MITSUBISHI ELECTRIC

SPLIT-TYPE,HEAT PUMP AIR CONDITIONERS

No. OC204

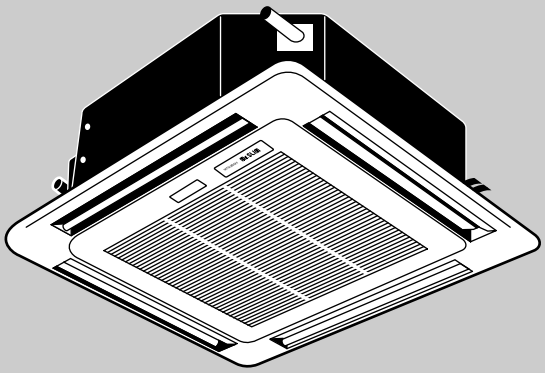
TECHNICAL & SERVICE MANUAL

Series PLFY Ceiling Cassettes R407C / R22

Indoor unit
[Model names]

[Service Ref.]

PLFY-P32VKM — **PLFY-P32VKM.UK**
PLFY-P40VKM — **PLFY-P40VKM.UK**
PLFY-P50VKM — **PLFY-P50VKM.UK**
PLFY-P63VKM — **PLFY-P63VKM.UK**



INDOOR UNIT

CONTENTS

Mr.SLIM™

1 SAFETY PRECAUTION

Cautions for using with the outdoor unit which adopts R407C refrigerant.

- **Do not use the existing refrigerant piping.**
  -The old refrigerant and refrigerator oil in the existing piping contains a large amount of chlorine which may cause the refrigerator oil of the new unit to deteriorate.

- **Do not use crushed, misshapen, or discoloured tubing.**
  The inside of the tubing should be clean and free from harmful sulfuric compounds, oxidants, dirt, debris, oils and moisture(or any other contaminants).
  -Contaminants on the inside of the refrigerant piping may cause the refrigerant residual oil deteriorate.

- **Store the piping to be used during installation indoors and keep both ends of the piping 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 liquid refrigerant to fill 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 refrigerator oil to deteriorate.

- **Use a vacuum pump with a reverse flow check valve.**
  -The vacuum pump oil may flow back into the refrigerant cycle and cause the refrigerator oil to deteriorate.

- **Use ester oil, ether oil or alkyl benzene(small amount) as the refrigerator oil to coat flares and flange connections.**
  -The refrigerator oil will degrade if it is mixed with a large amount of mineral oil.

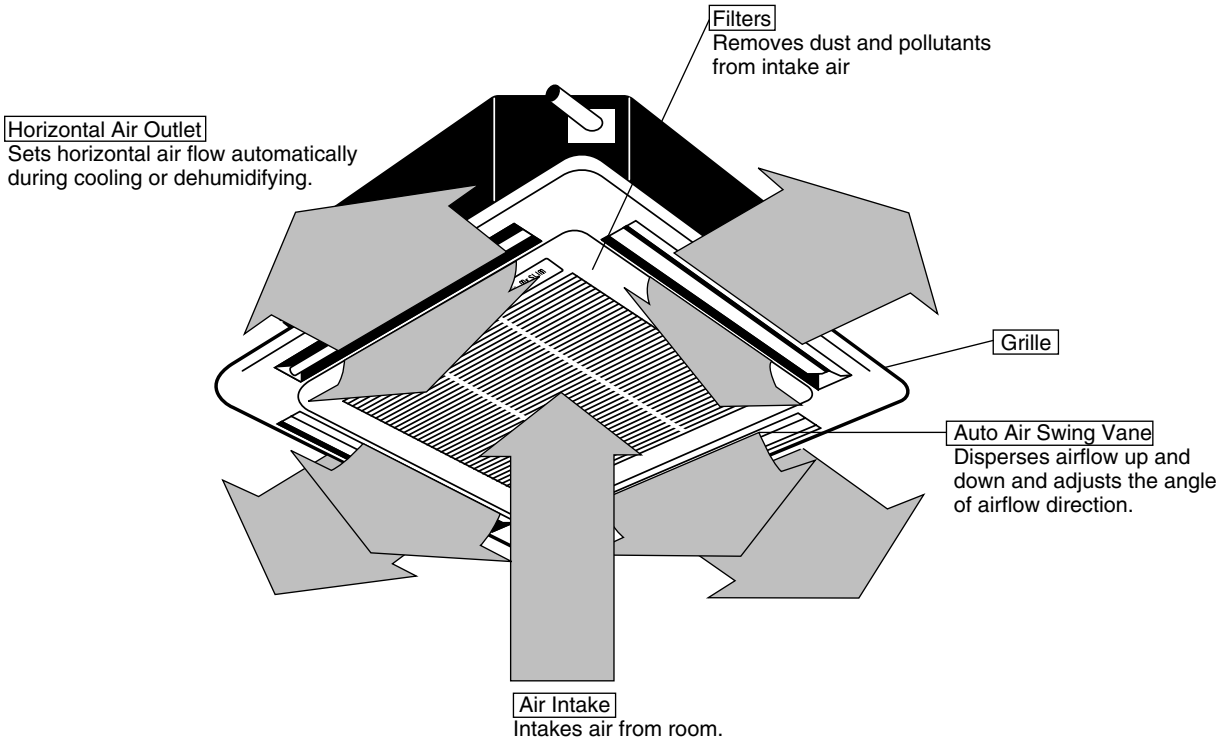
- **Do not used the following tools that are used with conventional refrigerants.**
  (Gauge manifold, charge hose, charging cylinder, gas leak detector, reverse flow check valve, refrigerant charge base, vacuum gauge, refrigerant recovery equipment)
  -If the conventional refrigerant and refrigerator oil are mixed in the R407C , the refrigerant may deteriorated.
  -If water is mixed in the R407C, the refrigerator oil may deteriorate.
  -Since R407C dose not contain any chlorine, gas leak detectors for conventional refrigerants will not react to it.

- **Be especially careful when managing the tools.**
  -If dust, dirt, or water gets in the refrigerant cycle, the refrigerant may deteriorate.

- **Do not use a charging cylinder.**
  -Using a charging cylinder may cause the refrigerant to deteriorate.

2 PART NAMES AND FUNCTIONS

● **Indoor (Main) Unit**



● **Remote controller** **[PAR-F25MA]**

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

● **Operation buttons**

TIMER button
This switches between continuous operation and the timer operation.

TIME SETTING button
This sets the current time, start time and stop time.

AIR SPEED button
This sets the ventilation fan speed.

ON/OFF button
This switches between the operation and stop modes each time it is pressed. The lamp on this button lights during operation.

OPERATION SWITCH button
Press this button to switch the cool, electronic dry (dehumidify), automatic and heater modes.

AIR DIRECTION button
This adjusts the vertical angle of the ventilation.

TEMP. ADJUSTMENT button
This sets the room temperature. The temperature setting can be performed in 1℃ units
Setting range
Cooler 19℃ to 30℃
Heater 17℃ to 28℃

FILTER button
This resets the filter service indication display

LOUVER button
This switches the horizontal fan motion ON and OFF.
(This button does not operate in this model)

VENTILATION button
This sets the ventilation fan speed.
(When the only LOSSNAY is connected.)

CHECK-TEST RUN button
Only press this button to perform an inspection check or test operation. Do not use it for normal operation.

● Display

CENTRALLY CONTROLLED display
This indicates when the unit is controlled by optional features such as central control type remote controller.

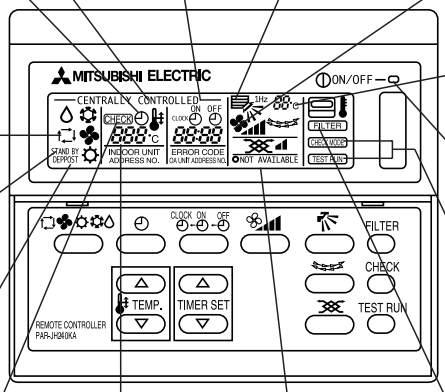
CLOCK display
The current time , start time and stop time can be displayed in ten second intervals by pressing the time switch button. The start time or stop time is always displayed during the timer operation.

In this display example on the bottom left, a condition where all display lamps light is shown for explanation purposes although this differs from actual operation.

AIR DIRECTION display
The selected fan speed is displayed.

TIMER display
This indicates when the continuous operation and time operation modes are set.
It also displays the time for the timer operation at the same time as when it is set.

FAN SPEED display
This displays the air direction.



ROOM TEMPERATURE display
The temperature of the suction air is displayed during operation. The display range is 8° to 39°C. The display flashes 8°C when the actual temperature is less than 8° and flashes 39°C when the actual temperature is greater than 39°C.

OPERATION MODE display
This indicates the operation mode.

Operation lamp
This lamp lights during operation, goes off when the unit stops and flashes when a malfunction occurs.

STANDBY display
This indicates when the standby mode is set from the time the sleep operation starts until the heating air is discharged.

CHECK MODE / TEST RUN display
This display lights in the check mode or when a test operation is performed.

DEFROST display
This indicates when the defrost operation is performed.

FILTER display
This lamp lights when the filter need to be cleaned.

CHECK display
This indicates when a malfunction has occurred in the unit which should be checked.

SET TEMPERATURE display
This displays the selected setting temperature.

POWER display
This lamp lights when electricity is supplied to the unit.

Caution

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

3 SPECIFICATIONS

3-1. Specification

Item				PLFY-P32VKM.UK	PLFY-P40VKM.UK	PLFY-P50VKM.UK	PLFY-P63VKM.UK
Power			V·Hz	Single phase 220V-240V 50 Hz			
Cooling capacity			kcal/h	3,150	4,000	5,000	6,300
			BTU/h	12,500	15,900	19,800	25,000
			kW	3.7	4.7	5.8	7.3
Heating capacity			kcal/h	3,550	4,500	5,600	7,100
			BTU/h	14,100	17,900	22,200	28,200
			kW	4.1	5.2	6.6	8.3
Electric characteristic	Power supply	Cooling	kW	0.13	0.13	0.14	0.15
		Heating	kW	0.13	0.13	0.14	0.15
	Starting current	Cooling	A	0.60	0.60	0.64	0.68
		Heating	A	0.60	0.60	0.64	0.68
	Power factor	Cooling	%	90	90	91	92
		Heating	%	90	90	91	92
Exterior (munsell symbol)				-Unit : Galvanized sheets · Standard grill : ABS resin acrylic coating Munsell<0.70y 8.59/0.97>			
Dimensions		Height	mm	298<30>			
		Width	mm	660<760>			
		Depth	mm	660<760>			
Heat exchanger				Cross fin			
Fan	Fan × No			Turbo fan × 1			
	Air flow #3		m^3/min	15-14.5-14-13		16-15-14-13	17-16-15-14
	External static pressure		Pa	0			
	Fan motor output		kW	0.030			
Insulator				Polyethylene sheet			
Air filter				PP honeycomb fabric			
Pipe dimensions		Gas side	ømm	12.7(1/2")		15.88(5/8")	
		Liquid side	ømm	6.35(1/4")		9.52(3/8")	
Unit drain pipe size			mm	ID32 (PVC pipe VP-25 connectable)			
Noise level			dB	35-34-32.5-31		37-35.5-34-32	39-38-36.5-35
Product weight			kg	19<3.7>			20<3.7>

Note 1. Rating conditions (JIS B 8615)
Cooling: Indoor: D.B. 27°C, W.B. 19.5°C
outdoor: D.B. 35°C
Heating: Indoor: D.B. 21°C
outdoor: D.B. 7°C, W.B. 6°C

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

Note 3. Air flow and the noise level are indicated as High-Medium 1-Medium 2-Low.

3-2. Electrical parts specifications

Model / Parts name	Symbol	PLFY-P32VKM.UK	PLFY-P40VKM.UK	PLFY-P50VKM.UK	PLFY-P63VKM.UK
Transformer	T	(Primary) 50/60Hz 220-240V (Secondary) (18.4V 1.7A)			
Room temperature thermistor	TH21	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ			
Liquid pipe thermistor	TH22	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ			
Gas pipe thermistor	TH23	Resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ			
Fuse (Indoor controller board)	FUSE	250V 6.3A			
Fan motor (with inner-thermostat)	MF	6-pole OUTPUT 30W PAI-V30F			
inner-thermostat (Fan motor)		OFF 125°C ± 5°C ON 85°C ± 20°C			
Fan motor capacitor	C1	2.5μF × 400V			
Vane motor (with limit switch)	MV	MC8 200V-240V 2.5/2W 5/6R.P.M			
Drain-up mechanism	DP	PJV-1002 INPUT 8/7.5W 24L/Hr			
Drain sensor	DS	Heater resistance 82Ω/25°C Thermistor resistance 0°C/15kΩ, 10°C/9.6kΩ, 20°C/6.3kΩ, 25°C/5.4kΩ, 30°C/4.3kΩ, 40°C/3.0kΩ			
Linear expansion valve	LEV	DC12V Stepping motor drive port dimension 3.2Ω (0~2000pulse) EDM-402ME			
Electric heater (Dew prevention)	H2	240V 28.8W			
Power supply terminal block	TB2	(L, N, Earth) 330V 30A			
Transmission terminal block	TB5	(M1, M2, S) 330V 30A			

4 OUTLINES AND DIMENSIONS

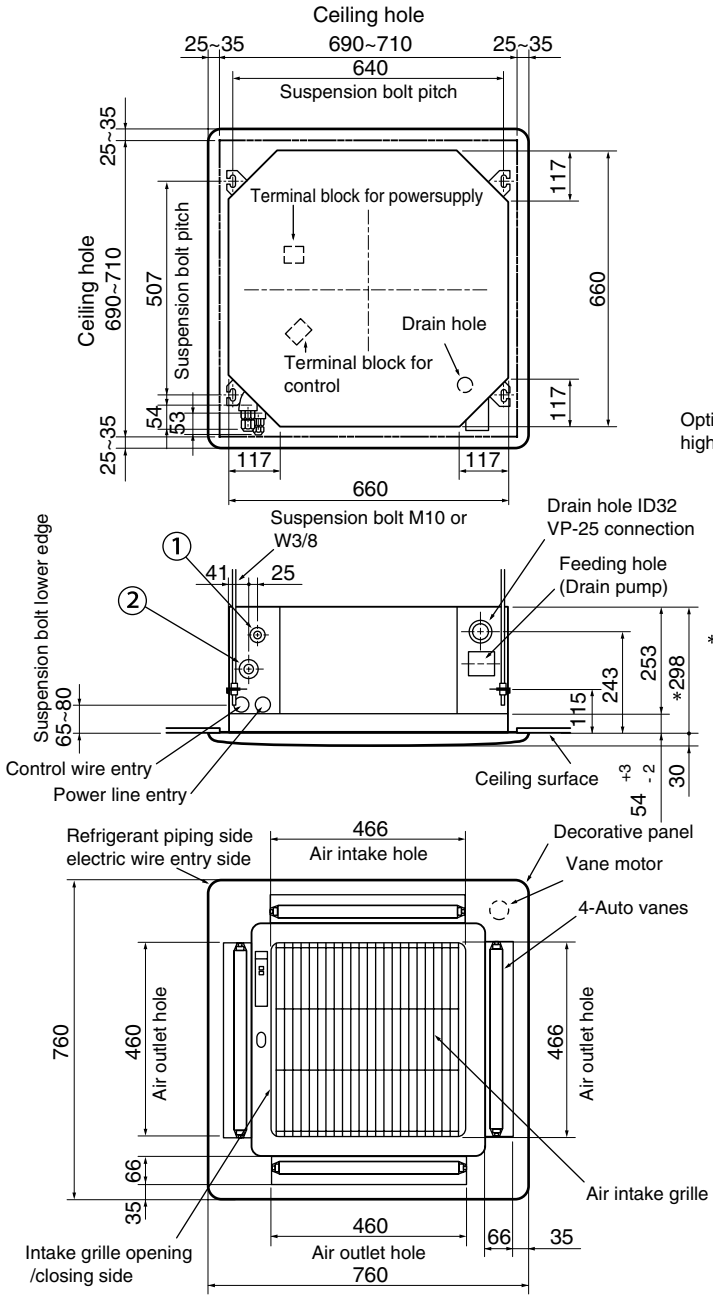
PLFY-P32VKM.UK, PLFY-P40VKM.UK
PLFY-P50VKM.UK, PLFY-P63VKM.UK

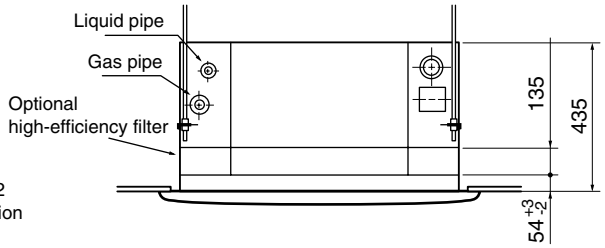
Unit : mm

NOTE 1.The electrical parts box may be removed during servicing. When connecting the power line and the control wire,provide enough length to the electric wires.

NOTE 2.When installing the optional high-efficiency filter,the dimension between the transom and ceiling shall be more than 440mm. Also,when installing the optional fresh air intake casement or the multi-functional casement,the dimension between the transom and ceiling shall be more than 440mm. (The optional high-efficiency filter can also be installed.)

Models	①	②
PLFY-P32VKM.UK PLFY-P40VKM.UK	Refrigerant pipe (6.35mmdia) flared connection 1/4F	Refrigerant pipe (12.7mmdia) flared connection 1/2F
PLFY-P50VKM.UK PLFY-P63VKM.UK	Refrigerant pipe (9.52mmdia) flared connection 3/8F	Refrigerant pipe (15.88mmdia) flared connection 5/8F

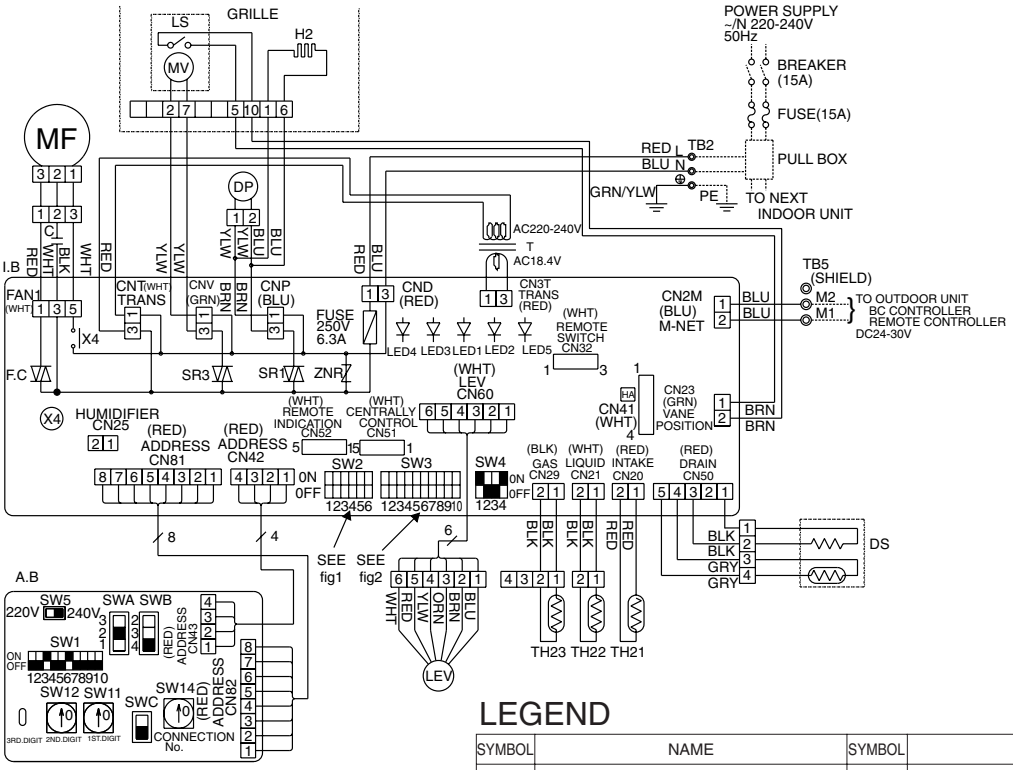




*Leave space of 10~15mm between the top surface of the unit and the ceiling slab.

5 WIRING DIAGRAM

PLFY-P32VKM.UK, PLFY-P40VKM.UK
PLFY-P50VKM.UK, PLFY-P63VKM.UK



LEGEND

SYMBOL	NAME	SYMBOL	NAME
I.B	INDOOR CONTROLLER BOARD	T	TRANSFORMER
CN25	HUMIDIFIER CONNECTOR	DS	DRAIN SENSOR
CN32	REMOTE SWITCH CONNECTOR	DP	DRAIN WATER LIFTING-UP MACH.
CN41	HA TERMINAL-A CONNECTOR	MF	FAN MOTOR (WITH INNER THERMO.)
CN51	CENTRALLY CONTROL CONNECTOR	C	FAN MOTOR CAPACITOR
CN52	REMOTE INDICATION CONNECTOR	MV	VANE MOTOR
SW2	CAPACITY CORD SWITCH	LS	LIMIT SWITCH
SW3	FUNCTION SELECTOR	H2	DEW PREVENTION HEATER
SW4	UNIT SELECTOR	TB2	POWER SUPPLY TERMINAL BLOCK
SR1	DRAIN UP MECH RELAY	TB5	TRANSMISSION TERMINAL BLOCK
	DEW PREVENTION HEATER RELAY	LEV	LINEAR EXPANSION VALVE
SR3	VANE RELAY	A.B	ADDRESS BOARD
X4	FAN MOTOR RELAY	SW1(A.B)	MODE SELECTOR
ZNR	VARISTOR	SW5(A.B)	VOLTAGE SELECTOR
FUSE	FUSE(6.3A)	SW11(A.B)	1ST DIGIT ADDRESS SETTING
F.C	FAN PHASE CONTROL	SW12(A.B)	2ND DIGIT ADDRESS SETTING
TH21	ROOM TEMPERATURE THERMISTOR (0℃/15kΩ,25℃/5.4kΩ)	SW14(A.B)	CONNECTION NO.
		SWA(A.B)	CEILING HEIGHT SELECTOR
TH22	LIQUID PIPE THERMISTOR (0℃/15kΩ,25℃/5.4kΩ)	SWB(A.B)	DISCHARGE AIR DIRECTION
TH23	GAS PIPE THERMISTOR (0℃/15kΩ,25℃/5.4kΩ)	SWC(A.B)	OPTION SELECTOR

NOTE

1.At servicing for outdoor unit,always follow the wiring diagram of outdoor unit.
2.Symbol(S) of TB5 is the shield wire connection.
3.Symbols used in wiring diagram above are,◎:Terminal block, □□□□:Connector.
4.The setting of the SW2 dip switches differs for the capacity.
For the detail,see the table below.

<fig1>

MODELS	SW2	MODELS	SW2
PLFY-P32VKM.UK	ON OFF 123456	PLFY-P50VKM.UK	ON OFF 123456
PLFY-P40VKM.UK	ON OFF 123456	PLFY-P63VKM.UK	ON OFF 123456

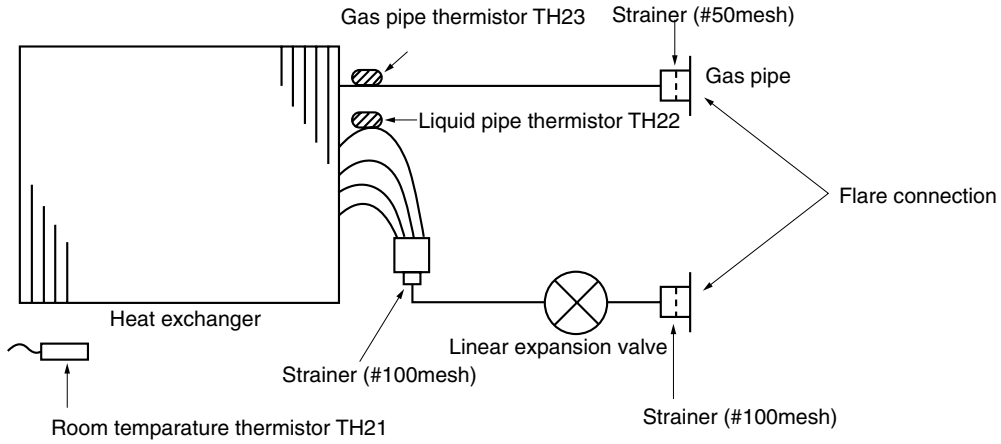
<fig2>

MODELS	SW3
PLFY-P32VKM.UK PLFY-P40VKM.UK	ON OFF 12345678910
PLFY-P50VKM.UK PLFY-P63VKM.UK	ON OFF 12345678910

5.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.

6 REFRIGERANT SYSTEM DIAGRAM

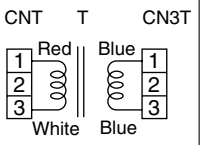
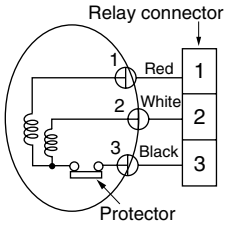
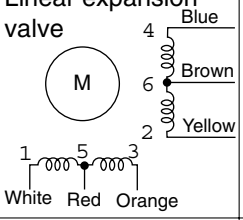
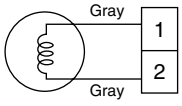
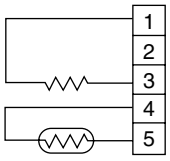
PLFY-P32VKM.UK, PLFY-P40VKM.UK
PLFY-P50VKM.UK, PLFY-P63VKM.UK



Item \ Service Ref.	PLFY-P32,P40VKM.UK	PLFY-P50,P63VKM.UK
Gas pipe	ϕ12.7<1/2F>	ϕ15.88<5/8F>
Liquid pipe	ϕ6.35<1/4F>	ϕ9.52<3/8F>

7 TROUBLE SHOOTING

7-1. How to check the parts PLFY-P•VKM.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°W~30°C)
<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 thermistor)</td></tr>
<tr><td>Trans
 
</td><td>Disconnect the connector and measure the resistance using a tester.
<table><tr><th></th><th>Normal</th><th>Abnormal</th></tr><tr><td>CNT(1)~(3)</td><td>Approx. 45Ω</td><td rowspan="2">Open or short</td></tr><tr><td>CN3T(1)~(3)</td><td>Approx. 1Ω</td></tr></table></td></tr>
<tr><td>Vane motor</td><td>Measure the resistance between the terminals using a tester.
(Surrounding temperature 20°C~30°C)
<table><tr><th>Normal</th><th>Abnormal</th></tr><tr><td>Approx. 14kΩ</td><td>Open or short</td></tr></table></td></tr>
<tr><td>Fan motor
 
</td><td>Measure the resistance between the terminals using a tester.
<table><tr><td rowspan="3">Motor terminal
or
Relay connector</td><td>Normal
PLFY-P·VKM.UK
P32, P40, P50, P63</td><td rowspan="3">Abnormal</td></tr><tr><td>Red-Black</td><td>136.2kΩ</td><td rowspan="2">Open or short</td></tr><tr><td>White-Black</td><td>197.5kΩ</td></tr></table></td></tr>
<tr><td>Linear expansion valve
 
</td><td>Disconnect the connector then measure the resistance using a tester.
Refer to the next page for a detail.
<table><tr><th colspan="4">Normal</th><th>Abnormal</th></tr><tr><td>(1)-(5)
White-Red</td><td>(2)-(6)
Yellow-Blown</td><td>(3)-(5)
Orange-Red</td><td>(4)-(6)
Blue-Brown</td><td rowspan="2">Open or short</td></tr><tr><td colspan="4">150kΩ ±10%</td></tr></table></td></tr>
<tr><td>Drain-up mechanism
 
</td><td>Measure the resistance between the terminals using a tester.
(Surrounding temperature 20°C~30°C)
<table><tr><th>Normal</th><th>Abnormal</th></tr><tr><td>327Ω</td><td>Open or short</td></tr></table></td></tr>
<tr><td>Drain sensor
 
</td><td>Measure the resistance between the terminals using a tester.
<table><tr><th></th><th>Normal</th><th>Abnormal</th></tr><tr><td>(1)-(3)</td><td>82Ω</td><td rowspan="2">Open or short</td></tr><tr><td>(4)-(5)</td><td>4.3kΩ~9.6kΩ</td></tr></table>(Refer to the thermistor)</td></tr>
</table>

<Output pulse signal and the valve operation>

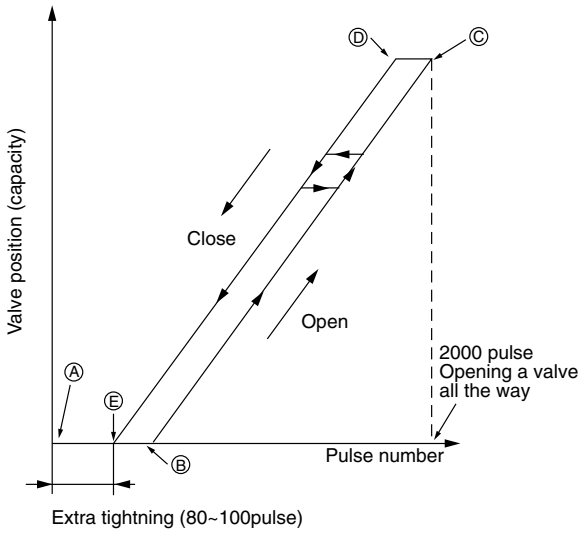
Output (Phase)	Output			
	1	2	3	4
ϕ1	ON	OFF	OFF	ON
ϕ2	ON	ON	OFF	OFF
ϕ3	OFF	ON	ON	OFF
ϕ4	OFF	OFF	ON	ON

Closing a valve : 1 → 2 → 3 → 4 → 1
Opening a valve : 4 → 3 → 2 → 1 → 4

The output pulse shifts in the above order.

❊ 1. When linear expansion valve operation stops, all output phases become OFF.
2. At phase interruption or when the phase does not shift in order, the motor does not rotate smoothly and will lock and vibrate.

② Linear expansion valve operation

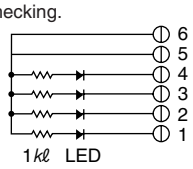
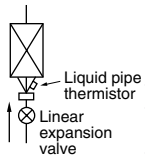


❊ When the switch is turned on, a 2200 pulse opening valve signal will be sent until point Ⓐ is reached in order to define the valve position.

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

❊ Noise can be detected by placing the ear against the screw driver handle while putting the screw driver 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.  Pulse signal will be sent out for 10 seconds as soon as the main switch is turned on. If there is flashing LED it means the operation circuit is abnormal.	Exchange the indoor controller board at drive circuit failure.
Linear expansion valve mechanism is locked.	Motor will idle and make ticking noise when motor is operated while the linear expansion valve is locked. This ticking sound is the sign of the abnormality.	Exchange the linear expansion valve.
Short or breakage of the motor coil of the linear expansion valve.	Measure the resistance between each coil (red-white, red-orange, brown-yellow, brown-blue) 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 (thermistor leaking).	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 some leaking, detecting temperature of the thermistor will decrease. 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 making any trouble.  	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.

<Thermistor Characteristic graph>

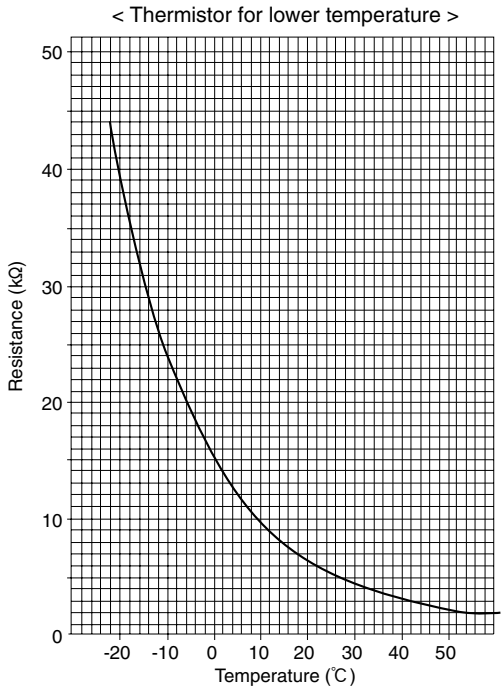
Thermistor for lower temperature

Room temperature thermistor(TH21)
Liquid pipe thermistor(TH22)
Gas pipe temperature thermistor(TH23)
Drain sensor(THD)

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

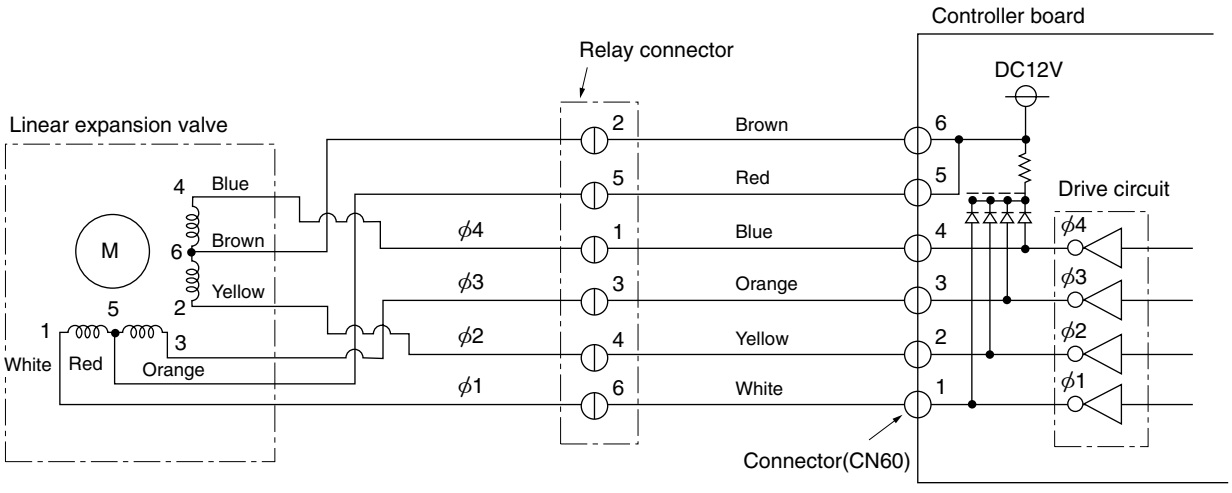
$$Rt=15\exp\{3480(\frac{1}{273+t}-\frac{1}{273})\}$$

0℃	15kΩ
10℃	9.6kΩ
20℃	6.3kΩ
25℃	5.2kΩ
30℃	4.3kΩ
40℃	3.0kΩ



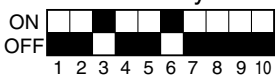
Linear expansion valve

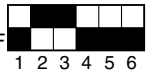
① **Operation summary of the linear expansion valve.**
• Linear expansion valve opens/closes through a stepping motor after receiving the pulse signal from the indoor controller board.
• Valve position can be changed in proportion to the number of pulse signals.
<Connection between the indoor controller board and the linear expansion valve>

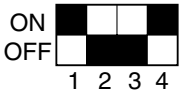


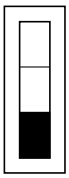
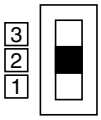
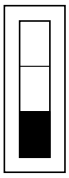
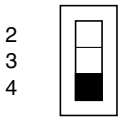
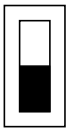
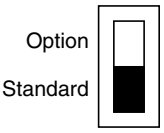
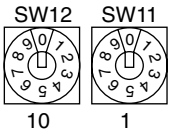
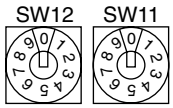
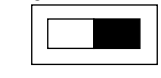
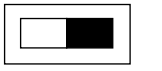
Note : Since the number of the connector at the controller board side and the relay connector are different, follow the color of the lead wire.

7-2. FUNCTION OF DIP SWITCHES

<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">Remarks</th></tr>
<tr><th>ON</th><th>OFF</th></tr>
<tr><td rowspan="10">SW1
Mode
Selection</td><td>1</td><td>Thermistor <intake temperature detection> position</td><td>Built-in remote controller</td><td>Indoor unit</td><td rowspan="10">Address board
<At delivery>
 

(Note1) Fan operation at Heating mode.
(Note1) Heater thermo ON is operating.
(Note1) 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 sign</td><td>2,500hr</td><td>100hr</td></tr>
<tr><td>4</td><td>Air intake</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>5</td><td>Remote indication switching</td><td>Thermostat ON signal indication</td><td>Fan output indication</td></tr>
<tr><td>6</td><td>Humidifier control</td><td>Always operated while in heating mode</td><td>Operated depending on the condition</td></tr>
<tr><td>7</td><td rowspan="2">Air flow set in case of heat thermostat OFF</td><td>Low</td><td>Extra low</td></tr>
<tr><td>8</td><td>Setting air flow</td><td>Depends on SW1-7</td></tr>
<tr><td>9</td><td>Auto reset function</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>10</td><td>Power ON/OFF</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>MODELS</th><th>SW 2</th><th>MODELS</th><th>SW 2</th></tr><tr><td>PLFY-P32VKM.UK</td><td> 
</td><td>PLFY-P50VKM.UK</td><td> 
</td></tr><tr><td>PLFY-P40VKM.UK</td><td> 
</td><td>PLFY-P63VKM.UK</td><td> 
</td></tr></table></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
Selection</td><td>1</td><td>Heat pump / Cool only</td><td>Cooling only</td><td>Heat pump</td><td rowspan="10">Indoor controller board
Set while the unit is off.
<At delivery>
 

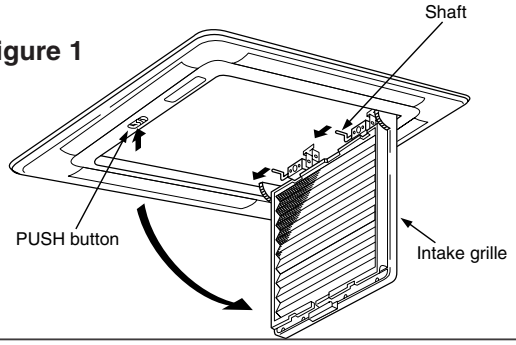
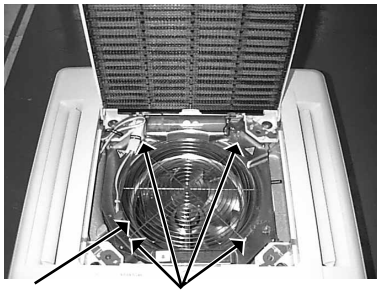
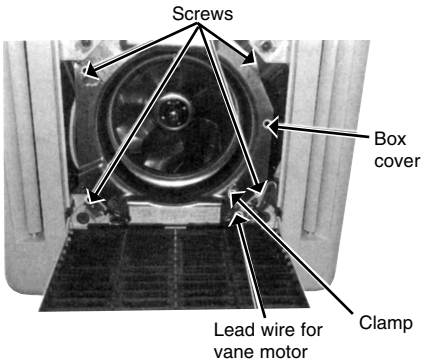
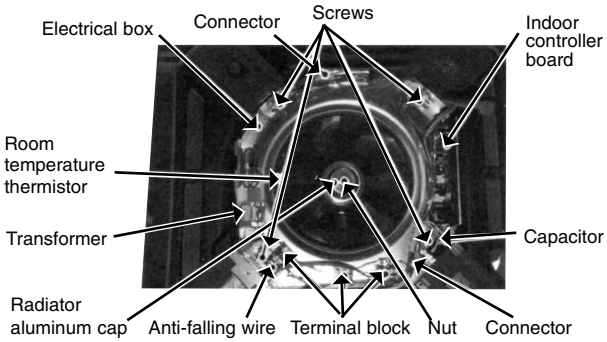
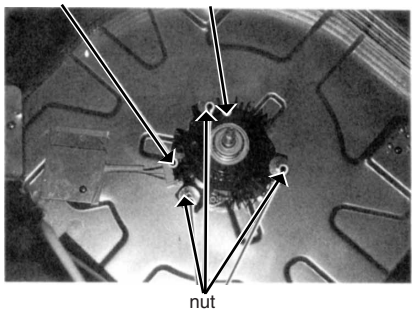
(Note1) At cooling mode, each angle can be used only for 1 hour.
(SW 3-9)
PLFY-P32, P40VKM.UK=ON
PLFY-P50, P63VKM.UK=OFF</td></tr>
<tr><td>2</td><td>Louver</td><td>Available</td><td>Not available</td></tr>
<tr><td>3</td><td>Vane</td><td>Available</td><td>Not available</td></tr>
<tr><td>4</td><td>Vane 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</td><td>Horizontal angle</td><td>Down B, C</td></tr>
<tr><td>7</td><td>Indoor linear expansion valve opening</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>8</td><td>Heater 4deg. up</td><td>Not effective</td><td>Effective</td></tr>
<tr><td>9</td><td>Superheat setting temperature</td><td>5deg.(R-22)/9deg.(R407C)</td><td>2deg.(R-22)/6deg.(R407C)</td></tr>
<tr><td>10</td><td>Superheat setting temperature</td><td>15deg.</td><td>10deg.</td></tr>
<tr><td>SW4
Unit
Selection</td><td>1~3</td><td colspan="3"> 
</td><td>Indoor controller board
Set while the unit is off.
<At delivery>
 
</td></tr>
</table>

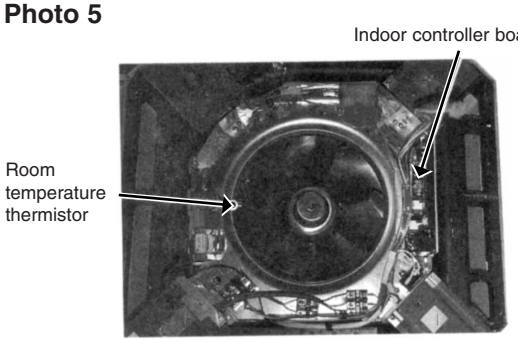
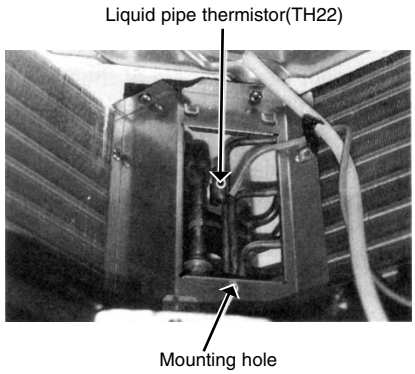
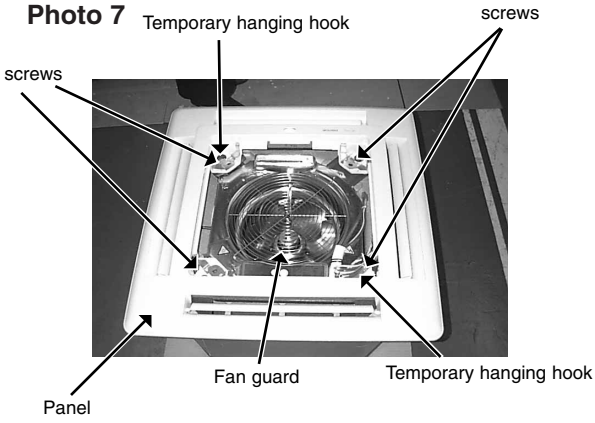
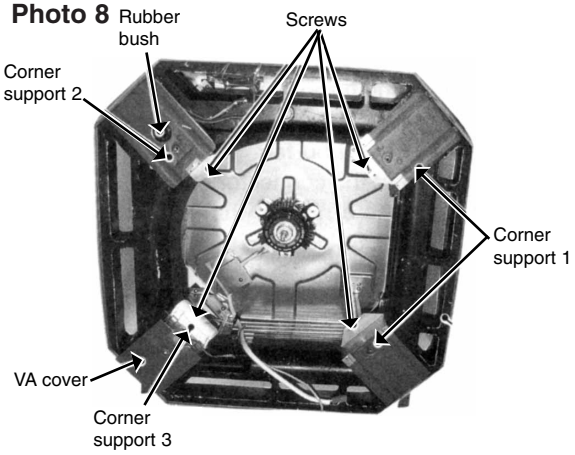
Switch	Pole	Operation by switch	Remarks
SWA Set the Ceiling height	1~3	(High ceiling) 3 (Standard) 2 (Silent) 1  ✻ Ceiling height can be changed depending on SWB setting.	Address board <At delivery> 
SWB Discharge Air Direction	3	Not used 3 way 4 way  SWB \ SWA: 1 / 2 / 3 3 way: 2.7m / 3.0m / 3.3m 4 way: 2.4m / 2.7m / 3.0m	Address board <At delivery> 
SWC Option	2	Option Standard  When attaching the optional high performance filter elements (filter casement) to the unit, be sure to attach it to the option side in order to prevent the air flow reducing.	Address board <At delivery> 
SW11 1st digit address setting SW12 2st digit address setting	Rotary switch	 Address setting should be done when network remote controller (PAR-F25MA) is being used.	Address board Address can be set while the unit is stopped. <At delivery> 
SW14 Connection No. setting	Rotary switch	 This is the switch to be used when the indoor unit is operated with R2, R3, series outdoor unit as a set.	Address board <At delivery> 
SW5 Voltage Selection	2	 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.	Address board <At delivery> 

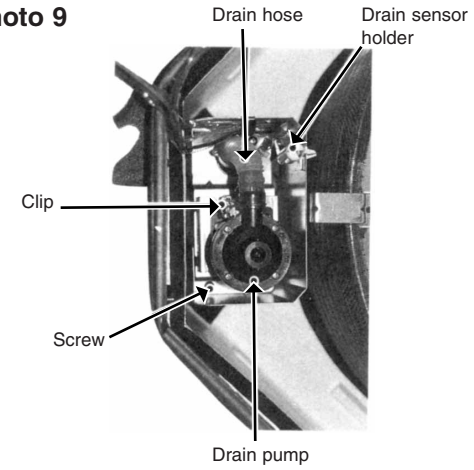
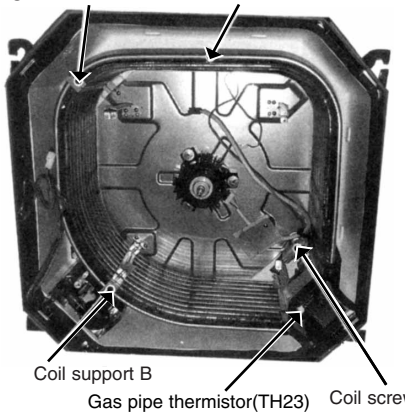
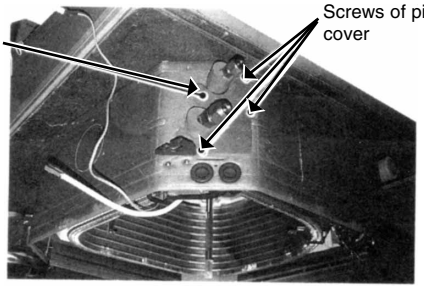
8 DISASSEMBLY PROCEDURE

1. INDOOR UNIT
PLFY-P63VKM.UK

Be careful on removing heavy parts.

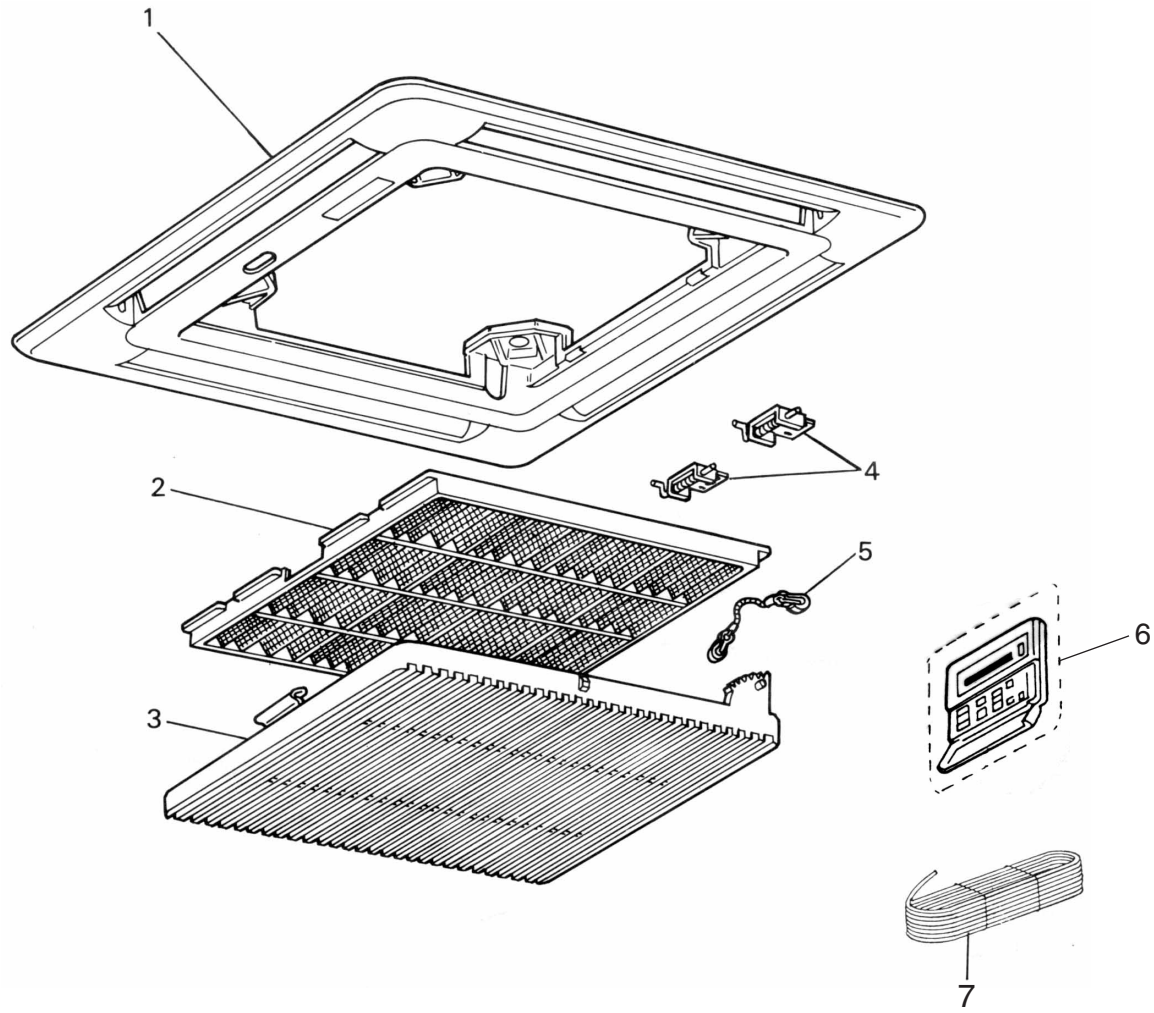
OPERATING PROCEDURE	PHOTOS&ILLUSTRATIONS
1. Removing the air intake grille (1) Press the PUSH button. (2) Open the intake grille 90°. (3) Remove the clip. (4) Slide the shaft in the hinge to the left and remove the intake grille.	**Figure 1** 
2. Removing the fan guard. (1) Open the intake grille. (2) Remove the 4 screws of the fan guard.	**Photo 1** 
3. Removing the electrical parts box (1) Remove the fan grand. (2) Disconnect the lead wire of the vane motor from the clamp, and disconnect the red connector (8P). (3) Remove 2 of 4 screws from the electrical parts cover. (4) Remove the electrical parts cover. (5) Disconnect the following connectors from the box. Red (3P) for the fan motor White (2P) for the indoor coil thermistor Blue (2P) for the drain pump White (4P) for the drain sensor (6) Disconnect the green anti-falling wire of the electrical parts box. (7) Remove 3 of 4 screws from the electrical parts box, and loosen the other screw. (8) Pull out the electrical parts box. Electrical parts inside the box Terminal block Transformer Indoor fan capacitor Room temperature thermistor Indoor controller board	**Photo 2**  **Photo 3** 
4. Removing the fan motor (1) Remove the fan guard. (2) Remove the turbo-fan nut and radiator aluminum cap. (3) Pull out the turbo fan. (4) Disconnect the connector of the fan motor lead wire. (5) Remove the 3nuts of fan motor.	**Photo 4** 

OPERATING PROCEDURE	PHOTOS&ILLUSTRATIONS
5. Removing the room temperature thermistor (1) Remove the fan guard. (2) Remove the electrical box cover (3) Remove the holder and the room temperature thermistor by pulling the catch. (4) Disconnect the red connector, CN20, on the indoor controller board.	**Photo 5** 
6. Removing the liquid pipe thermistor (1) Remove the fan guard. (2) Remove the electrical box cover. (3) Remove the electrical box. (4) Remove the turbo fan. (5) Remove the screw of the service panel. (6) Remove the service panel. (7) Remove the liquid pipe thermistor(TH22) from the holder attached to the copper pipe. (8) Disconnect the 2-pin white connector.	**Photo 6** 
7. Removing the panel (1) Open the intake grille. (2) Disconnect the connector the vane motor. (3) Remove 4 screws of the panel. (4) Pulling the temporary handing hook, remove the panel.	**Photo 7** 
8. Removing the drain pan (1) Remove the panel. (2) Remove the fan guard. (3) Remove the rubber bushing. (4) Drain the remaining water in the drain pan. (5) Remove the electrical box cover. (6) Remove the electrical box. (7) Remove the screw of the V.A. cover, and remove the V.A. cover. (8) Remove each screw of the corner supports 1,2, and 3, and remove the corner supports 1,2 and 3. (9) Pull out the drain pan. ※Pull the left and right of the pan gradually. Be careful not to crack or damage the pan.	**Photo 8** 

OPERATING PROCEDURE	PHOTOS&ILLUSTRATIONS
9. Removing the drain pump and drain sensor (1) Remove the panel. (2) Remove the fan guard. (3) Remove the electrical parts cover. (4) Remove the electrical parts box. (5) Remove the drain pan. (6) Remove 4 screws of the drain pump. (7) Pulling the clip of the drain hose, pull out the drain hose from the drain pump. (8) Remove the drain sensor and the holder. (9) Pull out the drain pump.	**Photo 9** 
10. Removing the gas pipe thermistor (1) Remove the panel. (2) Remove the fan guard. (3) Remove the electrical parts cover. (4) Remove the electrical parts box. (5) Remove the drain pan. (6) Remove the turbo fan. (7) Remove the gas pipe thermistor(TH23) from the holder attached to the copper pipe. (8) Disconnect the 4-pin connector.	**Photo 10** 
11. Removing the heat exchanger (1) Remove the panel. (2) Remove the fan guard. (3) Remove the electrical parts cover. (4) Remove the electrical parts box. (5) Remove the drain pan. (6) Remove the turbo fan. (7) Remove the screw of the coil support A. (8) Remove 2 screws of the coil support B. (9) Remove 2 screws of the coil. (10) Remove 4 screws of the piping cover of the outer wall, and pull out the piping cover.	**Photo 11** 

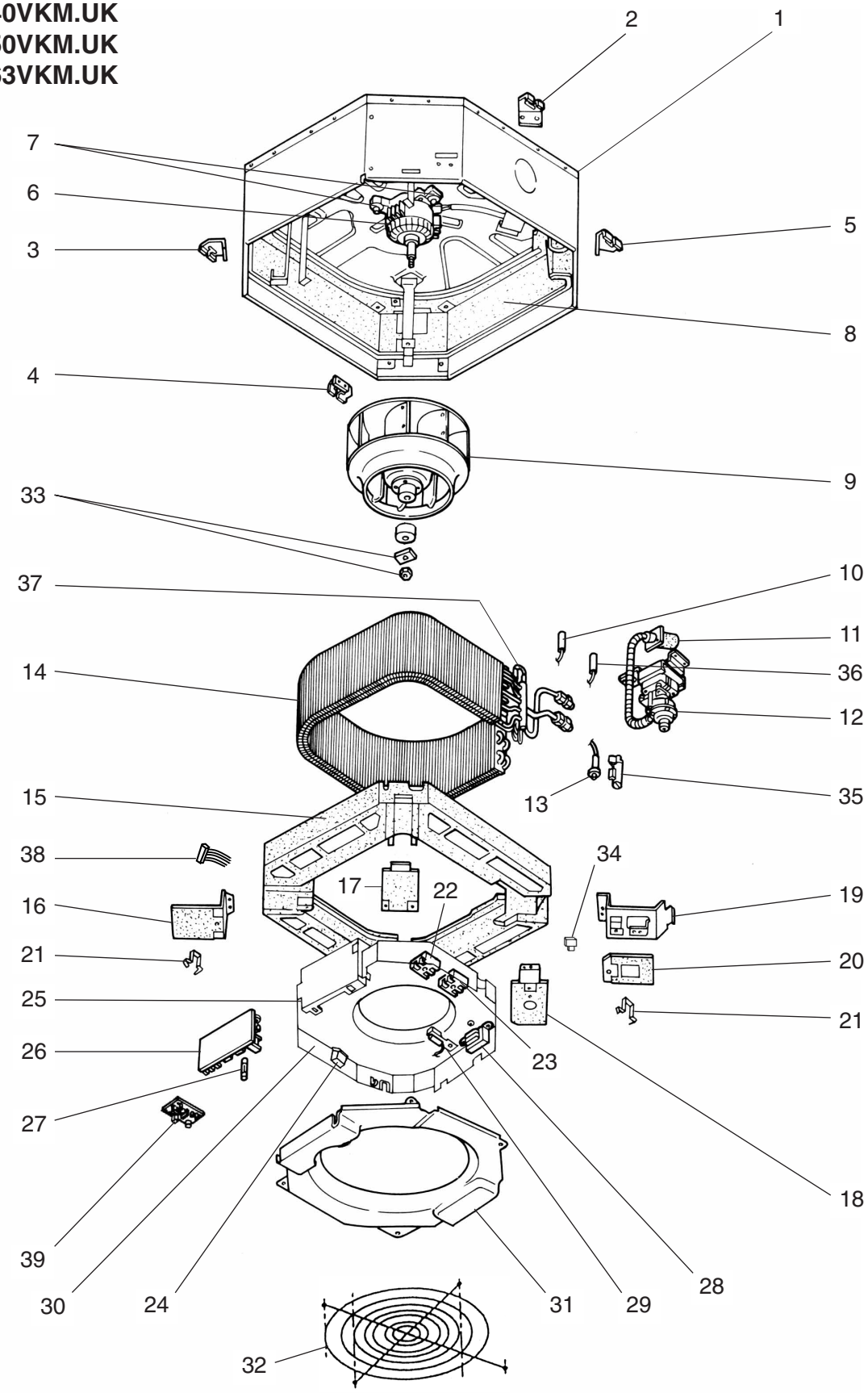
9 PARTS LIST

PANEL PARTS
PLFY-P32VKM.UK
PLFY-P40VKM.UK
PLFY-P50VKM.UK
PLFY-P63VKM.UK



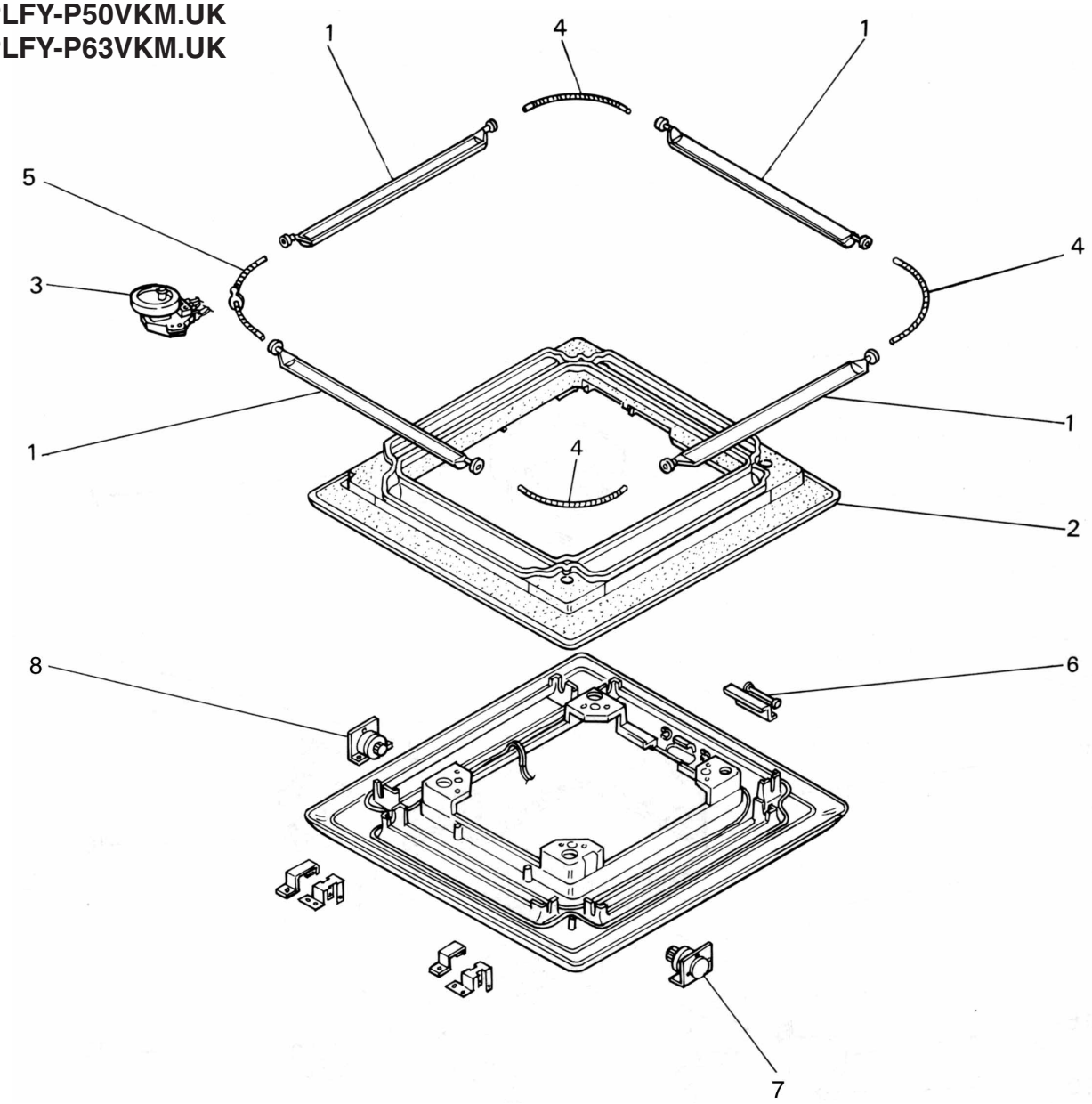
No.	Part No.	Part Name	Specification	Q'ty/set PLFY-P32/P40/P50/P63 VKM.UK	Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price Unit	Price Amount
1	S70 29H 003	AIR OUTLET GRILLE		1					
2	S70 29H 500	AIR FILTER		1					
3	S70 29H 691	INTAKE GRILLE		1					
4	S70 29H 061	HINGE		2					
5	S70 29H 098	GRILLE HANGER		1					
6	S70 B00 713	REMOTE CONTROLLER		1		R.B			
7	S70 A00 305	REMOTE CONTROLLER CABLE	10m	1					

FUNCTIONAL PARTS
PLFY-P32VKM.UK
PLFY-P40VKM.UK
PLFY-P50VKM.UK
PLFY-P63VKM.UK



No.	Part No.	Part Name	Specification	Q'ty/set				Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price	
				PLFY-P·VKM.UK							Unit	Amount
				P32	P40	P50	P63					
1	S70 002 687	BASE		1	1	1	1					
2	S70 101 130	LEG		1	1	1	1					
3	S70 100 130	LEG		1	1	1	1					
4	S70 101 130	LEG		1	1	1	1					
5	S70 100 130	LEG		1	1	1	1					
6	S70 E00 762	FAN MOTOR	PAI-V30F	1	1	1	1		MF			
7	S70 001 133	MOTOR MOUNT		3	3	3	3					
8	S70 001 659	INNER COVER		1	1	1	1					
9	S70 41N 114	TURBO FAN		1	1	1	1					
10	S70 12B 202	LIQUID PIPE THERMISTOR		1	1	1	1		TH22			
11	S70 29H 523	DRAIN SOCKET		1	1	1	1					
12	S70 55K 355	DRAIN PUMP		1	1	1	1		DP			
13	S70 001 266	DRAIN SENSOR		1	1	1	1		DS			
14	S70 12B 480	HEAT EXCHANGER		1	1							
	S70 14B 480	HEAT EXCHANGER				1						
	S70 15B 480	HEAT EXCHANGER					1					
15	S70 A00 529	DRAIN PAN		1	1	1	1					
16	S70 001 660	CORNER SUPPORT(1)		1	1	1	1					
17	S70 002 660	CORNER SUPPORT(2)		1	1	1	1					
18	S70 003 660	CORNER SUPPORT(3)		1	1	1	1					
19	S70 004 660	CORNER SUPPORT(4)		1	1	1	1					
20	S70 001 657	VA COVER ASSY		1	1	1	1					
21	S70 001 099	PANEL HOOKS		2	2	2	2	(PART OF GRILLE)				
22	S70 521 716	POWER SUPPLY TERMINAL BLOCK	(L, N, GND)	1	1	1	1		TB2			
23	S70 B02 716	TRANSMISSION TERMINAL BLOCK	(M1, M2, S)	1	1	1	1		TB5			
24	S70 29H 255	FAN MOTOR CAPACITOR	2.5μF 400V	1	1	1	1		C			
25	S70 001 656	B.BOX PLATE ASSY		1	1	1	1					
26	S70 030 310	INDOOR CONTROLLER BOARD		1					I.B			
	S70 040 310	INDOOR CONTROLLER BOARD			1				I.B			
	S70 050 310	INDOOR CONTROLLER BOARD				1			I.B			
	S70 060 310	INDOOR CONTROLLER BOARD					1		I.B			
27	S70 001 239	FUSE	250V 6.3A	1	1	1	1	(PART OF THE BOARD)	FUSE			
28	S70 B02 799	TRANSFORMER		1	1	1	1		T			
29	S70 050 202	ROOM TEMPERATURE THERMISTOR		1	1	1	1		TH21			
30	S70 003 501	ELECTRICAL PARTS COVER		1	1	1	1					
31	S70 002 502	BELL MOUTH		1	1	1	1					
32	S70 A00 675	FAN GUARD		1	1	1	1					
33	S70 001 097	NUT/WASHER/CAP		1	1	1	1					
34	S70 A48 524	DRAIN PLUG		1	1	1	1					
35	S70 006 533	SENSOR HOLDER		1	1	1	1					
36	S70 060 202	GAS PIPE THERMISTOR		1	1	1	1		TH23			
37	S70 12A 401	LINEAR EXPANSION VALVE		1	1	1	1		LEV			
38	S70 B02 304	ADDRESS CABLE		1	1	1	1					
39	S70 05B 294	ADDRESS BOARD		1	1	1	1		A.B			

PANEL PARTS
PLFY-P32VKM.UK
PLFY-P40VKM.UK
PLFY-P50VKM.UK
PLFY-P63VKM.UK



No.	Part No.	Part Name	Specification	Q'ty/set PLFY-P32/P40 /P50/P63 VKM.UK	Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty	Price Unit	Price Amount
1	S70 29H 002	AUTO VANE		4					
2	S70 29H 085	AIR GUIDE		1					
3	S70 29H 223	VANE MOTOR		1		MV			
4	S70 29H 063	SPRING JOINT 1		1	<3/SET>				
5	S70 31H 063	SPRING JOINT 2		1					
6	S70 29H 056	PUSH BUTTON		1					
7	S70 29H 040	GRILLE GEAR RIGHT		1					
8	S70 29H 041	GRILLE GEAR LEFT		1					
(9)	S70 29H 049	LID (UP)		1					

Mr.SLIM™

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE MITSUBISHI DENKI BLDG.MARUNOUCHI TOKYO100-8310 TELEX J24532 CABLE MELCO TOKYO

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