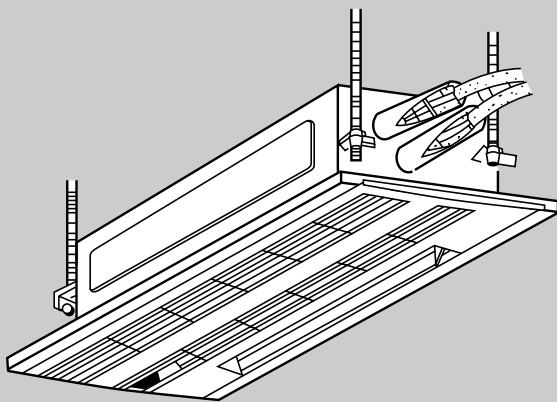


# TECHNICAL & SERVICE MANUAL

## Series PMFY Ceiling Cassettes

[Models] **PMFY-08NBMU-A**  
**PMFY-10NBMU-A**  
**PMFY-12NBMU-A**  
**PMFY-16NBMU-A**

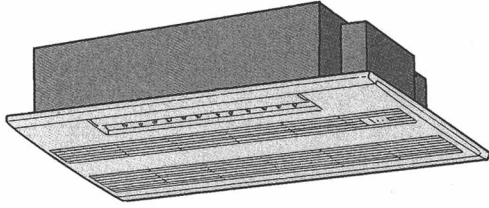
• Connected outdoor unit is  
**PURY-80TMU** or **PURY-100TMU**.  
**PUHY-80TMU** or **PUHY-100TMU**.



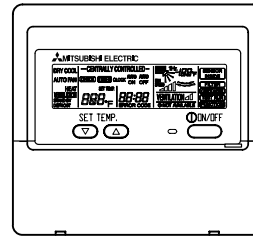
INDOOR UNIT

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Indoor Unit

Microprocessor  
Remote controller**Models**

PMFY-08NBMU-A  
 PMFY-10NBMU-A  
 PMFY-12NBMU-A  
 PMFY-16NBMU-A

**Cooling capacity / Heating capacity**

8,000 / 9,000 Btu/h  
 10,000 / 11,000 Btu/h  
 12,000 / 13,500 Btu/h  
 16,000 / 17,000 Btu/h

**1-1. Fresh Air Intake**

Air recycled indefinitely can become stale and stagnant with air quality suffering significantly. Fresh air is the answer and it is for this reason that the PMFY- series takes in air directly from outdoors. This fresh air intake allows you to enjoy the comfort of crisp, refreshing air in the confines of your living or working space.

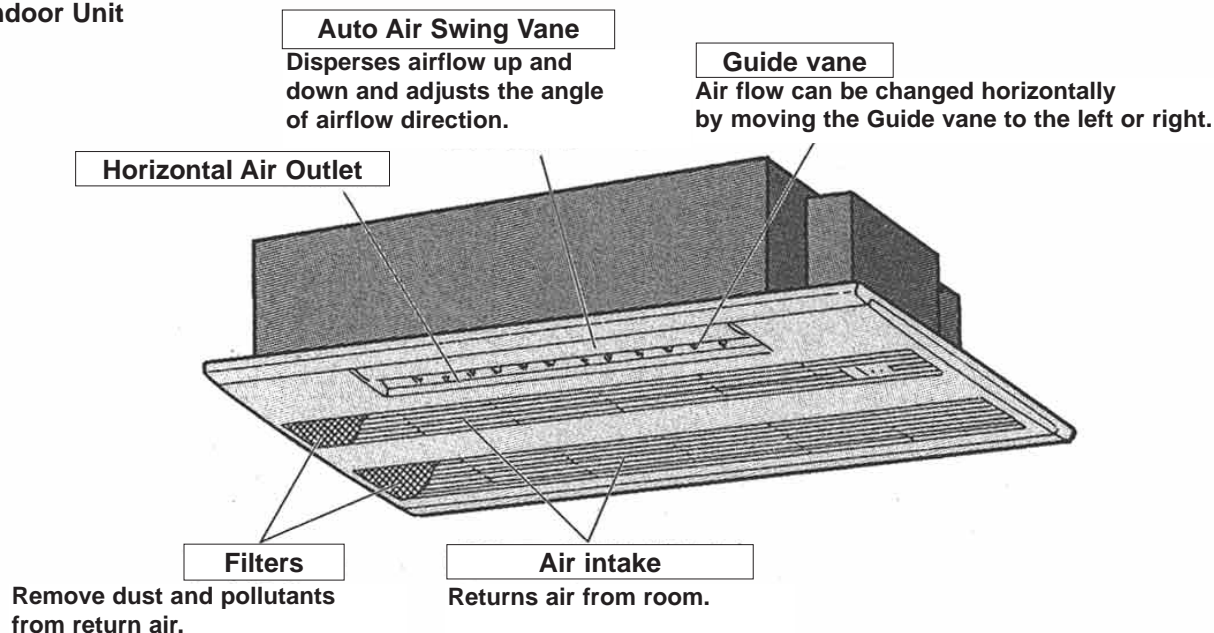
**1-2. Light and Compact**

The main unit weighs a measly 31 lb. and the panel a mere 7 lb. This makes the PMFY- series one of the lightest in the industry. The unit size is also quite small, having been standardised to a strikingly compact 33-5/8 inch. All of this make the chore of installation and maintenance that much simpler and easier

**1-3. Aesthetically Pleasing**

Nothing ruins the look of a carefully decorated room more than a poorly designed, bulky air conditioner. With the PMFY- series, there is no need worry. The unit mounts directly into the ceiling barely protruding into the living space for a pleasant, stylish aesthetic

### ● Indoor Unit

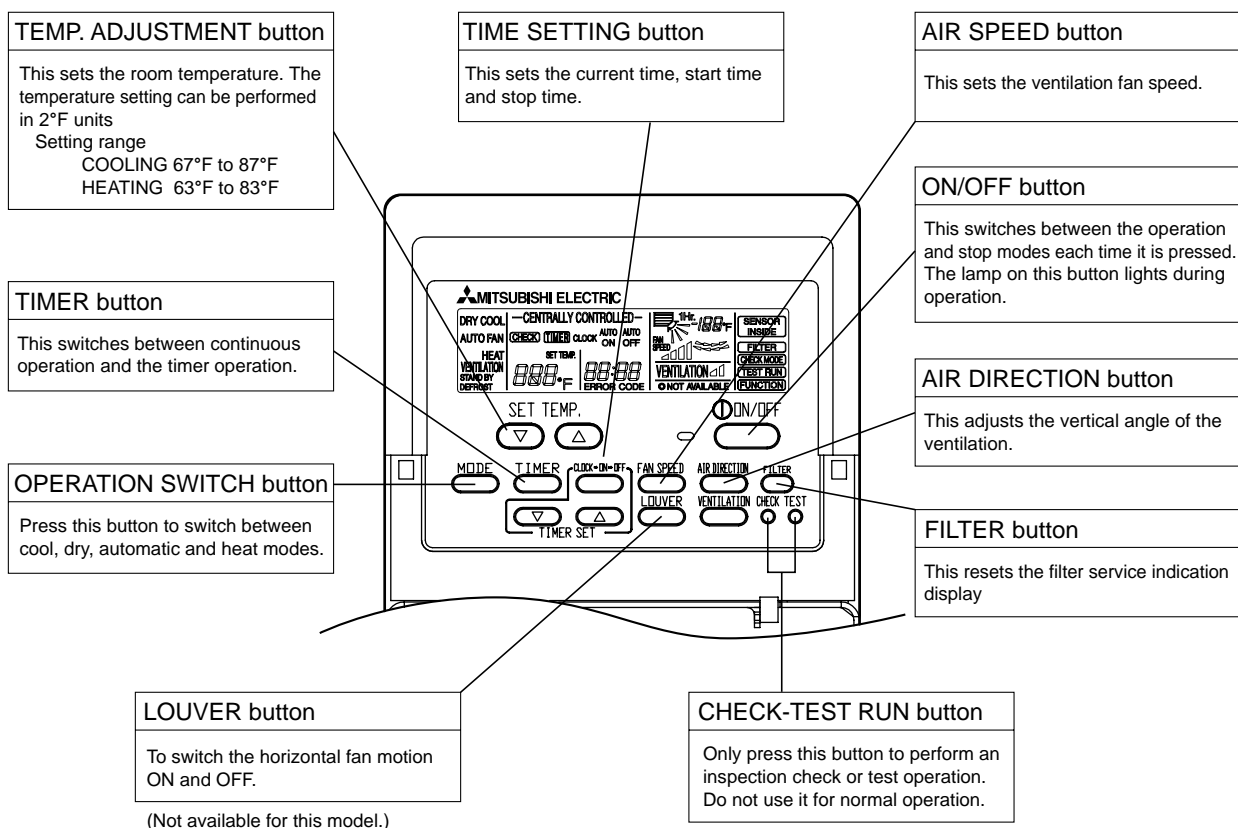


### ● Remote controller

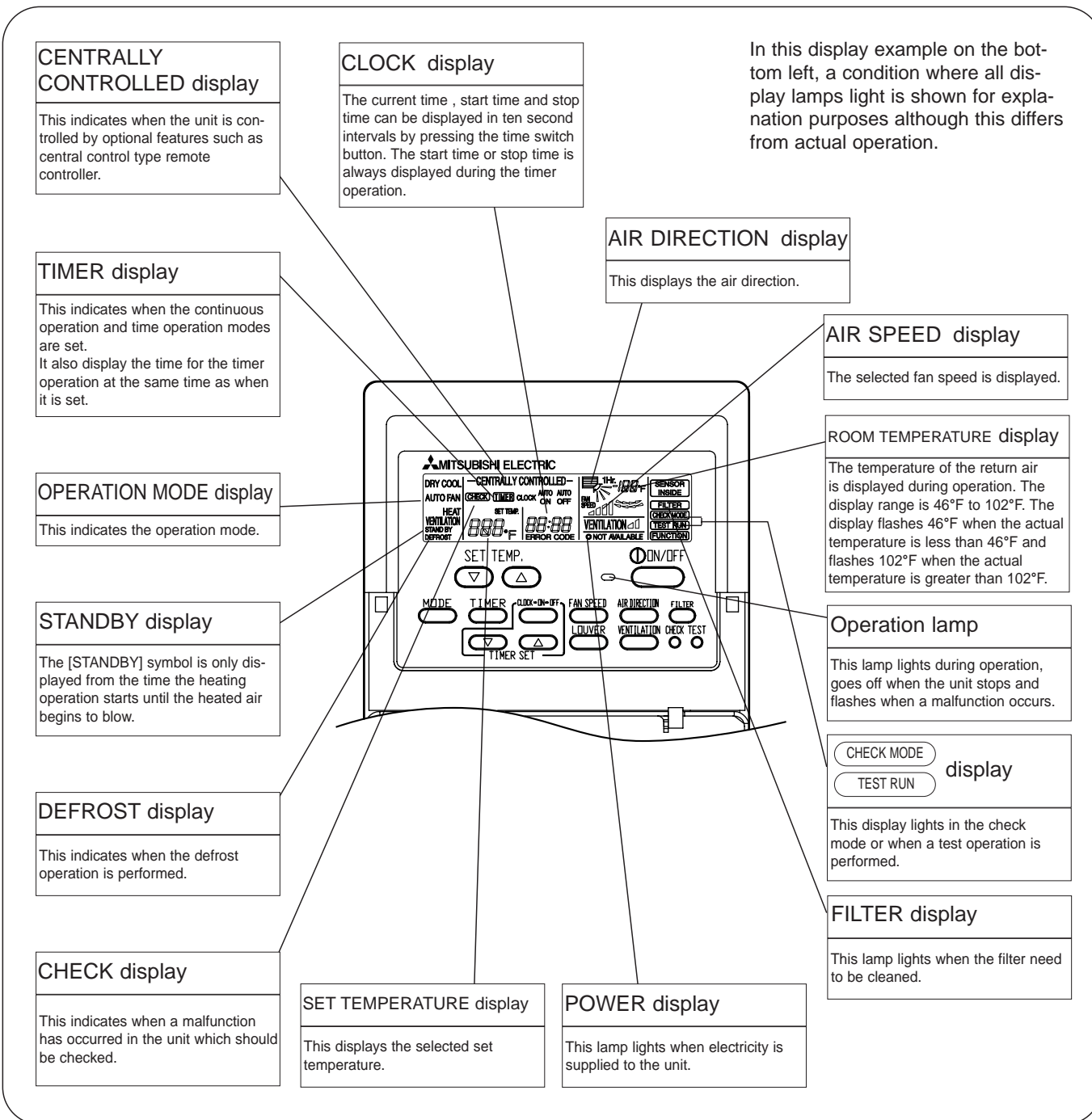
Once the controls are set, the same operation mode can be repeated by simply pressing the ON/OFF button.

#### ● Operation buttons

**Note :** This figure is PAR-20MAU. Refer to each remote controller manual for the details.



## ● Display



### Caution

- Only the Power display lights when the unit is stopped and power supplied to the unit.
- When the central control remote control unit, which is sold separately, is used the ON-OFF button, operation switch button and TEMP. adjustment button do not operate.
- "NOT AVAILABLE" is displayed when the Air speed button is pressed. This indicates that this room unit is not equipped with the fan direction adjustment function and the louver function.
- When power is turned ON for the first time, it is normal that "H0" is displayed on the room temperature indication (For max. 2minutes). Please wait until this "H0" indication disappear then start the operation.

## 3-1. Specification

Item			PMFY-08NBMU-A	PMFY-10NBMU-A	PMFY-12NBMU-A	PMFY-16NBMU-A	
Power		V•Hz	Single phase 208-230V 60Hz				
Cooling capacity		Btu/h	8,000	10,000	12,000	16,000	
Heating capacity		Btu/h	9,000	11,000	13,500	17,000	
Electric characteristics	Input	Cooling	kW	0.042	0.044	0.044	0.054
		Heating	kW	0.042	0.044	0.044	0.054
	Current	Cooling	A	0.20	0.21	0.21	0.26
		Heating	A	0.20	0.21	0.21	0.26
Exterior (munsell symbol)		—	Unit : Galvanized sheets · Standard grills : ABS resin acrylic coating Munsell<0.98Y 8.99/0.63>				
Dimensions	Height	in.	9-1/16<1-3/16>				
	Width	in.	31-31/32<39-3/8>				
	Depth	in.	15-9/16<18-1/2>				
Heat exchanger		—	Cross fin				
Fan	Fan X No	—	Line flow fan X 1				
	Air flow ※3	CFM	230-250-280-300	250-280-300-320		270-300-340-370	
	External static pressure	in W.G.	0				
	Fan motor output	kW	0.028				
Insulator		—	Polyethylene sheet				
Air filter		—	PP honey comb fabric				
Pipe dimensions	Gas side	φin.	1/2"				
	Liquid side	φin.	1/4"				
Unit drain pipe size		φin.	1" I.D. (PVC pipe VP-20 connectable)				
Noise level ※3		dB	27-30-33-35	32-34-36-37		33-35-37-39	
Product weight		lb.	31<7>				

Note 1. Rating conditions

Cooling: Indoor: D.B. 80°F W.B. 67°F

outdoor: D.B. 95°F W.B. 75°F

Heating: Indoor: D.B. 70°F

outdoor: D.B. 47°F W.B. 43°F

Note 2. The number indicated in &lt; &gt; is just for the grille.

\* 3. Air flow and the noise level are indicated as Low - Medium2 - Medium1 - High.

### 3-2. Electrical parts specifications

Model Parts name	Symbol	PMFY-08NBMU-A	PMFY-10NBMU-A	PMFY-12NBMU-A	PMFY-16NBMU-A
Room temperature thermistor	TH21	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ			
Liquid pipe thermistor	TH22	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ			
Gas pipe thermistor	TH23	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ			
Fuse (Indoor controller board)	FUSE	250V 6.3A			
Fan motor	MF	DC Brushless Motor 8-pole OUTPUT 28W PN0H28-MB			
Vane motor	MV	MSFJC 20M23 12V/380Ω			
Drain pump	DP	PJV-1063 208-240V 50/60Hz			
Drain sensor	DS	Thermistor resistance 30°F/6.3kΩ, 50°F/3.9kΩ, 70°F/2.5kΩ, 80°F/2.0kΩ, 90°F/1.6kΩ, 100°F/1.3kΩ			
Linear expansion valve	LEV	DC12V Stepping motor drive port (0~2000pulse) EDM-40YGME			
Power supply terminal block	TB2	(L1, L2, GR) Rated to 330V 30A ※			
Transmission terminal block	TB5	(M1, M2, S) Rated to 250V 20A ※			
MA-remote controller terminal block	TB15	(1,2) Rated to 250V 10A ※			

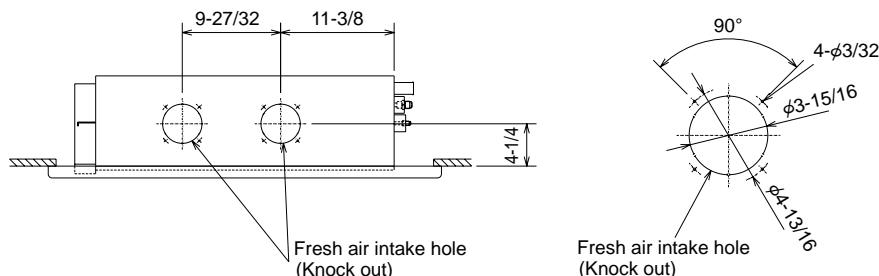
※ Note : Refer to WIRING DIAGRAM for the supplied voltage.

### 3-3. Air capacity taken from outside

PMFY--NBMU-A series are capable of taking air from outside.

When taking air from outside, the duct fan must be used.

The air capacity should be 20% or less of the air flow SPEC(Hi).



Service Ref.	Air flow (Hi)	Air capacity taken from outside
PMFY-08NBMU-A	300 CFM	60 CFM
PMFY-10NBMU-A	320 CFM	64 CFM
PMFY-12NBMU-A	320 CFM	64 CFM
PMFY-16NBMU-A	370 CFM	74 CFM

#### Interlocking operation method with duct fan (Booster fan)

● Whenever the indoor unit is operating, the duct fan must also operate.

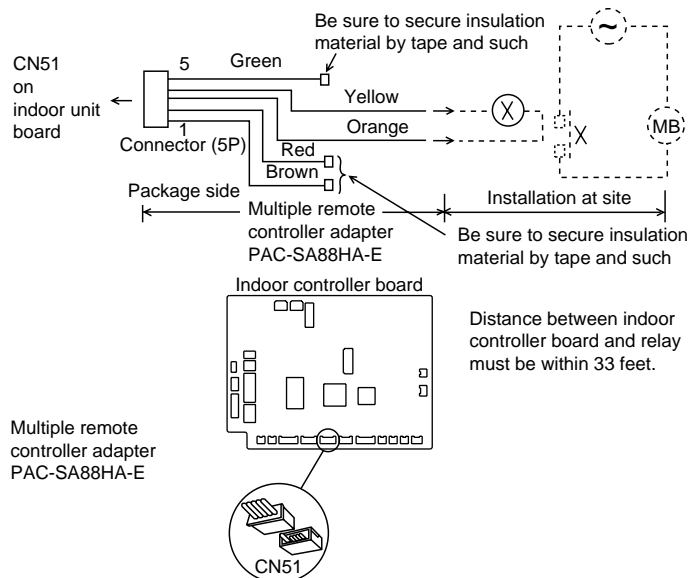
(1) Connect the optional multiple remote controller adaptor (PAC-SA88HA-E) to the connector CN51 on the indoor controller board.

(2) Power the relay by connecting the 12V DC coil terminals from the Yellow and Orange connector lines.

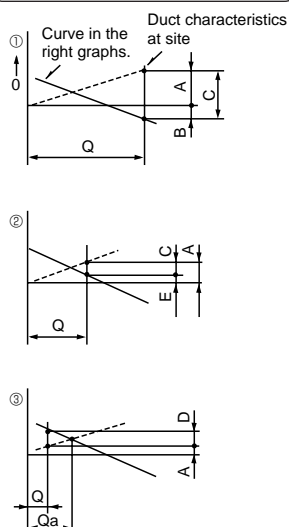
(※) Use a relay under 1W.

MB: Electromagnetic switch power relay for duct fan.

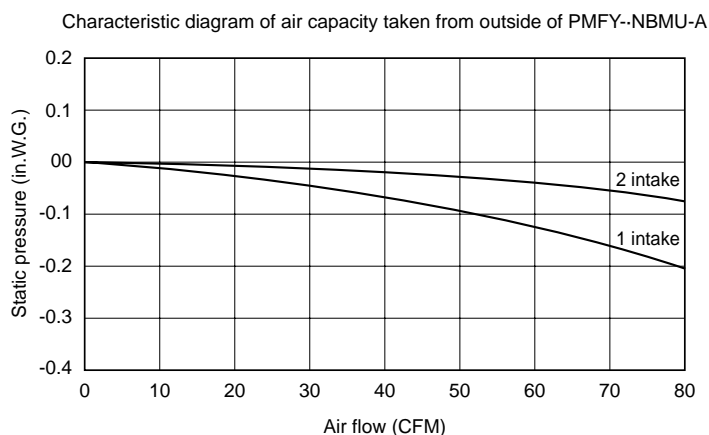
X: Auxiliary relay (12V DC LY-1F)



#### How to read curves



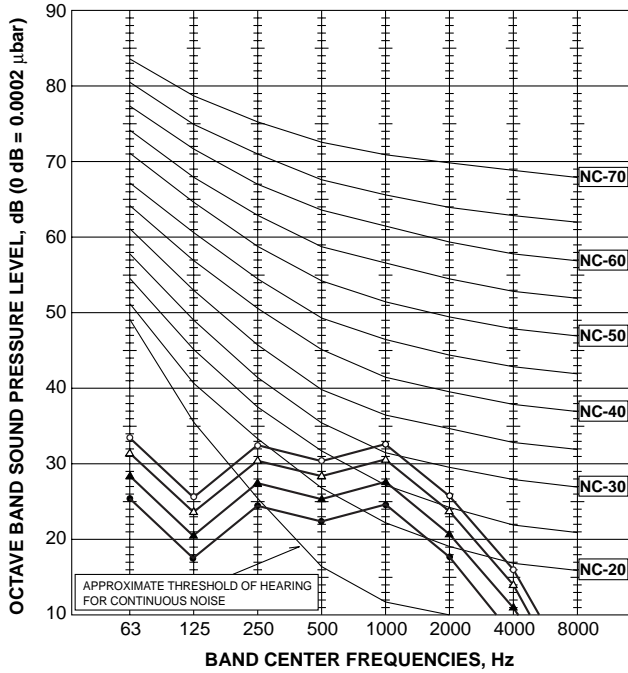
- Q...Planned amount of fresh air intake <CFM>
- A...Static pressure loss of fresh air intake duct system with air flow amount Q <in. W.G>
- B...Forced static pressure at air conditioner inlet with air flow amount Q <in. W.G>
- C...Static pressure of booster fan with air flow amount Q <in. W.G>
- D...Static pressure loss increase amount of fresh air intake duct system for air flow amount Q <in. W.G>
- E...Static pressure of indoor unit with air flow amount Q <in. W.G>
- Qa...Estimated amount of fresh air intake with out D <CFM>



### 3-4. NOISE CRITERION CURVES

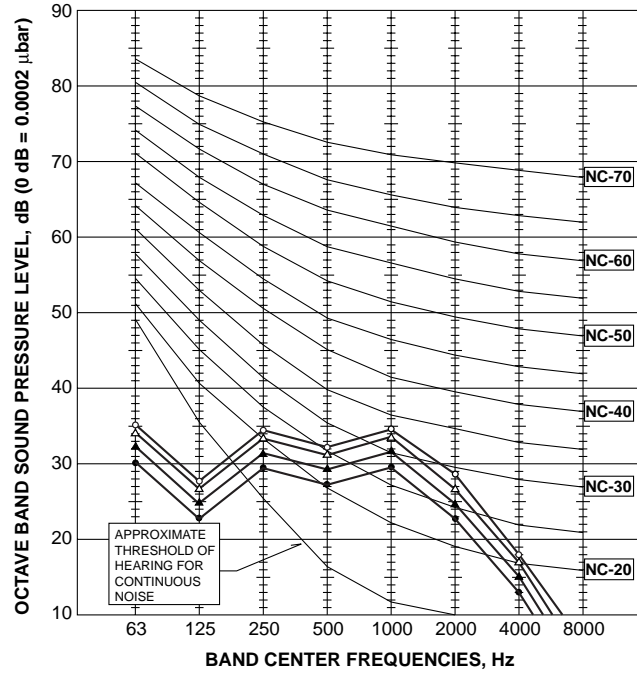
#### PMFY-08NBMU-A

NOTCH	SPL(dB)	LINE
High	35	○—○
Medium1	33	△—△
Medium2	30	▲—▲
Low	27	●—●



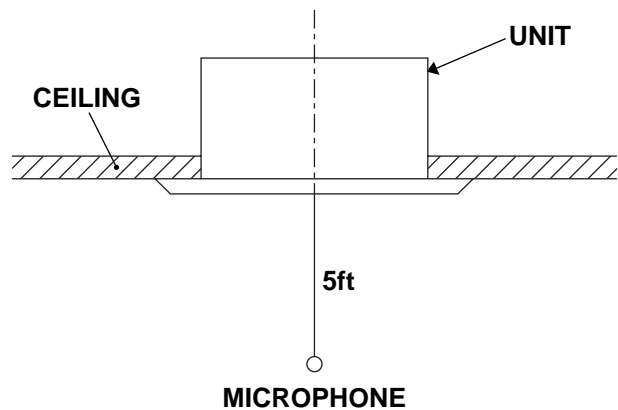
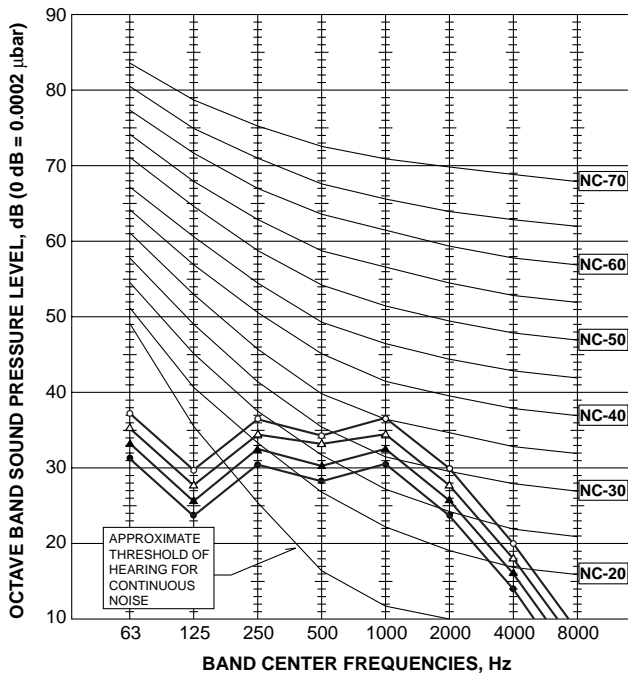
#### PMFY-10NBMU-A PMFY-12NBMU-A

NOTCH	SPL(dB)	LINE
High	37	○—○
Medium1	36	△—△
Medium2	34	▲—▲
Low	32	●—●



#### PMFY-16NBMU-A

NOTCH	SPL(dB)	LINE
High	39	○—○
Medium1	37	△—△
Medium2	35	▲—▲
Low	33	●—●

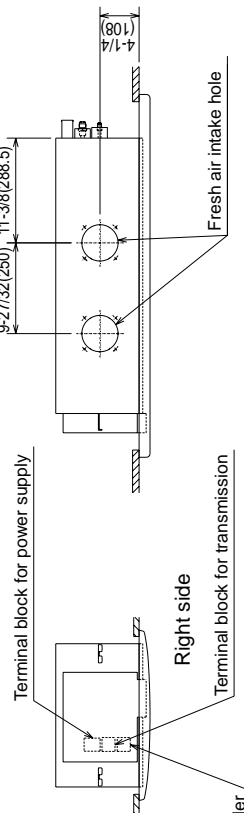
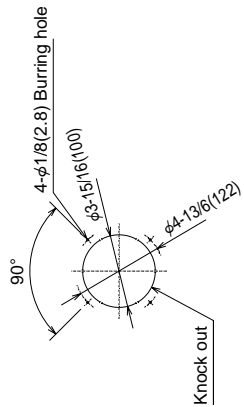




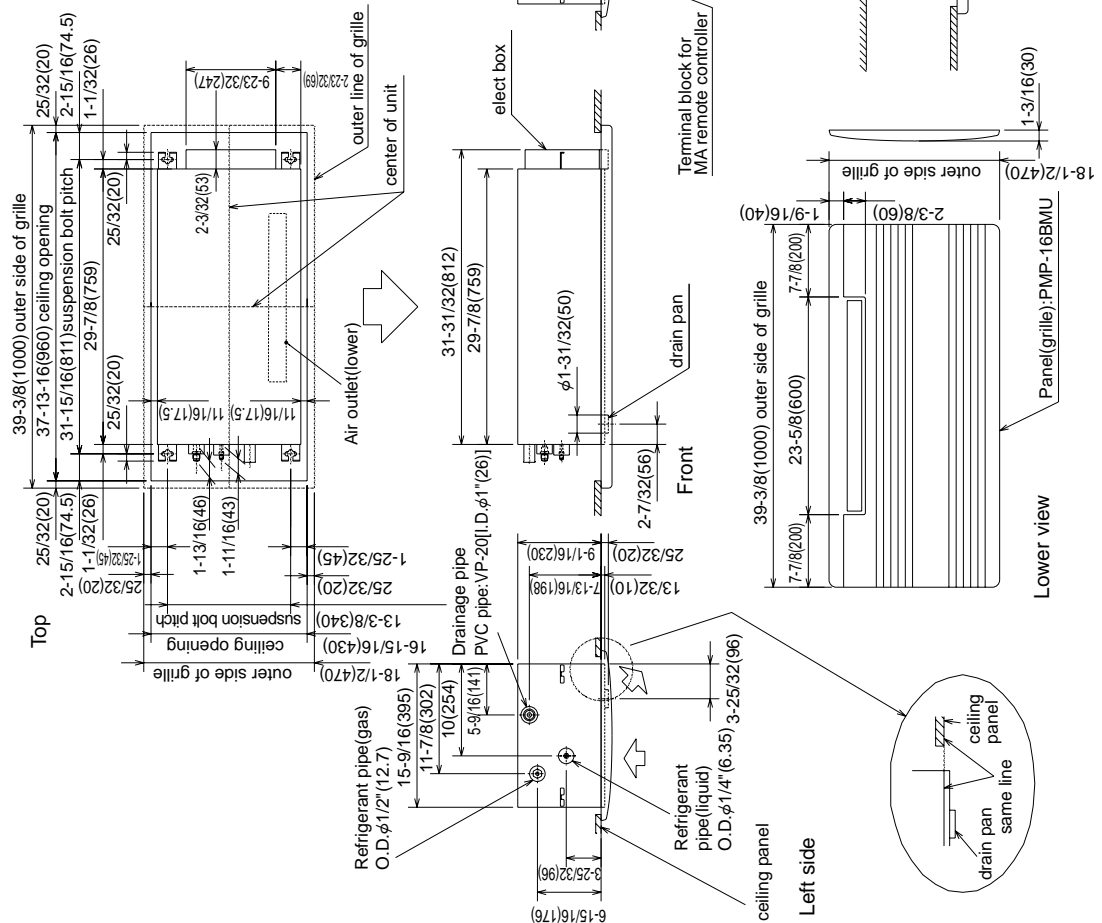
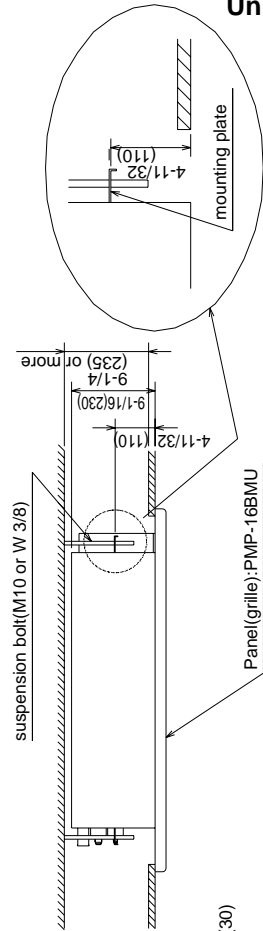
Unit : in. (mm)

Refrigerant piping	pipe cover	O.D. $\phi$ 1-11/16(43)
	Liquid pipe	O.D. $\phi$ 1/4"(6.35)
	Gas pipe	O.D. $\phi$ 1/2"(12.7)
Drainage piping		PVC pipe:VP-20[D. $\phi$ 1"(26)]

### Details of fresh air intake hole



Installation space required around indoor unit



PMFY-08NBMU-A PMFY-10NBMU-A  
PMFY-12NBMU-A PMFY-16NBMU-A

## [Legend]

Symbol	Name	Symbol	Name	Symbol	Name
I.B	Indoor controller board	X1	Aux.relay Drain pump	TH21	Thermistor
CN25	Connector	T	Transformer	TH22	
CN27		LED1	Power supply(I.B)	TH23	
CN32	Remote switch	LED2	Power supply(I.B)		
CN41	HA terminal-A	MF	Fan motor (with inner thermo)		
CN45	Centrally control	MV	Vane motor		
CN52	Remote indication	DP	Drain pump	A.B	Address board
SW2	Switch	DS	Drain sensor	SW1	Switch
SW3	Capacity code	LEV	Linear expansion valve	SW5	Voltage selection
SW4	Model selection	TB2	Terminal block	SW11	Address setting 1st digit
ZNR	Varistor	TB5	Terminal block	SW12	Address setting 2nd digit
FUSE	Fuse (6.3A/250V)	TB15	MA-Remote Controller	SW14	Connection No.

## Note

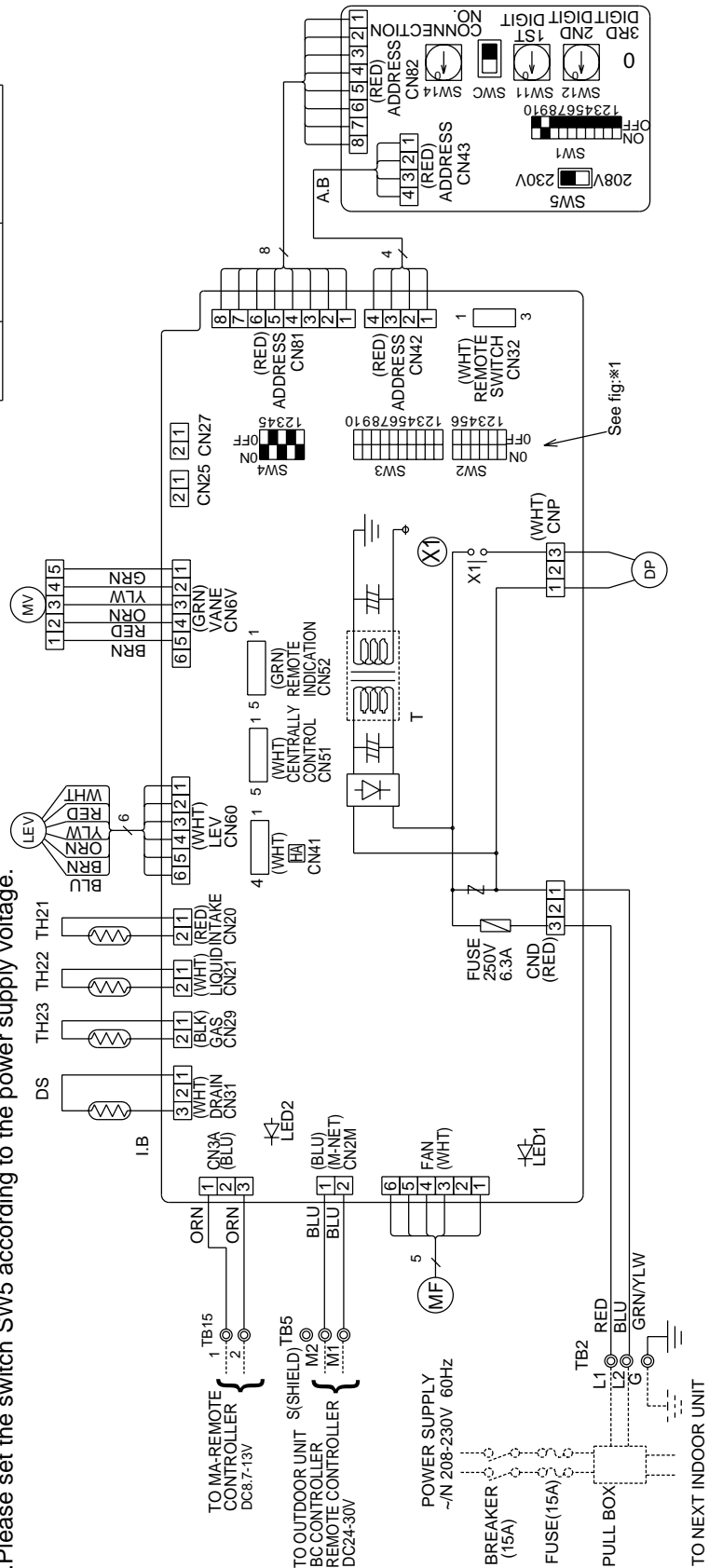
1. At servicing for outdoor unit, always follow the wiring diagram of outdoor unit.
2. In case of using MA-Remote controller, please connect to TB15.  
(Remote controller wire is non-polar.)
3. In case of using M-NET, please connect to TB5.  
(Transmission line is non-polar.)
4. Symbol[S] of TB5 is the shield wire connection.
5. Symbols used in wiring diagram above are: ⊙ terminal block, □□ : connector.
6. The setting of the SW2 dip switches differs in the capacity for the detail, refer to the fig.※1.
7. Please set the switch SW5 according to the power supply voltage.

## LED on indoor board for service

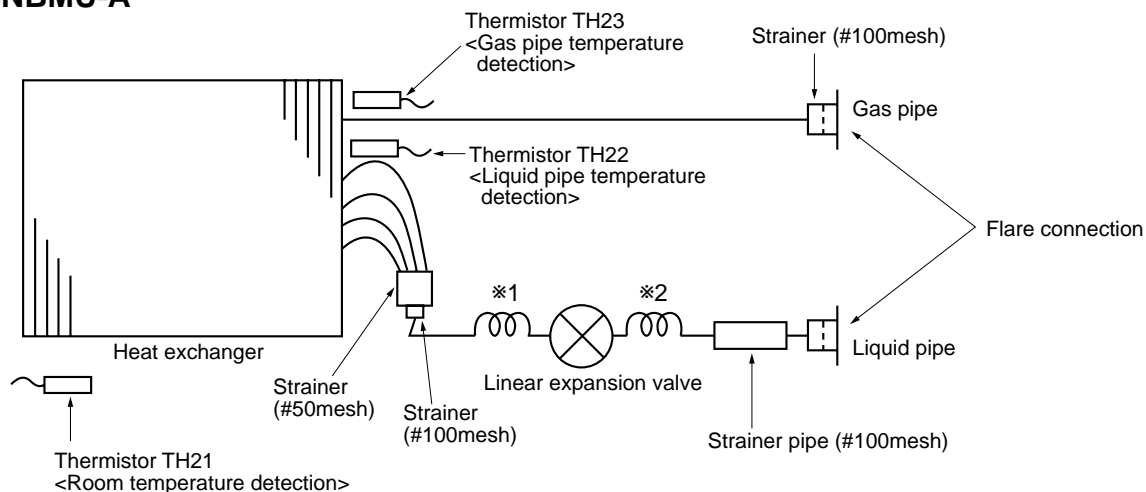
Mark	Meaning	Function
LED1	Main power supply	Main power supply(indoor unit:208~230V) power on → lamp is lit
LED2	Power supply for MA-Remote controller	Power supply for MA-Remote controller on → lamp is lit

&lt;fig.※1&gt;

Models	SW2	SW3
08	ON OFF	ON OFF
10	ON OFF	ON OFF
12	ON OFF	ON OFF
16	ON OFF	ON OFF



PMFY-08NBMU-A  
 PMFY-10NBMU-A  
 PMFY-12NBMU-A  
 PMFY-16NBMU-A

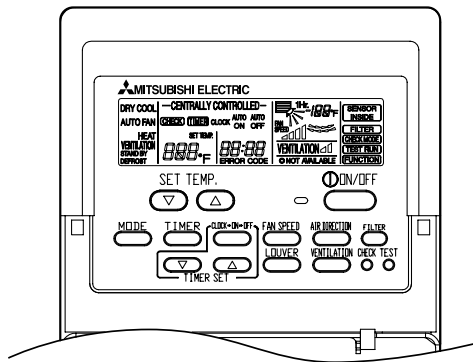


Item	Service Ref.	PMFY-08, 10, 12, 16NBMU-A
Gas pipe		$\phi 1/2"$ (12.7)
Liquid pipe		$\phi 1/4"$ (6.35)

	PMFY-08, 10NBMU-A	PMFY-12, 16NBMU-A
Capillary tube *1	O.D. $\phi 4.6 \times$ I.D. $\phi 3.4 \times \ell 200$	O.D. $\phi 3.6 \times$ I.D. $\phi 2.4 \times \ell 200$
Capillary tube *2	O.D. $\phi 3.6 \times$ I.D. $\phi 2.4 \times \ell 80$	

## INDOOR UNIT CONTROL

## 7-1. COOL operation



## &lt;How to operate&gt;

- ① Press POWER ON/OFF button.
- ② Press the operation MODE button to display COOL.
- ③ Press the SET TEMP. button to set the desired temperature.

**NOTE:** The set temperature changes 2°F when the  $\nabla$  or  $\Delta$  button is pressed one time Cooling 67 to 87°F.

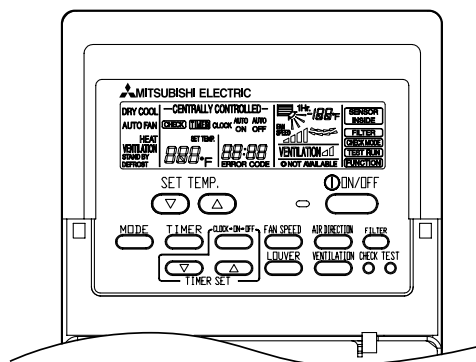
Control modes	Control details	Remarks				
1. Functions regulated by temperature	1-1. Functions regulated by temperature <ul style="list-style-type: none"><li>Room temperature <math>\geq</math> desired temperature + 2°F ...Thermostat ON</li><li>Room temperature <math>\leq</math> desired temperature ...Thermostat OFF</li></ul>					
	1-2. Anti-freezing control Detected condition : When the liquid pipe temp. (TH22) is 36°F or less in 16 minutes from compressors start up, anti-freezing control starts and the thermostat OFF. Released condition : The timer which prevents reactivating is set for 3 minutes, and anti- freezing control is cancelled when any one of the following conditions is satisfied. <ul style="list-style-type: none"><li>① Liquid pipe temp. (TH22) turn 50°F or above.</li><li>② The condition of the thermostat OFF has become complete by thermoregulating, etc.</li><li>③ The operation mode becomes a mode other than COOL.</li><li>④ The operation stopped.</li></ul> 1-3. Compressor time delay <ul style="list-style-type: none"><li>3 minutes minimum off cycle.</li></ul>					
2. Fan	By the remote controller setting (switch of 4 speeds) <table><tr><td>Type</td><td>Fan speed notch</td></tr><tr><td>4 speeds type</td><td>[Low], [Medium2], [Medium1], [High]</td></tr></table>	Type	Fan speed notch	4 speeds type	[Low], [Medium2], [Medium1], [High]	
Type	Fan speed notch					
4 speeds type	[Low], [Medium2], [Medium1], [High]					

To be continued on the next page.

From the preceding page.

Control modes	Control details	Remarks
3. Drain pump	<p>3-1. Drain pump control</p> <ul style="list-style-type: none"> <li>• Always drain pump ON during the COOL and DRY mode operation. (Regardless of the thermostat ON/ OFF)</li> <li>• When the operation mode is changed from COOL or DRY to any other mode (including Stop), the drain pump continues to run for 3 minutes.</li> </ul> <p><b>Drain sensor function</b></p> <ul style="list-style-type: none"> <li>• The indoor circuit board energizes the drain sensor at a fixed voltage for a fixed duration. After energizing, the circuit board then compares the drain sensor's temperature to the one before energizing, and judges whether the sensor is in the air or in the water.</li> </ul> <p><b>Basic control system</b></p> <ul style="list-style-type: none"> <li>• While drain pump is turned on, it will repeat the following control system and judge whether the sensor is in the air or in the water.</li> </ul> <p>Timing of energizing drain sensor</p> <p>ON</p> <p>OFF</p> <p>Stand by for a minute</p> <p>30 sec.</p> <p>Stand by for a minute</p> <p>30 sec.</p> <p>.....Repeat</p> <p>Detect the temperature before energizing (<math>T_0</math>)</p> <p>Detect the temperature after energizing (<math>T_1</math>)</p> <p>Judge whether the sensor is in the air or in the water.</p> <ul style="list-style-type: none"> <li>• Drain sensor temperature rise (<math>\Delta t</math>)</li> <li>• Temperature of drain sensor before current is applied (<math>T_0</math>)</li> <li>• Temperature of drain sensor after current is applied (<math>T_1</math>)</li> </ul> <p>[ <math>\Delta t = T_1 - T_0</math> ]</p>	<p>*1 Drain sensor Indoor controller board CN31</p>
4. Vane (up/ down vane change)	<p>(1) Initial setting : Start at COOL mode and horizontal vane.</p> <p>(2) Vane position : Horizontal → Downward A → Downward B → Downward C → Swing</p> <p>(3) Restriction of the downward vane setting When setting the downward vane A, B or C in [Medium1], [Medium2] or [Low] of the fan speed notch, the vane changes to horizontal position after 1 hour has passed.</p>	<p>*1 "SET FOR 1 HOUR" appears on the wired remote controller.</p>

## 7-2. DRY operation



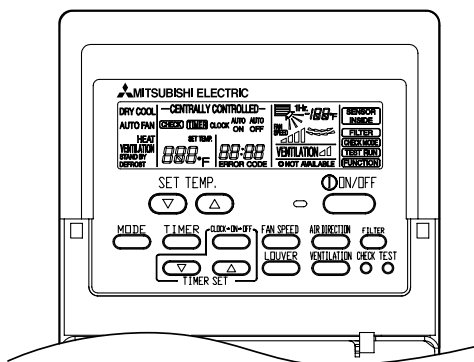
### <How to operate>

- ① Press POWER ON/OFF button.
- ② Press the operation MODE button to display DRY.
- ③ Press the SET TEMP. button to set the desired temperature.

**NOTE:** The set temperature changes 2°F when the  $\nabla$  or  $\Delta$  button is pressed one time. Dry 67 to 87°F.

Control modes	Control details	Remarks																														
1. Functions regulated by temperature	1-1. Dry mode temperature is controlled by TH21. Dry mode ON Room temperature ≥ desired temperature + 2°F Dry mode OFF Room temperature ≤ desired temperature																															
	<table><tr><td rowspan="2">Room temperature</td><td colspan="2">3 min. passed since starting operation</td><td rowspan="2">Dry mode ON time (min)</td><td rowspan="2">Dry mode OFF time (min)</td></tr><tr><td>Call</td><td>Room temperature (Ta)</td></tr><tr><td rowspan="4">Over 64°F</td><td rowspan="4">ON</td><td>Ta ≥ 82°F</td><td>9</td><td>3</td></tr><tr><td>82°F &gt; Ta ≥ 79°F</td><td>7</td><td>3</td></tr><tr><td>79°F &gt; Ta ≥ 75°F</td><td>5</td><td>3</td></tr><tr><td>75°F &gt; Ta</td><td>3</td><td>3</td></tr><tr><td></td><td>OFF</td><td>Unconditional</td><td>3</td><td>10</td></tr><tr><td>Less than 64°F</td><td colspan="4">Dry mode OFF</td></tr></table>	Room temperature	3 min. passed since starting operation		Dry mode ON time (min)	Dry mode OFF time (min)	Call	Room temperature (Ta)	Over 64°F	ON	Ta ≥ 82°F	9	3	82°F > Ta ≥ 79°F	7	3	79°F > Ta ≥ 75°F	5	3	75°F > Ta	3	3		OFF	Unconditional	3	10	Less than 64°F	Dry mode OFF			
Room temperature	3 min. passed since starting operation		Dry mode ON time (min)	Dry mode OFF time (min)																												
	Call	Room temperature (Ta)																														
Over 64°F	ON	Ta ≥ 82°F	9	3																												
		82°F > Ta ≥ 79°F	7	3																												
		79°F > Ta ≥ 75°F	5	3																												
		75°F > Ta	3	3																												
	OFF	Unconditional	3	10																												
Less than 64°F	Dry mode OFF																															
	1-2. Frozen prevention control No control function																															
2. Fan	Indoor fan operation control depends on the compressor conditions. <table><tr><td>Dry mode</td><td>Fan speed notch</td></tr><tr><td>ON</td><td>[Low]</td></tr><tr><td>OFF</td><td>Stop</td></tr></table> Note: Remote controller setting is not acceptable.	Dry mode	Fan speed notch	ON	[Low]	OFF	Stop																									
Dry mode	Fan speed notch																															
ON	[Low]																															
OFF	Stop																															
3. Drain pump	Same control as COOL operation																															
4. Vane (up/ down vane change)	Same control as COOL operation																															

### 7-3. FAN operation

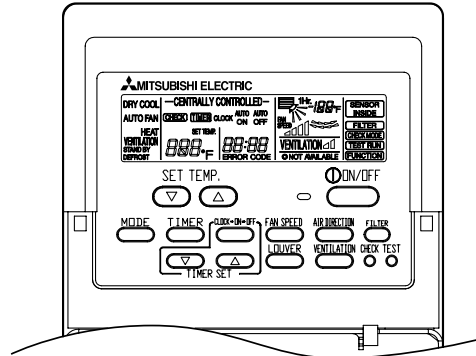


#### <How to operate>

- ① Press POWER ON/OFF button.
- ② Press the operation MODE button to display FAN.

Control modes	Control details	Remarks				
1. Fan	<div>Set by remote controller.</div> <table><tr><td>Type</td><td>Fan speed notch</td></tr><tr><td>4 speeds type</td><td>[Low], [Medium2], [Medium1], [High]</td></tr></table>	Type	Fan speed notch	4 speeds type	[Low], [Medium2], [Medium1], [High]	
Type	Fan speed notch					
4 speeds type	[Low], [Medium2], [Medium1], [High]					
2. Drain pump	<div>2-1. Drain pump control</div> <div>The drain pump turns ON for the specified amount of time when any of the following conditions are met:</div> <div>① ON for 3 minutes after the operation mode is switched from COOL or DRY to another operation mode (FAN).</div> <div>② ON for 6 minutes after the drain sensor is determined to be submerged using the liquid level detection method given below.</div> <div>③ ON for 6 minutes after indoor piping (liquid piping) temperature – indoor room temperature <math>\leq -18^{\circ}\text{F}</math>, AND the drain sensor input is at the short or open level.</div> <div>(If condition ② or ③ is still being met after the drain pump has been turned ON for 6 minutes, the drain pump is kept ON for a further 6 minutes.)</div>					
	<div>2-2. Liquid level detection method</div> <div>The liquid level is detected by determining whether or not the drain sensor is submerged, based on the amount the temperature rises after self-heating the sensor. This process is performed if any of the following conditions is met:</div> <div>① Drain pump is ON.</div> <div>② Indoor piping (liquid piping) temperature – indoor room temperature <math>\leq -18^{\circ}\text{F}</math></div> <div>③ Indoor piping (liquid piping) temperature or indoor room temperature is at the short or open level temperature.</div> <div>④ Every hour after the drain pump has been switched from ON to OFF.</div>					
3. Vane (up/ down vane change)	Same as the control performed during the COOL operation, but with no restriction on the vane's downward blow setting.					

## 7-4. HEAT operation



### <How to operate>

- ① Press POWER ON/OFF button.
- ② Press the operation MODE button to display HEAT.
- ③ Press the SET TEMP. button to set the desired temperature.

**NOTE:** The set temperature changes 2°F when the  $\nabla$  or  $\Delta$  button is pressed one time. Heating 63 to 83°F.

### <Display in HEAT operation>

#### [DEFROST]

The [DEFROST] symbol is only displayed during the defrost operation.

#### [STANDBY]

The [STANDBY] symbol is only displayed from the time the heating operation starts until the heated air begins to blow.

Control modes	Control details	Remarks
1. Functions regulated by temperature	1-1. Minimum compressor off cycle is 3 minutes. <ul style="list-style-type: none"> <li>Room temperature <math>\leq</math> desired temperature -2°F ...Thermostat ON</li> <li>Room temperature <math>\geq</math> desired temperature ...Thermostat OFF</li> </ul>	
2. Fan	Controlled by the remote controller (4-speed) Give priority to under-mentioned controlled mode <ul style="list-style-type: none"> <li>2-1. Stand by (hot adjuster) mode</li> <li>2-2. Preheating exclusion mode</li> <li>2-3. Thermostat OFF mode (When the compressor off by the thermoregulating)</li> <li>2-4. Cool air prevention mode (Defrosting mode)</li> </ul>	
	2-1. Stand by (hot adjuster) mode The fan controller becomes the stand by (hot adjuster) mode for the following conditions. <ul style="list-style-type: none"> <li>① When starting the HEAT operation</li> <li>② When the thermoregulating function changes from OFF to ON.</li> <li>③ When release the HEAT defrosting operation</li> </ul> <p style="text-align: center;">Hot adjuster mode *1</p> <p>A: Stand by (hot adjuster) mode start            B: 5 minutes have passed since the condition A or the indoor liquid pipe temperature turned 65°F or more            C: 2 minutes have passed since the condition A (Terminating the stand by (hot adjuster) mode)</p>	*1 "STAND BY" will be displayed during the stand by (hot adjuster) mode.
	2-2. Preheating exclusion mode When the condition changes the auxiliary heater ON to OFF (thermoregulating or operation stop, etc), the indoor fan operates in [Low] mode for 1 minute.	*1 This control is same for the model without auxiliary heater.

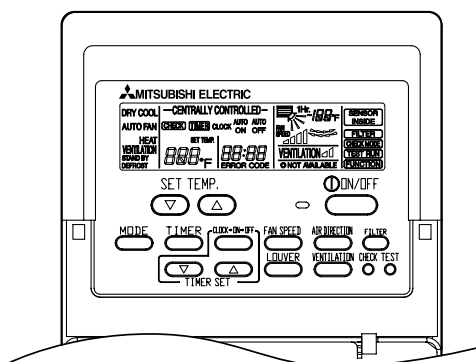
To be continued on the next page.



**From the preceding page.**

Control modes	Control details	Remarks
2. Fan	2-3. Thermostat OFF mode When the thermoregulating function changes to OFF, the indoor fan operates in [Extra low].	
	2-4. Heat defrosting mode The indoor fan stops.	
3. Drain pump	No drain pump operation However, when the control changes from COOL or DRY operation, the drain pump operates for 3 minutes.	
4. Vane control (Up/ down vane change)	<p>(1) Initial setting : OFF → HEAT...[last setting] When changing the mode from exception of HEAT to HEAT operation. ...[Downward C]</p> <p>(2) Vane position : Horizontal →Downward A →Downward B →Downward C→Swing ↑</p> <p>(3) Restriction of vane position ① The vane is horizontally fixed for the following modes. (The control by the remote controller is temporally invalidated and controlled by the unit.) •Thermostat OFF •Stand by (hot adjuster) [Extra low] mode •Heat defrost mode</p>	

## 7-5. AUTO operation [Automatic COOL/HEAT change over operation]



### <How to operate>

- ① Press POWER ON/OFF button.
- ② Press the operation MODE button to display AUTO.
- ③ Press the SET TEMP. button to set the desired temperature.

**NOTE:** The set temperature changes 2°F when the  $\nabla$  or  $\Delta$  button is pressed one time. Automatic 67 to 83°F.

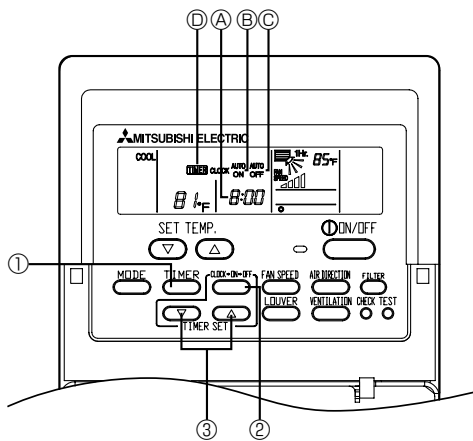
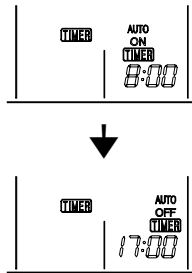
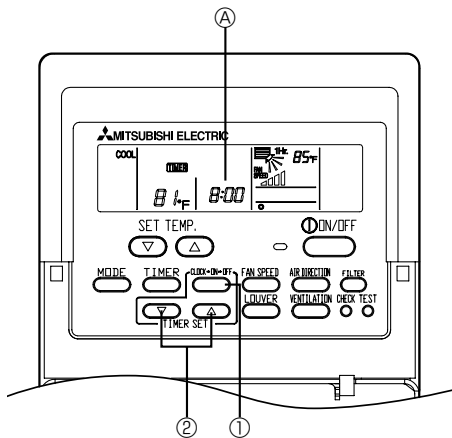
When in AUTO mode, the unit will switch from either heat or cool automatically to maintain the set temperature.

Control modes	Control details	Remarks
1. Initial value of operation mode	HEAT mode for room temperature < Desired temperature COOL mode for room temperature $\geq$ Desired temperature	
2. Mode change	(1) HEAT mode $\rightarrow$ COOL mode Room temperature $\geq$ Desired temperature + 4°F. or 15 min. has passed (2) COOL mode $\rightarrow$ HEAT mode Room temperature $\leq$ Desired temperature - 4°F. or 15 min. has passed	
3. COOL mode	Same control as cool operation	
4. HEAT mode	Same control as heat operation	

## 7-6. When unit is stopped Control mode

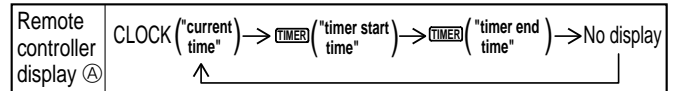
Control modes	Control details	Remarks
1. Drain pump	<p>1-1. Drain pump control</p> <p>The drain pump turns ON for the specified amount of time when any of the following conditions are met (regardless of whether the compressor is ON or OFF)</p> <ol style="list-style-type: none"> <li>① ON for 3 minutes after the operation mode is switched from COOL or DRY to another operation mode (HEAT mode).</li> <li>② ON for 6 minutes after the drain sensor is determined to be submerged using the liquid level detection method given below.</li> <li>③ ON for 6 minutes after indoor piping (liquid piping) temperature – indoor room temperature <math>\leq</math> -18°F, AND the drain sensor input is at the short or open level.</li> </ol> <p>(If condition ② or ③ is still being met after the drain pump has been turned ON for 6 minutes, the drain pump is kept ON for a further 6 minutes.)</p> <p>1-2. Liquid level detection method</p> <p>The liquid level is detected by determining whether or not the drain sensor is submerged, based on the amount the temperature rises after self-heating the sensor.</p> <p>This process is performed if any of the following conditions is met:</p> <ol style="list-style-type: none"> <li>① Drain pump is ON.</li> <li>② Indoor piping (liquid piping) temperature – indoor room temperature <math>\leq</math> -18°F (except during defrosting)</li> <li>③ Indoor piping (liquid piping) temperature or indoor room temperature is at the short or open level temperature.</li> <li>④ Every hour after the drain pump has been switched from ON to OFF.</li> </ol>	

## 7-7. TIMER operation



### 1) Set the current time

- ① Press CLOCK-ON-OFF button to display the "current time" ①.



- ② Each time you press button, the time increases in increments of one minute. Each time you press button, the time decreases in increments of one minute.
    - Press and hold the button to rapidly change the time.
    - The time changes in increments of one minute → ten minutes → in units of hour; in this order.
    - Approximately ten seconds after pressing the button, the display on the remote controller will turn off.
- The example shows a timer set for operation start at 8:00 and end at 17:00.

### 2) set the mode to continuous as follows

- ① Press TIMER button to display ①.

### 3) Set the time to start the unit as follows

- ② Press CLOCK-ON-OFF button to display ② ON.
- ③ Press button to set the time that you want the unit to start. The start time is displayed at ③.

### 4) Set the time to stop the unit as follows

- ② Press CLOCK-ON-OFF button to display ③ OFF.
- ③ Press button to set the time that you want the unit to stop. The stop time is displayed at ④.

### 5) Set the mode to timer as follows

- ① Press TIMER button to display ①.

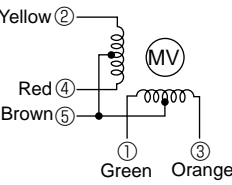
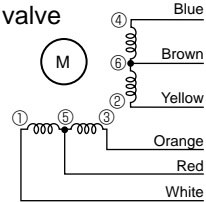
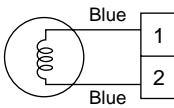

## 8-1. How to check the parts

PMFY-08NBMU-A

PMFY-10NBMU-A

PMFY-12NBMU-A

PMFY-16NBMU-A

Parts name	Check points																	
Thermistor (TH21) <Room temperature detection>  Thermistor (TH22) <Liquid pipe temperature detection>  Thermistor (TH23) <Gas pipe temperature detection>	Disconnect the connector then measure the resistance using a tester. (Surrounding temperature 50°F~86°F)																	
	<table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>4.3kΩ~9.6kΩ</td><td>Open or short</td></tr></table>		Normal	Abnormal	4.3kΩ~9.6kΩ	Open or short	Refer to the next page for the details.											
Normal	Abnormal																	
4.3kΩ~9.6kΩ	Open or short																	
Vane motor  	Measure the resistance between the terminals using a tester. (Surrounding temperature 68°F~86°F)																	
	<table><tr><td>Connector</td><td>Normal</td><td>Abnormal</td></tr><tr><td>Brown — Yellow</td><td rowspan="4">380Ω ±7%</td><td rowspan="4">Open or short</td></tr><tr><td>Brown — Red</td></tr><tr><td>Brown — Orange</td></tr><tr><td>Brown — Green</td></tr></table>		Connector	Normal	Abnormal	Brown — Yellow	380Ω ±7%	Open or short	Brown — Red	Brown — Orange	Brown — Green							
Connector	Normal	Abnormal																
Brown — Yellow	380Ω ±7%	Open or short																
Brown — Red																		
Brown — Orange																		
Brown — Green																		
Linear expansion valve  	Disconnect the connector then measure the resistance using a tester.																	
	<table><tr><td colspan="4">Normal</td><td>Abnormal</td></tr><tr><td>White-Red</td><td>Yellow-Brown</td><td>Orange-Red</td><td>Blue-Brown</td><td rowspan="2">Open or short</td></tr><tr><td colspan="4">150kΩ ±10%</td></tr></table>			Normal				Abnormal	White-Red	Yellow-Brown	Orange-Red	Blue-Brown	Open or short	150kΩ ±10%				Refer to the next page for the details.
Normal				Abnormal														
White-Red	Yellow-Brown	Orange-Red	Blue-Brown	Open or short														
150kΩ ±10%																		
Drain pump  	Measure the resistance between the terminals using a tester. (Surrounding temperature 68°F)																	
	<table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>400Ω~480Ω</td><td>Open or short</td></tr></table>		Normal	Abnormal	400Ω~480Ω	Open or short												
Normal	Abnormal																	
400Ω~480Ω	Open or short																	
Drain sensor  	Measure the resistance after 3 minutes have passed since the power supply was turned off. (Surrounding temperature 32°F~140°F)																	
	<table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>0.6kΩ~6.0kΩ</td><td>Open or short</td></tr></table>		Normal	Abnormal	0.6kΩ~6.0kΩ	Open or short	Refer to the next page for the details.											
Normal	Abnormal																	
0.6kΩ~6.0kΩ	Open or short																	

## <Thermistor characteristic graph>

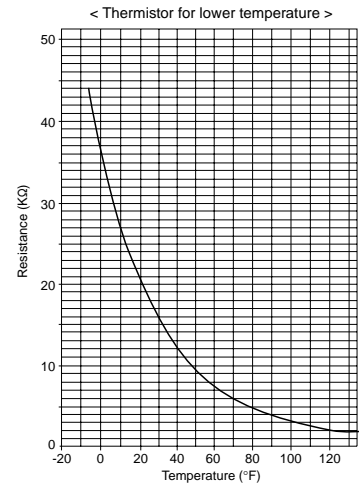
### Thermistor for lower temperature

Thermistor <Room temperature detection> (TH21)  
 Thermistor <Liquid pipe temperature detection> (TH22)  
 Thermistor <Gas pipe temperature detection> (TH23)

Thermistor  $R_0=15k\Omega \pm 3\%$   
 Fixed number of  $B=3480K \pm 2\%$

$$R_t = 15 \exp \left\{ 3480 \left( \frac{1}{273 + (t-32)/1.8} - \frac{1}{273} \right) \right\}$$

30°F	15.8kΩ
50°F	9.6kΩ
70°F	6.0kΩ
80°F	4.8kΩ
90°F	3.9kΩ
100°F	3.2kΩ



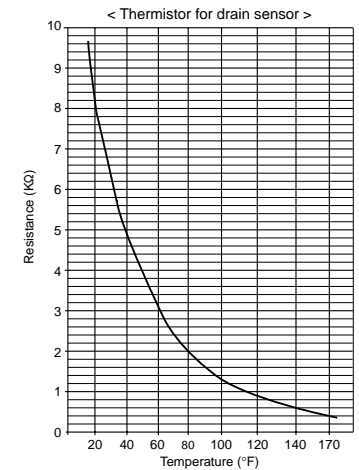
### Thermistor for drain sensor

Drain sensor (DS)

Thermistor  $R_0=6.0k \pm 5\%$   
 Fixed number of  $B=3390K \pm 2\%$

$$R_t = 6 \exp \left\{ 3390 \left( \frac{1}{273 + (t-32)/1.8} - \frac{1}{273} \right) \right\}$$

30°F	6.3kΩ
50°F	3.9kΩ
70°F	2.5kΩ
80°F	2.0kΩ
90°F	1.6kΩ
100°F	1.3kΩ
140°F	0.6kΩ

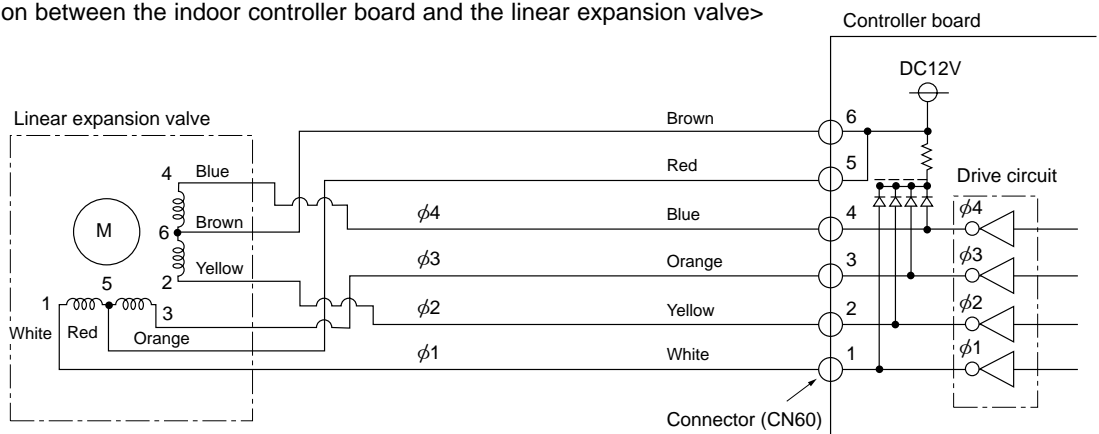


## Linear expansion valve

### ① Operation summary of the linear expansion valve.

- Linear expansion valves open/close through the use of a stepping motor after receiving the pulse signal from the indoor controller board.
- Valve position can be changed in proportion to the number of pulse signals.

<Connection between the indoor controller board and the linear expansion valve>



Note : Since the number of the connector at the controller board side and the relay connector are different, follow the color of the lead wire.

## <Output pulse signal and the valve operation>

Output (Phase)	Output			
	1	2	3	4
$\phi 1$	ON	OFF	OFF	ON
$\phi 2$	ON	ON	OFF	OFF
$\phi 3$	OFF	ON	ON	OFF
$\phi 4$	OFF	OFF	ON	ON

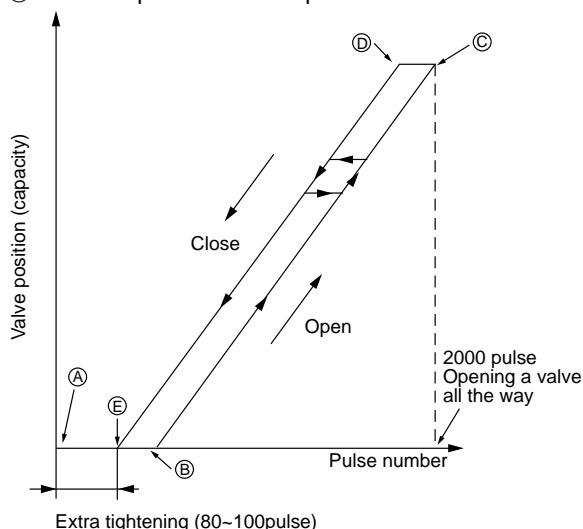
Closing a valve : 1 → 2 → 3 → 4 → 1

Opening a valve : 4 → 3 → 2 → 1 → 4

The output pulse shifts in above order.

- ✱ 1. When linear expansion valve operation stops, all output phase become OFF.
- 2. At phase interruption or when phase does not shift in order, motor does not rotate smoothly and motor will locks and vibrates.

### ② Linear expansion valve operation



- ✱ When the switch is turned on, 2200 pulse closing valve signal will be send till it goes to point A in order to define the valve position.

When the valve moves smoothly, there is no noise or vibration occurring from the linear expansion valves : however, when the pulse number moves from E to A or when the valve is locked, more noise can be heard than in a normal situation.

- ✱ Noise can be detected by placing the ear against the screw driver handle while putting the screw driver tip to the linear expansion valve.

### ③ Trouble shooting

Symptom	Check points	Countermeasures
Operation circuit failure of the micro processor.	Disconnect the connector on the controller board, then connect LED for checking. <p>1kΩ LED</p> <p>When power is turned on, pulse signals will send for 10 seconds. If the LED does not light or keeps lighting even after the signals stop, that means some failures in the operation circuit.</p>	Exchange the indoor controller board at drive circuit failure.
Linear expansion valve mechanism is locked.	Motor will idle and make a ticking noise when the motor is operated while the linear expansion valve is locked. This ticking sound is the sign of the abnormality.	Exchange the linear expansion vale.
Short or breakage of the motor coil of the linear expansion valve.	Measure the resistance between each coil (white-red, yellow-brown, orange-red, blue-brown) using a tester. It is normal if the resistance is in the range of 150Ω ±10%.	Exchange the linear expansion valve.
Valve doesn't close completely.	To check the linear expansion valve, operate the indoor unit in fan mode and at the same time operate other indoor units in cooling mode, then check the pipe temperature <liquid pipe temperature> of the indoor unit by the outdoor multi controller board operation monitor. During fan operation, linear expansion valve is closed completely and if there is any leaking, detecting temperature of the thermistor will go lower. If the detected temperature is much lower than the temperature indicated in the remote controller, it means the valve is not closed all the way. It is not necessary to exchange the linear expansion valve, if the leakage is small and not affecting normal operation. <p>Thermistor (Liquid pipe)</p> <p>Linear expansion valve</p>	If large amount of thermistor is leaked, exchange the linear expansion valve.
Wrong connection of the connector or contact failure.	Check the color of lead wire and missing terminal of the connector.	Disconnect the connector at the controller board, then check the continuity.

## 8-2. TROUBLESHOOTING

Check method of indoor fan motor (fan motor / controller board)

① Notes

- High voltage is applied to the connector (FAN) for the fan motor. Give attention to the service.
- Do not pull out the connector (FAN) for the motor with the power supply on, doing so may result in damage to the board.

② Self check

Conditions : The indoor fan does not rotate.

Turn OFF the power supply.  
Wiring contact check  
Contact of fan motor connector (FAN)  
Contact of power supply cable.



Was contact good?

No

Correct wiring connection.

↓ Yes

Fan motor check  
Measure the resistance between the fan motor connector ①(+) and ③(-).  
(With the connector pulled out from the board)



Is the resistance 1MΩ or more?

No

Replace the fan motor.

↓ Yes

Turn ON the power supply.  
Power supply check  
Check the voltage of the indoor controller board with the connector (FAN) connected to the board.  
Approx. 294~325V DC between the connector (FAN) ①(+) and ③(-).



Is the voltage normal?

No

Indoor controller board fuse check  
Turn off the power supply and check if there is any broken wire by using a tester.



Is the fuse normal?

No

Replace the fuse.

↓ Yes

Replace the indoor controller board.



Fan motor position sensor signal check  
Rotate the fan motor more than one turn slowly and check the voltage between the connector (FAN) ⑥(+) and ③(-) with the connector (FAN) connected to the board.



Does the voltage repeat 0V DC and 15V DC ?

No

Replace the fan motor.

↓ Yes






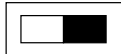

Replace the indoor controller board.

### 8-3. FUNCTION OF DIP SWITCH

Switch	Pole	Function	Operation by switch		Effective timing	Remarks													
			ON	OFF															
SW1 Function setting	1	Thermistor <Room temperature detection> position	Built-in remote controller	Indoor unit	Under suspension	<div>Address board</div> <div>&lt;At delivery&gt;</div> <div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6 7 8 9 10</div></div><div>(※1) Fan operation at Heating mode.</div><div>(※2) Heater thermostat ON is operating.</div><div>(※3) SW 1-7=OFF, SW 1-8=ON → Setting air flow. SW 1-7=OFF, SW 1-8=ON → Indoor fan stop.</div></div>													
	2	Filter clogging detection	Provided	Not provided															
	3	Filter cleaning sign	2,500hr	100hr															
	4	Fresh air intake	Effective	Not effective															
	5	Switching remote controller display	Indicating if the thermostat is ON	Indicating fan operation ON/OFF															
	6	Humidifier control	Always operated while the heat in ON ※1	Operated depends on the condition ※2															
	7	Air flow at	Low ※3	Extra low ※3															
	8	Heat thermostat OFF	Setting air flow	Depends on SW1-7															
	9	Auto restart function	Effective	Not effective															
	10	Power ON/OFF by breaker	Effective	Not effective															
SW2 Capacity code setting	1~6	<table><tr><td>MODELS</td><td>SW 2</td><td>MODELS</td><td>SW 2</td></tr><tr><td>PMFY-08NBMU-A</td><td><div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div></td><td>PMFY-12NBMU-A</td><td><div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div></td></tr><tr><td>PMFY-10NBMU-A</td><td><div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div></td><td>PMFY-16NBMU-A</td><td><div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div></td></tr></table>				MODELS	SW 2	MODELS	SW 2	PMFY-08NBMU-A	<div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div>	PMFY-12NBMU-A	<div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div>	PMFY-10NBMU-A	<div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div>	PMFY-16NBMU-A	<div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div>	Before power supply ON	<div>Indoor controller board</div> <div>Set while the unit is off.</div> <div>&lt;At delivery&gt;</div> <div>Set for each capacity.</div>
		MODELS	SW 2	MODELS	SW 2														
PMFY-08NBMU-A	<div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div>	PMFY-12NBMU-A	<div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div>																
PMFY-10NBMU-A	<div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div>	PMFY-16NBMU-A	<div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6</div></div></div>																
SW3 Function setting	1	Heat pump / Cool only	Cooling only	Heat pump	Under suspension	<div>Indoor controller board</div> <div>Set while the unit is off.</div> <div>&lt;At delivery&gt;</div> <div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5 6 7 8 9 10</div></div><div>(※4) At cooling mode, each angle can be used only 1 hour.</div><div>(※5) SW 3-9 setting PMFY-08, 10NBMU-A=ON PMFY-12, 16NBMU-A=OFF SW 3-10 setting PMFY-08, 10NBMU-A=ON PMFY-12, 16NBMU-A=OFF</div><div>(※6) The numerical valve in the parentheses shows the case which the R22 outdoor unit is connected.</div></div>													
	2	Louver	Available	Not available															
	3	Vane	Available	Not available															
	4	Vane swing function	Available	Not available															
	5	Vane horizontal angle	Second setting	First setting															
	6	Vane cooling limit angle setting ※4	Horizontal angle	Down B, C															
	7	Changing the opening of linear expansion valve when the thermostat is OFF	Effective	Not effective															
	8	Heating 4deg. up	Not effective	Effective															
	9	Target superheat setting ※5	9deg. (5deg.) ※6	6deg. (2deg.) ※6															
	10	Target sub cool setting ※5	15deg.	10deg.															
SW4 Model Selection (Setting for PMFY series)	1~5	In case replacing the indoor controller board, make sure to set the switch to the factory-preset status, which is shown below. <div><div>ON</div><div>OFF</div><div><div><div></div><div></div><div></div><div></div><div></div></div><div>1 2 3 4 5</div></div></div>			Before power supply ON	<div>Indoor controller board</div>													





Switch	Pole	Operation by switch	Effective timing	Remarks
SW11 1st digit address setting SW12 2nd digit address setting	Rotary switch	  <p>Address setting should be done when M-NET remote controller is being used.</p>	Before power supply ON	<div>Address board</div> <p>Address can be set while the unit is stopped.</p> <p>&lt;At delivery&gt;</p> 
SW14 Connection No. setting	Rotary switch	 <p>This is the switch to be used when the indoor unit is operated with R2 series outdoor unit as a set.</p>		<div>Address board</div> <p>&lt;At delivery&gt;</p> <p>SW14</p> 
SW5 Voltage Selection	2	<p>220V (208V)      240V (230V)</p>  <p>If the unit is used at the 230V area, set the voltage to 230V. If the unit is used at the 208V, set the voltage to 208V.</p>		<div>Address board</div> <p>&lt;At delivery&gt;</p> <p>220V (208V)      240V (230V)</p> 

**PMFY-16NBMU-A**



PMFY-08NBMU-A PMFY-10NBMU-A  
PMFY-12NBMU-A PMFY-16NBMU-A

Be careful when removing heavy parts.

## OPERATING PROCEDURE

### 1. Removing the intake grille

#### Opening the air intake grille

- (1) Press the **PUSH** of the air intake grille.(See figure 1)
- (2) Put your fingers on both ends of the air intake grille and let it down after the grille clicks.

#### Removing the air intake grille

- (1) Press the **PUSH** of air intake grille, and pull down both ends with your fingers after the grille clicks.  
(See figure 1)
- (2) Pull out the handle of air intake grille toward you.  
(See figure 2)
- (3) Unhook the string, which secures air intake grille.  
(See figure 3)

## PHOTOS&ILLUSTRATIONS

Photo 1



Figure 1

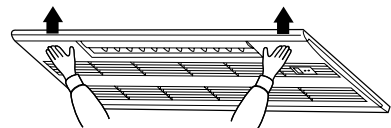


Figure 2

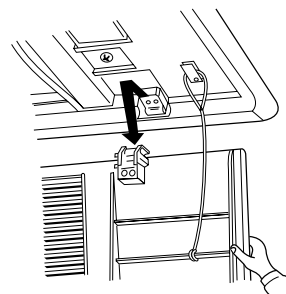
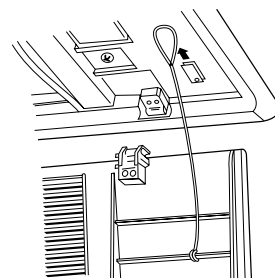
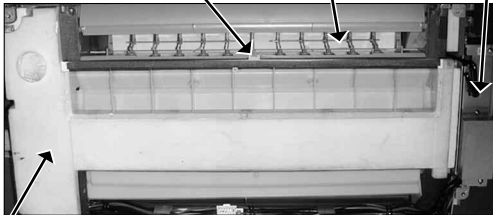
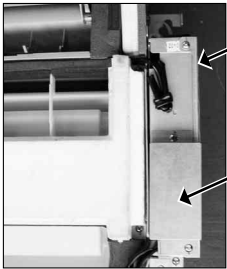

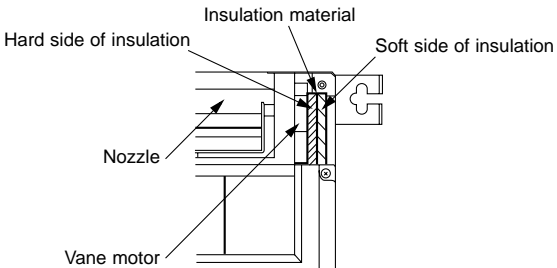
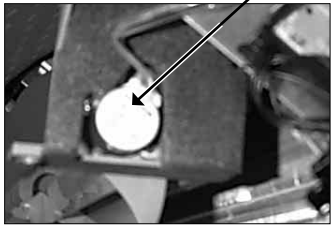
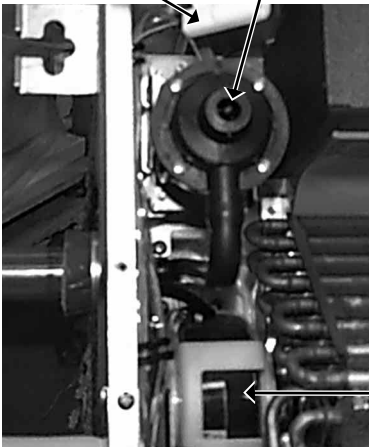
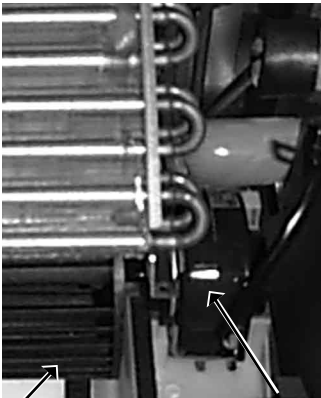


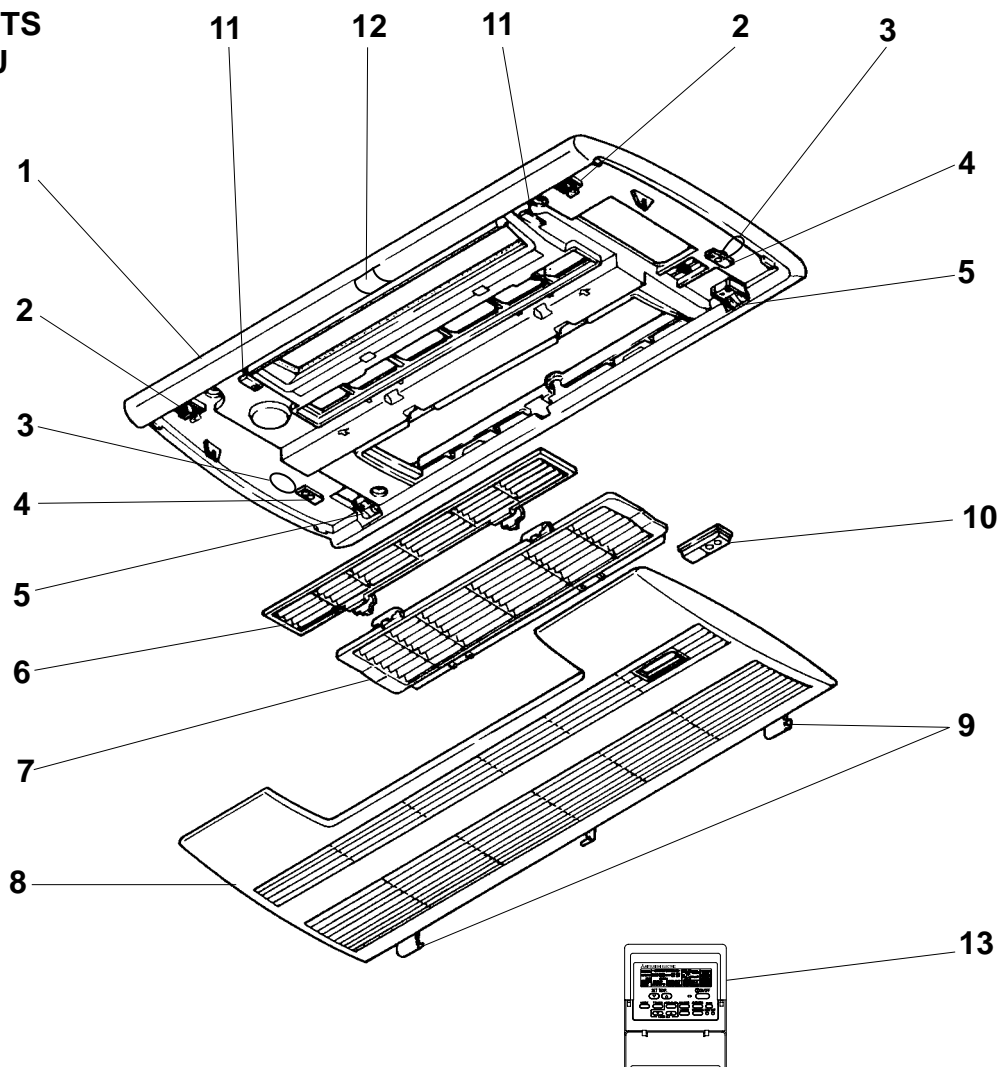
Figure 3





OPERATING PROCEDURE	PHOTOS&ILLUSTRATIONS
<p><b>2. Removing the electrical parts box</b></p> <ol style="list-style-type: none"><li>(1) Remove the panel.</li><li>(2) Remove the address board cover.</li><li>(3) Remove the electrical parts cover.</li><li>(4) Disconnect the connectors of fan motor, vane motor, drain pump, room temperature thermistor, pipe temperature thermistor, condenser/evaporator temperature thermistor, and drain sensor on the electrical controller board.</li><li>(5) Disconnect the lead wire and earth wire from terminal block.</li><li>(6) Remove the electrical parts box.</li></ol>	<p><b>Photo 2</b></p>  <p><b>Photo 3</b></p> 
<p><b>3. Removing the nozzle</b></p> <p><b>Note when the nozzle is removed</b></p> <ul style="list-style-type: none"><li>• <b>The insulation material (white)</b> which prevents water drop is mounted to the side of vane motor, remove the insulation material before removing nozzle. (See figure 4)</li><li>• After completing the service, re-mount the insulation material as before as shown in right figure.</li><li>• After service, mount the double layer insulation without fail.</li></ul> <p><b>The hard material side should be faced toward the nozzle. (See figure 4)</b></p> <ol style="list-style-type: none"><li>(1) Remove the panel.</li><li>(2) Remove the room temperature thermistor.</li><li>(3) Unhook the claw in the middle of nozzle and remove the drain pan. (5 screws) (See photo 2)</li><li>(4) Remove the nozzle side of the heat exchanger.(2 screws)</li><li>(5) Remove the address board cover.</li><li>(6) Remove the electrical parts cover.</li><li>(7) Disconnect the connector of vane motor.</li><li>(8) Remove the insulation material (white) on the right side of nozzle.</li><li>(9) Remove the nozzle. (6 screws)</li></ol>	<p><b>Photo 4</b></p>  <p><b>Figure 4</b></p> 
<p><b>4. Removing the vane motor</b></p> <ol style="list-style-type: none"><li>(1) Remove the nozzle. Refer to above-mentioned (3) Removing the nozzle.</li><li>(2) Remove the vane motor.</li></ol>	<p><b>Photo 5</b></p> 

OPERATING PROCEDURE	PHOTOS&ILLUSTRATIONS
<p><b>5. Removing the drain pump</b></p> <ol style="list-style-type: none"> <li>(1) Remove the panel.</li> <li>(2) Unhook the claw in the middle of nozzle and remove the drain pan.</li> <li>(3) Remove the address board cover.</li> <li>(4) Remove the electrical parts cover.</li> <li>(5) Disconnect the connector of drain pump.</li> <li>(6) Remove the drain hose.</li> <li>(7) Remove the drain pump.(2 screws)</li> </ol>	<p><b>Photo 6</b></p>  <p>Drain sensor      Drain pump</p> <p>Fan motor</p>
<p><b>6. Removing the fan motor and line flow fan</b></p> <ol style="list-style-type: none"> <li>(1) Remove the panel.</li> <li>(2) Unhook the claw in the middle of nozzle and remove the drain pan.</li> <li>(3) Unscrew 2 screws at the nozzle side of the heat exchanger.</li> <li>(4) Remove the address board cover.</li> <li>(5) Remove the electrical parts cover.</li> <li>(6) Disconnect the connector of vane motor,fan motor and drain pump.</li> <li>(7) Remove the nozzle side of the heat exchanger.(2 screws)</li> <li>(8) Remove the nozzle.</li> <li>(9) Remove the drain pump.</li> <li>(10) Unscrew 2 screws in the motor support.</li> <li>(11) Remove the fan motor and line flow fan (The fan motor and line flow fan can be removed without removing the heat exchanger.)</li> </ol>	<p><b>Photo 7</b></p>  <p>Line flow fan      Fan motor</p>
<p><b>7. Removing the thermistor&lt;Room temperature detection&gt;</b></p> <ol style="list-style-type: none"> <li>(1) Remove the panel.</li> <li>(2) Remove the address board cover.</li> <li>(3) Remove the electrical parts cover.</li> <li>(4) Remove the thermistor &lt;intake temperature detector&gt;</li> <li>(5) Disconnect the lead wire from the cord clamp (5 points)</li> <li>(6) Disconnect the connector (CN20) on the indoor controller board.</li> </ol>	
<p><b>8. Removing the thermistor</b>  <b>&lt;Liquid pipe temperature detection&gt;</b>  <b>&lt;Gas pipe temperature detection&gt;</b></p> <ol style="list-style-type: none"> <li>(1) Remove the panel.</li> <li>(2) Remove the address board cover.</li> <li>(3) Remove the electrical parts cover.</li> <li>(4) Remove the drain pan.</li> <li>(5) Remove the thermistor &lt;Gas pipe temperature detection&gt; /&lt;Liquid pipe temperature detection&gt;.</li> <li>(6) Disconnect the lead wire from the cord clamp</li> <li>(7) Disconnect the connector (CN21)/(CN29) on the indoor controller board.</li> </ol>	

**PANEL PARTS**  
**PMP-16BMU**


No.	Part No.	Part Name	Specification	Q'ty/set	Remarks (Drawing No.)	Wiring Diagram Symbol	Recom- mended Q'ty	Price	
				PMP-16BMU				Unit	Amount
1	T7W E11 003	AIR OUTLET GRILLE		1					
2	R01 E00 055	LATCH		2					
3	—	HANGER		2	(DT88D360H03)				
4	R01 E00 099	PANEL HOOK		2					
5	R01 E01 054	GRILLE CATCH		2					
6	R01 E01 500	L.L.FILTER		1					
7	R01 E02 500	L.L.FILTER		1					
8	TW7 E01 691	INTAKE GRILLE		1					
9	R01 E00 054	GRILLE CATCH		2					
10	R01 E00 648	RECEIVER COVER		1					
11	R01 E00 044	MAGNET		2					
12	R01 E00 096	SCREW CAP		1					
13	—	REMOTE CONTROLLER	PAR-20MAU	1		R.B			

This REMOTE CONTROLLER is made by AIR-CONDITIONING & REFRIGERATION SYSTEMS WORKS.,  
MITSUBISHI ELECTRIC CORPORATION.

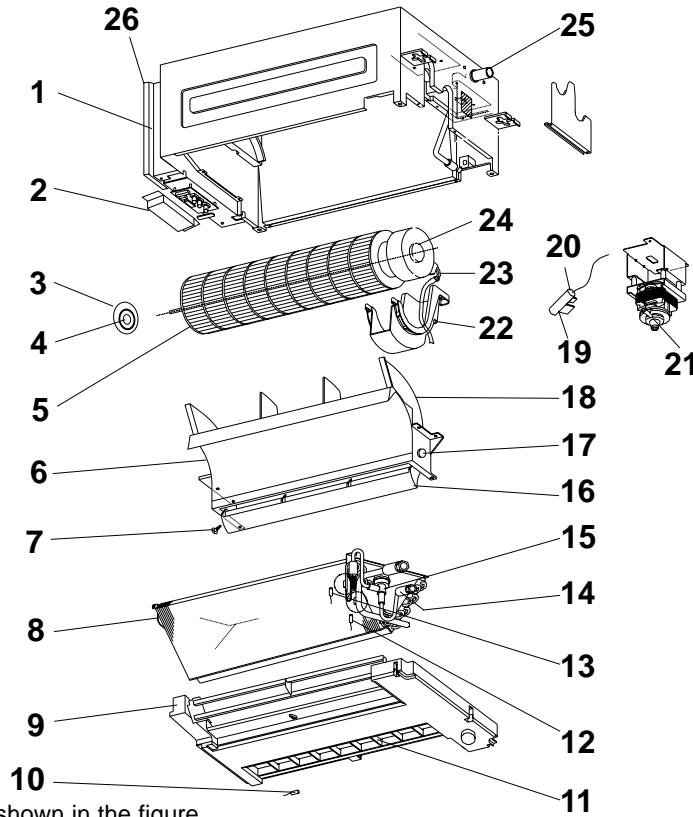
## FUNCTIONAL PARTS

PMFY-08NBMU-A

PMFY-10NBMU-A

PMFY-12NBMU-A

PMFY-16NBMU-A



Part number that is circled is not shown in the figure.

No.	Part No.	Part Name	Specification	Q'ty/set		Remarks (Drawing No.)	Wiring Diagram Symbol	Recom- mended Q'ty	Price	
				PMFY- - NBMU-A					Unit	Amount
				08 ,10	12 ,16					
1	—	CABINET		1	1	(DT00A478G81)				
2	—	ADDRESS BOARD COVER		1	1	(RG02L277H02)				
3	R01 22A 102	BEARING MOUNT		1	1					
4	R01 005 103	SLEEVE BEARING		1	1					
5	R01 E02 114	LINE FLOW FAN		1	1					
6	R01 E00 079	STABILIZER ASSY		1	1					
7	R01 E00 092	VANE SLEEVE		1	1					
8	T7W E48 480	HEAT EXCHANGER		1						
	T7W E49 480	HEAT EXCHANGER			1					
9	R01 E10 529	DRAIN PAN ASSY		1	1					
10	R01 E00 202	THERMISTOR	ROOM	1	1		TH21			
11	R01 E00 038	GUIDE VANE		1	1					
12	R01 E01 202	THERMISTOR	LIQUID	1	1		TH22			
13	R01 E03 202	THERMISTOR	GAS	1	1		TH23			
14	—	STRAINER PIPE		1	1	(BG14G637G05)				
15	R01 E66 401	LINEAR EXPANSION VALVE		1	1		LEV			
16	R01 E01 002	VANE		1	1					
17	R01 E01 223	VANE MOTOR		1	1		MV			
18	R01 E00 110	CASING ASSY		1	1					
19	R01 31K 241	SENSOR HOLDER		1	1					
20	R01 E01 266	DRAIN SENSOR		1	1		DS			
21	T7W E07 355	DRAIN PUMP		1	1		DP			
22	R01 E00 130	MOTOR SUPPORT		1	1					
23	T7W E22 762	FAN MOTOR		1	1		MF			
24	TW7 E01 105	RUBBER MOUNT		1	1					
25	R01 E00 527	DRAIN PIPE ASSY		1	1					
26	—	CONTROL BOX COVER		1	1	(RG00L311G18)				
27	R01 E01 673	SCREW ASSY		1	1					

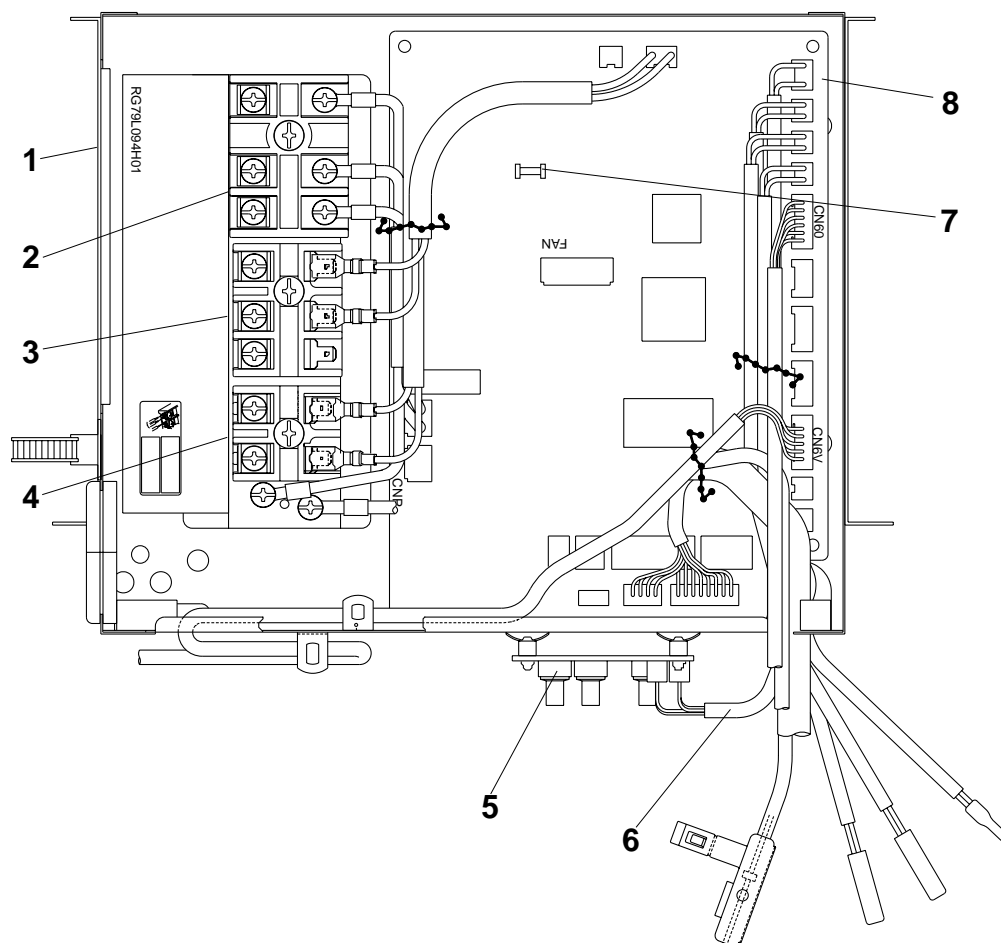
## ELECTRICAL PARTS

PMFY-08NBMU-A

PMFY-10NBMU-A

PMFY-12NBMU-A

PMFY-16NBMU-A



No.	Part No.	Part Name	Specification	Q'ty/set	Remarks (Drawing No.)	Wiring Diagram Symbol	Recom- mended Q'ty	Price	
				PMFY-08, 10 12, 16				Unit	Amount
				NBMU-A					
1	—	CONTROL BOX		1	(RG02B337G14)				
2	T7W E11 716	TERMINAL BLOCK	3P (L1,L2,G)	1		TB2			
3	T7W E17 716	TERMINAL BLOCK	3P (M1,M2,S)	1		TB5			
4	R01 556 246	TERMINAL BLOCK	2P(1,2)	1		TB15			
5	T7W E00 294	ADDRESS BOARD		1		A.B			
6	R01 E00 304	CABLE ASSY		1					
7	T7W 410 239	FUSE	250V 6.3A	1		FUSE			
8	T7W E37 310	INDOOR CONTROLLER BOARD	with POWER BOARD	1		I.B			

**MITSUBISHI ELECTRIC CORPORATION**

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