

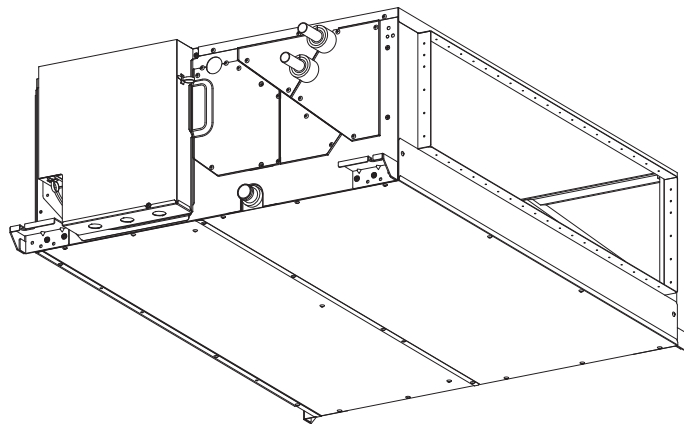
TECHNICAL & SERVICE MANUAL

Series PEFY Ceiling Concealed

Model name

<Indoor unit>

**PEFY-WL40VMHS-A, PEFY-WL50VMHS-A
PEFY-WL63VMHS-A, PEFY-WL71VMHS-A
PEFY-WL80VMHS-A, PEFY-WL100VMHS-A
PEFY-WL125VMHS-A**



INDOOR UNIT

CITY MULTI

Safety Precautions

Read before installation and performing electrical work

- Thoroughly read the following safety precautions prior to installation.
- Observe these safety precautions for your safety.
- This equipment may have adverse effects on the equipment on the same power supply system.
- Contact the local power authority before connecting to the system.

Symbol explanations

WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

CAUTION

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.



Indicates an action that must be avoided.



Indicates important instructions.



Indicates a parts that requires grounding.



Indicates that caution must be taken with rotating parts. (This symbol is on the main unit label.) <Color: Yellow>



Indicates that the parts that are marked with this symbol pose a risk of electric shock. (This symbol is on the main unit label.) <Color: Yellow>

WARNING

Carefully read the labels affixed to the main unit.

WARNING

•Do not use refrigerant other than the type indicated in the manuals provided with the unit and on the nameplate.

- Doing so may cause the unit or pipes to burst, or result in explosion or fire during use, during repair, or at the time of disposal of the unit.

It may also be in violation of applicable laws.

MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.

•Ask your dealer or a qualified technician to install the unit.

- Improper installation by the user may result in water leakage, electric shock, or fire.

•Properly install the unit on a surface that can withstand its weight.

- Unit installed on an unstable surface may fall and cause injury.

•Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable.

- Improperly connected cables may produce heat and start a fire.

•Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over.

- Improper installation may cause the unit to topple over and cause injury or damage to the unit.

•Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric.

•Do not make any modifications or alterations to the unit.

Consult your dealer for repair.

- Improper repair may result in water leakage, electric shock, or fire.

•Do not touch the heat exchanger fins with bare hands.

- The fins are sharp and pose a risk of cuts.

•Properly install the unit according to the instructions in the Installation Manual.

- Improper installation may result in water leakage, electric shock, or fire.

•Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.

- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

•Disconnect all electric power supplies before accessing of electric parts (inner of control box, fan motor, drain pump etc.)

- Touching electric parts result in electric shock.

•Keep electrical parts away from water.

- Wet electrical parts pose a risk of electric shock, smoke, or fire.

•Securely attach the control box cover.

- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.

•Consult your dealer or a qualified technician when moving or reinstalling the unit.

- Improper installation may result in water leakage, electric shock, or fire.

•Do not try to defeat the safety features of the unit.

- Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices, or the use of accessories other than the ones that are recommended by Mitsubishi Electric may result in smoke, fire, or explosion.

•Consult your dealer for proper disposal method.

Precautions for handling units for use with water

CAUTION

•Do not use the existing water piping.

- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before installation. Keep the joints wrapped in plastic bags. If dust or dirt enters the water circuit, it may damage the heat exchanger and cause water leakage.

•Only use water.

- Only use clean water as a refrigerant. The use of water outside the specification may damage the refrigerant circuit.

•Install the unit so that external force is not applied to the water pipes.

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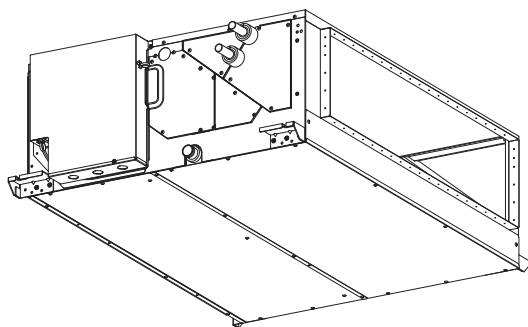
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[1] Features

Series PEFY Ceiling Concealed

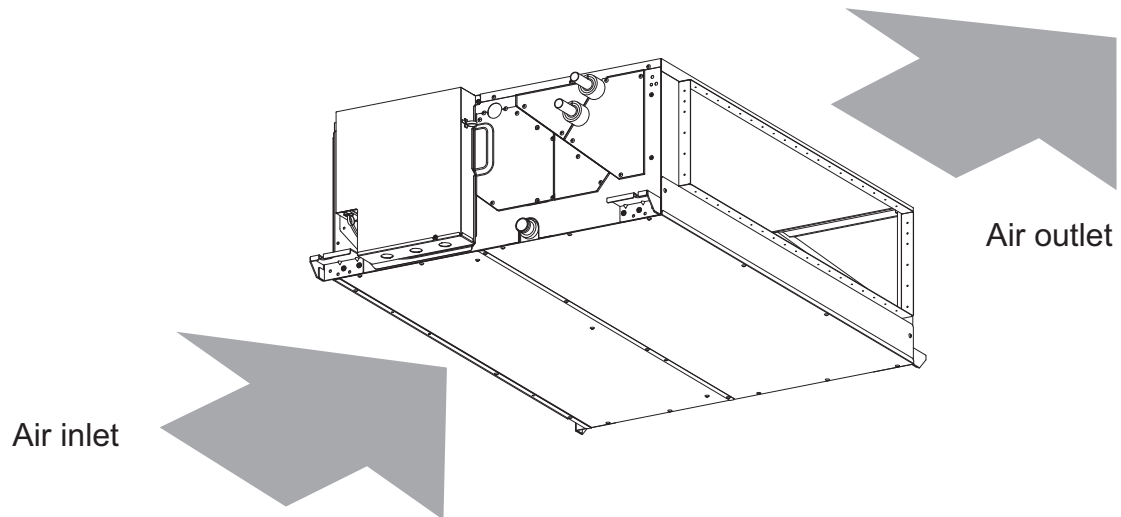


Indoor unit

Models	Cooling capacity/Heating capacity
	kW
PEFY-WL40VMHS-A	4.5 / 5.0
PEFY-WL50VMHS-A	5.6 / 6.3
PEFY-WL63VMHS-A	7.1 / 8.0
PEFY-WL71VMHS-A	8.0 / 9.0
PEFY-WL80VMHS-A	9.0 / 10.0
PEFY-WL100VMHS-A	11.2 / 12.5
PEFY-WL125VMHS-A	14.0 / 16.0

[1] Part Names and Functions

1. Indoor (main) unit



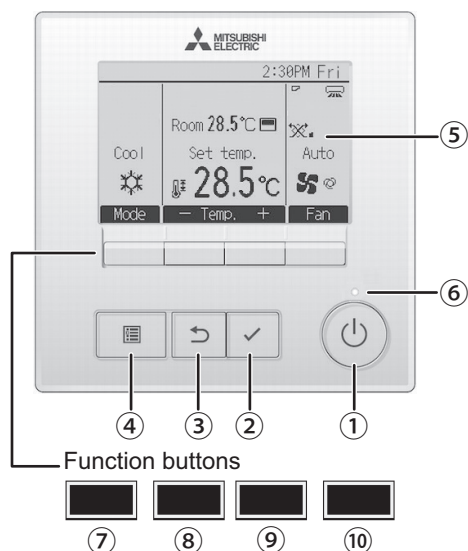
2. Remote controller

Wired remote controller function

* The functions which can be used are restricted according to the model.

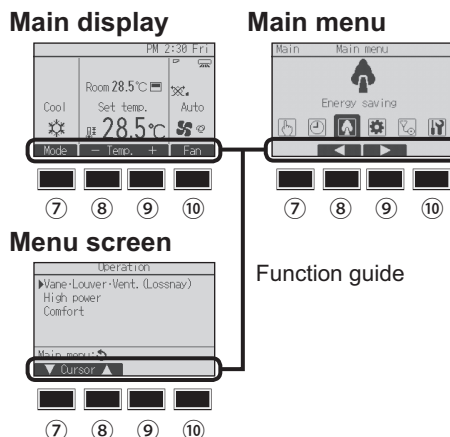
○ : Supported ✕ : Unsupported

	Function	PAR-40MAA	
		Slim	City multi
Body	Product size H × W × D (mm)	120 × 120 × 14.5	
	LCD	Full Dot LCD	
	Backlight	○	
Energy-saving	Energy-saving operation schedule	○	✕
	Automatic return to the preset temperature	○	
Restriction	Setting the temperature range restriction	○	
Function	Operation lock function	○	
	Weekly timer	○	
	On / Off timer	○	
	High Power	○	✕
	Manual vane angle	○	



The functions of the function buttons change depending on the screen. Refer to the button function guide that appears at the bottom of the LCD for the functions they serve on a given screen.

When the system is centrally controlled, the button function guide that corresponds to the locked button will not appear.



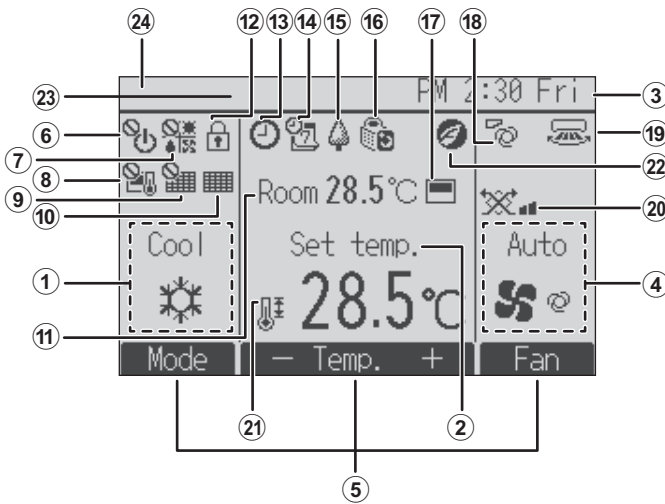
- ① ON/OFF button**
Press to turn ON/OFF the indoor unit.
 - ② SELECT button**
Press to save the setting.
 - ③ RETURN button**
Press to return to the previous screen.
 - ④ MENU button**
Press to bring up the Main menu.
 - ⑤ Backlit LCD**
Operation settings will appear.
When the backlight is off, pressing any button turns the backlight on and it will stay lit for a certain period of time depending on the screen.
- When the backlight is off, pressing any button turns the backlight on and does not perform its function. (except for the **ON/OFF** button)

- ⑥ ON/OFF lamp**
This lamp lights up in green while the unit is in operation. It blinks while the remote controller is starting up or when there is an error.
- ⑦ Function button F1**
Main display: Press to change the operation mode.
Menu screen: The button function varies with the screen.
- ⑧ Function button F2**
Main display: Press to decrease temperature.
Main menu: Press to move the cursor left.
Menu screen: The button function varies with the screen.
- ⑨ Function button F3**
Main display: Press to increase temperature.
Main menu: Press to move the cursor right.
Menu screen: The button function varies with the screen.
- ⑩ Function button F4**
Main display: Press to change the fan speed.
Menu screen: The button function varies with the screen.

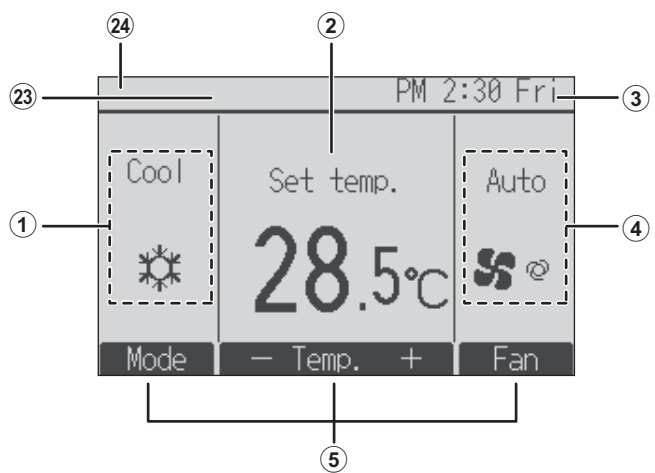
The main display can be displayed in two different modes: "Full" and "Basic".
The initial setting is "Full". To switch to the "Basic" mode, change the setting on the Main display setting.

<Full mode>

* All icons are displayed for explanation.



<Basic mode>




- ① Operation mode**


- ② Preset temperature**


- ③ Clock**
See the Installation Manual.


- ④ Fan speed**


- ⑤ Button function guide**
Functions of the corresponding buttons appear here.

- ⑥** 
Appears when the ON/OFF operation is centrally controlled.


- ⑦** 
Appears when the operation mode is centrally controlled.



- ⑧** 
Appears when the preset temperature is centrally controlled.


- ⑨** 
Appears when the filter reset function is centrally controlled.


- ⑩** 
Indicates when filter needs maintenance.


- ⑪ Room temperature**
See the Installation Manual.



- ⑫** 
Appears when the buttons are locked.


- ⑬** 
Appears when the On/Off timer, Night setback, or Auto-off timer function is enabled.
 appears when the timer is disabled by the centralized control system.


- ⑭** 
Appears when the Weekly timer is enabled.


- ⑮** 
Appears while the units are operated in the energy-save mode. (Will not appear on some models of indoor units)


- ⑯** 
Appears while the outdoor units are operated in the silent mode.


- ⑰** 
Appears when the built-in thermistor on the remote controller is activated to monitor the room temperature (⑩).
 appears when the thermistor on the indoor unit is activated to monitor the room temperature.

- ⑱** 
Indicates the vane setting.

- ⑲** 
Indicates the louver setting.

- ⑳** 
Indicates the ventilation setting.

- ㉑** 
Appears when the preset temperature range is restricted.

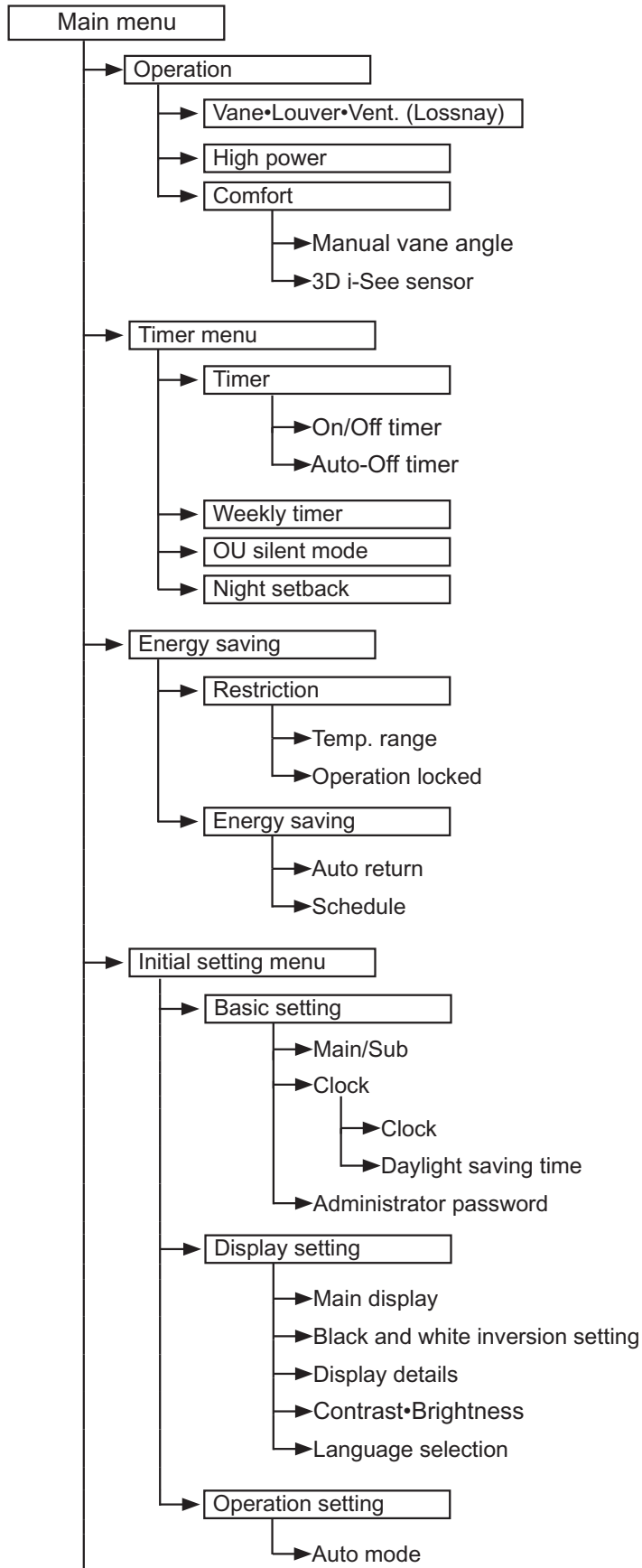
- ㉒** 
Appears when an energy-saving operation is performed using a "3D i-See sensor" function.

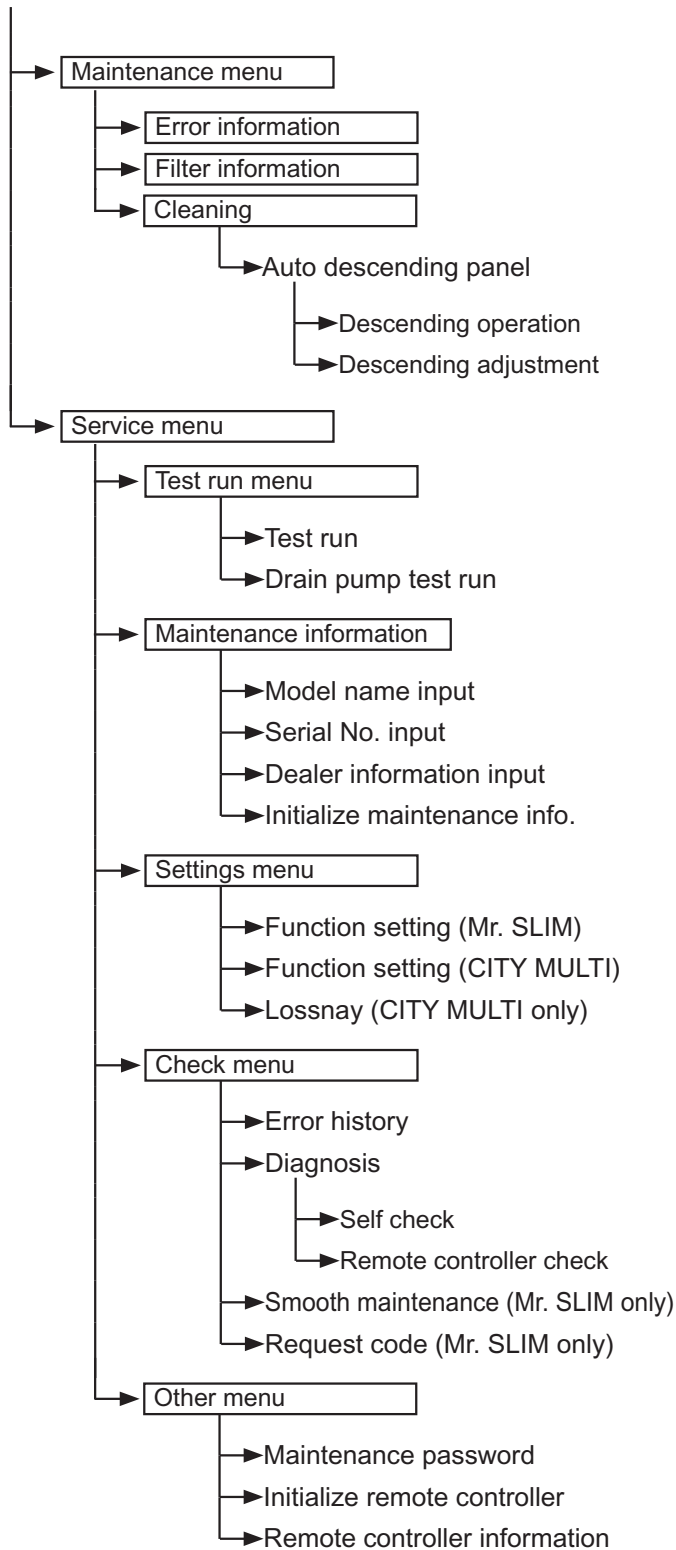
- ㉓ Centrally controlled**
Appears for a certain period of time when a centrally-controlled item is operated.

- ㉔ Error display**
An error code appears during the error.
* When an error code is displayed on the main display, an error is occurring but the indoor unit can keep its operation. Check the error code, and consult your dealer.

Most settings (except ON/OFF, mode, fan speed, temperature) can be made from the Main menu.

Menu structure





Not all functions are available on all models of indoor units.

Main menu list

Main menu	Setting items		Setting details
Operation	Vane•Louver•Vent. (Lossnay)		<p>Use to set the vane angle.</p> <ul style="list-style-type: none"> • Select a desired vane setting from five different settings. <p>Use to turn ON/OFF the louver.</p> <ul style="list-style-type: none"> • Select a desired setting from “ON” and “OFF.” <p>Use to set the amount of ventilation.</p> <ul style="list-style-type: none"> • Select a desired setting from “Off,” “Low,” and “High.”
	High power		<p>Use to reach the comfortable room temperature quickly.</p> <ul style="list-style-type: none"> • Units can be operated in the High-power mode for up to 30 minutes.
	Comfort	Manual vane angle	<p>Use to fix each vane angle.</p>
Timer	Timer	On/Off timer	<p>Use to set the operation On/Off times.</p> <ul style="list-style-type: none"> • Time can be set in 5-minute increments. * Clock setting is required.
		Auto-Off timer	<p>Use to set the Auto-Off time.</p> <ul style="list-style-type: none"> • Time can be set to a value from 30 to 240 in 10-minute increments.
	Weekly timer		<p>Use to set the weekly operation On/Off times.</p> <ul style="list-style-type: none"> • Up to eight operation patterns can be set for each day. • Two types of weekly schedules can be set. * Clock setting is required. * Not valid when the On/Off timer is enabled. * 1°C increments
	OU silent mode		<p>Use to set the time periods in which priority is given to quiet operation of outdoor units over temperature control. Set the Start/Stop times for each day of the week.</p> <ul style="list-style-type: none"> • Select the desired silent level from “Normal,” “Middle,” and “Quiet.” * Clock setting is required.
	Night setback		<p>Use to make Night setback settings.</p> <ul style="list-style-type: none"> • Select “Yes” to enable the setting, and “No” to disable the setting. The temperature range and the start/stop times can be set. * Clock setting is required. * 1°C increments
Energy saving	Restriction	Temp. range	<p>Use to restrict the preset temperature range.</p> <ul style="list-style-type: none"> • Different temperature ranges can be set for different operation modes. * 1°C increments
		Operation locked	<p>Use to lock selected functions.</p> <ul style="list-style-type: none"> • The locked functions cannot be operated.
	Energy saving	Auto return	<p>Use to get the units to operate at the preset temperature after performing energy-save operation for a specified time period.</p> <ul style="list-style-type: none"> • Time can be set to a value from 30 and 120 in 10-minute increments. * This function will not be valid when the preset temperature ranges are restricted. * 1°C increments
		Schedule	<p>Set the start/stop times to operate the units in the energy-save mode for each day of the week, and set the energy-saving rate.</p> <ul style="list-style-type: none"> • Up to four energy-save operation patterns can be set for each day. • Time can be set in 5-minute increments. • Energy-saving rate can be set to a value from 0% and 50 to 90% in 10% increments. * Clock setting is required.

Main menu	Setting items		Setting details
Initial setting	Basic setting	Clock	Use to set the current time.
		Daylight saving time	Sets the daylight saving time.
	Display setting	Main display	Use to switch between "Full" and "Basic" modes for the Status display and the Main display. • The default setting is "Full."
		Black and white inversion setting	Use to invert the colors of the display, turning white background to black and black characters to white.
		Contrast·Brightness	Use to adjust screen contrast and brightness.
		Language selection	Use to select the desired language.
Service	Initialize remote controller	Use to initialize the remote controller to the factory shipment status.	
	Remote controller information	Use to display the remote controller model name, software version, and serial number.	
Maintenance	Error information	Use to check error information when an error occurs. • Error code, error source, refrigerant address, unit model, manufacturing number, contact information (dealer's phone number) can be displayed. * The unit model, manufacturing number, and contact information need to be registered in advance to be displayed.	
	Filter information	Use to check the filter status. • The filter sign can be reset.	

[1] Specification

1. Specification

Model				PEFY-WL40VMHS-A	PEFY-WL50VMHS-A	PEFY-WL63VMHS-A	PEFY-WL71VMHS-A
Power source				~ 220-240V 50Hz/60Hz			
Cooling capacity *1		kW	4.5	5.6	7.1	8.0	
Heating capacity *1		kW	5.0	6.3	8.0	9.0	
Power consumption	Cooling	kW	0.055	0.077	0.095	0.075	
	Heating	kW	0.055	0.077	0.095	0.075	
Current	Cooling	A	0.41	0.58	0.70	0.54	
	Heating	A	0.41	0.58	0.70	0.54	
External finish				Galvanizing			
Dimension	Height	mm	380				
	Width	mm	745			1030	
	Depth	mm	900				
Net weight		kg	35		36	45	
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)			
Fan	Type		Sirocco fan x 1			Sirocco fan x 2	
	Airflow rate (Lo-Mid-Hi)	m³/min	10.0-12.0-14.0	13.0-15.0-18.0	13.5-16.0-19.0	15.5-18.0-22.0	
	External static pressure *2		Pa	50/100/150/200			
Motor	Type		DC motor				
	Output		0.121			0.244	
Air filter (option)				Synthetic fiber unwoven cloth filter (long life)			
Water piping diameter *3, *4	Connection size	Inlet	mm O.D.		22		
		Outlet	mm O.D.		22		
	Field pipe size	Inlet	mm I.D.		20	30	
		Outlet	mm I.D.		20	30	
Drain pipe dimension				32 (1-1/4 inch)			
Noise level (Lo-Mid-Hi)		dB(A)	22-25-29	24-27-32	25.5-28.5-32.5	24-27-31	

Model				PEFY-WL80VMHS-A	PEFY-WL100VMHS-A	PEFY-WL125VMHS-A
Power source				~ 220-240V 50Hz/60Hz		
Cooling capacity *1		kW	9.0	11.2	14.0	
Heating capacity *1		kW	10.0	12.5	16.0	
Power consumption	Cooling	kW	0.090	0.160	0.175	
	Heating	kW	0.090	0.160	0.175	
Current	Cooling	A	0.63	1.05	1.17	
	Heating	A	0.63	1.05	1.17	
External finish				Galvanizing		
Dimension	Height	mm	380			
	Width	mm	1030	1195		
	Depth	mm	900			
Net weight		kg	45	51	53	
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)		
Fan	Type		Sirocco fan x 2			
	Airflow rate (Lo-Mid-Hi)	m³/min	18.0-21.5-25.0	26.5-32.0-38.0		
	External static pressure *2		Pa	50/100/150/200		
Motor	Type		DC motor			
	Output		0.244	0.375		
Air filter (option)				Synthetic fiber unwoven cloth filter (long life)		
Water piping diameter *3, *4	Connection size	Inlet	mm O.D.		22	
		Outlet	mm O.D.		22	
	Field pipe size	Inlet	mm I.D.		30	
		Outlet	mm I.D.		30	
Drain pipe dimension				32 (1-1/4 inch)		
Noise level (Lo-Mid-Hi)		dB(A)	26-29-32	28-32-36		

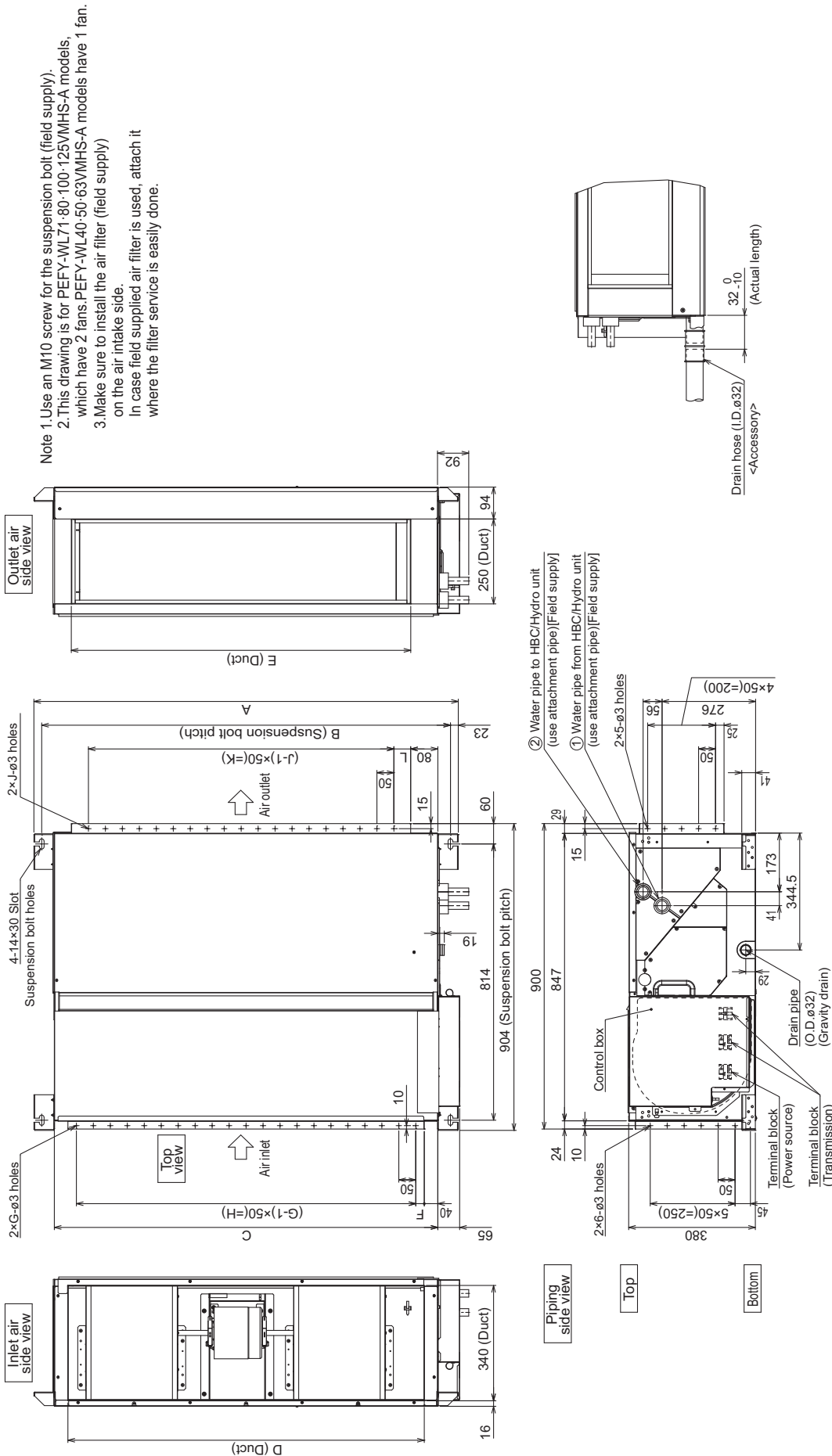
- Note: *1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
 Cooling: Indoor 27°CDB/19°CWB, Outdoor 35°CDB
 Heating: Indoor 20°CDB, Outdoor 7°CDB/6°CWB
 *2 The external static pressure is set to 50Pa at factory shipment.
 *3 Be sure to install a valve on the water inlet/outlet.
 *4 Install a strainer (40 mesh or more) on the pipe next to the valve to remove the foreign matters.

2. Electrical parts specifications

Model Parts name	Symbol	PEFY- WL40VMHS-A	PEFY- WL50VMHS-A	PEFY- WL63VMHS-A	PEFY- WL71VMHS-A	PEFY- WL80VMHS-A	PEFY- WL100VMHS-A	PEFY- WL125VMHS-A
Room temperature thermistor	TH21	Resistance 0°C/15 kΩ, 10°C/9.6 kΩ, 20°C/6.3 kΩ, 25°C/5.4 kΩ, 30°C/4.3 kΩ, 40°C/3.0 kΩ						
Water inlet thermistor	TH22	Resistance 0°C/15 kΩ, 10°C/9.6 kΩ, 20°C/6.3 kΩ, 25°C/5.4 kΩ, 30°C/4.3 kΩ, 40°C/3.0 kΩ						
Water outlet thermistor	TH23	Resistance 0°C/15 kΩ, 10°C/9.6 kΩ, 20°C/6.3 kΩ, 25°C/5.4 kΩ, 30°C/4.3 kΩ, 40°C/3.0 kΩ						
Fuse (Indoor controller board)	FUSE	250 V 6.3 A						
Fan motor (with Inner-thermostat)	MF1, 2	8-pole, output 121 W SIC-70CW-D8121-3			8-pole, output 244 W SIC-101CW-D8244-3		10-pole, output 375 W KMUC4E3MW	
Flow control valve	FCV	12 VDC stepping motor (0~770 pulse)						
Power supply terminal bed	TB2	(L, N, ⊕) 250 V 20 A						
Transmission terminal bed	TB5 TB15	(M1, M2, S) 250 V 20 A (1, 2) 250 V 15 A						

[1] Outlines and Dimensions

Unit: mm



Note 1. Use an M10 screw for the suspension bolt (field supply).
 2. This drawing is for PEFY-WL71-80-100-125VMHS-A models, which have 2 fans. PEFY-WL40-50-63VMHS-A models have 1 fan.
 3. Make sure to install the air filter (field supply) on the air intake side.
 In case field supplied air filter is used, attach it where the filter service is easily done.

Model	A	B	C	D	E	F	G	H	J	K	L	① Water pipe from HBC/Hydro unit to HBC/Hydro unit		② Water pipe to HBC/Hydro unit from HBC/Hydro unit		O.D. ø22
PEFY-WL40-50-63VMHS-A	800	754	680	600	550	50	11	500	10	450	49.5					
PEFY-WL71-80VMHS-A	1085	1039	965	885	835	42.5	17	800	15	700	67					
PEFY-WL100-125VMHS-A	1250	1204	1130	1050	1000	25	21	1000	19	900	49.5					

[Maintenance access space]

Secure enough access space to allow for the maintenance, inspection, and replacement of the motor, fan, heat exchanger, drain pan and control box in one of the following ways.
 Select an installation site for the indoor unit so that its maintenance access space will not be obstructed by beam or other objects.

Create access door 1 (450x450mm) for the maintenance from the unit side when the thermistor, and control box is exchanged. (Fig.2,4)

- (1) When a space of 300mm or more is available below the unit between the unit and the ceiling.
 Create access door 2 (600x600mm) for the maintenance from the bottom when the motor, fan, heat exchanger and drain pan is cleaned(exchanged). (Fig.2)
- (2) When a space of less than 300mm is available below the unit between the unit and the ceiling.
 (At least 20mm of space should be left below the unit as shown in Fig.3.)
 Create access door 3 for the maintenance from the bottom when the motor, fan, heat exchanger and drain pan is cleaned(exchanged). (Fig.4)

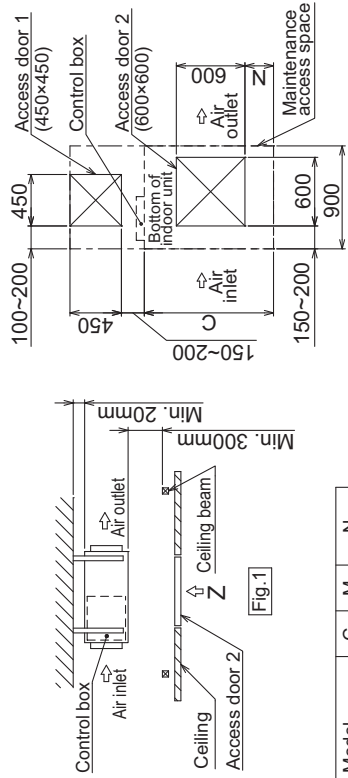


Fig.1

Model	C	M	N
PEFY-WL40-50-63VMHSA	680	780	0~50
PEFY-WL71-80VMHSA	965	1065	100~150
PEFY-WL100-125VMHSA	1130	1230	200~250

Fig.2 (Viewed from the direction of the arrow Z)

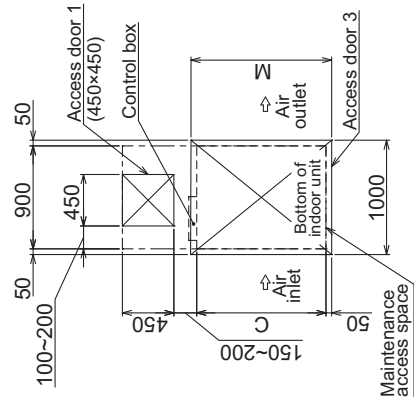


Fig.4 (Viewed from the direction of the arrow Y)

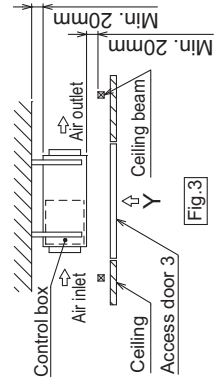
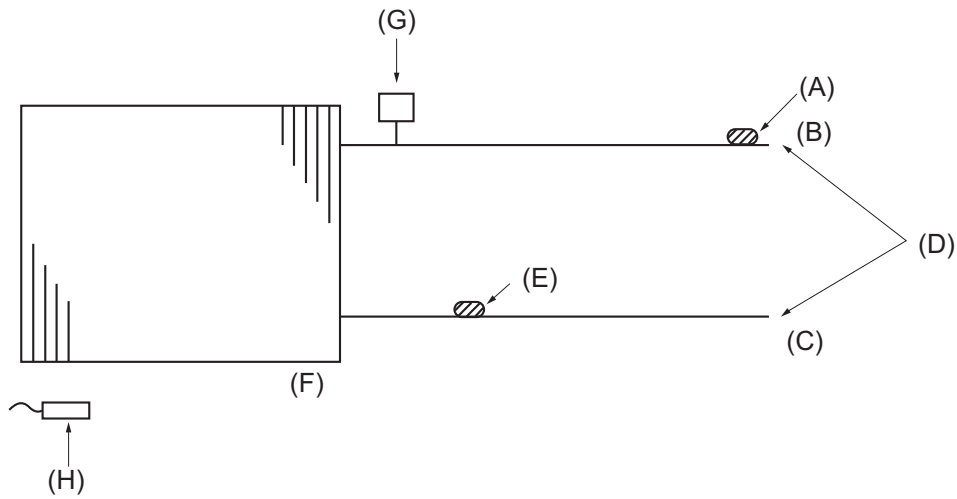


Fig.3

[1] Water System Diagram



- (A) Water outlet thermistor TH23
- (B) Water outlet
- (C) Water inlet
- (D) Connections
- (E) Water inlet thermistor TH22
- (F) Heat exchanger
- (G) Manual air purge valve
- (H) Room temperature thermistor TH21

				PEFY-WL 40, 50 VMHS-A	PEFY-WL 63, 71, 80, 100, 125 VMHS-A
Water piping diameter	Connection size	Inlet	mm O.D.	22	22
		Outlet	mm O.D.	22	22
	Field pipe size	Inlet	mm I.D.	20	30
		Outlet	mm I.D.	20	30

[1] Troubleshooting

1. Check methods

1. Component and check points

(1) Thermistor

- ◆Room temperature thermistor (TH21)
- ◆Water inlet thermistor (TH22)
- ◆Water outlet thermistor (TH23)

Disconnect the connector and measure the resistance between terminals with a tester.
(Ambient temperature 10°C - 30°C)

Normal	Abnormal
4.3 kΩ - 9.6 kΩ	Open or short

(Refer to the thermistor characteristic graph below.)

1) Thermistor characteristic graph

Low-temperature thermistor

- ◆Room temperature thermistor (TH21)
- ◆Water inlet thermistor (TH22)
- ◆Water outlet thermistor (TH23)
- ◆Drain sensor (DS)

- ◆Thermistor R₀ = 15 kΩ ± 3%
- ◆Multiplier of B = 3480 kΩ ± 2%*

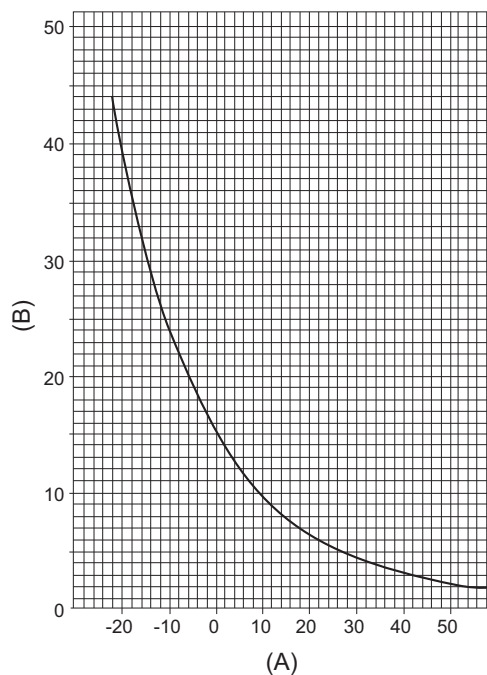
$$R_t = 15 \exp \left\{ 3480 \left(\frac{1}{273+t} - \frac{1}{273} \right) \right\}$$

*The B-constant of the inlet/outlet pipe temperature thermistor is 3465 K±1%.

0°C	15 kΩ
10°C	9.6 kΩ
20°C	6.3 kΩ
25°C	5.2 kΩ
30°C	4.3 kΩ
40°C	3.0 kΩ

(A) Temperature (°C)

(B) Resistance (kΩ)



(2) Fan motor (CNMF)

Refer to the page on “DC fan motor (fan motor/indoor control board).”

(3) Flow control valve (with the valve kit)

Disconnect the connector, and measure the resistance between terminals with a tester.
Refer to the next page for details.

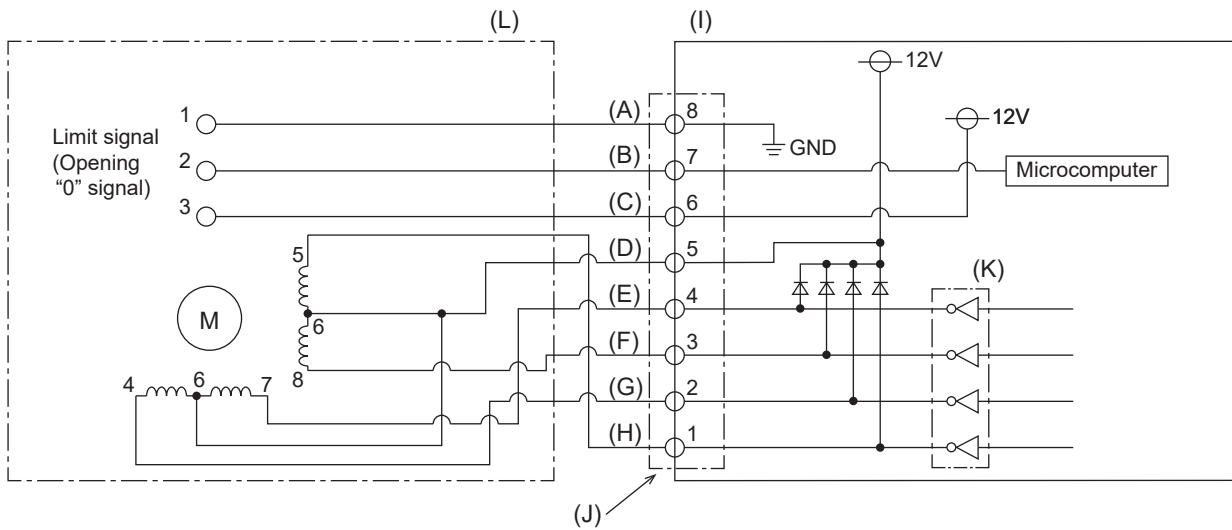
	Normal				Abnormal
	1-5 Purple-Brown	2-5 Orange-Brown	3-5 Blue-Brown	4-5 Green-Brown	Open or short
	55Ω / PHASE				

- | | |
|------------|------------|
| (A) Yellow | (E) Green |
| (B) White | (F) Blue |
| (C) Black | (G) Orange |
| (D) Brown | (H) Purple |

1) Summary of flow control valve (FCV) operation

- The FCV is operated by a stepping motor, which operates by receiving a pulse signal from the indoor control board.
- The FCV position changes in response to the pulse signal.

Indoor control board and FCV connection



- | | |
|------------|------------------------|
| (A) Yellow | (G) Orange |
| (B) White | (H) Purple |
| (C) Black | (I) Control board |
| (D) Brown | (J) Connection (CN60) |
| (E) Green | (K) Drive circuit |
| (F) Blue | (L) Flow control valve |

Pulse signal output and valve operation

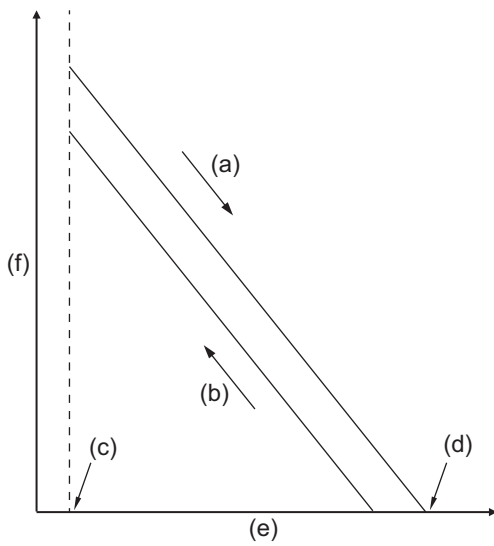
Output (phase) number	Output status			
	1	2	3	4
4	ON	ON	OFF	OFF
5	OFF	ON	ON	OFF
7	OFF	OFF	ON	ON
8	ON	OFF	OFF	ON

The output pulse changes in the following order:

When the valve closes 1 -> 2 -> 3 -> 4 -> 1

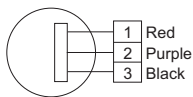
When the valve opens 4 -> 3 -> 2 -> 1 -> 4

2) FCV operation



- (a) Close
- (b) Open
- (c) Fully open valve (85 pulses)
- (d) Fully close valve (770 pulses)
- (e) No. of pulses
- (f) Valve opening degree

3) Drain pump



1. Check if the drain float switch works properly.
 2. Check if the drain pump works and drains water properly in cooling operation.
 3. If no water drains, confirm that the check code 2502 will not be displayed 10 minutes after the operation starts.
- Note: The drain pump for this model is driven by the internal DC motor of controller board, so it is not possible to measure the resistance between the terminals.

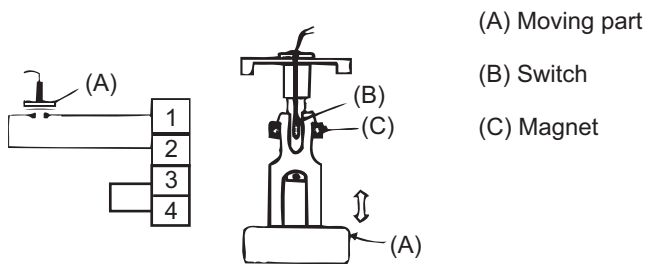
Normal

Red-Black: Input 13 VDC → The fan starts to rotate.

Purple-Black: Abnormal (check code 2502) if it outputs 0-13 V square wave (5 pulses/rotation), and the number of rotation is not normal.

4) Drain float switch (CN4F)

Disconnect the connector, and measure the resistance between terminals with a tester.



Position of the moving part	Normal	Abnormal
Up	Short	(any position but short)
Down	Open	(any position but open)

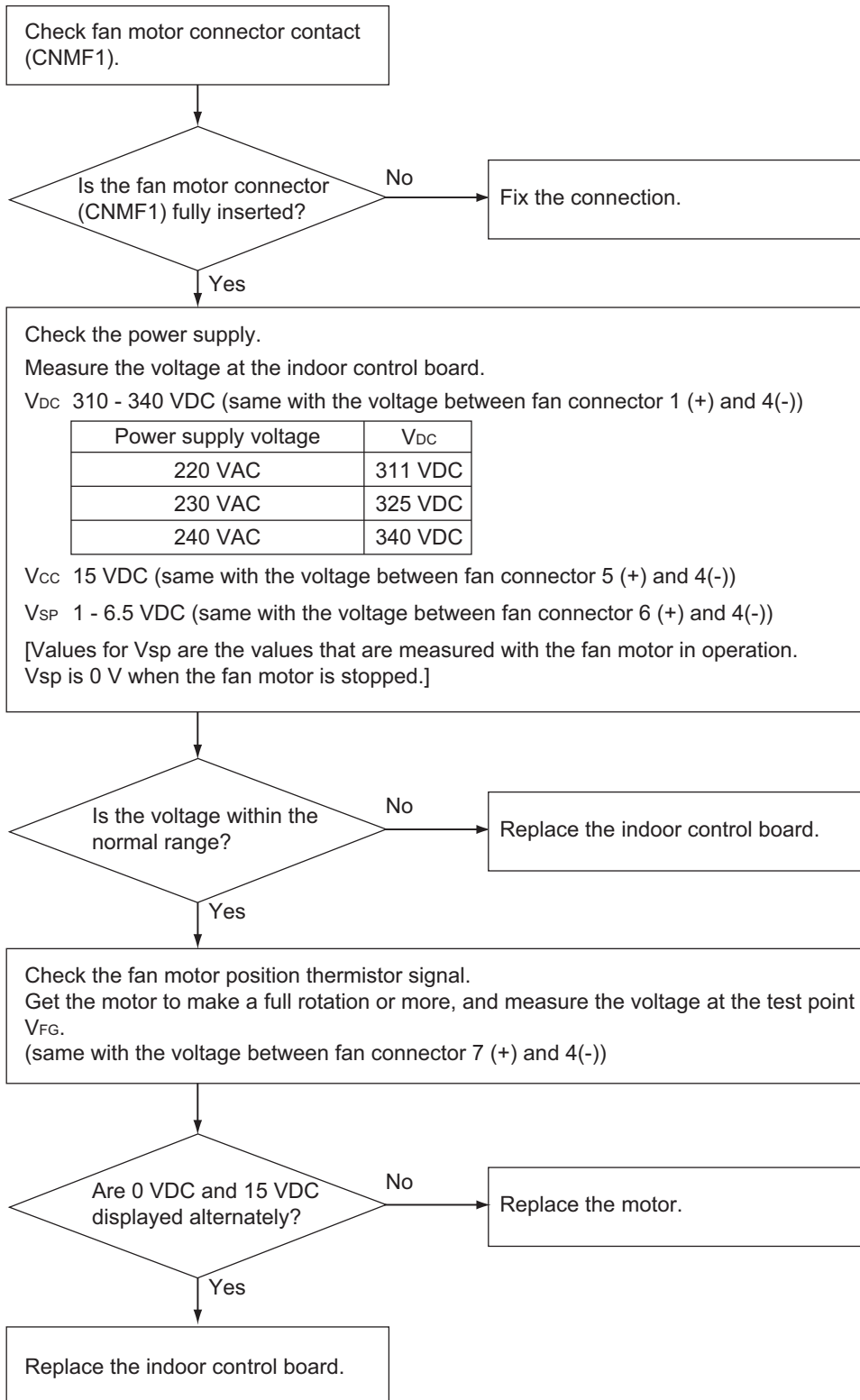
2. DC fan motor (fan motor/indoor control board)

1. CAUTION

- ◆A high voltage is applied to the connector for connection to the fan motor (CNMF1).
- ◆Do not unplug the connector CNMF1 with the unit energized to avoid damage to the indoor control board and fan motor.

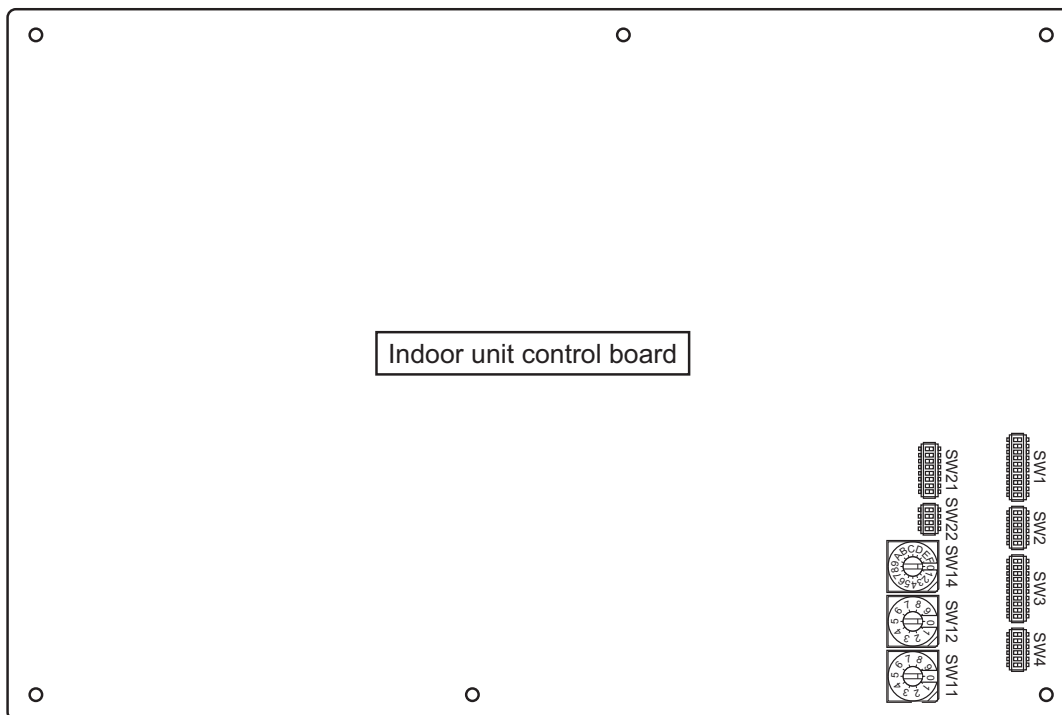
2. Troubleshooting

- ◆Symptom: Indoor unit fan does not run.



3. Setting of address switch

Make sure that power source is turning off.



1) In case using network remote controller, address is set by rotary switches. (SW11, SW12)

* It is not necessary setting address in case of using unit remote controller.

Indoor unit do not run without address setting in field.

2) Indoor unit address setting rule is different by each field work.

Refer to install manual of outdoor unit, operate the address setting.

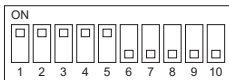
3) Setting the address is combination of SW11 (1st digit address setting) and SW12 (2nd digit address setting).

Address " 3 " setting is composed SW11 " 3 " and SW12 " 0 ".

Address " 25 " setting is composed SW11 " 5 " and SW12 " 2 ".

4. Setting of dip-switch (at delivery)

Models	SW1	SW2	SW3	SW4	SW21	SW22	SWE
PEFY-WL40VMHS-A	ON 	ON 	ON 	ON 	ON 	ON 	ON
PEFY-WL50VMHS-A	ON 	ON 	ON 	ON 	ON 	ON 	ON
PEFY-WL63VMHS-A	ON 	ON 	ON 	ON 	ON 	ON 	ON
PEFY-WL71VMHS-A	ON 	ON 	ON 	ON 	ON 	ON 	ON
PEFY-WL80VMHS-A	ON 	ON 	ON 	ON 	ON 	ON 	ON
PEFY-WL100VMHS-A	ON 	ON 	ON 	ON 	ON 	ON 	ON
PEFY-WL125VMHS-A	ON 	ON 	ON 	ON 	ON 	ON 	ON



The figure at left shows that the switches 1 through 5 are set to ON and 6 through 10 are set to OFF.

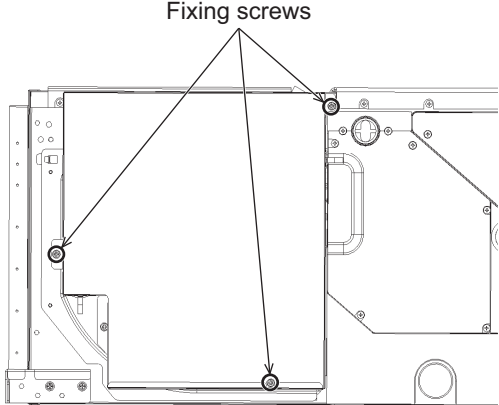
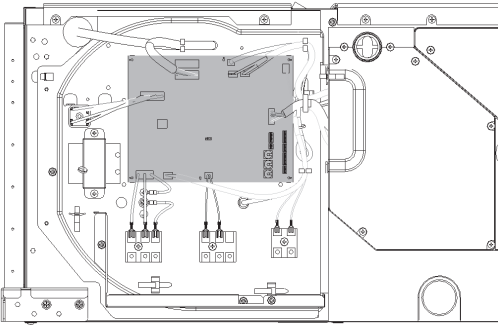
5. Function the LED of the indoor unit service board

Symbol	Silk display	LED operation under normal state
LED1	Main power source	At applying main power source (indoor unit 200 V) → Lighting
LED2	Transmission power source	At receiving M-NET transmission power source → Lighting

[1] Disassembly Procedure

1. Control box

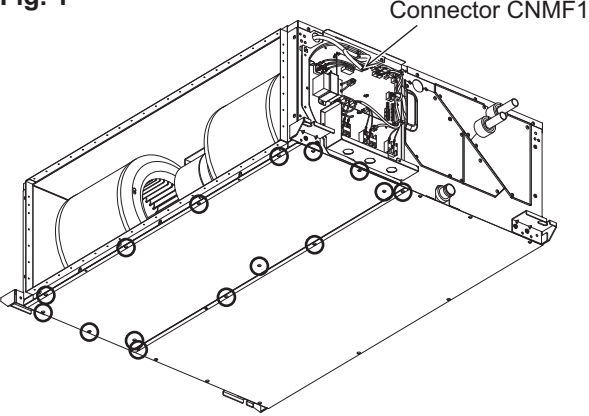
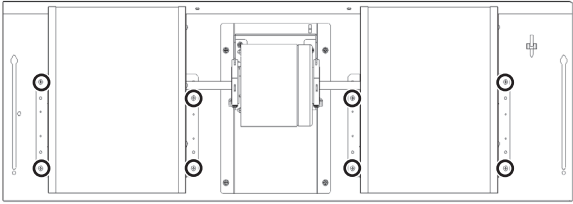
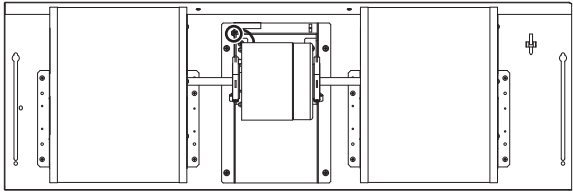
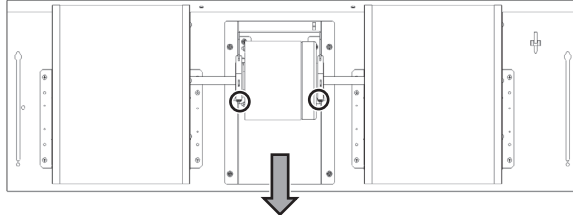
Be careful on removing heavy parts.

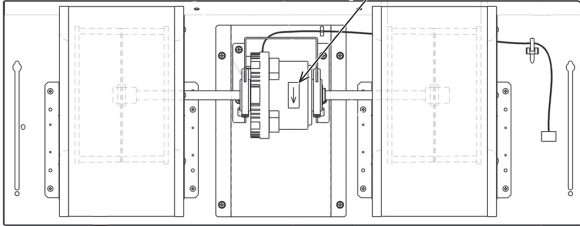
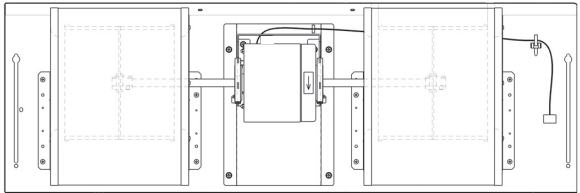
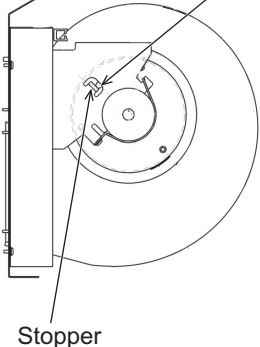
OPERATING PROCEDURE	FIGURES
<p>1. Removing the control box cover</p> <p>(1) Remove the fixing screws (three) of the control box (A), and remove the cover. (Fig. 1)</p> <p>*At this stage, the following servicing is possible. (Fig. 2)</p> <p>1 Operation and check of the switches (listed below) which are on the control board.</p> <ul style="list-style-type: none"> • Dip switch SW1 Function change • Dip switch SW2 Capacity code setting • Dip switch SW3 Function change • Dip switch SW4 Model code setting • Dip switch SW21 Static pressure setting • Dip switch SW22 Function setting • Rotary switches SW11, 12 ... Address setting • Rotary switch SW14 Branch port setting <p>2 Connection check of the lead wires (listed below) which are connected to the controller board.</p> <ul style="list-style-type: none"> • Power supply lead wire. • Network remote controller transmission lead wire. • Fan motor lead wire. • Intake air sensor lead wire • Water inlet piping sensor lead wire • Water outlet piping sensor lead wire <ul style="list-style-type: none"> (• Drain pump lead wire) (• Drain sensor lead wire) <p>3 Control board exchange</p> <p>4 Condenser exchange</p> <p>5 Fuse (Fuse holder) exchange</p> <p>6 Relay exchange</p> <p>7 Intake air sensor exchange</p> <p>8 Power supply terminal bed exchange</p> <p>9 Transmission terminal bed exchange x 2</p> <p>(): Optional parts</p>	<p>Fig. 1</p>  <p>Fig. 2</p> 

2. Fan and fan motor

Be careful on removing heavy parts.

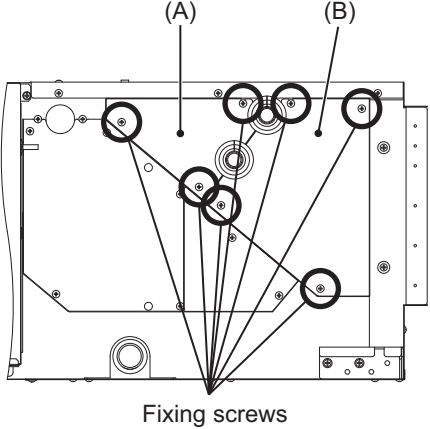
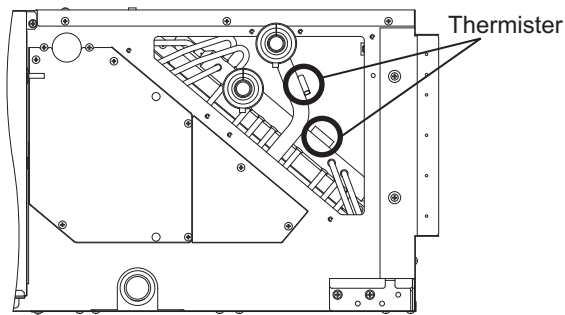
Electric shock hazard. Before performing any work, shut off the power supply.

OPERATING PROCEDURE	FIGURES
<p>1. Remove the control box cover according to the procedure in section [1]-1. Control box.</p> <p>2. Removing the fan motor cable</p> <p>(1) Disconnect the connector (CNMF1) from the control board.</p> <p>(2) Remove the cable through the rubber bush.</p> <p>3. Removing the bottom plate</p> <p>(1) Remove the fifteen fixing screws on the bottom plate to remove it.</p> <p>4. Removing the fan case</p> <p>(1) Remove the eight fixing screws on the fan case to remove it.</p> <p>5. Removing the fan and fan motor</p> <p>(1) Remove the earth lead of the motor from the motor base. (Fig. 3) The grounding wire of the motor wire is found only on the WL100 and 125 models.</p> <p>(2) Remove the two fixing screws and attachment on the fan motor (Fig. 4).</p> <p>(3) Pull out the fan motor in the direction of the arrow (Fig. 4).</p>	<p>Fig. 1</p>  <p>Connector CNMF1</p> <p>Fig. 2</p>  <p>Fig. 3</p>  <p>Fig. 4</p> <p>Exercise caution when removing heavy parts.</p> 

OPERATING PROCEDURE	FIGURES
<p>6. Precautions for reinstalling the removed motor in its original position</p> <p>(1) WL40-80 Fix the motor in place so that the stamp printed on the motor faces front when viewed from the air inlet. (Fig. 5)</p> <p>(2) WL100-125 Fix the motor in place so that the protruding portion on the motor and the stopper of the motor leg are positioned as shown in Fig. 6.</p>	<p>Fig. 5</p>  <p>Fig. 6</p>  <p>Viewed from left</p> 

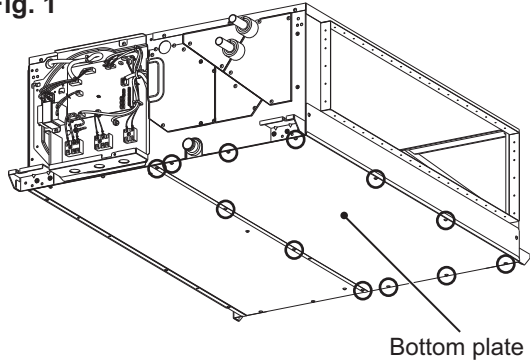
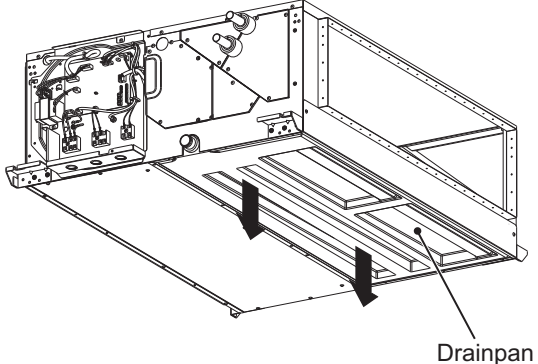
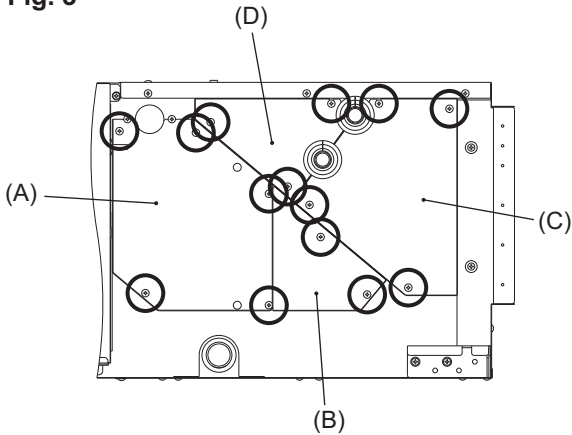
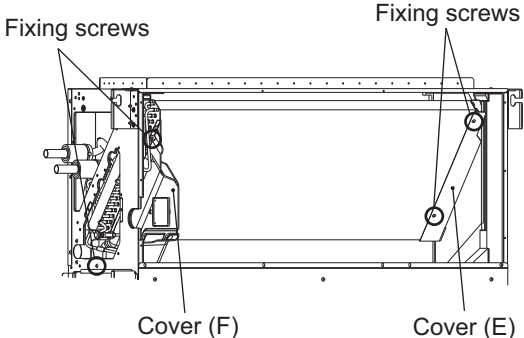
3. Thermistor (Water inlet/outlet piping temperature detection)

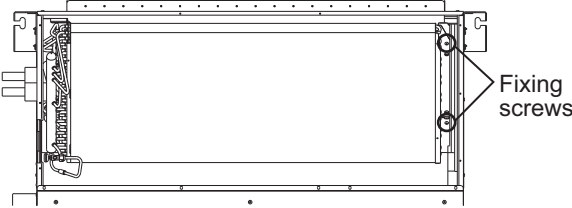
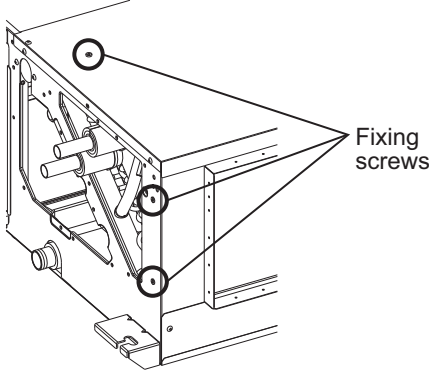
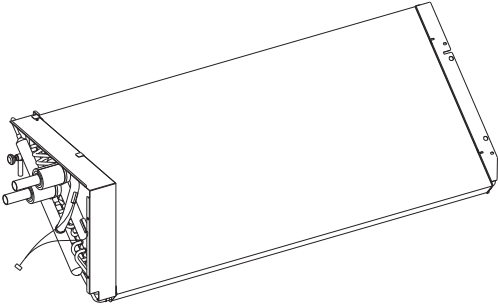
Be careful on removing heavy parts.

OPERATING PROCEDURE	FIGURES
<p>1. Removing the thermistors.</p> <p>(1) Remove the control box cover with procedure [1]-1.</p> <p>(2) Remove the fixing screws (seven) of the heat exchanger covers (A) and (B), and remove the covers (A) and (B). (Fig. 1)</p> <p>2. Removing the thermistors.</p> <p>(1) Remove the thermistors from the thermistor holders which are installed on the piping. (Fig. 2) (liquid piping: large piping, gas piping: small piping)</p>	<p>Fig. 1</p>  <p>Fig. 2</p> 

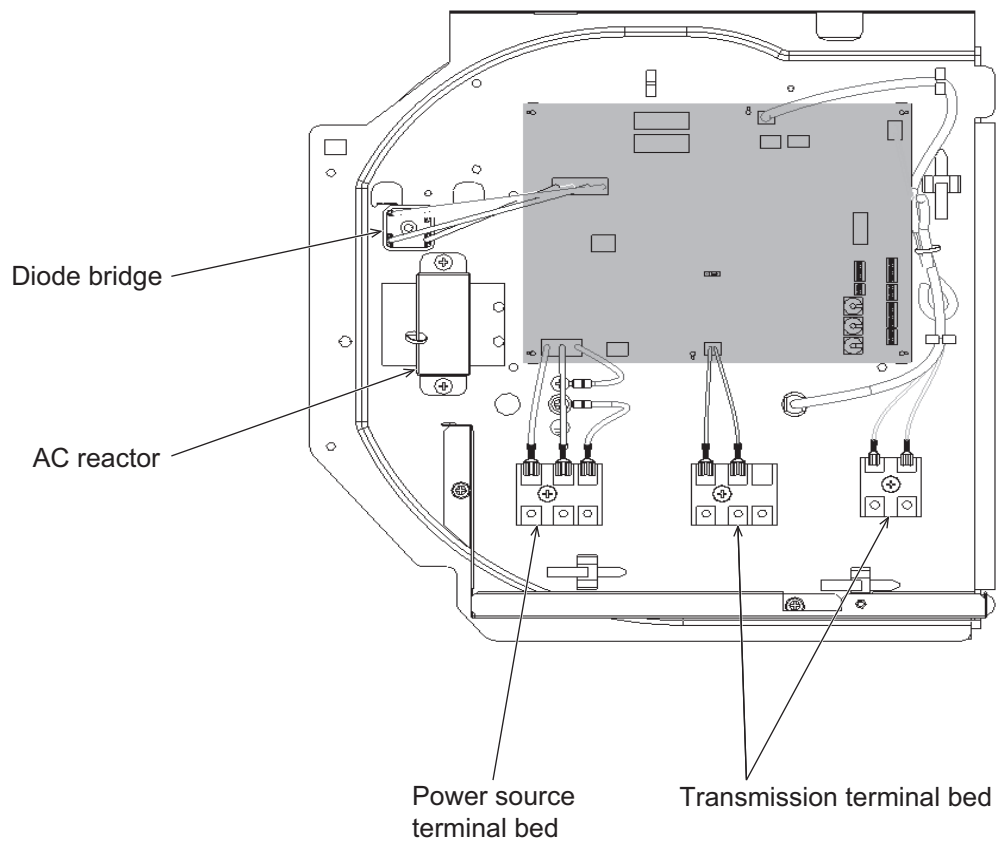
4. Heat exchanger

Be careful on removing heavy parts.

OPERATING PROCEDURE	FIGURES
<p>1. Removing the heat exchanger.</p> <ol style="list-style-type: none"> (1) Remove the bottom plate which is air outlet side. (fixing screws: twelve) (Fig. 1) (2) Remove the drainpan. (Fig. 2) (3) Remove the covers (A), (B), (C), and (D). (fixing screws: fourteen) (Fig. 3) (4) Remove the covers (E) and (F). (fixing screws: two x 2) (Fig. 4) 	<p>Fig. 1</p>  <p>Fig. 2</p>  <p>Fig. 3</p>  <p>Fig. 4</p> 

OPERATING PROCEDURE	FIGURES
<p data-bbox="142 275 815 309">(5) Remove the heat exchanger. (fixing screws: five) (Fig. 5, 6)</p> <p data-bbox="178 342 676 376">*Removed heat exchanger is as shown Fig. 7.</p>	<p data-bbox="874 275 948 309">Fig. 5</p>  <p data-bbox="874 656 948 689">Fig. 6</p>  <p data-bbox="874 1115 948 1149">Fig. 7</p> 

5. Control box inside layout



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