

October 2012
**No. OC231
REVISED EDITION-A**

TECHNICAL & SERVICE MANUAL

Series PKH Wall Mounted R22

Indoor unit
 [Model names]

PKH-2GKLA

[Service Ref.]

PKH-2GKLA

Revision :

- The indicated No. of CORNER COVER (page 65) has been corrected in REVISED EDITION-A.
- Some descriptions have been modified.

- Please void OC231.

- This manual does not cover the following outdoor units. When servicing them, please refer to the following service manual and this manual in a set.

[Service Ref.]

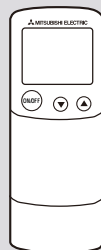
 PUH-2VKA₂

(OC128 REVISED EDITION-A)

 PUH-2AKA₁·TH-A (OC156)

 PUH-2NKA₁ (OC145)


Indoor unit

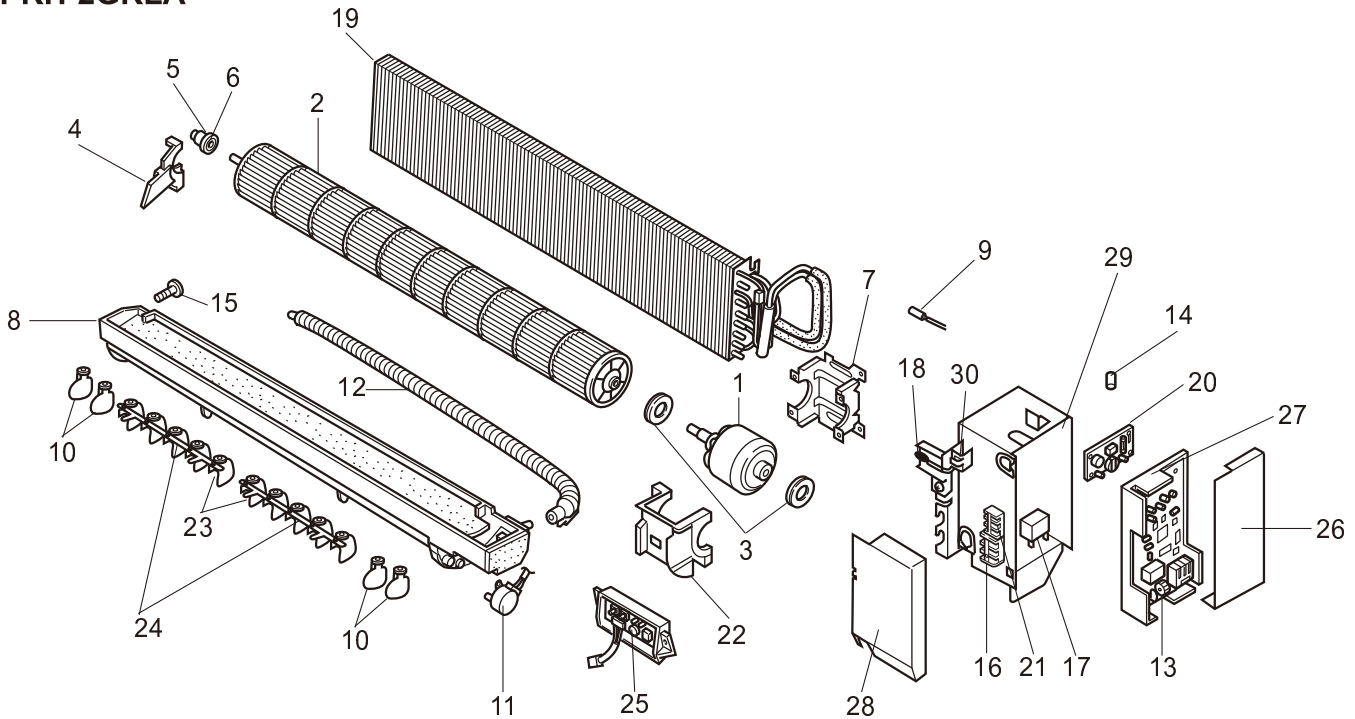


Remote controller

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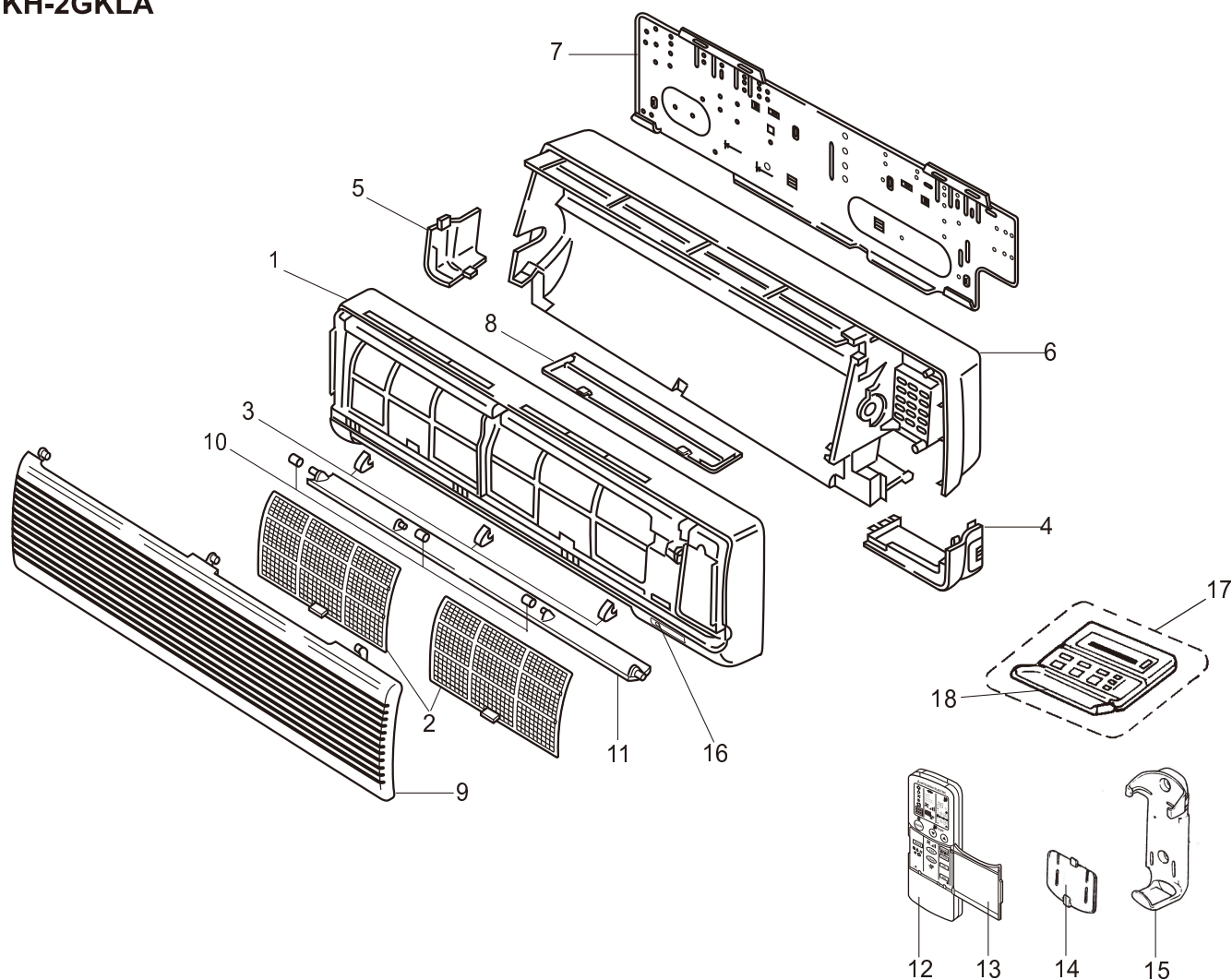
**ELECTRICAL PARTS
PKH-2GKLA**



No.	Parts No.	Parts Name	Specifications	PKH-2GKLA	Remarks (Drawing No.)	Wiring Diagram Symbol	Recommended Q'ty
1	T7WA01 762	FAN MOTOR	PMM/30K	1		MF	
2	RO1 07Y 114	LINE FLOWFAN		1			
3	RO1 07Y 105	RUBBER MOUNT		2			
4	RO1 07Y 106	BEARING SUPPORT		1			
5	RO1 005 103	SLEEVE BEARING		1			
6	RO1 07Y 102	BEARING MOUNT		1			
7	RO1 07Y 130	MOTOR SUPPORT		1			
8	T7W 07Y 530	NOZZLE ASSEMBLY		1			
9	T7WE06 202	PIPE TEMPERATURE THERMSTOR		1		RT2	
10	RO1 09Y 038	GUIDE VANE		4			
11	T7WE13 223	VANE MOTOR		1		MV	
12	RO1 07Y 527	DRAIN HOSE		1			
13	T7WE12 310	INDOOR CONTROLLER BOARD		1		I.B	
14	T7W 520 239	FUSE	250V 6.3A	2		F1,F2	
15	RO1 07Y 524	DRAIN PLUG		1			
16	T7W 521 716	TERMMAL BLOCK	3P(L, N, ⊕)	1		TB2	
17	RO1 588 255	CAPACITOR	20μF ×440V	1		C	
18	T7WE05 202	ROOMTEMPERATURE THERMSTOR		1		RT1	
19	RO1 16Y 480	HEAT EXCHANGER		1			
20	T7WE02 313	POWER BOARD		1		P.B	
21	T7W 517 716	TERMMAL BLOCK	3P(1, 2, 3)	1		TB4	
22	RO1 07Y 135	MOTOR COVER		1			
23	RO1 07Y 038	GUIDE VANE		10			
24	RO1 07Y 059	ARM		2			
25	RO1 50J 317	WMERLESS ADAPTER CONTROLLER BOARD		1		WB	
26	—	CONTROLLER COVER		1	(BG02/194H05)		
27	—	CONTROLLER CASE		1	(BG25B573H05)		
28	—	TERMMAL COVER		1	(BG02/195H10)		
29	—	ELECTRICAL PARTS COVER		1	(BG00V196G35)		
30	—	SENSOR HOLDER		1	(RG25C546H06)		

PARTS LIST (non-RoHS compliant)

STRUCTURAL PARTS PKH-2GKLA



No.	Parts No.	Parts Name	Specifications	PKH-2GKLA	Remarks (Drawing No.)	Wiring Diagram Symbol	Recom- mended Q'ty
1	R01 89Y 651	FRONT PANEL		1			
2	R01 A16 500	AIR FILTER		2			
3	R01 07Y 096	SCREW CAP		3			
4	R01 10Y 658	CORNER COVER (R)		1			
5	R01 08Y 658	CORNER COVER (L)		1			
6	R01 07Y 635	BOX ASSEMBLY		1			
7	R01 07Y 808	BACK PLATE		1			
8	R01 07Y 623	UNDER COVER		1			
9	R01 07Y 691	FRONT GRILLE		1			
10	R01 07Y 092	VANE SLEEVE		1			
11	R01 07Y 002	AUTO VANE		1			
12	T7W E04 714	WIRELESS REMOTE CONTROLLER		1			
13	T7W E01 049	WIRELESS REMOTE CONTROLLER DOOR		1			
14	R01 07Y 050	BATTERY COVER		1			
15	R01 07Y 075	WIRELESS REMOTE CONTROLLER HOLDER		1			
16	R01 24K 658	RECEIVING UNIT		1		RU	
17	T7W E04 713	REMOTE CONTROLLER		1		R.B	
18	T7W E03 049	REMOTE CONTROLLER COVER		1			

1. REFRIGERANT PIPES

Service Ref. : PKH-2GKLA

Part No	PAC-05FFS-E	PAC-07FFS-E	PAC-10FFS-E	PAC-15FFS-E
Pipe length	5m	7m	10m	15m
Pipe size O.D.	Liquid:φ9.52		Gas:φ15.88	
Connection method	Indoor unit:Flared		Outdoor unit:Flared	

Note 1. How to connect refrigerant pipes.

Factory supplied optional refrigerant pipings contain refrigerant at the above atmospheric pressures. As long as the connection takes no more than 5 minutes, no air will enter, and there will be no need for air purging. Remove the blind caps and make the connections within 5 minutes. After the connections for the indoor and outdoor units are made, open the stop valve on the outdoor unit to allow refrigerant gas to flow.

If piping length exceeds 30m, an additional charge of refrigerant is needed.

Note 2. The following main parts are contained in the optional refrigerant piping kit.

Heat insulating cover, vinyl tapes, nipples, sleeve and flange (for wall hole).

2. TIMER

When using a program timer, PAC-SC32PTA, a program timer adapter (PAC-825AD) is also needed. (See page 70)

Service Ref.	PKH-2GKLA
Part No	PAC-SC32PTA (with setback function)
Model Name	Program timer

2-1 Program timer specifications

Service Ref.	PKH-2GKLA
Part name	Program timer
Part No.	PAC-SC32PTA
Exterior dimensions (inch)	5-4/32 × 4-23/32 × 23/32 (130×120×18mm)
Installation	Wall mount
Type of clock	Quartz
Clock accuracy	50 seconds/month at 25°C
Display-Time	Liquid crystal display
-Week	Liquid crystal display
-Timer setting unit	Liquid crystal display
Program cycle	24 hours
Timer setting unit	30 minutes
No. of set points	48/day
Power rating	5V DC 5% (Supplied by Remote Controller)
Setback function	Provided

2-2 Feature of program timer

(1) Daily timer function

Daily timer can be set in 30 minutes units for up to 24 hours.

Each unit can be set for unit ON, unit OFF, or setback operation.

(2) Setback operation (PAC-SC32PTA)

Set back operation is useful for reducing running costs

e.g. At a hotel with a 24-hour system

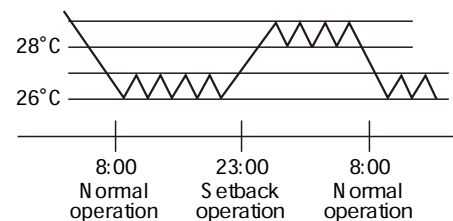
8:00~23:00 Cooling operation with set temperature at 26°C

23:00~8:00 Setback operation with 2 degrees of setback

As shown in the chart on the right, the set temperature rises 2 degrees automatically during the setback operation. When the setback operation ends, normal operation will begin.

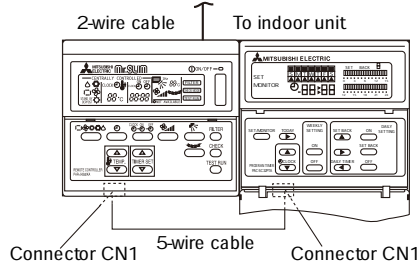
(3) Weekly timer function

Daily timer function can apply to each day of the week.



2-3. How to connect program timer

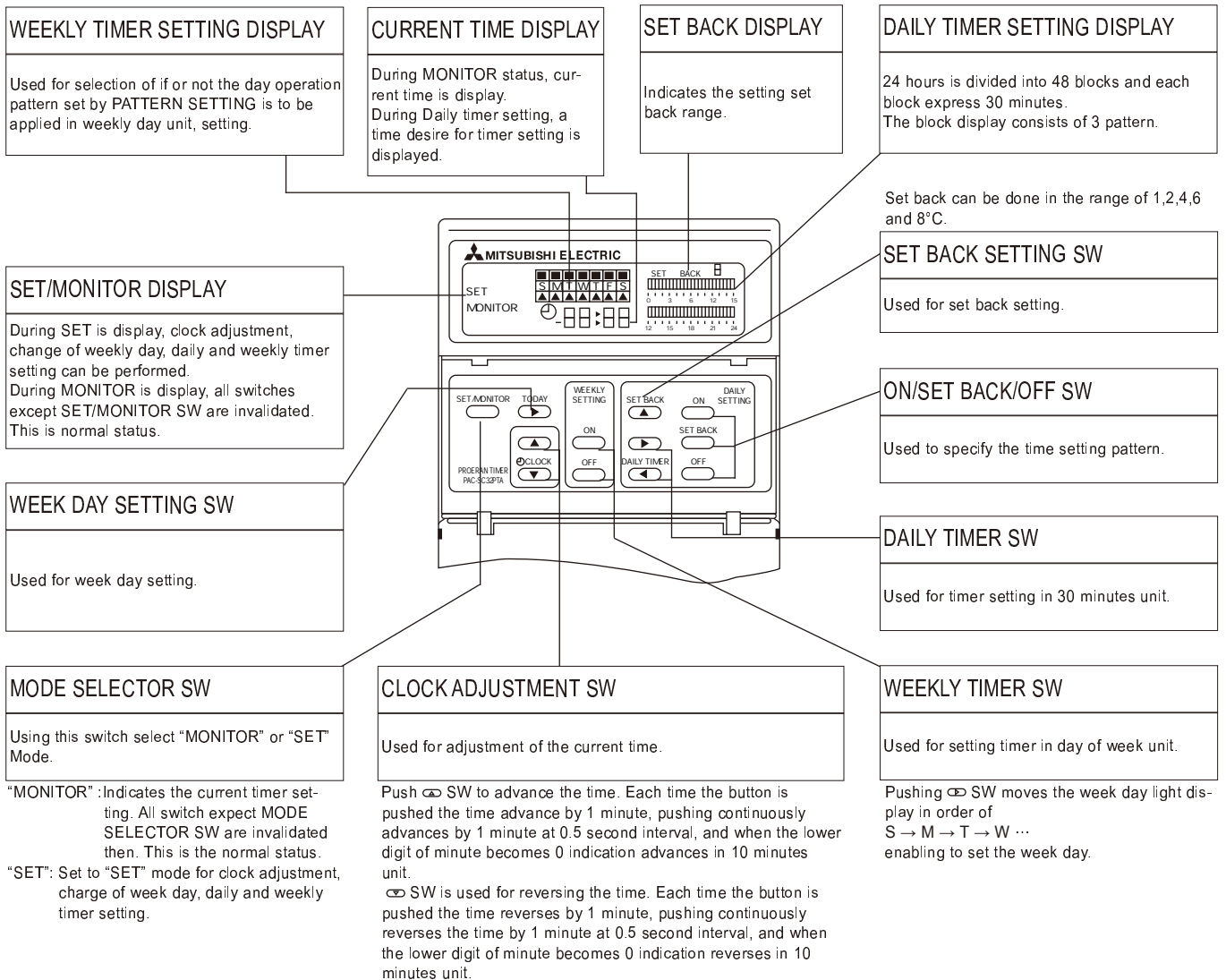
- (1) Install the program timer next to the remote controller the same way as the remote controller is installed.
- (2) Connect the program timer and the remote controller with a 6-wire cable as shown in the figure below.



NOTE: While the program timer is connected to the remote controller, the 24hour ON/OFF timer on the remote controller will not operate.

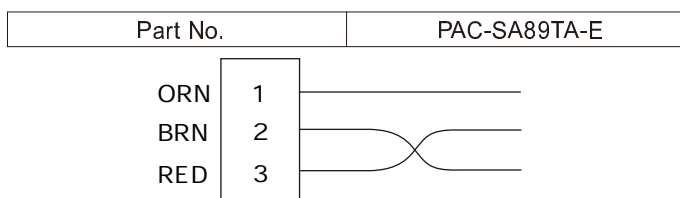
2-4 Names and functions

<PAC-SC32PTA>



3. TIMER ADAPTER

This adapter is needed for system control and for operation via external contacts. Adapter connection is described on page 57.



4. MULTIPLE REMOTE CONTROLLER ADAPTER

This adapter is needed for remote indication (operation/check). Adapter connection is described on page 59.

Part No.	PAC-SA88HA-E
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<input type="checkbox"/>	1	BRN
<input type="checkbox"/>	2	RED
<input type="checkbox"/>	3	ORN
<input type="checkbox"/>	4	YLW
<input type="checkbox"/>	5	GRN

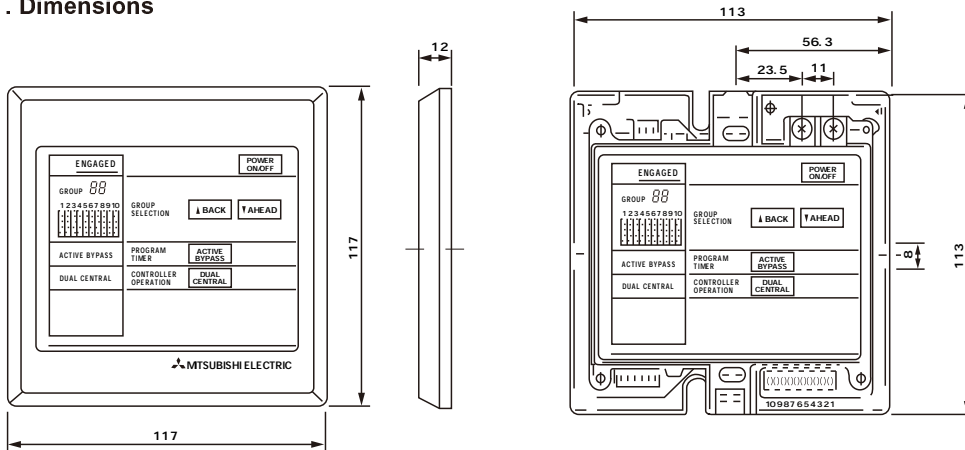
5. CENTRALIZED REMOTE CONTROLLER

Allows individual or combined control of up to 16 units. When using the PAC-805RC, the program timer adapter (PAC-825AD) is also needed.

Part No.	PAC-805RC
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5-1. Dimensions

Unit : mm



5-2. Functions

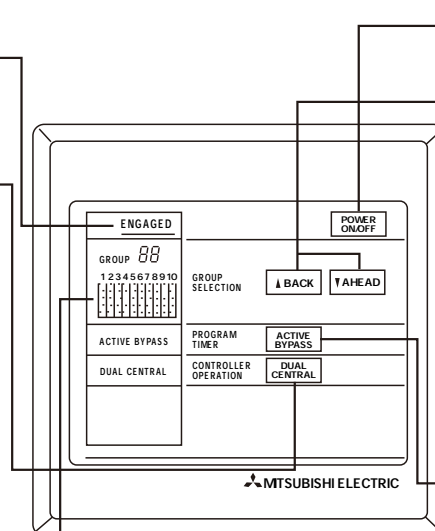
"ENGAGED" indicator
When this indicator is lit, transmission is in progress and all switches are inoperative.

DUAL/CENTRAL switch
This change-over switch governing the operation of the accessory remote controller.

"DUAL"
Instructions from both the accessory remote controller and the centralized remote controller are valid. (Priority given to the last instruction received.)

"CENTRAL"
ON/OFF switching by the accessory remote controller is invalidated. Control is by the centralized remote controller only. Initial setting is "DUAL".

LCD Matrix Display
This display indicates the operational status of all connected units either by steady lighting or by flashing.



POWER ON/OFF switch
Operation ON/OFF switch.

▲BACK ▼AHEAD buttons
These buttons are used to designate the attached unit(s). (They designate the unit that is centrally controlled.)

- When group "00" is designated; collective ON/OFF instruction is sent to all units.

- When group "01"-"16" is designated; ON/OFF instruction is sent to the designated units only.

ACTIVE/BYPASS switch
This is a change-over switch for the program timer. (It selects timer operation on the program timer.) Use "BYPASS" when a program timer is not connected. "ACTIVE"
The switch turns ON/OFF operational instructions from the program timer automatically. "BYPASS"
ON/OFF Operation is by the centralized remote controller only. Initial setting is "BYPASS".

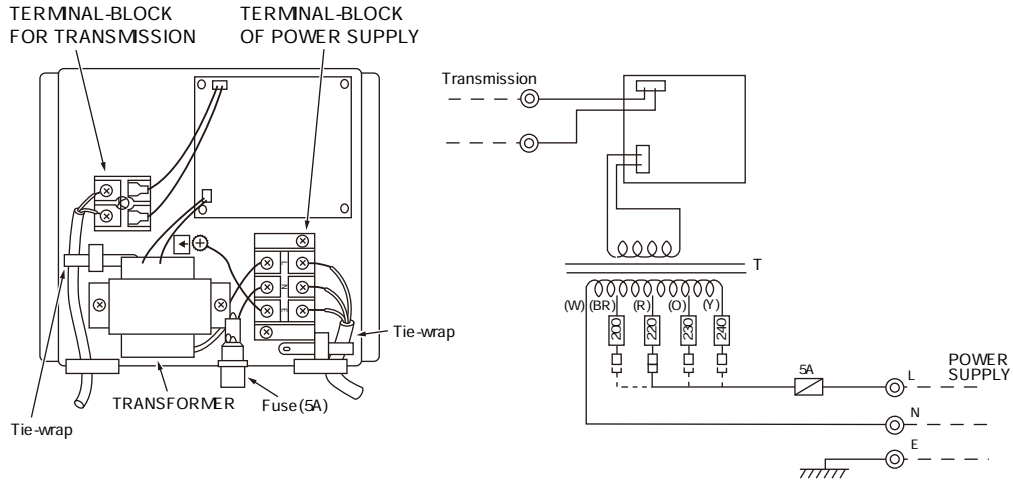
Independent "DUAL / CENTRAL" and "ACTIVE / BYPASS" setting of all the groups is possible. When the power supply to the centralized remote controller is cut due to power failure, all settings will return to original "DUAL" and "BYPASS".

5-3 Connection method

(1) Connections in the power supply cord

1. Connect the power supply cord to the power supply terminal-block and fix it in-place with a tie-wrap.
Connect a single phase 200V AC (220, 230, 240V) to Ⓐ Ⓝ.
As Ⓔ is the GND terminal, be sure to ground the earth wire.
2. Connect the transmission line to the transmission terminal-block and fix it in-place with a tie-wrap. Use a Ø1.6 (AWG 14) or above two-wire cable for the transmission line.

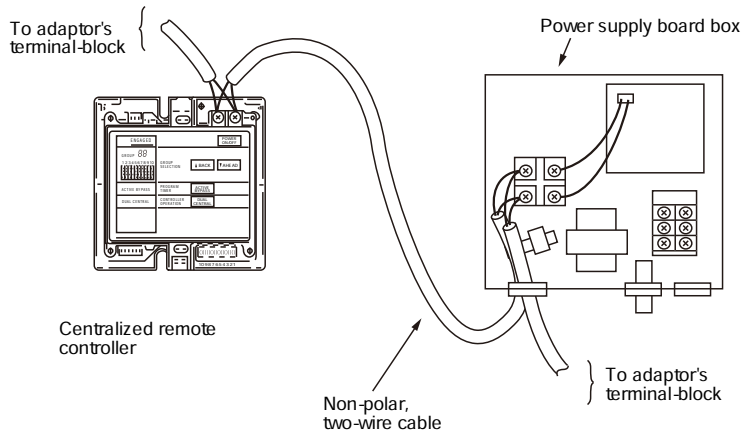
CAUTION : Never connect the power supply cord to the transmission terminal-block.



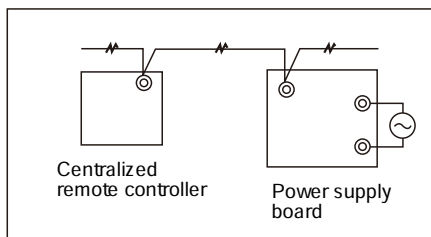
Wiring has to be changed when a 200, 230 or 240V power is supplied.

(2) Connection method of centralized remote controller and power supply board.

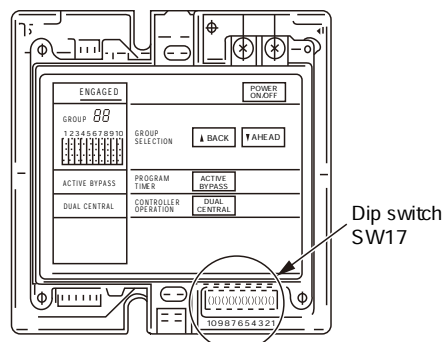
1. Connect the centralized remote controller and power supply board with a non-polar, two-wire cable.



2. Wiring diagram



3. Be sure to set the maximum address number with the dipswitch SW17 on the centralized remote controller.

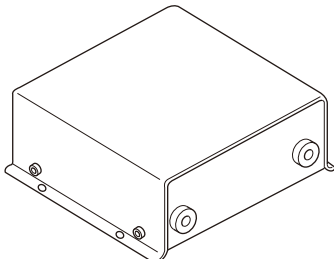

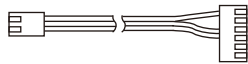




6. PROGRAM TIMER ADAPTER

This adapter is needed when a program timer (PAC-SC32PTA) or a centralized remote controller (PAC-805RC) is used.

Part No.	PAC-825AD
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6-1 Parts included

① ADAPTER	1P	② 3-core cable	1P	③ 3-core cable	1P
		 Length : 2m (6' 7")		 Length : 2m (6' 7")	
		 Length : 2m (6' 7")		 Length : 2m (6' 7")	

6-2 Connection method

Connection and wiring methods differ with the type of the indoor unit used. Confirm the type before carrying out the work.

(1) Connections in the adapter box

1. Connect the power supply cord to the terminal-block and fix it in-place with a tie-wrap.
Connect a single phase 200V AC(220, 230, 240V) to Ⓛ Ⓝ.
As Ⓧ is the GND terminal, be sure to ground the earth wire.
2. Connect the transmission line to the transmission terminal-block and fix it in-place with a tie-wrap (when a centralized remote controller is being used).
CAUTION : Never connect the power supply cord to the transmission terminal-block

Fig-1

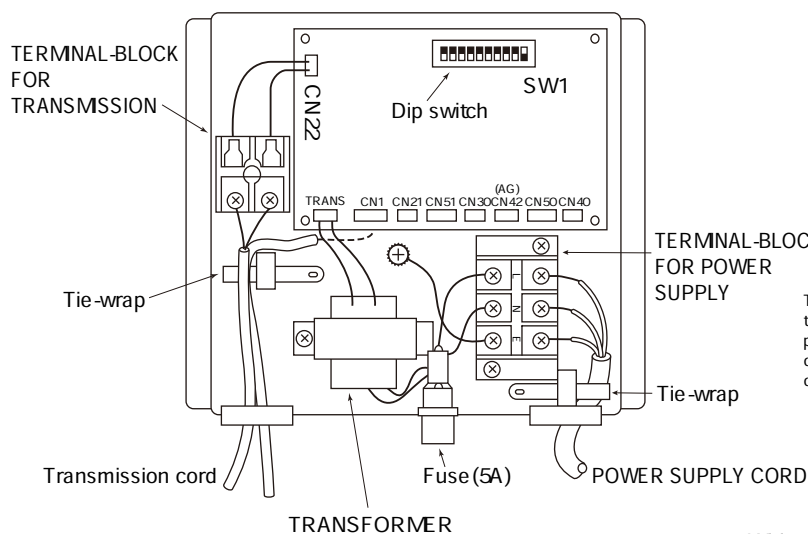
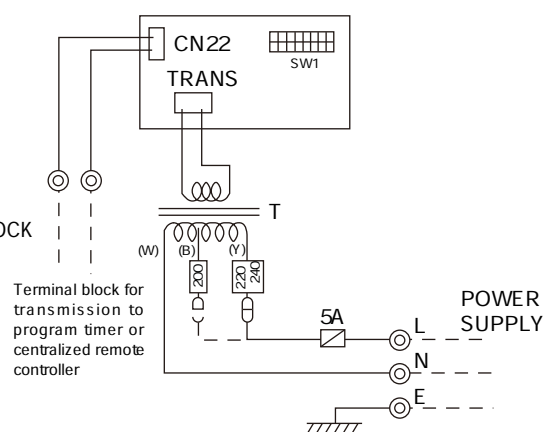


Fig-2



Wiring has to be changed when 200V power supply is used.

- (2) When the centralized remote controller is used, set the address number with the dipswitch SW1 of the program timer adapter.

7. Wired Remote Controller (with terminal block)

Part No.	PAR-JA240KAT-E
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Mr. SLIM™

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