Changes for the Better

MITSUBISHI ELECTRIC

SPLIT-TYPE, HEAT PUMP AIR CONDITIONERS

July 2006
No. OC313
REVISED EDITION-B

TECHNICAL & SERVICE MANUAL

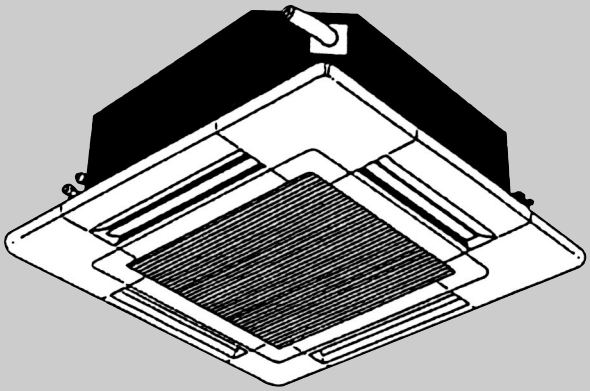
Series PLFY Ceiling Cassettes R410A / R407C / R22

Indoor unit [Model names]	[Service Ref.]
PLFY-P32VAM-E	PLFY-P32VAM-E.UK
PLFY-P40VAM-E	PLFY-P40VAM-E.UK
PLFY-P50VAM-E	PLFY-P50VAM-E.UK
PLFY-P63VAM-E	PLFY-P63VAM-E.UK
PLFY-P80VAM-E	PLFY-P80VAM-E.UK
PLFY-P100VAM-E	PLFY-P100VAM-E.UK
PLFY-P125VAM-E	PLFY-P125VAM-E.UK

Revision:
- RoHS PARTS LIST is added.
- Some descriptions have been modified.

- Please void OC313 REVISED EDITION-A.

Note:
- This manual does not cover outdoor units. When servicing them, please refer to the outdoor unit's service manual.
- RoHS compliant products have <G> mark on the spec name plate.
- For servicing of RoHS compliant products, refer to the RoHS Parts List.



INDOOR UNIT

CONTENTS

1 SAFETY PRECAUTION

CAUTIONS RELATED TO NEW REFRIGERANT

Cautions for units utilizing refrigerant R407C

Do not use the existing refrigerant piping.

The old refrigerant and lubricant in the existing piping contains a large amount of chlorine which may cause the lubricant deterioration of the new unit.

Use "low residual oil piping"

If there is a large amount of residual oil (hydraulic oil, etc.) inside the piping and joints, deterioration of the lubricant will result.

Store the piping to be used during installation indoors with keep both ends sealed until just before brazing.
(Store elbows and other joints in a plastic bag.)

If dust, dirt, or water enters the refrigerant cycle, deterioration of the oil and compressor trouble may result.

Use ESTR , ETHER or HAB as the lubricant to coat flares and flange connection parts.

If large amount of mineral oil enter, that can cause deterioration of refrigerant oil etc.

Use liquid refrigerant to charge the system.

If gas refrigerant is used to seal the system, the composition of the refrigerant in the cylinder will change and performance may drop.

Do not use a refrigerant other than R407C.

If another refrigerant (R22, etc.) is used, the chlorine in the refrigerant may cause the lubricant deterioration.

Use a vacuum pump with a reverse flow check valve.

The vacuum pump oil may flow back into the refrigerant cycle and cause the lubricant deterioration.

Ventilate the room if refrigerant leaks during operation. If refrigerant comes into contact with a flame, poisonous gases will be released.

[1] Cautions for service

·After recovering the all refrigerant in the unit, proceed to working.
·Do not release refrigerant in the air.
·After completing the repair service, recharge the cycle with the specified amount of liquid refrigerant.

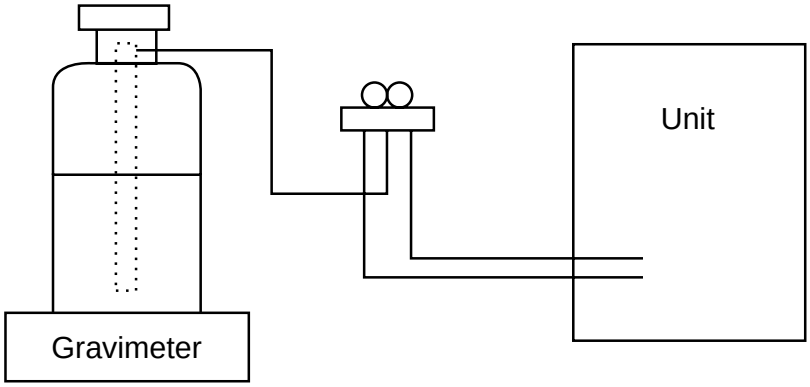
[2] Refrigerant recharging

(1) Refrigerant recharging process

①Direct charging from the cylinder.

·R407C cylinder are available on the market has a syphon pipe.

·Leave the syphon pipe cylinder standing and recharge it.
(By liquid refrigerant)



(2) Recharge in refrigerant leakage case

·After recovering the all refrigerant in the unit, proceed to working.

·Do not release the refrigerant in the air.

·After completing the repair service, recharge the cycle with the specified amount of liquid refrigerant.

[3] Service tools

Use the below service tools as exclusive tools for R407C refrigerant.

No.	Tool name	Specifications
①	Gauge manifold	·Only for R407C.
		·Use the existing fitting SPECIFICATIONS. (UNF7/16)
		·Use high-tension side pressure of 3.43MPa·G or over.
②	Charge hose	·Only for R407C.
		·Use pressure performance of 5.10MPa·G or over.
③	Electronic scale	———
④	Gas leak detector	·Use the detector for R134a or R407C.
⑤	Adapter for reverse flow check.	·Attach on vacuum pump.
⑥	Refrigerant charge base.	———
⑦	Refrigerant cylinder.	·For R407C ·Top of cylinder (Brown) ·Cylinder with syphon
⑧	Refrigerant recovery equipment.	———

Cautions for units utilizing refrigerant R410A

Do not use the existing refrigerant piping.

The old refrigerant and lubricant in the existing piping contains a large amount of chlorine which may cause the lubricant deterioration of the new unit.

Use “low residual oil piping”

If there is a large amount of residual oil (hydraulic oil, etc.) inside the piping and joints, deterioration of the lubricant will result.

Store the piping to be used during installation indoors and keep both ends of the piping sealed until just before brazing. (Leave elbow joints, etc. in their packaging.)

If dirt, dust or moisture enter into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

Use ester oil, ether oil or alkylbenzene oil (small amount) as the refrigerant oil applied to flares and flange connections.

If large amount of mineral oil enter, that can cause deterioration of refrigerant oil etc.

Charge refrigerant from liquid phase of gas cylinder.

If the refrigerant is charged from gas phase, composition change may occur in refrigerant and the efficiency will be lowered.

Do not use refrigerant other than R410A.

If other refrigerant (R22 etc.) is used, chlorine in refrigerant can cause deterioration of refrigerant oil etc.

Use a vacuum pump with a reverse flow check valve.

Vacuum pump oil may flow back into refrigerant cycle and that can cause deterioration of refrigerant oil etc.

Use the following tools specifically designed for use with R410A refrigerant.

The following tools are necessary to use R410A refrigerant.

Tools for R410A	
Gauge manifold	Flare tool
Charge hose	Size adjustment gauge
Gas leak detector	Vacuum pump adaptor
Torque wrench	Electronic refrigerant charging scale

Keep the tools with care.

If dirt, dust or moisture enter into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

Do not use a charging cylinder.

If a charging cylinder is used, the composition of refrigerant will change and the efficiency will be lowered.

Ventilate the room if refrigerant leaks during operation. If refrigerant comes into contact with a flame, poisonous gases will be released.

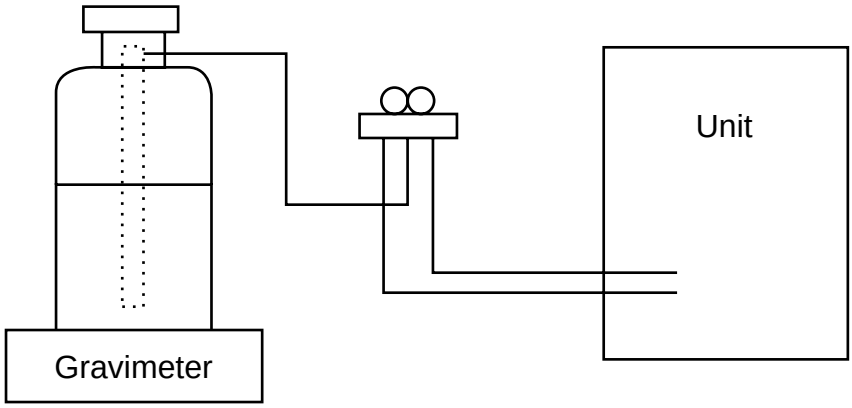
[1] Cautions for service

(1) Perform service after collecting the refrigerant left in unit completely.
(2) Do not release refrigerant in the air.
(3) After completing service, charge the cycle with specified amount of refrigerant.
(4) When performing service, install a filter drier simultaneously.
Be sure to use a filter drier for new refrigerant.

[2] Additional refrigerant charge

When charging directly from cylinder

· Check that cylinder for R410A on the market is syphon type.
· Charging should be performed with the cylinder of syphon stood vertically. (Refrigerant is charged from liquid phase.)



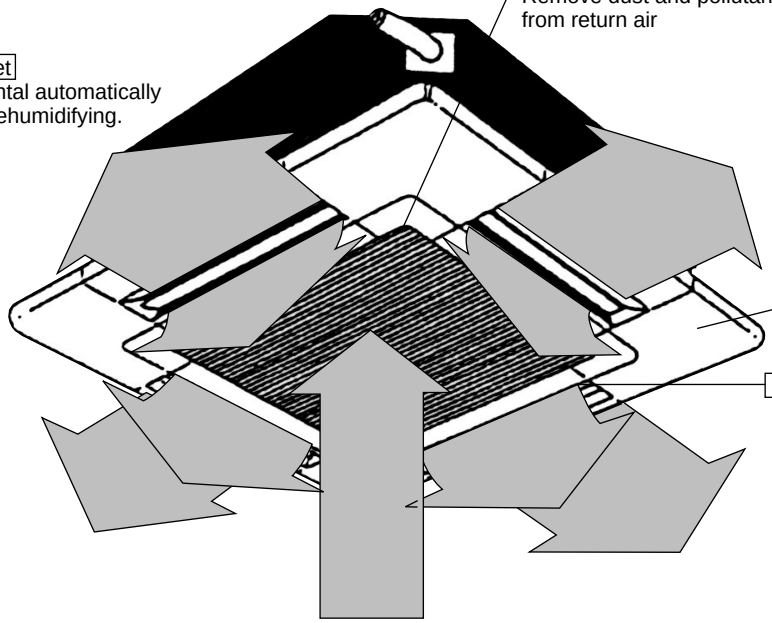
[3] Service tools

Use the below service tools as exclusive tools for R410A refrigerant.

No.		Specifications
①	Gauge manifold	·Only for R410A
		·Use the existing fitting specifications. (UNF1/2)
		·Use high-tension side pressure of 5.3MPa·G or over.
②	Charge hose	·Only for R410A
		·Use pressure performance of 5.09MPa·G or over.
③	Electronic scale	——
④	Gas leak detector	·Use the detector for R134a, R407C or R410A.
⑤	Adaptor for reverse flow check	·Attach on vacuum pump.
⑥	Refrigerant charge base	——
⑦	Refrigerant cylinder	·Only for R410A Top of cylinder (Pink) Cylinder with syphon
⑧	Refrigerant recovery equipment	——

2 PART NAMES AND FUNCTIONS

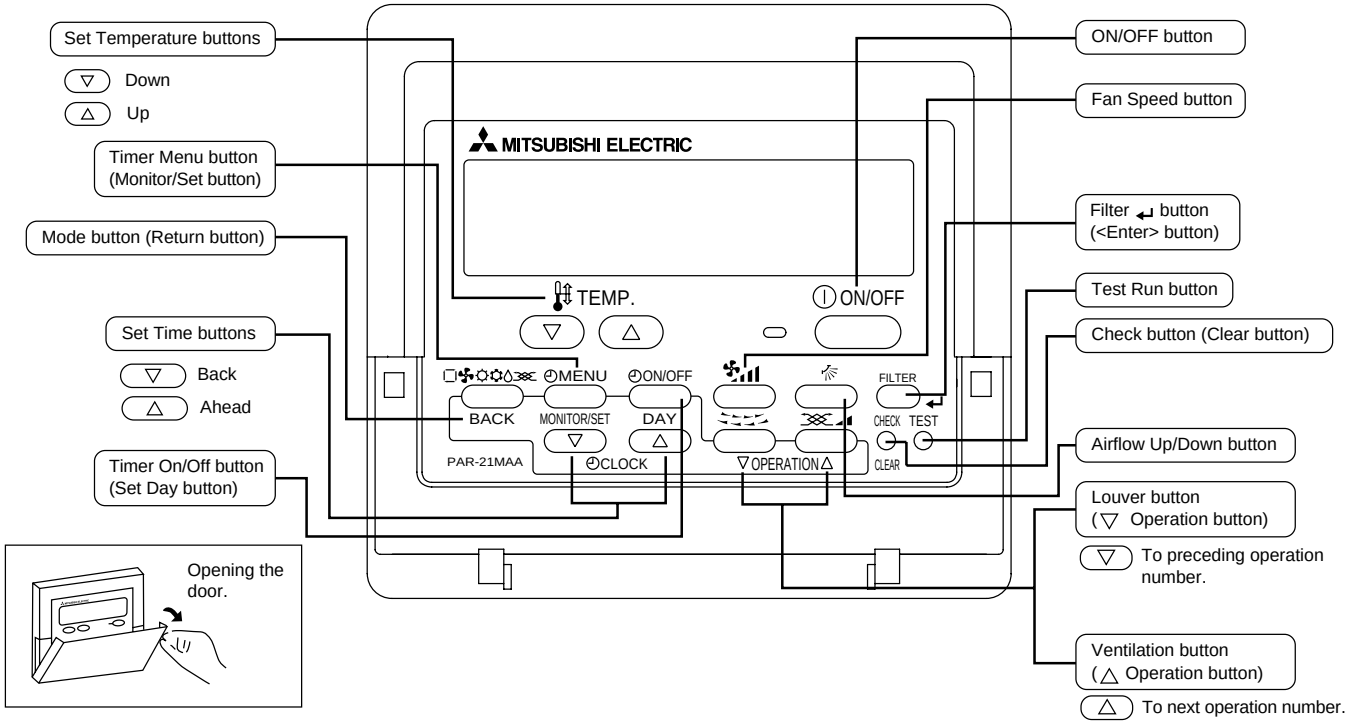
● Indoor Unit



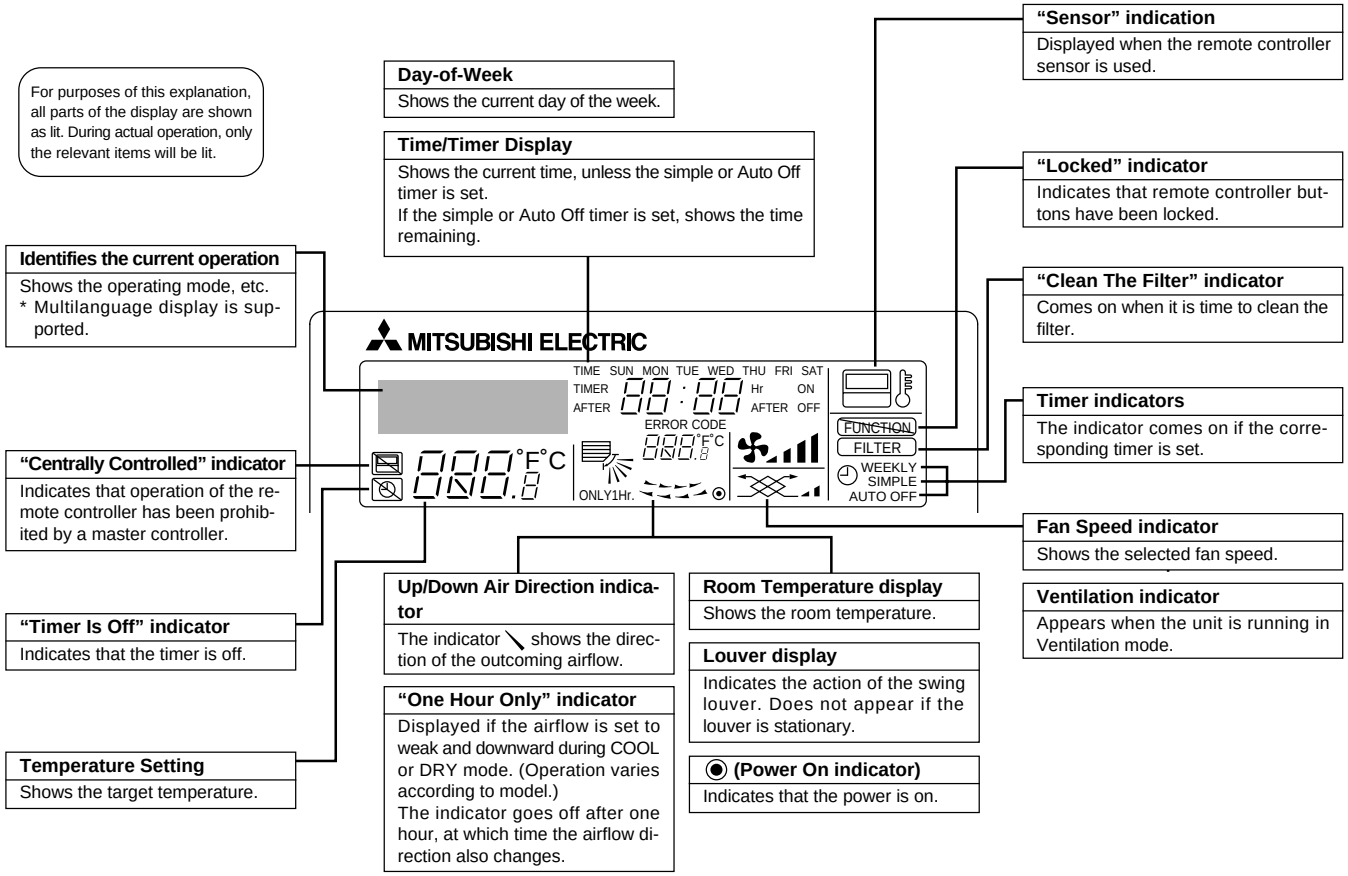
● Wired remote controller

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

● Operation buttons



● Display



Caution

- Only the Power on indicator lights when the unit is stopped and power supplied to the unit.
- If you press a button for a feature that is not installed at the indoor unit, the remote controller will display the "Not Available" message.
  If you are using the remote controller to drive multiple indoor units, this message will appear only if he feature is not present at the parent unit.
- When power is turned ON for the first time, it is normal that "PLEASE WAIT" is displayed on the room temperature indication (For max. 2minutes). Please wait until this "PLEASE WAIT" indication disappear then start the operation.

3 SPECIFICATIONS

3-1. SPECIFICATIONS

Item				PLFY-P32VAM-E.UK	PLFY-P40VAM-E.UK	PLFY-P50VAM-E.UK	PLFY-P63VAM-E.UK
Power			V･Hz	Single phase 220-230-240V 50Hz Single phase 220V 60Hz			
Cooling capacity			kW	3.6	4.5	5.6	7.1
Heating capacity			kW	4.0	5.0	6.3	8.0
Electric characteristic	Input	Cooling	kW	0.12	0.14		0.16
		Heating	kW	0.12	0.14		0.16
	Current	Cooling	A	0.59	0.68		0.78
		Heating	A	0.59	0.68		0.78
Exterior (munsell symbol)			—	Unit : Galvanized sheets with gray heat insulation Grills : ABS resin Munsell<0.70Y 8.59/0.97>			
Dimensions		Height	mm	258<30>			
		Width	mm	840<950>			
		Depth	mm	840<950>			
Heat exchanger			—	Cross fin			
Fan	Fan × No		—	Turbo fan × 1			
	Air flow ※3		m^3/min	14-13-12-11	16-14-13-12		18-16-15-14
	External static pressure		Pa	0			
	Fan motor output		kW	0.070			
Insulator			—	Polyethylene sheet			
Air filter			—	PP honey comb fabric			
Pipe dimensions		Gas side	ϕmm(in.)	ϕ12.7(1/2")		ϕ12.7(1/2") / ϕ15.88(5/8") (Compatible)	ϕ15.88(5/8")
		Liquid side	ϕmm(in.)	ϕ6.35(1/4")		ϕ6.35(1/4")/ϕ9.52(3/8") (Compatible)	ϕ9.52(3/8")
Unit drain pipe size			ϕmm	O.D.32 (PVC pipe VP-25 connectable)			
Noise level ※3			dB	31-29-28-27	32-30-28-27		33-31-29-28
Product weight			kg	22<5>			24<5>

Note 1. Rating conditions(JIS B 8616)
Cooling : Indoor : D.B. 27°C W.B. 19.0°C
outdoor : D.B. 35°C
Heating : Indoor : D.B. 20°C
outdoor : D.B. 7°C W.B. 6°C

Note 2. The number indicated in < > is just for the grille.

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

Item				PLFY-P80VAM-E.UK	PLFY-P100VAM-E.UK	PLFY-P125VAM-E.UK
Power			V･Hz	Single phase 220-230-240V 50Hz Single phase 220V 60Hz		
Cooling capacity			kW	9.0	11.2	14.0
Heating capacity			kW	10.0	12.5	16.0
Electric characteristic	Input	Cooling	kW	0.18	0.30	0.34
		Heating	kW	0.18	0.30	0.34
	Current	Cooling	A	0.86	1.43	1.64
		Heating	A	0.86	1.43	1.64
Exterior (munsell symbol)			—	Unit : Galvanized sheets with gray heat insulation Grills : ABS resin Munsell<0.70Y 8.59/0.97>		
Dimensions		Height	mm	258<30>	298<30>	
		Width	mm	840<950>		
		Depth	mm	840<950>		
Heat exchanger			—	Cross fin		
Fan	Fan × No		—	Turbo fan × 1		
	Air flow ※3		m^3/min	22-20-18-16	27-25-22-19	29-27-24-21
	External static pressure		Pa	0		
	Fan motor output		kW	0.070	0.120	
Insulator			—	Polyethylene sheet		
Air filter			—	PP honey comb fabric		
Pipe dimensions		Gas side	ϕmm(in.)	15.88(5/8")	ϕ15.88(5/8") / ϕ19.05(3/4") (Compatible)	
		Liquid side	ϕmm(in.)	9.52(3/8")		
Unit drain pipe size			ϕmm	O.D.32 (PVC pipe VP-25 connectable)		
Noise level ※3			dB	37-35-32-30	41-39-36-33	43-41-38-35
Product weight			kg	24<5>	32<5>	

Note 1. Rating conditions(JIS B 8616)
Cooling : Indoor : D.B. 27°C W.B. 19.0°C
outdoor : D.B. 35°C
Heating : Indoor : D.B. 20°C
outdoor : D.B. 7°C W.B. 6°C

Note 2. The number indicated in < > is just for the grille.

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

3-2. ELECTRICAL PARTS SPECIFICATIONS

Model / Parts name	Symbol	PLFY-P32VAM-E.UK	PLFY-P40VAM-E.UK	PLFY-P50VAM-E.UK	PLFY-P63VAM-E.UK
Room temperature thermistor	TH21	Resistance 0℃/15kΩ, 10℃/9.6kΩ, 20℃/6.3kΩ, 25℃/5.4kΩ, 30℃/4.3kΩ, 40℃/3.0kΩ			
Liquid pipe thermistor	TH22	Resistance 0℃/15kΩ, 10℃/9.6kΩ, 20℃/6.3kΩ, 25℃/5.4kΩ, 30℃/4.3kΩ, 40℃/3.0kΩ			
Gas pipe thermistor	TH23	Resistance 0℃/15kΩ, 10℃/9.6kΩ, 20℃/6.3kΩ, 25℃/5.4kΩ, 30℃/4.3kΩ, 40℃/3.0kΩ			
Fuse (Indoor controller board)	FUSE	250V 6.3A			
Fan motor (with inner-thermostat)	MF	6-pole OUTPUT 70W D17B6P70MS			
		Inner-thermostat OFF 130℃ ± 5℃ ON 90℃ ± 20℃			
Fan motor capacitor	C	3.0μF × 440V			
Vane motor	MV	MSBPC20M04 DC12V 300Ω/phase			
Drain-up mechanism	DP	PLD-12230ME-1 INPUT 12/10.8W 24 ℓ /Hr			
Drain sensor	DS	Thermistor resistance 0℃/6kΩ, 10℃/3.9kΩ, 20℃/2.6kΩ, 25℃/2.2kΩ, 30℃/1.8kΩ, 40℃/1.3kΩ			
Linear expansion valve	LEV	DC12V Stepping motor drive port dimension 5.2Ω (0~2000pulse) EDM-40YGME			
Electric heater (Condensation proof)	H2	240V 21.8W			
Power supply terminal block	TB2	(L, N, ⏚) 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.

Model / Parts name	Symbol	PLFY-P80VAM-E.UK	PLFY-P100VAM-E.UK	PLFY-P125VAM-E.UK
Room temperature thermistor	TH21	Resistance 0℃/15kΩ, 10℃/9.6kΩ, 20℃/6.3kΩ, 25℃/5.4kΩ, 30℃/4.3kΩ, 40℃/3.0kΩ		
Liquid pipe thermistor	TH22	Resistance 0℃/15kΩ, 10℃/9.6kΩ, 20℃/6.3kΩ, 25℃/5.4kΩ, 30℃/4.3kΩ, 40℃/3.0kΩ		
Gas pipe thermistor	TH23	Resistance 0℃/15kΩ, 10℃/9.6kΩ, 20℃/6.3kΩ, 25℃/5.4kΩ, 30℃/4.3kΩ, 40℃/3.0kΩ		
Fuse (Indoor controller board)	FUSE	250V 6.3A		
Fan motor (with inner-thermostat)	MF	6-pole OUTPUT 70W D17B6P70MS	6-pole OUTPUT 120W D176P120MS	
		Inner-thermostat OFF 130℃ ± 5℃ ON 90℃ ± 20℃		
Fan motor capacitor	C	3.5μF × 440V	7.0μF × 440V	
Vane motor	MV	MSBPC20M04 DC12V 300Ω/phase		
Drain-up mechanism	DP	PLD-12230ME-1 INPUT 12/10.8W 24 ℓ /Hr		
Drain sensor	DS	Thermistor resistance 0℃/6kΩ, 10℃/3.9kΩ, 20℃/2.6kΩ, 25℃/2.2kΩ, 30℃/1.8kΩ, 40℃/1.3kΩ		
Linear expansion valve	LEV	DC12V Stepping motor drive port dimension 5.2Ω (0~2000pulse) EDM-80YGME		
Electric heater (Condensation proof)	H2	240V 21.8W		
Power supply terminal block	TB2	(L, N, ⏚) 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.

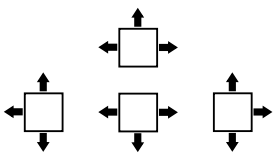
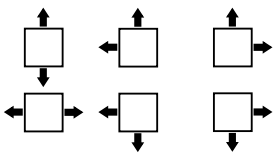
4 4-WAY AIR FLOW SYSTEM

4-1. PLACEMENT OF THE AIR OUTLETS

• For this grille, the blowout direction comes in 11 patterns.
Also, by setting the dip switches (SWA and SWB) on the circuit board to the appropriate settings, you can adjust the air flow and speed. Select the settings from Table according to the location in which you want to install the unit.

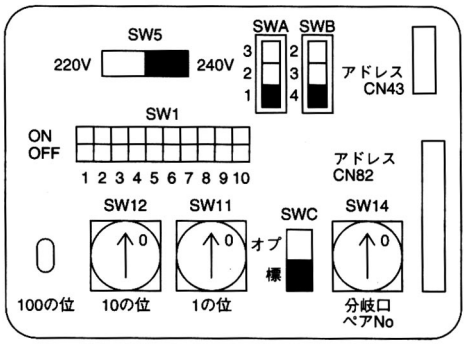
1) Decide on the pattern of the airflow direction.

<Table 1>

Blowout direction pattern	4-direction	3-direction	2-direction
	Pattern 1 Factory setting	Pattern 4 One air outlet fully closed	Pattern 6 Two air outlet fully closed
			

Note1.
For 3 and 2-directional, please use the air outlet shutter plate (option).

2) According to the number of air outlets and height of the ceiling to install the unit, be sure to set the up switches (SWA, SWB) on the circuit board to the appropriate setting.
• Correspondence of ceiling heights to numbers of air outlets.



PLFY-P32·P40·P50·P63·P80VAM-E

SWB \ SWA	①	②	③
	Standard	High ceiling ①	High ceiling ②
4 4 direction	2.7m	3.0m	3.5m
3 3 direction	3.0m	3.3m	3.5m
2 2 direction	3.3m	3.5m	—

PLFY-P100·P125VAM-E

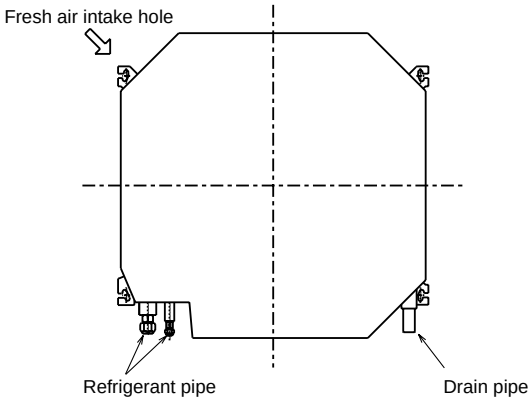
SWB \ SWA	①	②	③
	Standard	High ceiling ①	High ceiling ②
4 4 direction	3.2m	3.6m	4.2m
3 3 direction	3.6m	4.0m	4.2m
2 2 direction	4.0m	4.2m	—

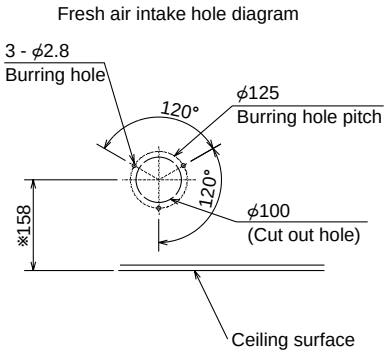
4-2. FRESH AIR INTAKE (Installation of site)

• At the time of installation, use the duct holes (cutout) located at the positions shown in following diagram, as and when required.

Note :

Be sure to add135mm to the dimensions in the diagram that are marked with a "※" if installing a multi function casement (Option)





4-3. INTERLOCKING OPERATION METHOD WITH DUCT FAN (Booster fan)

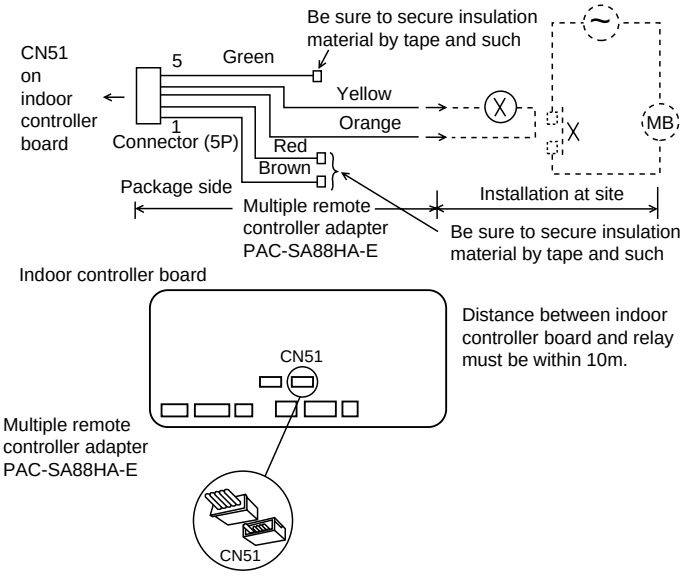
• Whenever the indoor unit is operating, the duct fun also operates.

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

(2)Drive the relay after connecting the 12V DC relay between the Yellow and Orange connector lines.

MB: Electromagnetic switch power relay for duct fan.

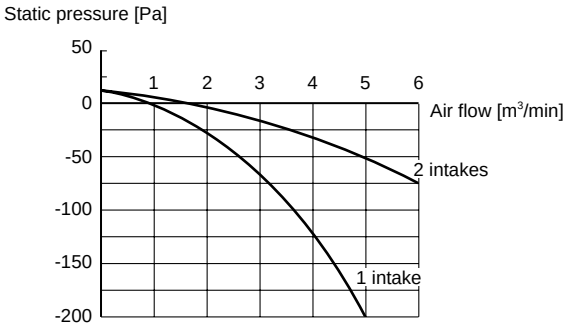
X: Auxiliary relay (For DC 12V, coil rating : 1.0W or below)



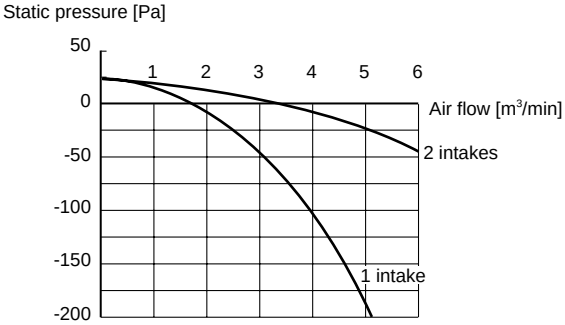
4-4. FRESH AIR INTAKE AMOUNT & STATIC PRESSURE CHARACTERISTICS

1 PLFY-P32 · P40 · P50 · P63 · P80VAM-E

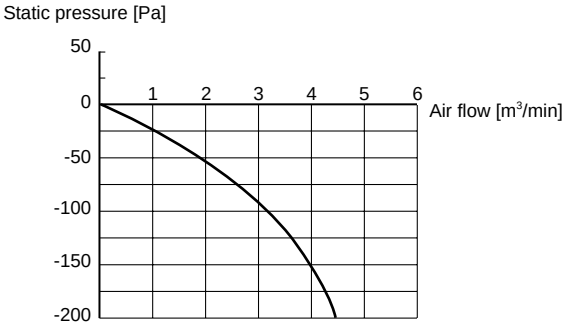
Multifunction casement + Standard filter



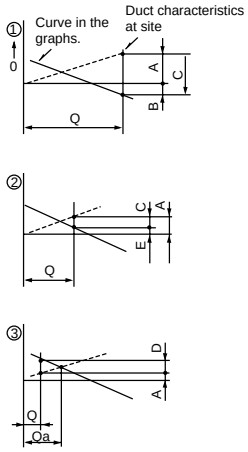
Multifunction casement + High efficiency filter



Taking air into the unit



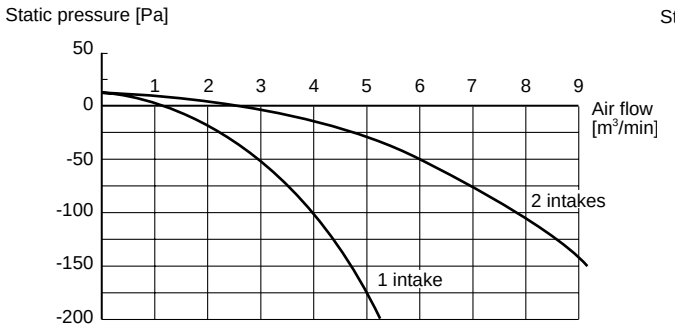
How to read curves



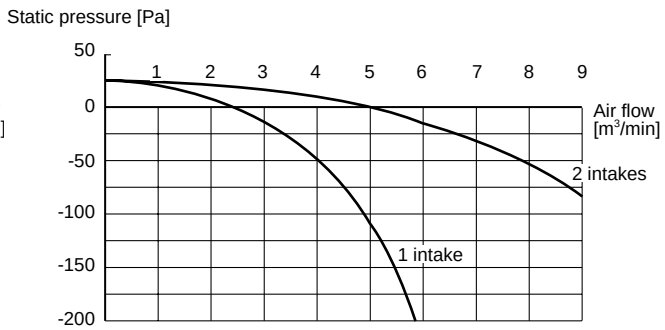
Q···Planned amount of fresh air intake <m³/min>
A···Static pressure loss of fresh air intake duct system with air flow amount Q <Pa>
B···Forced static pressure at air conditioner inlet with air flow amount Q <Pa>
C···Static pressure of booster fan with air flow amount Q <Pa>
D···Static pressure loss increase amount of fresh air intake dust system for air flow amount Q <Pa>
E···Static pressure of indoor unit with air flow amount Q <Pa>
Qa···Estimated amount of fresh air intake with out D <m³/min>

2 PLFY-P100 · P125VAM-E

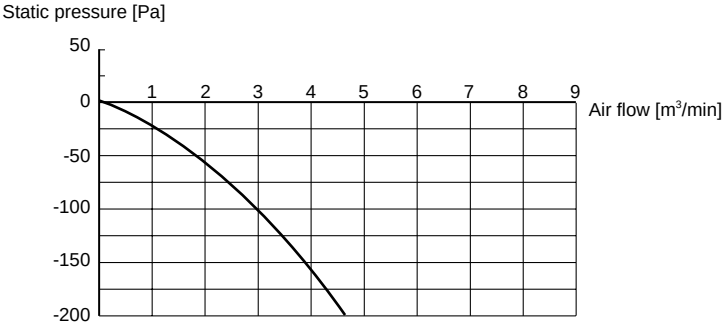
Multifunction casement + Standard filter



Multifunction casement + High efficiency filter



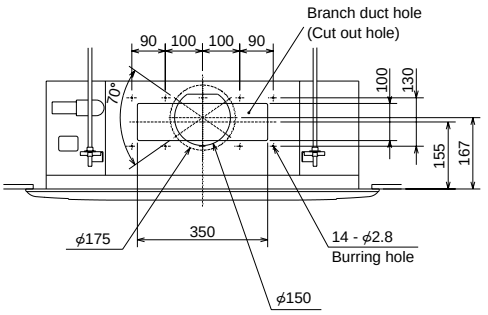
Taking air into the unit

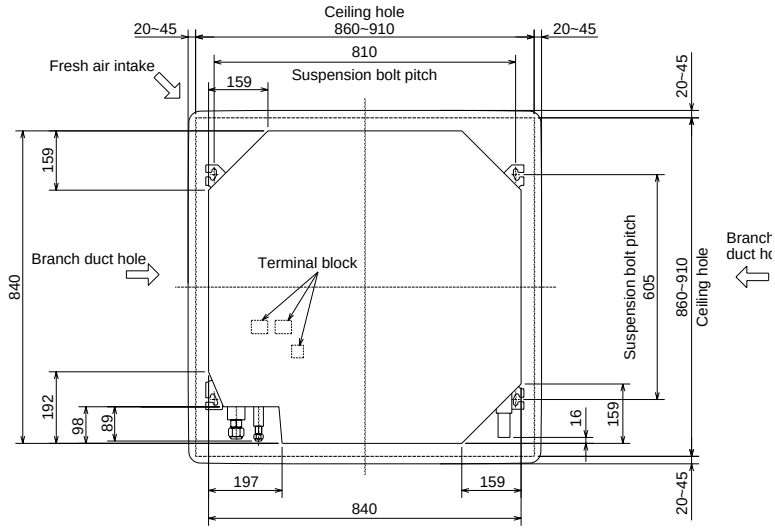


5 OUTLINES AND DIMENSIONS

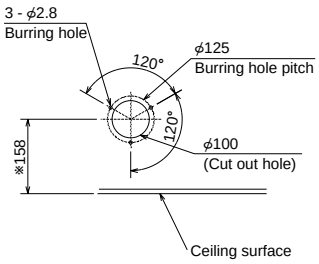
PLFY-P32VAM-E.UK PLFY-P80VAM-E.UK
PLFY-P40VAM-E.UK PLFY-P100VAM-E.UK
PLFY-P50VAM-E.UK PLFY-P125VAM-E.UK
PLFY-P63VAM-E.UK

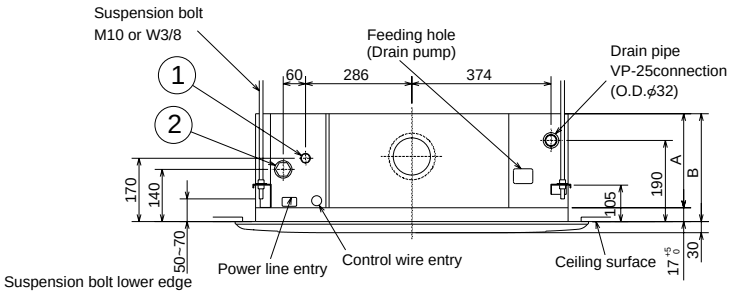
Unit : mm

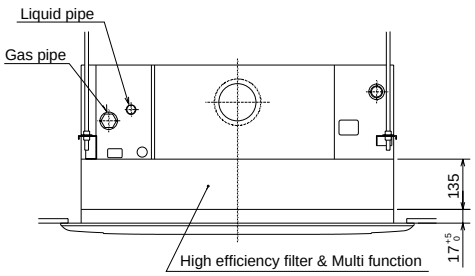


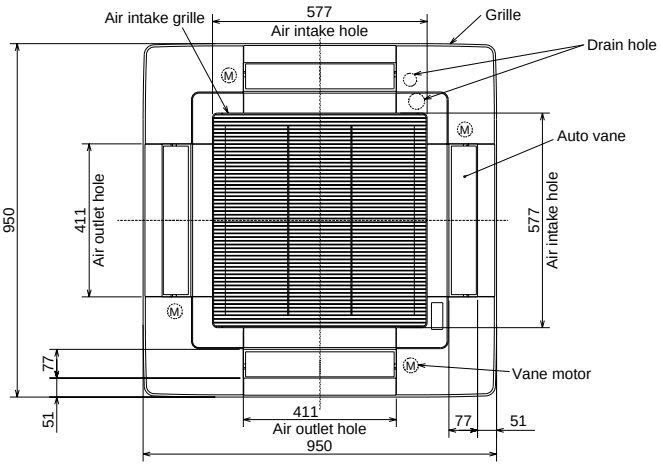


Detail drawing of fresh air intake









NOTES :
1. When servicing, electrical parts box may be disassembled.
   Make the wires loose enough when connecting heater power supply wire, remote controller wire, and indoor/outdoor unit connecting wire.
2. Detaching corner panel makes it possible to adjust the height of body with the grille attached.
3. Caution for attaching optional Muliti function casement and optional High efficiency filter :
   1) Space behind the ceiling shall be high enough as specified in the table below.

P32-P80	400
P100-P125	440

   2) Add extra 135mm to the dimensions of ※ in the figure.
   3) Mount both High efficiency filter and Multi function casement together.
4. When connecting branch duct, be sure to insulate the heat. (Otherwise, it causes dew to from or drop.)

Models	① Liquid Pipe	② Gas Pipe	A	B
PLFY-P32VAM-E.UK	ϕ6.35	ϕ12.7	241	258
PLFY-P40VAM-E.UK				
PLFY-P50VAM-E.UK	ϕ6.35 / ϕ9.52 (Compatible)	ϕ12.7 / ϕ15.88 (Compatible)		
PLFY-P63VAM-E.UK	ϕ9.52	ϕ15.88		
PLFY-P80VAM-E.UK				
PLFY-P100VAM-E.UK		ϕ15.88/ϕ19.05 (Compatible)	281	298
PLFY-P125VAM-E.UK				

6 WIRING DIAGRAM

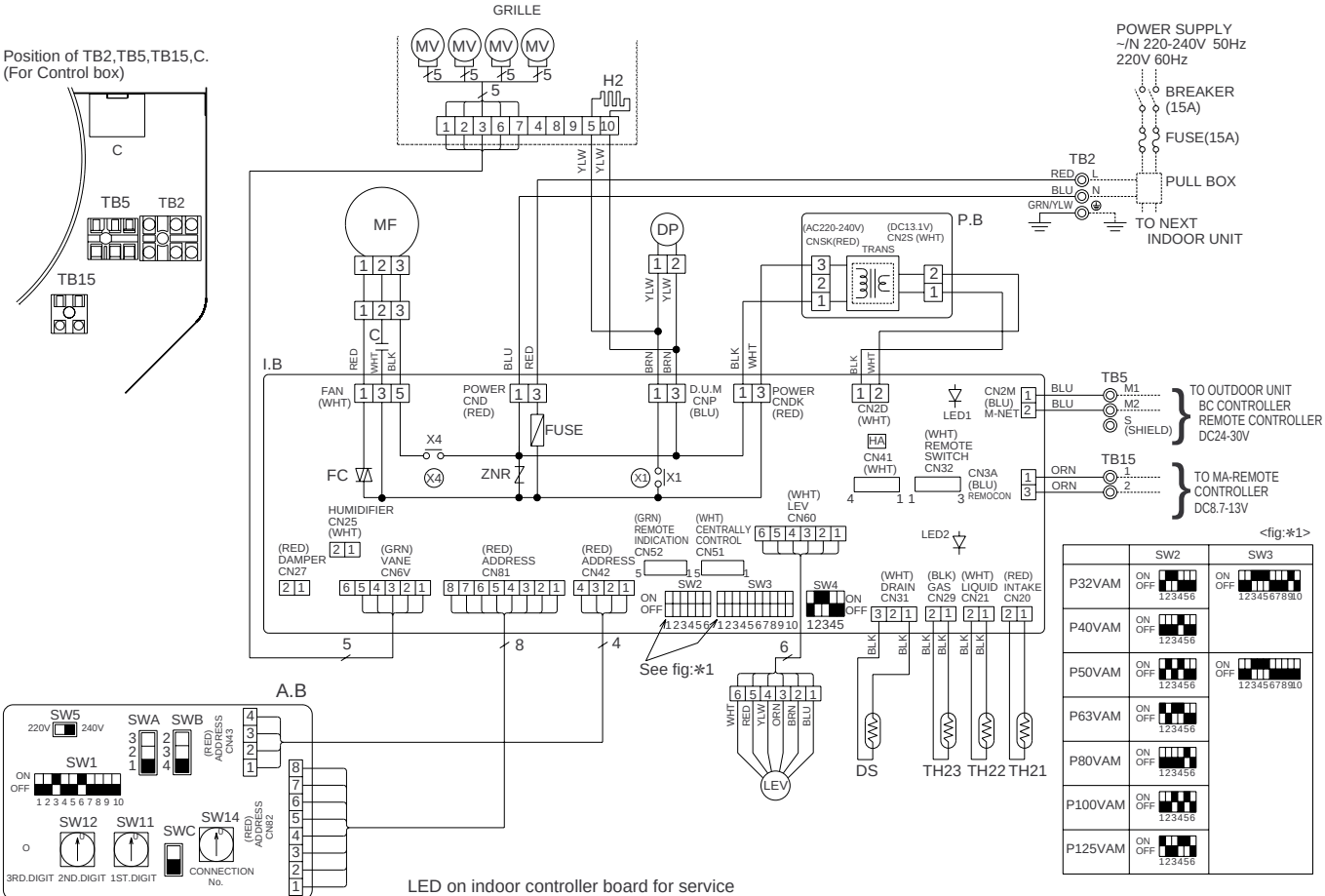
PLFY-P32VAM-E.UK PLFY-P80VAM-E.UK
PLFY-P40VAM-E.UK PLFY-P100VAM-E.UK
PLFY-P50VAM-E.UK PLFY-P125VAM-E.UK
PLFY-P63VAM-E.UK

※ The part name of symbol “I.B” is “SPCB”.

[LEGEND]

SYMBOL	NAME		SYMBOL	NAME	
P.B	INDOOR POWER BOARD		C	CAPACITOR(FAN MOTOR)	
※ I.B	INDOOR CONTROLLER BOARD		MF	FAN MOTOR(WITH INNER THERMO.)	
CN25	CONNECTOR	HUMIDIFIER	MV	VANE MOTOR	
CN27		DAMPER	DP	DRAIN PUMP	
CN32		REMOTE SWITCH	DS	DRAIN SENSOR	
CN41		HA TERMINAL-A	H2	DEW PREVENTION HEATER	
CN51		CENTRALLY CONTROL	TB2	TERMINAL BLOCK	POWER SUPPLY
CN52		REMOTE INDICATION	TB5		TRANSMISSION
SW2	SWITCH	CAPACITY CODE	TB15		MA-REMOTE CONTROLLER
SW3		FUNCTION SETTING	TH21	THERMISTOR	ROOM TEMP.DETECTION (0℃/15kΩ,25℃/5.4kΩ)
SW4		MODEL SELECTION	TH22		PIPE TEMP.DETECTION/LIQUID (0℃/15kΩ,25℃/5.4kΩ)
ZNR	VARISTOR		TH23		PIPE TEMP.DETECTION/GAS (0℃/15kΩ,25℃/5.4kΩ)
FUSE	FUSE(6.3A/250V)		LEV	LINEAR EXPANSION VALVE	
F.C	FAN PHASE CONTROL				
X1	AUX.RELAY	DRAIN WATER LIFTING-UP MACH.			
X4		FAN MOTOR			
LED1	POWER SUPPLY(I.B)				
LED2	POWER SUPPLY(I.B)				

SYMBOL	NAME	
A.B	CIRCUIT BOARD	
SW1	SWITCH	FUNCTION SETTING
SW5		VOLTAGE SELECTION
SW11		ADDRESS SETTING 1ST DIGIT
SW12		ADDRESS SETTING 2ND DIGIT
SW14		CONNECTION NO.
SWA		CEILING HEIGHT SELECTOR
SWB		DISCHARGE OUTLET NUMBER SELECTOR
SWC		OPTION SELECTOR



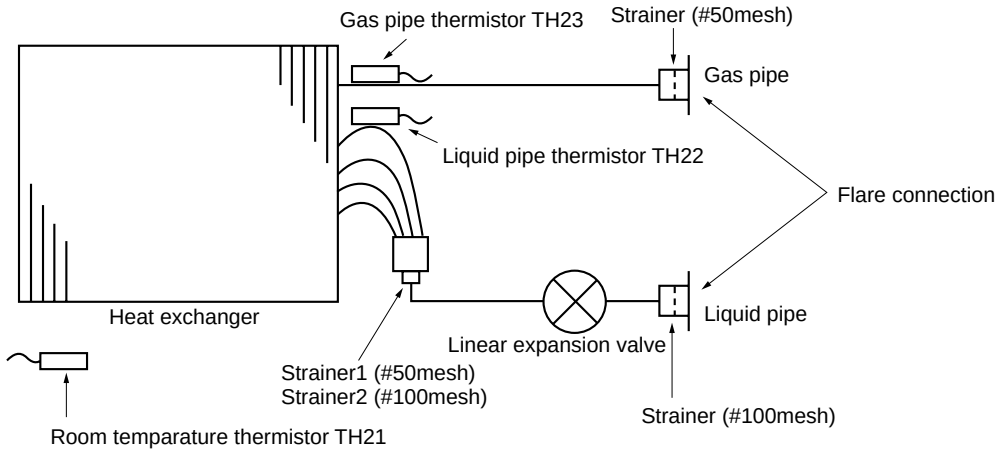
LED on indoor controller board for service

Mark	Meaning	Function
LED1	Main power supply	Main power supply(Indoor unit:220-240V) 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 above are, ◎:terminal block, □□□:connecter.
6.The setting of the SW2 dip switches differs in the capacity. For the detail, refer to the table below.
7.Please set the switch SW5 according to the power supply voltage.
Set SW5 to 240V side when the power supply is 230 and 240 volts.
When the power supply is 220 volts, set SW5 to 220V side.

7 REFRIGERANT SYSTEM DIAGRAM

PLFY-P32VAM-E.UK PLFY-P80VAM-E.UK
PLFY-P40VAM-E.UK PLFY-P100VAM-E.UK
PLFY-P50VAM-E.UK PLFY-P125VAM-E.UK
PLFY-P63VAM-E.UK

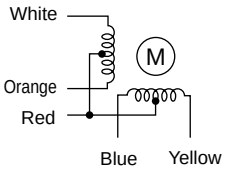
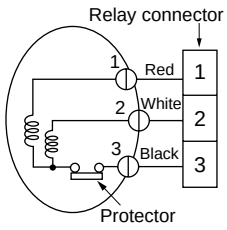
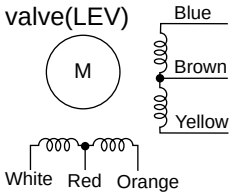
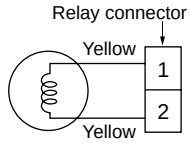
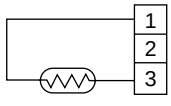


Capacity / Item	PLFY-P32, P40VAM-E	PLFY-P50VAM-E	PLFY-P63, P80VAM-E	PLFY-P100, P125VAM-E
Gas pipe	ϕ12.7(1/2")	ϕ12.7(1/2")/ϕ15.88(5/8")	ϕ15.88(5/8")	ϕ15.88(5/8")/ϕ19.05(3/4")
Liquid pipe	ϕ6.35(1/4")	ϕ6.35(1/4")/ϕ9.52(3/8")	ϕ9.52(3/8")	ϕ9.52(3/8")

8 TROUBLE SHOOTING

8-1. HOW TO CHECK THE PARTS

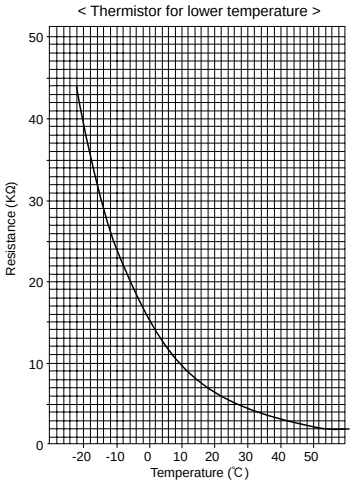
PLFY-P32VAM-E.UK PLFY-P80VAM-E.UK
PLFY-P40VAM-E.UK PLFY-P100VAM-E.UK
PLFY-P50VAM-E.UK PLFY-P125VAM-E.UK
PLFY-P63VAM-E.UK

<table>
<tr><th>Parts name</th><th>Check points</th></tr>
<tr><td>Room temperature thermistor (TH21)
Liquid pipe thermistor (TH22)
Gas pipe thermistor (TH23)</td><td>Disconnect the connector then measure the resistance using a tester.
(Surrounding temperature 10℃~30℃)
<table><tr><th>Normal</th><th>Abnormal</th></tr><tr><td>4.3kΩ~9.6kΩ</td><td>Open or short</td></tr></table>Refer to the next page for the details.</td></tr>
<tr><td>Vane motor(MV)
 
</td><td>Measure the resistance between the terminals using a tester.
(Surrounding temperature 20℃~30℃)
<table><tr><th>Connector</th><th>Normal</th><th>Abnormal</th></tr><tr><td>Red — Yellow</td><td rowspan="4">300Ω</td><td rowspan="4">Open or short</td></tr><tr><td>Red — Blue</td></tr><tr><td>Red — Orange</td></tr><tr><td>Red — White</td></tr></table></td></tr>
<tr><td>Fan motor(MF)
 
</td><td>Measure the resistance between the terminals using a tester.
<table><tr><th rowspan="3">Motor terminal
or
Relay connector</th><th colspan="2">Normal</th><th rowspan="3">Abnormal</th></tr><tr><th colspan="2">PLFY-P·VAM-E.UK</th></tr><tr><th>32, 40, 50, 63, 80</th><th>100, 125</th></tr><tr><td>Red-Black</td><td>87.2Ω</td><td>28.7Ω</td><td rowspan="2">Open or short</td></tr><tr><td>White-Black</td><td>104.1Ω</td><td>41.6Ω</td></tr></table></td></tr>
<tr><td>Linear expansion valve(LEV)
 
</td><td>Disconnect the connector then measure the resistance valve using a tester.
<table><tr><th colspan="4">Normal</th><th>Abnormal</th></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>Refer to the next page for the details.</td></tr>
<tr><td>Drain pump(DP)
 
</td><td>Measure the resistance between the terminals using a tester.
(Surrounding temperature 20℃~30℃)
<table><tr><th>Normal</th><th>Abnormal</th></tr><tr><td>290Ω</td><td>Open or short</td></tr></table></td></tr>
<tr><td>Drain sensor(DS)
 
</td><td>Measure the resistance after 3 minutes have passed since the power supply was intercepted.
(Surrounding temperature 0℃~60℃)
<table><tr><th>Normal</th><th>Abnormal</th></tr><tr><td>0.6kΩ~6.0kΩ</td><td>Open or short</td></tr></table>Refer to the next page for the details.</td></tr>
</table>

<Thermistor characteristic graph>

Thermistor for lower temperature

Room temperature thermistor(TH21)
Liquid pipe temperature thermistor(TH22)
Gas pipe temperature thermistor(TH23)

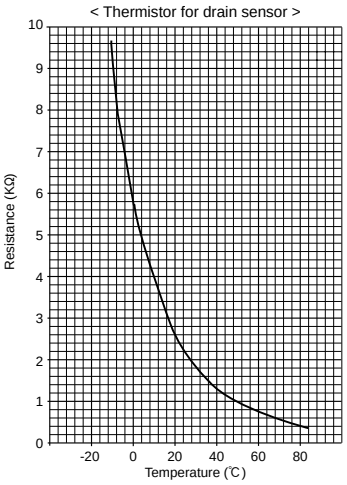


Thermistor R_0=15kΩ ± 3%
Fixed number of B=3480K ± 2%

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

0℃	15kΩ
10℃	9.6kΩ
20℃	6.3kΩ
25℃	5.4kΩ
30℃	4.3kΩ
40℃	3.0kΩ

Thermistor for drain sensor



Thermistor R_0=6.0kΩ ±5%
Fixed number of B=3390K ±2%

$$Rt=6\exp\{3390(\frac{1}{273+t}-\frac{1}{273})\}$$

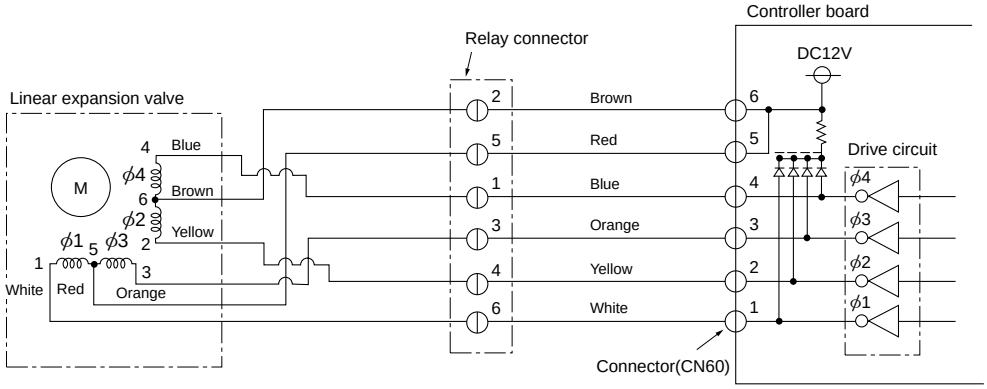
0℃	6.0kΩ
10℃	3.9kΩ
20℃	2.6kΩ
25℃	2.2kΩ
30℃	1.8kΩ
40℃	1.3kΩ
60℃	0.6kΩ

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>

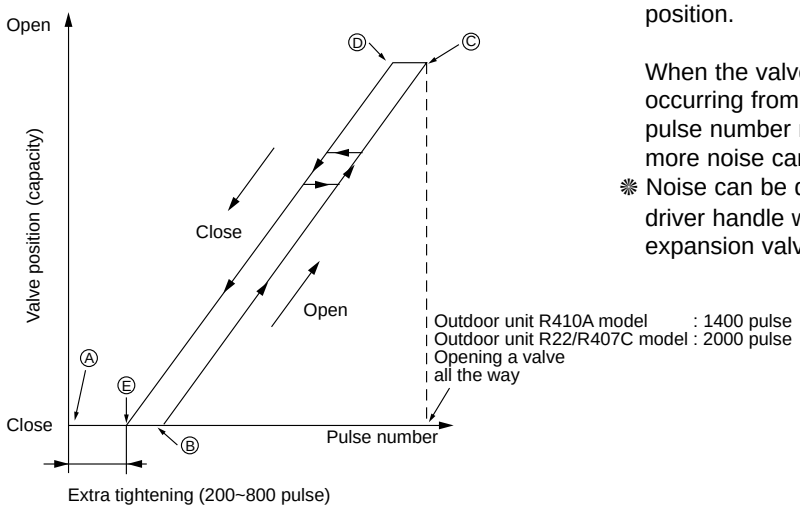
Output (Phase)	Output			
	1	2	3	4
ϕ1	ON	OFF	OFF	ON
ϕ2	ON	ON	OFF	OFF
ϕ3	OFF	ON	ON	OFF
ϕ4	OFF	OFF	ON	ON

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

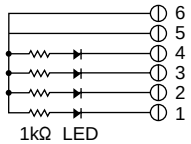
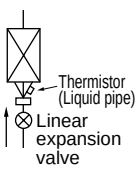


❋ When the switch is turned on, 2200 pulse closing valve signal will be send till it goes to point Ⓐ in order to define the valve position.

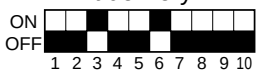
When the valve moves smoothly, there is no noise or vibration occurring from the linear expansion valves : however, when the pulse number moves from Ⓔ to Ⓐ or when the valve is locked, more noise can be heard than in a normal situation.

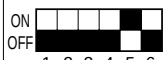
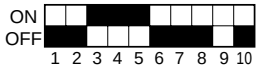
❋ Noise can be detected by placing the ear against the screw driver handle while putting the screw driver tip to the linear expansion valve.

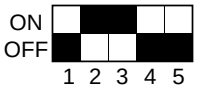
③ Trouble shooting

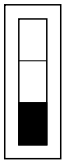
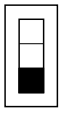
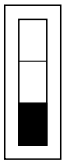
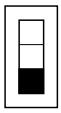
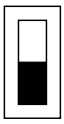
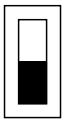
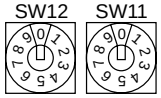
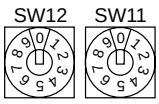
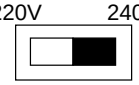
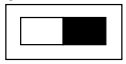
Symptom	Check points	Countermeasures
Operation circuit failure of the micro processor.	Disconnect the connector on the controller board, then connect LED for checking.  1kΩ LED When power is turned on, pulse signals will output for 10 seconds. There must be some defects in the operation circuit if the LED does not light while the signals are output or keeps lighting even after the signals stop.	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. 	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. FUNCTION OF DIP SWITCH

<table>
<tr><th rowspan="2">Switch</th><th rowspan="2">Pole</th><th rowspan="2">Function</th><th colspan="2">Operation by switch</th><th rowspan="2">Effective timing</th><th rowspan="2">Remarks</th></tr>
<tr><th>ON</th><th>OFF</th></tr>
<tr><td rowspan="10">SW1
Function setting</td><td>1</td><td>Thermistor <Room temperature detection> position</td><td>Built-in remote controller</td><td>Indoor unit</td><td rowspan="10">Under suspension</td><td rowspan="10">Address board
<At delivery>
 

Note :
※1 Fan operation at Heating mode.
※2 Heater thermostat ON is operating.
※3 SW 1-7=OFF, SW 1-8=ON → Setting air flow.
SW 1-7=ON, SW 1-8=ON → Indoor fan stop.</td></tr>
<tr><td>2</td><td>Filter clogging detection</td><td>Provided</td><td>Not provided</td></tr>
<tr><td>3</td><td>Filter cleaning</td><td>2,500hr</td><td>100hr</td></tr>
<tr><td>4</td><td>Fresh air intake</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>5</td><td>Switching remote controller display</td><td>Indicating if the thermostat is ON</td><td>Indicating fan operation ON/OFF</td></tr>
<tr><td>6</td><td>Humidifier control</td><td>Always operated while the heat in ON ※1</td><td>Operated depends on the condition ※2</td></tr>
<tr><td>7</td><td rowspan="2">Air flow set in case of Heat thermostat OFF</td><td>Low ※3</td><td>Extra low ※3</td></tr>
<tr><td>8</td><td>Setting air flow ※3</td><td>Depends on SW1-7</td></tr>
<tr><td>9</td><td>Auto restart function</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>10</td><td>Power ON/OFF by breaker</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>SW2
Capacity code setting</td><td>1~6</td><td colspan="3"><table><tr><th>Capacity</th><th>SW 2</th><th>Capacity</th><th>SW 2</th><th>Capacity</th><th>SW 2</th></tr><tr><td>P32</td><td> 
</td><td>P63</td><td> 
</td><td>P125</td><td> 
</td></tr><tr><td>P40</td><td> 
</td><td>P80</td><td> 
</td><td></td><td></td></tr><tr><td>P50</td><td> 
</td><td>P100</td><td> 
</td><td></td><td></td></tr></table></td><td>Before power supply ON</td><td>Indoor controller board
Set while the unit is off.
<At delivery>
Set for each capacity.</td></tr>
<tr><td rowspan="10">SW3
Function setting</td><td>1</td><td>Heat pump / Cooling only</td><td>Cooling only</td><td>Heat pump</td><td rowspan="10">Under suspension</td><td rowspan="10">Indoor controller board
Set while the unit is off.
<At delivery>
 

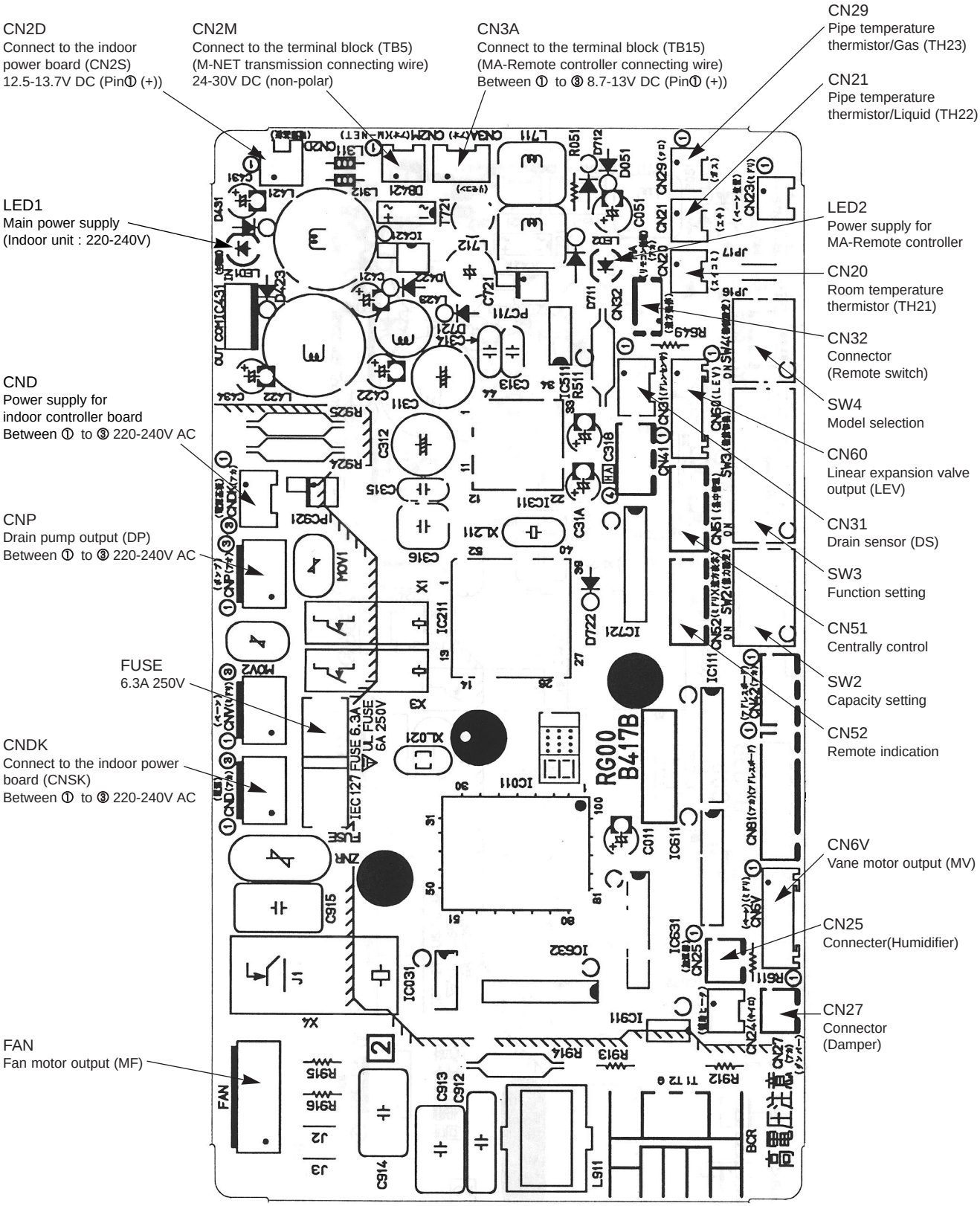
P32, P40 : SW3-9 = ON
SW3-10 = OFF
P50~P125 : SW3-9 = OFF
SW3-10 = OFF
Note :
※4 At cooling mode, each angle can be used only 1 hour.
※5 The numerical valve in the parentheses shows the case which the R22 outdoor unit is connected.
※6 SW3-2 setting
Only for PLFY-P･VAM, SW is used to change whether the humidifier functions or not.
(Fixed the louver function less.)</td></tr>
<tr><td>2</td><td>Louver / humidifier ※6</td><td>Available</td><td>Not available</td></tr>
<tr><td>3</td><td>Vane</td><td>Available</td><td>Not available</td></tr>
<tr><td>4</td><td>Vane swing function</td><td>Available</td><td>Not available</td></tr>
<tr><td>5</td><td>Vane horizontal angle</td><td>Second setting</td><td>First setting</td></tr>
<tr><td>6</td><td>Vane cooling limit angle setting ※4</td><td>Horizontal angle</td><td>Down B, C</td></tr>
<tr><td>7</td><td>Changing the opening of linear expansion valve when the thermostat is OFF</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>8</td><td>Heat 4degrees up</td><td>Not effective</td><td>Effective</td></tr>
<tr><td>9</td><td>Superheat setting temperature ※5</td><td>9(5)degrees</td><td>6(2)degrees</td></tr>
<tr><td>10</td><td>Sub cool setting temperature</td><td>15degrees</td><td>10degrees</td></tr>
<tr><td>SW4
Model Selection (Setting for PLFY series)</td><td>1~5</td><td colspan="3">In case replacing the indoor controller board, make sure to set the switch to the factory-preset status, which is shown below.
 
</td><td>Before power supply ON</td><td>Indoor controller board</td></tr>
</table>

<table>
<tr><th>Switch</th><th>Pole</th><th>Operation by switch</th><th>Effective timing</th><th>Remarks</th></tr>
<tr><td>SWA
Ceiling height selector</td><td>1~3</td><td>(High ceiling②) 3
(High ceiling①) 2
(Standard) 1
 
✻ Ceiling height can be changed depends on SWB setting.
PLFY-P32,P40,P50,P63,P80VAM-E
<table><tr><th colspan="2">SWB \ SWA</th><th>1
Standard</th><th>2
High ceiling①</th><th>3
High ceiling②</th></tr><tr><td>4</td><td>4 direction</td><td>2.7m</td><td>3.0m</td><td>3.5m</td></tr><tr><td>3</td><td>3 direction</td><td>3.0m</td><td>3.3m</td><td>3.5m</td></tr><tr><td>2</td><td>2 direction</td><td>3.3m</td><td>3.5m</td><td>—</td></tr></table></td><td rowspan="3">Under operation or suspension</td><td>Address board
<At delivery>
3
2
1
  </td></tr>
<tr><td>SWB
Discharge outlet number selector</td><td>3</td><td>(2 direction) 2
(3 direction) 3
(4 direction) 4
 
PLFY-P100, P125VAM-E
<table><tr><th colspan="2">SWB \ SWA</th><th>1
Standard</th><th>2
High ceiling①</th><th>3
High ceiling②</th></tr><tr><td>4</td><td>4 direction</td><td>3.2m</td><td>3.6m</td><td>4.2m</td></tr><tr><td>3</td><td>3 direction</td><td>3.6m</td><td>4.0m</td><td>4.2m</td></tr><tr><td>2</td><td>2 direction</td><td>4.0m</td><td>4.2m</td><td>—</td></tr></table></td><td>Address board
<At delivery>
2
3
4
  </td></tr>
<tr><td>SWC
Option selector</td><td>2</td><td>Option
Standard
 
When attach the optional high performance filter elements (multi function casement) to the unit, be sure to attach it to the option side in order to prevent the airflow reducing.</td><td>Address board
<At delivery>
Option
Standard
  </td></tr>
<tr><td>SW11
1st digit address setting
SW12
2nd digit address setting</td><td>Rotary switch</td><td>SW12 SW11
 
10 1
Address setting should be done when M-NET Remote controller is being used.</td><td rowspan="3">Before power supply ON</td><td>Address board
Address can be set while the unit is stopped.
<At delivery>
SW12 SW11
  </td></tr>
<tr><td>SW14
Connection No. setting</td><td>Rotary switch</td><td>SW14
 
This is the switch to be used when the indoor unit is operated with R2 series outdoor unit as a set.</td><td>Address board
<At delivery>
SW14
  </td></tr>
<tr><td>SW5
Voltage Selection</td><td>2</td><td>220V 240V
 
If the unit is used at the 230V or 240V area, set the voltage to 240V.
If the unit is used at the 220V, set the voltage to 220V.</td><td>Address board
<At delivery>
220V 240V
  </td></tr>
</table>

8-3. TEST POINT DIAGRAM

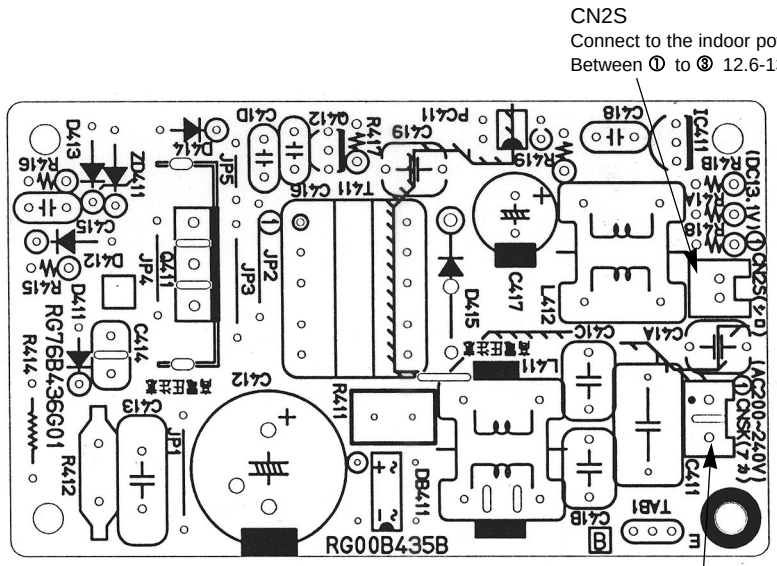
8-3-1. Indoor controller board

PLFY-P32VAM-E.UK PLFY-P80VAM-E.UK
PLFY-P40VAM-E.UK PLFY-P100VAM-E.UK
PLFY-P50VAM-E.UK PLFY-P125VAM-E.UK
PLFY-P63VAM-E.UK



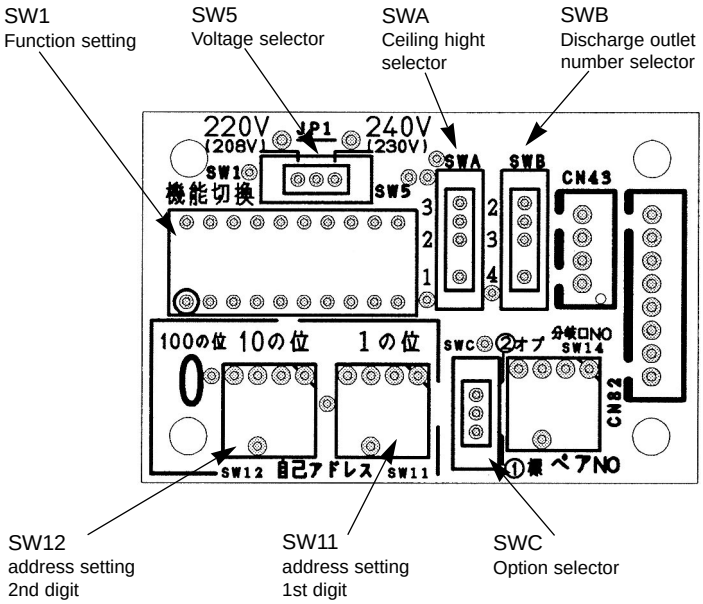
8-3-2. Indoor power board

PLFY-P32VAM-E.UK **PLFY-P80VAM-E.UK**
PLFY-P40VAM-E.UK **PLFY-P100VAM-E.UK**
PLFY-P50VAM-E.UK **PLFY-P125VAM-E.UK**
PLFY-P63VAM-E.UK



8-3-3. Circuit board

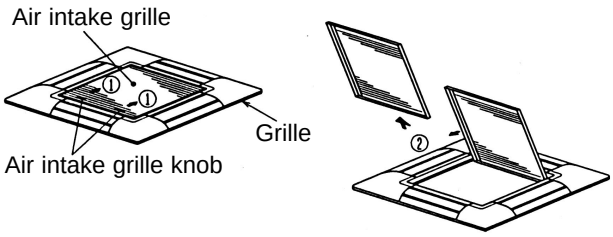
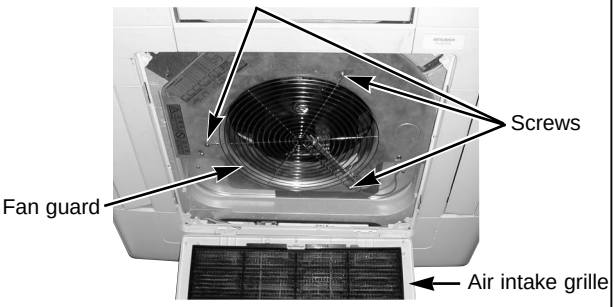
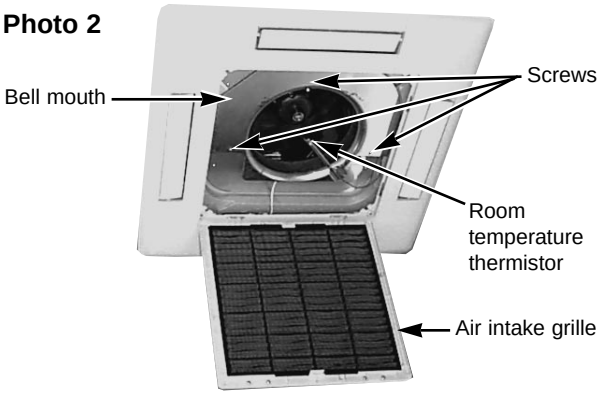
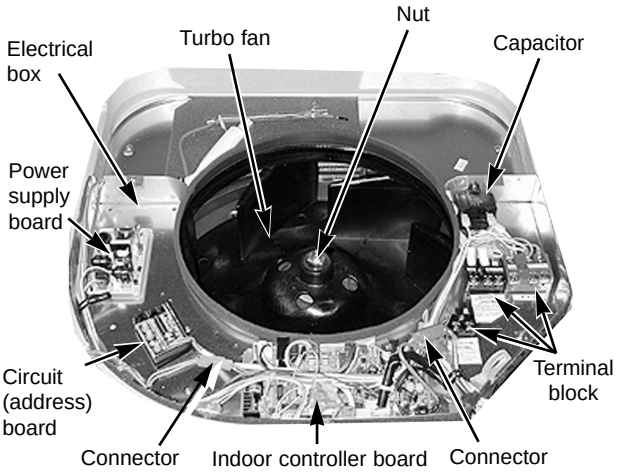
PLFY-P32VAM-E.UK **PLFY-P80VAM-E.UK**
PLFY-P40VAM-E.UK **PLFY-P100VAM-E.UK**
PLFY-P50VAM-E.UK **PLFY-P125VAM-E.UK**
PLFY-P63VAM-E.UK

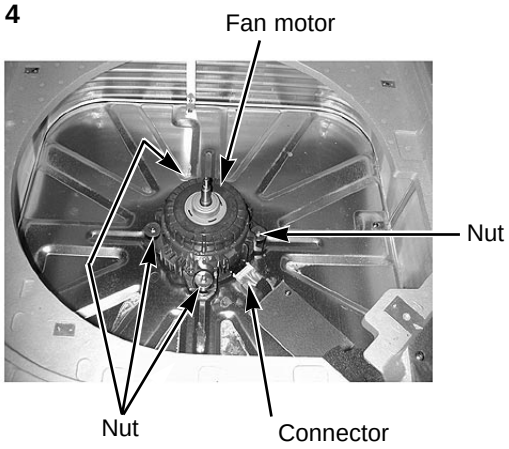
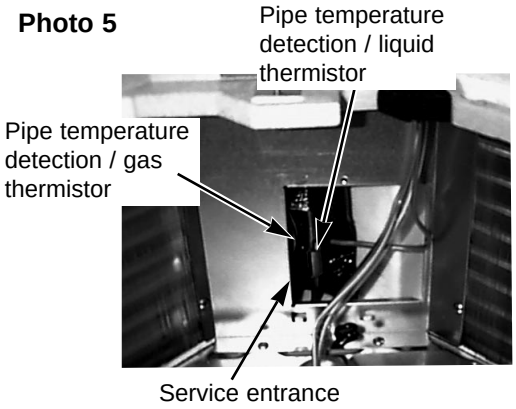
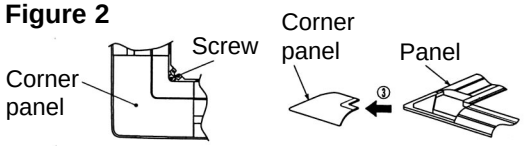
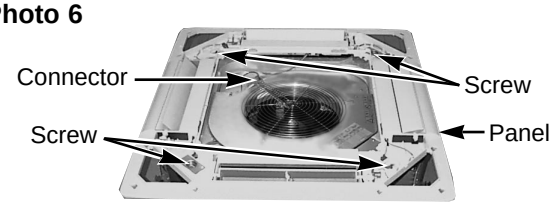
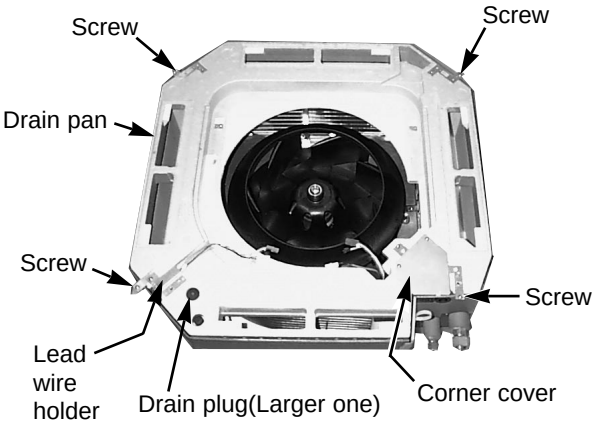


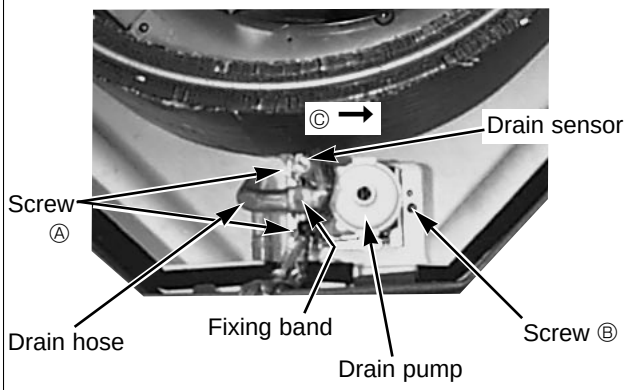
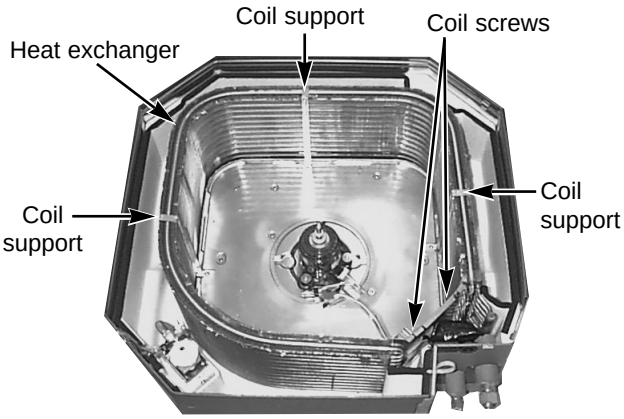
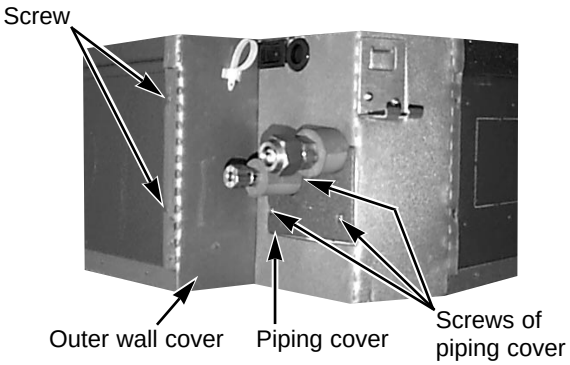
9 DISASSEMBLY PROCEDURE

PLFY-P32/40/50/63/80/100/125VAM-E.UK

Be careful on removing heavy parts.

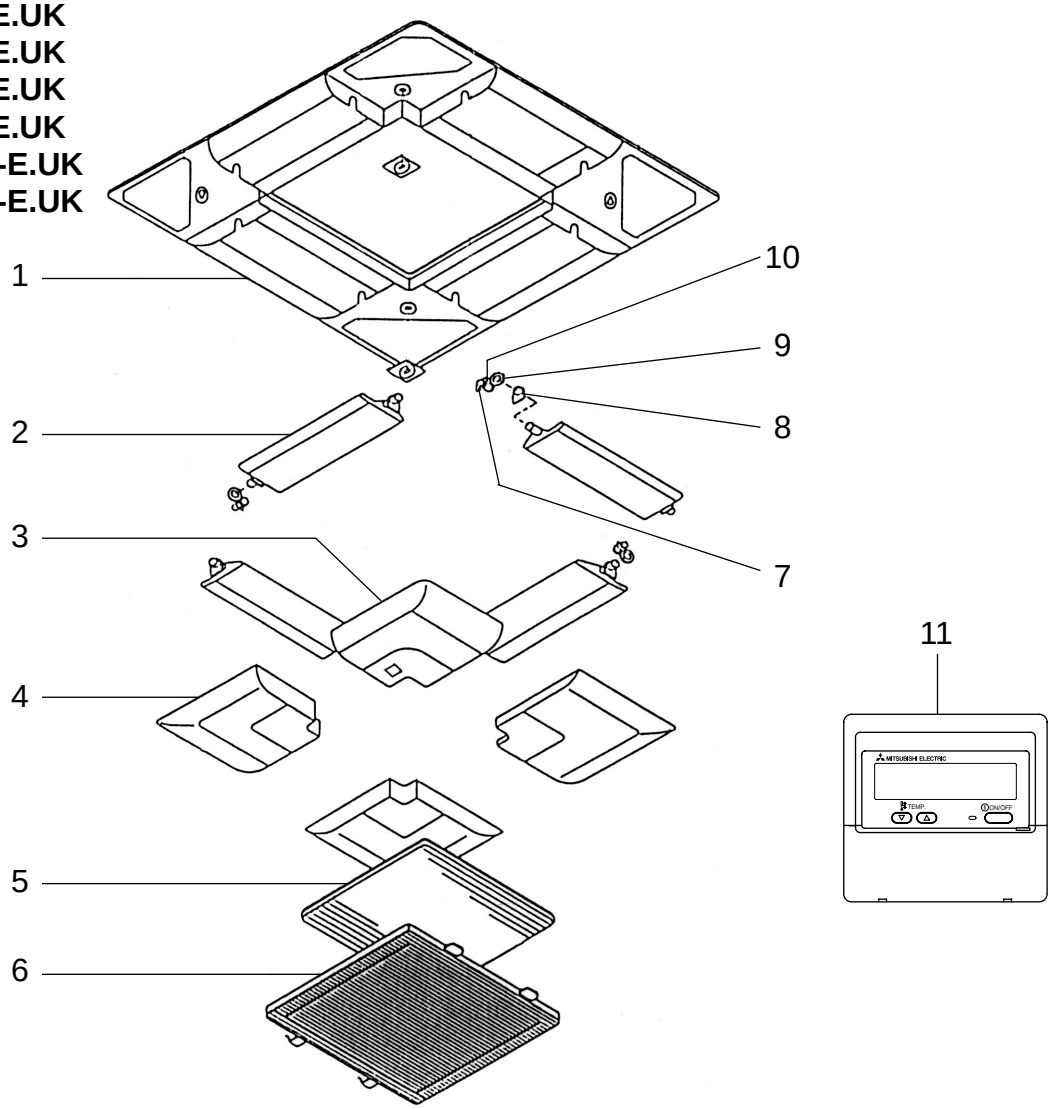
OPERATING PROCEDURE	PHOTOS&ILLUSTRATIONS
1. Removing the air intake grille (1) Slide the knob of air intake grille to the direction of the arrow ① to open the air intake grille. (2) Remove the string hook from the panel to prevend the grille from dropping. (3) Slide the shaft in the hinge to the direction of the arrow② and remove the air intake grille.	**Figure 1** 
2. Removing the fan guard (1) Open the air intake grille. (2) Remove the 3 screws of fan guard.	**Photo 1** 
3. Removing the room temperature thermistor (1)Remove the fan guard.(See photo 1) (2) Remove the screw(✕1) in the room temperature thermistor holder to remove the holder and the room temperature thermistor. (3) Remove the 1 screw from the bell mouth, and unscrew the another 2 screws (fixed to the oval hole which has different diameter) to remove the bell mouth. (4) Hold the holder claw, and remove the room temperature thermistor and holder. (5) Disconnect the connector (red) in the indoor control board.	**Photo 2** 
4. Removing the electrical box (1) Remove the fan guard.(See photo 1) (2) Remove the lead wire of the vane motor from the clamp, and disconnect the white connector (10P). (3) Remove the room temperature thermistor with the holder. (4) Remove the bell mouth.(See photo 2) (5) Disconnect the relay connector in the electrical box. Red (3P) for fan motor power supply White (2P) for pipe temperature detection / liquid thermistor Black (2P) for pipe temperature detection / gas thermistor Blue (2P) for drain pump White (3P) for drain sensor (6) Remove the 3 screws from the electrical box, loosen another 2 screws to remove the box. <Electrical parts in the electrical box> Indoor controller board power supply board Terminal block (Power supply) Terminal block (Transmission) Terminal block (MA remote controller) Capacitor Circuit(address) board	**Photo 3** 

OPERATING PROCEDURE	PHOTOS&ILLUSTRATIONS
5. Removing the fan motor (1) Remove the fan guard.(See photo 1) (2) Remove the bell mouth.(See photo 2) (3) Remove the electrical box.(See photo 3) (4) Remove the turbo fan nut, washer and radiation cap(P100, P125). (5) Pull out the turbo fan. (6) Disconnect the connector of the fan motor lead wire. (7) Remove the 4 nuts of the fan motor.	**Photo 4** 
6. Removing the pipe temperature detection / liquid thermistor and the pipe temperature detection / gas thermistor (1) Remove the fan guard.(See photo 1) (2) Remove the bell mouth.(See photo 2) (3) Remove the electrical box.(See photo 3) (4) Remove the turbo fan. (5) Remove the screw of the service panel. (6) Remove the service panel. (7) Remove the pipe temperature detection / liquid thermistor and the pipe temperature detection / gas thermistor which are inserted into the holder installed to the thin copper pipe. (8) Disconnect the each 2-pin white(liquid) and black(gas) connector.	**Photo 5** 
7. Removing the panel (1) Remove the air intake grille.(See figure 1) **Corner panel (See figure 2)** (1) Remove the screw of the corner. (2) Slide the corner panel to the direction of the arrow ③, and remove the corner panel. **Panel (See photo 6)** (1) Disconnect the connector that connects with the unit. (2) Remove the 2 screws from the panel and loose another 2 screws, which fixed to the oval hole, have different diameter. (3) Rotate the panel a little to remove the panel. (Slide the panel so that the screw comes to a large diameter of the oval hole, which has two different diameters.)	**Figure 2**  **Photo 6** 
8. Removing the drain pan (1) Remove the panel. (See photo 6) (2) Remove the drain plug (Larger one), drain the remaining water in the drain pan. (3) Remove the corner cover. (2 screws) (4) Remove the bell mouth. (See photo 2) (5) Remove the electrical box. (See photo 3) (6) Remove the lead wire holder. (1 screw) (7) Remove the 4 screws and pull out the drain pan. ※ Pull out the left and right of the pan gradually. Be careful not to crack or damage the pan.	**Photo 7** 

OPERATING PROCEDURE	PHOTOS&ILLUSTRATIONS
9. Removing the drain pump and drain sensor (1) Remove the panel. (See photo 6) (2) Remove the fan guard. (See photo 1) (3) Remove the bell mouth. (See photo 2) (4) Remove the electrical box. (See photo 3) (5) Remove the drain pan. (See photo 7) (6) Cut the drain hose band with scissors and pull out the drain hose from the drain pump. (7) Loosen the screw Ⓐ (2 screws) and remove the screw Ⓑ (1 screw). Slide the drain pump in the direction of the arrow Ⓒ and remove it. (8) Remove the drain sensor with its holder from the drain pump.	**Photo 8** 
10. Removing the heat exchanger (1) Remove the panel. (See photo 6) (2) Remove the fan guard. (See photo 1) (3) Remove the bell mouth. (See photo 2) (4) Remove the electrical box. (See photo 3) (5) Remove the drain pan. (See photo 7) (6) Remove the turbo fan. (See photo 4) (7) Remove the 3 screws of the piping cover, and pull out piping cover. (8) Remove the 4 screws of the outer wall cover, and pull out the outer wall cover. (9) Remove the screw of the coil support. (10) Remove the 2 screws of the coil. (11) Pull out the heat exchanger.	**Photo 9**  **Photo 10** 

10 PARTS LIST (non-RoHS compliant)

PANEL PARTS
PLFY-P32VAM-E.UK
PLFY-P40VAM-E.UK
PLFY-P50VAM-E.UK
PLFY-P63VAM-E.UK
PLFY-P80VAM-E.UK
PLFY-P100VAM-E.UK
PLFY-P125VAM-E.UK

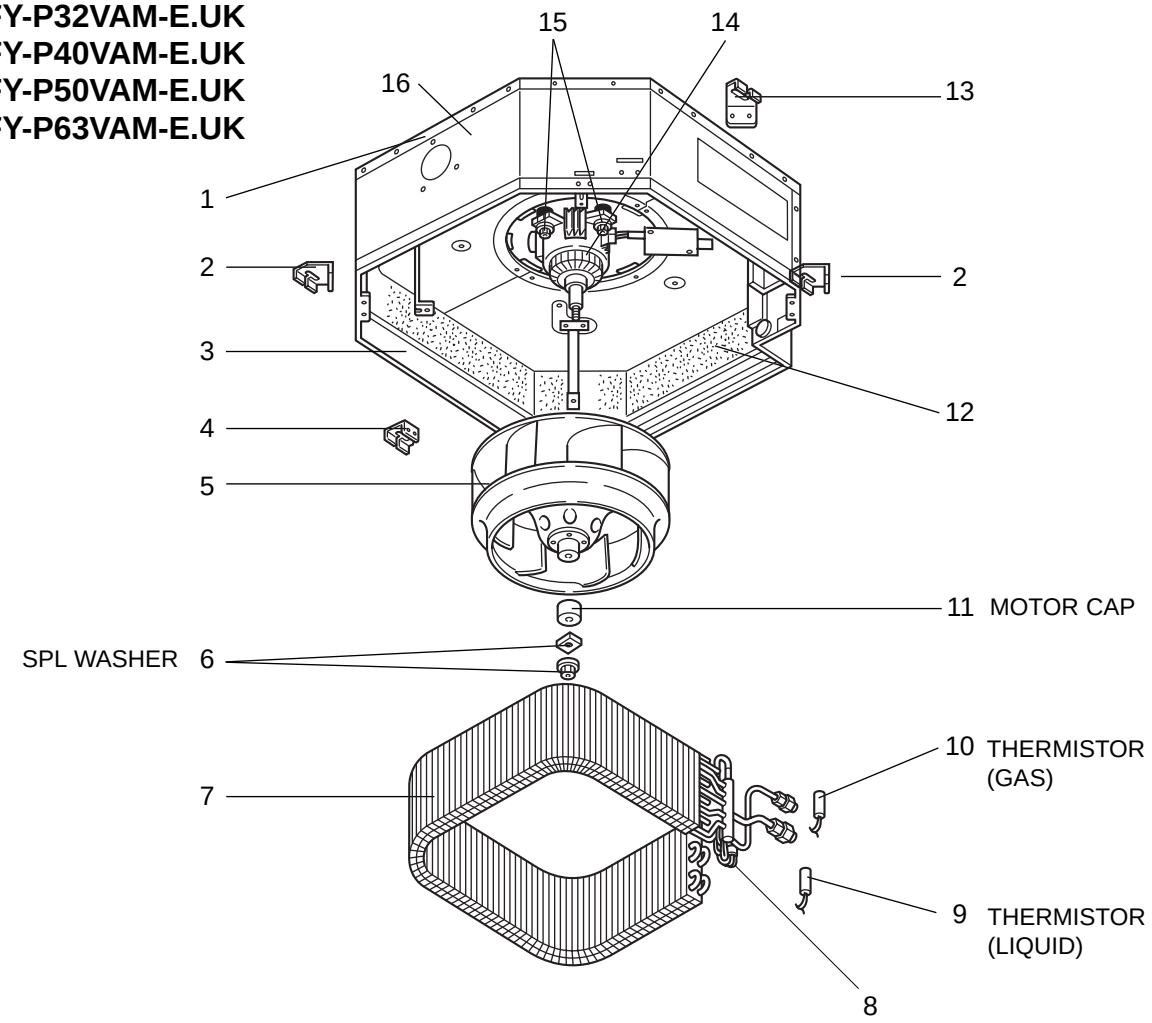


Part number that is circled is not shown in the figure.

No.	Part No.	Part Name	Specification	Q'ty/set PLFY- P32, P40, P50, P63 P80, P100, P125 VAM-E.UK	Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price Unit	Price Amount
1	S70 E10 003	AIR OUTLET GRILLE		1	Including H2				
2	S70 E00 002	AUTO VANE		4					
3	S70 E01 638	CORNER PANEL		1					
4	S70 E00 638	CORNER PANEL		3					
5	S70 E00 500	L.L FILTER		1					
6	S70 E00 691	GRILLE ASSY		1					
7	S70 E00 223	VANE MOTOR		4		MV			
8	S70 E00 063	VANE BUSH		8					
9	S70 E00 040	GEAR (VANE)		4					
10	S70 E01 040	GEAR (MOTOR)		4					
11	S70 KW1 713	REMOTE CONTROLLER	PAR-21MAA	1					
⑫	S70 E01 673	SCREW ASSY		1					

FUNCTIONAL PARTS

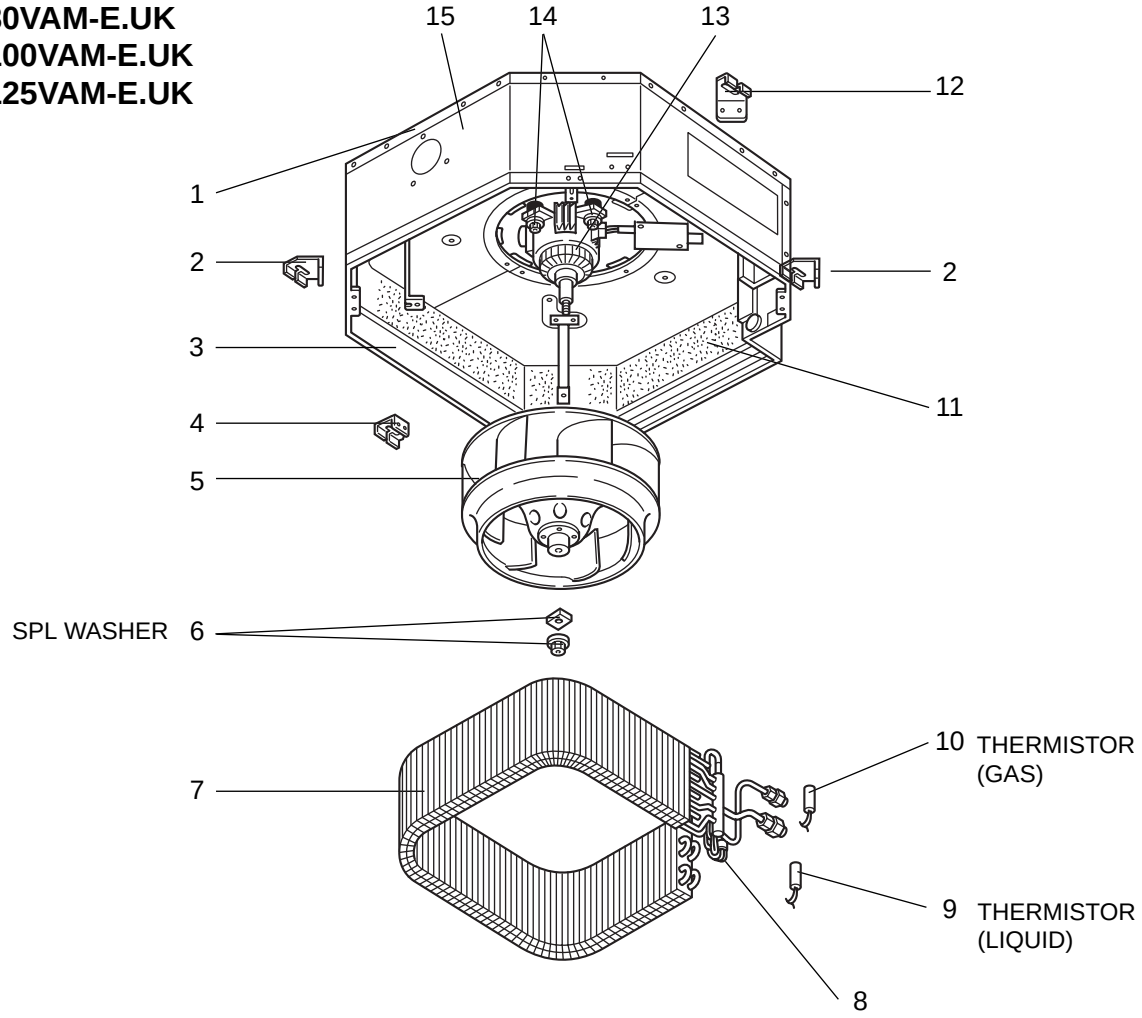
PLFY-P32VAM-E.UK
PLFY-P40VAM-E.UK
PLFY-P50VAM-E.UK
PLFY-P63VAM-E.UK



No.	Parts No.	Parts Name	Specification	Q'ty / set				Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price	
				PLFY-P·VAM-E.UK							Unit	Amount
				32	40	50	63					
1	S70 003 687	BASE DWG		1	1	1	1					
2	S70 E01 130	LEG		2	2	2	2					
3	S70 005 688	DRUM 1 ASSY		1	1	1	1					
4	S70 E00 130	LEG		1	1	1	1					
5	S70 E00 114	TURBO FAN		1	1	1	1					
6	S70 08K 097	SPL WASHER		1	1	1	1					
7	S70 E60 480	HEAT EXCHANGER		1								
	S70 E61 480	HEAT EXCHANGER			1							
	S70 E62 480	HEAT EXCHANGER				1						
	S70 E63 480	HEAT EXCHANGER					1					
8	S70 E60 401	LINEAR EXPANSION VALVE		1	1	1	1		LEV			
9	S70 17J 202	THERMISTOR (LIQUID)		1	1	1	1		TH22			
10	S70 79N 202	THERMISTOR (GAS)		1	1	1	1		TH23			
11	S70 E50 129	MOTOR CAP		1	1	1	1					
12	S70 E00 659	INNER COVER ASSY		1	1	1	1					
13	S70 E02 130	LEG		1	1	1	1					
14	S70 E06 762	FAN MOTOR	D17B6P70MS	1	1	1	1		MF			
15	S70 A41 105	MOTOR MOUNT		4	4	4	4					
16	S70 006 688	DRUM 2 ASSY		1	1	1	1					

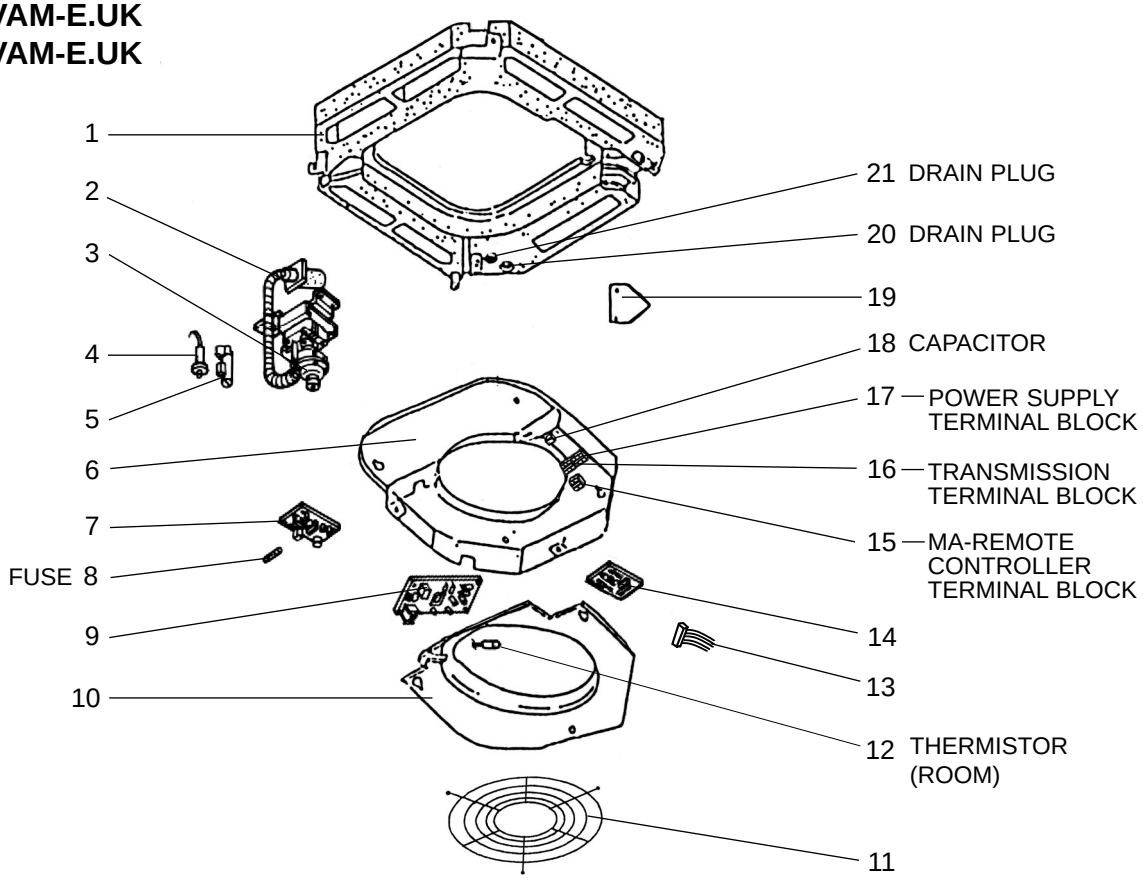
FUNCTIONAL PARTS

PLFY-P80VAM-E.UK
PLFY-P100VAM-E.UK
PLFY-P125VAM-E.UK



No.	Parts No.	Parts Name	Specification	Q'ty / set			Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price	
				PLFY-P·VAM-E.UK						Unit	Amount
				80	100	125					
1	S70 003 687	BASE DWG		1	1	1					
2	S70 E01 130	LEG		2	2	2					
3	S70 005 688	DRUM 1 ASSY		1							
	S70 007 688	DRUM 1 ASSY			1	1					
4	S70 E00 130	LEG		1	1	1					
5	S70 E00 114	TURBO FAN		1							
	S70 E01 114	TURBO FAN			1	1					
6	S70 08K 097	SPL WASHER		1	1	1					
7	S70 E64 480	HEAT EXCHANGER		1							
	S70 E65 480	HEAT EXCHANGER			1	1					
8	S70 E70 401	LINEAR EXPANSION VALVE		1	1	1		LEV			
9	S70 17J 202	THERMISTOR (LIQUID)		1	1	1		TH22			
10	S70 79N 202	THERMISTOR (GAS)		1	1	1		TH23			
11	S70 E00 659	INNER COVER ASSY		1							
	S70 E02 659	INNER COVER ASSY			1	1					
12	S70 E02 130	LEG		1	1	1					
13	S70 E06 762	FAN MOTOR	D17B6P70MS	1				MF			
	S70 E07 762	FAN MOTOR	D176P120MS		1	1		MF			
14	S70 A41 105	MOTOR MOUNT		4	4	4					
15	S70 006 688	DRUM 2 ASSY		1							
	S70 008 688	DRUM 2 ASSY			1	1					

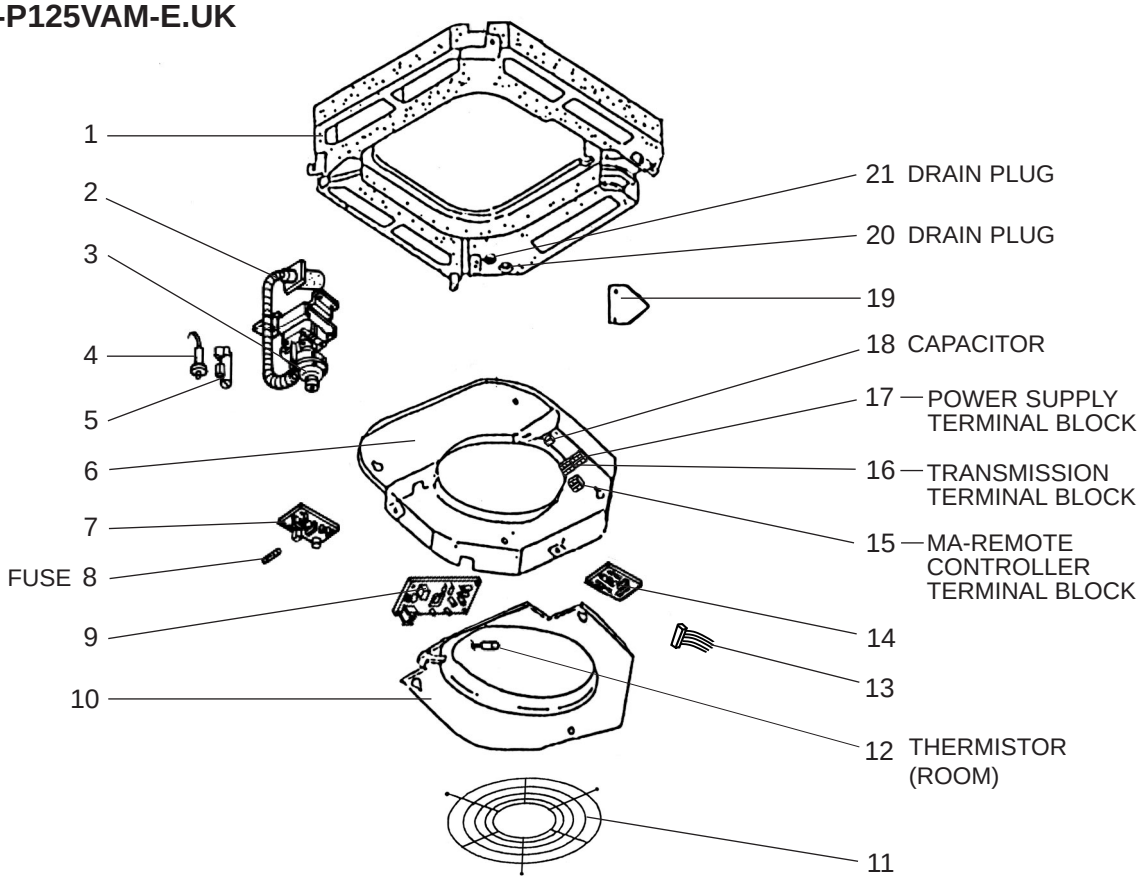
FUNCTIONAL PARTS
PLFY-P32VAM-E.UK
PLFY-P40VAM-E.UK
PLFY-P50VAM-E.UK
PLFY-P63VAM-E.UK



No.	Parts No.	Parts Name	Specification	Q'ty / set PLFY-P·VAM-E.UK 32, 40, 50, 63	Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price Unit	Price Amount
1	S70 E02 529	DRAIN PAN		1					
2	S70 A41 523	DRAIN SOCKET		1					
3	S70 E01 355	DRAIN PUMP		1		DP			
4	S70 E00 266	DRAIN SENSOR		1		DS			
5	S70 31K 241	DRAIN SENSOR HOLDER		1					
6	S70 E00 503	CONTROL BOX		1					
7	S70 E02 313	POWER BOARD		1		P.B			
8	S70 520 239	FUSE	6.3A 250V	1		FUSE			
9	S70 E35 310	INDOOR CONTROLLER BOARD		1		I.B ※			
10	S70 003 503	CONTROL COVER ASSY		1					
11	S70 E10 675	FAN GUARD		1					
12	S70 E00 202	THERMISTOR (ROOM)		1		TH21			
13	S70 E00 304	ADDRESS CABLE		1					
14	S70 B02 294	ADDRESS BOARD		1		A.B			
15	S70 512 716	MA-REMOTE CONTROLLER TERMINAL BLOCK	2P(1, 2)	1		TB15			
16	S70 B02 716	TRANSMISSION TERMINAL BLOCK	3P(M1, M2, S)	1		TB5			
17	S70 521 716	POWER SUPPLY TERMINAL BLOCK	3P(L, N, ⏚)	1		TB2			
18	S70 576 255	FAN MOTOR CAPACITOR	3.0μF 440V	1		C			
19	S70 001 663	CORNER COVER		1					
20	S70 A48 524	DRAIN PLUG		1					
21	S70 A41 524	DRAIN PLUG		1					

※ The part name of symbol "I.B" is "SPCB".

FUNCTIONAL PARTS
PLFY-P80VAM-E.UK
PLFY-P100VAM-E.UK
PLFY-P125VAM-E.UK

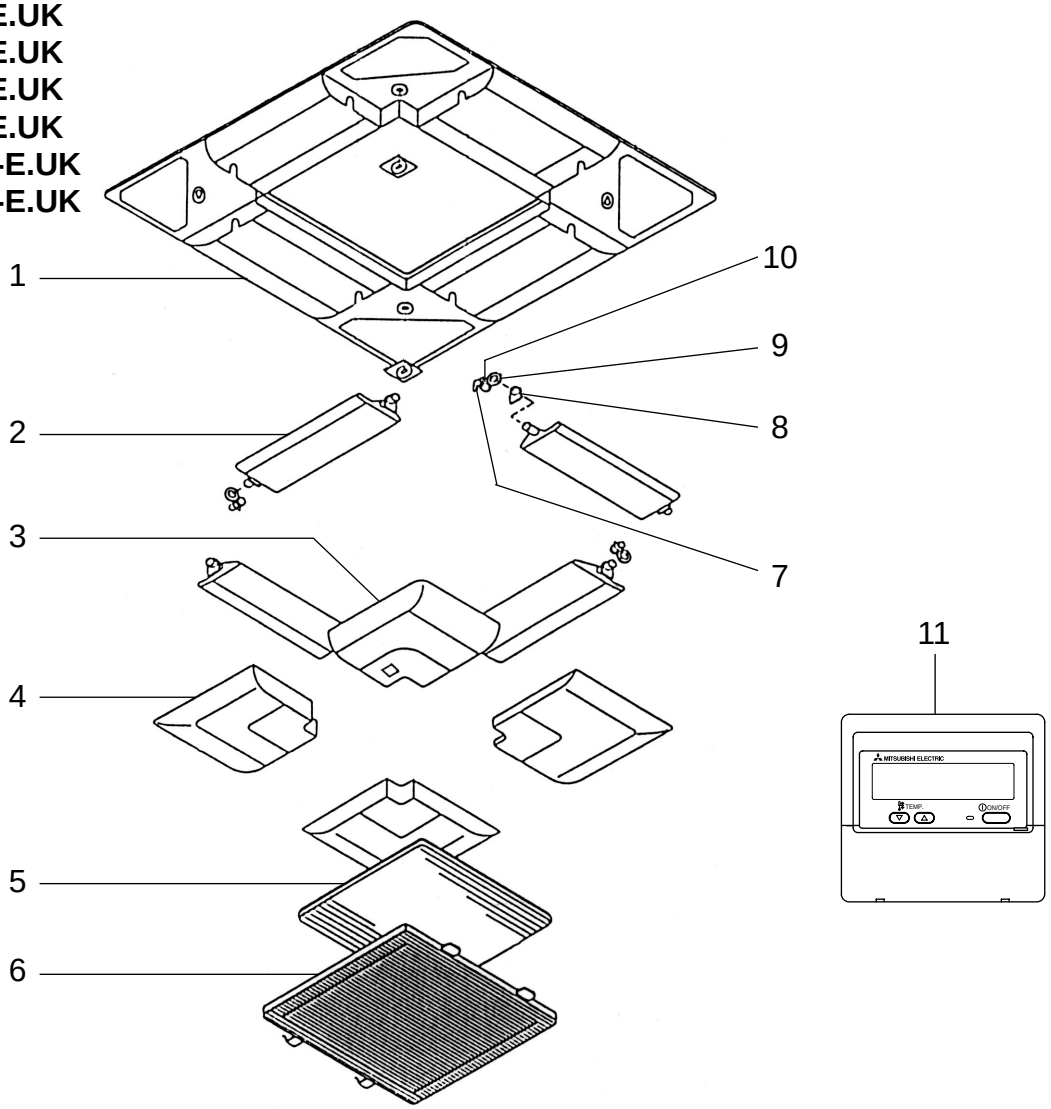


No.	Parts No.	Parts Name	Specification	Q'ty / set		Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price	
				PLFY-P·VAM-E.UK					Unit	Amount
				80	100, 125					
1	S70 E02 529	DRAIN PAN		1						
	S70 E01 529	DRAIN PAN			1					
2	S70 A41 523	DRAIN SOCKET		1	1					
3	S70 E01 355	DRAIN PUMP		1	1		DP			
4	S70 E00 266	DRAIN SENSOR		1	1		DS			
5	S70 31K 241	DRAIN SENSOR HOLDER		1	1					
6	S70 E00 503	CONTROL BOX		1	1					
7	S70 E02 313	POWER BOARD		1	1		P.B			
8	S70 520 239	FUSE	6.3A 250V	1	1		FUSE			
9	S70 E35 310	INDOOR CONTROLLER BOARD		1	1		I.B ※			
10	S70 003 503	CONTROL COVER ASSY		1	1					
11	S70 E10 675	FAN GUARD		1	1					
12	S70 E00 202	THERMISTOR (ROOM)		1	1		TH21			
13	S70 E00 304	ADDRESS CABLE		1	1					
14	S70 B02 294	ADDRESS BOARD		1	1		A.B			
15	S70 512 716	MA-REMOTE CONTROLLER TERMINAL BLOCK	2P(1, 2)	1	1		TB15			
16	S70 B02 716	TRANSMISSIONTERMINAL BLOCK	3P(M1, M2, S)	1	1		TB5			
17	S70 521 716	POWER SPPLY TERMINAL BLOCK	3P(L, N, ⏚)	1	1		TB2			
18	S70 17T 255	FAN MOTOR CAPACITOR	3.5μF 440V	1			C			
	S70 E02 255	FAN MOTOR CAPACITOR	7.0μF 440V		1		C			
19	S70 001 663	CORNER COVER		1	1					
20	S70 A48 524	DRAIN PLUG		1	1					
21	S70 A41 524	DRAIN PLUG		1	1					

※ The part name of symbol "I.B" is "SPCB".

11 RoHS PARTS LIST

PANEL PARTS
PLFY-P32VAM-E.UK
PLFY-P40VAM-E.UK
PLFY-P50VAM-E.UK
PLFY-P63VAM-E.UK
PLFY-P80VAM-E.UK
PLFY-P100VAM-E.UK
PLFY-P125VAM-E.UK

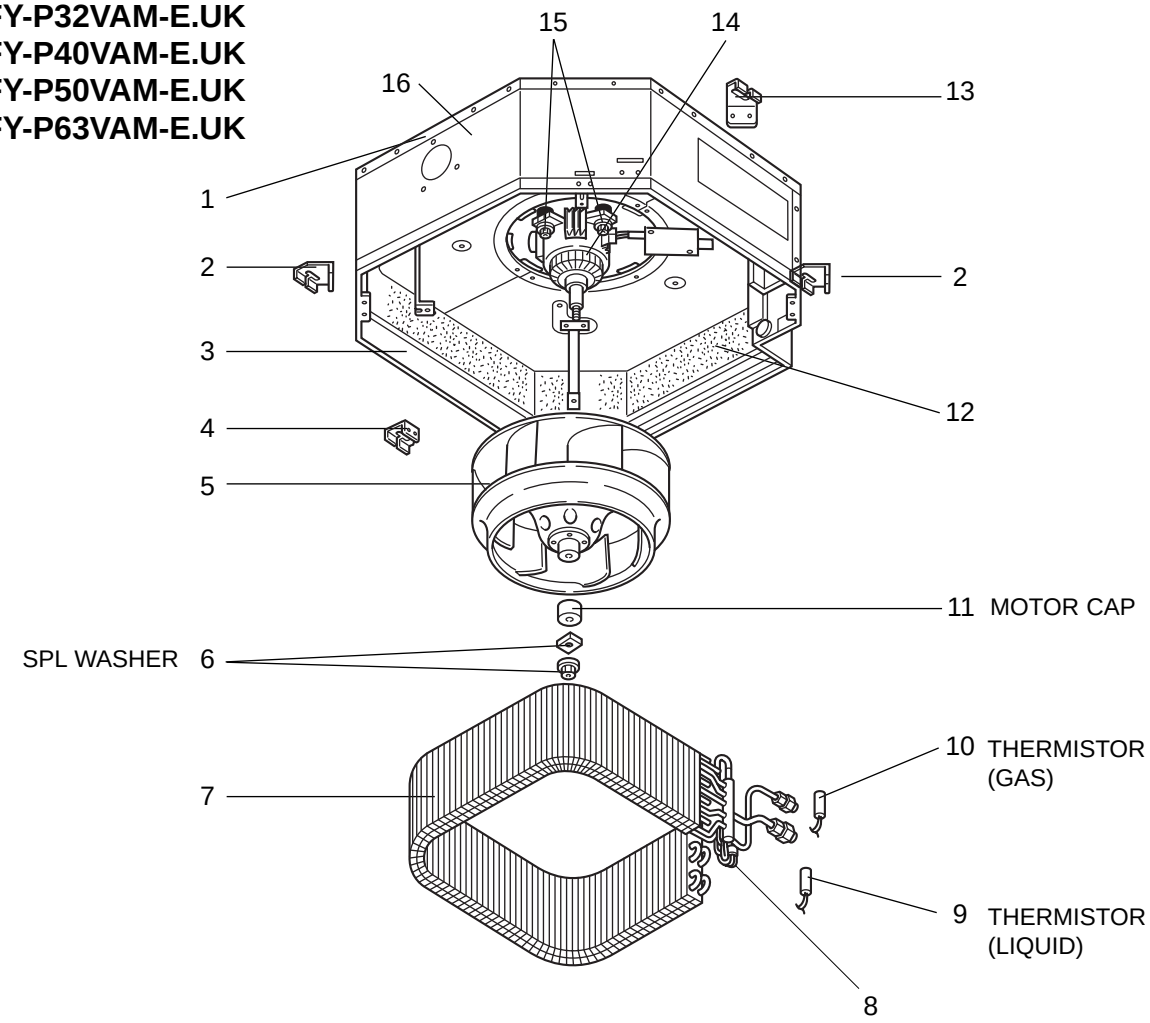


Part number that is circled is not shown in the figure.

No.	RoHS	Part No.	Part Name	Specification	Q'ty/set PLFY- P32, P40, P50, P63 P80, P100, P125 VAM-E.UK	Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price Unit	Price Amount
1	G	S70 E10 003	AIR OUTLET GRILLE		1	Including H2				
2	G	S70 E00 002	AUTO VANE		4					
3	G	S70 E01 638	CORNER PANEL		1					
4	G	S70 E00 638	CORNER PANEL		3					
5	G	S70 E00 500	L.L FILTER		1					
6	G	S70 E00 691	GRILLE ASSY		1					
7	G	S70 E00 223	VANE MOTOR		4		MV			
8	G	S70 E00 063	VANE BUSH		8					
9	G	S70 E00 040	GEAR (VANE)		4					
10	G	S70 E01 040	GEAR (MOTOR)		4					
11	G	S70 KW1 713	REMOTE CONTROLLER	PAR-21MAA	1					
(12)	G	S70 E01 673	SCREW ASSY		1					

FUNCTIONAL PARTS

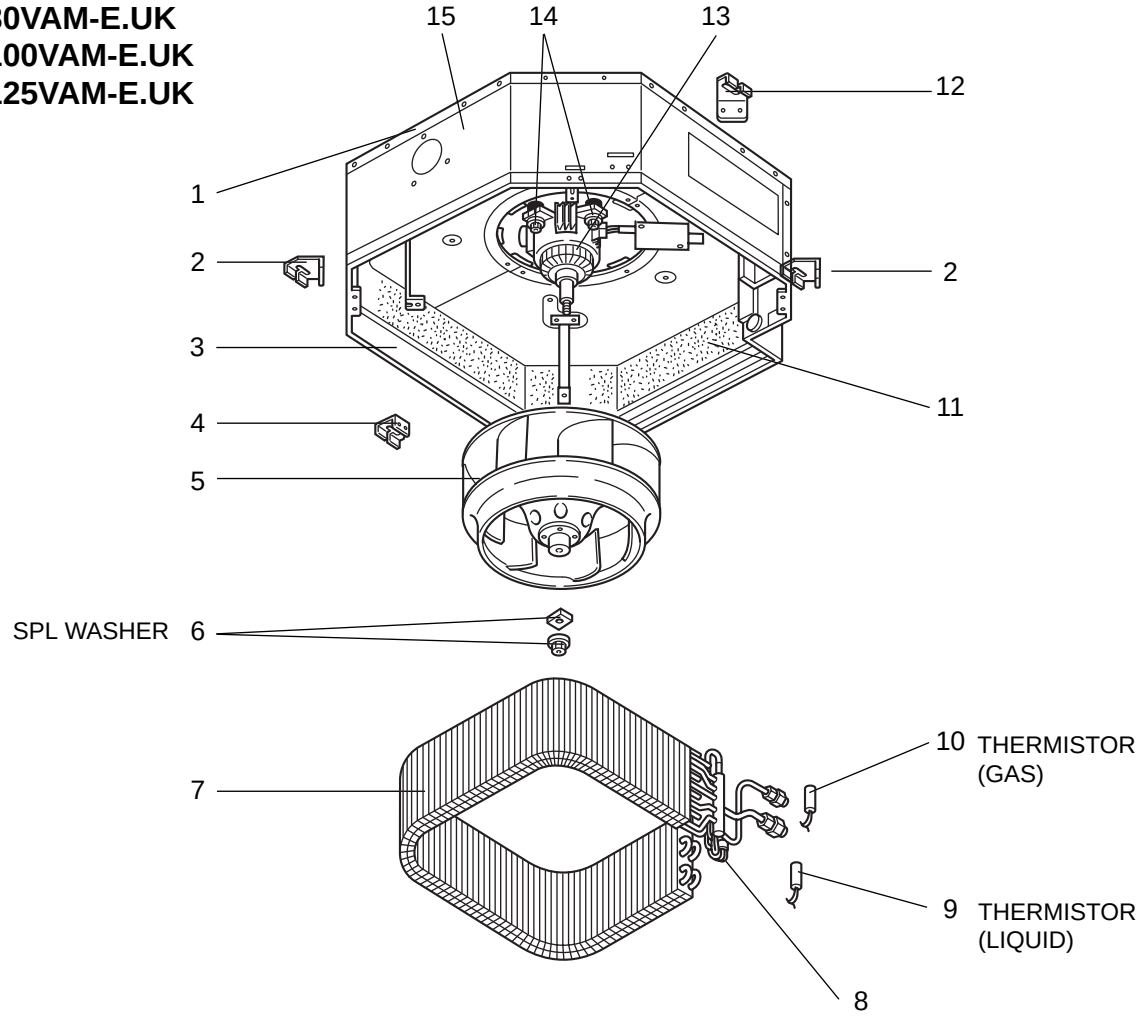
PLFY-P32VAM-E.UK
PLFY-P40VAM-E.UK
PLFY-P50VAM-E.UK
PLFY-P63VAM-E.UK



No.	RoHS	Parts No.	Parts Name	Specification	Q'ty / set PLFY-P·VAM-E.UK				Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price	
					32	40	50	63				Unit	Amount
1	G	S70 003 687	BASE DWG		1	1	1	1					
2	G	S70 E01 130	LEG		2	2	2	2					
3	G	S70 005 688	DRUM 1 ASSY		1	1	1	1					
4	G	S70 E00 130	LEG		1	1	1	1					
5	G	S70 E00 114G	TURBO FAN		1	1	1	1					
6	G	S70 08K 097	SPL WASHER		1	1	1	1					
7	G	S70 E60 480G	HEAT EXCHANGER		1								
	G	S70 E61 480G	HEAT EXCHANGER			1							
	G	S70 E62 480G	HEAT EXCHANGER				1						
	G	S70 E63 480G	HEAT EXCHANGER					1					
8	G	S70 E60 401	LINEAR EXPANSION VALVE		1	1	1	1		LEV			
9	G	S70 17J 202	THERMISTOR (LIQUID)		1	1	1	1		TH22			
10	G	S70 79N 202	THERMISTOR (GAS)		1	1	1	1		TH23			
11	G	S70 E50 129	MOTOR CAP		1	1	1	1					
12	G	S70 E00 659	INNER COVER ASSY		1	1	1	1					
13	G	S70 E02 130	LEG		1	1	1	1					
14	G	S70 E06 762	FAN MOTOR	D17B6P70MS	1	1	1	1		MF			
15	G	S70 A41 105	MOTOR MOUNT		4	4	4	4					
16	G	S70 006 688	DRUM 2 ASSY		1	1	1	1					

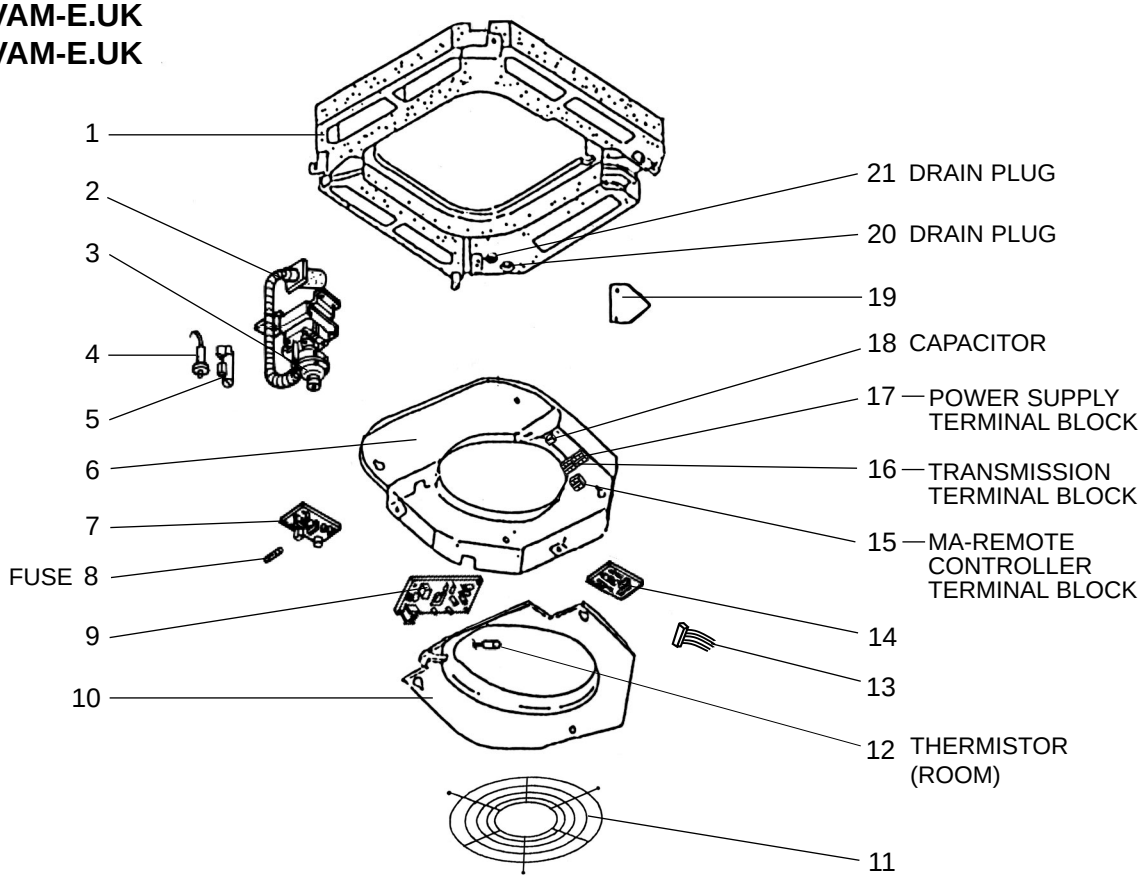
FUNCTIONAL PARTS

PLFY-P80VAM-E.UK
PLFY-P100VAM-E.UK
PLFY-P125VAM-E.UK



No.	RoHS	Parts No.	Parts Name	Specification	Q'ty / set PLFY-P·VAM-E.UK			Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price	
					80	100	125				Unit	Amount
1	G	S70 003 687	BASE DWG		1	1	1					
2	G	S70 E01 130	LEG		2	2	2					
3	G	S70 005 688	DRUM 1 ASSY		1							
	G	S70 007 688	DRUM 1 ASSY			1	1					
4	G	S70 E00 130	LEG		1	1	1					
5	G	S70 E00 114G	TURBO FAN		1							
	G	S70 E01 114G	TURBO FAN			1	1					
6	G	S70 08K 097	SPL WASHER		1	1	1					
7	G	S70 E64 480G	HEAT EXCHANGER		1							
	G	S70 E65 480G	HEAT EXCHANGER			1	1					
8	G	S70 E70 401	LINEAR EXPANSION VALVE		1	1	1		LEV			
9	G	S70 17J 202	THERMISTOR (LIQUID)		1	1	1		TH22			
10	G	S70 79N 202	THERMISTOR (GAS)		1	1	1		TH23			
11	G	S70 E00 659	INNER COVER ASSY		1							
	G	S70 E02 659	INNER COVER ASSY			1	1					
12	G	S70 E02 130	LEG		1	1	1					
13	G	S70 E06 762	FAN MOTOR	D17B6P70MS	1				MF			
	G	S70 E07 762	FAN MOTOR	D176P120MS		1	1		MF			
14	G	S70 A41 105	MOTOR MOUNT		4	4	4					
15	G	S70 006 688	DRUM 2 ASSY		1							
	G	S70 008 688	DRUM 2 ASSY			1	1					

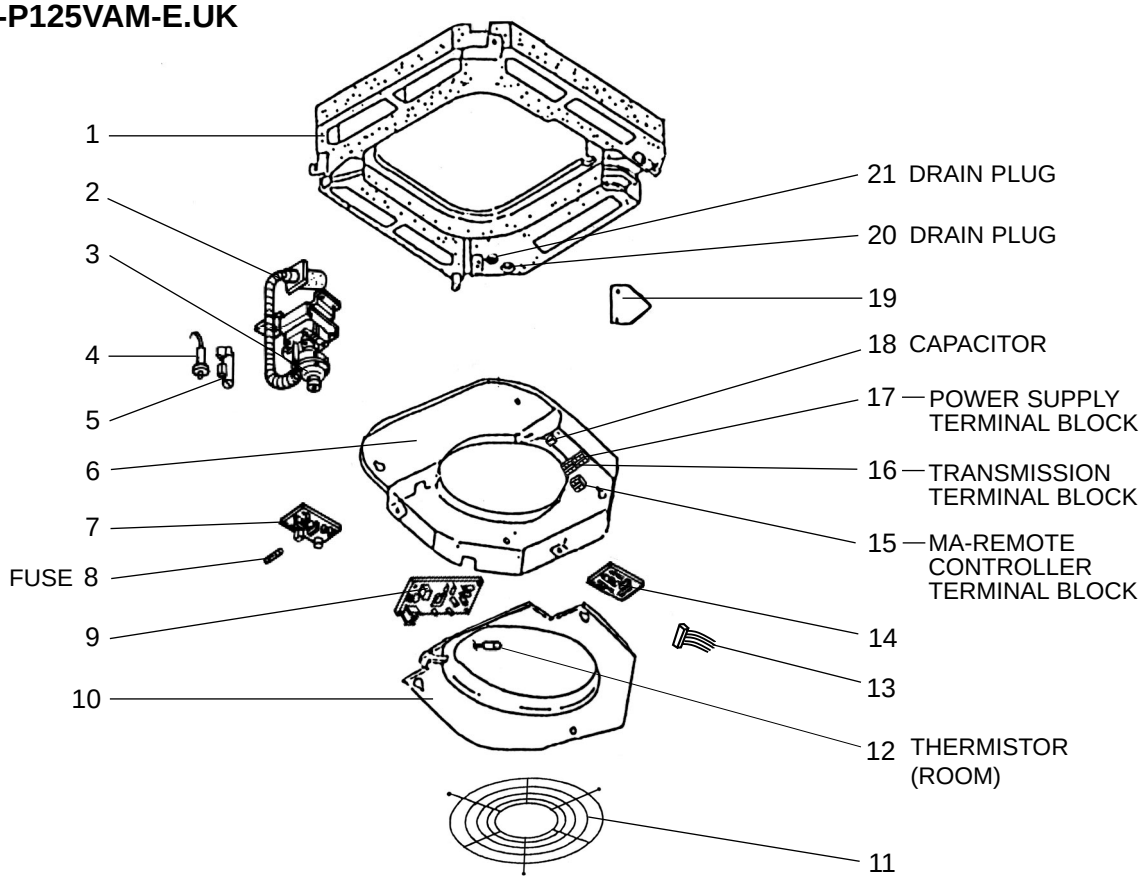
FUNCTIONAL PARTS
PLFY-P32VAM-E.UK
PLFY-P40VAM-E.UK
PLFY-P50VAM-E.UK
PLFY-P63VAM-E.UK



No.	RoHS	Parts No.	Parts Name	Specification	Q'ty / set	Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price	
					PLFY-P·VAM-E.UK				Unit	Amount
					32, 40, 50, 63					
1	G	S70 E02 529	DRAIN PAN		1					
2	G	S70 A41 523	DRAIN SOCKET		1					
3	G	S70 E01 355	DRAIN PUMP		1		DP			
4	G	S70 E00 266	DRAIN SENSOR		1		DS			
5	G	S70 31K 241	DRAIN SENSOR HOLDER		1					
6	G	S70 E00 503	CONTROL BOX		1					
7	G	S70 E02 313	POWER BOARD		1		P.B			
8	G	S70 520 239	FUSE	6.3A 250V	1		FUSE			
9	G	S70 E35 310	INDOOR CONTROLLER BOARD		1		I.B ※			
10	G	S70 003 503	CONTROL COVER ASSY		1					
11	G	S70 E10 675G	FAN GUARD		1					
12	G	S70 E00 202	THERMISTOR (ROOM)		1		TH21			
13	G	S70 E00 304	ADDRESS CABLE		1					
14	G	S70 B02 294	ADDRESS BOARD		1		A.B			
15	G	S70 512 716	MA-REMOTE CONTROLLER TERMINAL BLOCK	2P(1, 2)	1		TB15			
16	G	S70 B02 716	TRANSMISSION TERMINAL BLOCK	3P(M1, M2, S)	1		TB5			
17	G	S70 521 716	POWER SUPPLY TERMINAL BLOCK	3P(L, N, ⏚)	1		TB2			
18	G	S70 576 255	FAN MOTOR CAPACITOR	3.0μF 440V	1		C			
19	G	S70 001 663	CORNER COVER		1					
20	G	S70 A48 524	DRAIN PLUG		1					
21	G	S70 A41 524	DRAIN PLUG		1					

※ The part name of symbol "I.B" is "SPCB".

FUNCTIONAL PARTS
PLFY-P80VAM-E.UK
PLFY-P100VAM-E.UK
PLFY-P125VAM-E.UK



No.	RoHS	Parts No.	Parts Name	Specification	Q'ty / set		Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price	
					PLFY-P·VAM-E.UK					Unit	Amount
					80	100, 125					
1	G	S70 E02 529	DRAIN PAN		1						
	G	S70 E01 529	DRAIN PAN			1					
2	G	S70 A41 523	DRAIN SOCKET		1	1					
3	G	S70 E01 355	DRAIN PUMP		1	1		DP			
4	G	S70 E00 266	DRAIN SENSOR		1	1		DS			
5	G	S70 31K 241	DRAIN SENSOR HOLDER		1	1					
6	G	S70 E00 503	CONTROL BOX		1	1					
7	G	S70 E02 313	POWER BOARD		1	1		P.B			
8	G	S70 520 239	FUSE	6.3A 250V	1	1		FUSE			
9	G	S70 E35 310	INDOOR CONTROLLER BOARD		1	1		I.B ※			
10	G	S70 003 503	CONTROL COVER ASSY		1	1					
11	G	S70 E10 675G	FAN GUARD		1	1					
12	G	S70 E00 202	THERMISTOR (ROOM)		1	1		TH21			
13	G	S70 E00 304	ADDRESS CABLE		1	1					
14	G	S70 B02 294	ADDRESS BOARD		1	1		A.B			
15	G	S70 512 716	MA-REMOTE CONTROLLER TERMINAL BLOCK	2P(1, 2)	1	1		TB15			
16	G	S70 B02 716	TRANSMISSIONTERMINAL BLOCK	3P(M1, M2, S)	1	1		TB5			
17	G	S70 521 716	POWER SPPLY TERMINAL BLOCK	3P(L, N, ⏚)	1	1		TB2			
18	G	S70 17T 255	FAN MOTOR CAPACITOR	3.5μF 440V	1			C			
	G	S70 E02 255	FAN MOTOR CAPACITOR	7.0μF 440V		1		C			
19	G	S70 001 663	CORNER COVER		1	1					
20	G	S70 A48 524	DRAIN PLUG		1	1					
21	G	S70 A41 524	DRAIN PLUG		1	1					

※ The part name of symbol "I.B" is "SPCB".

12 OPTIONAL PARTS

12-1. MULTI FUNCTION CASEMENT

Part No.	PAC-SG03TM-E

12-2. AIR OUTLET SHUTTER PLATE (20 sets)

Part No.	PAC-SG06SP-E

12-3. HIGH EFFICIENCY FILTER (PAC-SG03TM-E is required in using this optional part.)

Part No.	PAC-SG01KF

CITY MULTI™

MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE : TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU TOKYO 100-8310, JAPAN

Distributed in Jul. 2006. No. OC313 REVISED EDITION-B PDF 7
Distributed in Sep. 2004. No. OC313 REVISED EDITION-A PDF 8
Distributed in May 2004. No. OC313 PDF 8
Made in Japan

New publication, effective Jul. 2006
Specifications subject to change without notice