

SERVICE MANUAL

Series PEY **Ceiling Concealed**

Model name

<Indoor unit>

PEY-SP18JA(L)

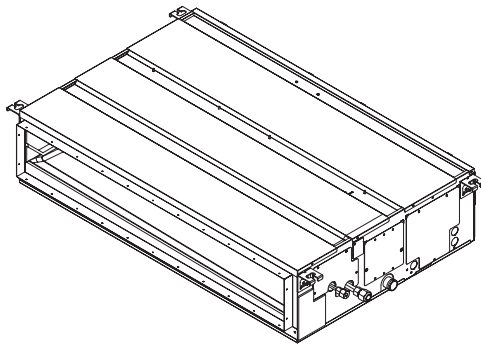
PEY-SP24JA(L)

PEY-SP30JA(L)

PEY-SP36JA(L)

PEY-SP42JA(L)

PEY-SP48JA(L)

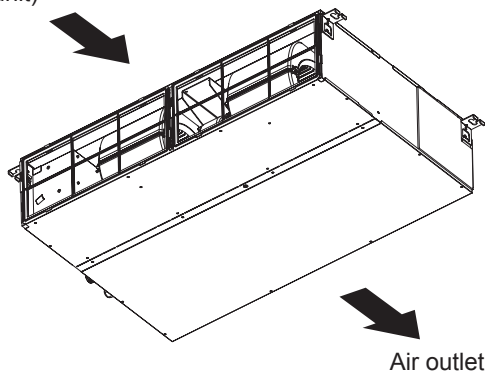


INDOOR UNIT

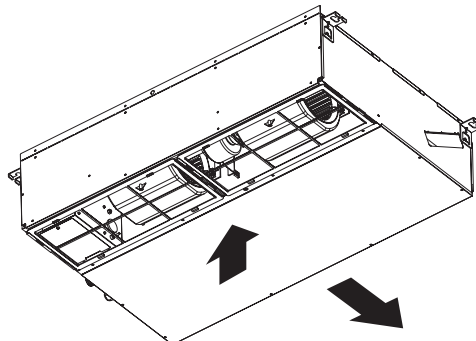
PART NAMES AND FUNCTIONS

Indoor unit

Air intake (sucks the air inside the room into the unit)



In case of rear inlet



In case of bottom inlet

SPECIFICATION

Service Ref.			PEY-SP18JA(L)	PEY-SP24JA(L)
Mode			Cooling	Cooling
Power supply			Single phase, 50,60Hz, 220-240V	Single phase, 50,60Hz, 220-240V
Input		kW	0.09	0.15
Running Current		A	0.79	1.17
External finish			Galvanized sheets	Galvanized sheets
Heat exchanger			Plate fin coil	Plate fin coil
Fan (drive) × No.			Sirocco fan × 1	Sirocco fan × 2
Fan motor output		kW	0.085	0.121
Airflow (Low-Mid-High)		m ³ /min (CFM)	12.0-14.5-17.0 (424-512-600)	17.5-21.0-25.0 (618-742-883)
External static pressure		Pa	35-50-70-100-125	35-50-70-100-125
Booster heater		kW	-	-
Operation control & Thermostat			Remote controller & built-in	Remote controller & built-in
Sound pressure level (Low-Mid-High)		35Pa	dB (A)	29-34-38
		50Pa		30-35-39
		70Pa		31-35-39
		100Pa		32-37-40
		125Pa		33-39-43
Field drain pipe O.D		mm (in.)	32 (1-1/4)	32 (1-1/4)
Dimensions		W	900 (35-7/16)	1100 (43-5/16)
		D	732 (28-7/8)	732 (28-7/8)
		H	250 (9-7/8)	250 (9-7/8)
Weight		kg	27	29
		lbs	60	64

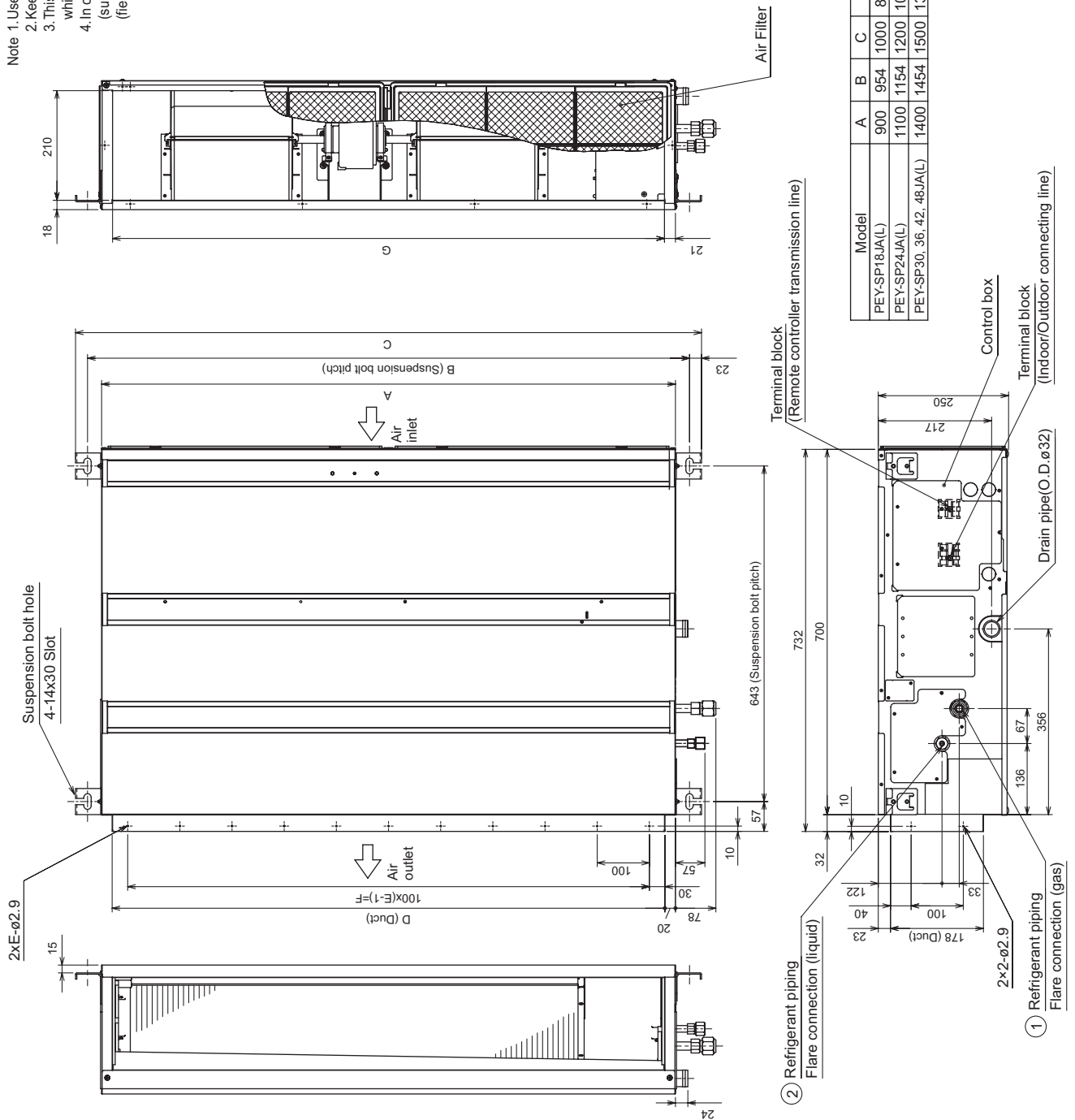
Service Ref.			PEY-SP30JA(L)	PEY-SP36, 42, 48JA(L)
Mode			Cooling	Cooling
Power supply			Single phase, 50,60Hz, 220-240V	Single phase, 50,60Hz, 220-240V
Input		kW	0.23	0.34
Running Current		A	1.57	2.29
External finish			Galvanized sheets	Galvanized sheets
Heat exchanger			Plate fin coil	Plate fin coil
Fan (drive) × No.			Sirocco fan × 2	Sirocco fan × 2
Fan motor output		kW	0.244	0.244
Airflow (Low-Mid-High)		m ³ /min (CFM)	24.0-29.0-34.0 (847-1024-1201)	29.5-35.5-42.0 (1042-4254-1483)
External static pressure		Pa	35-50-70-100-125	35-50-70-100-125
Booster heater		kW	-	-
Operation control & Thermostat			Remote controller & built-in	Remote controller & built-in
Sound pressure level (Low-Mid-High)		35Pa	dB (A)	32-38-42
		50Pa		33-38-42
		70Pa		34-39-43
		100Pa		36-40-44
		125Pa		38-42-45
Field drain pipe O.D		mm (in.)	32 (1-1/4)	32 (1-1/4)
Dimensions		W	1400 (55-1/8)	1400 (55-1/8)
		D	732 (28-7/8)	732 (28-7/8)
		H	250 (9-7/8)	250 (9-7/8)
Weight		kg	38	39
		lbs	84	86

OUTLINES & DIMENSIONS

Indoor unit

■ PEY-SP18, 24, 30, 36, 42, 48JA(L)

- Note
1. Use M10 screw for the Suspension bolt (field supply).
 2. Keep the service space for the maintenance at the bottom.
 3. This chart indicates for PEY-SP24, 30, 36, 42, 48JA(L) models which have 2 fans. PEY-SP18JA(L) models have 1 fan.
 4. In case of the inlet duct is used, remove the air filter (supply with the unit), then install the filter (field supply) at suction side.



[Maintenance access space]
 Secure enough access space to allow for the maintenance, inspection, and replacement of the motor, fan, heat exchanger, and electric 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 beams or other objects.

- (1) When a space of 300mm or more is available below the unit between the unit and the ceiling. (Fig.1)
 - Create access door 1 and 2 (450x450mm each) as shown in Fig.2.
 - (Access door 2 is not required if enough space is available below the unit for a maintenance worker to work in.)
- (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 1 diagonally below the electric box and access door 3 below the unit as shown in Fig.4.
 - or
 - Create access door 4 below the electric box and the unit as shown in Fig.5.

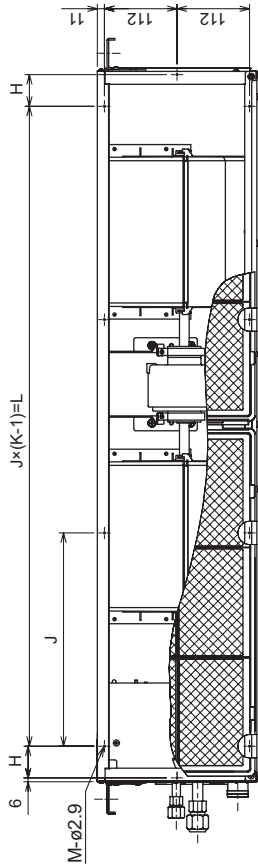
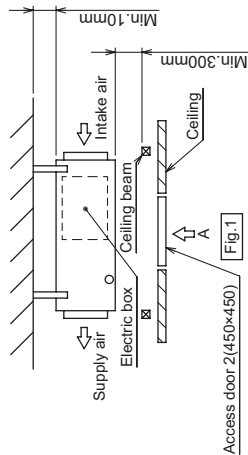


Fig.2 (Viewed from the direction of the arrow A)

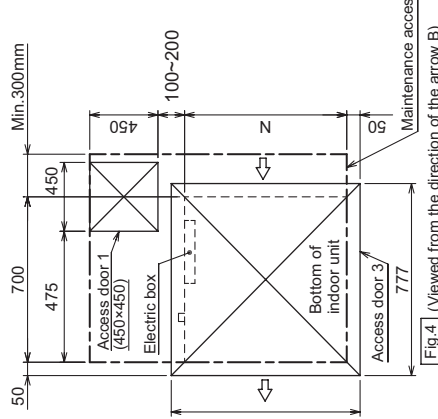


Fig.4 (Viewed from the direction of the arrow B)

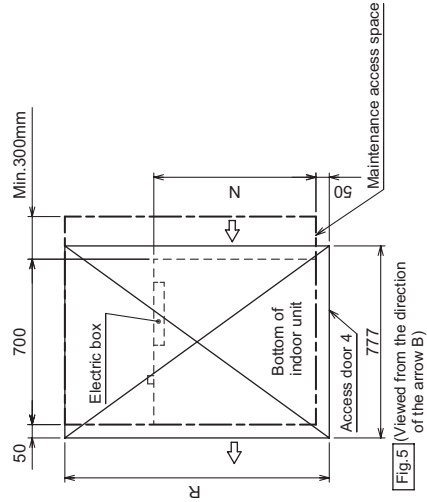


Fig.5 (Viewed from the direction of the arrow B)

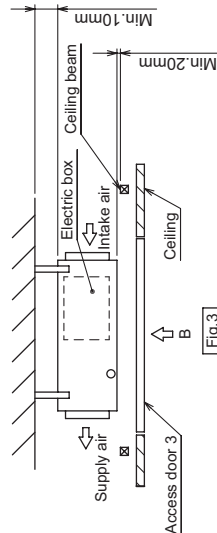
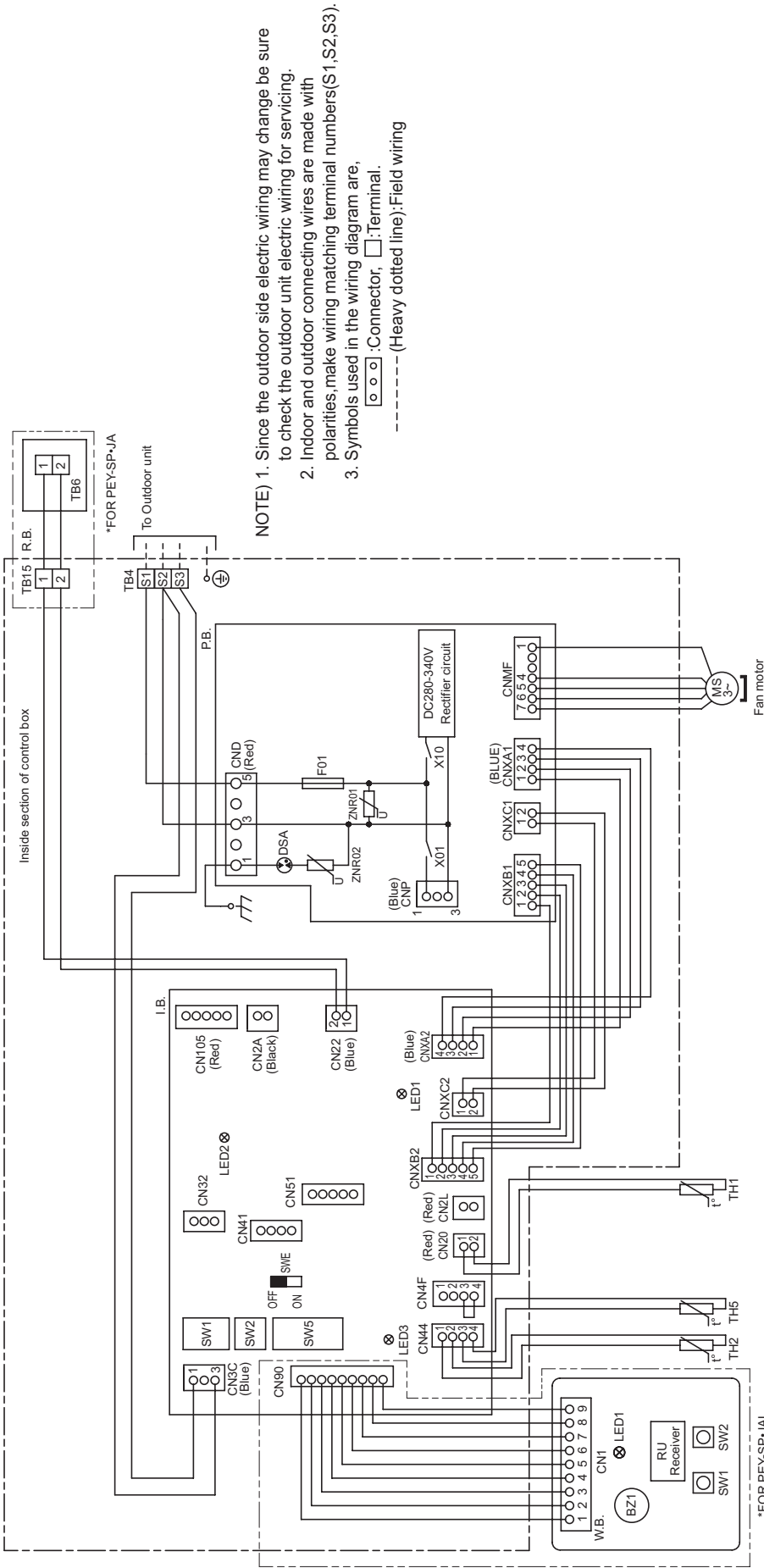


Fig.3

Model	H	J	K	L	M	N	P	Q	R
PEY-SP18JA(L)	54	260	4	780	10	900	150~250	1000	1500
PEY-SP24JA(L)	49	330	4	990	10	1100	250~350	1200	1700
PEY-SP30, 36, 42, 48JA(L)	54	320	5	1280	12	1400	400~500	1500	2000

WIRING DIAGRAM

■ PEY-SP18, 24, 30, 36, 42, 48JA(L)

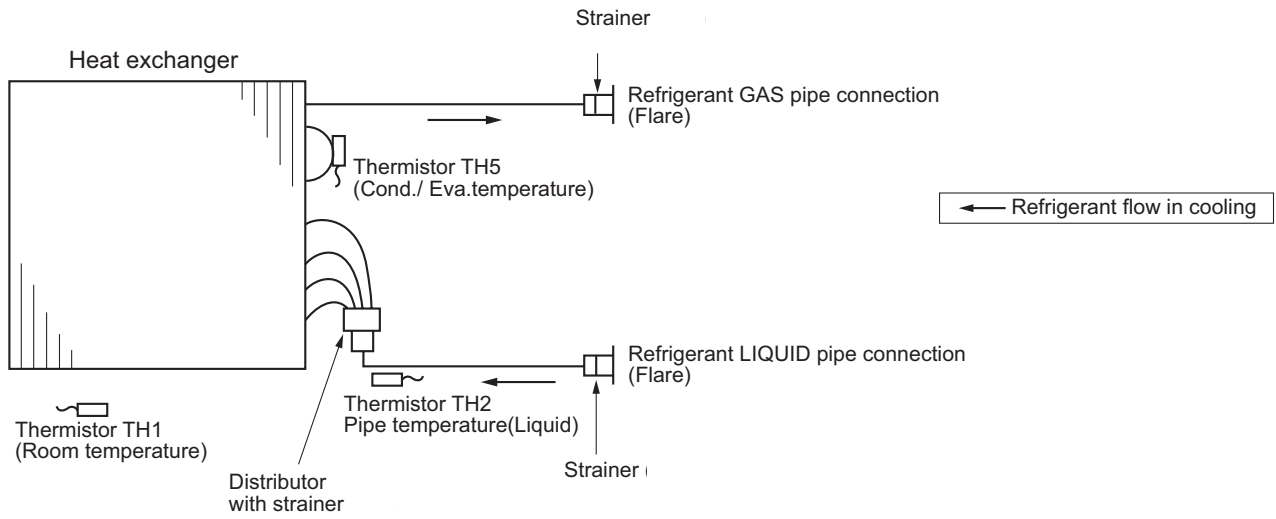


SYMBOL EXPLANATION

SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
I.B.	Indoor controller board	I.B.	Indoor controller board	W.B.	Wireless remote controller board	TH1	Intake air temp. thermistor
CN2A	Connector (0-10V Analog input)	SW1	Switch (for model selection)	RU	Receiving unit	TH2	Pipe temp. thermistor/liquid
CN2L	Connector (Lossnay)	SW2	Switch (for capacity code)	BZ1	Buzzer	TH5	Cond./eva. temp. thermistor
CN32	Connector (Remote switch)	SW5	Switch (for system selection)	LED1	LED (Run indicator)	TB4	Terminal block (Indoor/Outdoor connecting line)
CN41	Connector (Remote switch)	SW6	Connector (Emergency operation)	SW1	SWITCH (Heating ON/OFF)	TB15	Terminal block (Remote controller transmission line)
CN51	Connector (Centrally control)	P.B.	Power supply board	SW2	SWITCH (Cooling ON/OFF)		
CN90	Connector (Wireless)	F01	Fuse AC250V 6.3A	R.B.	Remote controller board		
CN105	Connector (IT Terminal)	ZNR01, 02	Varistor	TB6	Terminal block (Remote controller transmission line)		
LED1	LED (Power supply)	DSA	Arrester				
LED2	LED (Remote controller supply)	X01	Aux. relay				
LED3	LED (Transmission Indoor-Outdoor)	X10	Aux. relay				

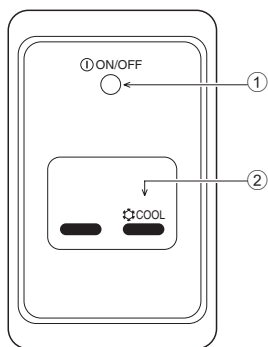
REFRIGERANT SYSTEM DIAGRAM

■ PEY-SP18, 24, 30, 36, 42, 48JA(L)



Emergency operation

When wireless remote controller fails or its battery is exhausted



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 the ❄️ COOL button on the wireless remote control signal receiver to toggle the unit on or off.

Operation mode	COOL
Preset temperature	24°C/75°F
Fan speed	High

When wired remote controller or indoor unit microprocessor fails

(1) When the wired remote control or the indoor unit microprocessor has failed, but all other components work properly, if you set the switch (SWE) on the indoor controller board ON, the indoor unit will begin emergency operation.

When emergency operation is activated, the indoor unit operates as follows:

- 1) Indoor fan is running at high speed.
- 2) Drain pump is operating.

* Note on the wireless remote control: when the remote control does not function, it is possible to activate emergency operation by using the indoor unit emergency operation switch (SW1, SW2 of the wireless signal receiver board). However, if the indoor unit microprocessor has failed, it is necessary to proceed with points 2) and 3) below as in the case of the wired remote controller.

(2) When you activate emergency operation of the cooling or heating, you have to set the switch (SWE) on the indoor controller board and activate emergency operation of the outdoor unit.

For details on how to activate emergency operation of the outdoor unit, refer to the outdoor unit wiring diagram.

(3) Before you activate emergency operation, check the following points:

1) Emergency operation cannot be activated when:

- The outdoor unit malfunctions.
- The indoor fan malfunctions.
- When it has detected the malfunction of drain pump during self-diagnosing.

2) Emergency operation becomes continuous only by switching the power source on/off.

ON/OFF on the remote control or temperature control etc. does not function.

3) Avoid operating for a long time when the outdoor unit begins defrosting while emergency operation of the heating is activated because it will start to blow cold air.

4) Emergency cooling should be limited to 10 hours maximum (The indoor unit heat exchanger may freeze).

5) After emergency operation has been deactivated, set the switches etc. to their original positions.

6) Movement of the vanes does not work in emergency operation, therefore you have to slowly set them manually to the appropriate position.