

**SAMSUNG**

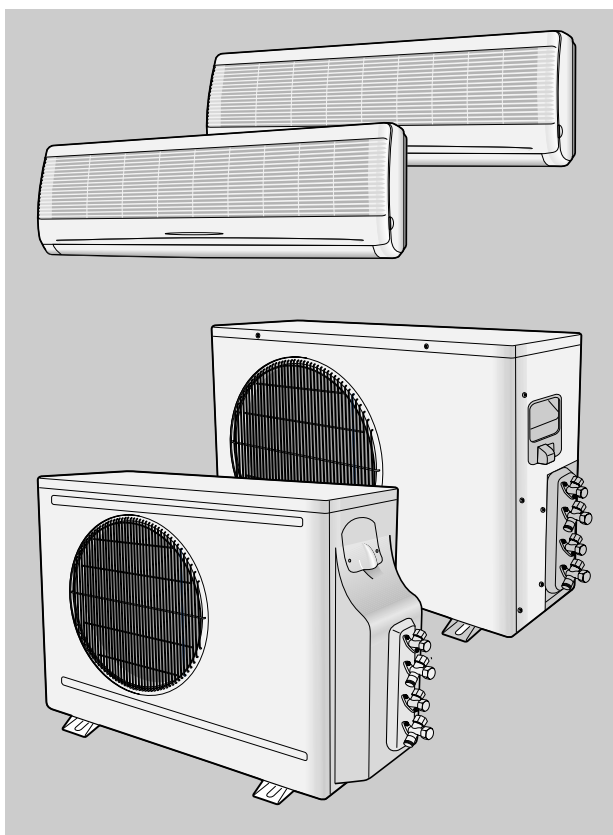
# ROOM AIR CONDITIONER

INDOOR UNIT  
AM26A1C13  
AM18A1C09

OUTDOOR UNIT  
UM26A1C2  
UM18A1C2

# ***SERVICE*** Manual

## AIR CONDITIONER



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# 1. Installation

## 1-1 Refrigerant Refill Procedure

If connecting pipe of more than 10 metres is installed, additional refrigerant should be charged by extra metre. You don't have to charge additional refrigerant up to 10 metres of connecting pipe.

1. Remove the valve stem cap and service port of 3-way valve.



2. Connect the charging hose of low pressure side of Manifold gauge to the packed valve having a charging port(1/20 Packed valve) as shown at the right figure.



3. Operate the unit at the cooling mode.



4. Slowly open the valve of the low pressure side of Manifold gauge counterclockwise until the low pressure of manifold gauge indicates 4.8 to 5.5 kg/cm<sup>2</sup> (68 a 78psi) at the high cool operation (1-unit operation) and the standard temperature.

It is recommend that refrigerant should be slowly put in. If the refrigerant is put in too quickly, compressor will be damaged.



5. Stop operation of the air conditioner.



6. Disconnect the charge hose of manifold gauge.



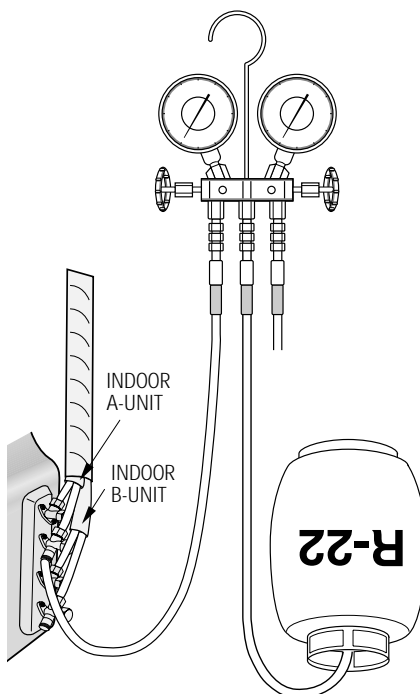
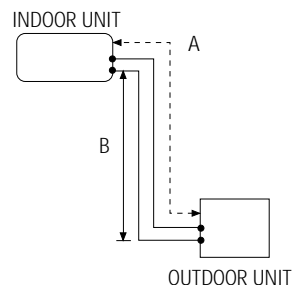
7. Close the cap of each valve.

### • Piping length and the height

		Pipe Size		Max.piping length A	Max height B
		LIQUID	GAS		
AM26A1C13	A-UNIT	1/4〃	1/2〃	15m(49ft 3in)	3m(9ft 10in)
	B-UNIT	1/4〃	1/2〃	15m(49ft 3in)	3m(9ft 10in)
AM18A1C09	A-UNIT	1/4〃	3/8〃	15m(49ft 3in)	3m(9ft 10in)
	B-UNIT	1/4〃	3/8〃	15m(49ft 3in)	3m(9ft 10in)

Additional refrigerant charge (R22,g)

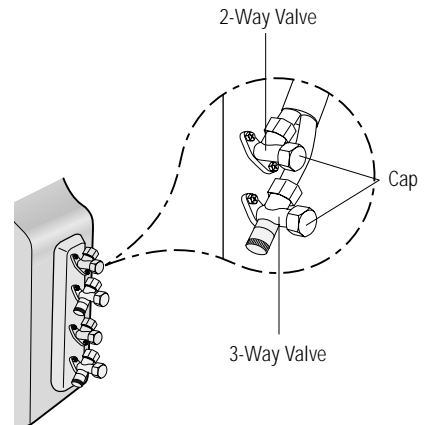
- When length of the pipe is over 5u by the unit, you should charge the refrigerant Formulas  
A-UNIT :  $10g \times (L_a - 10) / m$   
B-UNIT :  $10g \times (L_b - 10) / m$   
(L<sub>a</sub>:the length of A-unit's pipe L<sub>b</sub>:the length of B-unit's pipe)



## 1-2 ÒPump downÓ Procedure

---

1. Confirm that both the 2-way and 3-way valves are set to the open position.
  - (1) Remove the valve stem caps.
  - (2) Be sure to use a hexagonal wrench to operate the Gas side valve stems.
2. Operate the unit for 10 to 15 minutes.
3. Stop operation and wait for 3 minutes, then connect the charge set to the service port of the 3-way valve.
  - (1) Connect the charge hose with the push pin to the service port.
4. Air purging of the charge hose.
  - (1) Open the low-pressure valve on the charge set slightly to air purge from the charge hose.
5. Set the liquid side 2-way valve to the closed position.
6. Operate the air conditioner at the cooling cycle and stop operation immediately after setting the 3-way valve to the closed position when the gauge indicates 0 kg/cm<sup>2</sup>G.  
If the unit can not be operated at the Cooling Mode(weather is rather cool), operate the unit at the Turbo Mode. So that the unit can be operated.
7. Disconnect the charge set, and mount the both 3-way valve's stem nuts and the service port cap.



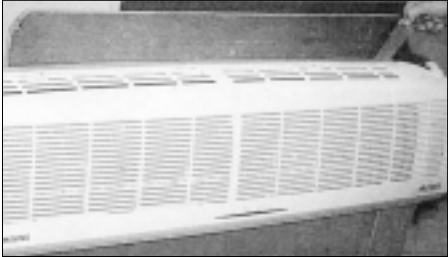
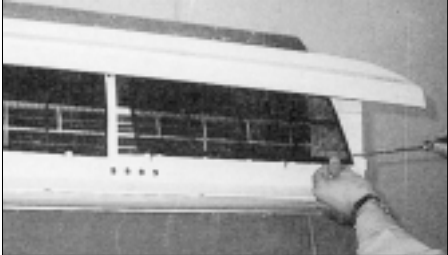

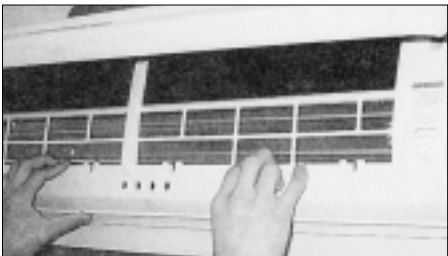

### Relocation of the air conditioner

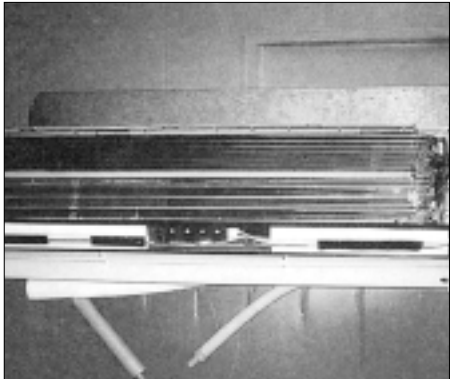

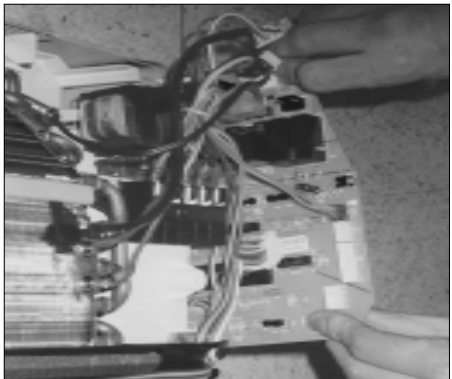
- Refer to this procedure when the unit is relocated.
1. Carry out the pump down procedure (refer to the details of 'pump down').
  2. Remove the power cord.
  3. Disconnect the assembly cable from the indoor and outdoor units.
  4. Remove the flare nut connecting the indoor unit and the pipe.  
At this time, cover the pipe of the indoor unit and the other pipe using a cap or vinyl plug to avoid foreign material entering.
  5. Disconnect the pipe connected to the outdoor unit.  
At this time, cover the valve of the outdoor unit and the other pipe using a cap or vinyl plug to avoid foreign material entering.
  6. Make sure you do not bend the connection pipes in the middle and store together with the cables.
  7. Move the indoor and outdoor units to a new location.
  8. Remove the mounting plate for the indoor unit and move it to a new location.



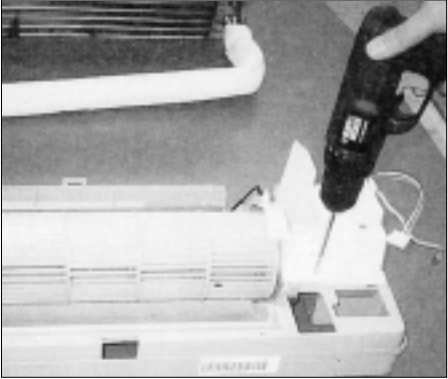
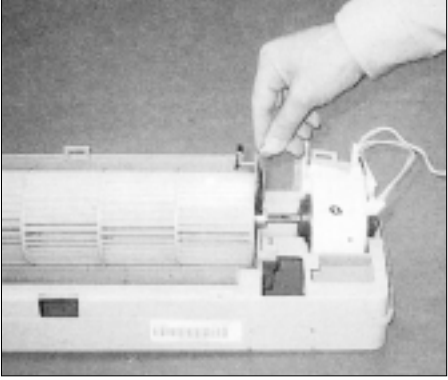
## 2. Disassembly and Reassembly

Stop operation of the airconditioner and remove the power plug from the wall outlet before repairing the unit

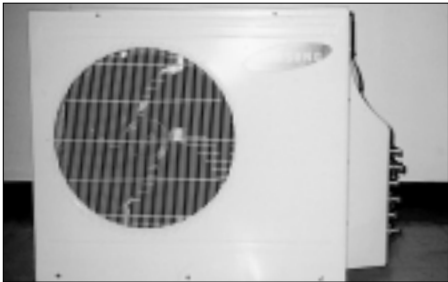
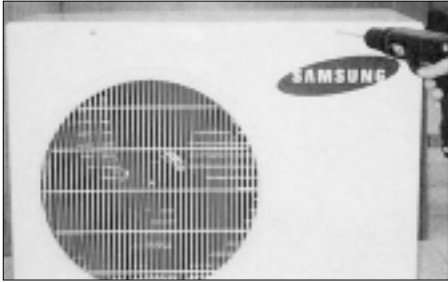
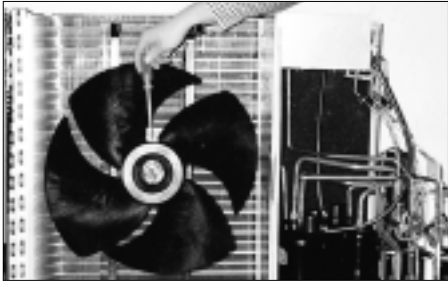


### 2-1 Indoor Unit

No	Parts	Procedure	Remark
①	Front Grille	<ol style="list-style-type: none"> <li>1) Stop the air conditioner operation and block the main power.</li> <li>2) Seperate the tape of front. Panel upper.</li> <li>3) Contract the second finger to the left and right handle and pull to open the inlet grille.</li> <li>4) Take the left and right filter out.</li> <li>5) Loosen one of the right fixing screw and seperate the terminal cover.</li> <li>6) Open the cover screw and loosen three fixing screws of front grille.</li> <li>7) Pull the upper left and right of discharge softly for the outside cover to be pulled out.</li> <li>8) Pull softly the lower part of discharge and push it up  <b>Caution:</b>            Assemble the front panel and fix the hooks of left and right.</li> </ol>	    

No	Parts	Procedure	Remark
②	Filter Frame	1) Loosen the left and right screw of the Holder Filter, and Separate the Holder Filter.	
③	Ass'y Tray Drain	1) Do ①②, above. Separate the holder at the rear side of Indoor unit.  2) Take the display PCB out. (Center of indoor unit).        3) Loosen three fixing screws of left and right.  4) Pull tray drain out from the back body.	 
④	Main PCB	1) Do "①②", above  2) Take all the connector of PCB upper side out.  3) Separate the outdoor unit connection wire from the terminal block.  4) If pulling the Main PCB up, it will be taken out. (Separate the TRANS hook, it before).	

No	Parts	Procedure	Remark
⑤	Heat Exchanger	<p>1) Do " ①②③④ ", above.</p> <p>2) Loosen the left screws of the heat exchanger.</p> <div data-bbox="372 584 781 693" style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <p>Lifting the heat exchanger up a little to push the up side for separation from the indoor unit</p> </div>	 
⑥	Fan Motor and Cross Fan	<p>1) Do " ①②③④⑤ ", above.</p> <p>2) Loosen the fixing two screws and separate the motor holder.</p> <p>3) Loosen the fixing screw of motor fan. (By use of M3 wrench) Separate the motor from the fan. Separate the fan motor the left holder bearing.</p>	 




## 2-2 Outdoor Unit

No	Parts	Procedure	Remark
①	Cabinet	<ol style="list-style-type: none"> <li>1) Turn off the unit and remove the power cable</li> <li>2) Remove the top cover.</li> <li>3) Remove the control box cover.</li> <li>4) Unplug the ass'y cable.</li> <li>5) Remove the cabi-side.</li> <li>6) Remove the cabi-front.</li> </ol> <p>* When you assemble the parts, check if the each parts and electric connectors are fixed firmly.</p>	<p>&lt;AM26A1C2&gt;</p>  <p>&lt;AM18A1C2&gt;</p> 
②	Fan Motor & Propeller Fan	<ol style="list-style-type: none"> <li>1) Do Procedure ① above.</li> <li>2) Remove the nut flange. (Turn to the right to remove as it is a left turned screw)</li> <li>3) Disassemble the propeller fan.</li> </ol>	<p>&lt;AM26A1C2&gt;</p>  <p>&lt;AM18A1C2&gt;</p>  

## 3. Troubleshooting

### 3-1 Items to be checked first

- 1) Is the voltage of the power correct?  
The input voltage shall be rating voltage  $\pm 10\%$  range.  
The airconditioner may not operate properly if the voltage is out of this range.
- 2) Is the link cable linking the indoor unit and the outdoor unit linked properly?  
The indoor unit and the outdoor unit shall be linked by 5 cables.  
Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.  
Otherwise the airconditioner may not operate properly.
- 3) When a problem occurs due to the contents illustrated in the table below it is a symptom not related to the malfunction of the airconditioner.

NO	Operation of air conditioner	Explanation
1	The COOL operation indication LED (Green) blinks when a power plug of the indoor unit is plugged in for the first time.	It indicates power is on. The LED stops blinking if the operation ON/OFF button on the remote control unit is pushed.
2	In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the IN DOOR FAN should operate.	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew
3	Fan speed setting is not allowed in AUTO or DRY mode.  	The speed of the indoor fan is set to LL in DRY mode. Fan speed is 5 steps is selected automatically in AUTO mode.
4	Compressor stops operation intermittently in DRY mode. 	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
5	Timer LED only of the indoor unit lights up and the air conditioner does not operate.	Timer is being activated and the unit is in ready mode. The unit operates normally if the timer operation is cancelled.
6	The compressor stops intermittently in a COOL mode or DRY mode, and fan speed of the indoor unit decreases.	The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air frozen depending on the inside/outside air temperature.

- 4) Indoor unit observes operation condition of the air conditioner, and displays self diagnosis details on the display panel.

NO	Display	Self Diagnosis
1	Operating LED blinking (1Hz)	Restore from power failure (input initial power)
2	TIMER LED blinking (1Hz)	Indoor unit Room sensor Error (open or short)
3	OPERATING and TIMER LED blinking (1Hz)	Indoor unit heat exchanger temperature sensor Error (open or short)
4	FAN LED blinking (1Hz)	Indoor fan malfunctioning (for speed is Below 380rpm)

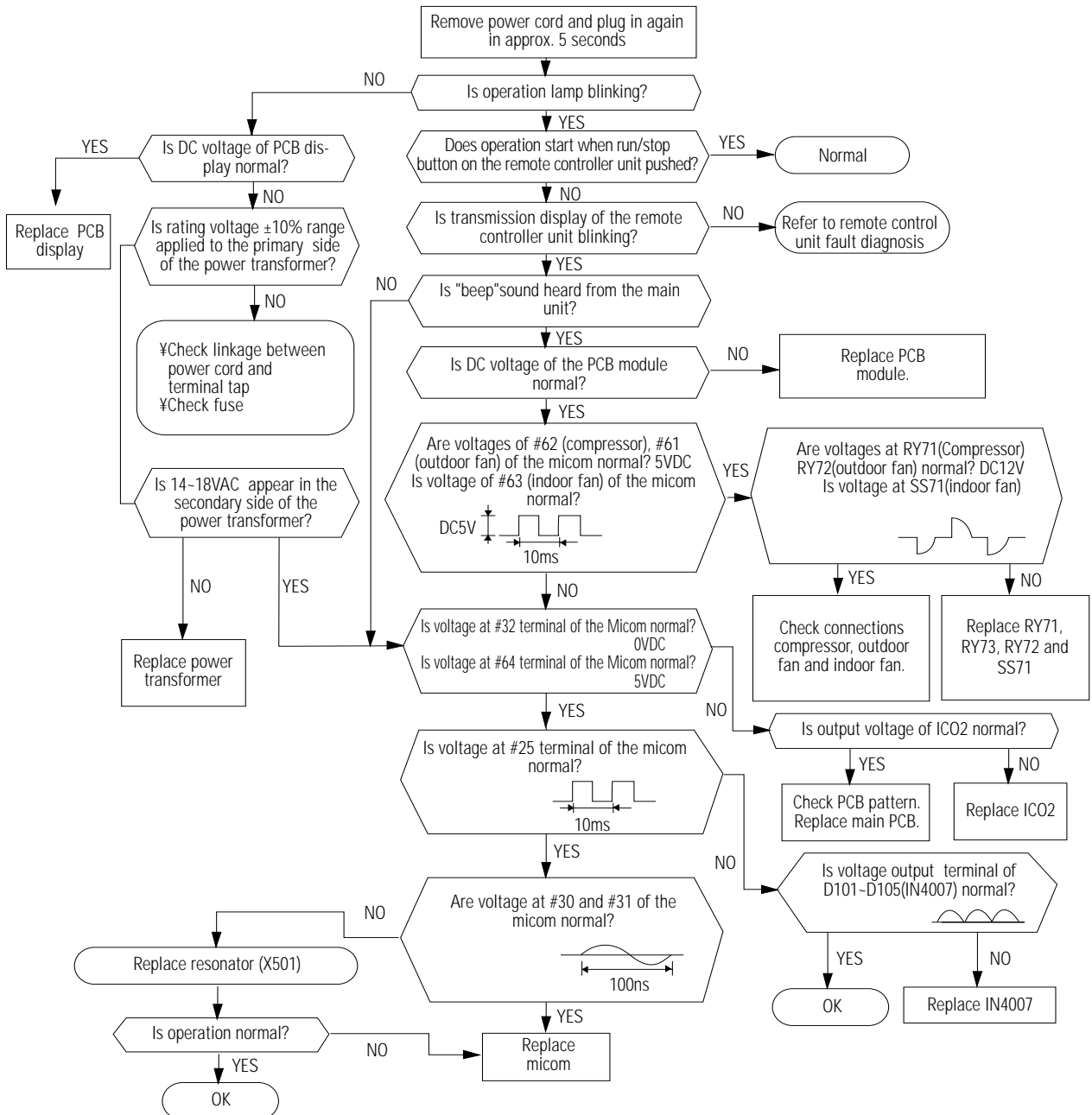
## 3-2 Fault Diagnosis by Symptom

### 3-2-1 No Power(completely dead)-Initial diagnosis

#### 1) Checklist :

- (1) Is input voltage normal?
- (2) Is AC power linked correctly?
- (3) Is output voltage of DC regulator IC KA7812(IC01) normal? (11.5VDC-12.5VDC)
- (4) Is output voltage of DC regulator IC KA7805(IC02) normal? (4.5VDC-5.5VDC)

#### 2) Troubleshooting procedure

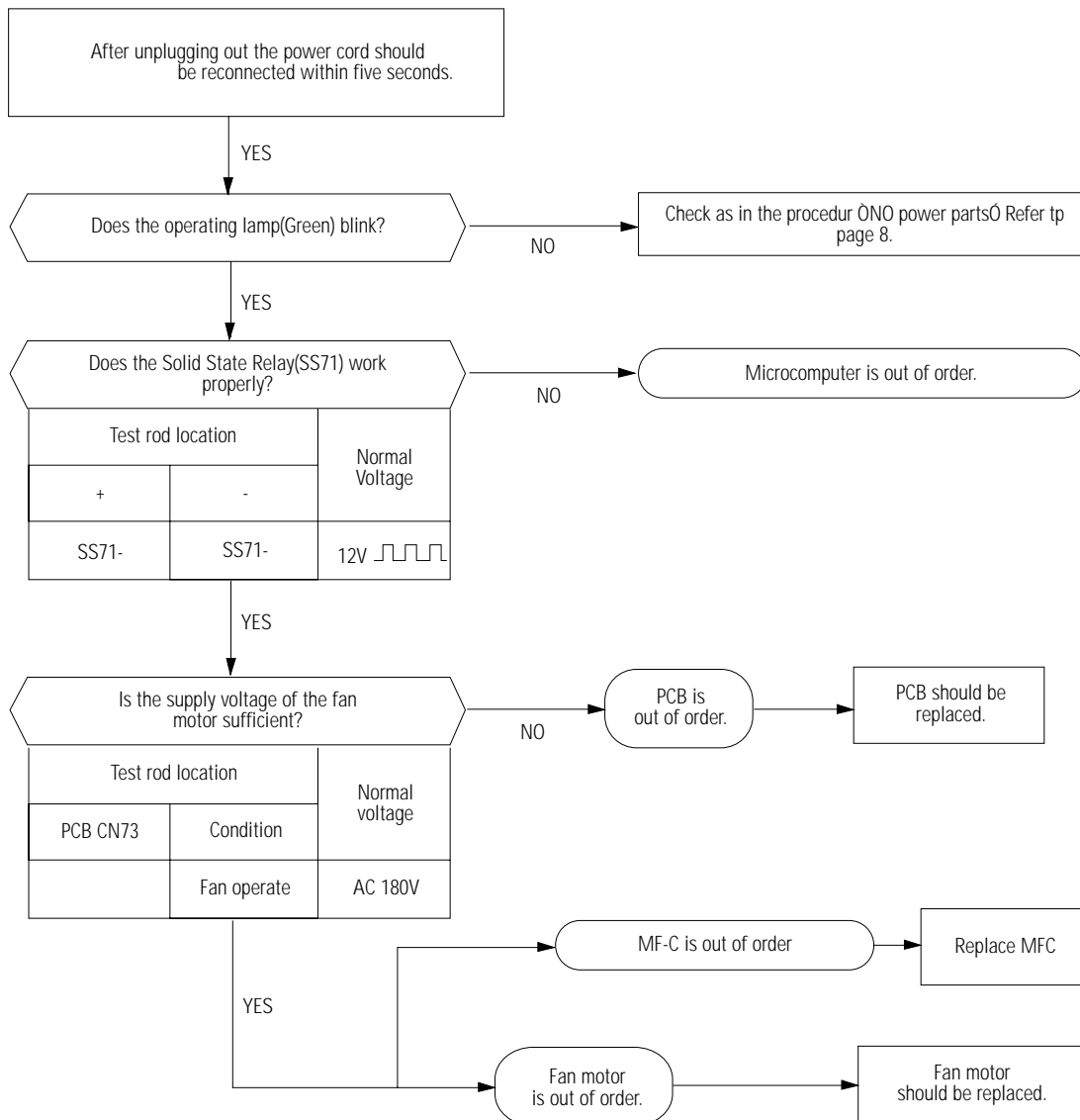


### 3-2-2 When the Indoor Unit Fan Does Not Operate. (Initial Diagnosis)

#### 1) Checklist :

- (1) Is the indoor unit fan motor properly connected with the connector (CN73)(CN43)?
- (2) Is the AC voltage correct?
- (3) Is HALL IC in indoor fan motor properly connected with the connector (CN43)?
- (4) Is the running capacitor properly connected with the terminal?

#### 2) Troubleshooting procedure



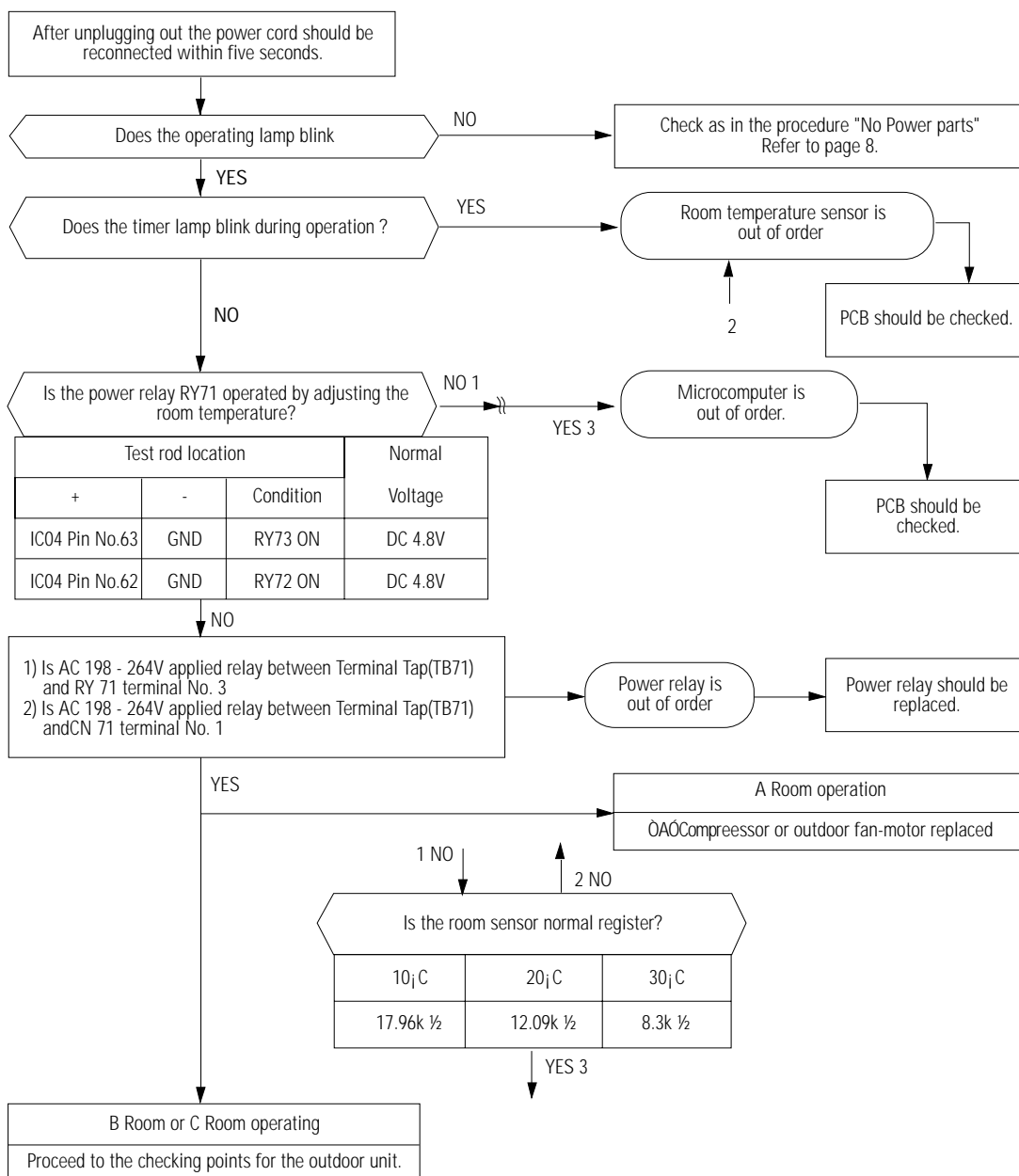
### 3-2-3 When the Outdoor Unit Does Not Operate. (Initial Diagnosis)

#### 1) Checklist :

- (1) Is input voltage normal?
- (2) Is the set temperature of the remote control higher than room temperature in COOL mode?
- (3) Is the POWER IN connector (terminal-tab) linked correctly?
- (4) Is the outdoor unit properly connected with the TERMINAL BLOCK connector(5P)?

#### 2) Troubleshooting procedure

##### (1) Checking procedures for the indoor unit.

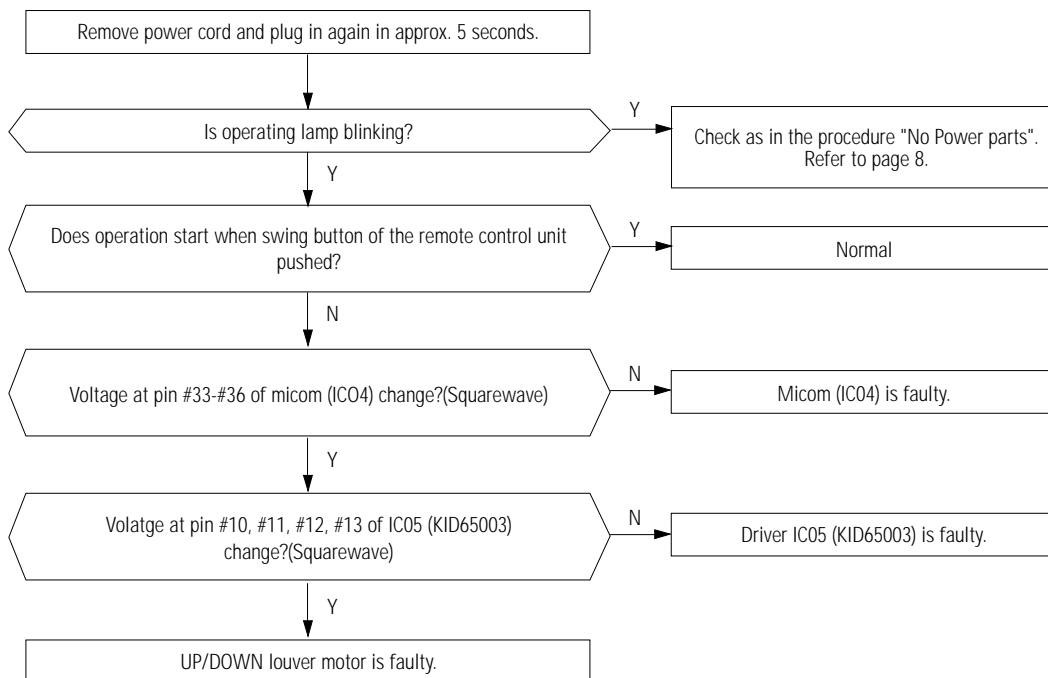


### 3-2-4 When the UP/DOWN Louver Motor Does Not Operate. (Initial Diagnosis)

#### 1) Checklist :

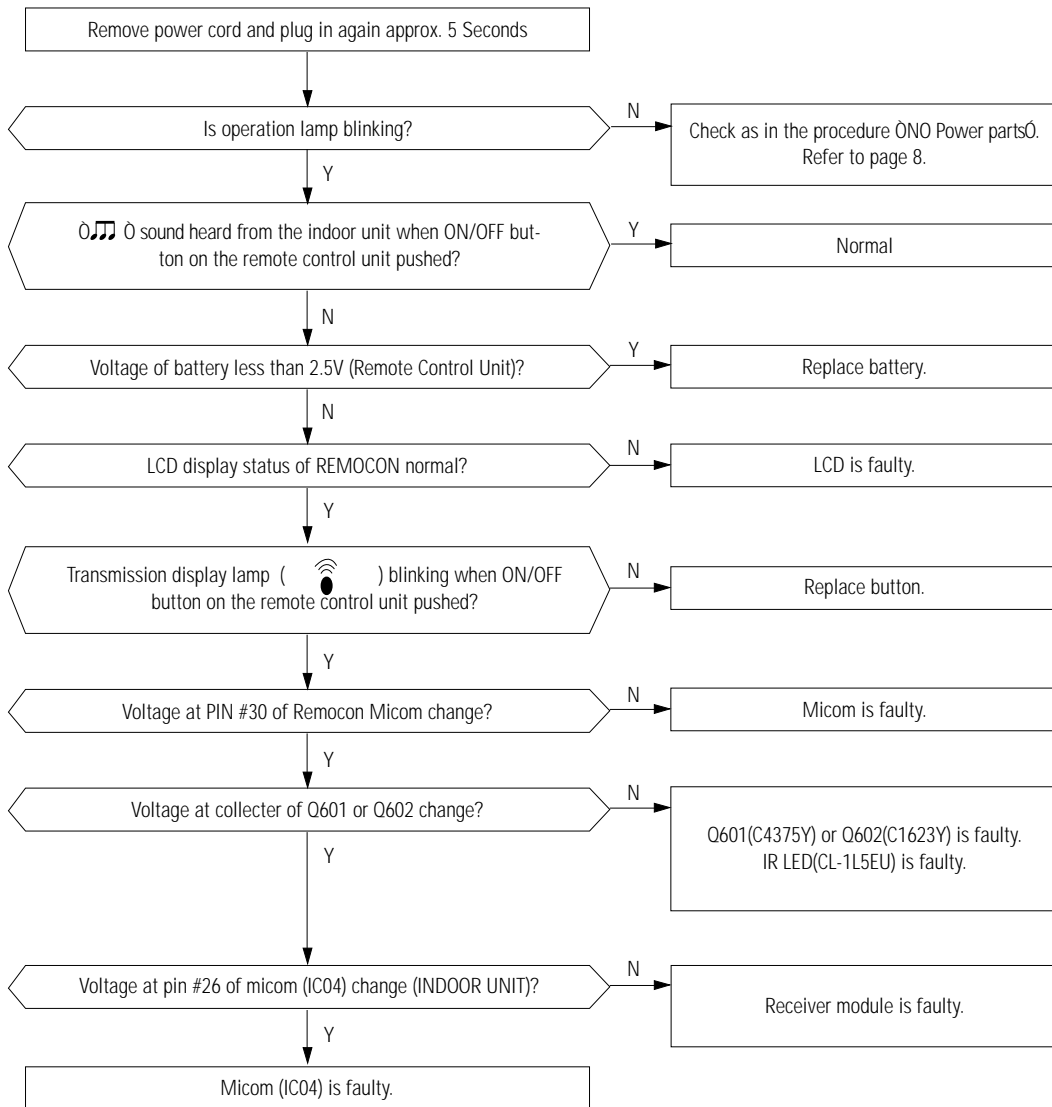
- (1) Is input voltage normal?
- (2) Is the UP/DOWN louver motor properly connected with the connector (CN61)?

#### 2) Troubleshooting procedure



### 3-2-5 If Operation By Remote Control Unit Is Impossible. (Initial Diagnosis)

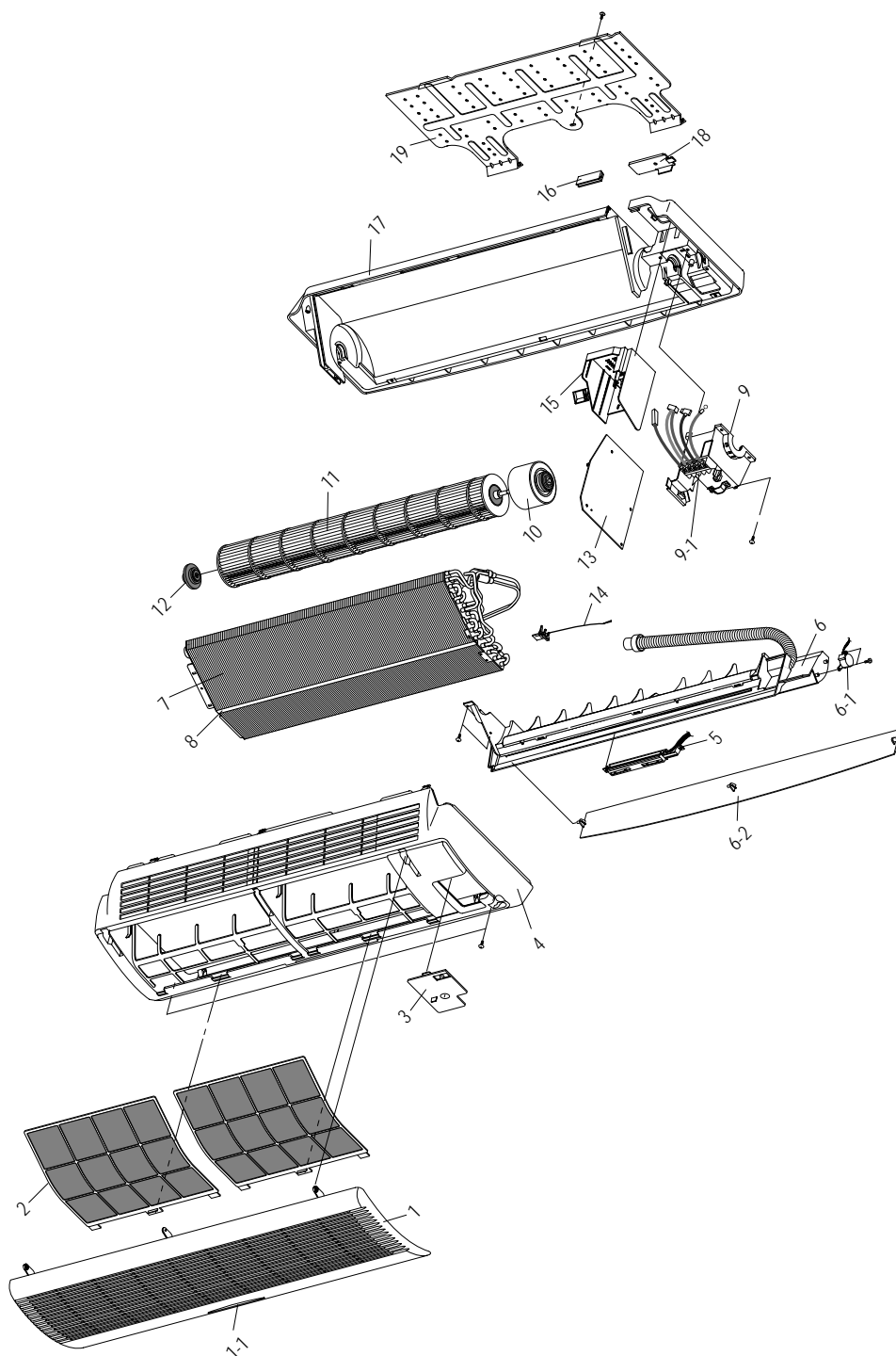
#### 1) Troubleshooting procedure
















# MEMO

# 4. Exploded Views and Parts List

## 4-1 Indoor Unit (AM26A1C13, AM18A1C09)

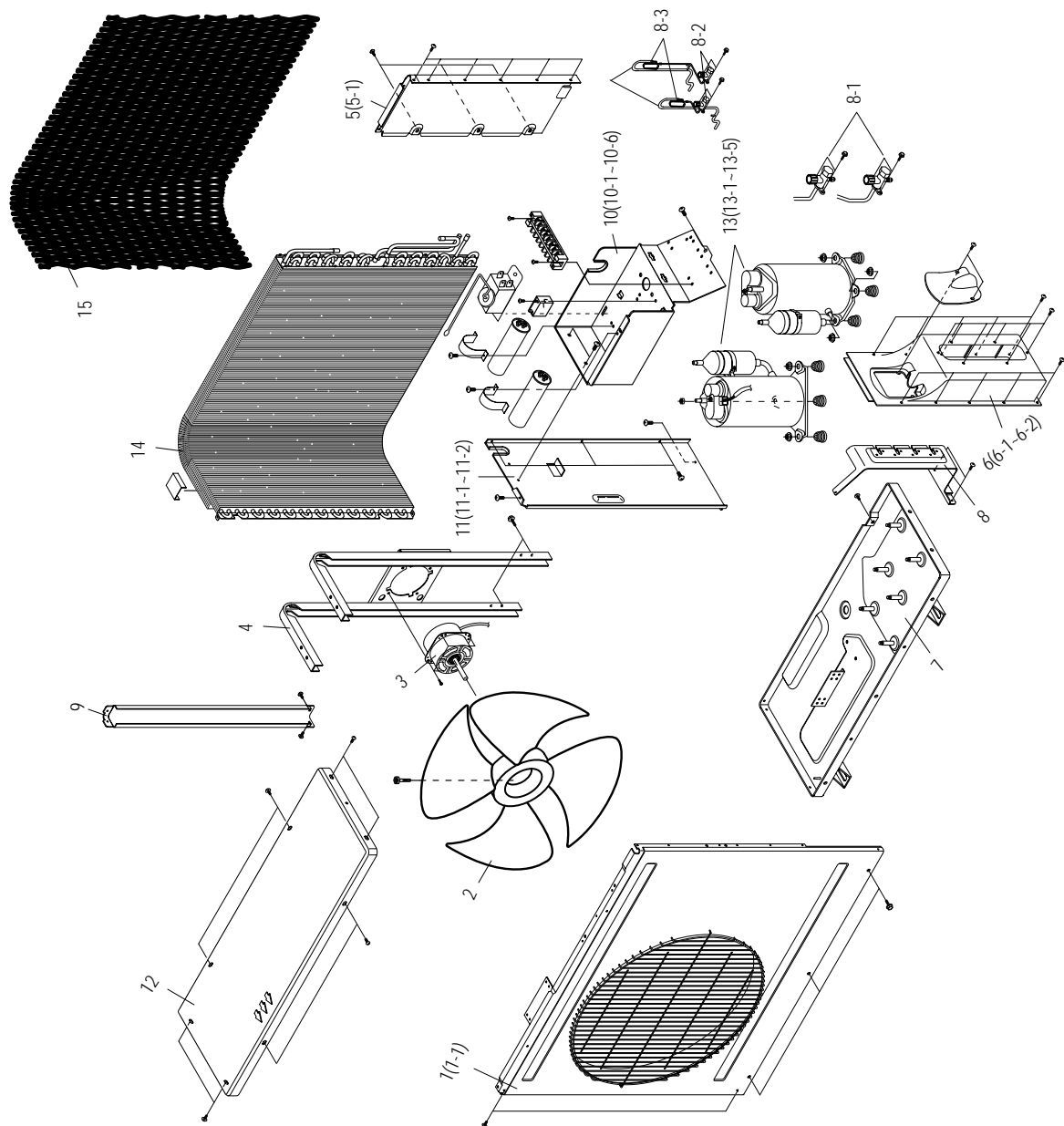


## ■ Parts List

No.	CODE NO	Description	Specification	QTY		Remark
				AM26A1C13	AM18A1C09	
1	DB64-10140A	GRILLE AIR INLET	ABS	1	1	
1-1	DB64-70073A	PANEL CENTER DISPLAY	PC	1	1	
2	DB63-30131A	GUARD AIR FILTER	PP	2	2	
3	DB63-10472B	COVER TERMINAL	HIPS	1	1	
4	DB92-70075E	ASS<Y FRONT PANEL	ASS<Y	1	1	
5	DB93-10560B	ASS<Y DISPLAY PCB	ASS<Y(EDGE)	1	1	
6	DB94-10088B	ASS<Y TRAY DRAIN	ASS<Y	1	1	
6-1	DB95-20138A	ASS<Y STEP MOTOR U/D	DC12V.600GR	1	1	
6-2	DB66-30153A	BLADE-H	HIPS	1	1	
7	DB75-40095A	ASS<Y EVAP	ASS<Y	1	-	
	DB75-40095B	ASS<Y EVAP	ASS<Y	-	1	
8	DB67-30058C	SPACER EVAP	PVC	1	1	
9	DB61-00011B	HOLDER MOTOR ASS<Y	ASS<Y	1	1	
9-1	DB65-00007A	ASS<Y TERMINAL BLOCK	ASS<Y	1	1	
10	DB31-10078H	MOTOR FAN IN	AMPFS040WTVB	1	1	
11	DB94-30141A	ASS<Y-C-F-FAN	795 X 619.4mm	1	1	
12	DB94-40017A	ASS<Y BEARING	ASS<Y	1	1	
13	DB93-10626B	ASS<Y MAIN PCB	ASS<Y	1	-	
	DB93-10626A	ASSOY MAIN PCB	ASSOY	-	1	
14	DB32-10008D	THERMISTOR ASS<Y	ASS<Y	1	1	
15	DB61-10151A	CASE-CONTROL	ABS(94-5V)	1	1	
16	DB61-60093A	BODY-BUSH	HIPS	1	1	
17	DB94-20030C	ASS<Y BACK BODY	ASS<Y	1	1	
18	DB61-40247A	HOLDER PIPE	HIPS	1	1	
19	DB70-10618A	PLATE HANGER	SGCC-M	1	1	

# 4-2 Outdoor Unit

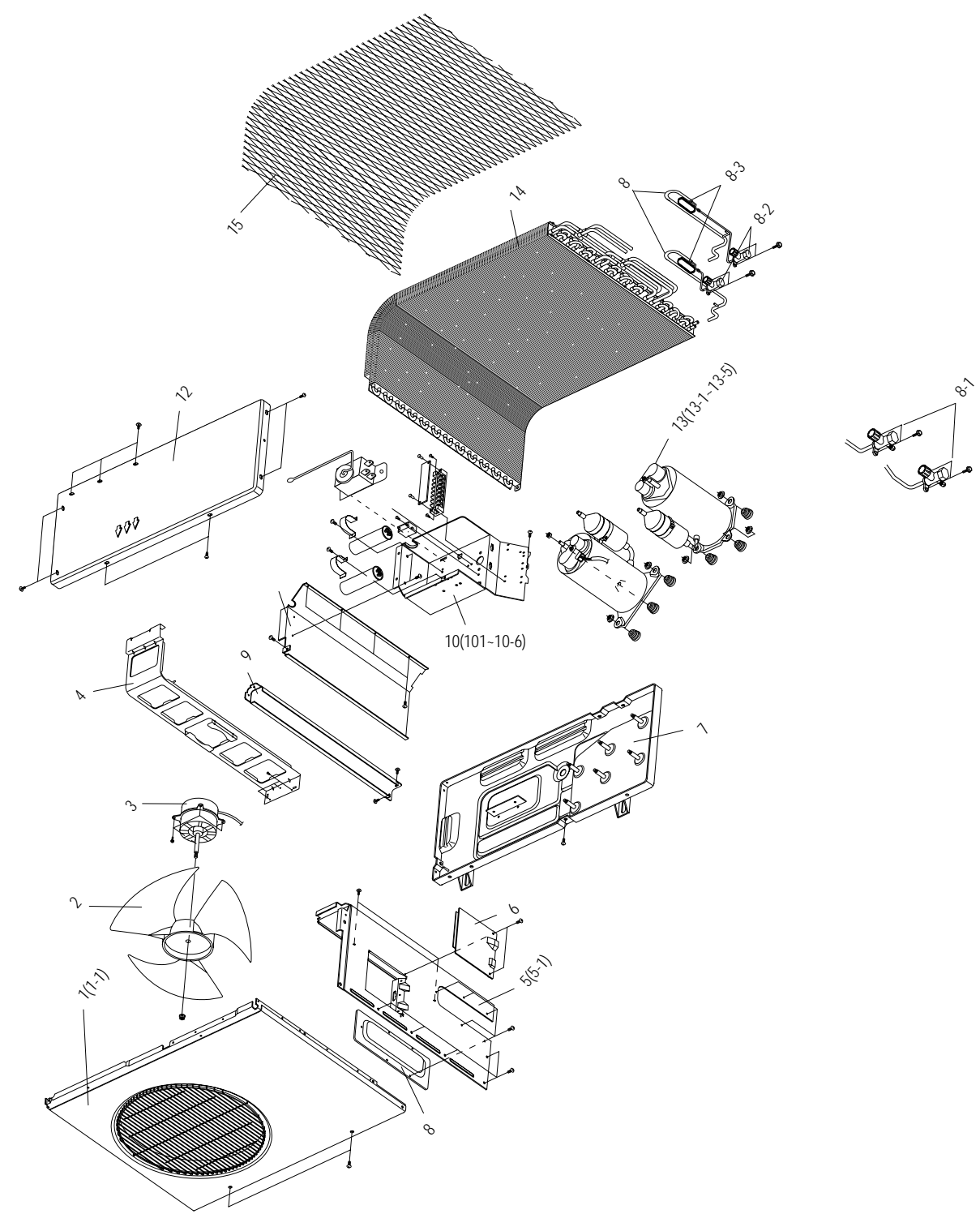
## 4-2-1 UM26A1C2



## ■ Parts List

No.	CODE NO	Description	Specification	QTY	Remark
				UM26A1C2	
1	DB90-10163D	ASS'Y-WELD FRONT	SC-90073T	1	
1-1	DB72-50520A	INSUL FRONT OUT	Foam pu + Foam pE	1	
2	DB67-50067A	FAN-PROPELLER	AS+G/F20%	1	
3	DB31-00095B	MOTOR-FAN OUT	OSM-738SRC	1	!
4	DB61-20094A	BASE-MOTOR	SGCC-M	1	
5	DB64-60134B	CABINET-SIDE	SECC-P	1	
5-1	DB72-60053A	INSUL SIDE CABI	FOAM PU + FOAM PE	1	
6	DB90-40120A	ASS'Y COVER VALVE	ASS'Y	1	
6-1	DB63-10433A	COVER-CONTROL	p.p	1	
6-2	DB63-10434A	COVER-VALVE	P.P	1	
7	DB90-20207A	ASS'Y-BASE OUT	UM26A1C2	1	
8	DB99-10174A	ASS'Y-VALVE	-	1	
8-1	DB62-40101A	VALVE-PACKED 1/2"	1/20	2	
8-2	DB62-40099A	VALVE-PACKED 1/4"	1/40	2	
8-3	DB62-31965A	TUBE CAPI (C)	ID 1.7 x 900	1	
9	DB63-30027C	GUARD-COND	SC-90073T	1	
10	DB93-40886A	ASS'Y CONTROL OUT	UM26A1C2	1	!
10-1	DB61-10199A	CASE CONTROL OUT	SGCC-M	1	
10-2	DB65-10015A	CLIP-CAPACITOR	SGCC-M	2	
10-3	2501-001158	C-OIL	25μF x 450V	2	
10-4	DB65-40072B	TERMINAL BLOCK	8P	1	
10-5	2301-001379	C-OIL	4.0μF x 450V	1	
10-6	DB47-00022A	THERMOSTAT	BU-A238	1	
11	DB94-50041A	ASS'Y PARTITION	ASS'Y	1	
11-1	DB72-60099A	INSUL PARTITION	FOAM PU + FOAM PE	1	
11-2	DB67-30083A	PARTITION	SGCC-M	1	
12	DB90-10616A	ASS'Y CABI UPPER	ASS'Y	1	
13	DB95-10062W	ASS'Y-COMP	48A1351V1E5	2	!
13-1	DB73-10004A	GROMMET-ISOLATOR	EPDM	6	
13-2	DB60-30028A	NUT-WASHER	M8	6	
13-3	DB60-30018A	NUT-FLANGE	P10.8	2	
13-4	DB63-10165B	COVER-TERMINAL	NORYL	2	
13-5	DB47-20001G	OLP	MRA12002-9200	2	
14	DB75-30107A	CONDENSER	ASS'Y	1	
15	DB63-30110J	SCREEN-GUARD	P.E.H 100%	1	!

4-2-2 UM18A1C2

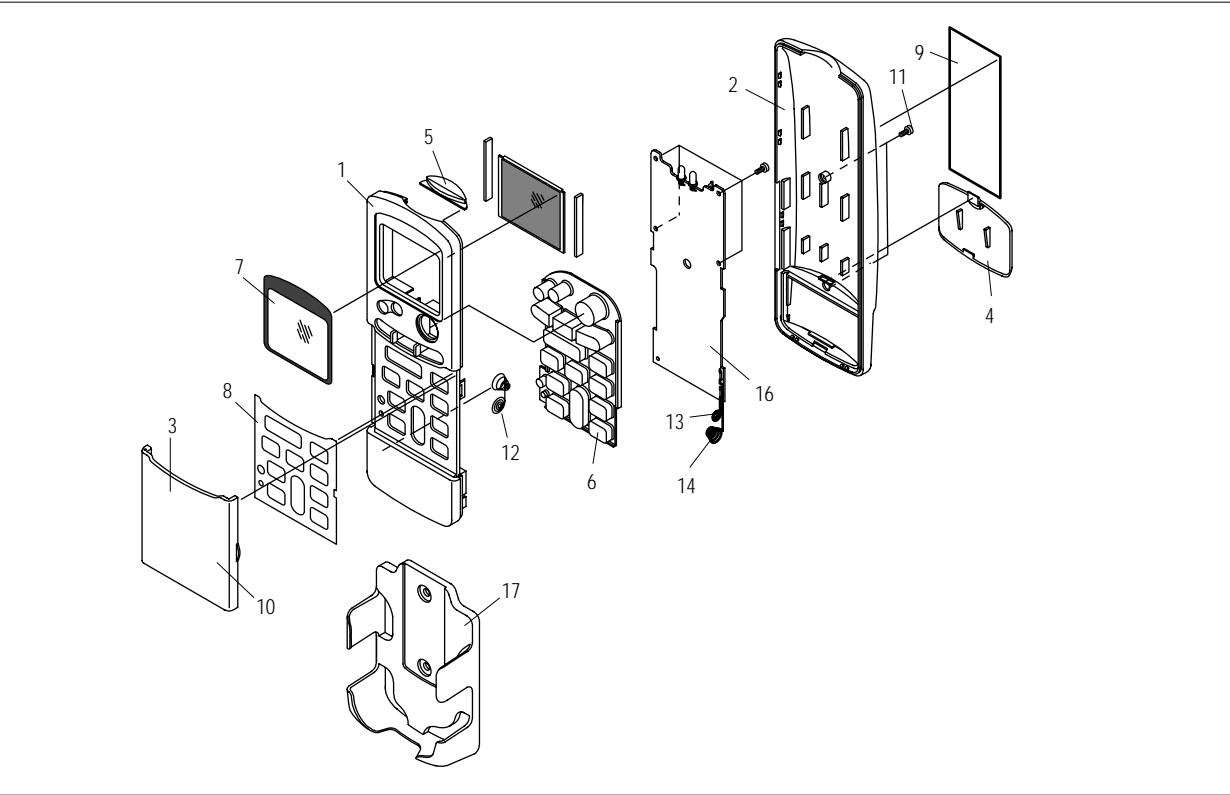


## ■ Parts List

No.	CODE NO	Description	Specification	QTY	Remark
				UM18A1C2	
1	DB90-10153J	ASS'Y-WELD FRONT	SC-90073J	1	
1-1	DB72-60034A	INSUL FRONT	FOAM-PU	1	
2	DB67-50063A	FAN-PROPELLER	AS+G/F20%	1	
3	DB31-00001A	MOTOR-FAN OUT	IC-9630SLF6J	1	!
4	DB61-20008C	BASE-MOTOR	SGCC-M	1	
5	DB90-10615B	ASSÖY CABINET-SIDE	ASSÖY	1	
5-1	DB64-60130A	CABI SIDE	-	1	
6	DB90-40168B	ASSÖY-COVER-TERMINAL	94-5V	1	
7	DB90-20211A	ASS'Y-BASE OUT	ASHM-1807ER	1	
8	DB99-10064A	ASS'Y-VALVE	UM18A1C2	1	
8-1	DB62-40095A	VALVE-PACKED 3/8"	3/80	2	
8-2	DB62-40094A	VALVE-PACKED 1/4"	1/40	2	
8-3	DB62-31368A	TUBE CAPI. C	ID 1.5 x 800	1	
9	DB63-30025D	GUARD-COND	SC-90073T	1	
10	DB93-40887A	ASS'Y CONTROL OUT	-	1	!
10-1	DB61-10199A	CASE-CONTROL	SGCC-M	1	
10-2	DB65-10015A	CLIP-CAPACITOR	SGCC-M	2	
10-3	2501-001157	C-OIL	20µF x 450V	2	
10-4	DB65-40072B	TERMINAL BLOCK	8P	1	
10-5	2501-001066	C-OIL	2.5µF x 450V	1	
10-6	DB47-00022A	THERMOSTAT	BU-A238	1	
11	DB67-30071B	PARTITION	SGCC-P	1	
11-1	DB72-60034B	INSUL PARTITION	Foam pu + Foam pe	1	
12	DB63-10011A	COVER-TOP	SECC-P	1	
13	DB95-10065C	ASS'Y-COMP	44B0921W1E5	2	!
13-1	DB73-10004A	GROMMET-ISOLATOR	EPDM	6	
13-2	DB60-30028A	NUT-WASHER	M8	6	
13-3	DB60-30018A	NUT-FLANGE	P10.8	2	
13-4	DB63-10165B	COVER-TERMINAL	NORYL	2	
13-5	DB47-20002A	OLP	MRA12032-12008	2	
14	DB96-30296A	CONDENSER	ASS'Y	1	
15	DB63-30130B	SCREEN-GUARD	P.E.H 100%	1	

## 4-3 Remote Control & PCB Box

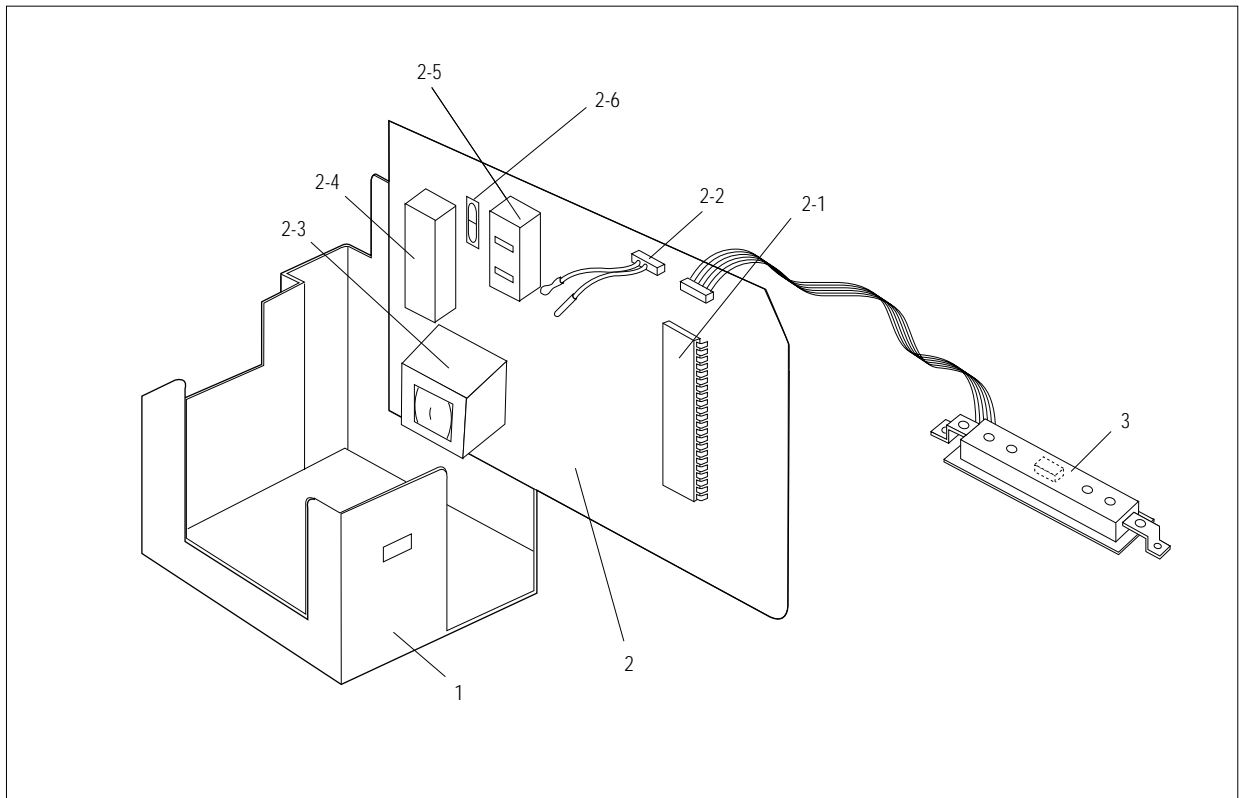
### 4-3-1 Remote Control



#### ■ Parts List

No	CODE NO	Description	Specification	QTY	Remark
1	DB61-10144A	CASE UP	ABS	1	
2	DB61-10145A	CASE LOW	ABS	1	
3	DB64-20054A	DOOR REMOCON	ABS	1	
4	DB63-10477A	COVER BATTERY	ABS	1	
5	DB74-10084A	FILTER REMOCON	PC	1	
6	DB73-20110B	RUBBER REMOCON	SILICON	1	
7		INLAY LCD	PC	1	
8	DB64-40166B	INLAY REMOCON	PC	1	
9	DB68-10775A	LABEL REMOCON	ART 90	1	
10	DB68-10777A	LABEL DOOR	ART 90	1	
11	PH-M2	SCREW TAP	PH-M2	6	
12	DB67-60061A	SPRING BATTERY	SUS 304	1	
13	DB67-60062A	SPRING BATTERY	SUS 304	1	
14	DB67-60063A	SPRING BATTERY	SUS 304	1	
15	90 x 250	PE BAG	90 x 250	1	
16	DB93-40179B	ASSÖY PCB REMOCON		1	
17	DB61-40243A	HOLDER REMOCON	ABS	1	
	DB93-30052L	ASSÖY REMOCON	Cooling Only		
	DB93-30067N	REMOCON + HOLDER	Cooling Only		

## 4-3-2 PCB Box



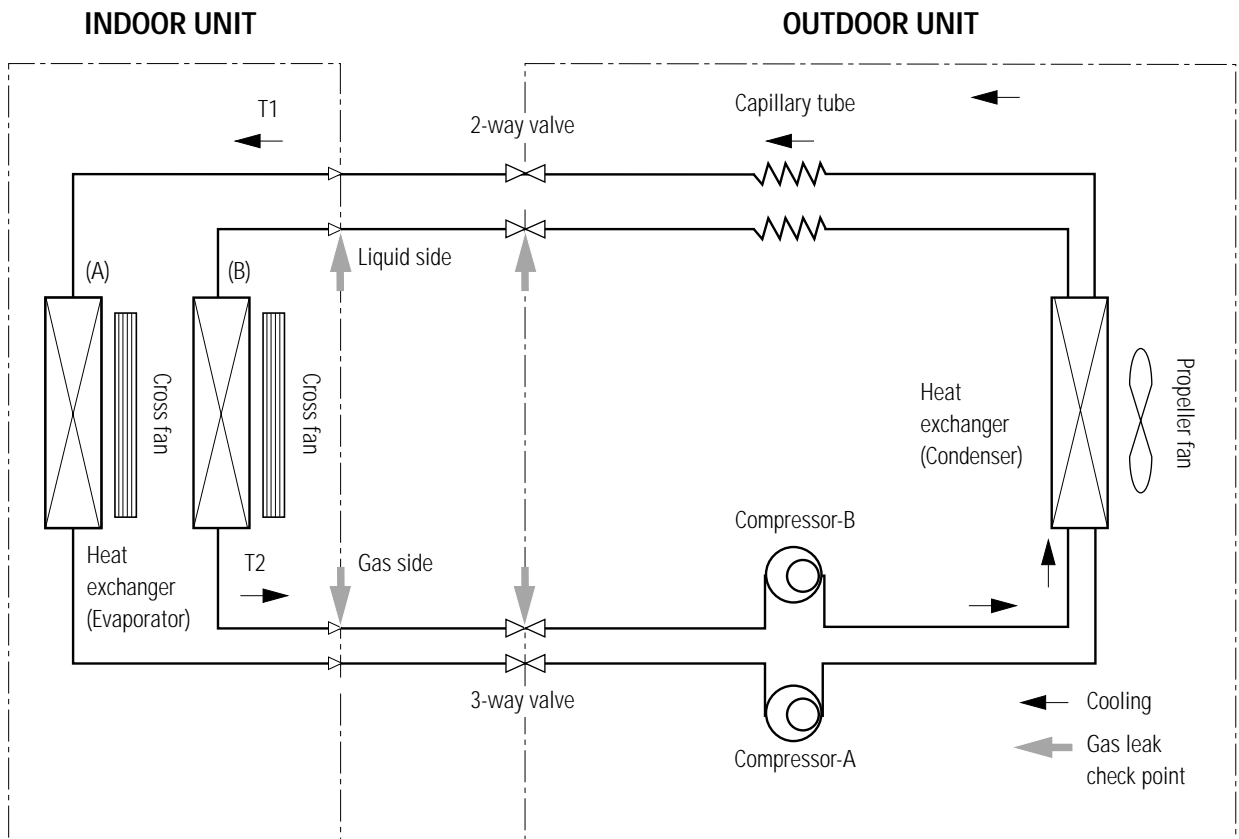
### ■ Parts List

No	CODE NO	Description	Specification	QTY		Remark
				AM26A1C13	AM18A1C09	
1	DB61-10151A	CASE-CONTROL	ABS(94-5V)	1	1	
2	DB93-10626A	ASS'Y MAIN PCB	-	-	1	
	DB93-10626BA	ASSÖY MAIN PCB		1	-	
2-1	DB09-10149A	IC-MCY	MB89635R-466	1	1	
2-2	DB32-10008D	THERMISTOR-ASSÖY	103AT	1	1	
2-3	DE26-20154A	TRANS-POWER	AC230V DC17V 300mA	1	1	
2-4	2306-000294	C-FILM	CFS 99N 450VAC 155K	1	1	
2-5	3501-001058	POWER-RELAY	DI1U DC12V	1	1	
2-6	DE32-10037A	FUSE	250V 3.15A	1	1	
3	DB93-10560B	ASSÖY DISPLAY PCB	EDGE	1	1	

- DB93-10560B

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## 5. Refrigerating Cycle Block Diagram (UM26A1C2/UM18A1C2)



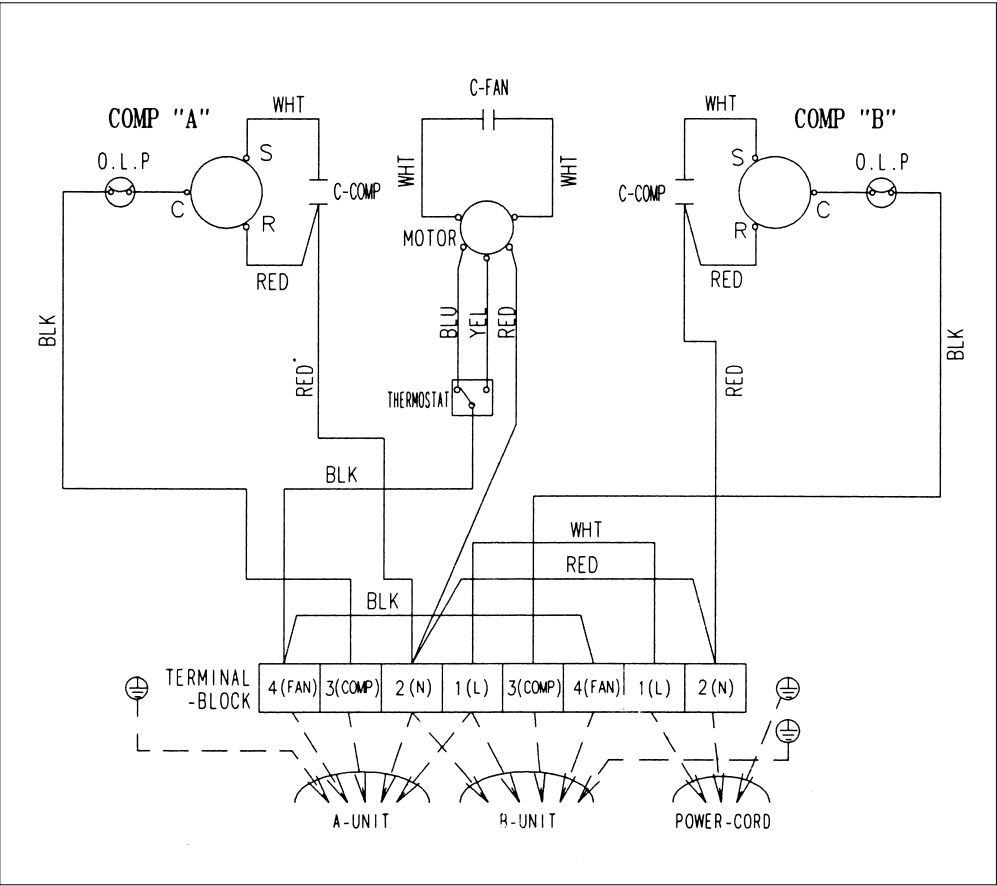
Refrigerating cycle temperature and pressure

Operating Condition		STD Pressure (psi) 3-WAY V/V	Piping Temp.(°F)		Use Temp. Condition (°F)			
			T1	T2	Indoor		Outdoor	
					DB	WB	DB	WB
Cooling	Standard	64~78	50~54	50~54	80	67	95	75
	Max over load	-	61~64	61~64	80	67	115	75
	Low temp	-	34~39	34~39	67	57	67	57

## 6-1 Indoor Unit



6-2 Outdoor Unit



	ENGLISH	ESPAÑOL	FRANÇAIS	ITALIANO
1	BLK	NEGRO	NOIR	NERO
2	RED	ROJO	ROUGE	ROSSO
3	WHT	BLANCO	BLANC	BIANCO
4	YEL	AMARILLO	JAUNE	GIALLO

UM26A1C2

CAPACITOR	FAN MOTOR : 3.5μF/450VAC
	COMP MOTOR : 25μF/450VAC

UM18A1C2

CAPACITOR	FAN MOTOR : 2.5μF/450VAC
	COMP MOTOR : 20μF/450VAC

## 7-1 Indoor Unit



