LG

Package
Air Conditioner
SERVICE MANUAL

MODEL: LP-E5020CL
LP-E5022CL/CA/HL/HA
LP-E5082CL/CA/HL/HA/ZL/ZA
LP-E5092CL/CA/HL/HA
LP-E50B0CL/CA/HL/HA

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1. PREFACE

This service manual provides various service information, containing the mechanical and electrical parts and etc.
This package air conditioner was manufactured and assembled under the strict quality control system.
The refrigerant is charged at the factory. Be sure to read the safety precautions prior to servicing the unit.

1.1 Safety Precautions

¤ When servicing the unit, set the main SWITCH to OFF and remove the POWER SUPPLY cables.

¤Ł Observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.

¤Ø After servicing the unit, make an insulation resistance test to protect the customer from being exposed to shock hazards.

1.2 Features

¤ Design for cooling and heating

¤Ł Super energy efficiency

¤Ø Micom Control

¤Œ Whisper quiet operation

¤º Wireless remote control

¤ Removable air filter

¤ 3 minute delay circuit

¤ 7 hour timer

¤ 3 step speeds for cooling/heating

¤ Plasma air purifying system

¤æ Auto Restart

1.3 Product Specifications

MODEL			LP-E5082CL/CA	LP-E5082HL/HA LP-E5082ZL/ZA	LP-E5020CL LP-E5022CA	LP-E5022HL/HA
POWER SOURCE (ø, V, Hz)			3.380 - 415,50	3,380 - 415,50	1,200,60	1,220,60
COOLING	CAPACITY	Btu/h	44,000	44,000	44,000	44,000
		W	12,896	12,896	12896	12,896
	INPUT	W	3,600	3,600	3,600	5500
	CURRENT	A	6	6	19	25
HEATING (Including Electiric heater)	CAPACITY	Btu/h (W)	–	48,000 +(3,000)	–	48,000
		W (W)	–	14069 +(3,000)	–	14,069
	INPUT	W (W)	–	3,500 +(3,000)	–	4900
	CURRENT	A (A)	–	5.5 +(13.5)	–	24
COMPRESSOR	MAKER		Tecumseh	Tecumseh	Copeland	Copeland
	TYPE		Recipro	Recipro	Recipro	Recipro
	MODEL		AVB5558EXG	AVB5558EXG	CR42K6-PFV	CRMQ-0400-PFV
	INPUT	W	4,340	4,340	3,860	5,370
	CURRENT	A	6.9	6.9	17.8	25.2
	CAPACITY	Kcal/h	11,620	11,620	10,559	12,928
NOISE	INDOOR	dB(A)	53	53	53	53
LEVEL(1m)	OUTDOOR		58	58	58	58
AIR	INDOOR	CMM	35	35	35	35
VOLUME	OUTDOOR		104	104	104	104
REFRIGERANT R-22		Kg	2.8	3.2	3.5	3.9
HEAT	INDOOR	R/C/FPI	3/28/17	3/28/17	3/28/17	3/28/17
EXCHANGER	OUTDOOR	R/C/FPI	2/44/16	2/44/18	2/44/16	2/44/17
FAN	INDOOR	TYPE	SIROCO	SIROCO	SIROCO	SIROCO
	OUTDOOR		PROPELLER	PROPELLER	PROPELLER	PROPELLER
ROOM TEMPERATURE CONTROL			MICOM CONTROL	MICOM CONTROL	MICOM COTROL	MICOM CONTROL
NET	INDOOR	Kg	62	62	62	62
WEIGHT	OUTDOOR		90	90	90	90
DIMENSIONS	INDOOR	mm	590 × 1,810 × 440	590 × 1,810 × 440	590 × 1,810 × 440	590 × 1,800 × 440
(W × H × D)	OUTDOOR		1,000 × 965 × 370	1,000 × 965 × 370	900 × 1,225 × 370	900 × 1,225 × 370
SVC	LIQUID	Inch	3/8	3/8	3/8	3/8
VALVE	GAS	(mm)	3/4	3/4	3/4	3/4

MODEL			LP-E50B2CL/CA	LP-E50B2HL/HA LP-E50B2ZL/ZA	LP-E5090CL LP-E5092CA	LP-E5092HL/HA
POWER SOURCE (ø, V, Hz)			3,220,60	3,220,60	3,380,60	3,380,60
COOLING	CAPACITY	Btu/h	44,000	44,000	44,000	44,000
		W	12,896	12,896	12,896	12,896
	INPUT	W	6,000	6,000	4,600	4,600
	CURRENT	A	10	10	8.2	8.2
HEATING	CAPACITY	Btu/h	–	48,000	–	48,000
		W	–	14,069	–	14,069
	INPUT	W	–	5,000	–	4,500
	CURRENT	A	–	9	–	8
COMPRESSOR	MAKER		Copeland	Copeland	Copeland	Copeland
	TYPE		Recipro	Recipro	Recipro	Recipro
	MODEL		CRNQ-0501-ES8	CRNQ-0501-ES8	CRNQ-0501-ES8	CRNQ-0501-ES8
	INPUT	W	6,210	6,210	6,210	6,210
	CURRENT	A	19.0/11.0	19.0/11.0	19.0/11.0	19.0/11.0
	CAPACITY	Kcal/h	61,500	61,500	61,500	61,500
NOISE	INDOOR	dB(A)	53	53	53	53
LEVEL(1m)	OUTDOOR		58	58	58	58
AIR	INDOOR	CMM	35	35	35	35
VOLUME	OUTDOOR		104	104	104	104
REFRIGERANT R-22		Kg	3.5	3.9	4	4.2
HEAT	INDOOR	R/C/FPI	3/28/17	3/28/17	3/28/17	3/28/17
EXCHANGER	OUTDOOR	R/C/FPI	2/44/16	2/44/18	2/44/16	2/44/18
FAN	INDOOR	TYPE	SIROCO	SIROCO	SIROCO	SIROCO
	OUTDOOR		PROPELLER	PROPELLER	PROPELLER	PROPELLER
ROOM TEMPERATURE CONTROL			MICOM CONTROL	MICOM CONTROL	MICOM CONTROL	MICOM CONTROL
NET	INDOOR	Kg	62	62	62	62
WEIGHT	OUTDOOR		90	90	90	90
DIMENSIONS	INDOOR	mm	590 × 1,800 × 440	590 × 1,800 × 440	590 × 1,800 × 440	590 × 1,800 × 440
(W ¥ H ¥ D)	OUTDOOR		900 × 1225 × 370	900 × 1225 × 370	900 × 1225 × 370	900 × 1225 × 370
SVC	LIQUID	Inch	3/8	3/8	3/8	3/8
VALVE	GAS	(mm)	3/4	3/4	3/4	3/4

1.4 Functions

Indoor Unit

Power Switch ON/OFF

Operation Mode Control

• Cooling, Soft Dry, Auto, Fan ¢ ¡Cooling Model • Cooling, Heating, Soft Dry, Fan ¢ ¡Heat Pump Model

Sensing the room temperature

• Room temperature sensor (Thermistor)

Controlling the room temperature

• Maintains the room temperature in accordance with the setting temperature.

Starting Current Control

• Indoor fan is delayed for 3 sec at the starting.

Sensing Heat Exchanger Temperature

• Heat exchanger temperature sensor (Thermistor)

Timer Delay Safety Control

• Restarting is inhibited for approx. 3 minutes.

Indoor Fan Speed Control

• High, Med, Low

Operation Indication lamps

Temperature Setting

• Up : up to 30°C
• Down : down to 16°C

Airflow Direction Control

• Airflow direction Automatic and Manual control

Room temperature Display

• Low, 10° ~ 35°C, Hi

Timer Control

• Off Timer (1, 2, 3....7 hour)

Sensing Discharge Air Temperature

• Discharge temperature sensor <Thermistor>
• Apply Heat Pump Model Only.

Remote Control

Operation ON/OFF

Operation Mode Selection

- Cooling, Soft Dry, Auto, Fan ¤I Cooling Only Model
- Cooling, Heating, Soft Dry, Fan, ¤I E/heater Heat Pump Model

Fan Speed Selection

- High, Medium, Low

Setting the temperature

- Up or Down

Timer Control

- Off Timer(1, 2, 3...7 hour)

Airflow Direction Control

- Airflow direction Auto-Swing and Manual control

Outdoor Unit

Deice Control

- De-ice PCB

Outdoor Fan Speed Control

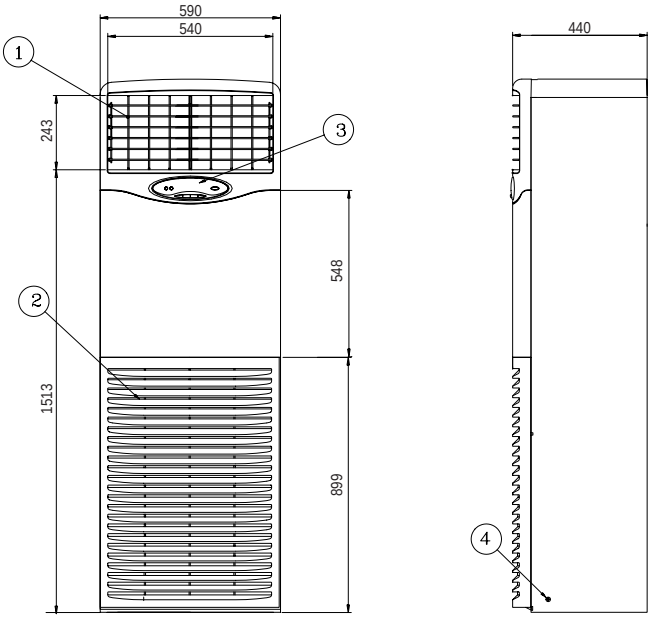
- One speed

Sensing Heat Exchanger Temperature

- Heat exchanger temperature sensor (Thermistor)

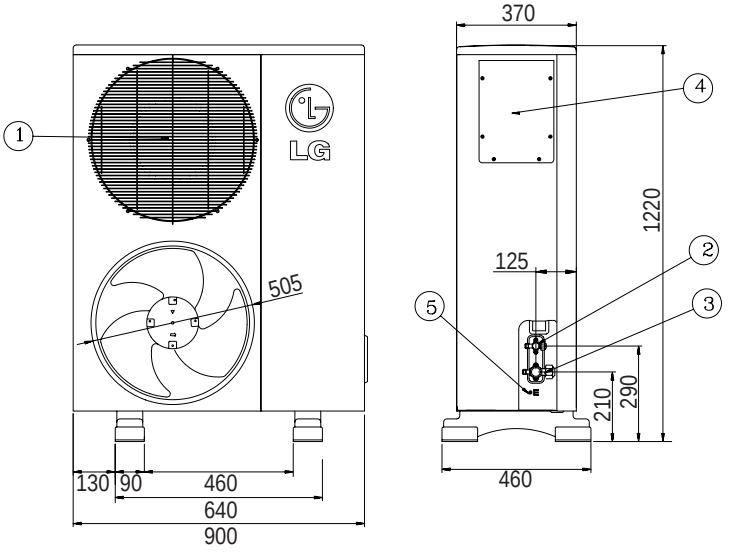
2. DIMENSIONS

1) Indoor Unit



¤ Air Outlet Vent
¤Ł Air Inlet Vent
¤Ø Window display
¤Œ Earth Screw

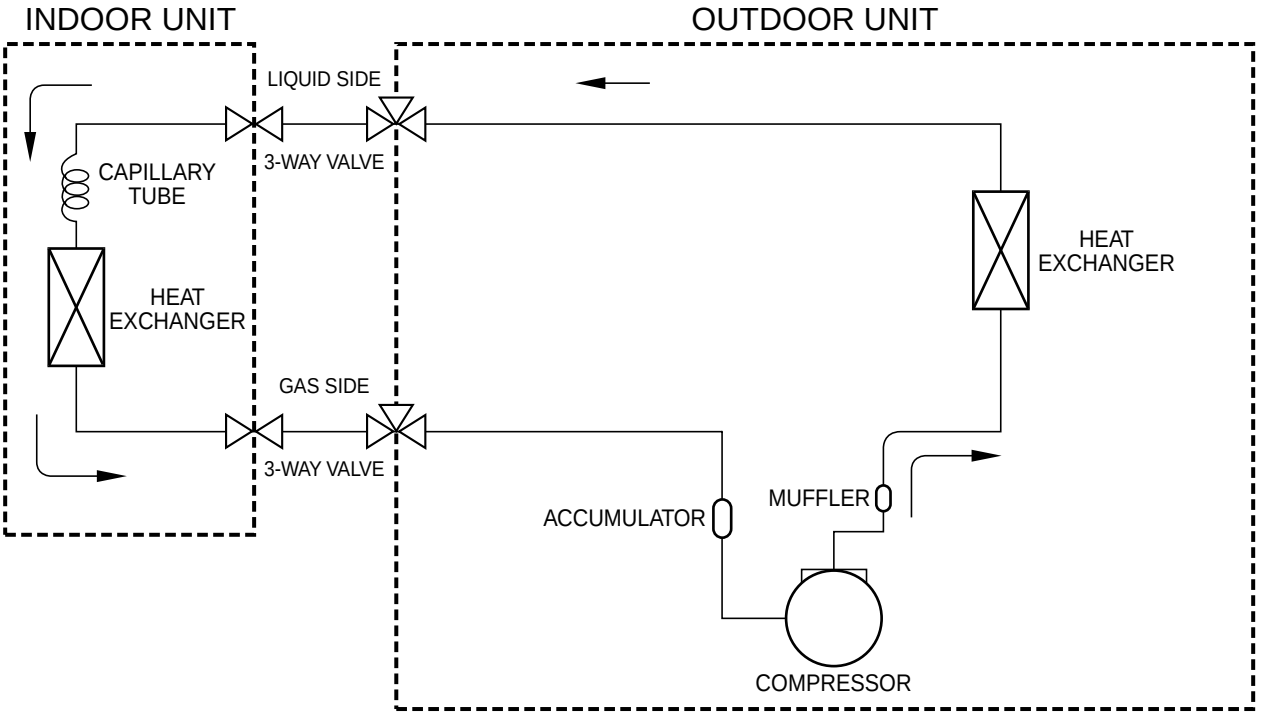
2) Outdoor Unit



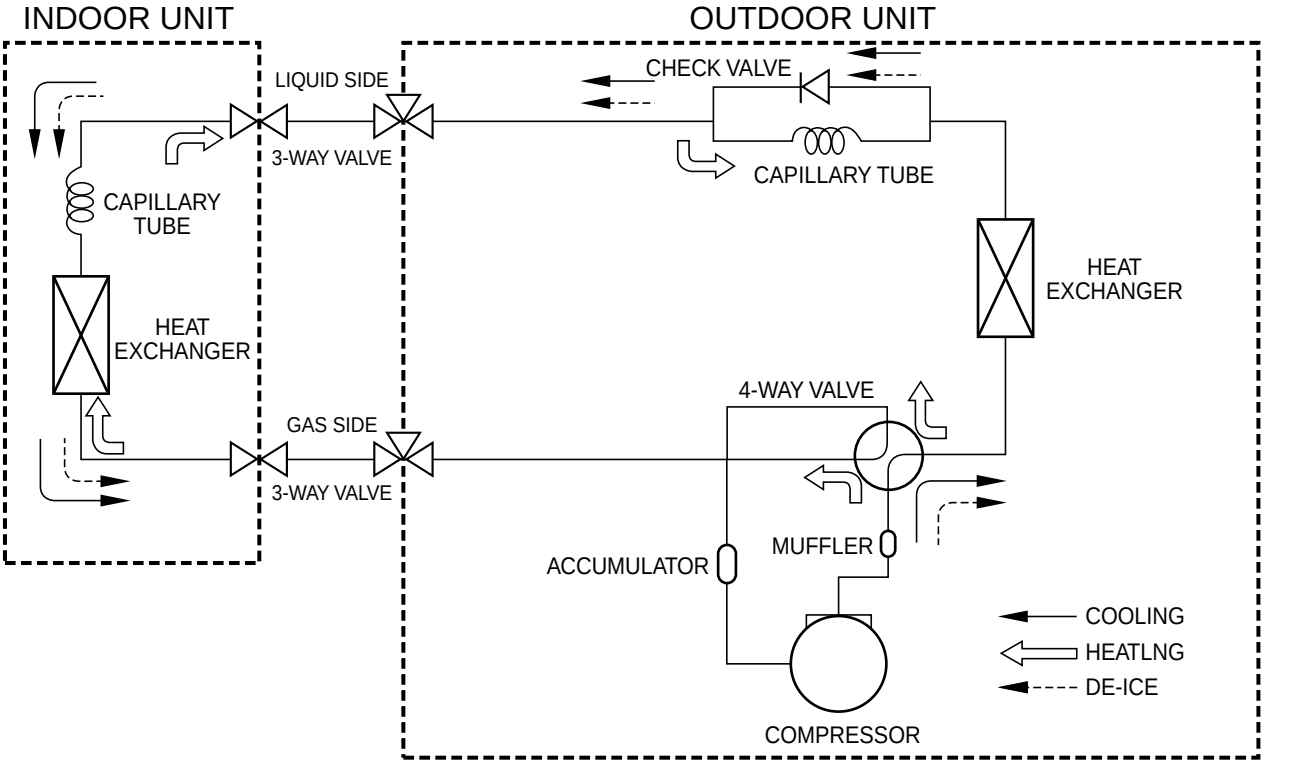
¤ Air Outlet Vent
¤Ł Liquid Side SVC Valve
¤Ø Gas Side SVC Valve
¤Œ Control Box
¤º Earth Screw

3. REFRIGERANT CYCLE DIAGRAM

3.1 Cooling Cycle



3.2 Cooling and Heating Cycle

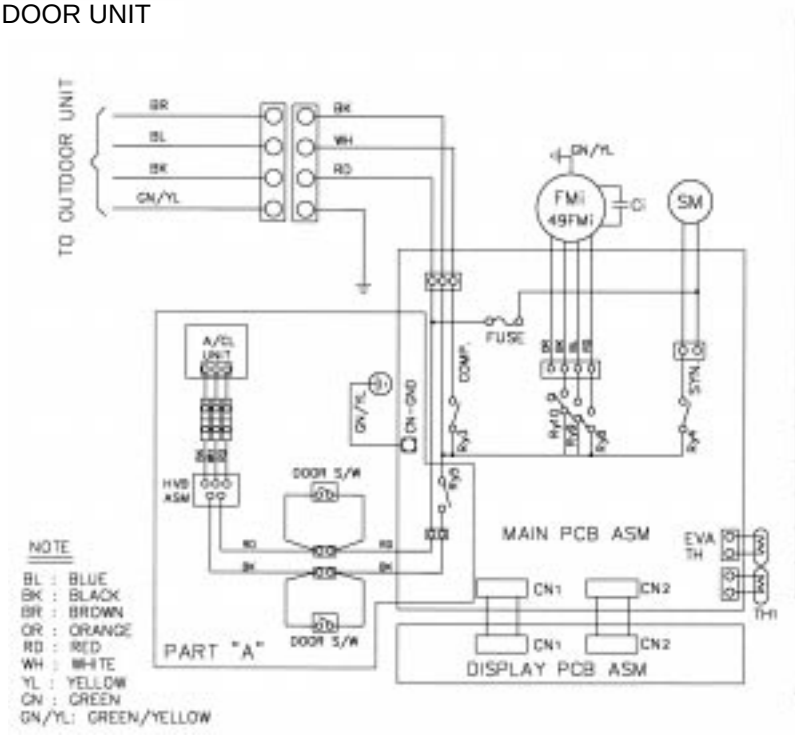


4. WIRING DIAGRAM

Indoor & Outdoor Unit Circuit Diagram

(1) LP-E5082CL/CA

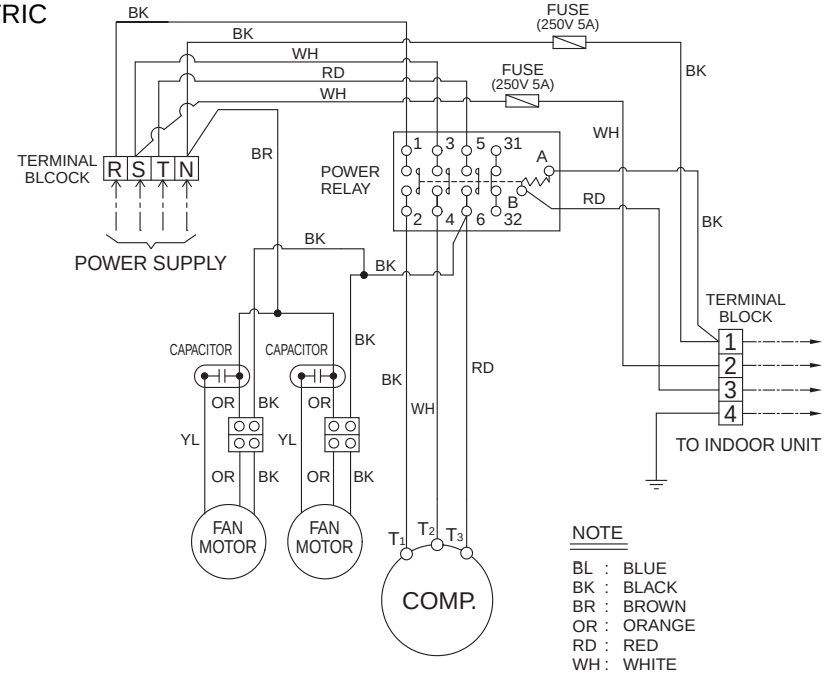
INDOOR UNIT



CH	CRANKCASE HEATER
CI	RUN CAPACITOR FOR FMI
CO	RUN CAPACITOR FOR FMO
CN1,2	CONNECTOR
49C	INTERNAL O.L.P FOR COMP.
F1,2	FUSE (250V, 5A)
FMI	INDOOR FAN MOTOR
FMO	OUTDOOR FAN MOTOR
Ry4	RELAY FOR AUTO SWING
Ry8,9,10	RELAY FOR FAN SPEED
Ry3	RELAY FOR COMP.
TH1	THERMISTOR FOR INDOOR TEMP.
EVA TH	THERMISTOR FOR PIPE TEMP.
52C	MAGNECTIC CONTACTOR
Ry5	RELAY FOR AIR CLEANER

* PART "A": Option and application to the model with an Air Purifying System.

OUTDOOR ELECTRIC CIRCUIT

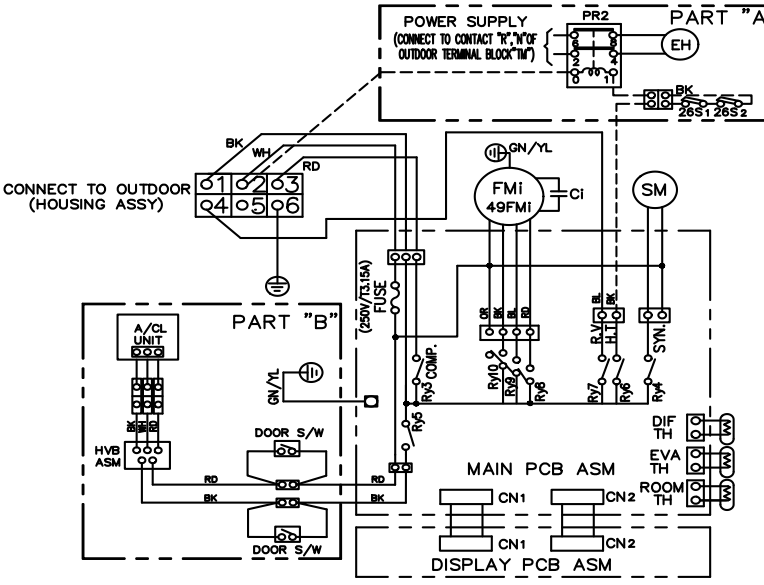


NOTE

BL : BLUE
BK : BLACK
BR : BROWN
OR : ORANGE
RD : RED
WH : WHITE
YL : YELLOW
GN/YL : GREEN/YELLOW

(2) LP-E5082HL/HA/ZL/ZA

INDOOR ELECTRIC CIRCUIT

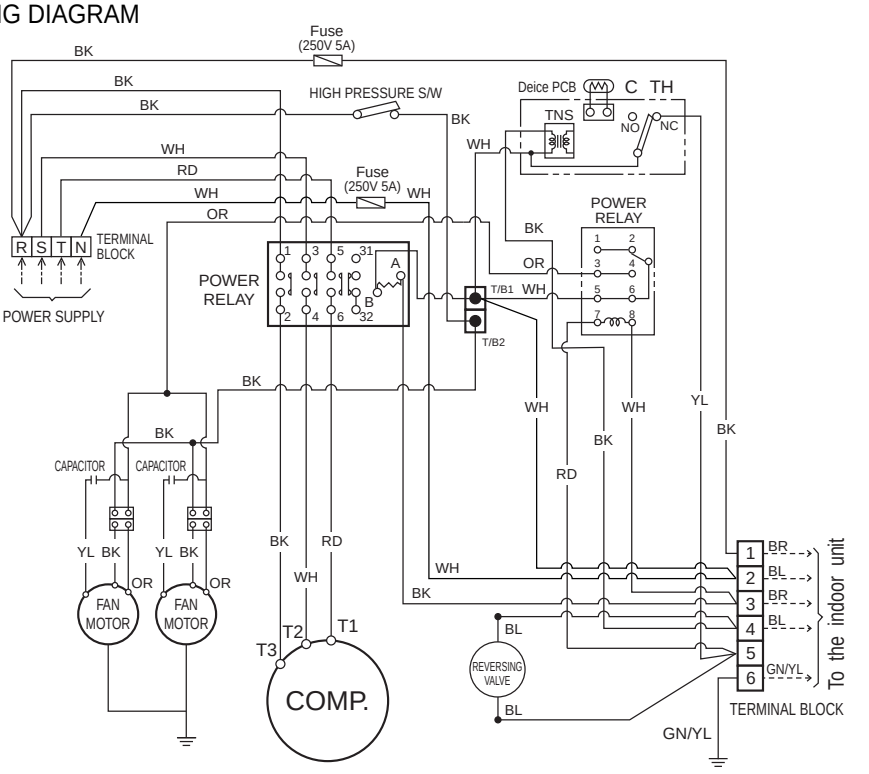


Ci	RUN CAPACITOR FOR FMI
CN1,2	CONNECTOR
FMI	INDOOR FAN MOTOR
Ry3	RELAY FOR COMP.
Ry4	RELAY FOR AUTO SWING
Ry5	RELAY FOR AIR CLEANER
Ry6	RELAY FOR ELECTRIC HEATER
Ry7	RELAY FOR REVERSING VALVE
Ry8,9,10	RELAY FOR FAN SPEED
ROOM TH	THERMISTOR FOR INDOOR TEMP.
EVA TH	THERMISTOR FOR PIPE TEMP.
DIF TH	THERMISTOR FOR DIFFUSER TEMP.
52C	MAGNECTIC CONTACTOR
SM	SYNCHRONOUS MOTOR
PR2	RELAY FOR ELECTRIC HEATER
EH	ELECTRIC HEATER
49FMi	INTERNAL T.P FOR FMI

* PART "A" : Option and application to the model with an Electric Heater.
* PART "B" : Option and application to the model with an Air Purifying System

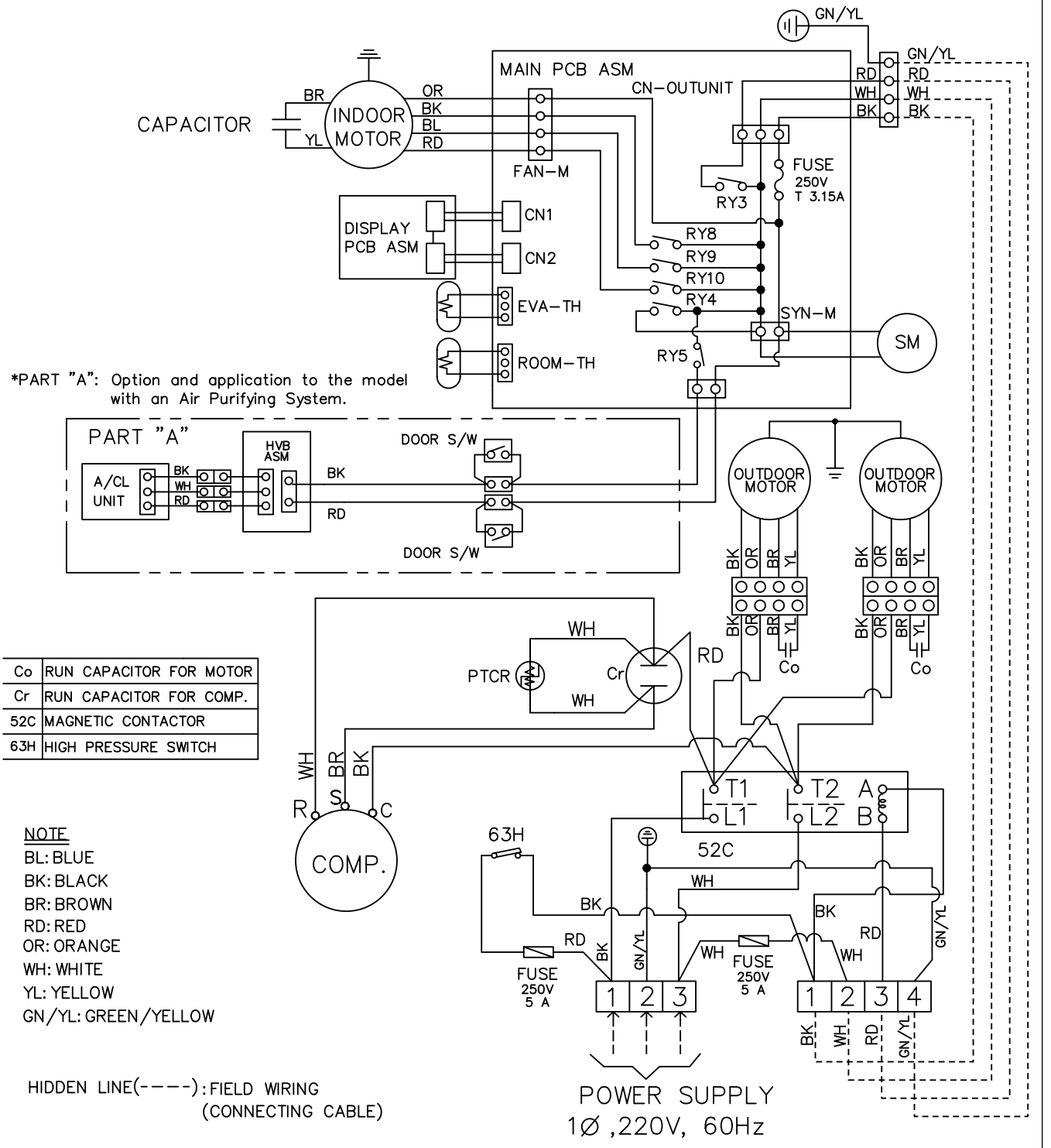
NOTE
BL : BLUE RD : RED
BK : BLACK WH : WHITE
BR : BROWN YL : YELLOW
OR : ORANGE GN/YL: GREEN/YELLOW

OUTDOOR UNIT WIRING DIAGRAM



(3) LP-E5020CL / LP-E5022CL/CA

WIRING DIAGRAM



Co	RUN CAPACITOR FOR MOTOR
Cr	RUN CAPACITOR FOR COMP.
52C	MAGNETIC CONTACTOR
63H	HIGH PRESSURE SWITCH

NOTE
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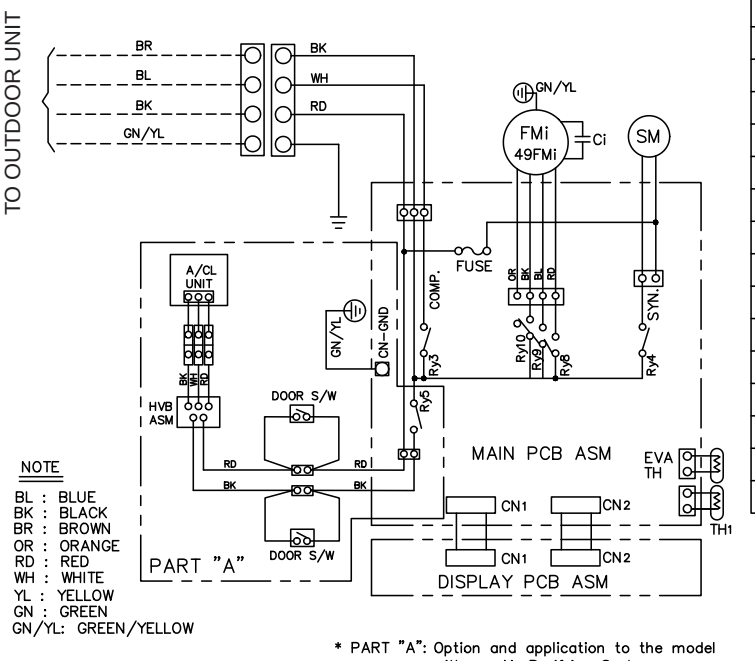
BK: BLACK
BR: BROWN
RD: RED
OR: ORANGE
WH: WHITE
YL: YELLOW
GN/YL: GREEN/YELLOW

HIDDEN LINE(----): FIELD WIRING
(CONNECTING CABLE)

(4) LP-E5022HL/HA

(5) LP-E50B0CL/CA

INDOOR UNIT



* PART "A": Option and application to the model with an Air Purifying System.

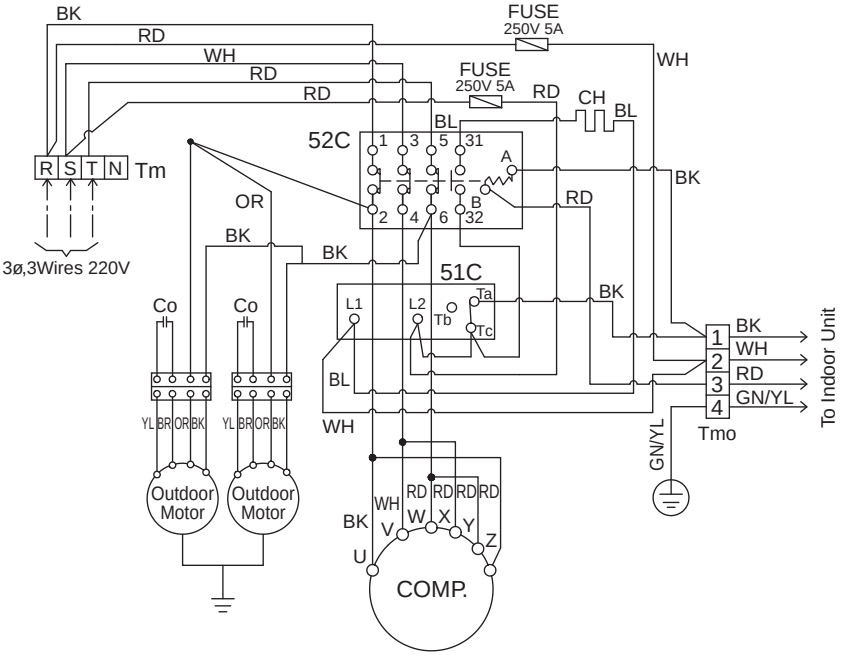
CH	CRANKCASE HEATER
Ci	RUN CAPACITOR FOR FMi
CO	RUN CAPACITOR FOR FMO
CN1,2	CONNECTOR
49C	INTERNAL O.L.P FOR COMP.
F1,2	FUSE (250V, 5A)
FMi	INDOOR FAN MOTOR
FMO	OUTDOOR FAN MOTOR
Ry4	RELAY FOR AUTO SWING
Ry8,9,10	RELAY FOR FAN SPEED
Ry3	RELAY FOR COMP.
TH1	THERMISTOR FOR INDOOR TEMP.
EVA TH	THERMISTOR FOR PIPE TEMP.
52C	MAGNECTIC CONTACTOR
Ry5	RELAY FOR AIR CLEANER

OUTDOOR WIRING DIAGRAM

EOCR Current Setting.

POWER SUPPLY	CURRENT(A)	TIME(sec)
3ø,220V,60Hz	30	5

Co	RUN CAPACITOR FOR MOTOR
52C	MAGNETIC CONTACTOR
51C	EOCR
Tmo	TERMINAL BLOCK(Outdoor Unit)
Tm	MAIN TERMINAL BLOCK
CH	CRANKCASE HEATER



NOTE

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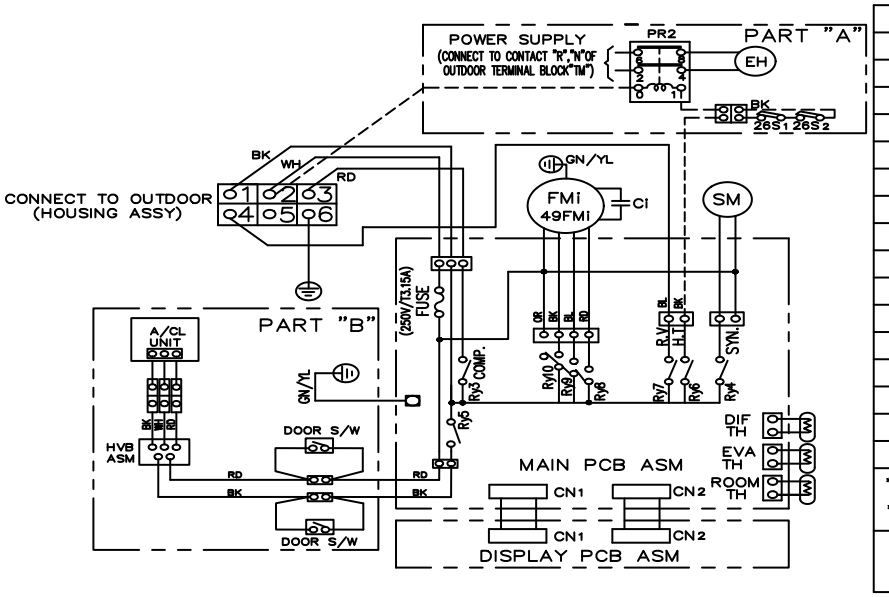
WH: WHITE
YL : YELLOW
GN/YL: GREEN/YELLOW

(6) LP-E50B0HL/HA

INDOOR ELECTRIC CERCUIT

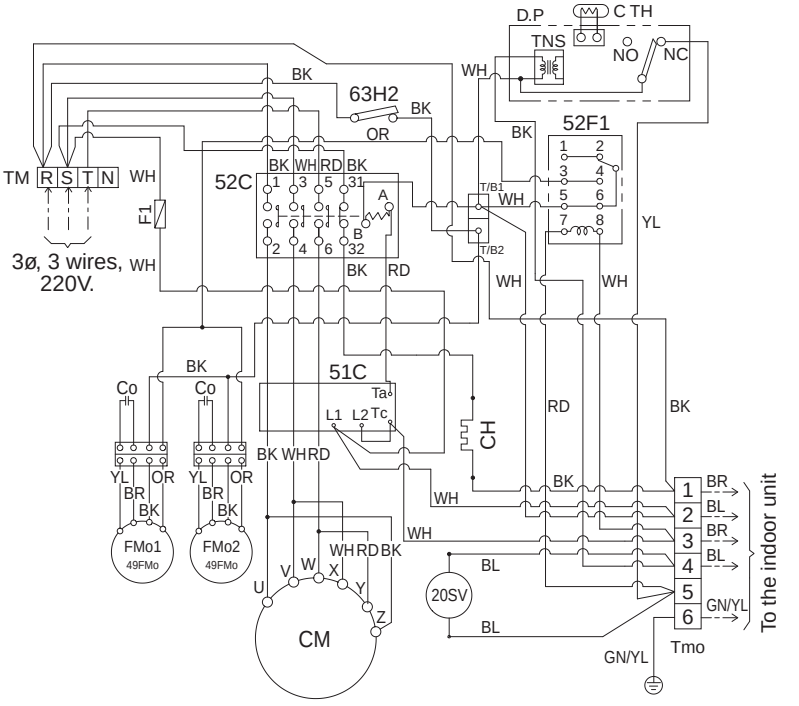


CI	RUN CAPACITOR FOR FMI
CN1,2	CONNECTOR
FMI	INDOOR FAN MOTOR
Ry3	RELAY FOR COMP.
Ry4	RELAY FOR AUTO SWING
Ry5	RELAY FOR AIR CLEANER
Ry6	RELAY FOR ELECTRIC HEATER
Ry7	RELAY FOR REVERSING VALVE
Ry8,9,10	RELAY FOR FAN SPEED
ROOM TH	THERMISTOR FOR INDOOR TEMP.
EVA TH	THERMISTOR FOR PIPE TEMP.
DIF TH	THERMISTOR FOR DIFFUSER TEMP.
52C	MAGNECTIC CONTACTOR
SM	SYNCHRONOUS MOTOR
PR2	RELAY FOR ELECTRIC HEATER
EH	ELECTRIC HEATER
49FMI	INTERNAL T.P FOR FMI

* PART "A" : Option and application to the model with an Electric Heater.
* PART "B" : Option and application to the model with an Air Purifying System

NOTE
BL : BLUE RD : RED
BK : BLACK WH : WHITE
BR : BROWN YL : YELLOW
OR : ORANGE GN/YL: GREEN/YELLOW

Outdoor Unit Wiring Diagram



WIRING FOR 220V
WIRING OF FIELD (CONNECTING WIRE)

NOTE
BL : BLUE RD: RED
BK : BLACK WH: WHITE
BR : BROWN YL: YELLOW
OR : ORANGE GN/YL: GREEN/YELLOW

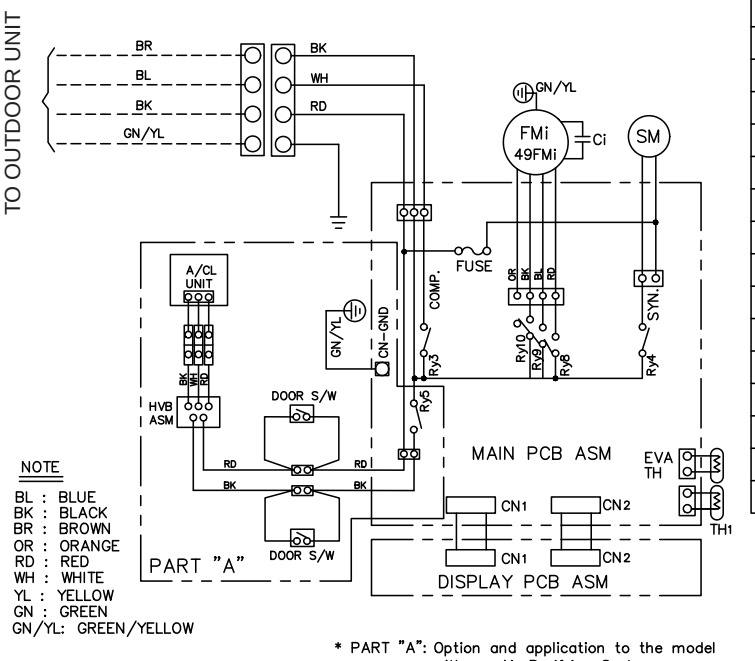
(Caution)
1. Basic wiring is 3ø,3 wires, 220V.
2. For setting E.O.C.R current

POWER SUPPLY	CURRENT(A)	TIME(sec)
3ø,220V,60HZ	30.0	5
3ø,380V,60HZ	17.5	5

63H2	HIGH PRESSURE SWITCH FOR HEATING
C TH	THERMISTOR FOR PIPE TEMP.
63H1	INTERNAL T.P FOR FMo
CH	CRANKCASE HEATER
20SV	REVERSING COIL
52C	MAGNETIC CONTACTOR
TM	MAIN TERMINAL BLOCK
52F1	RELAY FOR FMO
51C	E.O.C.R
CM	COMPRESSOR
Co	RUN CAPACITOR FOR FMo
FMo	OUTDOOR FAN MOTOR
F1	FUSE (250V, 10A)
DP	DEICER PCB
TMo	TERMINAL BLOCK

(7) LP-E5092CL/CA

INDOOR UNIT



* PART "A": Option and application to the model with an Air Purifying System.

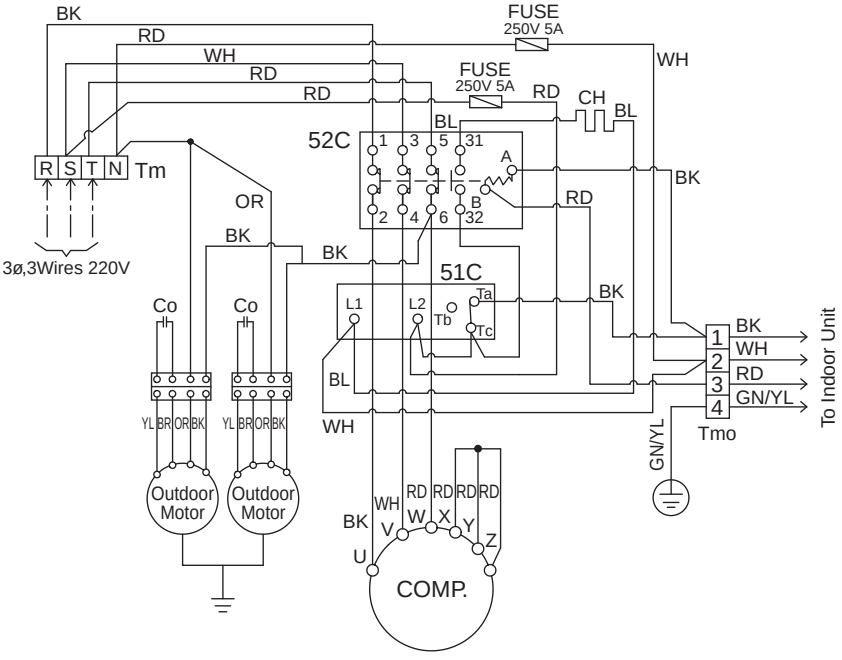
CH	CRANKCASE HEATER
Ci	RUN CAPACITOR FOR FMi
CO	RUN CAPACITOR FOR FMO
CN1,2	CONNECTOR
49C	INTERNAL O.L.P FOR COMP.
F1,2	FUSE (250V, 5A)
FMi	INDOOR FAN MOTOR
FMO	OUTDOOR FAN MOTOR
Ry4	RELAY FOR AUTO SWING
Ry8,9,10	RELAY FOR FAN SPEED
Ry3	RELAY FOR COMP.
TH1	THERMISTOR FOR INDOOR TEMP.
EVA TH	THERMISTOR FOR PIPE TEMP.
52C	MAGNECTIC CONTACTOR
Ry5	RELAY FOR AIR CLEANER

OUTDOOR WIRING DIAGRAM

EOCR Current Setting.

POWER SUPPLY	CURRENT(A)	TIME(sec)
3ø,380V,60Hz	17.5	5

Co	RUN CAPACITOR FOR MOTOR
52C	MAGNETIC CONTACTOR
51C	EOCR
Tmo	TERMINAL BLOCK(Outdoor Unit)
Tm	MAIN TERMINAL BLOCK
CH	CRANKCASE HEATER



NOTE

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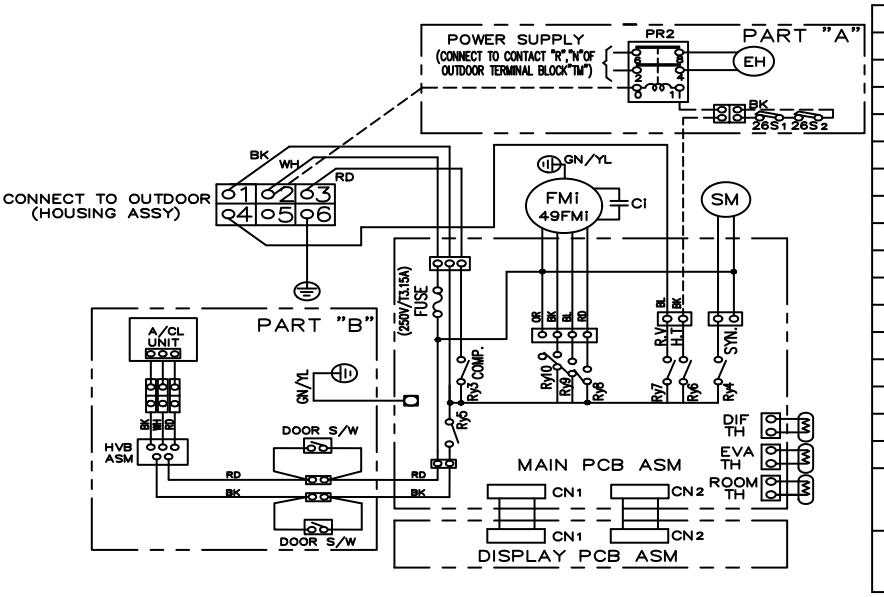
BK : BLACK
BR : BROWN
RD : RED
OR : ORANGE
WH: WHITE
YL : YELLOW
GN/YL: GREEN/YELLOW

(8) LP-E5092HL/ZL/HA/ZA

INDOOR ELECTRIC CIRCUIT

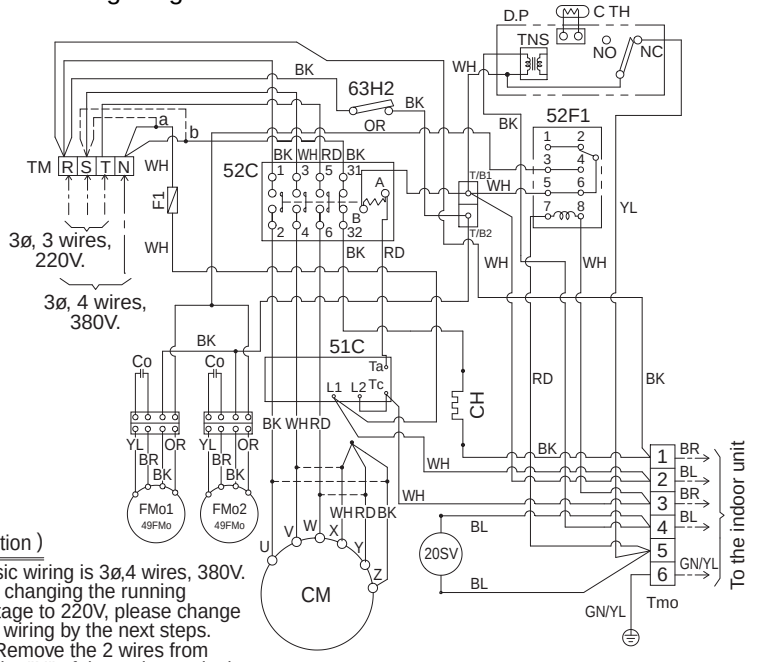


CI	RUN CAPACITOR FOR FMi
CN1,2	CONNECTOR
FMi	INDOOR FAN MOTOR
Ry3	RELAY FOR COMP.
Ry4	RELAY FOR AUTO SWING
Ry5	RELAY FOR AIR CLEANER
Ry6	RELAY FOR ELECTRIC HEATER
Ry7	RELAY FOR REVERSING VALVE
Ry8,9,10	RELAY FOR FAN SPEED
ROOM TH	THERMISTOR FOR INDOOR TEMP.
EVA TH	THERMISTOR FOR PIPE TEMP.
DIF TH	THERMISTOR FOR DIFFUSER TEMP.
52C	MAGNECTIC CONTACTOR
SM	SYNCHRONOUS MOTOR
PR2	RELAY FOR ELECTRIC HEATER
EH	ELECTRIC HEATER
49FMI	INTERNAL T.P FOR FMi

* PART "A" : Option and application to the model with an Electric Heater.
* PART "B" : Option and application to the model with an Air Purifying System

NOTE
BL : BLUE RD : RED
BK : BLACK WH : WHITE
BR : BROWN YL : YELLOW
OR : ORANGE GN/YL: GREEN/YELLOW

Outdoor Unit Wiring Diagram

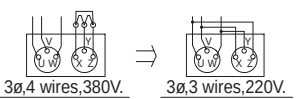


WIRING FOR 380V
WIRING FOR 220V
WIRING OF FIELD (CONNECTING WIRE)

NOTE
BL : BLUE RD: RED
BK : BLACK WH: WHITE
BR : BROWN YL: YELLOW
OR : ORANGE GN/YL: GREEN/YELLOW

63H2	HIGH PRESSURE SWITCH FOR HEATING
C TH	THERMISTOR FOR PIPE TEMP.
63H1	INTERNAL T.P FOR FMo
CH	CRANKCASE HEATER
20SV	REVERSING COIL
52C	MAGNETIC CONTACTOR
TM	MAIN TERMINAL BLOCK
52F1	RELAY FOR FMO
51C	E.O.C.R
CM	COMPRESSOR
Co	RUN CAPACITOR FOR FMo
FMo	OUTDOOR FAN MOTOR
F1	FUSE (250V, 10A)
DP	DEICER PCB
TMo	TERMINAL BLOCK

(Caution)
1. Basic wiring is 3ø,4 wires, 380V.
2. For changing the running voltage to 220V, please change the wiring by the next steps.
 1st) Remove the 2 wires from the "N" of the main terminal block
 2nd) Fit the removed 2 wires on the "S' of the main terminal block
 3rd) Change the compressor wires



3. For setting E.O.C.R current

POWER SUPPLY	CURRENT(A)	TIME(sec)
3ø,220V,60HZ	30.0	5
3ø,380V,60HZ	17.5	5

5. OPERATION DETAILS

(1) The function of main control

1. Time Delay Safety Control

- 3min··· The compressor is ceased for 3 minutes to balance the pressure in the refrigeration cycle. (Protection of compressor)
- 3sec··· The indoor fan is ceased for 1~3 seconds to prevent relay noise. (Protection of fan relay and micro chip)
- 1min··· The 4-way valve is ceased for 30 sec. to prevent the refrigerant-gas abnormal noise when the Heating operation is OFF or switched to the other operation mode.

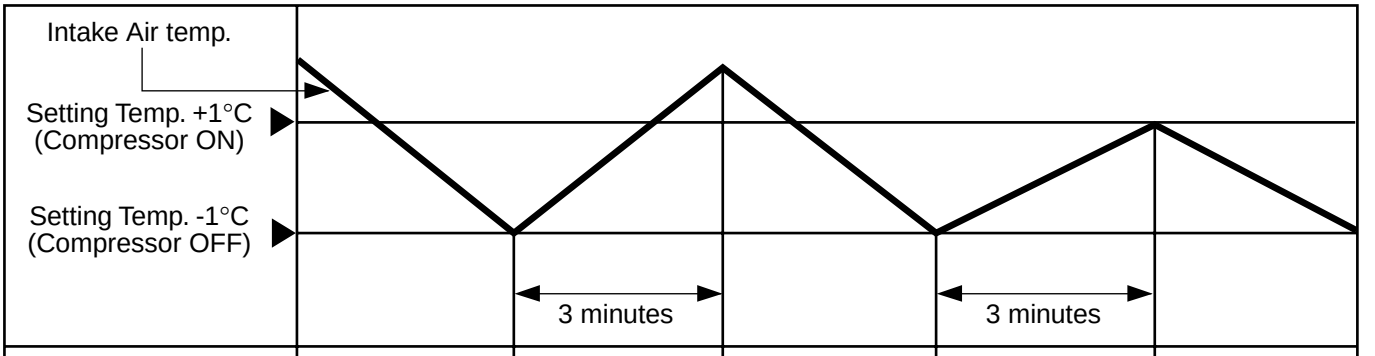
2. Airflow Direction Control

- This function is to swing the louver left and right automatically and to set it at the desired position.
- The procedure is as the following.

1st : Press the ON/OFF Button to operate the product.
2nd : Press the Airflow Direction Control Button to swing the louver left and right automatically. (Remote controller)
3rd : Repress the Airflow Direction Control Button to set the louver as the desired position. (Remote controller)

3. Cooling Mode Operation

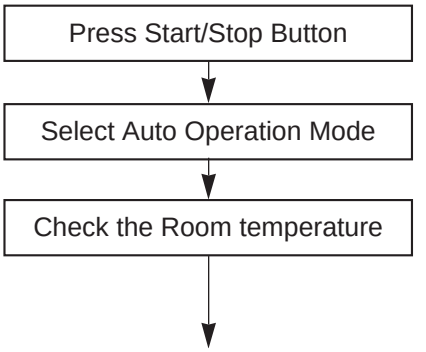
- When selecting the Cooling(❄) Mode Operation, the unit will operate according to the setting by the controller and the operation diagram is as following



Indoor Fan Speed	Selecting fan speed	Selecting fan speed	Selecting fan speed	Selecting fan speed	Selecting fan speed
Compressor	ON	OFF	ON	OFF	ON

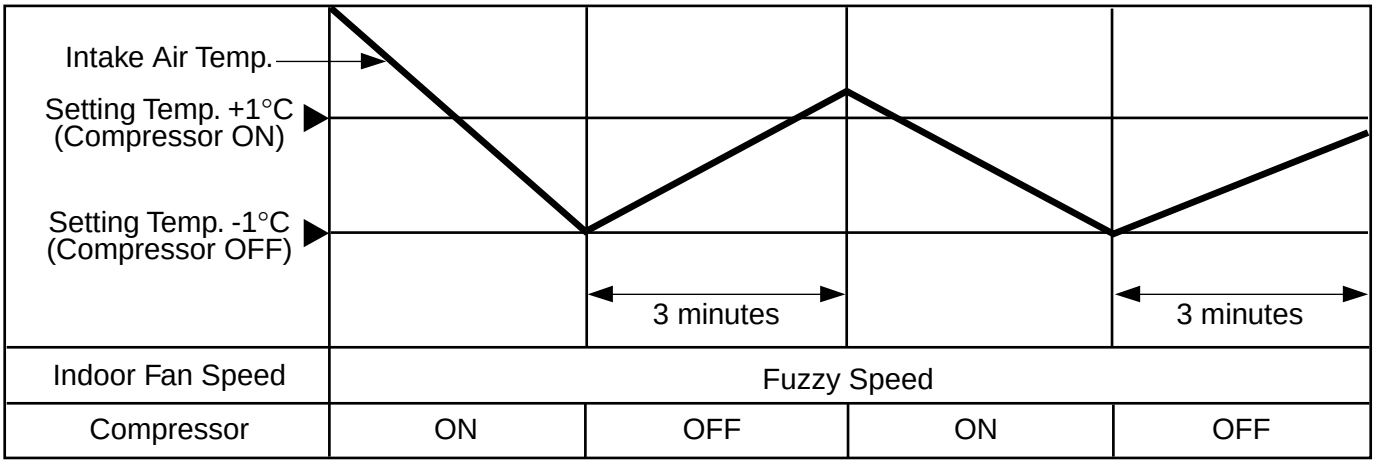
4. Auto Operation (Cooling Model only)

ƒUThe operation procedure is as following.



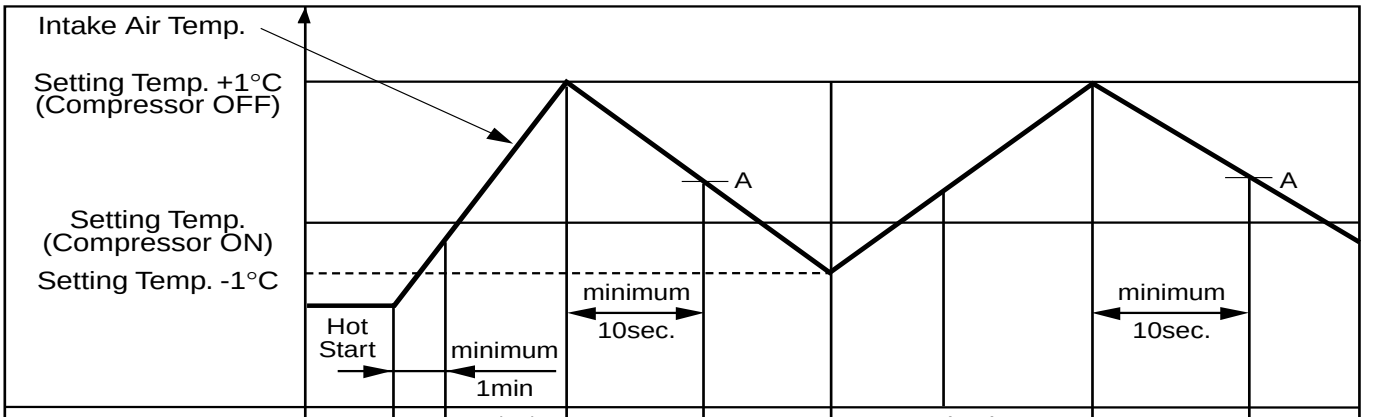
ƒUAuto Operation for Cooling

Operation Condition	Intake-air Temperature	Setting temperature	Fan speed
When Switch to Auto Operation	Over 26°C	25°C	Controlled by Fuzzy logic
	Over 24°C~below 25.5°C	Intake air -1.0°C	
	Over 22°C~below 23.5°C	Intake air -0.5°C	
	below 21.5°C	Intake air Temperature(18°C, MAX)	



5. Heating Mode Operation

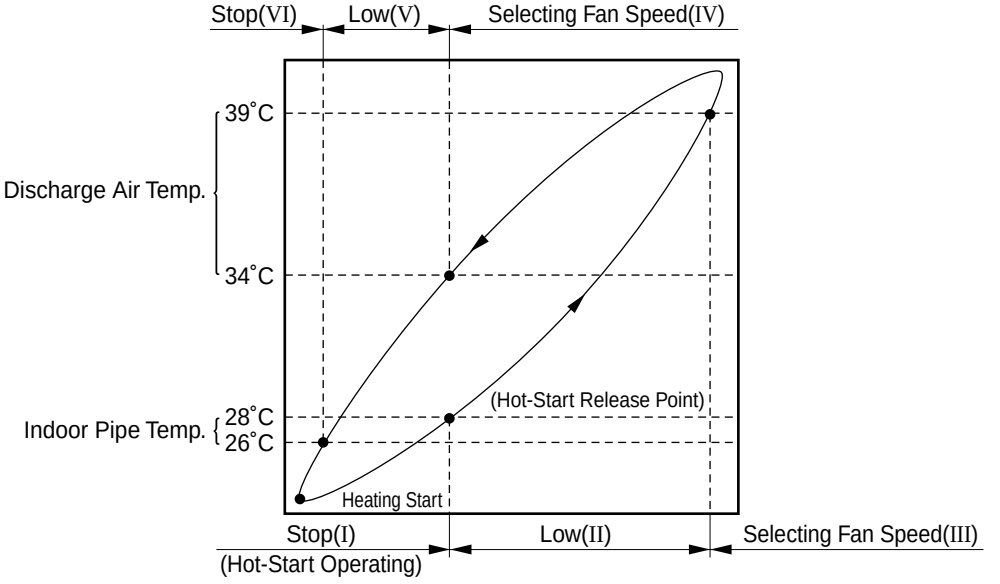
The unit will operate according to the setting by the remote controller and the operation diagram is shown as following.



Indoor Fan Speed	OFF	LOW	※ Selecting fan speed	LOW	OFF	※ Selecting fan speed	LOW	OFF
Compressor	ON			OFF		ON	OFF	
Electric Heater(Option)	OFF	ON		OFF		ON	OFF	

• A point: The indoor pipe temperature to be less then 35°C or Discharge air Temperature to be less than 29°C. The indoor fan operates for minimum 10sec. even if the indoor pipe temperature falls lower than35°C or the discharge air Temperature falls lower than 29°C.

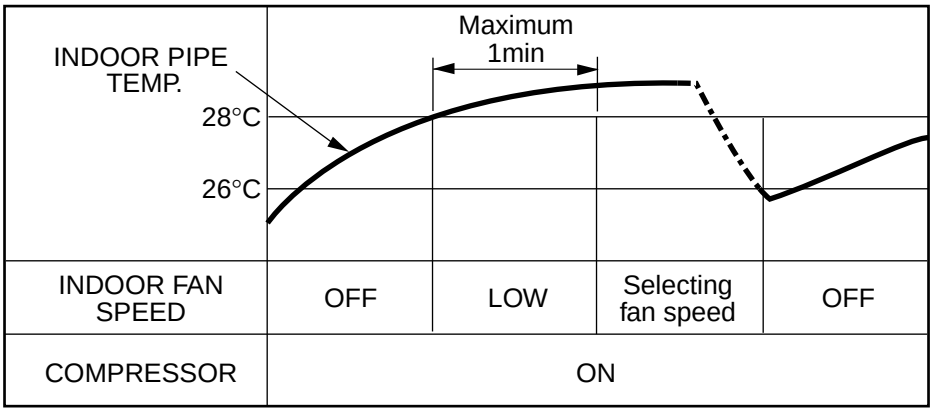
¡ During heating operation, the operating procedure of the indoor fan is as the following.



Step	Indoor fan speed	Pipe temp.	Air discharge temp.
¥	Off	≤28°C(Hot start operating)	–
¥–	Low	≥28°C	<39°C
¥†	Selecting speed	≥28°C	≥39°C
¥‡	Selecting speed	≥28°C	>34°C
¥·	Low	≥26°C	≤34°C
¥	Off	≤26°C	–

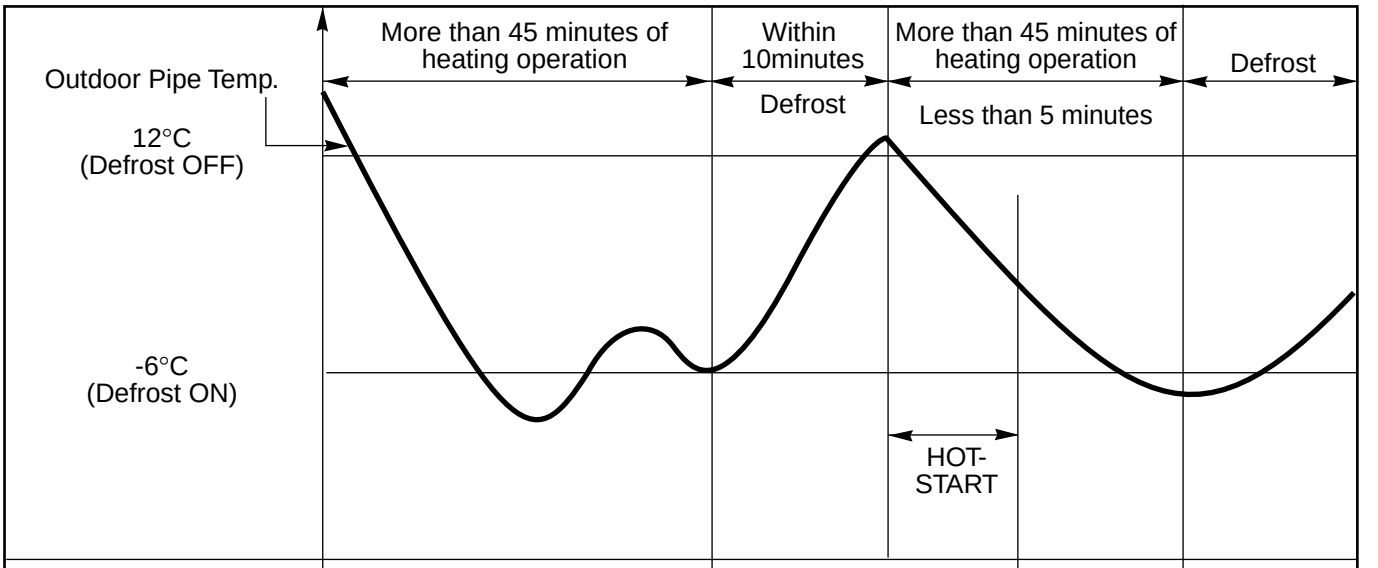
6. Hot-Start Control

- The indoor fan stops until the evaporator piping temperature will be reached to 28°C.
- During heating operation, if piping temperatures fall below 26°C fan stops.
- The operation diagram is as following.



7. Defrost Control

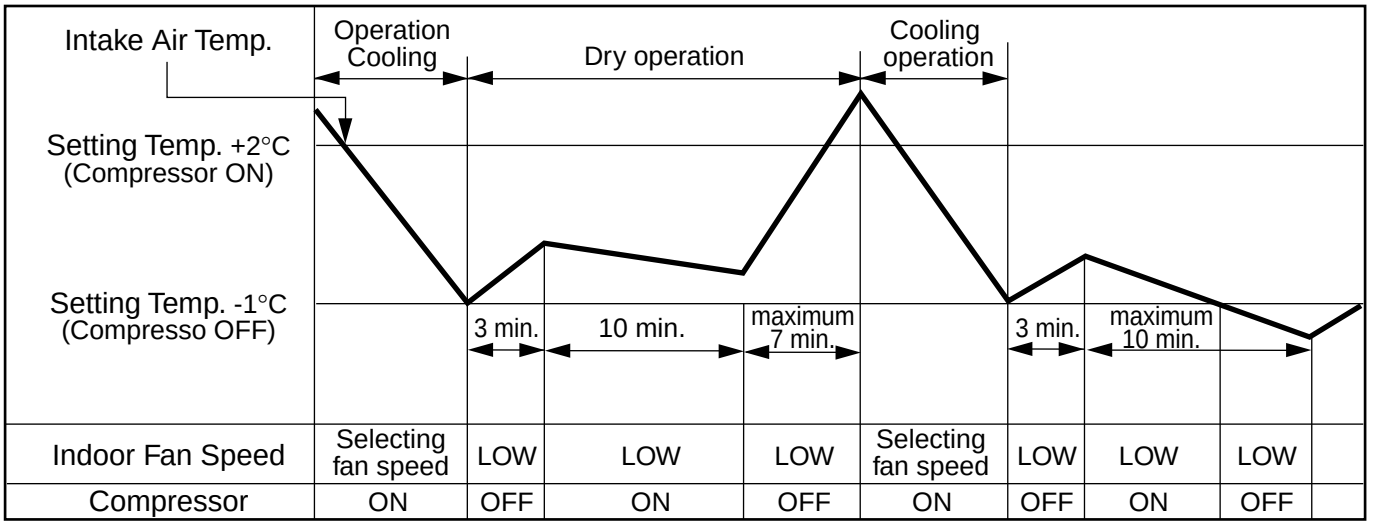
- Defrost operation is controlled by timer and sensing temperature of outdoor pipe.
- The first defrost starts only when the outdoor pipe temperature falls below -6°C after 45 minutes passed from starting of heating operation and more than.
- Defrost ends after 10 minutes pass from starting of defrost operation or when the outdoor pipe temperature rises over 12°C even if before 10 minutes.
- The second defrost starts only when the outdoor pipe temperature falls below -6°C after 45 minutes pass from ending of the first defrost and more than.



Indoor Fan	ON	OFF		ON	OFF
Compressor	ON	ON		ON	ON
4-Way Valve	ON	OFF	ON		OFF

8. Soft Dry Operation Mode

- During Soft Dry Operation, the compressor ON temperature is the setting temperature plus 2°C, the compressor OFF temperature is the setting temperature minus 1°C.
- When the room temperature rises over the compressor ON temperature, the operation mode is switched to the Cooling mode.
- When the room temperature falls between the compressor ON temperature and OFF temperature, the operation mode is switched to the Soft Dry Operation.
- The operation diagram is shown below.



Indoor Fan Speed	Selecting fan speed	LOW	LOW	LOW	Selecting fan speed	LOW	LOW	LOW	
Compressor	ON	OFF	ON	OFF	ON	OFF	ON	OFF	

9. Protection of the evaporator pipe from frosting

- Compressor and outdoor fan stop when indoor pipe temperature is below -2°C and restart at the pipe temperature is above 12°C.

10. Air Purifying Operation(CA, HA, ZA Model only)

Mode Selecting	Operating Mode	Fan Speed	Outdoor	OFF
Initial Starting of Air purifying Operation	- Outdoor not operating - Fan operating + Air purifying operating	- Low at the initial - But could be switched to Med. Hi	OFF	Repress Air purifying Button or ON/OFF Button
When switched to Air purifying operation	- Outdoor operating - Main Operating + Air purifying operating	Selecting Speed of Main Operating Mode	ON or OFF depend on main operating condition.	

11. Child Lock function

This function is to operate Air conditioner only by Remocon.
The procedure is as the following

1st: Press the 2 buttons of the temperature control simultaneously, to raise-to lower on the Display Panel of the product for more 3 seconds.

2nd: The buzzer sounds and then the window of Display Panel shows LOC (LOC) mark.

3rd: To release this function, the reverse again the operating procedure could be done.

¡ During this function is operating, any buttons of Display Panel don't work. But it is possible to operate with Remote controller.

12. Off Timer Function

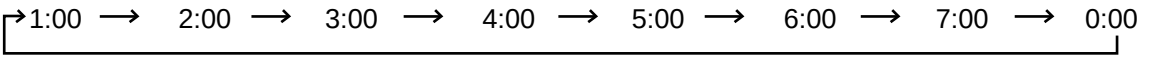
This function is to set the time of stopping the unit operation.

The procedure is as the following.

1st: Press the timer set button on the Remocon.

2nd: The buzzer sounds and then the display window shows the Off-Time to be set as 1:00 ¡ ··· ¡ 7:00 ¡ 0:00.

- The Off-Time is shifted as the following by each press.



- If you select '0:00', the Off-Timer function will be cancelled.
- During Off-Timer Operation, if you repress the timer set button, the rest time will be displayed.

13. Alarm mode display / only displayed while operating.

CH0 : The sensor for sensing room temperature is open or short.

CH1 : The sensor for sensing piping temperature of evaporator is open or short.

14. Function for test operation.

This function shall be operated while the set not operating and start while set temperature set button(▼) down and start/stop buttons pressing continuously for 3 seconds.

If you press start/stop button continuously for 3 seconds while set temp down button pressing once more test operation and the set shall be stopped.

After test operation operating and 18 minutes, test operation and the set shall be stopped.

If you press start/stop button while test operation operating, test operation shall be stopped and the set shall start.

When test operation operating, the display of **88:88** shall be shifted to tESt

4-way valve is always off when test operation.

Fan speed is high, air purifying system and auto air flow operations are off when test operation.

Regardless of outside temperature, the set operates when test operation.

All but start/stop and air purifying system buttons cannot be set.

15. Function of changing set temperature when re-operation after stop.

Heating operation is set to the previous set temperature when re-operation after stop. Cooling operation is set to the previous set temperature when re-operation with start/stop button.

1.Operation mode.

Cooling/soft dry mode → Cooling mode

Heating mode → Heating mode

2. Setting the set temperature when cooling operation.

Room temperature > Set temperature: to be set to the previous set temperature.

Room temperature ≤ Set temperature

a) Room temperature ≥ 26°C: to be set to 24°C

b) 22°C ≤ Room temperature ≤ 25°C: to be set to 21°C

c) Room temperature ≤ 21°C:to be set to -1°C less than room temperature.

3. Setting the set temperature when heating operation.

Set the previous set temperature when stopped.

16. Auto Restart

In case the power comes on again a power failure, Auto Restarting Operation is the function to operate procedures automatically to the previous operating conditions.

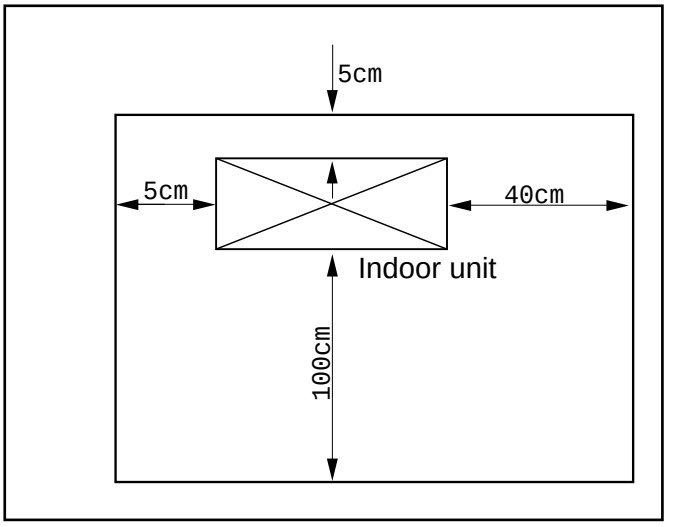
6. INSTALLATION

6.1 Installation of indoor, Outdoor Unit

1) Select the best location

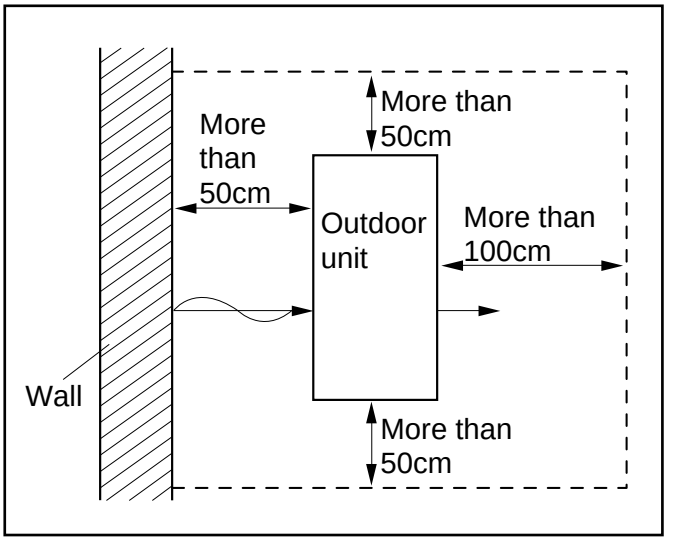
¥L Indoor unit

- There should not be any heat source or steam near the unit.
- There should not be any obstacles to prevent the air circulation.
- The place where air circulation in the room will be good.
- The place where drainage can be easily obtained.
- The place where noise prevention is taken into consideration.
- Do not install the unit near the door way.
- Ensure the space indicated by arrows from the wall, ceiling, fence, or the obstacles.



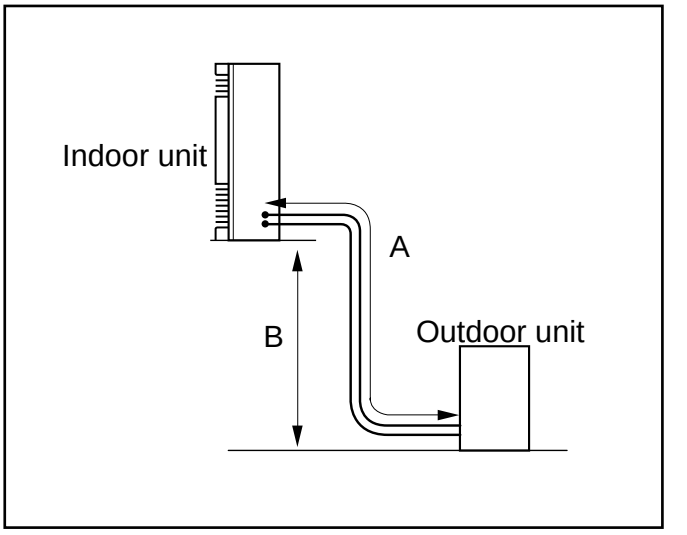
¥M Outdoor unit

- If an awning is built over the unit to prevent direct sunlight or rain exposure, be careful that heat radiation from the condenser is not restricted.
- There should not be any animals or plants which could be affected by discharged hot air.
- Ensure the space indicated by arrows from the wall, ceiling, fence, or other obstacles.



¥N Piping length and the elevation.

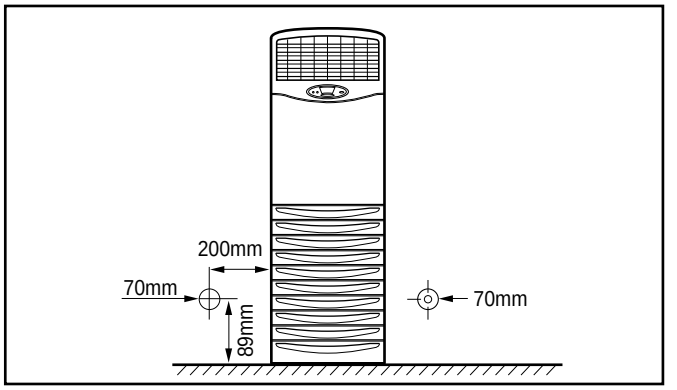
MODEL	MAX. Piping length A (m)	MAX. elevation B (m)
5HP	30	25

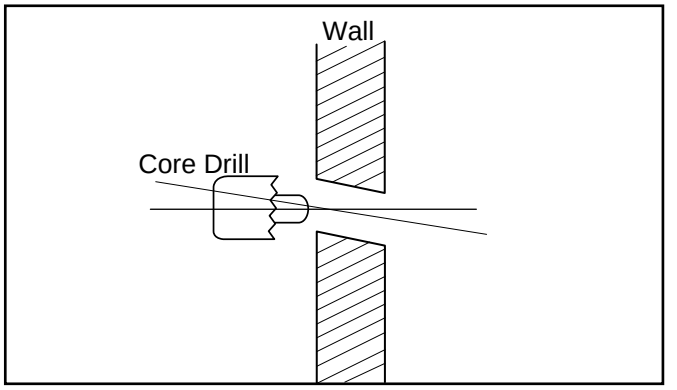


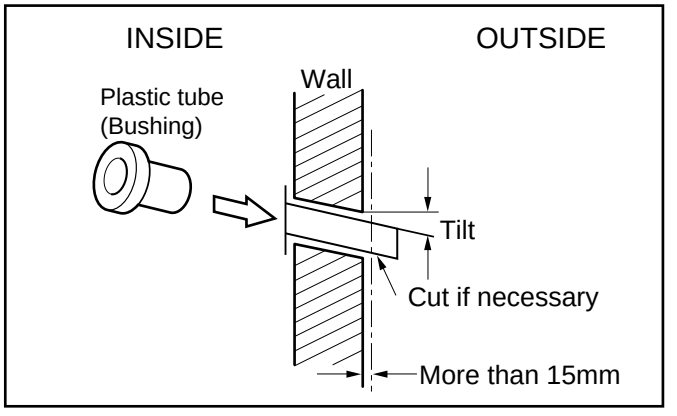
2) Indoor Unit installation

¥L The mounting floor should be strong and solid enough to prevent it from vibration.

¥M Drill the piping hole with 70mm diameter hole-core drill at either the right or the left of indoor unit. The hole should be sightly slant to the outdoor side.







¥N Insert the plastic tube through the hole.

¥0 Cut the extruded outside part of the plastic tube, if necessary.

3) Outdoor unit Installation

¥L Install the outdoor unit on the concrete or any solid base securely and horizontally by securing it with bolts (Ø12mm) and nuts.

¥M If there is any vibration transmitted to the building, mount the rubber underneath the outdoor unit.

4) Refrigerant amount

Before shipment, this air conditioner is filled with the rated amount of refrigerant including additional amount required for air-purging, subject to 5m piping length. (The rated amount of refrigerant is indicated on the name plate.) But when the piping length exceeds 5 meters, additional charge is required according to the following table.

(Unit: g)

MODEL	REFRIGERANT CHARGE
5HP	50g per 1 m

Example) In case of 10m long pipe(one-way), the amount of refrigerant to be replenished is:
$(10 - 5) \times 50 = 250g$

6.2 Installation Method

1) Procedure

No.	Installation works	Descriptions
1	Preparation of tools and installation parts	Preparation of installation
2	Flaring the pipes	To insert the flare nuts, mounted on the connection parts of both indoor and outdoor unit, onto the copper pipes.
3	Pipe bending	To reduce the flow resistance of refrigerant.
4	Connection of installation parts (elbows, socket etc)	Connection of long piping
5	Tighten the flare nut (outdoor)	Connecting the pipings of the outdoor unit.
6	Blowing the pipings	To remove dust and scale in working.
7	Tighten the flare nut (indoor)	Connecting the pipings of the indoor unit.
8	Check the gas-leakage of the connecting part of the pipings.	
9	Air purging of the piping and indoor unit	The air which contains moisture and which remains in the refrigeration cycle may cause malfunction on the compressor
10	Open the 3-way (liquid side) and 3-way (gas side) valves.	
11	Form the pipings	To prevent heat loss and sweat
12	Checking the drainage (indoor unit)	To ensure if water flows drain hose of indoor unit.
13	Connecting the cable between outdoor and indoor unit	Preparation of the operating
14	Connecting the main cable to outdoor unit	
15	Supply the power to the crankcase heater (before the operating the unit)	To prevent the liquid back to the compressor. (Heat pump only)
16	Cooling operation, Heating operation (Use the remote controller or display of the indoor unit)	To confirm the operation of the unit.

2) Preparation of installation parts and tools

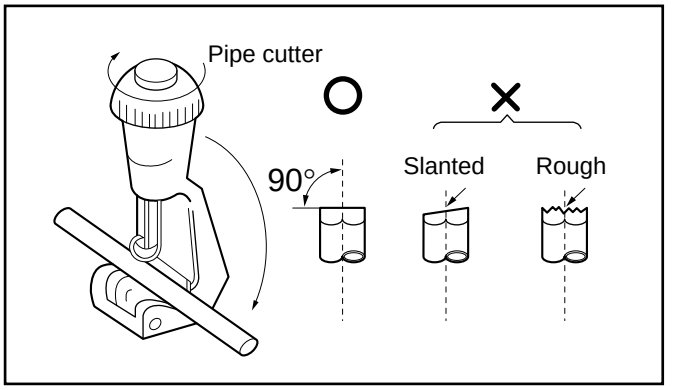
No.	Installation Parts, Tools	Use
1	Flaring tool (Ø 6,35 - Ø 19,05)	Flaring the pipes
2	Reamer	Remove burrs from cut edges of pipes.
3	Pipe cutter (Max 35mm Copper pipe)	Cutting the pipings
4	Wrench (H5, H4 hexagonal wrench)	To open the service valve
5	Pipe bender	Bending the pipings
6	Leak detector	Check the gas-leakage of connecting part of the pipings
7	Manifold gauge	To measure the pressure, to charge the refrigerant
8	Charge-nipple	To connect the bombe
9	Vacuum pump	To remove the air in the pipe.
10	Charge cylinder balance	To measure the refrigerant amount
11	Bombe (Freon-22)	Gas charge Air purge Cleaning the pipe
12	Spanner	To tighten the connecting parts of the pipings
13	Monkey spanner	
14	Driver(⊕, ⊖)	
15	Benchi (150mm)	Cutting the wires
16	Tapeline	To measure the length
17	Core drill	To make holes through the concrete to wall and blocks
18	Voltmeter, Amperemeter, Clampmeter	To measure the current and voltage
19	Insulation resistance tester	To measure the insulation resistance
20	Glass thermometer	To measure the intake and outlet air temperature of the indoor unit
21	Copper tubes	To use the connecting pipings
22	Insulation material	To cover the connecting pipings
23	Tape	To finish the connecting pipings
24	Electrical leakage Breaker	To shut off the main power
25	Cable	To connect the cable from outdoor unit to indoor unit
26	Drain hose sockets, elbows	To remote the condensing water

6.3 Piping of indoor unit

1) Preparation of pipings

¤ **Cut the pipes and the cable**

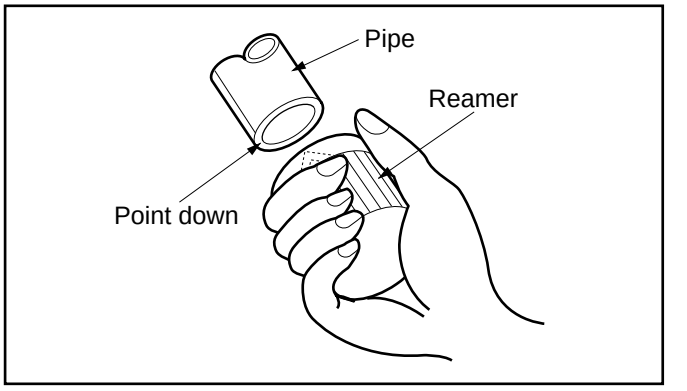
- Use the accessory piping kit or the pipes purchased locally.
- Measure the distance between the indoor and the outdoor unit.
- cut the pipes a little longer than measured distance.
- Cut the cable 1.5m longer than the pipe length.



¤Ł **Remove burrs.**

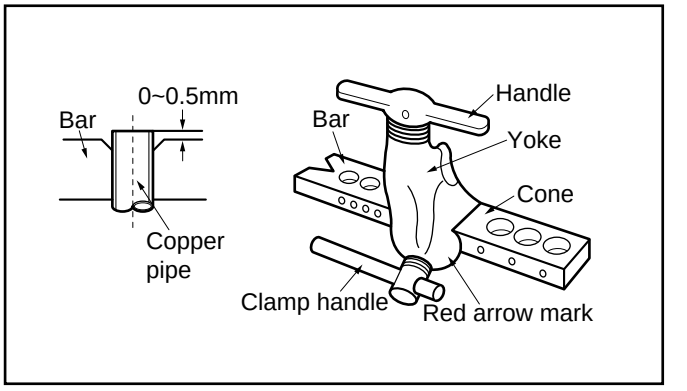
- Remove burrs from cut edges of pipes.
- Turn the pipe end down to avoid the metal powder entering the pipe.

Caution:
If burrs are not removed, they may cause gas leakage.

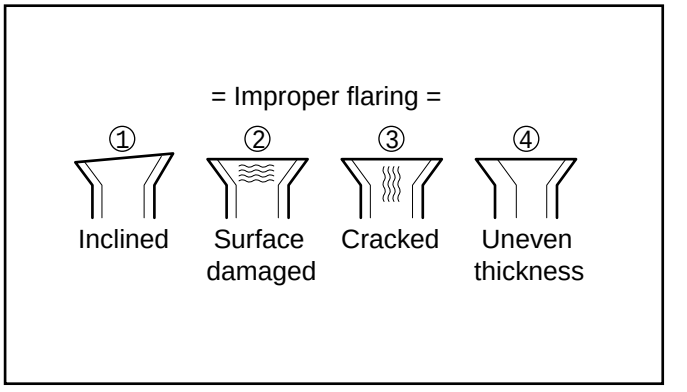


¤Ø **Flaring the pipes.**

- Insert the flare nuts, mounted on the connection ports of both indoor and outdoor unit, onto the copper pipes. Some refrigerant gas may leak, when the flare nuts are removed from the indoor unit, as some gas is charged to prevent the inside of the pipe from rusting.
- Fit the copper pipe end into the Bar of flare tool about 0~0.5mm higher. (See illustaration)
- Flare the pipe ends.



¤Œ **Tape the flaring part to protect it from dust or damages.**



2) Connection of pipings

¤ **Move the indoor tubing and drain hose to the hole**

- Remove tubing holder and pull the tubing out of the chassis.

¤Ł **Replace the tubing holder into original position**

¤Ø **Route the tubing and the drain hose staight backwards.**

¤Œ **Insert the connecting cable into the indoor unit through the hole.**

- Do not connect the cable to the indoor unit
- Make a small loop with the cable for easy connection later.

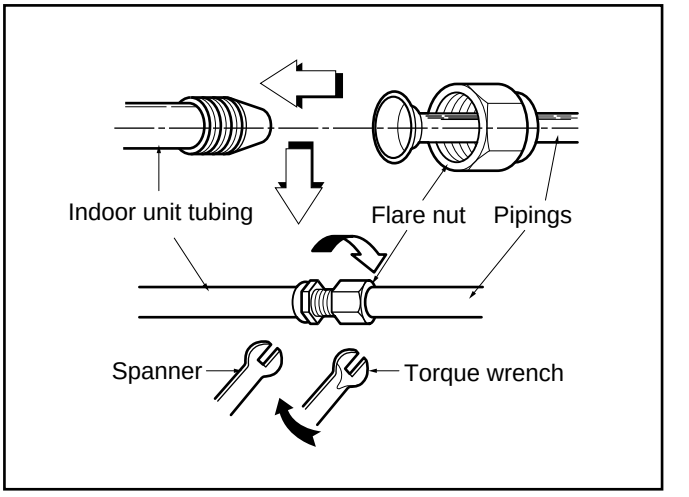
¤º **Tape the tubing and the connecting cable.**

¤ **Indoor unit installation.**

¤ **Connecting the pipings to the indoor unit.**

- Align the center of the pipings and suffciently tighten the flare nut with fingers.
- Finally, tighten the flare nut with troque wrench until the wrench clicks.
  When tightening the flare nut with troque wrench, ensure the direction for tightening follows the arrow on the wrench.

Pipe Size	Torque
3/8"	4.2 Kg·m
3/4"	6.5 Kg·m



3) Pre-cautions in bending

¤ **If it is necessary to bend or stretch the tubing, use the Spring which is attached to the tubing instead of pipe bender.**

- Please make a careful notice to make a smooth line.
- Hold the tubing with your two hands closely and then bend or stretch it slowly not to make any crack.
- Remember that the radius (R) should not exceed 70 mm (Refer to Fig. 1).

¤Ł **Do not repeat the bending process to prevent the tubing from cracking or curshing.**

¤Ø **Keep in mind that the bending part should not be cracked, and make the radius (R) as long as possible (Refer to Fig.2)**

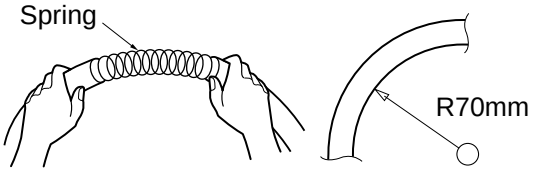


Fig. 1

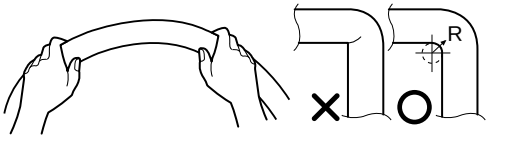
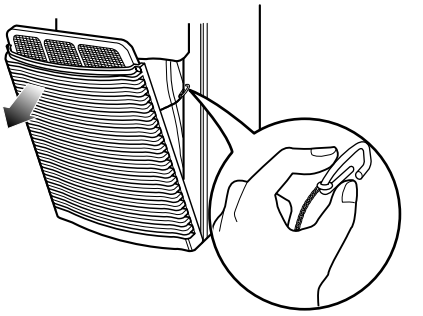


Fig. 2

6.4 Connecting the cable to indoor unit

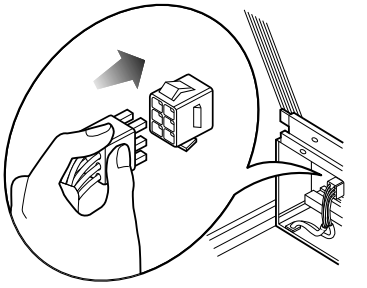
The inside and outside connecting cable can be connected after opening the inlet grille.

¤ **Open the inlet grille manually.**



¤Ł **Open the control cover with Driver (⊕)**

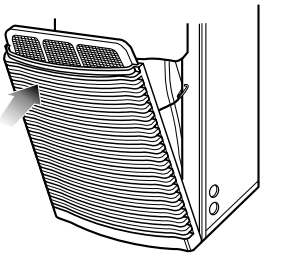
¤Ø **Connect the wire to the housing on the control board.**



¤Œ **Secure the cable onto the control board with clamp.**

¤º **Secure the control cover to the original position with the screw.**

¤ **Close the inlet grille.**



6.5 Connecting Pipings and the cable to Outdoor unit

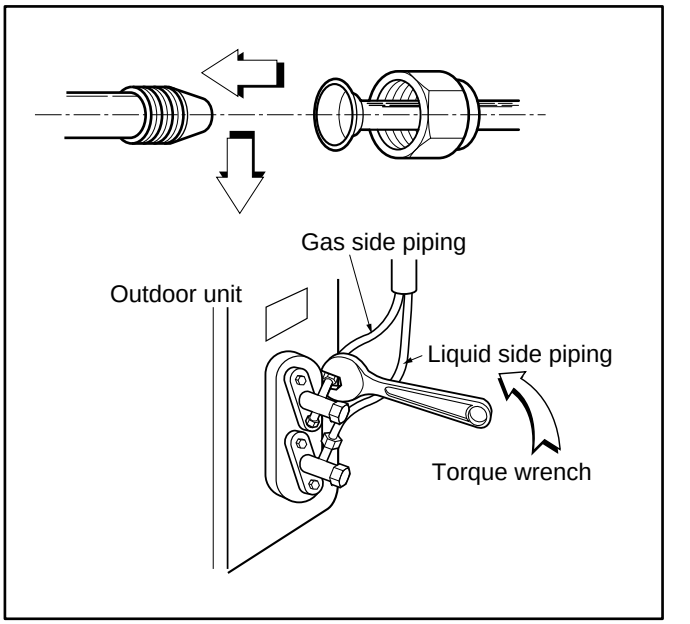
1) Connecting the pipings to the outdoor unit .

¥L **Align the center of the pipings and sufficiently tighten the flare nut with fingers.**

¥M **Finally tighten the flare nut with torque wrench until the wrench clicks.**

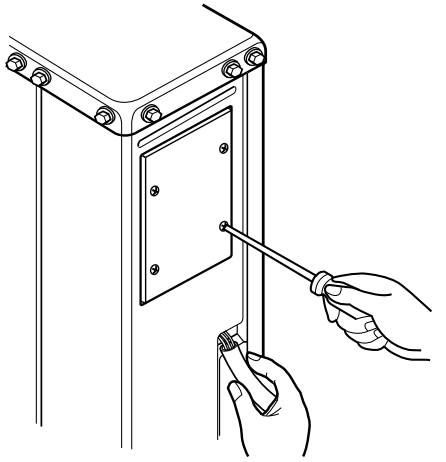
- When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.

Pipe Size	Torque
3/8"	4.2 Kg·m
3/4"	6.5 Kg·m

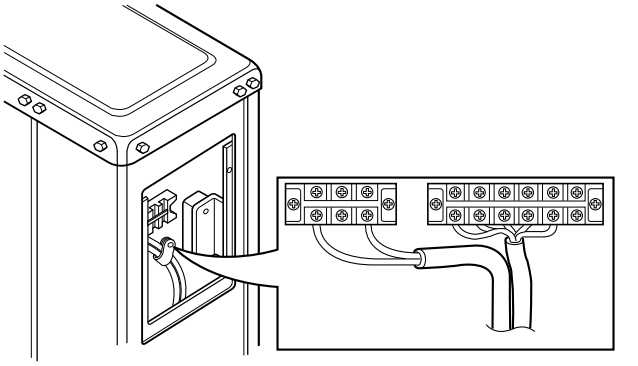


2) Connecting the cables to the outdoor unit

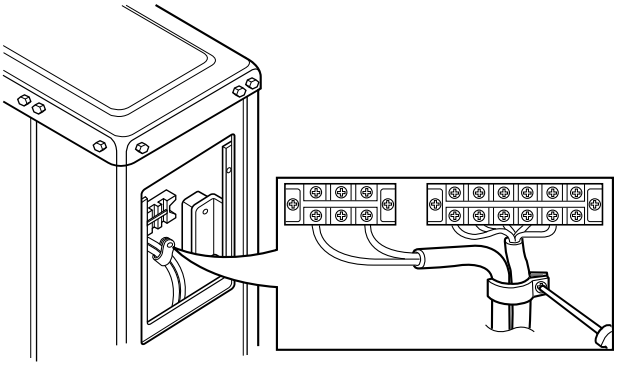
¤ **Open the control board cover from the outdoor unit by removing the screws.**



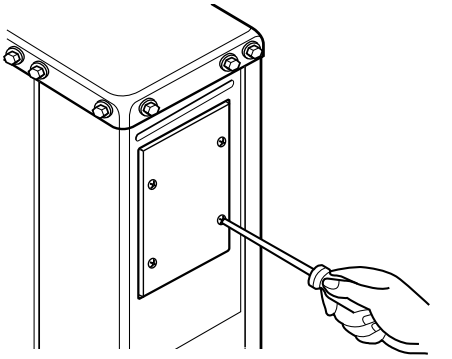
¤Ł **Connect wires to the terminals on the control board individually.**



¤Ø **Secure the cable onto the control board with clamp.**



¤Œ **Secure the control board cover to the original position with the screws.**



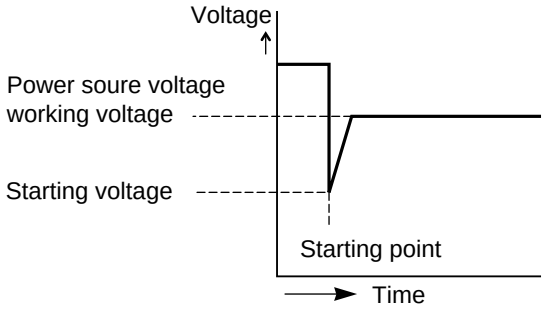
6.6 Power Supply and Wiring

The unit is completely wired internally at the factory according to general rule of electrical technology, but local rules, if they are required, should be complied with.

1) Power supply

Power source must fulfill the following conditions:

- **The working voltage should be higher than 90% and lower than 110% of the rated voltage marked on the name plate.**
- **The working voltage among the three phases should be balanced with in a 3% deviation from each phase voltage.**
- **The starting voltage should be higher than 85% of the rated voltage marked on the name plate.**



2) Wiring

After the confirmation of the above conditions, prepare the wiring as follows:

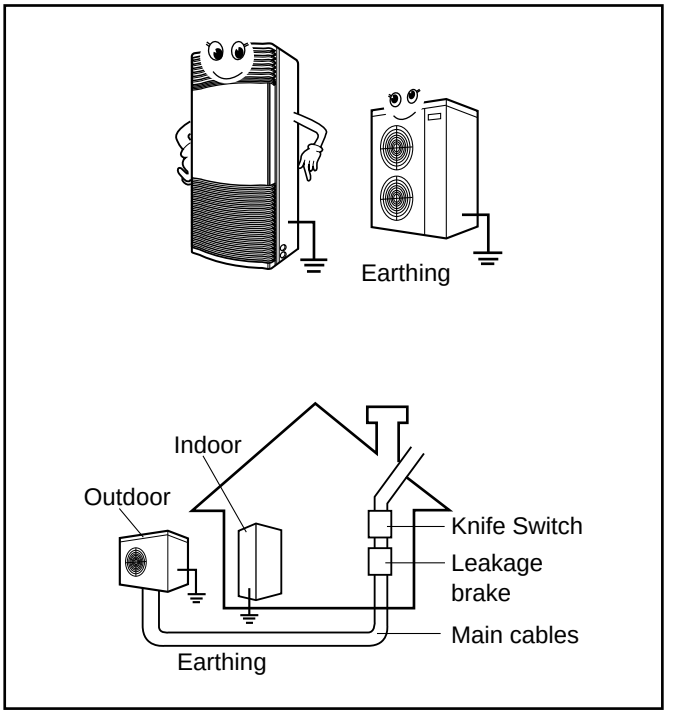
- **Never fail to have an individual power specialized for the air conditioner. As for the method of wiring, be guided by the circuit diagram pasted on the inside of control box cover.**
- **Provide a circuit brake switch between power source and the unit.**
- **The screws which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened.**
  (If they are loose, it could give rise to burn-out of the wires.)
- **Specification of power source.**
- **Confirm that electrical capacity is sufficient.**
- **See to that the starting voltaged is maintained at more than 90 percent of the rated voltage marked on the name plate.**
- **Confirm that the cable thickness is as specified in the power sources specification.**
  (Particularly note the relation between cable length and thickness.)
- **Never fail to equip a leakage brake where it is wet or moist.**
- **The following troubles would be caused by voltage drop-down.**

• Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.

• Proper starting power is not given to the compressor.

3) Earthing work

Connect the cable of diameter 1.6mm or more to the earthing terminal provided in the control box and do earthing. In case of equipping the electrical resistance will be reduced to 500Ω. But in case that no earthing is required in particular, the electrical resistance between the med is below 100Ω.
Also, the unit can be earthed to the water service pipe buried under the ground where electrical resistance of 3Ω or less is retained. Of course, the earthing to pipes must be approved by the authority of water supply.

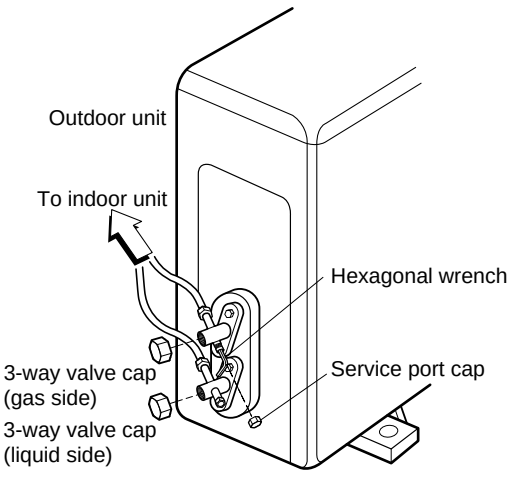


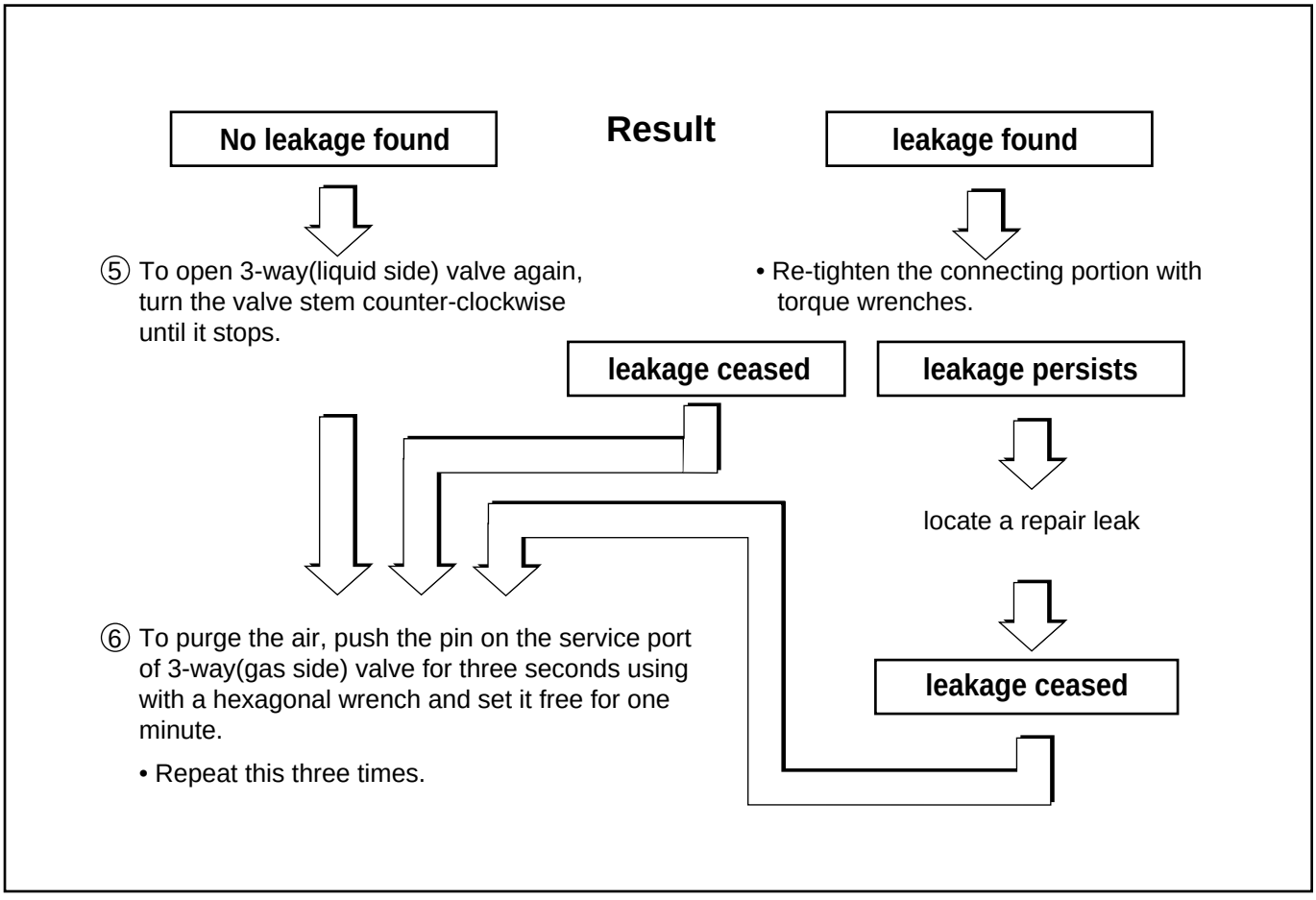
6.7 Air Purging of the Piping and Indoor Unit

1) Air purging

The air which contains moisture and remains in the Refrigeration cycle may cause a malfunction on the compressor.

- **Remove the caps from the 3-way(liquid side) and 3-way(gas side) valves.**
- **Remove the service-port cap from the 3-way (gas side) valve.**
- **To open the valve, turn the valve stem of 3-way (liquid side) valve counter-clockwise approx. 90° and hold it there for ten seconds, then close it.**
- **Check the gas-leakage of the connecting port of the pipings.**

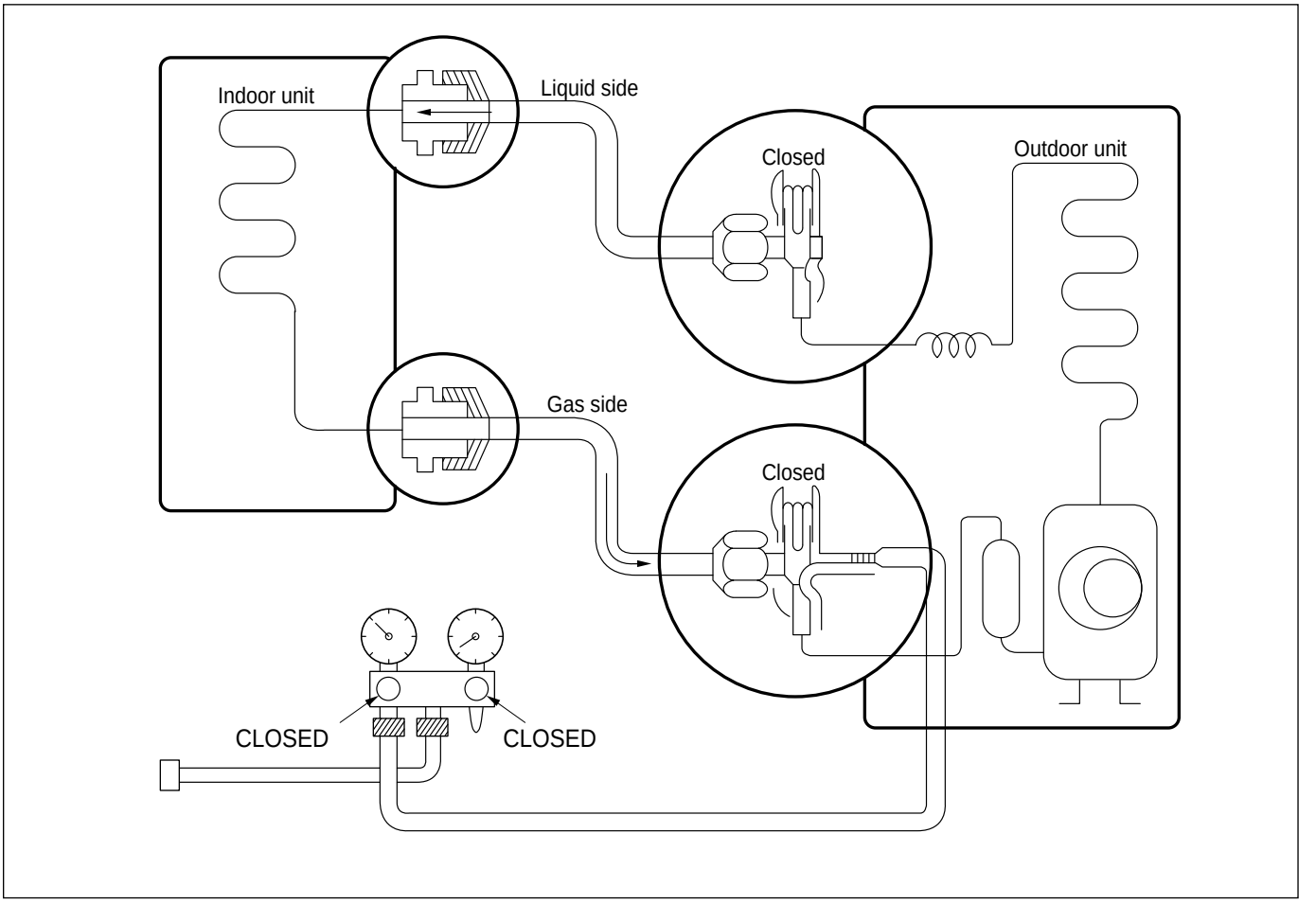




¤ **Set the both 3-way(liquid side) and 3-way(gas side) valves to open position with the hexagonal wrench for the unit operation.**

¤ **Checking the gas leakage for the left piping.**

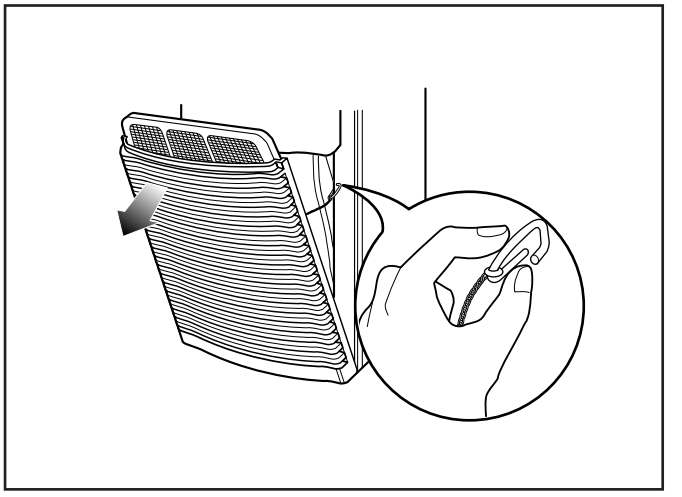
- Connect the manifold gauge to the service port of 3-way(gas side) valve.
  Measure the pressure.
- Keep it for 5 - 10 minutes.
  Ensure if the pressure indicated on the gauge is as same as that measured at first time.



6.8 Checking the Drainage and Form the Piping

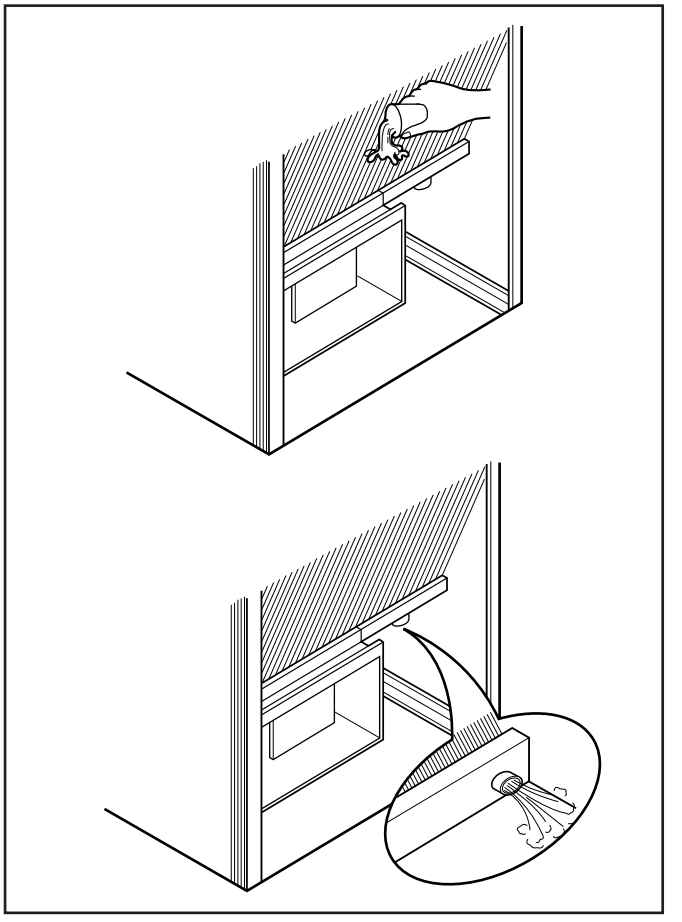
1) Checking the Drainage

¤ **Remove the inlet grille with your hands as shown (right and left) and pull in the direction indicated by the arrow.**



¤Ł **Check the drainage**

- Pour a glass of water into the Drain pan.
- Ensure if water flows drain hose of indoor unit.



2) Form the Piping

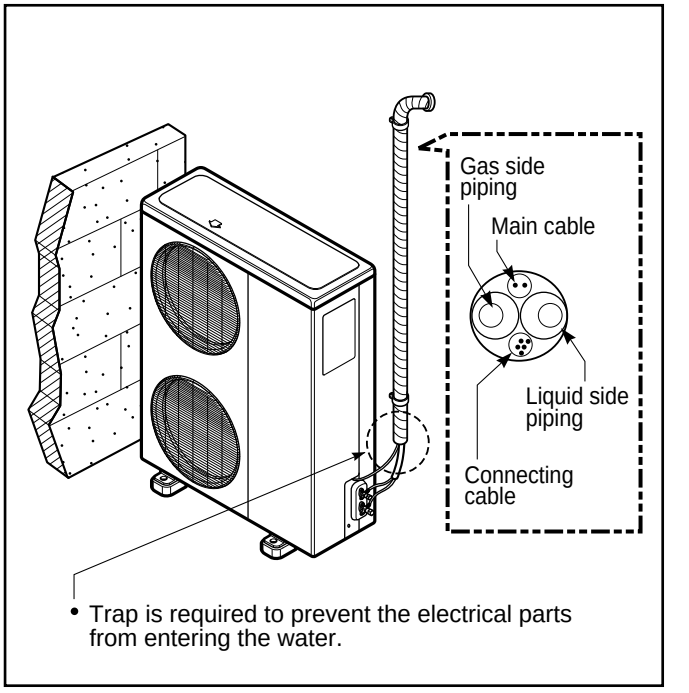
¤ **Wrap the connecting port of indoor unit with the insulation material and secure it with two Plastic Bands. (for the right Piping)**

• If you connect an additional drain hose, the end of the drain-outlet should be water, and fix it on the wall to avoid swinging in the wind.)

In case the outdoor unit is installed below position of the indoor unit.

¤Ł **Tape the Piping, and Connecting Cable from down to up.**

¤Ø **From the piping gathered by taping along the exterior wall fix it on the wall by saddle or equivalent.**



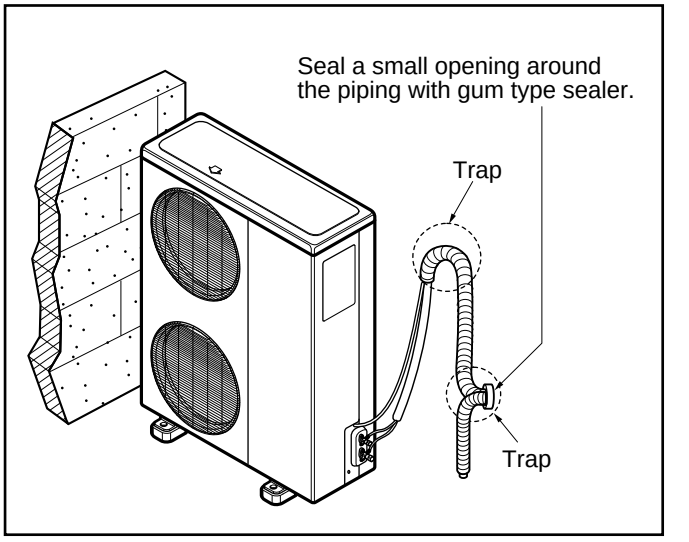
• Trap is required to prevent the electrical parts from entering the water.

In case the outdoor unit is installed upper position of the indoor unit.

¤ **Tape the piping and connecting cable from down to up.**

¤Ł **In order to prevent water from entering the room, tape the piping from a trap.**

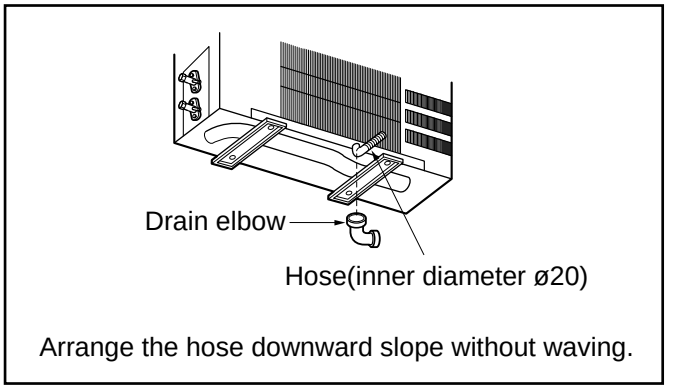
¤Ø **Fix the piping onto the wall with saddle or bracket.**



Drain water treatment of outdoor Unit(Heat Pump Only)

¤ **When using the drain elbow hose, use a mount of 3cm of higher.**

¤Ł **In the cold district (0°c continued for 2~3 days), the drain water is frozen and the fan fails to function, do not use the drain elbow.**



Arrange the hose downward slope without waving.

6.9 Final Check and Test Run

After installing the unit, perform the final check and running test as follows:

- **Is the unit securely mounted?**
- **Is the installation location adequate?**
- **Is the water piping work adequately and without leakage?**
- **Are trapped drain lines installed at condensate drain connections?**
- **Has the refrigeration cooling cycle been kept sealed?**
- **Is the electrical wiring adequate and are the screws tightened on terminals?**

After the above final checkings, prepare the running test as follows:

- **Connect compound gauges to the check joints at discharge and suction sides of the compressor.**
- **Turn all switches "OFF"**
- **Turn the main switch "ON"**

Running test should be accomplished as follows:

- **Set operation switch at "FAN" and the fan will start. Check to ensure that the fan sounds normal.**
- **Next, set it at "COOL" and the compressor will start. Check to ensure that the compressor sounds normal.**
- **Check discharge and suction pressure on the compound gauges.**
- **Check working voltage, phase balance and running current.**
- **Check to ensure that the thermistor functions properly.**
- **Check to ensure that the high pressure control switch functions correctly.**

6.10 Installation Check List

1. Is the unit securely mounted and levelled? ☐

- ☐ Space for Evaporator Air Flow
- ☐ Space for Condenser Air Flow
- ☐ Space for Maintenance Work
- ☐ Noise and Vibration
- ☐ Appearance

2. Is electrical wiring system adequate? ☐

- ☐ Wire Size
- ☐ Switch Size
- ☐ Fuse Size
- ☐ Voltage
- ☐ Tightened Connection
- ☐ Operation Control Devices
- ☐ Safety Devices
- ☐ Hz

3. Does the refrigerant piping work adequately? ☐

- ☐ Pipe Size
- ☐ Insulation
- ☐ Vibration
- ☐ Leakage
- ☐ Refrigerant Charge
- ☐ Trap

4. Does the duct work adequately? ☐

- ☐ Pipe Size
- ☐ Insulation
- ☐ Vibration
- ☐ Sound-proof
- ☐ Vibration-Proof

5. Are the condensate drain lines properly arranged? ☐

- ☐ Trap
- ☐ Drain Ditch

6. Are the service valves opened? ☐

6.11 Running Test and Maintenance Record

JOB NUMBER:
POWER SUPPLY : Main Power_____ V, _____ Hz

	Indoor Unit	Outdoor Unit
Model	(V, Hz)	(V, Hz)
Production No.		

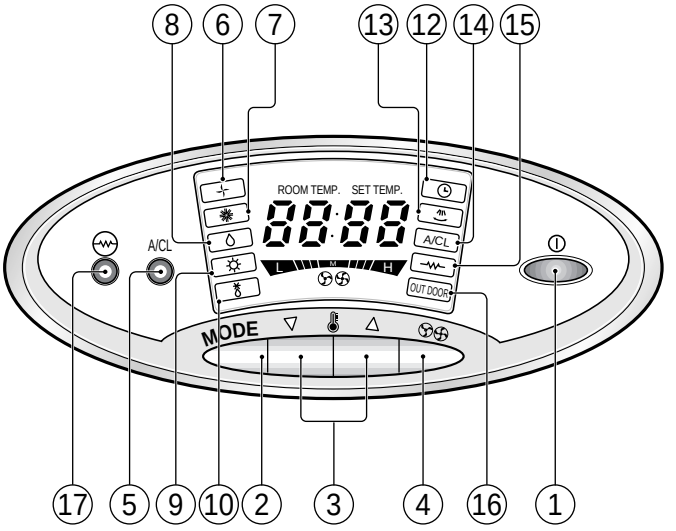
Accessory Attached : _____ _____ _____
CUSTOMER'S NAME AND ADDRESS :_____ (PHONE NO.:_____)
INSTALLED BY: _____ DATE: _____
START UP BY:_____ DATE: _____

❒ 1. Does the operation switch function properly?
❒ 2. Is the rotating direction of the evaporator fan correct?
❒ 3. Is the rotating direction of the condenser fan correct?
❒ 4. Is the evaporator airflow sufficient?
❒ 5. Are there any abnormal sounds?
❒ 6. Has the unit been operated at least twenty (20) minutes?
❒ 7. Check indoor temperatures :
Inlet : DB _____ °C, WB _____°C
Outlet : DB _____ °C, WB _____°C
❒ 8. Check outdoor temperatures :
Inlet : DB _____ °C
Outlet : DB _____ °C
❒ 9. Check pressures :
Discharge pressure:_____kg/cm^2
Suction pressure: ____kg/cm^2
❒ 10. Check voltage :
Rated voltage:_____ V
Operating voltage:R-S _____ V, S-T _____ V, T-R _____V.
Starting voltage: _____ V (≥0.85 x Rated Voltage)
Phase unbalance : 1-V/V mean = _____ (-0.03 ≤ Imbalance ≤ +0.03)
❒ 11. Check running current:
packaged air conditioner: ____ A
❒ 12. Do the control devices function properly?
❒ 13. Do the protective devices function correctly?
❒ 14. Is the refrigerant charge adequate?
❒ 15. Is the drain line draining properly?
❒ 16. Is the air filter clean?
❒ 17. Are the evaporator coil and condenser coil clean?
❒ 18. Are all cabinet panels fixed?
❒ 19. Are all cabinet panels free from rattles?

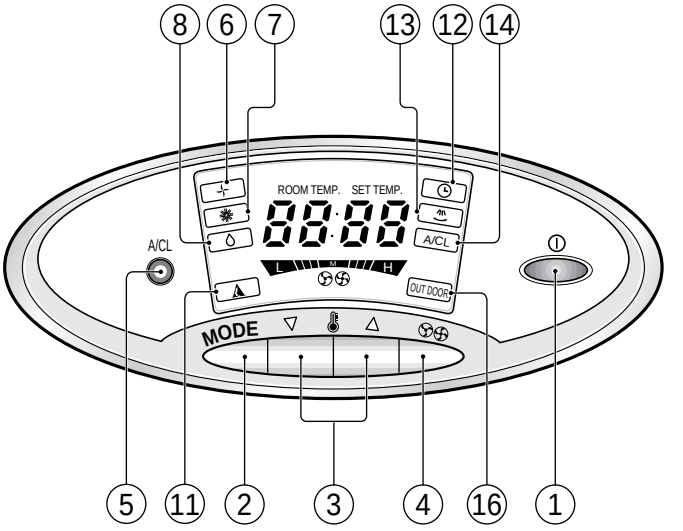
7. OPERATING

7.1 Display

(Heat Pump Model)



(Cooling only Model)



¤ **START/STOP BUTTON**
Operation starts when this button is pressed and stops when the button is pressed again.

¤Ł **OPERATION MODE SELECTION BUTTON**
Used to select the operation Mode.

¤Ø **ROOM TEMPERATURE SETTING BUTTONS**
Used to select the room temperature.

¤Œ **INDOOR FAN SPEED SELECTION**
Used to select fan speed in three steps-low, med, high.

¤º **AIR CLEANER OPERATION BUTTON (OPTION)**
Used to purify the Room air.

¤ **FAN OPERATION LAMP**

¤ **COOLING OPERATION LAMP**

¤ **SOFT DRY OPERATION LAMP**

¤ **HEATING OPERATION LAMP**

¤ **DEFROST OPERATION LAMP**

¤æ **AUTO OPERATION LAMP**

¤ **OFF TIMER OPERATION LAMP**

¤ **OFF TIMER OPERATION LAMP (HORIZONTAL AIR FLOW)**

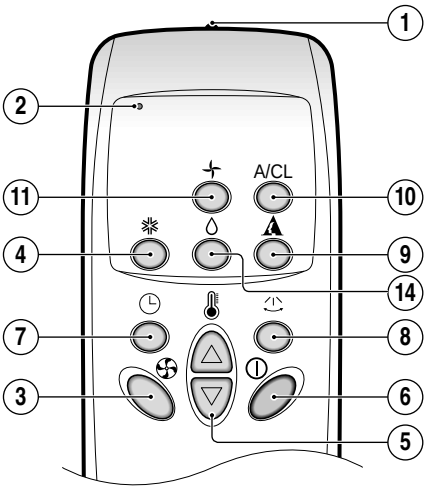
¤ **AIR CLEANER OPERATION LAMP (OPTION)**

¤ı **ELECTRIC HEATER OPERATION LAMP**

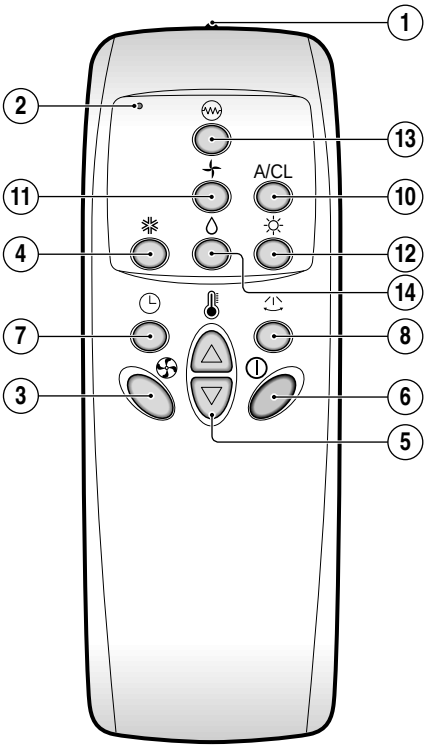
§ **OUT DOOR UNIT OPERATION LAMP**

§æ **ELECTRIC HEATER OPERATION BUTTON (OPTION)**

7.2 Control



(Cooling Model)



(Heat pump Model)

¤ **Signal Transmitter**
- Transmits the signals to the package air conditioner

¤Ł **Operation Display of the Remote Control**

¤Ø **Indoor Fan Speed Selection Button**
- To select the desired fan speed in three steps [Low, Med, High]

¤Œ **Cooling ON Button**

¤º **Temperature Setting Buttons**

¤ **Power ON/OFF Button**
- Operation will start when this button is pressed, and stop when the button is pressed again.

¤ **Timer Set Button**
- Each time the button is pressed, the mode is changed in the following process.
  Timer set (1, 2, 3, 4, 5, 6, 7 hours)
  If you select “0:00” the off Timer function will be cancelled.

¤ **Auto Airflow Direction Control Button**
- The vertical louvers swing left and right.
- The horizontal louvers can be adjusted manually.

¤ **Auto Mode Operation Button (Cooling Model Only)**

¤ **Plasma Air purifying Button (Option)**

¤æ **Indoor Fan Operation Button**

¤ **Heating Button (Heat Pump Model)**

¤ **Electric Heater ON/OFF Button (Option)**

¤ **Soft Dry Operation Button**

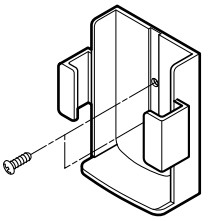
Wireless Remote Control Puts all functions at your fingertips

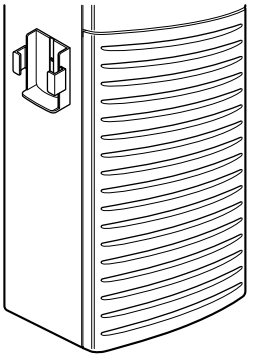
Handling the remote control

- Aim at the signal receptor on the package air conditioner when operating.
- The remote control signal can be received at a distance of up to about 7meters.
- Be sure that there are no obstructions between the remote controller and the signal receptor.
- Do not drop or throw the remote controller.
- Do not place the remote controller in a location exposed to direct sunlight, or next to a heating unit, or other heat source.

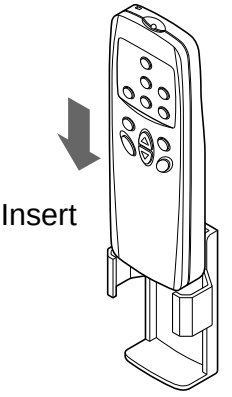
7.3 Remote Control Preparation

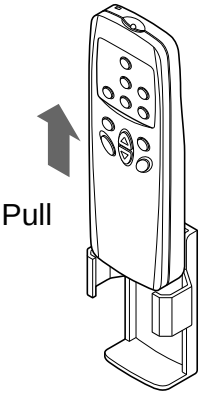
1 ***How to mount onto a wall***
Use the screws to secure the holder to the wall or attach the holder side of indoor unit.





2 To insert the remote control to the holder.



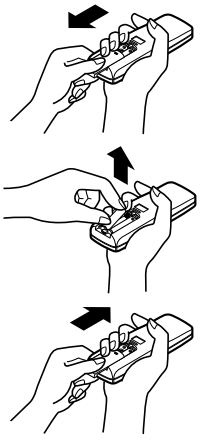


How to insert batteries

1 **Remove the cover from the back of the remote controller.**
- Slide the cover according to the arrow direction.

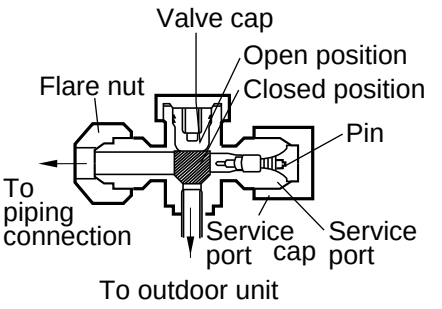
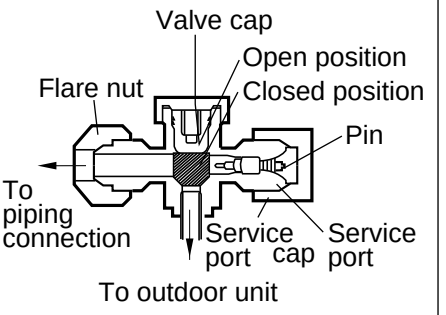
2 **Insert two batteries.**
- Be sure that the (+) and (-) directions are correct.
- Be sure that both batteries are new.

3 **Re-attach the cover.**
- Slide the cover into back position.



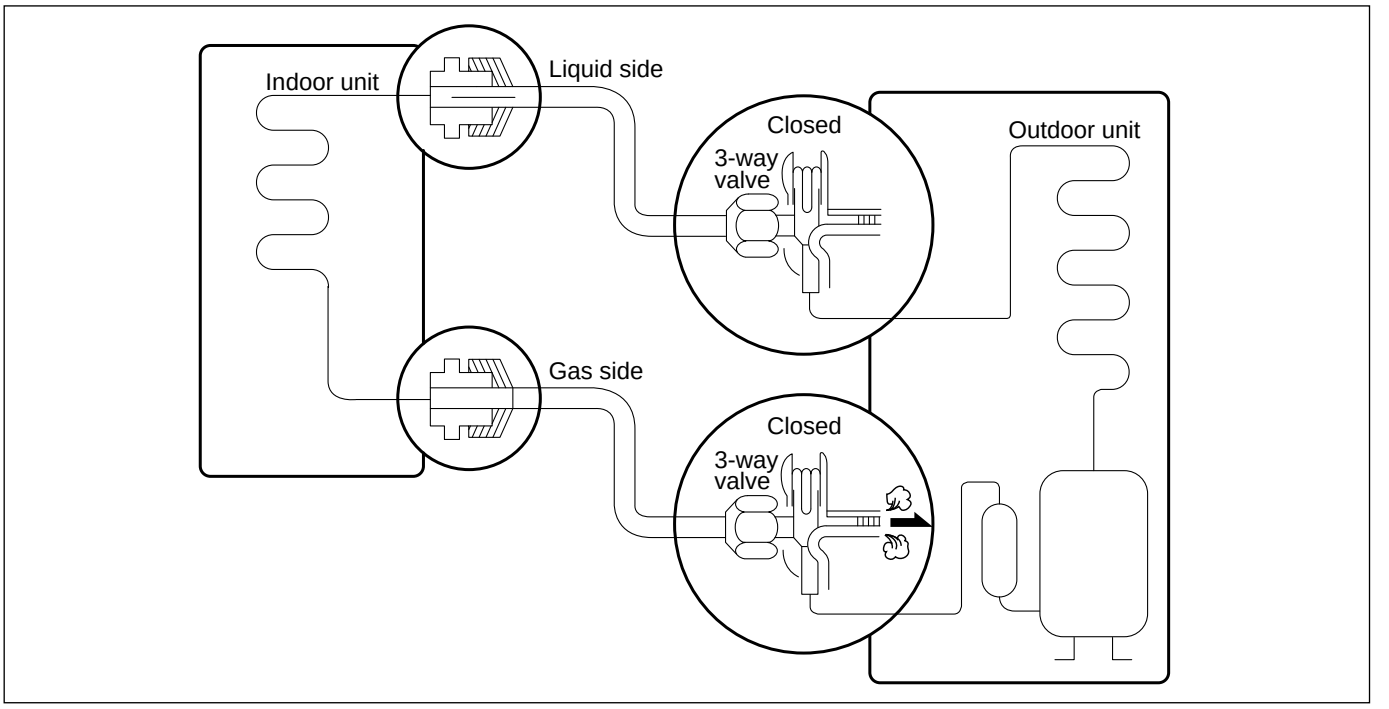
- Do not use rechargeable batteries such batteries as different from standard dry cells in shape, dimensions, and performance.
- Change the batteries with new ones if the remote controller does not work properly after using for an extended length of time.

8. 3-WAY VALVE

		3-Way Valve (Liquid Side)	3-Way Valve (Gas Side)	
				
Works		Shaft position	Shaft position	Service port
Shipping		Closed (with valve cap)	Closed (with valve cap)	Closed (with valve cap)
1.	Air purging (Installation)	Open (counter-clockwise)	Closed (clockwise)	Open (push-pin)
Operation		Open (with valve cap)	Open (with valve cap)	Closed
2.	Pumping down (transferring)	Open (clockwise)	Open (counter -clockwise)	Open (connected manifold gauge)
3.	Evacuation (Servicing)	Open	Open	Open (with charging cylinder)
4.	Gas charging (Servicing)	Open	Open	Open (with charging cylinder)
5.	Pressure check (Servicing)	Open	Open	Open (with charging cylinder)
6.	Gas releasing (Servicing)	Open	Open	Open (with charging cylinder)

8.1 Air purging

Required tools: hexagonal wrench, adjustable wrench, torque wrench, and gas leak detector.
The additional gas for air purging has been charged in the outdoor unit.
However, if the flare connections have not been done correctly and there gas leaks, a gas cylinder and the charge set will be needed.
The air in the indoor unit and in the piping must be purged. If air remains in the refrigeration pipes, it will affect the compressor, reduce cooling capacity, and can lead to a malfunction.



Service port nut.

Be sure, using a torque wrench to tighten the service port nut (after using the service port), so that it prevents the gas leakage from the refrigeration cycle.

• Procedure

¤ **Recheck the piping connections.**

¤Ł **Open the valve stem of the 3-way(liquid side) valve counterclockwise approximately 90°, wait 10 seconds, and then set it to closed position.**
- Be sure to use a hexagonal wrench to operate the valve stem.

¤Ø **Check for gas leakage.**
-Check the flare connections for gas leakage.

¤Œ **Purge the air from the system.**
- Set the 3-way(liquid side) valve to the open position and remove the cap from the 3-way(gas side) valve's service port.
- Using the hexagonal wrench to press the valve core pin, discharge for three seconds and then wait for one minute. Repeat this three times.

¤º **Use torque wrench to tighten the service port nut.**

¤ **Set the 3-way (gas side) valve to the back seat.**

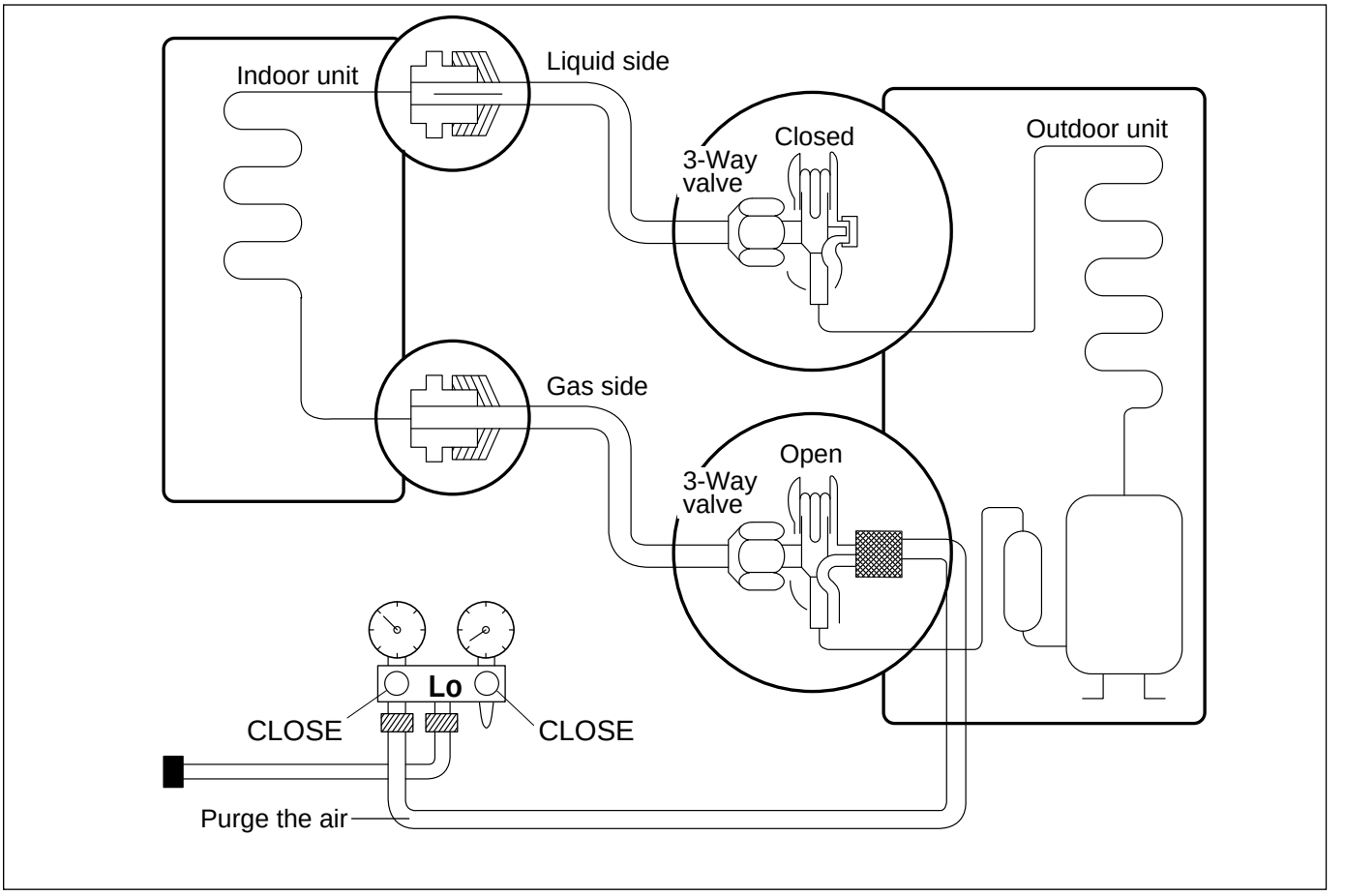
¤ **Mount the valve stem nuts to the 3-way (liquid side)valve and 3-way (gas side) valves.**

¤ **Check for gas leakage.**
• At this time, especially check for gas leakage from the 3-way (liquid side) valve and 3-way (gas side) valve's stem nuts, and from the service port nut.

Caution

If gas leakage is discovered in step ¤Ø above, take the following measures:
If the gas leaks stop when the piping connections are tightened further, continue working from step ¤Œ
If the gas leaks do not stop when the connections are retightened, repair the location of the leak, discharge all of the gas through the service port, and then recharge with the specified amount of gas from a gas cylinder.

8.2 Pumping down



• Procedure

¤ **Confirm that both 3-way(liquid side) and 3-way(gas side) valves are set to the open position.**
- Remove the valve stem caps and confirm that the valve stems are in the raised position.
- Be sure to use a hexagonal wrench to operate the valve stems.

¤Ł **Operate the unit for 10 to 15 minutes.**

¤Ø **Stop operation and wait for 3 minutes, then connect the charge set to the service port of the 3-way (gas side) valve.**
- Connect the charge hose with the push pin to the service port.

¤Œ **Air purging of the charge hose.**
- Open the low-pressure valve on the charge equipment slightly to purge air from the charge hose.

¤º **Set the 3-way(liquid side) valve to the closed position.**

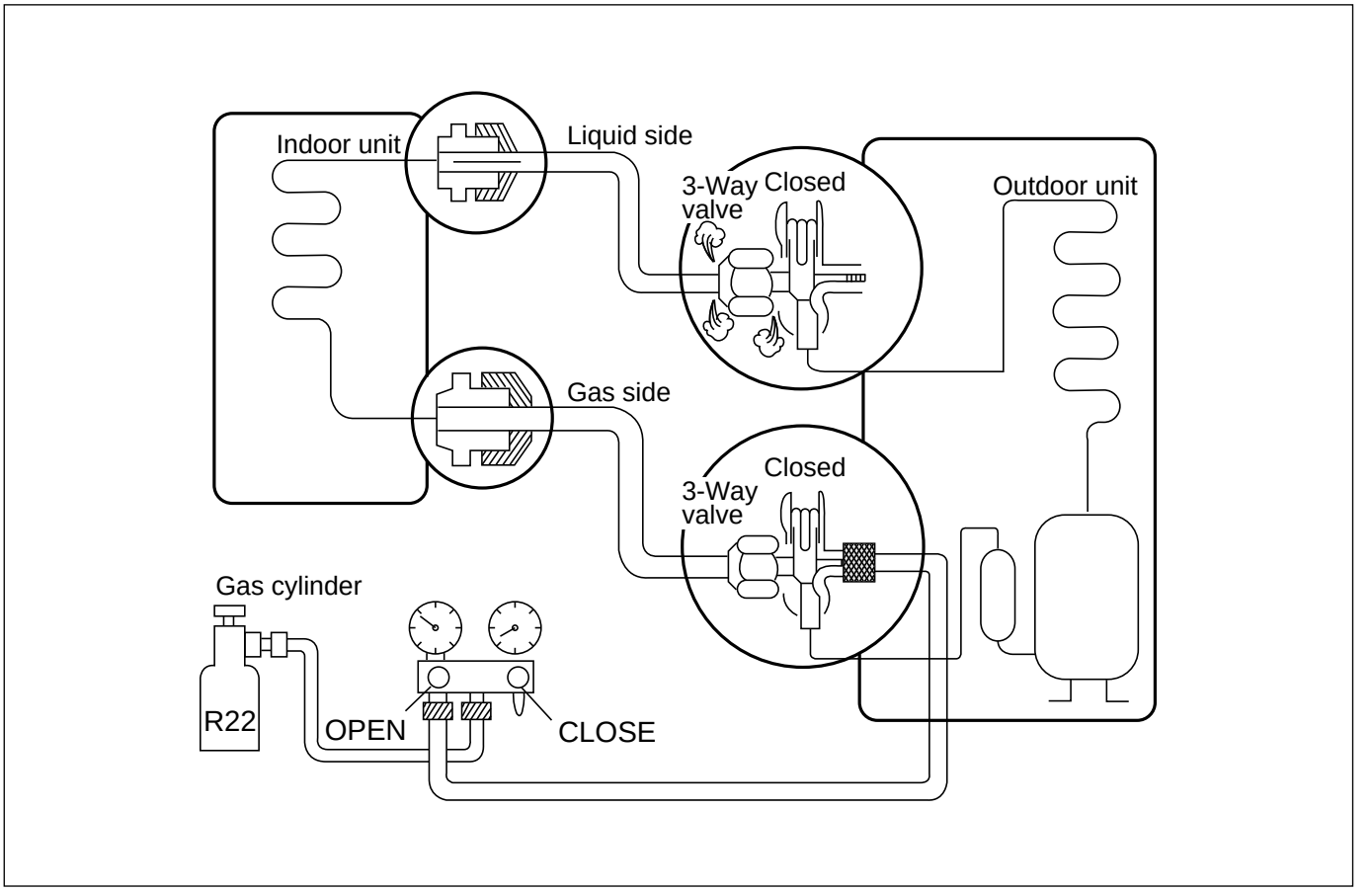
¤ **Operate the air conditioner at the cooling cycle and stop it when the gauge indicates 1 kg/cm²g**

¤ **Immediately set the 3-way(gas side) valve to the closed position.**
- Do this quickly so that the gauge ends up indicating 3 to 5kg/cm²g.

¤ **Disconnect the charge set, and mount the 3-way(liquid side) and 3-way(gas side) valve's stem nuts and the service port nut.**
- Use torque wrench to tighten the service port nut.
- Be sure to check gas leakage.

1) Re-air purging

(Re-installation)



• Procedure

¤ **Confirm that both the 3-way (liquid side) valve and the 3-way(gas side) valve are set to the closed position.**

¤Ł **Connect the charge set and a gas cylinder to the service port of the 3-way(gas side) valve.**

• Leave the valve on the gas cylinder closed.

¤Ø **Air purging.**

• Open the valves on the gas cylinder and the charge set. Purge the air by loosening the flare nut on the 3-way(liquid side) valve approximately 45° for 3 seconds then closing it for 1 minute; repeat 3 times.

• After purging the air, use a torque wrench to tighten the flare nut on liquid side valve.

¤Œ **Check gas leakage.**

• Check the flare connections for gas leakage.

¤º **Discharge the refrigerant.**

• Close the valve on the gas cylinder and discharge the refrigerant until the gauge indicates 3 to 5kg/cm²g

¤ **Disconnect the charge set and the gas cylinder, and set the 3-way(liquid side) and 3-way(gas side) valves to the open position.**

• Be sure to use a hexagonal wrench to operate the valve stems.

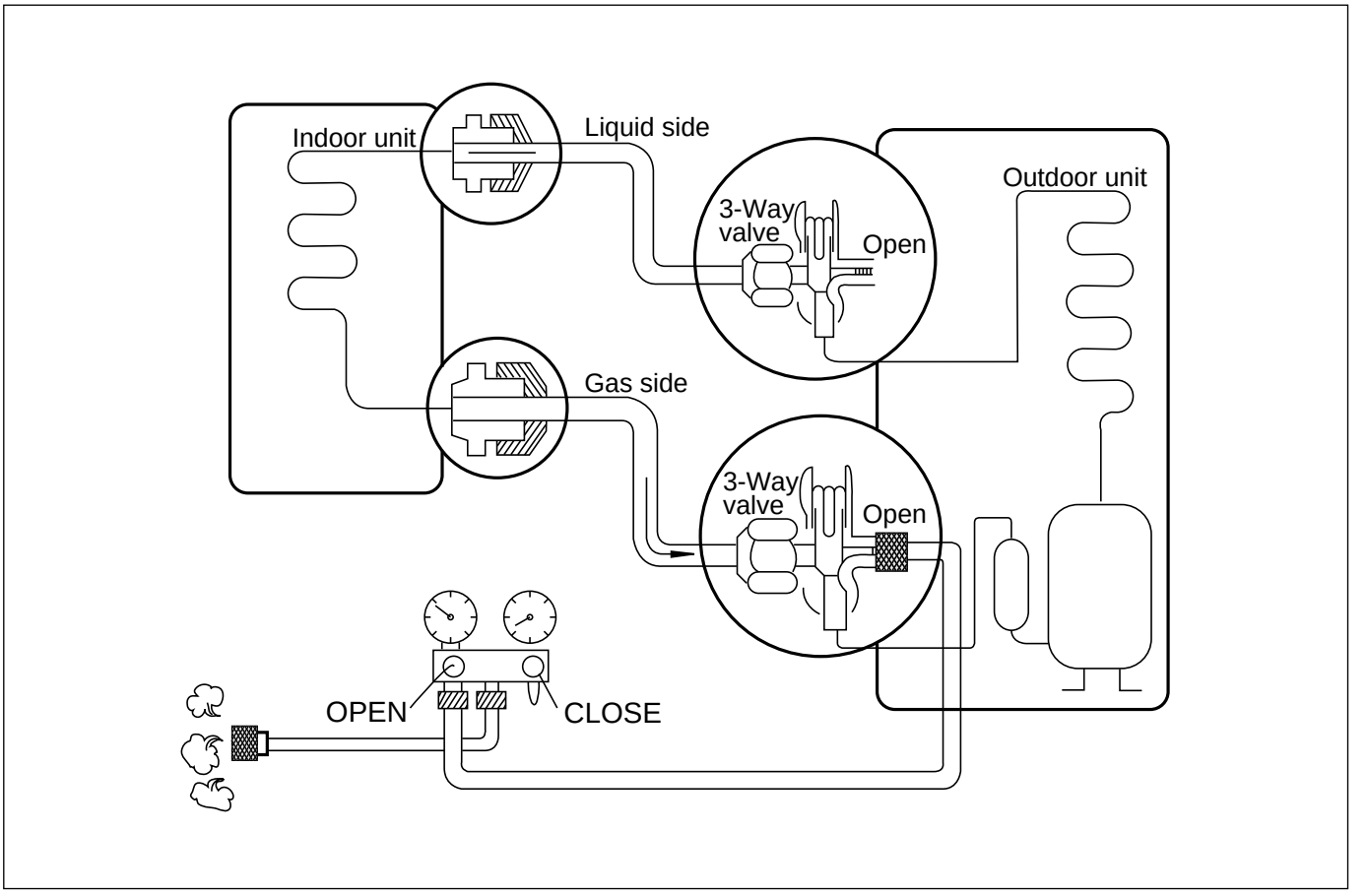
¤ **Mount the valve stem nuts and the service port nut.**

• Use torque wrench to tighten the service port nut.

• Be sure to check gas leakage.

2) Balance refrigerant of the 3-way(liquid side), 3-way(gas side) valves

(Gas leakage)



• Procedure

¤ **Confirm that both the liquid side and gas side valves are set to the back seat.**

¤Ł **Connect the charge set to the 3-way(gas side) valve's port.**

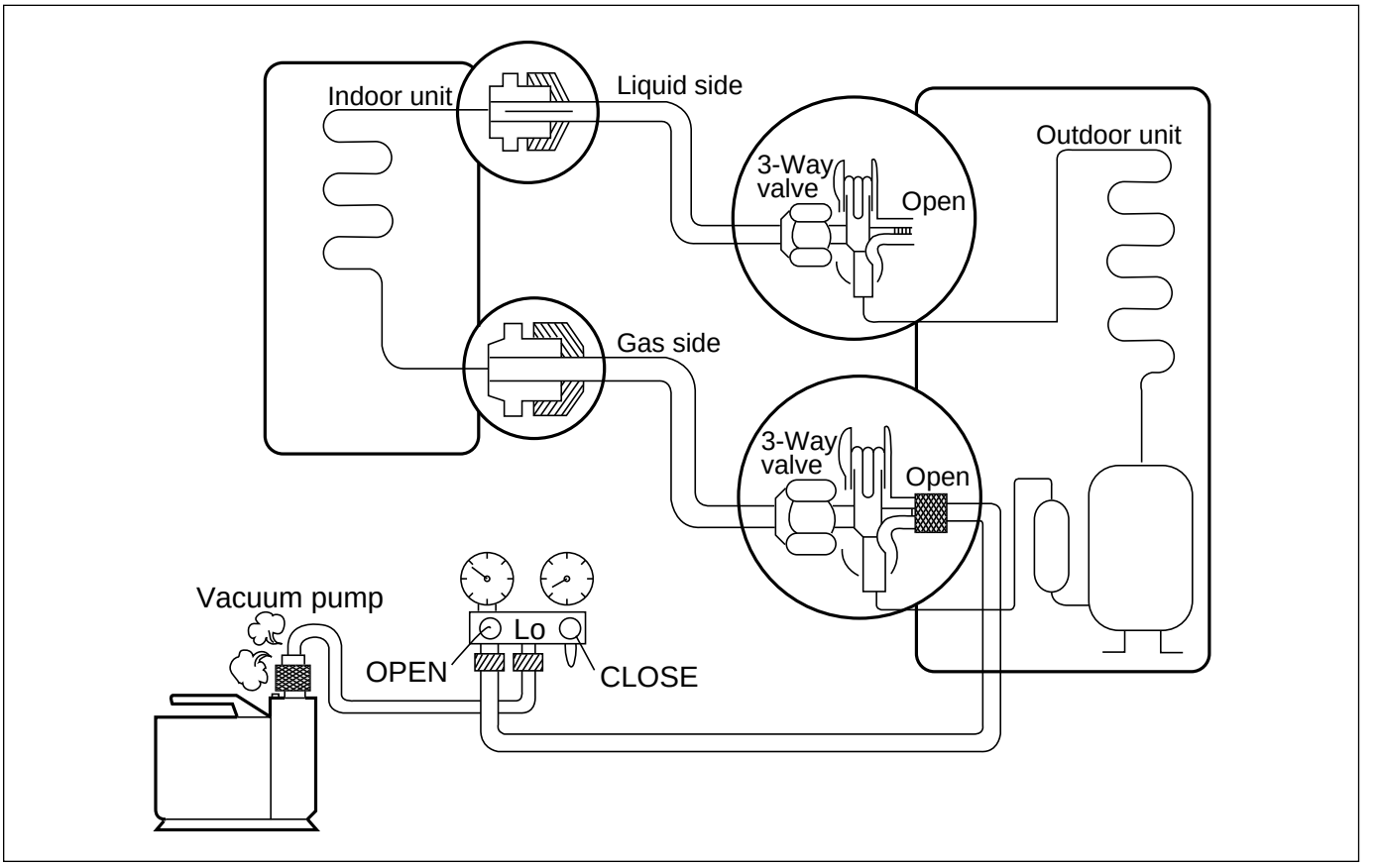
- Leave the valve on the charge set closed.
- Connect the charge hose with the push pin to the service port.

¤Ø **Open the valve (Lo side) on the charge set and discharge the refrigerant until the gauge indicates 0 kg/cm²g.**

- If there is no air in the refrigerant cycle (the pressure when the air conditioner is not running is higher than 1 kg/cm²g), discharge the refrigerant until the gauge indicates 0.5 to 1 kg/cm²g. In case of this, it will not be necessary to apply an evacuation.
- Discharge the refrigerant gradually; if it is discharged too suddenly, the refrigeration oil will also be discharged.

8.3 Evacuation

(All amount of refrigerant leaked)



• Procedure

¤ **Connect the vacuum pump to the center hose of charge set.**

¤Ł **Evacuation for approximately one hour.**

- Confirm that the gauge needle has moved toward -76cmHg (vacuum of 4 mmHg or less).

¤Ø **Close the valve (Lo side) on the charge set, turn off the vacuum pump, and confirm that the gauge needle does not move (approximately 5 minutes after turning off the vacuum pump).**

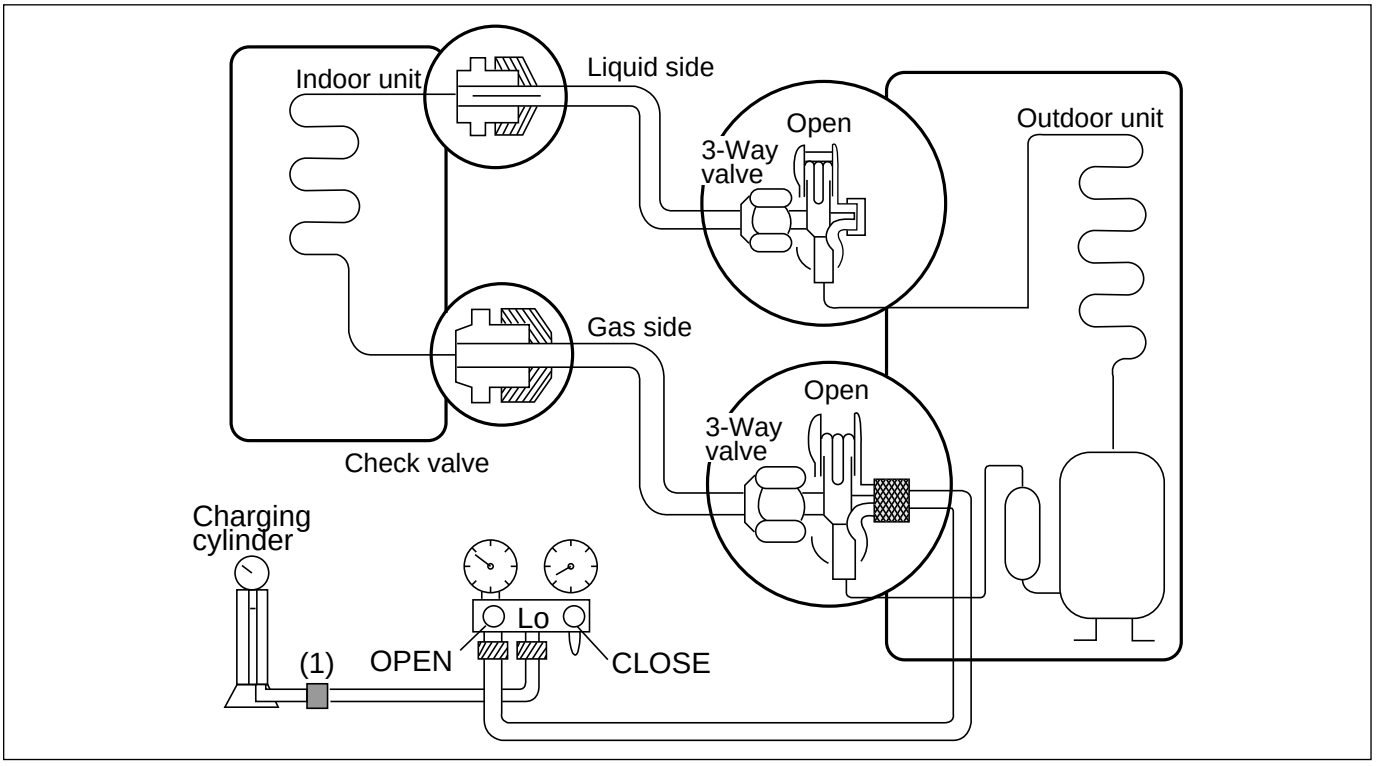
¤Œ **Disconnect the charge hose from the vacuum pump.**

- Vacuum pump oil.
  If the vacuum pump oil gets dirty or depleted, replenish as needed.

8.4 Gas Charging

1) Cooling mode

(After Evacuation)



• Procedure

¤ **Connect the charge hose to the charging cylinder.**

- Connect the charge hose which you disconnected from the vacuum pump to the valve at the bottom of the cylinder.
- If you are using a gas cylinder, use a scale and reverse the cylinder so that the system can be charged with liquid.

¤Ł **Purge the air from the charge hose.**

- Open the valve at the bottom of the cylinder and press the check valve on the charge set to purge the air. (Be careful of the liquid refrigerant). The procedure is the same if using a gas cylinder.

¤Ø **Open the valve (Lo side) on the charge set and charge the system with liquid refrigerant.**

- If the system can not be charged with the specified amount of refrigerant, it can be charged with a little at a time (approximately 150g each time) while operating the air conditioner in the cooling cycle; however, one time is not sufficient, wait approximately 1 minute and then repeat the procedure (pumping down-pin).

This is different from previous procedures.
Because you are charging with liquid refrigerant from the gas side, absolutely do not attempt to charge with larger amounts of liquid refrigerant while operating the air conditioner.

¤Œ **Immediately disconnect the charge hose from the 3-way(gas side) valve's service port.**

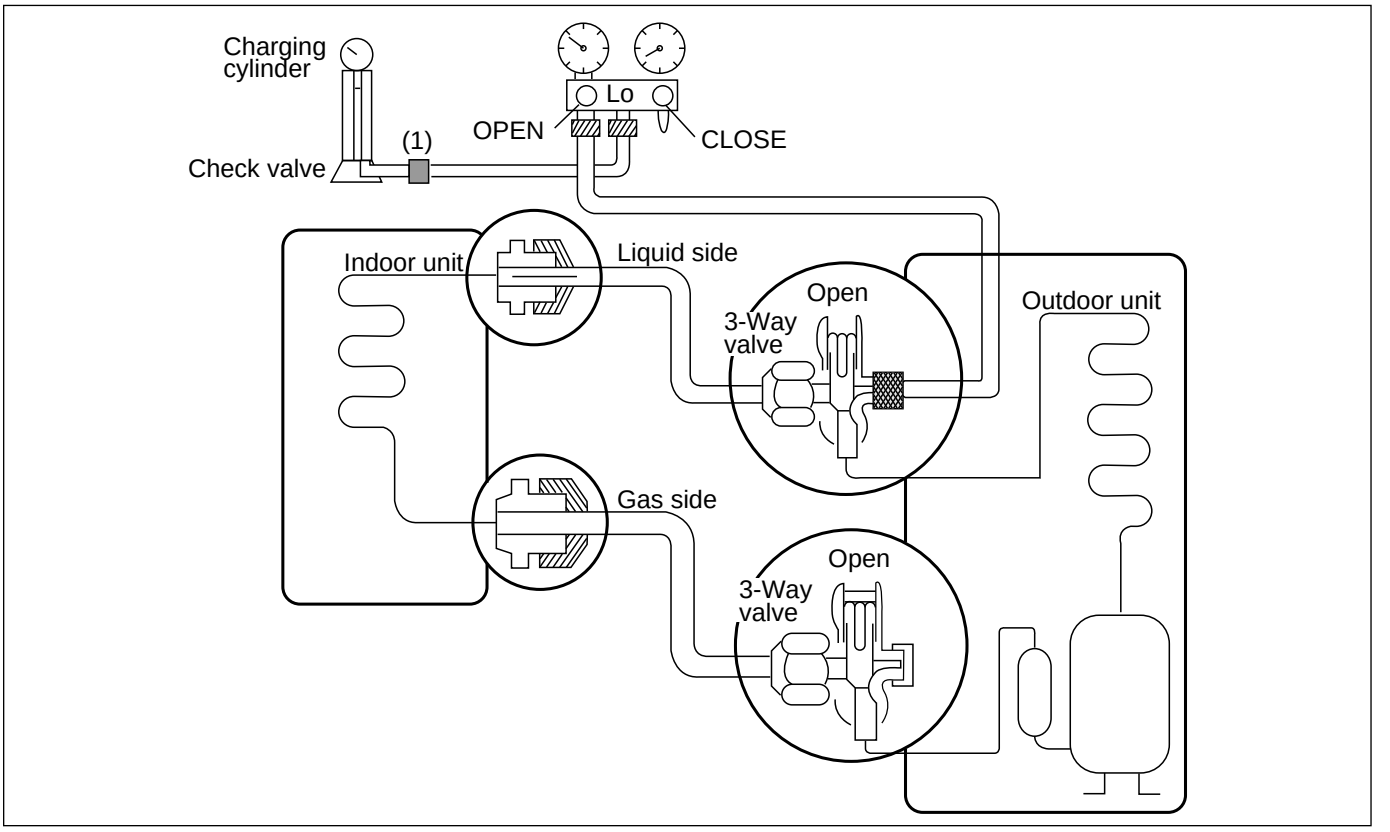
- Stopping partway will allow the gas to be discharged.
- If the system has been charged with liquid refrigerant while operating the air conditioner turn off the air conditioner before disconnecting the hose.

¤º **Mount the valve stem nuts and the service port nut.**

- Use a torque wrench to tighten the service port nut.
- Be sure to check gas leakage.

2) Heating Mode

(After Evacuation)



• Procedure

¤ **Connect the charge hose to the charge cylinder.**

- Connect the charge hose which you disconnected from the vacuum pump to the valve at the bottom of the cylinder.
- If you are using a gas cylinder, use a scale and reverse the cylinder so that the system can be charged with liquid.

¤Ł **Purge the air from the charge hose.**

- Open the valve at the bottom of the cylinder and press the check valve on the charge set to purge the air. (Be careful of the liquid refrigerant). The procedure is the same if using a gas cylinder.

¤Ø **Open the valve (Lo side) on the charge set and charge the system with liquid refrigerant.**

- If the system can not be charged with the specified amount of refrigerant, it can be charged with a little at a time (approximately 150g each time) while operating the air conditioner in the cooling cycle; however, one time is not sufficient, wait approximately 1 minute and then repeat the procedure (pumping down-pin).

This is different from previous procedures.
Because you are charging with liquid refrigerant from the gas side, absolutely do not attempt to charge with larger amounts of liquid refrigerant while operating the air conditioner.

¤Œ **Immediately disconnect the charge hose from the 3-way valve's service port.**

- Stopping partway will allow the gas to be discharged.
- If the system has been charged with liquid refrigerant while operating the air conditioner turn off the air conditioner before disconnecting the hose.

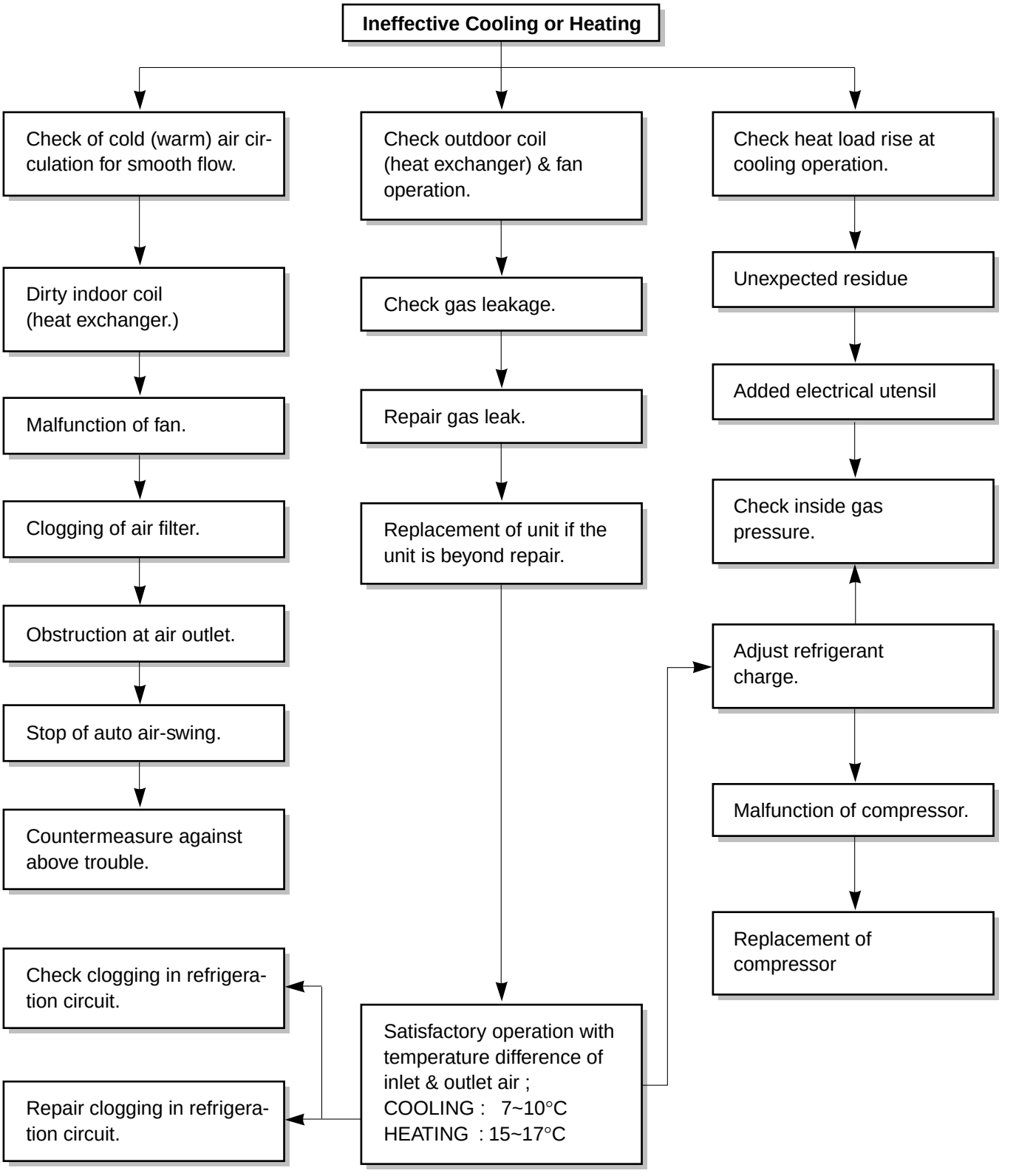
¤º **Mount the valve stem nuts and the service port nut.**

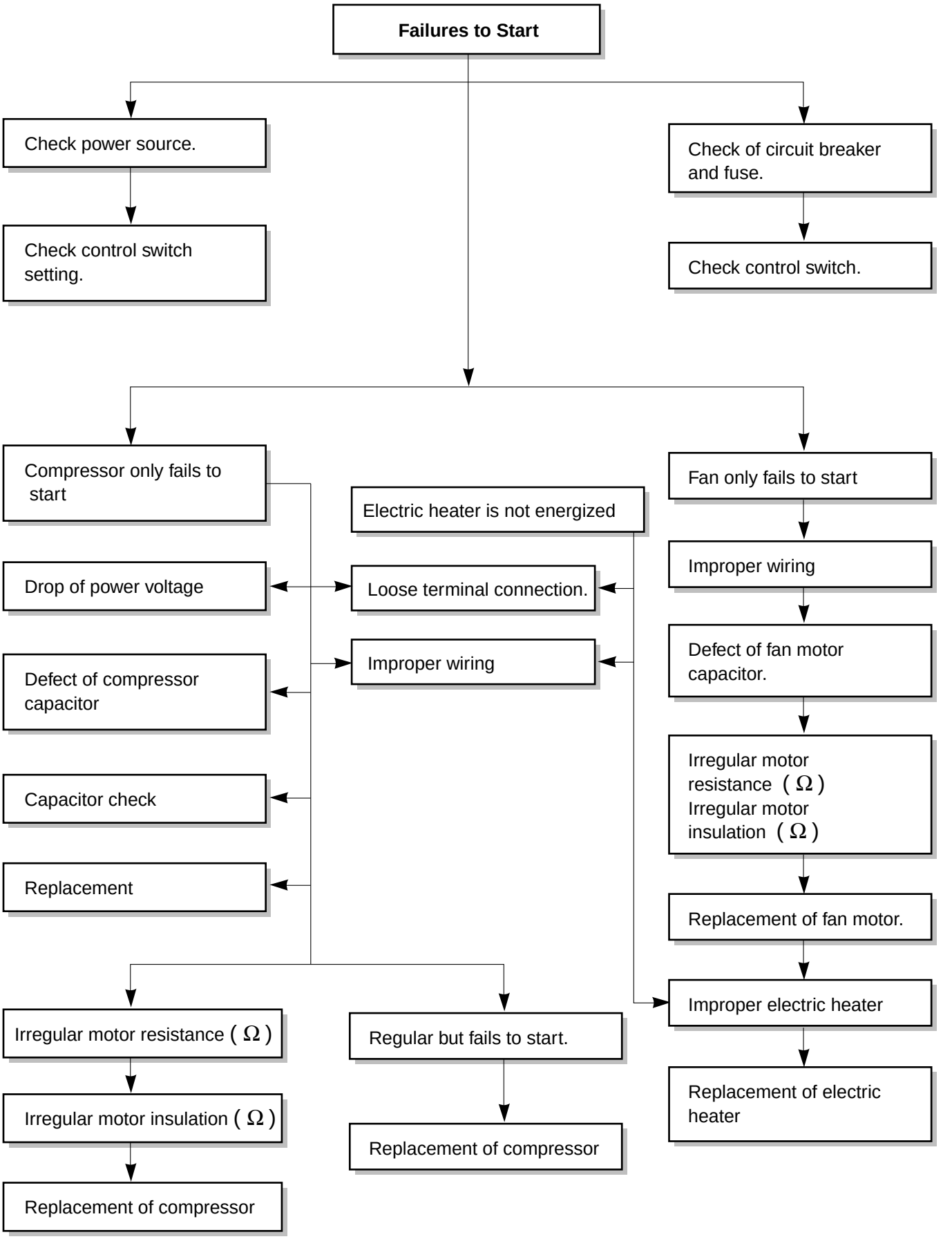
- Use a torque wrench to tighten the service port nut.
- Be sure to check gas leakage.

9. TROUBLESHOOTING GUIDE

In general, possible trouble is classified as two causes.
The one is so called **Starting Failure** which is caused from an electrical defect, and the other is **Ineffective Air Conditioning** caused by a defect in the refrigeration circuit and improper application.

Unit runs but ineffective cooling




Failures to Start
Check power source.
Check control switch setting.
Check of circuit breaker and fuse.
Check control switch.
Compressor only fails to start
Drop of power voltage
Defect of compressor capacitor
Capacitor check
Replacement
Irregular motor resistance (Ω)
Irregular motor insulation (Ω)
Replacement of compressor
Electric heater is not energized
Loose terminal connection.
Improper wiring
Regular but fails to start.
Replacement of compressor
Fan only fails to start
Improper wiring
Defect of fan motor capacitor.
Irregular motor resistance (Ω)
Irregular motor insulation (Ω)
Replacement of fan motor.
Improper electric heater
Replacement of electric heater

PACKAGE AIR CONDITIONER VOLTAGE LIMITS

NAME PLATE RATING	MINIMUM	MAXIMUM
380 V	342 V	418 V
220 V	198 V	242 V
380 - 415 V	342 V	456 V

9.1 No cooling and heating operation performed

1) Both the blower and the compressor do not work

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Other parts than the unit	Electric supply interrupted Defective power wiring Cut of power fuse	Measure it with a tester in case that the same power source is supplied to other equipment than the unit, what and where trouble can be discovered by checking the operation of other equipment.	Repair a switch box and is relative instrument. Replacement of fuse Request a power supplier to repair.
	Too low voltage	Measure it with a tester.	Check the power source. Use a thick cable if necessary.
Magnetic switch for compressor & fan motor	Control point is on condition of "OFF" due to trouble.	Make short-circuit, then measure it with a tester.	Replace it if necessary.
Operating switch	Troubled or defective contactor	Check it with the eyes or tester.	Repair or replace it.
Protection devices	Opened the contact point with trouble	Check it with the eyes or tester.	Discover the trouble cause and push the rest button.

2) Only blowers do not work

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Air volume change over switch	Troubled or defective contact point	Check it with the eyes or a tester	Repair or replace it.
Capacitor	Defected	Check it with a tester.	Replace it.

3) Only outdoor fan does not work

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Motor	Over-heated Layer short	Check how it is insulated.	Repair or replace it.
Electric Wiring	Open wire on operation	Check it with a tester.	Rewiring or repair.
	Short circuited on operation		

4) Only compressor does not work

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Magnetic switch for compressor motor	Defective contact, magnetic coil troubled.	Check it with the eyes on with a tester.	Repair or replace it.
Compressor motor	Troubled over-heated (layer short)	Check how it is insulated.	Replace or repair the compressor.
Compressor	Troubled or over-heated (lock)	Groaned noise of motor	Repair or replace it.
High pressure switch	Troubled or defective contact or operating	Check it with a tester.	Replace it if necessary.
Electric circuit	Defective connection or disconnection of the circuit for compressor.	Check it with a tester.	Rewiring or push reset button.

9.2 The Units discontinue after the operation started

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Other parts than the unit	Improper opening of the service valves in the refrigerant line	Checking	Open it properly
Outdoor coil	Coil is dirty *1	Checking	Wash it by means of something like chemical washing.
In-condensable gas blended.	Air intruded into the refrigerant pipe line *1	In the event that difference between the saturating temperature corresponding to high pressure and the temperature of air discharged from the outdoor coil is more than 15°C, incondensable gas may be blended.	Extract air by vacuum pump, then recharge the refrigerant.
High pressure switch	Improper adjustment	Check it with a pressure gauge.	Readjust it to normal operating pressure. (Note) Don't alternate the specified adjusting pressure. If the adjusted pressure exceeds the specified range, it will cause a great accident.
Refrigerant	A shortage of refrigerant amount. * 2		Recharge the refrigerant. Repair the spot where it leaks.
Outdoor Fan	Reverse rotation of fan Obstacle Air short circuit *1	Confirm the wind blowing out. Check it with eyes.	If reversed, connect interchanged wires to each terminal. Power wirings.

Note: Use an appropriate measuring instrument for readjustment.

*1: Check the High-pressure switch indication.

*2: Check the Low- pressure switch indication.

9.3 The unit is working, but not cooling and heating sufficiently (Both blower and compressor are working)

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Load	Much heat load	Heat load increased. Window or door has many cracks or gaps.	Do necessary disposal respectively.
Air flow	Obstacle disturbs Intake of uniform wind.	Checking	Correct it.
Short air volume	Reverse rotation of blower.	Checking	Correct it.
Refrigerant	Shortage in the charged refrigerant.	Coil inlet pipe is frosted	Replenish it. (Repair the leakage spot).
Air passage	Improper or foreign bodies	Checking	Correct or clear the foreign bodies.
Air filter	Clogged with dust	Checking	Cleaning

9.4 All the functions are performed normally, but very noisily and much vibratively.

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Compressor	Liquid refrigerant flooding back from the evaporator.	• Check for refrigerant over-charge. • Check to see if the intaking air temperature is extremely cold. • Check for insufficient air flow quantity.	
	Compressor shipping bracket is not removed.	• Checking	• Remove the shipping bracket.
	Faulty discharge valve and suction valve.	• Checking	• Replace the compressor
Blower	Fan broken. Other materials intruded.	Checking	• Repair or replace it. • Clear the other material
Screws	Looseness or fail-off of screws	Checking	Repair

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Electric troubles (Magnetic contactor)	Defective contact. Defective contact point. Rusting and faults in the iron core contact face. Defective contact of the operating switch.	Checking	Repair and clean or replace it.
Others	Improper installation	Checking	Correct it.

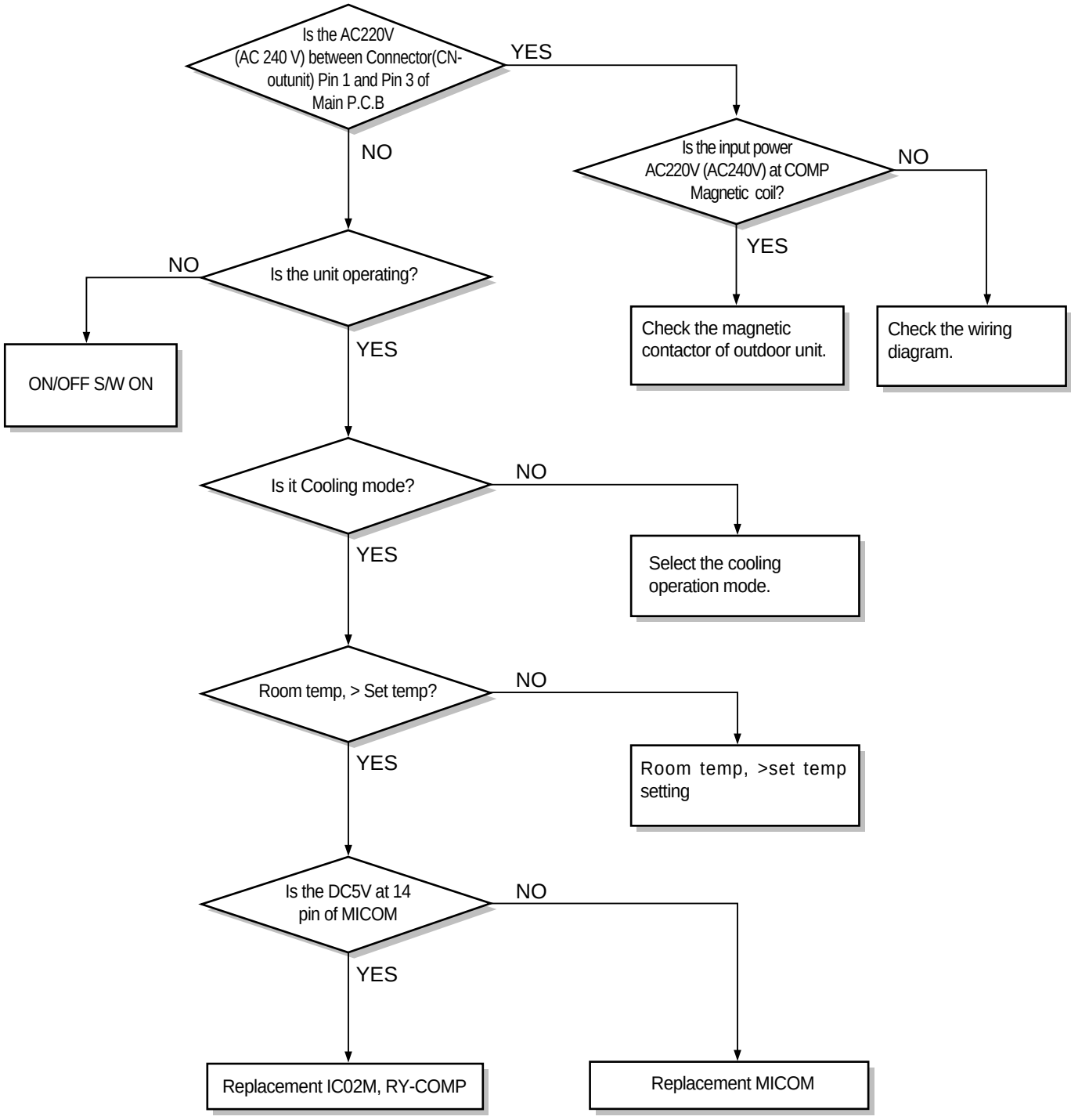
9.5 Trouble checking by protection devices

Fault	Cause	Check/Correcitve Action
High Discharge	Condenser cooling air extremely hot or insufficient air flow through the condenser	1. Check the operation of the outdoor motor. 2. Check discharge and suction, air circulation.
	Inside of the condenser tube is clogged.	Clean condenser coil.
	Air in the refrigeration cooling cycle.	Purge air from the cycle.
	Suction pressure is higher than standard.	See "High Suction Pressure".
Low Discharge	Faulty discharge valves or suction valves of the compressor.	1. Check unit operation input 2. Check the suction pressure.
	Refrigerant low-charge or leakage.	Add refrigerant: repair leakage if any.
	Suction pressure is lower than standard.	See "Low Suction Pressure".
High Suction Pressure	Intake air extemely hot or excessive air flow through the evaporator coil.	1. Check fresh air, intake or check for leakage of the return air. 2. Check air flow quantity.
	Refrigerant over-charge.	Purge the refrigerant.
	Faulty discharge valve or suction valve of the compressor.	Check the operating input.
	Discharge pressure is higher than standard	See "High discharge Pressure".
Low Suction Pressure	Intake air extremely cold or insufficient air flow through the evaporator coil.	1. Check air flow quantity. 2. Check air filter. 3. Check evaporator coil frosting
	Refrigerant short-charge or leakage.	Add refrigerant, repair leakage, if any.
	Restricted liquid in the suction line.	Check the capillary tube and the strainer.

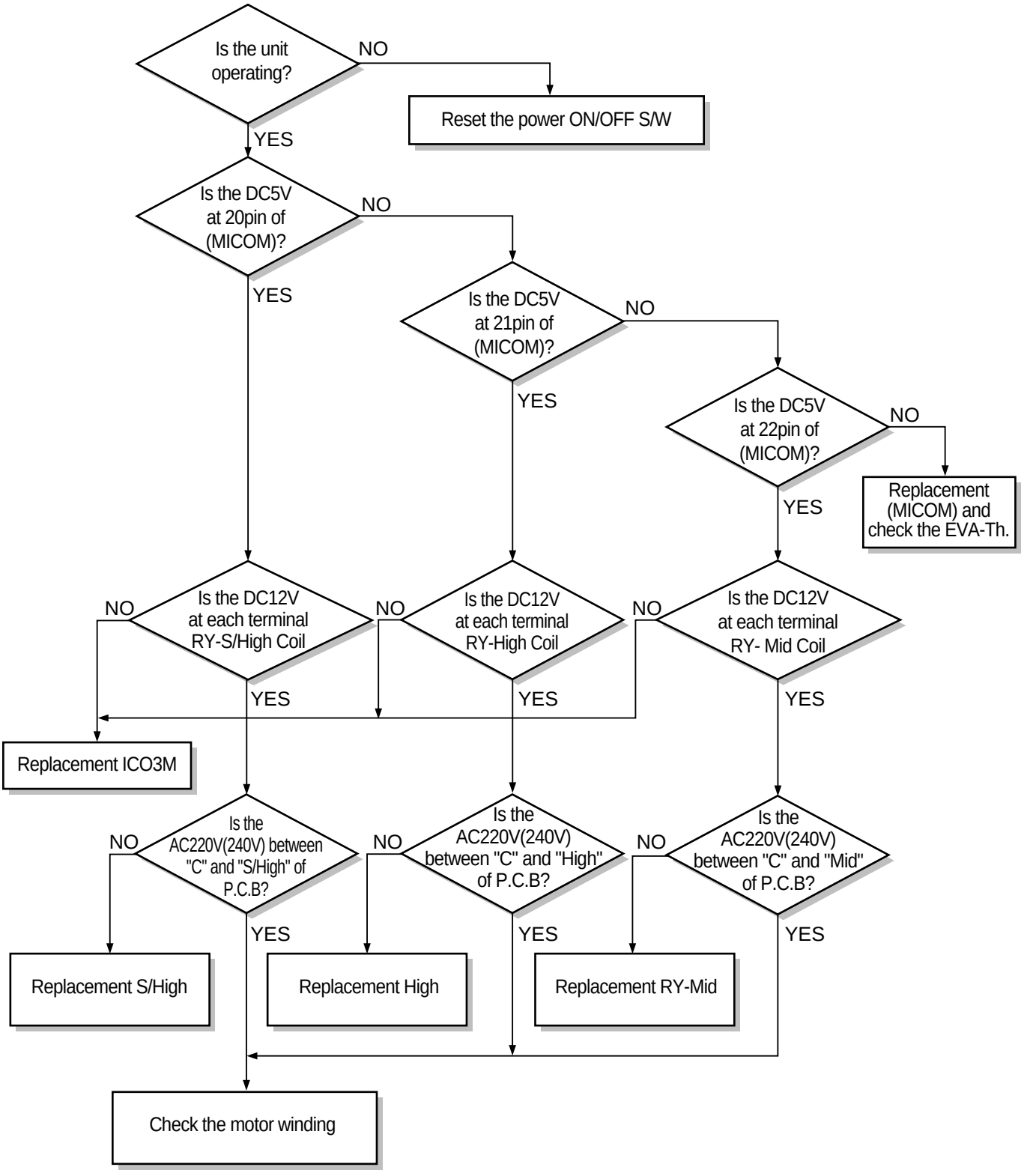
Fault	Cause	Check/Correcitve Action
	Discharge pressure is lower than standard.	See "Low Discharge Pressure".
	Single or three phases running.	Check the power supply line and the contactor.
	High or low voltage or phase unbalance.	Check the voltage and phase unbalance.
Internal Thermostat Cut-Off	Refrigerant short charge or leakage.	Add refrigerant, repair leakage, if any.
	Compressor frequently stops and starts.	Check thermistor operation, or any other cause for frequent stop and start operation.
	Discharge and suction pressure are extremely high.	See "High Discharge Pressure" or "High Suction Pressure".
Overcurrent Relay for Compressor Cut-Off	High or low voltage, or phase unbalance.	Check the voltage and phase unbalance.
	Single or three phases running	Check the power supply line and the contact.
	Faulty compressor motor.	Check electric resistance among the compressor terminals, and from the terminals to ground.
	Loose connections.	Check the electric connections.
	Compressor frequently stops and starts.	Check the operation of the thermistor, or any other cause for frequent stop.
Overcurrent Relay for Fan Motor Cut-Off	High or low voltage, or phase unbalance.	Check the voltage and electric wiring.
	Single or three phases running.	Check the power supply line and the contactor.
	Faulty fan motor.	Check the fan motor and wiring.
	Loose connection.	Check the elelctric connections.
	Faulty fan bearing.	Check repair or replace the bearing.
Fuse Blown	Loose connections.	Check the electric connections.
	Single or three phase running.	Check the power supply line.
	Faulty motor.	Check electric resistance among motor housing, and from the terminals to ground.
Disconnection and Faulty Contact	Disconnection.	1. Check the wires and connect where necessary. 2. Check the contact holding coil.
	Faulty contact.	Check the contact in the magnetic contact, the over-current relay, the pressure control switch, the operation switch, the auxiliary relay.

9.6 Electronic Parts Troubleshooting Guide

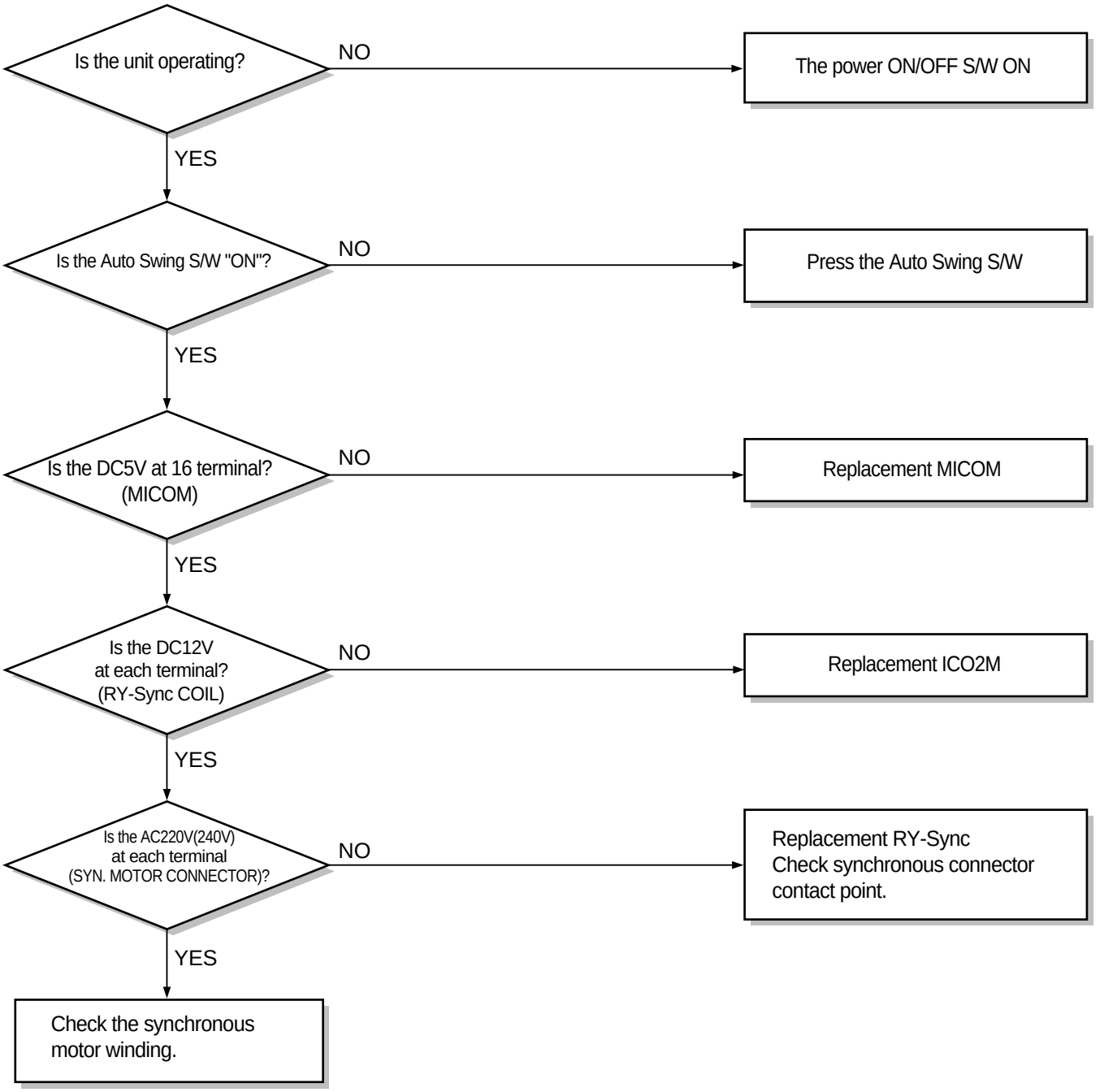
1) No cooling operation performed.



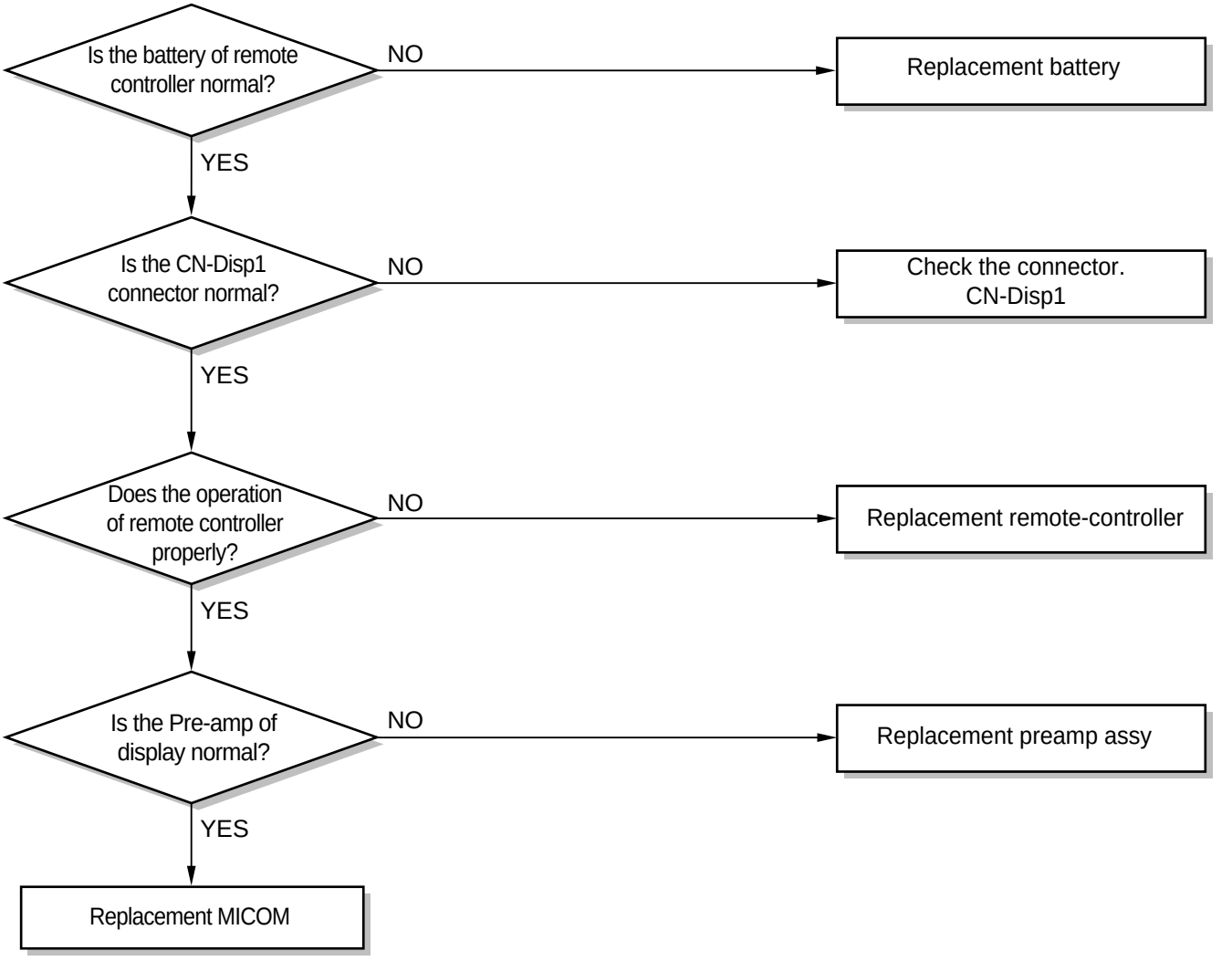
2-1) Indoor fan does not operate



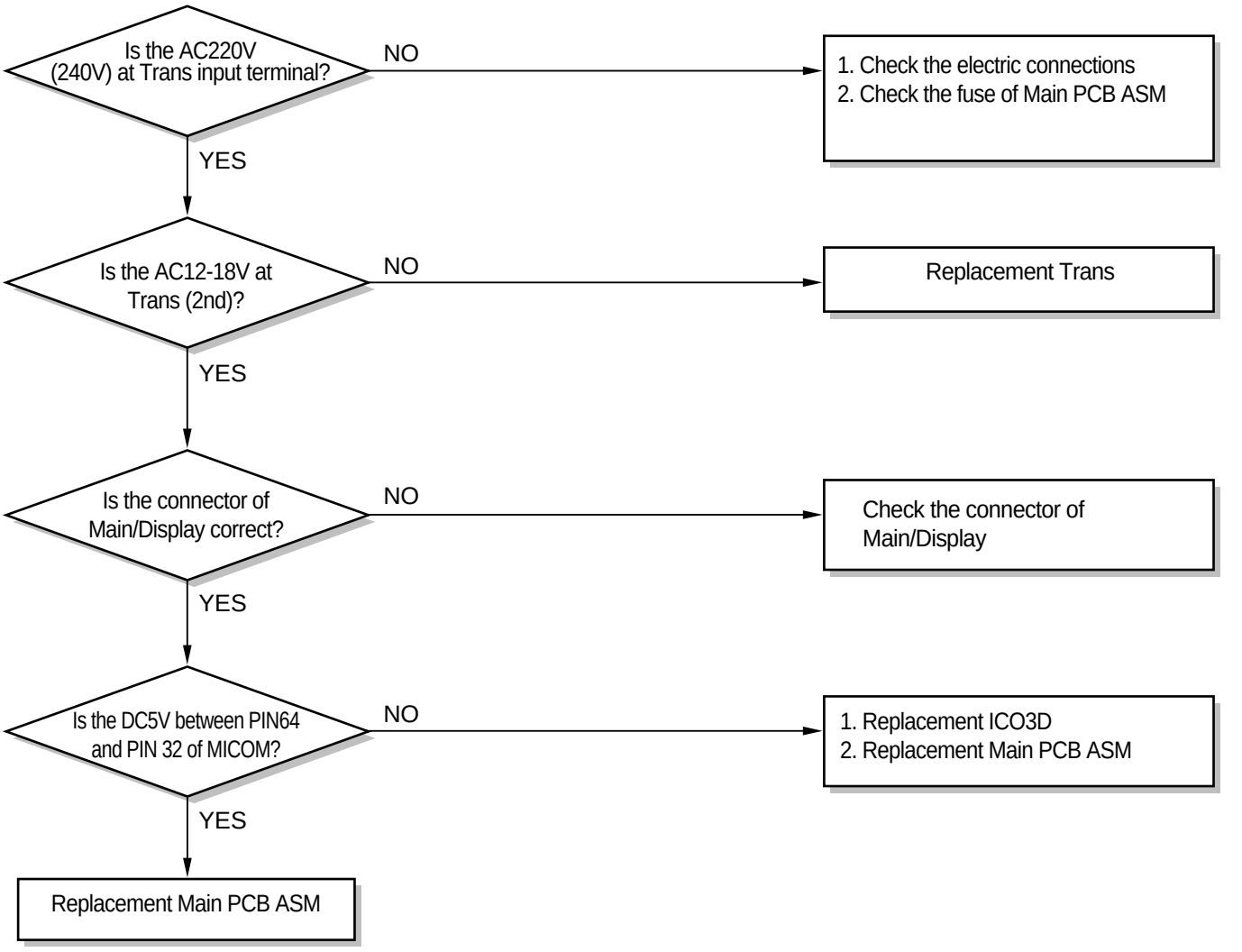
3) Airflow Direction does not operate.



4) Remote control does not operate.

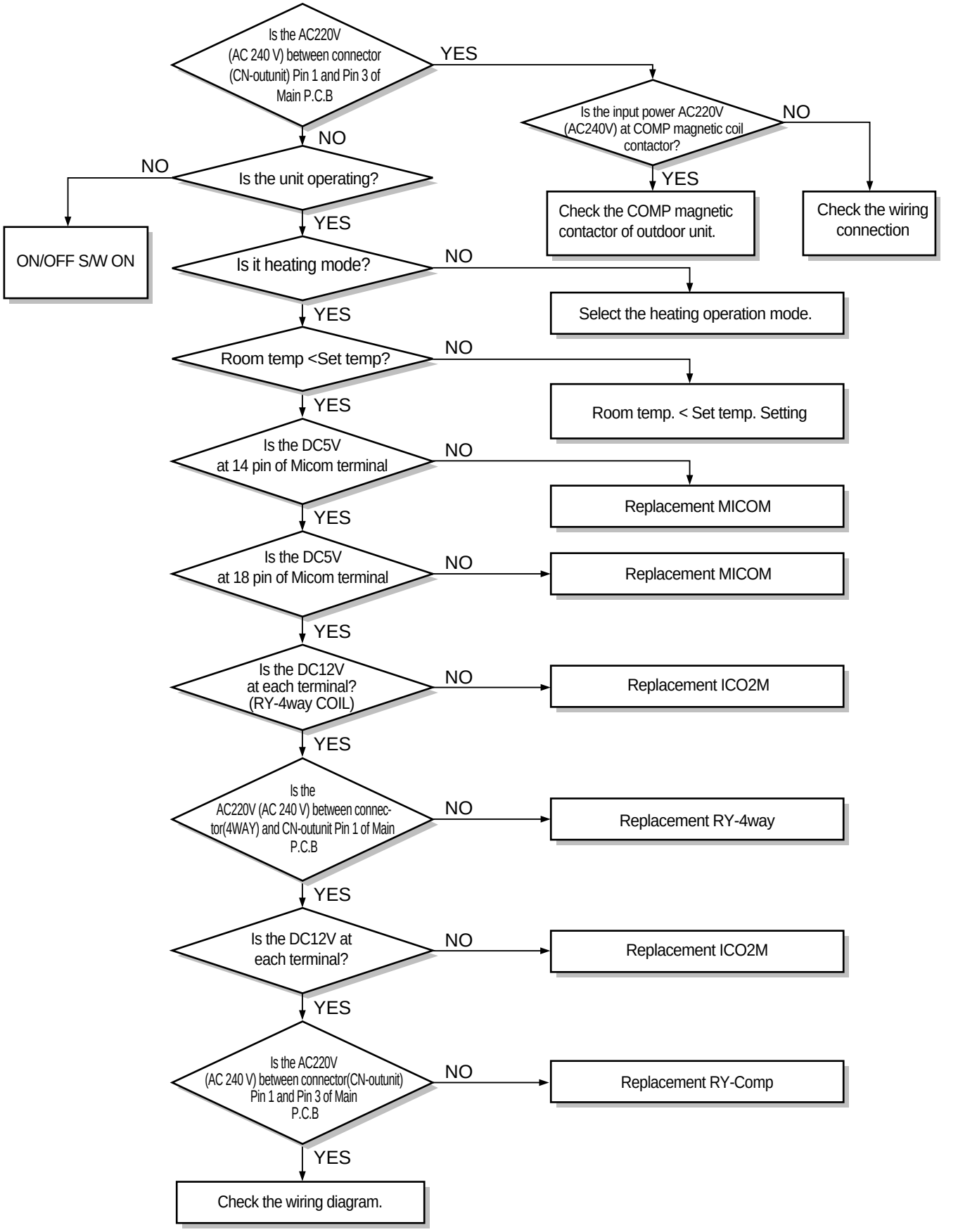


5) The unit does not operate.

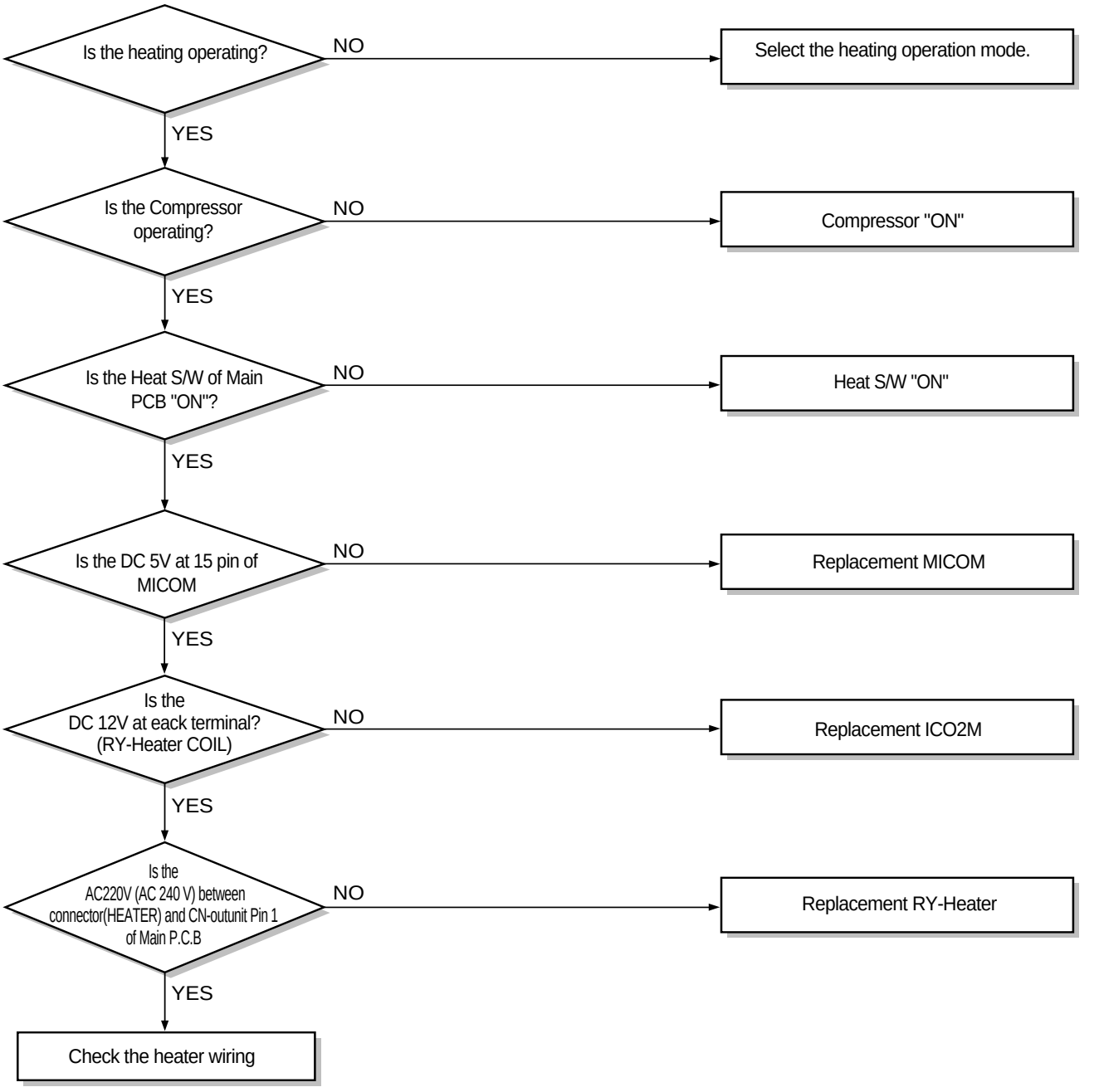


6) Timer control does not operate. —— **Replacement Micom**

7) No heating operation works

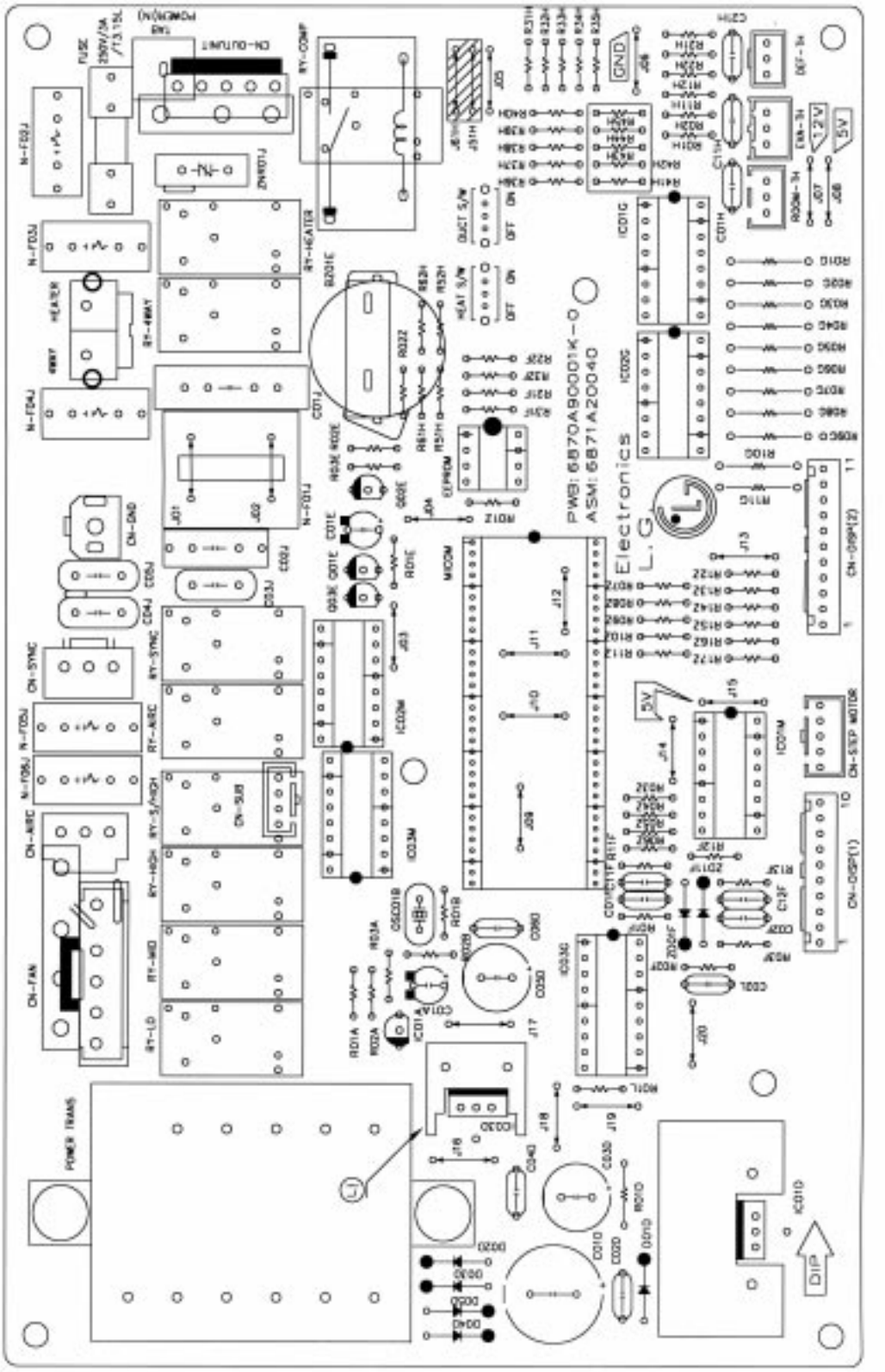


8) No heater operation works

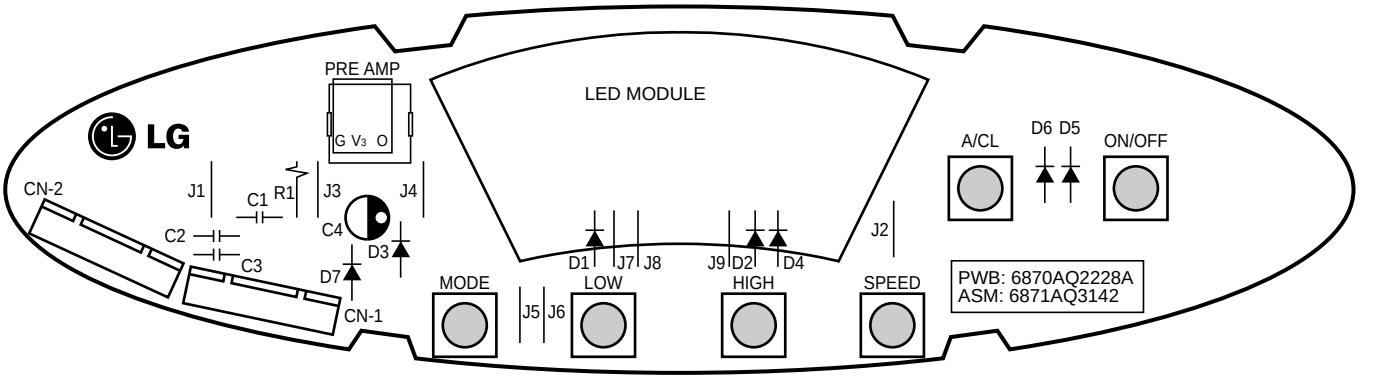


10. ELECTRONIC CONTROL DEVICE

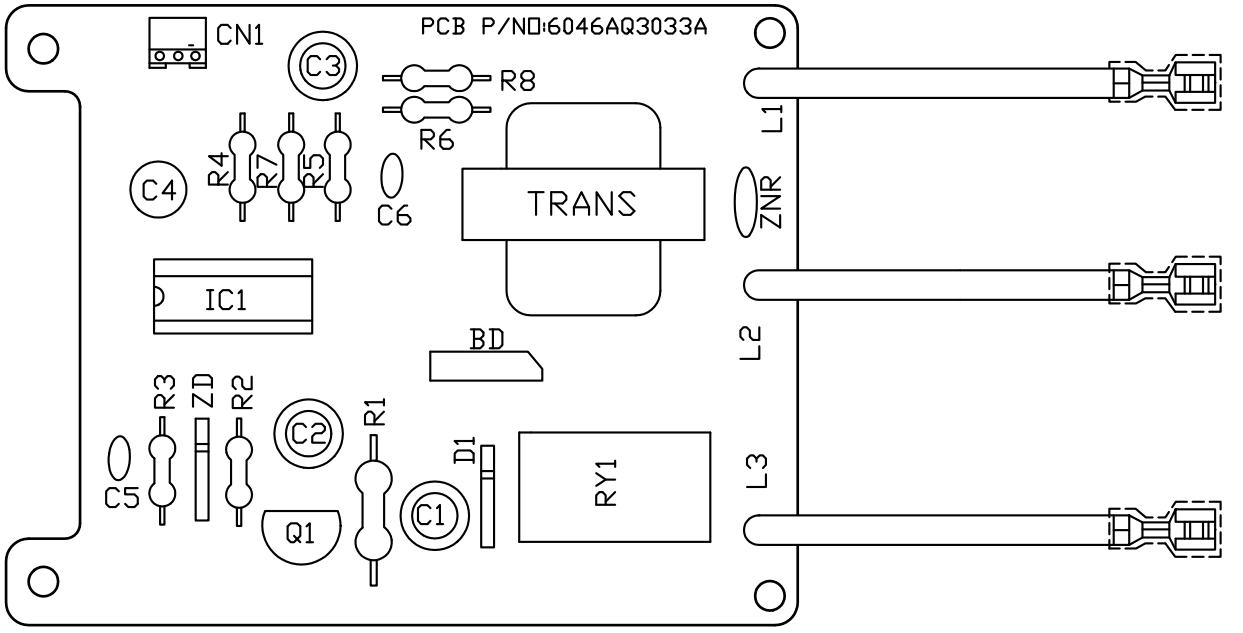
10.1 MAIN P.C.B ASM



10.2 DISPLAY P.C.B ASM

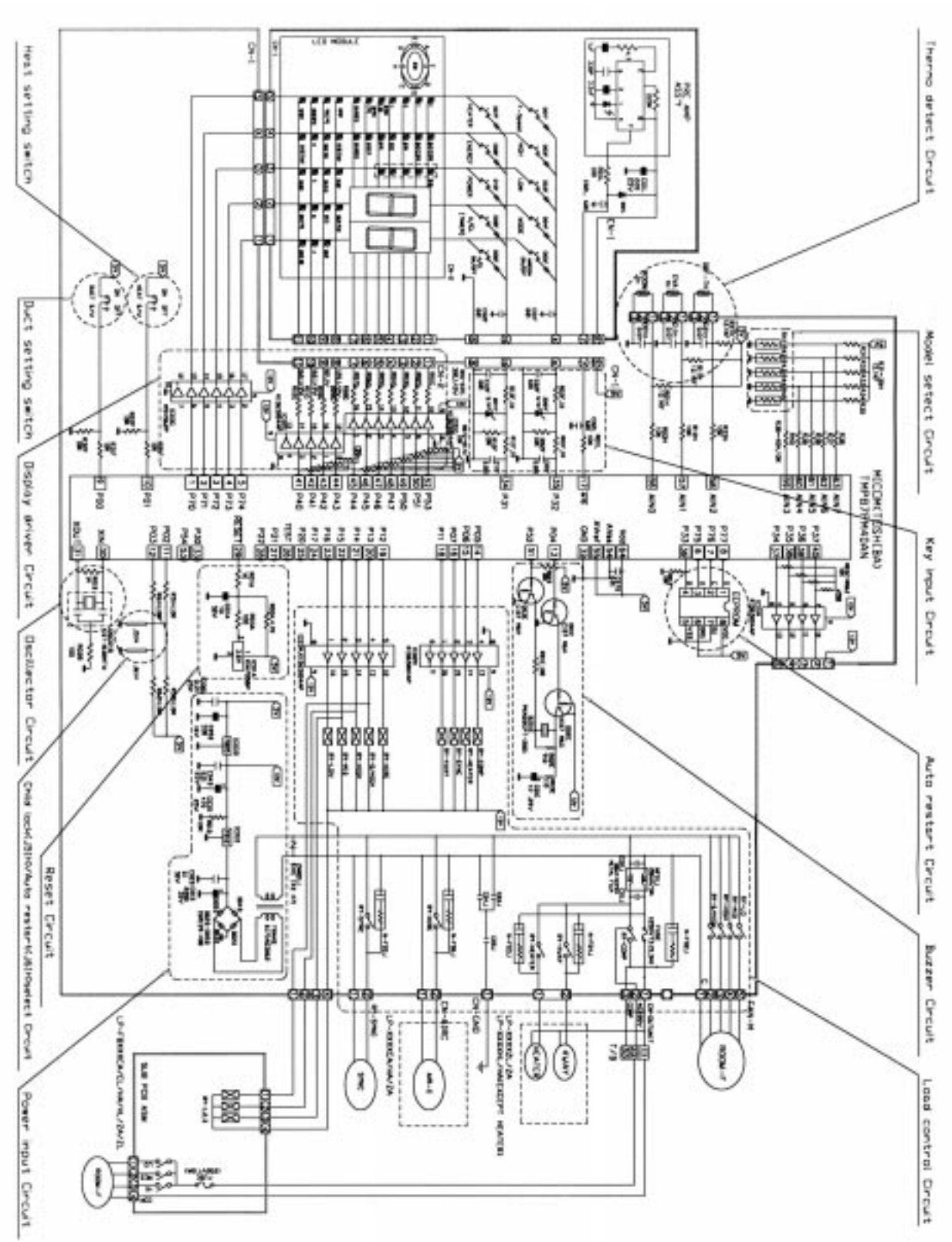


10.3 DE-ICE PCB

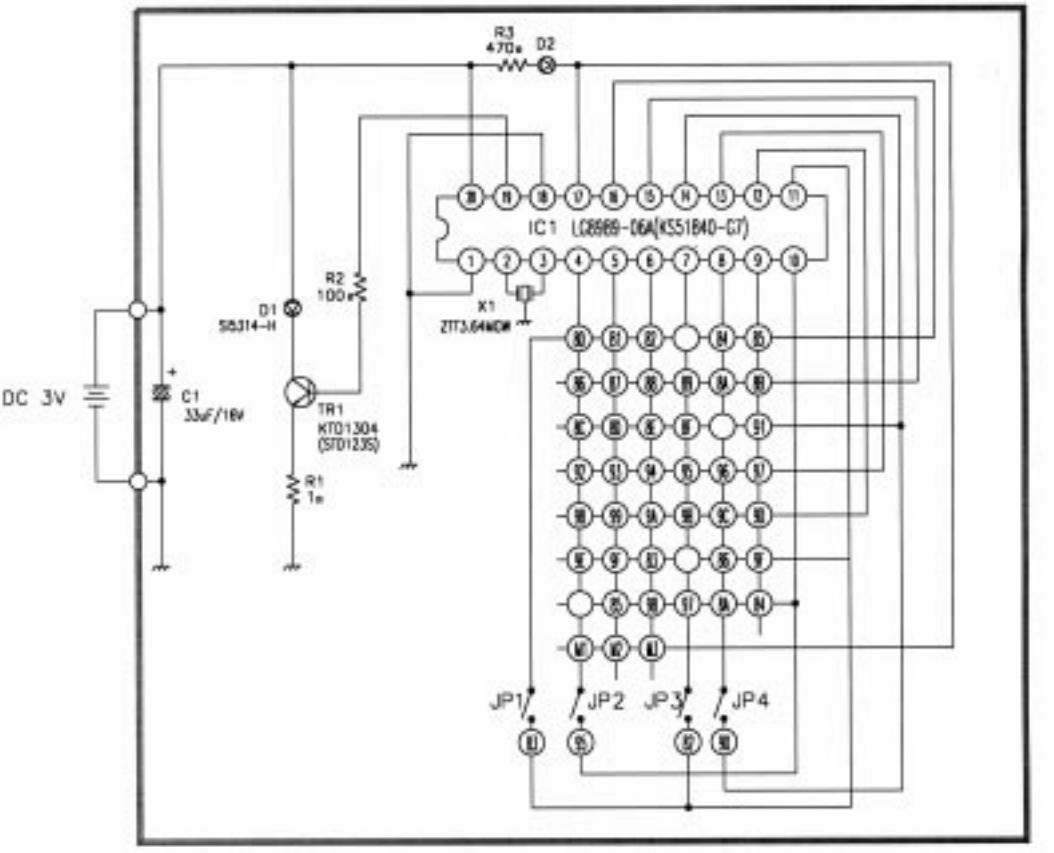


11. SCHEMATIC DIAGRAM

11.1 Circuit and Troubleshooting



11.2 Remote Controller



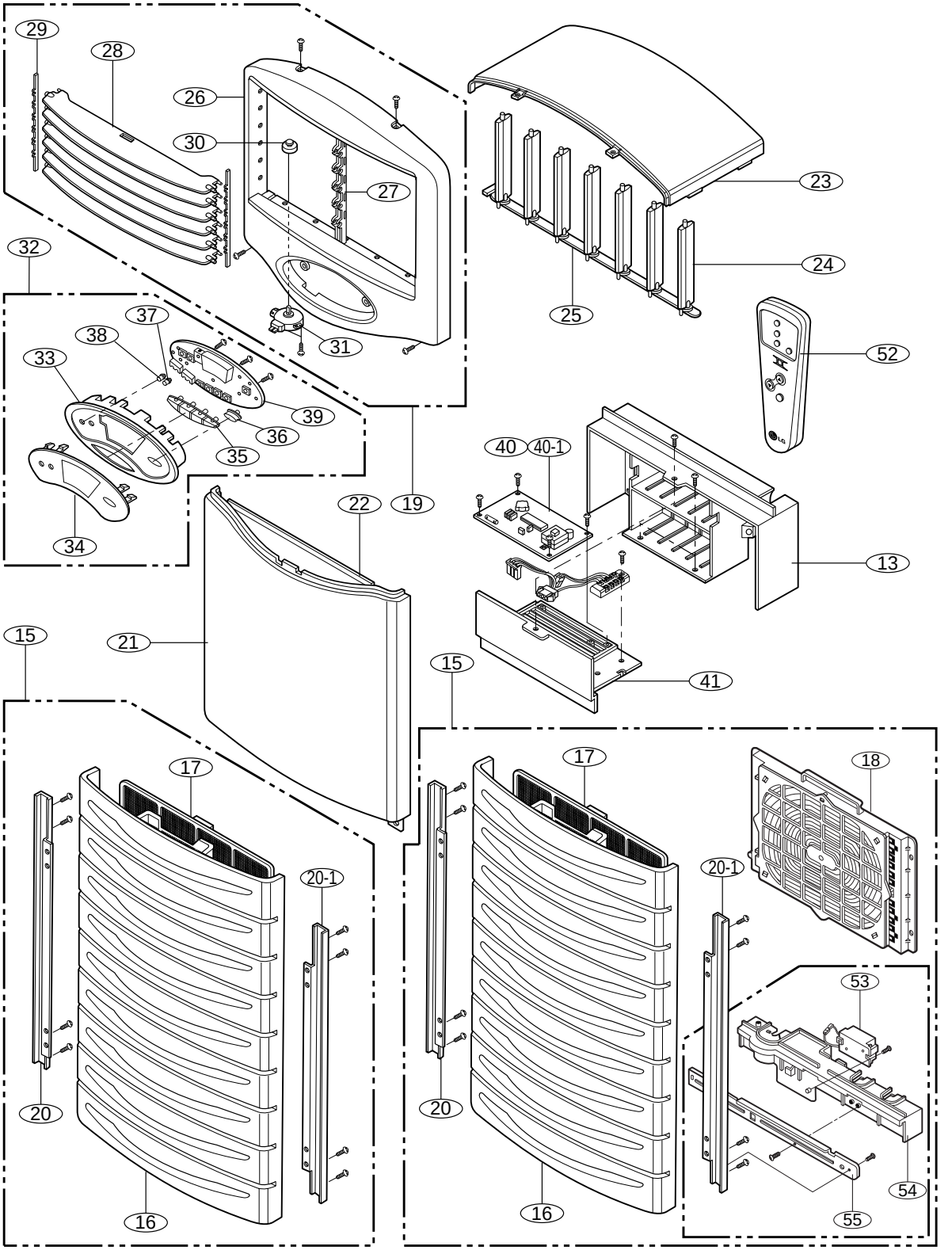
FUNCTION	DATA CODE(HEX)	FUNCTION	DATA CODE(HEX)
UP	96		99
DOWN	97		9D
	81		89
	8F	A/CL	8C
	95		86
	91		90
	9F		

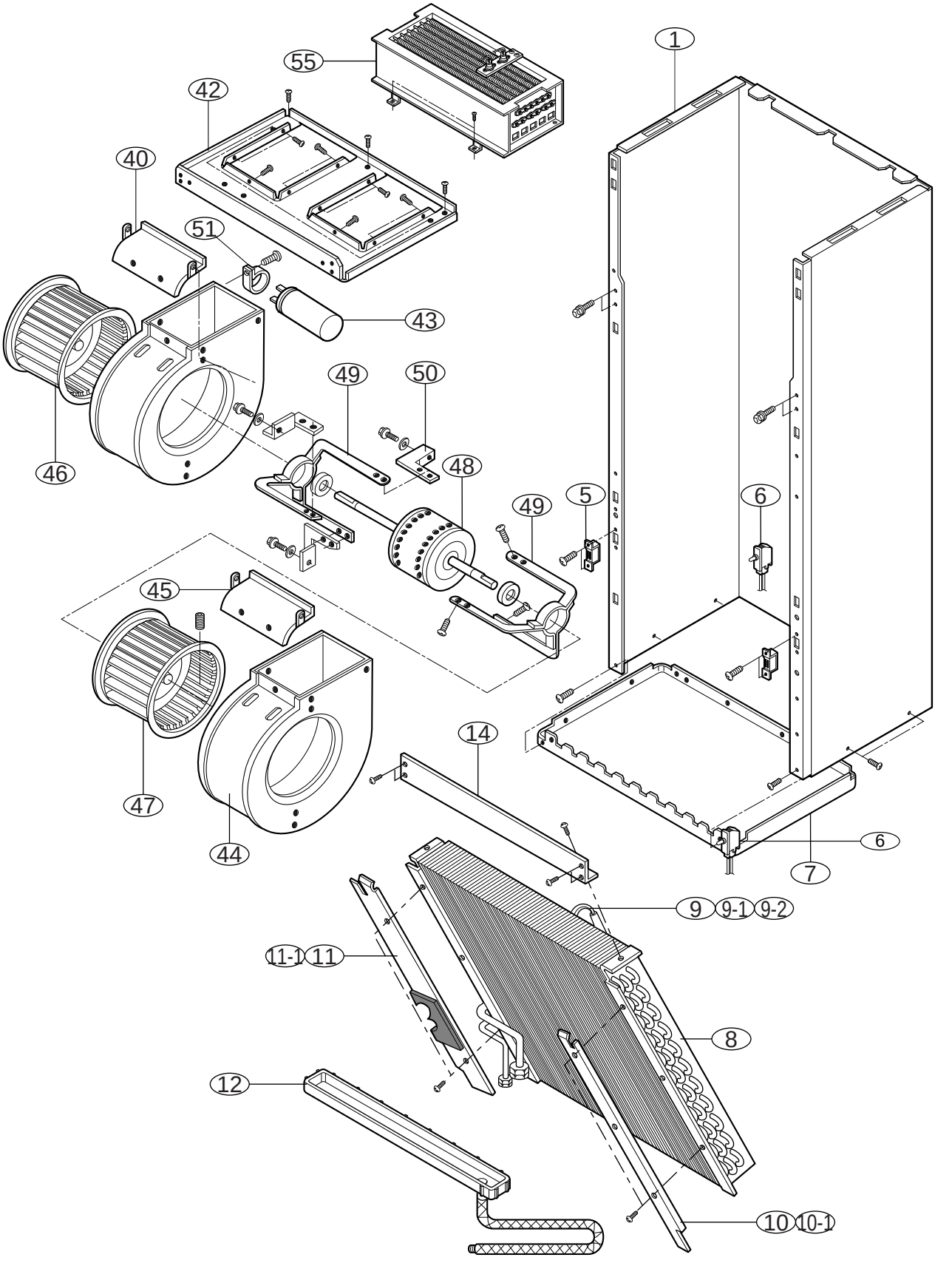
* CUSTOM CODE : 8656 (HEX)
1000011001010110(BINARY)

12. EXPLODED VIEW AND REPLACEMENT PARTS LIST

12.1 Indoor Unit

1) Exploded View

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2) Replacement Parts List

No.	DESCRIPTION	LP-E5082CL	LP-E5082CA	LP-E5082HL	LP-E5082HA	LP-E5082ZL	Q'TY	REMARK
1	CABINET	3090AP1174P	3090AP1174P	3090AP1174P	3090AP1174P	3090AP1174P	1	
5	DOOR MAGNET ASM	3A02221A	3A02221A	3A02221A	3A02221A	3A02221A	2	
6	DOOR SWITCH	-	6601AP3795A	-	6601AP3795A	-	2	
7	BASE PAN	3041AP3596A	3041AP3596A	3041AP3596A	3041AP3596A	3041AP3596A	1	
8	EVAPORATOR ASSY	2A00971F	2A00971F	2A00971F	2A00971F	2A00971F	1	
9	TUBE CAPILLIARY	3H02633E	3H02633E	3H03750H	3H03750H	3H03750H	6	
10	BRACKET SIDE-R	3A01978A	3A01978A	3A01978A	3A01978A	3A01978A	1	
11	BRACKET SIDE-L	3A02094B	3A02094B	3A02094B	3A02094B	3A02094B	1	
12	DRAIN PAN ASSY	3087AP2017G	3087AP2017G	3087AP2017G	3087AP2017G	3087AP2017G	1	
13	SUPPORT D.P.	4980AP2267B	4980AP2267B	4980AP2267B	4980AP2267B	4980AP2267B	1	
14	BRACKET EVA. TOP	4810AP7137A	4810AP7137A	4810AP7137A	4810AP7137A	4810AP7137A	1	
15	INLET GRILLE ASSY	5237AP2405A	5237AP2909A	5237AP2405A	5237AP2909A	5237AP2405A	1	ROUND
		3531A20019A	5237AP2909D	3531A20019A	5237AP2909D	3531A20019A	1	STRAIGHT
16	INLET GRILLE	3530AP1126A	3530AP1126A	3530AP1126A	3530AP1126A	3530AP1126A	1	ROUND
		3530A0001A	3530A0001A	3530A0001A	3530A0001A	3530A0001A	1	STRAIGHT
17	FILTER ASSY	5230AP2010A	5230AP2010A	5230AP2010A	5230AP2010A	5230AP2010A	1	ROUND
		5230A20002A	5230A20002A	5230A20002A	5230A20002A	5230A20002A	1	STRAIGHT
18	AIR CLEANER ASSY	-	5983AP1156C	-	5983AP1156C	-	1	
19	DIFFUSER ASSY	3023AP2403A	3023AP2403A	3023AP2403A	3023AP2403A	3023AP2403A	1	
21	FRONT PANEL ASSY	3721AP2404G	3721AP2404G	3721AP2404G	3721AP2404G	3721AP2404G	1	
22	BRACKET FRONT	4810AP3006A	4810AP3006A	4810AP3006A	4810AP3006A	4810AP3006A	1	
23	TOP,COVER	3551AP3473A	3551AP3473A	3551AP3473A	3551AP3473A	3551AP3473A	1	
30	CAM	3A01947A	3A01947A	3A01947A	3A01947A	3A01947A	1	
31	SYN.MOTOR	2H01102A	2H01102A	2H01102A	2H01102A	2H01102A	1	
32	CONTROLLER ASSY	3545A20004F	3545A20004E	3545A20004H	3545A20004G	3545A20004K	1	
33	BODY DISPLAY	3071AP2292K	3071AP2292K	3071AP2292K	3071AP2292K	3071AP2292K	1	
34	WINDOW DISPLAY	3790AP3936N	3790AP3936P	3790AP3936N	3790AP3936P	3790AP7356B	1	
35	KNOB	4940A30006A	4940A30006A	4940A30006A	4940A30006A	4940A30006A	1	
35-1	KNOB	4940A30006B	4940A30006B	4940A30006B	4940A30006B	4940A30006B	1	
35-2	KNOB	4940A30006C	4940A30006C	4940A30006C	4940A30006C	4940A30006C	1	
35-3	KNOB	4940A30006D	4940A30006D	4940A30006D	4940A30006D	4940A30006D	1	
36	KNOB-P	4940AP3422C	4940AP3422C	4940AP3422C	4940AP3422C	4940AP3422C	1	
37	KNOB-C.C	-	4940AP3166E	-	4940AP3166E	-	1	
38	KNOB-HEATER	-	-	-	-	4940AP3326E	1	
39	DISPLAY P.C.B ASSY	6871AQ3143K	6871AQ3143K	6871AQ3143L	6871AQ3143L	6871AQ3143L	1	
40	MAIN PCB ASSY	6871A20067F	6871A20067G	6871A20040L	6871A20040N	6871A20040L	1	
41	BOARD	3500AP2236C	3500AP2236C	3500AP2236D	3500AP2236D	3500AP2236D	1	
42	BARRIER BLOWER	4790AP2287B	4790AP2287B	4790AP2287B	4790AP2287B	4790AP2287B	1	
43	CAPACITOR	2H00841C	2H00841C	2H00841C	2H00841C	2H00841C	1	
44	HOUSING ASSY	2A00145B	2A00145B	2A00145B	2A00145B	2A00145B	1	
45	CUT OFF	3A00420A	3A00420A	3A00420A	3A00420A	3A00420A	2	
46	BLOWER WHEEL ASSY	2A00578Q	2A00578Q	2A00578Q	2A00578Q	2A00578Q	1	
47	BLOWER WHEEL ASSY	2A00578J	2A00578J	2A00578J	2A00578J	2A00578J	1	
48	MOTOR ASSY	4681AP2908B	4681AP2908B	4681AP2908B	4681AP2908B	4681AP2908B	1	
49	MOUNT MOTOR ASSY	3A00429A	3A00429A	3A00429A	3A00429A	3A00429A	1	
50	BRACKET,MOTOR	4A00273A	4A00273A	4A00273A	4A00273A	4A00273A	1	
51	CLAMP CAPACITOR	4H00930B	4H00930B	4H00930B	4H00930B	4H00930B		
52	REMOTE CONTROLLER	6711A20021E	6711A20021B	6711A20021K	6711A20021F	6711A20021M	1	
53	H.V ASSY	-	6609AQ2219C	-	6609AQ2219C	-	1	
55	PANEL,HEATER	-	-	-	-	3720AP2409A	1	

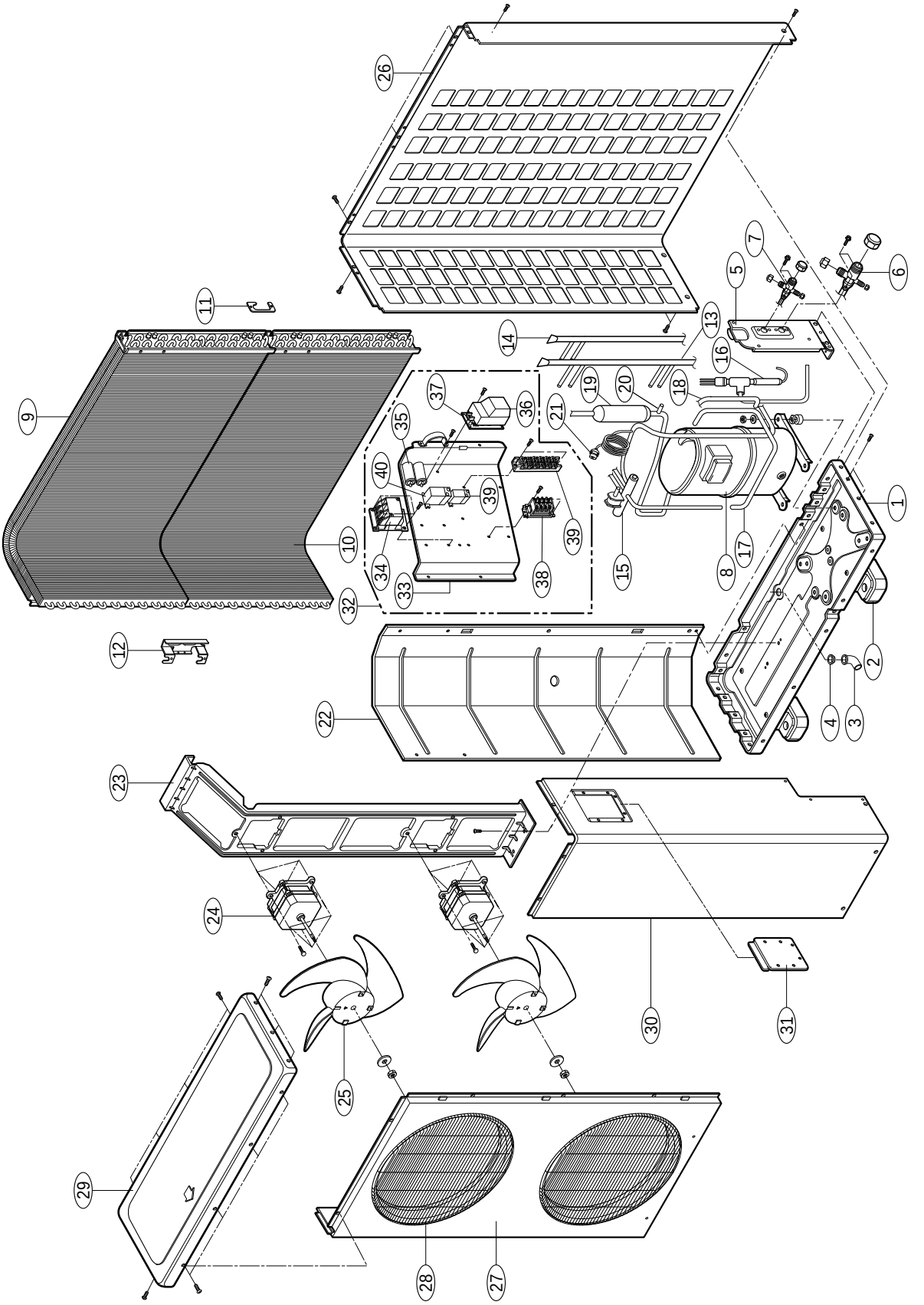
No.	DESCRIPTION	LP-E5082ZA	LP-E5020CL/22CL	LP-E5022CA	LP-E5022HL	LP-E5022HA	Q'TY	REMARK
1	CABINET	3090AP1174P	3090AP1174P	3090AP1174P	3090AP1174P	3090AP1174P	1	
5	DOOR MAGNET ASM	3A02221A	3A02221A	3A02221A	3A02221A	3A02221A	2	
6	DOOR SWITCH	6601AP3795A	-	6601AP3795A	-	6601AP3795A	2	
7	BASE PAN	3041AP3596A	3041AP3596A	3041AP3596A	3041AP3596A	3041AP3596A	1	
8	EVAPORATOR ASSY	2A00971F	2A00971A	2A00971A			1	
9	TUBE CAPILLIARY	3H03750H	3E92334G	3E92334G			6	
10	BRACKET SIDE-R	3A01978A	3A01978A	3A01978A	3A01978A	3A01978A	1	
11	BRACKET SIDE-L	3A02094B	3A02094B	3A02094B	3A02094B	3A02094B	1	
12	DRAIN PAN ASSY	3087AP2017G	3087AP2017G	3087AP2017G	3087AP2017G	3087AP2017G	1	
13	SUPPORT D.P.	4980AP2267B	4980AP2267B	4980AP2267B	4980AP2267B	4980AP2267B	1	
14	BRACKET EVA. TOP	4810AP7137A	4810AP7137A	4810AP7137A	4810AP7137A	4810AP7137A	1	
15	INLET GRILLE ASSY	5237AP2909A	5237AP2405A	5237AP2909B	5237AP2405A	5237AP2909B	1	ROUND
		5237AP2909D	3531A20019A	5237AP2909C	3531A20019A	5237AP2909C	1	STRAIGHT
16	INLET GRILLE	3530AP1126A	3530AP1126A	3530AP1126A	3530AP1126A	3530AP1126A	1	ROUND
		3530A0001A	3530A0001A	3530A0001A	3530A0001A	3530A0001A	1	STRAIGHT
17	FILTER ASSY	5230AP2010A	5230AP2010A	5230AP2010A	5230AP2010A	5230AP2010A	1	ROUND
		5230A20002A	5230A20002A	5230A20002A	5230A20002A	5230A20002A	1	STRAIGHT
18	AIR CLEANER ASSY	5983AP1156C	-	5983AP1156C	-	5983AP1156C	1	
19	DIFFUSER ASSY	3023AP2403A	3023AP2403A	3023AP2403A	3023AP2403A	3023AP2403A	1	
21	FRONT PANEL ASSY	3721AP2404G	3721AP2404G	3721AP2404G	3721AP2404G	3721AP2404G	1	
22	BRACKET FRONT	4810AP3006A	4810AP3006A	4810AP3006A	4810AP3006A	4810AP3006A	1	
23	TOP,COVER	3551AP3473A	3551AP3473A	3551AP3473A	3551AP3473A	3551AP3473A	1	
30	CAM	3A01947A	3A01947A	3A01947A	3A01947A	3A01947A	1	
31	SYN.MOTOR	2H01102A	2H01102A	2H01102A	2H01102A	2H01102A	1	
32	CONTROLLER ASSY	3545A20004J	3545A20004F	3545A20004E	3545A20004H	3545A20004G	1	
33	BODY DISPLAY	3071AP2292K	3071AP2292K	3071AP2292K	3071AP2292K	3071AP2292K	1	
34	WINDOW DISPLAY	3790AP7327S	3790AP3936N	3790AP3936P	3790AP3936N	3790AP3936P	1	
35	KNOB	4940A30006A	4940A30006A	4940A30006A	4940A30006A	4940A30006A	1	
35-1	KNOB	4940A30006B	4940A30006B	4940A30006B	4940A30006B	4940A30006B	1	
35-2	KNOB	4940A30006C	4940A30006C	4940A30006C	4940A30006C	4940A30006C	1	
35-3	KNOB	4940A30006D	4940A30006D	4940A30006D	4940A30006D	4940A30006D	1	
36	KNOB-P	4940AP3422C	4940AP3422C	4940AP3422C	4940AP3422C	4940AP3422C	1	
37	KNOB-C.C	4940AP3166E	-	4940AP3166E	-	4940AP3166E	1	
38	KNOB-HEATER	4940AP3326E	-	-	-	-	1	
39	DISPLAY P.C.B ASSY	3545A20014G	6871AQ3143K	6871AQ3143K	6871AQ3143L	6871AQ3143L	1	
40	MAIN PCB ASSY	6871A20040N	6871A20067H	6871A20067J	6871A20082A	6871A20067P	1	
41	BOARD	3545A20016G	3500AP2236C	3500AP2236C	3500AP2236D	3500AP2236D	1	
42	BARRIER BLOWER	4790AP2287B	4790AP2287B	4790AP2287B	4790AP2287B	4790AP2287B	1	
43	CAPACITOR	2H00841C	2H00841C	2H00841C	2H00841C	2H00841C	1	
44	HOUSING ASSY	2A00145B	2A00145B	2A00145B	2A00145B	2A00145B	1	
45	CUT OFF	3A00420A	3A00420A	3A00420A	3A00420A	3A00420A	2	
46	BLOWER WHEEL ASSY	2A00578Q	2A00578Q	2A00578Q	2A00578Q	2A00578Q	1	
47	BLOWER WHEEL ASSY	2A00578J	2A00578J	2A00578J	2A00578J	2A00578J	1	
48	MOTOR ASSY	4681AP2908B	4681AP2908C	4681AP2908C	4681AP2908C	4681AP2908C	1	
49	MOUNT MOTOR ASSY	3A00429A	3A00429A	3A00429A	3A00429A	3A00429A	1	
50	BRACKET,MOTOR	4A00273A	4A00273A	4A00273A	4A00273A	4A00273A	1	
51	CLAMP CAPACITOR	4H00930B	4H00930B	4H00930B	4H00930B	4H00930B		
52	REMOTE CONTROLLER	6711A20021H	6711A20021E	6711A20021B	6711A20021K	6711A20021F	1	
53	H.V ASSY	6609AQ2219C	-	6609AQ2219A	-	6609AQ2219A	1	
55	PANEL,HEATER	3720AP2409A	-	-	-	-	1	

No.	DESCRIPTION	LP-E50B0CL	LP-E50B0CA	LP-E50B0HL	LP-E50B0HA	LP-E5092CL	Q'TY	REMARK
1	CABINET	3090AP1174P	3090AP1174P	3090AP1174P	3090AP1174P	3090AP1174P	1	
5	DOOR MAGNET ASM	3A02221A	3A02221A	3A02221A	3A02221A	3A02221A	2	
6	DOOR SWITCH	-	6601AP3795A	-	6601AP3795A	-	2	
7	BASE PAN	3041AP3596A	3041AP3596A	3041AP3596A	3041AP3596A	3041AP3596A	1	
8	EVAPORATOR ASSY	2A00971A	2A00971A	2A00971F	2A00971F	2A00971A	1	
9	TUBE CAPILLIARY	3H02633E	3H02633E	3H02633E	3H02633E	3H02633E	6	
10	BRACKET SIDE-R	3A01978A	3A01978A	3A01978A	3A01978A	3A01978A	1	
11	BRACKET SIDE-L	3A02094B	3A02094B	3A02094B	3A02094B	3A02094B	1	
12	DRAIN PAN ASSY	3087AP2017G	3087AP2017G	3087AP2017G	3087AP2017G	3087AP2017G	1	
13	SUPPORT D.P.	4980AP2267B	4980AP2267B	4980AP2267B	4980AP2267B	4980AP2267B	1	
14	BRACKET EVA. TOP	4810AP7137A	4810AP7137A	4810AP7137A	4810AP7137A	4810AP7137A	1	
15	INLET GRILLE ASSY	5237AP2405A	5237AP2909B	5237AP2405A	5237AP2909B	5237AP2405A	1	ROUND
		3531A20019A	5237AP2909C	3531A20019A	5237AP2909C	3531A20019A	1	STRAIGHT
16	INLET GRILLE	3530AP1126A	3530AP1126A	3530AP1126A	3530AP1126A	3530AP1126A	1	ROUND
		3530A0001A	3530A0001A	3530A0001A	3530A0001A	3530A0001A	1	STRAIGHT
17	FILTER ASSY	5230AP2010A	5230AP2010A	5230AP2010A	5230AP2010A	5230AP2010A	1	ROUND
		5230A20002A	5230A20002A	5230A20002A	5230A20002A	5230A20002A	1	STRAIGHT
18	AIR CLEANER ASSY	-	5983AP1156C	-	5983AP1156C	-	1	
19	DIFFUSER ASSY	3023AP2403A	3023AP2403A	3023AP2403A	3023AP2403A	3023AP2403A	1	
21	FRONT PANEL ASSY	3721AP2404G	3721AP2404G	3721AP2404G	3721AP2404G	3721AP2404G	1	
22	BRACKET FRONT	4810AP3006A	4810AP3006A	4810AP3006A	4810AP3006A	4810AP3006A	1	
23	TOP,COVER	3551AP3473A	3551AP3473A	3551AP3473A	3551AP3473A	3551AP3473A	1	
30	CAM	3A01947A	3A01947A	3A01947A	3A01947A	3A01947A	1	
31	SYN.MOTOR	2H01102A	2H01102A	2H01102A	2H01102A	2H01102A	1	
32	CONTROLLER ASSY	3545A20004F	3545A20004E	3545A20004H	3545A20004G	3545A20004F	1	
33	BODY DISPLAY	3071AP2292K	3071AP2292K	3071AP2292K	3071AP2292K	3071AP2292K	1	
34	WINDOW DISPLAY	3790AP3936N	3790AP3936P	3790AP3936N	3790AP3936P	3790AP3936N	1	
35	KNOB	4940A30006A	4940A30006A	4940A30006A	4940A30006A	4940A30006A	1	
35-1	KNOB	4940A30006B	4940A30006B	4940A30006B	4940A30006B	4940A30006B	1	
35-2	KNOB	4940A30006C	4940A30006C	4940A30006C	4940A30006C	4940A30006C	1	
35-3	KNOB	4940A30006D	4940A30006D	4940A30006D	4940A30006D	4940A30006D	1	
36	KNOB-P	4940AP3422C	4940AP3422C	4940AP3422C	4940AP3422C	4940AP3422C	1	
37	KNOB-C.C	-	4940AP3166E	-	4940AP3166E	-	1	
38	KNOB-HEATER	-	-	-	-	-	1	
39	DISPLAY P.C.B ASSY	6871AQ3143K	6871AQ3143K	6871AQ3143L	6871AQ3143L	6871AQ3143K	1	
40	MAIN PCB ASSY	6871A20067H	6871A20067J	6871A20082A	6871A20067P	6871A20067H	1	
41	BOARD	3500AP2236C	3500AP2236C	3500AP2236D	3500AP2236D	3500AP2236C	1	
42	BARRIER BLOWER	4790AP2287B	4790AP2287B	4790AP2287B	4790AP2287B	4790AP2287B	1	
43	CAPACITOR	2H00841C	2H00841C	2H00841C	2H00841C	2H00841C	1	
44	HOUSING ASSY	2A00145B	2A00145B	2A00145B	2A00145B	2A00145B	1	
45	CUT OFF	3A00420A	3A00420A	3A00420A	3A00420A	3A00420A	2	
46	BLOWER WHEEL ASSY	2A00578Q	2A00578Q	2A00578Q	2A00578Q	2A00578Q	1	
47	BLOWER WHEEL ASSY	2A00578J	2A00578J	2A00578J	2A00578J	2A00578J	1	
48	MOTOR ASSY	4681AP2908D	4681AP2908D	4681AP2908D	4681AP2908D	4681AP2908D	1	
49	MOUNT MOTOR ASSY	3A00429A	3A00429A	3A00429A	3A00429A	3A00429A	1	
50	BRACKET,MOTOR	4A00273A	4A00273A	4A00273A	4A00273A	4A00273A	1	
51	CLAMP CAPACITOR	4H00930B	4H00930B	4H00930B	4H00930B	4H00930B		
52	REMOTE CONTROLLER	6711A20021E	6711A20021B	6711A20021K	6711A20021F	6711A20021E	1	
53	H.V ASSY	-	6609AQ2219A	-	6609AQ2219A	-	1	
55	PANEL,HEATER	-	-	-	-	-	1	

No.	DESCRIPTION	LP-E5092CA	LP-E5092HL	LP-E5092HA			Q'TY	REMARK
1	CABINET	3090AP1174P	3090AP1174P	3090AP1174P			1	
5	DOOR MAGNET ASM	3A02221A	3A02221A	3A02221A			2	
6	DOOR SWITCH	6601AP3795A	-	6601AP3795A			2	
7	BASE PAN	3041AP3596A	3041AP3596A	3041AP3596A			1	
8	EVAPORATOR ASSY	2A00971A	2A00971F	2A00971F			1	
9	TUBE CAPILLIARY	3H02633E	3H02633E	3H02633E			6	
10	BRACKET SIDE-R	3A01978A	3A01978A	3A01978A			1	
11	BRACKET SIDE-L	3A02094B	3A02094B	3A02094B			1	
12	DRAIN PAN ASSY	3087AP2017G	3087AP2017G	3087AP2017G			1	
13	SUPPORT D.P.	4980AP2267B	4980AP2267B	4980AP2267B			1	
14	BRACKET EVA. TOP	4810AP7137A	4810AP7137A	4810AP7137A			1	
15	INLET GRILLE ASSY	5237AP2909B	5237AP2405A	5237AP2909B			1	ROUND
		5237AP2909C	3531A20019A	5237AP2909C			1	STRAIGHT
16	INLET GRILLE	3530AP1126A	3530AP1126A	3530AP1126A			1	ROUND
		3530A0001A	3530A0001A	3530A0001A			1	STRAIGHT
17	FILTER ASSY	5230AP2010A	5230AP2010A	5230AP2010A			1	ROUND
		5230A20002A	5230A20002A	5230A20002A			1	STRAIGHT
18	AIR CLEANER ASSY	5983AP1156C	-	5983AP1156C			1	
19	DIFFUSER ASSY	3023AP2403A	3023AP2403A	3023AP2403A			1	
21	FRONT PANEL ASSY	3721AP2404G	3721AP2404G	3721AP2404G			1	
22	BRACKET FRONT	4810AP3006A	4810AP3006A	4810AP3006A			1	
23	TOP,COVER	3551AP3473A	3551AP3473A	3551AP3473A			1	
30	CAM	3A01947A	3A01947A	3A01947A			1	
31	SYN.MOTOR	2H01102A	2H01102A	2H01102A			1	
32	CONTROLLER ASSY	3545A20004E	3545A20004H	3545A20004G			1	
33	BODY DISPLAY	3071AP2292K	3071AP2292K	3071AP2292K			1	
34	WINDOW DISPLAY	3790AP3936P	3790AP3936N	3790AP3936P			1	
35	KNOB	4940A30006A	4940A30006A	4940A30006A			1	
35-1	KNOB	4940A30006B	4940A30006B	4940A30006B			1	
35-2	KNOB	4940A30006C	4940A30006C	4940A30006C			1	
35-3	KNOB	4940A30006D	4940A30006D	4940A30006D			1	
36	KNOB-P	4940AP3422C	4940AP3422C	4940AP3422C			1	
37	KNOB-C.C	4940AP3166E	-	4940AP3166E			1	
38	KNOB-HEATER	-	-	-			1	
39	DISPLAY P.C.B ASSY	6871AQ3143K	6871AQ3143L	6871AQ3143L			1	
40	MAIN PCB ASSY	6871A20067J	6871A20082A	6871A20067P			1	
41	BOARD	3500AP2236C	3500AP2236D	3500AP2236D			1	
42	BARRIER BLOWER	4790AP2287B	4790AP2287B	4790AP2287B			1	
43	CAPACITOR	2H00841C	2H00841C	2H00841C			1	
44	HOUSING ASSY	2A00145B	2A00145B	2A00145B			1	
45	CUT OFF	3A00420A	3A00420A	3A00420A			2	
46	BLOWER WHEEL ASSY	2A00578Q	2A00578Q	2A00578Q			1	
47	BLOWER WHEEL ASSY	2A00578J	2A00578J	2A00578J			1	
48	MOTOR ASSY	4681AP2908D	4681AP2908D	4681AP2908D			1	
49	MOUNT MOTOR ASSY	3A00429A	3A00429A	3A00429A			1	
50	BRACKET,MOTOR	4A00273A	4A00273A	4A00273A			1	
51	CLAMP CAPACITOR	4H00930B	4H00930B	4H00930B				
52	REMOTE CONTROLLER	6711A20021B	6711A20021K	6711A20021F			1	
53	H.V ASSY	6609AQ2219A	-	6609AQ2219A			1	
55	PANEL,HEATER	-	-	-			1	

12.2 Outdoor Unit

1) Exploded View



2) Replacement Parts List

No.	DESCRIPTION	LP-E5082CL/CA	LP-E5082HL/HA LP-E5082ZL/ZA	LP-E5020CL LP-E5022CL/CA	LP-E5022HL/HA	Q'TY	REMARK
1	BASE PAN ASSY	3041AP2569B	3041AP2569D	3041AP2569B	3041AP2569D	1	
2	LEG	4778AP2526A	4778AP2526A	4778AP2526A	4778AP2526A	2	
3	ELBOW, DRAIN	5212AP3173A	5212AP3173A	5212AP3173A	5212AP3173A	1	
4	RUBBER, DRAIN	5040AP3178A	5040AP3178A	5040AP3178A	5040AP3178A	1	
5	SUPPORT, VALVE	4980AP2517B	4980AP2517B	4980AP2517B	4980AP2517B	1	
6	VALVE SERVICE	2A00499A	2A00499A	2A00499A	2A00499A	1	
7	VALVE SERVICE	2A00393P	2A00393Q	2A00393P	2A00393Q	1	
8	COMPRESSOR	5416AR1141K	5416AR1141K	2A01196B	5416AP1153A	1	
9	CONDENSER ASSY	5403A20003F	5403AP2378V	5403AP2378B	5403AP2378V	1	
10	CONDENSER ASSY	5403A20003F	5403AP2378X	5403AP2378B	5403AP2378X	1	
11	LINK SHEET	4520AP4095A	4520AP4095A	4520AP4095A	4520AP4095A	1	
12	BRACKET COND.	4810AP3697A	4810AP3697A	4810AP3697A	4810AP3697A	1	
13	MANIFOLD IN ASSY	5211AP3843A	5211AP3988A	5211AP3843A	5211AP3988A	1	
14	MANIFOLD OUT ASSY	5211AP3844A	5211AP3989A	5211AP3844A	5211AP3989A	1	
15	REVERSING VALVE	-	5211AP2715E	-	5211AP2715E	1	
16	CHECK VALVE	-	3A01020D	-	3A01020D	1	
17	TUBE, DISCHARGE	5257A30003B	5257A30001E	5210AP3841A		1	
18	TUBE, SUCTION	5210A20004C	5210AP7003B	5210AP3838A		1	
19	ACCUMULATOR	4849A20001C	4849A20001C	4849A20001C	4849A20001C	1	
20	VALVE CORE ASSY	3A01902A	3A01902A	3A01902A	3A01902A	1	
21	H.P SWITCH	3A01100A	3A01100A	3A01100A	-	1	
22	BAFFLE	4760AP1216A	4760AP1216A	4760AP1216A	4760AP1216A	1	
23	MOUNT	4960AP1214A	4960AP1214A	4960AP1214A	4960AP1214A	1	
24	MOTOR ASSY	4680AP2135M	4680AP2135M	4681AP2666B	4681AP2666B	2	
25	EXTRA FAN	1A00195B	1A00195B	1A00195B	1A00195B	2	
26	PANEL REAR	3720AP1202C	3720AP1202C	3720AP1202C	3720AP1202C	1	
27	PANEL FRONT	3720AP1212B	3720AP1212B	3720AP1212B	3720AP1212B	1	
28	GRILLE DISCHARGE	3530AP1225B	3530AP1225B	3530AP1225B	3530AP1225B	2	
29	TOP COVER	3550AP1213B	3550AP1213B	3550AP1213B	3550AP1213B	1	
30	PANEL COVER	3720AP1215B	3720AP1215B	3720AP1215B	3720AP1215B	1	
31	COVER ASSY	3A01293X	3A01293X	3A01293X	3A01293X	1	
32	CONTROL ASSY	4995AG2098F	6615AP2772M	4995AP2681C		1	
33	BOARD CONTROL	3500AP1266A	3500AP1266A	3500AP1266A	3500AP1266A	1	
34	MAGNETIC CONTACTOR	2A01031A	2A01031A	2A00771D	2A00771D	1	
35	SH CAPACITOR	2A00986D	2A00986D	2H00841J	2H00841J	2	
36	COVER DEICER	-	2H00644A	-	2H00644A	1	
37	DEICER PWB ASSY	-	6871A20015N	-	6871A20015N	1	
38	TERMINAL BLOCK	3A00493A	3A00493A	3A00093C	3A00493A	1	
39	TERMINAL BLOCK	4G00103B	4G00103A	4G00103C	4G00103A	1	
40	POWER RELAY	-	3A00261C	-	3A00261C	1	

No.	DESCRIPTION	LP-E50B0CL/CA	LP-E50B0HL/HA	LP-E5092CL/CA	LP-E5092HL/HA	Q'TY	REMARK
1	BASE PAN ASSY	3041AP2569B	3041AP2569D	3041AP2569B	3041AP2569D	1	
2	LEG	4778AP2526A	4778AP2526A	4778AP2526A	4778AP2526A	2	
3	ELBOW, DRAIN	5212AP3173A	5212AP3173A	5212AP3173A	5212AP3173A	1	
4	RUBBER, DRAIN	5040AP3178A	5040AP3178A	5040AP3178A	5040AP3178A	1	
5	SUPPORT, VALVE	4980AP2517B	4980AP2517B	4980AP2517B	4980AP2517B	1	
6	VALVE SERVICE	2A00499A	2A00499C	2A00499A	2A00499C	1	
7	VALVE SERVICE	2A00393P	2A00393Q	2A00393P	2A00393Q	1	
8	COMPRESSOR	2A01094C	2A01094C	2A01094C	2A01094C	1	
9	CONDENSER ASSY	5403AP2378B	5403AP2378V	5403AP2378B	5403AP2378V	1	
10	CONDENSER ASSY	5403AP2378B	5403AP2378X	5403AP2378B	5403AP2378X	1	
11	LINK SHEET	4520AP4095A	4520AP4095A	4520AP4095A	4520AP4095A	1	
12	BRACKET COND.	4810AP3697A	4810AP3697A	4810AP3697A	4810AP3697A	1	
13	MANIFOLD IN ASSY	5211AP3843A	5211AP3988A	5211AP3843A	5211AP3988A	1	
14	MANIFOLD OUT ASSY	5211AP3844A	5211AP3989A	5211AP3844A	5211AP3989A	1	
15	REVERSING VALVE	-	5211AP2715A	-	5211AP2715A	1	
16	CHECK VALVE	-	3A01020D	-	3A01020D	1	
17	TUBE, DISCHARGE	5210AP3841C	4849A20001C	5210AP3841C	4849A20001C	1	
18	TUBE, SUCTION	5210AP7081A	3A01902A	5210AP7081A	3A01902A	1	
19	ACCUMULATOR	4849A20001C	4849A20001C	4849A20001C	4849A20001C	1	
20	VALVE CORE ASSY	3A01902A	3A01902A	3A01902A	3A01902A	1	
21	H.P SWITCH	-	3A01100A	-	3A01100A	1	
22	BAFFLE	4760AP1216A	4760AP1216A	4760AP1216A	4760AP1216A	1	
23	MOUNT	4960AP1214A	4960AP1214A	4960AP1214A	4960AP1214A	1	
24	MOTOR ASSY	4681AP2666B	4681AP2666B	4681AP2666B	4681AP2666B	2	
25	EXTRA FAN	1A00195B	1A00195B	1A00195B	1A00195B	2	
26	PANEL REAR	3720AP1202C	3720AP1202C	3720AP1202C	3720AP1202C	1	
27	PANEL FRONT	3720AP1212B	3720AP1212B	3720AP1212B	3720AP1212B	1	
28	GRILLE DISCHARGE	3530AP1225B	3530AP1225B	3530AP1225B	3530AP1225B	2	
29	TOP COVER	3550AP1213B	3550AP1213B	3550AP1213B	3550AP1213B	1	
30	PANEL COVER	3720AP1215B	3720AP1215B	3720AP1215B	3720AP1215B	1	
31	COVER ASSY	3A01293X	3A01293X	3A01293X	3A01293X	1	
32	CONTROL ASSY	4995AP2693E	6615AP2772N	4995AP2693G	6615AP2772P	1	
33	BOARD CONTROL	3500AP2513A	3500AP1266A	3500AP2513A	3500AP1266A	1	
34	MAGNETIC CONTACTOR	2A01031A	2A01031A	2A01031A	2A01031A	1	
35	SH CAPACITOR	2H00841J	2H00841J	2H00841J	2H00841J	2	
36	COVER DEICER	-	2H00644A	-	2H00644A	1	
37	DEICER PWB ASSY	-	6871A20015N	-	6871A20015N	1	
38	TERMINAL BLOCK	3A00493A	3A00493A	3A00493A	3A00493A	1	
39	TERMINAL BLOCK	4G00103B	4G00103A	4G00103B	4G00103A	1	
40	POWER RELAY	-	3A00261C	-	3A00261C	1	

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P/NO:3828A30074N

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