. lift) from bottom face of Drain Pump. However, if there is a horizontal run pipe connected to the vertical section of the drain pipe, water will overflow from the drain pan. This is because too much water will flow back when the operation stops. Therefore, the drain pipe must be raised vertically. Also, install the flow back stop at the highest point to prevent the water from flow back from horizontal part of the pipe. See the drawing below.



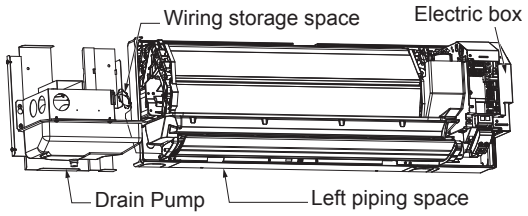
5. Electric wiring

5-1 Set up of the indoor unit (* Confirm that the power is off before starting the installation work.)

(1) Remove the panel of indoor unit and the electric box cover. (* See the indoor unit installation section in the installation manual of the indoor unit.)

5-2 Electric wiring

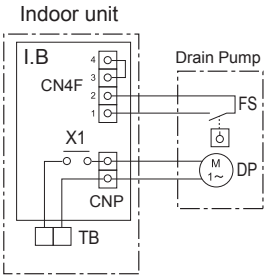
- Route the wiring through the left piping space of the indoor unit to the electric box as shown in right figure.
- Connect the lead wires to the connectors of the indoor unit control board, and then place the slack in the wires in the wiring storage space of the Drain Pump. (Fix the lead wires with the clamps.)



5-3 Electric wiring operation

- Pull out the electric box as far as necessary to connect the lead wires to the control board connectors “CNP” and “CN4F”.
- Connect the lead wires with connectors to the control board connectors “CNP” and “CN4F”. At this time, remove the bypass connector (will be unused) from the terminal CN4F of the control board.
- Be sure not to have the lead wires touch the heat generator (heat sink) on the control board.

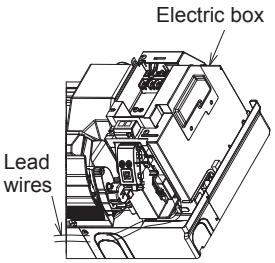
Electric circuit diagram



Symbol	Name
TB	Terminal block (indoor/outdoor connecting line)
I.B	Indoor control board
CNP	Connector (Drain Pump)
CN4F	Connector (Float switch)
DP	Drain Pump
FS	Float switch
X1	Relay (Drain Pump)

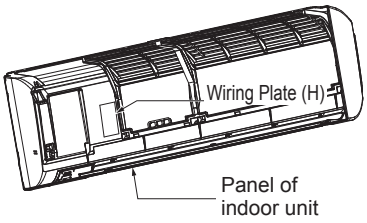
Note: □ stands for terminal connection.
⊡ stands for connector joint.

Electric wiring operation

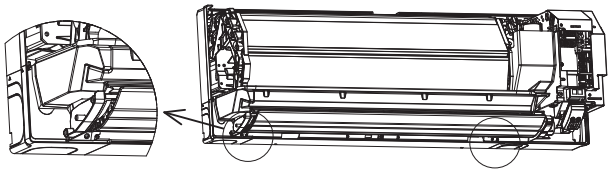


Wiring plate

- Affix the wiring plate (H) to the rear of the panel.



- After completing the electric wiring operation, make sure that the hooks are securely caught on the unit, and then put the electric box cover and panel back in place.



6. Test run

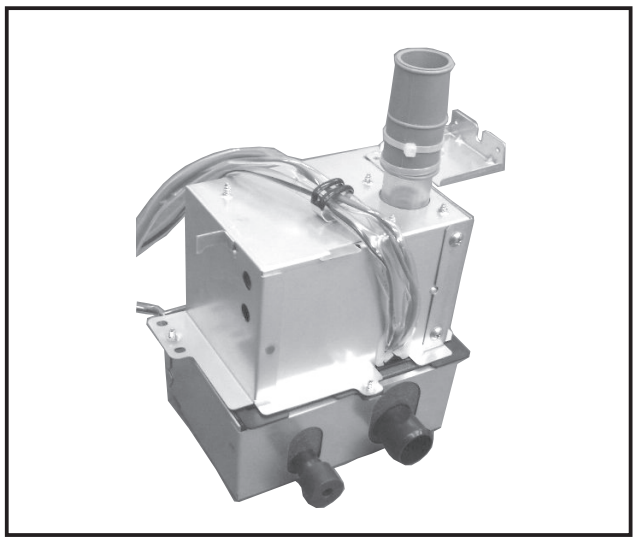
- After the installation of the Drain Pump has been completed, make sure that the drain works correctly and the water does not leak from any part of connection.

(1) Pour water
Pour water approximately 800 cc to the drain pan. (* See the drain pipe [checking the drain flow] section in the installation manual of the indoor unit.)
(* If the water is poured too much, it is possible that the drainage does not work due to alarm stop by activation of drain over flow protection device.)

(2) Test run
In accordance with the procedure for test run in the installation manual for the indoor unit, operate the air cooling and make sure that the drainage works and the water does not leak.
* When the Drain Pump is installed in winter season, the water must be drained.
To drain water, remove the drain plug under the Drain Pump. Prepare the pan to receive drain.
When the drainage has been completed, put the drain plug back in place.

(3) After checking, put the cover back in place.
* Make sure that the left end of the indoor unit perfectly comes on the point marked at 2-1. (If they do not match, the cover will not be able to be installed or there will be a gap between the cover and the indoor unit.)

Photo



Descriptions

Raises drain generated during unit's operation to secure the appropriate angle of the drain pipe.

Applicable Models

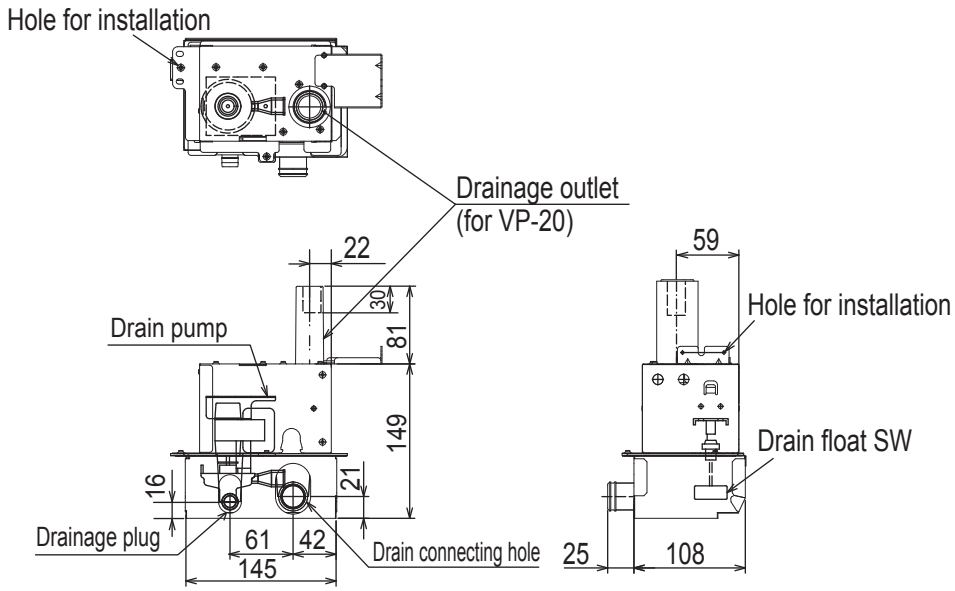
Drain pump	PAC-SH83DM-E	PAC-SH84DM-E	PAC-SH85DM-E
Applicable models	PCA-RP35KAQ PCA-RP50KAQ	PCA-RP71KAQ PCA-RP100KAQ PCA-RP125KAQ PCA-RP140KAQ	PCA-RP60KAQ

Specifications

Rated power	220V AC, single-phase, 50/60Hz
Power consumption	12/10.8W
Operating current	0.114/0.092A
Drain lift	Max. 600mm from indoor unit's top surface
Discharge rate	24ℓ/h or more
Driving motor	Shading type (Class E insulation)
Drain piping	Connected to drain outlet. PVC pipe VP-20 (O.D.Φ26) can be used.

Dimensions

Unit : mm

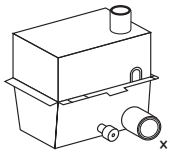
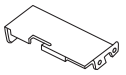
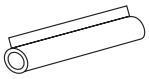
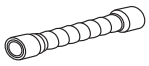


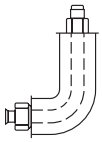
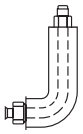
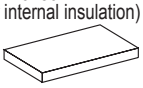
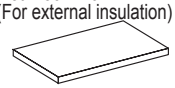
OPTIONAL PARTS

How to Use / How to Install

1 Confirming Supplied Accessories

* Before starting installation, make sure that the following accessories are present.

① Drain lift up mechanism	② Attachment	③ Screws (4×10)	④ VP-20 pipe	⑤ Pipe cover	⑥ Flexible hose	⑦ Fastener
 ×1	 ① Drain lift up mechanism fixture ×1	 For the installation of drain lift up mechanism① ×6	 ×1	 For insulation of VP20 pipe④ ×1	 ×1	 ×1

⑧ L-shaped pipe (gas pipe)	⑨ L-shaped pipe (liquid pipe)	⑩ Insulator A	⑪ Insulator B
 ×1	 PAC-SH83/84 ×1 PAC-SH85 ×2	6t×220×80 (For internal insulation)  For the insulation of L-shaped pipes ⑧ and ⑨ and the refrigerant pipes. ×2	3t×250×120 (For external insulation)  For the insulation of L-shaped pipes ⑧ and ⑨ and the refrigerant pipes. ×2

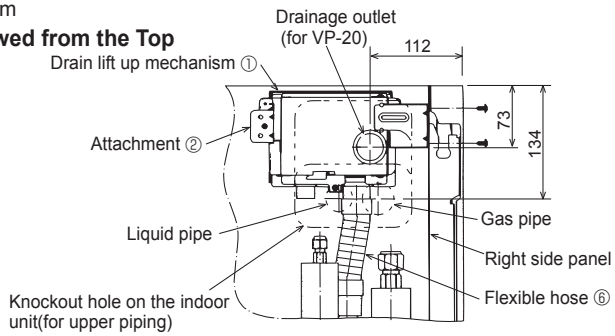
2 Installation Diagram of the Drain lift up mechanism

* This drain lift up mechanism must be installed inside an indoor unit.
* Installing this drain lift up mechanism limits to arrange the refrigerant pipe only upward.
* To facilitate installation of the drain lift up mechanism, it should be installed before indoor unit.
* The size of the plumbing that must connect, by the refrigerant kind of the indoor unit that corresponds in the case of PAC-SH85DM-E, changes.
* Please refer to the installation manual of an indoor unit for details.
* The L-shaped pipes there are bringing are corresponding to either refrigerant plumbing.

※1 In case of accessory parts VP-20pipe ④ and pipe cover ⑤ do not have enough length because the lifting height is high, please supply locally.

Unit:mm

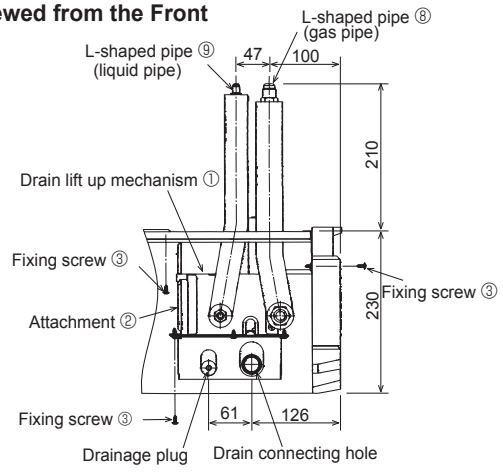
Viewed from the Top



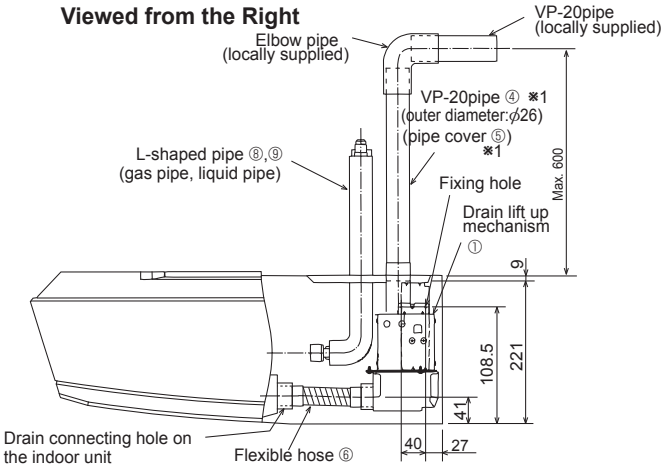
<Table 1>

Gas pipe	Liquid Pipe	Drain lift up mechanism Model
ϕ12.7	ϕ6.35	PAC-SH83
ϕ15.88	ϕ9.52	PAC-SH84
ϕ15.88	ϕ6.35/ϕ9.52	PAC-SH85

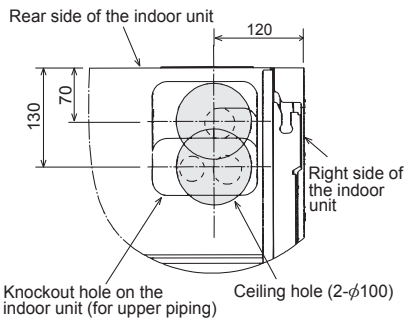
Viewed from the Front



Viewed from the Right



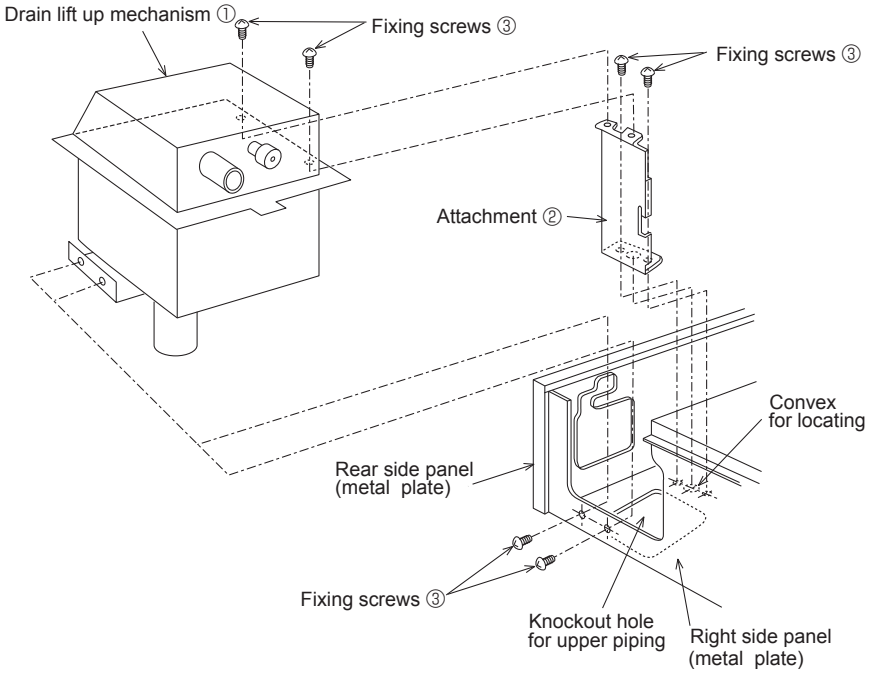
Positions of Holes on the Ceiling



OPTIONAL PARTS

3 Installing the Drain lift up mechanism

1.Remove the intake grille and side panel. (Refer to the indoor unit installation manual.)
2.Prepare the knockout hole to be used for the upper piping of the indoor unit.
3.Fix the attachment ② with the fixing screws ③ (×2)
4.Fix the drain lift up mechanism ① with the fixing screws ③ (×4)



4 Refrigerant Piping

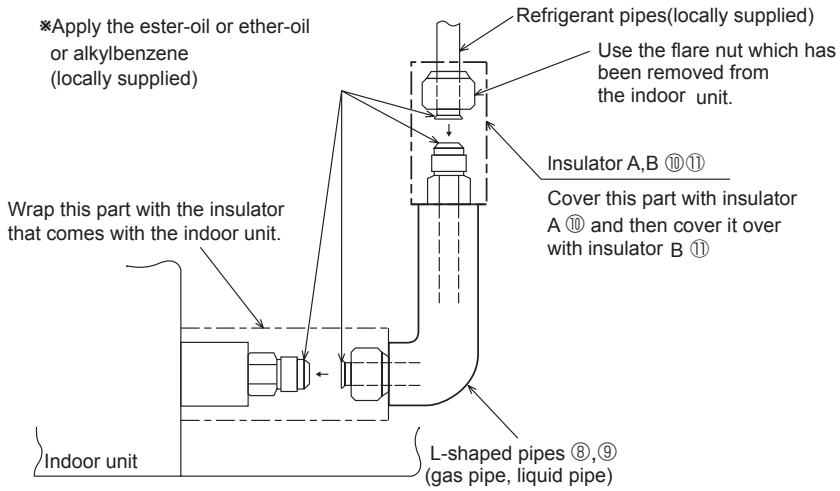
***For details on piping, refer to the installation manual of the indoor unit.**

[With the stop valve of the outdoor unit fully closed]

1.Apply lubricant to the flare sheet of the L-shaped pipes (gas pipe, liquid pipe) ⑧⑨.
2.Remove the flare nut and cap from the indoor unit.
3.Apply lubricant to the flare sheet connecting section of the indoor unit.
4.Connect the L-shaped pipes (gas pipe, liquid pipes) ⑧ and ⑨ quickly.
5.Fit the removed flare nut to the existing pipes and carry out flaring.
6.Connect the L-shaped pipes with the existing pipes in the same way.
7.Cover each connection with heat insulator ⑩⑪.

[After the refrigerant circuit is complete]

8.Vacuumize the refrigerant lines through the service port of the liquid stop valve.
9.Fully open the stop valves (both liquid and gas).
* The method for oparating the stop valve is described on the outdoor unit installation manual.



OPTIONAL PARTS

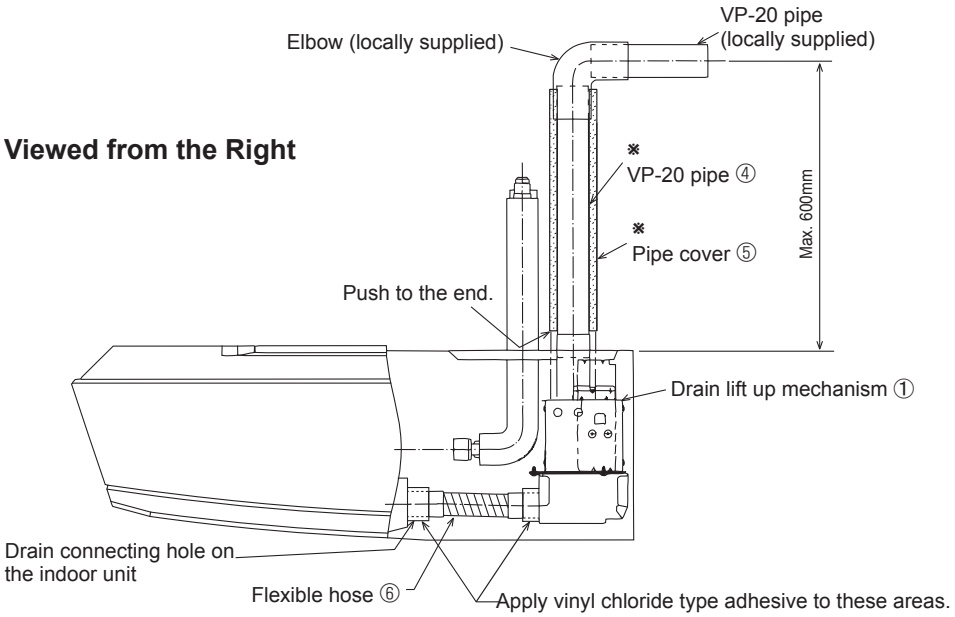
5 Drain Piping

※ In case of accessory parts VP-20pipe ④ and pipe cover ⑤ do not have enough length because the lifting height is high, please purchase procure supply locally.

***For details on piping, refer to the installation manual of the indoor unit.**

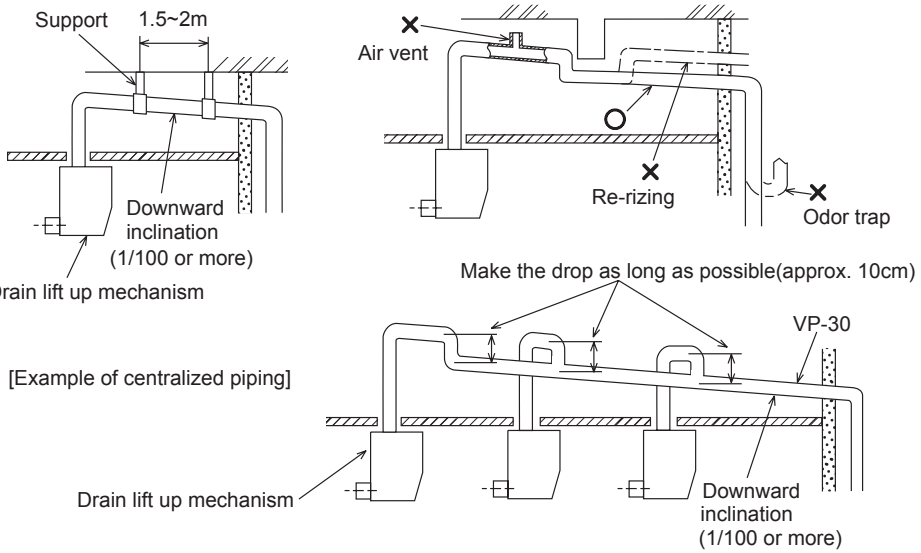
1.Apply vinyl chloride type abhesive to the drainage outlet of the drain lift up mechanism ① , then insert the VP-20 pipe ④ into it, (30mm deep)
2.Connect the VP20 pipe ④ and existing drain pipe using a 90-degree elbow etc. and adhesive.
3.Cover the VP-20 pipe ④ with the pipe cover ⑤.
4.Apply vinyl chloride type adhesive to the drain lift up mechanism ① and drain connecting hole on the indoor unit, then insert the flexible hose ⑥ into them. Take care that the hose does not twist.

***Insulate all pipes, from the drain lift up mechanism up to the outside.**



[Make sure to follow the following points during drain piping.]

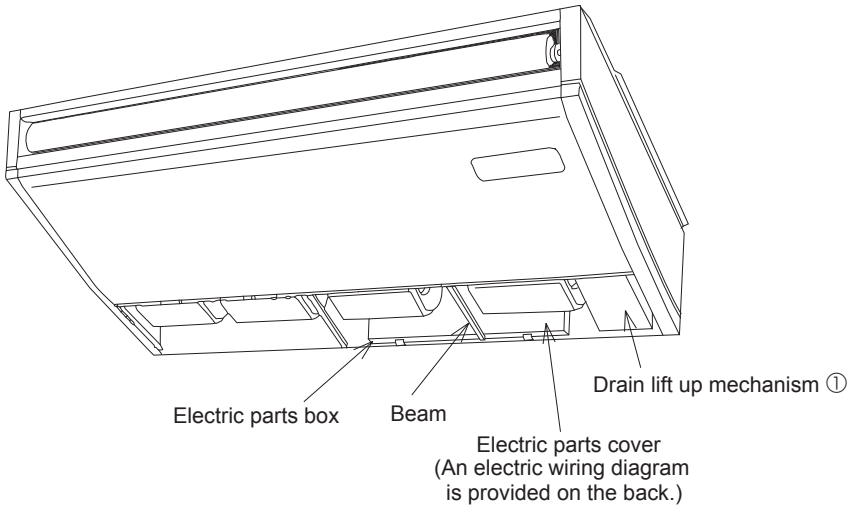
*Drain lifting height must be less than 600mm.
*Incline the drain pipe downwards (1/100 or more) to the drainage side (outdoor).
*Do not create traps or peaks.
*Keep the horizontal piping within 20m. Use fixtures to prevent the pipe from waving.
*Do not install air vent pipes. The drainage may spout out.
*Use general-purpose hard vinyl chloride pipes (outer diameter:ϕ26) and apply vinyl chloride type adhesive to prevent any leakage.
*Cover with insulator (made of foamed polyethylene, with specific gravity of 0.03 thickness of 9mm or more).
*Do not install odor trap at the drain outlet.
*Locate the end of pipe at a point where odor is unlikely to occur.
*Do not insert the pipe directly into a drainage ditch where sulfur gas may be produced.
*Use VP-30 pipes for centralized piping. Install the centralized drain pipe approximately 10cm below the output of pipes connected from the drain lift up mechanism.

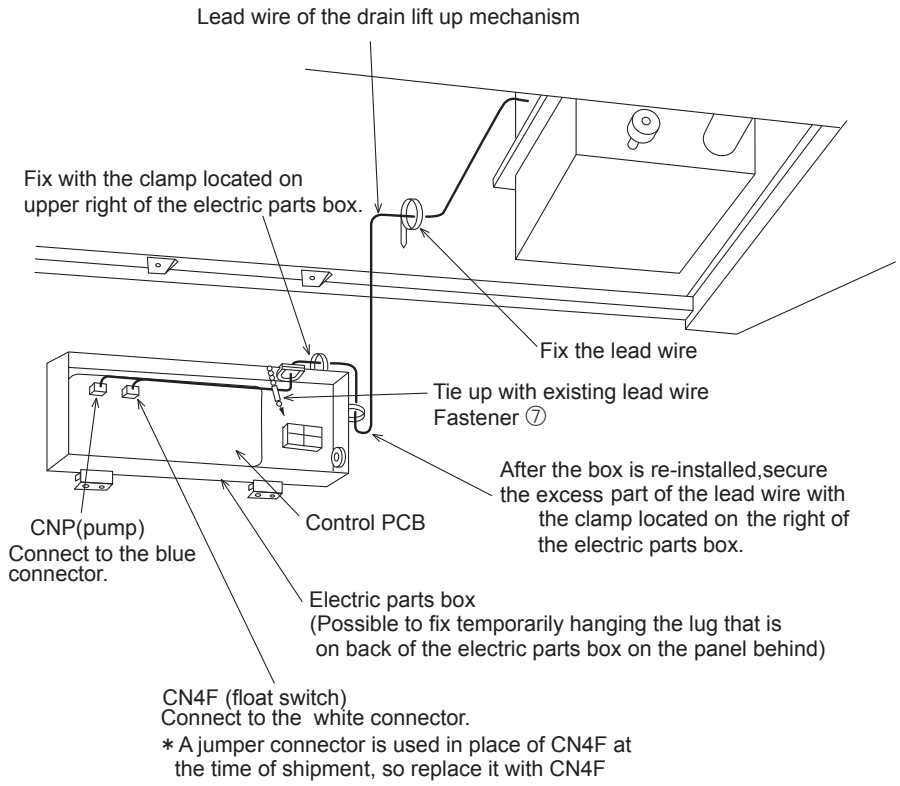


OPTIONAL PARTS

6 Electric Wiring

*Refer to the installation manual of the indoor unit together with this manual.
*Perform the work after checking that the power supply is off.
1.Remove the beam.
2.Remove the electric parts cover.
3.Pull the electric parts box downwards.
4.Connect the lead wire of drain lift up mechanism to the CNP and CN4F connectors provided on the control PCB of the indoor unit.
5.Tie up the lead wires with the fastener ⑦ so that the wires do not come apart inside the electric parts box.
6.When the wiring is finished, re-install the electric parts box, its cover and the beam.



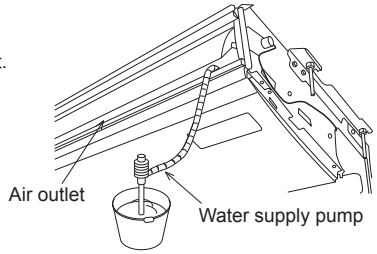


∗ The positions of the connectors which must be connected to the control PCB in certain models differ from those specified in the above diagram. Make sure that the lead wire are connected to CNP and CN4F connectors.

7 Test Run

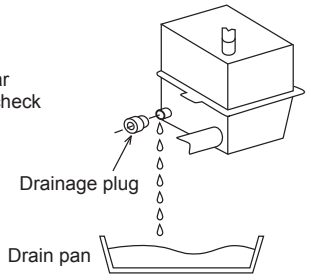
*Through this test run, check that drainage is discharged properly and that there is no water leakage from any of the connections.
*Refer to the installation manual of the indoor unit together with this manual.

1. Supplying water
Supply approximately 1000cc of water to the air outlet.

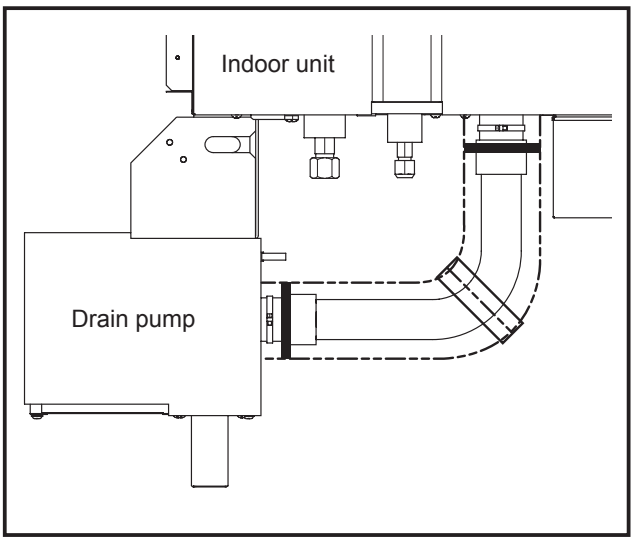


2.Carrying out a test run
(1) Turn the power ON.
(2) Press the TEST RUN button on the remote controller twice.
(3) Press the MODE button to select cooling mode.
*The drain lift up mechanism will be activated to start discharging the water.
(4) Check whether water is discharged properly.
(5) Press the POWER ON/OFF button to cancel the test run.
(6) Turn the power OFF.

3.Re-install each part after checking.
*If the drain lift up mechanism is installed at the time of the year when heating is used, make sure that the water for the drain check has been removed.
After removal of the water, reinstall the drainage plug.



Installation figure



Descriptions

Raises drain generated during unit's operation to secure the appropriate angle of the drain pipe.

Applicable Models

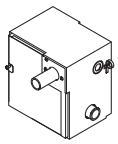
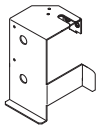
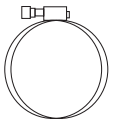
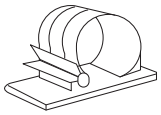
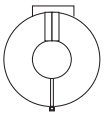
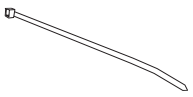
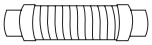
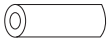
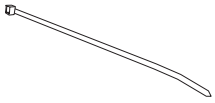
- SEZ-KD25VAQ
- SEZ-KD25VAL
- SEZ-KD35VAQ
- SEZ-KD35VAL
- SEZ-KD50VAQ
- SEZ-KD50VAL
- SEZ-KD60VAQ
- SEZ-KD60VAL
- SEZ-KD71VAQ
- SEZ-KD71VAL

Specifications

- External type
- 220 - 240V AC
- Liquid level detection: Float switch

Provided parts

Check that the packet includes the following parts in addition to installation manual.

Item	① DRAIN PUMP	② ATTACHMENT	③ DRAIN HOSE 1	④ PIPE COVER 1	⑤ PIPE COVER 2
Quantity	1	1	1	1	1
Shape			(385mm) 	(255mm) 	(200mm) 
Item	⑥ HOSE BAND	⑦ SCREW	⑧ CLAMP	⑨ FERRITE CLAMP	⑩ BAND 1
Quantity	1	3	3	1	2
Shape					(100mm) 
Item	⑪ DRAIN HOSE 2	⑫ PIPE COVER 3	⑬ BAND 2		
Quantity	1	1	6		
Shape	(175mm) 		(380mm) 		

How to Use / How to Install

1 Installing the Drain Pump

1-1 Installing the Drain Pump

(1) Unscrew the (a)screw on the unit cover, hook the ②ATTACHMENT over the mounting bracket on the unit, and screw it on to the unit with the (a)screw. (Fig. 1)

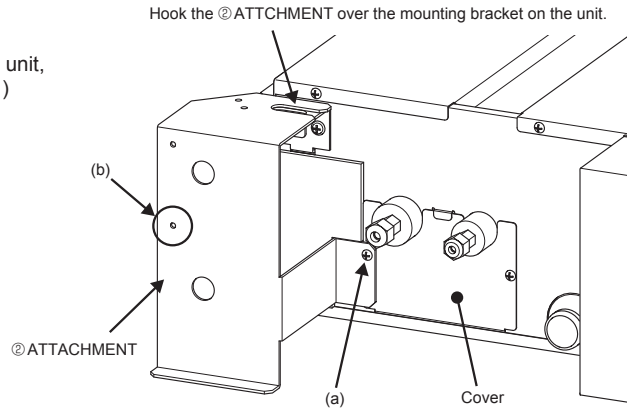


Fig. 1

(2) Temporarily screw in the ⑦SCREW in the hole (b) on the ②ATTACHMENT. (Fig. 1 and 2)

(3) Loosen the drain-pump-cover fixing screws, and remove the cover. (Fig. 3)

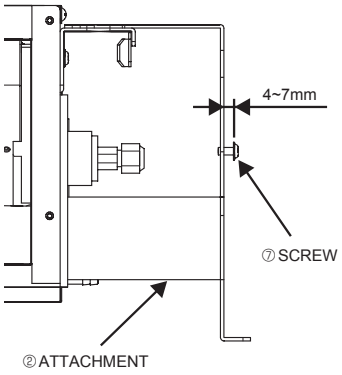


Fig. 2

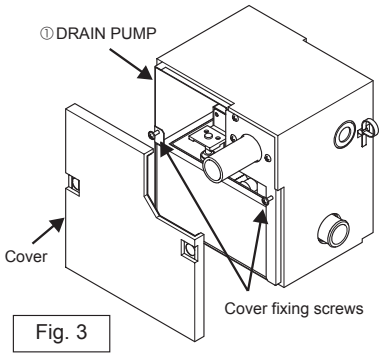


Fig. 3

(4) Hang the ①DRAIN PUMP on the ②ATTACHMENT by placing the ⑦SCREW (the one screwed in during Step (2) above) through the Figure-8 hole on back of the ①DRAIN PUMP, and then tighten the ⑦SCREW from inside the ①DRAIN PUMP. (Fig. 4)

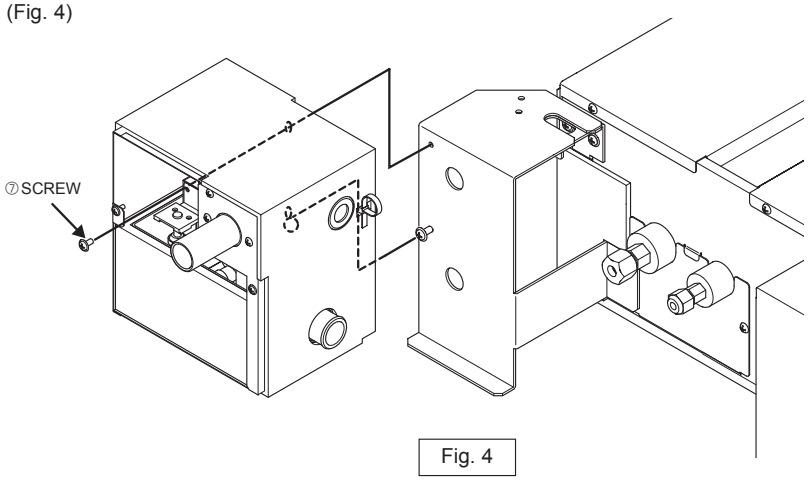


Fig. 4

1-2 Installing DRAIN HOSE 1

(1) Connect each end of ③DRAIN HOSE 1 to the drain port on the unit and on the drain pump. (Fig. 5)
✻ Insert the hose all the way to the end of the ports.
✻ Do not use any adhesive.

(2) Secure the hose with ⑥HOSE BANDs at both ends of the hose. (Fig. 5)

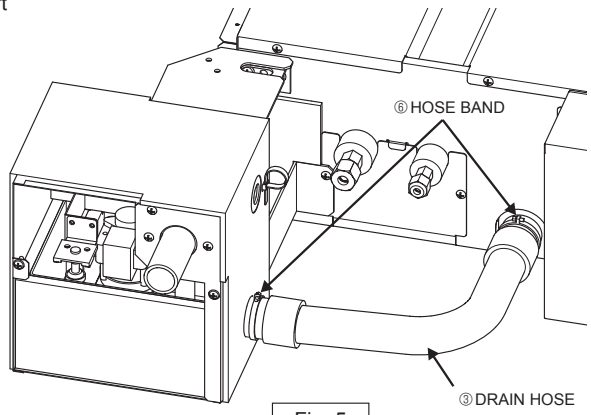


Fig. 5

(3) Attach ④PIPE COVER 1 and ⑤PIPE COVER 2 to ③DRAIN HOSE 1 flush against each other and against the unit and the drain pump, and then secure them in place with ⑬BANDs.
Wrap the pipe cover connection with vinyl tape to close the gap. (Fig. 6)

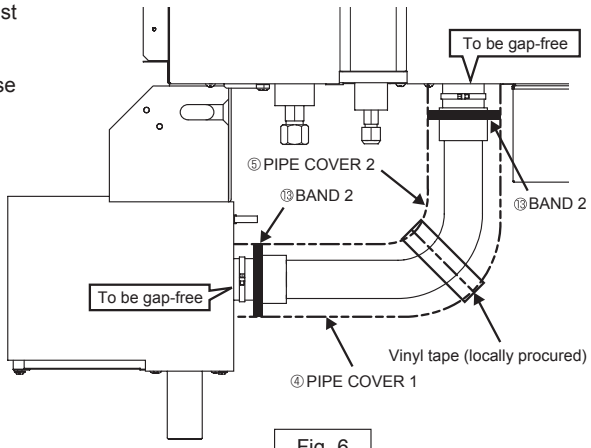


Fig. 6

1-3 Wiring connections

(1) Remove the CONTROL BOX COVER from the unit by unscrewing the two screws on the cover. (Fig. 7)

(2) Unscrew the (c)CONTROL BOX fixing screw. (Fig. 7)

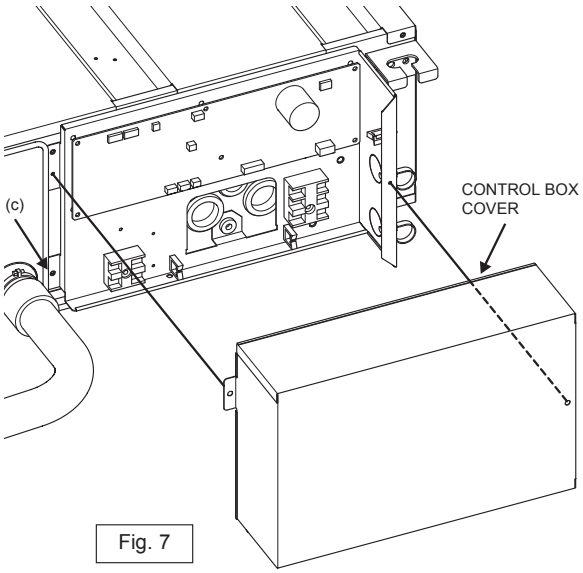


Fig. 7

(3) Remove the short-circuit connector from CN4F on the control board (white, 4P). (Fig. 8)

(4) Route the two drain pump wires behind the CONTROL BOX and into the CONTROL BOX. Lift the CONTROL BOX in the direction of the arrow (d) to allow the wires through. (Fig. 8)
※ Do not pinch the wires.

(5) Wind the drain pump wire (connector: blue, 3P) around ⑨FERRITE CLAMP once, and fix it in place with ⑩BAND. (Fig. 9)

(6) Connect the drain pump wire (connector: blue, 3P) to CNP on the control board, and connect the float switch wire (white: 4P) to CN4F on the control board respectively. (Fig. 8)

(7) Place the screw(c) that was removed in Step 3-3.(2) above back on. (Fig. 7)

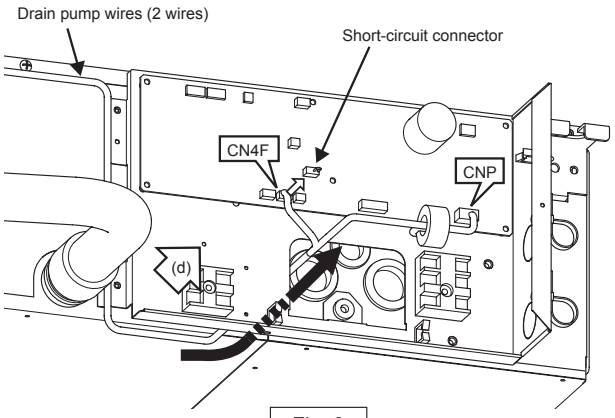


Fig. 8

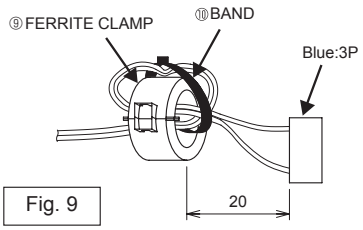


Fig. 9

(8) Fix the two drain pump wires with ⑧CLAMPs to the unit. (Fig. 10)

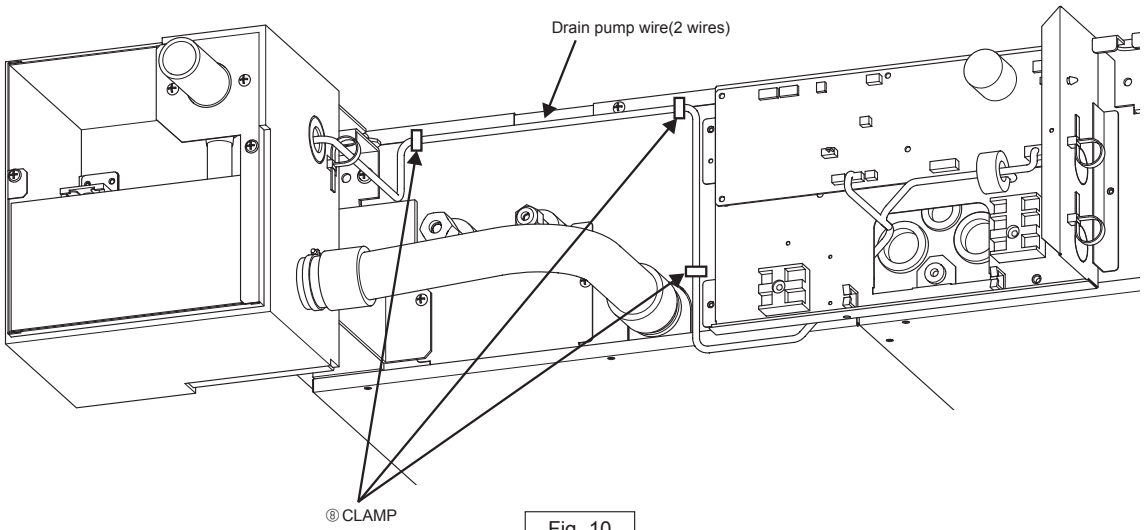
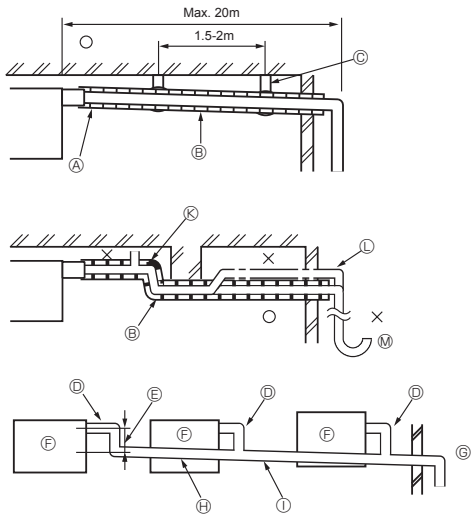


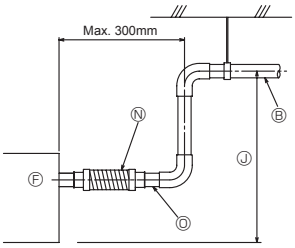
Fig. 10

OPTIONAL PARTS

2 Drain piping work

- Ensure that the drain piping is downward (pitch of more than 1/100) to the outdoor (discharge) side. Do not provide any trap or irregularity on the way.
- Ensure that any cross-wise drain piping is less than 20 m (excluding the difference of elevation). If the drain piping is long, provide metal braces to prevent it from waving. Never provide any air vent pipe. Otherwise drain may be ejected.
- Use a hard vinyl chloride pipe O.D. ø 32 for drain piping.
- Ensure that collected pipes are 10 cm lower than the unit body's drain port.
- Do not provide any odor trap at the drain discharge port.
- Put the end of the drain piping in a position where no odor is generated.
- Do not put the end of the drain piping in any drain where ionic gases are generated.





○ Correct piping
× Wrong piping
Ⓐ Insulation (9 mm or more)
Ⓑ Downward slope (1/100 or more)
Ⓒ Support metal
Ⓚ Air bleeder
Ⓛ Raised
Ⓜ Odor trap

Grouped piping
Ⓓ O. D. ø 32 PVC TUBE
Ⓔ Make it as large as possible. About 10 cm.
Ⓕ Indoor unit (Drain pump)
Ⓖ Make the piping size large for grouped piping.
Ⓗ Downward slope (1/100 or more)
Ⓘ O. D. ø 38 PVC TUBE for grouped piping. (9 mm or more insulation)
Ⓙ Up to 580 mm
Ⓝ Drain hose (accessory)
Ⓞ Horizontal or slightly upgradient

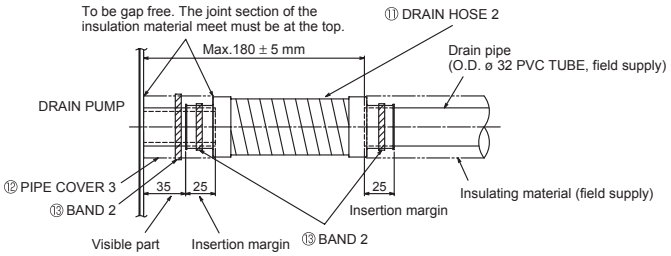
2-1. Insert the ⑪ DRAIN HOSE 2 into the drain port (insertion margin: 25mm).
(The drain hose must not be bent more than 45˚ to prevent the hose from breaking or clogging.)
(Attach the hose with glue for the hard vinyl chloride pipe, and fix it with the ⑬ BAND 2.)

2-2. Attach the drain pipe (O.D. ø 32 PVC TUBE, field supply).
(Attach the pipe with glue for the hard vinyl chloride pipe, and fix it with the ⑬ BAND 2.)

2-3. Perform insulation work on the drain pipe (O.D. ø 32 PVC TUBE) and on the socket (including elbow).

2-4. Check the drainage.

2-5. Attach the ⑫ PIPE COVER 3 and, fix it with the ⑬ BAND 2 to insulate the drain port.

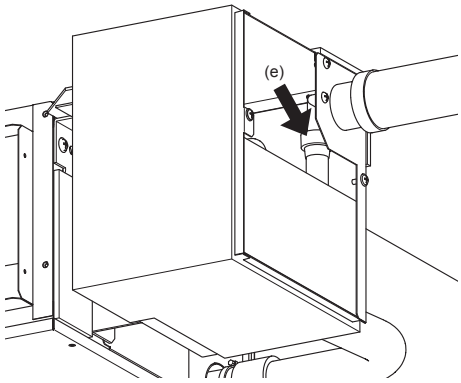


OPTIONAL PARTS

3 Confirming drain discharge

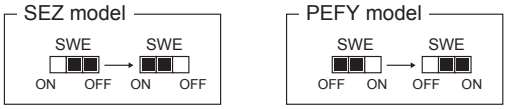
Make sure that the drain-up mechanism operates normally for discharge and that there is no water leakage from the connections.

- Be sure to confirm the above in a period of heating operation.
- Be sure to confirm the above before ceiling work is done in the case of a new construction.
- Make sure that water is not leaking from the connection (e) on the drain pump shown in the right figure.

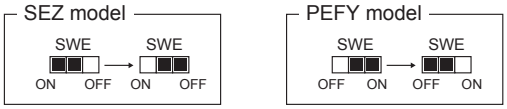


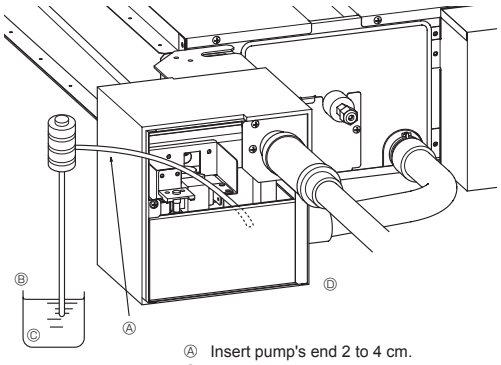
3-1. Fill water into the feed water pump using a feed water tank. In filling, be sure to put the end of the pump or tank in a drain pan. (If the insertion is incomplete, water may flow over the machine.)
※ Do not splash water on the drain pump coil or the float switch wire through hole when pouring water.

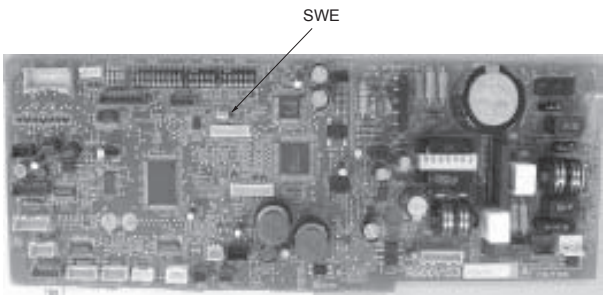
3-2. Perform the test run in cooling mode, or turn on the switch SWE on the controller circuit board. (The drain pump and the fan are forced to operate without any remote controller operation.) Make sure using a transparent hose that drain is discharged.



3-3. After confirmation, cancel the test run mode, and turn off the main power. When the switch SWE has been turned on, turn it off, and attach the CONTROL BOX COVER and the DRAIN PUMP COVER in the original positions.







<Indoor board>

Ⓐ Insert pump's end 2 to 4 cm.
Ⓑ About 2000 cc
Ⓒ Water
Ⓓ Do not splash water on the drain pump coil or the float switch wire through hole when pouring water.

Photo

Descriptions

A decoration cover to be attached to the upper section of ceiling suspended models. Possible to prevent dust accumulation.

Applicable Models

■ PCA-RP71HAQ

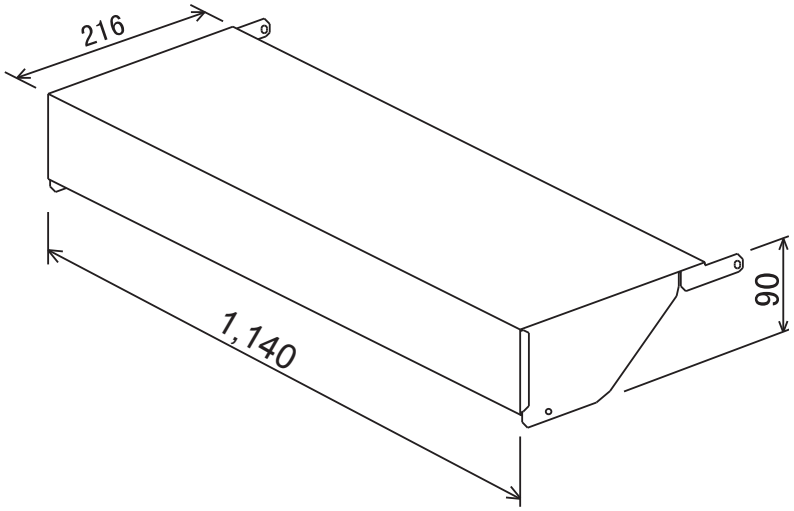
Specifications

Material	SUS304 (0.8t)
Parts composition	Front cover x 1
	Suspension bracket cover x 4
	Tapping screw (4 x 10, with nylon washer) x 4
	Washer x 8 (hot-dip zinc-coated carbon steel sheet (t1. 2))

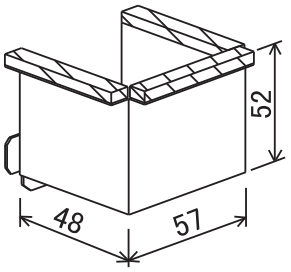
Dimensions

Unit : mm

Front cover



Suspention blacket cover

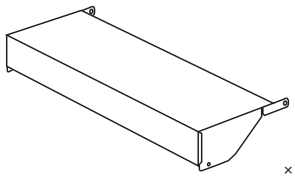
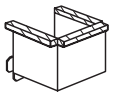


OPTIONAL PARTS

How to Use / How to Install

1. Checking Provided Parts

※Make sure that you have all the following parts before install ation:

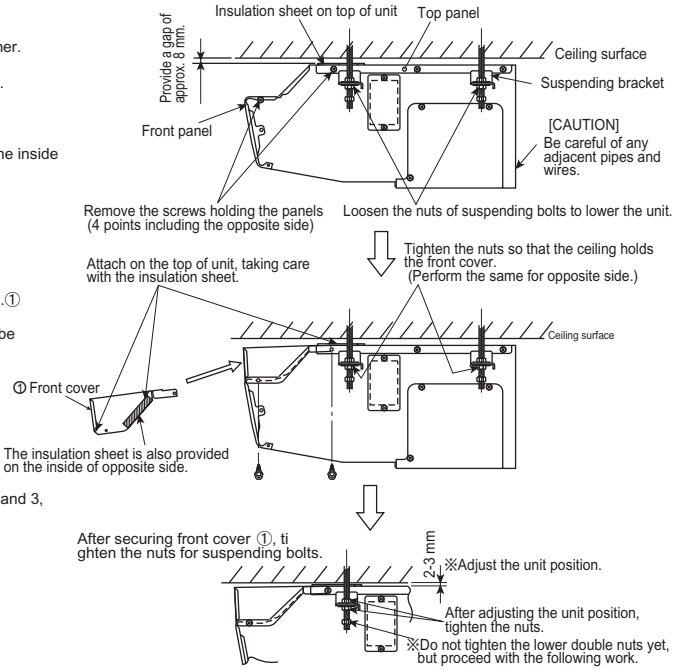
① Front cover	② Suspending bracket covers	③ Tapping screws (4x10)	④ Washers
		 (with nylon washers)	
×1	×4	×4	×8

2. Front Cover Installation Procedure

★The following procedure shows how to attach the front cover after installing air-conditioner.
1. Loosen the nuts of bolts suspending the unit, and lower the unit by approx. 5 mm.
   ・When lowering the unit, be careful not to damage the wires, coolant pipe or drain pipe.
2. Remove the screws that secure the front panel and top panel to the unit (at 4 points).
   (The provided tapping screws③are spares for these screws.)
3. Put front cover ① over the unit.
   ・Be careful not to damage the insulation sheets pasted on the top surface of unit and the inside of front cover ①.
4. Use the screws removed in step 2 to temporarily secure front cover ①.
   (Do not tighten the screws at this time.)
5. Tighten the nuts of bolts suspending the unit, and fit the unit onto ceiling.
   ・Tighten the nuts while carefully watching the attached status of front cover ①.
6. Tighten the screws that were temporarily secured in step 4.
   ・Make sure that front cover holds the insulation sheet on the top surface of unit, and that the cover fits securely on the top surface of unit before tightening the screws.①
7. Separate the unit from ceiling to leave a gap of 2-3 mm fromceiling.
   ・Be sure to provide this space: If the unit is in contact with ceiling, the vibrations could be transmitted to ceiling.
8. Make sure that the unit is correctly installed, and then tighten the nuts of bolts suspending the unit.

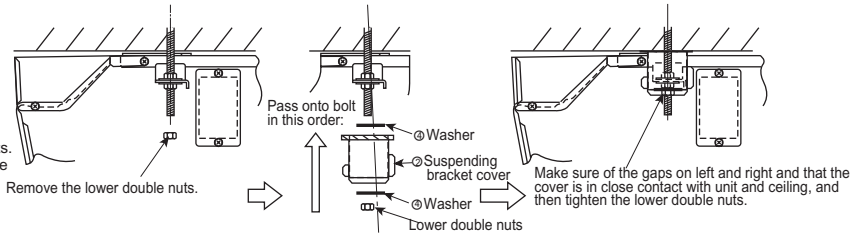
[CAUTION] Do not tighten the lower double nuts yet, because installing suspending bracket covers must now be done.

※ If you attach the front cover before installing the unit, perform the procedure in steps 2 and 3, and then fully tighten the 2 screws on each side (4 in total).



3. Suspending Bracket Installation Procedure

★Attach the suspending bracket covers in succession.
1. Remove the lower double nuts (from 4 points) from the suspending bolts.
2. Put the provided washers (tops and bottoms of suspending bracket covers) and suspending bracket covers through suspending bolts. ④
3. Tighten the nuts removed in step 1 for the suspending bolts.
   ・ Make sure that the suspending bracket covers are in close contact with the unit and ceiling.



4. Test Run

※ Also refer to the installation manual of indoor unit.
★ Make sure that test run is performed without any abnormal sound, such as vibrations, fluttering sound, etc.
[Test Run Procedure]
1. Turn power on.
2. Press the TEST RUN button on remote controller twice.
3. Press the MODE button on remote controller to set to the fan mode.
   * The fan will rotate to blow out air.
4. Make sure that no abnormal sound, such as vibrations, fluttering sound, etc. is heard.
5. Press the ON/OFF button on remote controller to release test run.
6. Turn power off.

Descriptions

Enables to control multiple air conditioners from a (remote) location by connecting the On/Off contact point. It can also control the operation of the relay with error signals by connecting the MA remote controller PAR-32MAA.

Applicable Models

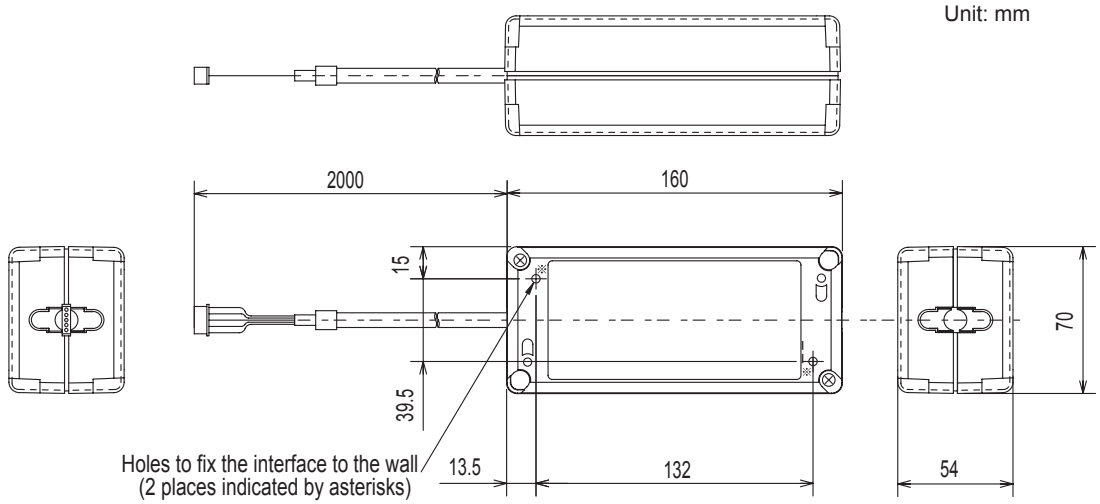
- MSZ-FH25/35/50VE2
- MSZ-EF18/22/25/35/42/50VE3W/B/S
- MSZ-SF15/20VA
- MSZ-SF25/35/42/50VE3
- MSZ-GF60/71VE2
- MSZ-DM25/35VA
- MFZ-KJ25/35/50VE2
- MLZ-KA25/35/50VA
- S-series models
- P-series models: In the case the outdoor unit is SUZ or MXZ, the indoor of P-series can be connected.
  (Except PCA-RP100/125/140KAQ, PCA-RP71HAQ, PSA-RP•KA)

Specifications

Power		12V DC (supplied from indoor unit)
Operating conditions		Indoor only (ambient temperature: 0 to 40℃, no condensation)
Connection of MA smooth remote controller / MA deluxe remote controller	Communication cable	2-wire (recommended: optional PAC remote controller cable PAC-YT81HC)
	Communication cable distance	Max. 10m
Indoor unit connecting cable		Dedicated 5-wire cable
Weight		360 g (including indoor unit connecting cable)

Dimensions

Unit: mm



How to Use / How to Install

1. Before Installation

1.1.How to Use the SYSTEM CONTROL Interface.

■Functions

Connecting with M-NET system (Fig. 2-1)

The room air conditioner can be managed centralized or individually by the system controller using M-NET communications control.

Used as wired remote controller (Fig. 2-2)

MA remote controller can be used as a wired remote controller.

Remote control (Fig. 2-3)

Contact signals enable inputting of ON/OFF, prohibiting/allowing operation, and heating/cooling.

Status indicator output (Fig. 2-4)

Signals of ON/OFF, error/normal, heater ON/OFF, and humidifier ON/OFF are output.

■Sample System Configuration

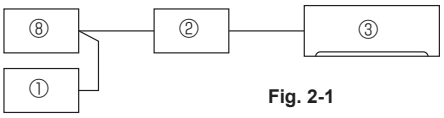


Fig. 2-1

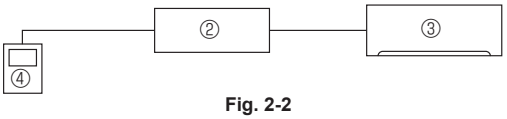


Fig. 2-2

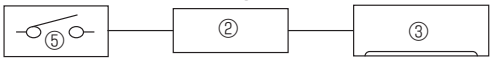


Fig. 2-3

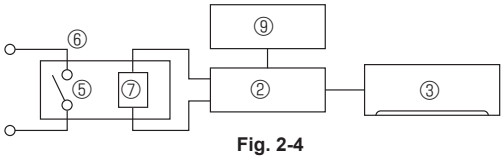
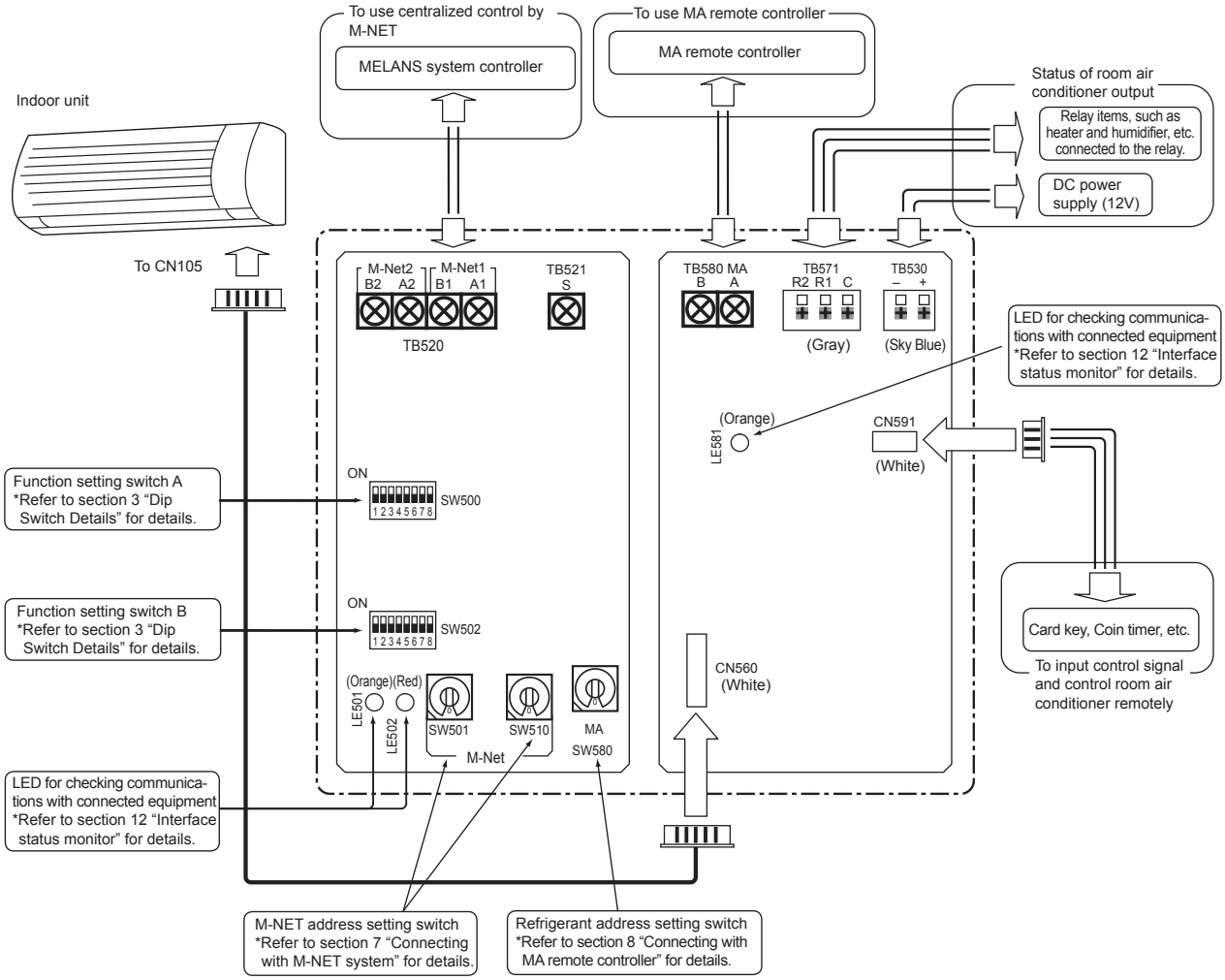


Fig. 2-4

① System controller, etc
② SYSTEM CONTROL Interface
③ Indoor Unit
④ MA remote controller
⑤ Contract point
⑥ Relay
⑦ Coil
⑧ Power supply unit for M-NET transmission line
⑨ External power supply for DC12V

2. Function and electric wiring of interface each part



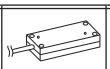
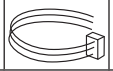
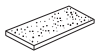
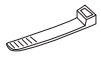
OPTIONAL PARTS

3. Dip Switch Details

Functions	SW No.	Functions		OFF (Factory setting)	ON
Function setting Switch A	SW500-1	Not in use		— (Set to OFF)	—
	SW500-2	Turn on/off with power		Not available	Available
	SW500-3	Room temperature detector		Indoor unit	MA remote controller
	SW500-4	Output setting		Switching output of ON/OFF, error/normal, heater ON/OFF, and humidifier ON/OFF	
	SW500-5				
	SW500-6	Input setting		Input of ON/OFF and prohibiting/ allowing operation	Input of ON/OFF and heating/cooling
	SW500-7	Interface status display switching		LE501: Confirmation of communications with indoor unit LE502: Confirmation of communications with M-NET LE581: Confirmation of supplying power to MA remote controller	LE501: Confirmation of communications with MA remote controller LE502: Extinguished LE581: Confirmation of supplying power to MA remote controller
	SW500-8	Not in use		— (Set to OFF)	—
Function setting Switch B	SW502-1	Output switching		DC12V output during operation or error, etc	DC12V output during stop or operating normally, etc
	SW502-2	Input mode		Level contact	Pulse contact
	SW502-3	Setting of range of prohibited operations by contact point		M-NET system controller ON/OFF operation allowed	M-NET system controller ON/OFF operation prohibited
	SW502-4	Input switching	Input mode when level contact	Running or operating the machine is prohibited, etc by short circuiting the level contact	Running or operating machine is prohibited, etc by level contact opening
			Input mode when pulse contact	ON/OFF is inverted by pressing pulse contact	ON or OFF no matter how many times pulse contact is pressed
	SW502-5	Behavior when operation by contact point is prohibited		State before prohibition of operation by contact point	Air conditioner running stop
	SW502-6	Behavior when prohibition of operation by contact point is canceled		State before canceling prohibition of operation by contact point	Running air conditioner
	SW502-7	Not in use		— (Set to OFF)	—
	SW502-8	Setting when P series is mixed in the same group (only when running group operation using the MA remote controller)		No mixture	Mixed

4. Parts

Accessory

❶	Interface unit [with connecting cable (5-core)]		1	❺	Mounting cord clamps (medium)		4	❾	Fasteners (for joining the wires)		5
❷	Screws for mounting 3.5×12		2	❻	Mounting cord clamps (large)		3	❿	Lead wires (3-core)		1
❸	Cushioning material (with adhesive)		1	❼	Screws for mounting 3.5 × 12 ❹, ❺ and ❻ (Use when attaching the clamps to the interface unit)		4	⓫	Screws for mounting 4 × 10 ❺ (Use when fixing near the room air conditioner)		1
❹	Mounting cord clamps (small)		2	❽	Cable ties		9	⓬	Screws for mounting 4 x 16 ❺ (Use when joining room air conditioner parts)		1

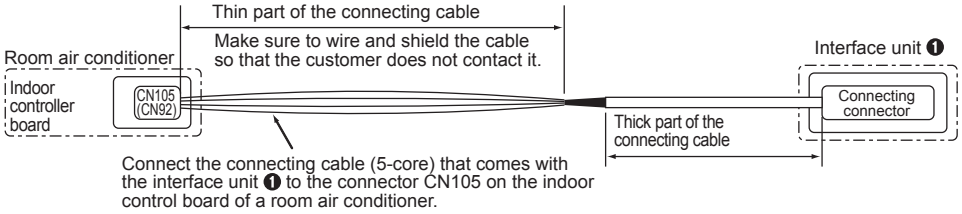
Item to be Prepare at the Installation Site

Ⓐ	M-NET communication cable	2-core shield cables CVVS/CPEVS,1.25mm^2 [AWG16] or more.* • When cross-wired by same terminal box, 1.25mm^2 [AWG16] is used. CPEVS: PE insulated PVC jacketed shielded communication cable CVVS: PVC insulated PVC jacketed shielded control cable PE: Polyethylene PVC: Polyvinyl chloride
Ⓑ	Remote control cable (for connecting the ME Remote Controller)	2-core shield cables CVVS/CPEVS* • When the distance from the interface unit ❶ is less than 10m: 0.3mm^2 [33ft: AWG22] or more.* • When the distance from the interface unit ❶ is not less than 10m: 1.25mm^2 [33ft: AWG16] or more.*
Ⓒ	Remote control cable (for connecting the MA Remote Controller)	2-core sheath cable 0.3mm^2 to 1.25mm^2* [AWG22 to 16]*
Ⓓ	Signal cable (also used as extension cable)	Sheath cable 0.3mm^2 [AWG22] or more.* • When remote control: The extension cable of Lead wires ⓾ • When status signal output: The cable for relay connection, or cable for DC power
Ⓔ	Related parts sold separately	Prepare the necessary number of parts sold separately as needed for your system.

* Please use cable with supplementary insulation.
Use wires which have insulation more than the MAX voltage.
MAX voltage is defined according to the law of the country where the interface is used.

5. Connecting the SYSTEM CONTROL Interface to a room air conditioner

● Connect the interface unit ❶ and the indoor control board of a room air conditioner using the connecting cable (5-core) that comes with the interface unit ❶.



⚠ Warning

Securely fix the connecting cable in the designated place. Failure to do so may cause an electric shock, fire, or malfunction.

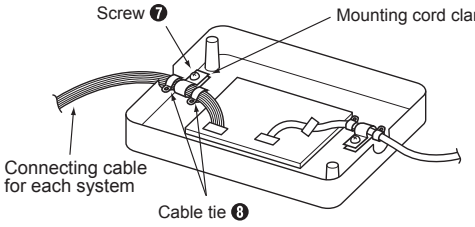
● The connecting cable (5-core) connected to a room air conditioner should be wired according to the room air conditioner installation manual.

Notes
- Extending or shortening the connecting cable (5-core) that comes out of the interface unit ❶ cause it to malfunction. Also, keep the connecting cable (5-core) as far as possible away from the electrical wires and ground wire. Do not bundle them together.
- To prevent the board from being damaged by static electricity, always remove static electricity before starting work.

6. Connecting the SYSTEM CONTROL Interface with each system

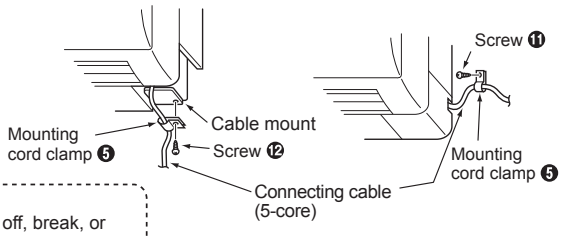
(For details on each system, see the relevant instruction manual.)

● Screw the mounting cord clamp ❹~❻ according to the thickness of the connecting cable used for each system. Fasten the cable tie ❽ as shown in the figure to prevent undesirable movement of the connecting cable.



● The connecting cable (5-core) connected to a room air conditioner should be mounted at the room air conditioner or its vicinity.

If the screw for the cable mount of the room air conditioner cannot be used, replace with the screw for mounting ⓬.



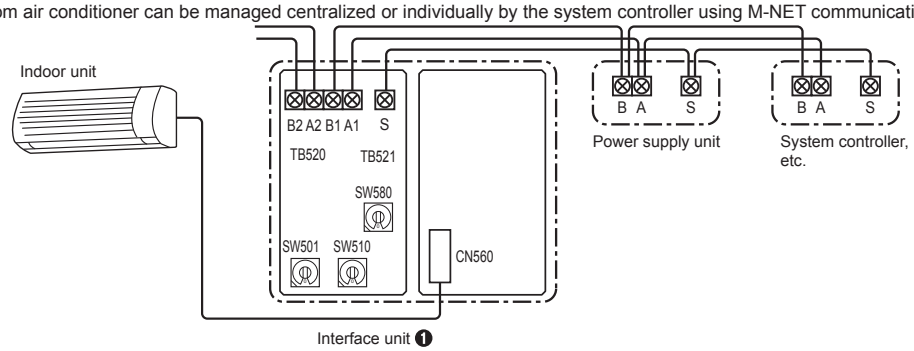
Notes
- If the connecting cable is not securely mounted, the connector may come off, break, or malfunction.
- The dip switch (SW500, SW502) and the rotary switch (SW501, SW510, SW580) on the interface unit ❶ do not operate if they are not set correctly.

● Conduct the settings of the interface unit ❶ dip switch (SW500, SW502) and rotary switch (SW501, SW510, SW580) before turning on the power.

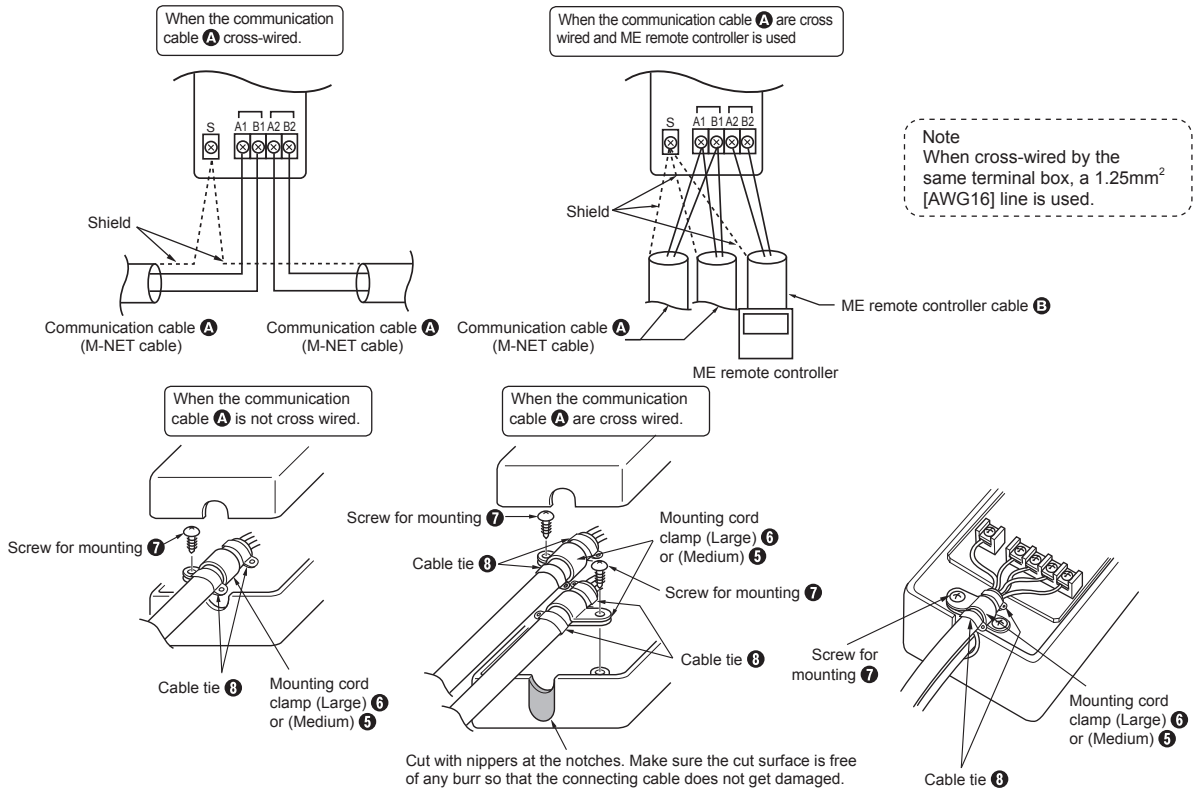
7. Connecting with M-NET system

■ Connecting the SYSTEM CONTROL Interface to M-NET cable

The room air conditioner can be managed centralized or individually by the system controller using M-NET communications control.



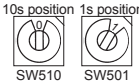
- To connect with the system controller and ME remote controller, connect the M-NET communication cable Ⓐ or ME remote control cable Ⓑ with TB520. (It is unpolarized.) Connect 2 core communication cable with A1/B1 or A2/B2. (There will be no problems with connecting to either one.)
- Cross the shield portion of each connecting cable using the S terminal only when cross wiring the communication cables Ⓐ.
- After wiring is complete, mount securely with any of mounting cord clamp ❹ to ❻, and fix with cable tie ❽ as shown in the figure.



* To prevent penetration by condensation, insects, etc., seal the opening well with putty.

Notes
- Electrical work should be performed in accordance with the Technical Standards Regarding Electrical Equipment and the Interior Wiring Standards.
- Connecting wires and remote control cables should be located as far away from other electrical wiring as possible. Placing them too closely together could cause a malfunction.
- To connect with the M-NET system and MA remote controller, connection is limited to only one unit of the MA remote controller.
- Do not put in the same group as City Multi or P series.
- Test run cannot be conducted from the ME remote controller or the system controller.

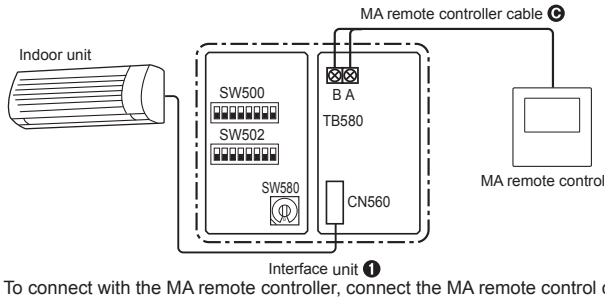
■ Setting when M-NET is connected

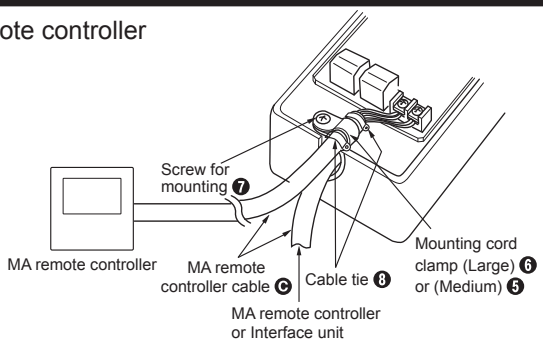
SW No.	Address	Comments
SW510 SW501	M-NET address 10s position 1s position  SW510 SW501	SW510 sets the 10s position of the address and SW501 sets the 1s position of the address. (Address setting can be set from 01 ~ 50.) For example, to set a unit to the address 25, set SW510 to “2” and SW501 to “5.” * The figure to the left is for address 1.
SW580	Refrigerant address  SW580	When the MA remote controller is not used, set the refrigerant address (SW580) to “1.”

8. Connecting with MA remote controller

■ Connecting the SYSTEM CONTROL Interface to MA remote controller

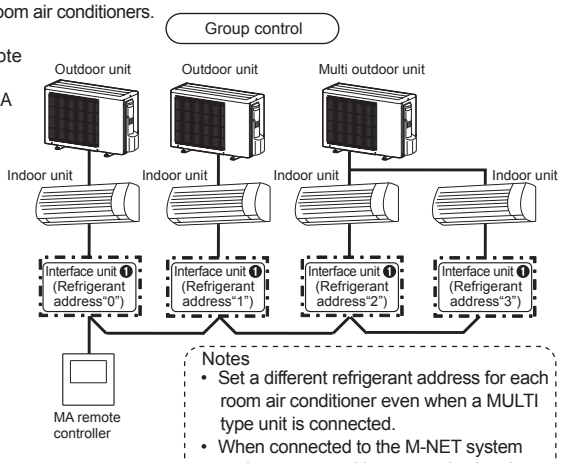
A room air conditioner can be operated with the wired remote control.





- To connect with the MA remote controller, connect the MA remote control cable © with TB580. (It is unpolarized.)
- When more than one unit of room air conditioner is operated in a group, make a cross wire connection at TB580 with the MA remote control cable ©.
- The MA remote controller can carry out simultaneous control of up to 16 sets of room air conditioners.
- Up to two MA controllers can be connected in one group.
- Wiring length from the interface at the refrigerant address “0” to the MA remote controller should be less than 10m [33ft].
- To operate the room air conditioner in a group, make the total length of wiring for the MA remote controller less than 50m [164ft].

Notes
- Be sure to set the “Auto Heating/Cooling Display Setting” of the MA remote controller OFF before use.
  * For details on the “Auto Heating/Cooling Display Setting”, refer to the MA remote controller instruction manual.
  * When the “Auto Heating/Cooling Display Setting” is ON, the remote controller display may differ from the actual operating status of the unit.
- A test run cannot be initiated using the test run switch on the MA remote controller.
- Group control with CITY MULTI is unable.



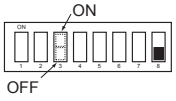
Notes
- Set a different refrigerant address for each room air conditioner even when a MULTI type unit is connected.
- When connected to the M-NET system and group control is executed using the MA remote controller, the group setting needs to be set on the M-NET system controller side.

■ Setting when MA remote controller is connected

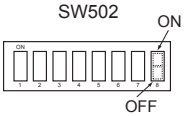
●Setup of an refrigerant address

SW No.	Refrigerant address	Comments
SW580	Address can be set from 0 to 15 	• Set the refrigerant address of the unit that supplies electric power to the MA remote controller to “0.” • When carrying out group operation of two of more room air conditioners, set different refrigerant addresses within the group. *A to F of the rotary switch correspond to refrigerant addresses 10 to 15.

●Setup of Room temperature detector position

Functions	SW No.	Operating details
Room temperature detector position	SW500 	SW500-3: OFF • Temperature detected by suction temperature sensor of the unit is made to be room temperature. SW500-3: ON • Temperature detected by temperature sensor of the remote controller is made to be room temperature.

●Setting when P series is mixed in the same group (only when running group operation using the MA remote controller)

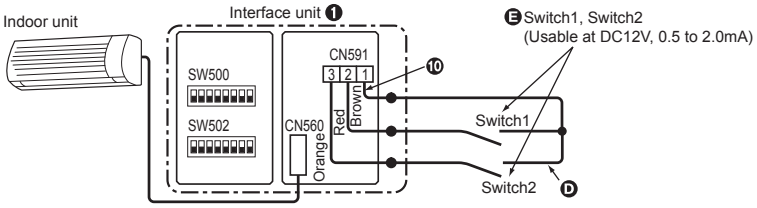
Functions	SW No.	Operating details
P series is mixed in the same group	SW502 	SW502-8: OFF • Set to OFF when P series is not mixed in the same group. SW502-8: ON • Set to ON when P series is mixed in the same group.

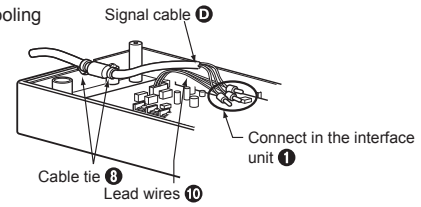
OPTIONAL PARTS

9. Remote Control

■ Connecting the SYSTEM CONTROL Interface

You can turn room air conditioner on/off, prohibit/allow manual operations, or input of heating/cooling with the ON/OFF switch.

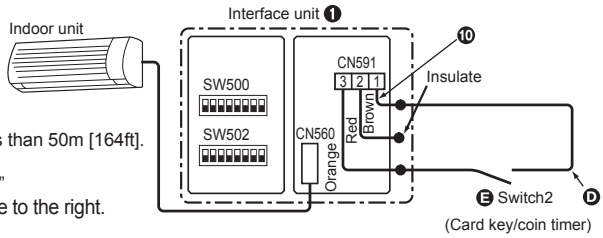




- ●Connect CN591 with Switch1 and Switch2 as shown in figure above.
- ●Connect the supplied lead wires (3-core) ❿ to the connector CN591 on the interface unit.
- ●Connect the supplied lead wires (3-core) ❿ to the connecting cable Ⓓ in the interface ❶ as shown in the figure on the right side.
- ●Wiring length from the interface to the Switch1 and Switch2 should be less than 50m [164ft].
- ●Procure and wire locally the remote control part including the switches.
- ●For each connection pattern, refer to "Setting when using remote control."

*When using a Card key/Coin timer, make connections shown in the figure to the right.

Card key coin timer connection



■ Setting when using remote control (Select one between No.1 through 5 and set.)

*Set No.1, No.6, and No.7 when using the card key/coin timer.

No.	Functions	SW No.	How to use	Operating details
1	ON/OFF Manual operation prohibited/allowed (Level Contact)	SW500 / SW502	Brown 1, Red 2, Orange 3 — CN591 Switch1: ON/OFF Switch2: Manual operation prohibited/allowed	• Unit is turned on when Switch1 has a short-circuit, and off when open. (Regardless of the Switch1 operation condition, the latest operation is prioritized.) • When Switch2 has a short-circuit, manual operation is prohibited,* and when open, manual operation is allowed. • When SW502-4 is turned on, the opening and short-circuiting of Switch1 and Switch2 result in their operating in the opposite manner. *When manual operation is prohibited, ON/OFF operation of the wireless remote controller, the MA remote controller, and the ME remote controller is prohibited. (Operation from Switch1 and M-NET system controller is possible.)
2	ON/OFF Manual operation prohibited/allowed (Pulse Contact)	SW500 / SW502	Brown 1, Red 2, Orange 3 — CN591 Switch1: ON/OFF Switch2: Manual operation prohibited/allowed	• Every time Switch1 is pressed, ON/OFF is switched over. (Regardless of the Switch1 operation condition, the latest operation is prioritized.) • Every time Switch2 is pressed, the manual operation prohibited*/the manual operation allowed is switched over. *When the manual operation is prohibited, ON/OFF operation of the wireless remote controller, the MA remote controller, and the ME remote controller is prohibited. (Operation from Switch1 and M-NET system controller is possible.)
3	ON/OFF Remote operation/ Manual operation (Level Contact)	SW500 / SW502	Brown 1, Red 2, Orange 3 — CN591 Switch1: ON/OFF Switch2: Remote operation/ Manual operation	• Unit is turned on when Switch1 has a short-circuit, and off when open. • When Switch2 has a short-circuit, only Switch1 is enabled (remote operation)*, when open, only Switch1 is disabled (manual operation). • When SW502-4 is turned on, the opening and short-circuiting of Switch1 and Switch2 result in their operating in the opposite manner. *In remote operation, ON/OFF operation from the wireless remote controller, the MA remote controller, the ME remote controller, and the M-NET system controller cannot be used.
4	ON, OFF (Pulse Contact)	SW500 / SW502	Brown 1, Red 2, Orange 3 — CN591 Switch1: ON Switch2: OFF	• Unit is turned on no matter how many times Switch1 is pressed. • Unit is turned off no matter how many times Switch2 is pressed. And regardless of the Switch1, Switch2 operation condition, the latest operation is prioritized. • ON/OFF operation from the wireless remote controller, the ME remote controller, the MA remote controller, and the M-NET system controller is enabled.
5	Heating/cooling input (Level Contact)	SW500 / SW502	Brown 1, Red 2, Orange 3 — CN591 Switch1: ON/OFF Switch2: Heating/Cooling	• Unit is turned on when Switch1 has a short circuit, and off when open. • Heating runs when Switch2 has a short circuit, and cooling runs when open. • When SW502-4 is turned on, the opening and short-circuiting of Switch1 and Switch2 result in their operating in the opposite manner. * As for ON/OFF operation and heating/cooling operation from the wireless remote controller, MA remote controller, ME remote controller, system controller, Switch1, and Switch2, the latest operation is prioritized.

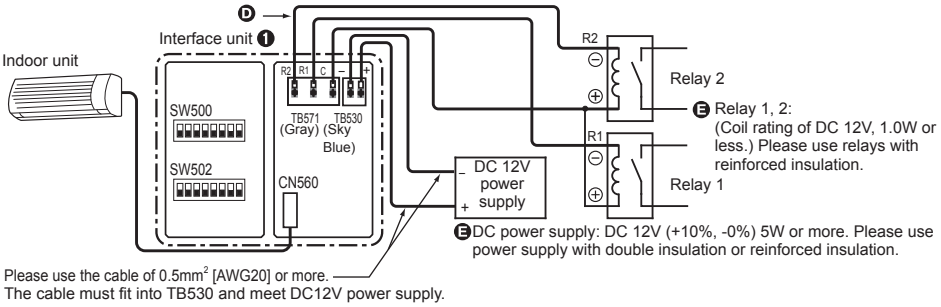
■ Setting operation (Valid only for No.1 and No.2. The following 2 functions can be used at the same time.)

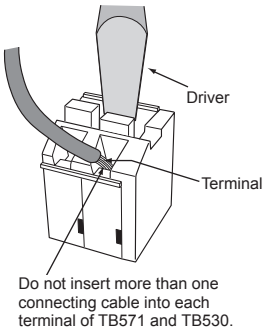
No.	Functions	SW No.	How to use	Operating details
6	Behavior when operation is prohibited.	SW502 ON / OFF	Operational status of room air conditioner when manual operation is prohibited can be set.	SW502-5: OFF • When manual operation is prohibited by Switch2, operational status is maintained as that before manual operation is prohibited. SW502-5: ON • When manual operation is prohibited by Switch2, the room air conditioner turns off.
7	Behavior when prohibition of operation is canceled.	SW502 ON / OFF	Operational status of room air conditioner when prohibition of manual operation is canceled can be set.	SW502-6: OFF • When prohibition of manual operation is canceled by Switch2, operational status is maintained as that before cancelation. SW502-6: ON • When prohibition of manual operation is canceled by Switch2, the room air conditioner turns on.

10. Setting Signal Output

■ Connecting the SYSTEM CONTROL Interface

Each relay can be turned ON/OFF by synchronizing with the room air conditioner's ON/OFF, error/normal, Heater ON/Heater OFF, and Humidifier ON/Humidifier OFF.

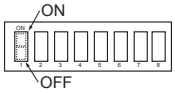
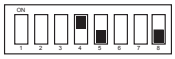
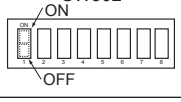
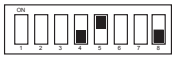
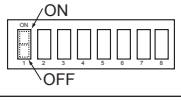
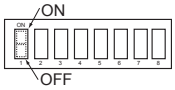




Notes
- Connecting terminal TB530 for power supply is polarized, so confirm proper polarity of the terminals before connecting.
- Do not connect DC12V from the DC power supply to TB571.
- Confirm polarity when using a diode built-in relay. C of TB571 is electropositive potential ⊕, and R1 and R2 are negative potential ⊖.

- For TB571 and TB530, insert wiring after inserting the flathead screwdriver into the terminal.
- Appropriate electric wire for TB571 and TB530 is as follows. Stranded wire: 0.3mm² to 1.25mm² [AWG22 to 16] Solid wire: ø0.4mm to ø1.2mm [ø1/64in. to ø3/64in.]
- Peeling dimension of the electric wire for TB571 and TB530 is 7mm to 10mm [9/32in. to 25/64in.].
- Wiring length from the interface to Relay 1 and Relay 2 should be less than 50m [164ft].

■ Setting when using Status Signal Output

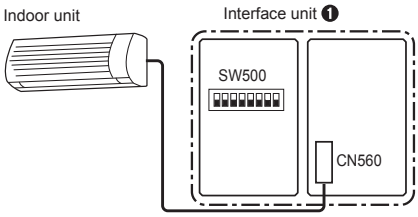
Functions	SW No.	Operating details
ON/OFF, Error/ Normal Output	SW500  SW502 	SW502-1: OFF • Relay 1 is on when room air conditioner is on, and off when room air conditioner is off. • Relay 2 is on when room air conditioner is in error, and off when room air conditioner is operating normally. SW502-1: ON • Relay 1 and 2 behavior are opposite of those above.
ON/OFF, Heater Control Output	SW500  SW502 	SW502-1: OFF • Relay 1 is on when room air conditioner is on, and off when room air conditioner is off. • When the air conditioner runs in the heating (automatic heating) mode and room temperature becomes the set temperature - 4.5 ºF (2.5 ºC) or lower, the Relay 2 (heater) turns on. When the air conditioner runs in a mode other than the heating (automatic heating) or it is OFF, or when room temperature becomes the set temperature or higher, the Relay 2 (heater) turns off. SW502-1: ON • Relay 1 and 2 behavior are opposite of those above.
ON/OFF, Humidifier Control Output	SW500  SW502 	SW502-1: OFF • Relay 1 is on when room air conditioner is on, and off when room air conditioner is off. • When the air conditioner runs in the heating (automatic heating) mode, Relay 2 (humidifier) turns on. When the air conditioner runs in a mode other than heating (automatic heating) or it is OFF, Relay 2 (humidifier) turns off. SW502-1: ON • Relay 1 and 2 behavior are opposite of those above.
Heater Control, Humidifier Control Output	SW500  SW502 	SW502-1: OFF • When the air conditioner runs in the heating (automatic heating) mode and room temperature becomes the set temperature - 4.5 ºF (2.5 ºC) or lower, Relay 1 (heater) turns on. When the air conditioner runs in a mode other than the heating (automatic heating) or it is OFF, or when room temperature becomes the set temperature or higher, Relay 1 (heater) turns off. • When the air conditioner runs in the heating (automatic heating) mode, Relay 2 (humidifier) turns on. When the air conditioner runs in a mode other than heating (automatic heating) or OFF, Relay 2 (humidifier) turns off. SW502-1: ON • Relay 1 and 2 behavior are opposite of those above.

11. Turn on/off with power

The room air conditioner turns on when power is supplied.

- When using for the first time, set to the operational status of your choice with the remote controller and leave the power off for 1 minute.

* When not used for a long period of time, you should set to the operational status of your choice again with the remote controller.



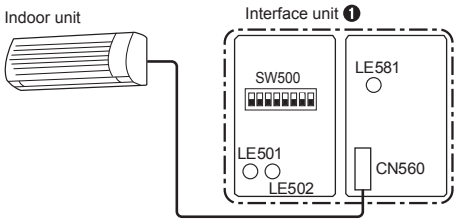
Notes
- The turn on/off with power function cannot be used when connected to multiple outdoor units.
- When starting two or more room air conditioners by using the turn on/off with power function, make the system so they do not recover simultaneously. (To avoid inrush current, start sequentially.)

Setting when using Turn on/off with power

Functions	SW No.	Operating details
Turn on/off with power	SW500 ON OFF	SW500-2: OFF • After the power is supplied, the room air conditioner resumes working in the previous running condition. When AUTO RESTART FUNCTION is not set to the room air conditioner, it remains off. SW500-2: ON • The room air conditioner turns on when power is supplied.

12. Interface status monitor

You can check the status of the interface unit by the LED lamp on the interface unit ❶ board.

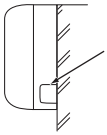


- Use the table below to check communications. If communications cannot be carried out normally, check that the relevant communications line is not disconnected from the connector or terminal box.

Functions	SW No.	Operating details
Interface status monitor	SW500 ON OFF	SW500-7: OFF ● LE501 (Orange): When blinking at an interval of about 1 second, the Interface unit is communicating normally with the room air conditioner. When the lamp is off, the Interface unit is not communicating normally with the room air conditioner. ● LE502 (Red): When blinking at an interval of about 1 minute, the Interface unit is communicating normally with the M-NET controller. When the lamp is off, the Interface unit is not communicating normally with the M-NET controller. SW500-7: ON ● LE501 (Orange): When blinking at an interval of about 10 second, the Interface unit is communicating normally with the MA remote controller. When the lamp is off, the Interface unit is not communicating normally with the MA remote controller. ● LE502 (Red): Extinguished * LE581 (Orange) displays the following status irrespective whether SW500-7 is on or off. ● When lit, power is supplied to the MA remote controller from the Interface unit ❶. When extinguished, power is not supplied.

13. Mounting the SYSTEM CONTROL Interface Unit

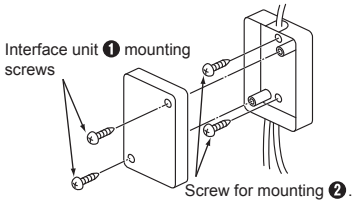
Notes
- The Interface unit ❶ should be placed in a location where the connecting cable (5-core) from the interface unit ❶ can reach an indoor unit.
- The device will not function properly the connecting cable is extended, so the connecting cable (5-core) should no be extended.
- Mount the interface unit ❶ securely to a pillar or wall using 2 or more screws ❷.

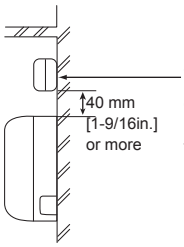


Attach the connecting cable (5-core) of the interface unit ❶ here. Store extra connecting cable (5-core) in the ductwork space behind the air conditioner.
If there is any slack in the connecting cable (5-core), use a fastener ❾ to keep it in place.

■ When Mounting Directly to a Wall

Mount the interface unit ❶ case to the wall using the mounting screws ❷.

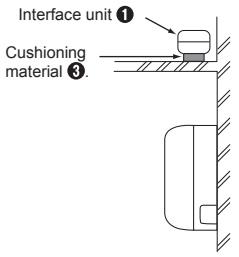




When the interface unit ❶ is mounted above an indoor unit, it should be positioned 40 mm [1-9/16in.] or more away from the unit to ensure that ceiling grills can be removed.

■ When mounting the interface unit inside a ceiling

When mounting the interface unit ❶ inside a ceiling or wall, install an access door to facilitate maintenance.



* When mounting the interface unit ❶ using a cushioning material ❸, be sure to mount it in a location where it will not fall.

14. Notes Regarding Use

The following control information should be thoroughly explained and provided to the users of this device. (Please provide these instructions to the user once the installation is complete.)

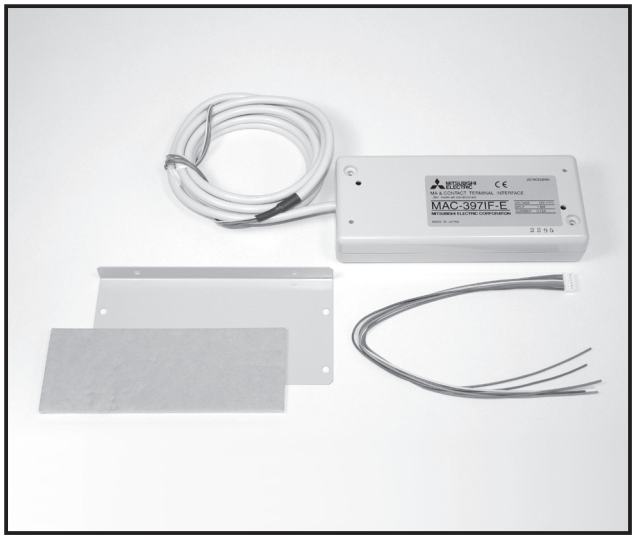
This Interface unit ❶ operates room air conditioners using the controls of a City-Multi or P series, but there are several limitations imposed as a result of the functional differences between room air conditioners and packaged air conditioners.

1. When operating the system using a System Controller, MA Remote Controller, or ME Remote Controller these operations will not appear on the display of the wireless remote controller.
2. When original dehumidification mode is set with the remote controller attached to the room air conditioner, “Dry” is displayed because there is no mode corresponding to dehumidification on the MA remote controller, ME remote controller, and the system controller.
3. Because the temperature range of the room air conditioners is broader than a System Controller, MA Remote Controller, or ME Remote Controller, when the room air conditioners is set to lower than 17°C (63ºF) or higher than 30°C (87ºF), the temperature display on the a System Controller, MA Remote Controller, or ME Remote Controller will show the minimum or maximum temperature that can be set. (For example, even if the room air conditioner is set to cool a room to 16°C (61ºF), the display on a System Controller, MA Remote controller, or ME Remote Controller may read “17°C” (63ºF)).
4. Timer operations should be set using only the remote controller that came with the room air conditioners or the a System Controller, MA Remote Controller, or ME Remote Controller. If both are used to set the timer to the same time, the timer will not function properly.
5. When “Manual operation prohibited” (ON/OFF, setting temperature, operation mode) is set with the system controller, the corresponding operation by the remote controller attached to the room air conditioner is not accepted, but allowed operation is reflected. A beep sounds during operation to confirm reception.
6. A part of functions including the operation of horizontal air blow direction cannot be used from the ME remote controller, the system controller, and the MA remote controller.

15. Specifications

Indoor unit side	Input voltage	12V ⎓
	Power consumption	1.8W
	Input current	0.15A
Power supply unit side	Input voltage	12V ⎓
	Power consumption	4.8W
	Input current	0.4A

Photo



Descriptions

Enables to control multiple air conditioners from a (remote) location by connecting the On/Off contact point. It can also control the operation of the relay with error signals by connecting the MA remote controller PAR-32MAA.

Applicable Models

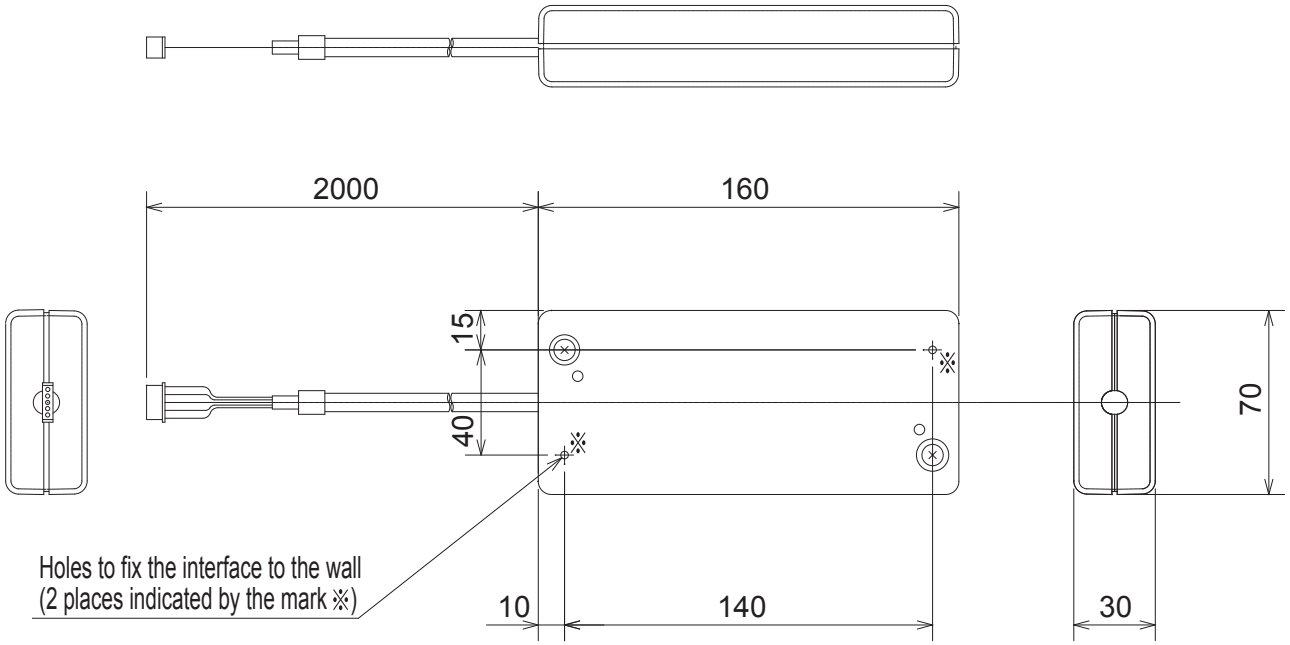
- MSZ-FH25/35/50VE2
- MSZ-EF18/22/25/35/42/50VE3W/B/S
- MSZ-SF15/20VA
- MSZ-SF25/35/42/50VE3
- MSZ-GF60/71VE2
- MSZ-DM25/35VA
- MFZ-KJ25/35/50VE2
- MLZ-KA25/35/50VA
- S-series models
- P-series models: In the case the outdoor unit is SUZ or MXZ, the indoor of P-series can be connected. (Except PEA-RP400/500GAQ, PCA-RP100/125/140FAQ, PCA-RP71HAQ)

Specifications

Power		12V DC (supplied from indoor unit)
Operating conditions		Indoor only (ambient temperature: 0 to 40℃, no condensation)
Connection of centralized controller	Communication cable	3-wire (recommended: microphone cord (MVVS) 0.3mm²)
	Communication cable distance	Max. 100m
Connection of MA smooth remote controller / MA deluxe remote controller	Communication cable	2-wire (recommended: optional PAC remote controller cable PAC-YT81HC)
	Communication cable distance	Max. 10m
Indoor unit connecting cable		Dedicated 5-wire cable
Weight		300g (including indoor unit connecting cable)

Dimensions

Unit : mm



1. Before Installation

1.1. How to Use the MA & CONTACT TERMINAL Interface

■ **Functions**

Centralized control (Fig. 1-1)

You can turn multiple air conditioners on and off from one location. (MAC-821SC-E (8-Room))

Use as wired remote controller (Fig. 1-2)

You can use the MA remote controller as a wired remote controller. (PAR-32MAA, PAR-31MAA, PAR-30MAA, PAR-21MAA)

Remote control (Fig. 1-3)

You can turn on and off an air conditioner from a remote location by connecting the ON/OFF contact point.

Status indicator output (Fig. 1-4)

You can control the operation of the relay with either of the on/off or error/ok status output signals.

■ **Sample System Configuration**

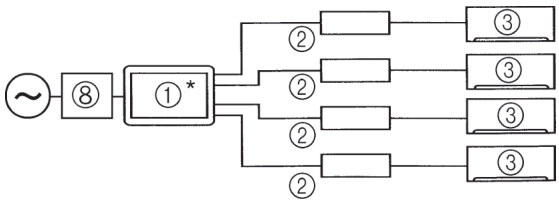


Fig. 1-1

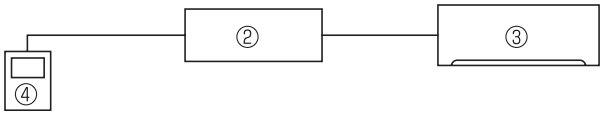


Fig. 1-2

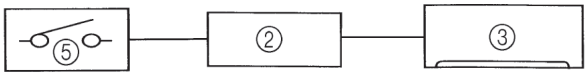


Fig. 1-3

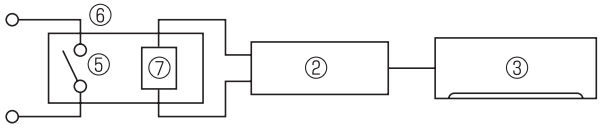


Fig. 1-4

① Centralized controller (MAC-821SC-E)
② MA & CONTACT Terminal Interface
③ Indoor Unit
④ MA remote controller
⑤ Contact point
⑥ Relay
⑦ Coil
⑧ Breaker

* A separate AC power supply is required for centralized controller.

OPTIONAL PARTS

1.2. Parts

Before installing the unit, make sure that you have all the necessary parts.

■ Accessory

(1)	Interface unit	1
(2)	Wall mouniing brackets	1
(3)	Screws for mounting (2) 3.5 × 12	4
(4)	Cushioning material (with adhesive)	1
(5)	Mounting cord clamp (small)	1
(6)	Mounting cord clamp (medium)	2
(7)	Mounting cord clamp (large)	1
(8)	Screws for mounting (5)-(7) 3.5 × 12 * Use when attaching the clamps to the interface unit	1
(9)	Screws for mounting (6) 4 × 10 * Use this when mounting the clamps near the M series	1
(10)	Screws for mounting (6) 4 × 16 * Use when mounting the clamps and electrical wire mounting bracket	1
(11)	Cable tie	3
(12)	Fasteners (for joining the lead wires)	3
(13)	Cord clamps for wiring	3
(14)	Screws for mounting (13) 3.5 × 12	3
(15)	Screws 3.5 × 12 (Spare)	2
(16)	Lead wires (6)	1

■ Items to Be Prepare at the Installation Site

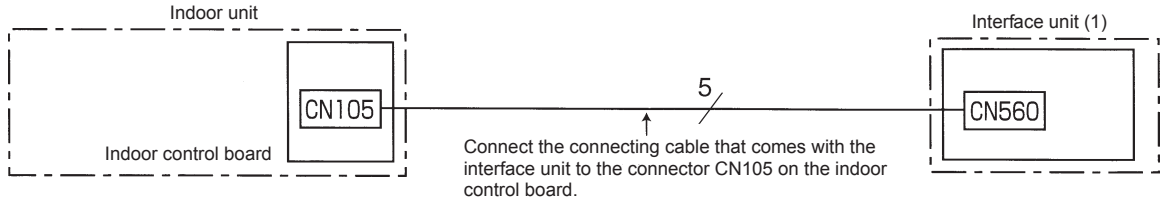
(A)	Signal wires (also used as extension wires)
(B)	Remote control wires (for connecting the MA Remote Controller) 2-corewire between 0.3 and 1.25mm^2.
(C)	Switch, relay, coin timer, etc. (if necessary) * Please use products with supplementary insulation.

Use wires which have insulation more than the MAX voltage.
* MAX voltage is defined according to the law of the country where the interface is used.

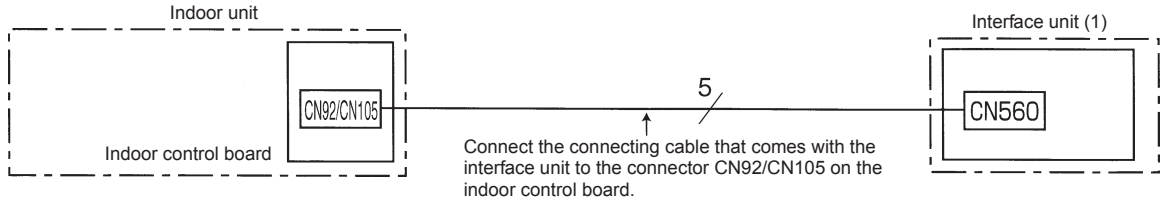
2.Connecting the MA & CONTACT TERMINAL Interface to Indoor Unit

- Connect the interface unit and the indoor control board using the connecting cable that came with the interface.
- Extending or shortening the connecting cable that comes out of the interface may cause it to malfunction. Also, keep the connecting cable as far as possible away from the electrical wires and ground wire. Do not bundle them together.

M series



P/S series



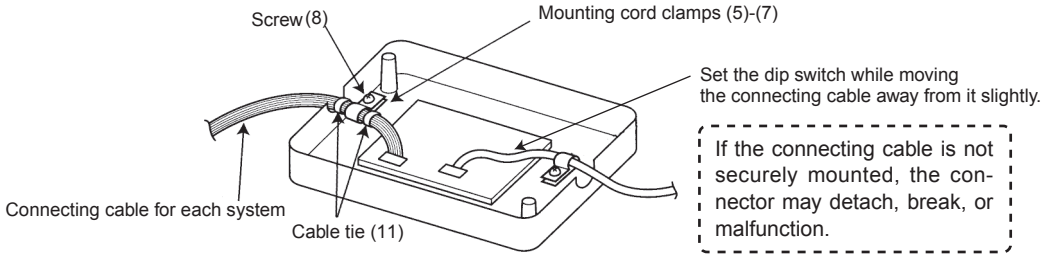
- When this interface unit is connected with indoor unit, timer operation cannot be set from a wireless remote controller.

OPTIONAL PARTS

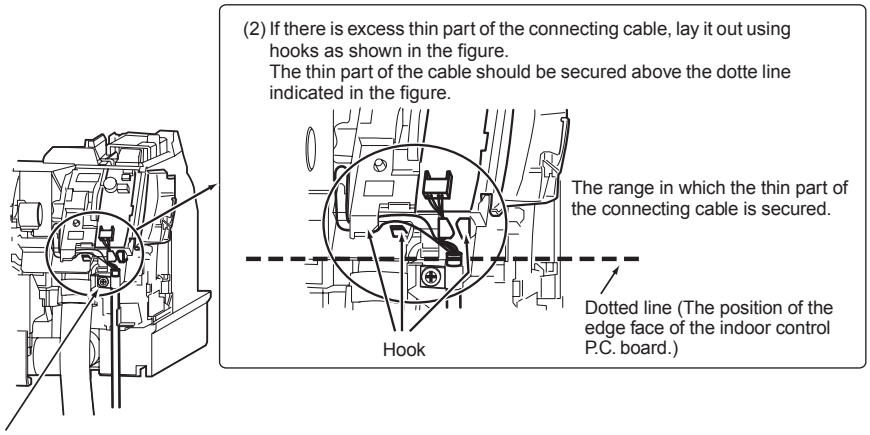
3. Connecting the MA & CONTACT TERMINAL Interface with each system

(For details on each system, see the relevant instruction manual.)

- Screw the mounting cord clamp (5)-(7) according to the thickness of the connecting cable used for each system. Fasten the cable tie (11) as shown in the figure to prevent undesirable movement of the connecting cable.



- The cables connected to the indoor unit should be mounted on or near the indoor unit.

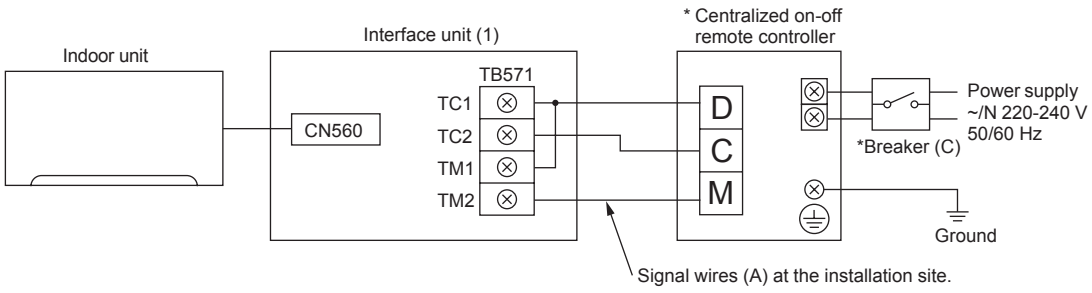


(1) Attach a mounting cord clamp (5)-(6) provided with the parts prepared at the installation site to the thick part of the connecting cable, and fix it with a screw 4 × 10 (9).

(3) Close the cover of the indoor control P.C. board. Reinstall the front panel and the lower right corner box.

- Set the interface dip switch (SW500–502) settings before turning on the power.
- If the interface dip switch (SW500–502) settings are not set correctly, the system will not function properly.

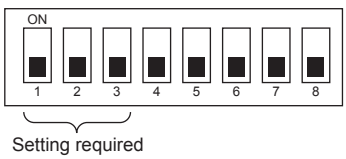
3.1. Centralized Control (When Connecting to a Centralized on-off remote Controller)



* Refer to the installation manual of centralized on-off remote controller.

Dip switch settings

■SW500



■SW501 and SW502 do not have to be set.

SW501

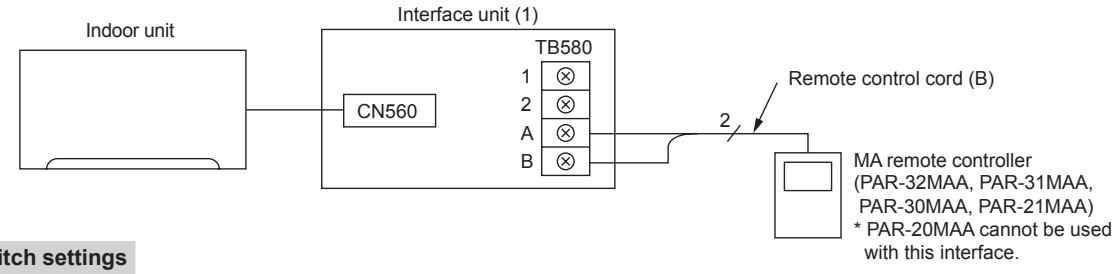
SW502

OPTIONAL PARTS

3.2. Use as a Wired Remote Controller (Using the MA Remote controller)

Note:

1. **Be sure to set the "Auto Heating/Cooling Display Setting" of the MA remote controller OFF before use. When the setting is turned ON, the remote controller display may differ from the actual operating status of the unit.**
   - **For details on the "Auto Heating/Cooling Display Setting," refer to the MA remote controller instruction manual.**
2. **A test run cannot be initiated using the test run switch on the MA remote controller.**
3. **The horizontal vanes on the unit cannot be operated using the louver switch.**
4. **The range of room temperature indication is between 10°C and 38°C.**



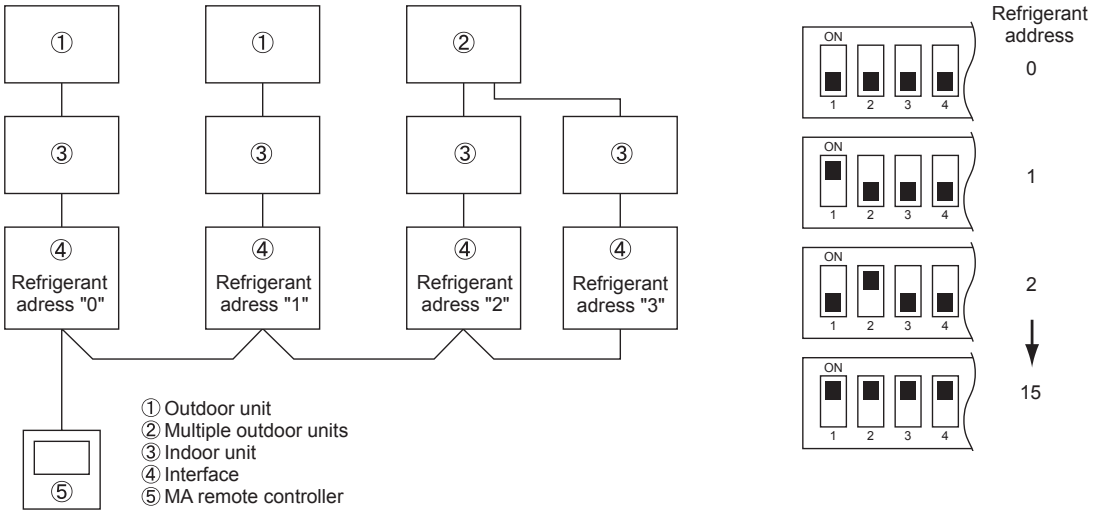
Dip switch settings

■ **SW500 does not have to be set.**

■ **SW501:**

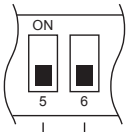
SW501- No. 1-4: Refrigerant address

- Set this switch when multiple indoor units (and interfaces) are connected to a single MA remote controller.
- Always start the refrigerant address at "0".
- Even when connecting multiple outdoor units, set a different refrigerant address for each indoor unit.



SW501- No. 5-6

M series



No. 5 and 6 should normally be set to OFF.
Under the following conditions, however, they should be switched to ON.

Only turn this ON when the indoor units in the same group include models where the MA remote controller and indoor unit are directly connected.

Set them to ON only when using the room temperature sensor installed in the MA remote controller.

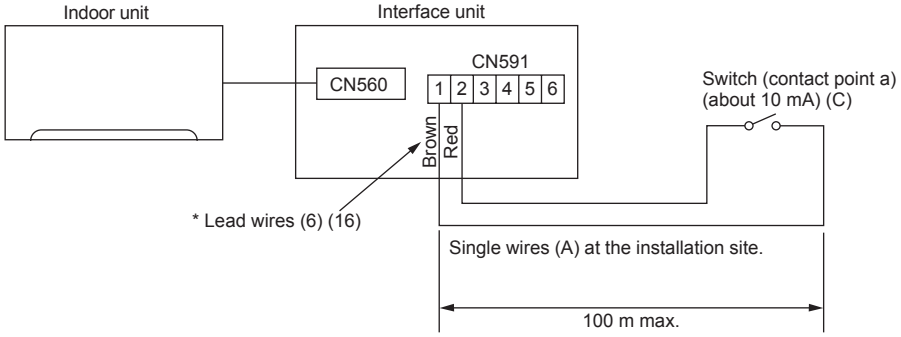
* This can be switched when an accurate room temperature cannot be detected by the air conditioner unit. MSZ-GA and MSZ-FA Series models can not use a room temperature sensor on their MA remote controllers. (Some M series models will not allow the use of the MA remote controller room temperature sensor.)

■**SW502:**

- Set this switch based on the functions of the indoor unit connected to the interface.
- See the table of “Air conditioner Function Settings” for SW502 and set the switch after checking the functions using the wireless remote control that came with the indoor unit.

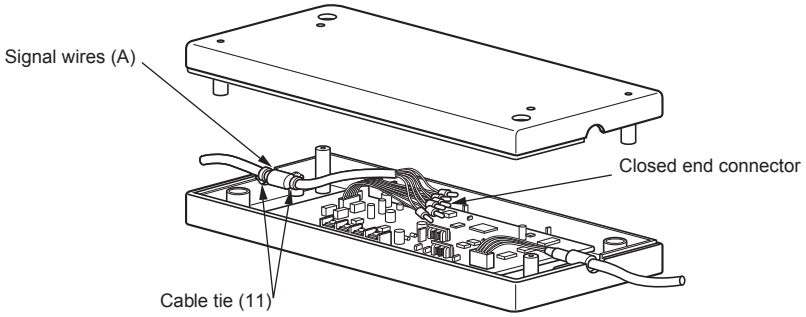
3.3. Remote Control (Turning Indoor Unit On and Off from the Contact Point)

- You can turn indoor unit on and off using an on/off switch like a light switch.
- Connect the supplied lead wires (6) (16) to the connector CN591 on the interface board.
- Wire the remote control components, including the switches, at the installation site.
- Please use extension cords with reinforced insulation.



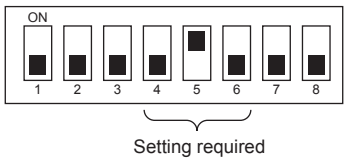
- When the switch contact point is closed (ON), the air conditioner will turn on, and when the switch contact point is open (OFF), the air conditioner will turn off.

* When connecting the connector and the lead wire, connect them using a closed end connector as shown below.



Dip switch settings

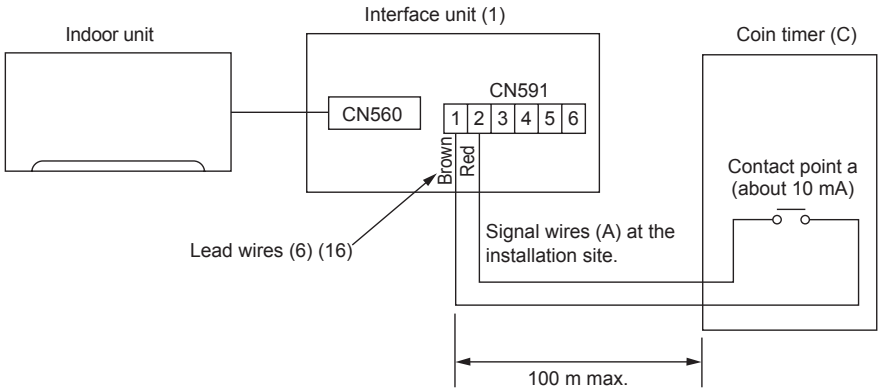
■**SW500**



■**SW501 and SW502 do not have to be set.**

3.4. Restricting Indoor Unit Operations from the Contact Point

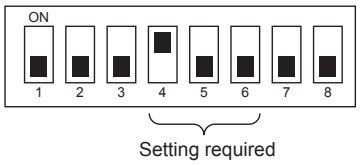
- You can use a coin timer or light switch to ensure that indoor unit will not operate.
- Connect the supplied lead wires (6) (16) to the connector CN591 on the interface board.
- Wire the remote control components, including the coin timers or switches, at the installation site.
- Please use extension cords with reinforced insulation.



* When the contact point is open, the unit will turn off and will not be operable from the remote control.
When the contact point is closed, the unit will turn on and will be operable from the remote control.

Dip switch settings

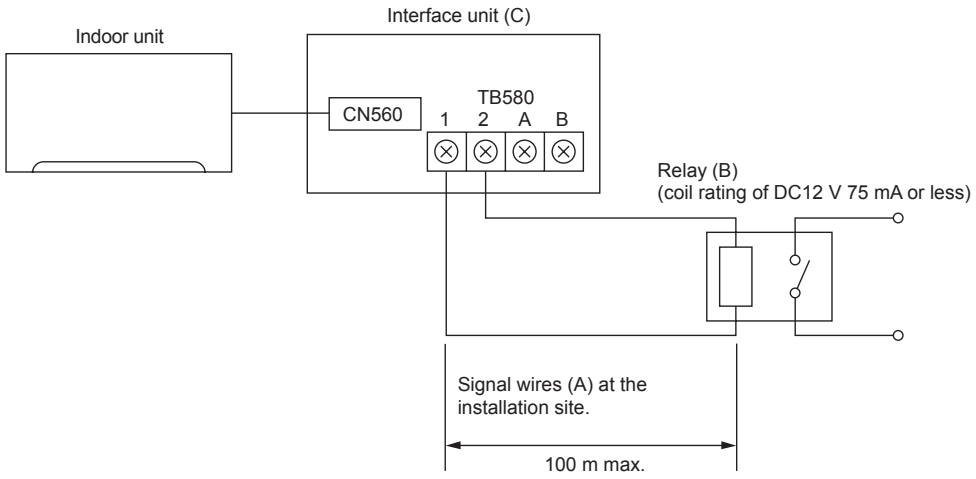
■ **SW500**



■ **SW501 and SW502 do not have to be set.**

3.5. Status Signal Output Using the Relay

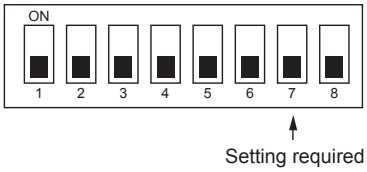
- You can set the external relay to ON/OFF based on whether the indoor unit is set to either on/off or error/ok.
- Set up and wire the relay and extension cables at the installation site.
- Please use relays with reinforced insulation.



Dip switch settings

■ **SW500**

1. When outputting the indoor unit ON/OFF



The relay is ON when the unit is running, and OFF when it is not.

2. When outputting the indoor unit ERROR/OK

The relay is ON when an error has occurred, and OFF when the unit is functioning properly.

■ **SW501 and SW502 do not have to be set.**

4. Dip Switch Details

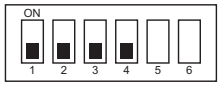
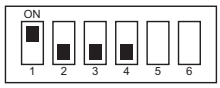
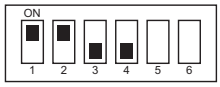
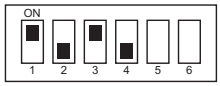
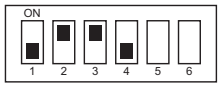
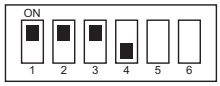
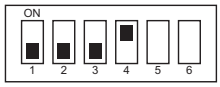
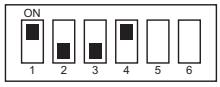
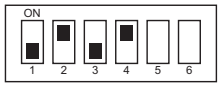
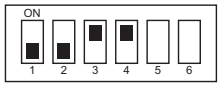
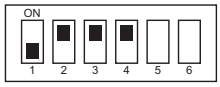
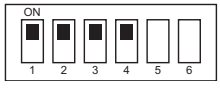
• SW500 - Input/Output Mode Settings

SW No.	Functions	OFF	ON	Comments
No. 1	Not in use	Set to OFF	-	Be sure to set these to OFF (When set to OFF, the unit cannot communicate with the air conditioner).
No. 2	HA terminal (CN504) input switch	Pulse input	Continuous input	There is a switch between TC1 and 2 input on the TB571.
No. 3	HA terminal (CN504) output switch	Static mode	Dynamic mode	
No. 4	Remote control (CN591) mode switch 1	See the next page	See the next page	
No. 5	Remote control (CN591) mode switch 2			
No. 6	Remote control (CN591) mode switch 3			
No. 7	Relay, extermination output mode switch	ON/OFF output	ERROR/OK output	When there is a problem while the unit is running, it will output a relay ON signal.
No. 8	Turn ON/OFF with power option	Turn ON/OFF with power: No (unit remains OFF when the source power is turned ON)	Turn ON/OFF with power: Yes (Returns the unit to the status (ON/OFF) it was in before the power was turned OFF)	When the Auto Restart function on the air conditioner itself is set to ON, be sure to set these to OFF.

Remote control (CN591) mode switch

<table>
<tr><th colspan="3">SW 500</th><th rowspan="2">Functions</th><th rowspan="2">Operating Details</th></tr>
<tr><th>No. 4</th><th>No. 5</th><th>No. 6</th></tr>
<tr><td>OFF</td><td>OFF</td><td>OFF</td><td>Do not use the CN591 remote control</td><td>-</td></tr>
<tr><td>OFF</td><td>OFF</td><td>ON</td><td>ON/OFF Prohibited/Allowed mode 1</td><td>Manual operations prohibited when CN591 No. 1 and No. 3 are closed, permitted when open.
Only when No. 1 and No. 3 are closed and manual operations are prohibited.
On when CN591 No. 1 and No. 2 are closed, off when open.
(Cannot be operated from the remote control when manual operations are permitted. Only valid when operated from the CN591.)</td></tr>
<tr><td>OFF</td><td>ON</td><td>OFF</td><td>ON/OFF Prohibited/Allowed mode 2 (level input)</td><td>On when CN591 No. 1 and No. 2 are closed, off when open.
Manual operations prohibited when No. 1 and No. 3 are closed, permitted when open.
(Cannot be operated from the remote control when manual operations are permitted. Only valid when operated from the CN591.)</td></tr>
<tr><td>OFF</td><td>ON</td><td>ON</td><td>ON/OFF Prohibited/Allowed mode 3 (pulse input)</td><td>On when CN591 No. 1 and No. 2 are closed, off when No. 1 and No. 3 are closed.
Manual operations prohibited when No. 1 and No. 4 are closed, and permitted when No. 1 and No. 5 are closed.
(Same as when they are open.)</td></tr>
<tr><td>ON</td><td>OFF</td><td>OFF</td><td>Coin timer mode 1 (for a no-voltage contact point a)</td><td>Permitted and on when CN591 No. 1 and No. 2 are closed, manual operations prohibited and off when open.
(When permitted, the unit can be operated from the remote control.)</td></tr>
<tr><td>ON</td><td>OFF</td><td>ON</td><td>Coin timer mode 2 (for a no-voltage contact point b)</td><td>Manual operations prohibited and off when CN591 No. 1 and No. 2 are closed, permitted and on when open.
(When permitted, the unit can be operated from the remote control.)</td></tr>
<tr><td>ON</td><td>ON</td><td>OFF</td><td>Cooling-Heating/Temperature settings mode 1 (3 temperature patterns)</td><td>On when CN591 No. 1 and No. 2 are closed, off when open.
When No. 1 and No. 3 are closed 20℃
When No. 1 and No. 4 are closed 24℃
When No. 1 and No. 5 are closed 28℃
(When multiple switches No. 3, 4, and 5 are closed, the highest temperature will be selected.)
Heat when No. 1 and No. 6 are closed, cool when open.
(Remote control operations are valid as always.)</td></tr>
<tr><td>ON</td><td>ON</td><td>ON</td><td>Cooling-Heating/Temperature settings mode 2 (8 temperature patterns)</td><td>On when CN591 No. 1 and No. 2 are closed, off when open.
<table>
<tr><th>No. 1 and No. 3</th><th>No. 4</th><th>No. 5</th><th>Temperature settings</th></tr>
<tr><td>Open</td><td>Open</td><td>Open</td><td>16℃</td></tr>
<tr><td>Closed</td><td>Open</td><td>Open</td><td>18℃</td></tr>
<tr><td>Open</td><td>Closed</td><td>Open</td><td>20℃</td></tr>
<tr><td>Closed</td><td>Closed</td><td>Open</td><td>22℃</td></tr>
<tr><td>Open</td><td>Open</td><td>Closed</td><td>24℃</td></tr>
<tr><td>Closed</td><td>Open</td><td>Closed</td><td>26℃</td></tr>
<tr><td>Open</td><td>Closed</td><td>Closed</td><td>28℃</td></tr>
<tr><td>Closed</td><td>Closed</td><td>Closed</td><td>30℃</td></tr>
</table>
Heat when No. 1 and No. 6 are closed, cool when open.
(Remote control operations are valid as always.)</td></tr>
</table>

■ **SW501: Settings when connecting an MA remote controller**

SW No.	Functions	OFF	ON	Comments
No. 1 No. 2 No. 3 No. 4	 Refrigerant address 0			Only specify these settings when connecting an MA remote controller.
	 Refrigerant address 1			
	 Refrigerant address 2			
	 Refrigerant address 3			
	 Refrigerant address 4			
	 Refrigerant address 5			
	 Refrigerant address 6			
	 Refrigerant address 7			
	 Refrigerant address 8			
	 Refrigerant address 9			
	 Refrigerant address 10			
	 Refrigerant address 11			
	 Refrigerant address 12			
	 Refrigerant address 13			
	 Refrigerant address 14			
	 Refrigerant address 15			
SW No.	Functions	OFF	ON	Comments
No. 5	Room temperature detector	Indoor unit	Remote control	This should normally be set to OFF.
No. 6	MA remote controllers are directly connected to indoor units within the same group.	Not mixed	Mixed	

■ **SW502 : Air Conditioner Function Settings**

(Set this switch based on the functions of the M series connected to this device.)

M series

SW No.	Functions	OFF	ON	Comments
No. 1	Availability of a heating mode	Combined cooler and heater	Cooling unit only	–
No. 2	Not in use	–	–	Permanently set to ON.
No. 3	Not in use	–	–	Permanently set to ON.
No. 4	Not in use	–	–	Permanently set to ON.
No. 5	Not in use	–	–	Permanently set to OFF.
No. 6	Not in use	–	–	Permanently set to OFF.
No. 7	Not in use	–	–	Permanently set to OFF.
No. 8	Availability of a fan (Cooling model only)	Has a fan or mode OFF	No fan or mode ON	–

P/S series

SW No.	Functions	OFF	ON	Comments
No.1	Cooling only type/Heat pump type	Heat pump type	Cooling only type	Set the mode in accordance with the operation manual for the indoor unit.
No.2	Auto mode	Not available (setting No. 3 disabled)	Available (setting No. 3 enabled)	Heat pump type : Set to ON. Cooling only type : Set to OFF.
No.3		Available (unit)	Available (remote controller)	Set to OFF.
No.4	Fan speed	4 speeds	3 speeds (2-speed model set ON)	When operating a 2-speed model with the 3-speed setting (ON), the MA remote controller display will indicate 3 fan speeds. The table below shows the displays and the actual outputs at that time.
No.5	Vane	Available	Not available	The Vane function of either of indoor unit : When the function is provided, it is Available (OFF). When the function is not provided it is Not available (ON).
No.6	Swing	Available	Not available	The Swing function of either of indoor unit : When the function is provided, it is Available (OFF). When the function is not provided, it is Not available (ON).
No.7	Not in use	–	–	Permanently set to OFF.
No.8	Fan mode	Not available	Available	Set to ON.

Display	Meaning	Indoor unit output
	Low speed	Low speed
	Medium speed	High speed
	High speed	High speed

* Fan speed 2 step model : An actual fan speed is 2 step though the display of remote controller becomes 4 step or 3 step.

5. Test Run (Check Operations)

■ **Interface status monitor**

You can check the status of the interface by the LED lamp on the interface unit board.

LED lamp no.	Lamp off	Lamp on	Blinking
LED521	DC 12 V is not being supplied from the air conditioner.	DC 12 V is being supplied from the air conditioner.	–
LED522	Device is not communicating properly with the air conditioner.	–	Blinking at approx. 1 second intervals: Device is communicating normally with the air conditioner.
LED523	Device is not communicating properly with the MA remote controller.	–	Blinking at approx. 8 second intervals: Device is communicating normally with the MA remote controller.

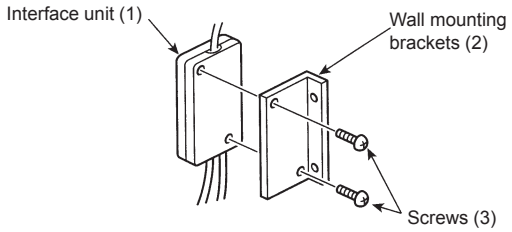
* Use the table above to check the device operations.

6. Mounting the MA & CONTACT TERMINAL Interface Unit

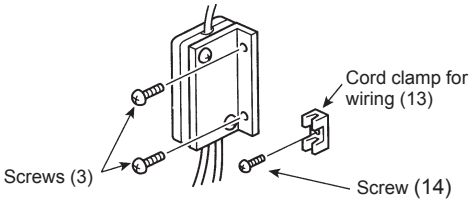
When mounting the interface to the back-side dent of MFZ-KJ model, be sure to apply insulation material to prevent condensation from forming.
The Interface unit should be placed in a location where the connecting cable from the interface can reach an indoor unit.
The device will not function properly if the connecting cable is extended so the connecting cable should not be extended.
Mount the interface unit securely to a pillar or wall using 2 or more screws.

■**When Using Wall Mounting Brackets**(2)

1 Attach the wall mounting brackets (2) to the interface unit (1) using 2 mounting serews (3).

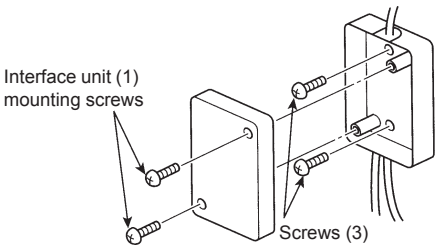


2 Mount the unit to a pillar or wall using 2 mounting screws (3).

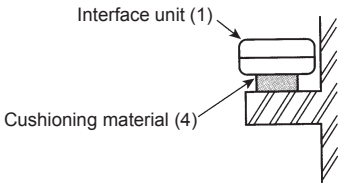


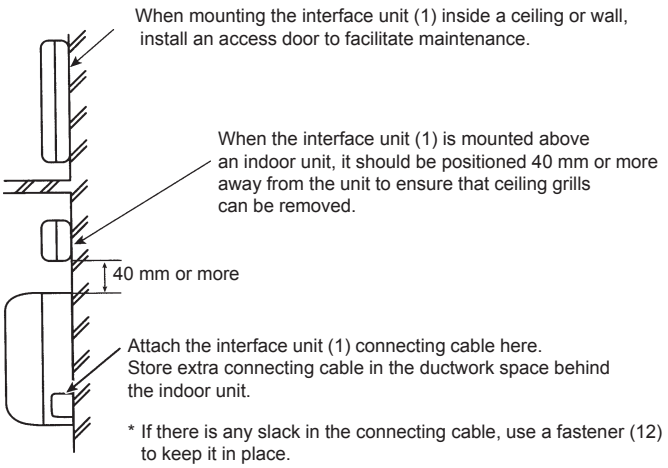
■**When Mounting Directly to a Wall**

Mount the interface unit (1) case to the wall using the mounting screws (3).



* When mounting the interface unit (1) using a cushioning material (4), be sure to mount it in a location where it will not fall.





7. Specifications

Input voltage	12 V ⎓
Power consumption	2 W
Input current	0.15 A

OPTIONAL PARTS

Descriptions

This device, Wi-Fi interface, communicates the status information and controls the commands from the server by connected to an air conditioner.

- Some room air conditioners are not compatible with the Wi-Fi interface. Make sure that the room air conditioner is compatible with the Wi-Fi interface before attempting to install the Wi-Fi interface.

Applicable Models

- MSZ-FH25/35/50VE2
- MSZ-EF18/22/25/35/42/50VE3W/B/S
- MSZ-SF15/20VA
- MSZ-SF25/35/42/50VE3
- MSZ-GF60/71VE2
- MSZ-DM25/35VA
- MFZ-KJ25/35/50VE2
- MLZ-KA25/35/50VA
- S-series models
- P-series models

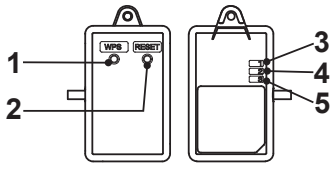
(Except PEA-RP400/500GAQ, PCA-RP71HAQ)

Specifications

Input Voltage	DC12.7V (from indoor unit)
Power consumption	MAX 2W
Size W×H×D (mm)	88×49×18.5
Weight	105g (including cable)
RF channel	1ch ~ 13ch
Radio protocol	IEEE 802.11b/g/n (20)
Encryption	AES
Authentication	PSK

Product Introduction

No	item	Description
1	WPS switch	It activates WPS.
2	RESET switch	It resets the system and ALL settings.
3	LED1 (Green)	It shows the wireless communication state.
4	LED2 (Orange)	It shows the MAC-557IF-E state.
5	LED3 (Green)	It shows the local communication state.



Parts

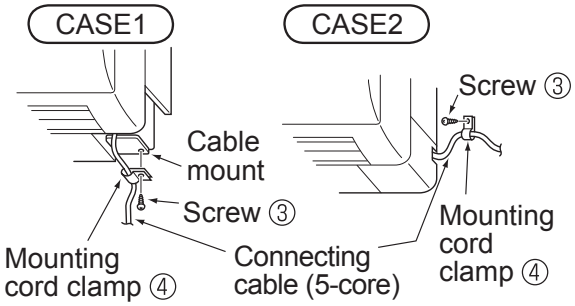
①	Interface unit [with connecting cable (5-core)]		1	④	Mounting cord clamp		1
②	Screw for mounting 3.5×16		1	⑤	Fastener (for bundling the wires)		1
③	Screw for mounting 4×16		1				

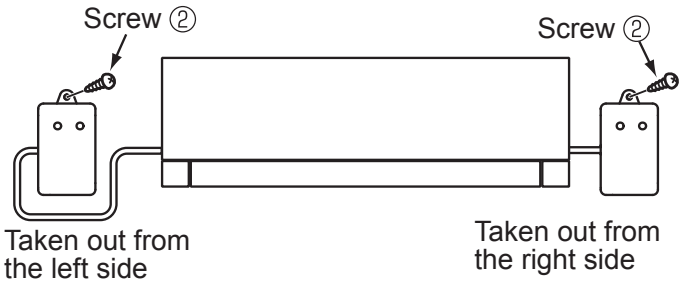
How to Use / How to Install

1. Connecting the Wi-Fi interface
(For details on each system, see the relevant instruction manual.)

- The connecting cable (5-core) connected to a room air conditioner (CN105) should be mounted at the room air conditioner or its vicinity.
- Cable length outside air conditioner: less than 50cm.

Do not install the Wi-Fi interface inside the indoor unit.





After connecting the Wi-Fi interface to the air conditioner, connect the Wi-Fi interface to the access point (to communicate with the server).
For this Wi-Fi interface, the use of WPS-Push is recommended. (Refer to 3.)

1) Hold down the WPS switch on the Wi-Fi interface for about 2 seconds to activate WPS-Push. When WPS-Push on the Wi-Fi interface is ready to communicate with the access point, LED 1 blinks at a 0.5-second interval.
2) Activate WPS-Push on the access point.
3) When WPS-Push is successfully enabled, LED 1 lights up for 5 seconds. If it failed, LED 2 lights up for 5 seconds, so try again from step 1.

Main Causes that WPS failed are as follows.
Comunication distance (from the Wi-Fi interface to access point), access point settings (encryption, authentication, limit of connections, etc.)
Refer to the instruction manual for more information.

2. LED pattern

● **:ON** ○ **:OFF** ☀ **:Blinking**

Description	LED1	LED2	LED3
Power is ON or software downloaded	☀ (0.5-sec interval)	☀ (0.5-sec interval)	☀ (0.5-sec interval)
ALL settings reset	●	●	●
WPS activated (PBC)	☀ (0.5-sec interval)	○	○
WPS activated (PIN)	☀ (0.2-sec interval)	○	○
WPS enabled	● (5-sec)	○	○
WPS failed	○	● (5 sec)	○
Server and access point communication connected, and air conditioner communication failed	☀ (once every 5 sec)	☀ (0.5-sec interval)	○
Server and access point communication connected, and air conditioner communication connected	☀ (once every 5 sec)	○	☀ (once every 5 sec)
Server and access point communication connected, and air conditioner communication starting up	☀ (once every 5 sec)	○	●
Server communication failed, and air conditioner communication connected	○	☀ (0.5-sec interval)	☀ (once every 5 sec)
Server communication or access point communication failed, and air conditioner communication starting up	○	☀ (0.5-sec interval)	●
Server communication or access point communication failed, and air conditioner communication failed	○	☀ (0.5-sec interval)	○
Access point communication failed, and air conditioner communication connected	○	○	☀ (once every 5 sec)
Access point communication failed, and air conditioner communication starting up	○	○	●

3. Switch Function

(1) WPS switch

The WPS switch is used for pairing the Wi-Fi interface with the access point. There are two types of WPS: push button configuration (WPS-Push) and PIN code method (WPS-PIN).

- WPS-Push
  Hold down the WPS switch for 2 seconds to start WPS-Push pairing.
  When WPS-Push is enabled on the Wi-Fi interface, LED1 starts flashing green (0.5-sec interval) and the pairing can be completed by enabling WPS-Push on the access point.
- WPS-PIN
  Hold down the WPS switch for 15 seconds to starts WPS-PIN pairing.
  When WPS-PIN is enabled on the Wi-Fi interface, LED1 starts flashing green (0.2-sec interval) and the pairing can be completed by enabling WPS-PIN on the access point.
  Before using WPS-PIN, the PIN code of the Wi-Fi interface needs to be set on the access point.

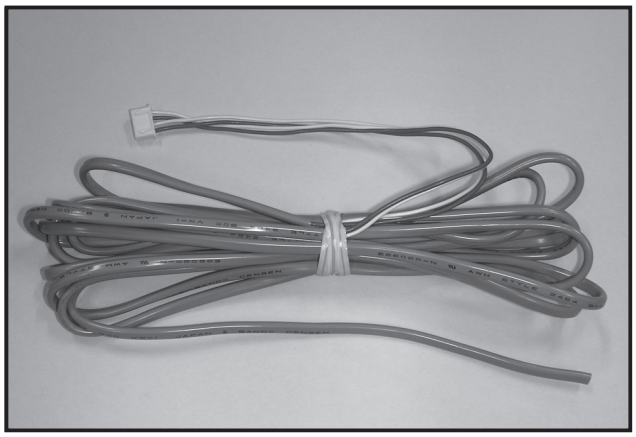
This product is only compatible with the access point that supports WPS.

(2) RESET switch

- Hold down the RESET switch for 2 seconds to reboot the system.
- Hold down the RESET switch for 15 seconds to initialize the Wi-Fi interface to the factory default.

When the Wi-Fi interface is reset to the factory default, ALL the configuration information will be lost. Take great care in implementing this operation.

Photo



Descriptions

This product is an adapter which inputs the incoming signals from an open/close switch to the air conditioner and outputs the ON/OFF signals from the air conditioner to the back-up heater.

Applicable Models

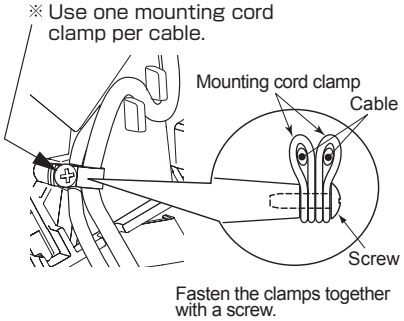
- MSZ-FH25VE2
- MSZ-FH35VE2
- MSZ-FH50VE2
- MSZ-DM25VA
- MSZ-DM35VA
- MFZ-KJ25VE2
- MFZ-KJ35VE2
- MFZ-KJ50VE2

Specifications

Model name		MAC-1702RA-E	MAC-1710RA-E
Size	Length	2 m	10 m
	Diameter	4.48 mm x 3.09 mm	4.48 mm x 3.09 mm
Material	Cable core	Tinned annealed copper wire	Tinned annealed copper wire
	Insutation	Heat-resistant PVC	Heat-resistant PVC
	Sheath	Heat-resistant PVC	Heat-resistant PVC
Weight		72 g	360 g
Standards	Standards	UL2464	UL2464
	Name	2464 2CFB #23	2464 2CFB #23

Accessory

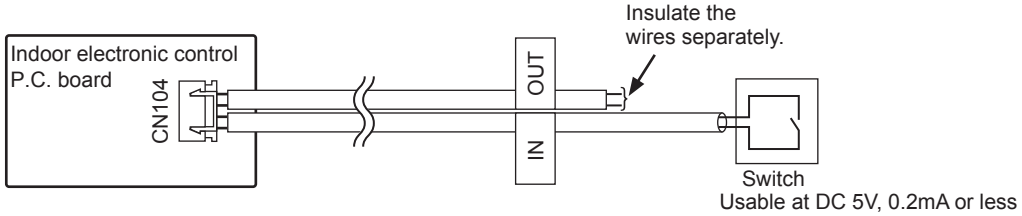
	Part name	Illustration	Q' ty
①	Mounting cord clamp ※		2
②	Screw for mounting 4×16		1
③	Fastener (for bundling the wires)		1



How to Use / How to Install

1. Card key/Window connection with the open/close switch

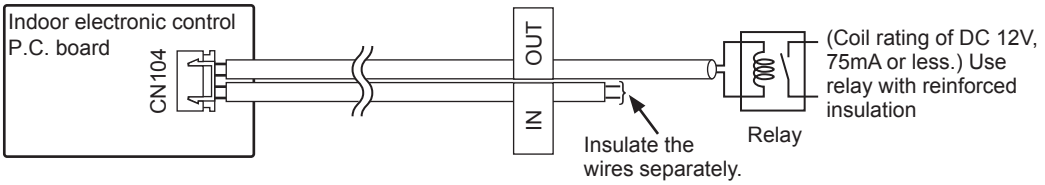
1. How to connect the open/close switch
   - Connect the connector to CN104 on the indoor electronic control P.C. board.
   - Connect the electrical wires with the tag of “IN” to the switch.
   - Separately insulate the wires with the tag of “OUT”.



2. Operation details
   - Opening the switch stops operation of the air conditioner.
     A remote controller is enabled even the switch is open. To disable the remote controller, cut JR88 on the indoor electronic control P.C. board.
   - When the switch closes, the ON/OFF operation from the remote controller is enabled.

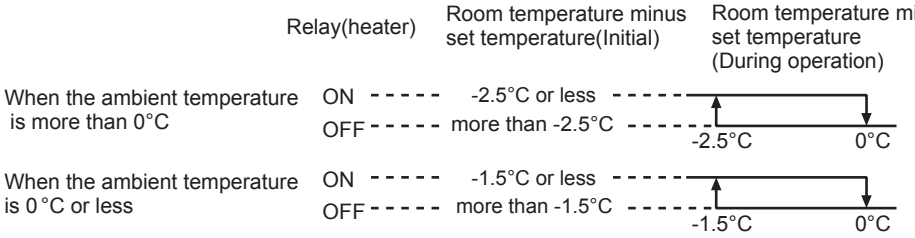
2. Back-up heating function

1. How to connect the relay
   - Connect the connector to CN104 on the indoor electronic control P.C. board.
   - Connect the electrical wires with the tag of “OUT” to the relay.
   - Separately insulate the wires with the tag of “IN”.



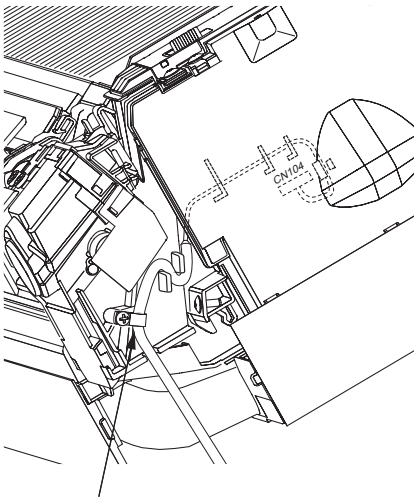
2. Operation details
   (1) Starting conditions
   When both a) and b) are satisfied, the relay turns ON.
   a) The HEAT mode is selected. (The unit operates in the HEAT mode when the AUTO operation is selected.)
   b) In the figure below, the conditions for ON are satisfied. (**NOTE 1**)
   (2) Releasing conditions
   When either a) or b) is satisfied, the relay turns OFF.
   a) The modes other than HEAT are selected. (The unit operates in the mode other than HEAT when the AUTO operation is selected.)
   b) In the figure below, the conditions for OFF are satisfied. (**NOTE 1**)

NOTE 1: Relay (heater) turns ON or OFF by the difference between room temperature and set temperature.



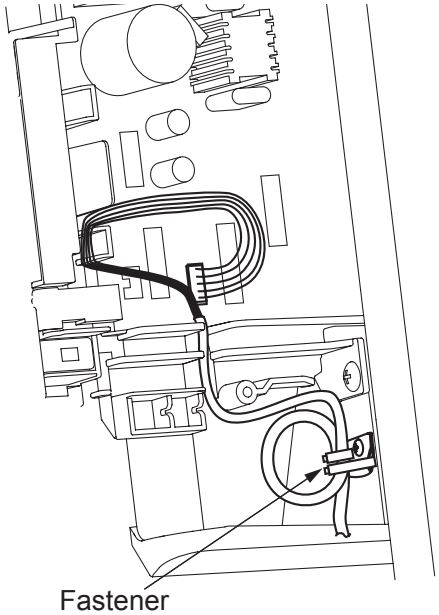
Connecting an connector cable to the air conditioner

Models for which the mounting cord clamp is used



Mounting cord clamp

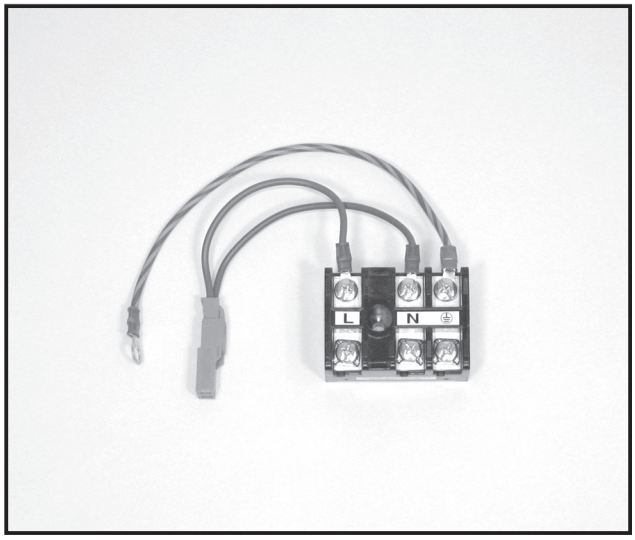
Models for which the fastener is used



Fastener

Power Supply Terminal Kit for new A-Control indoor units (L/N/Earth) PAC-SG94HR-E

Photo



Descriptions

This kit (L/N/Earth) is used when the power supply of the indoor unit and the outdoor unit is separated.
(For PUHZ applications only)

Applicable Models

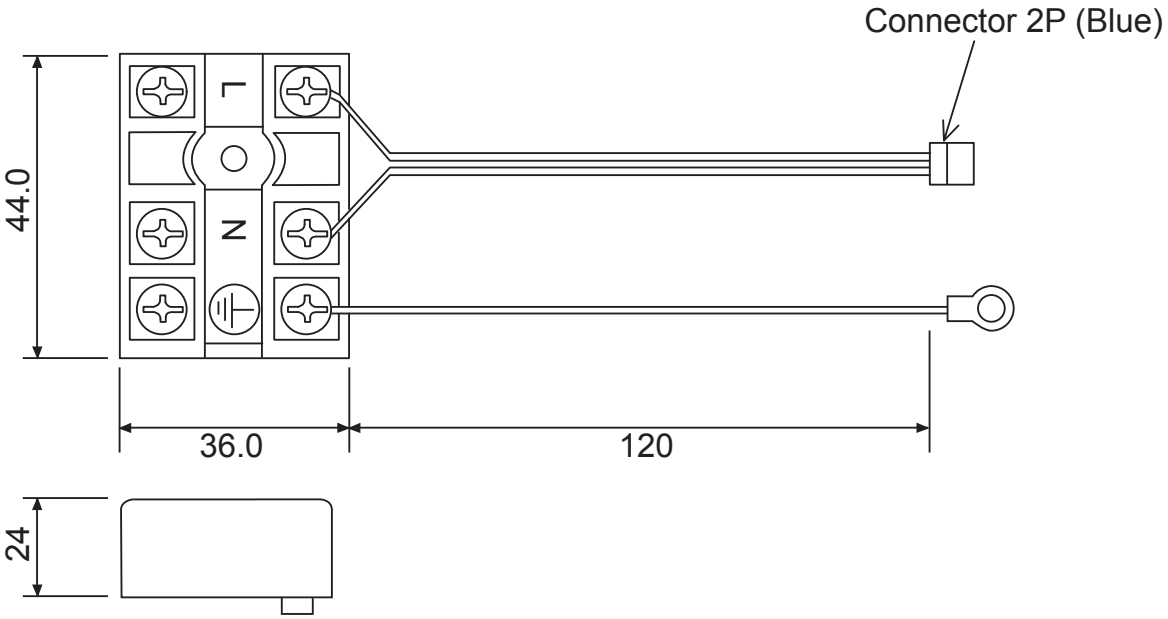
- PKA-RP35/50HAL
- PKA-RP60/71/100KAL

Specifications

Terminal block capacity	20A/250V
Terminal block material	Denatured melamine

Dimensions

Unit : mm



OPTIONAL PARTS

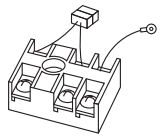
How to Use / How to Install

1. Overview

This kit is used when the power supply of the indoor unit and the outdoor unit is separated.
(for PUHZ applications only)
Refer to the installation manual of the indoor unit as well.

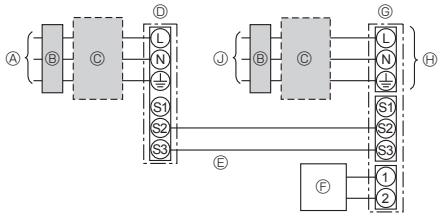
2. Provided parts

Comfirm the following parts are included.

Terminal block (lead wires already wired) x 1	Screw (to attach terminal block) x 1	Fastener (to tie lead wires) x 1	Screw (to secure ground wire) x 1
			For PAC-SG96HR-E only 

1:1 System

<For models without heater>
•The indoor power supply terminal kit is required.

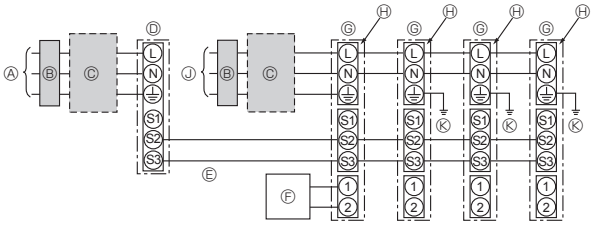


ⒶOutdoor unit power supply
ⒷEarth leakage breaker
ⒸWiring circuit breaker or isolating switch
ⒹOutdoor unit
ⒺIndoor unit / outdoor unit connecting cords
ⒻWired remote controller(option)
ⒼIndoor unit
ⒽOption
ⒿIndoor unit power supply

•Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

Simultaneous twin/triple/four system

<For models without heater>
•The indoor power supply terminal kits are required.



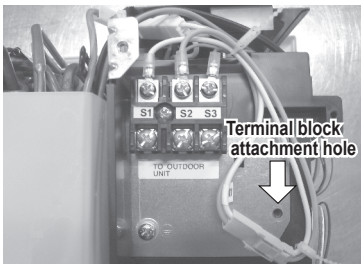
ⒶOutdoor unit power supply
ⒷEarth leakage breaker
ⒸWiring circuit breaker or isolating switch
ⒹOutdoor unit
ⒺIndoor unit / outdoor unit connecting cords
ⒻWired remote controller(option)
ⒼIndoor unit
ⒽOption
ⒿIndoor unit power supply
ⓀIndoor unit earth

•Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

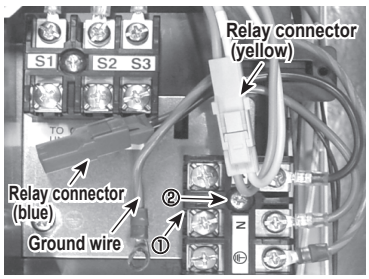
3. Attachment method

■ Wall mounted, PKA-RP.HAL type:

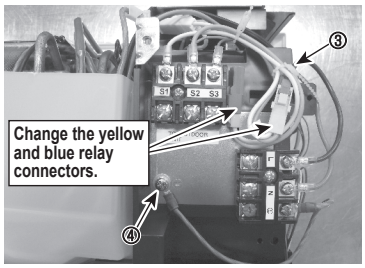
1. Remove the electrical box covers (front and side).



2. Attach terminal block ① using screw ② in the direction shown in the figure.

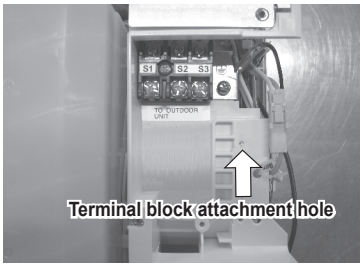


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

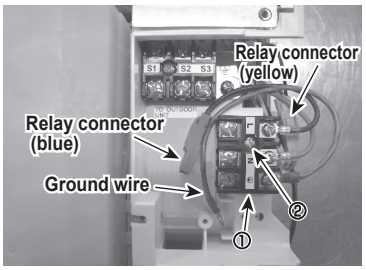


■ Wall mounted, PKA-RP.KAL type:

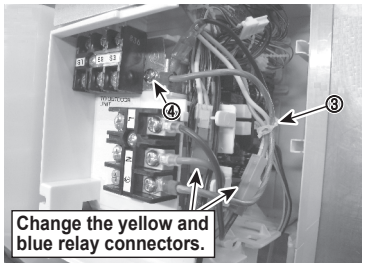
1. Remove the electrical box covers (front and side).



2. Attach terminal block ① using screw ② in the direction shown in the figure.



3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ④.



4. Electric wiring

Be sure to do the electric wiring following the steps in each indoor unit installation manual.

5. Paste the labels enveloped in the instruction document of indoor unit near the electric wiring diagrams of both indoor and outdoor units.

Three types of labels (labels A-C) are provided: Paste the label B.
(Separate indoor unit/outdoor unit power supplies... Label B)

6. DIP switch settings of the outdoor unit control board

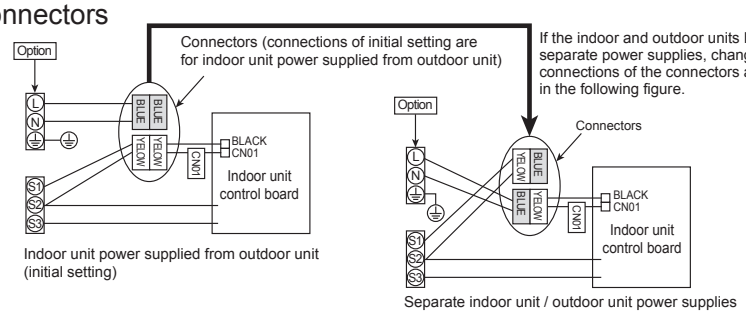
It is necessary to change the settings of DIP switch on the outdoor unit control board.

Outdoor unit DIP switch settings (when using separate indoor unit / outdoor unit power supplies only)	ON 3 OFF 1 2 <SW8>

7. Test run

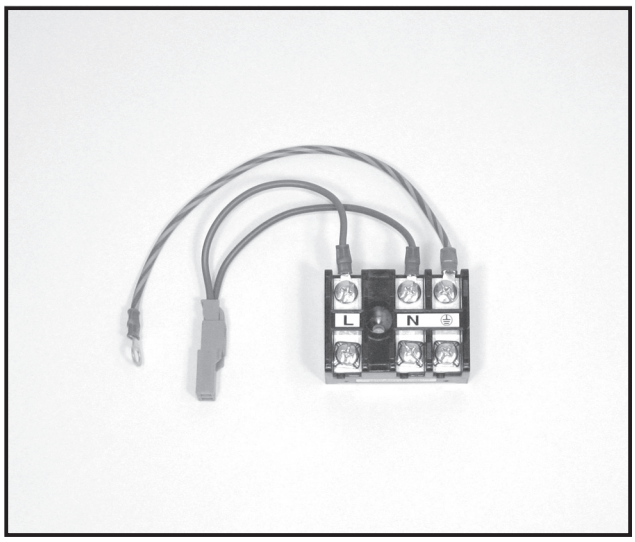
Perform a test run following the steps in the installation manual of the outdoor unit.

Change of connectors



Power Supply Terminal Kit for new A-Control indoor units (L/N/Earth) PAC-SG96HR-E

Photo



Descriptions

This kit (L/N/Earth) is used when the power supply of the indoor unit and the outdoor unit is separated.
(For PUHZ applications only)

Applicable Models

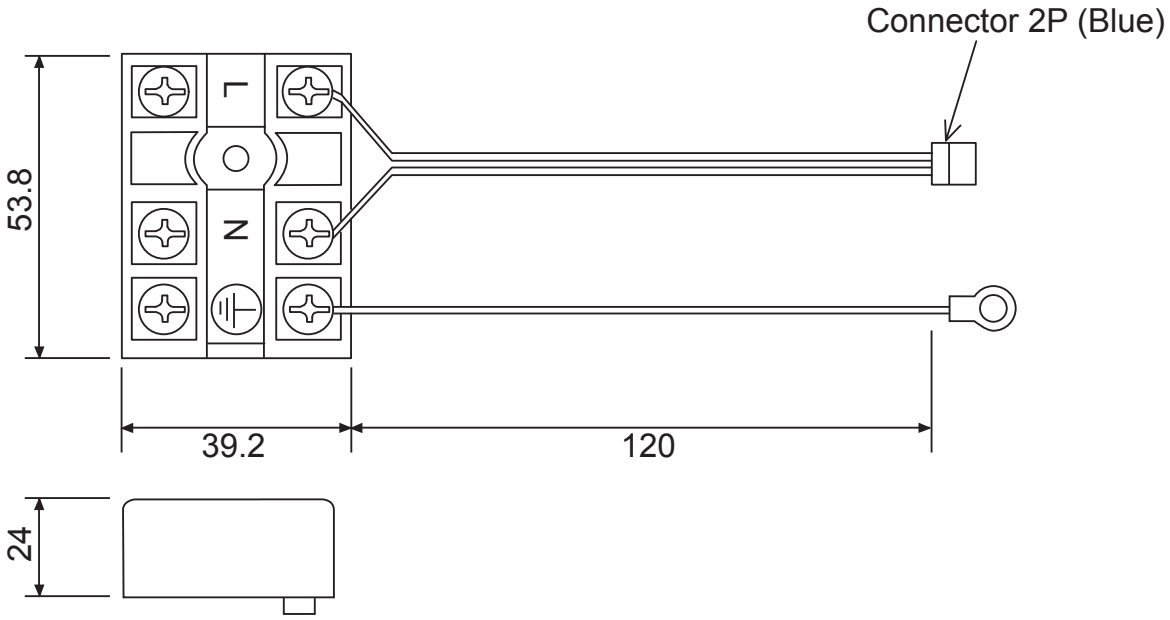
- PSA-RP·KA
- PCA-RP·KAQ

Specifications

Terminal block capacity	30A/330V
Terminal block material	Denatured melamine
Parts composition	Terminal block (with lead wires connected) x 1, Screw x 1, Fastener (for binding lead wires)

Dimensions

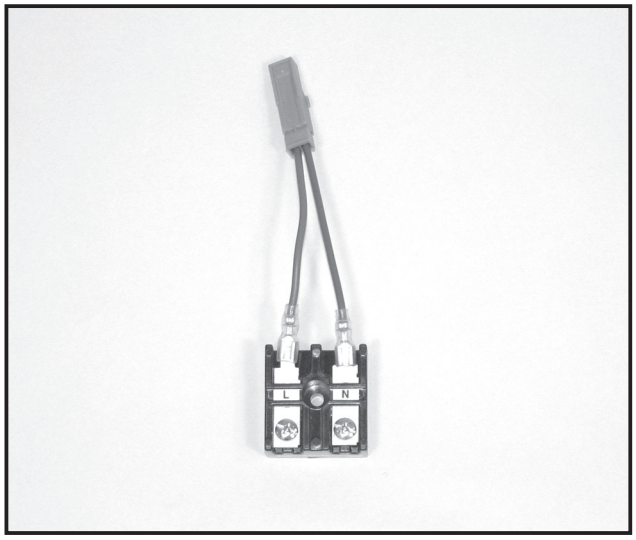
Unit : mm



OPTIONAL PARTS

Power Supply Terminal Kit for new A-Control indoor units (L/N) PAC-SG97HR-E

Photo



Descriptions

This kit (L/N) is used when the power supply of the indoor unit and the outdoor unit is separated.
(For PUHZ applications only)

Applicable Models

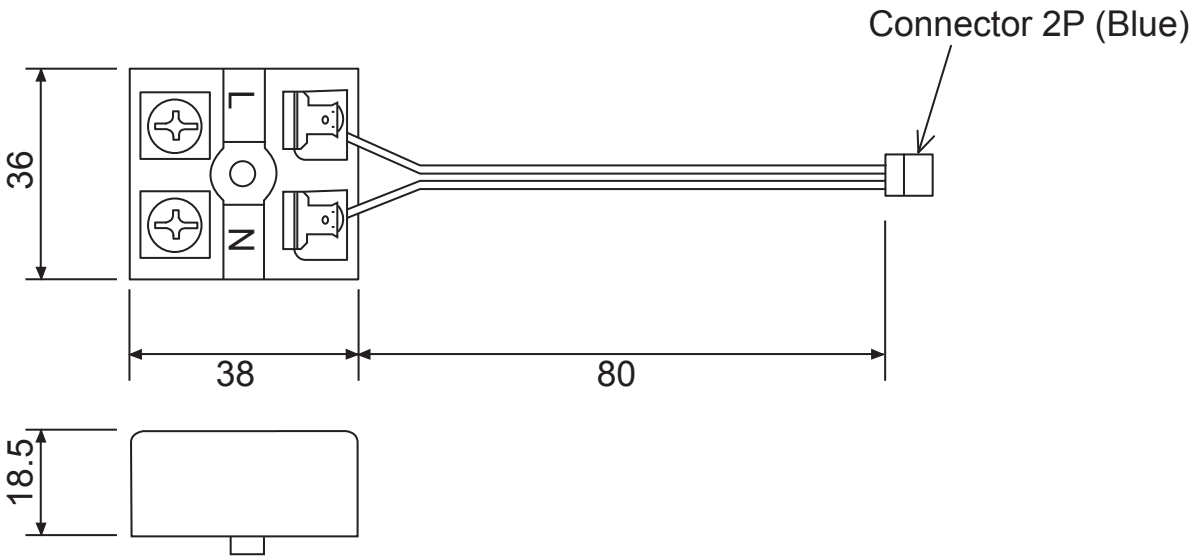
- PCA-RP71HAQ
- PEAD-RP·JA(L)Q

Specifications

Terminal block capacity	15A/264V
Terminal block material	Denatured melamine
Parts composition	Terminal block (with lead wires connected) x 1, Screw x 1, Fastener (for binding lead wires)

Dimensions

Unit : mm



OPTIONAL PARTS

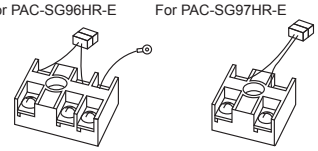
How to Use / How to Install

1. Overview

This kit is used when the power supply of the indoor unit and the outdoor unit is separated.
(for PUHZ applications only)
Refer to the installation manual of the indoor unit as well.

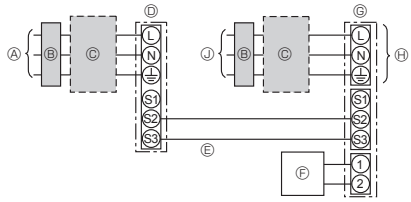
2. Provided parts

Comfirm the following parts are included.

Terminal block (lead wires already wired) x 1	Screw (to attach terminal block) x 1	Fastener (to tie lead wires) x 1	Screw (to secure ground wire) x 1
For PAC-SG96HR-E For PAC-SG97HR-E 			For PAC-SG96HR-E only 

1:1 System

<For models without heater>
•The indoor power supply terminal kit is required.

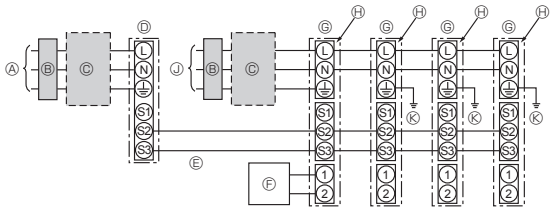


Ⓐ Outdoor unit power supply
Ⓑ Earth leakage breaker
Ⓒ Wiring circuit breaker or isolating switch
Ⓓ Outdoor unit
Ⓔ Indoor unit / outdoor unit connecting cords
Ⓕ Remote controller
Ⓖ Indoor unit
Ⓗ Option
Ⓙ Indoor unit power supply

•Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

Simultaneous twin/triple/four system

<For models without heater>
•The indoor power supply terminal kits are required.



Ⓐ Outdoor unit power supply
Ⓑ Earth leakage breaker
Ⓒ Wiring circuit breaker or isolating switch
Ⓓ Outdoor unit
Ⓔ Indoor unit / outdoor unit connecting cords
Ⓕ Remote controller
Ⓖ Indoor unit
Ⓗ Option
Ⓙ Indoor unit power supply
Ⓚ Indoor unit earth

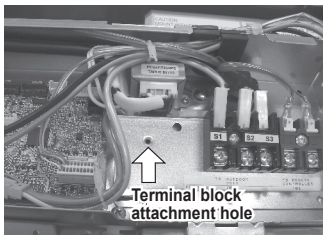
•Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

3. Attachment method

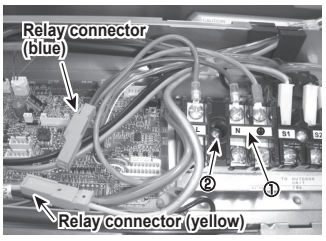
■PAC-SG96HR

Ceiling suspended, PCA-RP.KAQ type:

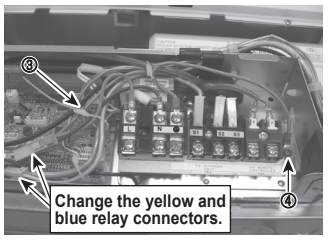
1.Remove the cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

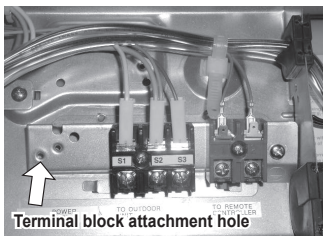


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

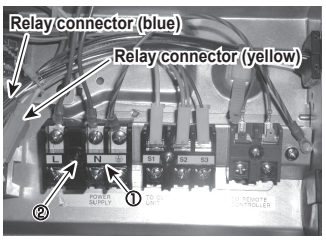


Ceiling suspended, PCA-RP.GA type:

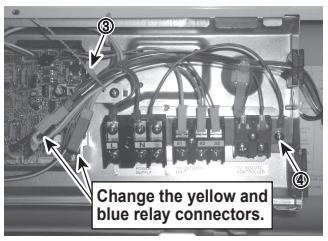
1.Remove the cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.



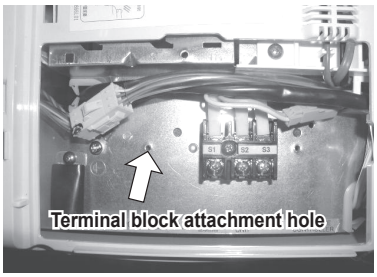
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.



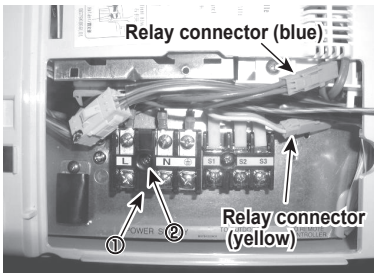
OPTIONAL PARTS

Wall mounted, PKA-RP.GAL type:

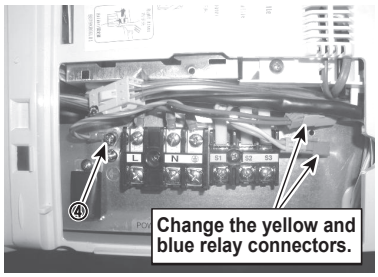
1.Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

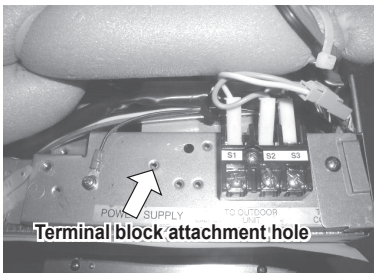


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

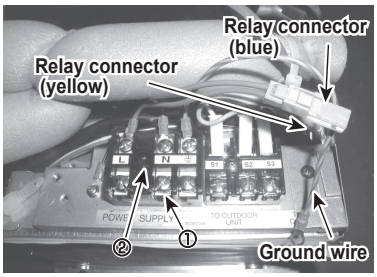


Wall mounted, PKA-RP.FAL type:

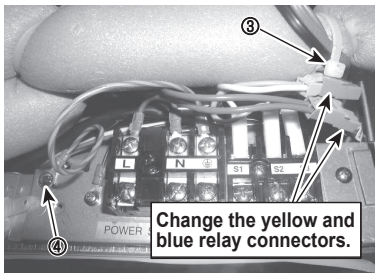
1.Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

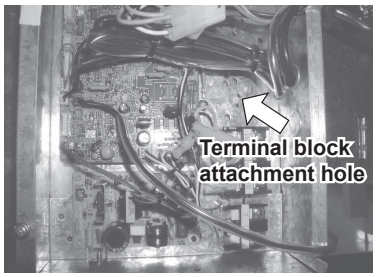


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ④.

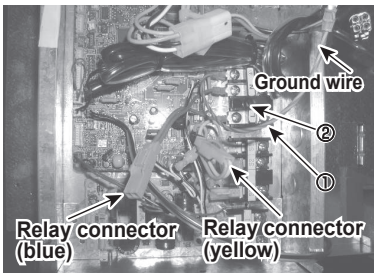


Ceiling concealed, PEAD-RP.EA type:

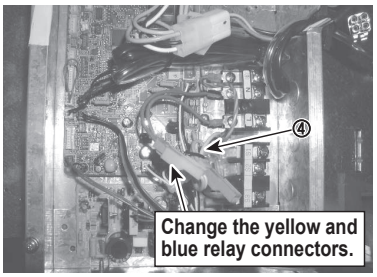
1.Remove the cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

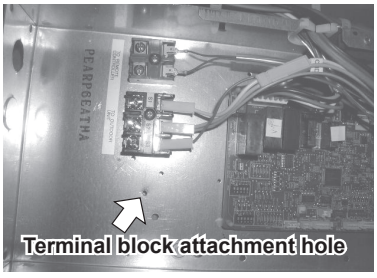


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

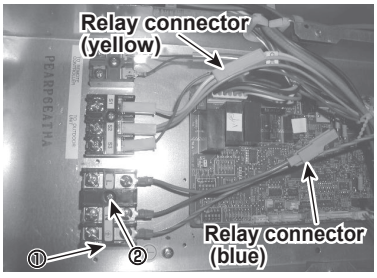


Ceiling concealed, PEA-RP.EA type:

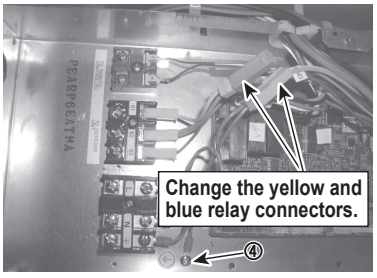
1.Remove the cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.



3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

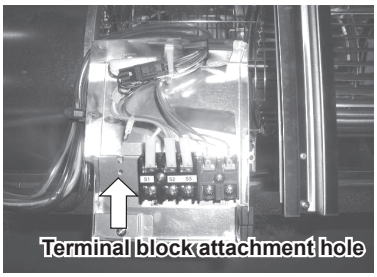


OPTIONAL PARTS

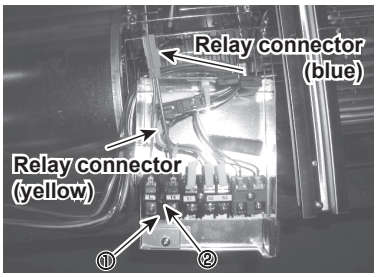
■PAC-SG97HR

Ceiling suspended for kitchens, PCA-RP·HAQ type:

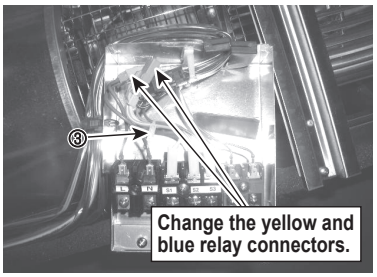
1.Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

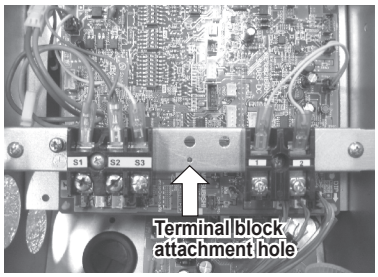


3. Change the relay connectors of blue and yellow lead wires, and then bundle the lead wires using fastener ③.

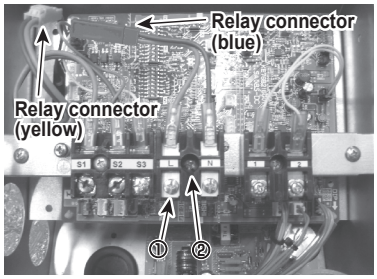


Ceiling concealed, PEAD-RP·JA(L)Q type

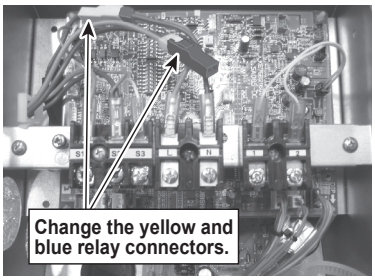
1.Remove the cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

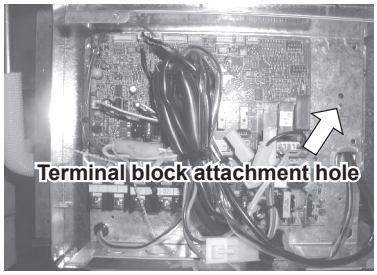


3.Change the relay connectors of blue and yellow lead wires.

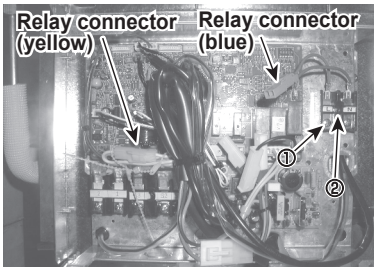


Ceiling concealed, PEAD-RP·GAQ type:

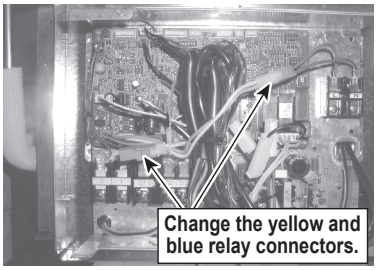
1.Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.



3.Change the relay connectors of blue and yellow lead wires.



4. Electric wiring

Be sure to do the electric wiring following the steps in each indoor unit installation manual.

5. Paste the labels enveloped in the instruction document of indoor unit near the electric wiring diagrams of both indoor and outdoor units.

Three types of labels (labels A-C) are provided: Paste the label B.
(Separate indoor unit/outdoor unit power supplies... Label B)

6. DIP switch settings of the outdoor unit control board

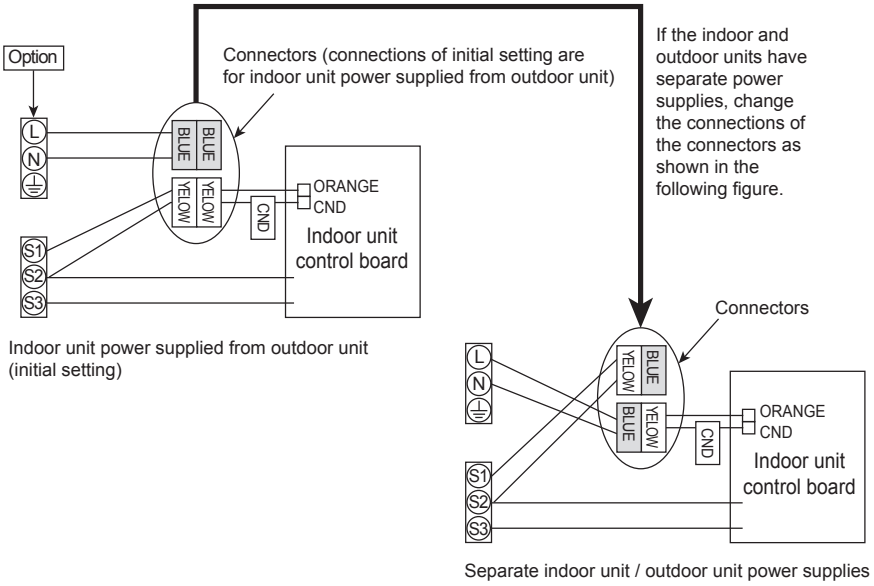
It is necessary to change the settings of DIP switch on the outdoor unit control board.

Outdoor unit DIP switch settings (when using separate indoor unit / outdoor unit power supplies only)	ON 3 OFF 1 2 <SW8>

7. Test run

Perform a test run following the steps in the installation manual of the outdoor unit.

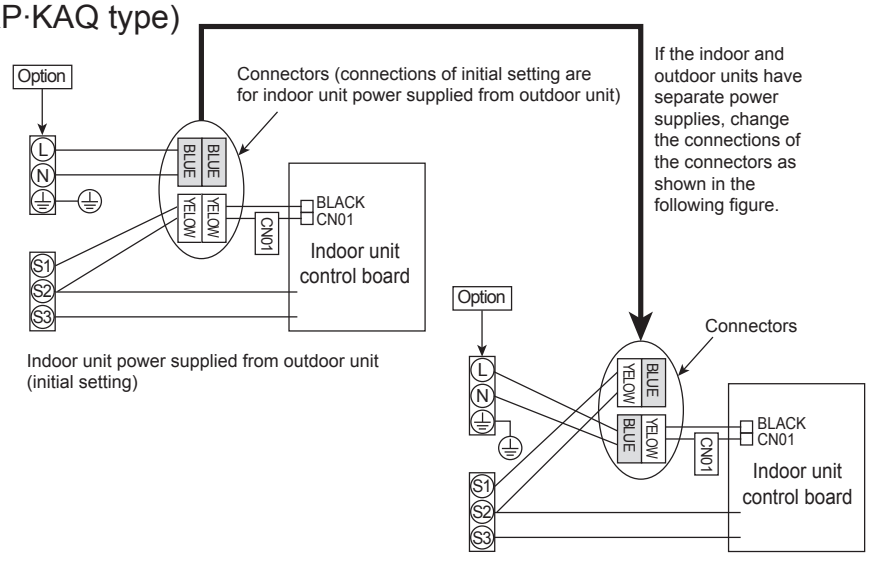
Change of connectors
(except PCA-RP·KAQ type)



Indoor unit power supplied from outdoor unit (initial setting)

Separate indoor unit / outdoor unit power supplies

(PCA-RP·KAQ type)



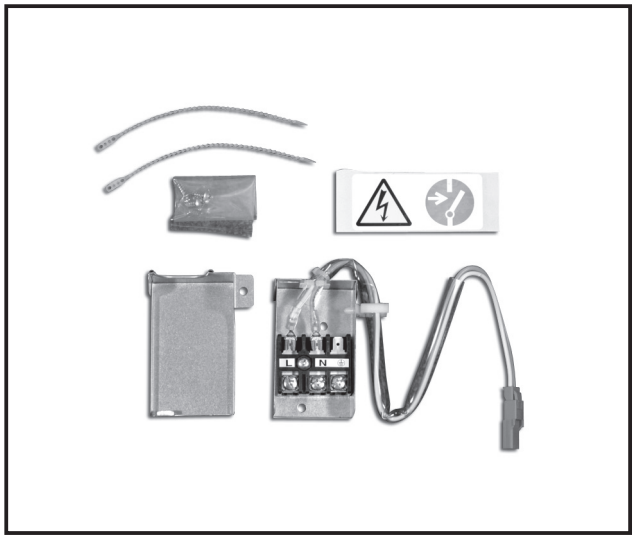
Indoor unit power supplied from outdoor unit (initial setting)

Separate indoor unit / outdoor unit power supplies

OPTIONAL PARTS

Indoor Power Supply Terminal Kit PAC-SH52HR-E

Photo



Descriptions

This kit is used when the power supply of the indoor unit and the outdoor unit is separated.
(for PLA series applications only)

Applicable Models

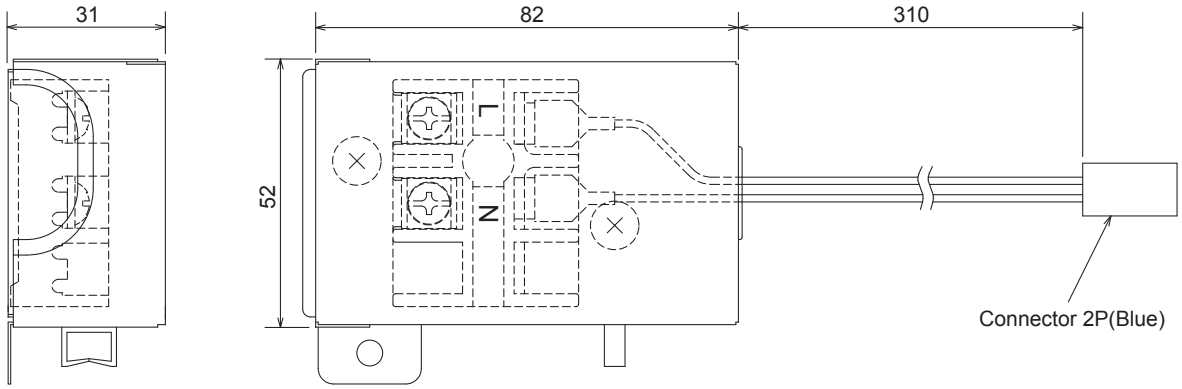
- PLA-ZRP•BA
- PLA-RP•BA(2)

Specifications

Terminal block capacity	5A/250V
Terminal block material	Denatured melamine

Dimensions

Unit : mm



OPTIONAL PARTS

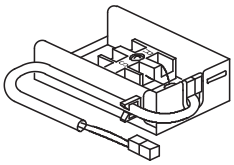
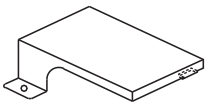
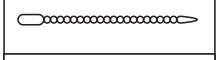
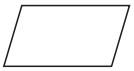
How to Use / How to Install

1. Overview

This kit is used when the power supply of the indoor unit and the outdoor unit is separated. (for PLA applications only)
Refer to the installation manual of the indoor unit as well.

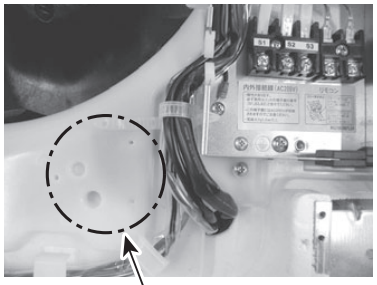
2. Provided parts

Comfirm the following parts are included.

① Terminal block (lead wires already wired) x 1	② Cover x 1	③ Screw x 3	④ Fastener (to tie lead wires) x 2
			 ⑤Seal x 1 

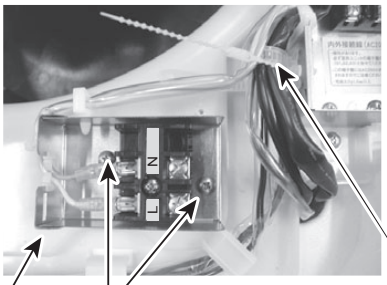
3. Attachment method

1. Remove the cover of electric parts box.



Terminal block attachment position

2. Use the two screws ③ to attach the terminal block ① in the direction shown in the figure, and wire the leads to electric parts box.

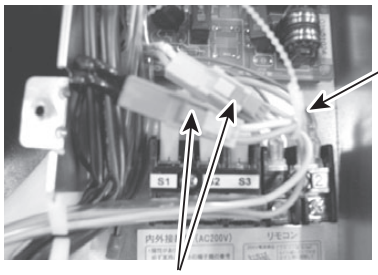


Terminal block①

Screws③(2pcs)

Bundle the leads with other leads using fastener ④: Cut off any surplus.

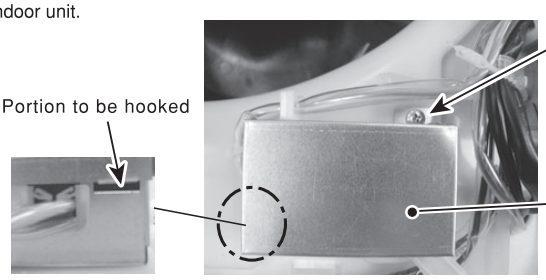
3. Exchange the blue and yellow relay connectors of leads, and use fastener ④ to bundle the leads.



Fastener④ (1Piece)

Exchange the blue and yellow relay connectors.

4. Hook cover ② onto terminal block ① to attach the cover, and use screw ③ (1Piece) to secure it to the indoor unit.

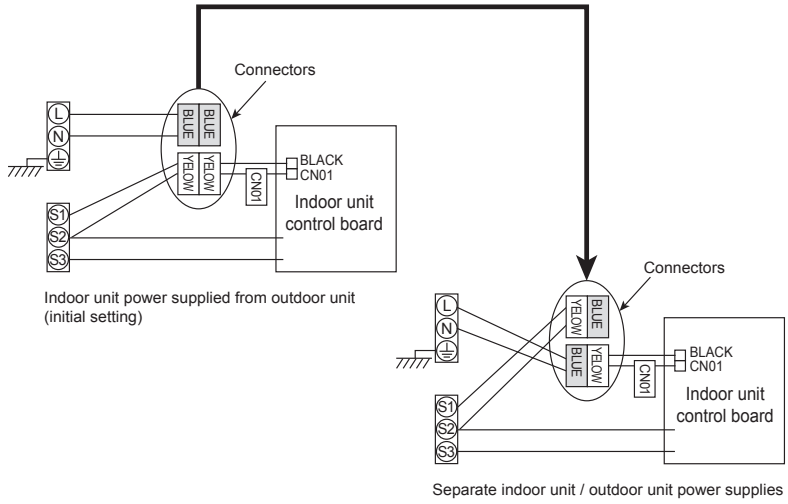


Portion to be hooked

Screw③ (1Piece)

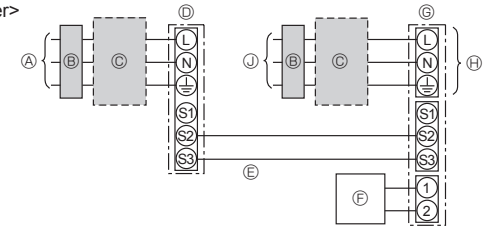
Cover②

Change of connectors



1:1 System

<For models without heater>
•The indoor power supply terminal kit is required.

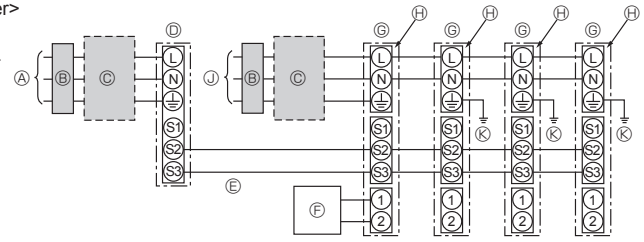


ⒶOutdoor unit power supply
ⒷEarth leakage breaker
ⒸWiring circuit breaker or isolating switch
ⒹOutdoor unit
ⒺIndoor unit / outdoor unit connecting cords
ⒻRemote controller
ⒼIndoor unit
ⒽOption
ⒿIndoor unit power supply

•Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

Simultaneous twin/triple/four system

<For models without heater>
•The indoor power supply terminal kits are required.



ⒶOutdoor unit power supply
ⒷEarth leakage breaker
ⒸWiring circuit breaker or isolating switch
ⒹOutdoor unit
ⒺIndoor unit / outdoor unit connecting cords
ⒻRemote controller
ⒼIndoor unit
ⒽOption
ⒿIndoor unit power supply
ⓀIndoor unit earth

•Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

4. Electric wiring

Be sure to do the electric wiring following the steps in each indoor unit installation manual.

5. Paste the labels enveloped in the instruction document of indoor unit near the electric wiring diagrams of both indoor and outdoor units.

Three types of labels (labels A-C) are provided: Paste the label B.
(Separate indoor unit/outdoor unit power supplies... Label B)

6. Paste the seal ⑤ on the surface of indoor electric cover.

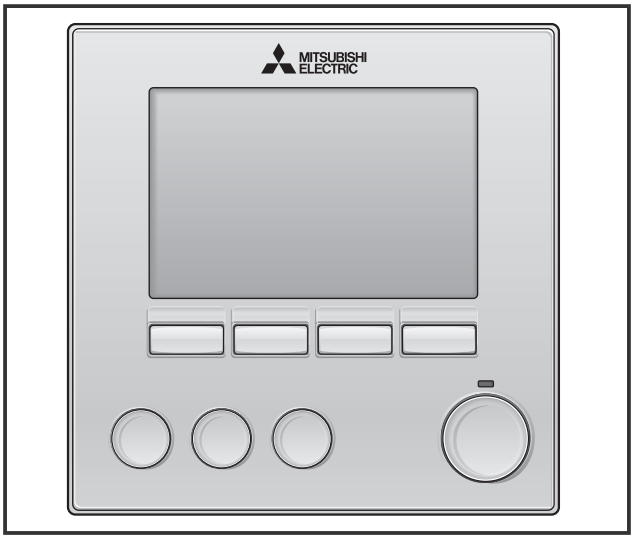
7. DIP switch settings of the outdoor unit control board

It is necessary to change the settings of DIP switch on the outdoor unit control board.

Wired Remote Controller PAR-32MAA

***MAC-397IF-E required**

Figure



Descriptions

Advanced MA remote controller with the large size dot liquid crystal display. Multi-language display and weekly timer function are available.

Applicable Models

- MSZ-FH25/35/50VE2
- MSZ-EF18/22/25/35/42/50VE3W/B/S
- MSZ-SF15/20VA
- MSZ-SF25/35/42/50VE3
- MSZ-GF60/71VE2
- MSZ-DM25/35VA
- MFZ-KJ25/35/50VE2
- MLZ-KA25/35/50VA
- P-series models (Except PSA-RP•KA)
- SLZ-KF•VA2
- SEZ-KD•VAQ

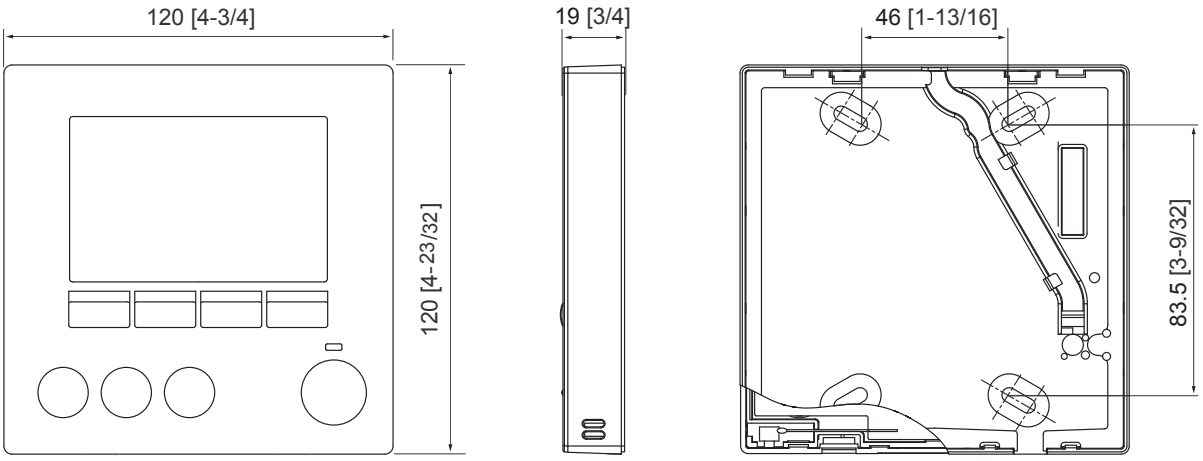
※ Remote controller terminal block kit for PKA PAC-SH29TC-E

Specifications

External colors	Cover	Clear white (Munsell 1.0Y 9.2/0.2)
	LCD peripheral area	Medium gray

Dimensions

Unit : mm [in.]



(Front view) (Side view) (Rear view)

OPTIONAL PARTS

How to Use / How to Install

1. System Requirements

⚠ WARNING	The CD-ROM that is supplied with the unit can only be played on a CD-drive or a DVD-drive. Do not attempt to play this CD-ROM on an audio CD player as this may damage your ears and/or speakers.

Your computer must meet the following requirements to run Manual Navigation Software.

[PC] PC/AT compatible

[CPU] Core2 Duo 1.66 GHz or faster (Core2 Duo 1.86 GHz or faster recommended)
Pentium D 1.7 GHz or faster (Pentium D 3.0 GHz or faster recommended)
Pentium M 1.7 GHz or faster (Pentium M 2.0 GHz or faster recommended)
Pentium 4 2.4 GHz or faster (Pentium 4 2.8 GHz or faster recommended)
* Core2 Duo or faster processor is required to run Manual Navigation Software on Windows Vista or later.

[RAM] Windows Vista or later: 1 GB minimum (2 GB or more recommended)
Windows XP: 512 MB minimum (1 GB or more recommended)

[HDD space] 1 GB minimum (available space)
* Windows Vista or later: Available space in the drive that has the Document folder
* Windows XP: Available space in the drive that has the My Document folder

[Resolution] SVGA 800 × 600 or greater

[OS] Windows8/Pro/Enterprise (Pro recommended)
Windows7 Ultimate/Enterprise/Professional/Home Premium Service Pack1 (Professional recommended)
Windows Vista Ultimate/Business/Home Basic Service Pack1 (Business version recommended)
Windows XP Professional/Home Edition Service Pack2 or Service Pack3 (Professional version recommended)

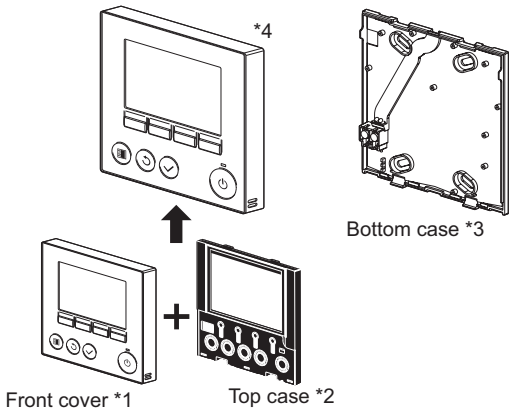
[Required software] Windows8: Adobe Reader 11.0.2 or later (Windows Reader, installed by default in Windows8, cannot be used.)
Windows7: Adobe Reader 10.1.0 or later
Windows XP and Windows Vista: Adobe Reader 8.1.3 or later
* Software to view PDF files

"Windows", "Windows XP", "Windows Vista", "Windows7" and "Windows8" are registered trade marks of Microsoft Corporation.
"Adobe Reader" and "Adobe Acrobat" are registered trademarks of Adobe Systems Incorporated.
"Core2 Duo" and "Pentium" are registered trademarks of Intel Corporation.

2. Component names and supplied parts

The following parts are included in the box.

Parts name	Qty.	Appearance
Remote controller (front cover)	1	Right figure *1
Remote controller (top case)	1	Right figure *2
Remote controller (bottom case)	1	Right figure *3
Roundhead cross slot screws M4×30	2	
Wood screw 4.1×16 (for direct wall installation)	2	
Installation Manual (this manual)	1	
Simple Operation Manual	1	
CD-ROM (Instruction Book and Installation Manual)	1	



*4 The front cover (*1) is already installed on the top case (*2) at factory shipment.
*5 Remote controller cable is not included.

3. Field-supplied parts/Required tools

(1) Field-supplied parts

The following parts are field-supplied parts.

Parts name	Qty.	Notes
Double switch box	1	Not required for direct wall installation
Thin metal conduit	Necessary	
Lock nut and bushing	Necessary	
Cable cover	Necessary	Required for routing remote controller cable along a wall
Putty	Reasonable	
Molly anchor	Necessary	
Remote controller cable (Use a 0.3 mm² (AWG22) 2-core sheathed cable.)	Necessary	

(2) Field-supplied tools

- Flat-tip screwdriver (Width: 4-7 mm (5/32-9/32 inch)) or Plate service tool (Part No.R61008235)
- Nipper
- Miscellaneous tools

Plate service tool

4. Selecting an installation site

This remote controller is for the wall installation. It can be installed either in the switch box or directly on the wall. When performing direct wall installation, wires can be thread through either back or top of the remote controller.

(1) Selecting an installation site

Install the remote controller (switch box) on the site where the following conditions are met.

(a) For connection to the indoor unit with an Auto descending panel, a place where people can check the Auto descending panel operation of the indoor unit while they are operating the remote controller (Refer to the indoor unit Instructions Book for how to operate Auto descending panel.)

(b) A flat surface

(c) A place where the remote controller can measure the accurate indoor temperature

Sensors to monitor indoor temperature are on the indoor unit and on the remote controller. When the room temperature is monitored with the sensor on the remote controller, the main remote controller monitors the room temperature. When using the sensor on the remote controller, follow the instructions below.

- To monitor the accurate indoor temperature, install the remote controller away from direct sunlight, heat sources, and the supply air outlet of the air conditioner.
- Install the remote controller in a location that allows the sensor to measure the representative room temperature.
- Install the remote controller where no wires are routed around the temperature sensor on the controller. (If wires are routed, the sensor cannot measure accurate indoor temperature.)

Important

Do not install the controller in a place where the difference between the remote controller surface temperature and the actual room temperature will be great.
If the temperature difference is too high, room temperature may not be adequately controlled.

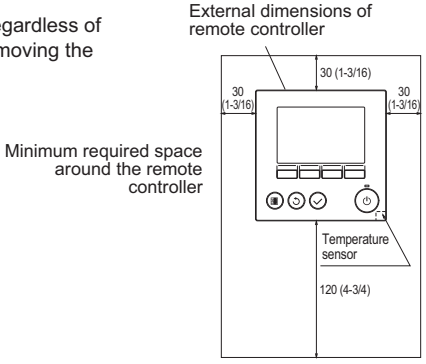
To avoid deformation and malfunction, do not install the remote controller in direct sunlight or where the ambient temperature may exceed 40ºC (104ºF) or drop below 0ºC (32ºF).

To reduce the risk of shorting, current leakage, electric shock, malfunctions, smoke, or fire, do not install the controller in a place exposed to water or in a condensing environment.

To reduce the risk of malfunctions and damage to the controller, avoid installing the remote controller on an electrically conductive surface, such as an unpainted metal sheet.

(2) Installation space

Leave a space around the remote controller as shown in the figure at right, regardless of whether the controller is installed in the switch box or directly on the wall. Removing the remote controller will not be easy with insufficient space.
Also, leave an operating space in front of the remote controller.



unit: mm(in)

OPTIONAL PARTS

5. Installation/Wiring work

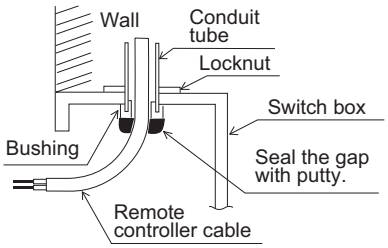
(1) Installation work

Controller can be installed either in the switch box or directly on the wall. Perform the installation properly according to the method.

① Drill a hole in the wall.

■ Installation using a switch box
- Drill a hole in the wall, and install the switch box on the wall.
- Connect the switch box to the conduit tube.

■ Direct wall installation
- Drill a hole in the wall, and thread the cable through it.

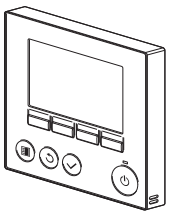


② Seal the cable access hole with putty.

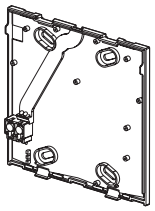
■ Installation using a switch box
- Seal the remote controller cable access hole at the connection of switch box and conduit tube with putty.

> To reduce the risk of electric shock, malfunctions, or fire, seal the gap between the cables and cable access holes with putty.

③ Prepare the bottom case of the remote controller.



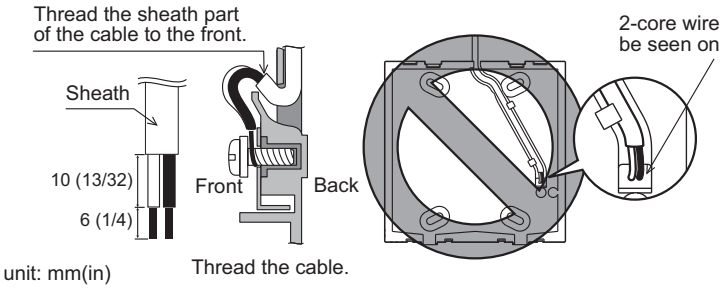
Front cover and top case



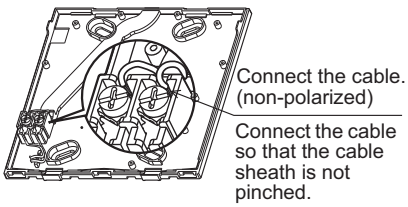
Bottom case

④ Connect the remote controller cable to the terminal block on the bottom case.

Peel off 6 mm of the remote controller cable sheath as shown in the figure below, and thread the cable from behind the bottom case. Thread the cable to the front of the bottom case so that the peeled part of the cable cannot be seen behind the bottom case. Connect the remote controller cable to the terminal block on the bottom case.



unit: mm(in)

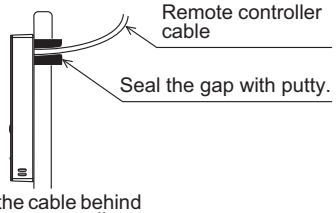


■ Direct wall installation
- Seal the hole through which the cable is threaded with putty.

> To reduce the risk of electric shock, shorting, or malfunctions, keep wire pieces and sheath shavings out of the terminal block.

Important

> Do not use solderless terminals to connect cables to the terminal block.
> Solderless terminals may come in contact with the circuit board and cause malfunctions or damage the controller cover.



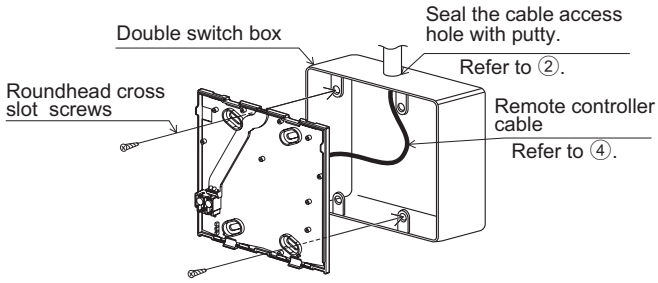
Route the cable behind the remote controller.

⑤ Install the bottom case.

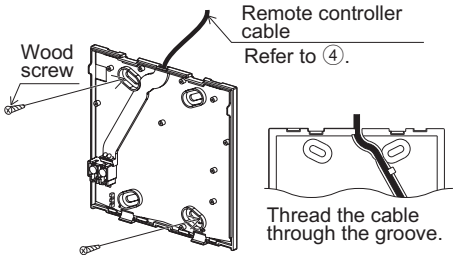
■ Installation using a switch box
- Secure at least two corners of the switch box with screws.

■ Direct wall installation
- Thread the cable through the groove.
- Secure at least two corners of the remote controller with screws.
- Be sure to secure top-left and bottom-right corners of the remote controller (viewed from the front) to prevent it from lifting. (Use molly anchor etc.)

■ Installation using a switch box



■ Direct wall installation



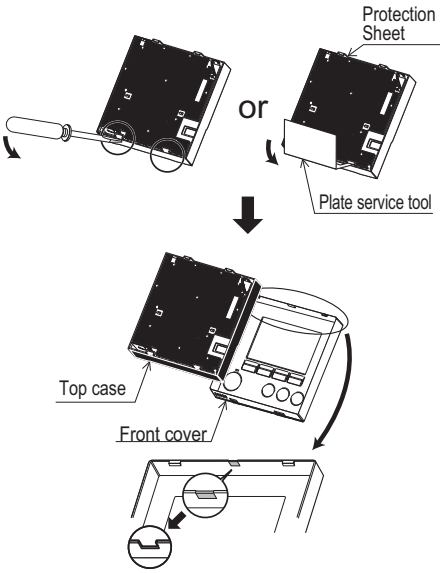
Important

To avoid damage to the controller, do not overtighten the screws.

To avoid damage to the controller, do not make holes on the controller cover.

⑥ Cut out the cable access hole.

■ Direct wall installation (when running the cable along the wall)
- Insert a flat-tip screwdriver with a blade width of 4–7 mm (5/32–9/32 inch) or a Plate service tool into either of the two latches at the bottom of the remote controller, and move it in the direction of the arrow as shown in the figure at right.
- The top case will come loose from the front cover. Pull the top case toward you to remove it.
- Cut out the thin-wall part on the front cover (indicated with the shaded area in the right figure) with a nipper.
  (This cutout hole will be used to thread the remote controller cable through, after the cable is threaded through the groove on the back of the bottom case.)
- Place the top case onto the front cover.

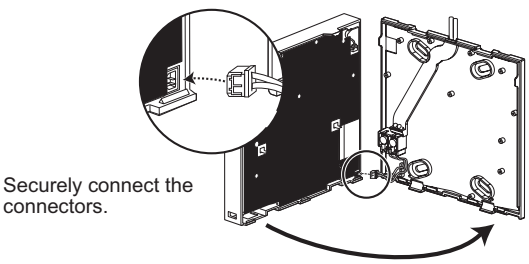


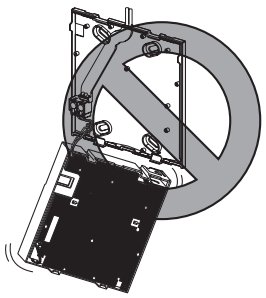
Notice

To prevent damage to the circuit board, remove the front cover from the top case before cutting out a cable access hole.

⑦ Route the wire to the top case.

Connect the connector on the bottom case to the connector on the top case.





Important

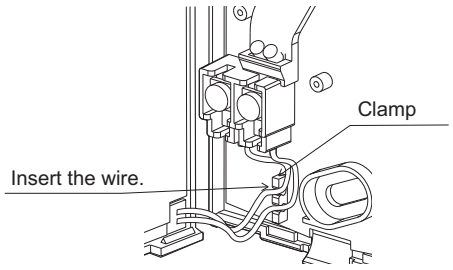
To prevent malfunctions, do not remove the protective film or the circuit board from the casing.

To prevent cable breakage and malfunctions, do not hang the top controller casing hang by the cable.

⑧ Route the wire to the top case.

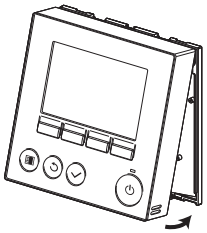
Important

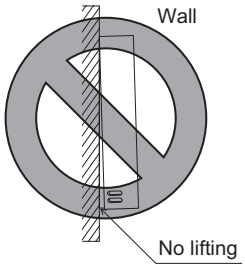
Hold the cables in place with clamps to prevent undue force from being applied to the terminal block and causing cable breakage.



⑨ Install the front cover and top case on the bottom case.

Two mounting tabs are at the top of the top case. (A cover is already installed on the case at the time of factory shipment.)
Hook those two tabs onto the bottom case, and click the top case into place. Check that the case is securely installed and not lifted.



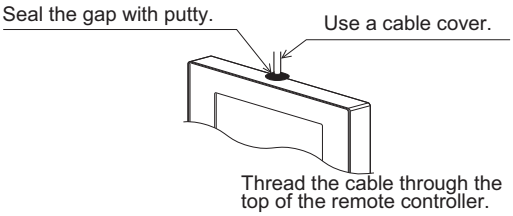


Important

When attaching the cover and the top casing to the bottom casing, push it until it they click into place.
If they are not properly locked into place, they may fall, causing personal injury, controller damage, or malfunctions.

■ Direct wall installation (when running the cable along the wall)

- Thread the cable through the access hole at the top of the remote controller.
- Seal the cut-out part of the cover with putty.
- Use a cable cover.

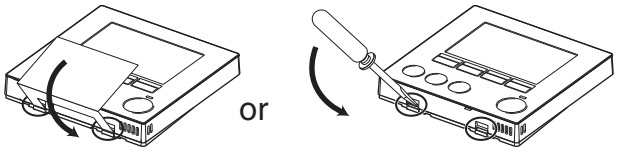


Installation is complete.
Follow the instructions below when uninstalling them.

• Uninstalling the front cover and top case

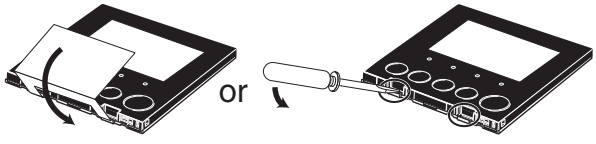
① Uninstalling the front cover

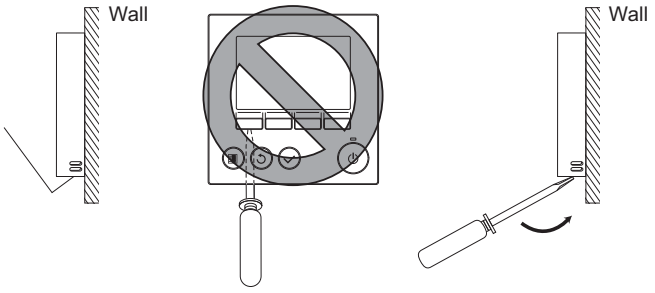
Insert a flat-tip screwdriver or a Plate service tool into either of the two latches at the bottom of the remote controller, and move it in the direction of the arrow as shown in the figure at right. Note that the top case may also be removed if the driver or the tool is inserted deeply.



② Uninstalling the top case

Insert a flat-tip screwdriver or a Plate service tool into either of the two latches at the bottom of the remote controller, and move it in the direction of the arrow as shown in the figure at right.





OPTIONAL PARTS

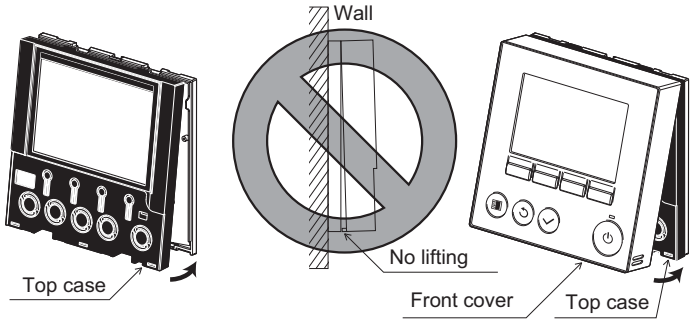
Important

Use a flat-head screwdriver with a blade width of 4-7 mm (5/32-9/32 inch). The use of a screwdriver with a narrower or wider blade tip may damage the controller casing.

To prevent damage to the controller casing, do not force the driver to turn with its tip inserted in the slot.

To prevent damage to the control board, do not insert the driver into the slot strongly.

③ Installing the cover and top case
Two mounting tabs are at the top of the top case.
Hook those two tabs onto the bottom case, and click the top case into place.
Install the cover on the top case in the same way as with the top case.
Check that the top case is securely installed and not lifted.



Important

When attaching the cover and the top casing to the bottom casing, push it until it they click into place.
If they are not properly locked into place, they may fall, causing personal injury, controller damage, or malfunctions.

6. Important

■ **Discrepancy between the indoor temperature measured at the wall and the actual indoor temperature may occur.**

If the following conditions are met, the use of the temperature sensor on the indoor unit is recommended.

- Supply air does not reach to the wall easily where the remote controller is installed due to improper airflow distribution.
- There is a great discrepancy between the wall temperature and the actual indoor temperature.
- The back side of the wall is directly exposed to the outside air.

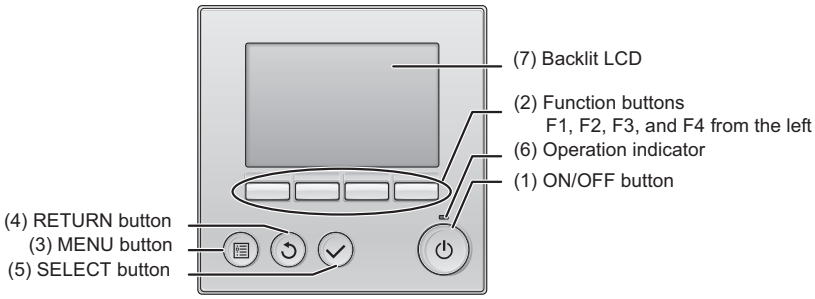
Note: When temperature changes rapidly, the temperature may not be detected accurately.

■ **Refer to the section on initial setting in this Manual for remote controller main/sub setting.**

■ **Refer to either of the following manuals for temperature sensor setting: indoor unit Installation Manual for City Multi; this manual for Mr. Slim.**

■ **At the time of factory shipment, protective sheet is on the operation interface of the front cover.**
Peel off the protective sheet on the operation interface prior to use.

7. Remote controller button functions



(1) ON/OFF button
Use to turn ON/OFF the indoor unit.

(2) Function buttons
Use to select the operation mode or to set the temperature and fan speed on the Main display.
Use to select items on other screens.

(3) MENU button
Use to bring up the Main menu.

(4) RETURN button
Use to return to the previous screen.

(5) SELECT button
Use to jump to the setting screen or to save the settings.

(6) Operation indicator
Stays lit during normal operation. Blinks during startup and when an error occurs.

(7) Backlit LCD
Dot display. When the backlight is off, pressing any button turns the backlight on and it will stay lit for a certain period of time depending on the screen. Performing any button operation keeps the backlight on.

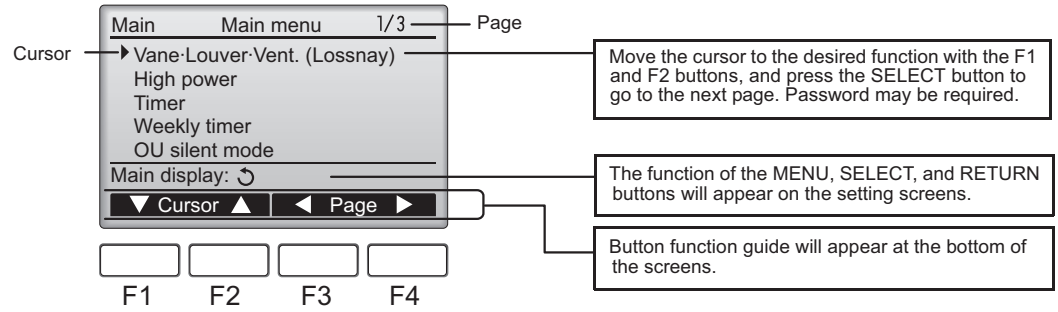
Note: When the backlight is off, pressing any button turns the backlight on and does not perform its function. (except for the ON/OFF button)

Pressing the MENU button will bring up the Main menu as shown below.
(Refer to section 9.(2) "Main display" for details.)

1/3 Vane·Louver·Vent. (Lossnay)	*1
High power	*1
Timer	*1
Weekly timer	*1
OU silent mode	*1
2/3 Restriction	*1
Energy saving	*1
Night setback	*1
Filter information	*1
Error information	*1
3/3 Maintenance	*1
Initial setting	*2 *3
Service	*2 *3

*1 Refer to the Instructions Book in the CD-ROM for details.
*2 Explained in this manual.
*3 If no buttons are pressed for 10 minutes on the initial setting screens, or 2 hours on the service screens (10 minutes on some screens), the screen will automatically return to the Main display. Any settings that have not been saved will be lost.
The available items on the menu depend on the connected indoor unit model. For items not described in the manuals that are enclosed with the MA remote controller, refer to the manuals that came with the air conditioning units.

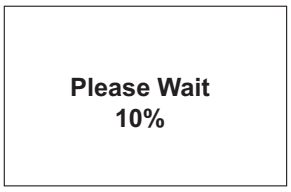
Button operations on the Main menu



8. Turning on the power

Make sure that the MA remote controller is properly installed according to the instructions in the Installation Manual and that the indoor and outdoor unit installation has been completed before turning on the power.

(1) When the power is turned on, the following screen will appear.

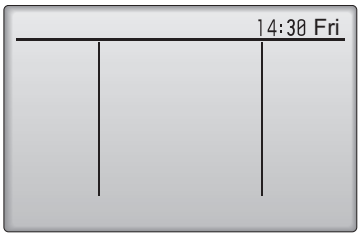


Normal start up (indicating the percentage of process completion)

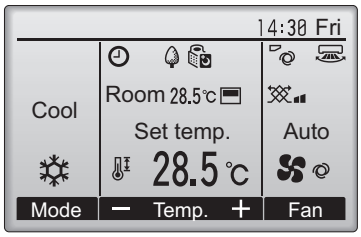
Notes
- When the power is on for the first time, the Language selection screen will be displayed. Refer to section 11 (8). Select a desired language. The system will not start-up without language selection.
- Some models of City Multi cannot have more than one remote controller connected. Refer to relevant documents (e.g., catalogs) for usage compatibility.

(2) Main display

After the successful startup, the Main display will appear. The Main display can be displayed in two different modes: "Full" and "Basic." Refer to section 11 "Initial settings" for how to select the display mode. (The factory setting is "Full.")



Main display in the Full mode (while the unit is not in operation)



Main display in the Full mode (while the unit is in operation)

Notes
- When connecting two remote controllers, be sure to designate one as a main and the other as a sub controller. Refer to section 11 "Initial settings" for how to make the Main/Sub setting.
- Refer to the Instructions Book for the icons on the display.

9. Test run <Maintenance password is required.>

(1) Read the section about Test run in the indoor unit Installation Manual before performing a test run.

(2) At the Main display, press the MENU button and select Service>Test run>Test run.

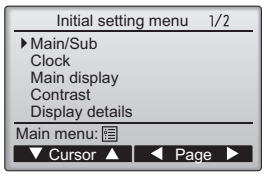
(3) Press the ON/OFF button to cancel the test run if necessary.

(4) Refer to the indoor unit Installation Manual for the detailed information about test run and for how to handle the errors that occur during a test run.

Note: Refer to section 12 "Service menu" for information about the maintenance password.

10. Initial settings (Remote controller settings) <Administrator password is required.>

From the Main display, select Main menu>Initial setting, and make the remote controller settings on the screen that appears.



Initial setting menu (1/2)
- Main/Sub
- Clock
- Main display
- Contrast
- Display details
  -Clock
  -Temperature
  -Room temp.
  -Auto mode

Initial setting menu (2/2)
- Auto mode
- Administrator password
- Language selection

Note: The initial administrator password is "0000." Refer to section (7) "Administrator password setting" for how to change the password.

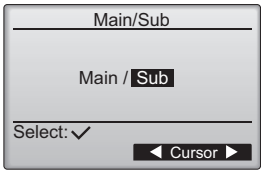
(1) Main/Sub setting

When connecting two remote controllers, one of them needs to be designated as a sub controller.

[Button operation]

[1] When the F3 or F4 button is pressed, the currently selected setting will appear highlighted. Select "Sub", and press the SELECT button to save the change.

[2] Press the MENU button to return to the Main menu screen. (This button always brings up the Main menu screen.)



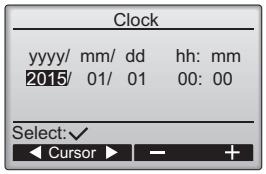
OPTIONAL PARTS

(2) Clock setting

[Button operation]

[1] Move the cursor with the F1 or F2 button to the desired item.

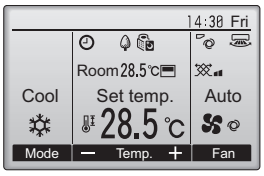
[2] Change the date and time with the F3 or F4 button, and press the SELECT button to save the change. The change will be reflected on the clock display on the Main display.



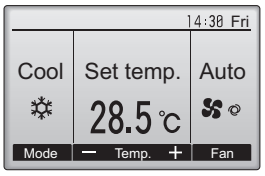
Note: Clock setting is necessary for time display, weekly timer, timer setting and error history. Make sure to perform clock setting when the unit is used for the first time or has not used for a long time.

(3) Main display setting

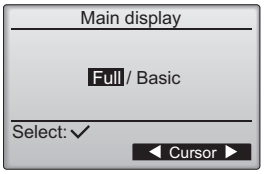
Use the F3 or F4 button to select the display mode "Full" or "Basic." (The factory setting is "Full.")



Full mode (Example)



Basic mode (Example)



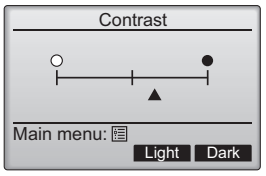
Note: This setting is only for the Main display. In the Basic mode, icons that indicate control status on timer and schedule settings will not appear on the display. Vane, louver, and ventilation settings or room temperature will not appear, either.

(4) Display contrast

[Button operation]

Adjust LCD contrast with the F3 or F4 button.

The current level is indicated with a triangle.

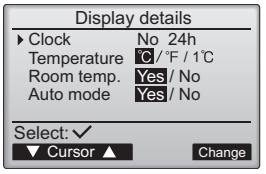


Note: Adjust the contrast to improve viewing in different lighting conditions or installation locations. This setting can not improve viewing from all directions.

(5) Remote controller display details setting

Make the settings for the remote-controller-related items as necessary.

Press the SELECT button to save the changes.



[1] Clock display

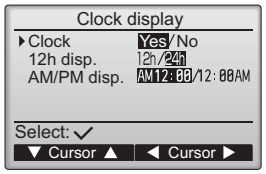
[Button operation]

· Select "Clock" from the remote controller display details setting screen, and press the F4 button (Change) to bring up the clock display setting screen.

· Use the F1 through F4 buttons to select "Yes" (display) or "No" (non-display) and its format for the Main display.

· Save the settings with the SELECT button.

(The factory settings are "Yes" (display) and "24 h" format.)



Clock display: Yes (Time is displayed on the Main display.)

No (Time is not displayed on the Main display.)

Display format: 24-hour format

12-hour format

AM/PM display (Effective when the display format is 12-hour): AM/PM before the time

AM/PM after the time

Note: Time display format will also be reflected on the timer and schedule setting display. The time is displayed as shown below.

12-hour format: AM12:00 ~ AM1:00 ~ PM12:00 ~ PM1:00 ~ PM11:59

24-hour format: 0:00 ~ 1:00 ~ 12:00 ~ 13:00 ~ 23:59

[2] Temperature unit setting

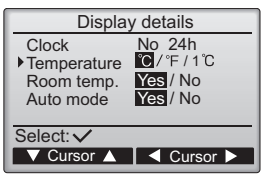
[Button operation]

Move the cursor to the "Temperature" on the display details setting screen, and select the desired temperature unit with the F3 or F4 button. (The factory setting is Centigrade (˚C).)

· ˚C: Temperature is displayed in Centigrade. Temperature is displayed in 0.5- or 1-degree increments, depending on the model of indoor units.

· ˚F: Temperature is displayed in Fahrenheit.

· 1 ˚C: Temperature is displayed in Centigrade in 1-degree increments. This item will not appear on a sub remote controller.



OPTIONAL PARTS

[3]Room temperature display

[Button operation]

Move the cursor to the "Room temp." on the display details setting screen, and select the desired setting with the F3 or F4 button. (The factory setting is "Yes".)

· Yes: Room temperature appears on the Main display.

· No: Room temperature does not appear on the Main display.

Note: Even when "Yes" is set, the room temperature is not displayed on the Main display in the "Basic" mode.

[4]Auto (single set point) mode display setting

[Button operation]

Move the cursor to the "Auto mode" on the display details setting screen, and select the desired mode with the F3 or F4 button. (The factory setting is "Yes".)

· Yes: "AUTO COOL" or "AUTO HEAT" is displayed during operation in the AUTO (single set point) mode.

· No: Only "AUTO" is displayed during operation in the AUTO (single set point) mode.

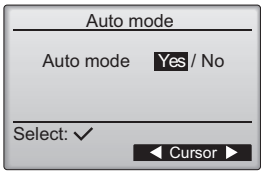
(6) Auto mode setting

[Button operation]

Whether or not to use the Auto (single set point) or Auto (dual set points) mode can be selected by using the F3 or F4 button. This setting is valid only when indoor units with the AUTO mode function are connected.
(The factory setting is "Yes".)
Press the SELECT button to save the changes made.

· Yes: The AUTO mode can be selected in the operation mode setting.

· No: The AUTO mode cannot be selected in the operation mode setting.

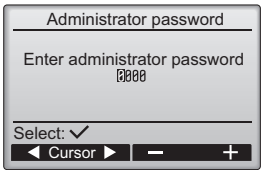


(7) Administrator password setting

[Button operation]

[1] To enter the current Administrator password (4 numerical digits), move the cursor to the digit you want to change with the F1 or F2 button, and set each number (0 through 9) with the F3 or F4 button.

[2] Press the SELECT button.

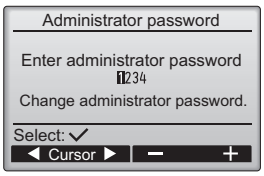


Note: The initial administrator password is "0000." Change the default password as necessary to prevent unauthorized access. Have the password available for those who need it.

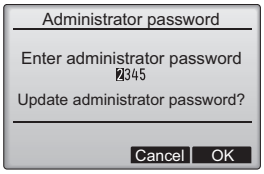
Note: If you forget your administrator password, you can initialize the password to the default password "0000" by pressing and holding the F1 and F2 buttons simultaneously for three seconds on the administrator password setting screen.

[3] If the password matches, a window to enter a new password will appear. Enter a new password in the same way as explained above, and press the SELECT button.

[4] Press the F4 button (OK) on the password change confirmation screen to save the change. Press the F3 button (Cancel) to cancel the change.



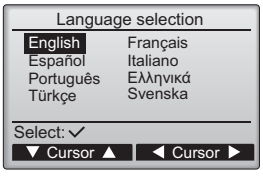
Note: The administrator password is required to make the settings for the following items.
· Timer setting · Weekly timer setting · Energy-save setting
· Outdoor unit silent mode setting · Restriction setting
Refer to the Instruction Book that came with the remote controller for the detailed information about how to make the settings for these items.



(8) Language selection

[Button operation]

Move the cursor to the language you desire with the F1 through F4 buttons.
Press the SELECT button to save the setting.



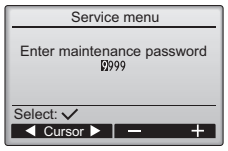
11. Service menu (Maintenance password is required.)

At the Main display, press the MENU button and select "Service" to make the maintenance settings.

When the Service menu is selected, a window will appear asking for the password.
To enter the current maintenance password (4 numerical digits), move the cursor to the digit you want to change with the F1 or F2 button, and set each number (0 through 9) with the F3 or F4 button. Then, press the SELECT button.

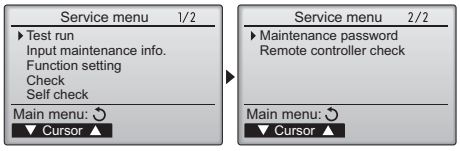
Note: The initial maintenance password is "9999." Change the default password as necessary to prevent unauthorized access. Have the password available for those who need it.

Note: If you forget your maintenance password, you can initialize the password to the default password "9999" by pressing and holding the F1 and F2 buttons simultaneously for three seconds on the maintenance password setting screen.

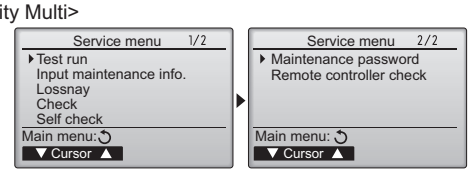


If the password matches, the Service menu will appear.
The type of menu that appears depends on the connected indoor units' type (City Multi or Mr. Slim).

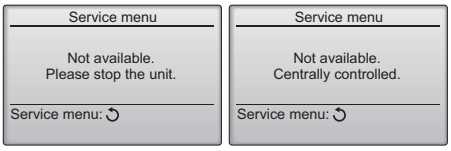
<Mr. Slim>



<City Multi>



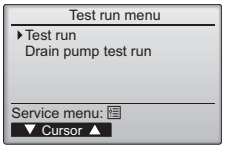
Note: Air conditioning units may need to be stopped to make certain settings. There may be some settings that cannot be made when the system is centrally controlled.



(1) Test run (City Multi and Mr. Slim)

Select "Test run" from the Service menu to bring up the Test run menu.
· Test run: Select this option to perform a test run.
· Drain pump test run: Select this option to perform a test run on the drain pump on the indoor unit. Applicable only to the type of indoor units that support the test run function.

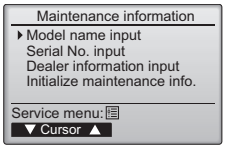
Note: Refer to the indoor unit Installation Manual for the detailed information about test run.



(2) Input maintenance Info. (City Multi and Mr. Slim)

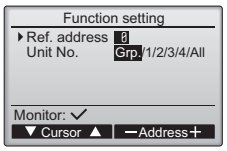
Select "Input maintenance Info." from the Service menu to bring up the Maintenance information screen. Refer to the indoor unit Installation Manual for how to make the settings.

Note: The following settings can be made from the Maintenance Information screen.
•Registering model names and serial numbers
Enter the model names and serial numbers of outdoor and indoor units. The information entered will appear on the Error information screen. Model names can have up to 18 characters, and the serial numbers can have up to 8 characters.
•Registering dealer information
Enter phone number of a dealer. The entered information will appear on the Error information screen. Phone number can have up to 13 characters.
•Initializing maintenance information
Select the desired item to initialize the above settings.



(3) Function setting (Mr. Slim)

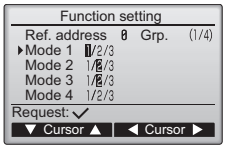
Make the settings for the indoor unit functions via the remote controller as necessary.
Select "Function setting" from the Service menu to bring up the Function setting screen.



[Button operation]

[1] Set the indoor unit refrigerant addresses and unit numbers with the F1 through F4 buttons, and then press the SELECT button to confirm the current setting.

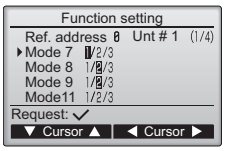
[2] When data collection from the indoor units is completed, the current settings appears highlighted. Non-highlighted items indicate that no function settings are made. Screen appearance varies depending on the "Unit No." setting.



Common items

OPTIONAL PARTS

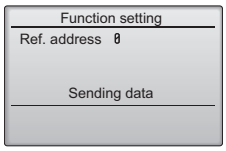
[3] Use the F1 or F2 button to move the cursor to select the mode number, and change the setting number with the F3 or F4 button.



Individual items
(Unit No. 1 through 4)

[4] When the settings are completed, press the SELECT button to send the setting data from the remote controller to the indoor units.

[5] When the transmission is successfully completed, the screen will return to the Function setting screen.



Note:	• Make the above settings on Mr. Slim units as necessary. • Refer to the Instructions Book when it is necessary to set the settings for City Multi units. • **Table 1 summarizes the setting options for each mode number. Refer to the indoor unit Installation Manual for the detailed information about initial settings, mode numbers, and setting numbers for the indoor units.** • Be sure to write down the settings for all functions if any of the initial settings has been changed after the completion of installation work.

Table1. Function setting options

Mode No.	Mode	Settings	Setting No.	Unit numbers
01	Automatic recovery after power failure	Disable	1	Set "Grp." for the Unit number. These settings apply to all the connected indoor units.
		Enable (Four minutes of standby time is required after the restoration of power.)	2	
02	Thermistor selection (indoor temperature detection)	Average temperature reading of the indoor units in operation	1	
		Thermistor on the indoor unit to which the remote controller is connected (fixed)	2	
		Built-in sensor on the remote controller	3	
03	LOSSNAY connection	Not connected	1	
		Connected (without outdoor air intake by the indoor units)	2	
		Connected (with outdoor air intake by the indoor units)	3	
04	Power voltage	240 V	1	
		220 V, 230 V	2	
05	AUTO mode	Enable (Automatically the unit achieves effective energy saving operation.)	1	
		Disable	2	
07	Filter sign	100 hours	1	Set "1, 2, 3, 4, or All" for the Unit number. These settings apply to each indoor unit. • If "1, 2, 3, or 4" is set for the Unit number, the settings apply only to the specified indoor unit regardless of the number of connected indoor units (one through four units). • If "ALL" is set for the Unit number, the settings apply to all the connected indoor units regardless of the number of connected indoor units (one through four units).
		2500 hours	2	
		Not displayed	3	
08	Fan speed	Silent mode (or standard)	1	
		Standard (or High ceiling 1)	2	
		High ceiling (or High ceiling 2)	3	
09	Outlet	4 directional	1	
		3 directional	2	
		2 directional	3	
10	Optional parts (High-efficiency filter)	No	1	
		Yes	2	
11	Vane	No vanes (or the vane setting No.3 is effective.)	1	
		Equipped with vanes (The vane setting No.1 is effective.)	2	
		Equipped with vanes (The vane setting No.2 is effective.)	3	

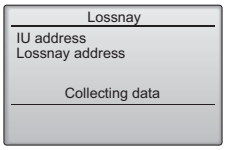
(4) LOSSNAY setting (City Multi only)

This setting is required only when the operation of City Multi units is interlocked with LOSSNAY units. This setting is not available for the Mr. Slim units. Interlock settings can be made for the indoor unit to which the remote controller is connected. (They can also be confirmed or deleted.)

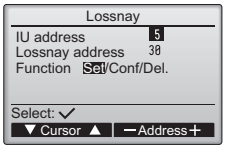
Note:	• Use the centralized controller to make the settings if it is connected. • To interlock the operation of the indoor units with the LOSSNAY units, be sure to interlock the addresses of ALL indoor units in the group and that of the LOSSNAY unit.

[Button operation]

[1] When "Lossnay" on the Service menu is selected, the remote controller will automatically begin searching for the registered LOSSNAY addresses of the currently connected indoor unit.



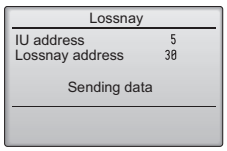
[2] When the search is completed, the smallest address of the indoor units that are connected to the remote controller and the address of the interlocked LOSSNAY unit will appear. "--" will appear if no LOSSNAY unit is interlocked with the indoor units.

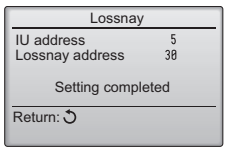


If no settings need to be made, press the RETURN button to go back to the Service menu.

To make LOSSNAY interlock setting

[3] Enter the addresses of the indoor unit and the LOSSNAY unit to be interlocked, with the F1 through F4 buttons, select "Set" in the "Function", and press the SELECT button to save the settings. "Sending data" will appear on the screen. If the setting is successfully completed, "Setting completed" will appear.

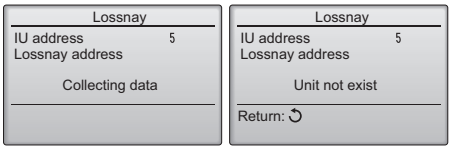




OPTIONAL PARTS

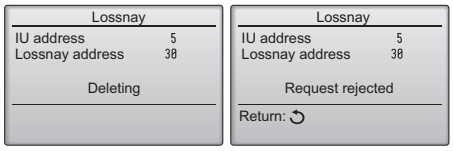
To search for the LOSSNAY address

[4] Enter the address of the indoor unit to which the remote controller is connected, select "Conf" in the "Function", and press the SELECT button. "Collecting data" will appear on the screen. If the signal is received correctly, the indoor unit address and LOSSNAY address will appear. "--" will appear when no LOSSNAY unit is found. "Unit not exist" will appear if no indoor units that are correspond to the entered address are found.



To delete the interlock setting

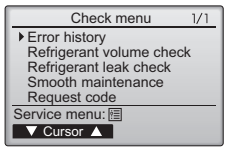
[5] To delete the interlocked setting between LOSSNAY unit and the indoor units to which the remote controller is connected, enter the indoor unit address and LOSSNAY address with the F1 through F4 buttons, select "Del." in the "Function", and press the SELECT button. "Deleting" will appear. The screen will return to the search result screen if the deletion is successfully completed. "Unit not exist" will appear if no indoor units that are correspond to the entered address are found. If deletion fails, "Request rejected" will appear on the screen.



(5) Check

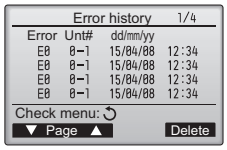
Select "Check" on the Service menu to bring up the Check menu screen. The type of menu that appears depends on the type of indoor units that are connected (City Multi or Mr. Slim).
(When City Multi is connected, only "Error history" will appear in the menu.)

<Mr. Slim>



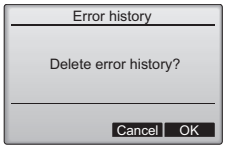
[1] Error history

Select "Error history" from the Check menu, and press the SELECT button to view up to 16 error history records. Four records are shown per page, and the top record on the first page indicates the latest error record.

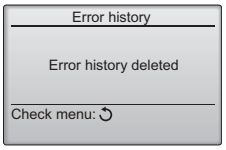


[Deleting the error history]

To delete the error history, press the F4 button (Delete) on the screen that shows error history. A confirmation screen will appear asking if you want to delete the error history.
Press the F4 button (OK) to delete the history.



"Error history deleted" will appear on the screen. Press the Return button to go back to the Check menu screen.



[2] Other options in the Check menu (Mr. Slim only)

The following options are also available on the Mr. Slim units in the Check menu.

- •Refrigerant volume check
- •Refrigerant leak check
- •Smooth maintenance
- •Request code

These options are available only on the Mr. Slim units. Refer to the indoor unit Installation Manual for details.

(6) Diagnostic function.

Error history of each unit can be checked via the remote controller.
[Procedures]

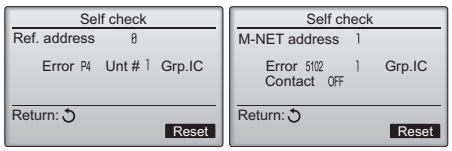
[1] Select "Self check" from the Service menu, and press the SELECT button to view the Self check screen.

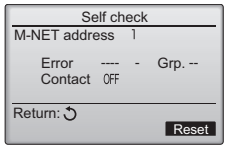
[2] With the F1 or F2 button, enter the refrigerant address (Mr. Slim) or the M-NET address (City Multi), and press the SELECT button.

[3] Error code, unit number, attribute, and indoor unit demand signal ON/OFF status at the contact (City Multi only) will appear. "-" will appear if no error history is available.

<Mr. Slim> <City Multi>

<Mr. Slim> <City Multi>



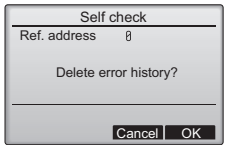


When there is no error history

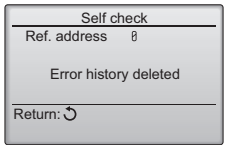
OPTIONAL PARTS

[Resetting the error history]

[1] Press the F4 button (Reset) on the screen that shows the error history. A confirmation screen will appear asking if you want to delete the error history.



[2] Press the F4 button (OK) to delete the error history. If deletion fails, "Request rejected" will appear, and "Unit not exist" will appear if no indoor units that are correspond to the entered address are found.



(7) Setting the maintenance password
Take the following steps to change the maintenance password.

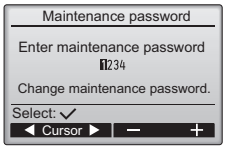
[Procedures]

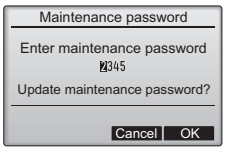
[1] Select "Maintenance password" on the Service menu, and press the SELECT button to bring up the screen to enter a new password.

[2] Move the cursor to the digit you want to change with the F1 or F2 button, and set each digit to the desired number (0 through 9) with the F3 or F4 button.

[3] Press the SELECT button to save the new password.

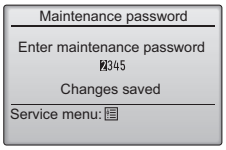
[4] A confirmation screen will appear asking if you want to change the maintenance password. Press the F4 button (OK) to save the change. Press the F3 button (Cancel) to cancel the change.





[5] "Changes saved" will appear when the password is updated.

[6] Press the MENU button to return to the Service menu or press the RETURN button to go back to the "Maintenance password" screen.



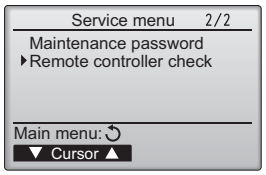
12. Remote controller check

When the remote controller does not work properly, use the remote controller checking function to troubleshoot the problem.

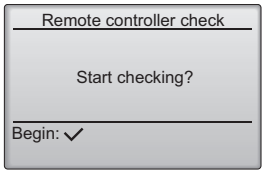
(1) Check the remote controller display and see if anything is displayed (including lines). Nothing will appear on the remote controller display if the correct voltage (8.5-12 VDC) is not supplied to the remote controller. If this is the case, check the remote controller wiring and indoor units.

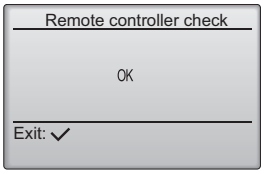
[Procedures]

[1] Select "Remote controller check" from the Service menu, and press the SELECT button to start the remote controller check and see the check results. To cancel the remote controller check and exit the Remote controller check menu screen, press the MENU or the RETURN button. The remote controller will not reboot itself.



Select "Remote controller check".





Remote controller check results screen

OK: No problems are found with the remote controller. Check other parts for problems.
E3, 6832: There is noise on the transmission line, or the indoor unit or another remote controller is faulty. Check the transmission line and the other remote controllers.
NG (ALL0, ALL1): Send-receive circuit fault. Remote controller needs replacing.
ERC: The number of data errors is the discrepancy between the number of bits in the data transmitted from the remote controller and that of the data that was actually transmitted over the transmission line. If data errors are found, check the transmission line for external noise interference.

[2] If the SELECT button is pressed after the remote controller check results are displayed, remote controller check will end, and the remote controller will automatically reboot itself.

Simple MA Remote Controller PAC-YT52CRA

Photo

Descriptions

New functions have been added to the CITY MULTI series that enable the setting of certain indoor unit functions (such as static pressure) from the remote controller. (For more detailed information, please contact your nearest sales office or distributor.)

Applicable Models

- MSZ-FH25/35/50VE2
- MSZ-EF18/22/25/35/42/50VE3W/B/S
- MSZ-SF15/20VA
- MSZ-SF25/35/42/50VE3
- MSZ-GF60/71VE2
- MSZ-DM25/35VA
- MFZ-KJ25/35/50VE2
- MLZ-KA25/35/50VA
- P-series models (Except PSA-RP•KA)
- SLZ-KF•VA2
- SEZ-KD•VAQ

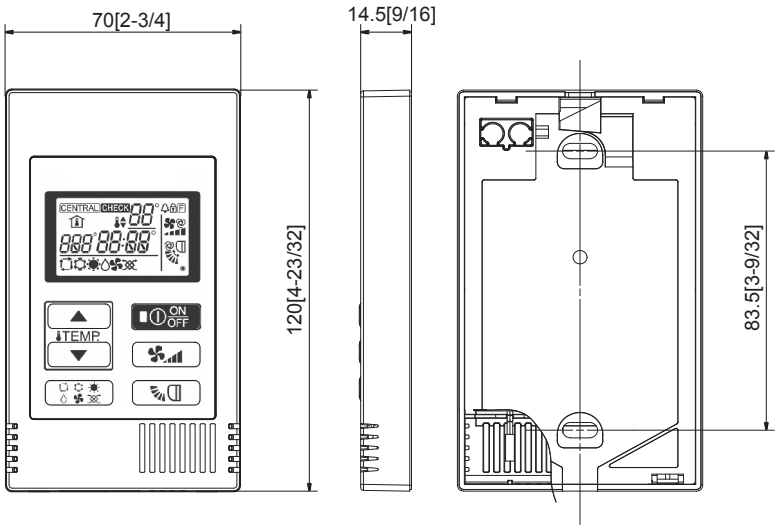
Specifications

	Specifications
Product size	70 (W) × 120 (H) × 14.5 (D) mm (2-3/4 × 4-3/4 × 9/16 [in]) (not including the protruding part)
Net weight	0.1 kg (1/4 lb.)
Rated power supply voltage	12 VDC (supplied from indoor units)
Power consumption	0.3 W
Usage environment	Temperature 0 ~ 40ºC (32 ~ 104ºF) Humidity 30 ~ 90%RH (with no dew condensation)
Material	PC + ABS

Dimensions

Unit : mm

Unit:mm[in.]



OPTIONAL PARTS

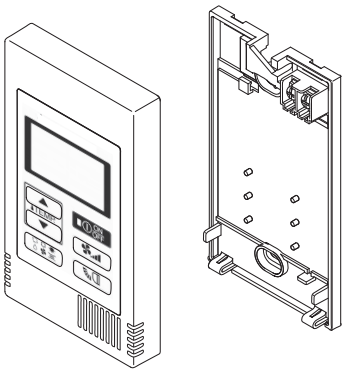
How to Use / How to Install

1 Component names and supplied parts

The following parts are included in the box.

Parts name	Qty.	Appearance
Remote controller (top case)	1	Right figure *1
Remote controller (bottom case)	1	Right figure *2
Roundhead cross slot screws M4×30	2	*3
Wood screw 4.1×16 (for direct wall installation)	2	*3
Installation Manual (this manual)	1	
Instruction Book	1	

Top case *1 Bottom case *2



*3 ISO metric screw thread
*4 Remote controller cable is not included.

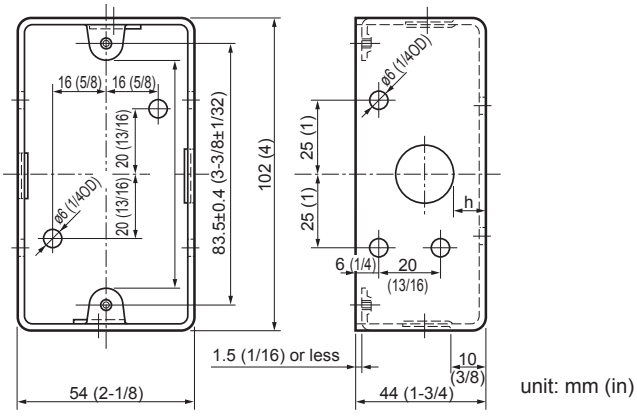
2 Field-supplied parts/Required tools

(1) Field-supplied parts

The following parts are field-supplied parts.

Parts name	Qty.	Notes
Single switch box	1	Not required for direct wall installation
Thin metal conduit	Necessary	
Lock nut and bushing	Necessary	
Cable cover	Necessary	Required for routing remote controller cable along a wall
Putty	Reasonable	
Molly anchor	Necessary	
Remote controller cable (Use a 0.3 mm² (AWG22) 2-core sheathed cable.)	Necessary	

Switch box



unit: mm (in)

(2) Field-supplied tools

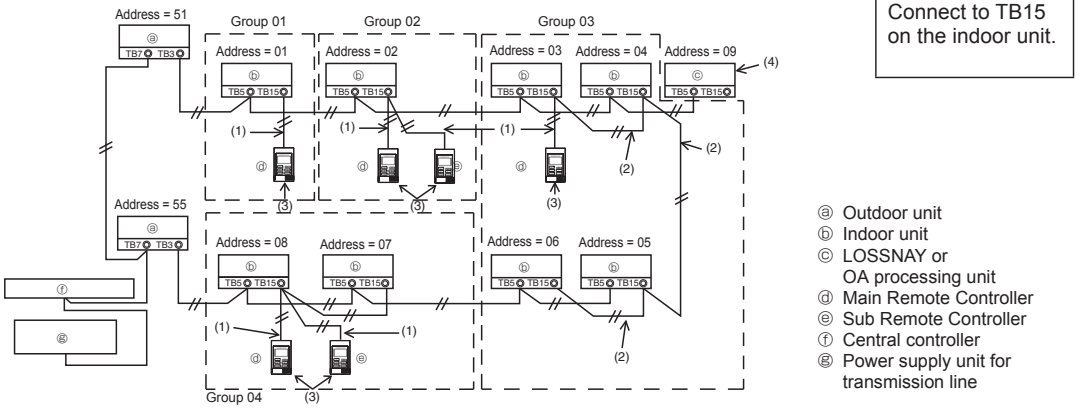
- Flat-tip screwdriver (Width: 3 - 5 mm (1/8 - 7/32 inch))
- Knife or Nipper
- Miscellaneous tools

3 How To Wire Transmission Line

The wiring is different when the remote controller is connected to a CITY MULTI control system ("-A" type and later) and when it is connected to a Mr. SLIM air conditioner (A control type). The wiring also differs with the system configuration. Check the system used.

1. Connecting to CITY MULTI control system

The numbers (1) to (4) in the figure correspond to items (1) to (4) in the following description.



(1) Wiring from the remote controller
- Connect to the MA remote controller terminal block (TB15) on the indoor unit.
- The terminal block has no polarity. Connect to the terminal block at the rear bottom of the remote controller.

(2) Operating in a group (Groups 03, and 04 above)
- Interconnect the MA remote controller terminal block (TB15) of the indoor units you want to operate as a group, and connect the MA remote controller to that point.
- When the remote controller is used in combination with the system controller as shown in the figure above, group setting at the system controller (central controller in the figure above) is necessary.

(3) Number of connectable remote controllers (groups 02 and 04)
- A main remote controller and one sub remote controller, a total of two, can be connected to a group made up of indoor units.

NOTE: When using this Simple MA remote controller in combination with other MA remote controllers, be sure to follow the compatibility rules below.

Indoor unit function	Main remote controller	Sub remote controller	Compatibility
Models applicable for AUTO (dual set point) mode	This Simple MA remote controller	This Simple MA remote controller	Compatible, and AUTO (dual set point) mode can be used depending on the indoor units to be connected.
	Other MA remote controllers	This Simple MA remote controller	Compatible, but AUTO (dual set point) mode cannot be used.
	This Simple MA remote controller	Other MA remote controllers	Incompatible
Models not applicable for AUTO (dual set point) mode	Combination with all of the above		Compatible

(4) To interlock to a LOSSNAY or OA processing unit, make the following settings using the remote controller. (For a description of how to set an interlock, see section 6 Ventilation Setting .)
Set the LOSSNAY or OA processing unit address and the address of all the indoor units you want to interlock.

(5) Total length of remote controller wiring
- The simple MA controller can be wired up to 200 m (656 ft).

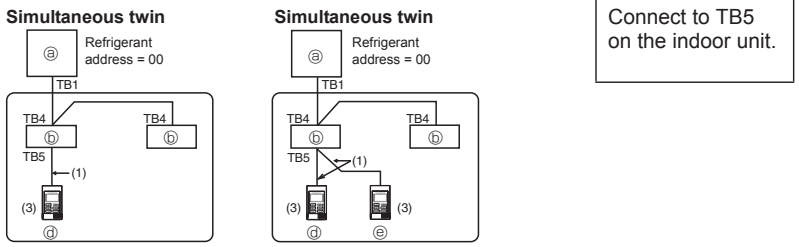
⚠ CAUTION	Remote controllers cannot be wired together. Only one wire can be connected to the remote controller terminal block. 

NOTE: When interlocking the MA remote controller with a LOSSNAY or OA processing unit, always set the address of all the indoor units in the group and the address of the LOSSNAY or OA processing unit.

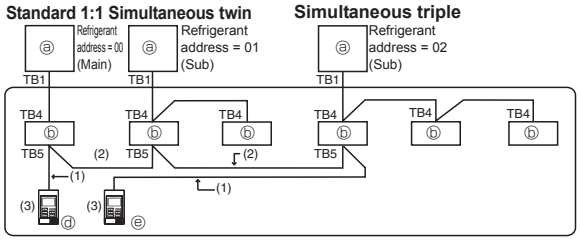
2. Connecting to Mr. SLIM air conditioner

The remote controller wiring depends on the system configuration. Check the system configuration. Wire the remote controller as shown in the example below.
The numbers (1) to (3) in the figure correspond to items (1) to (3) in the following description.

[1] Connecting the remote controller for each refrigerant system (Standard 1:1, simultaneous twin, simultaneous triple, simultaneous four)



[2] When grouping by different refrigerant systems



ⓐ Outdoor unit
ⓑ Indoor unit
ⓓ Main Remote Controller (Simple MA Controller)
ⓔ Sub Remote Controller (Simple MA Controller)

* Set the refrigerant address using the outdoor unit dip switches. (For more information, refer to the outdoor unit installation manual.)
* All the indoor units enclosed in ⬭ are controlled as one group.

(1) Wiring from remote controller
- Connect to indoor unit TB5 (remote controller terminal block). (The terminal block has no polarity.)
- For simultaneous multi type, when mixing various types of indoor units, always connect the remote controller to the indoor unit with the most functions (wind velocity, vane, louver, etc.).

(2) When grouping with difference refrigerant systems
- Group using the remote controller wiring. Connect the remote controller to an arbitrary indoor unit of each refrigerant system you want to group.
- When mixing different types of indoor units in the same group, always make the outdoor unit connecting the indoor unit with the most functions (wind velocity, vane, louver, etc.) the Main unit (refrigerant address = 00). Also, when the Main unit is the simultaneous multi type, always satisfy the conditions of (1) above.
- The Simple MA Remote Controller can control up to 16 refrigerant systems as one group.

(3) Up to two remote controllers can be connected to one group
- When two remote controllers are connected to one group, always set the Main remote controller and Sub remote controller.
- When only one remote controller is connected to one group, set it as the Main controller. When two remote controllers are connected to one group, set the Main remote controller and Sub remote controller. (For a description of how to set the Main/Sub switch, see step 5 in section 4 How To Install .)

NOTE: When using this Simple MA remote controller in combination with other MA remote controllers, be sure to follow the compatibility rules below.

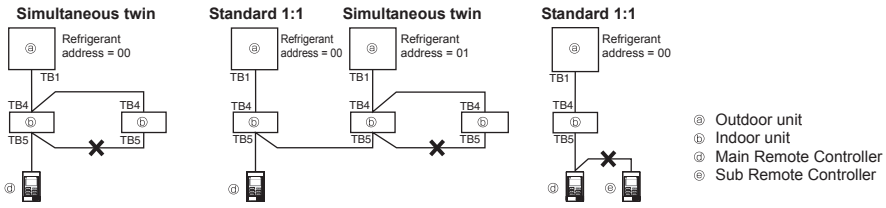
Indoor unit function	Main remote controller	Sub remote controller	Compatibility
Models applicable for AUTO (dual set point) mode	This Simple MA remote controller	This Simple MA remote controller	Compatible, and AUTO (dual set point) mode can be used depending on the indoor units to be connected.
	Other MA remote controllers	This Simple MA remote controller	Compatible, but AUTO (dual set point) mode cannot be used.
	This Simple MA remote controller	Other MA remote controllers	Incompatible
Models not applicable for AUTO (dual set point) mode	Combination with all of the above		Compatible

OPTIONAL PARTS

(4) Total length of remote controller wiring

• The Simple MA Remote Controller can be wired up to 500 m (1640 ft).

⚠CAUTION
- The wiring cannot be connected to TB5 of the indoor unit of the same refrigerant system. If so connected, the system will not operate normally.
- Remote controllers cannot be wired together. Only one wire can be connected to the remote controller terminal block.
- When connecting to TB5, connect up to two wires of the same size to one terminal block.



4 How To Install

This remote controller is for the wall installation. It can be installed either in the switch box or directly on the wall. When performing direct wall installation, wires can be thread through either back or top of the remote controller.

(1) Selecting an installation site

Install the remote controller (switch box) on the site where the following conditions are met.

(a) A flat surface

(b) A place where the remote controller can measure the accurate indoor temperature
Sensors to monitor indoor temperature are on the indoor unit and on the remote controller. When the room temperature is monitored with the sensor on the remote controller, the built-in sensor on the Main remote controller monitors the room temperature. When using the sensor on the remote controller, follow the instructions below.

- To monitor the accurate indoor temperature, install the remote controller away from direct sunlight, heat sources, and the supply air outlet of the air conditioner.
- Install the remote controller in a location that allows the sensor to measure the representative room temperature.
- Install the remote controller where no wires are routed around the temperature sensor on the controller. (If wires are routed, the sensor cannot measure accurate indoor temperature.)

Important

Do not install the controller in a place where the difference between the remote controller surface temperature and the actual room temperature will be great.
If the temperature difference is too high, room temperature may not be adequately controlled.

To reduce the risk of malfunctions, do not install the controller in a place where water or oil may come into contact with the controller, or in a condensing or corrosive environments.

To avoid deformation and malfunction, do not install the remote controller in direct sunlight or where the ambient temperature may exceed 40ºC (104ºF) or drop below 0ºC (32ºF).

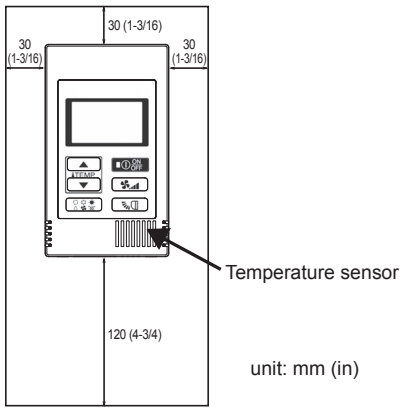
Do not install the remote controller directly onto electrically conductive objects such as metal plate that has not been painted.

(2) Installation space

Leave a space around the remote controller as shown in the figure shown below, regardless of whether the controller is installed in the switch box or directly on the wall. Removing the remote controller will not be easy with insufficient space.
Also, leave an operating space in front of the remote controller.

External dimensions of remote controller

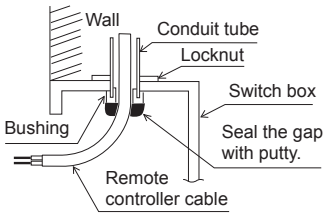
Minimum required space around the remote controller



OPTIONAL PARTS

(3) Installation work

Controller can be installed either in the switch box or directly on the wall. Perform the installation properly according to the installation method.



① **Drill a hole in the wall.**

■ Installation using a switch box
- Drill a hole in the wall, and install the switch box on the wall.
- Connect the switch box to the conduit tube.

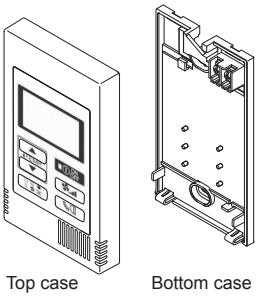
■ Direct wall installation
- Drill a hole in the wall, and thread the cable through it.

② **Seal the cable access hole with putty**

■ Installation using a switch box
- Seal the remote controller cable access hole at the connection of switch box and conduit tube with putty.

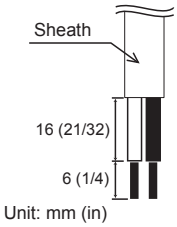
> To reduce the risk of electric shock, malfunctions, or fire, seal the gap between the cables and cable access holes with putty.

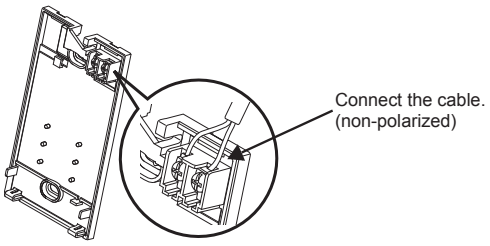
③ **Prepare the bottom case of the remote controller.**

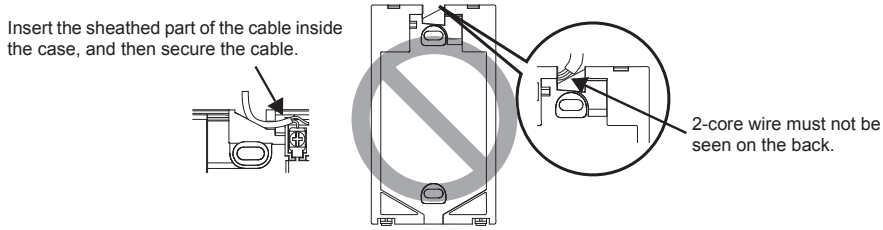


④ **Connect the remote controller cable to the terminal block on the bottom case.**

Peel off the remote controller cable sheath as shown below to connect to the terminal block properly. Secure the remote controller cable so that the peeled part of the cable will fit into the case.

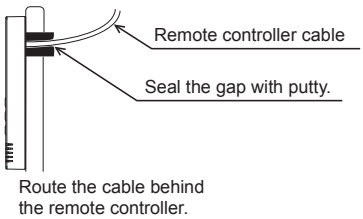






■ Direct wall installation
- Seal the hole through which the cable is threaded with putty.

> To reduce the risk of electric shock, shorting, or malfunctions, keep wire pieces and sheath shavings out of the terminal block.



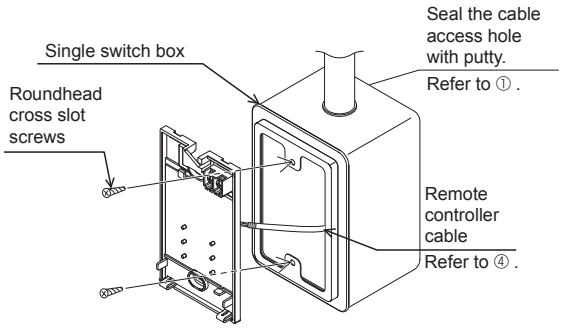
Important

> Do not use solderless terminals to connect cables to the terminal block.
> Solderless terminals may come in contact with the circuit board and cause malfunctions or damage the controller cover.

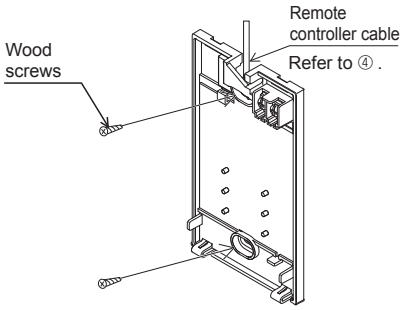
⑤ **Install the bottom case.**

Be sure to secure two places of the bottom case.

■ Installation using a switch box



■ Direct wall installation



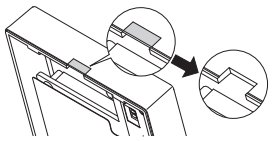
Important

To avoid deformation and damage to the bottom case, do not overtighten the screws.	To avoid damage to the bottom case, do not make holes on it.

⑥ **Cut out the cable access hole.**

■ Direct wall installation (when running the cable along the wall)

- Cut out the thin-wall part on the cover (the shaded area in the right figure) with a knife or a nipper.
- Thread the cable from the groove behind the bottom case through this access hole.



⑦ **Set the dip switches on the top case.**

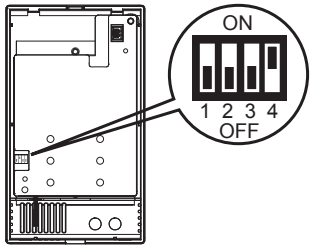
When using two remote controllers in one group, set the dip switches.
When using two remote controllers in one group, specify the main and sub remote controllers using dip switch No. 1 shown below.

- When connecting only one remote controller to one group, it is always the main remote controller. When connecting two remote controllers to one group, set one remote controller as the main remote controller and the other as the sub remote controller.
- The factory setting is “Main”.

Setting the dip switches

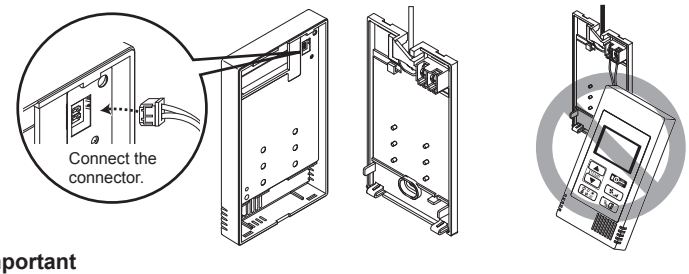
There are switches on the back of the top case. Remote controller Main/Sub and other function settings are performed using these switches. Ordinarily, only change the Main/Sub setting of SW1. (The factory settings are ON for SW1, 2, and 3 and OFF for SW4.)

SW No.	SW contents Main	ON	OFF	Comment
1	Remote controller Main/Sub setting	Main	Sub	Set one of the two remote controllers at one group to “ON”.
2	Temperature display units setting	Celsius	Fahrenheit	When the temperature is displayed in [Fahrenheit], set to “OFF”.
3	Cooling/heating display in AUTO mode	Yes	No	When you do not want to display “Cooling” and “Heating” in the AUTO mode, set to “OFF”.
4	Indoor temperature display	Yes	No	When you want to display the indoor temperature, set to “ON”.



⑧ **Connect the connector to the top case.**

Connect the connector on the bottom case to the socket on the top case.



Important

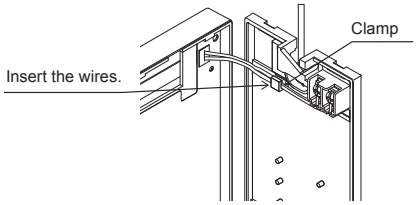
To prevent malfunctions, do not remove the protective sheet or the circuit board from the top case.

To prevent cable breakage and malfunctions, do not hang the top controller casing hang by the cable as shown in the figure above.

⑨ **Insert the wires into the clamp.**

Important

Hold the wires in place with the clamp to prevent undue force from being applied to the terminal block and causing cable breakage.

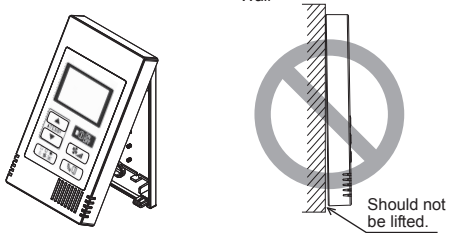


⑩ **Install the top case on the bottom case.**

Two mounting tabs are at the top of the top case.
Hook those two tabs onto the bottom case, and click the top case into place. Check that the case is securely installed and not lifted.

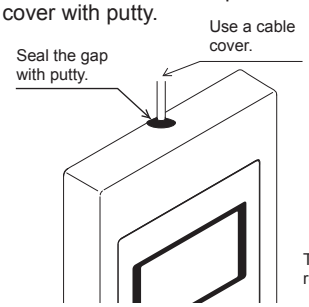
Important

When attaching the top casing to the bottom casing, push it until it they click into place. If they are not properly locked into place, they may fall, causing personal injury, controller damage, or malfunctions.



■ Direct wall installation (when running the cable along the wall)

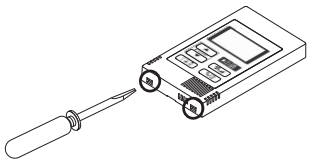
- Thread the cable through the access hole at the top of the remote controller.
- Seal the cut-out part of the cover with putty.
- Use a cable cover.



- **Uninstalling the top case**

① Uninstalling the top case

Insert a flat-tip screwdriver with a blade width of 3-5 mm (1/8-7/32 inch) into the latches at the bottom of the remote controller and lift the latches. Then, pull up the top case.



Important

To prevent damage to the controller casing, do not force the flat-tip screwdriver to turn with its tip inserted in the slot.

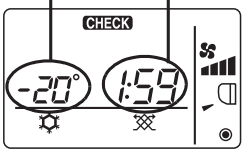
Do not insert the flat-tip screwdriver too far. Doing so will damage the circuit board.

5 Test Run

1. Before making a test run, refer to the “Test Run” section of the indoor unit installation manual.
2. When the ON/OFF button and TEMP. ▲ button are pressed simultaneously for 2 seconds or longer, test run is performed.
3. Stop the test run by pressing the ON/OFF button.
4. If trouble occurred during the test run, refer to the “Test Run” section of the indoor unit installation manual.

Indoor unit piping temperature
Display range: -20ºC (-4ºF) to 70ºC (158ºF) “-20ºC” or “70ºC” flashes on the display.

Test run time
The remaining time for test run is displayed. Display range: 2:00 to 0:01 After two hours, the test run stops automatically.



6 Ventilation Setting

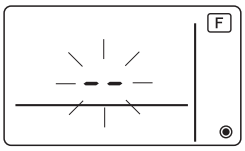
Make this setting only when interlocked operation with LOSSNAY or OA processing unit is necessary with CITY MULTI models.
(This setting cannot be made with Mr. SLIM air conditioners.)

Perform this operation when you want to register the LOSSNAY or OA processing unit, confirm the registered units, or delete the registered units controlled by the remote controller.
The following uses indoor unit address 05 and LOSSNAY or OA processing unit address 30 as an example to describe the setting procedure.

[Setting Procedure]

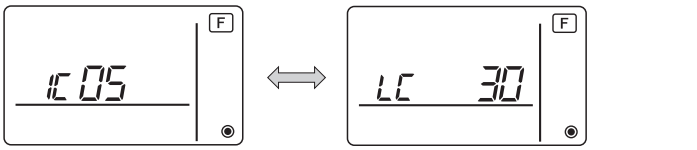
① Stop the air conditioner using the remote controller ON/OFF button.

② Press and hold down the fan speed and TEMP. ▼ buttons at the same time for two seconds. The display shown below appears. The remote controller confirms the registered LOSSNAY or OA processing unit addresses of the currently connected indoor units.



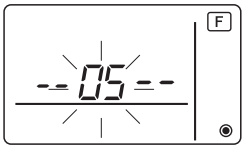
③ Registration confirmation result

- The indoor unit address and registered LOSSNAY or OA processing unit address are displayed alternately.



<Indoor unit address and indoor unit display> <LOSSNAY address display and LOSSNAY display>

- When LOSSNAY or OA processing unit are not registered

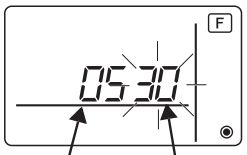


④ If registration is unnecessary, end registration by pressing and holding down the fan speed and TEMP. ▼ buttons at the same time for two seconds.
If a new LOSSNAY or OA processing unit must be registered, go to step **1. Registration procedure**.
If you want to confirm another LOSSNAY or OA processing unit, go to step **2. Confirmation procedure**. To delete a registered LOSSNAY or OA processing unit, go to step **3. Deletion procedure**.

<1. Registration procedure>

⑤ Set the address of the indoor unit to be interlocked with the LOSSNAY unit using the [TEMP. ▲] and [TEMP. ▼] buttons. (01 to 50)

⑥ After setting, press the [ ] button and set the Lossnay address you want to register by operating the [TEMP. ▲] and [TEMP. ▼] buttons. (01~50)

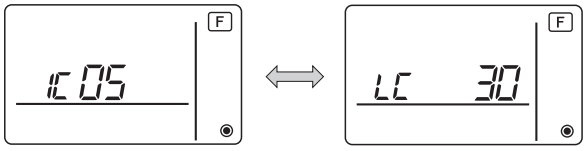


Indoor unit address LOSSNAY or OA processing unit address

⑦ Press the [ON/OFF] button, and register the set indoor unit address and LOSSNAY address.

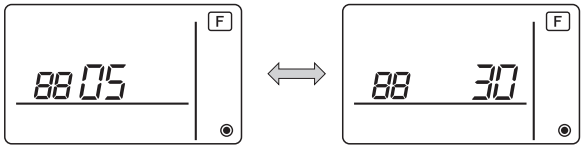
- Registration end display

The indoor unit address and “IC” and LOSSNAY address and “LC” are alternately displayed.



- Registration error display

If the address is not registered correctly, the indoor unit address and [88], and the registered LOSSNAY (or OA processing unit address) and [88] are alternately displayed.



Cannot be registered because the registered indoor unit or LOSSNAY or OA processing unit does not exist.

Cannot be registered because another LOSSNAY or OA processing unit was registered at the registered indoor unit.

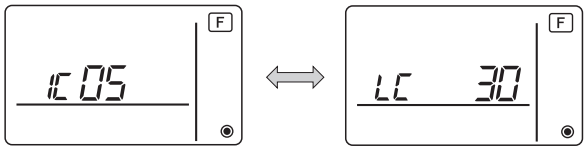
<2. Confirmation procedure>

⑧ Set the address of the indoor unit connected by the remote controller whose LOSSNAY or OA processing unit you want to confirm using the [TEMP. ▲] and [TEMP. ▼] buttons. (01 to 50)

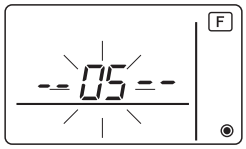
⑨ Press the [ON/OFF] button and [ ] button simultaneously for 2 seconds, and check the LOSSNAY address registered at the set indoor unit address.

- Confirmation end display (When LOSSNAY is connected.)

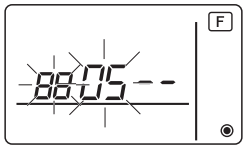
The indoor unit address and “IC” and registered LOSSNAY address and “LC” are alternately displayed.



- Confirmation end display (When LOSSNAY or OA processing unit is not connected.)



- Registered indoor unit address does not exist.



OPTIONAL PARTS

<3. Deletion procedure>

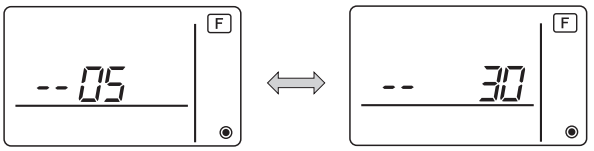
Use this procedure when you want to delete registration of indoor units connected by the remote controller and LOSSNAY or OA processing unit.

⑩ Confirm (see **2. Confirmation procedure**) the LOSSNAY or OA processing unit you want to delete and display the indoor units and LOSSNAY or OA processing unit confirmation results.

⑪ Press the [TEMP. ▲] and [TEMP. ▼] buttons simultaneously for 2 seconds, and delete registration of the LOSSNAY or OA processing unit address registered at the set indoor unit.

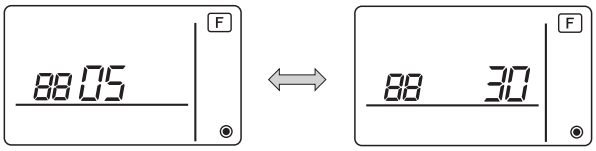
- Deletion end display

  Indoor unit address and "– –" and registered LOSSNAY or OA processing unit address and "– –" are alternately displayed.



- Deletion error display

  When deletion was not performed properly.



7 Function Selection for Mr. SLIM

Make the following settings for Mr. SLIM if necessary.
(This setting cannot be made with CITY MULTI Control System. To make CITY MULTI indoor unit settings from the remote controller, refer to section 8 Function Selection for CITY MULTI .)

Set the functions of each indoor unit from the remote controller, as required. The functions of each indoor unit can be selected only from the remote controller.
Set the functions by selecting the necessary items from Table 1.

Table1. Function selection contents

(For a detailed description of the factory settings and mode of each indoor unit, refer to the indoor unit installation manual.)

Mode No.	Mode	Settings	Setting No.	Check	Unit numbers
01	Automatic recovery after power failure	Disable	1		Set "00" for the Unit number. These settings apply to all the connected indoor units.
		Enable (Four minutes of standby time is required after the restoration of power.)	2		
02	Thermistor selection (Indoor temperature detection)	Average temperature reading of the indoor units in operation	1		
		Thermistor on the indoor unit to which the remote controller is connected (fixed)	2		
		Built-in sensor on the remote controller	3		
03	LOSSNAY connection	Not connected	1		
		Connected (without outdoor air intake by the indoor units)	2		
		Connected (with outdoor air intake by the indoor units)	3		
04	Power voltage	240 V	1		
		220 V, 230 V	2		
07	Filter sign	100 hours	1		Set "01" to "04" or "AL" for the Unit number. These settings apply to each indoor unit. • If "01" ("02", "03", "04") is set for the Unit number, the settings apply only to the specified indoor unit regardless of the number of connected indoor units (one through four units). • If "AL" is set for the Unit number, the settings apply to all the connected indoor units regardless of the number of connected indoor units (one through four units).
		2500 hours	2		
		Not displayed	3		
08	Fan speed	Silent mode (or standard)	1		
		Standard (or High ceiling 1)	2		
		High ceiling (or High ceiling 2)	3		
09	No. of air outlets	4 directional	1		
		3 directional	2		
		2 directional	3		
10	Installed options (High performance filter)	No	1		
		Yes	2		
11	Vane setting	No vanes (or the vane setting No.3 is effective.)	1		
		Equipped with vanes (The vane setting No.1 is effective.)	2		
		Equipped with vanes (The vane setting No.2 is effective.)	3		

* Static pressure setting can be made by using Mode 08 in combination with Mode 10 depending on the indoor unit model. Refer to the Indoor unit Installation Manual for details.

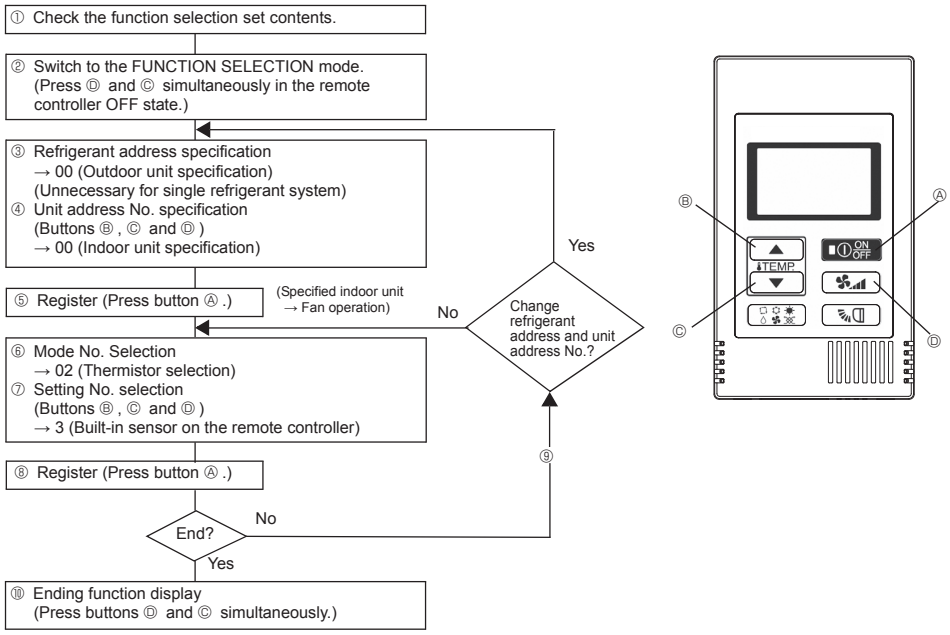
* For mode numbers other than listed above, refer to the indoor unit installation manual.

NOTE: When the indoor unit functions were changed using the function selection after installation is complete, always indicate the set contents by entering check marks or other marks in the appropriate check field of Table 1.

[Function selection flow]

First grasp the function selection flow. The following describes setting of “Thermistor selection” of Table 1 as an example.

(For the actual setting procedure, see [Setting procedure] ① to ⑩ .)



[Setting procedure] (Set only when change is necessary.)

① Check the set contents of each mode. When the set contents of a mode were changed by function selection, the functions of that mode also change.
Check the set contents as described in steps ② to ⑦ and change the setting based on the entries in the Table 1 check field. For the factory settings, refer to the indoor unit installation manual.

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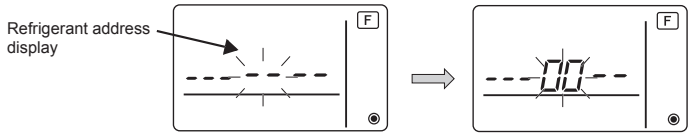
② Set the remote controller to Off.
Press and hold down the Ⓓ [fan] and the Ⓒ [TEMP. ▼] buttons at the same time for two seconds or longer.
“ F (FUNCTION)” blinks for a while, then the remote controller display changes to the display shown below.

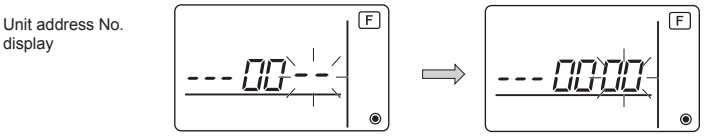


③ Set the outdoor unit refrigerant address No.
When the Ⓑ [TEMP. ▲] and Ⓒ [TEMP. ▼] buttons are pressed, the refrigerant address No. decreases and increases between 00 and 15.
Set it to the refrigerant address No. whose function you want to select.
(This step is unnecessary for single refrigerant system.)

* If the remote controller enters the OFF state after the “F (FUNCTION)” and room temperature displays “ 88 ” have flashes for two seconds, communication is probably abnormal. Make sure there are no noise sources near the transmission line.

NOTE: If you make a mistake during operation, end function selection by step ⑩ and repeat selection from step ② .

④ Set the indoor unit address No.
Press the Ⓓ [fan] button. The unit address No. display “– –” flashes.
When the Ⓑ [TEMP. ▲] and Ⓒ [TEMP. ▼] buttons are pressed, the unit address No. changes in the order of 00 ↔ 01 ↔ 02 ↔ 03 ↔ 04 ↔ AL. Set it to the unit address No. of the indoor unit whose functions you want to set.

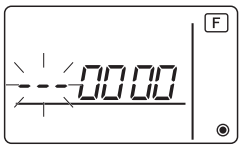


* When setting mode 1 ~ 6, set the unit address No. to “00”.
* When setting modes 7 to 14:
  - When setting for each indoor unit, set the unit address No. to “01-04”.
  - When batch setting for all indoor units, set the unit address No. to “AL”.

OPTIONAL PARTS

⑤ Refrigerant address and unit address No. registration
Press the Ⓐ ON/OFF button. The refrigerant address and unit address No. are registered.
After a while, the mode No. display "– –" flashes.

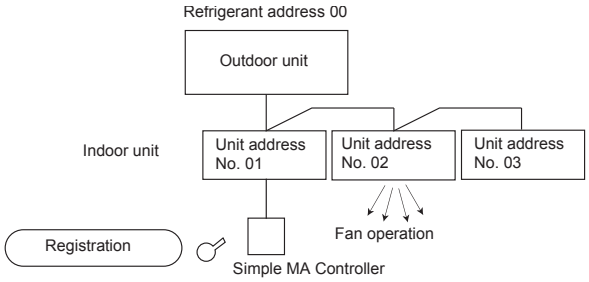
Mode No. display



* When " 88 " flashes at the room temperature display, the selected refrigerant address is not in the system. When "F" is displayed at the unit address No. display, and when it flashes together with the refrigerant address display, the selected unit address No. does not exist. Correctly set the refrigerant address and unit address No. by repeating steps ③ and ④ .

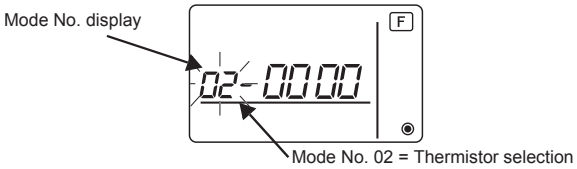
When registered using the Ⓐ ON/OFF, the registered indoor unit begins fan operation.
When you want to know the location of the indoor units of the unit address No. whose functions were selected, check here.
When the unit address No. is 00 or AL, all the indoor units of the selected refrigerant address perform the fan operation.

EX): When refrigerant address 00, unit address No. = 02 registered

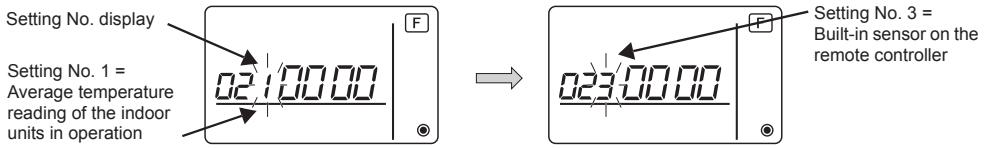


* When grouping by different refrigerant systems and an indoor unit other than the specified refrigerant address performs the fan operation, the refrigerant address set here is probably duplicated.
Recheck the refrigerant address at the outdoor unit dip switches.

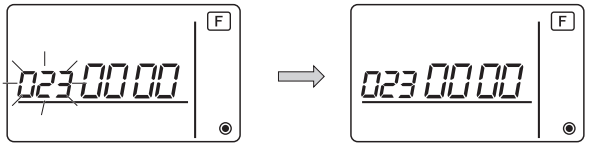
⑥ Mode No. selection
Select the mode No. you want to set with the Ⓑ TEMP. ▲ and Ⓒ TEMP. ▼ buttons. (Only the settable mode numbers can be selected.)



⑦ Select the setting contents of the selected mode.
When the Ⓓ button is pressed, the current setting No. flashes. Use this to check the currently set contents.
Select the setting No. using the Ⓑ TEMP. ▲ and Ⓒ TEMP. ▼ buttons.



⑧ The contents set at steps ③ to ⑦ are registered.
When the Ⓐ ON/OFF button is pressed, the mode No. and setting No. flash and registration begins.
The flashing mode No. and setting No. change to a steady light and setting ends.



* When " 88 " flashes at the Mode No. display, communication is probably abnormal.
Make sure there are no noise sources near the transmission line.

---

⑨ To select more functions, press the Ⓓ button and repeat steps ③ to ⑧ .

---

⑩ End function selection.
Press and hold down the Ⓒ [TEMP. ▼] and Ⓓ [fan] buttons at the same time for two seconds or longer.
After a while, the function selection display disappears and the remote controller returns to the air conditioner off display.
* Do not operate the air conditioner from the remote controller for 30 seconds after the end of function selection.

NOTE: When the functions of an indoor unit were changed by function selection after the end of installation, always indicate the set contents by entering check marks or other marks in the appropriate check field of Table 1.

8 Function Selection for CITY MULTI

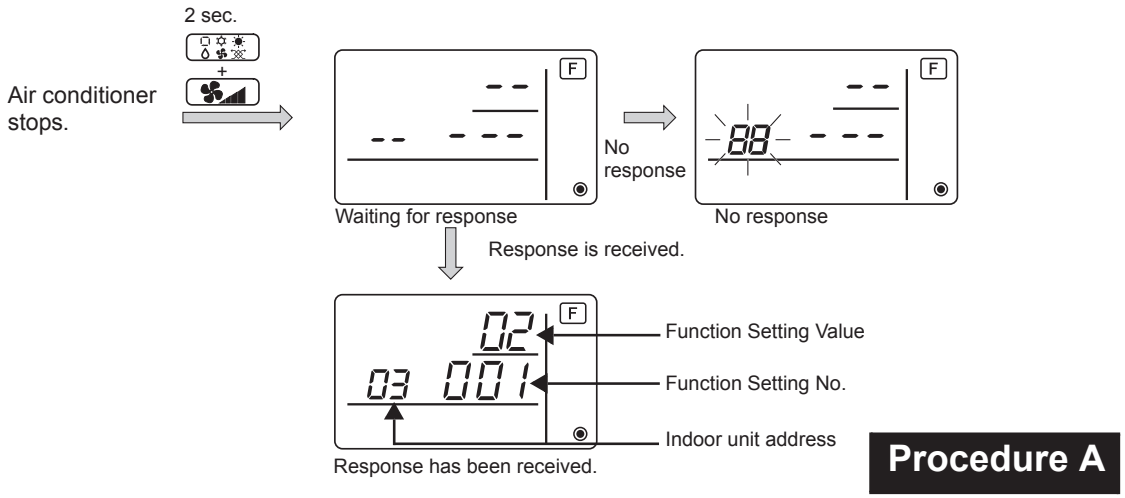
Make this setting only when the function settings need to be changed on CITY MULTI.
(This setting cannot be made with Mr. SLIM Control System. To make settings for Mr. SLIM, refer to section 7 Function Selection for Mr. SLIM .)

Set the functions of each indoor unit from the remote controller, as required.
Refer to the Indoor unit Installation Manual for factory settings, mode No., and the setting No. of the indoor units.

NOTE: Be sure to write down any settings that you change performing the following steps.

■ Setting the indoor unit Setting Value

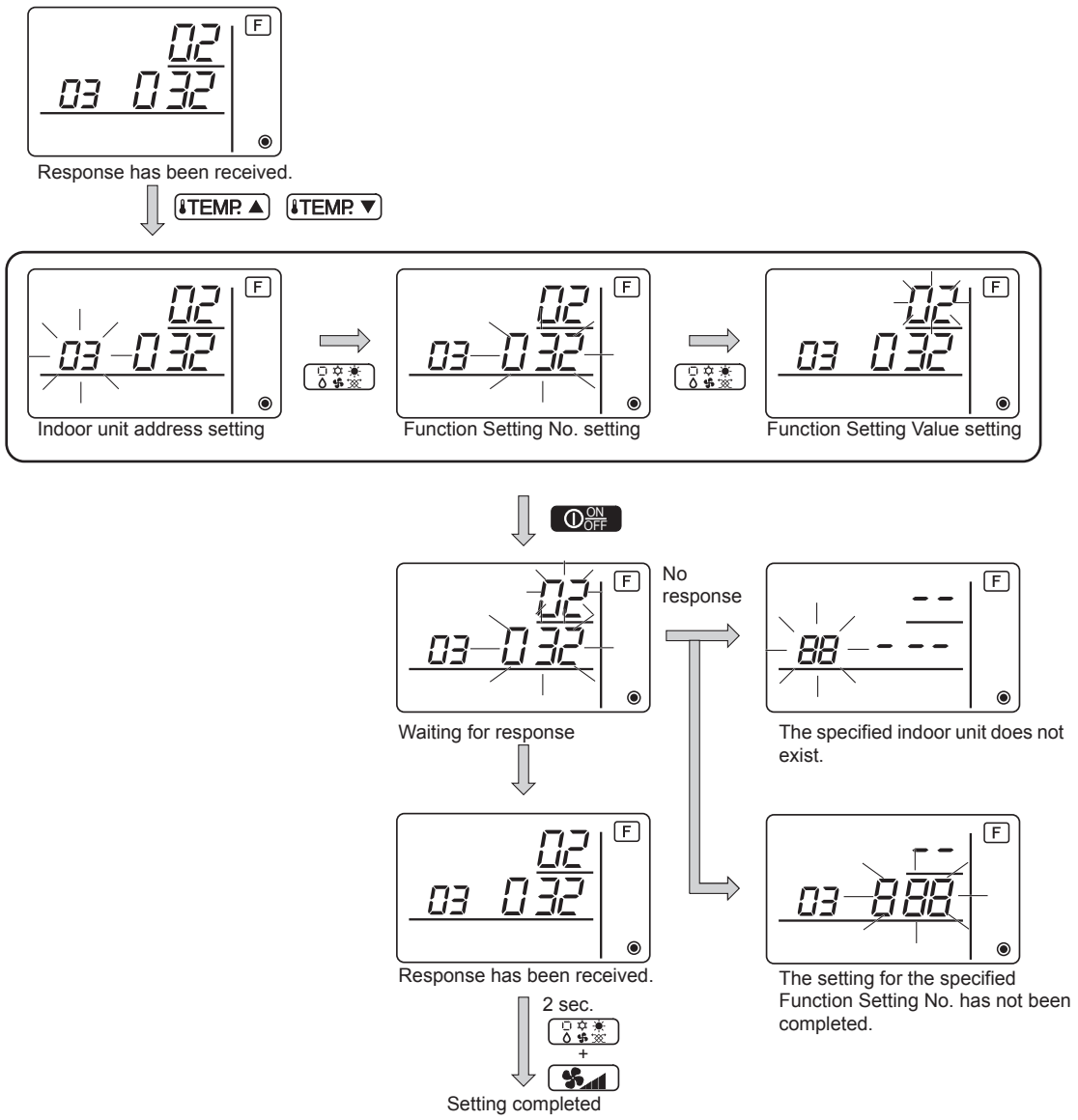
① Press the [ON/OFF] button to stop the operation of the air conditioner.
② Press and hold down the [mode] and the [fan] buttons at the same time for two seconds or longer to check the current settings.
③ When the response has been received from the indoor unit, the current settings appear. If there is no response, nothing appears.



④ Press the [TEMP. ▲] and the [TEMP. ▼] buttons to set the address of the indoor unit whose settings to be made. (ALL, 1 to 50)
⑤ Press the [mode] button, then press the [TEMP. ▲] and the [TEMP. ▼] buttons to set the Function Setting No. to be set. (000 to 255)
⑥ Press the [mode] button, then press the [TEMP. ▲] and the [TEMP. ▼] buttons to set the Function Setting Value. to be set (00 to 15)
⑦ Press the [ON/OFF] button to set the settings.

OPTIONAL PARTS

⑧ If the set settings need to be changed, repeat steps ④ to ⑦ .
To complete the settings, press the [ ] and the [ ] buttons at the same time for two seconds or longer.



■ **Checking the indoor unit Function Setting Value**

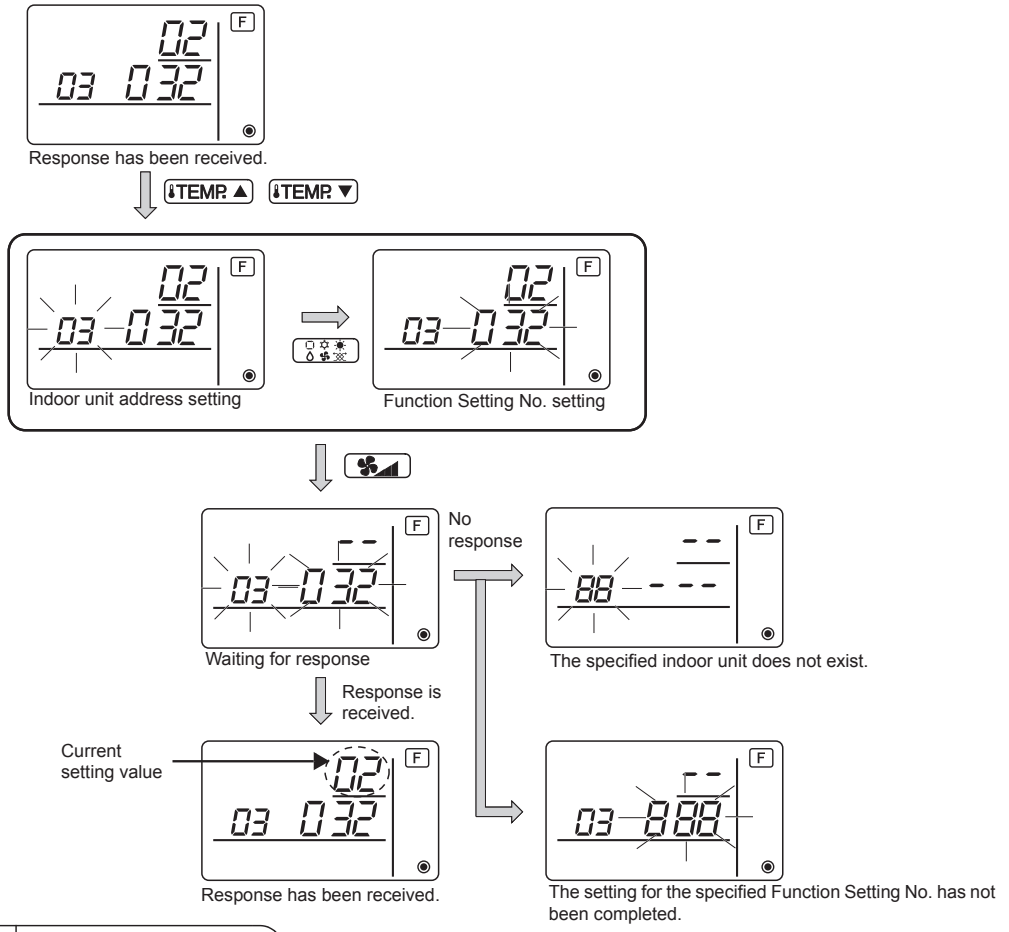
① Perform the Procedure A on the previous page.

② Press the [TEMP. ▲] and the [TEMP. ▼] buttons to set the address of the indoor unit whose settings to be checked. (ALL, 1 to 50)

③ Press the [ ] button, then press the [TEMP. ▲] and the [TEMP. ▼] buttons to set the Function Setting No. to be checked. (000 to 255)

④ Press the [ ] button to display the current Function Setting Value.

⑤ To check the settings, repeat steps ② to ④ .
To complete the checking process, press the [ ] and the [ ] buttons at the same time for two seconds or longer.

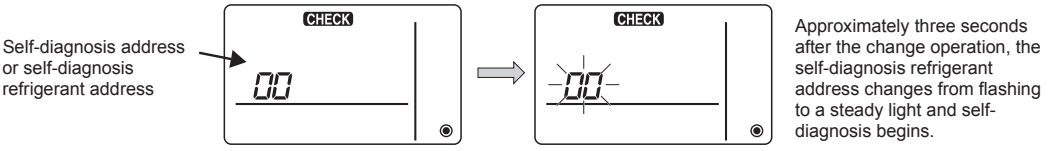


9 Self diagnosis

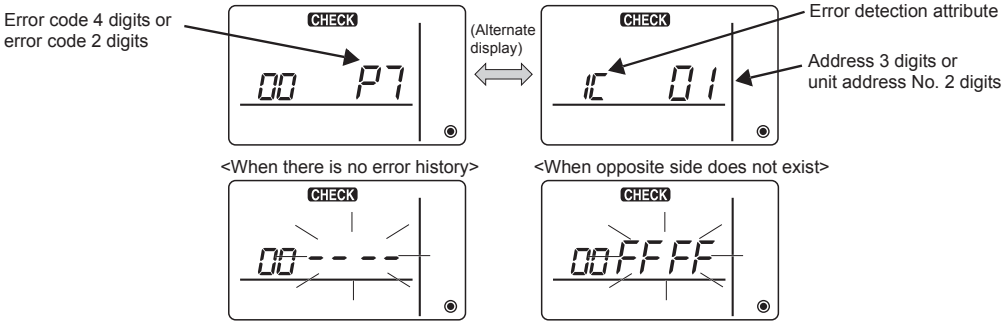
Retrieve the error history of each unit using the Simple MA controller.

① Switch to the self-diagnosis mode.
When the Ⓐ [ON/OFF] button and the Ⓒ [TEMP. ▼] button are pressed for 5 seconds or longer, the figure shown below is displayed.

② Set the address or refrigerant address No. you want to self-diagnosis.
When the Ⓑ [TEMP. ▲] and Ⓒ [TEMP. ▼] are pressed, the address decreases and increases between 01 and 50 or 00 and 15. Set it to the address No. or refrigerant address No. you want to self-diagnosis.



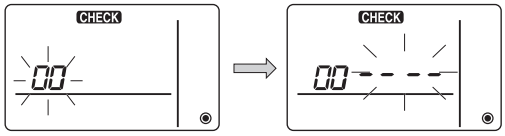
③ Self-diagnosis result display <Error history> (For the contents of the error code, refer to the indoor unit installation manual or service handbook.)



OPTIONAL PARTS

④ Error history reset

The error history is displayed in ③ self-diagnosis results display.
When the Ⓓ [fan] button is pressed two times successively within three seconds, the self-diagnosis object address and refrigerant address flash.
When the error history was reset, the display shown below appears.
When error history reset failed, the error contents are displayed again.



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⑤ Self-diagnosis reset

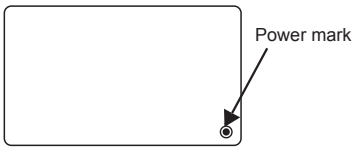
There are the following two ways of resetting self-diagnosis.
Press the Ⓐ [ON/OFF] button and the Ⓒ [TEMP. ▼] button simultaneously for 5 seconds or longer.
→ Resets self-diagnosis and returns to the state before self-diagnosis.

Press the Ⓐ [ON/OFF] button. → Self-diagnosis resets and indoor units stop. (When operation is prohibited, this operation is ineffective.)

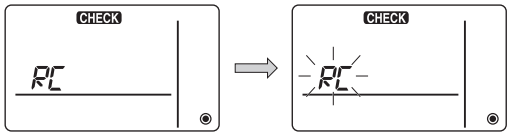
10 Remote Controller Check

When the air conditioner cannot be controlled from the Simple MA controller, use this function to check the remote controller.

① First check the power mark.
When normal voltage (DC12V) is not applied to the remote controller, the power mark goes off.
When the power mark is off, check the remote controller wiring and the indoor unit.

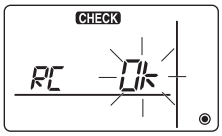


② Switch to the remote controller check mode.
When the Ⓑ [TEMP. ▲] button and Ⓓ [fan] button are pressed simultaneously for 5 seconds or longer, the figure shown below is displayed.
When the Ⓐ [ON/OFF] button is pressed, remote controller check begins.



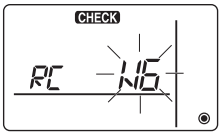
③ Remote controller check result

<When remote controller is normal>



Since there is no problem at the remote controller, check for other causes.

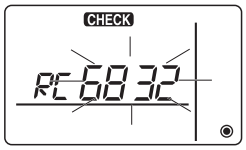
<When remote controller is faulty>



(Error display 1) "NG" flashes
→ Remote controller send/receive circuit abnormal

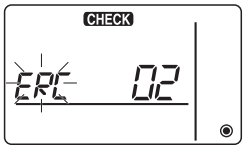
Remote controller switching is necessary.

When the problem is other than the checked remote controller



(Error display 2) "E3" "6833" "6832" flash → Cannot send

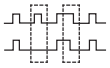
There is noise on the transmission line, or the indoor unit or another remote controller is faulty. Check the transmission line and the other remote controllers.



(Error display 3) "ERC" and data error count are displayed → Data error generation

"Data error count" is the difference between the number of bits of remote controller send data and the number of bits actually sent to the transmission line. In this case, the send data was disturbed by the noise, etc. Check the transmission line.

When data error count is 02
Remote controller send data Send data on transmission line

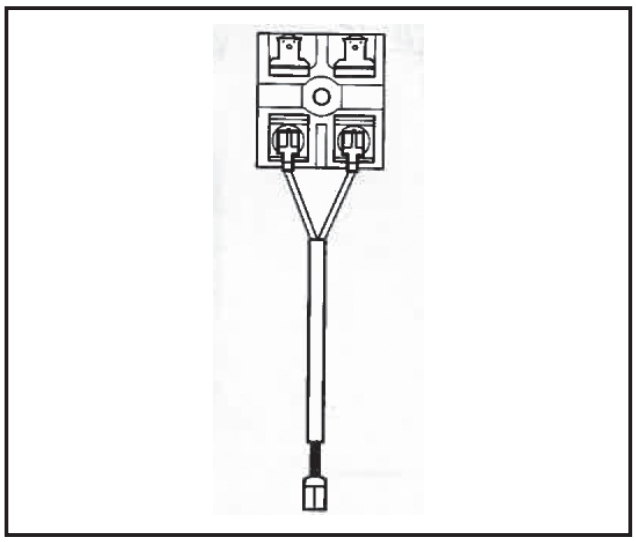


---

④ Remote controller check reset

When the Ⓑ [TEMP. ▲] button and Ⓓ [fan] button are pressed simultaneously for 5 seconds or longer, remote controller diagnosis is reset, the [HO] and run lamp flash for a certain period of time, and then the remote controller returns to its state before diagnosis.

Figure



Descriptions

The terminal block is used as a relay to wire an indoor unit and to 2 remote controllers or to wire a remote controller and multiple indoor units in order to perform grouping control.

Applicable Models

- PKA-RP·HAL
- PKA-RP·KAL

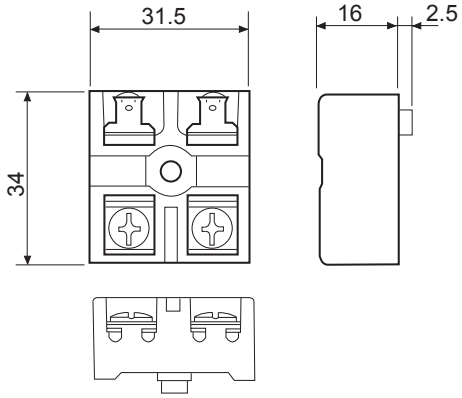
Specifications

Terminal block capacity	10A/250V
Applicable wire	Φ1.6mm or less
Terminal block material	Phenol resin

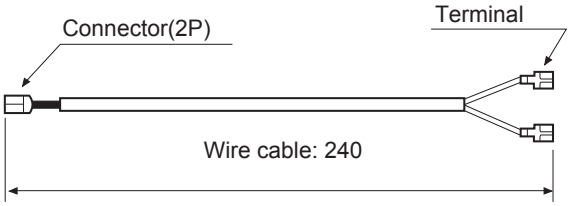
Dimensions

Unit : mm

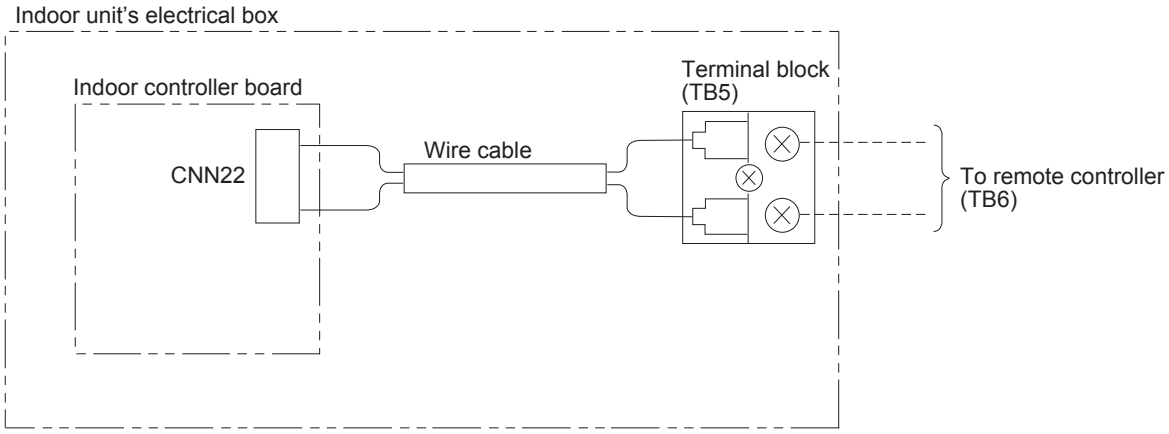
Terminal block



Wire cable



Wiring Diagram



OPTIONAL PARTS

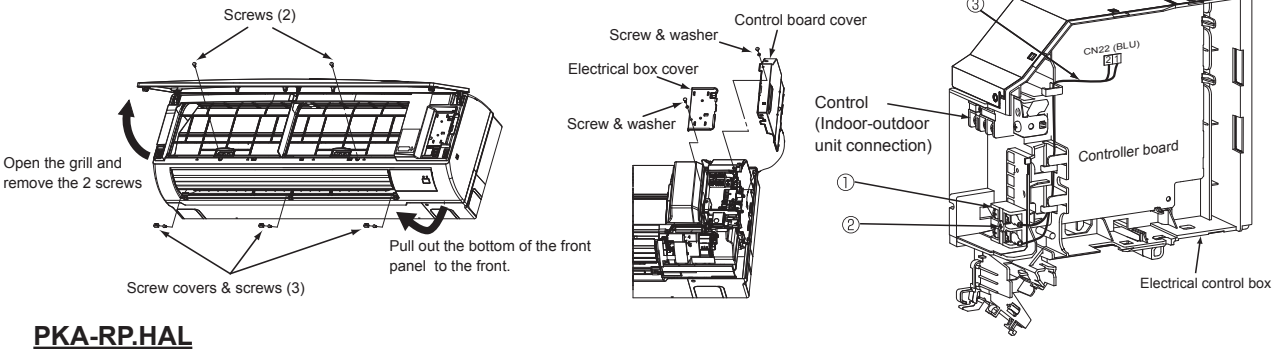
1 Included parts

① Terminal block (TB5) ·····1 ② Screw ·····1 ③ Wire cable ·····1 (240 mm)

2 Installation procedure

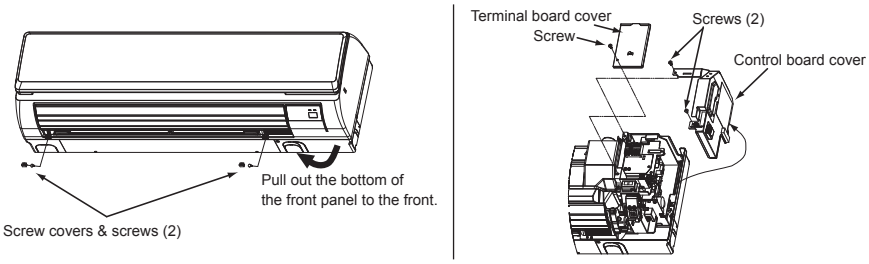
PKA-RP·KAL

1). Open the front grille and remove the 2 screws.
2). Remove the 3 screw covers and the 3 front panel screws.
3). Pull out the bottom of the front panel to the front.
Note: Beware that the panel does not contact with the vane while in the procedure.
4). Remove the terminal block cover and the control board cover by removing their respective screws.
Note: Be sure to keep the washers at hand.
5). Secure terminal block ① with screw ② to the electrical control box.
6). Connect wire cable ③ to terminal block ① and to connector CN22 on the indoor controller board.
7). Wire the wires of the cable that wire an indoor unit and 2 remote controllers or the cable that wire a remote controller and multiple indoor units for grouping control to the screw terminals at the bottom of terminal block ①.
Note: For more details about the methods for wiring the indoor unit and the remote controller(s), refer to the installation manual attached with the appropriate indoor unit.
8). After the installation of the terminal block is complete, reinstall the removed parts in the reverse order.

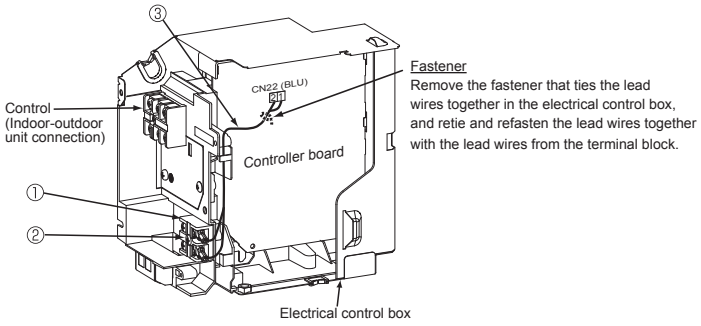


PKA-RP.HAL

1). Remove the 2 screw covers and the 2 front panel screws.
2). Pull out the bottom of the front panel to the front.
Note: Beware that the panel does not contact with the vane while in the procedure.
3). Remove the terminal block cover and the control board cover by removing their respective screws.



4). Secure terminal block ① with screw ② to the electrical control box.
5). Connect wire cable ③ to terminal block ① and to connector CN22 on the indoor controller board.
6). Wire the wires of the cable that wire an indoor unit and 2 remote controllers or the cable that wire a remote controller and multiple indoor units for grouping control to the screw terminals at the bottom of terminal block ①.
Note: For more details about the methods for wiring the indoor unit and the remote controller(s), refer to the installation manual attached with the appropriate indoor unit.
7). After the installation of the terminal block is complete, reinstall the removed parts in the reverse order.



OPTIONAL PARTS

Photo

Descriptions

Wireless remote controller for P series and SEZ models.
(The receiver is necessary.)

Applicable Models

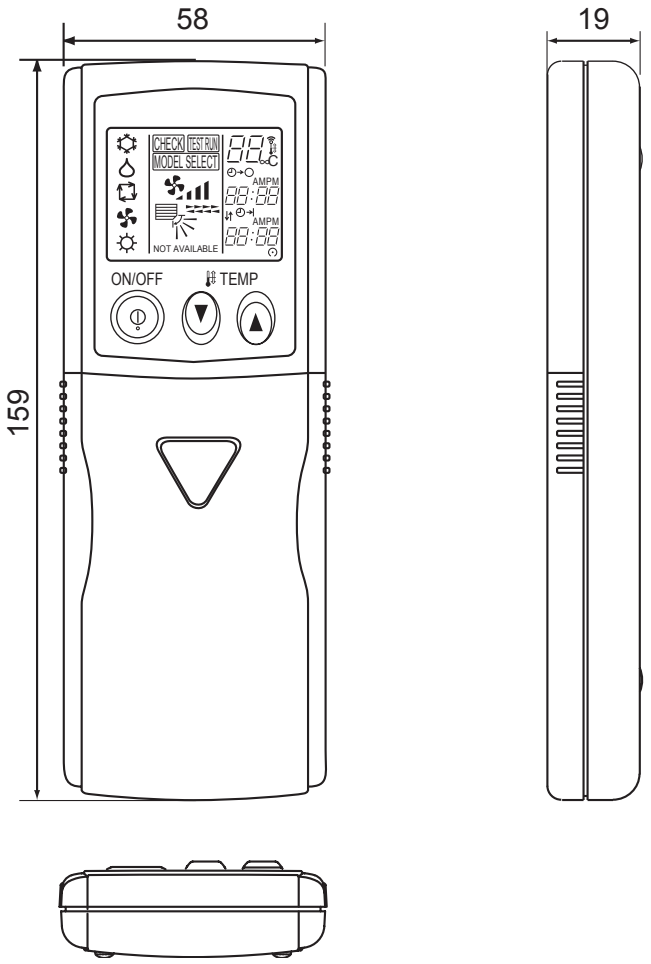
- SLZ-KF•VA2
- SEZ-KD•VAQ
- SEZ-KD•VAL
- PLA-RP•BA(2)
- PLA-ZRP•BA
- PEAD-RP•JA(L)Q
- PKA-RP•HAL
- PKA-RP•KAL
- PCA-RP•KAQ
- PCA-RP71HAQ

Specifications

Accessory	"AAA" LR03 alkaline batteries: 2 pcs
	4.1×16 wood screw: 2

Dimensions

Unit : mm



Photo

Descriptions

Enables the use of wireless remote controller for ceiling suspended models.

Applicable Models

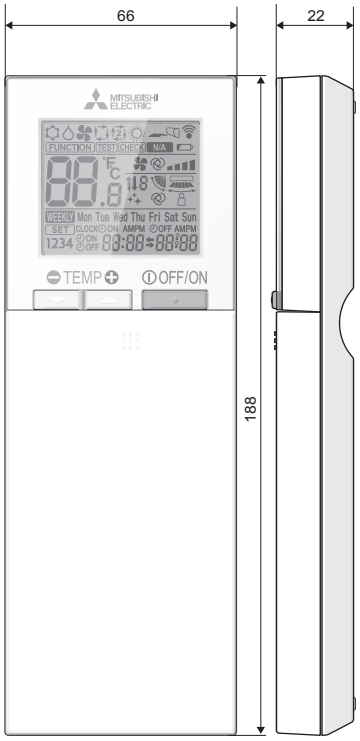
■ SLZ-KF•VA2

Specifications

Parts Name	Quantity
Wireless remote controller	1
Remote controller holder	1
AA(LR6) alkaline battery	2
Tapping screws 3.5 × 16	2
Instruction book	1
Notice for initial setting	1

Dimensions

Unit : mm



OPTIONAL PARTS

How to Use / How to Install

1 Confirming the Supplied Parts

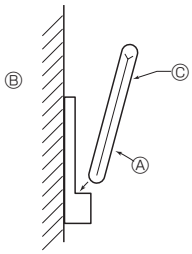
Check that the box includes the following parts in addition to this installation manual:

Parts Name	Quantity
Wireless remote controller	1
Remote controller holder	1
AA (LR6) alkaline battery	2
Tapping screws 3.5 × 16	2

Only use AA batteries (LR6). Replace low batteries with new AA batteries (LR6). Observe the polarity of the batteries as indicated, and insert the negative end first.

2 Installation

- Use the remote controller holder that is provided to avoid misplacing the remote controller.
- Install the remote controller in a location that meets the following conditions.
  - Out of the direct sun light
  - Away from any heat sources
  - Out of the airflow from the air conditioner (cool or warm)
  - Where the operation of the remote controller can easily be performed and the display is readily visible to the user
  - Out of the reach of small children



Ⓐ Remote controller
Ⓑ Wall
Ⓒ Display panel

NOTES:

* If there is a fluorescent light in the room in which the air conditioner is to be installed, turn it on and make sure that the signal from the remote controller can be received by the indoor unit from the intended installation location. When the signal receiving unit receives a signal from the remote controller, a short beeping sound will be heard.

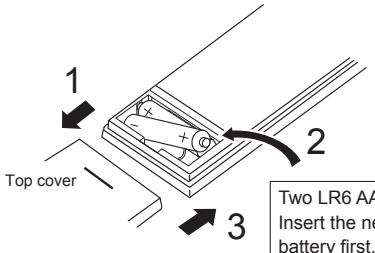
If the air conditioner unit is installed in a room in which a fluorescent light on an electronic lighting control system (i.e., inverter light) is installed, signal interference may occur.

* Maximum signal receiving distance is approximately 7 meters (Approx. 22 feet). Signal receiving angle is approximately 45 degrees to the right and the left from the center.

* Install the unit at least 1 meter (Approx. 3 feet) away from the TV or radio.
(If the unit is installed too close to these appliances, signal interference (picture distortion and noise) may occur.)

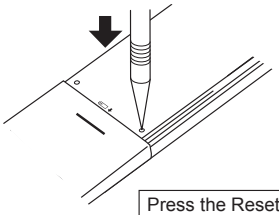
- Use the tapping screws that are provided to mount the remote controller holder on the wall, and then place the remote controller in the holder.

1. Remove the top cover, insert two LR6 AA batteries, and then install the top cover.



Two LR6 AA batteries
Insert the negative (–) end of each battery first. Install the batteries in the correct directions (+, –)!

2. Press the Reset button.



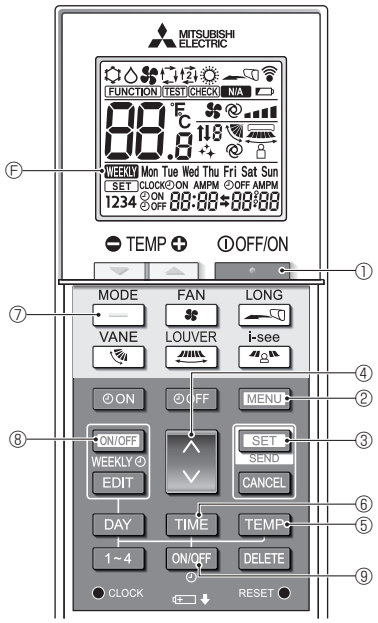
Press the Reset button with an object that has a narrow end.

OPTIONAL PARTS

3 Initial Setting

The following settings can be made in the initial setting mode.

Item	Setting
Temperature unit	°C/°F
Time display	12-hour format/ 24-hour format
AUTO mode	Single set point/ Dual set point
Pair No.	0–3
Backlight	On/Off



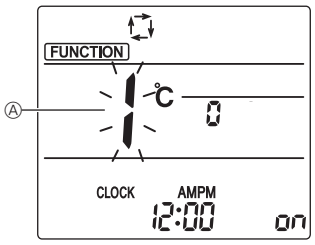


Fig. 3-1

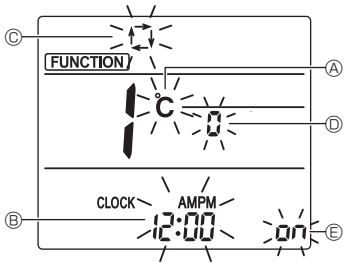


Fig. 3-2

3.1. Switching to the initial setting mode

1. Press the [ ] button 1 to stop the air conditioner.
   - If the weekly timer is enabled, press the [ON/OFF WEEKLY] button ⑧ to disable the timer. (WEEKLY Ⓕ disappears.)
2. Press the [MENU] button ②.
   - The Function setting screen will be displayed and the function No. Ⓐ will blink. (Fig. 3-1)
   - Press the [▲▼] button ④ to change the function No.
3. Check that function No. "1" is displayed, and then press the [SET] button ③.
   - The Screen display setting screen will be displayed. (Fig. 3-2)

3.2. Changing the temperature unit Ⓐ [Factory setting:°C] (Fig. 3-2)

Press the [TEMP] button ⑤.

- Each time the [TEMP] button ⑤ is pressed, the setting switches between °C and °F.
  °C : The temperature is displayed in degrees Celsius.
  °F : The temperature is displayed in degrees Fahrenheit.

3.3. Changing the time display Ⓑ [Factory setting: 12-hour format]

Press the [TIME] button ⑥.

- Each time the [TIME] button ⑥ is pressed, the setting switches between AMPM 12:00 and 24:00.
  AMPM 12:00 : The time is displayed in the 12-hour format.
  24:00 : The time is displayed in the 24-hour format.

3.4. Changing the AUTO mode Ⓒ [Factory setting: Single set point]

Press the [—] button ⑦.

- Each time the [—] button ⑦ is pressed, the setting switches between and .
  : The AUTO mode operates as the usual automatic mode (Single set point).
  : The AUTO mode operates using dual set points.

3.5. Changing the pair No. Ⓓ [Factory setting: 0]

Press the [▲▼] button ④.

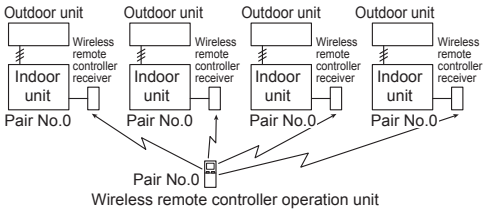
- Set the pair number Ⓓ to "0"–"3".

Pair No. of wireless remote controller	Indoor unit setting		
	Slim air conditioner	Multi air conditioner	
	Indoor PC board jumper wire (J41 and J42 settings)	Indoor PC board SW22 settings	
		SW22-3	SW22-4
0	Do not cut	ON	ON
1	Cut only J41	OFF	ON
2	Cut only J42	ON	OFF
3	Cut both J41 and J42	OFF	OFF

Setting example (when using slim air conditioners)

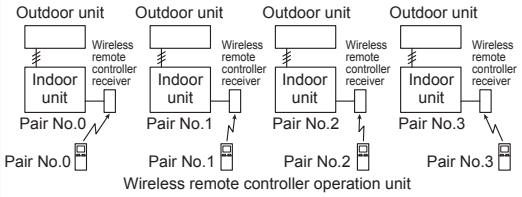
Independent system

(1) Same settings
- All of the units can be operated by the same wireless remote controller.



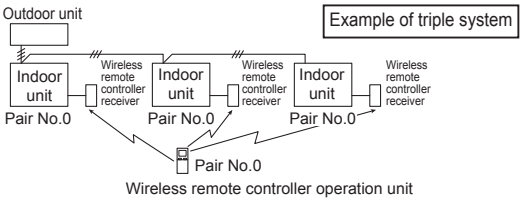
- All of the indoor PC boards and the wireless remote controller are set to the same pair number.
- Install each unit within the receiving range of the wireless remote controller or have the operator move the wireless remote controller to operate each unit.

(2) Separate settings
- Each unit can be operated only by its own wireless remote controller.



- The indoor PC boards and wireless remote controllers are set to different pair numbers for each unit.

Simultaneous twin/triple/ quadruple system



- The system operates regardless of which indoor unit receives the signals.

3.6. Changing the backlight setting Ⓔ [Factory setting: ON]

Press the [ON/OFF] button ⑨.

- Each time the [ON/OFF] button ⑨ is pressed, the setting switches between on and oFF.
  on : The backlight comes on when a button is pressed.
  oFF : The backlight does not come on when a button is pressed.

3.7. Completing the settings

Press the [SET] button ③.

- The function No. Ⓐ blinks. (Fig. 3-1)

Press the [MENU] button ②.

- The remote controller exits the initial setting mode. (The air conditioner operation is stopped.)

OPTIONAL PARTS

4 Function settings

To confirm the functions and settings for the indoor unit you want to set, refer to the operation manual and technical materials for the unit.

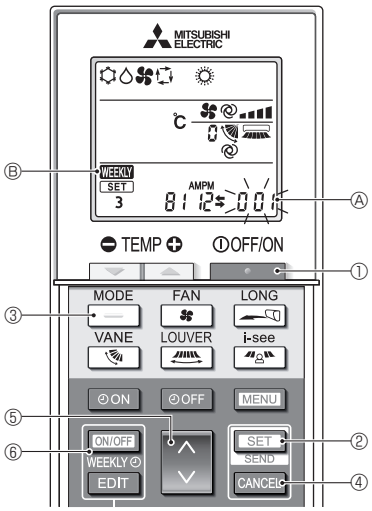


Fig. 4-1

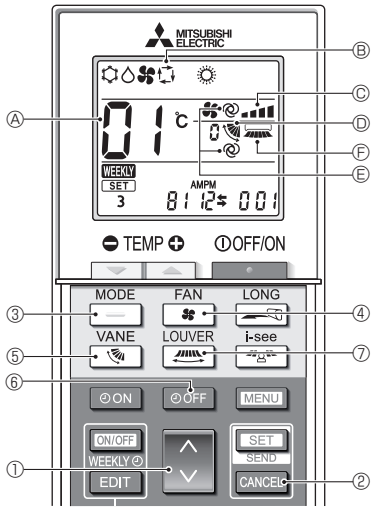


Fig. 4-2

Switching to the function setting mode (Fig. 4-1)

1. Press the [ ] button ① to stop the air conditioner.
   - If the weekly timer is enabled, press the [ON/OFF WEEKLY] button ⑥ to disable the timer. (WEEKLY Ⓑ disappears.)
2. Press the [SET] button ② for 5 seconds.
   - The unit enters the function setting mode. (The group model setting number Ⓐ blinks.)

4.1. Entering the group model setting number

Press the [ ] button ⑤.

- Enter the group model setting number for the indoor unit you want to operate. (The factory setting is “001”.)
  To confirm the group model setting number, refer to the indoor unit operation manual.

4.2. Separate settings

You can also set the functions as necessary for the indoor unit that you want to operate.

1) Operation mode setting (Fig. 4-2) (The factory setting is “Cool/Dry/Auto/Fan/Heat” [Setting number 01].)

1. Press the [—] button ③.
   - The operation mode Ⓑ blinks.
2. Press the [ ] button ① to select the setting number Ⓐ.

Operation mode display Ⓑ	Setting No. Ⓐ	Operation mode display Ⓑ	Setting No. Ⓐ
	01		05
	02		06
	03		07
	04		

* If the setting is incorrect, press the [CANCEL] button ② and repeat the procedure from step 1.

2) Fan speed setting (Fig. 4-2) (The factory setting is “4 speeds” [Setting number 01].)

1. Press the [ ] button ④.
   - The fan speed Ⓒ blinks.
2. Press the [ ] button ① to select the setting number Ⓐ.

Fan speed display Ⓒ	Setting No. Ⓐ
(4 speeds)	01
(3 speeds)	02
(2 speeds)	03
(1 speed, none)	04

* If the setting is incorrect, press the [CANCEL] button ② and repeat the procedure from step 1.

3) Airflow direction setting (Fig. 4-2) (The factory setting is “With vane, swing” [Setting number 01].)

1. Press the [ ] button ⑤.
   - The airflow direction Ⓓ blinks.
2. Press the [ ] button ① to select the setting number Ⓐ.

Airflow direction Ⓓ		Setting No. Ⓐ
With auto vane	Without auto vane	
(With vane, swing)	(With vane, swing)	01
(With vane, no swing)	(With vane, no swing)	02
No display (no vane)	No display (no vane)	03

* If the setting is incorrect, press the [CANCEL] button ② and repeat the procedure from step 1.

4) Auto fan speed and airflow direction display setting (Fig. 4-2) (The factory setting is “With auto fan speed and airflow direction” [Setting number 02].)

1. Press the [OFF] button ⑥.
   - The auto fan speed and airflow direction displays Ⓔ blink. (2 locations)
2. Press the [ ] button ① to select the setting number Ⓐ.

Auto fan speed and airflow direction displays Ⓔ	Setting No. Ⓐ
No display (Without)	01
(With)	02

* If the setting is incorrect, press the [CANCEL] button ② and repeat the procedure from step 1.

5) Louver display setting (Fig. 4-2) (The factory setting is “Without louver” [Setting number 01].)

1. Press the [ ] button ⑦.
   - The louver display Ⓕ blinks.
2. Press the [ ] button ① to select the setting number Ⓐ.

Louver display Ⓕ	Setting No. Ⓐ
(Without)	01
(With)	02

* If the setting is incorrect, press the [CANCEL] button ② and repeat the procedure from step 1.

4.3.Completing the settings (Fig. 4-1)

Press the [SET] button ② for 5 seconds.

- The remote controller exits the function setting mode.

OPTIONAL PARTS

5 Service

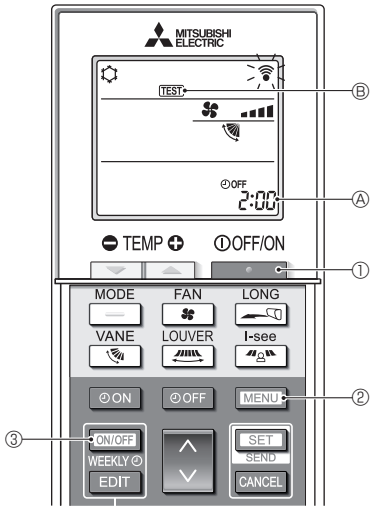


Fig. 5-1

5.1. Test run (Fig. 5-1)

1. Press the [ ] button ① to stop the air conditioner.
   - If the weekly timer is enabled (WEEKLY is on), press the [ON/OFF WEEKLY] button ③ to disable it (WEEKLY is off).
2. Press the [MENU] button ② for 5 seconds.
   - [CHECK] comes on and the unit enters the service mode.
3. Press the [MENU] button ②.
   - [TEST] Ⓑ comes on and the unit enters the test run mode.
4. Press the following buttons to start the test run.
   - [—] : Switch the operation mode between cooling and heating and start the test run.
   - [ ] : Switch the fan speed and start the test run.
   - [ ] : Switch the airflow direction and start the test run.
   - [ ] : Switch the louver and start the test run.
   - [SET] : Start the test run.
5. Stop the test run.
   - Press the [ ] button ① to stop the test run.
   - After 2 hours, the stop signal is transmitted.

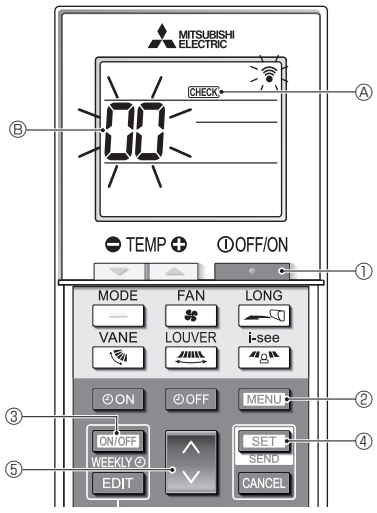


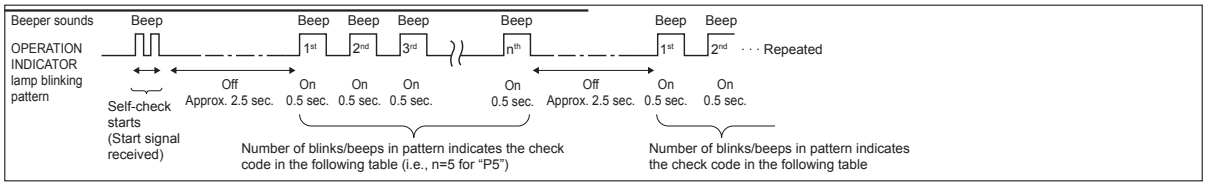
Fig. 5-2

5.2. Self-check (Fig. 5-2)

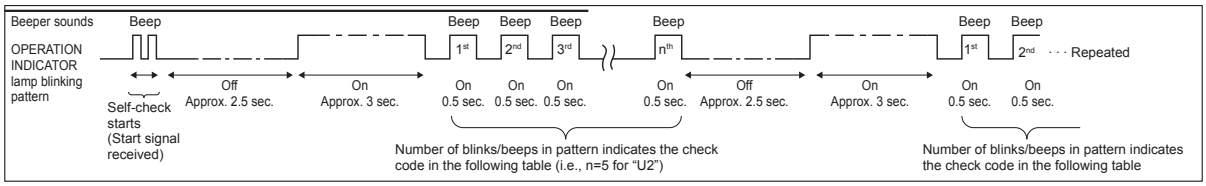
1. Press the [ ] button ① to stop the air conditioner.
   - If the weekly timer is enabled (WEEKLY is on), press the [ON/OFF WEEKLY] button ③ to disable it (WEEKLY is off).
2. Press the [MENU] button ② for 5 seconds.
   - [CHECK] Ⓐ comes on and the unit enters the self-check mode.
3. Press the [ ] button ⑤ to select the refrigerant address (M-NET address) Ⓑ of the indoor unit for which you want to perform the self-check.
4. Press the [SET] button ④.
   - If an error is detected, the check code is indicated by the number of beeps from the indoor unit and the number of blinks of the OPERATION INDICATOR lamp.
5. Press the [ ] button ①.
   - [CHECK] Ⓐ and the refrigerant address (M-NET address) Ⓑ go off and the self-check is completed.

Refer to the following tables for details on the check codes.
* A receiver adapter (MA type) cannot be used.

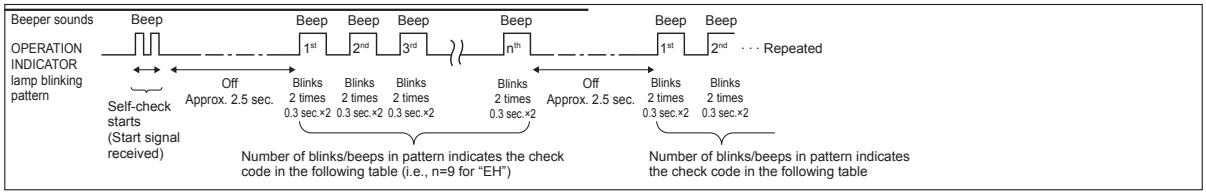
[Output pattern A]



[Output pattern B]



[Output pattern C]



OPTIONAL PARTS

■ **Mr. Slim output contents**

[Output pattern A] Errors detected by indoor unit

Wireless remote controller	Wired remote controller	Symptom	Remark
Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Check code		
1	P1	Intake sensor error	
2	P2, P9	Pipe (liquid or 2-phase pipe) sensor error	
3	E6, E7	Indoor/indoor unit communication error	
4	P4	Drain sensor error / Float switch connector open	
5	P5	Drain overflow protection operation	
	PA	Forced compressor error	
6	P6	Freezing (during cooling operation)/Overheating protection operation (during heating operation)	
7	EE	Assembly error (system error)	
8	P8	Pipe temperature error	
9	E4	Communication error between wired remote controller and indoor unit	
10	—	—	
11	Pb	Indoor unit fan motor error	
12	Fb	Indoor unit control system error (memory error, etc.)	
14	PL	Refrigerant circuit abnormal	

[Output pattern B] Errors detected by unit other than indoor unit (outdoor unit, etc.) * The supported check codes may vary depending on the connected outdoor unit.

Wireless remote controller	Wired remote controller	Symptom	Remark
Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Check code		
1	E9	Indoor/outdoor unit communication error	For details, check the LED display of the outdoor controller board.
2	UP	Compressor overcurrent interruption	
3	U3, U4	Open/short of outdoor unit thermistors	
4	UF	Compressor overcurrent interruption (When compressor locked)	
5	U2	Abnormal high discharging temperature/49C worked/insufficient refrigerant	
6	U1, Ud	Abnormal high pressure (63H worked)/Overheating protection operation	
7	U5	Abnormal temperature of heat sink	
8	U8	Outdoor unit fan protection stop	
9	U6	Compressor overcurrent interruption/Abnormal of power module	
10	U7	Abnormality of super heat due to low discharge temperature	
11	U9, UH	Abnormality such as overvoltage or voltage shortage and abnormal synchronous signal to main circuit/Current sensor error	
12	—	—	
13	—	—	
14	Others	Other errors (Refer to the technical manual for the outdoor unit.)	

[Output pattern C] Errors detected by unit other than indoor unit (outdoor unit, etc.)

Wireless remote controller	Wired remote controller	Symptom	Remark
Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Check code		
9	EH	Panel communication abnormal (auto ascending/descending panel)	

■ **City multi output contents**

[Output pattern A] The abnormal unit (attribute) is an indoor unit, LOSSNAY unit, or outdoor air processing unit.
[Output pattern B] The abnormal unit (attribute) is an outdoor unit or other unit (a unit other than an indoor unit, LOSSNAY unit, or outdoor air processing unit).

Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	M-NET check code	Remarks
1	1000 – 1999	If the wired remote controller and system controller are not used together, the details of the check codes in the error history can be checked using the LED display of the outdoor PC board. To check the error history of the outdoor unit, refer to the outdoor unit service handbook.
2	2000 – 2999	
3	3000 – 3999	
4	4000 – 4999	
5	5000 – 5999	
6	6000 – 6999	
7	7000 – 7999	
8	0 – 999	

Notes:
1. If the beeper does not sound and the OPERATION INDICATOR lamp remains off after the signal was received when the self-check starts, there is no error history.
2. If the beeper sounds 3 times continuously “beep, beep, beep (0.4 + 0.4 + 0.4 seconds)” after the signal was received when the self-check starts, the specified refrigerant address (M-NET address) is incorrect.

5.3. Unit function selection

This setting method is for slim air conditioners. For City multi models, set the DIP switches on the indoor PC board and outdoor PC board. To set the DIP switches, refer to the technical materials for the City multi models.

Set the functions as necessary using the remote controller. The functions for each unit can be set only from the remote controller.
Select the functions from table 1 that must be set.
Only the refrigerant systems that are connected to indoor units equipped with wireless remote controller receivers can be set from the wireless remote controller operation unit. The refrigerant address cannot be specified using the wireless remote controller operation unit.

Table 1 Function selection settings (For details about the factory settings and modes of each indoor unit, refer to the indoor unit installation manual.)

Note: The items in the following table are representative examples. Because the settings for each mode may vary depending on the model, refer to the indoor unit installation manual for details.

Mode	Settings	Mode no.	Setting no.	Initial setting	Setting
Power failure automatic recovery	Not available	01	1		Select unit number 00.
	Available		2		
Indoor temperature detecting	Indoor unit operating average	02	1		
	Set by indoor unit's remote controller		2		
	Remote controller's internal sensor		3		
LOSSNAY connectivity	Not Supported	03	1		
	Supported (indoor unit is not equipped with fresh air intake)		2		
	Supported (indoor unit is equipped with fresh air intake)		3		
Filter sign	100Hr	07	1		Select unit number 01–04 or AL (all units).
	2500Hr		2		
	No filter sign indicator		3		
Fan speed	Silent	08	1		
	Standard		2		
	High ceiling		3		
Number of air outlets	4-directional	09	1		
	3-directional		2		
	2-directional		3		
Installed option (high-efficiency filter, etc.)	Without	10	1		
	With		2		
Up/down vane setting	Not setting	11	1		
	Equipped with vanes (vanes angle setup ①)		2		
	Equipped with vanes (vanes angle setup ②)		3		
Built-in humidifier	Not equipped	13	1		
	Equipped		2		

Note: Whenever the function selection is used to change the indoor unit functions after installation, be sure to record all of the settings with a "○" or other mark in the "Initial setting" column of the table.

Function selection procedure

First, it is important to understand the procedure for the function selection. The following procedure explains how to set "LOSSNAY connectivity" in table 1 to "Supported (indoor unit is not equipped with outdoor-air intake)" as an example.
For the actual operations, refer to the following procedure.

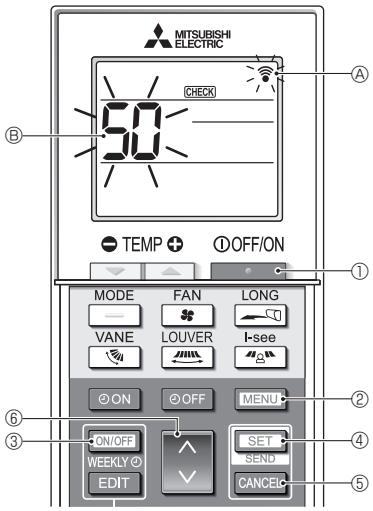


Fig. 5-3

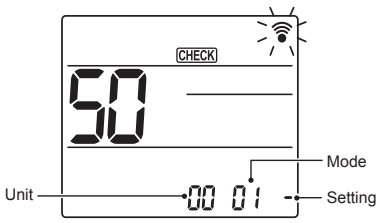
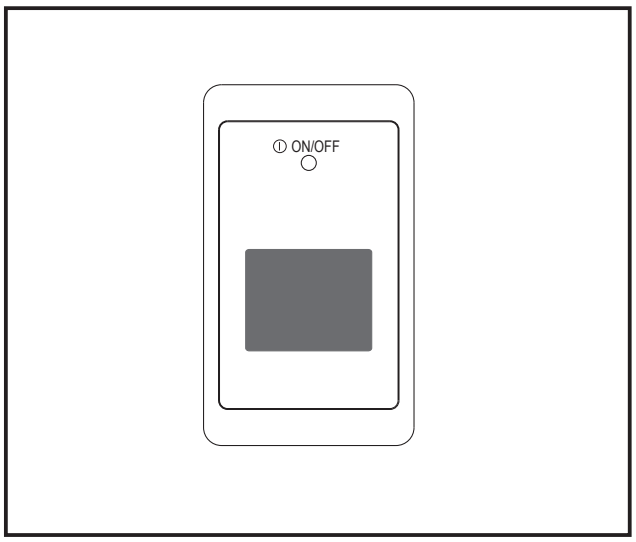


Fig. 5-4

1. Press the [ ] button ① to stop the air conditioner.
   * If the weekly timer is enabled (WEEKLY is on), press the [ON/OFF WEEKLY] button ③ to disable it (WEEKLY is off).
2. Press the [MENU] button ② for 5 seconds.
   • [CHECK] Ⓐ comes on and the unit enters the self-check mode.
3. Press the [▲▼] button ⑥ to set the displayed number Ⓑ to "50".
   • While pointing the wireless remote controller toward the receiver, press the [SET] button ④. (The unit number blinks.)
4. Press the [▲▼] button ⑥ to set the unit number of the indoor unit. (Fig. 5-3)
   • While pointing the wireless remote controller toward the receiver, press the [SET] button ④. (The mode number blinks.)
   * When the unit number is transmitted, the selected indoor unit starts operating in the fan mode.
     You can use this step to confirm which indoor unit corresponds to the unit number you selected to change the functions.
     However, if you set the unit number to "00" or "AL", all of the indoor units in the same refrigerant system will start operating in the fan mode.
   * If you transmit a unit number that cannot be selected, the beeper sounds 3 times continuously “beep, beep, beep (0.4 + 0.4 + 0.4 sec.)”.
     If this occurs, press the [CANCEL] button ⑤, and then set the unit number again while the unit number display is blinking.
   * If the signal was not received correctly, the beeper will not sound or it will beep twice.
     If this occurs, press the [CANCEL] button ⑤, and then set the unit number again while the unit number display is blinking.
5. Press the [▲▼] button ⑥ to set the mode number. (Fig. 5-3)
   • While pointing the wireless remote controller toward the receiver, press the [SET] button ④. (The setting number blinks.)
     At this time, the beeper sound and OPERATION INDICATOR lamp blinking pattern indicate the current setting number for the selected mode number.
     Current setting value = 1: Beep (1 sec.) × 1 time
     = 2: Beep (1 sec.) × 2 times
     = 3: Beep (1 sec.) × 3 times
   * If you enter a mode that cannot be set, the beeper sounds 3 times continuously “beep, beep, beep (0.4 + 0.4 + 0.4 sec.)”.
     If this occurs, press the [CANCEL] button ⑤, and then set the mode number again while the mode number display is blinking.
   * If the signal was not received correctly, the beeper will not sound or it will beep twice.
     If this occurs, press the [CANCEL] button ⑤, and then set the mode number again while the mode number display is blinking.
6. Press the [▲▼] button ⑥ to select the setting number. (Fig. 5-3)
   • While pointing the wireless remote controller toward the receiver, press the [SET] button ④. (The mode number blinks.)
     At this time, the beeper sound and OPERATION INDICATOR lamp blinking pattern indicate the setting number for the selected mode number.
     Current setting value = 1: Beep (1 sec.) × 1 time
     = 2: Beep (1 sec.) × 2 times
     = 3: Beep (1 sec.) × 3 times
   * If you enter a number that cannot be set, the originally set number will be used.
   * If the signal was not received correctly, the beeper will not sound or it will beep twice.
     If this occurs, repeat the procedure from step 5.
7. To set another mode without changing the unit number of the indoor unit, repeat steps 5 and 6.
8. To change the unit number of the indoor unit and perform the function selection, repeat steps 4–6.
9. Press the [ ] button ① to complete the function selection.

Note:
- **After the function selection is complete, do not operate the wireless remote controller for 30 seconds.**
- **Whenever the function selection is used to change the indoor unit functions after installation, be sure to record all of the settings with a “○” or other mark in the “Initial setting” column of the table.**

Figure



Descriptions

Enables the use of wireless remote controller.

Applicable Models

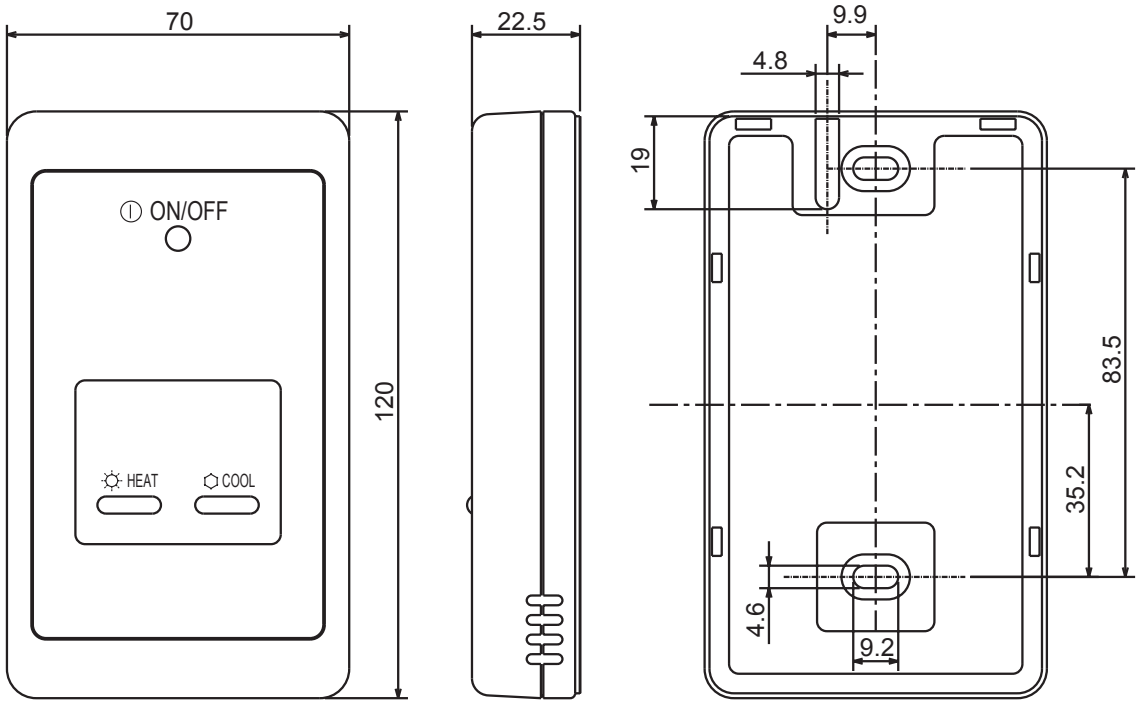
- SEZ-KD•VAQ
- SEZ-KD•VAL
- PEAD-RP•JA(L)Q

Specifications

Item	Content
external dimensions	120(H)×70(W)×22.5(D) mm
Weight	0.2kg
Power	DC12V (supplied from indoor unit control)
Temperature	0 ~40°C Humidity : 30 ~90% RH (no condensing)
Material	ABS
Colour (Munsell)	White Grey (4.8Y7.92/0.66)

Dimensions

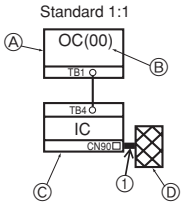
Unit : mm



OPTIONAL PARTS

How to Use / How to Install

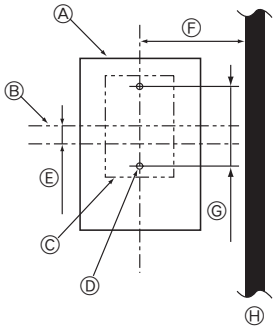
[Fig. 8-7]



Indoor/outdoor wiring
Signal receiving unit wiring

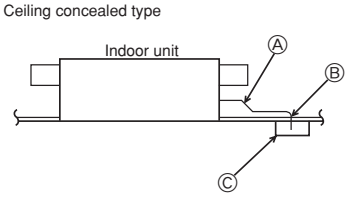
Ⓐ Outdoor unit
Ⓑ Refrigerant address
Ⓒ Indoor unit
Ⓓ Signal receiving unit

[Fig. 8-8]



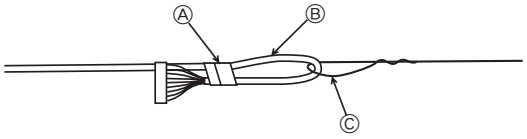
Ⓐ Signal receiving unit external
Ⓑ Center of Switch box
Ⓒ Switch box
Ⓓ Installation pitch
Ⓔ 6.5 mm (1/4 inch)
Ⓕ 70 mm (2 - 3/4 inch)
Ⓖ 83.5 ± 0.4 mm (3 - 9/32 inch)
Ⓗ Protrusion (pillar, etc)

[Fig. 8-9]



Ⓐ Remote controller wire
Ⓑ Hole (drill a hole on the ceiling to pass the remote controller wire.)
Ⓒ Signal Receiving Unit

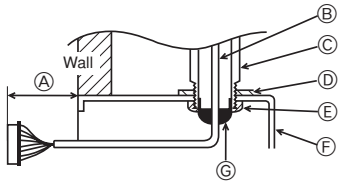
[Fig. 8-10]



Ⓐ Fix tightly with tape.
Ⓑ Remote controller wire
Ⓒ Order wire

[Fig. 8-11]

When using the switch box

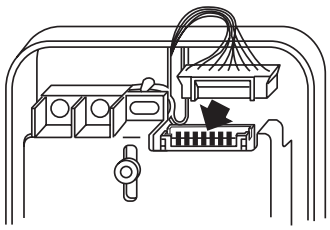


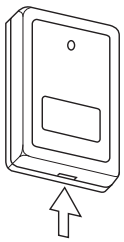
Ⓐ 150 mm (5 - 15/16 inch)
Ⓑ Remote controller wire (Accessory)
Ⓒ Wiring pipe
Ⓓ Locknut
Ⓔ Bushing
Ⓕ Switch box
Ⓖ Seal around here with putty

When installing directly on the wall

Ⓗ Seal around here with putty
Ⓘ Remote controller wire
Ⓙ Seal around here with putty

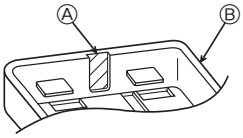
[Fig. 8-12]

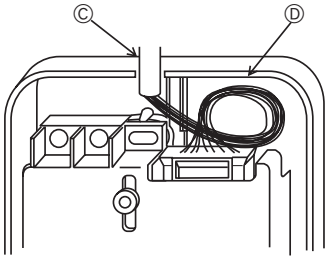




Insert the minus screwdriver toward the arrow pointed and wrench it to remove the cover.
A flat screwdriver whose width of blade is between 4 and 7mm (5/32 - 9/32inch) must be used.

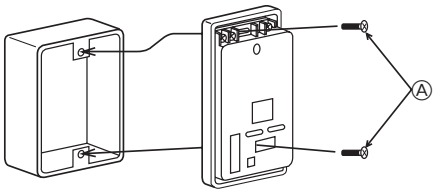
[Fig. 8-13]





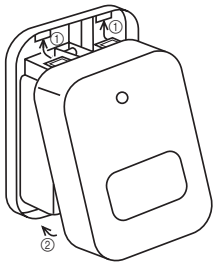
Ⓐ Thin-wall portion
Ⓑ Bottom case
Ⓒ Remote controller wire
Ⓓ Conducting wire

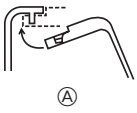
[Fig. 8-14]



Ⓐ Screw (M4 x 30)
* When installing the lower case directly on the wall or the ceiling, use wood screws.

[Fig. 8-15]





① Hang the cover to the upper hooks (2 places).
② Mount the cover to the lower case
Ⓐ Cross-section of upper hooks

Signal Receiving Unit

1) Sample system connection
[Fig. 8-7]

Only the wiring from the signal receiving unit and between the remote controllers is shown in [Fig. 8-7]. The wiring differs depending on the unit to be connected or the system to be used.
For details on restrictions, refer to the installation manual or the service handbook that came with the unit.

1. Connecting to Mr. SLIM air conditioner

(1) Standard 1:1

① Connecting the signal receiving unit
Connect the signal receiving unit to the CN90 (Connect to the wireless remote controller board) on the indoor unit using the supplied remote controller wire. Connect the signal receiving units to all the indoor units.

2) How To Install
[Fig. 8-8] to [Fig. 8-15]

1. Common items for "Installation on the ceiling" and "Installation on the switch box or on the wall"

[Fig. 8-8]

Ⓐ Signal receiving unit external
Ⓑ Center of Switch box
Ⓒ Switch box
Ⓓ Installation pitch
Ⓔ 6.5 mm (1/4 inch)
Ⓕ 70 mm (2 - 3/4 inch)
Ⓖ 83.5 ± 0.4 mm (3 - 9/32 inch)
Ⓗ Protrusion (pillar, etc)

[Fig. 8-9]

Ⓐ Remote controller wire
Ⓑ Hole (drill a hole on the ceiling to pass the remote controller wire.)
Ⓒ Signal Receiving Unit

(1) Select the installation site.
The following must be observed.

① Connect the signal receiving unit to the indoor unit with the supplied remote controller wire. Note that the length of the remote controller wire is 5 m (16 ft). Install the remote controller within the reach of the remote controller wire.
② When installing on either the switch box or the wall, allow space around the Signal Receiving Unit as shown in the figure in [Fig. 8-8].
③ When installing the Signal Receiving Unit to the switch box, the Signal Receiving Unit slipped downward for 6.5 mm (1/4 inch) as right illustrated.
④ Parts which must be supplied on site.
Switch box for one unit
Thin-copper wiring pipe
Lock nut and bushing
⑤ The thickness of the ceiling to which the remote controller is installed must be between 9 mm (3/8 inch) and 25 mm (1 inch).
⑥ Install the unit on the ceiling or on the wall where the signal can be received from the wireless remote controller.
The area where the signal from the wireless remote controller can be received is 45 ° and 7 m (22 ft) away from the front of the signal receiving unit.
⑦ Install the signal receiving unit to the position depending on the indoor unit model.
⑧ Connect the remote controller wire securely to the order wire. To pass the remote controller wire through the conduit, follow the procedure as shown in [Fig. 8-10].

[Fig. 8-10]

Ⓐ Fix tightly with tape.
Ⓑ Remote controller wire
Ⓒ Order wire

Note:

- **The point where the remote controller wire is connected differs depending on the indoor unit model.**
  Take into account that the remote controller wire cannot be extended when selecting the installation site.
- **If the Signal Receiving Unit is installed near a fluorescent lamp specially inverter type,signal interception may occur.**
  Be careful for installing the Signal Receiving Unit or replacing the lamp.

(2) Use the remote controller wire to connect it to the connector (CN90) on the controller circuit board on the indoor unit.
Refer to the 2) Setting the Pair Number Switch for details on controller circuit board on the indoor unit.

(3) Seal the Signal Receiving Unit cord lead-in hole with putty in order to prevent the possible entry of dew, water droplets, cockroaches, other insects, etc.

[Fig. 8-11]

Ⓐ 150 mm (5 - 15/16 inch)
Ⓑ Remote controller wire (Accessory)
Ⓒ Wiring pipe
Ⓓ Locknut
Ⓔ Bushing
Ⓕ Switch box
Ⓖ Seal around here with putty

- When installing on the switch box, seal the connections between the switch box and wiring pipe with putty.

[Fig. 8-11]

Ⓗ Seal around here with putty
Ⓘ Remote controller wire
Ⓙ Seal around here with putty

- When opening a hole using a drill for Signal Receiving Unit wire (or taking the wire out of the back of the Signal Receiving Unit), seal that hole with putty.
- When routing the wire via the portion cut off from the upper case, equally seal that portion with putty.

(4) Install the remote control wire to the terminal block. [Fig. 8-12]

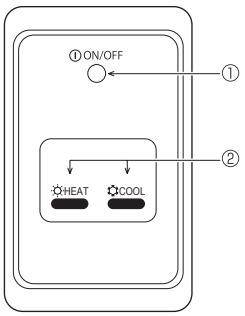
(5) Installing hole when the Signal Receiving Unit is installed on the wall direct. [Fig. 8-13]

- Cut the thin-wall portion inside the bottom case (oblique section) by a knife or a nipper.
- Take out the connected remote controller wire to the terminal brock through this space.

(6) Install the lower case on the switch box or directly on the wall. [Fig. 8-14]
Mounting the cover [Fig. 8-15]

⚠ Caution:
- **Insert the cover securely until the clicking sound is made. If not doing so, the cover may fall.**

■ Emergency Operation for Wireless Remote-controller



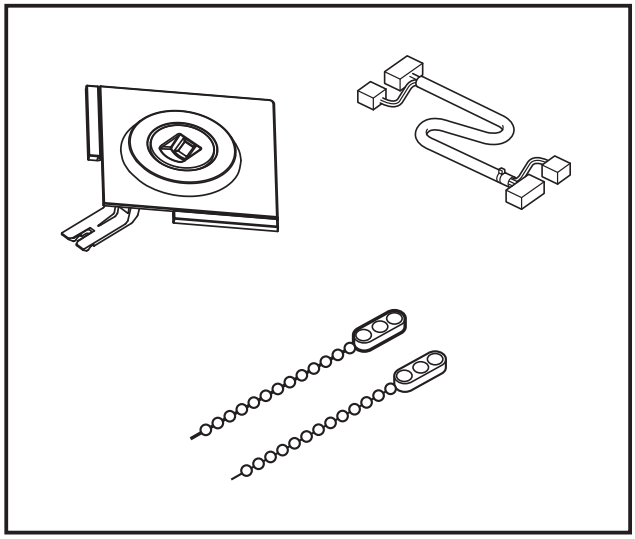
① **ON/OFF lamp** (lit when unit is operating; unlit when unit is not operating)
② **Emergency operation**
In cases where the remote control unit does not operate properly, use either the ☼ COOL or ☼ HEAT button on the wireless remote control signal receiver to toggle the unit on or off. On cooler only units, pushingthe ☼ HEAT button toggles the fan on and off.

Pressing the ☼ COOL or ☼ HEAT button selects the following settings.

Operation mode	COOL	HEAT
Preset temperature	24 °C/75 °F	24 °C/75 °F
Fan speed	High	High

OPTIONAL PARTS

Figure



Descriptions

- Integrate the Signal Receiver in the corner panel.
- Applicable only for SLZ-KF·VA(2) models.

Applicable Models

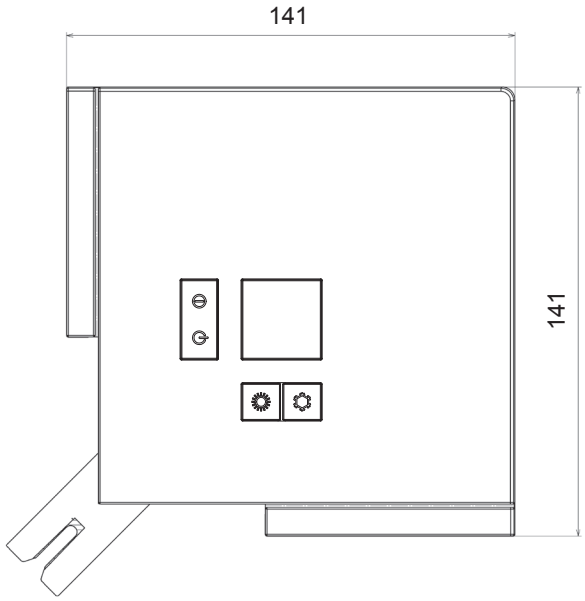
■ SLZ-KF·VA2

Specifications

Model name	PAR-SA9FA-E
Operation indicator lamp	During operation: LED (green) lights, Abnormal condition: LED (green) blinks, Preparing for heating operation:LED.(orange) lights
Emergency operation	Cooling/heating switch (operate/stop) equipped.
Number of controllable units	Maximum 16 refrigerant systems in one group (At least one wireless signal receiving kit must be installed to each refrigerant system.)
Adapter wiring	Connect the 9-core cord with connector (attached) to CN90 of the indoor controller board of the indoor unit.
Signal distance	Within 7m in 45 degrees range from the front of the Signal Receiver

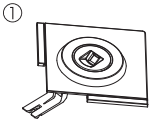
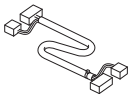
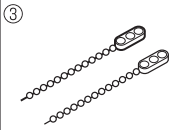
Dimensions

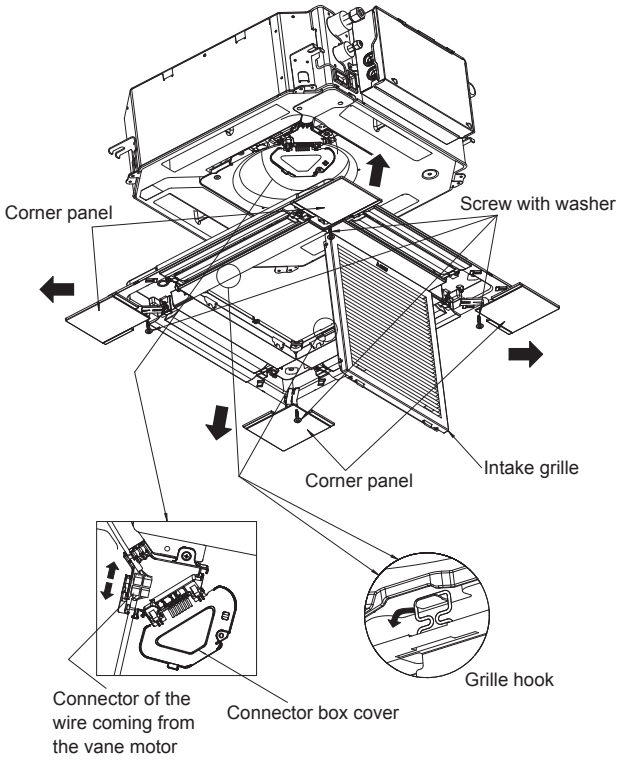
Unit : mm



How to Use / How to Install

1. Accessories
Make sure that all the following accessories besides this installation manual are contained in the package.

Model	Accessory name		Q'ty
PAR-SF9FA-E	①	Signal receiver	1
	②	Junction wire	1
	③	Fastener	2
① 	② 	③ 	



2. Preparation for mounting signal receiver
(The junction wire ② needs to be connected to the indoor unit.)
Note 1: Turn off main power supply to the indoor unit before installation.
Note 2: See the installation manual of the indoor unit in addition to this manual.

- Remove the grille from the indoor unit as described in the following procedure.
  1) Open the intake grille, loosen the screws for the corner panels, and remove the corner panels.
  2) Remove the screw for the connector box cover, and open the connector box cover. Disconnect the connector of the wire coming from the vane motor.
  3) Remove the 4 screws fastened on the corners of the grille.
  4) Disengage the 2 hooks of the grille from the indoor unit, and remove the grille.

- Perform the electrical work of the junction wire ② by referring to [Electrical work] in the installation manual of the indoor unit.

3. Mounting signal receiver
- Mount the signal receiver ① on either corner of the grille, which is marked with "□" or "○" by referring to [Installing the grille] in the installation manual of the indoor unit.
  Note 1: "□" stamp : default signal receiver position.
  Note 2: Discard the corner panel removed from the position indicated with "□" or "○".
- After mounting the signal receiver ①, close the connector box cover. Replace the 3 corner panels, the intake grille, in the reverse order of the removal described above.

4. Check
- Make sure that there is no gap either between the body of indoor unit and the grille or between the ceiling surface and the grille. The gap may cause dew formation.
- Make sure that the wires are connected properly.
  The colors of the male and female sections of the junction wire connectors must match.
  Otherwise the vanes do not move or the indoor unit does not respond to input from the wireless remote controller.

Signal Receiver

PAR-SA9FA-E

Photo

Descriptions

- Integrate the Signal Receiver in the corner panel (the opposite side of refrigerant piping).
- Applicable only for PLA-ZRP·BA , PLA-RP·BA(2) models.

Applicable Models

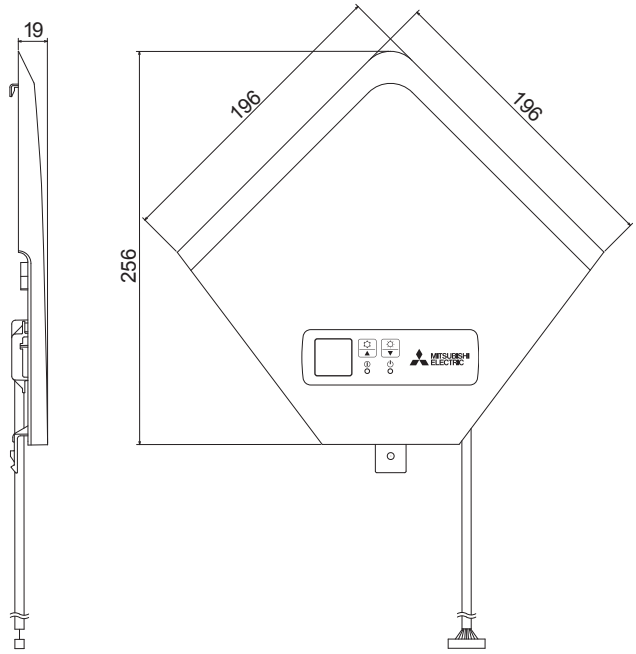
- PLA-ZRP·BA
- PLA-RP·BA(2)

Specifications

Model name	PAR-SA9FA-E
Operation indicator lamp	During operation: LED (green) lights, Abnormal condition: LED (green) blinks, Preparing for heating operation:LED.(orange) lights
Emergency operation	Cooling/heating switch (operate/stop) equipped.
Number of controllable units	Maximum 16 refrigerant systems in one group (At least one wireless signal receiving kit must be installed to each refrigerant system.)
Adapter wiring	Connect the 9-core cord with connector (attached) to CN90 of the indoor controller board of the indoor unit.
Signal distance	Within 7m in 45 degrees range from the front of the Signal Receiver

Dimensions

Unit : mm



OPTIONAL PARTS

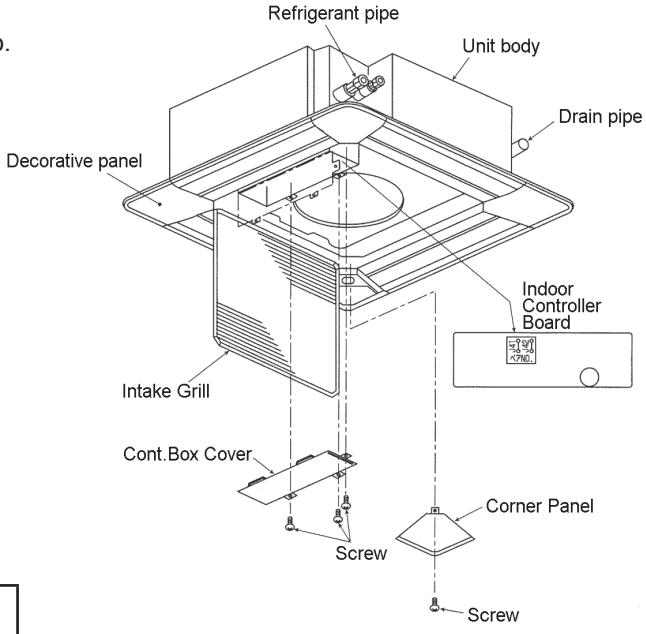
How to Use / How to Install

1 Before installation ※Turn off the main power before work.

- Open the intake grill and remove the corner panel where refrigerant pipes are and where local wires are drawn into.
  ※The corner panel removed is not needed.
  ※When attaching the duct flange during installation of decoration panel, perform the following work only after connecting the wires to the decoration panel:
- The control box cover fixed by 3 screws, which is possible to hang temporarily.
- Perform setting to designate the unit to be operated by the wireless remote control.
  Set J41 and J42 (jumper wires) on the indoor controller board and pair number switch of the wireless remote control as follows:

■ Setting pair number

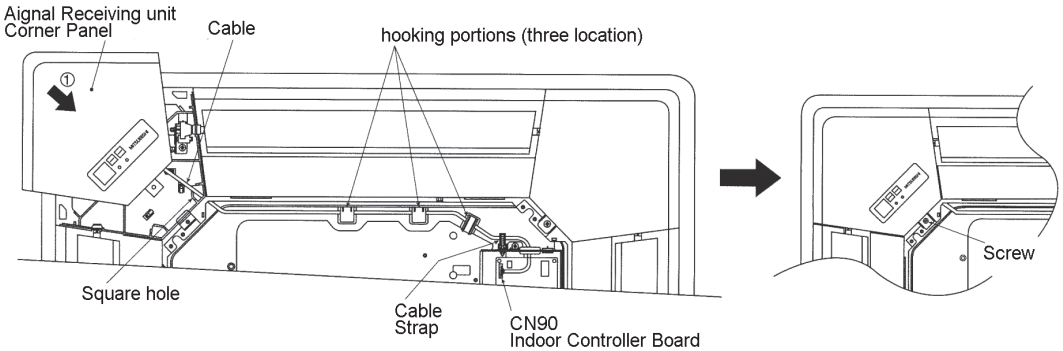
- Up to 4 patterns of pair number can be set.
  Match the pair number (setting of J41 and J42) of the indoor controller board and the pair number switch of wireless remote control as shown in the table below.
  ※See the installation manual provided with the wireless remote control for details on setting method of the wireless remote control.



Setting Pattern.	Pair number of wireless remote controller.	Cut point of Jumper wires on the indoor controller board.
A	0	Don't cut the jumper wire
B	1	Cut the jumper wire "J41"
C	2	Cut the jumper wire "J42"
D	One of procedures 3-9	Cut the jumper wire both "J41" and "J42"

2 Installation of signal receiving unit.

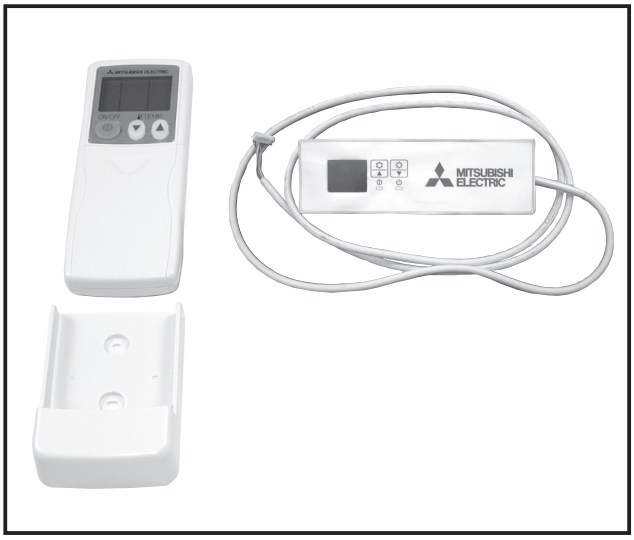
- Pull out the cable of infrared receiver from the square hole in the corner of decoration panel, the portion of corner panel that was removed in step 1.
- Pass the cable through the three hooking portions of unit and electrical parts box as shown in the figure, adjust the length of cable so that the
- Slide the receiving unit in the ① direction as shown and fix it by the screw which is used for the corner panel removed.



●After the installation completed, set the cont,box cover as they were.

OPTIONAL PARTS

Photo



Descriptions

Enables the use of wireless remote controller for ceiling suspended models.

Applicable Models

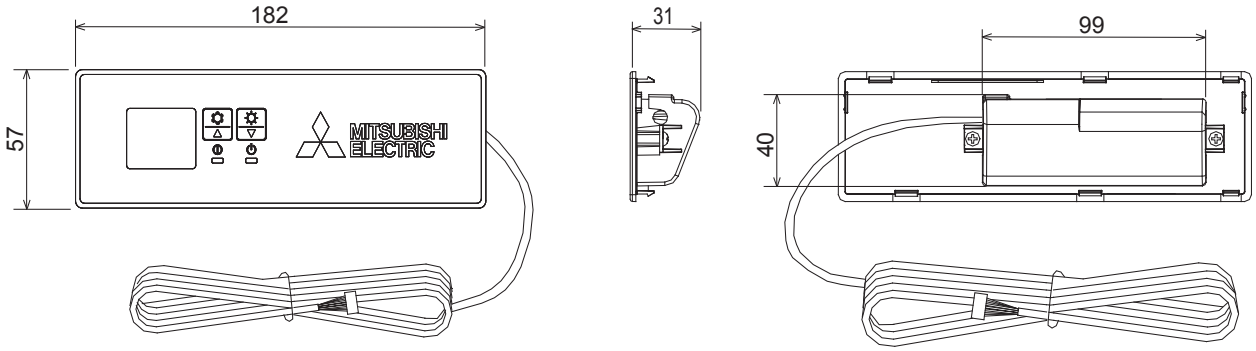
■ PCA-RP•KAQ

Specifications

Operation indication	During operation: LED (green) is lit, Alarm: LED (green) flashes.
Emergency operation	Cooler/heater button (start/stop) is provided.
Number of units controlled	Max. 16 refrigerant systems per group (One or more wireless light receivers must be installed for each refrigerant system.)
Adapter wiring	9-wire cord (standard accessory) with connector is connected to the connector (CN90) on the indoor unit control board.
Light receiver range	7m or less, at within 45 degrees to the front of receiver (the range varies with conditions)
Operating conditions	Temperature: 0 to 40°C, Humidity: 30 to 90% (no condensation)
Exterior	White gray (Munsell 4.48Y 7.92/0.66), ABS resin
Installation method	Attached to the brand label case of indoor unit.

Dimensions

Unit : mm



OPTIONAL PARTS

How to Use / How to Install

1 Making Sure of Components

Make sure that the following components, along with this manual, are packed in the box.

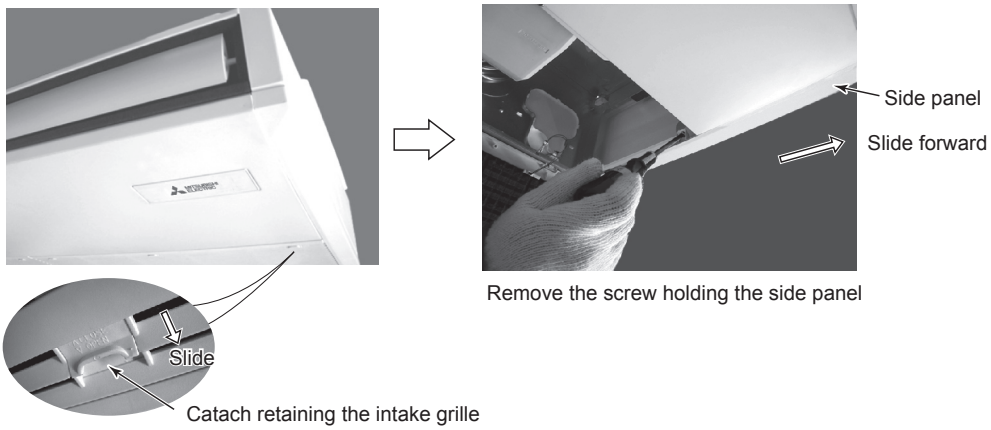
Component	Q'ty
Wireless remote controller reciever	1
Wireless remote controller	1
Remote control holder	1
"AAA" LR03 alkaline batteries	2
4.1×16 wood screws	2
Cord retaining clips	2
Connection cord fixing seal (12×30 size)	1

2 How to Install

※ Be sure to turn the power off before installing.

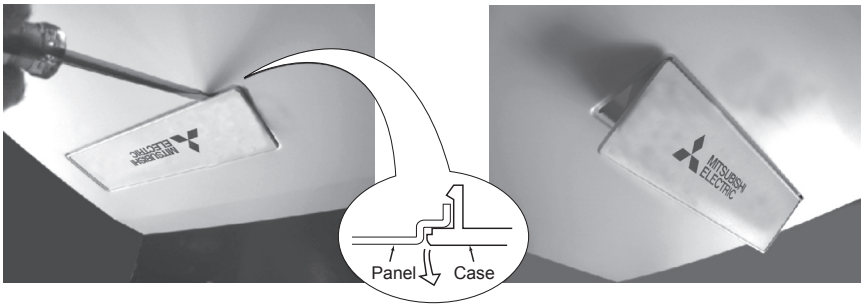
① Removing the intake grille and the right side panel

• Slide the catch holding the intake grille backwards to open the grille. Remove the screw holding the side panel, and then slide the side panel forward to remove it.



② Removing the existing brand label case

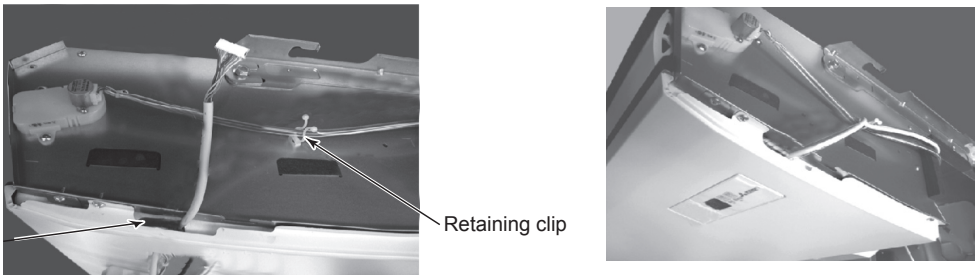
• Remove the brand label case (name plate with MITSUBISHI ELECTRIC) from the bottom right of the unit. If it is difficult to remove the case, use a flat-blade screwdriver, etc., taking care not to damage the panel.



③ Installing to the indoor unit

• Pass the receiver board connector through the right side of the square hole to which the brand label case was attached and then pull the connector and cord thruogh the slit in the right side of the bottom panel.

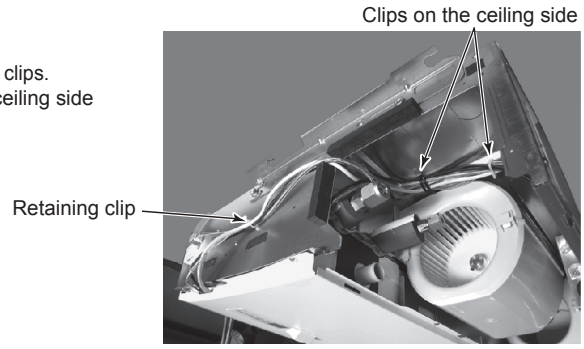
• Fit the receiver into the square hole where the brand label case was attached.



OPTIONAL PARTS

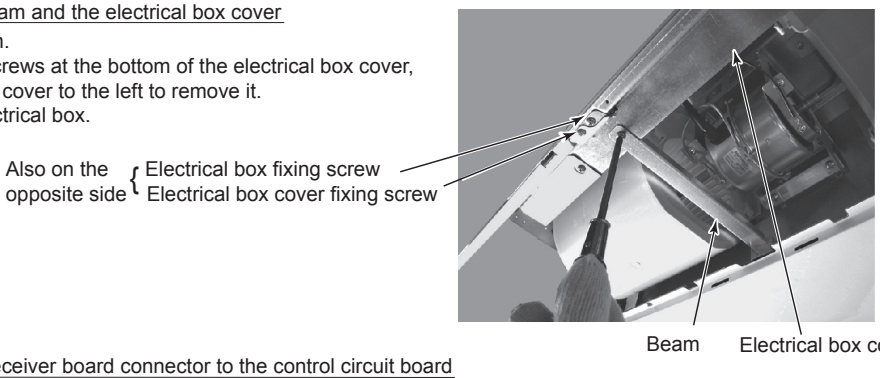
④ Laying out the lead wire

- Pass the lead wire for receiver through the retaining clips.
- Fix the lead wire for receiver with the clips on the ceiling side of the unit.



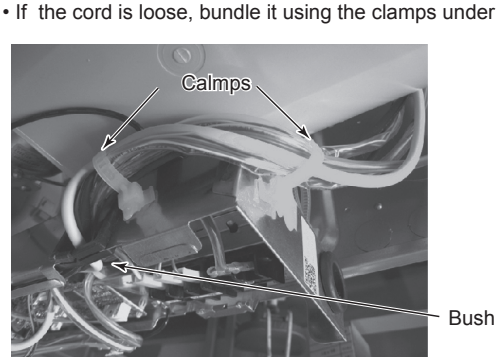
⑤ Removing the beam and the electrical box cover

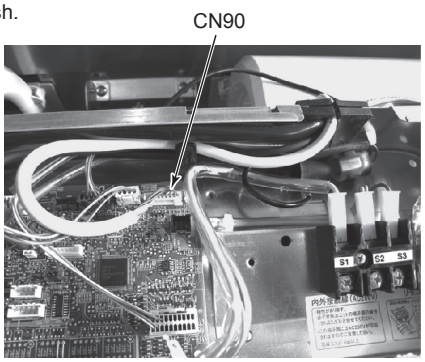
- Remove the beam.
- Loosen the two screws at the bottom of the electrical box cover, and then slide the cover to the left to remove it.
- Pull down the electrical box.



⑥ Connecting the receiver board connector to the control circuit board

- Pass the cord through the bush at the top right of the electrical box.
- Connect the connector to CN90 on the right of the control board.
- If the cord is loose, bundle it using the clamps under the above bush.





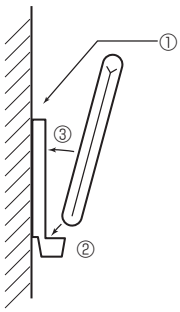
* The positions of the connectors may be different according to the model. Please refer to the wiring diagram to confirm the positions of the connectors.

⑦ Reinstalling the removed components

- Reinstall the removed components in reverse order. (The brand lavel case is not needed.)

⑧ Remote control holder

- To install the wireless remote controller on a wall, first attach the remote control holder to a wall.



Fitting remote control into holder

① Fix the remote control holder to the wall using the 2 wood screws provided.
② Insert the remote control into the holder.
③ Push the remote control against the wall.

Removing remote control

- Pull the top of remote control forward.

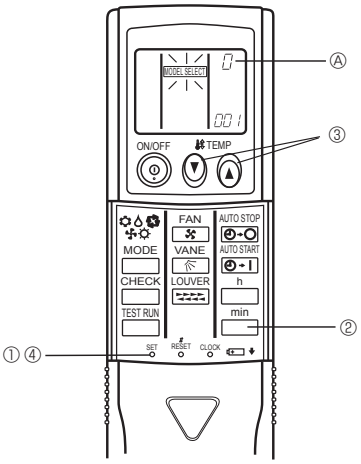
NOTE : The remote signal will reach the receiver over a distance of approx. 7m in a straight line and approx. 45° left or right. If the infrared receiver is affected by fluorescent light (especially, inverter type), it may not be able to receive the signal. Take this into consideration when installing fluorescent lights or replacing them.

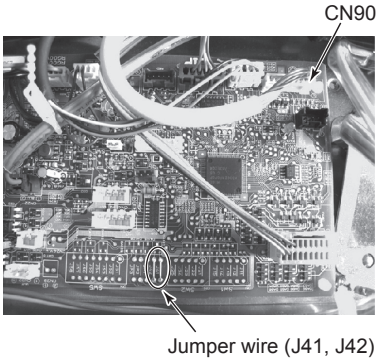
3 Pair Number Setting

- This is the setting to specify the unit to operate with the wireless remote controller.
- Make setting for J41, J42 (Jumper wire) of indoor controller board and the pair number of wireless remote cotroller.
- The pair number setting is available with the 4 patterns as shown in the following table. Make setting for the pair number (J41, J42) of indoor controller board and the pair number of wireless remote controller which is used as shown in the following table. *The initial setting is Pair No. “0”.

① Press the SET button with something sharp at the end.
Start this operation from the status of remote controller display turned off.
MODEL SELECT blinks and Model No. is lighted.
② Press the min button twice continuously. Pair No. “0” blinks.
③ Press the temp ▼ ▲ button to set the pair number you want to set.
④ Press the SET button with something sharp at the end.
Set pair number is lighted for 3 seconds then turned off.

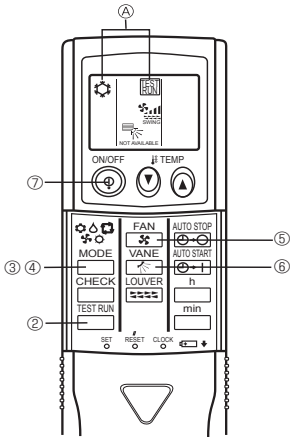
Ⓐ Pair No. of wireless remote controller	Indoor PC board
0	Initial setting
1	Cut J41
2	Cut J42
3 ~ 9	Cut J41, J42





* The positions of the connectors may be different according to the model. Please refer to the wiring diagram to confirm the positions of the connectors.

4 Test Run



Measure an impedance between the power supply terminal block on the outdoor unit and the ground with a 500V Megger and check that it is equal to or greater than 1.0 MΩ.

① Turn on the main power to the unit.
② Press the TEST RUN button twice continuously.
(Start this operation from the status of remote controller display turned off.)
Ⓐ TEST RUN and current operation mode are displayed.
③ Press the MODE (☼ △ ❄ ○) button to activate COOL ☼ mode, then check whether cool air is blown out from the unit.
④ Press the MODE (☼ △ ❄ ○) button to activate HEAT ☼ mode, then check whether warm air is blown out from the unit.
⑤ Press the FAN button and check whether strong air is blown out from the unit.
⑥ Press the VANE button and check whether the auto vane operates properly.
⑦ Press the ON/OFF button to stop the test run.

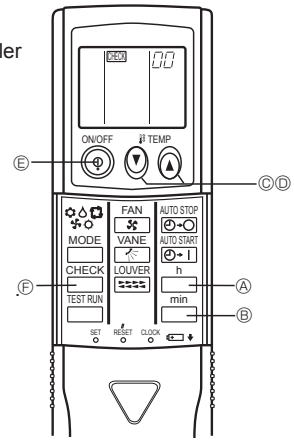
NOTE : • Point the remote controller towards the indoor unit receiver while following steps ② to ⑦.
• It is not possible to run in FAN, DRY or AUTO mode.

OPTIONAL PARTS

5 Function Selection

This setting is available only for Mr. Slim model. CITY MULTI model can be set by dip switch of indoor/outdoor control circuit board. Refer to technical data of CITY MULTI model to set dip switch.

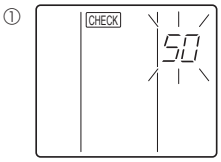
Each function can be set according to necessity using the remote controller.
The setting of function for each unit can only be done by the remote controller.
Select function available from the Table3. Function selection using wireless remote controller is available only for refrigerant system with wireless function. Refrigerant address cannot be specified by the wireless remote controller.
The article below describes how to set "LOSSNAY connectivity" into "supported (indoor unit is not equipped with outdoor-air intake)" in Table 3 as an example.



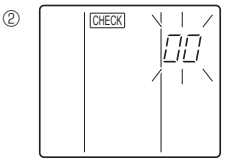
① Go to the function select mode
Press the CHECK button Ⓕ twice continuously.
(Start this operation from the status of remote controller display turned off.)
CHECK is lighted and "00" blinks.
Press the temp ▼ button Ⓒ once to set "50". Direct the wireless remote controller toward the receiver of the indoor unit and press the h button Ⓐ

② Setting the unit number
Press the temp ▼ ▲ button Ⓒ and Ⓓ to set the unit number "00". Direct the wireless remote controller toward the receiver of the indoor unit and press the min button Ⓑ.

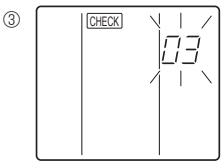
③ Selecting a mode
Enter 03 to change the LOSSNAY connectivity setting using the ▼ Ⓒ and ▲ Ⓓ buttons. Direct the wireless remote controller toward the receiver of the indoor unit and press the h button Ⓐ .
Current setting number: 1=1 beep (1 second)
2=2 beeps (1 second each)
3=3 beeps (1 second each)



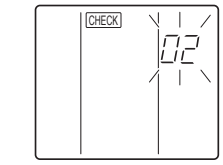
※ If a mode number that can not be recognized by the unit is entered, 3 beeps (3 beeps of 0.4 seconds duration)will be heard.
Reenter the mode number selecting.
※ If the signal was not received by the sensor or an error occurred during transmission, you will not hear a beep or a "double beep" may be heard.
Press the h button again.



④ Selecting the setting number
Use the ▼ Ⓒ and ▲ Ⓓ buttons to change the LOSSNAY connectivity setting to 02. Direct the wireless remote controller toward the sensor of the indoor unit and press the h button Ⓐ .
→ At this time, current setting number for selected mode number will be output by the interrupted buzzer sounds and the blinks of operation indicator.
Output : setting number = 1 → beep beep (0.4 second + 0.4 second) ×1
2 → beep beep (0.4 second + 0.4 second) ×2
3 → beep beep (0.4 second + 0.4 second) ×3



※ If a setting number that can not be recognized by the unit is entered, 3 beeps (3 beeps of 0.4 seconds duration) will be heard (unit will beep only).
Reenter the setting number selecting.
※ If the signal was not received by the sensor or an error occurred during transmission, you will not hear a beep or a "double beep" may be heard.
Press the h button again.
※ If the number that can not be set is input, the former setting number will be set.



⑤ To select multiple functions continuously
Repeat steps ③ and ④ to change multipul function settings continuously.

⑥ Complete function selection
Direct the wireless remote controller toward the sensor of the indoor unit and press the ⏻ button Ⓔ.

NOTE : Whenever changes are made to the function settings after construction or maintenance, be sure to record the added functions with an "○", in the "Check" column provided on the chart.

Other function selections
Now that you know how to change LOSSANY connectivity setting, there are several other settings that can be changed as well.
The following table lists the various settings that can be changed through the remote controller and the default settings.

Table 3.

Function	Settings	PCA-RP·KA
Power failure automatic recovery	Not available	*1
	Available	*1
Indoor temperature detecting	Indoor unit operating average	○
	Set by indoor unit's remote controller	
	Remote controller's internal sensor	
LOSSNAY connectivity	Not supported	○
	Supported (indoor unit is not equipped with outdoor-air intake)	
	Not supported (indoor unit is not equipped with outdoor-air intake)	
Auto mode (only for PUHZ)	Energy saving cycle automitically enabled	○
	Energy saving cycle automitically disabled	
Filter sign	100Hr	
	2500Hr	○
	No filter sign indicator	
Fan speed	Quiet	
	Standard	○
	High ceiling	
Up/down vane setting	No vanes	
	Equipped with vanes (No.1 set)	○
	Equipped with vanes (No.2 set)	

*1 Power failure automatic recovery initial setting depends on the connecting outdoor unit.

Things to remember when entering function selections:
The basic procedure for entering function selections is the same as described for switching between LOSSNAY connectivity. However, there are some differences at step ② for selecting the unit number, step ③ for selecting the mode number and step ④ for selecting the setting number.
The following Tables 4 and 5 list the various function settings, mode numbers and setting numbers.
Table 4 details the function of the entire refrigerant system while Table 5 shows the function that can be set for the indoor unit.

Table 4. Itemized functions of the entire refrigerant system (select unit number 00)

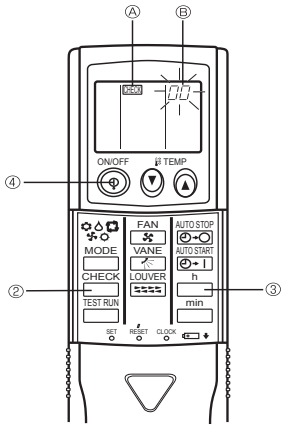
Mode	Settings	Mode no.	Setting no.	Check	Remarks
Power failure automatic recovery	Not available	01	1		
	Available (Approximately 4-minutes wait-period after power is restored.)		2		Approximately 4-minutes wait-period after power is restored.
Indoor temperature detecting	Indoor unit operating average	02	1		
	Set by indoor unit's remote controller		2		
	Remote controller's internal sensor		3		
LOSSNAY connectivity	Not supported	03	1		
	Supported (indoor unit is not equipped with outdoor-air intake)		2		
	Not supported (indoor unit is not equipped with outdoor-air intake)		3		
Auto mode (only for PUHZ)	Energy saving cycle automitically enabled	05	1		
	Energy saving cycle automitically disabled		2		

Table 5. Itemized functions of the indoor unit (select unit numbers 01 to 04 or 07)

Mode	Settings	Mode no.	Setting no.	Check	Remarks
Filter sign	100Hr	07	1		
	2500Hr		2		
	No filter sign indicator		3		
Fan speed	Quiet	08	1		
	standard		2		
	High ceiling		3		
Up/down vane setting	No vanes	11	1		
	Equipped with vaneas (No.1 set)		2		
	Equipped with vaneas (No.2 set)		3		

② Setting the unit numbers
Set "00" as the unit number when setting function from Table 4.
When setting function from Table 5.
- When setting function for an indoor unit in an independent system, set the unit number to 01.
- When setting function for a simultaneous-Twin Triple quadruple indoor unit system, assign unit numbers from 01 to 04 to each indoor unit.
- When setting the same functions for an entire simultaneous Twin Triple quadruple-indoor unit system, assign "07" as the unit number.

③ Selecting the mode number
Select from Table 4 and Table 5.
④ Selecting the setting number.

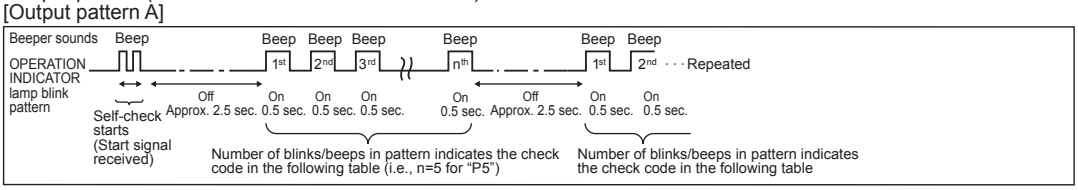


6 Self-Check

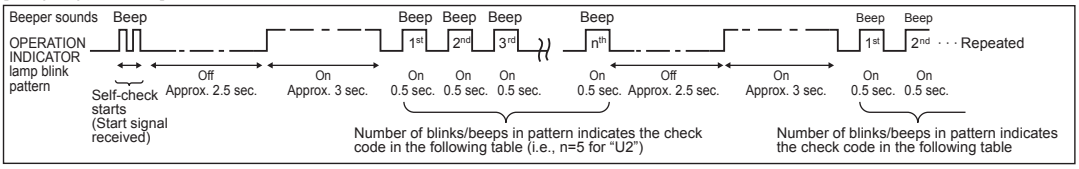
① Turn on the main power to the unit.
② Press the CHECK button twice continuously.
(Start this operation from the status of remote controller display turned off.)
Ⓐ CHECK begins to light.
Ⓑ «00» begins to blink.
③ While pointing the remote controller toward the unit's receiver, press the h button. The check code will be indicated by the number of times that the buzzer sounds from the receiver section and the number of blinks of the operation lamp.
④ Press the ON/OFF button to stop the self-check.

● Refer to the following tables for details on the check codes.

① Output pattern (Mr.Slim model / CITY MULTI model)
[Output pattern A]



[Output pattern B]



② Check code (Mr.Slim model)
[Output pattern A] Errors detected by indoor unit

Wireless remote controller	Wired remote controller	Symptom	Remark
Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Check code		
1	P1	Intake sensor error	
2	P2, P9	Pipe (Liquid or 2-phase pipe) sensor error	
3	E6,E7	Indoor/outdoor unit communication error	
4	P4	Drain sensor error/Float switch connector open	
5	P5	Drain pump error	
6	P6	Freezing/Overheating safeguard operation	
7	EE	Communication error between indoor and outdoor units	
8	P8	Pipe temperature error	
9	E4	Remote controller signal receiving error	
10	–	–	
11	–	–	
12	Fb	Indoor unit control system error (memory error, etc.)	
No sound	– –	No corresponding	

[Output pattern B] Errors detected by unit other than indoor unit (outdoor unit, etc.)

Wireless remote controller	Wired remote controller	Symptom	Remark
Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Check code		
1	E9	Indoor/outdoor unit communication error (Transmitting error) (Outdoor unit)	For details, check the LED display of the outdoor controller board.
2	UP	Compressor overcurrent interruption	
3	U3,U4	Open/short of outdoor unit thermistors	
4	UF	Compressor overcurrent interruption (When compressor locked)	
5	U2	Abnormal high discharging temperature/ insufficient refrigerant	
6	U1,Ud	Abnormal high pressure (63H worked)/Overheating protection operation	
7	U5	Abnormal temperature of heat sink	
8	U8	Outdoor unit fan protection stop	
9	U6	Compressor overcurrent interruption/Abnormal of power module	
10	U7	Abnormality of super heat due to low discharge temperature	
11	U9,UH	Abnormality such as overvoltage or voltage shortage and abnormal synchronous signal to main circuit/Current sensor error	
12	–	–	
13	–	–	
14	Others	Other errors (Refer to the technical manual for the outdoor unit.)	

*1 If the beeper does not sound again after the initial 2 beeps to confirm the self-check start signal was received and the OPERATION INDICATOR lamp does not come on, there are no error records.
*2 If the beeper sounds 3 times continuously “beep, beep, beep (0.4 + 0.4 + 0.4 sec.)” after the initial 2 beeps to confirm the self-check start signal was received, the specified refrigerant address is incorrect.
• On wireless remote controller
The continuous buzzer sounds from receiving section of indoor unit.
Blink of operation lamp
• On wired remote controller
Check code display in the LCD.

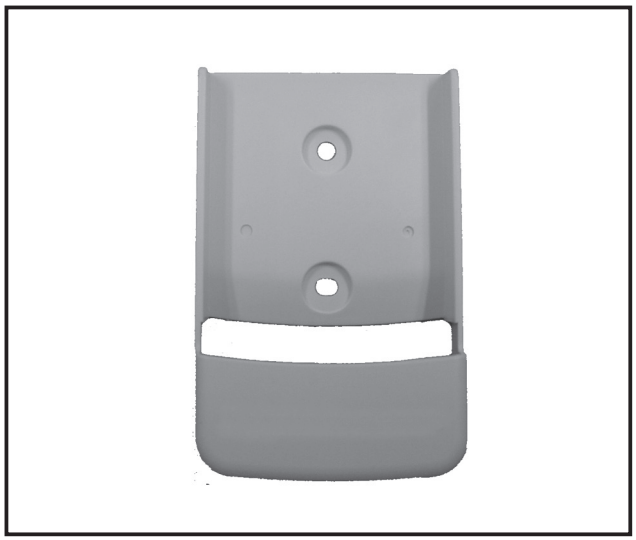
③ Check code (CITY MULTI model)
[Output pattern A] Errors detected by indoor unit or LOSSNAY unit
[Output pattern B] Errors detected by unit other than indoor unit (outdoor unit, etc.)

Wireless remote controller	Wired remote controller	Remark
Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Check code	
1	1000 ~ 1999	
2	2000 ~ 2999	
3	3000 ~ 3999	
4	4000 ~ 4999	
5	5000 ~ 5999	
6	6000 ~ 6999	
7	7000 ~ 7999	
8	0000 ~ 0999	
9	8000 over	

*1 Refer to service handbook of outdoor unit for the detail.
*2 If the beeper does not sound again after the initial 2 beeps to confirm the self-check start signal was received and the OPERATION INDICATOR lamp does not come on, there are no error records.
*3 If the beeper sounds 3 times continuously “beep, beep, beep (0.4 + 0.4 + 0.4 sec.)” after the initial 2 beeps to confirm the self-check start signal was received, the specified address is incorrect.
• On wireless remote controller
The continuous buzzer sounds from receiving section of indoor unit.
Blink of operation lamp
• On wired remote controller
Check code display in the LCD.

Controller Holder for Wireless remote controller **MAC-1200RC**

Photo



Descriptions

- The controller holder allows you to place the remote controller on the wall.
- It helps to prevent the remote controller, from being misplaced.

Applicable Models

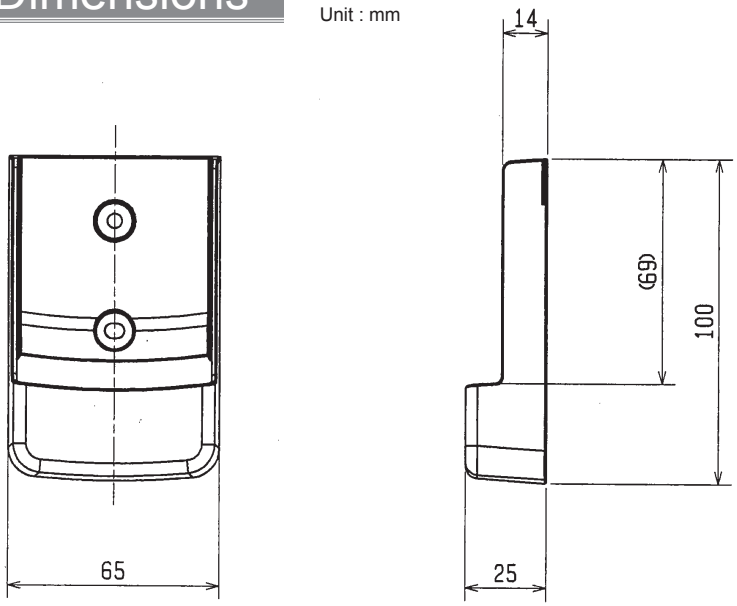
- MSZ-DM25VA
- MSZ-DM35VA
- MSZ-HJ25VA
- MSZ-HJ35VA
- MSZ-HJ50VA
- MSZ-HJ60VA
- MSZ-HJ71VA

Specifications

Material	Polystyrene
Color	White

Dimensions

Unit : mm



How to Use / How to Install

Installation area

1) Installation area

- Area in which the remote controller is not exposed to direct sunshine.
- Area in which there is no nearby heating source.
- Area in which the remote controller is not exposed to cold (or hot) winds.
- Area in which the remote controller can be operated easily.
- Area in which the remote controller is beyond the reach of children.

2) Installation method

① Attach the remote controller holder to the desired location using two tapping screws.

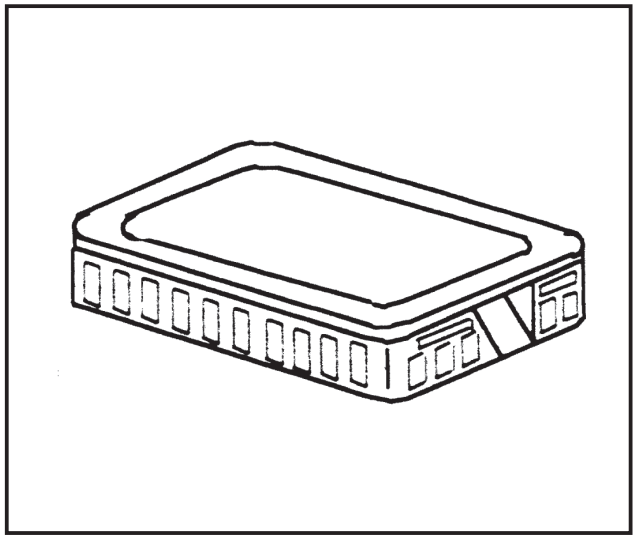
② Place the lower end of the controller into the holder.

Ⓐ Remote controller
Ⓑ Wall
Ⓒ Display panel
Ⓓ Receiver

- The signal can travel up to approximately 7 meters (in a straight line) within 45 degrees to both right and left of the center line of the receiver.

OPTIONAL PARTS

Figure



Descriptions

Enables to pick up the room tempreture at the remote position.

Applicable Models

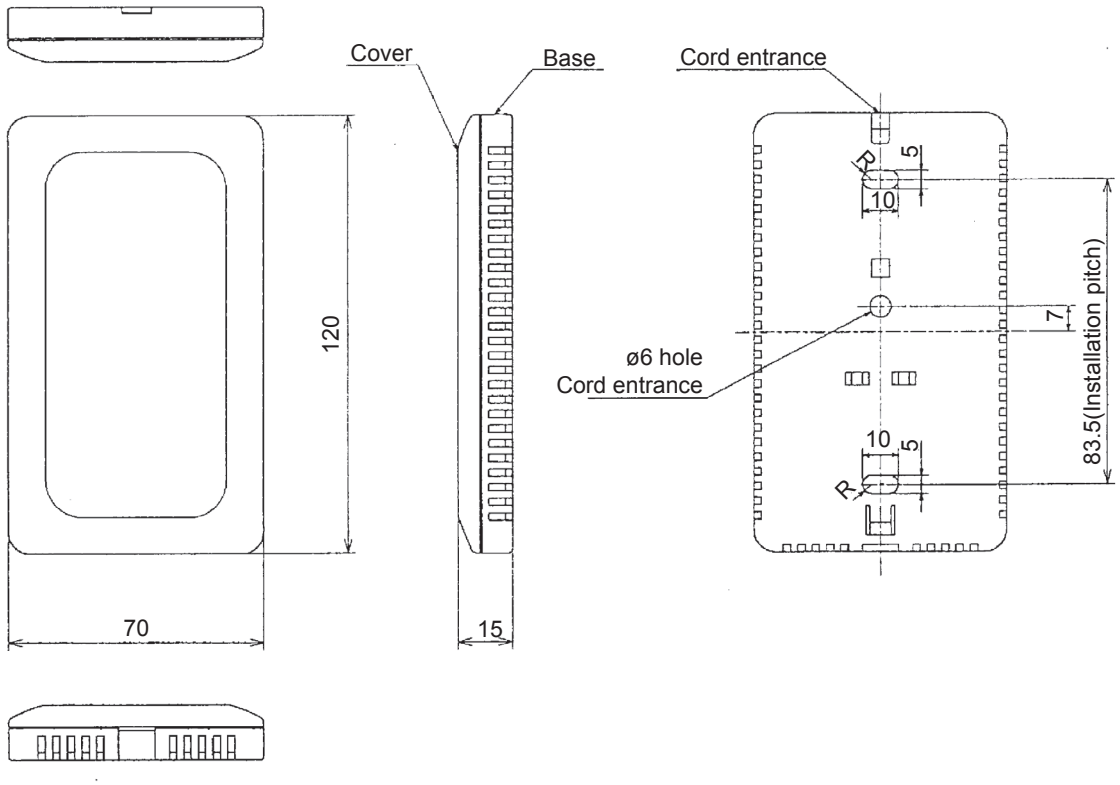
- S-series models
- P-series models

Specifications

External dimensions (mm)	120 (H) x 70 (W) x 15 (D)
Exterior	White gray (Munsell 4.48Y 7.92/0.66) Material: ABS resin
Operating conditions	Temperature: -20 to 65℃ Humidity: 30 to 90% RH (no condensation)
Installation method	Mounting on single-type switch box (JIS C8336) or directly mounting on wall
Accessory	2-wire cable (12m), Connector with post, Fixing screw (x2)
When combining with environmental measurement controller	
Temperature measuring range	-20 to 65℃
Measurement resolution	0.1℃ (10 to 35℃), 0.5℃ (other temperature ranges)

Dimensions

Unit : mm



OPTIONAL PARTS

How to Use / How to Install

1 How to Install

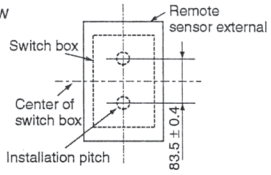
(1)Determine the installation of the remote sensor (switch box).
The follwing items must be observed.

①Select a place where the remote sensor will detect an average temperature of the room, and where the sensor will not be subject to direct sunlight, heat sources, or the blow-off from the air conditioner, etc.

②Install the sensor within the length of the cable provided (12m). (The cable cannot be extented. If extented, it may cause misoperation due to noise.)

③The following parts must be procured at the site.

- •Cross-recessed pan head screw M4 .... Tow screws
- •Single switch box
- •Thin steel conduit
- •Lock nut, bushing



(2)Connect the wires.

•Connect the 2-core cable to the terminal block in the lower case. Peel the sheath of the 2-core cable as shown in Fig.1 , and correctly wire it as shown in Fig.2.

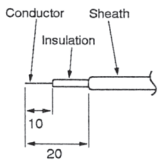


Fig.1

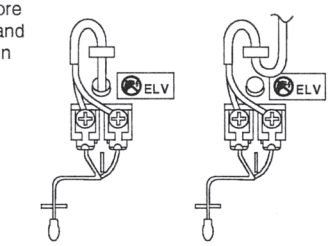


Fig.2

•The wiring connection of the indoor unit's electrical box and remote sensor is an shown in Fig.3. There are three methods of connecting the 2-core cable to the electrical box.

Exchange 2-core cable (connector 20)

①When using the connector attached to the end of the 2-core cable as it is.

②When cutting the connector attached to the end of the 2-core cable and connecting the cable to the terminal block in the I.B. (Indoor Board).

③When using the enclosed post for connection and convert cable.

The above three methods are used according to the indoor unit being used. If the 2-core cable is to be embedded in the wall, follow Fig.4.

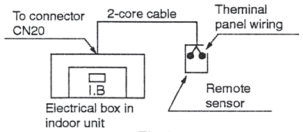


Fig.3

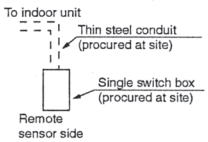
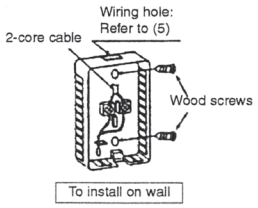


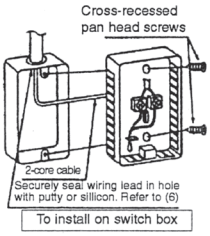
Fig.4

(3)Install the lower case on the wall or switch box.

NOTE The recommended tightening torque for installing the 2-core cable to the terminal block is 1.17N·m.



To install on wall



To install on switch box

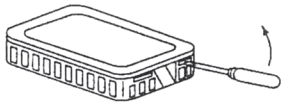
⚠CAUTION
- •If the screws are tightened too hard, the case may break or deform.
- •Install the sensor on a flat wall. If installed on a bumpy wall, the case may break or trouble may occur.

(4)Fit the upper case.

Catch the two upper claws first, and fit the case as shown on the left.

⚠CAUTION •Securely fit the case until a catching sound is heard. It may drop off if is not fitted securely.

To remove the case, fit a flat-flap screwdriver into the claw section as shown below, and move the screwdriver in the direction of the arrow.



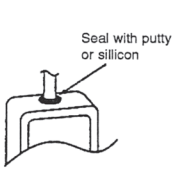
⚠CAUTION
- •Do not turn the screwdriver when it is fit into the claw section as the claws may be broken.

(5)Wiring hole for direction installation on wall, etc.

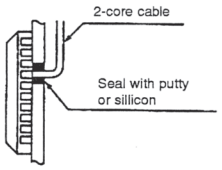
Cut the thin section (shaded section) of the lower case with a knife or pair of nippers, etc. The 2-core cable connected to the terminal block is led out from here.

(6)Securely seal the wiring lead hole with putty or silicon to prevent dew, water drops, cockroaches and other insects from entering.

- •When installing directly on the wall, seal the section cut on the lower case with putty or silicon. If the wiring is to be passed through a hole in the wall (when leading the wiring from the rear of the remote sensor), seal the hole in the same manner.
- •When installing on a switch box, seal the connection of the switch box and conduit with putty or silicon.

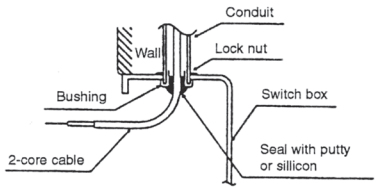


To lead wiring from top of remote sensor.



To lead wiring from rear of remote sensor.

To install directly on wall



To use switch box

2 Setting of indoor unit

When the remote sensor is connected to the indoor unit and room temepature detection poisition is changed, reset the setting of "Set temp. 4-deg. up" in the heating mode as shown below.

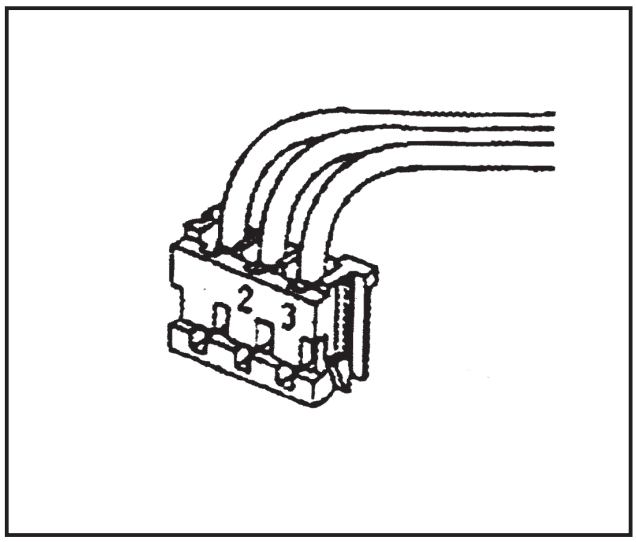
① K control models	: DIP switch Nos 1-6 on the control PCB of the indoor unit.
② M-NET control models	: DIP switch Nos 3-8 on the control PCB of the indoor unit.
③ A control models	: Refer to A-control air-conditioners SERVICE TECHNICAL GUIDE.

OPTIONAL PARTS

Remote On/Off Adapter

PAC-SE55RA-E

Figure



Descriptions

- Operation other than ON/OFF (adjustment of temperature, fan speed, and air direction, for example) can be performed even when remote controller operation is prohibited.

Applicable Models

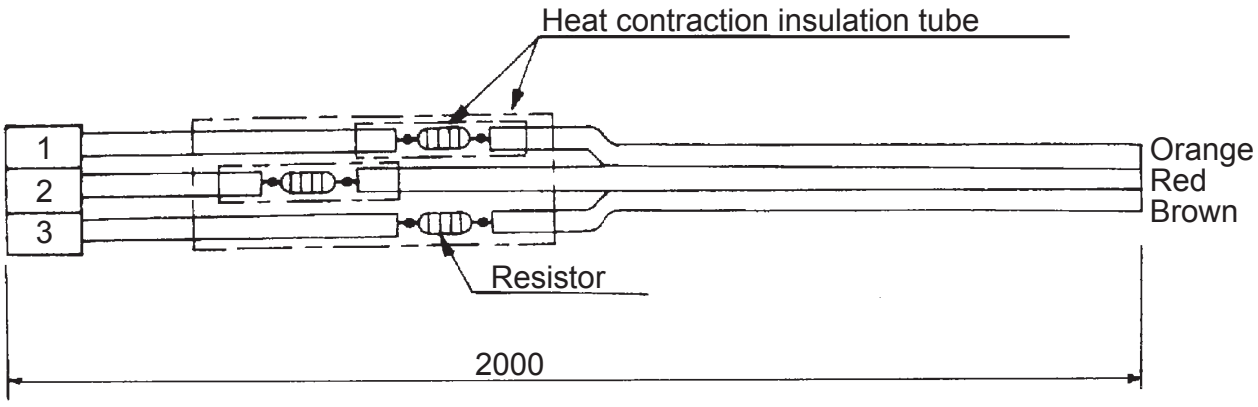
- S-series models
- P-series models

Specifications

Function	ON/OFF by external signal External signal ON (remote control disabled) / OFF (remote control enabled) switch able
Input signal	No-voltage contact (ON/OFF level signal)
Connector	3P (connected to CN32 on outdoor unit control board)
Cable type	3-wire cable, for extension: Sheathed vinyl cord or cable (0.5 to 1.25mm^2)
Cable length	2m (max. 10m when extended locally)

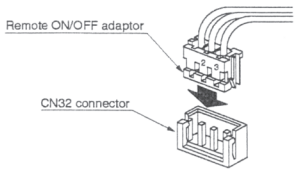
Dimensions

Unit : mm



How to Use / How to Install

1 Connecting to the Indoor Unit



1. Connect to the connector CN32 on the indoor controller board.
2. Press the connector for the remote ON/OFF adaptor into the CN32 connector.
   The connector can only be connected in one direction only. Do not force the connection.

2 Locally Procured Wiring

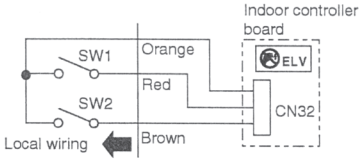
With the remote ON/OFF adaptor, variations of connection method with the locally installed circuit will provide different types of operating configurations.

Example: External timer operation, remote control operation

1. Basic Connection Method

   SW1 - Operating switch
   Performs operation/stopping of indoor unit.

   SW2 - Selecting switch
   For selecting whether the operation/stopping is to be performed by external circuit or remote control.*
   * Also includes system controller (central controller).



2. Switch Settings (Refer to table at right for details.)

   SW2 - If on.
   - Operation/stopping cannot be controlled from remote controller.
     Other operations (such as temperature settings and changing fan speed) can be performed.
   - Operation/stopping can be performed by SW1.

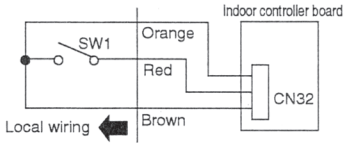
   SW2 - If off.
   - Operations can be performed from remote controller.
   - Operation/stopping cannot be performed by SW1.

		SW2	
		ON	OFF
Remote controller		Cannot perform operation/stopping	Can perform operation/stopping
SW1	ON	Operation	Cannot perform operation/stopping
	OFF	Stopping	

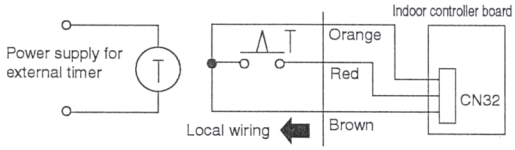
3 Examples of Usage

In either case, there is a 5 to 6 second delay from the time when the operating command is sent until the unit operates.

1. To perform operation/stopping by only remote operation or external timer and to prohibit operation/stopping by the remote controller, use the following circuits.

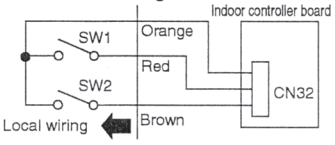


For remote operation

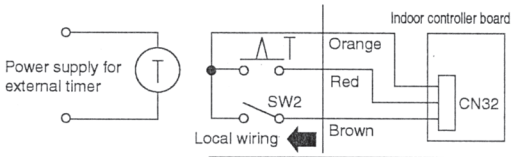


For remote timer operation

2. To perform operation/stopping by remote operation or external timer and allow operation/stopping by the remote controller, use the following circuits.

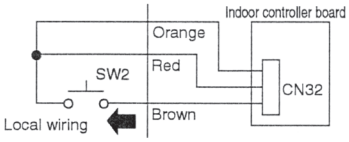


For remote operation



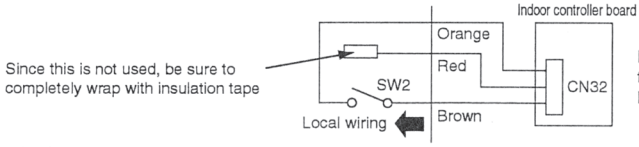
For remote timer operation

3. To start operation by remote operation and then freely use remote controller, use the following circuit.



Use a momentary switch (a switch that is turned on manually and turns off automatically) for SW2.
Press SW2 (for 1 second or more) and the operation starts. After this, the remote controller can be used for operations.

4. To permit/prohibit the use of the remote controller by an external circuit.

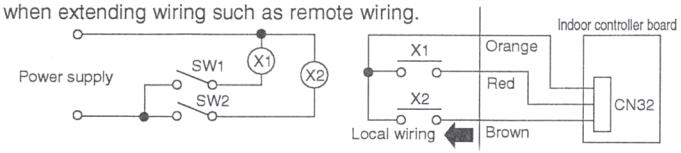


If SW2 is on, operation cannot be performed by the remote controller.
If SW2 is off, operation is permited.

4 Wiring Restrictions

Keep the length of wire from the circuit board of the indoor unit within 10 meters. Excessive length could cause improper operation.

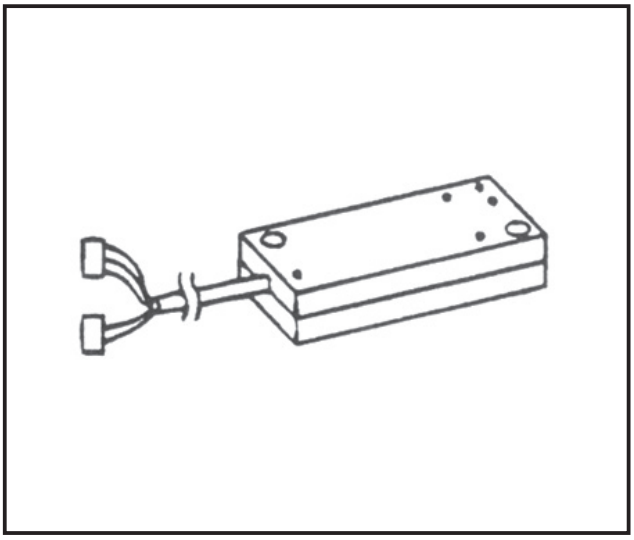
Use a transit relay when extending wiring such as remote wiring.



OPTIONAL PARTS

Remote Operation Adapter PAC-SF40RM-E

Figure



Descriptions

Extraction of non-voltage contact output.
*Use of optional [Remote Operation Adapter] and "remote display panel" Part to be provided at your site) provides non-voltage contact outputs of signals (operation, error) and operation/stop input function.
Unable to use with wireless remote controller. (except PKA-RP·HAL/KAL)

Applicable Models

- S-series models
- P-series models

(Except PEA-RP400/500GAQ, PKA-RP·HAL, PKA-RP·KAL)

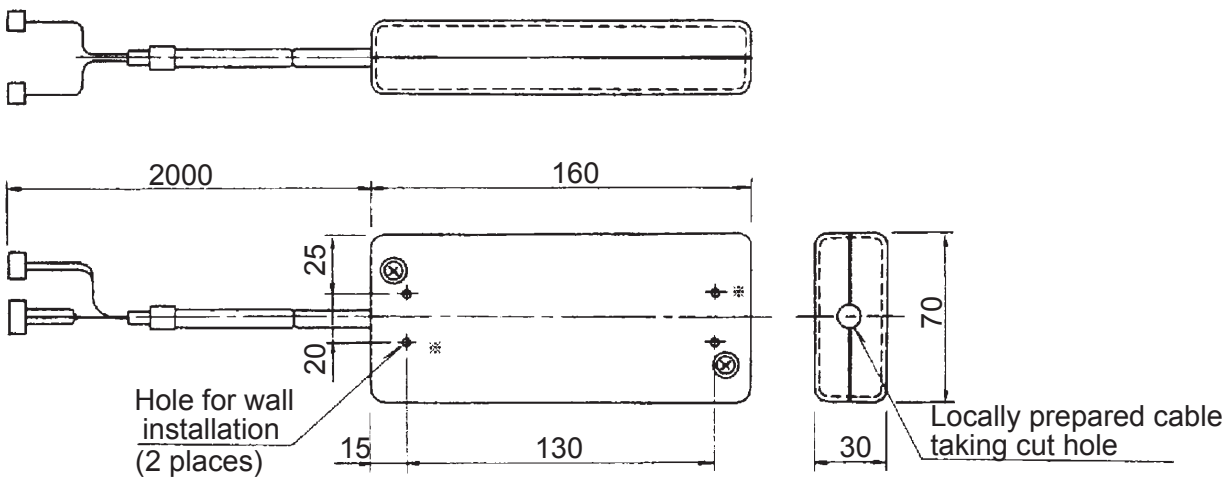
Specifications

Power		Supplied from indoor unit
External dimensions (mm)		160 x 70 x 30
Exterior		Material: ABS resin, Color: Gray (Munsell 3.07Y 6.16/0.33)
Weight		200g
Operating conditions		Indoor only Temperature: 0 to 40℃, Humidity: 35 to 85%RH (no condensation)
Connecting cable (indoor unit)		5-wire (3 + 2) cable with connector (9-pin, 4-pin)
Output signal		No-voltage "a" contact (relay contact method)
	Number of Contacts	2 (Operation / Alarm)
	Contact capacity	200V AC (30V DC)/1A or less
	Minimum load	10mA
Input signal		Pulse signal (instantaneous non-voltage "a" contact), pulse width: 200ms or more
	Number of Contacts	1 (start/stop)
Input/output signal cable (locally prepared)	Type	CV, CVS, or equivalent sheathed vinyl cord/cable
	Diameter	Twisted: 0.5 to 1.25mm2, Single: Φ0.65 to Φ1.2mm
	Distance	Output signal cable: Max. 100m Input signal cable: Max. 10m (Extension relay must be used when exceeding 10m)

* This kit cannot be used with a wireless remote controller.
Water leakage alarm will not be displayed if the unit is built into the ceiling (PDH)

Dimensions

Unit : mm



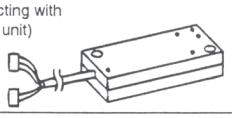
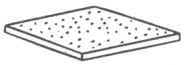
OPTIONAL PARTS

How to Use / How to Install

1 Confirming the Supplied Parts

(1) Parts Provided

Check that the box includes the following parts in addition to this installation manual.

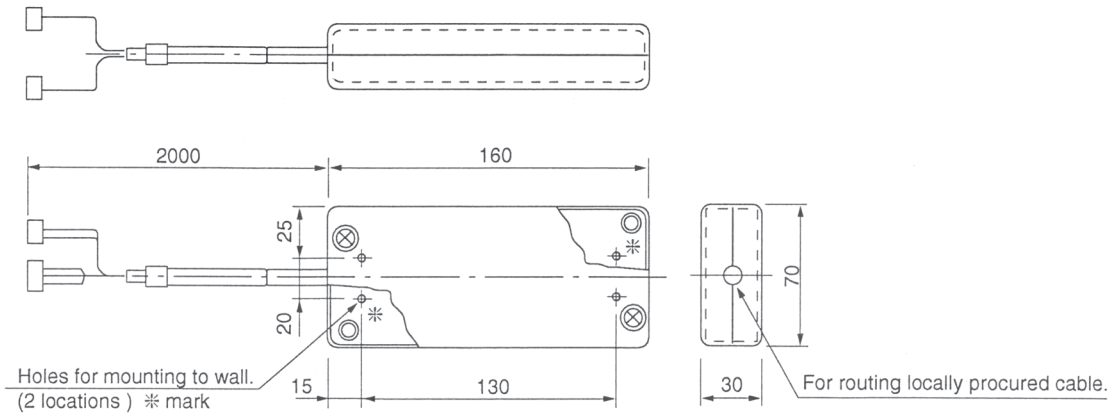
Parts	① Remote operation adaptor unit	② Cord clamp	③ Wall mount bracket
Shape	(with 2 meter wire for connecting with indoor unit) 	(Use this clamp if the local wiring is too thick to be held by the clamp inside the main unit.) 	
Quantity	1	1	1
Parts	④ Screws for mounting ③	⑤ Cushion material	⑥ Tie-wrap
Shape	 3.5 x 12 (Black)	(With adhesive on both sides.) 	(Use this for bundling lead wires.) 
Quantity	4	1	5
Parts	⑦ Cord clamp	⑧ Screws for mounting ⑦	⑨ Screws for mounting main unit
Shape		 3.5 x 12 (Black)	 3.5 x 12 (Black)
Quantity	5	5	2

(2) Locally Procured Parts

Note : Please keep LVD. LVD;Low Voltage Directive (EC Directive of Europe)
Apply some countermeasure for wiring and relay not to be touched from outside.
① Wiring should be covered by the insulation tube. ② Use relay with EU regulation.

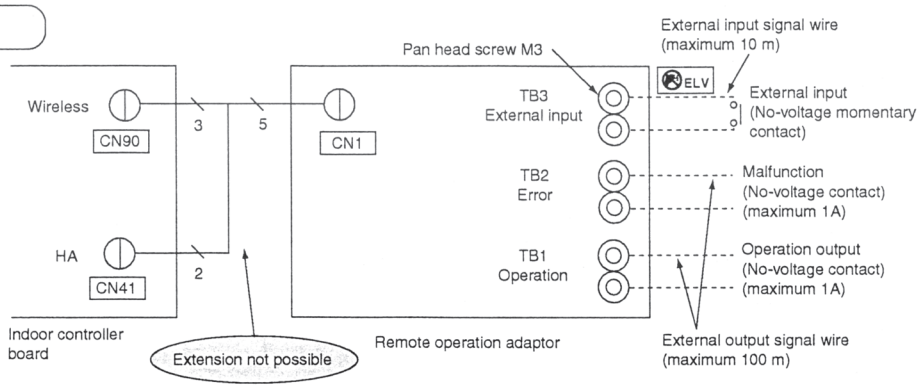
Item	Part Name	Model & Specifications
External output function	External signal output wire	Use a vinyl cord with sheath or cable Electric wire type: CV, CVS or equivalent Electric wire size: 0.5 mm^2 to 1.25 mm^2 Single wire: ø0.65 mm to ø1.2 mm
	Display lamp, etc.	No-voltage contact AC 220 to 240 V (DC30V), 1A or less
External input function	External signal input wire	Use a vinyl cord with sheath or cable Electric wire type: CV, CVS or equivalent Electric wire size: 0.5 mm^2 To 1.25 mm^2 (Single wire: ø0.65 mm to ø1.2 mm)
	Switch	No-voltage momentary contact (Operation ⇄ Stop is switched by input of a pulse of 200 ms or more)

2 External Dimension Drawing



OPTIONAL PARTS

3 Wiring



⚠Caution

1) TB3 is a dedicated terminal for contact input. Do not apply voltage. Applying voltage will cause damage to the circuit board inside the for the indoor unit controller.
2) Always use the cable provided for connecting the unit to the indoor unit. Never make modifications to extend this cable. Extensions could cause the cable to be affected by external noise which could lead to mis-operation.
If an extension is needed, refer to specification chart in "6. Product Specifications" a follow it when extending the external signal wire.

<Connecting to the indoor unit>

① If external output functions are used ····· Insert the 9-electrode (3 core) side of the cable provided into CN90 on the controller circuit board for the indoor unit.

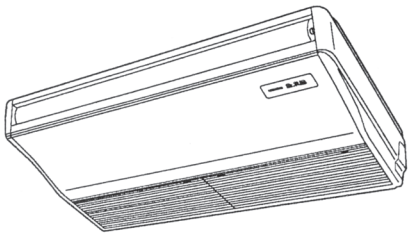
② If external input functions are used ····· Insert the 4-electrode (2 core)side of the cable provided into CN41 on the controller circuit board for the indoor unit.

✳ The connector can only be inserted in one direction. Be sure to check that the connector is in the proper direction before inserting. Forcing the connector will cause damage.

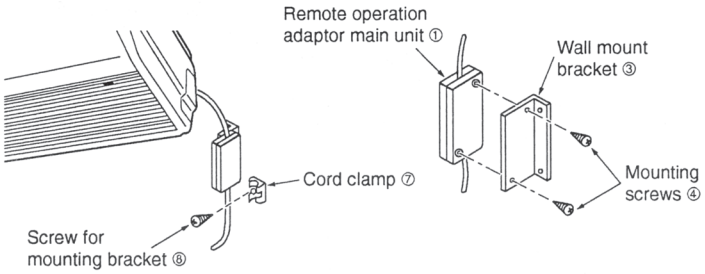
4 How to Install

There are three ways to mount the remote operation adaptor main unit: [A] Using mounting bracket, [B] Mounting directly, and [C] Using the cushion material.

(1) Installation Example (Suspended Type)



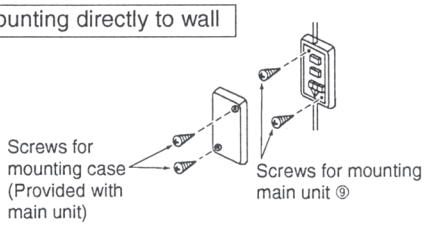
[A] Mounting to wall mounting bracket

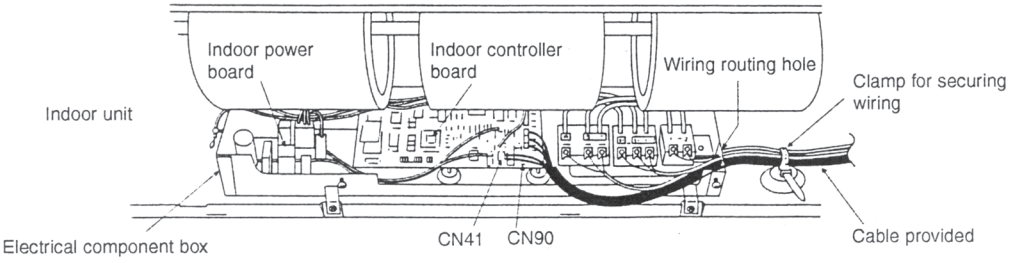


⚠Caution

1) When mounting the remote operation adaptor main unit, be sure to use the mounting hardware to mount it to a wall or beam so that an inspection port is available for servicing.
2) If there is any loose remaining wire after installation, use a tie-wrap ⑥ to bundle it.

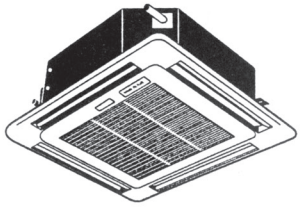
[B] Mounting directly to wall



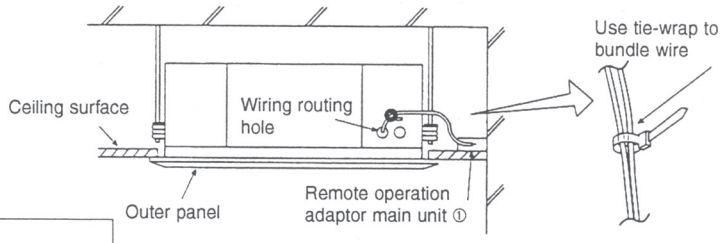


OPTIONAL PARTS

(2) Installation Example 2 [Cassette Type]



[A] If recess-mounted into ceiling

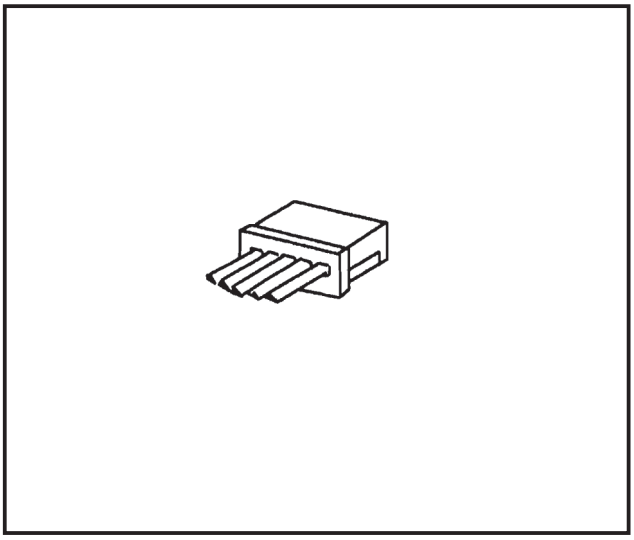


⚠Caution

1) When mounting the remote operation adaptor main unit, be sure to use the mounting hardware to mount it to a wall or beam so that an inspection port is available for servicing.
2) If there is any loose remaining wire after installation, use a tie-wrap ⑥ to bundle it.

Connector Cable For Remote Display PAC-SA88HA-E

Figure



Descriptions

• This adapter enables control of several units with a multiple remote control display.

Applicable Models

■ S-series models

■ P-series models

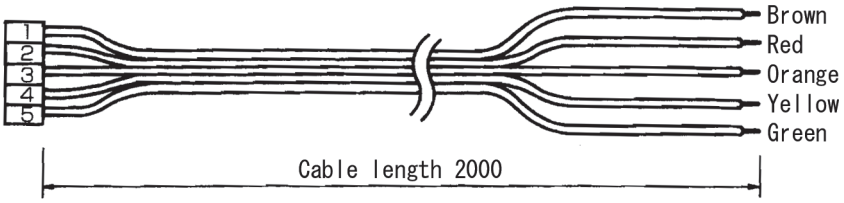
(Except PEA-RP400/500GAQ)

Specifications

Function	Connecting cable to output status signal of the air conditioner, and ON/OFF by external (pulse) signal.
Input signal	Pulse signal (no voltage instantaneous ON contact) Pulse duration 200m/s or more.
Connector	5P (connector to CN51 or CN52 on indoor unit control board)
Cable type	5-wire vinyl cable, for extension: sheathed vinyl cord or cable (0.5 to 1.25 mm²)
Cable length	2 m (max. 10 m when extended locally)
Output capacity)	DC12V 75 mA (Max 0.9W)

Dimensions

Unit : mm



OPTIONAL PARTS

How to Use / How to Install

MULTIPLE REMOTE CONTROL DISPLAY

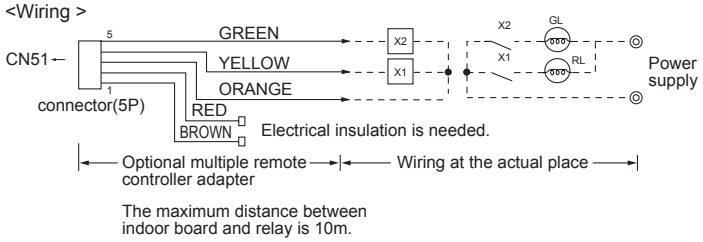
You can control several units with a multiple remote control display, by wiring an optional multiple remote controller adapter (PAC-SA88HA-E) with relays and lamps on the market.

How to wire

(1) Connect the multiple remote controller adapter to the connector CN51 on the indoor controller board.

(2) Wire three of the five wires from the multiple remote controller adapter as shown in the figure below.

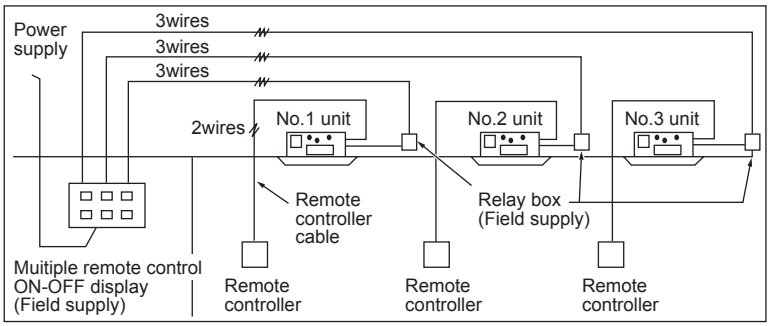
<Wiring >



[Notes on Signs]
X1:Relay (for operation lamp)
X2:Relay (for check lamp)
RL:Operation Lamp
GL:Check Lamp

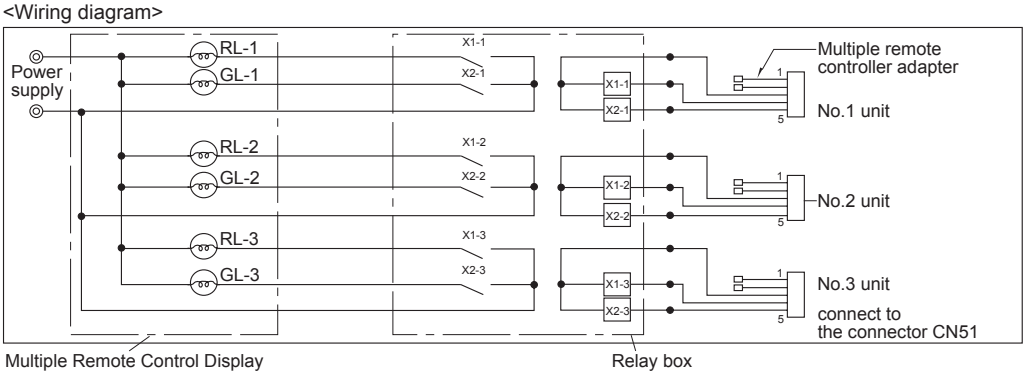
[Field supplied parts]
Relays:12V DC with rated coil power consumption below 0.9W.
Lamps:Matching to power supply voltage.

<System>



(Operation check)

<Wiring diagram>

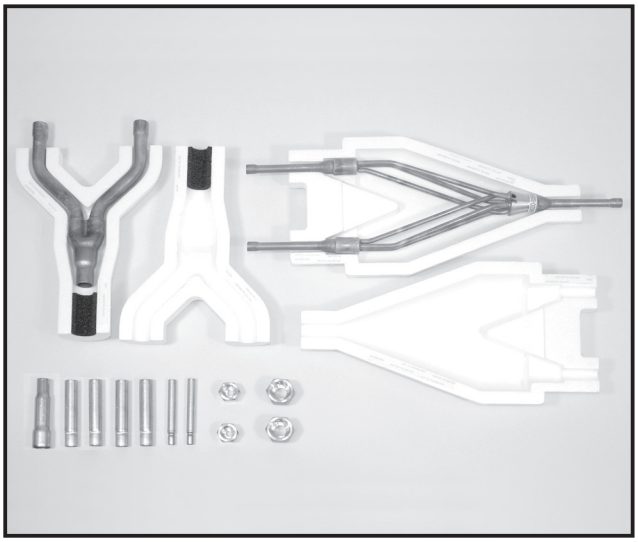


Distribution Pipe

MSDD-50TR-E

* model change from MSDD-50SR-E

Photo



Descriptions

Branch pipe for Multi-System Twin type Twin use. (50:50)

Applicable Models

- PUHZ-SHW112/140
- PUHZ-ZRP71/100/125/140
- PUHZ-P100/125/140

for Twin 50:50 use

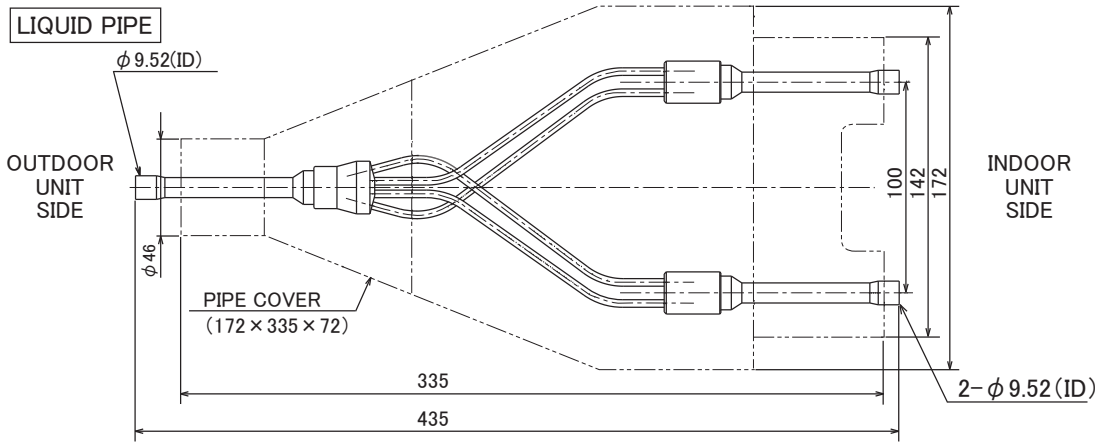
Specifications

Main body	Distribution ratio	Outdoor unit capacity is divided into two (50:50)
	Number of distribution pipes	1 each for liquid pipe and gas pipe
	Pipe material	Phosphate deoxidized copper C1220T-OL (JIS H3300)
Accessory	Pipe cover	Styrofoam molding (1 each for liquid pipe and gas pipe)
	Joint	7 joints (4 types)

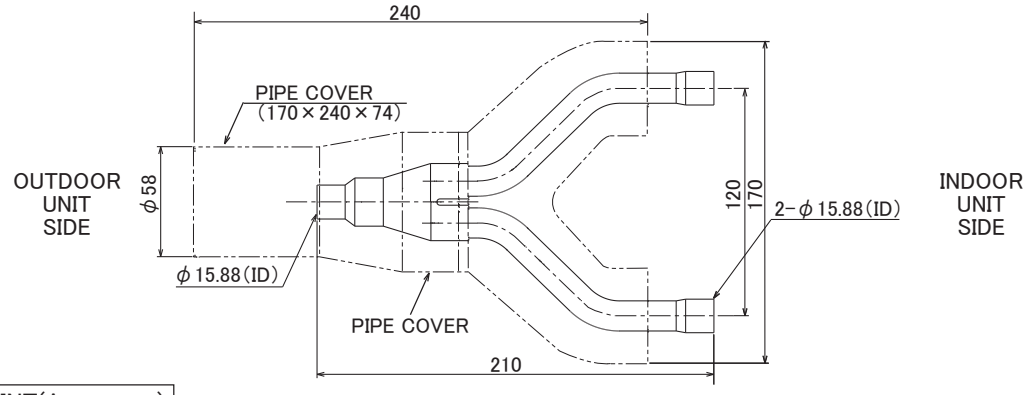
Dimensions

Unit: mm

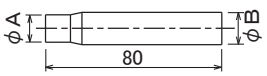
LIQUID PIPE



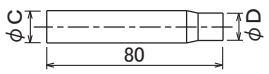
GAS PIPE



JOINT(Accessory)



ØA(ID)	ØB(OD)	Amount
6.35	9.52	2
9.52	15.88	2
12.7	15.88	2



ØC(ID)	ØD(OD)	Amount
19.05	15.88	1

OPTIONAL PARTS

How to Use / How to Install

Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Twin Distributing Pipe

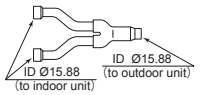
Make sure that you have all the following parts before installation.

① Instruction sheet	② Gas pipe	③ Liquid pipe	④ Pipe cover (for gas pipe)	⑤ Pipe cover (for liquid pipe)	⑥ Joint pipe	⑦Flare nut
This sheet 1 sheet	1pc	1pc	1pc	1pc	Ⓐ φ9.52→ φ6.35···· 2pcs Ⓑφ15.88→φ12.7····· 2pcs Ⓒφ15.88→φ19.05···· 1pc Ⓓφ15.88→φ9.52····· 2pcs	1/4F····2pcs 1/2F····2pcs For R410A indoor unit.

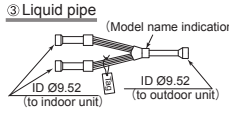
● See the following for the specifications of gas pipe ② ,and liquid pipe ③ ,

■ MSDD-50TR

② Gas pipe



③ Liquid pipe



※ Procure the following at local site in addition to the above
- Tape for heat insulator sealing
- Extended pipe for refrigerant pipe

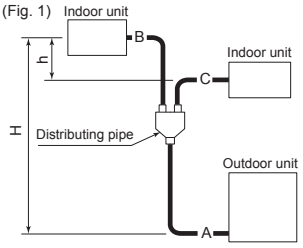
Pipe size and limit to refrigerant pipe

■For R410A (Table 1-2)

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	Number of bends
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
71(3Hp)	Ø15.88 (5/8)	35, 50 Ø9.52(3/8) Ø12.7(1/2) 60~71 Ø15.88(5/8)	Ø9.52 (3/8)	35, 50 Ø6.35(1/4) 60~71 Ø9.52(3/8)	—	50m or less	| B−C | = 8m or less	H = 30m or less	h = 1m or less	15 or less
100~140 (4~6Hp)						75m or less				

Note 1: Limit the number of bends for refrigerant pipes to 8 in each of the 〈A+B〉 and 〈A+C〉 ranges.
※ See the installation manual provided with the main unit for details on chargeless pipe length and refrigerant additional charge amount.

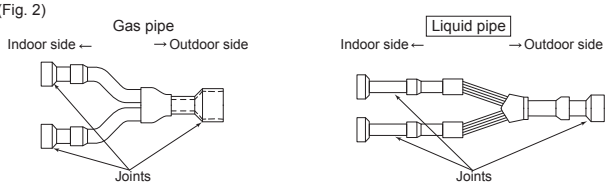
(Fig. 1)



Pipe connections

Combination pattern of indoor and outdoor units and joints to be used:

(Fig. 2)



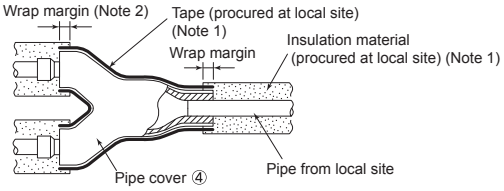
1. Perform work, taking care with the followings:
   - Be sure to check the combination pattern of indoor and outdoor units and joints to be used (Table 2).
   - Be sure to observe the limits to refrigerant pipe length and number of bends (Table 1).
   - Insert the refrigerant pipe (procured at local site) and joint ⑥ into the expanded pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-oxidization soldering.
   - There is no restriction on the orientation of distributing pipe (this product)during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - Remove the tag of liquid pipe ③ after checking it.
2. Pipe connections
   - The provided joints ⑥ will be necessary depending on the capability of model used: See (Table 2), and connect the joints as shown in (Fig. 2).
   - Do not bend or widen the distributing pipe (liquid pipe).

■For R410A (Table 2-2)

Outdoor unit	Indoor unit	Joint to be used
71(3Hp)	35+35 (1.6+1.6)	ⒷOuter Ø15.88−inner Ø12.7 [indoor gas pipe side], ⒶOuter Ø9.52−inner Ø6.35 [indoor liquid pipe side]
		ⒹOuter Ø15.88−inner Ø9.52 [indoor gas pipe side], ⒶOuter Ø9.52−inner Ø6.35 [indoor liquid pipe side]
100(4Hp)	50+50 (2+2)	ⒷOuter Ø15.88−inner Ø12.7 [indoor gas pipe side], ⒶOuter Ø9.52−inner Ø6.35 [indoor liquid pipe side]
125(5Hp)	60+60 (2.5+2.5)	No joint is necessary.
140(6Hp)	71+71 (3+3)	

※ Installation positions in brackets ( ).

Heat insulation work



Notes:
1. Cover the entire refrigerant pipe (procured at local site) with heat insulation material. When using generally available heat insulation material, heat-resistant insulation material (at least 12 mm thick).
2. Pipe covers ④ and ⑤ will shrink slightly at high temperatures: Provide wrap margins with insulation material.

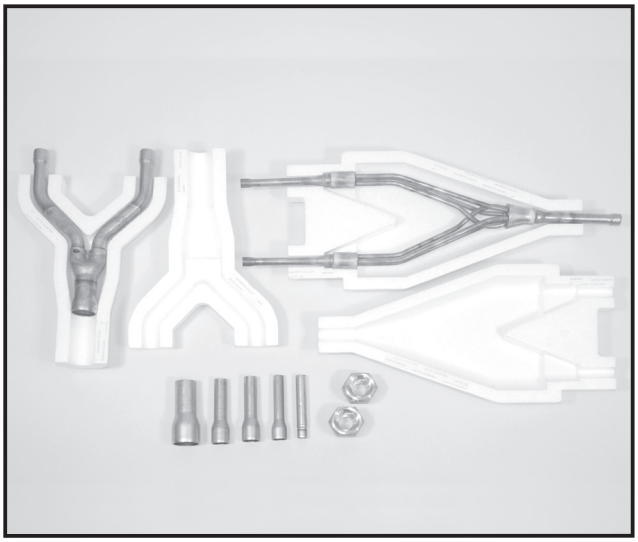
- Fit gas pipe ② into pipe covers ④, and then seal the mated portion of pipe covers ④ using heat insulation seal tape (procured at local site).
- Process liquid pipe ③ in the same way.

Please install contents other than this description on the main part of a product with an attached installation description, and use them as it.

Distribution Pipe

MSDD-50WR-E

Photo



Descriptions

Branch pipe for Multi-System Twin type Twin use. (50:50)

Applicable Models

- PUHZ-ZRP200/250
- PUHZ-P200/250

for Twin 50:50 use

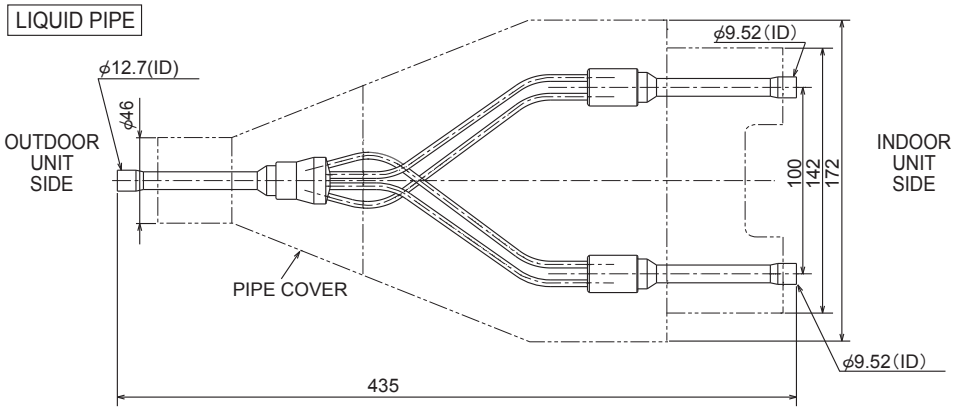
Specifications

Main body	Distribution ratio	Outdoor unit capacity is divided into two (50:50)
	Number of distribution pipes	1 each for liquid pipe and gas pipe
	Pipe material	Phosphate deoxidized copper C1220T-OL (JIS H3300)
Accessory	Pipe cover	Styrofoam molding (for liquid pipe and gas pipe)
	Joint	5 joints (4 types)

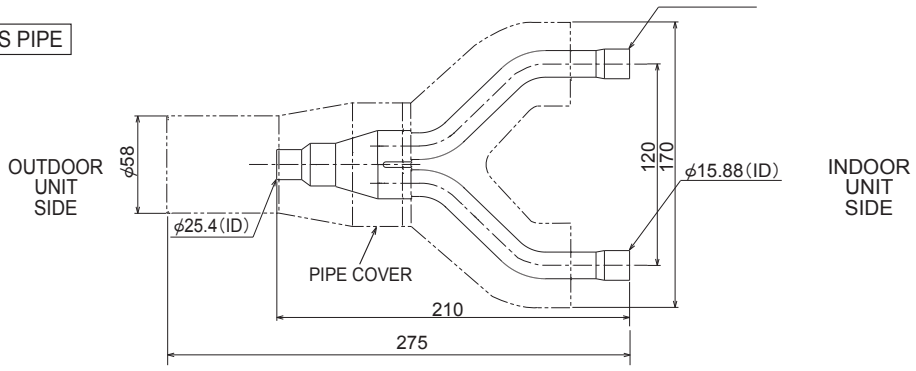
Dimensions

Unit: mm

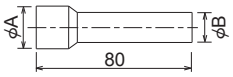
LIQUID PIPE



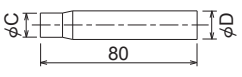
GAS PIPE



JOINT(Accessory)



ØA(ID)	ØB(OD)	Amount
28.6	25.4	1
15.88	12.7	1
19.05	15.88	2



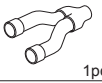
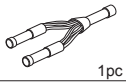
ØC(ID)	ØD(OD)	Amount
9.52	12.7	1

OPTIONAL PARTS

How to Use / How to Install

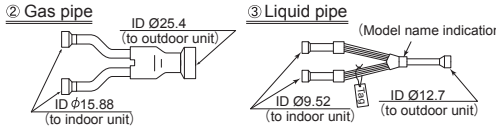
Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Twin Distributing Pipe

Make sure that you have all the following parts in packing box before installation.

① Instruction sheet	② Gas pipe	③ Liquid pipe	④ Pipe cover (for gas pipe)	⑤ Pipe cover (for liquid pipe)	⑥ Joint pipe	⑦Flare nut
 This sheet 1 sheet	 1pc	 1pc	 1pc	 1pc	 Ø12.7→Ø 9.52 ····· 1pc Ø12.7→Ø 15.88 ····· 1pc Ø15.88→Ø19.05 ····· 2pcs Ø25.4→Ø28.6 ····· 1pc	 5/8F····2pcs For R410A indoor unit.

● See the following for the specifications of gas pipe ② ,and liquid pipe ③ ,

■MSDD-50WR



※ Procure the following at local site in addition to the above
- Tape for heat insulator seal
- Extended pipe for refrigerant pipe

Pipe size and limit to refrigerant pipe

■For R407C fixed speed models (Table 1-1)

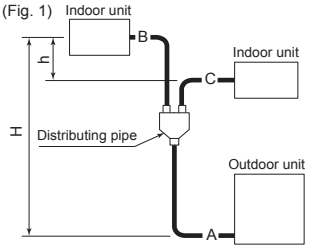
Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
200(8Hp)	ϕ25.4 (1)	Ø19.05 (3/4)	Ø12.7 (1/2)	Ø9.52 (3/8)	A + B = A + C = 50m or less	70m or less	| B−C | = 8m or less	H = 40m or less	h = 1m or less	15 or less
250(10Hp)	ϕ28.6 (1-1/8)									

■For R410A Power Inverter models (Table 1-2)

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
200(8Hp)	Ø25.4 (1)	Ø15.88(5/8)	Ø9.52 (3/8)	Ø9.52(3/8)	A + B = A + C = 80m or less	100 m or less (ZRP200/250) 70 m or less (P200/250)	| B−C | = 8m or less	H = 30m or less	h = 1m or less	15 or less
250(10Hp)	Ø25.4 (1) Ø28.6 (1-1/8)		Ø12.7 (1/2)							

Note 1: Limit the number of bends for refrigerant pipes to 8 in each of the 〈A+B〉 and 〈A+C〉 ranges.
※See the installation manual provided with the main unit for details on chargeless pipe length and refrigerant additional charge amount.

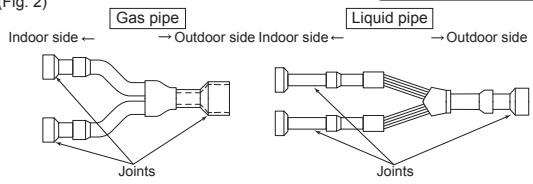
(Fig. 1)



Pipe connections

Combination pattern of indoor and outdoor units and joints to be used:

(Fig. 2)



1. Perform work, taking care with the followings:
   - Be sure to check the combination pattern of indoor and outdoor units and joints to be used (Table 2).
   - Be sure to observe the limits to refrigerant pipe length and number of bends (Table 1).
   - Insert the refrigerant pipe (procured at local site) and joint ⑥ into the expanded pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-oxidization soldering.
   - There is no restriction on the orientation of distributing pipe (this product)during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - Remove the tag of liquid pipe ③ after checking it.
2. Pipe connections
   - The provided joints ⑥ will be necessary depending on the capability of model used: See (Table 2), and connect the joints as shown in (Fig. 2).
   - Do not bend or widen the distributing pipe (liquid pipe).

■For R407C fixed speed (Table 2-1)

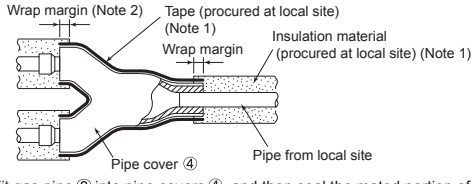
Outdoor unit	Indoor unit	Joint to be used
200(8Hp)	100+100 (4+4)	Outer Ø15.88−inner Ø19.05 [indoor gas pipe side]
250(10Hp)	125+125 (5+5)	Outer Ø25.4−inner Ø28.6 [outdoor gas pipe side]

※Installation positions in brackets ( ).

■For R410A Power Inverter (Table 2-2)

Outdoor unit	Indoor unit	Joint to be used
200(8Hp)	100+100 (4+4)	Outer Ø12.7−inner Ø9.52 [outdoor liquid pipe side]
250(10Hp)	125+125 (5+5)	HA:Outer Ø25.4−inner Ø28.6 [outdoor gas pipe side] HA2,KA:No joint necessary

Heat insulation work



Notes:
1. Cover the entire refrigerant pipe (procured at local site) with heat insulation material. When using generally available heat insulation material, heat-resistant
2. insulation material (at least 12 mm thick).
   Pipe covers ④ and ⑤ will shrink slightly at high temperatures: Provide wrap margins with insulation material.

- Fit gas pipe ② into pipe covers ④, and then seal the mated portion of pipe covers ④ using heat insulation seal tape (procured at local site).
- Process liquid pipe ③ in the same way.

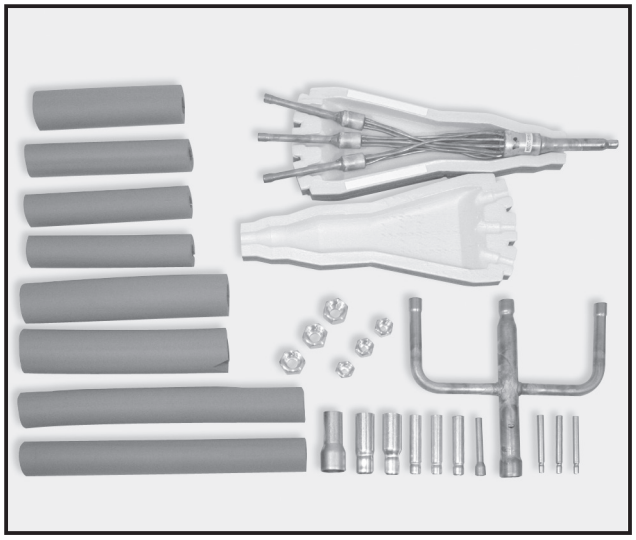
Please install contents other than this description on the main part of a product with an attached installation description, and use them as it.

OPTIONAL PARTS

Distribution Pipe

MSDT-111R-E

Photo



Descriptions

3-branch pipe for Multi-System Triple use. (33:33:33)

Applicable Models

- PUHZ-ZRP140/200/250
- PUHZ-P140/200/250

  for 33:33:33 Triple use

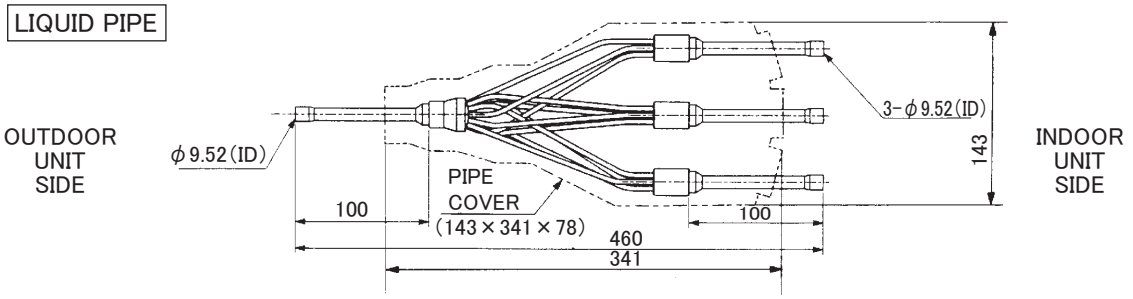
Specifications

Main body	Distribution ratio	Outdoor unit capacity is divided into three (33:33:33)
	Number of distribution pipes	1 each for liquid pipe and gas pipe
	Pipe material	Phosphate deoxidized copper C1220T-OL (JIS H3300)
Accessory	Pipe cover	Polyethylene foam molding (for liquid pipe) EPT sponge rubber type (for gas pipe)
	Joint	10 joints (6 types)

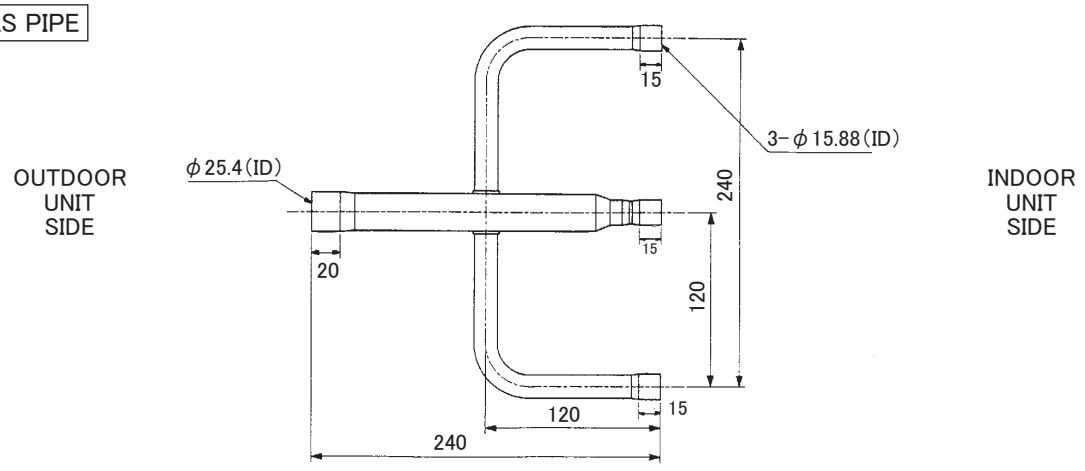
Dimensions

Unit: mm

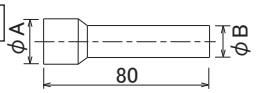
LIQUID PIPE



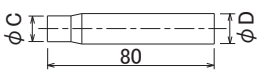
GAS PIPE



JOINT(Accessary)



ØA(ID)	ØB(OD)	Amount
12.7	9.52	1
28.6	25.4	1



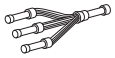
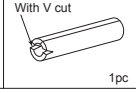
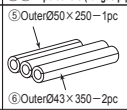
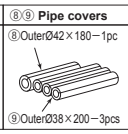
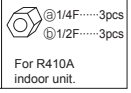
ØC(ID)	ØD(OD)	Amount
12.7	15.88	3
19.05	25.4	1
6.35	9.52	3
15.88	25.4	1

OPTIONAL PARTS

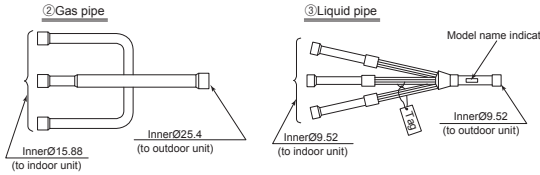
How to Use / How to Install

Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Triple Distributing Pipe exclusively used with Free Compo Multi-Units

Make sure that you have all the following parts in packing box before beginning installation:

① Instruction sheet	② Gas pipe	③ Liquid pipe	④ Pipe cover (for gas pipe)	⑤⑥ Pipe covers (for gas pipe)	⑦ Pipe cover (for liquid pipe)	⑧⑨ Pipe covers	⑩ Bands	⑪ Joint	⑫ Flare nut
									
This sheet 1 sheet	1pc	1pc	1pc		2pcs		8pcs	See Table 1.	For R410A indoor unit.

●See the following for the specifications of gas pipe ② and liquid pipe ③ :



※Procure the following at local site in addition to the above:
・Tape for heat insulator seal
・Extended pipe for refrigerant pipe

Joint specifications and provided numbers 〈Table 1〉

Sizes of joint pipe ends (mm)	Numbers provided
Ⓐ OuterØ9.52−InnerØ6.35	3
Ⓑ OuterØ9.52−InnerØ12.7	1
Ⓒ OuterØ15.88−InnerØ12.7	3
Ⓓ OuterØ25.4−InnerØ19.05	1
Ⓔ OuterØ25.4−InnerØ15.88	1
Ⓕ OuterØ25.4−InnerØ28.6	1

Pipe size and limit to refrigerant pipe

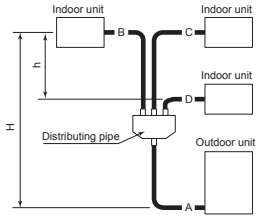
■**For R407C fixed speed models** 〈Table 2-1〉

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C+D=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
140 (6Hp)	Ø19.05 〈3/4〉	Ø15.88 〈5/8〉	Ø9.52 〈3/8〉	Ø9.52 〈3/8〉	—	50m or less	| B−C | = | B−D | = | C−D | = 8m or less	H = 40m or less	h = 1m or less	15 or less
200 (8Hp)	Ø25.4 〈1〉		Ø12.7 〈1/2〉		A + B = A + C = A + D = 50m or less	70m or less				
250 (10Hp)	Ø28.6 〈1-1/8〉									

■**For R410A Power Inverter models** 〈Table 2-2〉

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C+D=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
140 (6Hp)	Ø15.88 〈5/8〉	Ø12.7 〈1/2〉	Ø9.52 〈3/8〉	Ø6.35 〈1/4〉	—	75m or less	| B−C | = 8m or less	H = 30m or less	h = 1m or less	15 or less
200 (8Hp)	Ø25.4 〈1〉	Ø15.88 〈5/8〉		Ø9.52 〈3/8〉	A + B = A + C = A + D = 100m or less (ZRP200/250) 70m or less (P200/250)	100m or less (ZRP200/250) 70m or less (P200/250)		H = 30m or less		
250 (10Hp)	Φ25.4 〈1〉 Φ28.6 〈1-1/8〉		Ø12.7 〈1/2〉							

〈Fig. 1〉



Note 1: Limit the number of bends for refrigerant pipes to 8 in each of the 〈A+B〉, 〈A+C〉 and 〈A+D〉 ranges.
※See the installation manual provided with the main unit for details on charge-less pipe length and refrigerant additional charge amount.

Pipe connections

1. Perform work, taking care with the following:
   ・Be sure to check the combination pattern of indoor and outdoor units, joints to be used 〈Table 3〉, pipe size 〈Table 1〉 and joint used ⑪.
   ・Be sure to observe the limits to refrigerant pipe length and number of bends 〈Table 2〉.
   ・Insert the refrigerant pipe (procured at local site) and joint ⑪ into the expanded pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-oxidization soldering.
   ・There is no restriction on the orientation of distributing pipe (this product)during installation.
   ・Take care that no foreign object, such as dust, enters during pipe connecting work.
   ・Remove the tag of liquid pipe ③ after checking it.
2. Pipe connections
   ・The provided joints ⑪ will be necessary depending on the capability of model used: See 〈Table 3〉, and connect the refrigerant piping.
   ・Do not bend or widen the distributing pipe (liquid pipe).

Combination pattern of indoor and outdoor units and joints to be used:

■For R407C fixed speed 〈Table 3-1〉

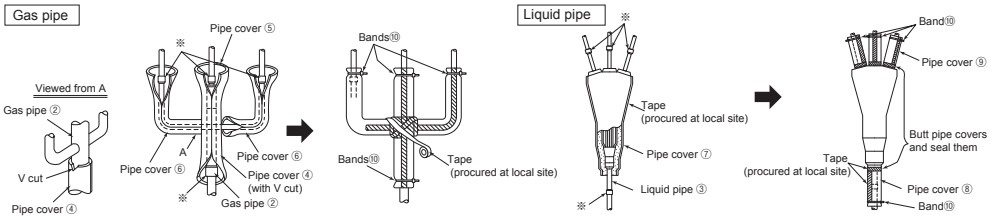
Outdoor unit	Indoor unit	Joint to be used
140 (6Hp)	50+50+50 (2+2+2)	Ⓓ OuterØ25.4−innerØ19.05〔outdoor gas pipe side〕×1,Ⓒ outerØ15.88−innerØ12.7×3〔indoor gas pipe side〕
200 (8Hp)	60+60+60 (2.5+2.5+2.5)	Ⓑ OuterØ9.52−innerØ12.7〔indoor gas pipe side〕×3
250 (10Hp)	71+71+71 (3+3+3)	Ⓕ OuterØ25.4−innerØ28.6〔outdoor gas pipe side〕×1

■For R410A Power Inverter 〈Table 3-2〉

Outdoor unit	Indoor unit	Joint to be used
140 (6Hp)	50+50+50 (2+2+2)	Ⓔ OuterØ25.4−innerØ15.88〔outdoor gas pipe side〕×1,Ⓒ outerØ15.88−innerØ12.7〔indoor gas pipe side〕×3,Ⓐ outerØ9.52−innerØ6.35〔indoor gas pipe side〕×3,
200 (8Hp)	60+60+60 (2.5+2.5+2.5)	No Joint is necessary
250 (10Hp)	71+71+71 (3+3+3)	Ⓑ OuterØ9.52−innerØ12.7〔outdoor liquid pipe side〕×1, Ⓕ outerØ25.4−innerØ28.6〔outdoor gas pipe side〕×1

※Installation positions in brackets〔 〕.

Heat insulation work



(1) Wind pipe covers ④, ⑤ and ⑥ round gas pipe ② so that there is no gap. Securely fit the V-cut portions of pipe cover ④ into the roots of pipe on both sides to install the pipe cover.

(2) Completely seal the openings of pipe covers ④, ⑤ and ⑥ using heat insulation seal tape (procured at local site). Wind seal tape round the pipe crossing portion in a crossed way so that there is no gap.

(3) Use band ⑩ to tighten the ends of each pipe cover.

(1) Fit liquid pipe ③ into 2 pipe covers ⑦, and then seal the mated portion of pipe covers ⑦ using heat insulation seal tape (procured at local site).

(2) Fit pipe covers ⑧ and ⑨ onto liquid pipe ③, and then securely seal the mated portion of pipe covers ⑦ using heat insulation seal tape (procured at local site).

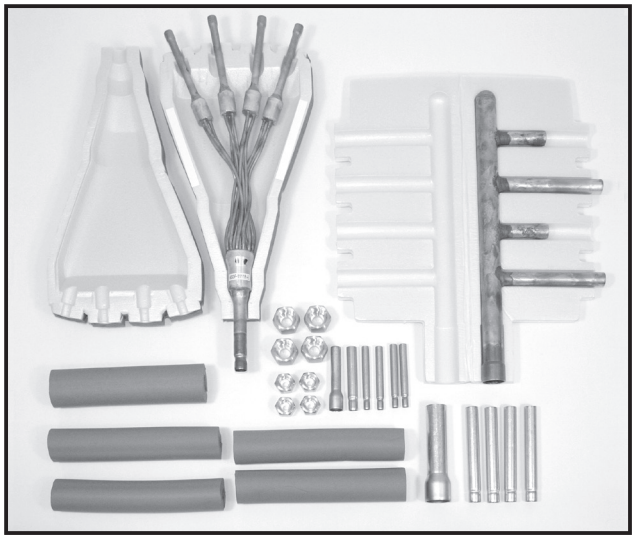
(3) Use band ⑩ to tighten the ends of each pipe cover.

Notes:
1. Cut off any surplus pipe cover to make appropriate length.
2. Use pipe covers to completely cover the connection portions of refrigerant pipe (procured at local site), gas pipe ② and liquid pipe ③.
3. Cover the entire refrigerant pipe (procured at local site) with heat insulation material. When using generally available heat insulation material, make sure it is heat-resistant insulation material (at least 12 mm thick).

Please install contents other than this description on the main part of a product with an attached installation description, and use them as it.

OPTIONAL PARTS

Photo



Descriptions

4-branch pipe for Multi-System Quadruple use. (25:25:25:25)

Applicable Models

- PUHZ-ZRP200/250
- PUHZ-P200/250

for 25:25:25:25 Quadruple use

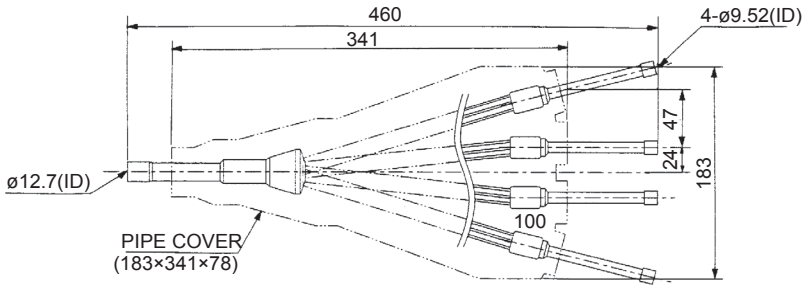
Specifications

Main body	Distribution ratio	Outdoor unit capacity is divided into four (25:25:25:25)
	Number of distribution pipes	1 each for liquid pipe and gas pipe
	Pipe material	Phosphate deoxidized copper C1220T-OL (JIS H3300)
Accessory	Pipe cover	Polyethylene foam molding (for liquid pipe) EPT sponge rubber type (for gas pipe)
	Joint	11 joints (5 types)
	Band	7 bands

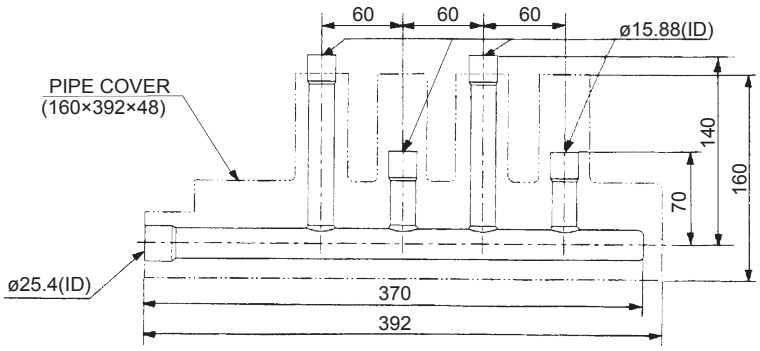
Dimensions

Unit: mm

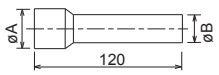
LIQUID PIPE



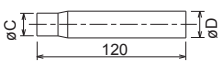
GAS PIPE



JOINT(Accessory)



ØA(ID)	ØB(OD)	Amount
28.6	25.4	1
15.88	12.7	1



ØC(ID)	ØD(OD)	Amount
12.7	15.88	4
6.35	9.52	4
9.52	12.7	1

OPTIONAL PARTS

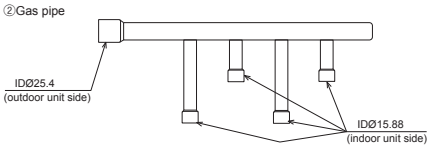
How to Use / How to Install

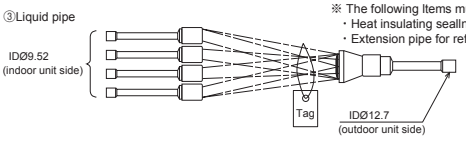
Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Quadruple Distributing Pipe exclusively used with Free Compo Multi-Units

Make sure that you have all the following parts in packing box before beginning installation:

① Installation manual	② Gas pipe	③ Liquid pipe	④ Pipe cover (gas pipe)	⑤ Pipe covers (liquid pipe)	⑥⑦ Pipe cover	⑧ Band	⑨ Joint	⑩ Flare nut
This sheet 1 sheet	1pc	1pc	1pc	2pcs	⑥OD.Ø42×180L－1pc ⑦Ø38×200L－4pcs	7pcs	Ø9.52→Ø6.35····· 4pcs Ø12.7→Ø9.52····· 1pcs Ø12.7→Ø15.88···· 1pcs Ø15.88→Ø12.7···· 4pcs Ø25.4→Ø28.6····· 1pcs	1/4F·····4pcs 1/2F·····4pcs For R410A indoor unit.

● **the gas pipe ② and liquid pipe ③ are specified as shown below.**





※ The following Items must be obtained locally in addition to the packed parts.
- Heat insulating sealing tape.
- Extension pipe for refrigerant pipe.

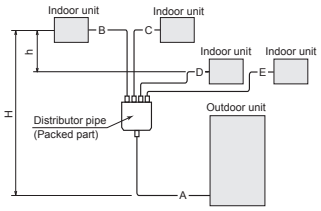
Pipe size and refrigerant pipe limits.

■**For R407C fixed speed models** 〈**Table 1-1**〉

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C+D=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
200 (8Hp)	Ø25.4 〈1〉	Ø15.88 〈5/8〉	Ø12.7 〈1/2〉	Ø9.52 〈3/8〉	A + B = A + C = A + D = A + E = 50m or less	70m or less	|B－C| = |B－D| = |B－E| = |C－D| = |C－E| = |D－E| = 8m or less	H = 40m or less	h = 1m or less	15 or less
250 (10Hp)	Ø28.6 〈1-1/8〉									

■**For R410A Power Inverter models** 〈**Table 1-2**〉

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C+D=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
200 (8Hp)	Ø25.4 〈1〉	Ø12.7 〈1/2〉	Ø9.52 〈3/8〉	Ø6.35 〈1/4〉	A + B = A + C = A + D = A + E = 100m or less (ZRP200/250) 70m or less (P200/250)	100m or less (ZRP200/250) 70m or less (P200/250)	|B－C| = |B－D| = |B－E| = |C－D| = |C－E| = |D－E| = 8m or less	H = 30m or less	h = 1m or less	15 or less
250 (10Hp)	Ø25.4 〈1〉 Ø28.6 〈1-1/8〉	Ø15.88 〈5/8〉	Ø12.7 〈1/2〉	Ø9.52 〈3/8〉						



Note 1: The number of bends in the refrigerant pipes is respectlvely 8 or less in the range of 〈A＋B〉 〈A＋C〉 〈A＋D〉 〈A＋E〉.

Pipe connections

1. Perform work, taking care with the following:
   - Be sure to check the combination pattern of indoor and outdoor units, joints to be used 〈Table 2〉, pipe size and joint used ⑨.
   - Be sure to observe the limits to refrigerant pipe length and number of bends 〈Table 1〉.
   - Insert the refrigerant pipe (procured at local site) and joint ⑨ into the expanded pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-oxidization soldering.
   - There is no restriction on the orientation of distributing pipe (this product)during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - Remove the tag of liquid pipe ③ after checking it.
2. Pipe connections
   - The provided joints ⑨ will be necessary depending on the capability of model used: See 〈Table 2〉, and connect the refrigerant piping.
   - Do not bend or widen the distributing pipe (liquid pipe).

Combination pattern of indoor and outdoor units and joints to be used:

■**For R407C fixed speed** 〈**Table 2-1**〉

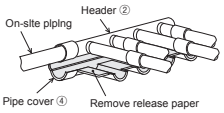
Outdoor unit	Indoor unit	Joint to be used
200 (8Hp)	50+50+50+50 (2+2+2+2)	No Joint is necessary
250 (10Hp)	60+60+60+60 (2.5+2.5+2.5+2.5)	OuterØ25.4－innerØ28.6〔outdoor gas pipe side〕×1

■**For R410A Power Inverter** 〈**Table 2-2**〉

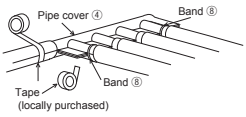
Outdoor unit	Indoor unit	Joint to be used
200 (8Hp)	50+50+50+50 (2+2+2+2)	OuterØ15.88－innerØ12.7〔indoor gas pipe side〕×4, OuterØ9.52－innerØ6.35〔indoor liquid pipe side〕×4, OuterØ12.7－innerØ9.52〔outdoor gas pipe side〕×1,
250 (10Hp)	60+60+60+60 (2.5+2.5+2.5+2.5)	OuterØ25.4－innerØ28.6〔outdoor gas pipe side〕×1

Heat insulation work

Gas pipe

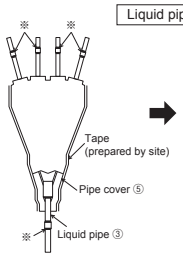


(1) After assembling header ② into pipe cover ④ remove the release paper from inside pipe cover ④ and wrap header ② with pipe cover ④.

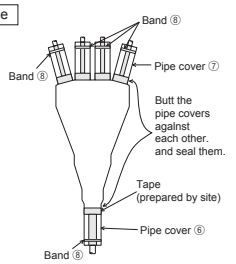


(2) Clamp both ends of the Indoor branch connection of pipe cover ④ with band ⑧ as shown above. Cut off the excess length of the band.
(3) Tightly seal the joints of the pipe cover with tape (locally purchased).(Incomplete sealing can result in dew condensation.)

Liquid pipe



(1) Install the liquid pipe ③ while aligning it with the pipe cover ⑤ (2 pcs).Seal the joint ares of the pipe cover ⑤ with hest Insulating sealing tape (obtalnlocally).



(1) As shown above, install the liquid pipe ③ on the pipe cover ⑧ and ⑦, and securely seal with heat Insulating seal- ing tape (obtain locally).
(3) Fasten the end of each pipe cover with band ⑧

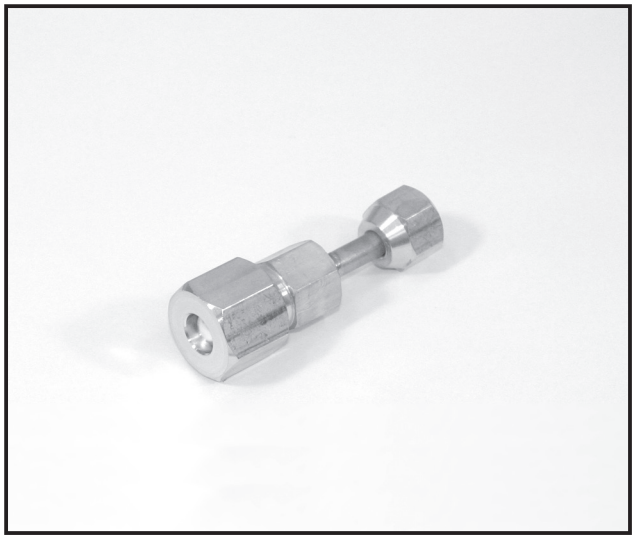
Notes:
1. Cut the excesslve part of each pipe cover
2. Securely cover the joint areas (※) of the refrlgerant pipe (obtained locally) to the gas pipes ② and llquid pipe ③ with the pipe covers.
3. Cover the entire refrigerant pipe (obtained locally) with heat insulating materal.if commercial heat insulating material is used, it must be 12mm or thicker.

Please install contents other than this description on the main part of a product with an attached installation description, and use them as it.

OPTIONAL PARTS

Joint Pipe Unit ϕ6.35 → Pipe ϕ9.52 PAC-SG72RJ-E

Photo



Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit ϕ6.35 → ϕ9.52)

Applicable Models

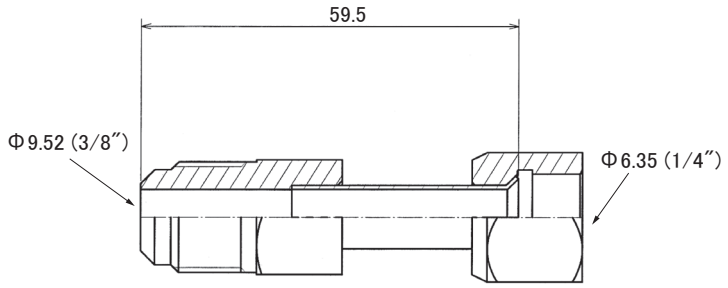
■ PUHZ-ZRP35/50KA

Specifications

Pipe diameter	Φ 6.35
Pipe material	C 1220T - OL

Dimensions

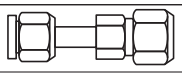
Unit: mm (inch)



How to Use / How to Install

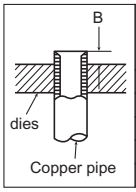
Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
PAC-SG72RJ-E (unit side: Φ6.35 diameter, onsite pipe side: Φ9.52 diameter)
PAC-SG73RJ-E (unit side: Φ9.52 diameter, onsite pipe side: Φ12.70 diameter)
PAC-SG74RJ-E (unit side: Φ12.70 diameter, onsite pipe side: Φ15.88 diameter)
PAC-SG75RJ-E (unit side: Φ15.88 diameter, onsite pipe side: Φ19.05 diameter)

Unit side  Onsite piping side

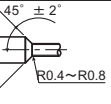
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※ When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

1) Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right.Use optional accessory flare nut at this time.
※ Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.
※ When pipe of 19.05 diameter is used, be sure to turn ON the SW8-1 on outdoor unit control board.

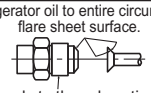


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
ϕ 6.35(1/4")	0~0.5	1.0~1.5
ϕ 9.52(3/8")	0~0.5	1.0~1.5
ϕ12.70(1/2")	0~0.5	1.0~1.5
ϕ15.88(5/8")	0~0.5	1.0~1.5
ϕ19.05(3/4")	0~0.5	1.0~1.5

※ When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
ϕ6.35	8.7~9.1	
ϕ9.52	12.8~13.2	
ϕ12.70	16.2~16.6	
ϕ15.88	19.3~19.7	
ϕ19.05	23.6~24.0	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or oil (locally procured) on flare surface.

Refrigerator oil application point
Apply refrigerator oil to entire circumference of flare sheet surface.

※ Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)

3) Securely tighten flare nut using torque wrench according to the table on the right.

〈Proper tightening torque using torque wrench〉

Outer diameter of copper pipe (mm)	Tightening torque N・m (kgf・cm)
ϕ6.35	14~18(140~180)
ϕ9.52	34~42(340~420)
ϕ12.70	49~61(490~610)
ϕ15.88	68~82(680~820)
ϕ19.05	100~120(1000~1200)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

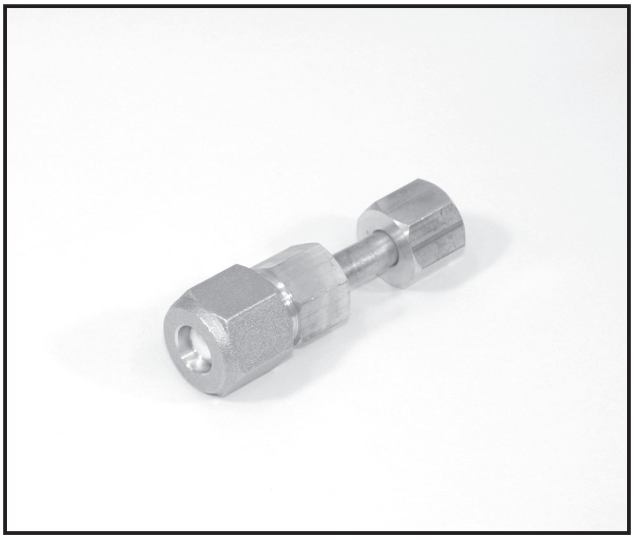
5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

OPTIONAL PARTS

Joint Pipe Unit ϕ9.52 → Pipe ϕ12.7 PAC-SG73RJ-E

Photo



Descriptions

A part to connect refrigerant pipes of the different diameter.
(Unit ϕ9.52 → ϕ12.7)

Applicable Models

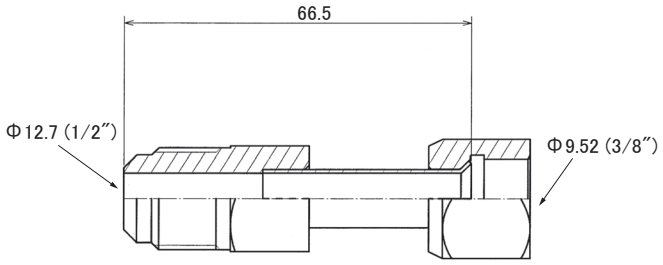
- SUZ-KA25/35VA5
- PUHZ-ZRP60/71VHA
- PUHZ-ZRP100/125/140VKA2
- PUHZ-ZRP100/125/140YKA2
- PUHZ-ZRP200YKA

Specifications

Pipe diameter	Φ 9.52
Pipe material	C 1220T - OL

Dimensions

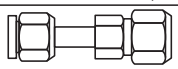
Unit: mm (inch)



How to Use / How to Install

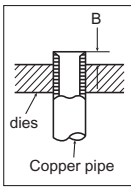
Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
PAC-SG72RJ-E (unit side: Φ6.35 diameter, onsite pipe side: Φ9.52 diameter)
PAC-SG73RJ-E (unit side: Φ9.52 diameter, onsite pipe side: Φ12.70 diameter)
PAC-SG74RJ-E (unit side: Φ12.70 diameter, onsite pipe side: Φ15.88 diameter)
PAC-SG75RJ-E (unit side: Φ15.88 diameter, onsite pipe side: Φ19.05 diameter)

Unit side  Onsite piping side

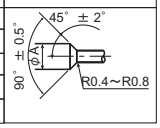
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

1) Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right.Use optional accessory flare nut at this time.
※Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.
※When pipe of 19.05 diameter is used, be sure to turn ON the SW8-1 on outdoor unit control board.

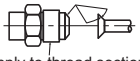


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
ϕ 6.35(1/4")	0~0.5	1.0~1.5
ϕ 9.52(3/8")	0~0.5	1.0~1.5
ϕ12.70(1/2")	0~0.5	1.0~1.5
ϕ15.88(5/8")	0~0.5	1.0~1.5
ϕ19.05(3/4")	0~0.5	1.0~1.5

※When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
ϕ6.35	8.7~9.1	
ϕ9.52	12.8~13.2	
ϕ12.70	16.2~16.6	
ϕ15.88	19.3~19.7	
ϕ19.05	23.6~24.0	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or oil (locally procured) on flare surface.

Refrigerator oil application point
Apply refrigerator oil to entire circumference of flare sheet surface.  ※ Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)

3) Securely tighten flare nut using torque wrench according to the table on the right.

〈Proper tightening torque using torque wrench〉

Outer diameter of copper pipe (mm)	Tightening torque N・m (kgf・cm)
ϕ6.35	14~18(140~180)
ϕ9.52	34~42(340~420)
ϕ12.70	49~61(490~610)
ϕ15.88	68~82(680~820)
ϕ19.05	100~120(1000~1200)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

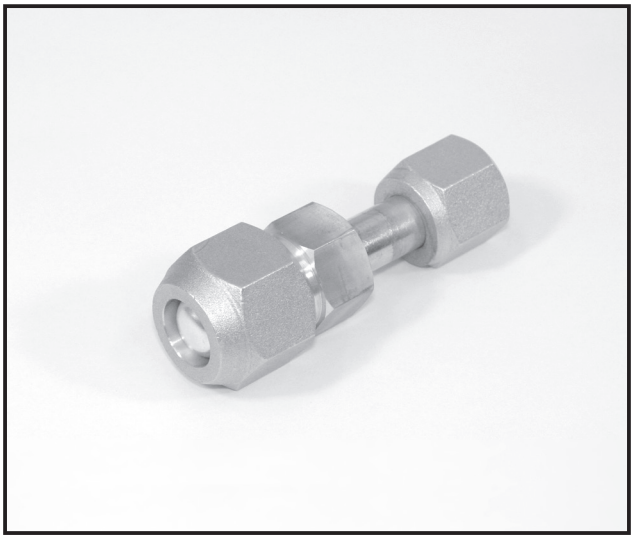
5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

OPTIONAL PARTS

Joint Pipe Unit ϕ15.88 → Pipe ϕ19.05 PAC-SG75RJ-E

Photo



Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit ϕ15.88 → ϕ19.05)

Applicable Models

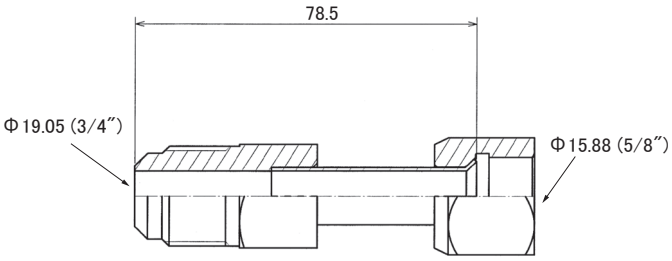
- PUHZ-ZRP60/71VHA
- PUHZ-ZRP100/125/140VKA2
- PUHZ-ZRP100/125/140YKA2

Specifications

Pipe diameter	Φ 15.88
Pipe material	C 1220T - OL

Dimensions

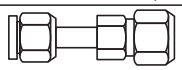
Unit: mm (inch)



How to Use / How to Install

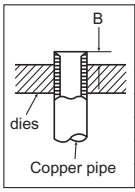
Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
PAC-SG72RJ-E (unit side: Φ6.35 diameter, onsite pipe side: Φ9.52 diameter)
PAC-SG73RJ-E (unit side: Φ9.52 diameter, onsite pipe side: Φ12.70 diameter)
PAC-SG74RJ-E (unit side: Φ12.70 diameter, onsite pipe side: Φ15.88 diameter)
PAC-SG75RJ-E (unit side: Φ15.88 diameter, onsite pipe side: Φ19.05 diameter)

Unit side  Onsite piping side

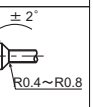
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※ When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

1) Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right.Use optional accessory flare nut at this time.
※ Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.
※ When pipe of 19.05 diameter is used, be sure to turn ON the SW8-1 on outdoor unit control board.

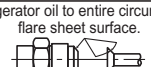


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
ϕ 6.35(1/4″)	0~0.5	1.0~1.5
ϕ 9.52(3/8″)	0~0.5	1.0~1.5
ϕ12.70(1/2″)	0~0.5	1.0~1.5
ϕ15.88(5/8″)	0~0.5	1.0~1.5
ϕ19.05(3/4″)	0~0.5	1.0~1.5

※When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
ϕ6.35	8.7~9.1	
ϕ9.52	12.8~13.2	
ϕ12.70	16.2~16.6	
ϕ15.88	19.3~19.7	
ϕ19.05	23.6~24.0	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or oil (locally procured) on flare surface.

Refrigerator oil application point
Apply refrigerator oil to entire circumference of flare sheet surface.  ※ Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)

3) Securely tighten flare nut using torque wrench according to the table on the right.

〈Proper tightening torque using torque wrench〉

Outer diameter of copper pipe (mm)	Tightening torque N・m (kgf・cm)
ϕ6.35	14~18(140~180)
ϕ9.52	34~42(340~420)
ϕ12.70	49~61(490~610)
ϕ15.88	68~82(680~820)
ϕ19.05	100~120(1000~1200)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

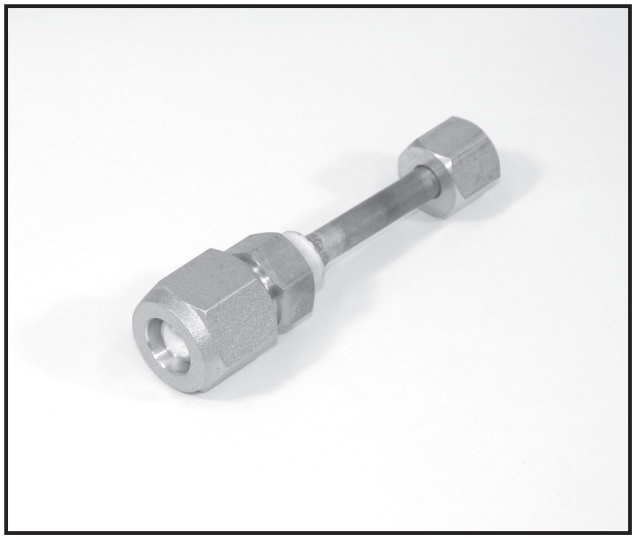
5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

OPTIONAL PARTS

Joint Pipe Unit ϕ9.52 → Pipe ϕ15.88 PAC-SG76RJ-E

Photo



Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit ϕ9.52 → ϕ15.88)

Applicable Models

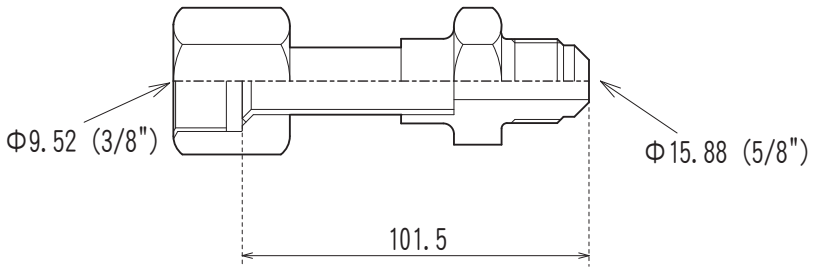
- MXZ-3E68VA
- MXZ-4E72VA
- MXZ-4E83VA
- MXZ-5E102VA
- MXZ-6D122VA
- MXZ-4E83VAHZ

Specifications

Pipe diameter	Φ 9.52
Pipe material	C 1220T - OL

Dimensions

Unit: mm (inch)



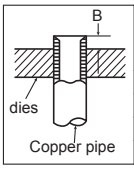
How to Use / How to Install

Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe PAC-SG76RJ-E (unit side:Ø9.52 diameter, onsite pipe side:Ø15.88 diameter) PAC-493PI (unit side:Ø6.32 diameter, onsite pipe side:Ø9.52 diameter) MAC-A454JP-E (unit side:Ø9.52 diameter, onsite pipe side:Ø12.7 diameter) MAC-A455JP-E (unit side:Ø12.7 diameter, onsite pipe side:Ø9.52 diameter) MAC-A456JP-E (unit side:Ø12.7 diameter, onsite pipe side:Ø15.88 diameter)
Unit side  Onsite piping side

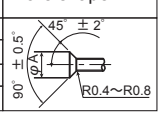
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※ When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

1)Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right.Use optional accessory flare nut at this time.
※ Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.

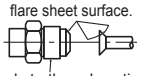


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
ø 6.35(1/4")	0～0.5	1.0～1.5
ø 9.52(3/8")	0～0.5	1.0～1.5
ø12.70(1/2")	0～0.5	1.0～1.5
ø15.88(5/8")	0～0.5	1.0～1.5

※When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
ø6.35	8.7～9.1	
ø9.52	12.8～13.2	
ø12.70	16.2～16.6	
ø15.88	19.3～19.7	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or oil (locally procured) on flare surface.

Refrigerator oil application point
Apply refrigerator oil to entire circumference of flare sheet surface.  ※ Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)

3) Securely tighten flare nut using torque wrench according to the table on the right.

〈Proper tightening torque using torque wrench〉

Outer diameter of copper pipe (mm)	Tightening torque N•m (kgf•cm)
ø6.35	14～18(140～180)
ø9.52	34～42(340～420)
ø12.70	49～61(490～610)
ø15.88	68～82(680～820)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

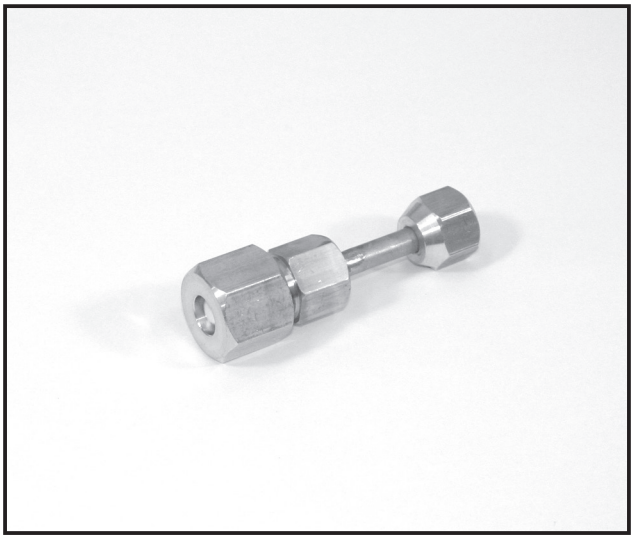
5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

OPTIONAL PARTS

Joint Pipe Unit ϕ6.35 → Pipe ϕ9.52 PAC-493PI

Photo



Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit ϕ6.35 → ϕ9.52)

Applicable Models

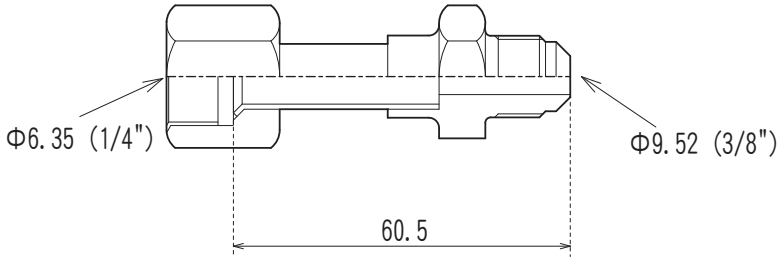
- MXZ-4E83VA
- MXZ-5E102VA
- MXZ-6D122VA
- MXZ-4E83VAHZ

Specifications

Pipe diameter	Φ 6.35
Pipe material	C 1220T - OL

Dimensions

Unit: mm (inch)



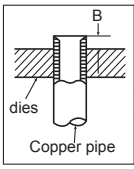
How to Use / How to Install

Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe PAC-SG76RJ-E (unit side:Ø9.52 diameter, onsite pipe side:Ø15.88 diameter) PAC-493PI (unit side:Ø6.32 diameter, onsite pipe side:Ø9.52 diameter) MAC-A454JP-E (unit side:Ø9.52 diameter, onsite pipe side:Ø12.7 diameter) MAC-A455JP-E (unit side:Ø12.7 diameter, onsite pipe side:Ø9.52 diameter) MAC-A456JP-E (unit side:Ø12.7 diameter, onsite pipe side:Ø15.88 diameter)
Unit side  Onsite piping side

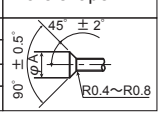
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※ When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

1)Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right.Use optional accessory flare nut at this time.
※ Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.

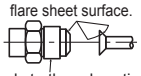


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
ø 6.35(1/4")	0~0.5	1.0~1.5
ø 9.52(3/8")	0~0.5	1.0~1.5
ø12.70(1/2")	0~0.5	1.0~1.5
ø15.88(5/8")	0~0.5	1.0~1.5

※ When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
ø6.35	8.7~9.1	
ø9.52	12.8~13.2	
ø12.70	16.2~16.6	
ø15.88	19.3~19.7	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or oil (locally procured) on flare surface.

Refrigerator oil application point
Apply refrigerator oil to entire circumference of flare sheet surface.  ※ Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)

3) Securely tighten flare nut using torque wrench according to the table on the right.

〈Proper tightening torque using torque wrench〉

Outer diameter of copper pipe (mm)	Tightening torque N•m (kgf•cm)
ø6.35	14~18(140~180)
ø9.52	34~42(340~420)
ø12.70	49~61(490~610)
ø15.88	68~82(680~820)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

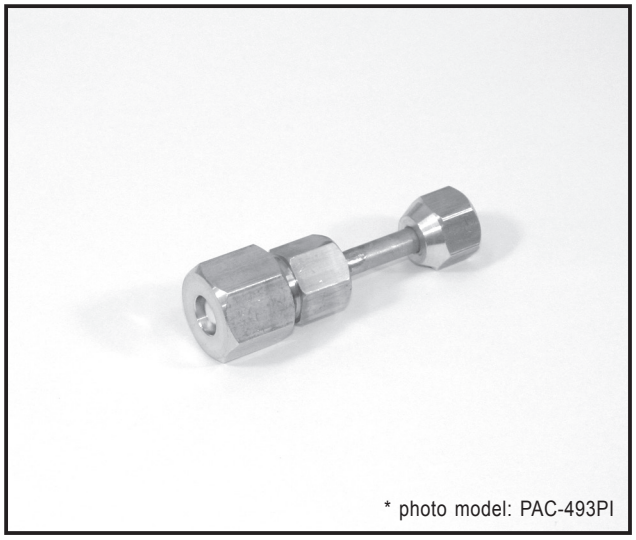
5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

OPTIONAL PARTS

Joint Pipe Unit ϕ9.52 → Pipe ϕ12.7 MAC-A454JP-E

Photo



* photo model: PAC-493PI

Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit ϕ9.52 → ϕ12.7)

Applicable Models

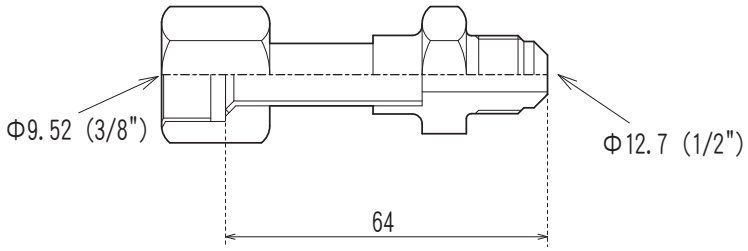
- MXZ-2D53VA2
- MXZ-2D53VAH2
- MXZ-3E54VA
- MXZ-3E68VA
- MXZ-4E72VA
- MXZ-4E83VA
- MXZ-5E102VA
- MXZ-6D122VA
- MXZ-2E53VAHZ
- MXZ-4E83VAHZ
- MXZ-3DM50VA

Specifications

Pipe diameter	Φ 9.52
Pipe material	C 1220T - OL

Dimensions

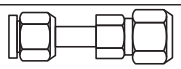
Unit: mm (inch)



How to Use / How to Install

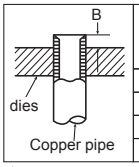
Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
- PAC-SG76RJ-E (unit side:Ø9.52 diameter, onsite pipe side:Ø15.88 diameter)
- PAC-493PI (unit side:Ø6.32 diameter, onsite pipe side:Ø9.52 diameter)
- MAC-A454JP-E (unit side:Ø9.52 diameter, onsite pipe side:Ø12.7 diameter)
- MAC-A455JP-E (unit side:Ø12.7 diameter, onsite pipe side:Ø9.52 diameter)
- MAC-A456JP-E (unit side:Ø12.7 diameter, onsite pipe side:Ø15.88 diameter)

Unit side  Onsite piping side

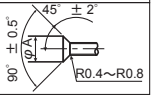
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

1)Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right.Use optional accessory flare nut at this time.
※Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.

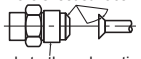


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
ø 6.35(1/4")	0～0.5	1.0～1.5
ø 9.52(3/8")	0～0.5	1.0～1.5
ø12.70(1/2")	0～0.5	1.0～1.5
ø15.88(5/8")	0～0.5	1.0～1.5

※When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
ø6.35	8.7～9.1	
ø9.52	12.8～13.2	
ø12.70	16.2～16.6	
ø15.88	19.3～19.7	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or oil (locally procured) on flare surface.

Refrigerator oil application point
Apply refrigerator oil to entire circumference of flare sheet surface.

※ Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)

3) Securely tighten flare nut using torque wrench according to the table on the right.

〈Proper tightening torque using torque wrench〉

Outer diameter of copper pipe (mm)	Tightening torque N•m (kgf•cm)
ø6.35	14～18(140～180)
ø9.52	34～42(340～420)
ø12.70	49～61(490～610)
ø15.88	68～82(680～820)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

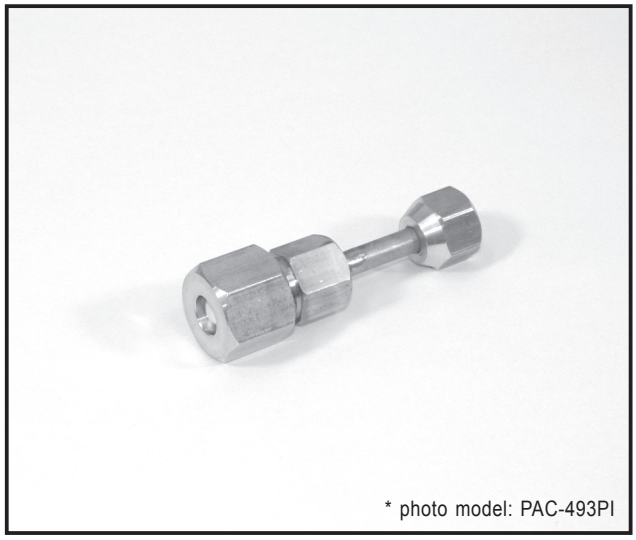
5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

OPTIONAL PARTS

Joint Pipe Unit ϕ12.7 → Pipe ϕ9.52 MAC-A455JP-E

Photo



* photo model: PAC-493PI

Descriptions

A part to connect the refrigerant pipes of the different diameter.
(Unit ϕ12.7 → ϕ9.52)

Applicable Models

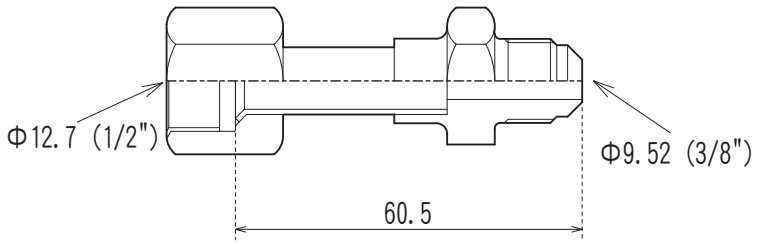
- MXZ-4E72VA
- MXZ-4E83VAHZ
- MXZ-4E83VA
- MXZ-5E102VA
- MXZ-6D122VA

Specifications

Pipe diameter	Φ 12.7
Pipe material	C 1220T - OL

Dimensions

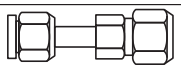
Unit: mm (inch)



How to Use / How to Install

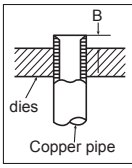
Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
PAC-SG76RJ-E (unit side:Ø9.52 diameter, onsite pipe side:Ø15.88 diameter)
PAC-493PI (unit side:Ø6.32 diameter, onsite pipe side:Ø9.52 diameter)
MAC-A454JP-E (unit side:Ø9.52 diameter, onsite pipe side:Ø12.7 diameter)
MAC-A455JP-E (unit side:Ø12.7 diameter, onsite pipe side:Ø9.52 diameter)
MAC-A456JP-E (unit side:Ø12.7 diameter, onsite pipe side:Ø15.88 diameter)

Unit side  Onsite piping side

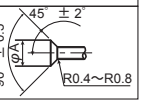
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

1)Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right.Use optional accessory flare nut at this time.
※Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.

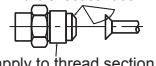


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
ø 6.35(1/4")	0～0.5	1.0～1.5
ø 9.52(3/8")	0～0.5	1.0～1.5
ø12.70(1/2")	0～0.5	1.0～1.5
ø15.88(5/8")	0～0.5	1.0～1.5

※When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
ø6.35	8.7～9.1	
ø9.52	12.8～13.2	
ø12.70	16.2～16.6	
ø15.88	19.3～19.7	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or oil (locally procured) on flare surface.

Refrigerator oil application point
Apply refrigerator oil to entire circumference of flare sheet surface.

※ Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)

3) Securely tighten flare nut using torque wrench according to the table on the right.

〈Proper tightening torque using torque wrench〉

Outer diameter of copper pipe (mm)	Tightening torque N•m (kgf•cm)
ø6.35	14～18(140～180)
ø9.52	34～42(340～420)
ø12.70	49～61(490～610)
ø15.88	68～82(680～820)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

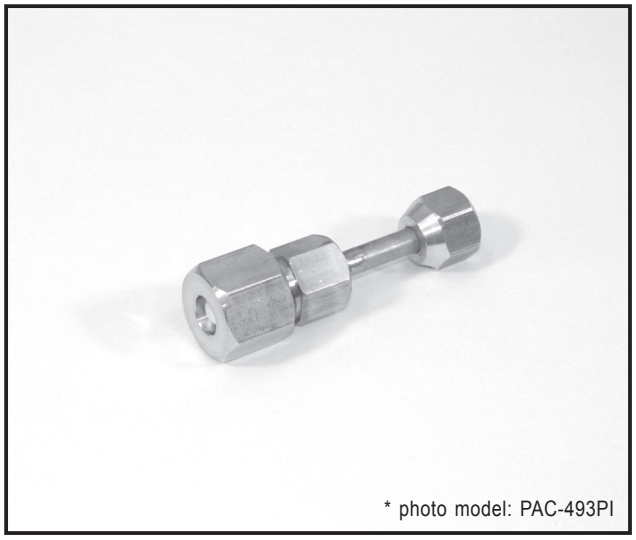
5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

OPTIONAL PARTS

Joint Pipe Unit φ12.7 → Pipe φ15.88 MAC-A456JP-E

Photo



* photo model: PAC-493PI

Descriptions

A part to connect refrigerant pipes of the different diameter.
(Unit φ12.7 → φ15.88)

Applicable Models

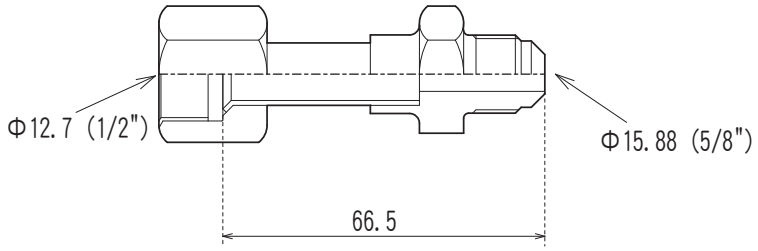
- MXZ-4E72VA
- MXZ-4E83VA
- MXZ-5E102VA
- MXZ-6D122VA
- MXZ-4E83VAHZ

Specifications

Pipe diameter	Φ 12.7
Pipe material	C 1220T - OL

Dimensions

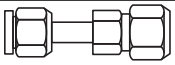
Unit: mm (inch)



How to Use / How to Install

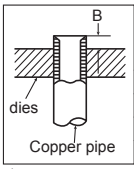
Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
PAC-SG76RJ-E (unit side:Ø9.52 diameter, onsite pipe side:Ø15.88 diameter)
PAC-493PI (unit side:Ø6.32 diameter, onsite pipe side:Ø9.52 diameter)
MAC-A454JP-E (unit side:Ø9.52 diameter, onsite pipe side:Ø12.7 diameter)
MAC-A455JP-E (unit side:Ø12.7 diameter, onsite pipe side:Ø9.52 diameter)
MAC-A456JP-E (unit side:Ø12.7 diameter, onsite pipe side:Ø15.88 diameter)

Unit side  Onsite piping side

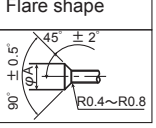
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

1)Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right.Use optional accessory flare nut at this time.
※Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.

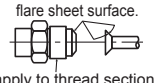


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
ø 6.35(1/4")	0～0.5	1.0～1.5
ø 9.52(3/8")	0～0.5	1.0～1.5
ø12.70(1/2")	0～0.5	1.0～1.5
ø15.88(5/8")	0～0.5	1.0～1.5

※When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
ø6.35	8.7～9.1	
ø9.52	12.8～13.2	
ø12.70	16.2～16.6	
ø15.88	19.3～19.7	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or oil (locally procured) on flare surface.

Refrigerator oil application point
Apply refrigerator oil to entire circumference of flare sheet surface.

※ Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)

3) Securely tighten flare nut using torque wrench according to the table on the right.

〈Proper tightening torque using torque wrench〉

Outer diameter of copper pipe (mm)	Tightening torque N•m (kgf•cm)
ø6.35	14～18(140～180)
ø9.52	34～42(340～420)
ø12.70	49～61(490～610)
ø15.88	68～82(680～820)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

OPTIONAL PARTS

Filter Dryer (for Liquid Pipe of ϕ6.35) PAC-SG81DR-E

Photo

Descriptions

Removes minute dirt particles in the refrigerant pipe, when replacing an air-conditioning unit. (for Liquid Pipe of ø6.35)

Applicable Models

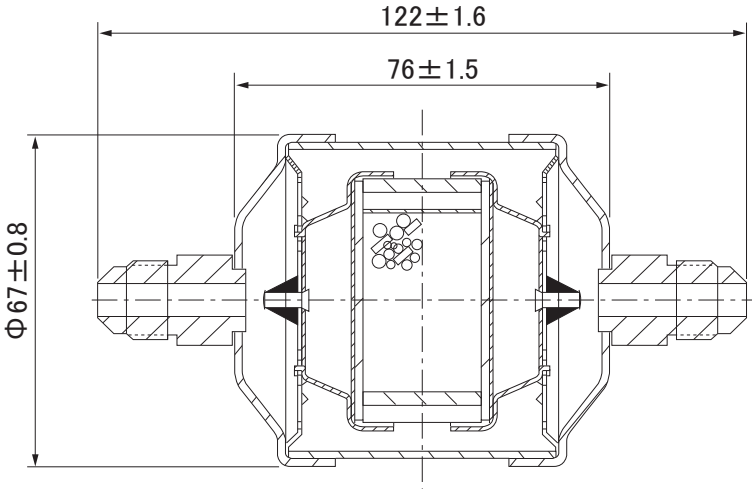
- PUHZ-ZRP35VKA
- PUHZ-ZRP50VKA

Specifications

Pipe size	Liquid side: Ø6.35 flare
Applicable refrigerant	R407C / R410A

Dimensions

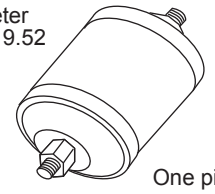
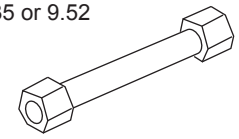
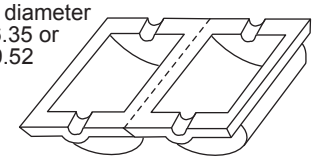
Unit: mm



OPTIONAL PARTS

How to Use / How to Install

Make sure that you have all the following parts.

①Filter dryer	②Connection pipe	③Heat insulator
PAC-SG81DR-E (for diameter of Ø6.35) PAC-SG82DR-E (for diameter of Ø9.52)	PAC-SG81DR-E (for diameter of Ø6.35) PAC-SG82DR-E (for diameter of Ø9.52)	PAC-SG81DR-E (for diameter of Ø6.35) PAC-SG82DR-E (for diameter of Ø9.52)
For diameter of 6.35 or 9.52  One piece	For diameter of 6.35 or 9.52  One piece	For diameter of 6.35 or 9.52  One piece

Installation Procedures (carefully read the following before installation.)

Cautions:

1) This optional part is used to remove moisture within refrigerant pipe to prevent compressor failures. However, if too much impurity inside refrigerant cycle has accumulated, such as amount of mixed moisture, dryer must be replaced after one season elapses. (Amount of allowable moisture absorption: 3 -7 cc)
2) Install the filter dryer to refrigerant pipe mid way on liquid side.
3) Filter dryer can be installed outside of the unit. Installation inside the unit is possible only when installation space can be secured.

1 Preparation for installation

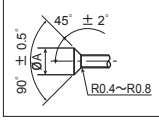
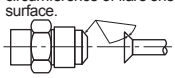
In the following parts, the installation for PUHZ-RP3VHA is highlighted as a representive.

•1)Refer to the installation manual of the unit for procedure of refrigerant piping and vacuuming, etc.
Remove the panel from outdoor unit. (See Fig. 1.)

•2)Removing the panel
Remove the service panel, front pipe cover and back pipe cover.
Remove back pipe cover only when taking it from back pipe.

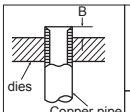
•3)Pipe connection
- When bending pipe, take bending R (R100~R150) just enough, and take care that pipe des not fold.
- Apply pipe processing without touching compressor. (If the pipe touches, it may cause abnormal sound or vibration.)
- Apply flare processing to connection pipe, arranging this on site.
- Thinly apply refrigerator oil (locally procured) to flare sheet surface.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)
ø6.35	8.7～9.1
ø9.52	12.8～13.2

Flare shape	Refrigerator oil application point
	Apply refrigerator oil to entire circumference of flare sheet surface. 

〈Proper tightening torque using torque wrench〉

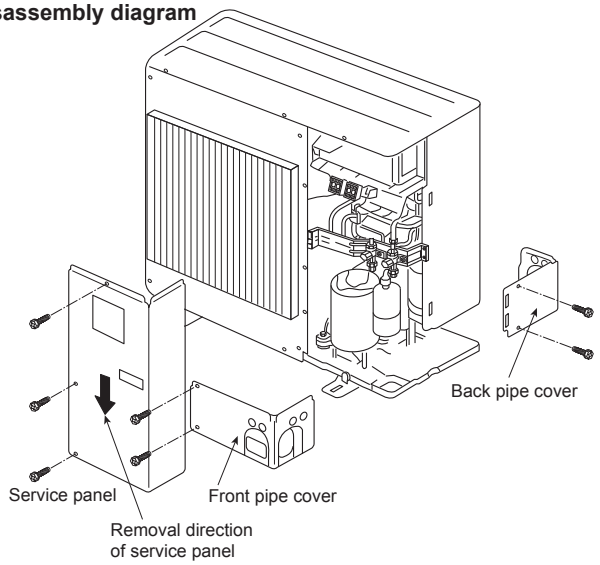
Outer diameter of copper pipe (mm)	Tightening torque N•m (kgf•cm)
ø6.35	14～18 (140～180)
ø9.52	34～42 (340～420)



Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22, R407C flare tool
	Clutch type	
ø 6.35(1/4")	0～0.5	1.0～1.5
ø 9.52(3/8")	0～0.5	1.0～1.5

※When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

[Fig. 1]
Panel disassembly diagram



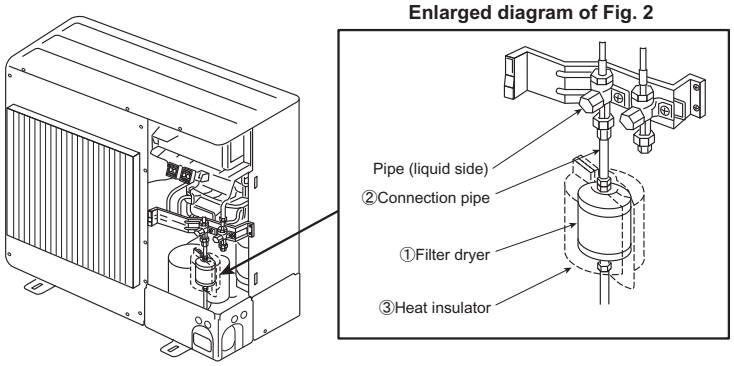
OPTIONAL PARTS

2 Installation of Filter dryer

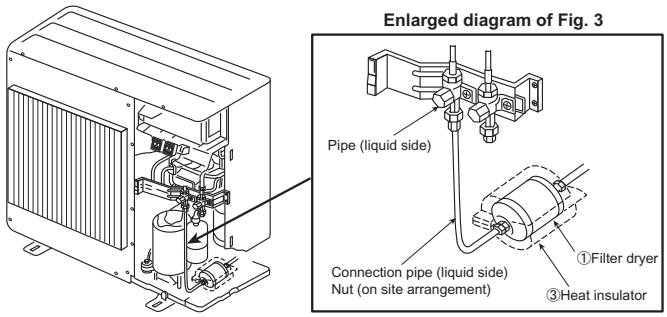
Be sure to install filter dryer on liquid side (narrow side).

・1） When filter dryer is being installed inside the unit, refer to Figs 2 and 3, according to the installation space for dryer. If installation space for dryer cannot be secured, install it outside of the unit.Install referring to Item 2-ii).

【Fig. 2】
Filter dryer installation diagram (Installation inside the unit)

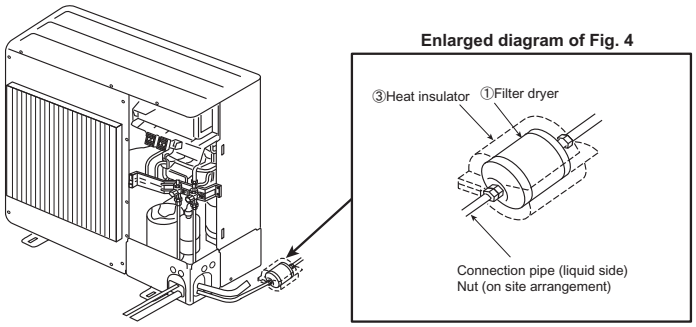


【Fig. 3】
Filter dryer installation diagram (horizontal installation inside the unit)



2） When installing outside of the unit, install it at optional position of extension pipe. Make and arrange connection pipe on the site. (See Fig. 4.)

【Fig. 4】
Filter dryer installation diagram (Installation outside of the unit)



3） Perform heat insulation work. (To prevent dewdrops forming)

・After dryer is installed, wrap heat insulator around dryer section.

※Apply taping to joint of heat insulator ensuring that there is no gap. Also wrap heat insulator around pipe.

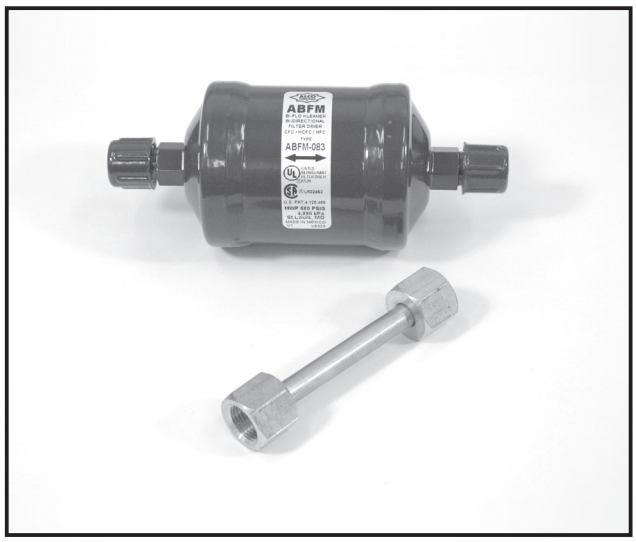
3 Filter dryer installation is now complete. Reattach service panel as it was.

4 Test run

1） Perform test run according to the installation manual of the unit, and be sure to perform gas leak check and operation check.

Filter Dryer (for Liquid Pipe of ϕ9.52) PAC-SG82DR-E

Photo



Descriptions

Removes minute dirt particles in the refrigerant pipe, when replacing an air-conditioning unit. (for Liquid Pipe of ϕ9.52)

Applicable Models

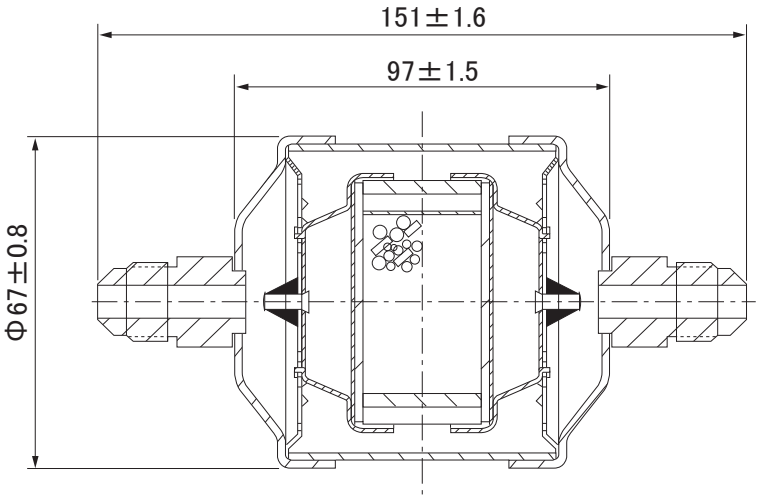
- PUHZ-SHW112/140
- PUHZ-ZRP60/71/100/125/140/200
- PUHZ-P100/125/140/200

Specifications

Pipe size	Liquid side: Ø 9.52 flare
Applicable refrigerant	R407C / R410A

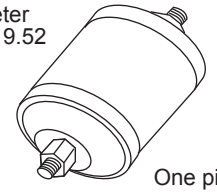
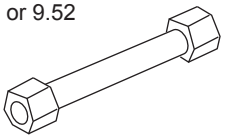
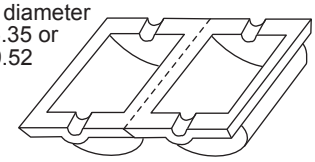
Dimensions

Unit: mm



How to Use / How to Install

Make sure that you have all the following parts.

①Filter dryer	②Connection pipe	③Heat insulator
PAC-SG81DR-E (for diameter of Φ6.35) PAC-SG82DR-E (for diameter of Φ9.52)	PAC-SG81DR-E (for diameter of Φ6.35) PAC-SG82DR-E (for diameter of Φ9.52)	PAC-SG81DR-E (for diameter of Φ6.35) PAC-SG82DR-E (for diameter of Φ9.52)
For diameter of 6.35 or 9.52  One piece	For diameter of 6.35 or 9.52  One piece	For diameter of 6.35 or 9.52  One piece

Installation Procedures (carefully read the following before installation.)

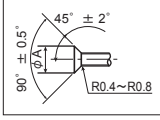
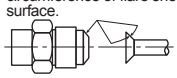
Cautions:
1) This optional part is used to remove moisture within refrigerant pipe to prevent compressor failures. However, if too much impurity inside refrigerant cycle has accumulated, such as amount of mixed moisture, dryer must be replaced after one season elapses. (Amount of allowable moisture absorption: 3 -7 cc)
2) Install the filter dryer to refrigerant pipe mid way on liquid side.
3) Filter dryer can be installed outside of the unit. Installation inside the unit is possible only when installation space can be secured.

1 Preparation for installation

In the following parts, the installation for PUHZ-RP3VHA is highlighted as a representive.

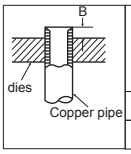
- 1) Refer to the installation manual of the unit for procedure of refrigerant piping and vacuuming, etc. Remove the panel from outdoor unit. (See Fig. 1.)
- 2) Removing the panel
  Remove the service panel, front pipe cover and back pipe cover.
  Remove back pipe cover only when taking it from back pipe.
- 3) Pipe connection
  - When bending pipe, take bending R (R100～R150) just enough, and take care that pipe des not fold.
  - Apply pipe processing without touching compressor. (If the pipe touches, it may cause abnormal sound or vibration.)
  - Apply flare processing to connection pipe, arranging this on site.
  - Thinly apply refrigerator oil (locally procured) to flare sheet surface.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)
ϕ6.35	8.7～9.1
ϕ9.52	12.8～13.2

Flare shape	Refrigerator oil application point
	Apply refrigerator oil to entire circumference of flare sheet surface. 

〈Proper tightening torque using torque wrench〉

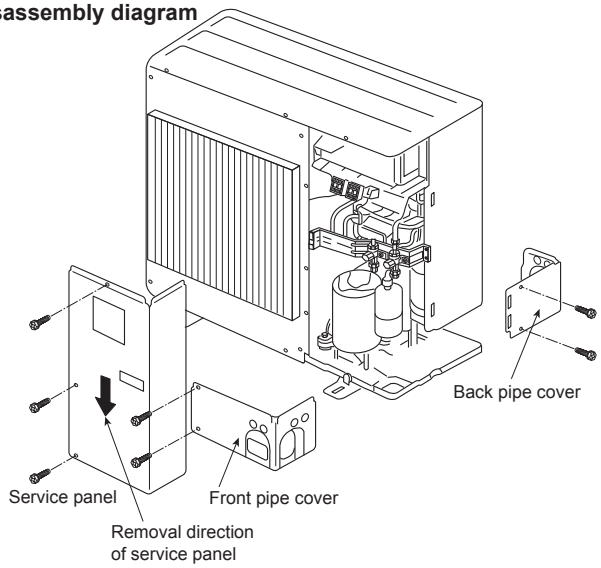
Outer diameter of copper pipe (mm)	Tightening torque N·m (kgf·cm)
ϕ6.35	14～18(140～180)
ϕ9.52	34～42(340～420)



Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22, R407C flare tool
	Clutch type	
ϕ 6.35(1/4")	0～0.5	1.0～1.5
ϕ 9.52(3/8")	0～0.5	1.0～1.5

※When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

【Fig. 1】
Panel disassembly diagram



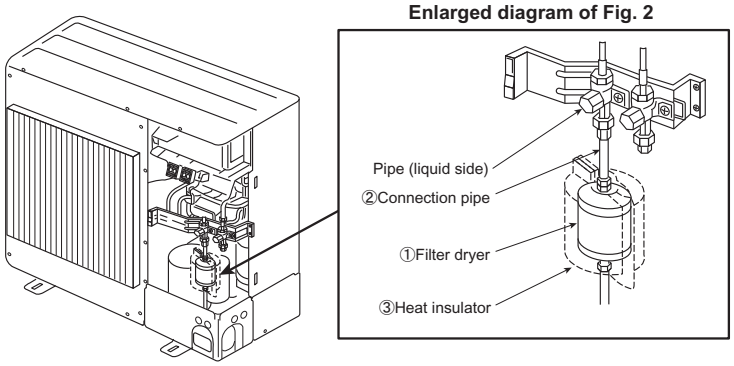
OPTIONAL PARTS

2 Installation of Filter dryer

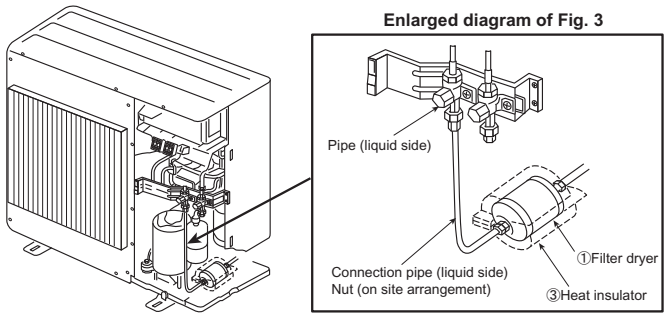
Be sure to install filter dryer on liquid side (narrow side).

・1） When filter dryer is being installed inside the unit, refer to Figs 2 and 3, according to the installation space for dryer. If installation space for dryer cannot be secured, install it outside of the unit.Install referring to Item 2-ii).

【Fig. 2】
Filter dryer installation diagram (Installation inside the unit)

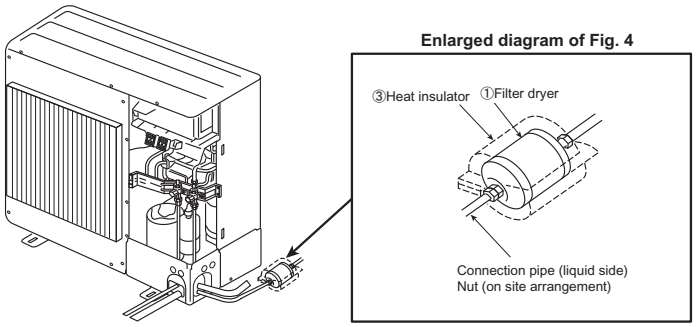


【Fig. 3】
Filter dryer installation diagram (horizontal installation inside the unit)



2） When installing outside of the unit, install it at optional position of extension pipe. Make and arrange connection pipe on the site. (See Fig. 4.)

【Fig. 4】
Filter dryer installation diagram (Installation outside of the unit)



3） Perform heat insulation work. (To prevent dewdrops forming)

・After dryer is installed, wrap heat insulator around dryer section.

※Apply taping to joint of heat insulator ensuring that there is no gap. Also wrap heat insulator around pipe.

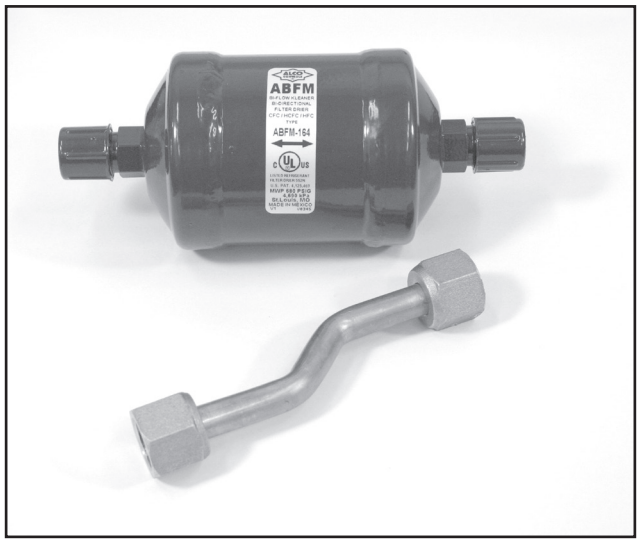
3 Filter dryer installation is now complete. Reattach service panel as it was.

4 Test run

1） Perform test run according to the installation manual of the unit, and be sure to perform gas leak check and operation check.

OPTIONAL PARTS

Photo



Descriptions

Removes minute dirt particles in the refrigerant pipe. Is used when replacing an air-conditioning unit. (for Liquid Pipe of ϕ12.7)

Applicable Models

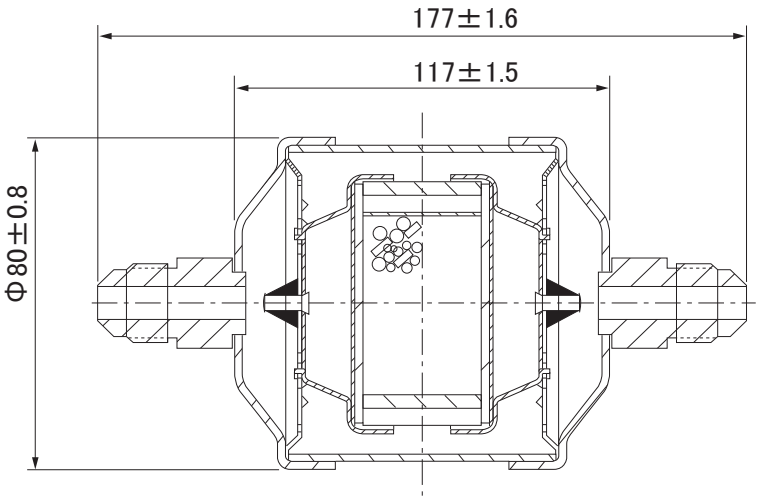
- PUHZ-ZRP250YKA
- PUHZ-P250YKA

Specifications

Pipe size	Liquid side: Ø 12.7 flare
Applicable refrigerant	R407C / R410A

Dimensions

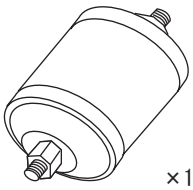
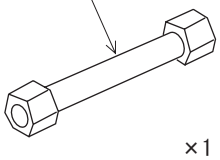
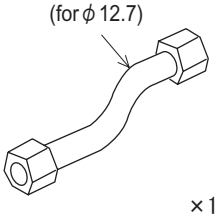
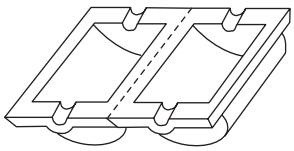
Unit: mm



OPTIONAL PARTS

How to Use / How to Install

Make sure that you have all the following parts.

①Filter dryer	②Connection pipe	③Heat insulator
 ×1	With PAC-SG81DR-E (for ϕ6.35) or PAC-SG82DR-E (for ϕ9.52)  ×1 or With PAC-SG85DR-E (for ϕ12.7)  ×1	 ×1

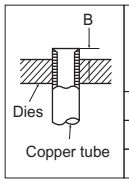
Installation Procedures (carefully read the following before installing)

Cautions
1) This optional part is used to remove moisture inside the refrigerant pipe and prevent fault of compressor. However, if there is excessive contamination inside the refrigerant cycle, such as a large amount of mixed moisture, etc., the dryer must be replaced after it is used during one season (the amount of allowable moisture absorption: 3-7 cc).
2) Install the filter dryer to refrigerant pipe midway on liquid side, using flare connection.
3) The filter dryer can be attached outside the unit. It can also be attached to the inside of unit only if the space for installation can be secured

1 Preparations for Installation

i) Refer to the installation manual of outdoor unit for the procedures of removing outdoor unit panel, refrigerant piping, vacuuming, etc.
ii) Removing panel
- Remove the service panel and cover.

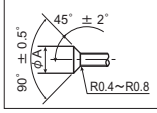
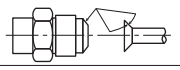
iii) Connecting pipes
- When bending pipe, allow enough bending R (R100-150), and take care that the pipe is not folded.
- Lay out the pipe so that it does not come into contact with the compressor. (Being in contact could cause abnormal sound or vibrations.)
- Apply flare processing to the connection pipe procured at local site.
- Thinly coat the flare sheet surface with refrigerant oil (procured at local site).



Pipe diameter (mm)	Dimension B (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
ϕ 6.35(1/4")	0～0.5	1.0～1.5
ϕ 9.52(3/8")	0～0.5	1.0～1.5
ϕ 12.7(1/2")	0～0.5	1.0～1.5

※Use the above table as a reference when processing the flare for refrigerant R410A using the conventional tool. Dimension B can be secured when using a copper pipe gauge for outgoing margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare portion ϕA (mm)
ϕ6.35	8.7～9.1
ϕ9.52	12.8～13.2
ϕ12.7	16.2～16.6

Flare shape	Refrigerant oil coating point
	Coat the entire circumference of sheet surface with refrigerant oil. 

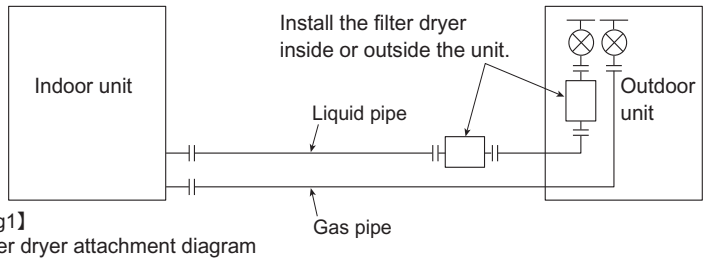
〈Appropriate tightening force with torque wrench〉

Outer diameter of copper pipe (mm)	Tightening force N.m (kgf-cm)
ϕ6.35	14～18(140～180)
ϕ9.52	34～42(340～420)
ϕ12.7	49～61(490～610)

2 Installing Filter Dryer

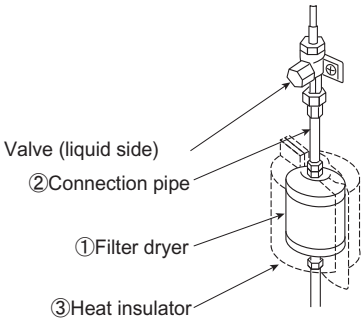
Be sure to attach the filter dryer on the liquid pipe (narrower one)

i) When installing the filter dryer inside the unit, refer to Fig. 1 or Fig. 2 according to the space in unit and install it. If there is no space for the dryer to be installed in unit, install it outside the unit (see Fig. 3).

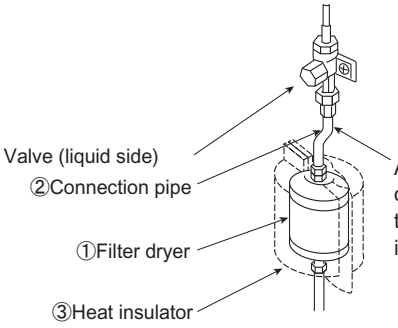


【Fig1】
Filter dryer attachment diagram (installing in unit)

With PAC-SG81DR-E or PAC-SG82DR-E



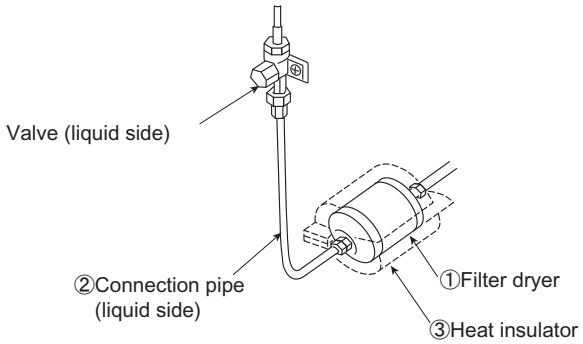
With PAC-SG85DR-E



Adjust the pipe attachment orientation, taking care with the position of knockout hole in the bottom of outdoor unit.

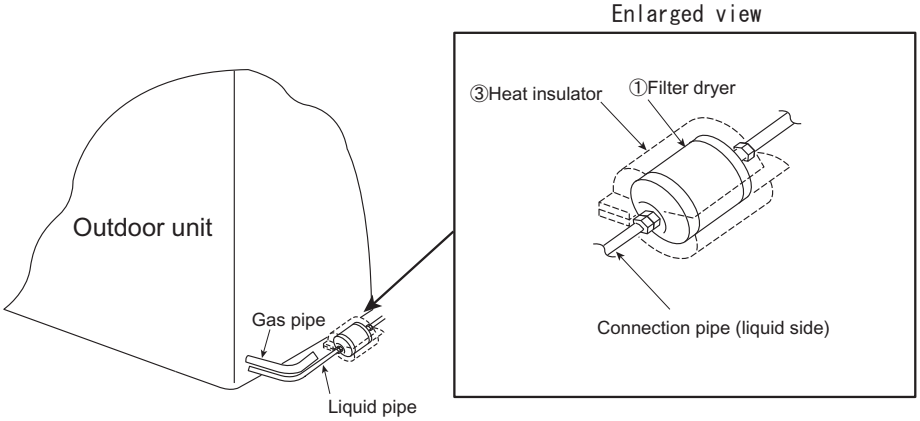
OPTIONAL PARTS

【Fig2】Filter dryer attachment diagram (horizontal attachment in unit)



ii) When installing the filter dryer outside the unit, attach it to any position of extended pipe.
Procore the connection pipe at local site.

【Fig3】Filter dryer attachment diagram (attachment outside unit)



iii) Heat insulation (to prevent dripping)
- After attaching the filter dryer, wrap the heat insulator around the dryer.
  ※Tape the seam of heat insulator so that no gap is produced.
- Also wrap heat insulator around other pipes.

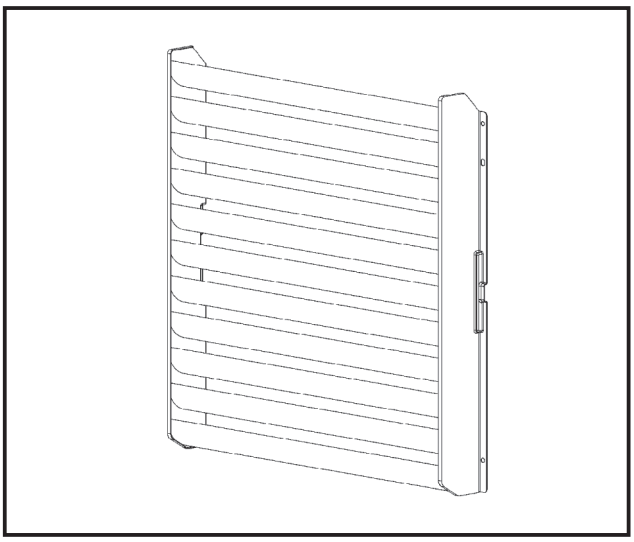
3 The attachment of filter dryer is now complete.

Reattach the service panels, etc. to the original position.

4 Test Run

i) Perform test run according to the installation manual of unit, and be sure to execute gas leakage check and operation check.

Figure



Descriptions

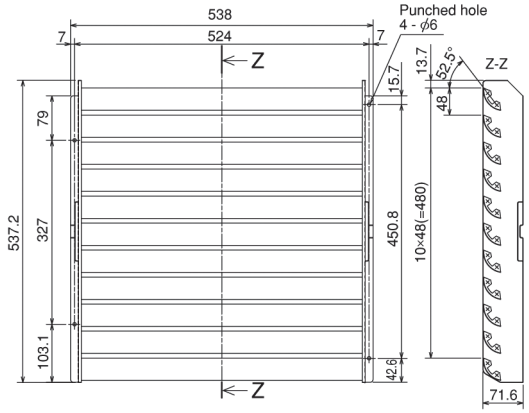
The air outlet guide changes the direction of air from the outdoor unit and prevents short cycling.

Applicable Models

- MUZ-FH25VE
- MUZ-FH25VEHZ
- MUZ-FH35VE
- MUZ-FH35VEHZ
- MUZ-SF25VE
- MUZ-SF25VEH
- MUZ-SF35VE
- MUZ-SF35VEH
- MUZ-SF42VE
- MUZ-SF42VEH
- MUZ-EF25VE
- MUZ-EF25VEH
- MUZ-EF35VE
- MUZ-EF35VEH
- MUZ-EF42VE
- MUZ-HJ50VA
- MUFZ-KJ25VE
- MUFZ-KJ25VEHZ
- MUFZ-KJ35VE
- MUFZ-KJ35VEHZ
- MXZ-2D33VA
- MXZ-2D42VA2
- MXZ-2D53VA2
- MXZ-2D53VAH2
- MXZ-2DM40VA
- SUZ-KA25VA5
- SUZ-KA35VA5

Dimensions

Unit: mm



MAC-889SG

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Polyester resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet
Weight		2.6kg

OPTIONAL PARTS

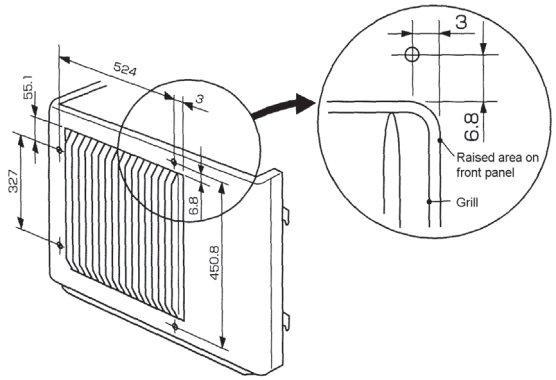
How to Use / How to Install

Selecting the installation location

• To select a location for installation, refer to "Selecting the installation location" in the installation manual included with the outdoor unit.

1. Preparations

For 800(W) x 550(H) x 285(D) outdoor units
• Remove the front panel from the outdoor unit.
• Drill Ø4.0 mm screw holes in the front panel at the 4 locations shown below.
(Be sure to remove the front panel before drilling the holes. Otherwise, the heat exchanger and electrical components could be damaged if the drill bit goes too far into the unit).

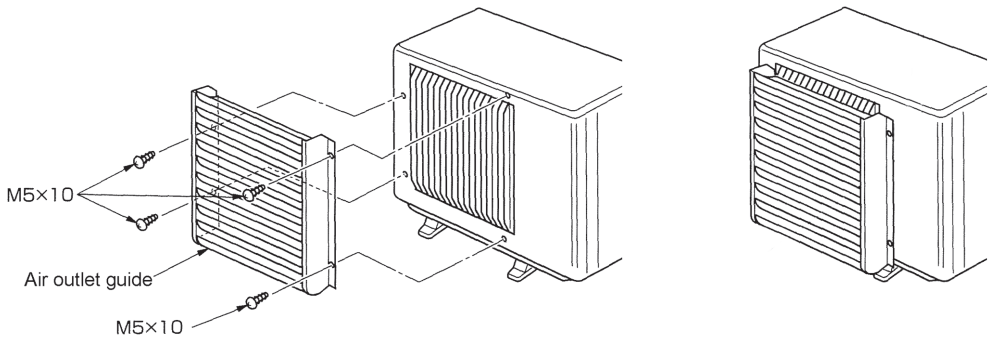


2. Attaching the air outlet guide

• Install the front panel to the outdoor unit.
• Install the air outlet guide to the outdoor unit using the 4 included screws.
(Install the air outlet guide so that air blows upward.)

Note

• Be sure to securely tighten the screws. Otherwise, a chattering sound could be produced due to vibration.

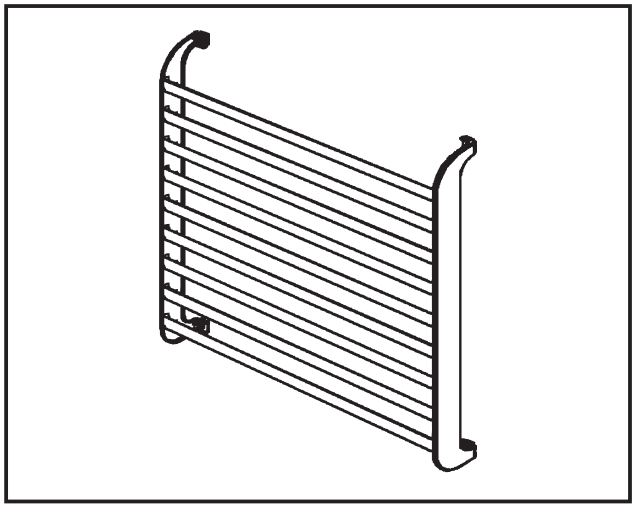


OPTIONAL PARTS

Air Outlet Guide

MAC-881SG

Figure



Descriptions

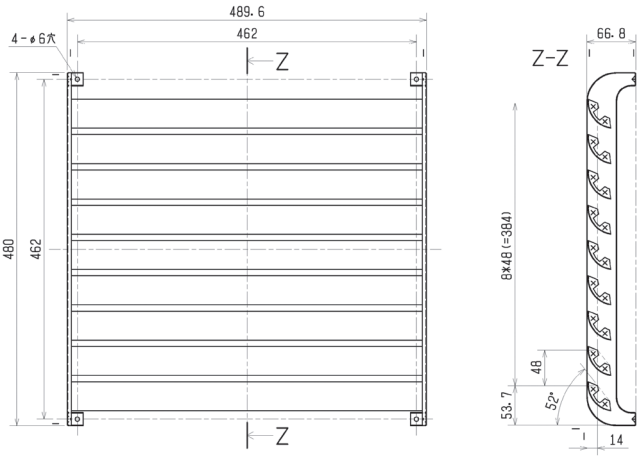
The air outlet guide changes the direction of air from the outdoor unit and prevents short cycling.

Applicable Models

- MUZ-FH25VE
- MUZ-FH25VEHZ
- MUZ-FH35VE
- MUZ-FH35VEHZ
- MUZ-SF25VE
- MUZ-SF25VEH
- MUZ-SF35VE
- MUZ-SF35VEH
- MUZ-SF42VE
- MUZ-SF42VEH
- MUZ-EF25VE
- MUZ-EF25VEH
- MUZ-EF35VE
- MUZ-EF35VEH
- MUZ-EF42VE
- MUZ-HJ50VA
- MUFZ-KJ25VE
- MUFZ-KJ25VEHZ
- MUFZ-KJ35VE
- MUFZ-KJ35VEHZ
- SUZ-KA25VA5
- SUZ-KA35VA5
- MXZ-2D33VA
- MXZ-2D42VA2
- MXZ-2D53VA2
- MXZ-2D53VAH2
- MXZ-2DM40VA

Dimensions

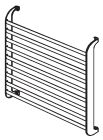
Unit: mm



Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Polyestel powder coating
	Material	Electro-galvanized steel sheet
Weight		1.6 kg

Components

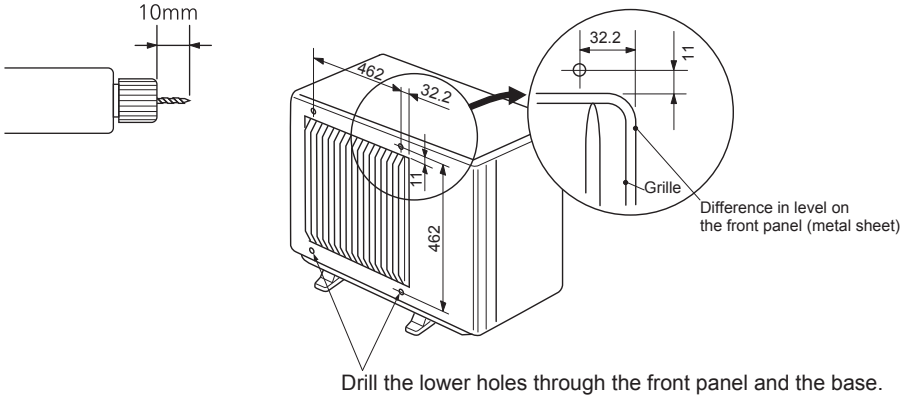
① Air outlet guide ×1	② Screw M5 x 10 × 4
	

How to Use / How to Install

1. Preparations

For 800(W) x 550(H) x 285(D) outdoor units

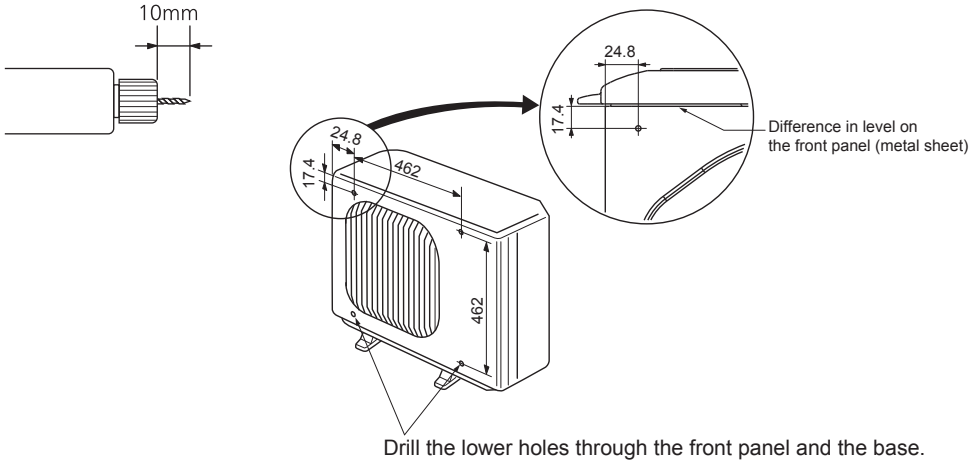
- Remove the front panel from the outdoor unit.
- Drill Ø4.0 mm screw holes in the front panel at the 4 locations shown below.
- The length of the drill bit should be about 10 mm as shown in the figure below. If the drill bit is too long, it may damage the parts inside the outdoor unit.



Drill the lower holes through the front panel and the base.

OPTIONAL PARTS

For 684(W) x 540(H) x 255(D) outdoor units
- Remove the front panel from the outdoor unit.
- Drill Ø4.0 mm screw holes in the front panel at the 4 locations shown below.
- The length of the drill bit should be about 10 mm as shown in the figure below. If the drill bit is too long, it may damage the parts inside the outdoor unit.

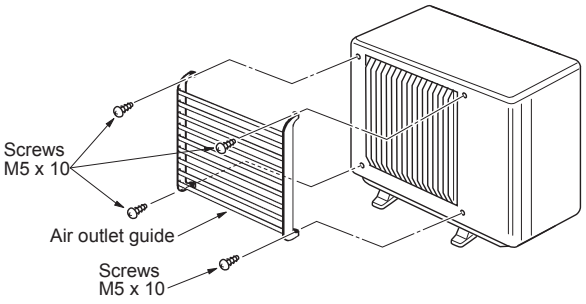


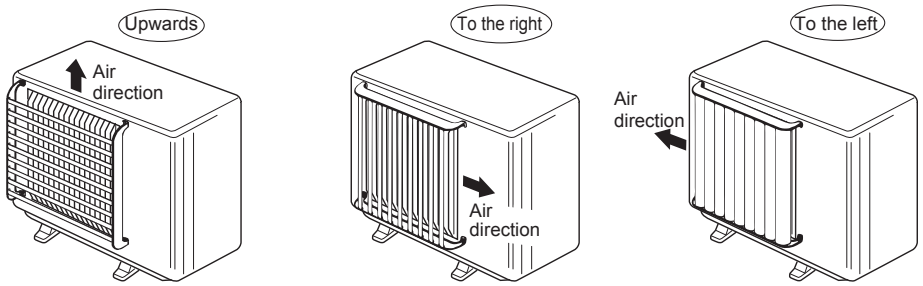
2. Attaching the air outlet guide

- Attach the air outlet guide to the outdoor unit with the 4 screws provided with the air outlet guide.
- The air outlet guide is allowed to be installed in any of the following directions so that air blows upwards, to the left, or to the right.

* Do not install the air outlet guide in the downward direction, or it may cause short cycling.

Note: Tighten the screws securely.
A chattering sound could be produced due to vibration if the screws are loose.

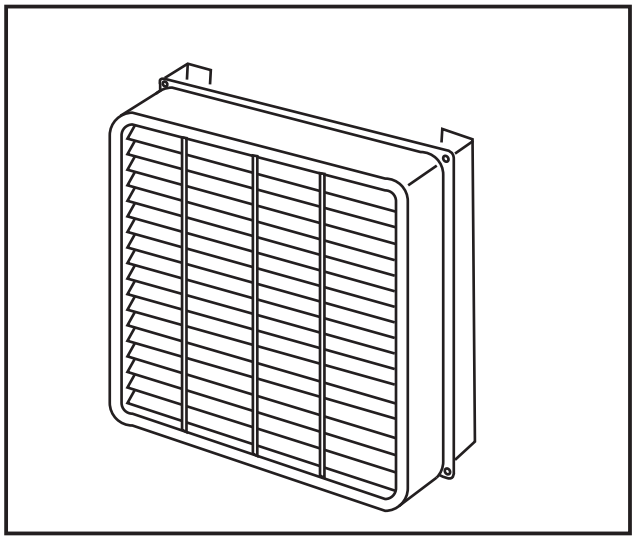




Air Outlet Guide

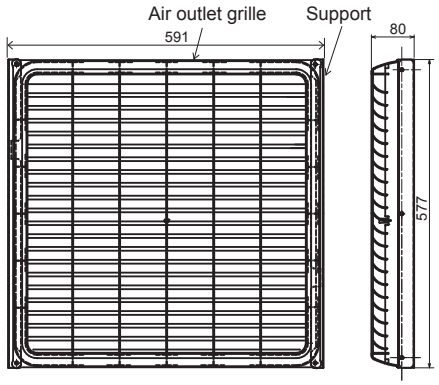
MAC-856SG

Figure



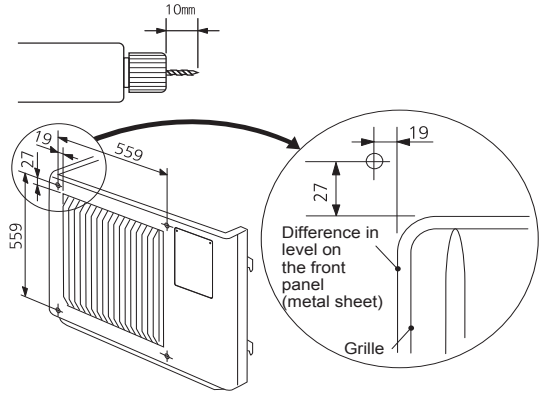
Dimensions

Unit: mm



How to Use / How to Install

1) • Drill Ø4.0 mm screw holes in the front panel at the 4 locations shown below.
• The length of the drill bit should be about 10 mm as shown in the figure below. If the drill bit is too long, it may damage the parts inside the outdoor unit.



Descriptions

The air outlet guide changes the direction of air from the outdoor unit and prevents short cycling.

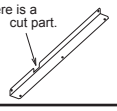
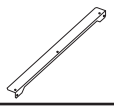
Applicable Models

- MXZ-3E54VA
- MXZ-4E72VA
- MXZ-3E68VA
- MXZ-3DM50VA

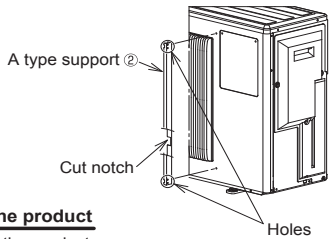
Specifications

Exterior	Color (Munsell)	Ivory (3.0Y7.8/1.1)
	Material	Air outlet grille: PP resin
Air outlet direction		Changeable between up and down
Accessory name × Qty. <Material/Surface treatment>		Support A × 2 (Alloy hot-dip zinc-coated carbon steel sheet / Acrylic resin coating) Support B × 2 (Alloy hot-dip zinc-coated carbon steel sheet / Acrylic resin coating) Screw (5×10) × 14 (Iron/Zinc nickel alloy plated)

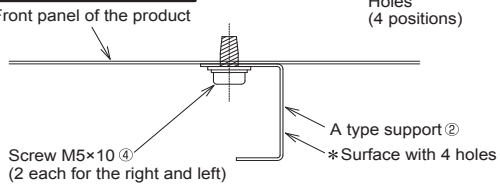
Components

① Air outlet guide ×1	② Support A ×2	③ Support B ×2	④ Screw 5×10 ×14
			

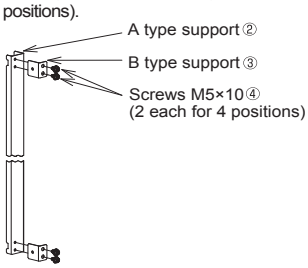
2) Fix A type supports② by tightening the screws M5×10④ (2 each for the right and left) into the holes drilled in step 1).



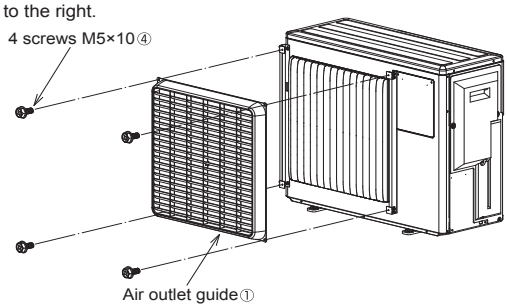
Plan view of the product



3) Fix B type supports③ to A type support② with the 8 screws M5×10④ (2 each for 4 positions).



4) Fix air outlet guide① to B type supports③ with 4 screws M5×10④. The air direction can be selected from upwards, to the left, and to the right.



AFTER INSTALLATION

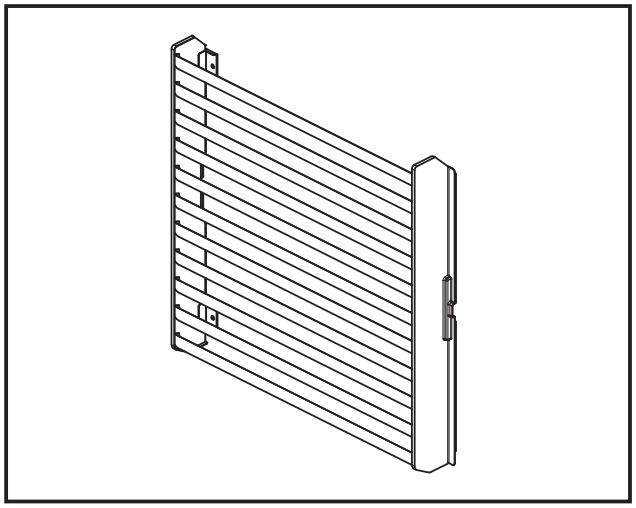
NOTE: Make sure that A type supports, B type supports, and air outlet guide are fixed with screws securely.

OPTIONAL PARTS

Air Outlet Guide

MAC-886SG-E

Figure



Descriptions

The air outlet guide changes the direction of air from the outdoor unit and prevents short cycling.

Applicable Models

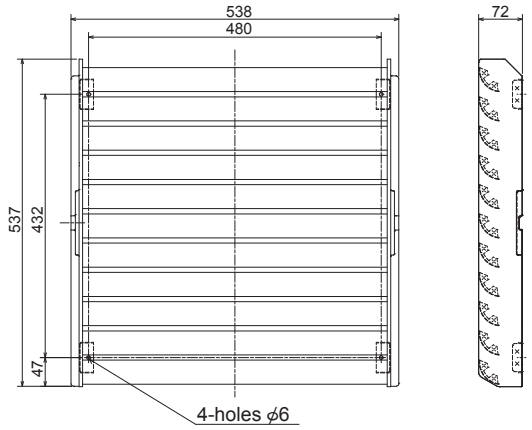
- MUZ-FH50VE
- MUZ-FH50VEHZ
- MUZ-SF50VE
- MUZ-SF50VEH
- MUZ-GF60VE
- MUZ-GF71VE
- MUZ-EF50VE
- MUZ-HJ60VA
- MUZ-HJ71VA
- MUFZ-KJ50VE
- MUFZ-KJ50VEHZ
- SUZ-KA50VA5
- SUZ-KA60VA5
- SUZ-KA71VA5

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y7.8/1.1)
	Material/Surface treatment	Alloy hot-dip zinc-coated carbon steel sheet / Acrylic resin coating
Air outlet direction		Upward

Dimensions

Unit: mm



Components

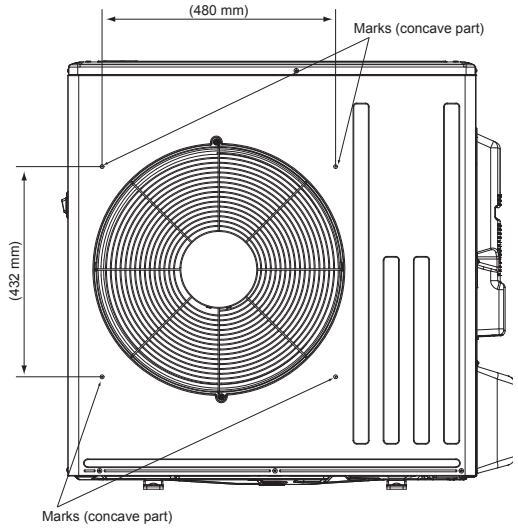
① Air outlet guide ×1	② Screw ×4
	

How to Use / How to Install

1. Preparations

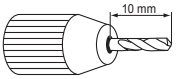
(1) Make sure to switch off the power supply or turn off the breaker.

(2) Determine the position of the front panel. Drill 4 holes (ϕ 4.0 mm) into the front panel on the marks (concave part).



Note:

The drill bit should be about 10mm long as shown in the right picture. If the drill bit is too long, it may damage the heat exchanger, the electrical parts, etc. in the outdoor unit.

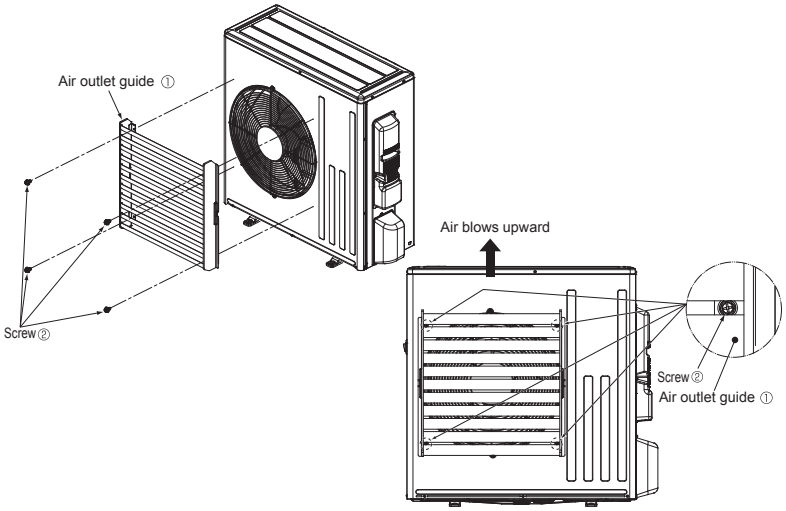


2. Attaching the air outlet guide

Fix the air outlet guide ① with 4 screws ② .

Note:

- Tighten the screws sufficiently. When the screws are not tight enough, vibrations occur and they may cause fluttering sound.
- Attach the air outlet guide so that air does NOT blow downward to prevent short cycling.

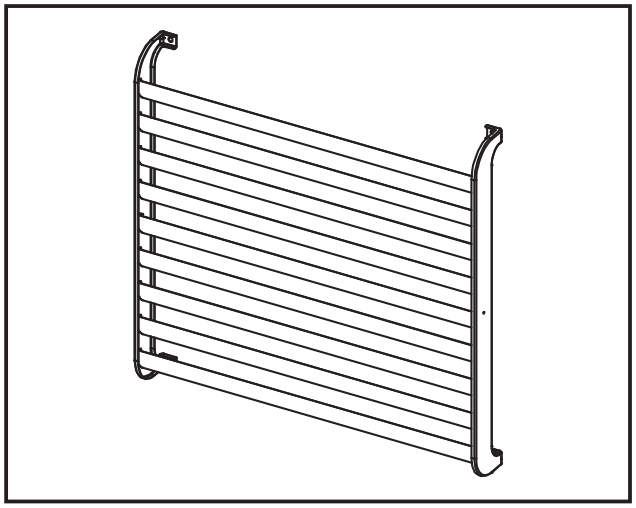


3. After installation

Refer to the installation manual provided with the unit to perform pipe connection and electric wiring.

OPTIONAL PARTS

Figure



Descriptions

The air outlet guide changes the direction of air from the outdoor unit and prevents short cycling.

Applicable Models

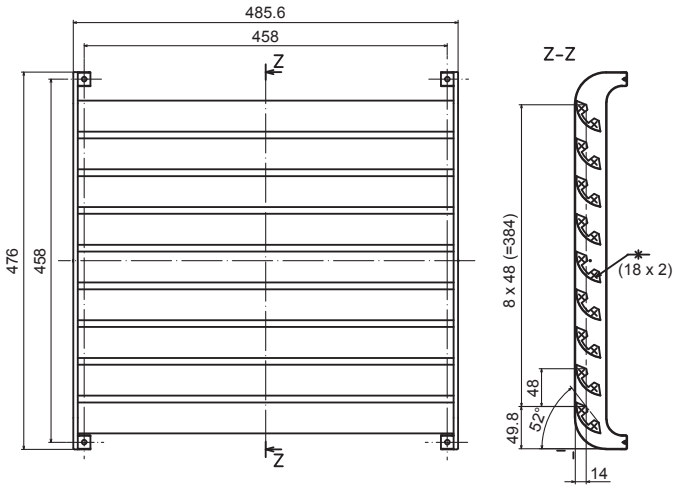
- MUZ-DM25VA
- MUZ-DM35VA
- MUZ-HJ25VA
- MUZ-HJ35VA

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Polyestel powder coating
	Material	Electro-galvanized steel sheet
Weight		1.6 kg

Dimensions

Unit: mm



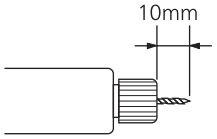
Components

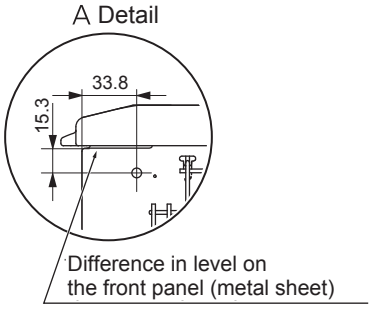
① Air outlet guide ×1	② Screw M5 x 10 × 4
	

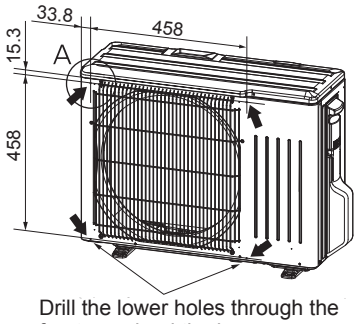
How to Use / How to Install

1. Preparations

- Make a hole in the 4 concave parts indicated by ➡ using a drill with a diameter of 4.0 mm.
- The length of the drill bit should be about 10 mm as shown in the figure below. If the drill bit is too long, it may damage the parts inside the outdoor unit.







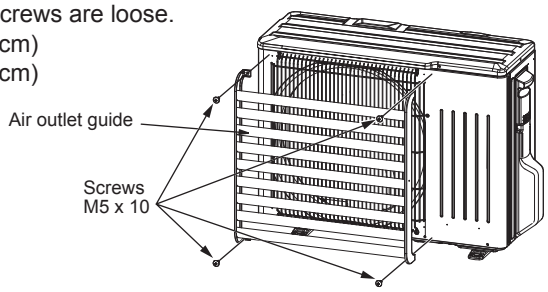
OPTIONAL PARTS

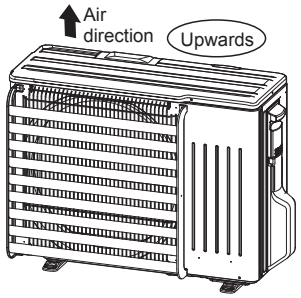
2. Attaching the air outlet guide

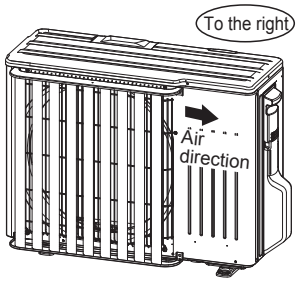
- Attach the air outlet guide to the outdoor unit with the 4 screws provided with the air outlet guide.
- The air outlet guide is allowed to be installed in any of the following directions so that air blows upwards, to the left, or to the right.

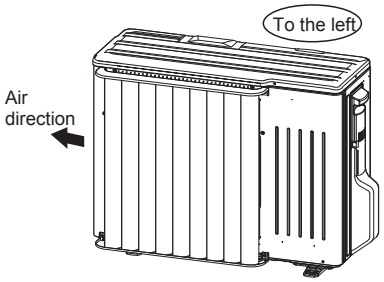
* Do not install the air outlet guide in the downward direction, or it may cause short cycling.

Note: Tighten the screws securely.
A chattering sound could be produced due to vibration if the screws are loose.
* Tightening torque 2 upper screws $1.47^{+0.196}_{-0.098}$ N•m (15^{+2}_{-1} kgf•cm)
2 lower screws $2.45^{+0.196}_{-0.098}$ N•m (25^{+2}_{-1} kgf•cm)



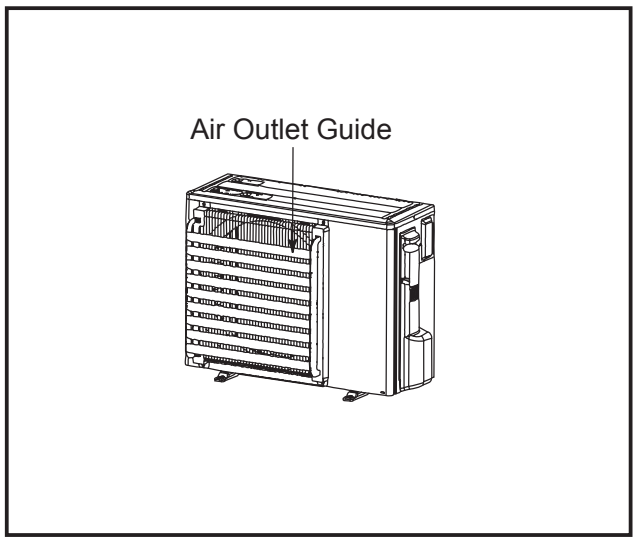






Air Outlet Guide (to change air blowing direction) PAC-SJ07SG-E

Figure



Descriptions

A part to change air direction from outdoor unit. Can also be used to prevent short cycles.

Applicable Models

■ PUHZ-ZRP35/50VKA

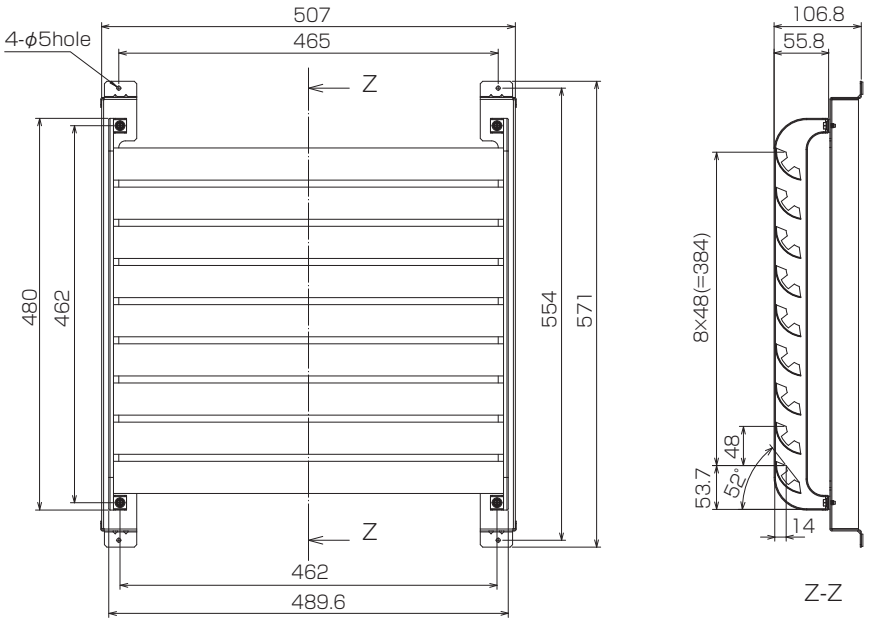
only 1 piece required

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Material/surface treatment	Alloy hot-dip zinc-coated carbon steel sheet/Acrylic resin coating
Weight		2.8kg
Air outlet direction		Changeable between up, down or sideways
Accessory name x Qty. <Material/Surface treatment>		Screw (M5x10) x 4 (Iron/Zinc nickel alloy plated) Screw (M4x12) x 4 (Iron/Zinc nickel alloy plated)

Dimensions

Unit: mm



⚠ CAUTION

When the outdoor unit is installed in front of a store or in a passage, this air outlet guide is used to change the discharge direction of hot air (during cooling) or cold air (during heating) from the outdoor unit.
Upward, downward and sideways directions are possible. This guide is also effective to protect the winds may blow against the discharge outlet.

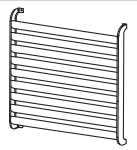
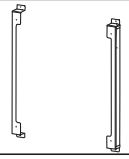
Note the followings when installing this guide:
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

Note that two sets of this product are necessary for RP100, RP125, RP140.

1 Accesories

Make sure that this package has the following parts as well as the installation sheet:

①Air outlet guide	1	②Support	2	③Attachment screw 5×10	4	④Attachment screw 4×12	4
							

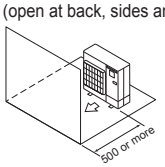
2 Requirements of installation space [Unit:mm]

●Secure the necessary surrounding space shown below and select a place with less obstacles, to prevent a short cycle.

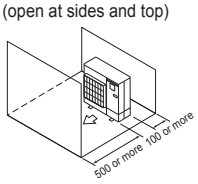
1) Surrounding space needed when installing one unit

・Do not use "upward discharge" in cases of figures (3) and (5) below.

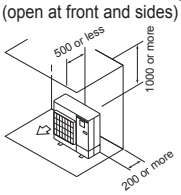
(1) Obstacle at front (open at back, sides and top)



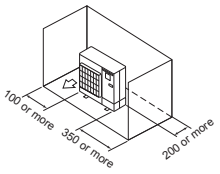
(2) Obstacles at back and front (open at sides and top)



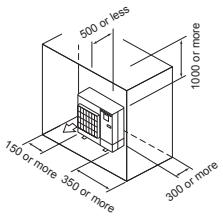
(3) Obstacles at back and top (open at front and sides)



(4) Obstacles at back, and sides (open at front and top)



(5) Obstacles at back, sides and top (open at front)

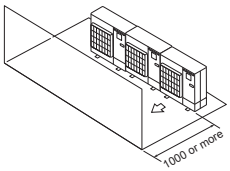


2) Surrounding space needed when installing multiple units

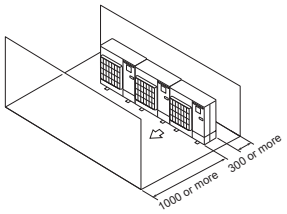
・When installing units horizontally in a series, leave at least 350 mm space between units .

・Do not use "upward discharge" in case of figure (3) below.

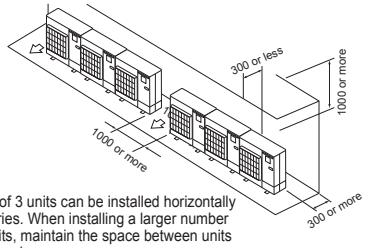
(1) Obstacle at front (open at back, sides and top)



(2) Obstacles at back and front (open at sides and top)

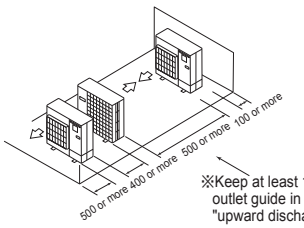


(3) Obstacles at back and top (open at front and sides)



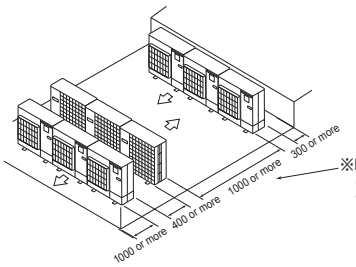
※Limit of 3 units can be installed horizontally in series. When installing a larger number of units, maintain the space between units shown above.

(4) Installing units, one in each row



※Keep at least 1000 when using outlet guide in directions other than "upward discharge".

(5) Installing multiple units in multiple rows

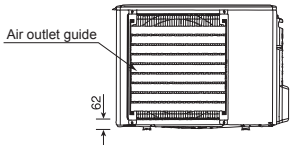


※Keep at least 2000 when using outlet guide in directions other than "upward discharge".

OPTIONAL PARTS

3 Installation Complete Diagrams

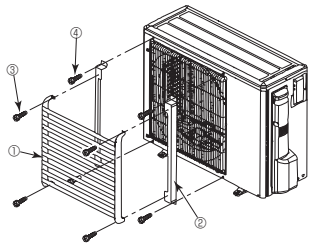
809W × 300D × 630H(mm)
Outdoor unit



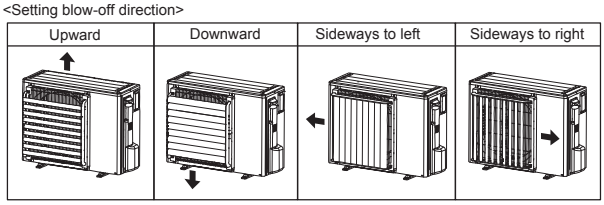
4 Installation Method

● Four blowout directions can be selected: Check the orientation of blowout vane, and attach the blowout guide in the direction that matches the situation at local site.

(1) Make a frame by fixing 2 supports ② on the outdoor unit with 4 screws ④.
(2) Fix the air outlet guide ① to the supports mounted on the outdoor unit with 4 screws ③.

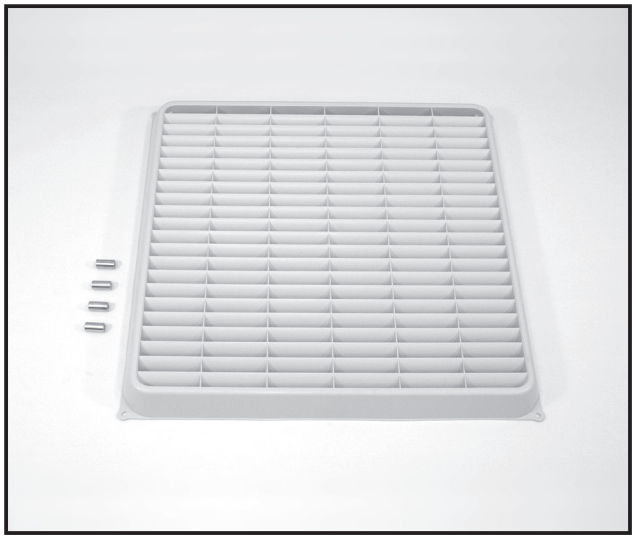


<Setting blow-off direction>



Air Outlet Guide (to change air blowing direction) PAC-SG59SG-E

Photo



Descriptions

A part to change air direction from outdoor unit.
Can also be used to prevent short cycles.

Applicable Models

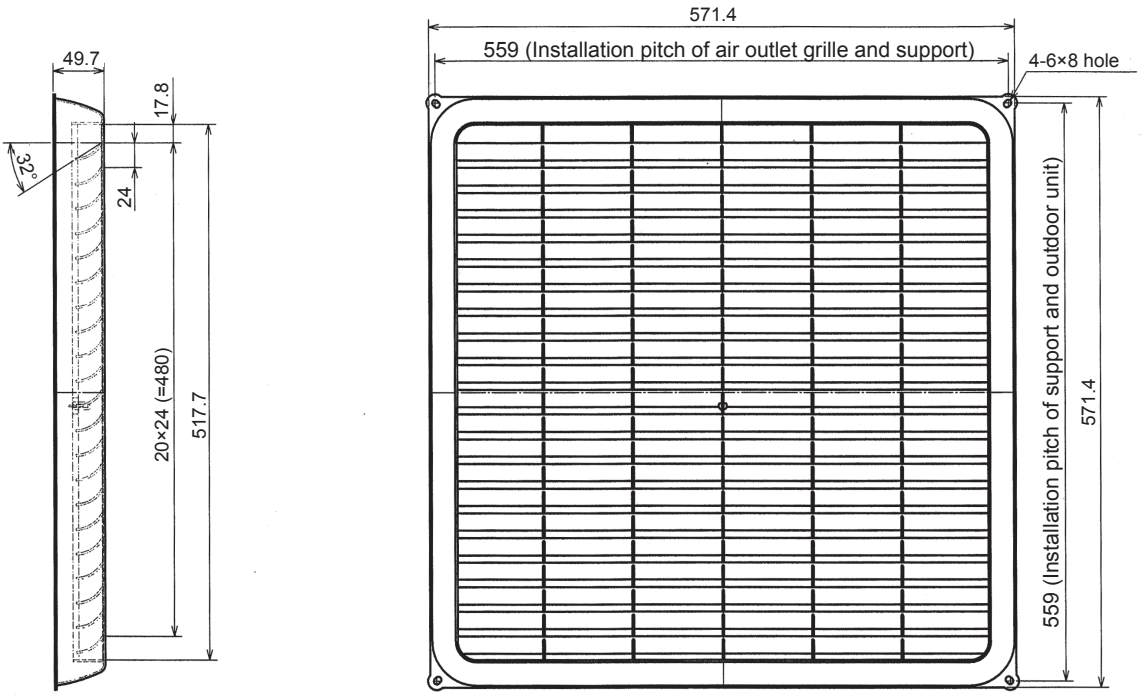
- PUHZ-ZRP60/71
  only 1 piece required
- PUHZ-P100
  only 1 piece required
- PUHZ-P125/140
  2 pieces required
- PUHZ-SHW112/140
  2 pieces required

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Material	Air outlet grille: PP resin
Weight		1.2kg
Air outlet direction		Changeable between up, down or sideways
Accessory name x Qty. <Material/Surface treatment>		Washer faced screw (M5x35) x 4 (Iron wire (SWCH18A)/Zinc nickel plated)

Dimensions

Unit: mm



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

Note the followings when installing this guide:
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

2-fan type outdoor unit

1 Checking provided parts

Make sure that this package has the following parts as well as the installation sheet:

①Air Discharge guide × 1	②Support × 2 (For the upper and lower sides)	③Support × 2 (For right and left)	④Attachment screw × 4	⑥Spacer × 4
	※PAC-SG58SG-E (Screw hole × 6) 	PAC-SG58SG-E (Screw hole × 2) 	PAC-SG58SG-E(5 × 10) PAC-SG59SG-E(5 × 35) ⑤Attachment screw × 8 PAC-SG58SG-E(4 × 10) 	※PAC-SG59SG-E 

2 Checking Installation Space

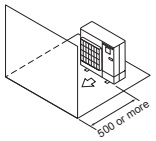
(In the following diagrams, dimensions in parentheses are for 2 fan type models. Dimensions not in parentheses are common for all series models. Unit: mm)

●Secure the necessary surrounding space shown below and select a place with less obstacles, to prevent a short cycle.

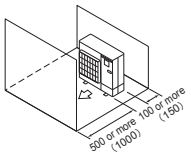
1) Surrounding space needed when installing one unit

・Do not use "upward discharge" in cases of figures (3) and (5) below.

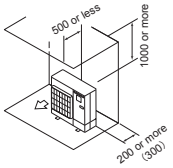
(1) Obstacle at front (open at back, sides and top)



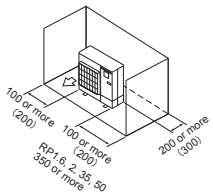
(2) Obstacles at back and front (open at sides and top)



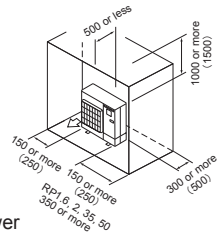
(3) Obstacles at back and top (open at front and sides)



(4) Obstacles at back, and sides (open at front and top)



(5) Obstacles at back, sides and top (open at front)

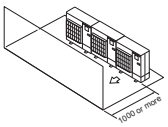


2) Surrounding space needed when installing multiple units

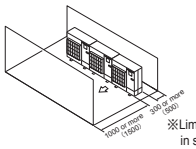
・When installing units horizontally in a series, leave at least 350 mm space between units for RP2, 50 type or lower models, and at least 10 mm for RP2.5, 60 type or higher models.

・Do not use "upward discharge" in case of figure (3) below.

(1) Obstacle at front (open at back, sides and top)

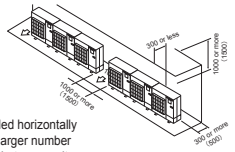


(2) Obstacles at back and front (open at sides and top)

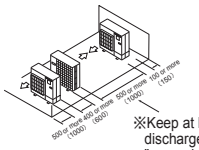


※Limit of 3 units can be installed horizontally in series. When installing a larger number of units, maintain the space between units shown above.

(3) Obstacles at back and top (open at front and sides)

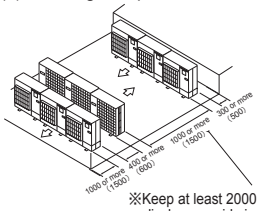


(4) Installing units, one in each row



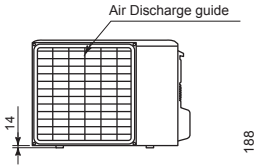
※Keep at least 1000 (2000) when using discharge guide in directions other than "upward discharge".

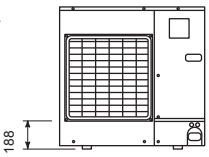
(5) Installing multiple units in multiple rows

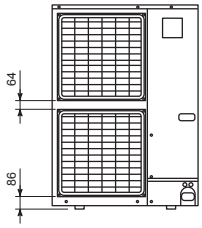


※Keep at least 2000 (3000) when using discharge guide in directions other than "upward discharge".

3 Installation Complete Diagrams







＜Models RP1.6, 2, 35, 50＞ ＜Models RP2.5, 3, 60, 71＞ ＜Models RP4～6,100～140＞

4 Installation Method

For RP1.6, 2, 35, 50：

1) Fix the two supports (2) and two supports (3), using four screws (5) to make a frame.

2) Attach the assembled supports to the outdoor unit using four screws (5), and then attach blowout guide (1) to the support (2), using four screws (4).

・Four blowout directions can be selected: Check the orientation of blowout vane, and attach the blowout guide in the direction that matches the situation at local site.

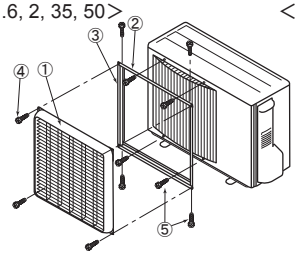
For (R)P2.5～6, 60～140: (Two sets of support and blowout guide are necessary for two-fan type models.)

1) Remove the 4 screws that hold the existing fan guard.

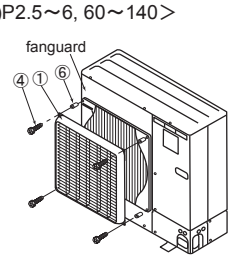
2) Fit the 4 spacers ⑥ into the hole in fan guard, and then use the 4 screws ④ to install the provided blowout guide ① to the outdoor unit above the existing fan guard.

・The four blowout directions can be selected: Check the orientation of blowout vane, and install the blowout guide in the direction that matches the circumstance at local site.

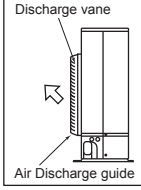
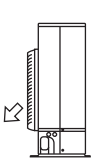
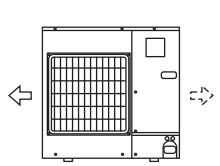
＜RP1.6, 2, 35, 50＞



＜(R)P2.5～6, 60～140＞



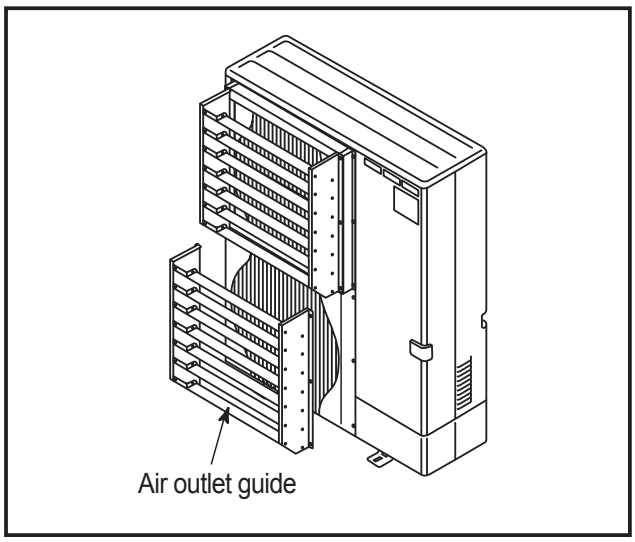
＜Setting blow-off direction＞

Upward	Downward	Sideways (to left or right)
Discharge vane  Air Discharge guide		

OPTIONAL PARTS

Air Outlet Guide (to change air blowing direction) PAC-SH96SG-E

Figure



Descriptions

A part to change air direction from outdoor unit.
Can also be used to prevent short cycles.

Applicable Models

- PUHZ-ZRP100/125/140/200/250
  2 pieces required
- PUHZ-P200/250YKA
  2 pieces required
- MXZ-4E83VA
  1 piece required
- MXZ-5E102VA
  1 piece required
- MXZ-6D122VA
  1 piece required
- MXZ-2E53VAHZ
  1 piece required
- MXZ-4E83VAHZ
  1 piece required

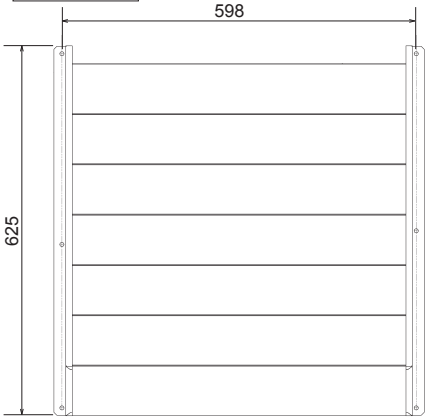
Specifications

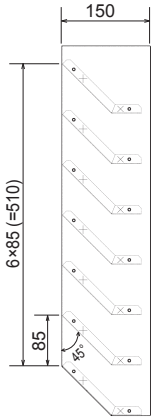
Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Material	Air outlet grille: Alloy hot-dip zinc-coated carbon steel sheet
Weight		7kg
Air outlet direction		Changeable between up, down or sideways
Accessory name x Qty. <Material/Surface treatment>		Washer faced screw (M5x15) x 12 (Iron wire (SWCH18A)/Zinc nickel plated) Washer x 12, Spring washer x 12

Dimensions

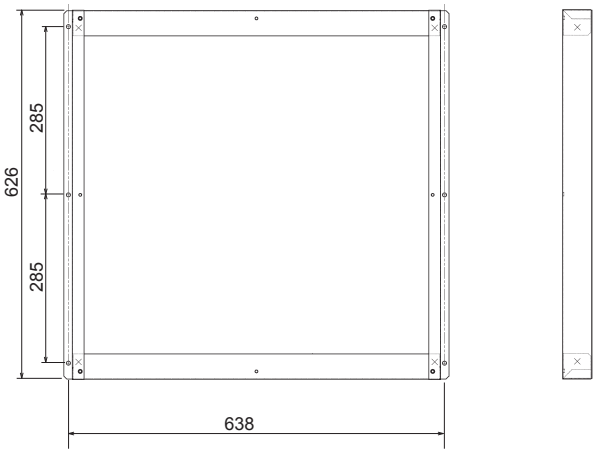
Unit: mm

Air outlet grile





Support



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

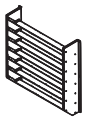
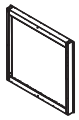
Note the followings when installing this guide:
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

2-fan type outdoor unit

1 Checking provided parts

Make sure that this package has the following parts as well as the installation sheet:

①Air Discharge guide	1	②Support	1	③Screw(5×15)	12	④Washer	12	⑤Spring washer	12
									

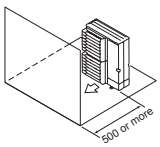
2 Checking Installation Space (Unit: mm)

●Secure the necessary surrounding space shown below and select a place with less obstacles, to prevent a short cycle.

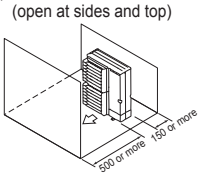
1) Surrounding space needed when installing one unit

・Do not use "upward discharge" in cases of figures (3) and (5) below.

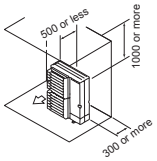
(1) Obstacle at front (open at back, sides and top)



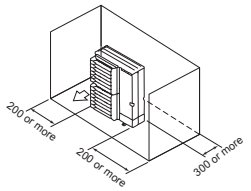
(2) Obstacles at back and front (open at sides and top)



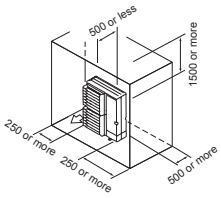
(3) Obstacles at back and top (open at front and sides)



(4) Obstacles at back, and sides (open at front and top)



(5) Obstacles at back, sides and top (open at front)

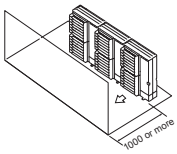


2) Surrounding space needed when installing multiple units

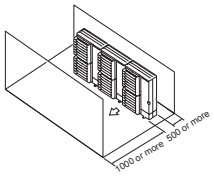
・When installing units horizontally in a series, leave at least 10 mm space between units.

・Do not use "upward discharge" in case of figure (3) below.

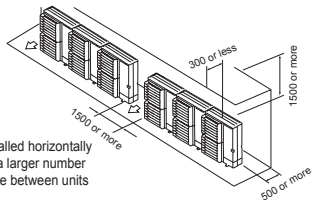
(1) Obstacle at front (open at back, sides and top)



(2) Obstacles at back and front (open at sides and top)

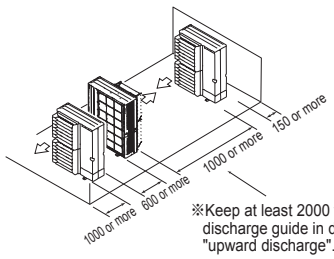


(3) Obstacles at back and top (open at front and sides)



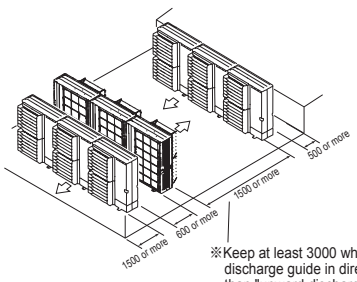
※Limit of 3 units can be installed horizontally in series. When installing a larger number of units, maintain the space between units shown above.

(1) Installing units, one in each row



※Keep at least 2000 when using discharge guide in directions other than "upward discharge".

(2) Installing multiple units in multiple rows

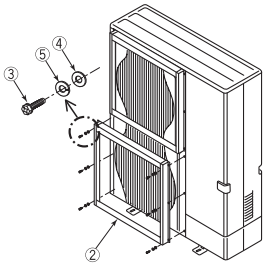


※Keep at least 3000 when using discharge guide in directions other than "upward discharge".

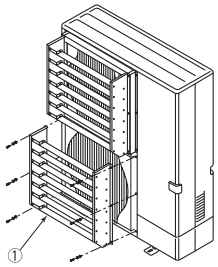
3 Installation Method

・4 blowout directions can be selected: Check the orientation of blowout vane, and attach the blowout guide in the direction that matches the situation at local site.

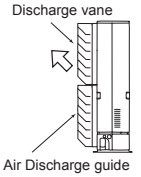
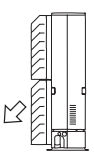
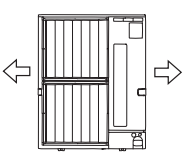
(1)Attach the support ② to the outdoor unit using the washers ④ , spring washers ⑤ and screws ③ (at the 6 points) on the existing fan guard



(2)Set the orientation of the blowout vane of the discharge guide ① to the desired direction and install the vane to the outdoor unit using the washers ④, spring washers ⑤ and screws ③ (at 6 points).



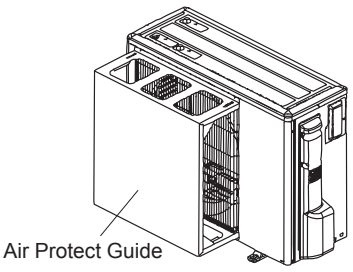
＜Setting blow-off direction＞

Upward	Downward	Sideways (to left or right)
		

OPTIONAL PARTS

Air Protect Guide (for cooling at -15℃) PAC-SJ06AG-E

Figure



Descriptions

Enables operation even when the outside temperature is low.
Protect the unit from cold wind.

Applicable Models

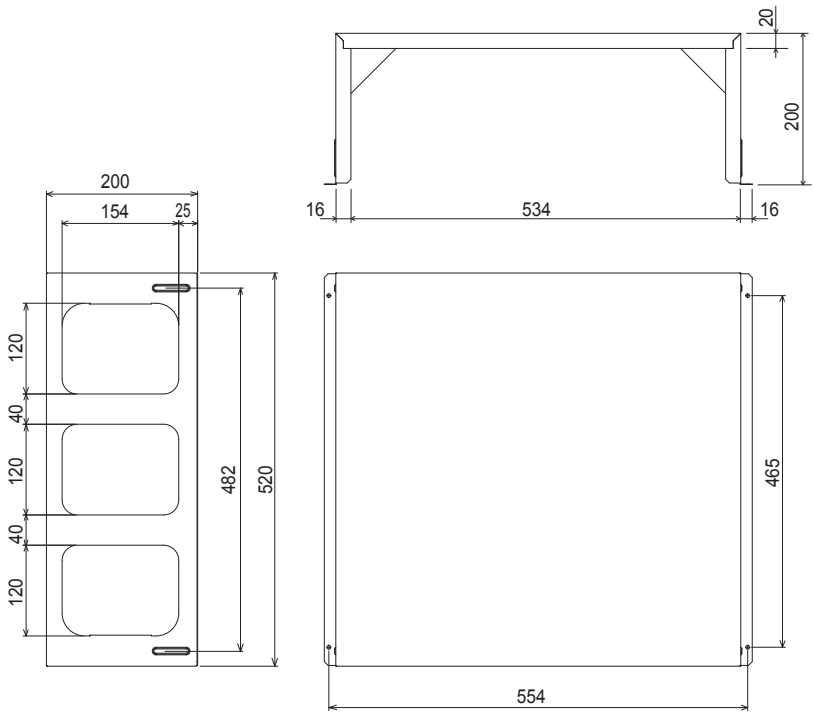
■ PUHZ-ZRP35/50VKA
only 1 piece required

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet
Weight		3.4kg
Accessory name x Qty.		Mounting screw (4x10) x 4 Spring washerx 4

Dimensions

Unit: mm



⚠ CAUTION

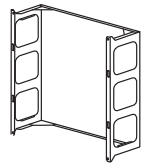
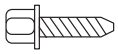
* This Air protect prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

Pay attention to the following points when installing this product:
1) To eliminate the effects of external wind, be sure to install this unit with back surface facing wall side.
2) Do not install this unit in orientation or site where wind directly blows at the back of the unit.
3) Installing of this product will reduce the capacity of the unit (approx. 2 or 3%) and increase the noise of outdoor unit (approx. 1 or 2dB)
4) Do not use this product where there is any obstacle at either side or above the outdoor unit (discharge air will be blocked): This may cause a short cycle.

How to Use / How to Install

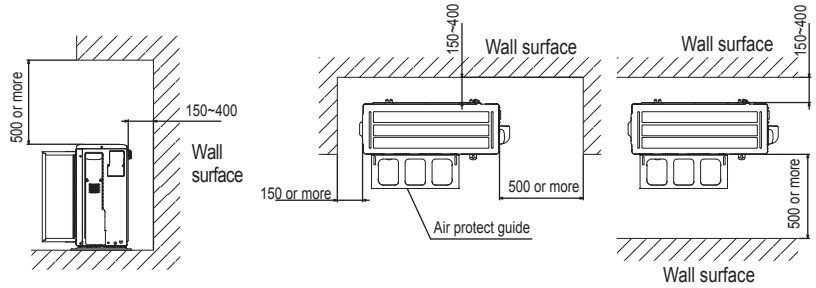
1 Accessories

Make sure that all the following parts, in addition to this manual, are in this box.

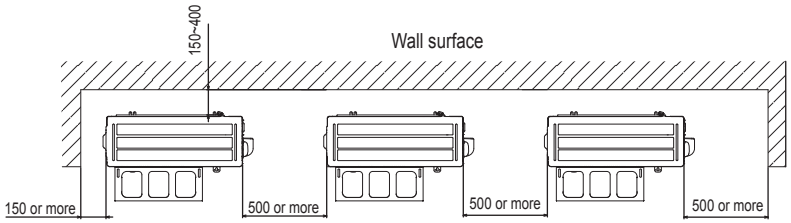
① Air protect guide	1	② Mounting screw 4×16	4	③ Washer	4	④ Spring washer	4
							

2 Requirements of installation space [Unit: mm]

(1) One unit installation:

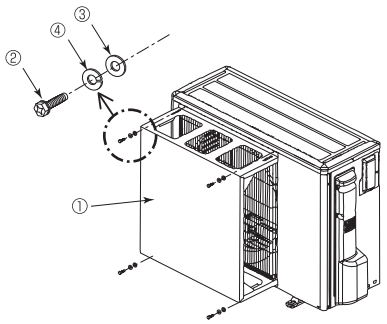


(2) Multiple unit installation: ※Installation of multiple units in series must be no more than five units.



3 Installation procedure

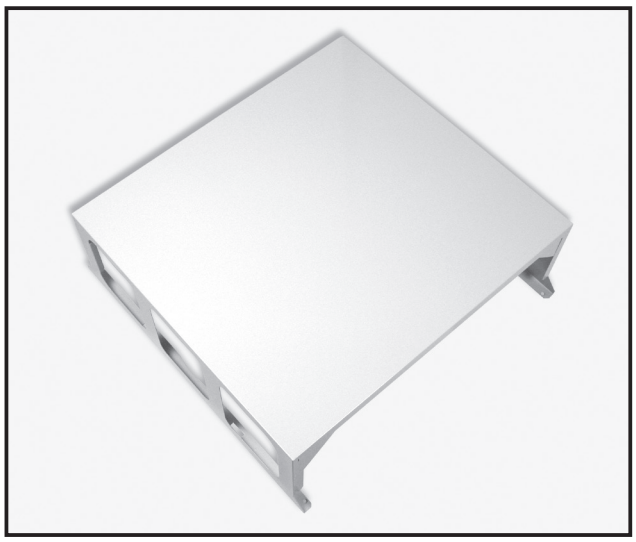
(1) Install the air protect guide ①on the outdoor unit using washers ③, spring washers ④ and screws ②.



Air Protect Guide (for cooling at -15℃) PAC-SH63AG-E *

* model change from **PAC-SG57AG-E** from Sep 2005

Photo



Descriptions

Enables operation even when the outside temperature is low. Protect the unit from cold wind.

Applicable Models

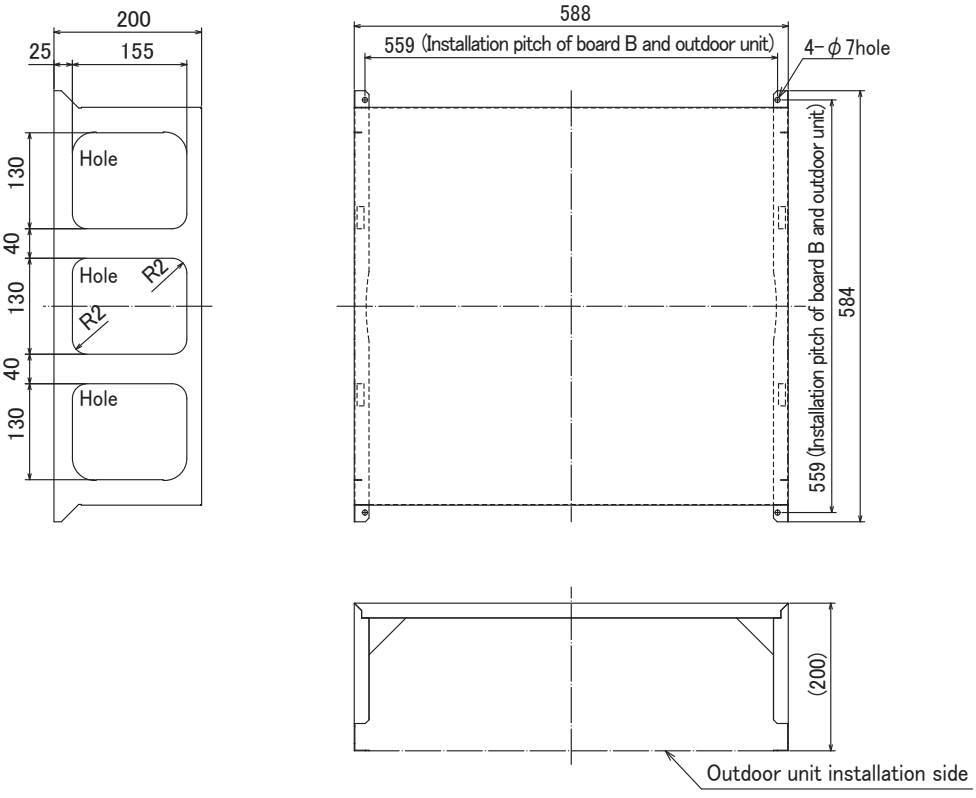
- PUHZ-SHW112/140
  2 pieces required
- PUHZ-P125/140
  2 pieces required
- PUHZ-ZRP60/71
  only 1 piece required
- PUHZ-P100
  only 1 piece required

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet
Weight		3.3kg
Accessory name x Qty. <Material/Surface treatment>		Washer faced screw (M5x15) x 4 <Iron wire (SWCH18A)/Zinc nickel plated>

Dimensions

Unit: mm (inch)



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

Note the followings when installing this guide:
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

Package air-conditioner Optional parts
Installation Manual for Air Guide

Always observe for safety

●Carefully read this section 「Always observe for safety」, and securely install the optional parts.
●Be sure to observe the cautions described here: They include critical contents for safety.
●The following indications show the classifications for danger, and possible consequences following incorrect handling.

⚠WARNING	Incorrect handling could lead to death or serious injury.
⚠CAUTION	Incorrect handling could lead to injury or damage to house and household articles.

●After installation, perform a test run and make sure that there is no abnormality, and ask your customer to keep this installation sheet with the instruction manual at all times. Also ask the customer to transfer these manuals to a new user if the user changes.

⚠WARNING

Ask the dealer or specialist for installation.
●If installed incorrectly by user, water leak, electric shock, fire, etc. could result.

Carefully install the panel according to this installation sheet.
●Incorrect installation could cause water leak, electric shock, fire, etc.

Before performing installation (moving) and electrical work

⚠CAUTION

Do not place polyethylene bags in reach of young children.
●Putting them over the head will block breathing passages, which could result in suffocation.

If electrical work is necessary, use only specified electric wires adapted with current capacity.
●Use of unsuitable wire could cause electric leak, overheating or fire.

Securely apply heat-insulation to refrigerant pipe so that no condensation occurs.
●If heat-insulation is inadequate, condensation could occur on the surface of pipes and dewdrops could accumulate on ceiling, floor or important goods.

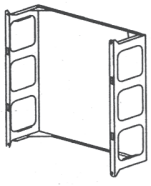
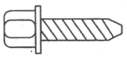
Securely perform drain piping work according to the installation manual so that no condensation occurs.
●If piping work is incorrect, water leak may occur and ceiling, furniture, etc may get wet.

This Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as in a typhoon, wind blowing through tall buildings, etc., directly strike the at air outlet.
In addition, installation of this product is necessary when cooling operation is to be performed in outside-air temperature of −5℃ or lower (down to −15℃).
Pay attention to the following points when installing this product:
1) To eliminate the effects of external wind, be sure to install this unit with back surface facing wall side.
2) Do not install this unit in orientation or site where wind directly blows at the back of the unit.
3) Installing of this product will reduce the capacity of the unit (approx. 2 or 3%) and increase the noise of outdoor unit (approx. 1 or 2dB).
4) Do not use this product where there is any obstacle at either side or above the outdoor unit (discharged air will be blocked). This may cause a short cycle.

When 2-fan type outdoor unit is used, note that two sets of this product will be necessary.

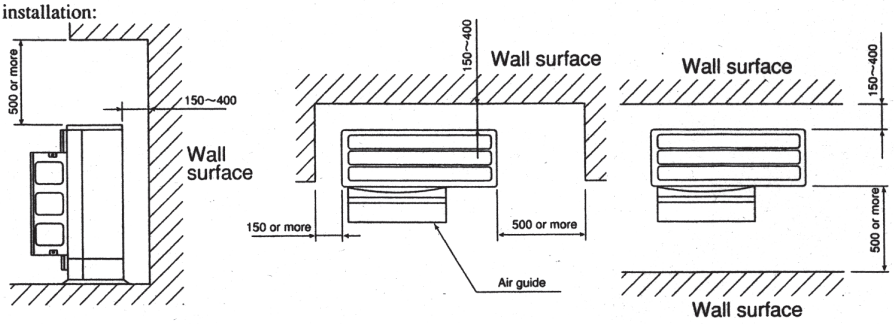
1 Checking parts

Make sure that all the following parts, in addition to this manual, are in this box:

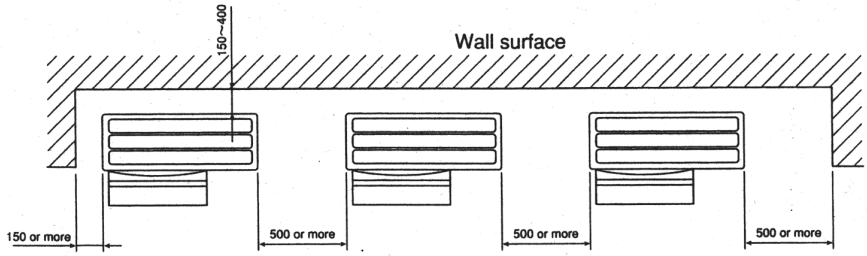
①Air Guide	1	②Mounting screw 5×15	4	③Washer	4	④Spring washer	4
							

2 Requirements of space for installation

(1) One unit installation:

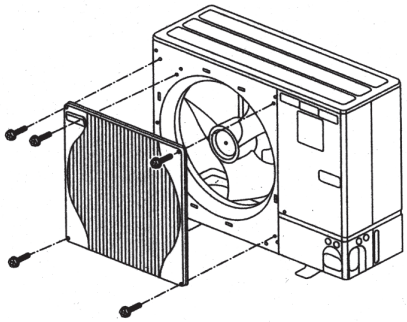


(2) Multiple unit installation: ※Installation of multiple units in series must be no more than five units.

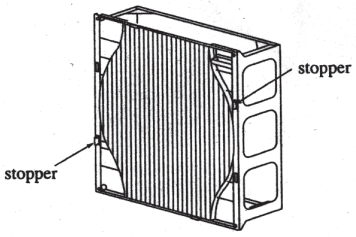


3 Installation procedure

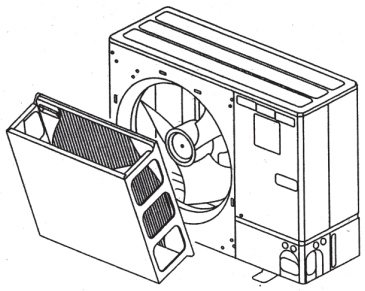
(1) Remove the fan guard fixing screws (five screws on circumference), and then remove the fan guard.



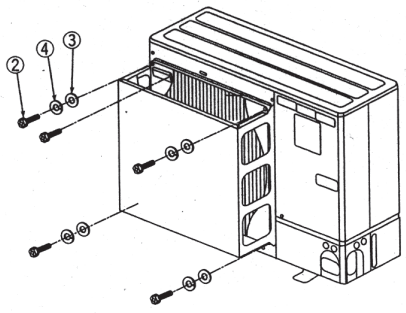
(2) Insert the fan guard stoppers into the square holes on the air guide.



(3) Insert the stoppers (four locations) of the fan guard into the installation holes on the outdoor unit.

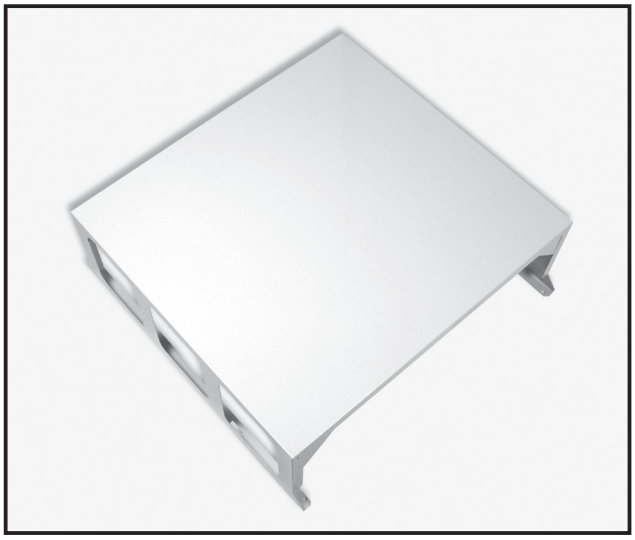


(4) Install the air guide on the outdoor unit using washers (3), spring washers (4) and screws (2).
* Use existing screws for handle section.



OPTIONAL PARTS

Photo



Descriptions

Enables operation even when the outside temperature is low.
Protect the unit from cold wind.

Applicable Models

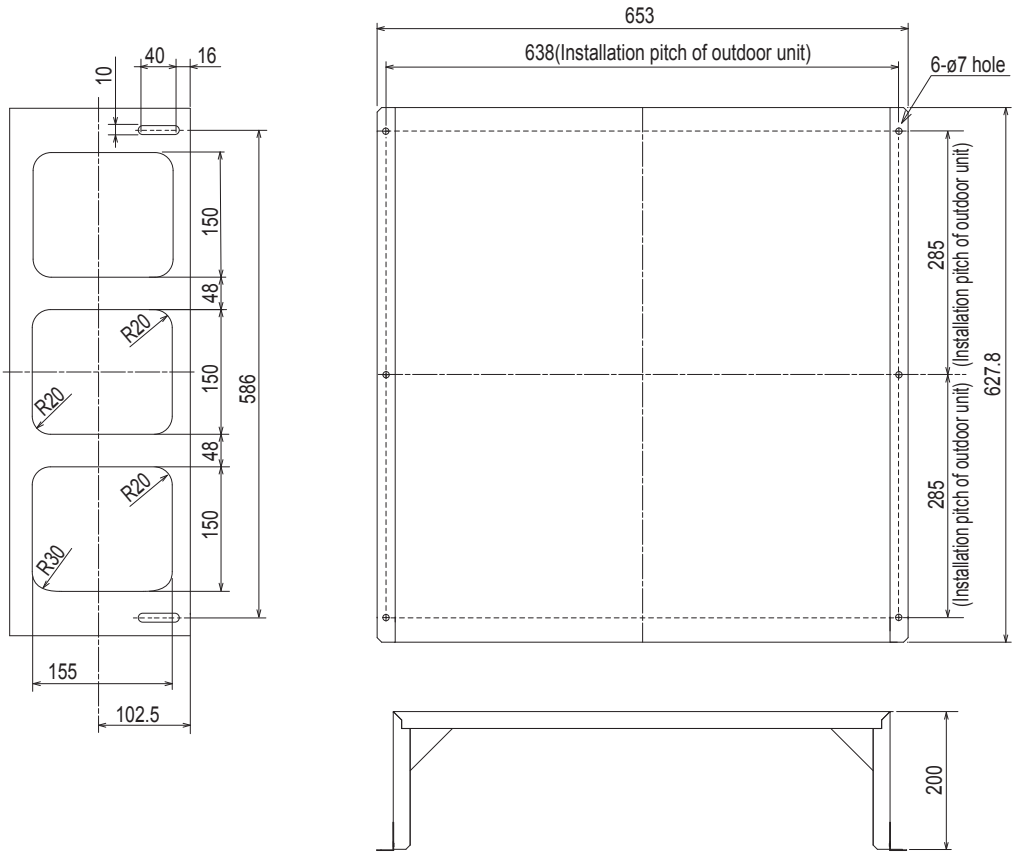
- PUHZ-ZRP100/125/140/200/250
  2 pieces required
- PUHZ-P200/250YKA
  2 pieces required

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet
Weight		3.5kg
Accessory name x Qty. <Material/Surface treatment>		Washer faced screw (M5x15) x 4 <Iron wire (SWCH18A)/Zinc nickel plated>

Dimensions

Unit: mm (inch)



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

Note the followings when installing this guide:
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

Always observe for safety

●Carefully read this section 「Always observe for safety」, and securely install the optional parts.
●Be sure to observe the cautions described here: They include critical contents for safety.
●The following indications show the classifications for danger, and possible consequences following incorrect handling.

⚠WARNING	Incorrect handling could lead to death or serious injury.
⚠CAUTION	Incorrect handling could lead to injury or damage to house and household articles.

●After installation, perform a test run and make sure that there is no abnormality, and ask your customer to keep this installation sheet with the instruction manual at all times. Also ask the customer to transfer these manuals to a new user if the user changes.

⚠WARNING

Ask the dealer or specialist for installation.
●If installed incorrectly by user, water leak, electric shock, fire, etc. could result.

Carefully install the panel according to this installation sheet.
●Incorrect installation could cause water leak, electric shock, fire, etc.

Before performing installation (moving) and electrical work

⚠CAUTION

Do not place polyethylene bags in reach of young children.
●Putting them over the head will block breathing passages, which could result in suffocation.

If electrical work is necessary, use only specified electric wires adapted with current capacity.
●Use of unsuitable wire could cause electric leak, overheating or fire.

Securely apply heat-insulation to refrigerant pipe so that no condensation occurs.
●If heat-insulation is inadequate, condensation could occur on the surface of pipes and dewdrops could accumulate on ceiling, floor or important goods.

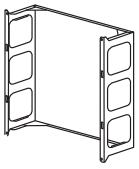
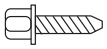
Securely perform drain piping work according to the installation manual so that no condensation occurs.
●If piping work is incorrect, water leak may occur and ceiling, furniture, etc may get wet.

This Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as in a typhoon, wind blowing through tall buildings, etc., directly strike the at air outlet.
In addition, installation of this product is necessary when cooling operation is to be performed in outside-air temperature of −5℃ or lower (down to −15℃).
Pay attention to the following points when installing this product:
1) To eliminate the effects of external wind, be sure to install this unit with back surface facing wall side.
2) Do not install this unit in orientation or site where wind directly blows at the back of the unit.
3) Installing of this product will reduce the capacity of the unit (approx. 2 or 3%) and increase the noise of outdoor unit (approx. 1 or 2dB).
4) Do not use this product where there is any obstacle at either side or above the outdoor unit (discharged air will be blocked). This may cause a short cycle.

When 2-fan type outdoor unit is used, note that two sets of this product will be becessary.

1 Checking parts

Make sure that all the following parts, in addition to this manual, are in this box:

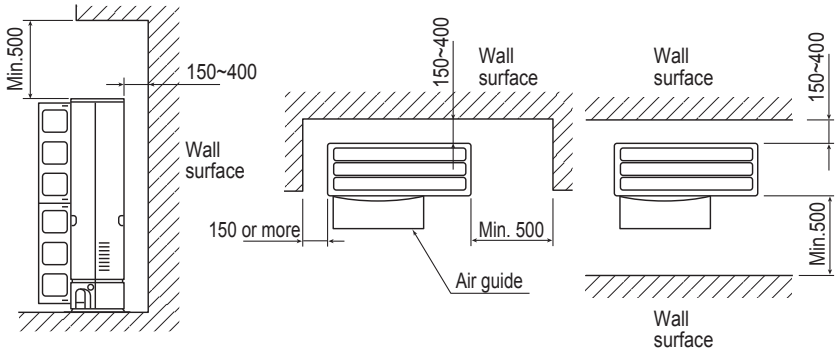
①Air Guide	1	②Mounting screw (5×15)	6	③Washer	6	④Spring washer	6
							

OPTIONAL PARTS

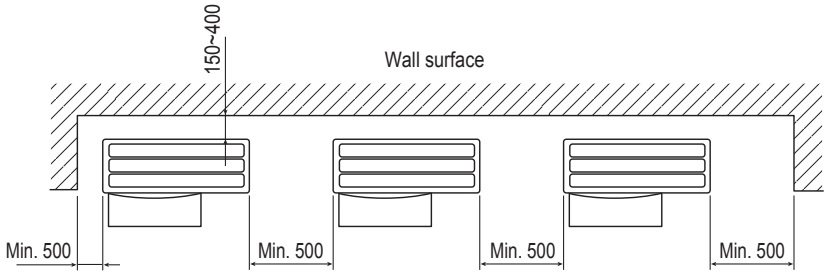
2 Requirements of space for installation

(Unit : mm)

(1)One unit installation

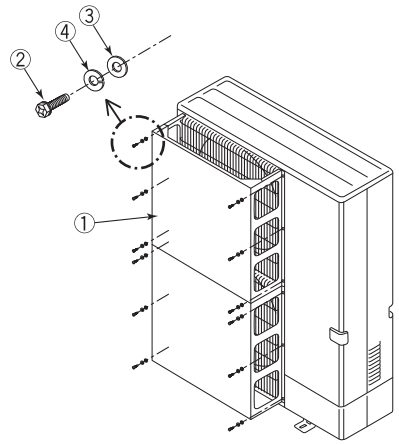


(2)Multiple unit installation : Installation of multiple units in series must be no more than 5 units.



3 Installation procedure

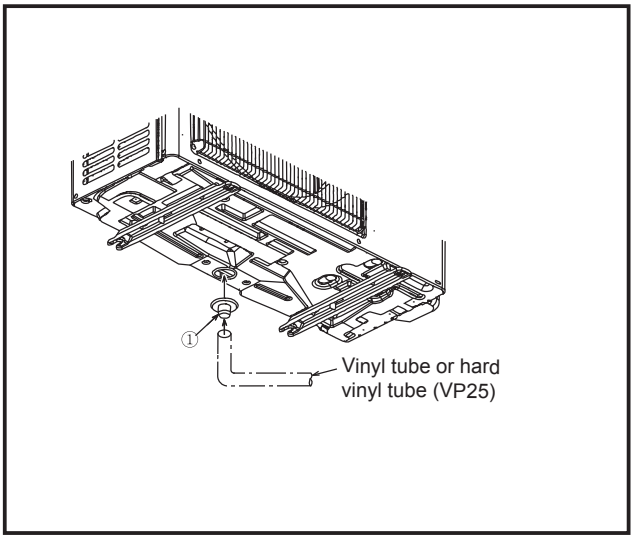
(1)Install the air guide ① on the outdoor unit using washers ③, spring washers ④ and screws ②.



Drain Socket

PAC-SJ08DS-E

Figure



Descriptions

Cap the unnecessary holes on the outdoor unit (bottom) and centralize the drainage when using a drain pipe.

Applicable Models

- PUHZ-ZRP35VKA
- PUHZ-ZRP50VKA

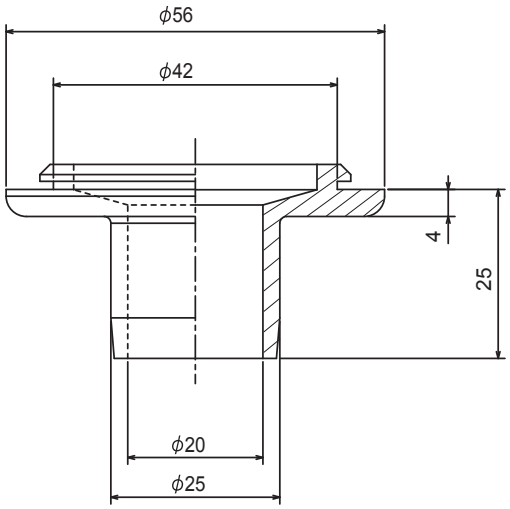
Specifications

Drain pipe	PVC VP-25 or vinyl hose (ID: 25mm)
Operating conditions	No freezing allowed (Never to be used in cold climates)
Material	EPT rubber
Component	Drain socket x 1

Dimensions

Unit: mm

Drain socket



The outdoor unit is provided with several holes for drainage at the bottom to ma
easier. The drain socket is used to close the unnecessary holes and centralize
when using the drain tube at the installation place.
Do not to use the drain socket in cold areas. The drain tube can be frozen.
※ Condensation could drop through the part fitting holes in the bottom of the ou
Use the centralized drain pan to completely prevent condensation dropping.

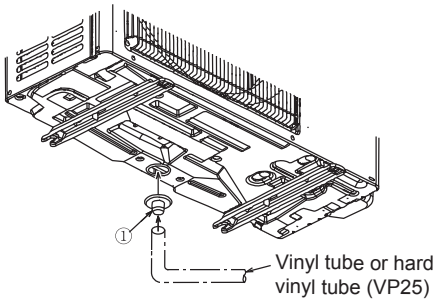
1. Accessory

①Drain socket••••••••••••1 pc

Be aware that the part shown to the left is put in the package together with the installation manual.

2. Installation procedure ☆**Prepare the adhesive in the field.**

(1) Glue the drain socket ① to the hole that is used to the drainage at the bottom of the unit with the glue (Prepare in the field).
(2) Insert a vinyl tube of which inner diameter 25 mm available commercially or a hard vinyl tube VP25 to the drain socket ①.

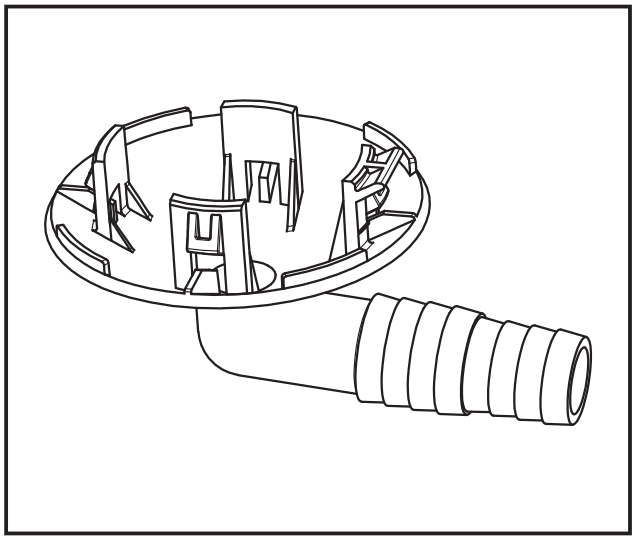


OPTIONAL PARTS

Drain Socket

PAC-SG60DS-E

Photo



Descriptions

Cap the unnecessary holes on the outdoor unit (bottom) and centralize the drainage when using a drain pipe.

Applicable Models

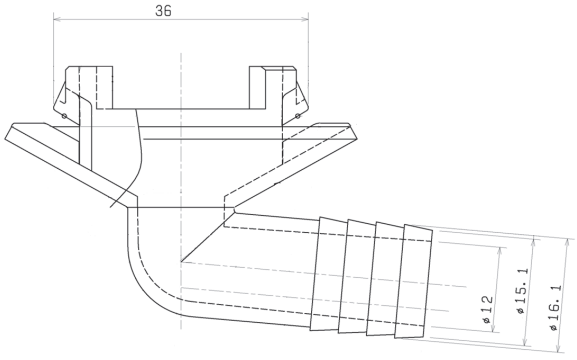
- MXZ-4E83VA
- MXZ-5E102VA
- MXZ-6D122VA

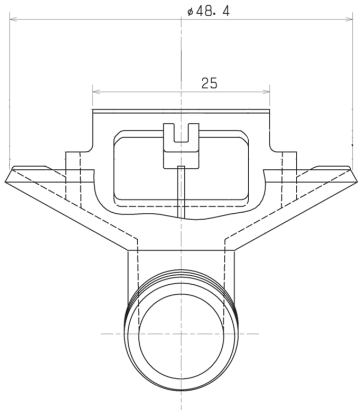
Specifications

Drain pipe	PVC VP-25 or vinyl hose (ID: 25mm)
Operating conditions	No freezing allowed (Never to be used in cold climates)
Material	EPT rubber
Component	Drain socket x 1, Drain cap x 6

Dimensions

Unit: mm





How to Use / How to Install

1. Accessories

Be aware that the following parts are put in the package together with the installation manual.

Ⓐ Drain socket ·····1 pc	Ⓑ Drain cap ·····6 pcs
	

2. Installation procedure for drain unit ☆**Prepare the adhesive in the field.**

Install the unit horizontally.

(1)Please perform the drain piping work only when draining from one place.

❶ Provide drain piping before indoor and outdoor piping connection.

❷ Attach the drain socket Ⓐ to one of the several drain holes. Fix the drain socket Ⓐ into the drain hole of the base using the catches to secure it in place.

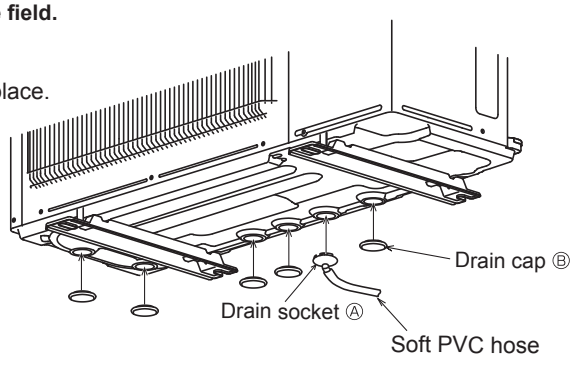
❸ Connect the soft PVC hose I.D.15 ㎜ as shown in the illustration.

❹ Make sure to provide drain piping with a downhill grade for easy drain now.

(2)Glue the drain caps Ⓑ to close all the other unnecessary holes with the glue (Prepare in the field).

<Note>Apply the glue securely, as the glue (Prepare in the field) will work as seal to prevent water from leaking.

<Note>Use the adhesive for the rubber and metal.

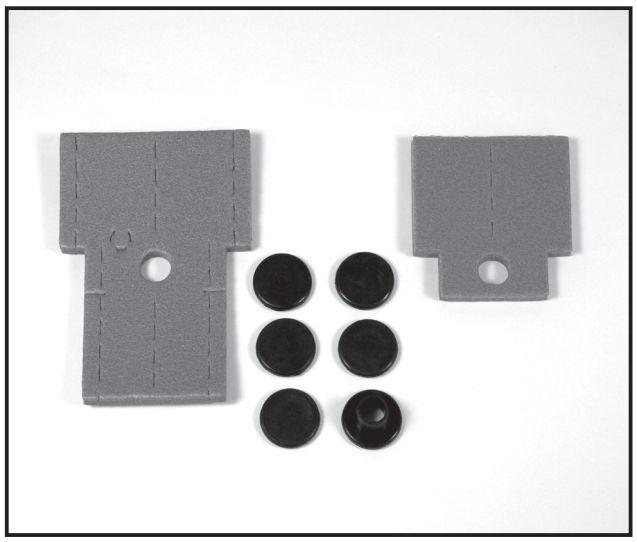


OPTIONAL PARTS

Drain Socket

PAC-SG61DS-E

Photo



Descriptions

Cap the unnecessary holes on the outdoor unit (bottom) and centralize the drainage when using a drain pipe.

Applicable Models

- PUHZ-ZRP60/71/100/125/140/200/250
- PUHZ-P100/125/140/200/250

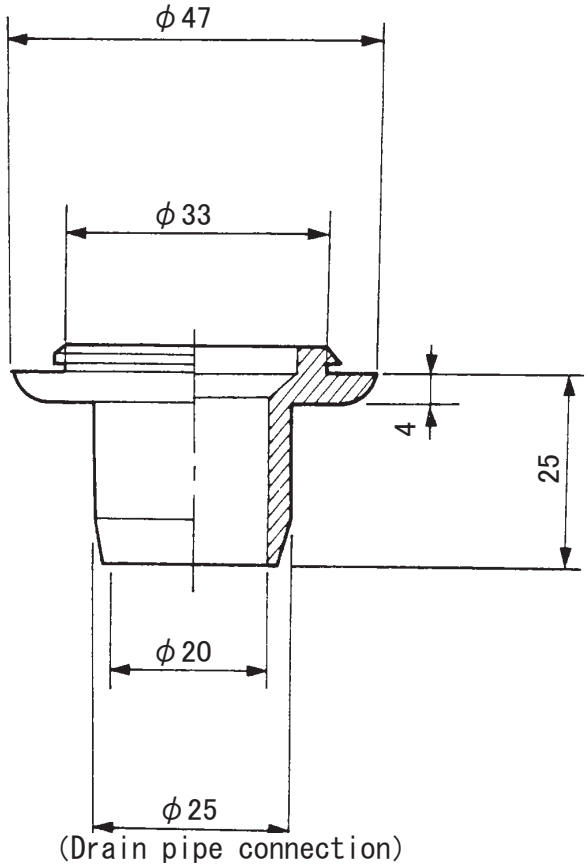
Specifications

Drain pipe	PVC VP-25 or vinyl hose (ID: 25mm)
Operating conditions	No freezing allowed (Never to be used in cold climates)
Material	EPT rubber
Component	Drain socket x 1, Drain cap x 5 Heat insulator x 3 (1 for liquid pipe, 1 large and 1 small insulator for gas pipe), Band x 8

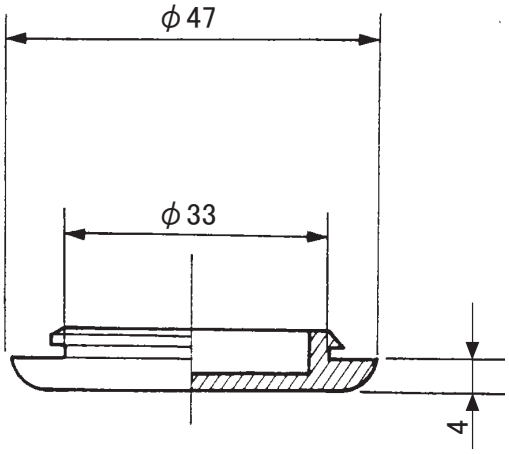
Dimensions

Unit: mm

Drain socket



Drain cap

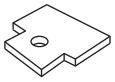
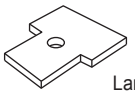
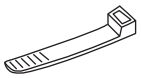


OPTIONAL PARTS

How to Use / How to Install

1 Accessory

Make sure that the following parts are put in the package.

①Drain socket ····· 1 pcs	②Drain cap ····· 5 pcs	
		
③Insulation part (for liquid pipe) ···· 1 pc	④Insulation part (for gas pipe) ····· 1 pc	⑤Band ····· 8 pcs
 Small size	 Large size	

2. Installation method for drain unit ☆Prepare the adhesive in the field.

(1) Glue the drain socket ① to the hole that is used to centralize the drainage among several holes at the bottom of the unit with the glue (Prepare in the field).

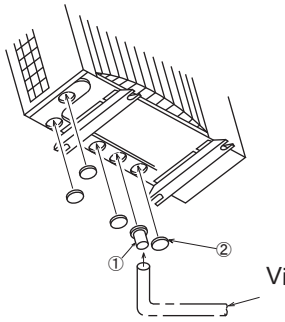
(2) Glue the drain caps ② to close all the other unnecessary holes with the glue (Prepare in the field).

〈Note〉 Apply the glue securely, as the glue (Prepare in the field) will work as seal to prevent water from leaking.

〈Note〉 Use the adhesive for the rubber and metal.

〈Recommended product〉 Supper X series made by CEMEDINE CO., Ltd.

(3) Insert a vinyl tube of which inner diameter 25 mm available commercially or a hard vinyl tube VP25 to the drain socket ①.



3. Installation method for insulation parts

Install the insulation parts to stop valve of the outdoor unit.

※The insulation parts should be installed after the tube has been connected to the unit.

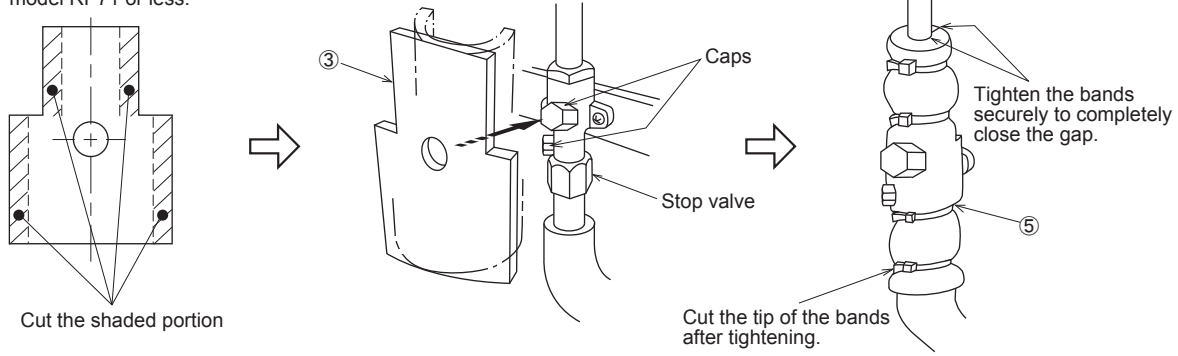
※Some units are provided with a check valve near stop valve. In this case, cut the insulation parts ③ and ④ so that they will fit the stop valve properly.

(1) Install the insulation part ③ with 2 holes to the liquid pipe side so that the holes fit the valve caps and cover the stop valve entirely.

(2) Fix the insulation part ③ securely with bands ⑤.

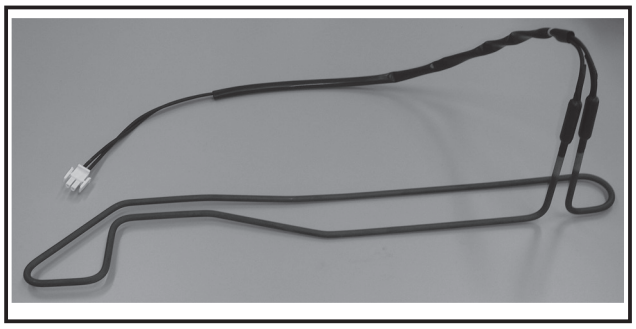
Install the other insulation part ④ to the gas pipe side with the same procedure.

・Cut both ends of the insulation part ⑤ for gas tube side for the model RP71 or less.



Freeze-prevention heater (for drain pan) **MAC-643BH-E**

Photo



Descriptions

It is freeze-prevention heater for the outdoor unit of the air conditioner.

Applicable Models

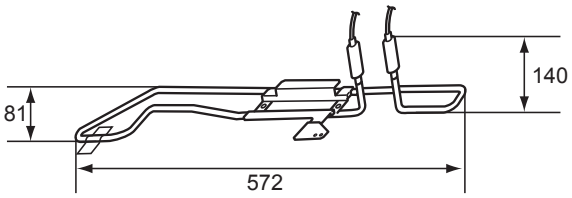
- MUZ-EF42VE
- SUZ-KA25VA5
- SUZ-KA35VA5

Specifications

Rated voltage	230 V 50 Hz
Power consumption	130 W

Dimensions

Unit: mm



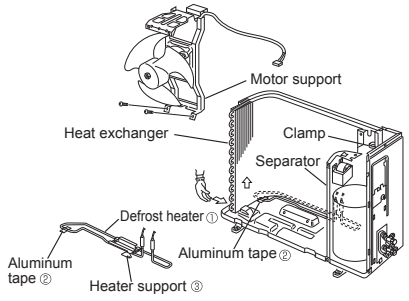
Components

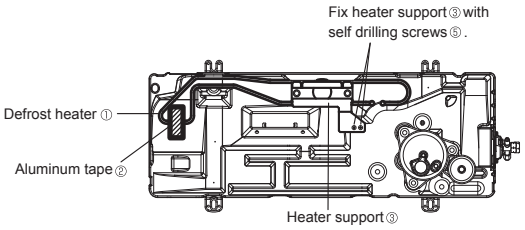
①	Defrost heater	1	⑤	Self drilling screw	2
②	Aluminum tape	1	⑥	Insulation	1
③	Heater support	1	⑦	Wiring diagram	1
④	Cable tie	1	⑧	Spec label	1

How to Use / How to Install

1. INSTALLING THE HEATER

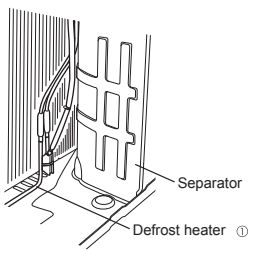
(1) Hold the left lower side of the heat exchanger, and slightly lift up the heat exchanger.
(2) Insert the defrost heater ① under the heat exchanger, and align it with the groove on the base.
After positioning the defrost heater ①, secure it to the base with the aluminum tape ②.
In order to fix the defrost heater to the base, fix the heater support ③ to the base with 2 self drilling screws ⑤.
(3) Put the heat exchanger back in place, and install the motor support and the propeller fan. (Refer to the figure below for details.)

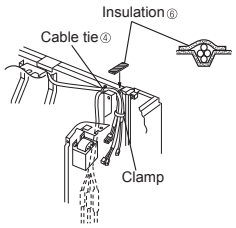




2. FIXING THE WIRES

(1) Place the lead wires of the defrost heater ①, fan motor, and ambient temp. thermistor as shown in the figure below. Secure them with the cable tie ④.
＊If the lead wires slacken, there is a possibility that they touch the propeller fan.
Be sure to secure the wires with the cable tie ④ and a clamp for safety.
Cut off the surplus of the cable tie ④.
(2) Apply the insulation ⑥ on the place indicated in the figure below.
Secure all the wires tightly with the clamp.
(3) Install the elect assy on the fixed place.
Connect the lead wires from the defrost heater ① to CN 722 on the inverter P.C. board.

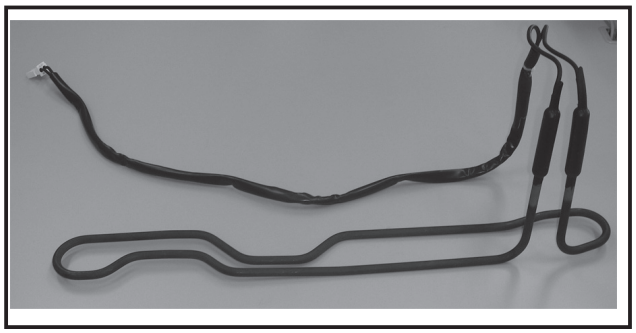




OPTIONAL PARTS

Freeze-prevention heater (for drain pan) **MAC-644BH-E**

Photo



Descriptions

It is freeze-prevention heater for the outdoor unit of the air conditioner.

Applicable Models

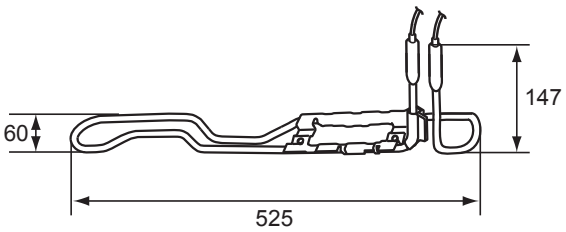
- MUZ-EF50VE
- SUZ-KA50VA5

Specifications

Rated voltage	230 V 50 Hz
Power consumption	120 W

Dimensions

Unit: mm



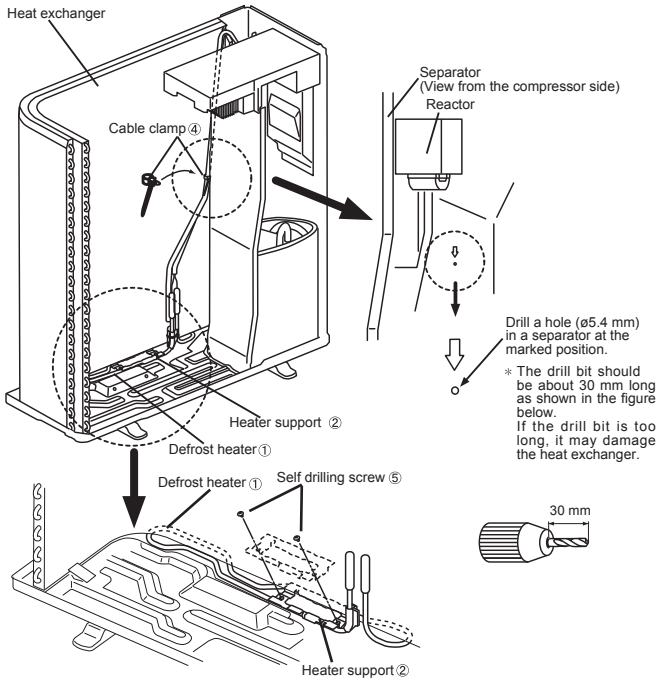
Components

①	Defrost heater	1	⑤	Self drilling screw	2
②	Heater support	1	⑥	Wiring diagram	1
③	Insulation	1	⑦	Spec label	1
④	Cable clamp	1			

How to Use / How to Install

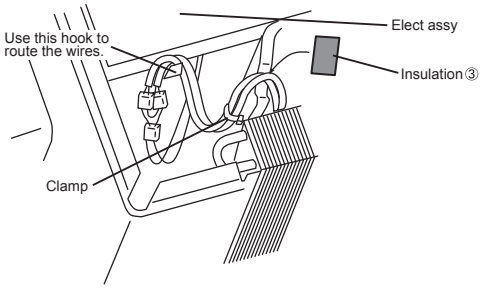
1. INSTALLING THE HEATER

(1) Hold the left lower side of the heat exchanger, and slightly lift up the heat exchanger.
(2) Insert the defrost heater ① under the heat exchanger, and align it with the groove on the base.
In order to fix the defrost heater to the base, fix the heater support ② to the base with 2 self drilling screws ⑤ .
(3) Route the lead wires of the defrost heater①, as shown in the figure below.
Tightly secure them with the cable clamp④ .
*If the lead wires slacken, they may touch the propeller fan. Be sure to secure the wires with the cable clamp ④ for safety.



2. FIXING THE WIRES

(1) Install the motor support.
(2) Tightly secure all the lead wires of the defrost heater①, the motor, and the ambient thermistor with a clamp as shown in the figure below.
(3) Apply the insulation on ③ the place indicated in the figure below.
(4) Connect the lead wires of the defrost heater ① to the inverter P.C. board (CN722).

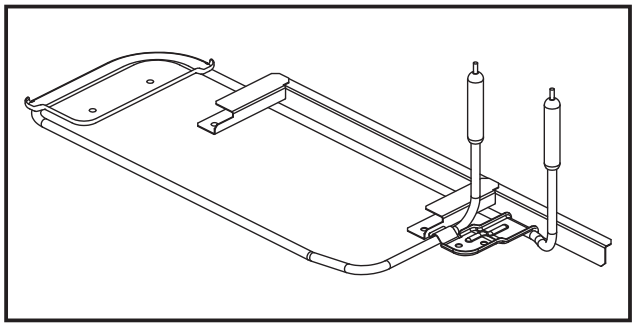


OPTIONAL PARTS

Base Heater

PAC-645BH-E

Figure



Descriptions

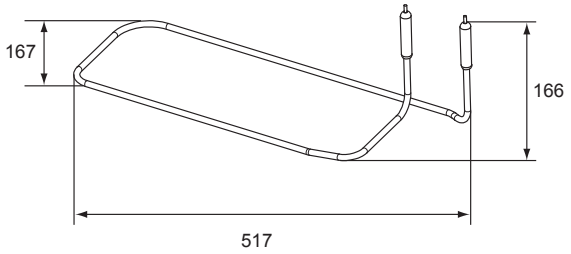
It is freeze-prevention heater for the outdoor unit of the air conditioner.

Applicable Models

- MXZ-4E83VA
- MXZ-5E102VA
- MXZ-6D122VA

Dimensions

Unit: mm

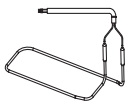
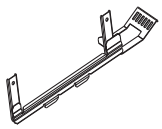


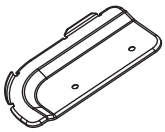
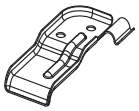
Specifications

Rated voltage	230 V 50 Hz
Power consumption	80 W

Components

This package includes the following parts besides this installation sheet.

① base heater	1	② heater guard*	1	③ screws 5×12	8	④ cable ties	2	⑤ fasteners	2
									

⑥ spec label	1	⑦ base heater support(1)	1	⑧ base heater support(2)	1	⑨ clamp	1
							

* Refer to 4 Mounting the heater guard

How to Use / How to Install

1 Preparation

It is easier to mount the base heater before installing the outdoor unit.
- Make sure that the main power supply to the unit is OFF.
- Do not lose the removed screws. Many screws will be removed to install the base heater.
- Eliminate dust, dirt, etc.

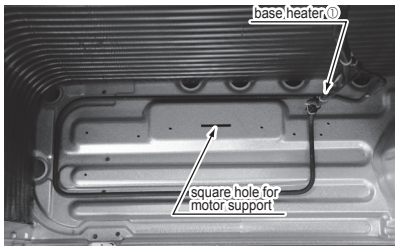
2 Preparation for mounting the base heater

Before mounting the base heater, follow the procedures below to remove some parts from the outdoor unit.
NOTE: Turn OFF power supply before disassembly.

❶ Remove the screw fixing the service panel.
❷ Pull down the service panel and remove it.
❸ Remove the screws fixing the top panel.
❹ Remove the top panel.
❺ Remove the screws fixing the front panel.
❻ Remove the front panel.
❼ Removal of fan.
Remove the mounting screws for the fan. Pull the fan toward you to remove it.
❽ Removal of motor support.
Disconnect the connector of the fan motor, and remove mounting screw for the motor support.
Slightly pull the motor support toward you and lift it up to remove it.

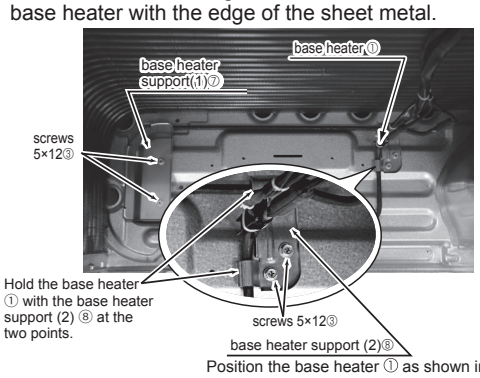
3 Mounting the base heater

❶ Temporarily place the base heater ① along the groove of the base as shown in the photo below.



❷ Fix the base heater ① with the base heater supports ⑦, ⑧ and the screws 5×12 ③.

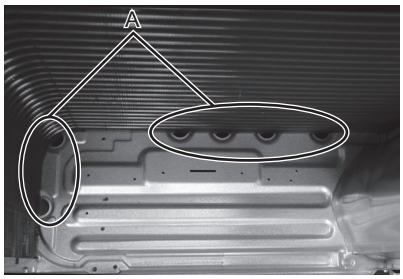
※ Be careful not to damage the lead wire and surface of the base heater with the edge of the sheet metal.



Position the base heater ① as shown in the photo above.

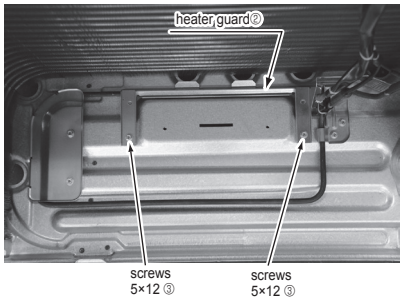
4 Mounting the heater guard

When you see the holes A as in the photo below, install the heater guard ②.

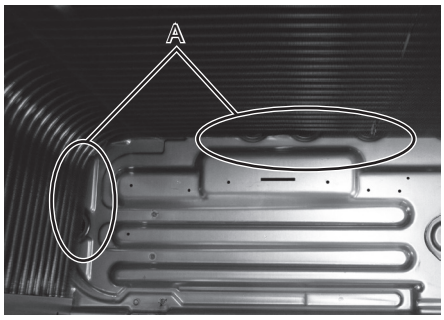


Place the heater guard ② as shown in the below photo. Fix them with the screws 5×12 ③.

<After installation of the heater guard ②>



When the holes A are covered as in the right photo, do not install the heater guard ②.



5 Mounting the motor support

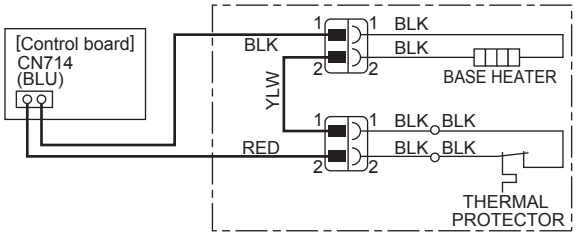
Mount the motor support.

• Make sure that the lead wire is not caught between the bottom of the motor support and the base.

6 Securing the lead wires

Wiring diagram

Connect the lead wires according to the wiring diagram on the right.

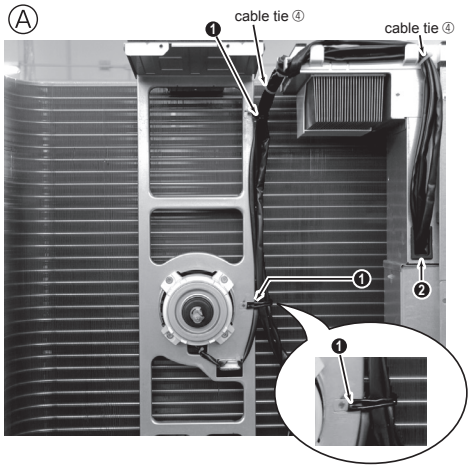


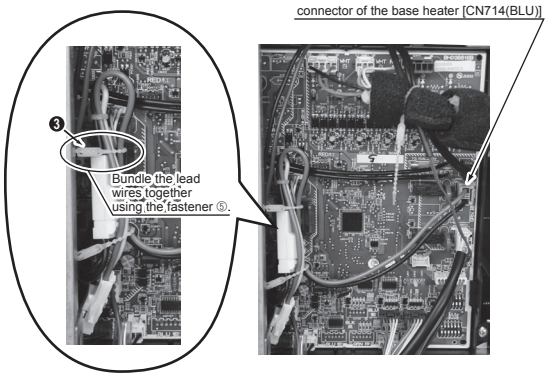
OPTIONAL PARTS

< In case of UNIT size H796 × W950 × D330 > ··· Ⓐ

❶ Bundle the lead wires of the base heater and the fan motor together with clamps.
• Secure the lead wires so they will not interfere with the propeller fan.
❷ Pass the lead wires through the rubber parts hole on the metal parts of the electrical box toward the electrical box.
※ Fix the lead wires between the motor support and the rubber parts hole with the cable ties ④.
❸ After connecting the lead wires, bundle the extra lead wires together and secure them with the fastener ⑤.
※ Arrange the lead wires so that they do not touch the service panel.

Ⓐ

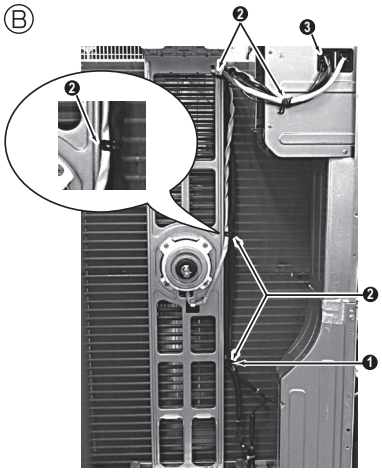


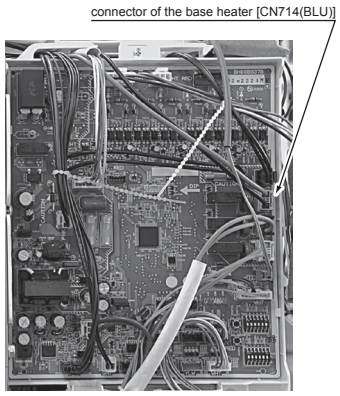


< In case of UNIT size H1048 × W950 × D330 > ··· Ⓑ

❶ Fix the clamp ⑨ on the right side of the motor support with screw 5×12 ③.
❷ Bundle the lead wires of the base heater and the fan motor together with clamps.
• Secure the lead wires so they will not interfere with the propeller fan.
❸ Pass the lead wires through the rubber parts hole on the metal parts of the electrical box toward the electrical box.
※ Arrange the lead wires so that they do not touch the service panel.

Ⓑ

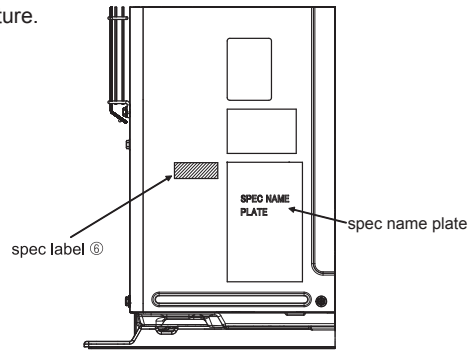




7 Attaching the spec label

Attach the spec label ⑥ by the spec name plate on the service panel.

※ This is an example picture.



8 Reinstallation

Make sure that the installation of the base heater and connections of the lead wires have been completed according to this installation sheet.
Install the removed parts in the reverse order of removal.
• Tighten the propeller fan with a torque of 5.7±0.3N•m[4.2±0.2ft-lbs](57±3kgf•cm).
• Rotate the propeller fan and make sure that the base heater and the lead wires do not interfere with the movement of propeller fan.

⚠WARNING

Mount the outer panels securely. Incomplete installation may result in electric shock and fire caused by dust, water, etc.

Photo

Descriptions

A drain pan for the drain water generated from the outdoor unit.

Applicable Models

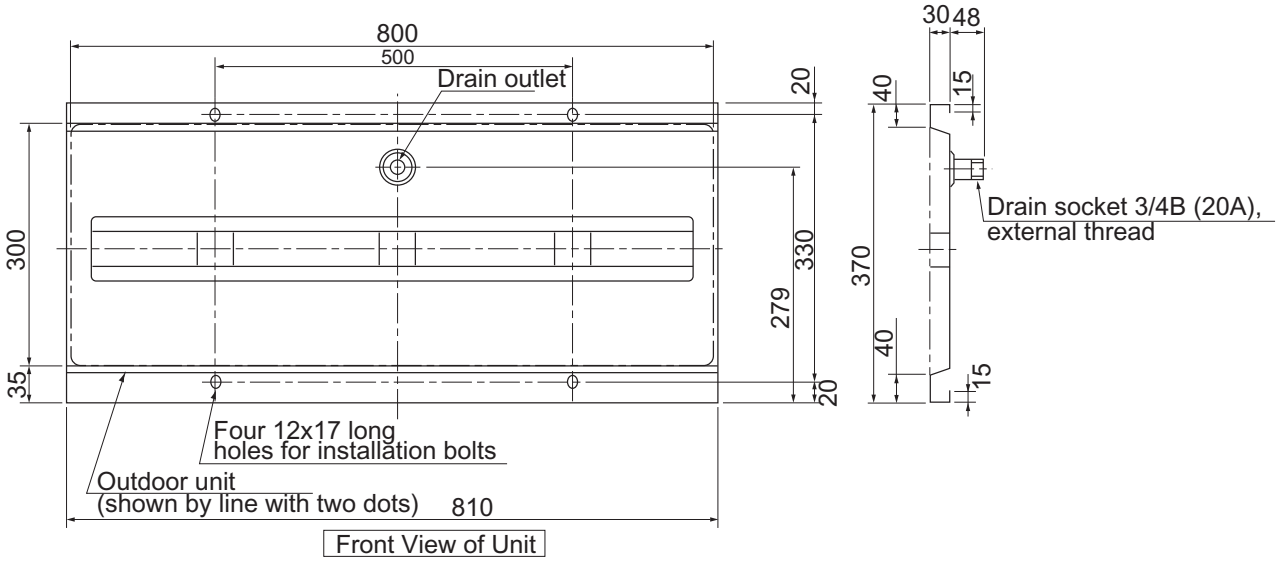
- PUHZ-ZRP35VKA
- PUHZ-ZRP50VKA

Specifications

Drain outlet size		R3/4 screw (20A)
Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet (t1.6)
Weight		6.3kg
Mounting bolt (locally prepared)		M10 (or W3/8), length: 48 mm or less extrusion from drain pan's under surface

Dimensions

Unit: mm



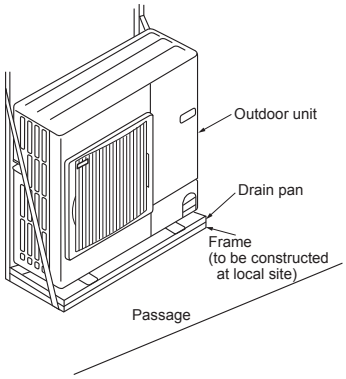
OPTIONAL PARTS

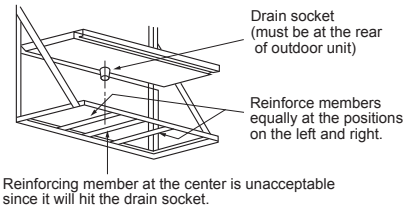
How to Use / How to Install

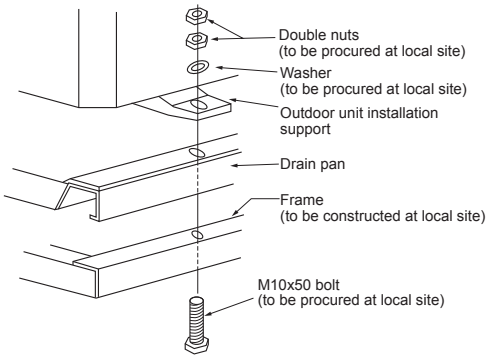
1 Installation Method

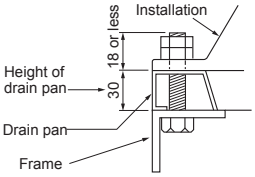
(1) When installing on installation frame

1) The installation frame must have structure and strength that can sufficiently support the outdoor unit and drain pan. Securely install the outdoor unit and drain pan so that they cannot fall or drop as a result of earthquake, strong wind, etc.
2) The drain socket of drain pan is at the center in the longitudinal direction. When constructing the installation frame, be careful that no part of the frame interferes with the socket.
3) The drain pan is tightened with the outdoor unit. Punch approx. ϕ13 holes in the installation frame at pitches to install the outdoor unit.
4) Fix the frame, drain pan and outdoor unit together to join them firmly (at the 4 points). The bolt length must be no more than 60 mm.



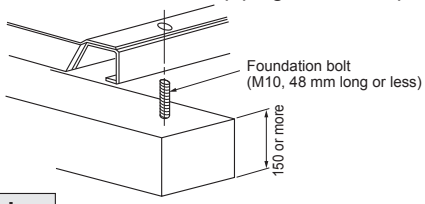


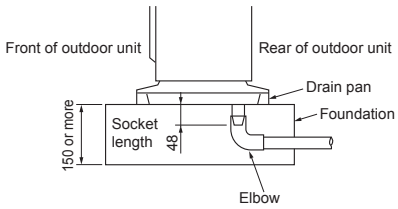




(2) When installing on foundation

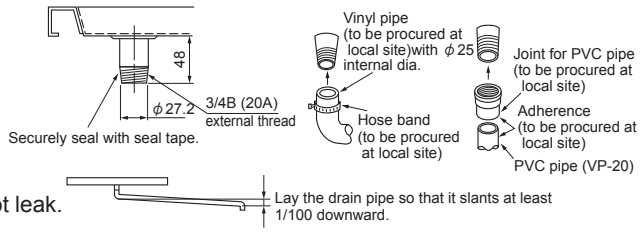
- Since concentrated drain disposal is necessary, make the foundation at least 150 mm high measured from the ground as shown in the figure below.
  If it is less than 150 mm, drain piping will not be possible because the drain socket protrudes 48 mm.





2 Drain Piping

(1) When connecting steel pipe:
Connect 3/4B internally threaded pipe.
(2) When connecting vinyl pipe (soft):
Use a ϕ25 mm internal dia. pipe, and fix the connected section with a hose band, etc.
(3) When connecting PVC pipe (hard):
Use VP-20 and connect with a joint for PVC pipe.
※In all cases, seal the socket threaded section securely with a seal tape, etc., and make sure that water does not leak.



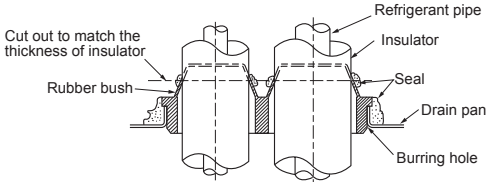
3 Refrigerant Piping

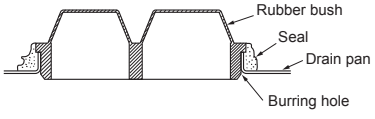
※For PAC-SG64DP-E only

- The refrigerant pipe can be laid in from four directions: front, right, rear and bottom. When laying, be sure to perform the following:

(1) Piping from the bottom:
Cut out the rubber bush to match the thickness of refrigerant pipe insulator. Pass the refrigerant pie through the rubber bush and fit it into the burring hole. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.

(2)Piping from other directions:
Block the burring hole of the bottom piping section in the drain pan with rubber bush. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.





OPTIONAL PARTS

Photo

Descriptions

A drain pan for the drain water generated from the outdoor unit.

Applicable Models

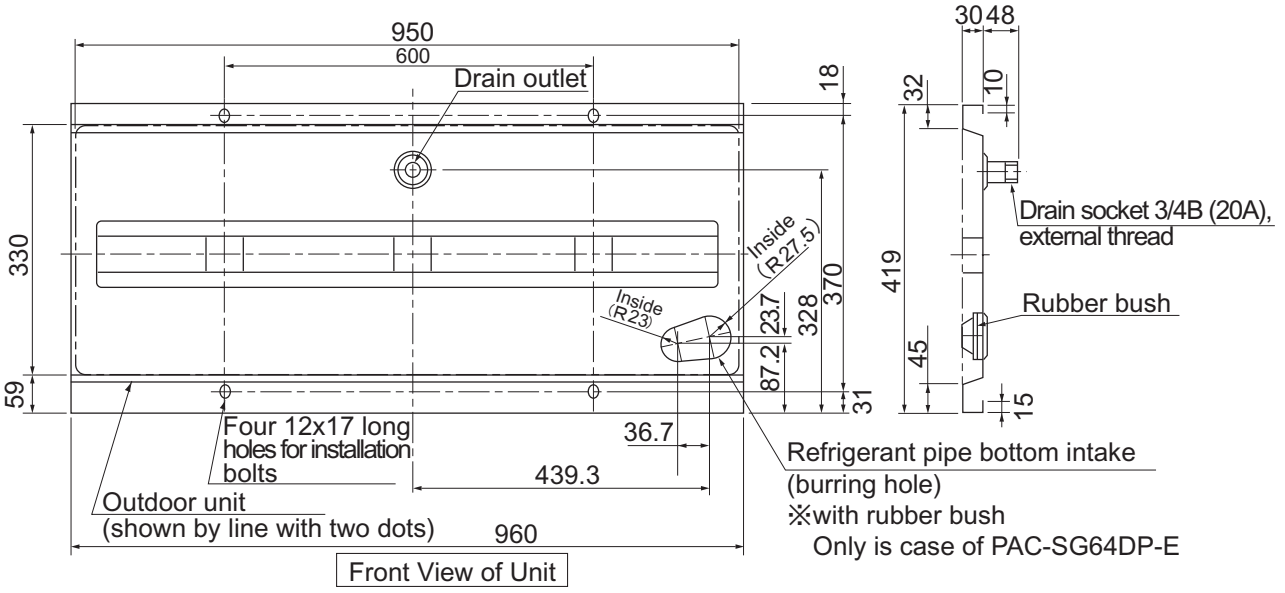
- PUHZ-ZRP60/71VHA
- PUHZ-P100/125/140

Specifications

Drain outlet size		R3/4 screw (20A)
Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet (t1.6)
Weight		7.8kg
Mounting bolt (locally prepared)		M10 (or W3/8), length: 60 mm or less extrusion from drain pan's under surface

Dimensions

Unit: mm



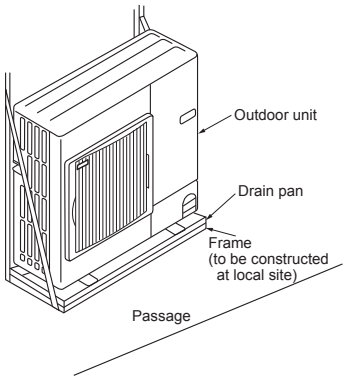
OPTIONAL PARTS

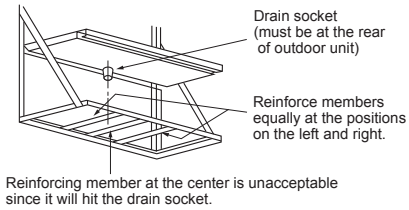
How to Use / How to Install

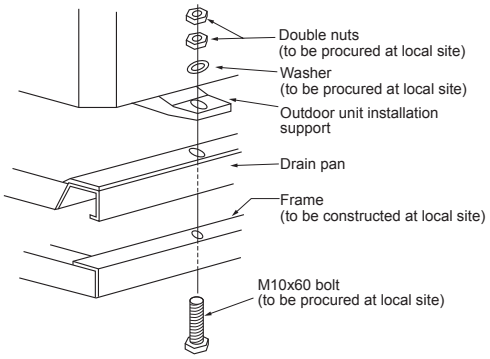
1 Installation Method

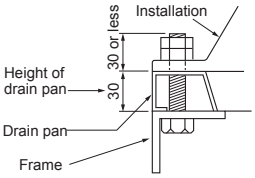
(1) When installing on installation frame

1) The installation frame must have structure and strength that can sufficiently support the outdoor unit and drain pan. Securely install the outdoor unit and drain pan so that they cannot fall or drop as a result of earthquake, strong wind, etc.
2) The drain socket of drain pan is at the center in the longitudinal direction. When constructing the installation frame, be careful that no part of the frame interferes with the socket.
3) The drain pan is tightened with the outdoor unit. Punch approx. ϕ13 holes in the installation frame at pitches to install the outdoor unit.
4) Fix the frame, drain pan and outdoor unit together to join them firmly (at the 4 points). The bolt length must be no more than 60 mm.



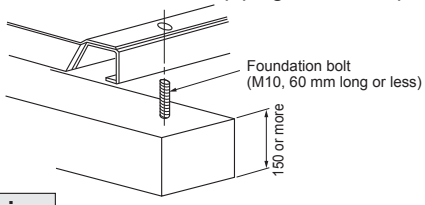


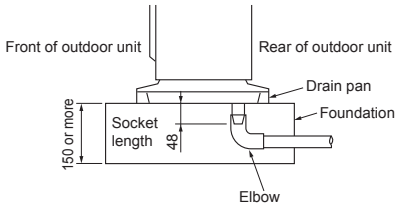




(2) When installing on foundation

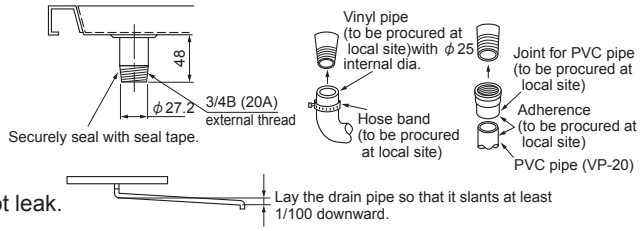
- Since concentrated drain disposal is necessary, make the foundation at least 150 mm high measured from the ground as shown in the figure below.
  If it is less than 150 mm, drain piping will not be possible because the drain socket protrudes 48 mm.





2 Drain Piping

(1) When connecting steel pipe:
Connect 3/4B internally threaded pipe.
(2) When connecting vinyl pipe (soft):
Use a ϕ25 mm internal dia. pipe, and fix the connected section with a hose band, etc.
(3) When connecting PVC pipe (hard):
Use VP-20 and connect with a joint for PVC pipe.
※In all cases, seal the socket threaded section securely with a seal tape, etc., and make sure that water does not leak.



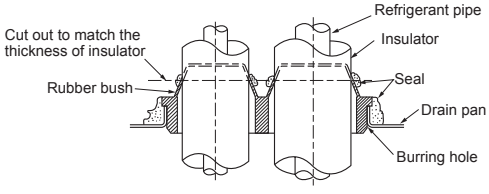
3 Refrigerant Piping

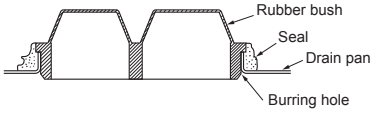
※For PAC-SG64DP-E only

- The refrigerant pipe can be laid in from four directions: front, right, rear and bottom. When laying, be sure to perform the following:

(1) Piping from the bottom:
Cut out the rubber bush to match the thickness of refrigerant pipe insulator. Pass the refrigerant pie through the rubber bush and fit it into the burring hole. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.

(2)Piping from other directions:
Block the burring hole of the bottom piping section in the drain pan with rubber bush. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.





OPTIONAL PARTS

Photo

Descriptions

A drain pan for the drain water generated from the outdoor unit.

Applicable Models

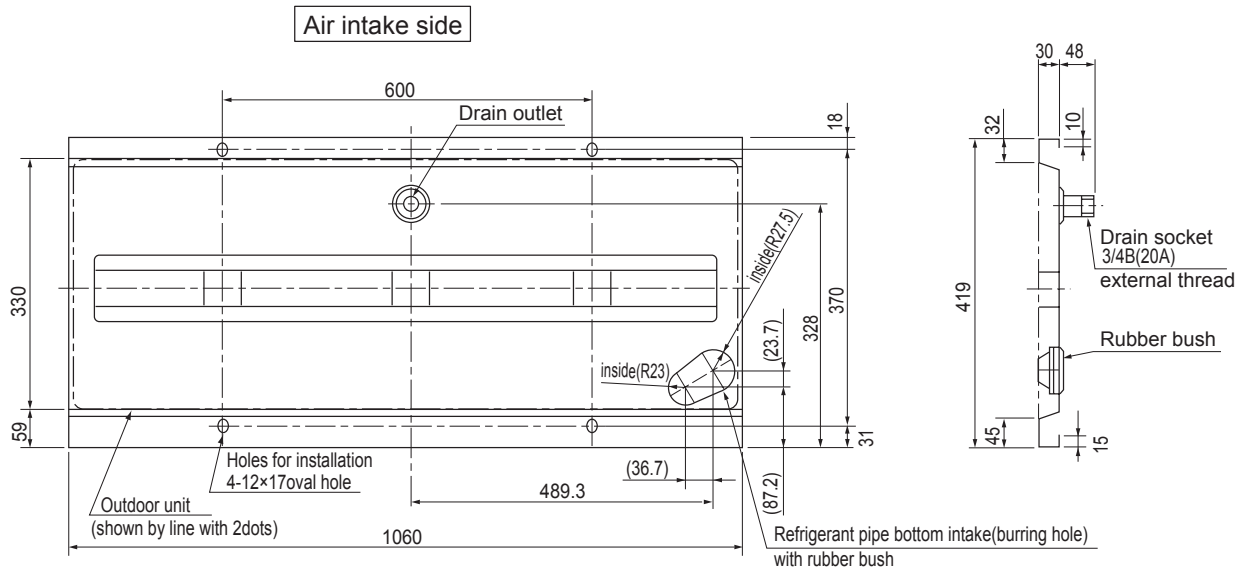
- PUHZ-ZRP100/125/140/200/250
- PUHZ-P200/250YKA

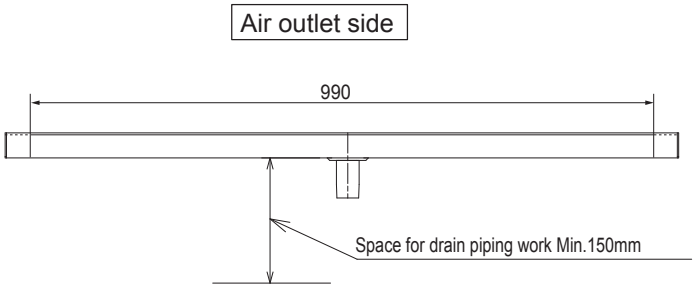
Specifications

Drain outlet size		R3/4 screw (20A)
Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet (t1.6)
Weight		8.8kg
Mounting bolt (locally prepared)		M10 (or W3/8), length: 60 mm or less extrusion from drain pan's under surface

Dimensions

Unit: mm





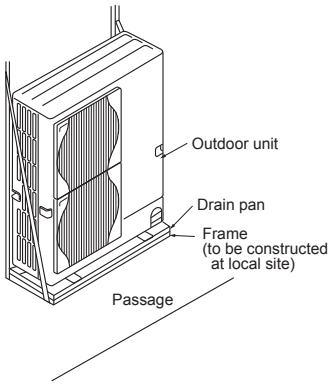
OPTIONAL PARTS

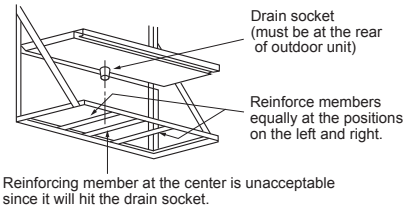
How to Use / How to Install

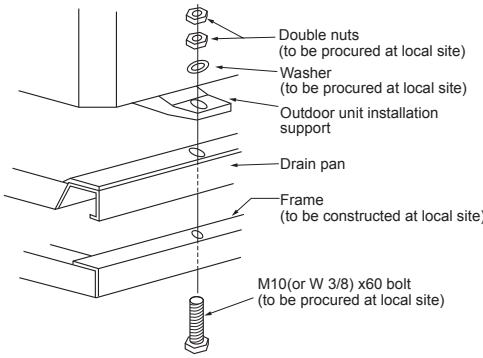
1 Installation Method

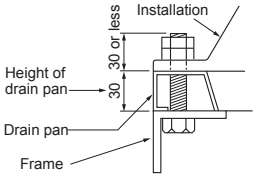
(1) When installing on installation frame

1) The installation frame must have structure and strength that can sufficiently support the outdoor unit and drain pan. Securely install the outdoor unit and drain pan so that they cannot fall or drop as a result of earthquake, strong wind, etc.
2) The drain socket of drain pan is at the center in the longitudinal direction. When constructing the installation frame, be careful that no part of the frame interferes with the socket.
3) The drain pan is tightened with the outdoor unit. Punch approx. ϕ13 holes in the installation frame at pitches to install the outdoor unit.
4) Fix the frame, drain pan and outdoor unit together to join them firmly (at the 4 points). The bolt length must be no more than 60 mm.



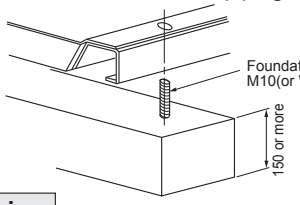


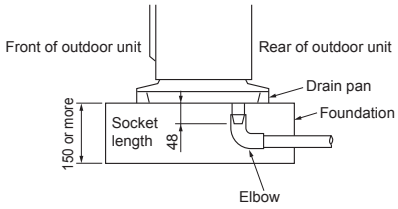




(2) When installing on foundation

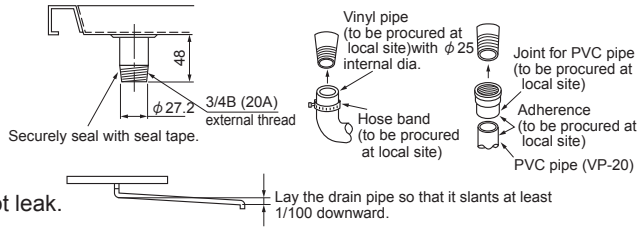
- Since concentrated drain disposal is necessary, make the foundation at least 150 mm high measured from the ground as shown in the figure below.
  If it is less than 150 mm, drain piping will not be possible because the drain socket protrudes 48 mm.





2 Drain Piping

(1) When connecting steel pipe:
Connect 3/4B internally threaded pipe.
(2) When connecting vinyl pipe (soft):
Use a ϕ25 mm internal dia. pipe, and fix the connected section with a hose band, etc.
(3) When connecting PVC pipe (hard):
Use VP-20 and connect with a joint for PVC pipe.
※In all cases, seal the socket threaded section securely with a seal tape, etc., and make sure that water does not leak.

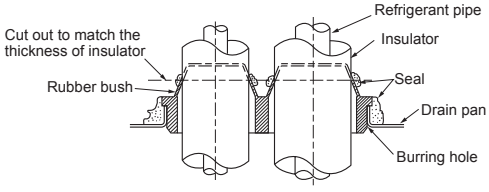


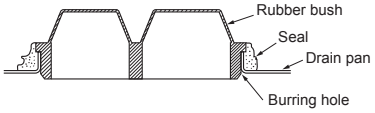
3 Refrigerant Piping

- The refrigerant pipe can be laid in from four directions: front, right, rear and bottom. When laying, be sure to perform the following:

(1) Piping from the bottom:
Cut out the rubber bush to match the thickness of refrigerant pipe insulator. Pass the refrigerant pie through the rubber bush and fit it into the burring hole. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.

(2)Piping from other directions:
Block the burring hole of the bottom piping section in the drain pan with rubber bush. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.





OPTIONAL PARTS

Descriptions

A-control MXZ models can be connected to “M-NET” through optional M-NET converter so that they can be monitored / controlled effectively and meticulously.

Applicable Models

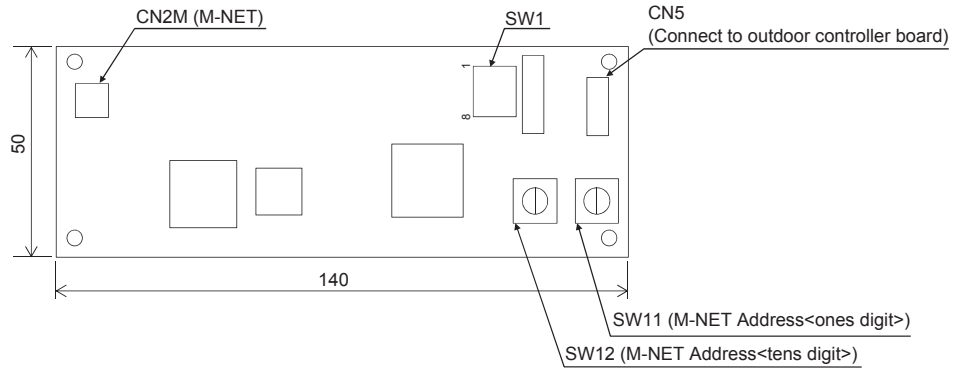
- MXZ-4E83VA
- MXZ-5E102VA
- MXZ-6D122VA
- MXZ-2E53VAHZ
- MXZ-4E83VAHZ

Specifications

Power	Supplied from power supply unit
Power consumption	0.8 W (at 30 V DC)
Operating conditions	Mounted inside the electrical utility box of outdoor unit. (Temperature: -20 to 60℃ , humidity: 90% or less (no condensation))
Weight	0.3kg

Dimensions

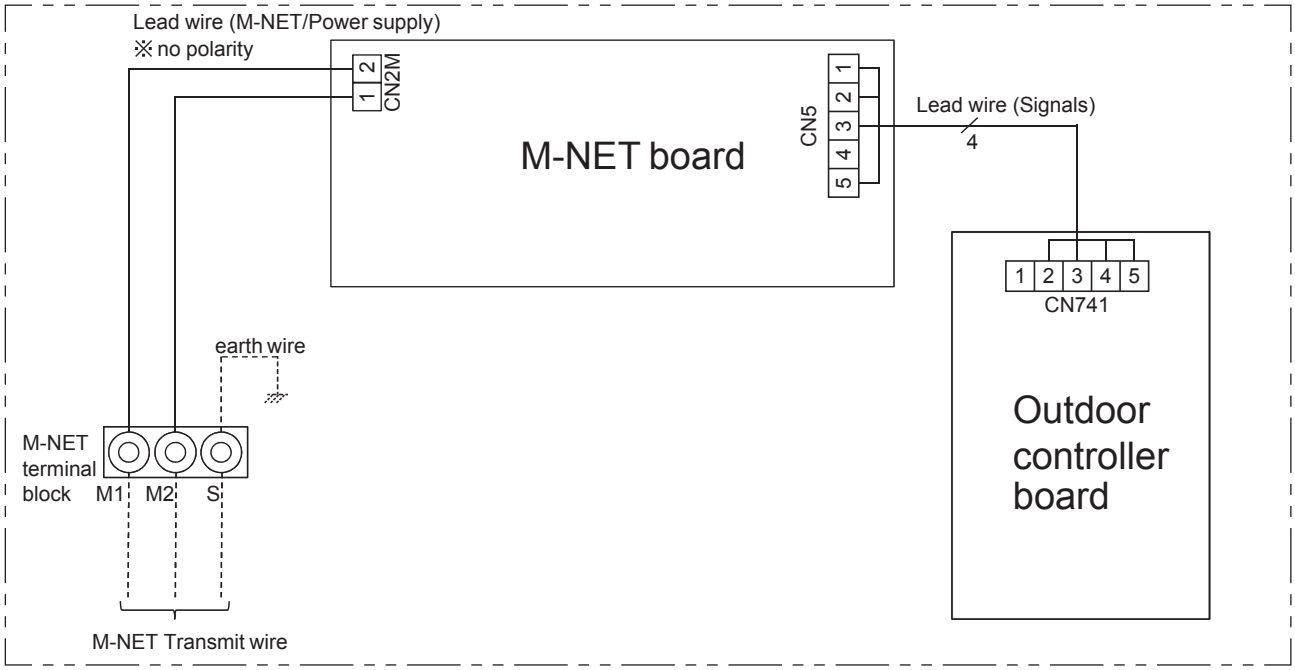
Unit: mm



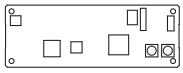
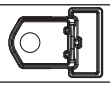
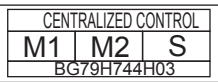
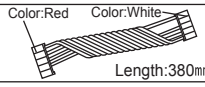
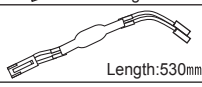
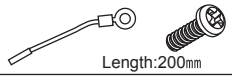
How to Use / How to Install

1. Wiring diagram

The electrical box of outdoor unit.



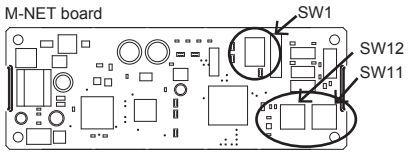
2. Parts List

No.	Description	Figure	Q'ty
①	M-NET Board		1
②	Fixture		2
③	Screw (M3×10)		2
④	Terminal block (M-NET)		1
⑤	Terminal screw (M4×25)		1
⑥	Label		1
⑦	Lead wire-A (4 wires)		1
⑧	Lead wire-B (2 wires)		1
⑨	Ground wire and screw (M4×8)		1each
⑩	Fastener		2

3. Switch setting

Before installation

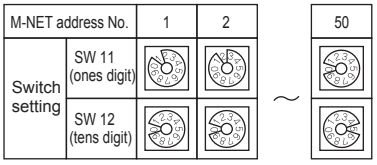
Set M-NET address on M-NET board in advance before installing on the electrical box.



(1) M-NET head address setting

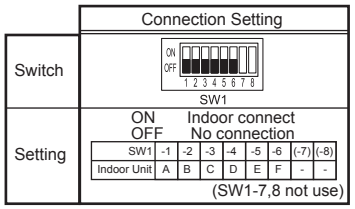
The setting should be done by rotary switches SW11 and SW12 on M-NET board. (Factory settings are all Zero)

Make sure to set M-NET address within the range of 01 to 50. When installing two or more outdoor units, do not use the same number more than once for M-NET address.



(2) Indoor unit connection switch setting

Set each indoor unit to ON or OFF with SW1.



♦M-NET address setting

Starting with the M-NET head address set with SW11 and SW12, the M-NET address is automatically allocated in numerical order to each indoor unit which is connected.

OPTIONAL PARTS

Descriptions

A-control Mr. SLIM models can be connected to "M-NET" through optional M-NET converter so that they can be monitored / controlled effectively and meticulously.

Applicable Models

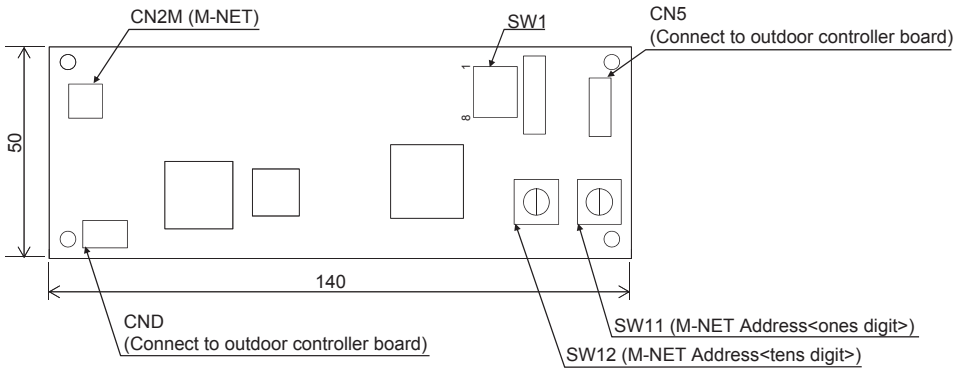
- PUHZ-ZRP35VKA
- PUHZ-ZRP50VKA

Specifications

Power	Supplied from control board
Power consumption	0.6W (at 5V DC, 12V DC)
Operating conditions	Mounted inside the electrical utility box of outdoor unit. (Temperature: -20 to 60℃ , humidity: 90% or less (no condensation))
Weight	0.3kg

Dimensions

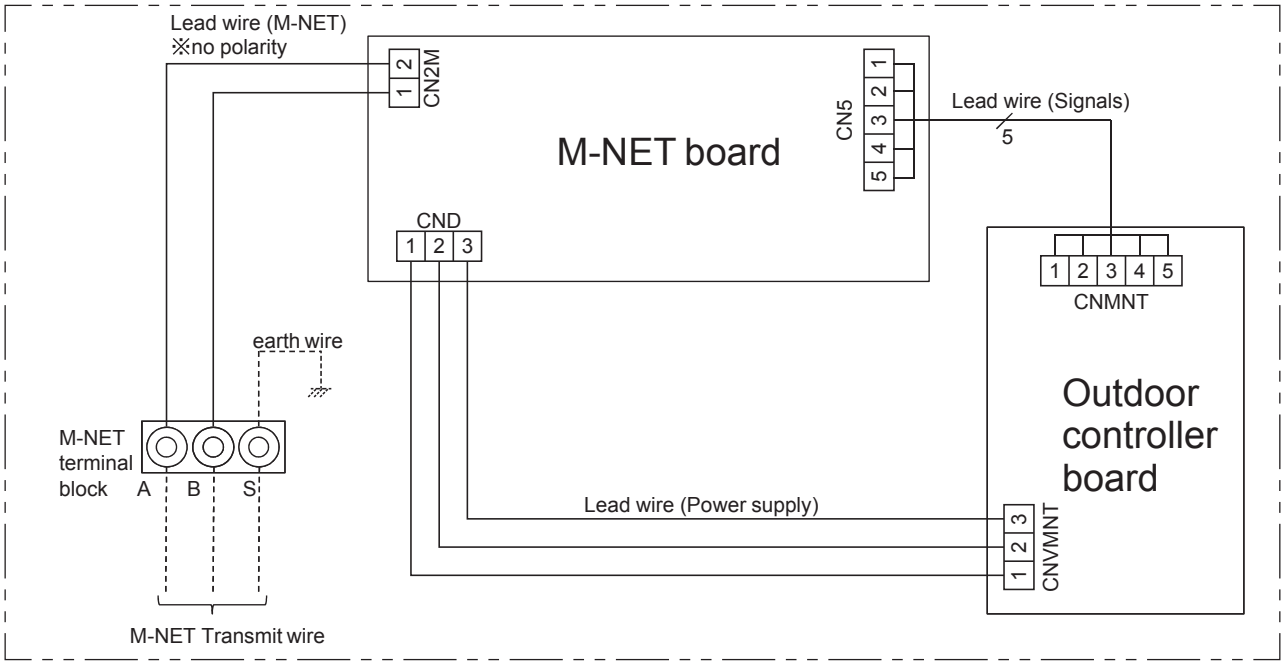
Unit: mm



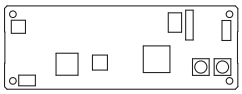
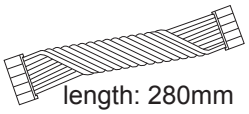
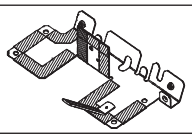
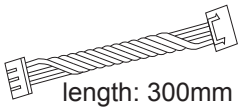
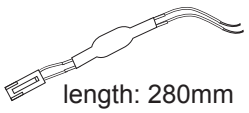
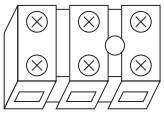
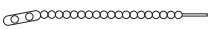
How to Use / How to Install

1. Wiring diagram

The electrical box of outdoor unit.



2. Parts list

No.	Description	Figure	Q'ty	No.	Description	Figure	Q'ty
①	M-NET board (with insulation sheets and supports)		1	⑦	Lead wire (5 wires) for signals	 length: 280mm	1
②	Mounting plate (M-NET board)		1	⑧	Lead wire (3 wires) for power supply	 length: 300mm	1
③	Screw (M4×8)		2	⑨	Lead wire (M-NET)	 length: 280mm	1
④	Terminal block (M-NET)		1	⑩	Earth wire and screw (M4×8)		1 each
⑤	Terminal screw (M3×20)		1	⑪	Cable tie		2
⑥	Label		1				

3. Switch setting

■ M-NET address setting

Make M-NET setting and refrigerant address setting on only outdoor unit.
There is no address settings for outdoor unit and remote controller like City Multi system.
The M-NET address setting for taking into centralized control system should be done only to the outdoor unit.
The address set number should be 1-50 same as for City Multi indoor unit and make set in order of number for the same group.

	A control slim	City Multi (M-NET)
Indoor unit	—	1~50
Outdoor unit	1~50	51~100
Remote controller	—	101~150
System controller	201~250	
Group remote controller	201~250	

The setting should be done by rotary switches SW11 (ones digit) and SW12 (tens digit) on M-NET board of the outdoor unit. (Factory settings are all zero.)

[Example]

M-NET address No.		1	2	~	50
Switch setting	SW11 (ones digit)				
	SW12 (tens digit)				

OPTIONAL PARTS

Descriptions

A-control Mr. SLIM models can be connected to "M-NET" through optional M-NET converter so that they can be monitored / controlled effectively and meticulously.

Applicable Models

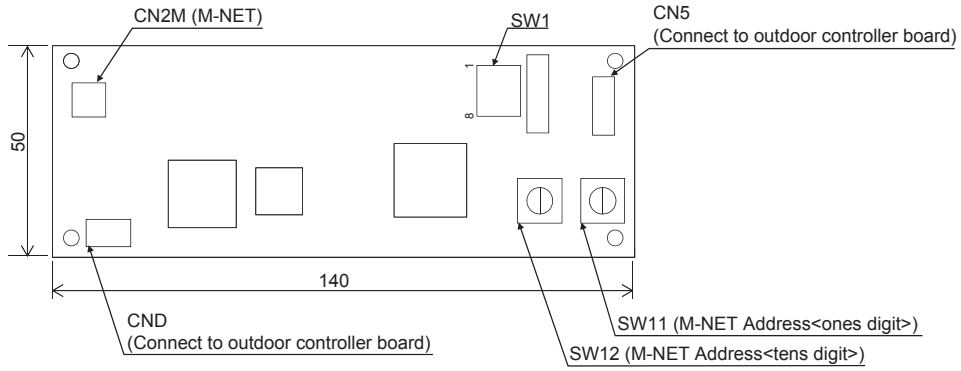
- PUHZ-SHW112/140
- PUHZ-ZRP60/71/100/125/140/200/250
- PUHZ-P100/125/140/200/250

Specifications

Power	Supplied from control board
Power consumption	0.6W (at 5V DC, 12V DC)
Operating conditions	Mounted inside the electrical utility box of outdoor unit. (Temperature: -20 to 60℃ , humidity: 90% or less (no condensation))
Weight	0.3kg

Dimensions

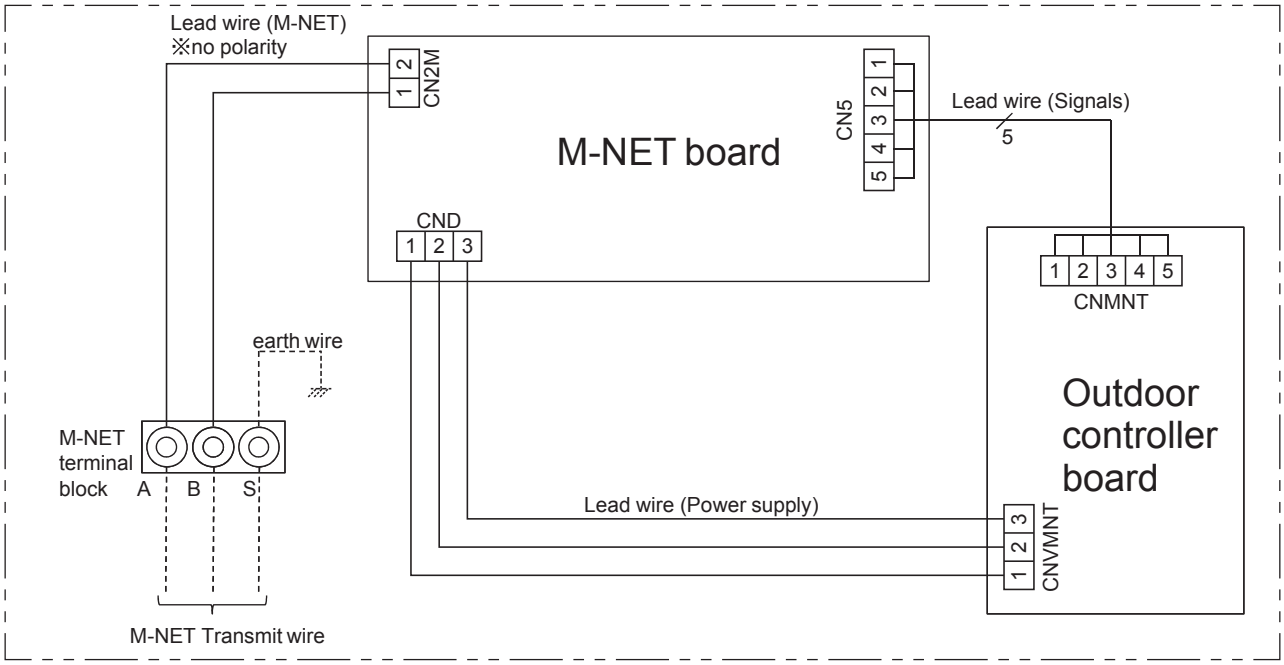
Unit: mm



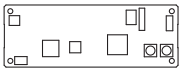
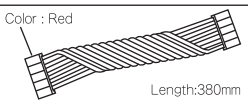
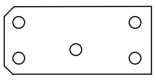
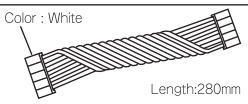
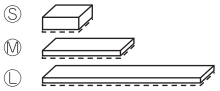
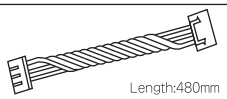
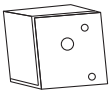
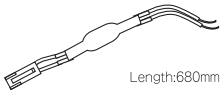
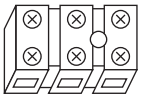
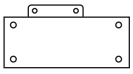
How to Use / How to Install

1. Wiring diagram

The electrical box of outdoor unit.



2. Parts List

No.	Description	Figure	Q'ty	No.	Description	Figure	Q'ty
①	M-NET board (with insulation sheets and supports)		1	⑨	Lead wire-A (5 wires)		1
②	Plate (For mounting circuit board)		1	⑩	Lead wire-B (5 wires)		1
③	Insulation sheets Ⓢ, Ⓜ, Ⓛ		Ⓢ 1 Ⓜ 1 Ⓛ 1	⑪	Lead wire-C (3 wires)		1
④	Terminal base		1	⑫	Lead wire-D (2 wires)		1
⑤	Screw (M4×8)		2	⑬	Ground wire and screw (M4×8)		1each
⑥	Terminal block (M-NET)		1	⑭	Pull tight		2
⑦	Terminal screw (M3x20)		1	⑮	Plate 2 (For mounting circuit board)		1
⑧	Label		1	⑯	Plate 3 (For mounting circuit board)		1

3. Switch setting

■ M-NET address setting

Make M-NET setting and refrigerant address setting on only outdoor unit.
There is no address settings for outdoor unit and remote controller like City Multi system.
The M-NET address setting for taking into centralized control system should be done only to the outdoor unit.
The address set number should be 1-50 same as for City Multi indoor unit and make set in order of number for the same group.

	A control slim	City Multi (M-NET)
Indoor unit	—	1~50
Outdoor unit	1~50	51~100
Remote controller	—	101~150
System controller	201~250	
Group remote controller	201~250	

The setting should be done by rotary switches SW11 (ones digit) and SW12 (tens digit) on M-NET board of the outdoor unit. (Factory settings are all zero.)

[Example]

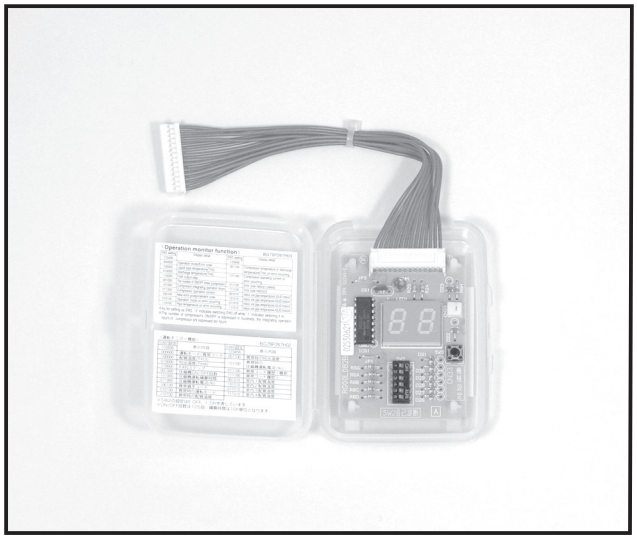
M-NET address No.		1	2	~	50
Switch setting	SW11 (ones digit)				
	SW12 (tens digit)				

OPTIONAL PARTS

Control / Service Tool

PAC-SK52ST

Photo



Descriptions

This item is used to display operation and self-diagnosis state.

Applicable Models

- PUHZ-SHW
- PUHZ-ZRP
- PUHZ-P

Specifications

Power	5V DC (supplied from outdoor unit control board)
Temperature	-20 to 60℃, Humidity: 90% RH or less (no condensation)
External dimensions	69 (W) x 91 (H) x 27 (D) (mm), excluding lead wires
Weight	0.05kg

How to Use / How to Install

- Notes on Use
  - Before installing / removing a control / service tool, make sure that the main power to this unit is turned OFF.
  - The connector for control / service tool has a lock. Connection / removal of the connector must be dine with the locking lever pressed.

- How to Use
  1. Connect the control / service tool connector to the [CNM] connector on the outdoor unit control board.
  2. Operating the control / service tool's DIP switch "SW2" causes "LED1" to display the operation state and inspection code description using 2-digit value and symbols. "SW2" setting varies with the unit to be connected. For details of the display content, refer to the appropriate service handbook.
  3. After the control / service tool has been used, remove it from the outdoor unit control board.

Photo

Descriptions

With Step Interface, local units can be connected with P series heat pump outdoor units.

Applicable Models

- SUZ-KA
- PUHZ-SHW
- PUHZ-ZRP
- PUHZ-P

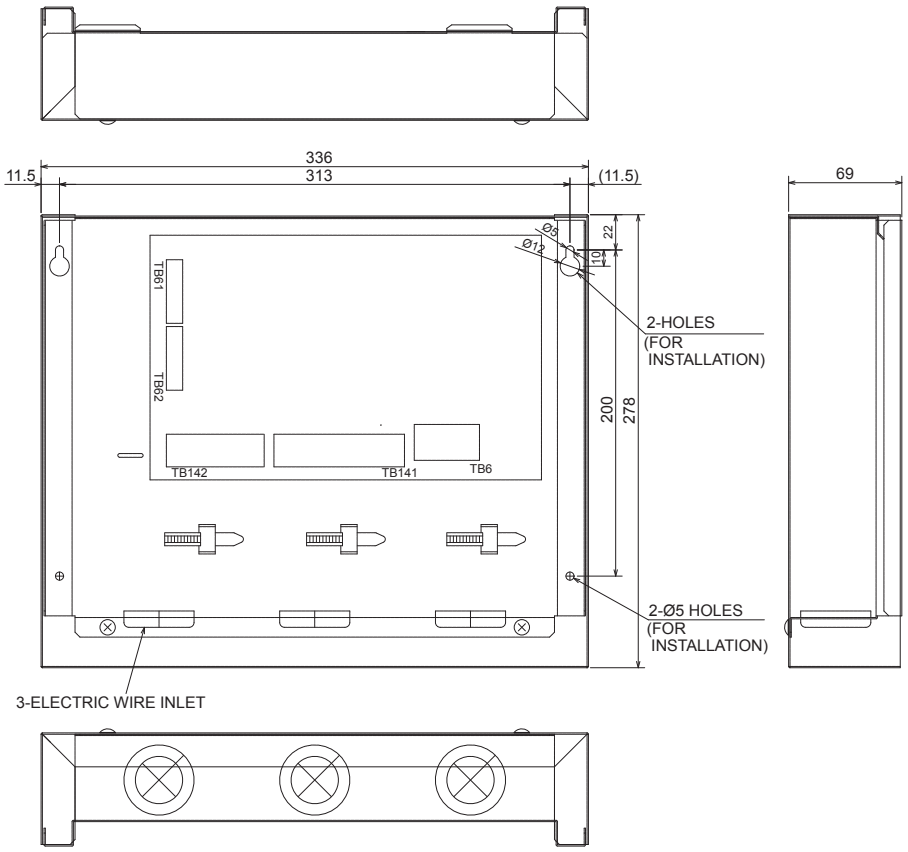
Specifications

Model	PAC-IF012B-E
Type	Cased
Power supply	220-240V AC, 50Hz
Thermistor	Target temp. (TH1) Pipe temp./Liquid (TH2) Pipe temp./Cond./eva (TH2)

Dimensions

Unit: mm

[PAC-IF012B-E]



OPTIONAL PARTS

How to Use / How to Install

[PAC-IF012B-E]

2. Installing the interface unit

IF012

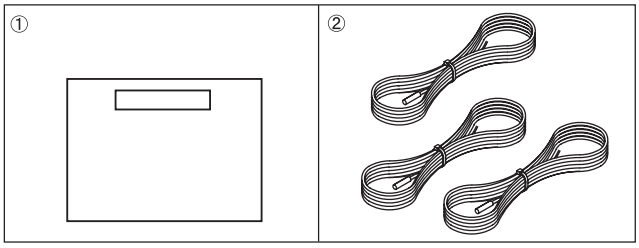


Fig. 2-1

2.1. Check the parts (Fig. 2-1)

The interface unit should be supplied with the following parts.

	Part Name	IF012
①	Interface unit	1
②	Thermistor	3

2.2. Choosing the interface unit installation location

- Do not install the interface unit in outdoor location as it is designed for indoor installation only. (The interface board and casing are not waterproof.)
- Avoid locations where the unit is exposed to direct sunlight or other sources of heat.
- Select a location where easy wiring access to the power source is available.
- Avoid locations where combustible gases may leak, be produced, flow, or accumulate.
- Select a level location that can bear the weight and vibration of the unit.
- Avoid locations where the unit is exposed to oil, steam, or sulfuric gas.

2.3. Installing the interface unit (Fig. 2-2, Photo.2-1)

1. Remove 2 screws from interface unit and remove the cover.
2. Install the 4 screws (locally supplied) in 4 holes.
   Ⓐ Screw Ⓑ Cover
   Ⓒ Hole for installation

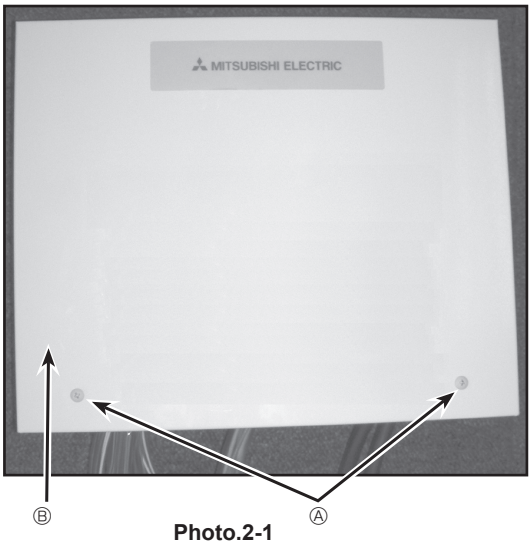


Photo.2-1

Unit:mm

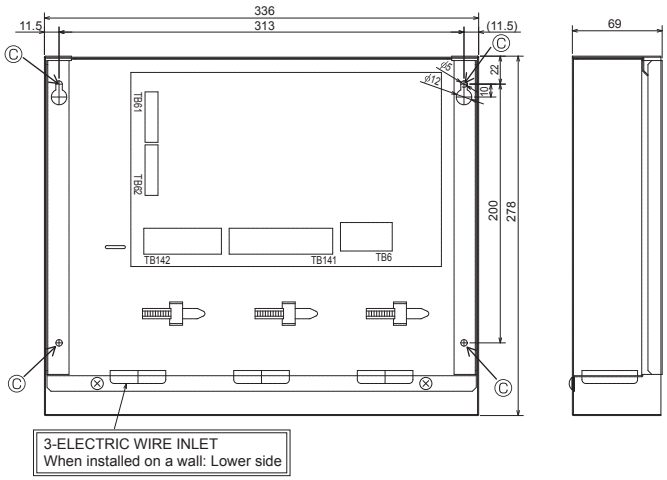


Fig.2-2

3. Electrical work

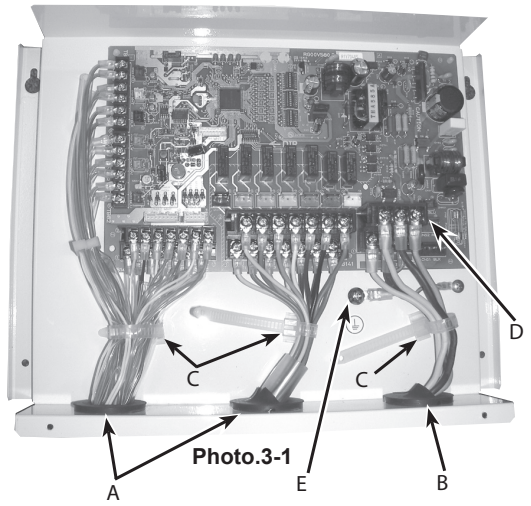


Photo.3-1

3.1. Interface unit (Photo. 3-1)

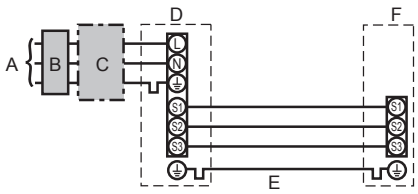
1. Remove the cover.
2. Wire the power cable and control cable separately through the respective wiring inlets given in the photo.

• Do not allow slackening of the terminal screws.

A Inlet for control cable
B Inlet for power
C Clamp
D Interface / Outdoor unit connecting terminals
E Earth terminal

3.1.1. Interface unit power supplied from outdoor unit

The following connection patterns are available.
The outdoor unit power supply patterns vary on models.



A Outdoor unit power supply
B Earth leakage breaker
C Wiring circuit breaker or isolating switch
D Outdoor unit
E Interface unit/outdoor unit connecting cables
F Interface unit

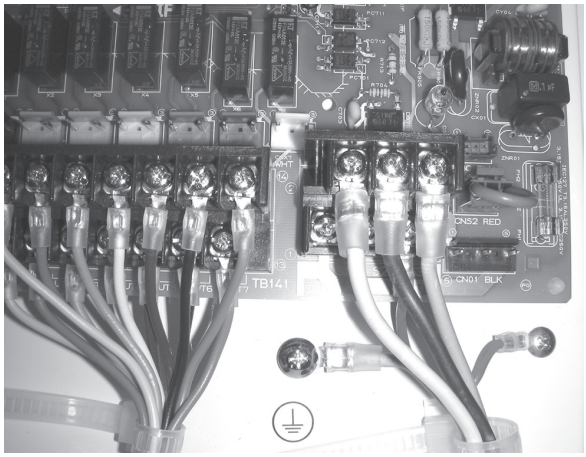


Photo.3-2

Interface unit model			PAC-IF012B-E
Wiring Wire No. × size (mm²)	Interface unit-Outdoor unit	*1	3 × 1.5 (polar)
	Interface unit-Outdoor unit earth	*2	1 × Min. 1.5
Circuit rating	Interface unit-Outdoor unit S1-S2	*2	AC 230 V
	Interface unit-Outdoor unit S2-S3	*3	DC24 V

*1. Max. 80 m
*2. The figures are NOT always against the ground.
S3 terminal has DC 24 V against S2 terminal. However between S3 and S1, these terminals are not electrically insulated by the transformer or other device.

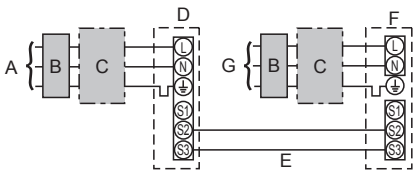
Notes: 1. Wiring size must comply with the applicable local and national code.
2. Power supply cables and interface unit/outdoor unit connecting cables shall not be lighter than polychloroprene sheathed flexible cable. (Design 60245 IEC 57)
3. Install an earth longer than other cables.

OPTIONAL PARTS

3. Electrical work

3.1.2. Separate interface unit/outdoor unit power supplies

The following connection patterns are available.
The outdoor unit power supply patterns vary on models.



A Outdoor unit power supply
B Earth leakage breaker
C Wiring circuit breaker or isolating switch
D Outdoor unit
E Interface unit/outdoor unit connecting cables
F Interface unit
G Interface unit power supply

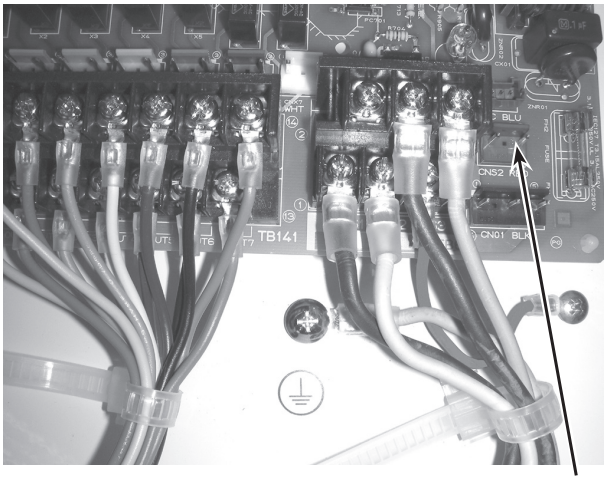


Photo.3-3

If the interface and outdoor units have separate power supplies, refer to the table below.

	Separate power supply specifications
Interface unit controller connector (CNS2) connection change	Disconnected
Outdoor unit DIP switch settings (when using separate interface unit/outdoor unit power supplies only)	ON 3 / OFF 1 2 (SW8) Set the SW8-3 to ON.

Interface unit model			PAC-IF012B-E
Interface unit power supply			~/N (Single Phase), 50 Hz, 230 V
Interface unit input capacity Main switch (Breaker)		*1	16 A
Wiring Wire No. × size (mm²)	Interface unit power supply		2 × Min. 1.5
	Interface unit power supply earth		1 × Min. 1.5
	Interface unit-Outdoor unit	*2	2 × Min. 0.3
	Interface unit-Outdoor unit earth		—
Circuit rating	Interface unit L-N	*3	AC 230 V
	Interface unit-Outdoor unit S1-S2	*3	—
	Interface unit-Outdoor unit S2-S3	*3	DC24 V

*1. A breaker with at least 3.0mm contact separation in each pole shall be provided. Use earth leakage breaker (NV).
*2. Max. 120 m
*3. The figures are NOT always against the ground.

Notes: 1. Wiring size must comply with the applicable local and national code.
2. Power supply cables and interface unit/outdoor unit connecting cables shall not be lighter than polychloroprene sheathed flexible cable. (Design 60245 IEC 57)
3. Install an earth longer than other cables.

3.1.3. Connecting thermistor cable

Connect the thermistor ② for the interface controller.

1. Target temp. thermistor (TH1)
   Connect the thermistor for the target temp. to 1 and 2 on the terminal block (TB61) on the interface controller.
2. Pipe temp. thermistor / Liquid (TH2)
   Connect the thermistor for the pipe temp. to 3 and 4 on the terminal block (TB61) on the interface controller.
3. Cond./eva. temp. thermistor (TH5)
   Connect the thermistor for the cond./eva. temp. to 5 and 6 on the terminal block (TB61) on the interface controller.

When the thermistor cables are too long, cut it to the appropriate length.
Do not bind it in the interface unit.

Caution:
Do not route the thermistor cables together with power cables.
The sensor part of the thermistor should be installed where user must not touch.
(It is separated by the supplementary insulation from where user may touch.)

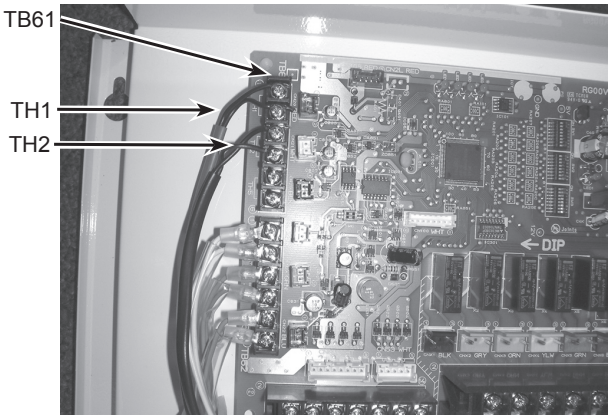


Photo.3-4

3. Electrical work

3.1.4. Connecting external input

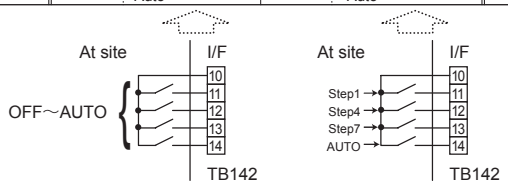
Demand control is available by external input.
It is possible to set the outdoor unit's power consumption by setting the switch of the interface controller.

Switch1, Switch 6 : Input selection of inverter capacity setting

Input	SW 1-1	SW 1-2	SW 1-3	SW 6-1	SW 6-2	Step for capacity setting
REMOTE SWITCH Type A (4bit-8 setting)	OFF	OFF	OFF	OFF	OFF	OFF/Step1/Step2/…/Step7/Auto
REMOTE SWITCH Type B (1bit-1 setting)	ON	OFF	OFF	OFF	OFF	OFF/Step1/Step4/Step7/Auto
4-20mA	ON	ON	OFF	ON	ON	OFF/Step1/Step2/…/Step7
1-5V	ON	ON	OFF	OFF	ON	OFF/Step1/Step2/…/Step7
0-10V	OFF	OFF	ON	OFF	OFF	OFF/Step1/Step2/…/Step7
0-10kΩ	ON	OFF	ON	OFF	OFF	OFF/Step1/Step2/…/Step7/Auto
No input (AUTO mode)	OFF	ON	ON	OFF	OFF	Only Auto mode

- **REMOTE SWITCH Type A (4bit - 8 setting) / Type B (1bit -1 setting)**

TB142 10-11 (COM-IN5)	TB142 10-12 (COM-IN6)	TB142 10-13 (COM-IN7)	TB142 10-14 (COM-IN8)	Step for capacity setting TypeA			TypeB			Remark
OFF	OFF	OFF	OFF	[OFF]	OFF	0%	[OFF]	OFF	0%	OFF
ON	OFF	OFF	OFF	[ON]	Step1	10%	[ON]	Step1	10%	
OFF	ON	OFF	OFF		Step2	20%		Step4	50%	
ON	ON	OFF	OFF		Step3	30%		↑	↑	Hz fixed mode
OFF	OFF	ON	OFF		Step4	50%		Step7	100%	
ON	OFF	ON	OFF		Step5	70%		↑	↑	
OFF	ON	ON	OFF		Step6	80%		↑	↑	
ON	ON	ON	OFF		Step7	100%		↑	↑	
OFF	OFF	OFF	ON		Auto			Auto		Auto mode



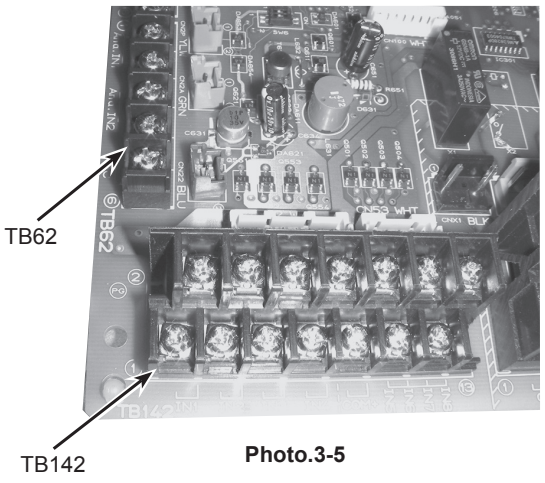


Photo.3-5

Demand control is available by connecting remote switches with terminal No.10 - 14.
Make sure to use the non-voltage switch (for the remote switch)
Remote switch cable length : Maximum 10m
Remote switch : Minimum applicable load DC12V, 1mA

- 4-20mA / 1-5V / 0-10V / 0-10kΩ
  ①Use 4-20mA / 1-5V / 0-10V
  Connect the transmission cables to No. 3 and 4 on the terminal block (TB62).
  No. 3 on the terminal block(TB62) : Plus side
  No. 4 on the terminal block(TB62) : Minus side (Reference side)
  ②Use adjustable resistor (0-10kΩ)
  Connect the transmission cables to No. 1 and 2 on the terminal block (TB62).

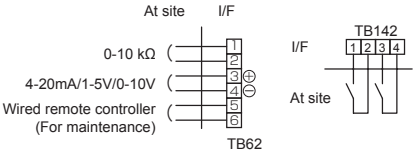
Adjustable resistor (0-10kΩ)	4-20mA	1-5V	0-10V	Step for capacity setting		Remark
0~100Ω	4~5mA	0~1.25V	0~0.63V	OFF	0%	Stop
510Ω	7mA	1.75V	1.88V	Step1	10%	Hz fixed mode
1kΩ	9mA	2.25V	3.13V	Step2	20%	
2kΩ	11mA	2.75V	4.38V	Step3	30%	
3.3kΩ	13mA	3.25V	5.63V	Step4	50%	
4.3kΩ	15mA	3.75V	6.88V	Step5	70%	
5.6kΩ	17mA	4.25V	8.13V	Step6	80%	
7.5kΩ	19~20mA	4.75~5V	9.38~10V	Step7	100%	
10kΩ	–	–	–	Auto		Auto mode
OPEN(12kΩ~)	–	–	–	OFF	0%	Stop

*The value of the above-mentioned table becomes the center of the input value.
Cable length : Maximum 10m

- **External function setting**
  This function is setting operation mode or stopping compressor, by the external signal.

TB142	Item	OFF	ON	Remark
1-2 (IN1)	Forced Comp. OFF	Normal	Forced Comp. OFF	
3-4 (IN2)Item	Fixed operation mode	Cooling	Heating	Available when SW2-1 and SW2-2 are ON

Cable length : Maximum 10m
Remote switch : Minimum applicableload DC12V, 1mA



Caution:
The external input signals are separated by basic insulation from power supply for the unit.
The external input signals should be separated by supplementary insulation from where user may touch in case that it is installed where user may touch.
Connect the terminals by using the ring terminals and also insulate the cables of adjoining terminals when wiring to terminal block.

OPTIONAL PARTS

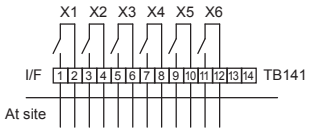
3. Electrical work

3.1.5. Connecting External Output

The signal in the following states can be output.

TB141		Item	OFF	ON
1-2	(OUT1) X1	Operation Output	OFF	ON
3-4	(OUT2) X2	Error Output	Normal	Error
5-6	(OUT3) X3	Comp. Output	OFF(Comp. OFF)	ON (Comp. ON)
7-8	(OUT4) X4	Defrost Output	OFF	ON (Defrosting)
9-10	(OUT5) X5	Mode(Cool) Output	OFF	ON (Cooling)
11-12	(OUT6) X6	Mode(Heat) Output	OFF	ON (Heating)
13-14	(OUT7) –	–	–	–

Cable length : Maximum 50m
Output specification : Non-voltage switch 1A or less , 240V AC
*Connect the surge absorber according to the load at site.



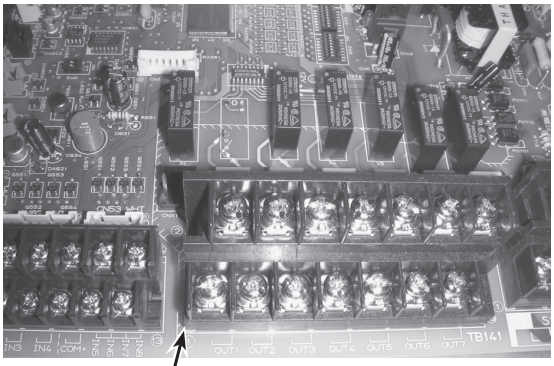


Photo.3-6

Note : External output signals are separated by basic insulation from other circuit of interface.

Caution : When 2 or more external outputs are used, the power supply on the output side should be the same.

3.1.6. Wiring specification External output / External input
Locally supplied parts

Item	Name	Model and specifications
External output function	External output signal wire	Use sheathed vinyl coated cord or cable. Wire type : CV, CVS or equivalent. Wire size : Stranded wire 0.5mm^2 to 1.25mm^2 Solid wire: { 0.65mm to { 1.2mm
	Display lamp, etc.	Non-voltage Contact AC220-240V (DC30V), 1A or less
External input function	External input signal wire	Use sheathed vinyl coated cord or cable. Wire type : CV, CVS or equivalent. Wire size : Stranded wire 0.5mm^2 to 1.25mm^2 Solid wire : { 0.65mm to { 1.2mm
	Switch	Non-voltage "a" contact

3.1.7. Switch setting

It is possible to set the following function by setting the switch of the interface controller.

• SW2-1/2-2 : Fixed operation mode

SW2-1	SW2-2	Details
OFF	OFF	Not FIX (Depending on Remote controller setting)
ON	OFF	[Cooling] FIX
OFF	ON	[Heating] FIX
ON	ON	External input (Depending on TB142-3, 4)

• SW2-3/2-4/2-5 : Fixed set temperature [For Auto mode only]

SW2-3	SW2-4	SW2-5	Details
OFF	OFF	OFF	Not fixed (Remote controller setting)
ON	OFF	OFF	Cooling 19°C/Heating 17°C FIX
OFF	ON	OFF	20°C FIX
ON	ON	OFF	22°C FIX
OFF	OFF	ON	24°C FIX
ON	OFF	ON	26°C FIX
OFF	ON	ON	28°C FIX
ON	ON	ON	Cooling 30°C/Heating 28°C FIX

Set switches in case of auto mode.

• SW2-6 : COND./EVA. TEMP. THERMISTOR (TH5)

SW2-6	Details	Model
OFF	Effect	PAC-IF012B-E

3.1.8.Before test run

After completing installation and the wiring and piping of the local application and outdoor units, check for refrigerant leakage, looseness in the power supply or control wiring, wrong polarity, and no disconnection of one phase in the supply.
Use a 500-volt megohmmeter to check that the resistance between the power supply terminals and ground is at least 1.0MΩ.

Warning:
Do not use the system if the insulation resistance is less than 1.0MΩ.

Caution:
Do not carry out this test on the control wiring (low voltage circuit) terminals.

Local Application Factors

* This interface is to connect Mr. Slim inverter outdoor unit of MITSUBISHI ELECTRIC to local applications. Please check the following when designing the local system.
* MITSUBISHI ELECTRIC does not take any responsibility on the local system design.

1. Heat exchanger

(1) Withstanding pressure

Designed pressure of outdoor unit is 4.15 MPa. Following must be satisfied for burst pressure of connecting application.
Burst pressure : More than 12.45 MPa (3 times more than designed pressure)

(2) Performance

Secure the heat exchanger capacity which meets the following conditions. If the conditions are not met, it may result in malfunction caused by the protection operation or the outdoor unit may be turned off due to the operation of protection system.

1. Evaporate temperature is more than 4℃ in max. frequency operation under ※1the cooling rated conditions.
2. Condense temperature is less than 60℃ in max. frequency operation under ※2the heating rated conditions.
3. In case of hot water supply, condense temperature is less than 58℃ in max. frequency operation with the outside temperature 7℃D.B./6℃W.B.

※1. Indoor: 27℃D.B./19℃W.B. Outdoor: 35℃D.B./24℃W.B.
※2. Indoor: 20℃D.B. Outdoor: 7℃D.B./6℃W.B.

(3) Heat exchanger internal capacity

Heat exchanger internal capacity must be within the capacity range shown below. If the heat exchanger below the minimum capacity is connected, it may result in the back flow of liquid or the failure of the compressor.
If the heat exchanger above the maximum capacity is connected, it may result in the deficiency in performance due to lack of refrigerant or overheating of the compressor.
Minimum capacity : 10 × Model capacity [㎤] / Maximum capacity : 30 × Model capacity [㎤]
e.g. When connecting to PUHZ-RP*100* VHA2
Minimum capacity : 10 × *100* =1000 ㎤
Maximum capacity : 30 × *100* =3000 ㎤

Model capacity	35	50	60	71	100	125	140	200	250
Maximum capacity [㎤]	1050	1500	1800	2130	3000	3750	4200	6000	7500
Minimum capacity [㎤]	350	500	600	710	1000	1250	1400	2000	2500

(4) Contamination maintenance

1. Wash the inside of heat exchanger to keep it clean. Be sure to rince not to leave flux. Do not use chlorine detergent when washing.
2. Be sure that the amount of contamination per unit cubic content of heat transfer pipe is less than the following amount.
Example) In case of ϕ9.52mm
Residual water : 0.6㎎/m, Residual oil : 0.5㎎/m, Solid foreign object : 1.8㎎/m

2. Thermistor position

<Target temp.thermistor (TH1)> (Used only in *auto mode (Only for Air to Air applications))

1. Put thermistor (TH1) where average intake temperature for heat exchanger can be detected.
2. It is better to put thermistor (TH1) where radiant heat from heat exchanger can be avoided.
To use this interface for manual step control, put a fixed resistor of 4~10kΩ instead of thermistor (TH1 on the terminal block TB61).
* Auto mode: In this mode, the capacity step of the outdoor unit is controlled automatically to let the target (intake) temperature reach the setting temperature. (Only for air to air application)

<Liquid pipe thermistor(TH2)>

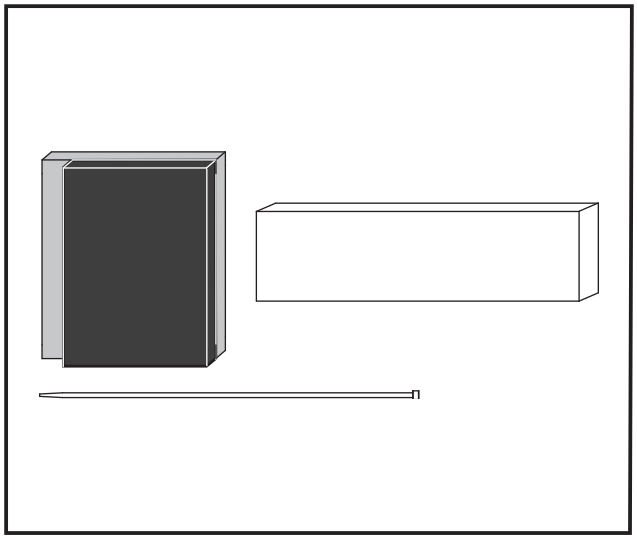
1. Put thermistor (TH2) where liquid refrigerant pipe temperature can be detected.
2. It is better to protect the thermistor (TH2) with heat insulating materials not to be affected by the ambient temperature, etc.
3. In case that the refrigerant is distributed by distributor, put thermistor (TH2) before the distributor.

<Cond./Eva. temp. thermistor (TH5)>

1. Put thermistor (TH5) where Cond./Eva. temperature can be detected on the indoor HEX pipe.

Insulation for Accumulator MAC-892INS-E

Figure



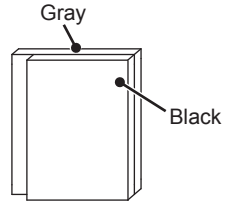
Descriptions

The insulation protects the accumulator from the freeze.

Applicable Models

■ MXZ-2E53VAHZ

Accessory

P.No. Name	1 Insulation Size: (t5+t3)×300×190	2 Band	3 Spare insulation Size:t5×100×300
Qty	2	3 +Spare 1	1
Shape			

NOTES:

(1) Attach the insulation correctly as shown in this installation manual: Incomplete attachment could cause freeze of accumulator.
(2) The insulation have adhesive: Once they are attached, they cannot be removed. So check the positions carefully before attaching.
(3) If any gap or break occurs during attachment, cut off the spare insulation 3 approximately and attach it.
Any gap or break could cause freeze of accumulator.
(4) If fire is used during installation or maintenance work, avoid the insulation from catching fire. Otherwise, fire may spread.

How to Use / How to Install

- Complete attaching the insulation before the piping/wiring work for the indoor-outdoor connection.
- In case the piping work is completed, finish the pump-down operation to remove the piping before attaching the insulation.
- Pay attention to the piping as it might be hot right after the operation is stopped.
- When assembling, pay attention not to make mistakes in connecting lead wire, fixing with the band, and so on.

For details on how to assemble each part, refer to the service manual.

(1) How to disassemble the unit

・For details on how to disassemble each part, refer to the service manual.

① Removing the service panel
Remove the screws (3 for the front and 3 for the side), then slide the service panel downward to remove.

② Removing the top panel
Remove the screws (2 for the front and 3 for the back), then lift the top panel upward to remove.

③ Removing the handle (R Rear)
Remove the 3 screws to remove the handle.

④ Removing the back panel
Remove the 6 screws of the back panel, then lift the back panel upward to remove.

⑤ Removing the front panel (assy)
Remove 7 screws of the front panel, then lift the front panel upward to remove.

⑥ Removing the ambient temperature thermistor
Remove the 2 claws of the ambient temperature thermistor holder, then remove from the rear guard.

⑦ Removing the junction connector of the compressor

⑧ Removing the elect assy (control P.C. board connector)
Disconnect the connectors CNF1 (*1), CN712, CN714 (*2), CNTH1, CN63H, CN791, and CN792.
Remove the 5 elect assy fixing screws, then lift the elect assy upward to remove.
*1 Remove the fan motor lead wire of CNF1 routing on elect assy.
*2 Remove the defrost heater lead wire of CN714 routing on elect assy.

⑨ Removing the back pillar
Remove the 3 back pillar fixing screws, then remove the back pillar.

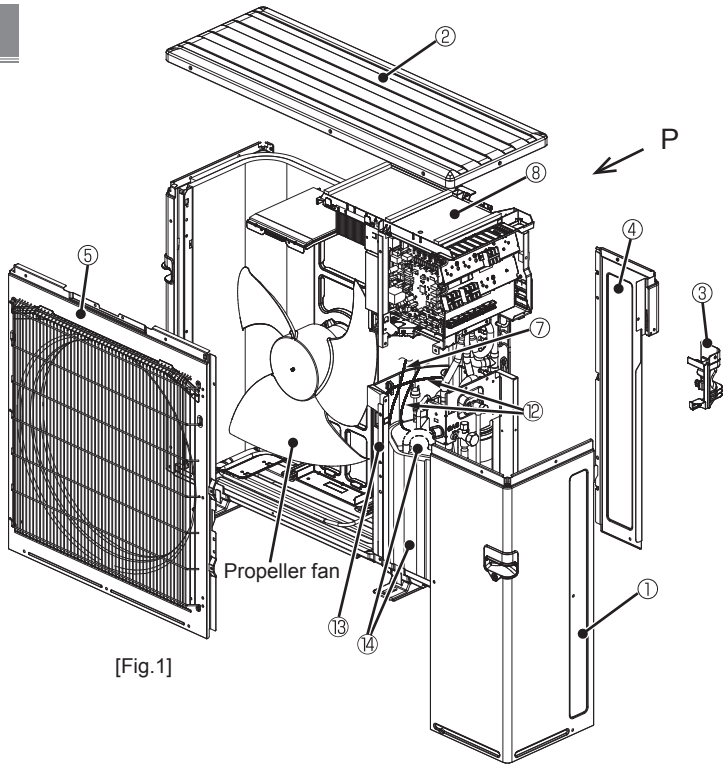
⑩ Removing the outdoor heat exchanger temperature thermistor (tube: green)
Pull out the outdoor heat exchanger temperature thermistor from the thermistor holder.

⑪ Removing the defrost thermistor (tube: white)
Pull out the defrost thermistor from the thermistor holder.

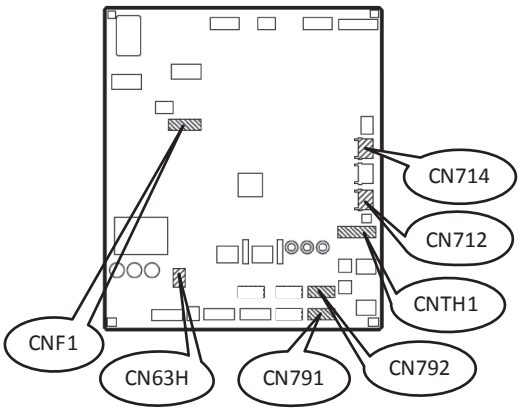
⑫ Removing the lead wire for the compressor
Remove the lead wire for both the compressor and the thermistor from the clamp of separator.

⑬ Removing the separator
Remove the 2 separator fixing screws, then lift the separator upward to remove.
Note: Pay attention not to touch the propeller fan when removing the separator.

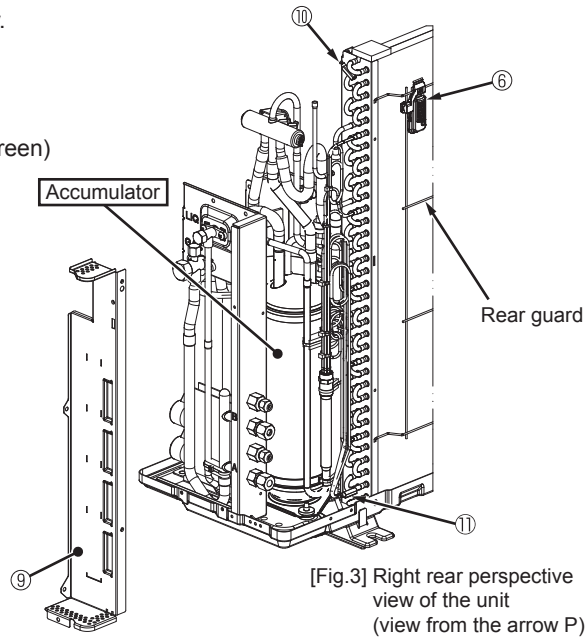
⑭ Remove the compressor felt (top/body).



[Fig.1]



[Fig.2] Reference figure of the controller board



[Fig.3] Right rear perspective view of the unit (view from the arrow P)

Continued to the next page

(2) How to attach the INSULATION (hereafter referred to as INS)

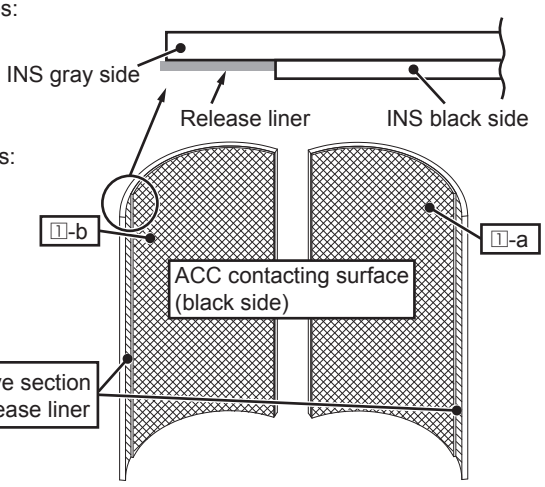
- When attaching the INS, be sure not to include any air or dust between the INS and ACC.
- If there is any condensation on the ACC, wipe it before attaching the INS.
- If any gap or break occurs during attachment, cut off the spare INS 3 approximately and attach it.

"Attaching the INS on the back side of the ACCUMULATOR (hereafter referred to as ACC)"

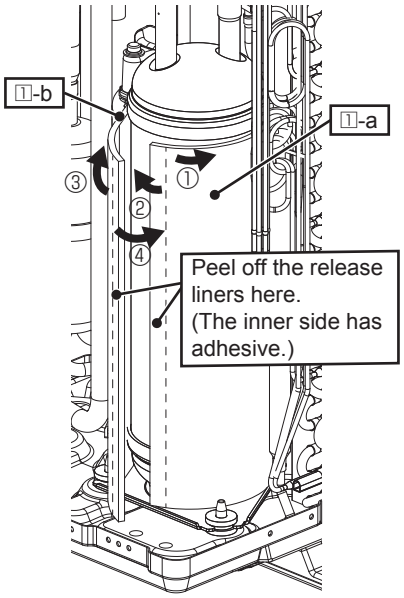
① Insert the INS (1–a) to the back side of the ACC following the attaching guides: A in the Fig.6 and C in the Fig.7.
②Peel off the release liner of INS (1–a) and attach to the ACC.

"Attaching the INS on the front side of the ACC"

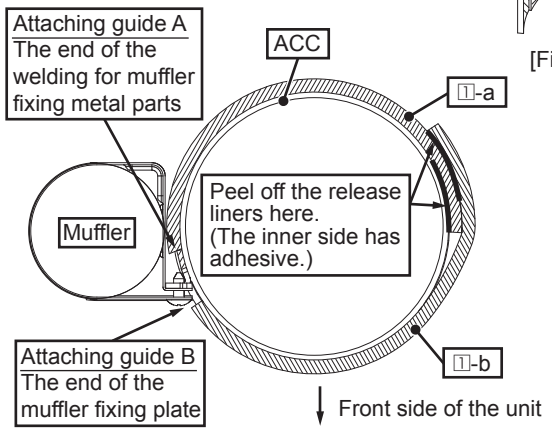
③ Insert the INS (1–b) to the front side of the ACC following the attaching guides: B in the Fig.6 and C in the Fig.7.
④ Peel off the release liner of INS (1–b) and attach to the ACC as it overlaps the INS(1–a), which is attached earlier.



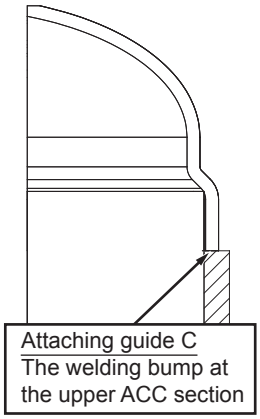
[Fig.4] Part detail figure of INS 1-a, 1-b



[Fig.5] ACC detail figure for attaching the INS (view from the arrow P)



[Fig.6] ACC upper cross section for INS circumferential position detail

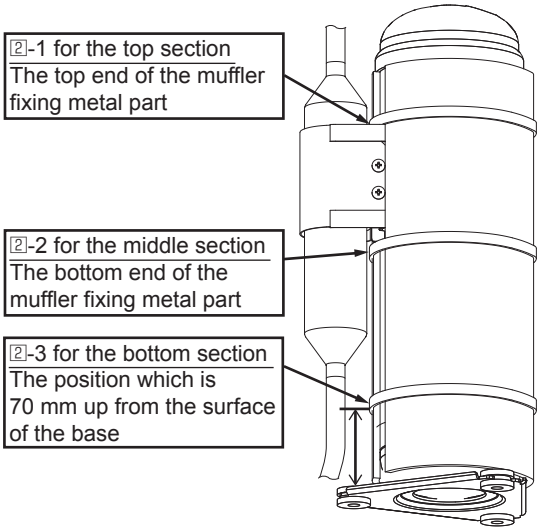


[Fig.7] INS vertical position in ACC section

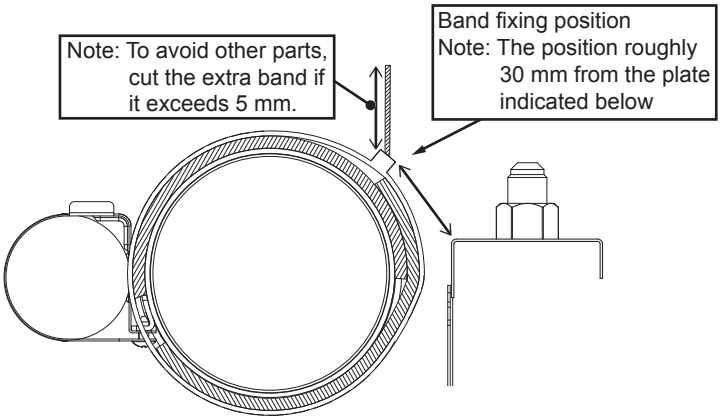
(3) How to fix with the band 2

- Do not fix the piping and lead wire together with the INS with the band.
- Make sure that the head of the band does not touch the piping, panels, and other peripheral parts. (Cut the extra part of the band after fixing it.)

Fix the 3 positions with the band 2 over the INS as shown in the Fig.8.



[Fig.8] Band fixing position detail



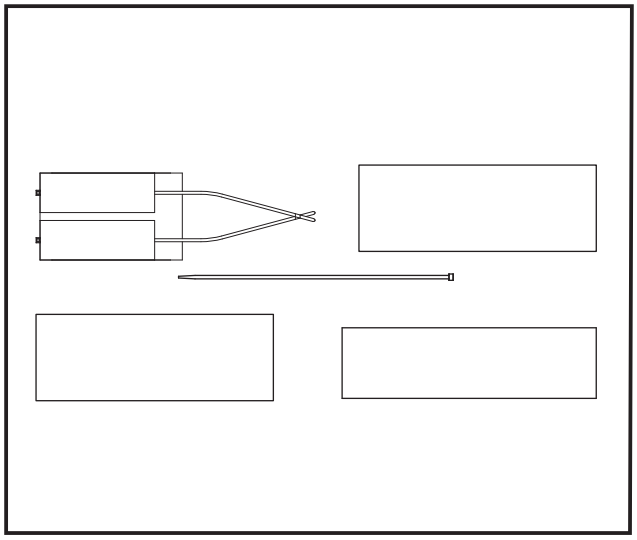
Note: Make sure that the INS is fixed with the band without slack and does not shift vertically or circumferentially.

OPTIONAL PARTS

Insulation for Accumulator

MAC-893INS-E

Figure



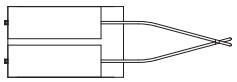
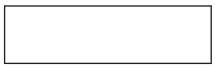
Descriptions

The insulation protects the accumulator from the freeze.

Applicable Models

■ MXZ-4E83VAHZ

Accessory

P.No. Name	1 Insulation Size: (t5+t2+t1)×360×220	2 Insulation Size: (t5+t1)×190×80	3 Insulation Size: t5×110×80	4 Band	5 Spare insulation Size:t5×220×80
Qty	1	1	1	1 + Spare 1	1
Shape					

NOTES:

(1) Attach the insulation correctly as shown in this installation manual: Incomplete attachment could cause freeze of accumulator.
(2) The insulation have adhesive: Once they are attached, they cannot be removed. So check the positions carefully before attaching.
(3) If any break occurs during attachment, cut off the spare insulation 5 approximately and attach it.
Break could cause freeze of accumulator.
(4) If fire is used during installation or maintenance work, avoid the insulation from catching fire. Otherwise, fire may spread.

How to Use / How to Install

- Complete attaching the insulation before the piping/wiring work for the indoor-outdoor connection.
- In case the piping work is completed, finish the pump-down operation to remove the piping before attaching the insulation.
- Pay attention to the piping as it might be hot right after the operation is stopped.
- When assembling, pay attention not to make mistakes in connecting lead wire, fixing with the band, and so on.

For details on how to assemble each part, refer to the service manual.

(1) How to disassemble the unit

For details on how to disassemble each part, refer to the service manual.

① Removing the service panel
Remove the 8 screws of the service panel, then slide the service panel downward to remove.

② Removing the top panel
Remove the screws (2 for the front and 3 for the back), then lift the top panel upward to remove.

③ Removing the back panel (assy)
Remove the 8 screws of the back panel, then lift the back panel upward to remove.

④ Removing the front panel (assy)
Remove the 9 screws of the front panel, then lift the front panel upward to remove.

⑤ Remove the junction connector of the compressor.

⑥ Removing the electrical parts
Disconnect the following connectors on the control board: CNF1 (*1), CN712, CN713, CN714 (*2), CNTH1, CNTH2, CN63H, CN791, CN792, CN793, and CN794.
Remove the 4 elect assy fixing screws, then lift the elect assy upward to remove.
*1 Remove the fan motor lead wire of CNF1 routing on elect assy.
*2 Remove the defrost heater lead wire of CN714 routing on elect assy.

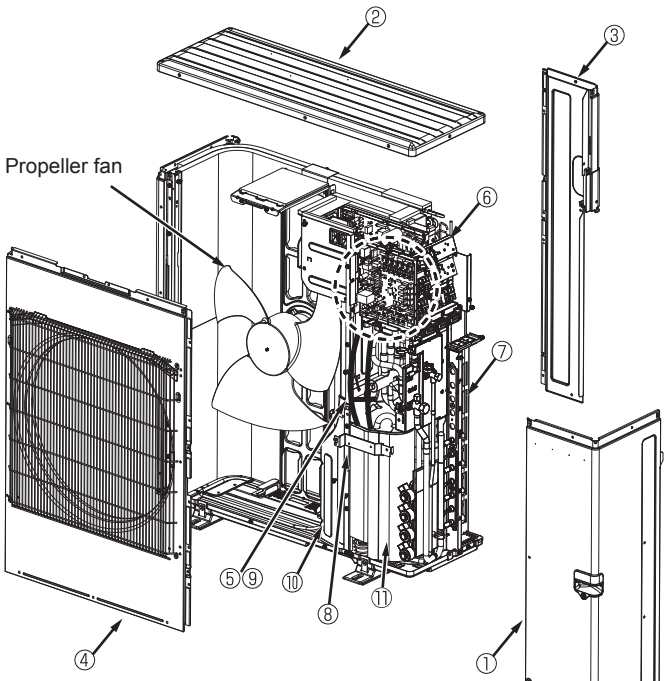
⑦ Removing the back pillar
Remove the 3 back pillar fixing screws, then remove the back pillar.

⑧ Removing the vb fixture
Remove the 2 vb fixture fixing screws, then remove the vb fixture.

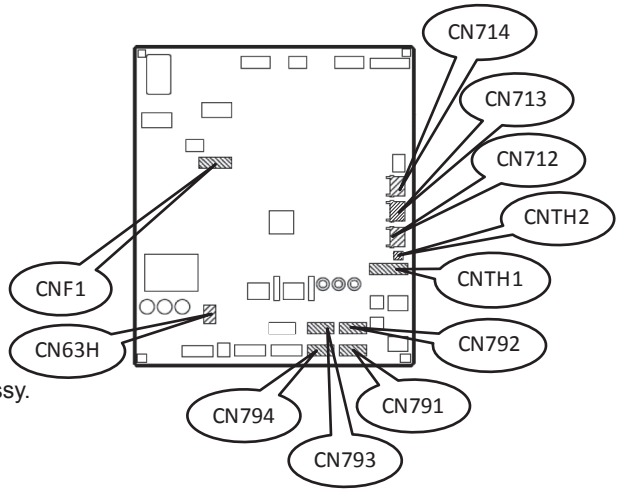
⑨ Removing the lead wire for the compressor
Remove the lead wire for both the compressor and the thermistor from the clamp of separator.

⑩ Removing the separator
Remove the 2 separator fixing screws, then lift the separator upward to remove. Pay attention not to touch the propeller fan when removing the separator.

⑪Remove the compressor felt (top/body).



[Fig.1]



[Fig.2] Reference figure of the controller board

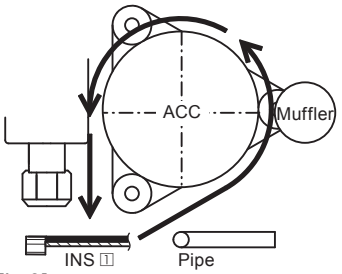
(2) How to attach the INSULATION (hereafter referred to as INS)

- •When attaching the INS, be sure not to include any air or dust between the insulation and ACC.
- •Do not fix the piping and lead wire together with the INS with the band.
- •Make sure that the head of the band does not touch the piping, panels, and other peripheral parts. (Cut the extra part of the band after fixing it.)
- •If there is any condensation on the ACC, wipe it before attaching the INS.
- •If any break occurs during attachment, cut off the spare INS approximately and attach it.

"Attaching the INS on the bottom section of the ACCUMULATOR (hereafter referred to as ACC) unit"

•Placing the INS ① around the ACC

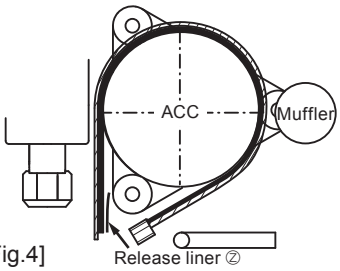
Pull the band of the INS ① towards the arrow in the Fig.3, then place the INS ① around the ACC with its adhesive inside as shown in the Fig.9 and the Fig.10.
Remove the tape after placing the INS ①.



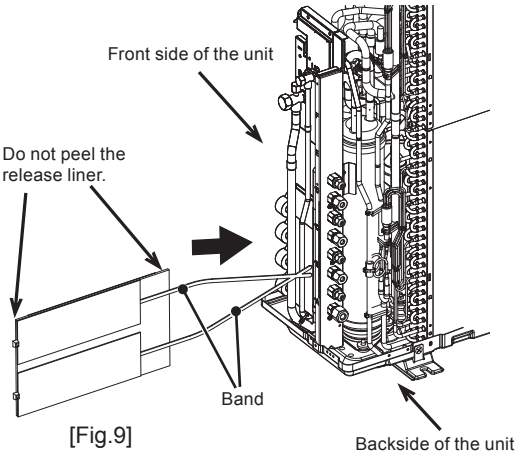
[Fig.3]

•Peeling the release liner Ⓩ of the INS ①

Peel the release liner Ⓩ while placing the INS ① as shown in the Fig.4.



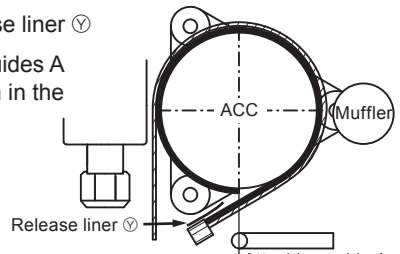
[Fig.4]



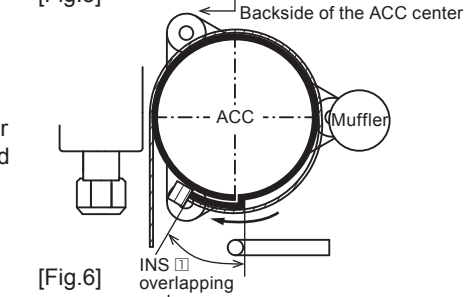
[Fig.9]

•Attaching the INS ① / Peeling the release liner Ⓨ

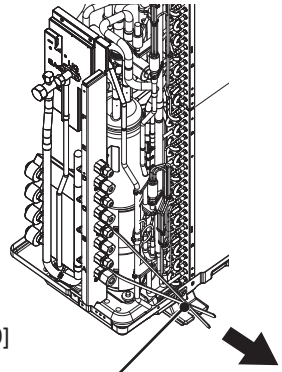
Put the end of INS ① to the attaching guides A and B, then attach to the ACC as shown in the Fig.5 and Fig.11.
Pay attention not to tilt the INS ① when attaching to the ACC.
Peel the release liner Ⓨ after attaching the inner INS ①.



[Fig.5]



[Fig.6]



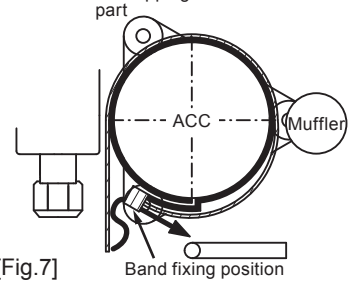
[Fig.10]

•Attaching the INS ①

Pull the INS ① towards the arrow then attach to the ACC as it overlaps the inner INS ① with no gaps between the INS and the ACC as shown in the Fig.6.

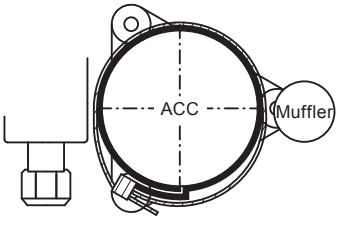
•Fixing with the band

Fix the 2 bands of the INS ① as shown in the Fig.7.
Note: To avoid other parts, cut the extra part of the band if it exceeds 5 mm.

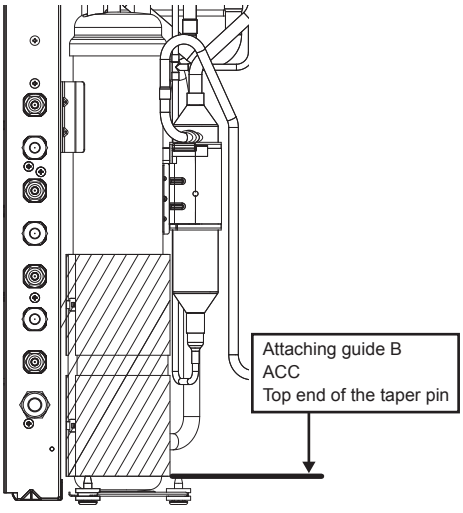


[Fig.7]

•Completing the attachment of the INS ①



[Fig.8]



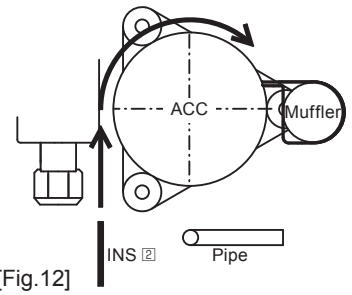
[Fig.11] Back side of the ACC

OPTIONAL PARTS

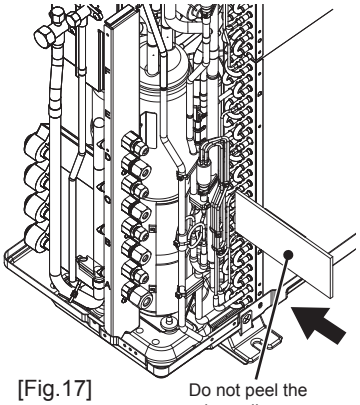
"Attaching the INS on the top section of the ACC unit"

•Placing the INS [2] around the ACC

Insert the INS [2] towards the arrow in the Fig.12 with its adhesive inside, then place the INS [2] around the ACC as shown in the Fig.17.



[Fig.12]

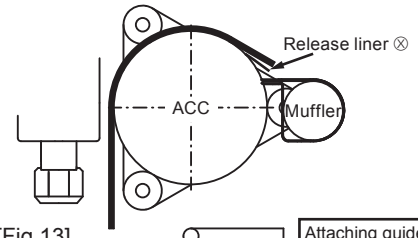


[Fig.17]

Do not peel the release liner.

•Peeling the release liner Ⓧ of the INS [2]

Peel the release liner Ⓧ while placing the INS [2] as shown in the Fig.13.

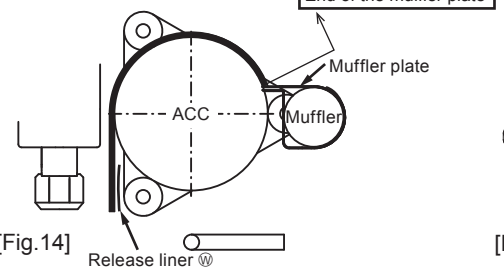


[Fig.13]

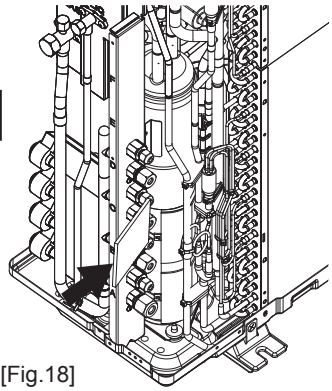
•Attaching the INS [2] / Peeling the release liner Ⓦ

Put the end of the INS [2] to the attaching guide C and D, then attach to the ACC as shown in the Fig.14 and Fig.19.
Note: Pay attention not to tilt the INS [2] when attaching to the ACC.

Peel the release liner Ⓦ after attaching the end of the INS [2].



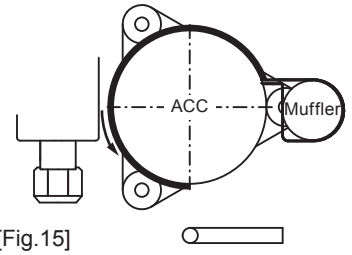
[Fig.14]



[Fig.18]

•Attaching the INS [2]
(Completing attachment of INS [2])

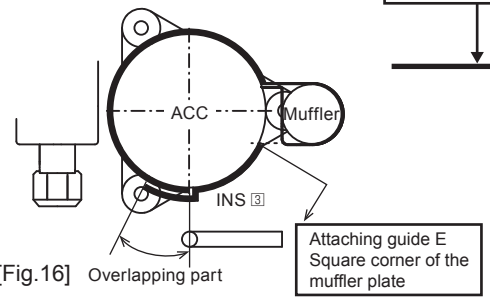
Pull the INS [2] towards the arrow in the Fig.15, then attach with no gaps between ACC and INS [2].



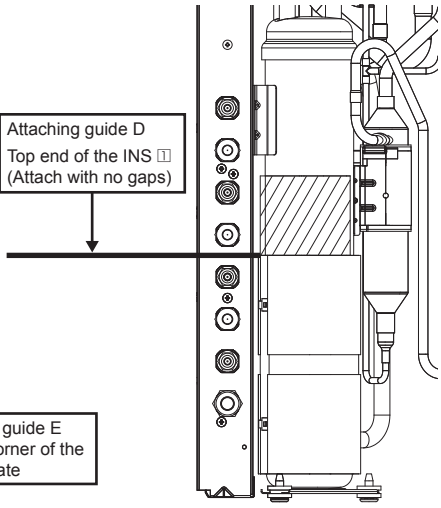
[Fig.15]

•Peeling the release liner of the INS [3] / Attaching the INS [3]

Peel the release liner of the INS [3], then insert the INS [3] as shown in the Fig.18.
Put the end of the INS [3] to the attaching guide D and E, then attach as it overlaps the INS [2] as shown in the Fig.16 and the Fig.19.



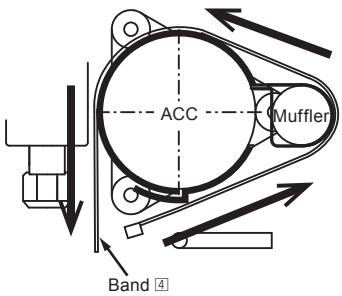
[Fig.16]



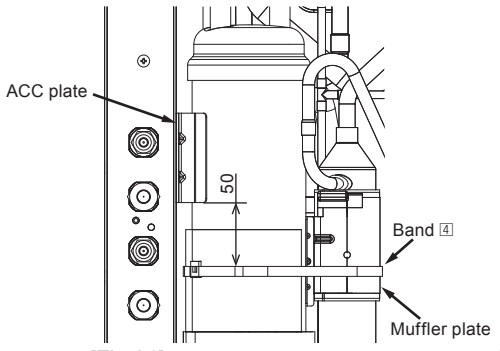
[Fig.19] Back side of the ACC

"Fixing the top section of the ACC unit with the band"

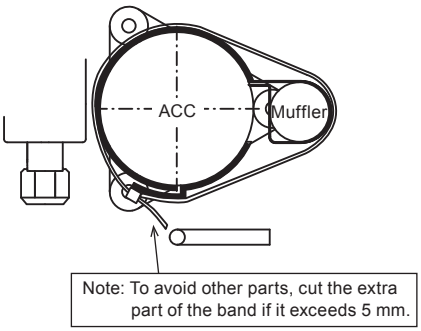
Placing the band [4] around the INS [2] and the INS [3] as shown in the Fig.20.
Fix the band [4]. For the height, the position, and the head of the band, refer to the Fig.21 and the Fig.22.
Notes: Make sure to fix the muffler plate and the INS firmly.
Make sure that the INS is fixed with the band without slack and does not shift vertically or circumferentially.



[Fig.20]



[Fig.21]



[Fig.22]

MEMO