MITSUBISHI ELECTRIC

Changes for the Better

AIR CONDITIONING SYSTEMS

CITY MULTI

DATA BOOK

MODEL

PLFY-P-VFM-E1

CONTENTS

PLFY-P-VFM-E1

1. SPECIFICATIONS

Model			PLFY-P15VFM-E1	PLFY-P20VFM-E1	PLFY-P25VFM-E1
Power source			1-phase 220-230-240V 50Hz/220V 60Hz		
Cooling capacity (Nominal)	*1	kW	1.7	2.2	2.8
	*1	BTU / h	5,800	7,500	9,600
	Power input	kW	0.02	0.02	0.02
	Current input	A	0.19	0.21	0.22
Heating capacity (Nominal)	*2	kW	1.9	2.5	3.2
	*2	BTU / h	6,500	8,500	10,900
	Power input	kW	0.02	0.02	0.02
	Current input	A	0.14	0.16	0.17
External finish			Galvanized steel sheet		
External dimension H x W x D		mm	208 x 570 x 570	208 x 570 x 570	208 x 570 x 570
		in.	8-1/4 x 22-1/2 x 22-1/2	8-1/4 x 22-1/2 x 22-1/2	8-1/4 x 22-1/2 x 22-1/2
Net weight		kg (lbs)	14 (31)	14 (31)	14 (31)
Decoration panel	Model		**SLP-2FA(L)(E)**	**SLP-2FA(L)(E)**	**SLP-2FA(L)(E)**
	External finish		MUNSELL (1.0Y 9.2/0.2)		
	Dimension H x W x D	mm	10 x 625 x 625	10 x 625 x 625	10 x 625 x 625
		in.	3/8 x 24-5/8 x 24-5/8	3/8 x 24-5/8 x 24-5/8	3/8 x 24-5/8 x 24-5/8
	Net Weight	kg (lbs)	3 (7)	3 (7)	3 (7)
Heat exchanger			Cross fin (Aluminum fin and copper tube)		
FAN	Type x Quantity		Turbo fan x 1		
	External static press.		0Pa (0mmH_2O)	0Pa (0mmH_2O)	0Pa (0mmH_2O)
	Motor type		DC motor		
	Motor output	kW	0.05	0.05	0.05
	Driving mechanism		Direct-driven		
	Airflow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		m^3 / min	6.5-7.5-8.0	6.5-7.5-8.5	6.5-8.0-9.0
		L / s	108-125-133	108-125-142	108-133-150
		cfm	230-265-282	230-265-300	230-282-318
Sound pressure level (measured in anechoic room)		dB <A>	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
			26-28-30	26-29-31	26-30-33
Insulation material			PS		
Air filter			PP honeycomb fabric (long life type)		
Protection device			Fuse		
Refrigerant control device			LEV		
Connectable outdoor unit			R410A CITY MULTI		
Diameter of refrigerant pipe	Liquid	mm (in.)	ø6.35 (ø1/4) Flare	ø6.35 (ø1/4) Flare	ø6.35 (ø1/4) Flare
	Gas	mm (in.)	ø12.7 (ø1/2) Flare	ø12.7 (ø1/2) Flare	ø12.7 (ø1/2) Flare
Field drain pipe size		mm (in.)	O.D. 32 (1-1/4) (PVC pipe VP-25 connectable)		
Standard attachment			Installation manual, Instruction book		
Remark	Optional parts				
	Decoration panel		SLP-2FA/SLP-2FAE/SLP-2FAL/SLP-2FALE		
			*PLFY-P-VFM-E1 should be used together with Decoration panel.		
	Installation		Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.		

Note :

*1 Nominal cooling condition

Indoor :	27°CDB/19°CWB (81°FDB/66°FWB)
Outdoor :	35°CDB (95°FDB)
Pipe length :	7.5 m (24-9/16 ft)
Level difference :	0 m (0 ft)

*2 Nominal heating condition

	20°CDB (68°FDB)
	7°CDB/6°CWB (45°FDB/43°FWB)
	7.5 m (24-9/16 ft)
	0 m (0 ft)

* Nominal conditions *1, *2 are subject to JIS B8615-1.

* Due to continuing improvement, above specification may be subject to change without notice.

Unit converter

BTU/h = kW x 3,412
cfm = m^3/min x 35.31
lbs = kg / 0.4536

*Above specification data is subject to rounding variation.

Model			PLFY-P32VFM-E1	PLFY-P40VFM-E1	PLFY-P50VFM-E1
Power source			1-phase 220-230-240V 50Hz/220V 60Hz		
Cooling capacity (Nominal)	*1	kW	3.6	4.5	5.6
	*1	BTU / h	12,300	15,400	19,100
	Power input	kW	0.02	0.03	0.04
	Current input	A	0.23	0.28	0.40
Heating capacity (Nominal)	*2	kW	4.0	5.0	6.3
	*2	BTU / h	13,600	17,100	21,500
	Power input	kW	0.02	0.03	0.04
	Current input	A	0.18	0.23	0.35
External finish			Galvanized steel sheet		
External dimension H x W x D		mm	208 x 570 x 570	208 x 570 x 570	208 x 570 x 570
		in.	8-1/4 x 22-1/2 x 22-1/2	8-1/4 x 22-1/2 x 22-1/2	8-1/4 x 22-1/2 x 22-1/2
Net weight		kg (lbs)	15 (33)	15 (33)	15 (33)
Decoration panel	Model		**SLP-2FA(L)(E)**	**SLP-2FA(L)(E)**	**SLP-2FA(L)(E)**
	External finish		MUNSELL (1.0Y 9.2/0.2)		
	Dimension H x W x D	mm	10 x 625 x 625	10 x 625 x 625	10 x 625 x 625
		in.	3/8 x 24-5/8 x 24-5/8	3/8 x 24-5/8 x 24-5/8	3/8 x 24-5/8 x 24-5/8
	Net Weight	kg (lbs)	3 (7)	3 (7)	3 (7)
Heat exchanger			Cross fin (Aluminum fin and copper tube)		
FAN	Type x Quantity		Turbo fan x 1		
	External static press.		0Pa (0mmH_2O)	0Pa (0mmH_2O)	0Pa (0mmH_2O)
	Motor type		DC motor		
	Motor output	kW	0.05	0.05	0.05
	Driving mechanism		Direct-driven		
	Airflow rate		(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
		m^3 / min	7.0-8.0-9.5	7.5-9.0-11.0	9.0-11.0-13.0
		L / s	117-133-158	125-150-183	150-183-217
		cfm	247-282-335	265-318-388	318-388-459
Sound pressure level		dB <A>	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
(measured in anechoic room)			26-30-34	28-33-39	33-39-43
Insulation material			PS		
Air filter			PP honeycomb fabric (long life type)		
Protection device			Fuse		
Refrigerant control device			LEV		
Connectable outdoor unit			R410A CITY MULTI		
Diameter of refrigerant pipe	Liquid	mm (in.)	ø6.35 (ø1/4) Flare	ø6.35 (ø1/4) Flare	ø6.35 (ø1/4) Flare
	Gas	mm (in.)	ø12.7 (ø1/2) Flare	ø12.7 (ø1/2) Flare	ø12.7 (ø1/2) Flare
Field drain pipe size		mm (in.)	O.D. 32 (1-1/4) (PVC pipe VP-25 connectable)		
Standard attachment			Installation manual, Instruction book		
Remark	Optional parts				
	Decoration panel		SLP-2FA/SLP-2FAE/SLP-2FAL/SLP-2FALE		
			*PLFY-P-VFM-E1 should be used together with Decoration panel.		
	Installation		Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.		

Note :

	*1 Nominal cooling condition	*2 Nominal heating condition
Indoor :	27°CDB/19°CWB (81°FDB/66°FWB)	20°CDB (68°FDB)
Outdoor :	35°CDB (95°FDB)	7°CDB/6°CWB (45°FDB/43°FWB)
Pipe length :	7.5 m (24-9/16 ft)	7.5 m (24-9/16 ft)
Level difference :	0 m (0 ft)	0 m (0 ft)

* Nominal conditions *1, *2 are subject to JIS B8615-1.
* Due to continuing improvement, above specification may be subject to change without notice.

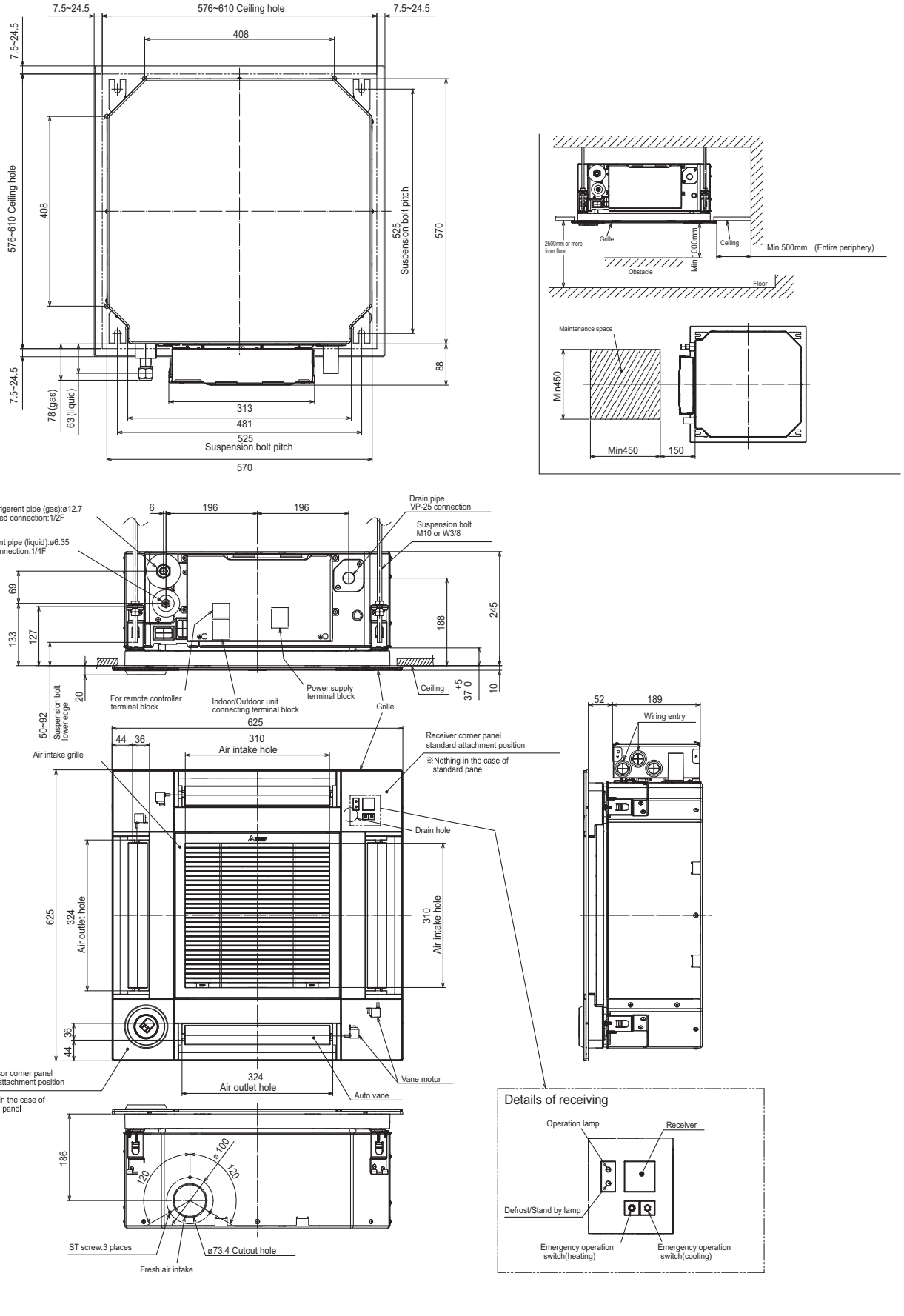
Unit converter

BTU/h = kW x 3,412
cfm = m^3/min x 35.31
lbs = kg / 0.4536

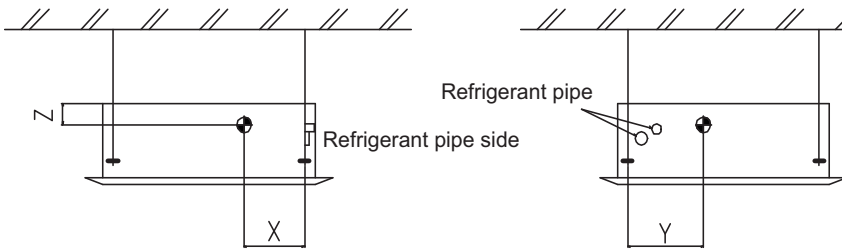
*Above specification data is subject to rounding variation.

PLFY-P15, 20, 25, 32, 40, 50VFM-E1

Unit: mm



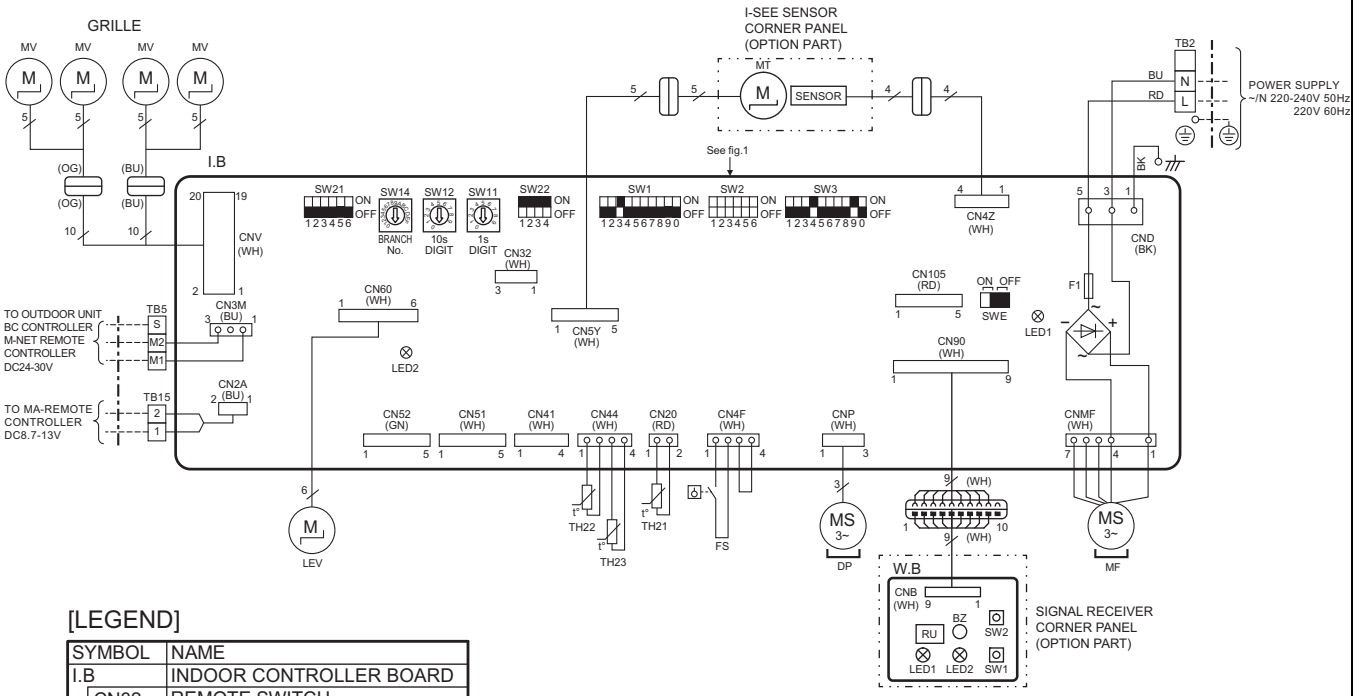
PLFY-P15, 20, 25, 32, 40, 50VFM-E1



(mm)[in]

Model name	X	Y	Z
PLFY-P15VFM-E1	150 [5-29/32]	260 [10-1/4]	105 [4-5/32]
PLFY-P20VFM-E1	150 [5-29/32]	260 [10-1/4]	105 [4-5/32]
PLFY-P25VFM-E1	150 [5-29/32]	260 [10-1/4]	105 [4-5/32]
PLFY-P32VFM-E1	150 [5-29/32]	260 [10-1/4]	105 [4-5/32]
PLFY-P40VFM-E1	150 [5-29/32]	260 [10-1/4]	105 [4-5/32]
PLFY-P50VFM-E1	150 [5-29/32]	260 [10-1/4]	105 [4-5/32]

PLFY-P15, 20, 25, 32, 40, 50VFM-E1



[LEGEND]

SYMBOL	NAME
I.B	INDOOR CONTROLLER BOARD
CN32	REMOTE SWITCH
CN41	HA TERMINAL-A
CN51	CENTRALLY CONTROL
CN52	REMOTE INDICATION
CN105	IT TERMINAL
F1	FUSE(T6.3AL 250V)
LED1	POWER SUPPLY (I.B)
LED2	POWER SUPPLY (MA-REMOTE CONTROLLER)
SW1	MODE SELECTION
SW2	CAPACITY CODE
SW3	MODE SELECTION
SW11	ADDRESS SETTING ONES DIGIT
SW12	ADDRESS SETTING TENS DIGIT
SW14	BRANCH No.
SW21	CEILING HEIGHT SELECTOR
SW22	PAIR NO. SETTING
SWE	DRAIN PUMP(TEST MODE)
DP	DRAIN PUMP
LEV	LINEAR EXPANSION VALVE
MF	FAN MOTOR
MV	VANE MOTOR
FS	FLOAT SWITCH
TB2	TERMINAL BLOCK: POWER SUPPLY
TB5	TERMINAL BLOCK: TRANSMISSION
TB15	TERMINAL BLOCK: MA-REMOTE CONTROLLER
TH21	ROOM TEMP. THERMISTOR
TH22	PIPE TEMP. THERMISTOR/LIQUID
TH23	PIPE TEMP. THERMISTOR/GAS
OPTION PART	
W.B	WIRELESS REMOTE CONTROLLER BOARD
BZ	BUZZER
LED1	OPERATION (GREEN)
LED2	STAND BY (ORANGE)
RU	RECEIVING UNIT
SW1	EMERGENCY OPERATION(HEAT)
SW2	EMERGENCY OPERATION(COOL)
MT	I-SEE SENSOR MOTOR

<fig.1>

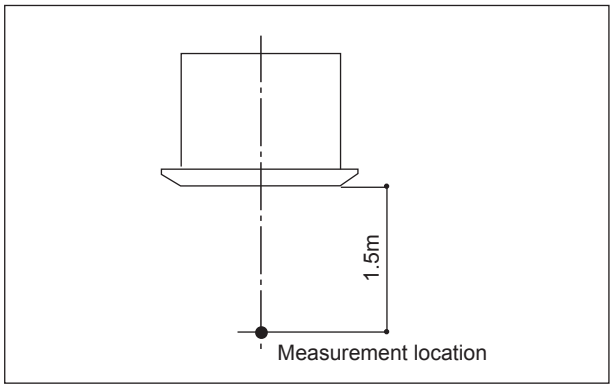
MODELS	SW2	MODELS	SW2
P15	ON OFF 123456	P32	ON OFF 123456
P20	ON OFF 123456	P40	ON OFF 123456
P25	ON OFF 123456	P50	ON OFF 123456

The black square (■) indicates a switch position.

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 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.

5-1. Sound levels

PLFY-P-VFM-E1



* Measured in anechoic room.

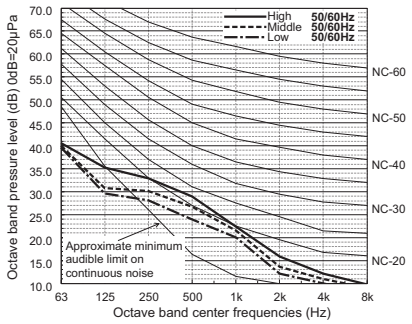
Sound level at anechoic room : Low-Mid-High

	Sound level dB (A)
PLFY-P15VFM-E1	26-28-30
PLFY-P20VFM-E1	26-29-31
PLFY-P25VFM-E1	26-30-33
PLFY-P32VFM-E1	26-30-34
PLFY-P40VFM-E1	28-33-39
PLFY-P50VFM-E1	33-39-43

5-2. NC curves

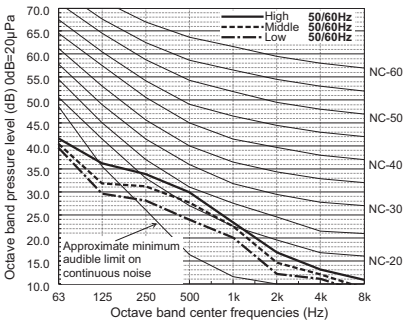
PLFY-P15VFM-E1

External Static Pressure: 0Pa [0.00in.WG]
Power Source: 220,230,240V, 50Hz/220V, 60Hz



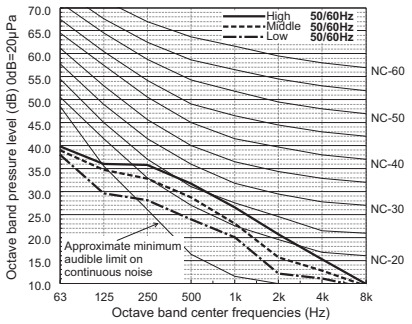
PLFY-P20VFM-E1

External Static Pressure: 0Pa [0.00in.WG]
Power Source: 220,230,240V, 50Hz/220V, 60Hz



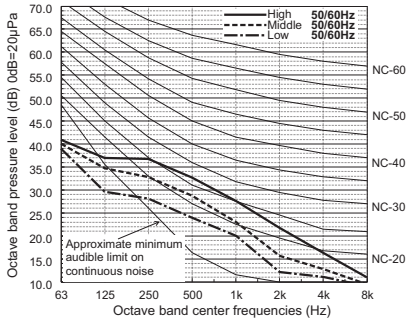
PLFY-P25VFM-E1

External Static Pressure: 0Pa [0.00in.WG]
Power Source: 220,230,240V, 50Hz/220V, 60Hz



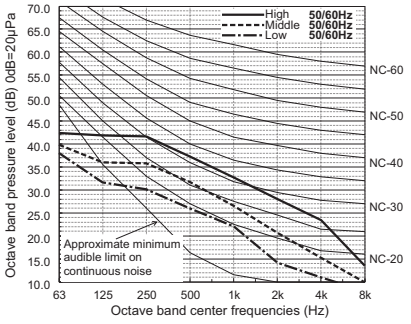
PLFY-P32VFM-E1

External Static Pressure: 0Pa [0.00in.WG]
Power Source: 220,230,240V, 50Hz/220V, 60Hz



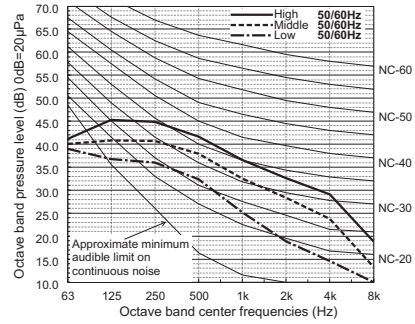
PLFY-P40VFM-E1

External Static Pressure: 0Pa [0.00in.WG]
Power Source: 220,230,240V, 50Hz/220V, 60Hz



PLFY-P50VFM-E1

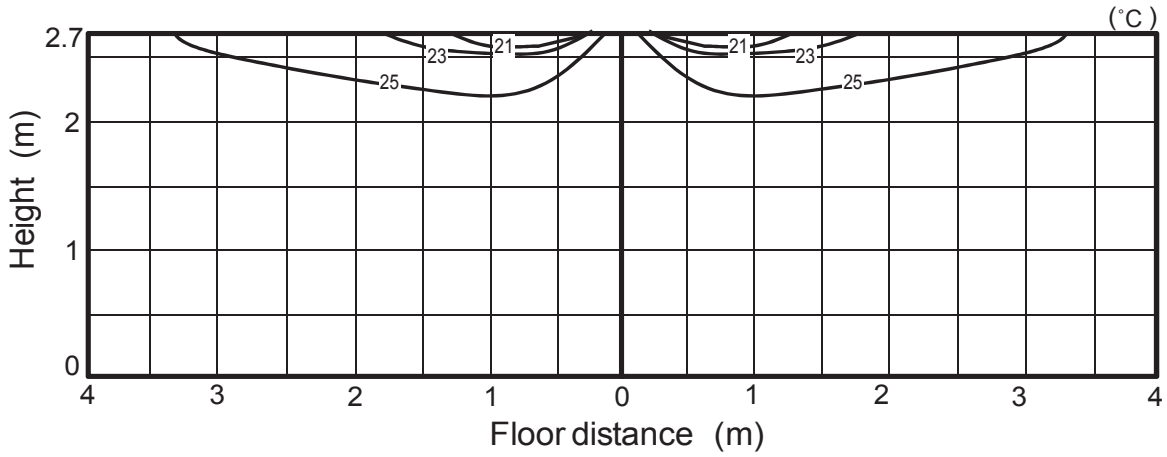
External Static Pressure: 0Pa [0.00in.WG]
Power Source: 220,230,240V, 50Hz/220V, 60Hz



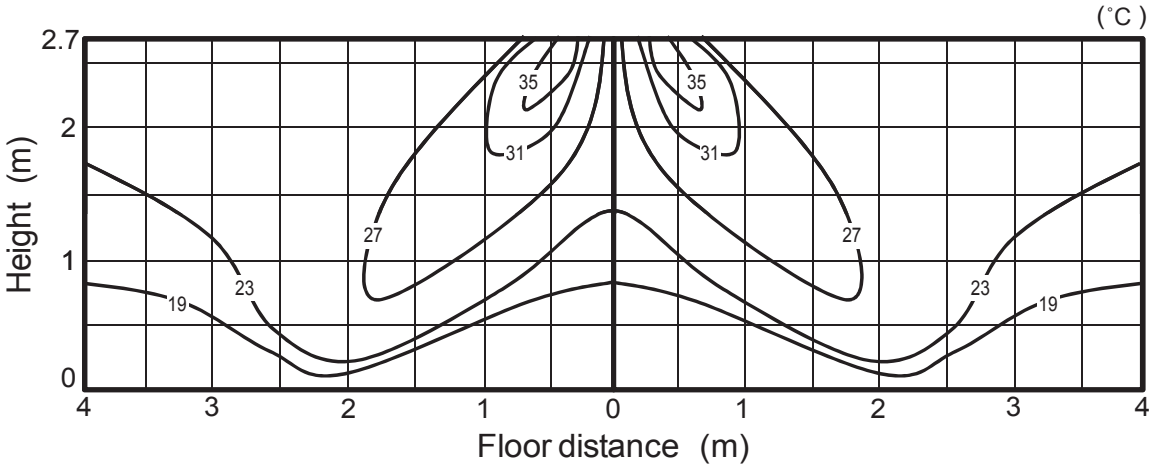
6-1. Temperature distributions

PLFY-P15-50VFM-E1

<Cooling mode>
Horizontal
Ceiling height : 2.7m



<Heating mode>
Downward
Ceiling height : 2.7m

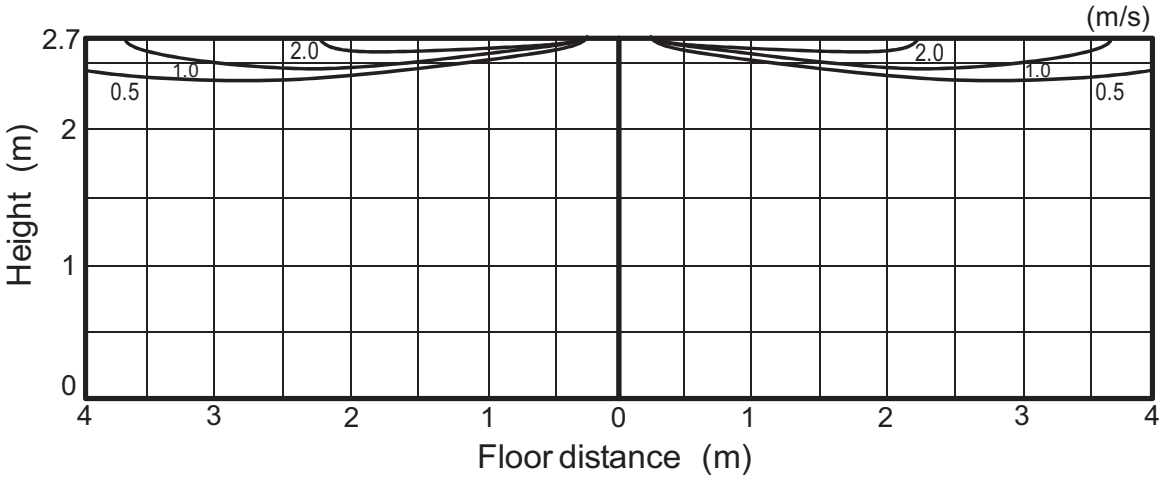


Note : These figures show typical temperature distributions in the conditions above. In the actual installation, they may differ from these figures under the influence of air temperature conditions, ceiling height, cooling/heating load,obstacles,etc.

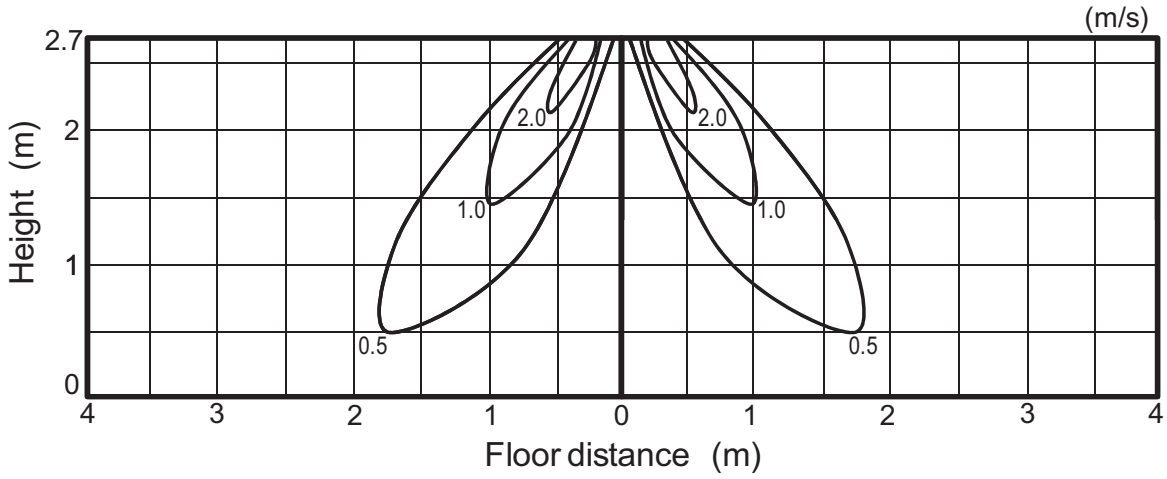
6-2. Airflow distributions

PLFY-P15-50VFM-E1

<Cooling mode>
Horizontal
Ceiling height : 2.7m



<Heating mode>
Downward
Ceiling height : 2.7m



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.

Symbols: MCA (Max.Circuit Amps =1.25xFLA), FLA (Full Load Amps)
IFM (Indoor Fan Motor), Output (Fan motor rated output)

PLFY-P-VFM-E1	Power supply			IFM	
	Volts/Hz	Range +-10%	MCA(A)	Output (kW)	FLA(A)
PLFY-P15VFM-E1	220-240V/50Hz 220V/60Hz	Max.: 264V Min.: 198V	0.24	0.008	0.19
PLFY-P20VFM-E1			0.29	0.011	0.23
PLFY-P25VFM-E1			0.29	0.015	0.23
PLFY-P32VFM-E1			0.35	0.020	0.28
PLFY-P40VFM-E1			0.35	0.020	0.28
PLFY-P50VFM-E1			0.35	0.020	0.28

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

	Description	Model
PLFY-P-VFM-E1	3D i-see Sensor corner panel	PAC-SF1ME-E
	Wireless signal receiver	PAR-SF9FA-E

8-2. 3D i-see Sensor corner panel

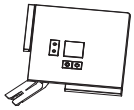
3D i-see Sensor provides comfortable space as it detects the floor temperature to prevent spotty temperature.
And that enables the unit to save energy.
Attention
Make sure that there are no gaps between the unit and the grille, and the grille and ceiling.
* It may cause dew dripping.

Item	3D i-see Sensor corner panel	Plastic fastener	
Quantity	1	2	
Shape			

Detailed installation information should be referred to its Installation Manual.

8-3. Wireless signal receiver

Wireless signal receiver PAR-SF9FA-E is necessary for using wireless remote controller
PAR-SF9FA-E is a corner panel with the signal receiver for wireless remote controller.

Item	Wireless signal receiver	
Quantity	1	
Shape		

Detailed installation information 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, R410A.

MITSUBISHI ELECTRIC CORPORATION

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