

AIR CONDITIONING SYSTEMS

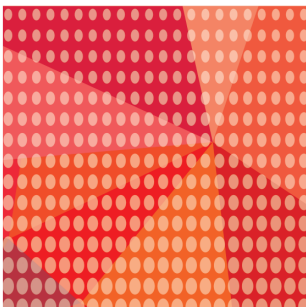
CITY MULTI



DATA BOOK

MODEL

PMFY-M-NCMU-A



PMFY-M-NCMU-A

1. SPECIFICATIONS	2
2. EXTERNAL DIMENSIONS	3
3. CENTER OF GRAVITY	4
4. ELECTRICAL WIRING DIAGRAMS	5
5. SOUND LEVELS	6
5-1. Sound levels	6
5-2. NC curves	6
6. TEMPERATURE/AIRFLOW DISTRIBUTIONS	7
6-1. Temperature distributions	7
6-2. Airflow distributions	7
7. ELECTRICAL CHARACTERISTICS	8
8. OPTIONAL PARTS	9
8-1. Optional parts line up for the Indoor unit	9
8-2. Decoration panel	9
8-3. External heater adapter	10

1. SPECIFICATIONS

Ceiling cassette (1-way flow type)

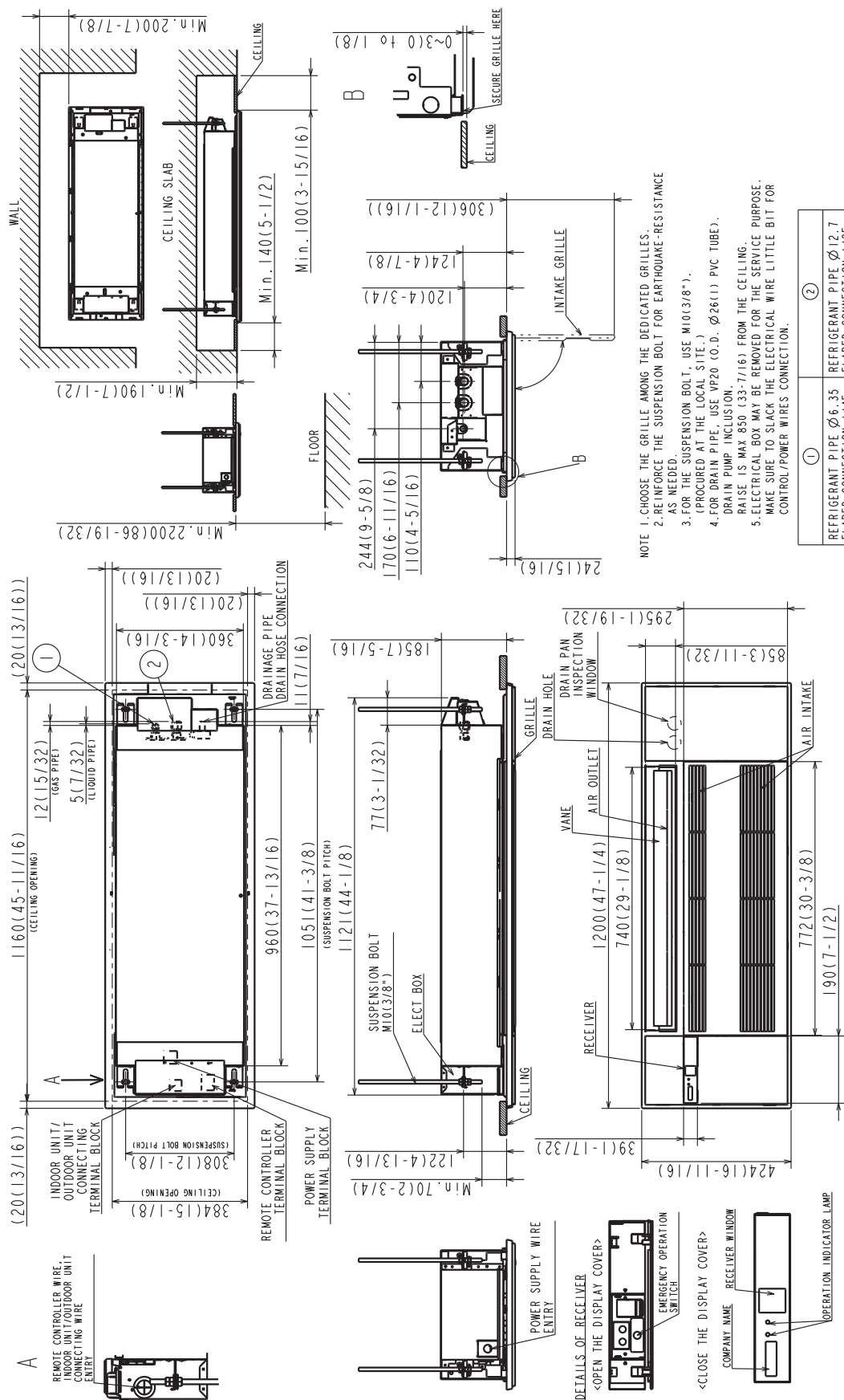
PMFY-M-NCMU-A

Model			PMFY-M06NCMU-A	PMFY-M08NCMU-A	PMFY-M12NCMU-A	PMFY-M15NCMU-A	PMFY-M18NCMU-A
Power source			1-phase 208-230 V 60Hz				
Cooling capacity (Nominal)	*1	BTU / h	6,000	8,000	12,000	15,000	18,000
	*1	kW	1.8	2.3	3.5	4.4	5.3
		Power input	kW	0.02	0.03	0.03	0.05
		Current input	A	0.29	0.32	0.35	0.58
Heating capacity (Nominal)	*2	BTU / h	6,700	9,000	13,500	17,000	20,000
	*2	kW	2.0	2.6	4.0	5.0	5.9
		Power input	kW	0.02	0.03	0.03	0.05
		Current input	A	0.24	0.27	0.30	0.53
External finish			-				
External dimension H x W x D		in.	7-5/16 x 44-1/8 x 14-3/16	7-5/16 x 44-1/8 x 14-3/16	7-5/16 x 44-1/8 x 14-3/16	7-5/16 x 44-1/8 x 14-3/16	7-5/16 x 44-1/8 x 14-3/16
		mm	185 x 1121 x 360	185 x 1121 x 360	185 x 1121 x 360	185 x 1121 x 360	185 x 1121 x 360
Net weight		lbs (kg)	35.3 (16.0)	35.3 (16.0)	36 (16.3)	36 (16.3)	36 (16.3)
Decoration panel	Model		MLP-449WU-U1 / MLP-449WCA-CA1				
	External finish		0.98Y 8.99/0.63				
	Dimension	in.	15/16 x 47-1/4 x 16-11/16	15/16 x 47-1/4 x 16-11/16	15/16 x 47-1/4 x 16-11/16	15/16 x 47-1/4 x 16-11/16	15/16 x 47-1/4 x 16-11/16
	H x W x D	mm	24 x 1200 x 424	24 x 1200 x 424	24 x 1200 x 424	24 x 1200 x 424	24 x 1200 x 424
	Net Weight	lbs (kg)	8.2(3.7)	8.2(3.7)	8.2(3.7)	8.2(3.7)	8.2(3.7)
Heat exchanger			Cross fin				
FAN	Type x Quantity		Line flow fan x 1	Line flow fan x 1	Line flow fan x 1	Line flow fan x 1	Line flow fan x 1
	External static press	in.WG	0.000 (208V)	0.000 (208V)	0.000 (208V)	0.000 (208V)	0.000 (208V)
		Pa	0	0	0	0	0
		in.WG	0.000 (230V)	0.000 (230V)	0.000 (230V)	0.000 (230V)	0.000 (230V)
		Pa	0	0	0	0	0
	Motor type		DC Blush-less Motor				
	Motor output	kW	0.03	0.03	0.03	0.03	0.03
	Driving mechanism		Direct-driven				
	Airflow rate (Low-Mid2-Mid1-High)	cfm	195-205-215-225	195-225-255-285	235-260-285-310	235-275-315-360	235-300-360-420
		m3 / min	5.6-5.9-6.2-6.5	5.6-6.4-7.3-8.1	6.7-7.4-8.1-8.8	6.7-7.9-9.0-10.2	6.7-8.5-10.2-12.0
		L / s	93-98-103-108	93-106-121-135	111-123-135-146	111-131-150-170	111-141-170-200
Sound pressure level (Low-Mid1-Mid2-High) (measured in anechoic room)	dB <A>	25-27-28-29 (208-230V)	25-29-32-35 (208-230V)	29-32-35-37 (208-230V)	29-34-38-41 (208-230V)	29-36-41-45 (208-230V)	
	dB <A>	-	-	-	-	-	
	dB <A>	-	-	-	-	-	
Insulation material			PS foam, Polyethylene foam				
Air filter			PP honeycomb				
Protection device			Fuse				
Refrigerant control device			LEV				
Connectable outdoor unit			R32/R454B CITY MULTI	R32/R454B CITY MULTI	R32/R454B CITY MULTI	R32/R454B CITY MULTI	R32/R454B CITY MULTI
Diameter of refrigerant pipe (O.D.)	Liquid	in. (mm)	1/4 (6.35) Flare	1/4 (6.35) Flare	1/4 (6.35) Flare	1/4 (6.35) Flare	1/4 (6.35) Flare
	Gas	in. (mm)	1/2 (12.7) Flare	1/2 (12.7) Flare	1/2 (12.7) Flare	1/2 (12.7) Flare	1/2 (12.7) Flare
Field drain pipe size		in. (mm)	O.D. 1 (26)	O.D. 1 (26)	O.D. 1 (26)	O.D. 1 (26)	O.D. 1 (26)
Standard attachment	Document		Installation Manual,Installation Book				
	Accessory						
Optional parts	External heater adapter		PAC-YU25HT	PAC-YU25HT	PAC-YU25HT	PAC-YU25HT	PAC-YU25HT
Remarks			* Details on foundation work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. * Due to continuing improvement, above specification may be subject to change without notice.				

Notes :		*1 Nominal cooling conditions	*2 Nominal heating conditions	Unit converter
Indoor :		80degF D.B. / 67degF W.B. (26.7degC D.B. / 19.4degC W.B.)	70degF D.B. (21.1degC D.B.)	BTU/h = kW x 3.412
Outdoor :		95degF D.B. (35degC D.B.)	47degF D.B. / 43degF W.B. (8.3degC D.B. / 6.1degC W.B.)	cfm = m3/min x 35.31
Pipe length :		25 ft. (7.6 m)	25 ft. (7.6 m)	lbs = kg / 0.4536
Level difference :		0 ft. (0 m)	0 ft. (0 m)	*Above specification data is subject to rounding variation.

Ref.: Spec_PMFY-M06-18NCMU-A

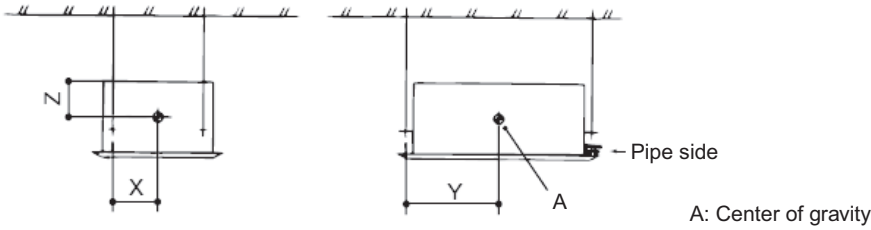
PMFY-M06, 08, 12, 15, 18NCMU-A

 Draw : IU-BK01C1JJ
 Unit : in(mm)


PMFY-M-NCMU-A

PMFY-M06, 08, 12, 15, 18NCMU-A

Ref.: PMFY_NCMU_COG_USDB_ALL



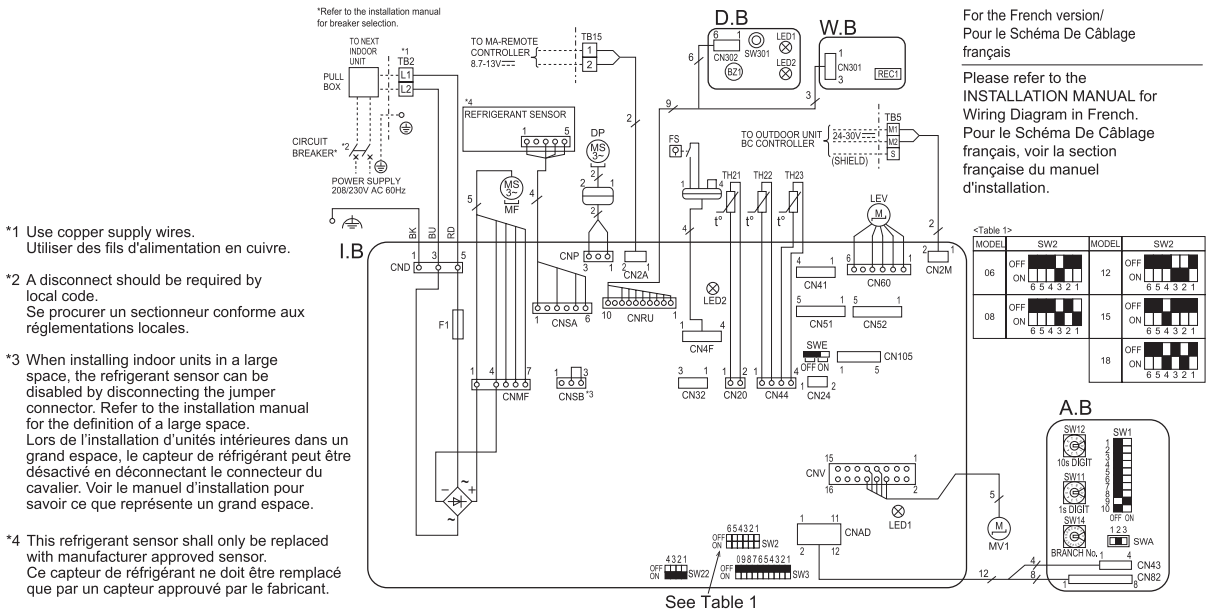
(mm)[in]

Model name	X	Y	Z
PMFY-M06NCMU-A	155 [6-3/32]	496 [19-17/32]	78 [3-1/16]
PMFY-M08NCMU-A	155 [6-3/32]	496 [19-17/32]	78 [3-1/16]
PMFY-M12NCMU-A	155 [6-3/32]	496 [19-17/32]	84 [3-5/16]
PMFY-M15NCMU-A	155 [6-3/32]	496 [19-17/32]	84 [3-5/16]
PMFY-M18NCMU-A	155 [6-3/32]	496 [19-17/32]	84 [3-5/16]

PMFY-M06, 08, 12, 15, 18NCMU-A

Please refer to the back side of the board box for an explanation of the symbols.

[LEGEND]		
SYMBOL	TERMINAL	NAME
TB2	POWER SUPPLY	
TB5	TRANSMISSION	
TB15	MA-REMOTE CONTROLLER	
A.B	ADDRESS BOARD	
SWA	FAN SPEED SELECTOR	
SW1	MODE SELECTION	
SW11	ADDRESS SETTING 1s DIGIT	
SW12	ADDRESS SETTING 10s DIGIT	
SW14	BRANCH No.	



LEGEND]

SYMBOL	NAME		SYMBOL	NAME
I.B	INDOOR CONTROLLER BOARD		TH21	THERMISTOR
CN24	CONNECTOR	EXTERNAL HEATER	TH22	ROOM TEMP. DETECTION (0°C / 15kΩ, 25°C / 5.4kΩ) (32°F / 15kΩ, 77°F / 5.4kΩ)
CN32		REMOTE SWITCH		PIPE TEMP. DETECTION/LIQUID (0°C / 15kΩ, 25°C / 5.4kΩ) (32°F / 15kΩ, 77°F / 5.4kΩ)
CN51		CENTRALLY CONTROL		
CN52		REMOTE INDICATION		
CN105		IT TERMINAL		
F1	FUSE (T3.15A/250V)		TH23	PIPE TEMP. DETECTION/GAS (0°C / 15kΩ, 25°C / 5.4kΩ) (32°F / 15kΩ, 77°F / 5.4kΩ)
SW2	SWITCH	CAPACITY CODE	D.B	DISPLAY BOARD
SW3		MODE SELECTION		
SW22		PAIR NO. SETTING		
SWE		FAN-DRAIN PUMP (TEST MODE)		
LEV	LINEAR EXPANSION VALVE			
MF	FAN MOTOR		SW301	EMERGENCY OPERATION
MV1	VANE MOTOR		LED1	LED(OPERATING INDICATOR)
			LED2	LED(STANDBY FOR HEATING)
			BZ1	BUZZER
		W.B	WIRELESS RECEIVING BOARD	
		REC1	RECEIVING UNIT	
			DP	DRAIN PUMP
			FS	DRAIN FLOAT SWITCH

LED on indoor controller board for service

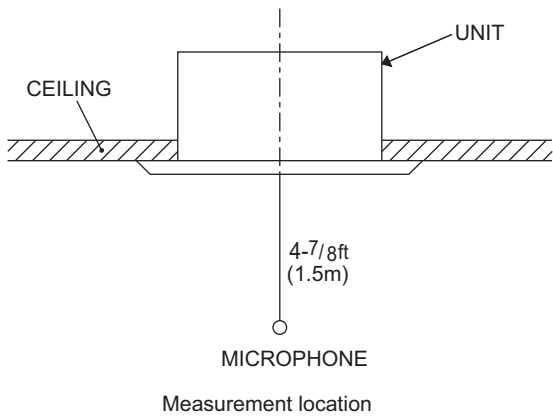
Symbol	Meaning	Function
LED1	Main power supply	Main power supply (Indoor unit) Power on → lamp is lit
LED2	Power supply for MA-Remote controller	Power supply for MA-Remote controller on → lamp is lit

- NOTES:
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 are,
□ □ □ : terminal block, □ ○ □ : connector.
 6. The setting of the SW2 dip switches differs in the capacity.
For the detail, see Table 1.
 7. The black square (■) in the wiring diagram indicates a switch position.

PMFY-M-NCMU-A

5-1. Sound levels

Ceiling cassette series



Operating sound levels
(Low-Medium2-Medium1-High)

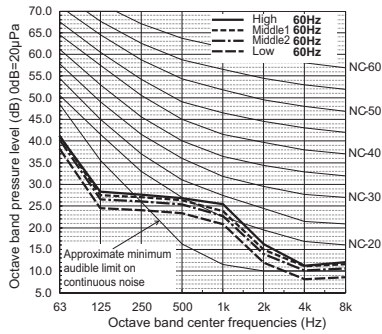
Unit : dB(A)

Model	Sound levels (A weighted)
PMFY-M06NCMU-A	25-27-28-29
PMFY-M08NCMU-A	25-29-32-35
PMFY-M12NCMU-A	29-32-35-37
PMFY-M15NCMU-A	29-34-38-41
PMFY-M18NCMU-A	29-36-41-45

5-2. NC curves

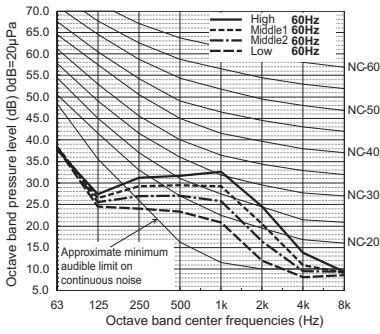
PMFY-M06NCMU-A

External Static Pressure: 0Pa [0.00in.WG]
Power Source: 208-230V, 60Hz



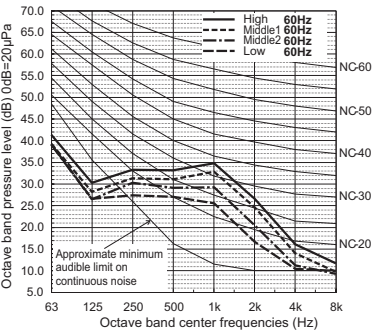
PMFY-M08NCMU-A

External Static Pressure: 0Pa [0.00in.WG]
Power Source: 208-230V, 60Hz



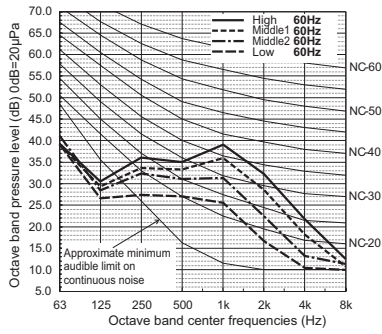
PMFY-M12NCMU-A

External Static Pressure: 0Pa [0.00in.WG]
Power Source: 208-230V, 60Hz



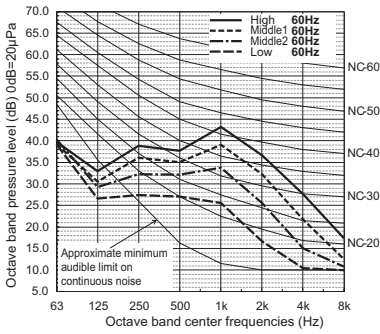
PMFY-M15NCMU-A

External Static Pressure: 0Pa [0.00in.WG]
Power Source: 208-230V, 60Hz



PMFY-M18NCMU-A

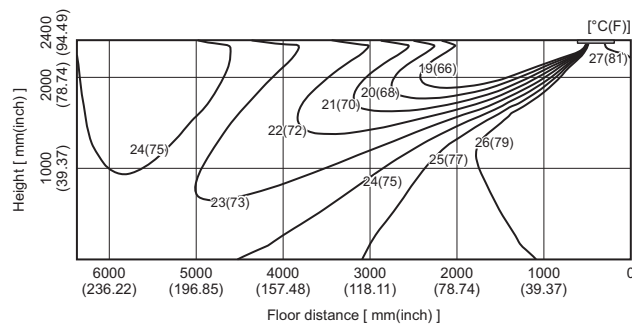
External Static Pressure: 0Pa [0.00in.WG]
Power Source: 208-230V, 60Hz



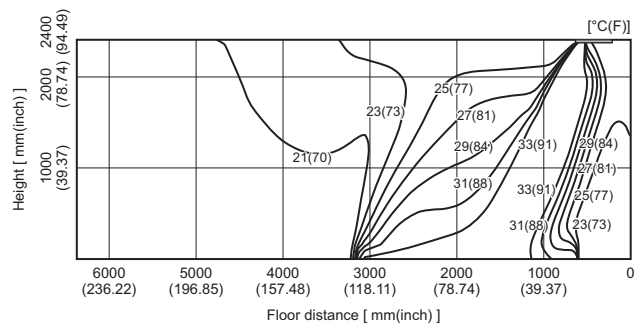
6-1. Temperature distributions

PMFY-M18NCMU-A

<Cooling mode>



<Heating mode>

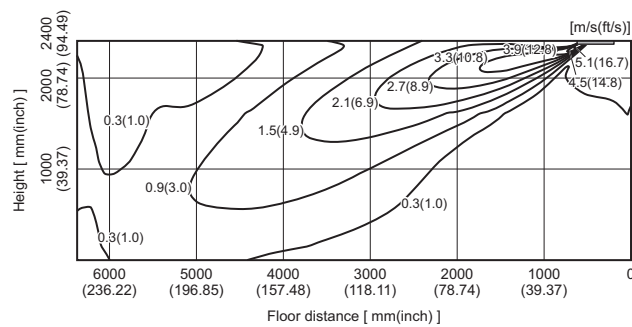


Note : These figures show typical airflow distributions in the conditions above. In the actual installation, they may differ from these figures under the influence of air temperature conditions, ceiling height, cooling/heating load, obstacles, etc.

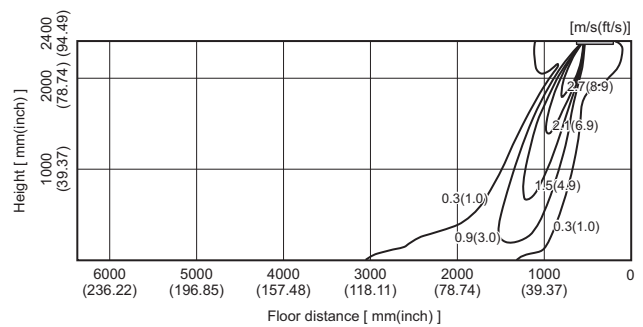
6-2. Airflow distributions

PMFY-M18NCMU-A

<Fan mode>



<Fan mode>



Note : These figures show typical airflow distributions in the conditions above. In the actual installation, they may differ from these figures under the influence of air temperature conditions, ceiling height, cooling/heating load, obstacles, etc.

PMFY-M-NCMU-A

Symbols: MCA: Minimum Circuit Ampacity
IFM: Indoor Fan Motor Output: Fan motor rated output

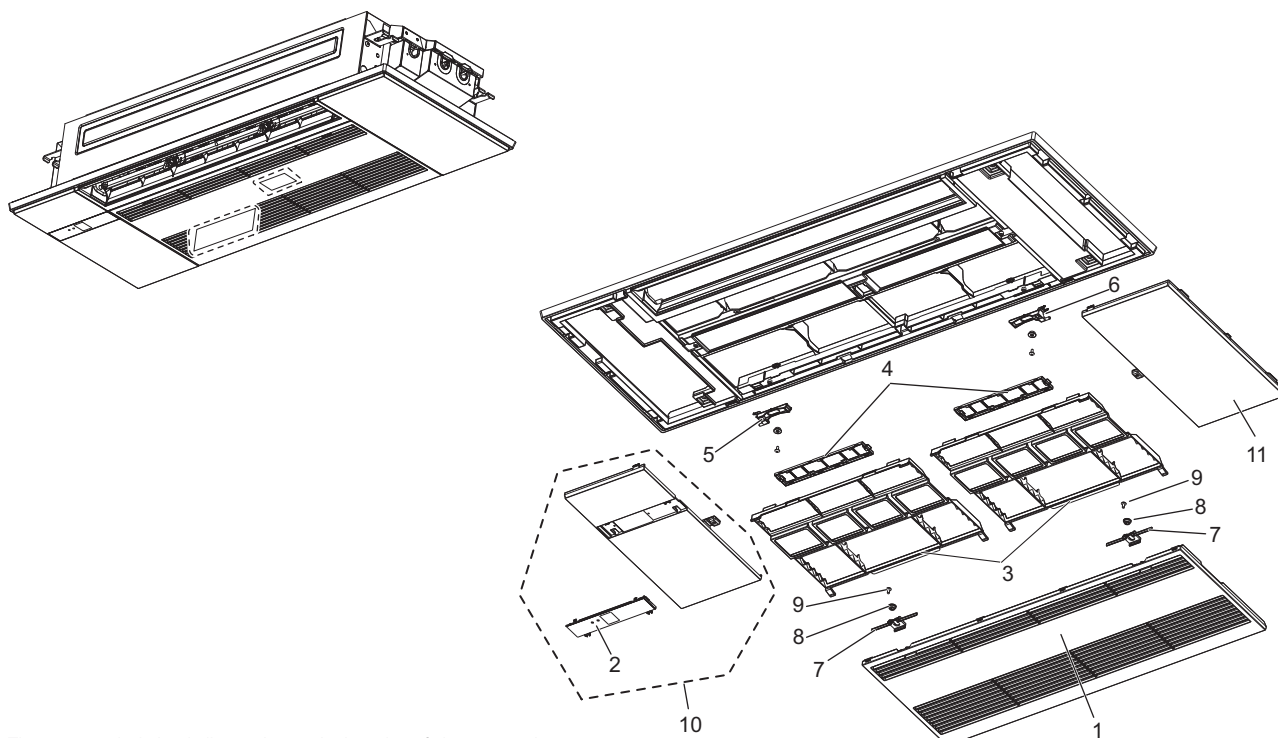
Model	Indoor Unit				IFM
	Hz	Volts	Voltage range	MCA(A)	Output(kW)
PMFY-M06NCMU-A	60Hz	208 / 230V	187 to 253V	0.36 / 0.36	0.03 / 0.03
PMFY-M08NCMU-A				0.40 / 0.40	0.03 / 0.03
PMFY-M12NCMU-A				0.44 / 0.44	0.03 / 0.03
PMFY-M15NCMU-A				0.55 / 0.55	0.03 / 0.03
PMFY-M18NCMU-A				0.73 / 0.73	0.03 / 0.03

8-1. Optional parts line up for the Indoor unit

Decoration panel		External heater adapter
PMFY-M-NCMU-A	MLP-449WU-U1 / MLP-449WCA-CA1	PAC-YU25HT

8-2. Decoration panel

PMFY-M-NCMU-A should use decoration panel MLP-449WU-U1 / MLP-449WCA-CA1 together.
Refer to the specifications for details.



1. The part quantity below indicates the required number of pieces per unit.
2. The circled No. indicates that the part is not shown in the figure.

No.	Part No.	Part Name	MLP-449WU-U1	MLP-449WCA-CA1	Wiring Diagram Symbol	Remarks
1	U02 001 521	GRILLE ASSEMBLY (W)	1			
1	U02 005 521	GRILLE ASSEMBLY (W)		1		
2	U02 001 816	DISPLAY COVER SET	1			Includes display sheet (Mitsubishi)
2	U02 004 816	DISPLAY COVER SET		1		Includes display sheet (Mitsubishi)
3	U02 001 500	AIR FILTER (AIR PURIFYING FILTER)	2			
3	U02 001 100	AIR FILTER (AIR PURIFYING FILTER)		2		
4	—	AIR CLEANING FILTER (ANTI-ALLERGY ENZYME FILTER)	1	1		MAC-408FT-E
5	U02 002 521	GRILLE SHAFT L	1	1		
6	U02 003 521	GRILLE SHAFT R	1	1		
7	U02 004 521	GRILLE KNOB (W)	2	2		
8	U02 A02 067	BOSS CAP (FOR FIXING GRILLE KNOB)	2	2		
9	U02 001 087	SCREW	2	2		Z004Z015H37
10	U02 A14 000	SIDE PANEL L ASSEMBLY (W)	1			Includes display sheet (Mitsubishi)
10	U02 A17 000	SIDE PANEL L ASSEMBLY (W)		1		Includes display sheet (Mitsubishi)
11	U02 A13 000	SIDE PANEL R ASSEMBLY (W)	1	1		
⑫	U02 011 087	SCREW CAP (W)	1			
⑫	U02 A03 067	SCREW CAP (W)		1		
⑬	U02 002 087	SCREW ASSEMBLY	1			M5 × 0.8 × 16: 6 pcs. Self-tapping screws 4 × 12: 1 piece
⑬	U02 003 087	SCREW ASSEMBLY		1		M5 × 0.8 × 16: 6 pcs. Self-tapping screws 4 × 12: 1 piece

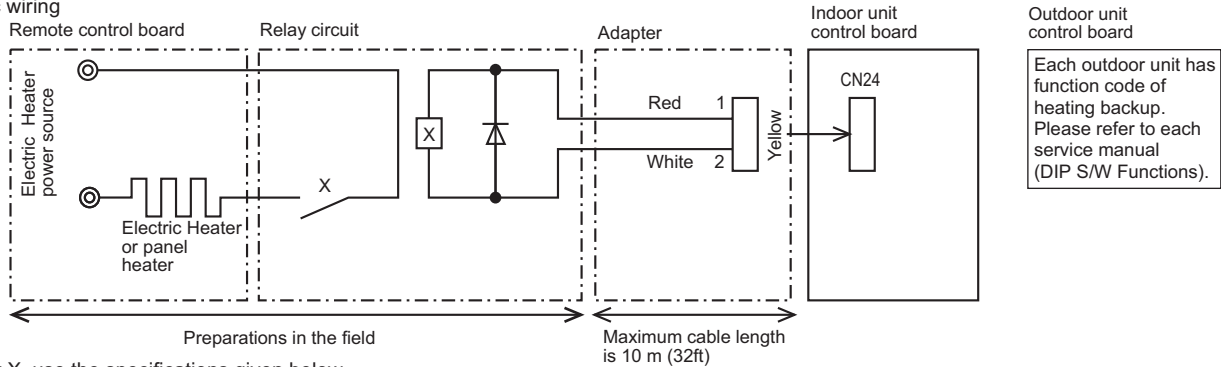
Detailed installation information should be referred to PMFY-M-NCMU-A's Technical and Service Manual.

8-3. External heater adapter

External heater adapter PAC-YU25HT is a set of special wiring parts for controlling the electric heater* with the air conditioner system.
*The electric heater should be designed and prepared at the site.

A basic connection method is shown as follows:(For details, refer to its Installation Manual.)

(1) Basic wiring



For relay X, use the specifications given below.

- Operation coil
- Rated voltage: 12VDC
- Power consumption: 0.9W or less

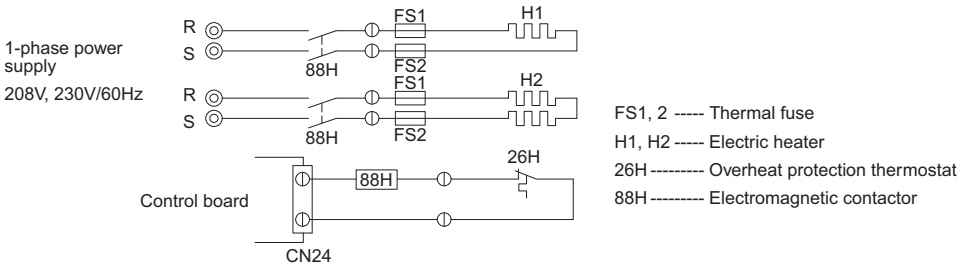
* Use the diode that is recommended by the relay manufacturer at both ends of the relay coil.

The length of the electrical wiring for the PAC-YU25HT is 2 meters (6-1/2 ft).

To extend this length, use sheathed 2-core cable.

- Control cable type: CVV, CVS, CPEV or equivalent.
- Cable size: 0.5 mm² ~ 1.25 mm² (16 to 22 AWG)
- Don't extend the cable more than 10 meters (32ft).

(2) Recommended circuit



Item	① External output cable	② Connector (for use with the panel heater)	
Quantity	2	3	
Shape			

Wiring details and Installation details should be referred to its Installation Manual.

⚠ 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, 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.
- Our air conditioning equipment and heat pumps contain a fluorinated greenhouse gas, R32/R454B.

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