GREE
Change for Life



Service Manual

Models: GWH18MC-K3DNA7F
GWH18MC-K3DNB8E
GWH24MD-K3DNB8E
GWH18MC-K3DNC9E
GWH24MD-K3DNC9E
GWH18MC-K3DNE3E
GWH24MD-K3DNE3E
(Refrigerant R410A)

GREE ELECTRIC APPLIANCES,INC.OF ZHUHAI

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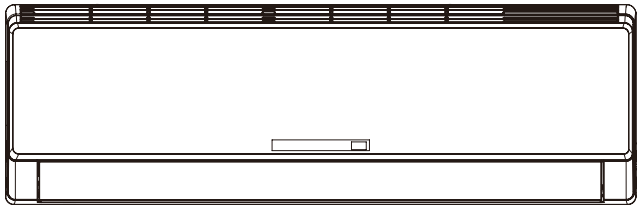
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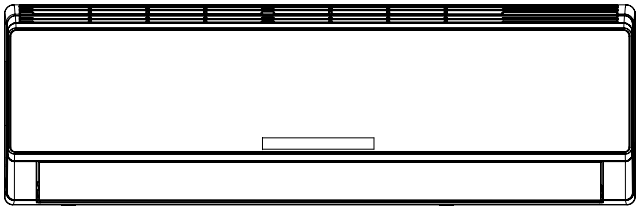
Summary and Features

Indoor Unit

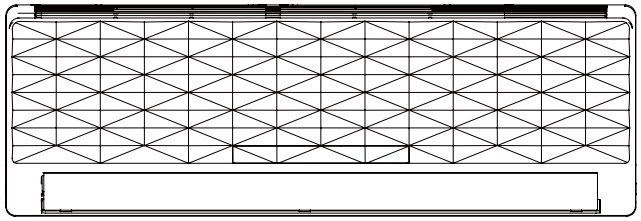
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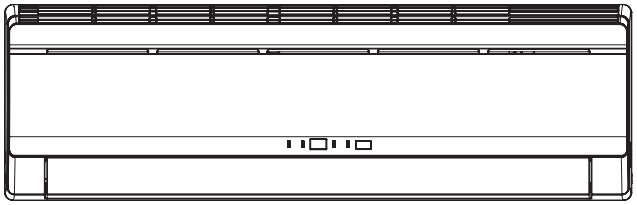
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A7 Panel

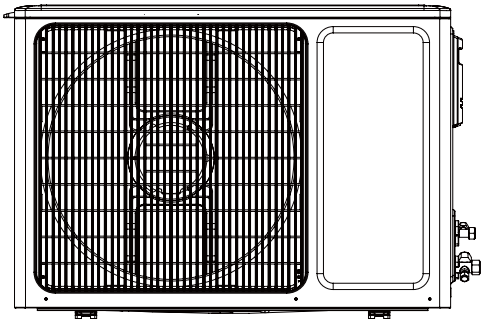


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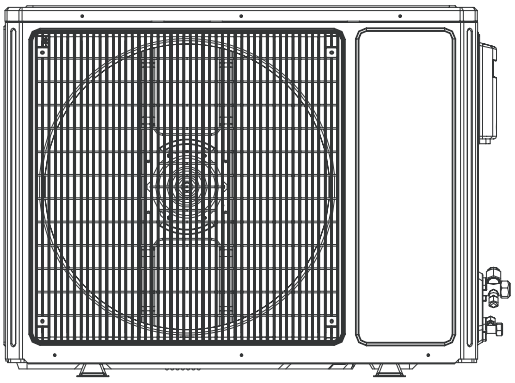


Outdoor Unit

GWH18MC-K3DNA7E/O
GWH18MC-K3DNA7F/O



GWH24MD-K3DNA7E/O



Remote Controller

YB1FA



Model List

NO.	Model	Product code	Indoor model	Indoor product code	Outdoor model	Outdoor product code
1	GWH18MC-K3DNA7F	CB172002700	GWH18MC-K3DNA7F/I	CB172N02700	GWH18MC-K3DNA7F/O	CB172W02700
2	GWH18MC-K3DNB8E (white)	CB174002300	GWH18MC-K3DNB8E/I (white)	CB174N02300	GWH18MC-K3DNA7E/O	CB172W02500
3	GWH18MC-K3DNB8E (inner moulding pearl white)	CB174002301	GWH18MC-K3DNB8E/I (inner moulding pearl white)	CB174N02301	GWH18MC-K3DNA7E/O	CB172W02500
4	GWH18MC-K3DNC9E	CB145000800	GWH18MC-K3DNC9E/I	CB145N00800	GWH18MC-K3DNA7E/O	CB172W02500
5	GWH18MC-K3DNE3E (white wire drawing with middle display)	CB404001501	GWH18MC-K3DNE3E/I (white wire drawing with middle display)	CB404N01501	GWH18MC-K3DNA7E/O	CB172W02500
6	GWH24MD-K3DNB8E (white)	CB174002400	GWH24MD-K3DNB8E/I (white)	CB174N02400	GWH24MD-K3DNA7E/O	CB172W02600
7	GWH24MD-K3DNB8E (inner moulding pearl white)	CB174002401	GWH24MD-K3DNB8E/I (inner moulding pearl white)	CB174N02401	GWH24MD-K3DNA7E/O	CB172W02600
8	GWH24MD-K3DNE3E (white wire drawing with middle display)	CB404001601	GWH24MD-K3DNE3E/I (white wire drawing with middle display)	CB404N01601	GWH24MD-K3DNA7E/O	CB172W02600
9	GWH24MD-K3DNC9E	CB145000900	GWH24MD-K3DNC9E/I	CB145N00900	GWH24MD-K3DNA7E/O	CB172W02600

1.Safety Precautions

Installing, starting up, and servicing air conditioner can be hazardous due to system pressure, electrical components, and equipment location, etc.

Only trained, qualified installers and service personnel are allowed to install, start-up, and service this equipment.

Untrained personnel can perform basic maintenance functions such as cleaning coils. All other operations should be performed by trained service personnel.

When handling the equipment, observe precautions in the manual and on tags, stickers, and labels attached to the equipment. Follow all safety codes. Wear safety glasses and work gloves. Keep quenching cloth and fire extinguisher nearby when brazing.

Read the instructions thoroughly and follow all warnings or cautions in literature and attached to the unit. Consult local building codes and current editions of national as well as local electrical codes.

Recognize the following safety information:

⚠ Warning	Incorrect handling could result in personal injury or death.
⚠ Caution	Incorrect handling may result in minor injury, or damage to product or property.

⚠ Warning

All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.

- Before installing, modifying, or servicing system, main electrical disconnect switch must be in the OFF position. There may be more than 1 disconnect switch. Lock out and tag switch with a suitable warning label.
- Never supply power to the unit unless all wiring and tubing are completed, reconnected and checked.
- This system adopts highly dangerous electrical voltage. Incorrect connection or inadequate grounding can cause personal injury or death. Stick to the wiring diagram and all the instructions when wiring.
- Have the unit adequately grounded in accordance with local electrical codes.
- Have all wiring connected tightly. Loose connection may lead to overheating and a possible fire hazard.

All installation or repair work shall be performed by your dealer or a specialized subcontractor as there is the risk of fire, electric shock, explosion or injury.

- Make sure the outdoor unit is installed on a stable, level surface with no accumulation of snow, leaves, or trash beside.
- Make sure the ceiling wall is strong enough to bear the weight of the unit.
- Make sure the noise of the outdoor unit does not disturb neighbors.
- Follow all the installation instructions to minimize the risk of damage from earthquakes, typhoons or strong winds.
- Avoid contact between refrigerant and fire as it generates poisonous gas.
- Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture and other hazards.
- Make sure no refrigerant gas is leaking out when installation is completed.
- Should there be refrigerant leakage, the density of refrigerant in the air shall in no way exceed its limited value , or it may lead to explosion .
- Keep your fingers and clothing away from any moving parts.
- Clear the site after installation. Make sure no foreign objects are left in the unit.
- Always ensure effective grounding for the unit.

⚠ Caution

- Never install the unit in a place where a combustible gas might leak, or it may lead to fire or explosion.
- Make a proper provision against noise when the unit is installed at a telecommunication center or hospital.
- Provide an electric leak breaker when it is installed in a watery place.
- Never wash the unit with water.
- Handle unit transportation with care. The unit should not be carried by only one person if it is more than 20kg.
- Never touch the heat exchanger fins with bare hands.
- Never touch the compressor or refrigerant piping without wearing glove.
- Do not have the unit operate without air filter.
- Should any emergency occur, stop the unit and disconnect the power immediately.
- Properly insulate any tubing running inside the room to prevent the water from damaging the wall.

2.Specifications

2.1 Unit Specifications

Model			1.GWH18MC-K3DNB8E 2.GWH18MC-K3DNE3E 3.GWH18MC-K3DNC9E
Product Code			1.CB174002300 CB174002301 2.CB404001501 3.CB145000800
Power Supply	Rated Voltage	V~	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Outdoor
Cooling Capacity(Min ~ Max)		W	5275(1260 ~ 6600)
Heating Capacity(Min ~ Max)		W	5850(1120 ~ 6800)
Cooling Power Input(Min ~ Max)		W	1600(380 ~ 2650)
Heating Power Input(Min ~ Max)		W	1620(380 ~ 2650)
Cooling Current Input		A	7.25
Heating Current Input		A	7.34
Rated Input		W	2650
Rated Current		A	12
Air Flow Volume(SH/H/M/L/SL)		m^3/h	850/780/650/550/-
Dehumidifying Volume		L/h	2
EER		W/W	3.3
COP		W/W	3.61
SEER		W/W	/
HSPF		W/W	/
Application Area		m^2	23-34
Indoor Unit	Indoor Unit Model		1.GWH18MC-K3DNB8E/I 2.GWH18MC-K3DNE3E/I 3.GWH18MC-K3DNC9E/I
	Indoor Unit Product Code		1.CB174N02300 CB174N02301 2.CB404N01501 3.CB145N00800
	Fan Type		Cross-flow
	Fan Diameter Length(DXL)	mm	Φ98X710
	Cooling Speed(SH/H/M/L/SL)	r/min	1350/1250/1050/900/-
	Heating Speed(SH/H/M/L/SL)	r/min	1420/1250/1150/1050/-
	Fan Motor Power Output	W	20
	Fan Motor RLA	A	0.25
	Fan Motor Capacitor	μF	1.5
	Evaporator Form		Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7
	Evaporator Row-fin Gap	mm	2-1.4
	Evaporator Coil Length (LXDXW)	mm	718X25.4X304.8
	Swing Motor Model		MP28VB
	Swing Motor Power Output	W	3
	Fuse Current	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB(A)	48/46/40/35/-
	Sound Power Level (SH/H/M/L/SL)	dB(A)	58/56/50/45/-
	Dimension (WXHXD)	mm	940X298X200
	Dimension of Carton Box (LXWXH)	mm	1010X285X380
	Dimension of Package (LXWXH)	mm	1013X383X300
	Net Weight	kg	12
	Gross Weight	kg	16

Outdoor Unit	Outdoor Unit Model		GWH18MC-K3DNA7E/O
	Outdoor Unit Product Code		CB172W02500
	Compressor Manufacturer		MTSUBISHI ELECTRIC(GUANGZHOU)COMP
	Compressor Model		SNB130FGYMC
	Compressor Oil		PV50S
	Compressor Type		Rotary
	Compressor LRA.	A	27
	Compressor RLA	A	8.4
	Compressor Power Input	W	1245
	Compressor Overload Protector		1NT11L-6578
	Throttling Method		Capillary
	Set Temperature Range	°C	16 ～ 30
	Cooling Operation Ambient Temperature Range	°C	18 ～ 45
	Heating Operation Ambient Temperature Range	°C	-7 ～ 24
	Condenser Form		Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7
	Condenser Rows-fin Gap	mm	2-1.4
	Condenser Coil Length (LXDXW)	mm	812X38.1X550
	Fan Motor Speed	rpm	880
	Fan Motor Power Output	W	60
	Fan Motor RLA	A	0.62
	Fan Motor Capacitor	μF	3.5
	Outdoor Unit Air Flow Volume	m^3/h	2400
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ445
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IP24
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	0.9
	Sound Pressure Level (H/M/L)	dB(A)	54/-/-
	Sound Power Level (H/M/L)	dB(A)	64/-/-
	Dimension (WXHXD)	mm	899X596X378
	Dimension of Carton Box (LXWXH)	mm	945X417X630
	Dimension of Package (LXWXH)	mm	948X432X633
	Net Weight	kg	38
	Gross Weight	kg	43
	Refrigerant		R410A
	Refrigerant Charge	kg	1.2
Connection Pipe	Connection Pipe Length	m	5
	Connection Pipe Gas Additional Charge	g/m	20
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ12
	Max Distance Height	m	10
	Max Distance Length	m	25

The above data is subject to change without notice. Please refer to the nameplate of the unit.

Model			GWH18MC-K3DNA7F
Product Code			CB172002700
Power Supply	Rated Voltage	V~	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Outdoor
Cooling Capacity(Min ~ Max)		W	5270(1260 ~ 6600)
Heating Capacity(Min ~ Max)		W	5850(1120 ~ 6800)
Cooling Power Input(Min ~ Max)		W	1600(380 ~ 2650)
Heating Power Input(Min ~ Max)		W	1620(350 ~ 2650)
Cooling Current Input		A	7.561
Heating Current Input		A	7.414
Rated Input		W	2650
Rated Current		A	11.757
Air Flow Volume(SH/H/M/L/SL)		m^3/h	850/780/650/550/-
Dehumidifying Volume		L/h	1.8
EER		W/W	3.29
COP		W/W	3.61
SEER		W/W	/
HSPF		W/W	/
Application Area		m^2	23-34
Indoor Unit	Indoor Unit Model		GWH18MC-K3DNA7F/I
	Indoor Unit Product Code		CB172N02700
	Fan Type		Cross-flow
	Fan Diameter Length(DXL)	mm	Φ98X710
	Cooling Speed(SH/H/M/L/SL)	r/min	1350/1200/1050/900/-
	Heating Speed(SH/H/M/L/SL)	r/min	1420/1250/1150/1050/-
	Fan Motor Power Output	W	20
	Fan Motor RLA	A	0.31
	Fan Motor Capacitor	μF	1.5
	Evaporator Form		Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7
	Evaporator Row-fin Gap	mm	2-1.4
	Evaporator Coil Length (LXDXW)	mm	715X25.4X304.8
	Swing Motor Model		MP28VB
	Swing Motor Power Output	W	3
	Fuse Current	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB(A)	48/46/40/35/-
	Sound Power Level (SH/H/M/L/SL)	dB(A)	58/56/50/45/-
	Dimension (WXHXD)	mm	940X298X200
	Dimension of Carton Box (LXWXH)	mm	1010X380X285
	Dimension of Package (LXWXH)	mm	1013X383X383
	Net Weight	kg	12
	Gross Weight	kg	16

Outdoor Unit	Outdoor Unit Model		GWH18MC-K3DNA7F/O
	Outdoor Unit Product Code		CB172W02700
	Compressor Manufacturer		MITSUBISHI ELECTRIC (GUANGZHOU) COMPRESSOR CO. LTD
	Compressor Model		SNB130FGYMC
	Compressor Oil		FV50S
	Compressor Type		Rotary
	Compressor LRA.	A	27
	Compressor RLA	A	8.4
	Compressor Power Input	W	1245
	Compressor Overload Protector		1NT11L-6578
	Throttling Method		Capillary
	Set Temperature Range	°C	16 ～ 30
	Cooling Operation Ambient Temperature Range	°C	18 ～ 43
	Heating Operation Ambient Temperature Range	°C	-15 ～ 24
	Condenser Form		Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7
	Condenser Rows-fin Gap	mm	2-1.4
	Condenser Coil Length (LXDXW)	mm	812X38.1X550
	Fan Motor Speed	rpm	880
	Fan Motor Power Output	W	60
	Fan Motor RLA	A	0.5
	Fan Motor Capacitor	μF	3.5
	Outdoor Unit Air Flow Volume	m^3/h	2400
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ445
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IP24
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5
	Sound Pressure Level (H/M/L)	dB(A)	54/-/-
	Sound Power Level (H/M/L)	dB(A)	64/-/-
	Dimension (WXHXD)	mm	899X596X378
	Dimension of Carton Box (LXWXH)	mm	945X417X630
	Dimension of Package (LXWXH)	mm	948X420X645
	Net Weight	kg	38
	Gross Weight	kg	43
	Refrigerant		R410A
	Refrigerant Charge	kg	1.2
Connection Pipe	Connection Pipe Length	m	5
	Connection Pipe Gas Additional Charge	g/m	20
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ12
	Max Distance Height	m	10
	Max Distance Length	m	25

Model			1.GWH24MD-K3DNB8E 2.GWH24MD-K3DNE3E 3.GWH24MD-K3DNC9E
Product Code			1.CB174002400 CB174002401 2.CB404001601 3.CB145000900
Power Supply	Rated Voltage	V~	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Outdoor
Cooling Capacity(Min ～ Max)		W	6450(1400 ～ 7000)
Heating Capacity(Min ～ Max)		W	7000(1200 ～ 8200)
Cooling Power Input(Min ～ Max)		W	1985(350 ～ 2500)
Heating Power Input(Min ～ Max)		W	1930(350 ～ 2700)
Cooling Current Input		A	8.8
Heating Current Input		A	8.56
Rated Input		W	2700
Rated Current		A	12.4
Air Flow Volume(SH/H/M/L/SL)		m^3/h	900/800/700/550/-
Dehumidifying Volume		L/h	2
EER		W/W	3.25
COP		W/W	3.62
SEER		W/W	/
HSPF		W/W	/
Application Area		m^2	27-42
Indoor Unit	Indoor Unit Model		1.GWH24MD-K3DNB8E/I 2.GWH24MD-K3DNE3E/I 3.GWH24MD-K3DNC9E/I
	Indoor Unit Product Code		1.CB174N02400 CB174N02401 2.CB404N01601 3.CB145N00900
	Fan Type		Cross-flow
	Fan Diameter Length(DXL)	mm	Φ98X765
	Cooling Speed(SH/H/M/L/SL)	r/min	1250/1100/950/800/-
	Heating Speed(SH/H/M/L/SL)	r/min	1300/1100/1000/850/-
	Fan Motor Power Output	W	35
	Fan Motor RLA	A	0.3
	Fan Motor Capacitor	μF	1.5
	Evaporator Form		Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7
	Evaporator Row-fin Gap	mm	2-1.5
	Evaporator Coil Length (LXDXW)	mm	765X25.4X342.9
	Swing Motor Model		MP35XX
	Swing Motor Power Output	W	3
	Fuse Current	A	3.15
	Sound Pressure Level (SH/H/M/L/SL)	dB(A)	51/47/42/39/-
	Sound Power Level (SH/H/M/L/SL)	dB(A)	61/57/52/49/-
	Dimension (WXHXD)	mm	1007X315X219
	Dimension of Carton Box (LXWXH)	mm	1073X395X313
	Dimension of Package (LXWXH)	mm	1076X398X328
	Net Weight	kg	14
	Gross Weight	kg	19

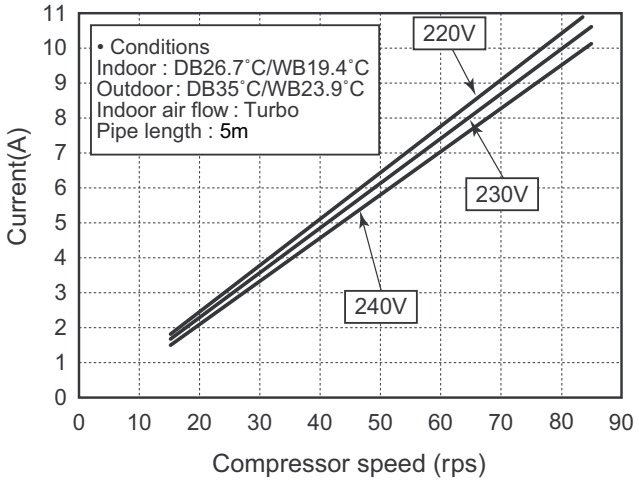
Outdoor Unit	Outdoor Unit Model		GWH24MD-K3DNA7E/O
	Outdoor Unit Product Code		CB172W02600
	Compressor Manufacturer		MITSUBISHI ELECTRIC (GUANGZHOU)COMP
	Compressor Model		SNB130FGYMC
	Compressor Oil		PV50S
	Compressor Type		Rotary
	Compressor LRA.	A	27
	Compressor RLA	A	8.4
	Compressor Power Input	W	1245
	Compressor Overload Protector		1NT11L-6578
	Throttling Method		Capillary
	Set Temperature Range	°C	16 ～ 30
	Cooling Operation Ambient Temperature Range	°C	18 ～ 45
	Heating Operation Ambient Temperature Range	°C	-7 ～ 24
	Condenser Form		Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7
	Condenser Rows-fin Gap	mm	2-1.4
	Condenser Coil Length (LXDXW)	mm	837X38.1X660
	Fan Motor Speed	rpm	690
	Fan Motor Power Output	W	60
	Fan Motor RLA	A	0.62
	Fan Motor Capacitor	μF	3.5
	Outdoor Unit Air Flow Volume	m^3/h	3200
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ520
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IP24
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	0.9
	Sound Pressure Level (H/M/L)	dB(A)	54/-/-
	Sound Power Level (H/M/L)	dB(A)	64/-/-
	Dimension (WXHXD)	mm	955X700X396
	Dimension of Carton Box (LXWXH)	mm	1026X455X735
	Dimension of Package (LXWXH)	mm	1029X458X750
	Net Weight	kg	48
	Gross Weight	kg	53
	Refrigerant		R410A
	Refrigerant Charge	kg	1.35
Connection Pipe	Connection Pipe Length	m	5
	Connection Pipe Gas Additional Charge	g/m	20
	Outer Diameter Liquid Pipe	mm	Φ6
	Outer Diameter Gas Pipe	mm	Φ12
	Max Distance Height	m	10
	Max Distance Length	m	25

The above data is subject to change without notice. Please refer to the nameplate of the unit.

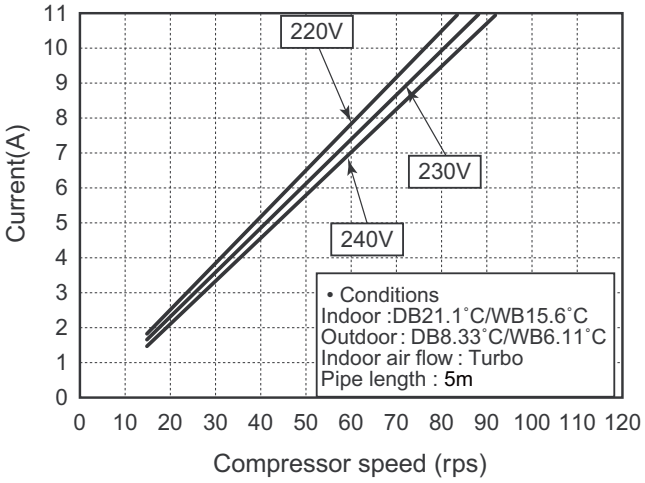
2.2 Operation Characteristic Curve

18K

Cooling

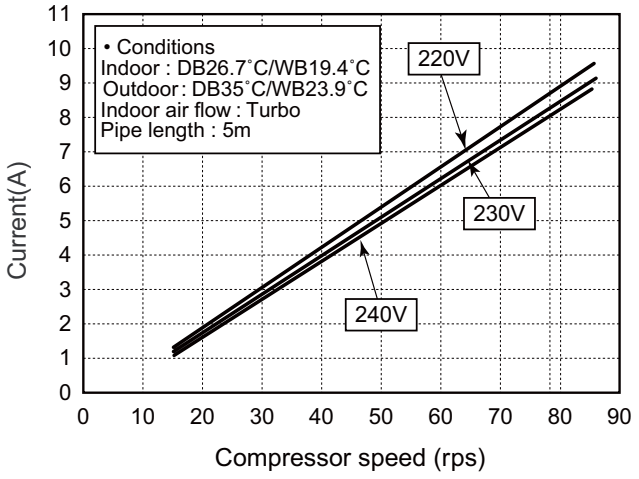


Heating

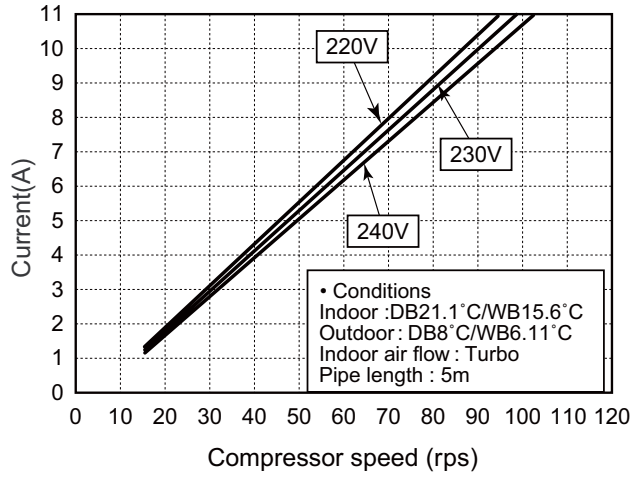


24K

Cooling



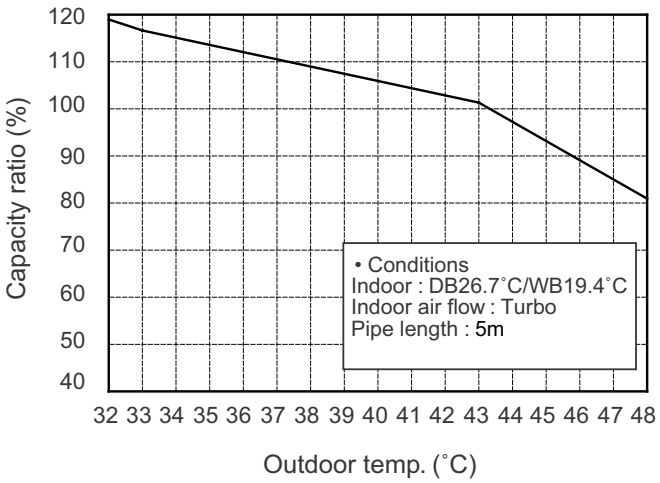
Heating



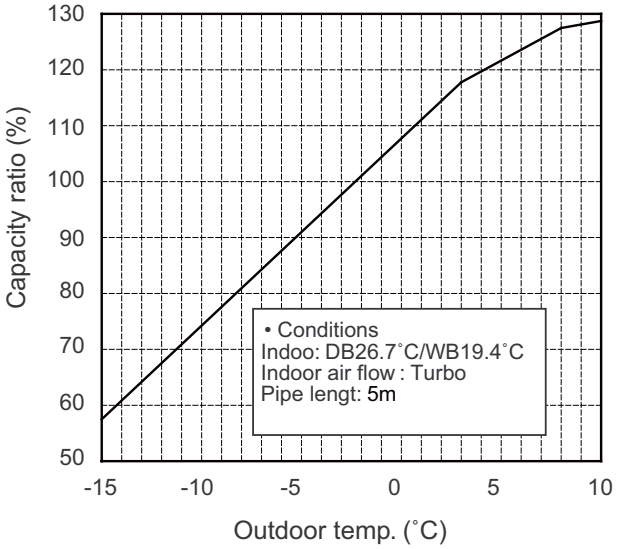
2.3 Capacity Variation Ratio According to Temperature

18K

Cooling

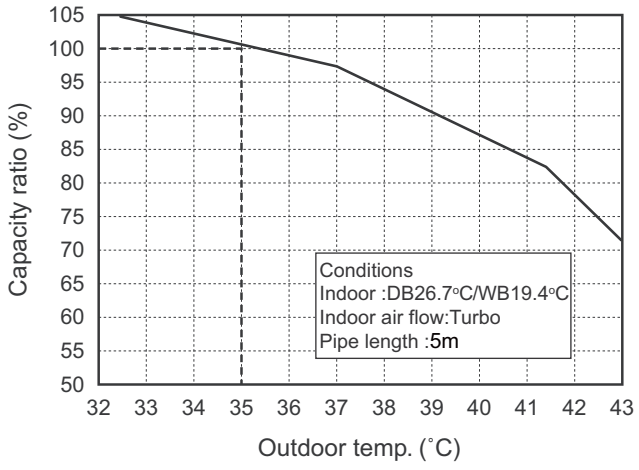


Heating

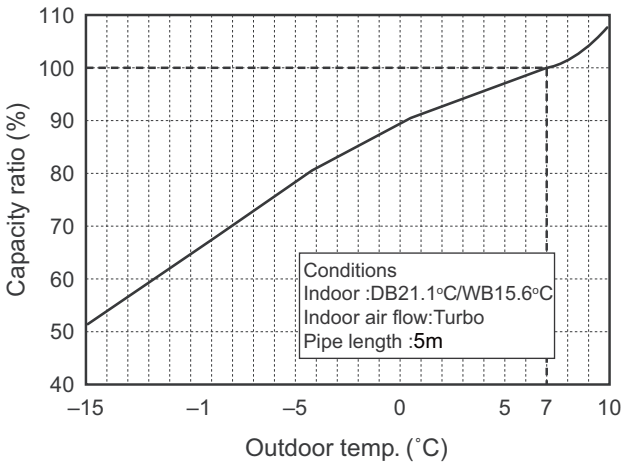


24K

Cooling



Heating



2.4 Operation Data

Cooling

Temperature condition (°C)		Model name	Standard pressure	Heat exchanger pipe temp.		Indoor fan mode	Outdoor fan mode	Compressor frequency (Hz)
Indoor	Outdoor		P (MPa)	T1 (°C)	T2 (°C)			
27/19	35/24	18K	0.9 to 1.1	12 to 14	80 to 40	Super High	High	71
		24K	0.8 to 1.0	10 to 12	80 to 40	Super High	High	80

Heating

Temperature condition (°C)		Model name	Standard pressure	Heat exchanger pipe temp.		Indoor fan mode	Outdoor fan mode	Compressor frequency (Hz)
Indoor	Outdoor		P (MPa)	T1 (°C)	T2 (°C)			
20/-	7/6	18K	2.2 to 2.4	70 to 40	1 to 5	Super High	High	74
		24K	2.5 to 2.7	70 to 40	1 to 5	Super High	High	90

NOTES :

(1) Measure surface temperature of heat exchanger pipe around center of heat exchanger path U bent. (Thermistor the mometer)

(2) Connecting piping condition : 5m.

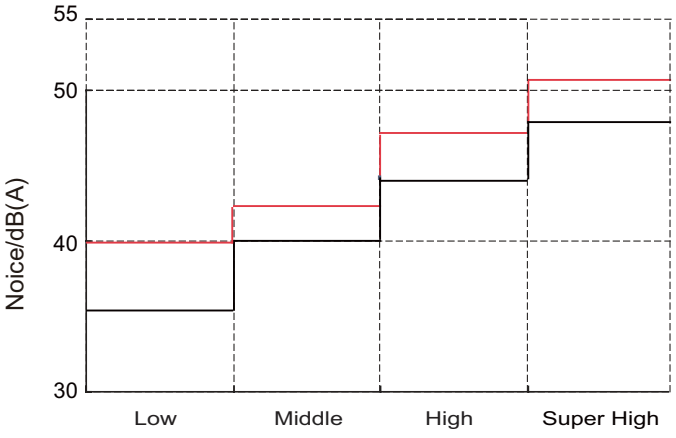
T1: Inlet and outlet pipe temperature of evaporator

T2: Inlet and outlet pipe temperature of condenser

P: Pressure of air pipe connecting indoor and outdoor units

2.5 Noise Criteria Curve Tables for Both Models

Indoor side noise when blowing

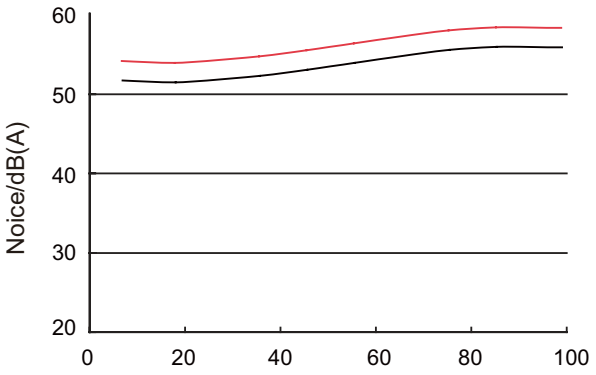


Indoor fan motor rotating speed

18K

24K

Outdoor side noise



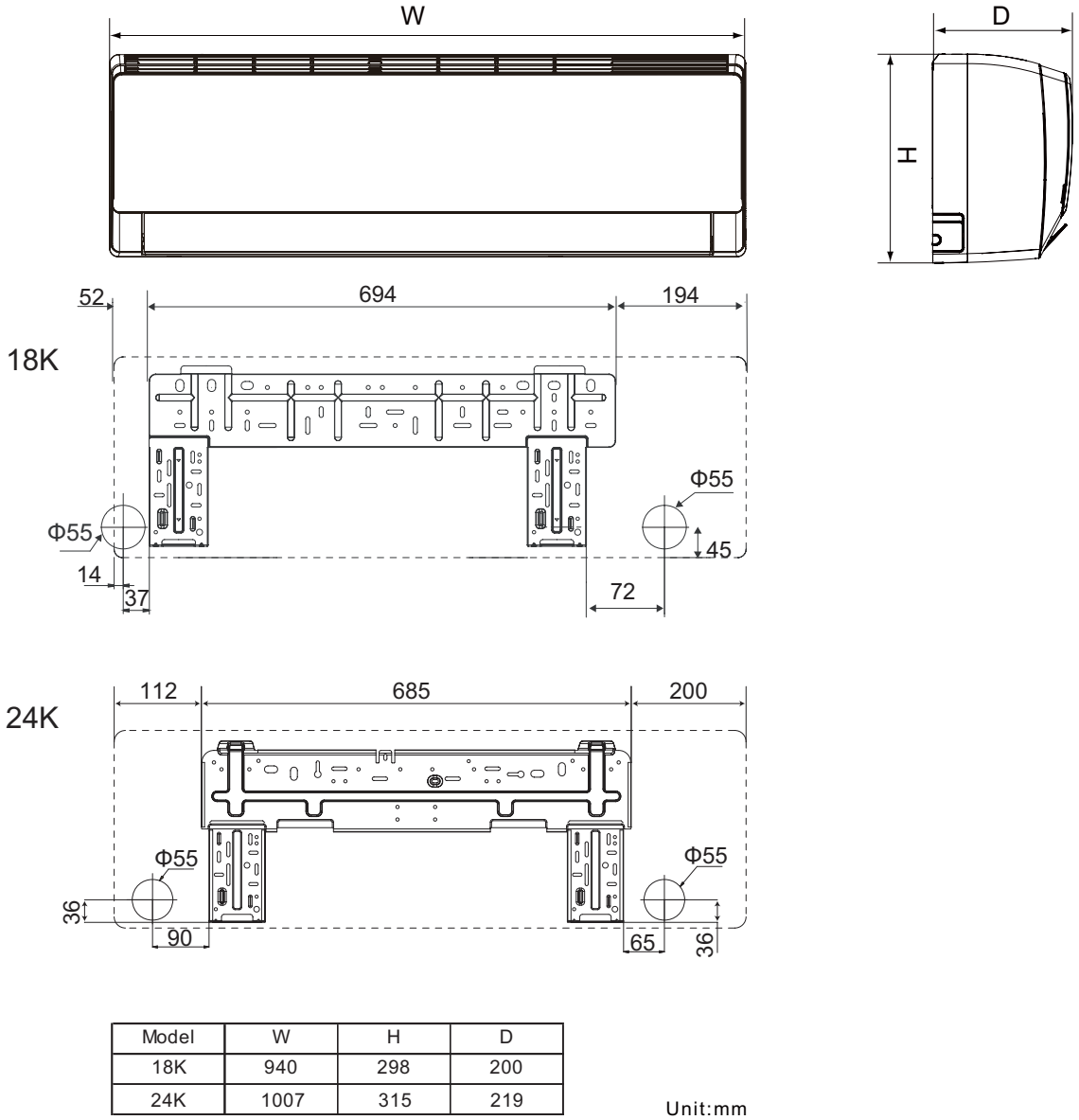
Compressor frequency/Hz

18K

24K

3. Construction Views

3.1 Indoor Unit

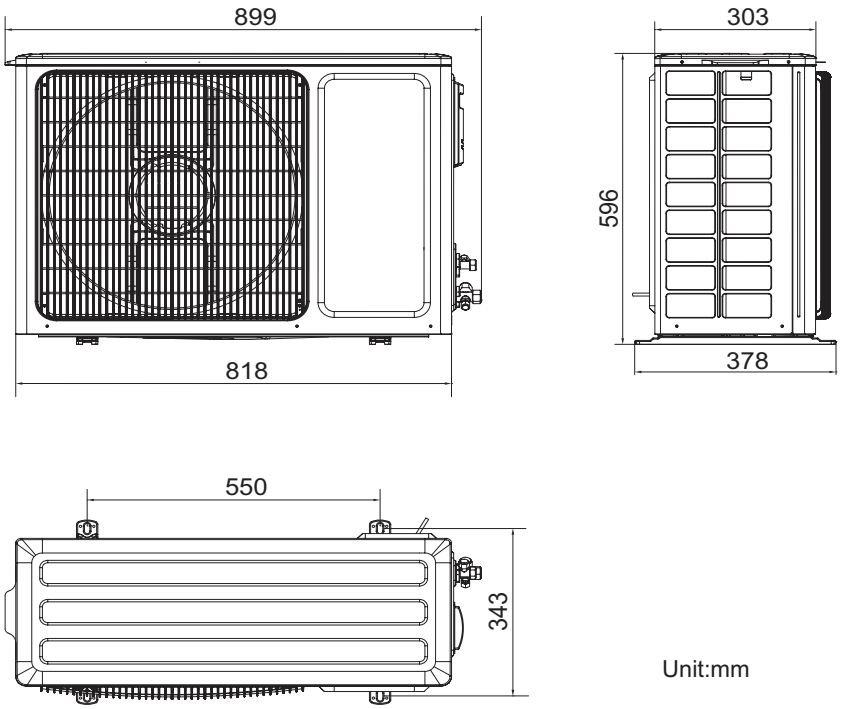


Model	W	H	D
18K	940	298	200
24K	1007	315	219

Unit:mm

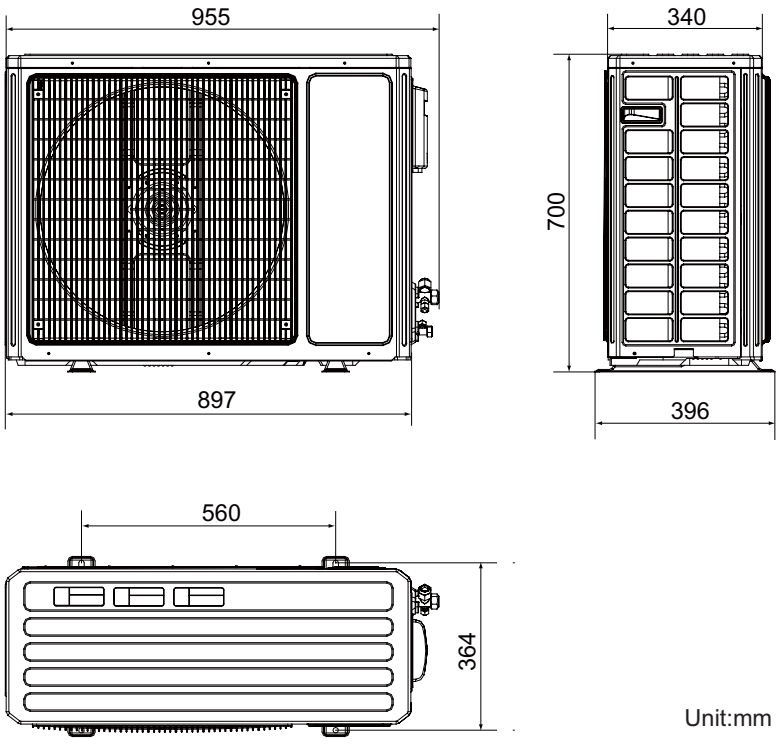
3.2 Outdoor Unit

(1)GWH18MC-K3DNA7E/O GWH18MC-K3DNA7F/O



Unit:mm

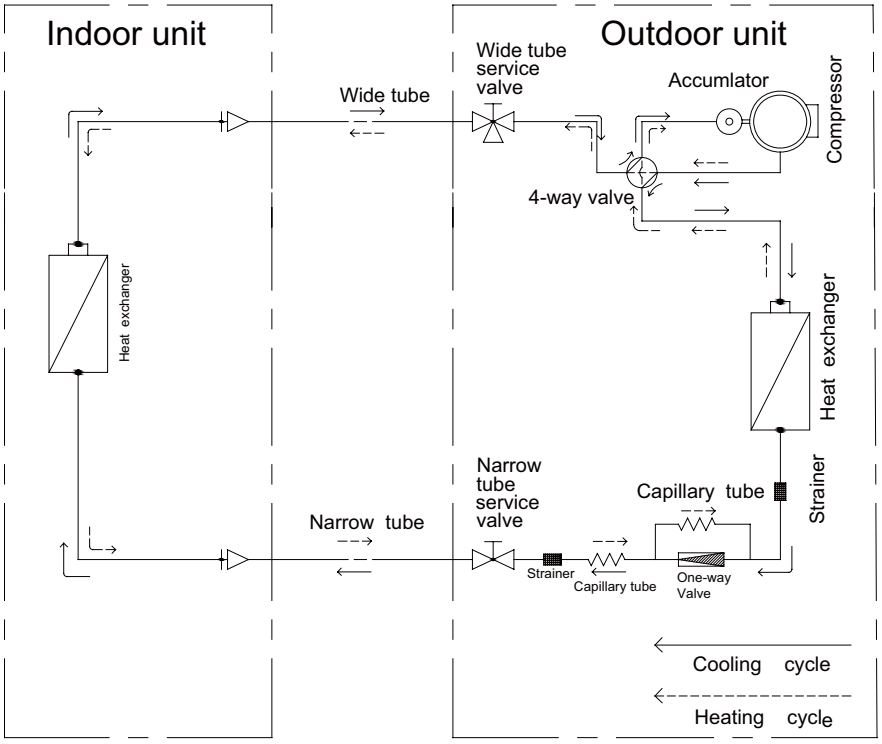
(2)GWH24MD-K3DNA7E/O



Unit:mm

4. Refrigerant System Diagram

Cooling & Heating Models



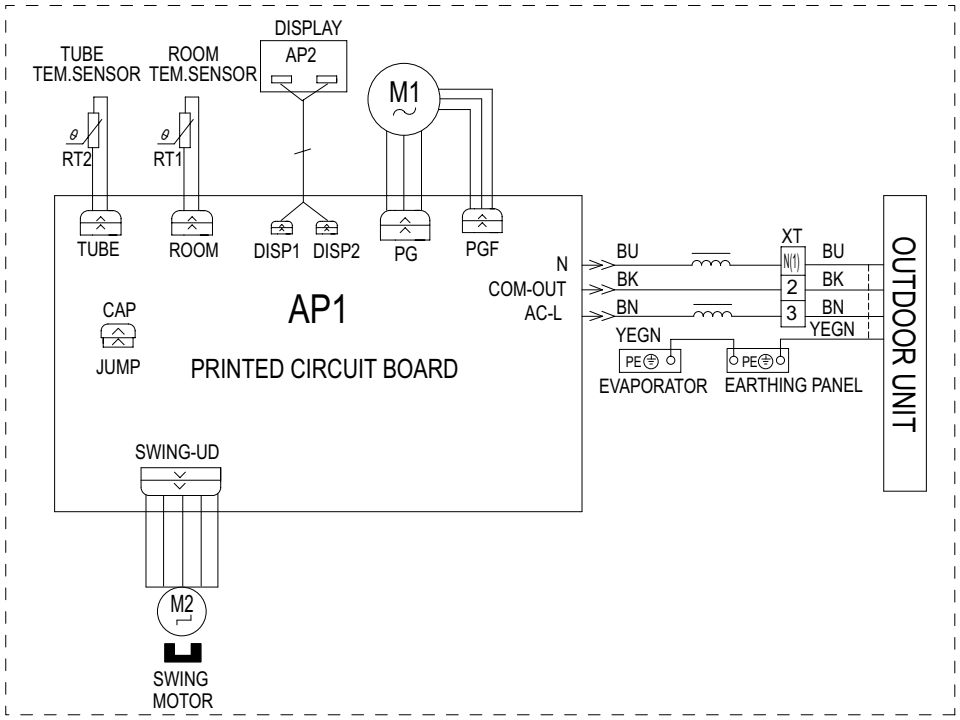
Refrigerant pipe diameter
Liquid :1/4" (6 mm)
Gas : 1/2" (12mm)

5. Schematic Diagram

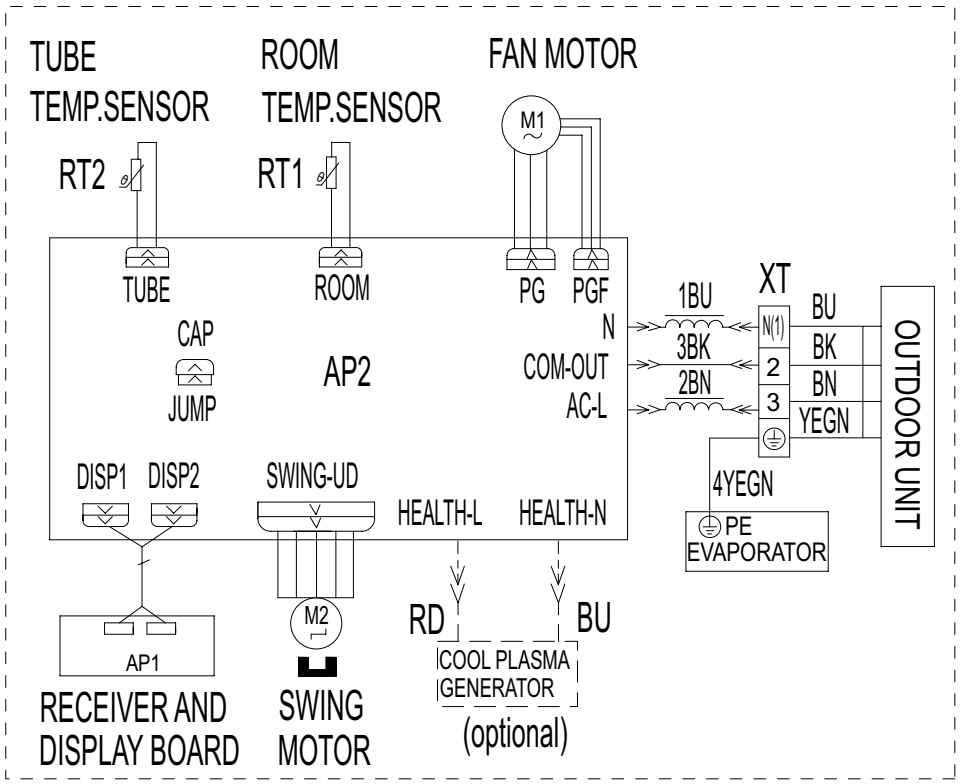
5.2 Electrical Wiring

● Indoor unit

(1)Applicable for all models except GWH18MC-K3DNA7F/I



(2).GWH18MC-K3DNA7F/I

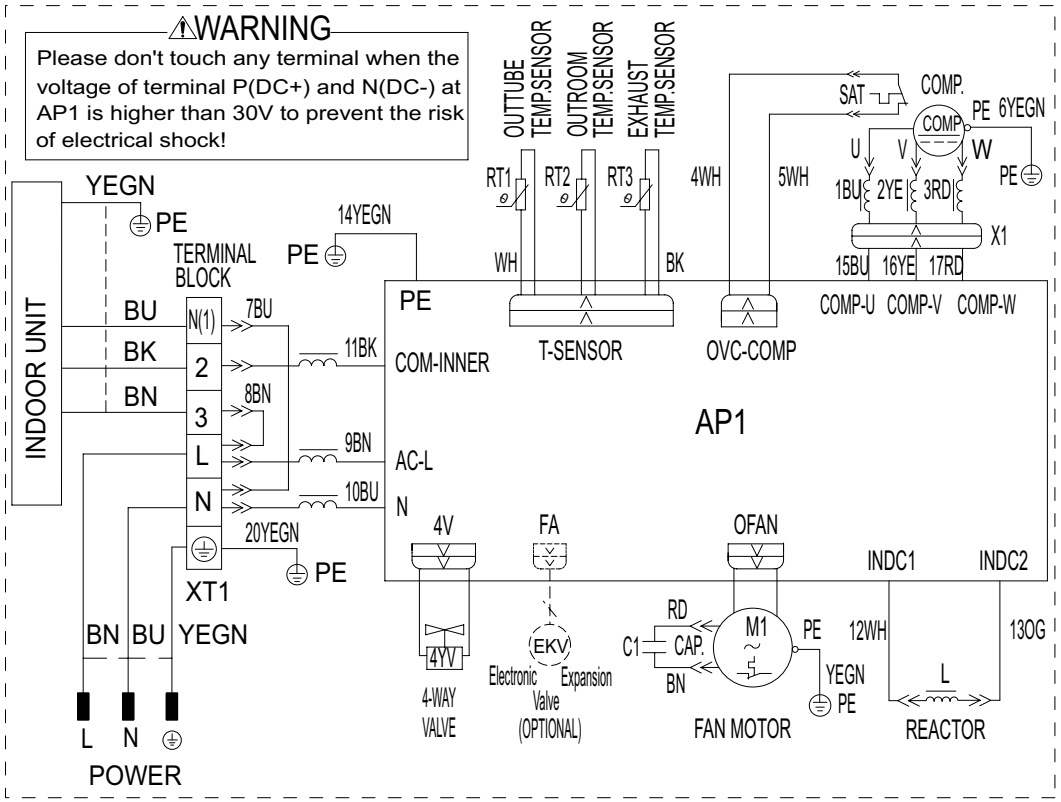


Meaning of marks

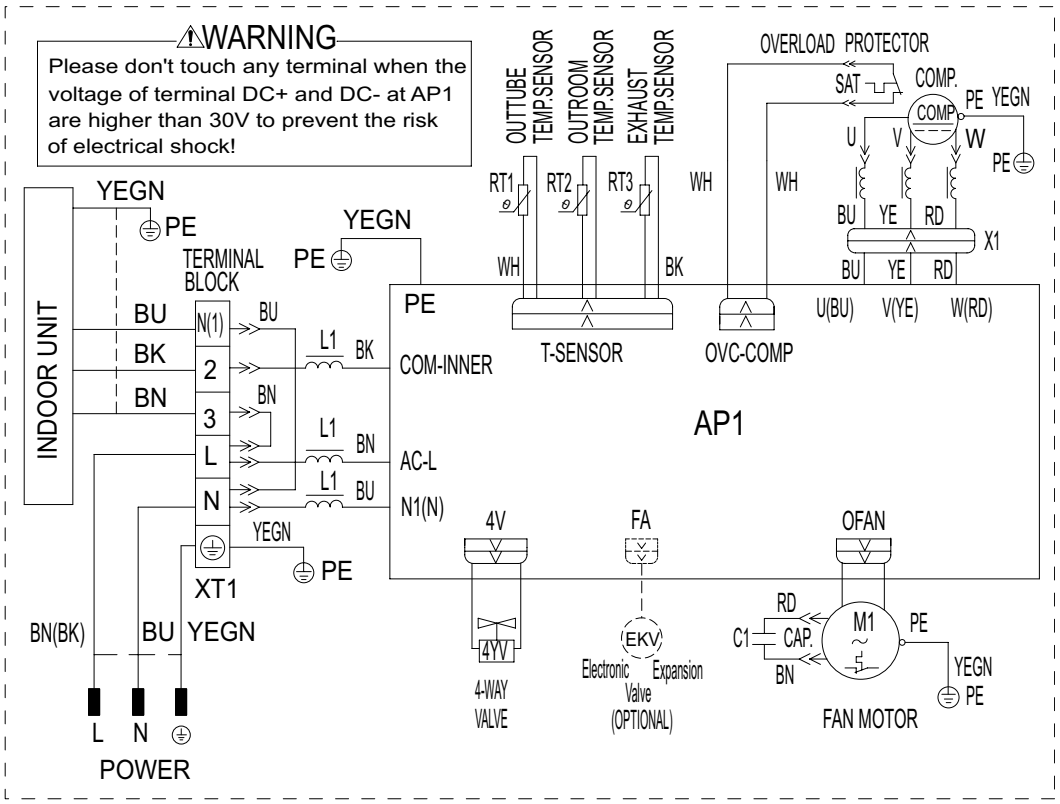
Symbol	Color symbol
OG	ORANGE
WH	WHITE
YE	YELLOW
RD	RED
YEGN	YELLOW GREEN
BN	BROWN
BU	BLUE
BK	BLACK
VT	VIOLET
Symbol	Parts name
C1	CBB61
C2	CBB65
SAT	OVERLOAD
COMP	COMPRESSOR
⏚	PROTECTIVE EARTH

● outdoor unit

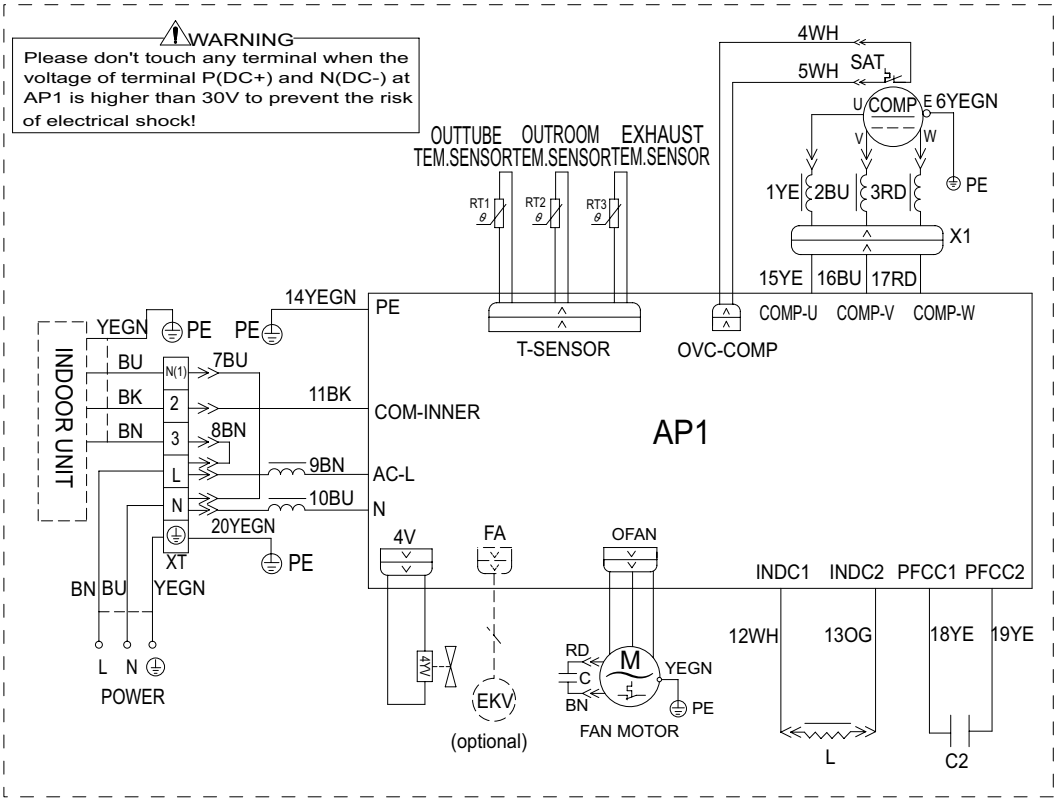
(1)GWH18MC-K3DNA7E/O



(2)GWH18MC-K3DNA7F/O



(3)GWH24MD-K3DNA7E/O



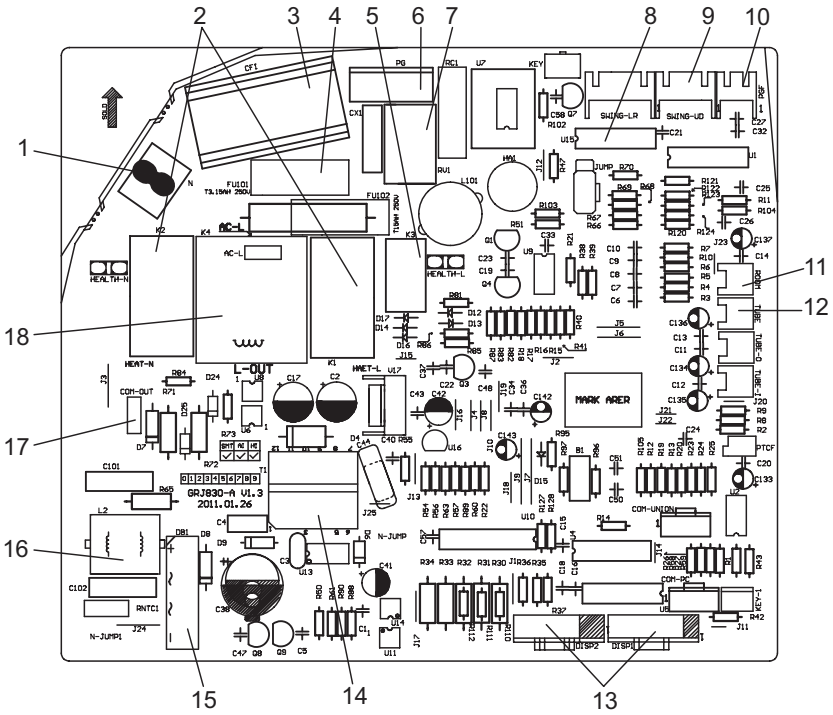
These circuit diagrams are subject to change without notice, please refer to the one supplied with the unit.

5.3 Printed Circuit Board

● Indoor unit

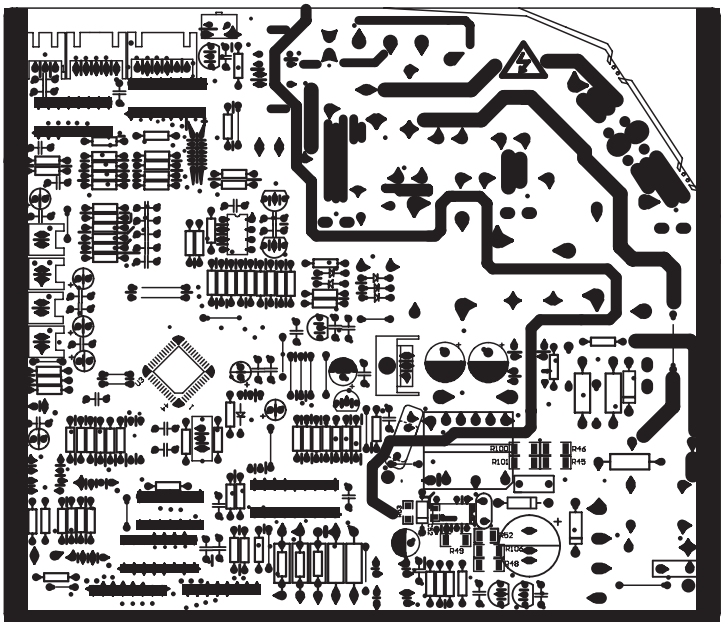
(1)Applicable for all models except GWH18MC-K3DNA7F/I

● TOP VIEW



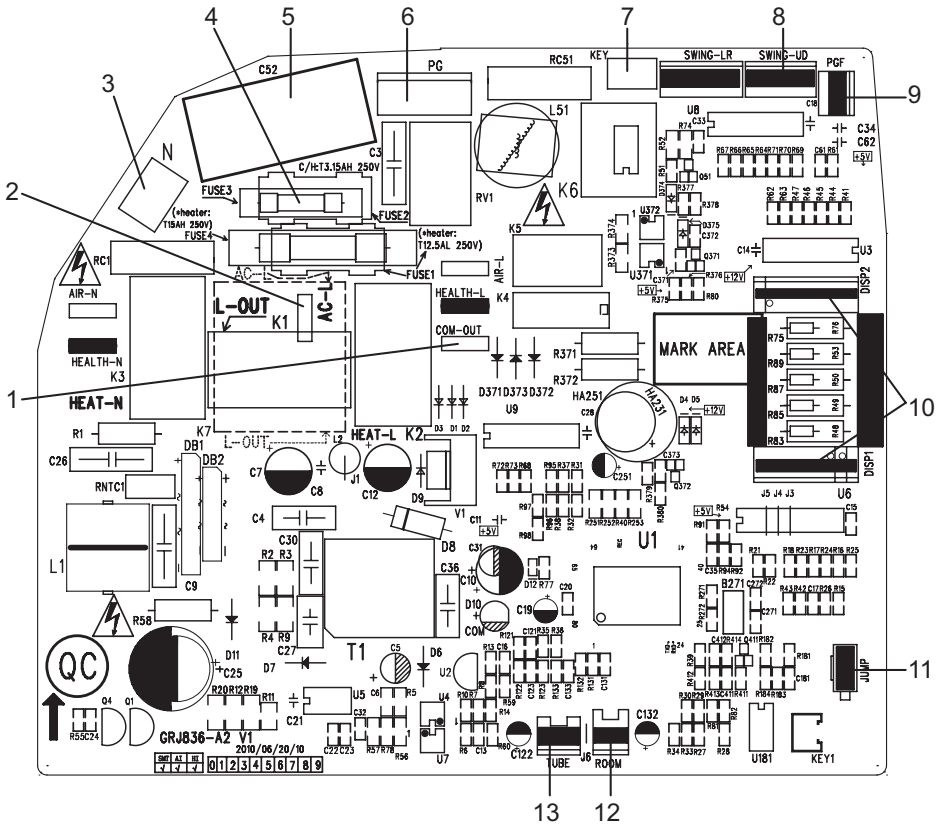
1	Copper pin terminal of neutral wire
2	Auxiliary heating relay K1, K2
3	Fan capacitor
4	Protective tube
5	Health relay K3
6	PG motor terminal
7	Piezoresistor
8	Jumper cap
9	Up&down swing terminal
10	PG feedback terminal
11	Terminal of ambient temperature sensor
12	Terminal of tube temperature sensor
13	Connect display board DISP1,DISP2 terminals
14	High-frequency transformer T1
15	Rectifier DB1
16	Strainer SF2022A-05220
17	Connect copper terminal of communication line for indoor fan
18	Supply power for control relay K4 of outdoor fan

● BOTTOM VIEW



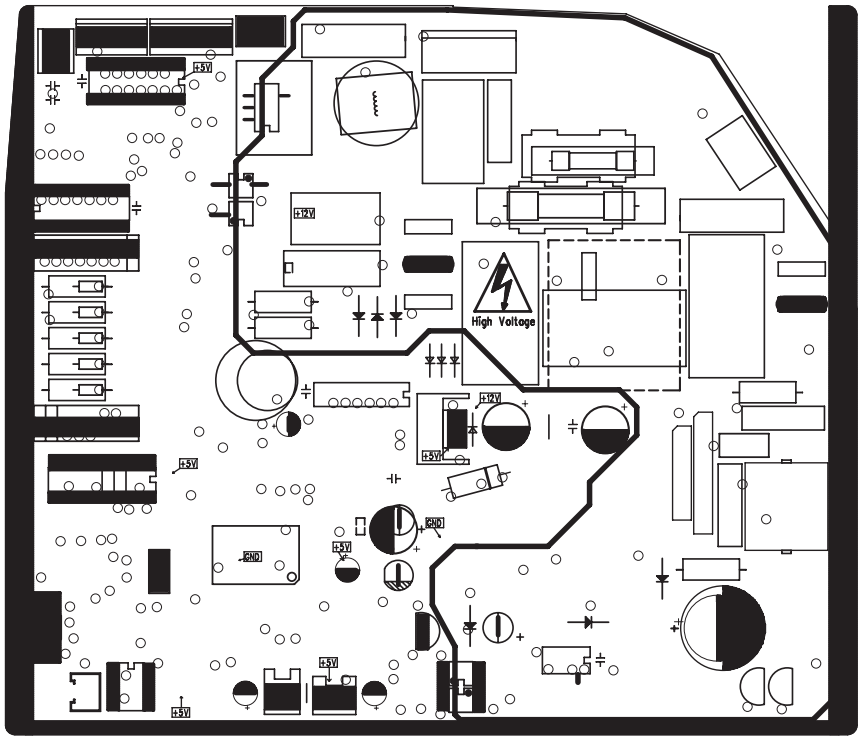
(2).GWH18MC-K3DNA7F/I

● TOP VIEW



1	Communication terminal of IDU and ODU
2	Live wire terminal of power supply
3	Neutral wire terminal of power supply
4	Fuse
5	Fan capacitor
6	Connection terminal of PG motor
7	Connection terminal of PG motor
8	Connection terminal of up and down swing
9	Feedback connection terminal of PG motor
10	Connection terminal of display board
11	Connection terminal of display board
12	Indoor ambient temp. sensor
13	Indoor ambient temp. sensor

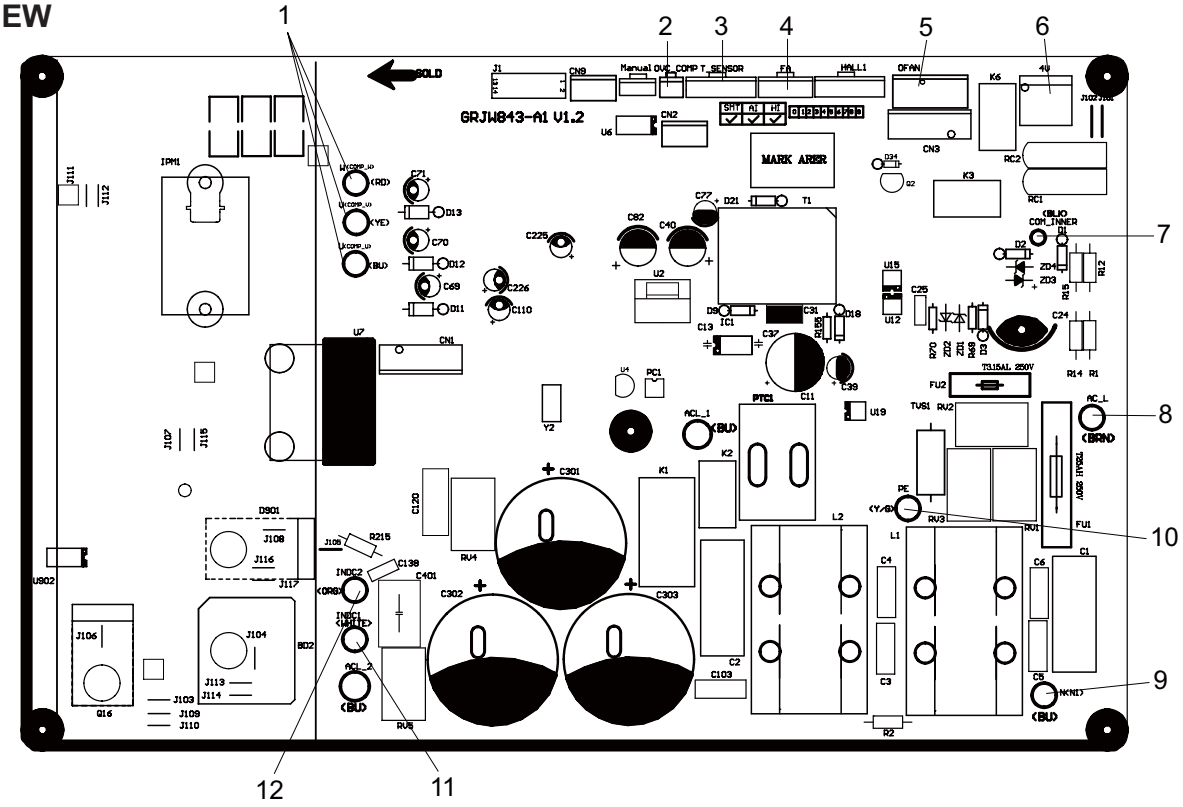
● BOTTOM VIEW



● Outdoor unit

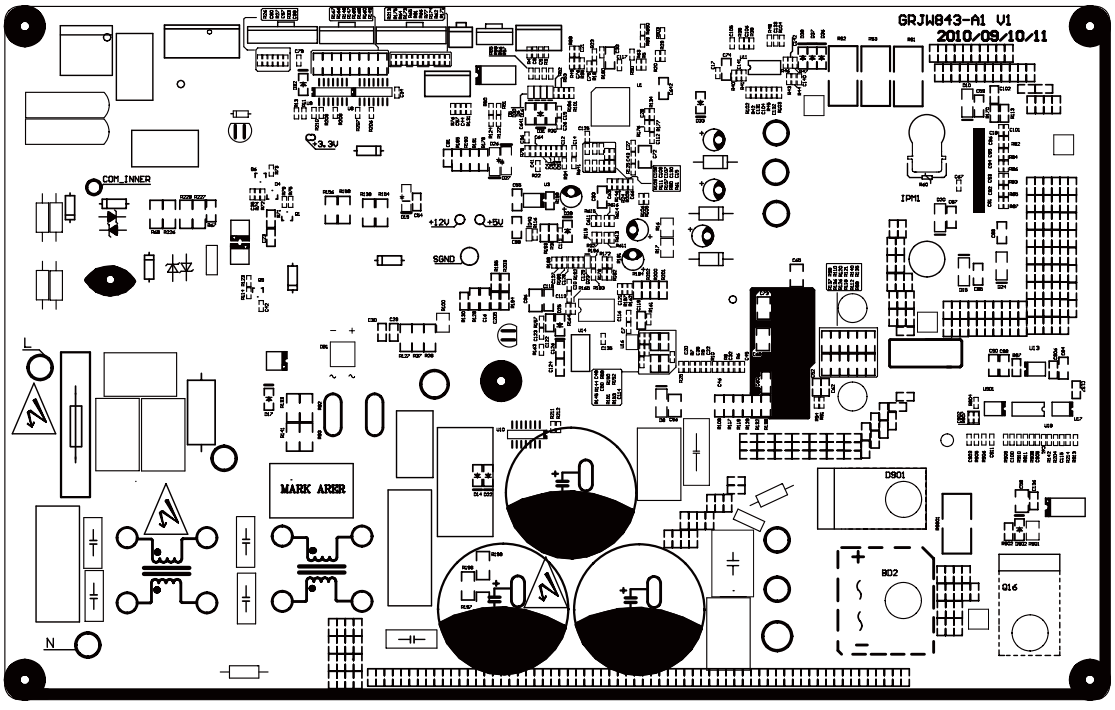
(1)GWH18MC-K3DNA7E/O

● TOP VIEW



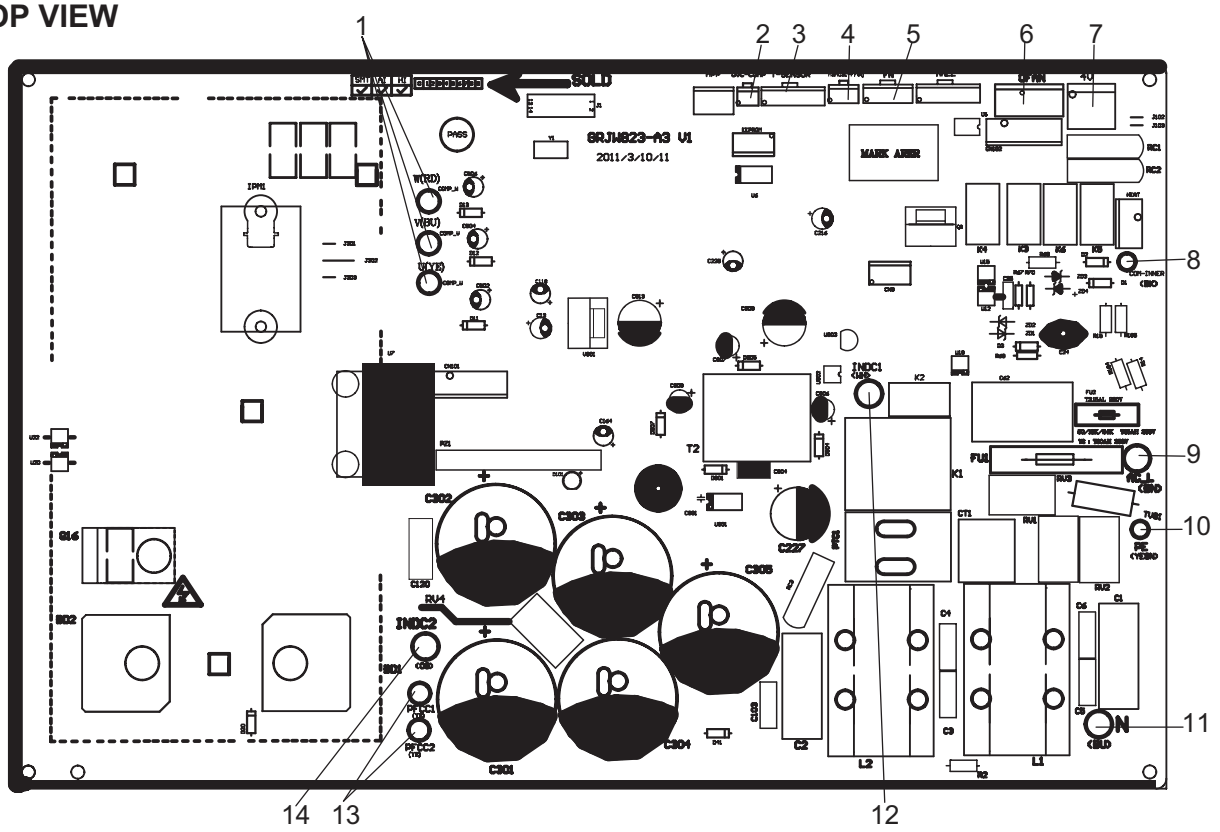
1	Compressor interface	2	Compressor overloadprotector	3	Temperature sensor	4	Electric expansion valve
5	Outdoor fan	6	4-way valve	7	Communication interface with indoor unit	8	Live wire
9	Neutral wire	10	Earthing wire	11	Reactor interface	12	Reactor interface 2

● BOTTOM VIEW



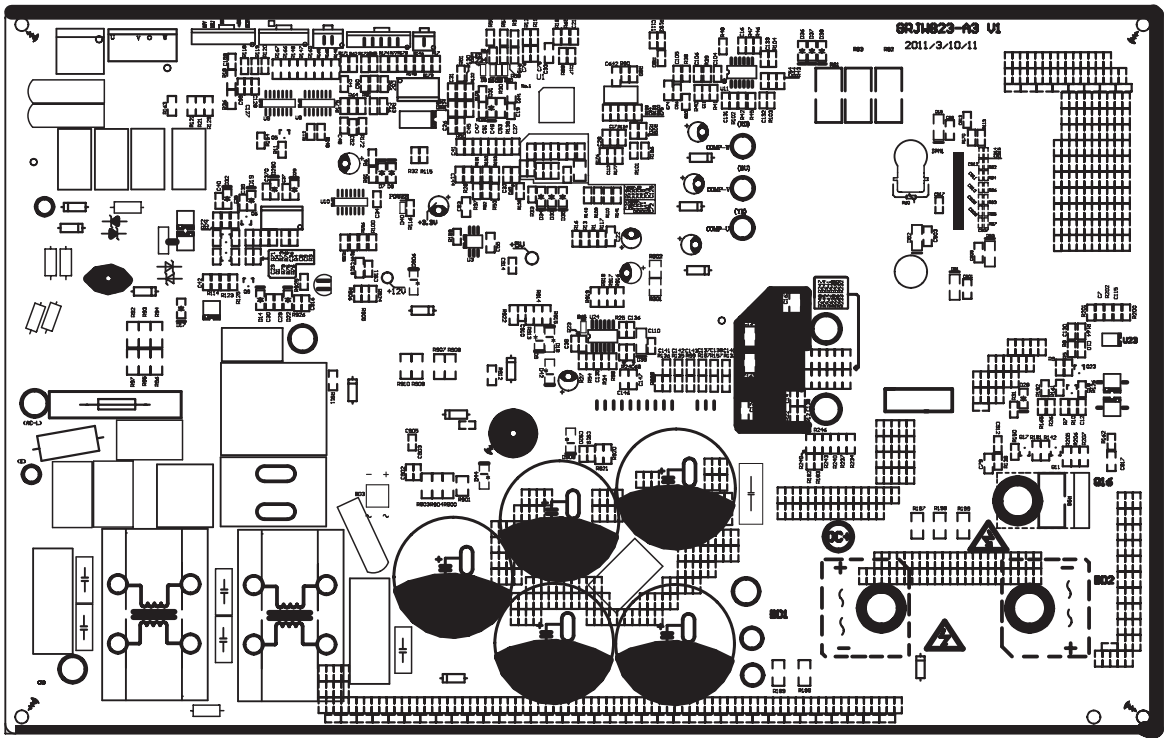
(2)GWH24MD-K3DNA7E/O

● TOP VIEW



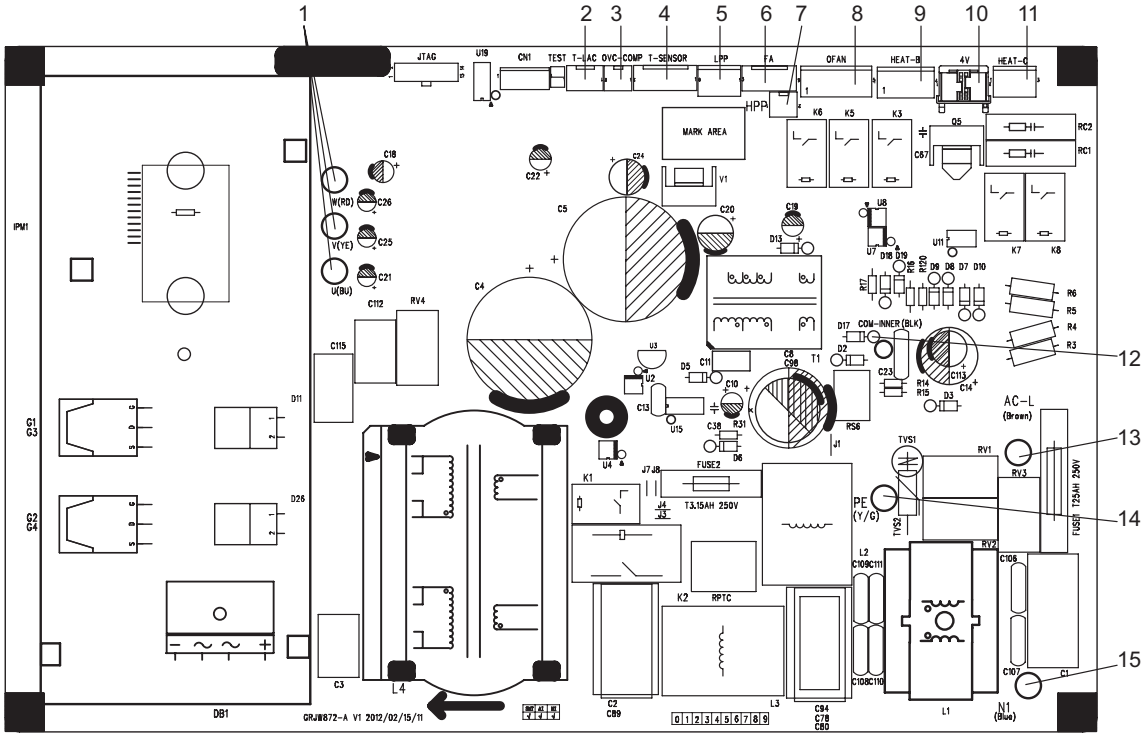
1	Compressor interface	2	Compressor overload protector	3	Temperature sensor	4	Electric expansion valve
5	Fan HALL interface	6	Outdoor fan	7	4-way valve	8	Communication interface with indoor unit
9	Live wire	10	Earthing wire	11	Neutral wire	12	Reactor interface 1
13	PFC capacitor interface 1	14	Reactor interface 2				

● BOTTOM VIEW



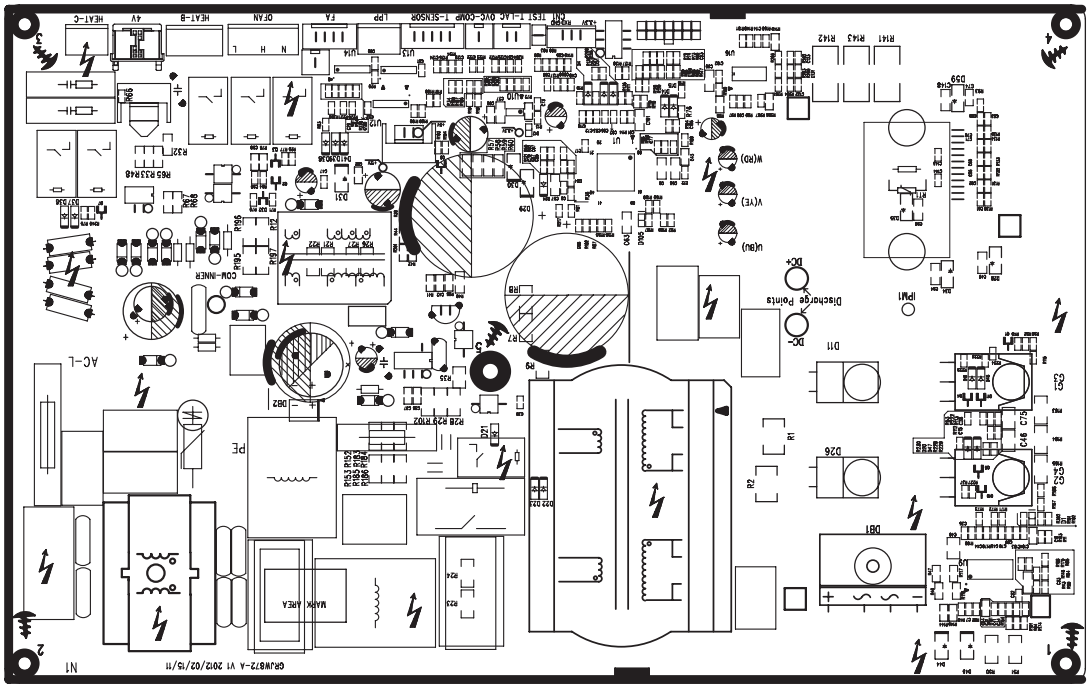
(3)GWH18MC-K3DNA7F/O

● TOP VIEW



1	Compressor wire terminal	4	Temp. sensor terminal of ODU	7	High voltage protection terminal	10	Four-way valve terminal	13	Power supply live wire
2	Temp. sensor terminal of middle pipe	5	Low voltage protection terminal	8	Outdoor fan terminal	11	Electric heater terminal of compressor	14	Earth wire
3	Overload protection terminal of compressor	6	EXV terminal	9	Electric heater terminal of chassis	12	Communication cable of IDU	15	Neutral wire of power supply

● BOTTOM VIEW



6. Function and Control

6.1 Remote Control Operations



1 ON/OFF

Press it to start or stop operation.

2 MODE

Press it to select operation mode (AUTO/COOL/DRY/FAN/HEAT).

3 +

Press it to increase temperature setting.

4 -

Press it to decrease temperature setting.

5 FAN

Press it to set fan speed.

6

Press it to set swing angle.

7 TIMER ON

Press it to set auto-on timer.

8 TIMER OFF

Press it to set auto-off timer.

9 CLOCK

Press it to set clock.

10 X-FAN (X-FAN is the alternative expression of BLOW for the purpose of understanding.)

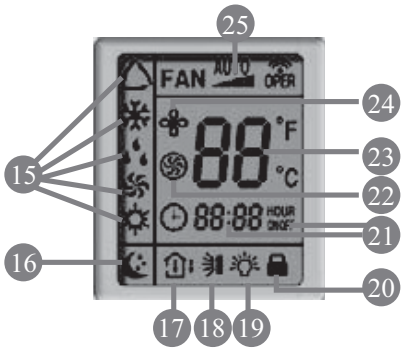
11 TEMP

12 TURBO

13 SLEEP

14 LIGHT

Press it to turn on/off the light.



15 MODE icon:

If MODE button is pressed, current operation mode icon (AUTO), (COOL), (DRY), (FAN) or (HEAT is only for heat pump models) will show.

16 SLEEP icon :

is displayed by pressing the SLEEP button. Press this button again to clear the display.

17 TEMP icon:

Pressing TEMP button, (set temperature), (indoor ambient temperature), (outdoor ambient temperature) and blank is displayed circularly.

18 Up & down swing icon:

is displayed when pressing the up & down swing button. Press this button again to clear the display.

19 LIGHT icon:

is displayed by pressing the LIGHT button.Press LIGHT button again to clear the display.

20 LOCK icon:

is displayed by pressing "+" and "-" buttons simultaneously.Press them again to clear the display.

21 SET TIME display:

After pressing TIMER button, ON or OFF will blink.This area will show the set time.

22 TURBO icon:

is displayed when pressing theTURBO button.Press this button again to clear the display.

23 DIGITAL display:

This area will show the set temperature. In SAVE mode,"SE" will be displayed. During defrosting operation, "H1" will be displayed.

24 X-FAN icon:

is displayed when pressing the X-FAN button. Press this button again to clear the display.

25 FAN SPEED display:

Press FAN button to select the desired fan speed setting(AUTO Low-Med-High).Your selection will be displayed in the LCD windows, except the AUTO fan speed.

Remote Controller Description

1 ON/OFF:

Press this button to turn on the unit. Press this button again to turn off the unit.

2 MODE:

Each time you press this button,a mode is selected in a sequence that goes from AUTO, COOL,DRY, FAN, and HEAT *, as the following:

AUTO ▶COOL ▶DRY▶FAN ▶ HEAT*

*Note: Only for models with heating function.

After energization, AUTO mode is defaulted. In AUTO mode, the set temperature will not be displayed on the LCD, and the unit will automatically select the suitable operation mode in accordance with the room temperature to make indoor room comfortable.

3 + :

Press this button to increase set temperature. Hold it down for above 2 seconds to rapidly increase set temperature. In AUTO mode, set temperature is not adjustable.

4 -:

Press this button to decrease set temperature. Hold it down for above . 2 seconds to rapidly decrease set temperature. In AUTO mode, set temperature is not adjustable.

5 FAN :

This button is used for setting fan speed in the sequence that goes from AUTO, , , to then back to Auto.

AUTO → → → →

Low speed Medium speed High speed

6

Press this button to set up & down swing angle, which circularly changes as below:

OFF

This remote controller is universal. If any command , or is sent out, the unit will carry out the command as

indicates the guide louver swings as:

7 TIMER ON:

Press this button to initiate the auto-ON timer. To cancel the auto-timer program, simply press this button again. After pressing this button, ㊀ disappears and "ON" blinks . 0 0:00 is displayed for ON time setting. Within 5 seconds, press + or - button to adjust the time value. Every press of either button changes the time setting by 1 minute. Holding down either button rapidly changes the time setting by 1 minute and then 10 minutes. Within 5 seconds after setting, press TIMER ON button to confirm.

8 TIMER OFF:

Press this button to initiate the auto-off timer. To cancel the auto-timer program, simply press the button again.TIMER OFF setting is the same as TIMER ON.

9 CLOCK :

Pressing CLOCK button, ㊀ blinks. Within 5 seconds, pressing + or - button adjusts the present time. Holding down either button above 2 seconds increases or decreases the time by 1 minute every 0.5 second and then by 10 minutes every 0.5 second. During blinking after setting, press CLOCK button again to confirm the setting, and then ㊀ will be constantly displayed.

10 X-FAN:

Pressing X -FAN button in COOL or DRY mode,the icon ❀ is displayed and the indoor fan will continue operation for 10 minutes in order to dry the indoor unit even though you have turned off the unit.

After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.

11 TEMP:

Press this button, could select displaying the indoor setting temperature or indoor ambient temperature.When the indoor unit firstly power on it will display the setting temperature, if the temperature's displaying status is changed from other status to" ⌂ ",displays the ambient temperature, 5s later or within 5s, it receives other remote control signal that will return to display the setting temperature. if the users haven't set up the temperature displaying status,that will display the setting temperature.

12 TURBO:

Press this button to activate / deactivate the Turbo function which enables the unit to reach the preset temperature in the shortest time. In COOL mode, the unit will blow strong cooling air at super high fan speed. In HEAT mode, the unit will blow strong heating air at super high fan speed.

13 SLEEP:

Press this button to go into the SLEEP operation mode. Press it again to cancel this function. This function is available in COOL, HEAT (Only for models with heating function) or DRY mode to maintain the most comfortable temperature for you.

14 LIGHT:

Press LIGHT button to turn on the display's light and press this button again to turn off the display's light. If the light is turned on , ☼ is displayed. If the light is tunrned off, ☼ disappears.

15 Combination of "+" and "-" buttons: About lock

Press "+ " and "-" buttons simultaneously to lock or unlock the keypad. If the remote controller is locked, 🔒 is displayed. In this case, pressing any button, 🔒 blinks three times.

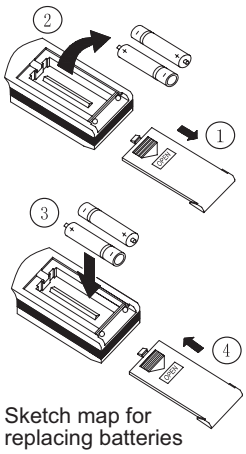
16 Combination of "MODE" and "-" buttons:About switch between Fahrenheit and Centigrade At unit OFF, press "MODE" and "- " buttons simultaneously to switch between ℃ and ℉.

Replacement of Batteries

1.Remove the battery cover plate from the rear of the remote controller.
(As shown in the figure)
2.Take out the old batteries.
3.Insert two new AAA1.5V dry batteries, and pay attention to the polarity.
4. Reinstall the battery cover plate.

★Notes:

●When replacing the batteries, do not use old or different types of batteries. Otherwise, it may cause malfunction.
●If the remote controller will not be used for a long time, please remove batteries to prevent batteries from leaking.
●The operation should be performed in its receiving range.
●It should be kept 1m away from the TV set or stereo sound sets.
●If the remote controller does not operate normally, please take the batteries out and reinsert them after 30 seconds. If it still can't operate properly, replace the batteries.



Sketch map for replacing batteries

6.2 Description of Each Control Operation

6.2.1 Functions of Indoor Unit

1.Basic function of system

(1)Cooling mode

1.Under this mode, fan motor, swing will work under setting status, the temp. range is 16-30°C(61-86 Fahrenheit scale)

2.Outdoor unit malfunctionor unit stop running, indoor unit will keep original running status, malfunction displayed.

3.When 0(Tset-Tamb.), if indoor fan motor is high speed,that the fanmotorist runninginmiddle speed, the middle speed or low speed will be maintained;(this condition should be executed when compressor start up);the super high speed will not rotate;When(Tamb-Tset)≥1°C, the fan will return to the setting fan speed.

(2)Dehumidifying mode

1.Under this mode, fan motor will run atlow speed,swing will work at setting status,setting temp. range is16-30(61-86 Fahrenheit scale)

2.Outdoor unit malfunctionor protection, unit will stop, indoor unit will keep original running status,malfunction displayed.

(3)Fan mode

Under this mode,indoor fan motor could be setted at high speed,middle speed,low or auto speed,compressor,outdoor unit and four-way valve will stop to run.Under this mode,temp. range shouldbe16-30°C(61-86 Fahrenheit scale)

(4)Heating mode

1.Under this mode, temp. range should be 16-30°C(61-86 Fahrenheit scale)

2.Working condition and procedure of heating mode:When unit turn on and enter into Heating mode, indoor unit enter into anti-cool wind mode, when unitis stop running, and indoor fan motor turns on, blowing heat will act.

3.Protection function,under heating mode, compressor will stop to run due to malfunction happened, indoor fan motor will blow surplus heat.

4.Defrosting control:When receiving the defrosting signal from outdoo runit,displayer will display H1,10s later,indoor fan motor will stop to run.

5.Anti-coold wind function

6.Blow heat air function.If heating temp. meets the compressor stop running condition, compressors, outdoor fan motor will stop to run,the upper and lower guide louver will rotate to horizontal position L, indoor fan motor run at setting fan speed for 60s, then the indoor fan motor will stop to run.b.Dueto PG motor block running,the air guide board will keep the position when it stopping. (undereach mode),other malfunctionunit will stop to run, the upper and lower air guide louver will rotate to horizontal position L, indoor fanunit will run at setting fan speed and run for 60s, indoor fan unit will stopto run.

(5)Auto mode

1.When Tamb≤26°C, select the cooling mode, at this time, the setting temp. is 25°C.(77 Fahrenheit scale)

2.Cooling and heating units:Tamb≤22°C,will runat heating mode, at this time, the setting temp. is 20°C(68Fahrenheit scale).

3.Coolingonly unit:When Tamb≤22°C,it will run at Fan mode, the setting temp. is 25°C(77 Fahrenheit scale)

4.When 23°C≤Tindoor amb.≤25°C,firstly enter into auto mode and run at auto fan speed, other modes will run at auto mode, will keep the previous running mode. (When entering into Dehumidifying mode, it will run at auto fan speed)

2. Display state of indoor indicators

(1) State of indoor display board

1. When the unit is powered on, all patterns will be displayed and then only power indicator is on. When the unit is turned on with a remote controller, the operating indicator is on and operation mode which is set currently is displayed.
2. In defrosting mode, "H1" is displayed on "Double 8".
3. Set temperature is displayed on "Double 8".

◆ Display of operation patterns and mode patterns

When the unit is powered on, all patterns will be displayed and the standby operation indicator will become red. When the unit is turned on through a remote controller, the operation indicator is light. At the same time, operating mode patterns (mode indicators include cooling, heating and dehumidification modes) set currently are displayed, and dynamic display patterns of wind speed are displayed. If the light button is switched off, all display will be turned off.

◆ Temperature display control mode of separated air conditioner

1. When user sets the remote controller at set temperature display, currently set temperature will be displayed.
2. Only when remote signals are converted from other display states into indoor ambient temperature display state, the remote controller will display indoor ambient temperature for 5 seconds and then return to set temperature display.
3. Only when remote signals are converted from other display states into outdoor ambient temperature display state, the remote controller will display outdoor ambient temperature for 5 seconds and then return to set temperature display.
4. If the controller is lack of outdoor display functions, as the signal is received, set temperature will be displayed. 5. When the unit is turned off, temperature display will be compulsively set at given temperature by the controller. When the unit is turned on, patterns as set by remote signals will be displayed.
6. If user does not set up temperature display state, given temperature will be displayed.

(2) Failure display of indoor unit

1. Requirements for failure display

When multiple failures appear at the same time, failure protection codes shall be displayed alternatively.

(1) Hardware failures shall be displayed immediately, referring to requirements in "Failure State Display Table";

(2) Operation states shall be displayed immediately, referring to requirements in "Failure State Display Table";

(3) Other failures shall be displayed 200s after the compressor stops, referring to requirements in "Failure State Display Table". (Note: in the case that the unit is switched off with the remote controller, or the compressor is switched on again, failure display waiting time (200s) shall be cleared.)

(4) Frequency limitation and reduction states shall be displayed by means of remote calling.

2. Failure display control

Indicator failure display shall be kept synchronous with Double 8 failure display, that is, during indicator blinking, failure code corresponding to such indicator shall be displayed on Double 8.

3. Method of remote calling of failure display

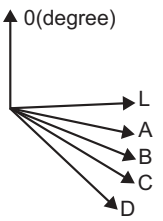
Entering the failure remote calling mode: push the light button four times within 3s to call out relevant failure protection code; Quit the failure remote calling mode: push the light button four times within 3s or call out failure display to enter it for 5 minutes and then quit.

3. Other control targets

(1) Up and down wind blow functions: model of stepping motor is MP28VB(18K),MP35XX(24K).

When the unit is powered on, the up and down wind blow motor will turn a wind deflector anticlock wise to Position 0 to shut down the air outlet. When the unit is switched on and wind blow function is not preset, under the heating mode, up and down wind blades will turn clockwise to position D; and under other modes, the up and down wind blades will turn clockwise to position L. If wind blow function is set at the same time as the unit is switched on, the wind blades will swing between positi on L and D. The wind blades can be kept in seven states: position L, position A, position B, position C, position D, swing between position L and D, stop at one position from L to D. When the unit is turned off, the wind deflector will be closed up to position 0. Wind blow action is effective only when wind blow commands are set and the indoor unit is running.

Note: When the wind blades are set at position L to B, position A to C, or position B to D through remote setting, the wind deflector will swing between position L and D. L—A—B—C—D.



(2) Buzzer When the controller is powered on, signals from a remote controller are received, or the auto button is pushed, a buzzerwillgiveout prompt tone.

(3) Auto button

When the button is pushed, the unit will operate in auto mode and the indoor fan will run in auto state. When the indoor fan is running, the wind blow motor will work. When the button is pushed again, the unit will be switched off. At the same time as the button is pushed, the whole unit will be powered on and enter into fast test mode; when the unit is powered on and detects for continuous 20s (such time shall not be fast tested) that the auto button is pushed, and if the unit is currently at fast test state,the unit will quit the fast test state.

(4) Sleep function

This mode is effective only in cooling and heating modes. Proper sleep curves shall be selected for operation according to preset temperature.

In cooling mode:

(1) When initial temperature is set at 16-23°C, an increase of 1°C will be gained every hour after the sleep function is activated. After 3 is raised, the temperature will be maintained. After operation for 7 hours, temperature will go down by 1°C,afterwards, the unit will operate at such temperature.

(2) When initial temperature is set at 24-27°C, an increase of 1°C will be gained every hour after the sleep function is activated. After 2 is raised, the temperature will be maintained. After operation for 7 hours, temperature will go down by 1°C,afterwards, the unit will operate at such temperature.

(3) When initial temperature is set at 28-29°C, an increase of 1will be gained every hour after the sleep function is activated. after 1°C is raised, the temperature will be maintained. After operation for 7 hours, temperature will go down by 1°C ,afterwards, the unit will operate at such temperature.

In heating mode:

(1) When initial temperature is set at 16°C , the unit will operate at such temperature.

(2) When initial temperature is set at 17-20°C, a decrease of 1will be gained every hour after the sleep function is activated. After 1°C is reduced, the temperature will be maintained.

(3) When initial temperature is set at 21-27°C, a decrease of 1will be gained every hour after the sleep function is activated. After 2°C is reduced, the temperature will be maintained.

(4) When initial temperature is set at 28-30°C, a decrease of 1will be gained every hour after the sleep function is activated. After 3°C is reduced, the temperature will be maintained.

(5) Timing function

The main board integrates general timing and moment timing. Such two timing functions can be selected through a remote controller on which different functions are arranged.

1 General timing:

Timing start: timing start can be set when the unit is off. When preset time is reached, the controller will operate in a preset mode. Timing can be set at an interval of 0.5 hour in a scope of 0.5 - 24 hours.

Timing stop: timing stop can be set when the unit is on. When preset time is reached, the system will be turned off. Timing can be set at an interval of 0.5 hour in a scope of 0.5 - 24 hours.

2 Moment timing

Timing start: if timing start is set when the system is at operation state, the system will continue to operate; if timing start is set when the system is at stop, as the preset time is reached, the system will start to run in preset mode.

Timing stop: if timing stop is set when the system is at stop state, the system will keep standby; if timing stop is set when the system is in operation, as the preset time is reached, the system will stop running.

Timing change: When the system is in timing mode, start and stop can be set through the On/Off button on the remote controller; or timing time can be reset and the system will operate according to the latest setting. When the system is in operation and both timing start and stop are set, the system will stay at currently set operation state. When preset timing stop time is reached, the system will stop working. When the system is at stop state and both timing start and stop are set, the system will keep at stop state. When preset timingstart time is reached, the system will start operation. From then on, the system will operate in preset mode at a preset start time and stop at a preset stop time everyday. If timing stop time is set as the same as timing start time, a stop command will be executed.

(6) Dry and mildew proof function

Dry and mildew proof function can be set in cooling and dehumidification modes.

(7) Control of indoor fan

Indoor fan can be set at four levels, super-high, high, middle and low, with a remote controller. When one level is set, the fan will thus operate at such level. The fan can also be set at auto state.

(8) Power off Memory Function

What will be memorized includes modes, up and down wind blow, light, preset temperature, preset wind speed, general timing (no memory for moment timing), and Fahrenheit /Celsius degree. When the unit is powered on again after power failure, operation continues according to memorized content. If timing is not set by the last remote control command,the system will memorize the last remote control command and operate in the mode specified in the last remote control command. If timing is set by the last remote control command and power failure happens before the preset time, the system, as powered on again, will memorize the timing function set by the last remote control command. Timing will be re-counted from the time at which the system is powered again. If timing is set by the last remote control command and timing of start or stop is reached before power failure, the system, as powered on again, will memorize operation state before power failure and will not perform timing action. Moment timing is out the range of memory.

(9) Locked Protection of PG Motor

When starting up the fans, if the motor has run at a lower speed continuously for a period, for preventing automatic protection of the motor, stop running, and display the locked operation; if the machine is running at present, the code of the locked fault---H6 of double-eight digital tubes will be displayed; if the machine is shut down at present, the information of the locked fault will not be displayed.

(10) Super Power Function

In cooling and heating modes (automatic, dehumidifying and air-supplying modes are without strong power), press the button of Super Power, the wind speed on the remote controller is displayed as super-high air flow, and the inner fans are also turned to super-high air flow;

(11) Health Function

When the inner fans are running, the remote controller is set at the Health function at this time (if there is no Health button on the remote controller, the Health On order is defaulted), then start the Health function device.

5. Fault Detection of Temperature Sensor

(1) Indoor Environment Temperature Sensor:

Detect the fault of thermo-bulb at any time;

(2) Indoor Pipe Temperature Temperature Sensor:

During the defrosting period, the fault of the thermo-bulb will be not detected, which shall be detected in 5 minutes after defrosting is completed; the fault of the thermo-bulb will be detected at other times;

(3) Protecting Treatments of Temperature Sensor:

1.When the thermo-bulb is detected to be short-circuited continuously for 30 seconds: It is regarded that the temperature detected by the thermo-bulb is over-high (or unlimited), then the whole machine will exert corresponding safety stops according to the over-high temperature sensed by the thermo-bulb, and display corresponding temperature safety stops and faults of the thermo-bulb simultaneously.

2. When the thermo-bulb is detected in open circuit continuously for 30 seconds: stop the machine in protection, directly display corresponding faults of the thermo-bulb.

6. Forced Running Function of the Inner Units

(It is refrigerants reclaiming function which is used for the condition that refrigerants cannot be reclaimed by cooling operation in the season with low temperature.)

(1) Enter into Forced Running Control Within 5 minutes after power-up, press the Lights Off button on the remote controller continuously for three times within 3 seconds to enter into the fluorine collecting mode, and display Fo, send the fluorine-collecting mode for 25 minutes continuously, each load will be treated as cooling when starting the machine (set the air flow as High, set the temperature as 16).

(2) Exit from the Forced Running Control After receiving any remote signal, or signal of keys, the fluorine-collecting mode will exit, and operate in accordance with the current orders set; or exit the fluorine-collecting mode after running for 25 minutes, and the machine will be shut down automatically.

6.2.2 Functions of Outdoor Unit

1. Input Parameter Compensation

(1) Input parameter compensation function As the structure feature of split unit, concerning the comfort, in heating mode, when compressor stops, the indoor ambient temperature is higher than preset temperature for 3^{o}C.

2. Check parameters to effectively make judgment and control

Insert the outdoor discharge temp sensor into corresponding temp sensor jacket of discharge pipe in order to protect safe andreliable operation of the unit, so that the control system can accurately detect the discharge temp as well as effectively control and protect it. Otherwise, the unit will stop and display the trouble of “outdoor discharge temp sensor failure (not be inserted correctly)” which can be recovered by pressing ON/OFF button.

3. Cooling Mode

3.1 Conditions and processes of cooling operation:

3.1.1 If the compressor stops, and [T_{preset} – ($T_{indoor\ ambient}$ – ⊿ $T_{cooling\ indoor\ ambient\ temperature\ compensation}$)] ≤0.5°C, start up the unit for cooling operation;5. Fan Mode

3.1.2 During cooling operation, if 0°C≤ [T_{preset} – ($T_{indoor\ ambient}$ – ⊿ $T_{cooling\ indoor\ ambient\ temperature\ compensation}$)]<2°C, keep the cooling operation;

3.1.3 During cooling operation, if 2°C≤ [T_{preset} – ($T_{indoor\ ambient}$ – ⊿ $T_{cooling\ indoor\ ambient\ temperature\ compensation}$)], the cooling operation will stop after reaching to the setting temperature.

3.2 Temperature setting range

3.2.1 If Toutdoor ambient ≥ [$T_{low\text{-}temperature\ cooling}$], the temperature can be set at: 16~30°C(Cooling at roomemperature);

3.2.2 If Toutdoor ambient< [$T_{low\text{-}temperature\ cooling}$], the temperature can be set at: 25~30°C (Cooling at low temperature), that is, the minimum setting temperature to be judged by outdoor unit is 25°C.

4. Dry Mode

4.1 Conditions and processes of dry operation: same as the cooling mode;

4.2 The temperature setting range is: 16~30°C;

5. Fan Mode

5.1 The compressor, outdoor fan and four-way valve are switched off;

5.2 The temperature setting range is: 16~30°C.

6. Heating Mode

6.1. Conditions and processes of heating operation: ($T_{indoor\ ambient}$ is the actual detection temperature of indoorenvironment temp sensor, ⊿ Theating indoor ambient temperature compensation is the indoor ambient temperature compensation during heating operation)

6.1.1 If the compressor stops, and [($T_{indoor\ ambient}$ – ⊿ $T_{heating\ indoor\ ambient\ temperature\ compensation}$) –$T_{preset}$]≤0.5°C, start the unit to enter into heating operation;

6.1.2 During heating operation, if 0°C≤ [($T_{indoor\ ambient}$ – ⊿ $T_{heating\ indoor\ ambient\ temperature\ compensation}$)–$T_{preset}$] < 2°C, keep the heating operation;

6.1.3 During heating operation, if 2°C≤[($T_{indoor\ ambient}$ – ⊿ $T_{heating\ indoor\ ambient\ temperature\ compensation}$)–$T_{preset}$], the heating operation will stop after reaching the setting temperature.6.2 The temperature setting range in this mode is: 16~30°C.

7. Defrosting Control (heating)

7.1 After the time for defrosting is judged to be satisfied, if the temperature for defrosting is satisfied for continuous 3minutes, the defrosting operation will start.

7.2 Start defrosting: Compressor stops and starts up 55S later;

7.3 Finish of Defrosting: Compressor stops and starts up 55S later;

7.4 The defrosting operation can exit when any of the conditions below is satisfied:

7.4.1 Toutdoor pipe≥12°C;

7.4.2 Toutdoor ambient<-5°C, and the $T_{outdoor\ pipe}$≥6°C last more than 80S;

7.4.3The continuous running time of defrosting reaches.

8. Compressor Control

8.1. The frequency of compressor will be controlled according to the relationship of ambient temperature and preset temperature as well as changing speed of ambient temperature;

8.2 Start the compressor after starting cooling, heating, dry operation, and the outdoor fan for 5s;

8.3 When the unit is off, in safety stops and switching to fan mode, the compressor will stop immediately;

8.4 In all modes: once the compressor starts up, it will not be allowed to stop within 7 min. (Note: except the cases that require stop of the compressor such as fault protection, remote shutdown, mode switching etc.);

8.5 In all modes: once the compressor stops, it can't restart within 3-minute (Note: The indoor units with memory function can be restarted after remote shutdown and powering on again without delay).

9. Outdoor Fan Control

9.1 When the unit is off by remote control in safety stops or stops after reaching the setting temperature, 1min later,the outdoor fan will stop;

9.2 In fan mode: The outdoor fan stops;

9.3 Start of defrosting: Outdoor fan will stop after compressor stops for 50S;

9.4 Finish of defrosting: Outdoor fan will start up when the compressor stops.

10. 4-way valve control

10.1 The 4-way valve is off under the modes of Cooling, dry and fan;

10.2 In heating mode, the 4-way valve is energized;

10.3 When the unit is off in heating mode or heating mode shifts to other modes, the 4-way valve will be de-energized after compressor stops for 2min;

10.4. After protection stops, the 4-way valve will be de-energized after 4min;

10.5 Start of defrosting: when entering defrosting mode, 4-way valve will be de-energized after the compressor stops for 50s;
10.6 Finish of defrosting: The 4-way valve will be energized after the compressor stops for 50s.

11. Anti-freezing protection

11.1 In cooling and dry mode, if $T_{indoor\ pipe}$<0 is detected for 3min continuously, the unit will stop; if 6°C<$T_{indoor\ pipe}$, and compressor has stopped for 3min, the unit will resume running;
11.2 In cooling and dry mode, if $T_{indoor\ pipe}$<6°C, running frequency of compressor will be decreased or stop increasing;
11.3 If the unit stops as anti-freezing protection for 6 times, it can not resume running automatically and display trouble code, it can resume by pressing ON/OFF button. During operation, if the compressor operates for over 10min, the times of anti-freezing protection stop will be cleared to zero. When the unit is off/ fan/ heating mode, the malfunction and malfunction times will be cleared to zero. (If the malfunction can not be removed)

12. Overload protection

12.1 In cooling and dry mode: if 65°C<Toutdoor pipe, the unit will stop; if Toutdoor pipe<55°C, and compressor has stopped for 3min, the unit will resume running;
12.2 In cooling and dry mode: if 55°C≤$T_{outdoor\ pipe}$, running frequency of compressor will be decreased or stop increasing;
12.3 In heating mode: if 64°C≤$T_{indoor\ pipe}$, the unit will stop; if Tindoor pipe<54°C, and compressor has stopped for 3min, the unit will resume running;
12.4 In heating mode: if 54°C≤$T_{indoor\ pipe}$, running frequency of compressor will be decreased or stop increasing;
12.5 If the unit stops as overload protection for 6 times, it can not resume running automatically and display malfunction. It can resume running by pressing ON/OFF.During operation, if the compressor has operated for over 10 min, the times of overload protection stop will be cleared to zero. When the unit is off or in Fan mode or shifts to heating mode, the malfunction and malfunction times will be cleared to zero immediately. (If the malfunction can not be removed)

13. Compressor discharge temperature protection

13.1 If 115°C≤$T_{discharge}$, the unit will stop; if $T_{discharge}$<97°C, and compressor has stopped for 3min, the unit will resume running;
13.2 If 97°C≤$T_{discharge}$, running frequency of compressor will be decreased or stop increasing;
13.3 If the unit stops as protection of compressor discharge temperature for 6 times, it can not resume runningautomatically and malfunction will be displayed. It can resume running by pressing ON/OFF. During operation, if the compressor has operated for over 10min, the time of compressor discharge temperature stop will be cleared to zero.When the unit is off/ shifts to fan mode, the malfunction and malfunction times will be cleared. (If the malfunction can not be removed)
14. Current protection
14.1. If 12A≤I alternating-current, running frequency of compressor will be decreased or stop increasing;
14.2. If 17A≤I alternating-current, the unit will stop; and after compressor has stopped for 3min, the unit will resume running;
14.3 If the unit stops as protection for compressor discharge temperature for 6 times, it can not resume running automatically and malfunction will be displayed. It can resume by pressing ON/OFF button. During operation, if the compressor has operated for over 10 min, the time of compressor discharge temperature stop will be cleared to zero.

15. Drop off voltage

During compressor operation, the system will stop and malfunction of drop off voltage will occur if voltage downward fluctuates rapidly, and it will re-start up automatically 3min later.

16. Communication malfunction

If the unit does not receive correct signal from indoor unit for 3min continuously, the unit will stop as communication malfunction protection; if communication malfunction has removed and compressor has stopped for 3min, the unit will resume running.

17. IPM module protection

When the compressor starts, if there is overcurrent or low control voltage for IPM module due to some abnormal results, IPM will detect module protection signal as the unit is on. Once the module protective signal is detected, stop the unit with module protection immediately. If the module protection is removed and compressor has stopped for 3min, the unit will be allowed to operate.If the module protection continuously occurs for three times, it can not be removed automatically, and you should press the ON/OFF button to resume operation. If the running time of compressor exceeds 10 min, the module protection times will be cleared.and malfunction times will be cleared. (If the malfunction can not be removed).

18. Module overheating protection

18.1 If 80°C ≤T_{module}, running frequency of compressor will be decreased or stop increasing;

18.2.If 95°C ≤T_{module}, the unit will stop; if T_{module}<87°C , and compressor has stopped for 3min, the unit will resume running;

18.3 If the unit stops as module overheating protection occurs for 6 times, it can not resume running automatically and malfunction will be displayed, it can resume by pressing ON/OFF. During operation, if the time exceeds compressor running time, the time of module overheating protection stop will be cleared. When the unit is off or shifts to fan mode,the malfunction

19 Compressor overload protection

19.1 If detect that the overload switch breaks within continuous 3S, the system will stop as protection;

19.2 If detect that the protection has removed and the compressor has stopped for 3min, the unit will be allowed to operate.

19.3 If the unit stops as compressor overload protection occurred for 3 times continuously, it can not resume running automatically and malfunction will be displayed.It can resume operation by pressing ON/OFF button; and the times of compressor overload protection will be cleared after the compressor has run for 30min.

7. Installation Manual

7.1 Notices for Installation

Caution

1.The unit should be installed only by authorized service center according to local or government regulations and in compliance with this manual.
2.Before installing, please contact with local authorized maintenance center. If the unit isnot installed by the authorized service center, the malfunction may not be solved due to incovenient contact between the user and the service personnel.
3.When removing the unit to the other place, please firstly contact with the local authorized service center.
4.Warning: Before obtaining access to terminals, all supply circuits must be disconnected.
5.For appliances with type Y attachment, the instructions shall contain the substance of the following. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
6.The appliance must be positioned so that the plug is accessible.
7.The temperature of refrigerant line will be high; please keep the interconnection cable away from the copper tube.
8.The instructions shall state the substance of the following:
This appliance is not intended for use by persons(including children)with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
Children should be supervised to ensure that they do not play with the appliance.

7.1.1 Installation Site Instructions

Proper installation site is vital for correct and efficient operation of the unit. Avoid the following sites where:
- strong heat sources, vapours, flammable gas or volatile liquids are emitted.
- high-frequency electro-magnetic waves are generated by radio equipment,welders and medical equipment.
- salt-laden air prevails (such as close to coastal areas).
- the air is contaminated with industrial vapours and oils.
- the air contains sulphures gas such as in hot spring zones.
- corrosion or poor air quality exists.

7.1.2 Installation Site of Indoor Unit

1.The air inlet and outlet should be away from the obstructions. Ensure the air can be blown through the whole room.
2.Select a site where the condensate can be easily drained out, and where it is easily connected to outdoor unit.
3.Select a place where it is out of reach of children.
4.Select a place where the wall is strong enough to withstand the full weight and vibration of the unit.
5.Be sure to leave enough space to allow access for routine maintenance. The installation site should be 250cm or more above the floor.
6.Select a place about 1m or more away from TV set or any other electric appliance.
7.Select a place where the filter can be easily taken out.
8.Make sure that the indoor unit is installed in accordance with installation dimension instructions.
9.Do not use the unit in the laundry or by swimming pool etc.

7.1.3 Installation Site of Outdoor Unit

1.Select a site where noise and outflow air emitted by the unit will not annoy neighbors.
2.Select a site where there is sufficient ventilation.
3.Select a site where there is no obstruction blocking the inlet and outlet.
4.The site should be able to withstand the full weight and vibration.
5.Select a dry place, but do not expose the unit to direct sunlight or strong wind.
6.Make sure that the outdoor unit is installed in accordance with the installation instructions, and is convenient for maintenance and repair.
7.The height difference between indoor and outdoor units is within 10m, and the length of the connecting tubing does not exceed 25m.
8.Select a place where it is out of reach of children.
9.Select a place where the unit does not have negative impact on pedestrians or on the city.

7.1.4 Safety Precautions for Electric Appliances

1.A dedicated power supply circuit should be used in accordance with local electrical safety regulations.
2.Don't drag the power cord with excessive force.
3.The unit should be reliably earthed and connected to an exclusive earth device by the professionals.
4.The air switch must have the functions of magnetic tripping and heat tripping to prevent short circuit and overload.
5.The minimum distance between the unit and combustive surface is 1.5m.
6.The appliance shall be installed in accordance with national wiring regulations.
7.An all-pole disconnection switch with a contact separation of at least 3mm in all poles should be connected in fixed wiring.

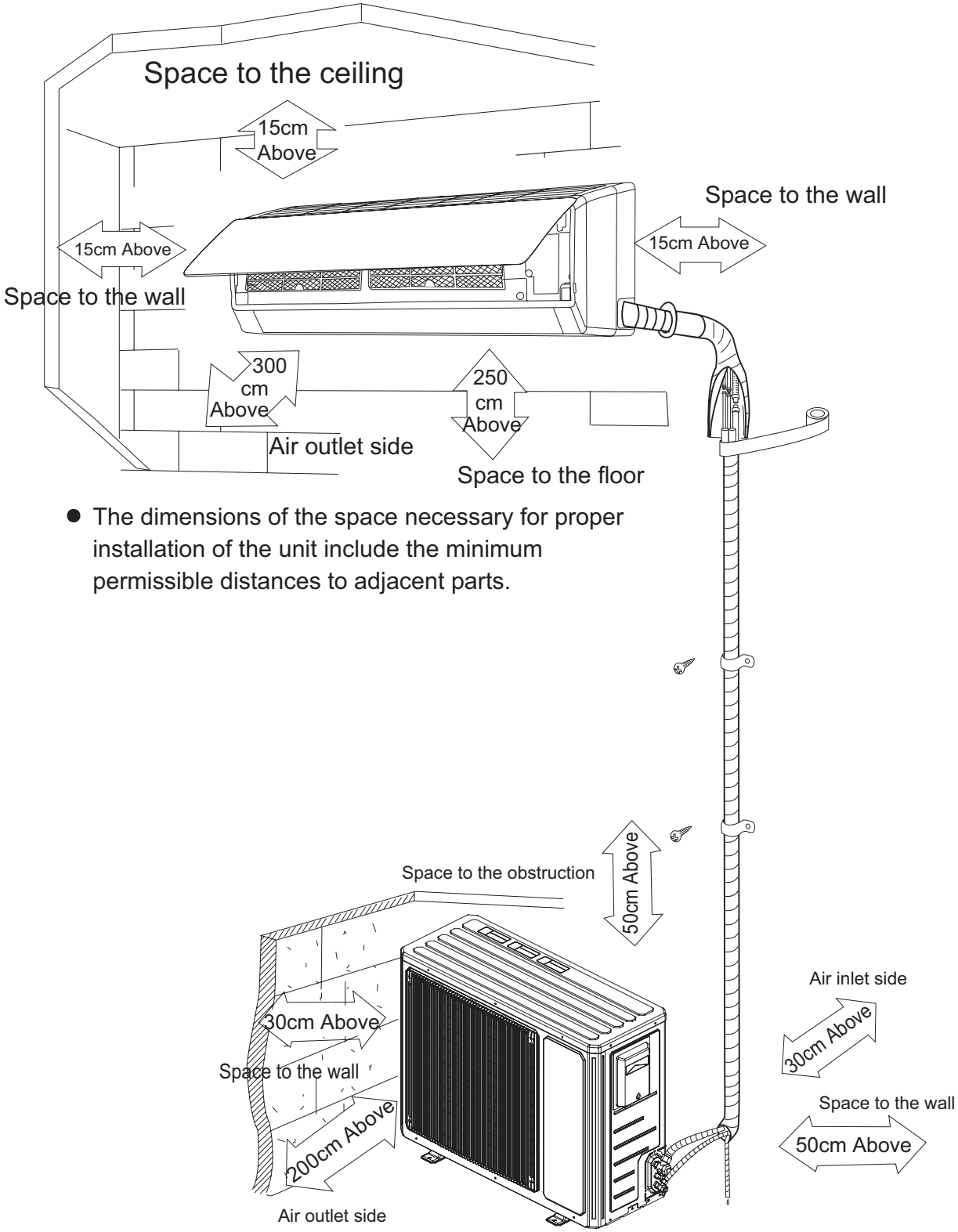
Note:

● Make sure the live wire, neutral wire and earth wire in the family power socket are properly connected.
● There should be reliable circuit in the diagram.Inadequate or incorrect electrical connections may cause electric shock or fire.

7.1.5 Earthing Requirements

1.Air conditioner is type I electric appliance. Please ensure that the unit is reliably earthed.
2.The yellow-green wire in air conditioner is the earthing wire which can not be used for other purposes. Improper earthing may cause electric shock.
3.The earth resistance should accord to the national criterion.
4.The power must have reliable earthing terminal. Please do not connect the earthing wire with the following:
①Water pipe ② Gas pipe ③ Contamination pipe ④Other place that professional personnel consider is unreliable
5. The model and rated values of fuses should accord with the silk print on fuse cover or related PCB.

7.2 Installation Dimension Diagram



- The dimensions of the space necessary for proper installation of the unit include the minimum permissible distances to adjacent parts.

Schematic diagram being reference only (outdoor unit is with variation), please refer to real product for authentic information.

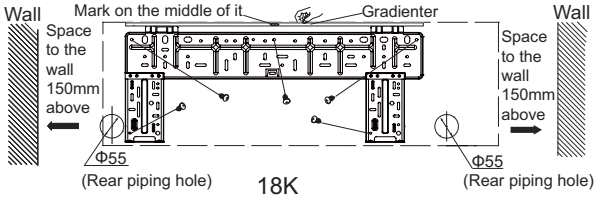
7.3 Install Indoor Unit

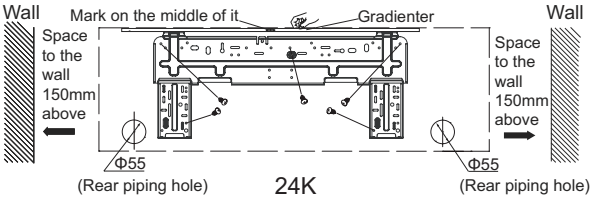
7.3.1 Installing of Mounting Plate

1.Mounting plate should be installed horizontally. As the water tray's oulet for the indoor unit is two-way type, during installation, the indoor unit should slightly slant to water tray's outlet for smooth drainage of condensate.

2.Fix the mounting plate on the wall with screws.

3.Be sure that the mounting plate has been fixed firmly enough to withstand about 60 kg. Meanwhile, the weight should be evenly shared by each screw.



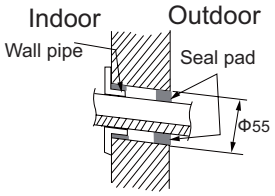


Unit:mm

7.3.2 Boring Piping Hole

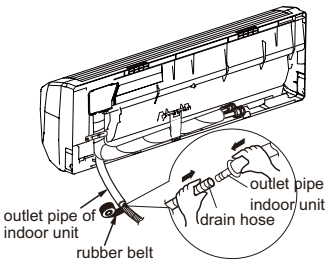
1.Slant the piping hole (Φ 55) on the wall slightly downward to the outdoor side.

2.Insert the piping-hole sleeve into the hole to prevent the connection piping and wiring from being damaged when passing through the hole.

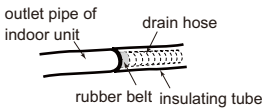


7.3.3 Installing of Drain Hose

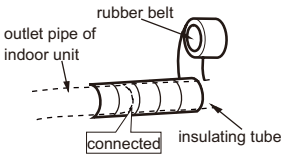
1.Connect the drain hose to the outlet pipe of the indoor unit.Bind the joint with rubber belt.



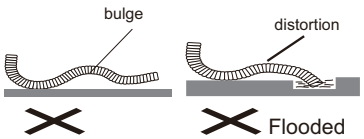
2.Put the drain hose into insulating tube.



3.Wrap the insulating tube with wide rubber belt to prevent the shift of insulating tube. Slant the drain hose downward slightly for smooth drainage of condensate.



Note: The insulating tube shoud be connected reliably with the sleeve outside the outlet pipe. The drain hose should be slanted downward slightly,without d-istortion, bulge or fluctuation. Do not put the outlet in the water.



7.3.4 Connecting Indoor and Outdoor Electric Wires

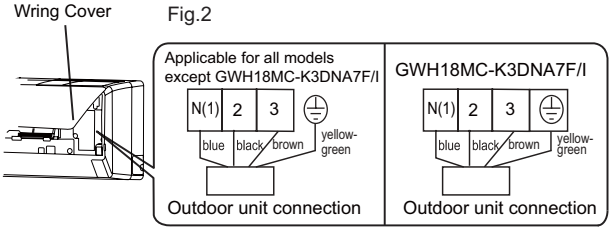
1.Open the front panel.

2.Remove the wiring cover,connect and fix power connection cord to the terminal board shown in Fig 2.

3.Make the power connection cord pass through the hole at the back of indoor unit.

4.Reinstall the cord anchorage and wiring cover.

5.Reinstall the front panel.



NOTE:

All wires between indoor and outdoor units must be connected by the qualified electric contractor.

- Electric wires must be connected correctly. Improper connection may cause malfunction.
- Tighten the terminal screws securely.
- After tightening the screws, pull the wire sligltly to confirm whether it's firm or not.
- Make sure that the electric connections are earthed properly to prevent electric shock.
- Make sure that all wiring connections are secure and the cover plates are reinstalled properly. Poor installation may cause fire or electric shock.

7.3.5 Installing of Indoor Unit

- The piping can be output from right, right rear, left or left rear.

1.When routing the piping and wiring from the left or right side of indoor unit, cut off the tailings from the chassis as necessary(As shown in Fig.3)

(1)Cut off the tailing 1 when routing the wiring only;

(2)Cut off the tailing 1 and tailing 2 when routing both the wiring and piping.

2.Take out the piping from body case, wrap the piping, power cords, drain hose with the tape and then make them pass through the piping hole. (As shown in Fig.4)

3.Hang the mounting slots of the indoor unit on the upper hooks of the mounting plate and check if it is firm enough.(As shown in Fig.5)

4.The installation site should be 250cm or more above the floor.

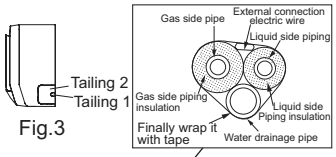


Fig.3

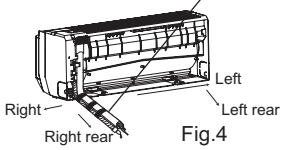


Fig.4

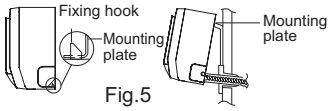


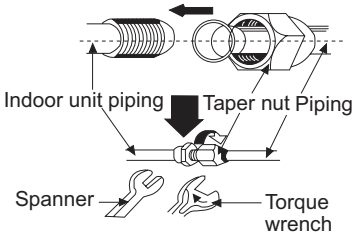
Fig.5

7.3.6 Installing of Connection Pipe

1.Align the center of the pipe flare with the related valve.

2.Screw in the flare nut by hand and then tighten the nut with spanner and torque wrench by referring to the following:

Hex nut diameter	Tightening torque (N·m)
Φ6	15～20
Φ 9.52	31～35
Φ 12	50～55
Φ 16	60～65
Φ 19	70～75



NOTE: Connect the connection pipe to indoor unit at first and then to outdoor unit. Handle pi-ping bending with care. Do not damage the connection pipe. Ensure that the joint nut is tightened firmly, otherwise, it may cause leakage.

7.4 Install Outdoor Unit

7.4.1 Electric Wiring

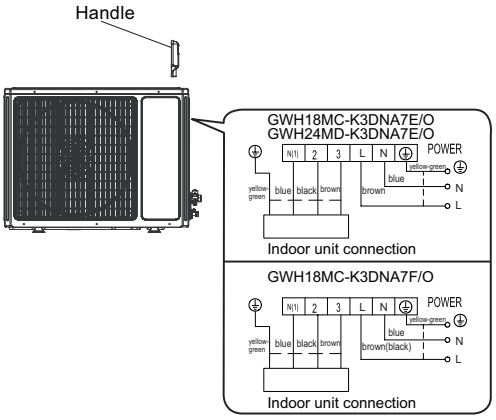
1.Remove the handle on the right side plate of outdoor unit.

2.Take off wire cord anchorage. Connect and fix power connection cord and power cord to the terminal board.Wiring should fit that of indoor unit.

3.Fix the power connection cord and power cord with wire clamps and then connect the corresponding connector.

4.Confirm if the wire has been fixed properly.

5.Reinstall the handle.



NOTE:

- Incorrect wiring may cause malfunction of spare part.
- After the wire has been fixed, ensure there is free space between the connection and fixing places on the lead wire.

Schematic diagram being reference only, please refer to real product for authentic information.

7.4.2 Air Purging and Leakage Test

1. Connect charging hose of manifold valve to charge end of low pressure valve (both high/low pressure valves must be tightly shut).
2. Connect joint of charging hose to vacuum pump.
3. Fully open the handle of Lo manifold valve.
4. Open the vacuum pump for vacuumization. At the beginning, slightly loosen joint nut of low pressure valve to check if there is air coming inside. (If noise of vacuum pump has been changed, the reading of multimeter is 0) Then tighten the nut.
5. Keep vacuuming for more than 15mins and make sure the reading of multimeter is-1.0 $\times 10^5$ pa(-76cmHg).
6. Fully open high/low pressure valves.
7. Remove charging hose from charging end of low pressure valve.
8. Tighten lid of low pressure valve. (As shown in Fig.6)

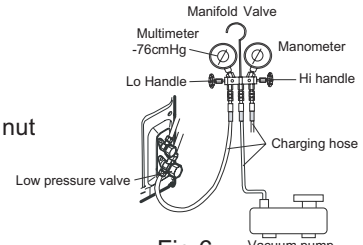
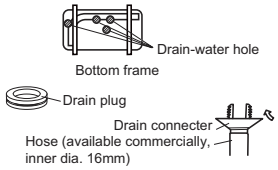


Fig.6

7.4.3 Outdoor Condensate Drainage (only for heat pump type)

During heating operation, the condensate water and defrosting water should be drained out reliably through the drain hose. Install the outdoor drain connector in a Φ25 hole on the the base plate and attach the drain hose to the connector,so that the waste water formed in the outdoor unit can be drained out .The hole diameter 25 must be plugged.
Whether to plug other holes will be determined by the dealers according to actual conditions.



7.5 Check after Installation and Test Operation

7.5.1 Check after Installation

Items to be checked	Possible malfunction
Has the unit been fixed firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling(heating)
Is thermal insulation sufficient?	It may cause condensation.
Is water drainage satisfactory?	It may cause water leakage.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the unit.
Is the electric wiring or piping connection installed correctly and securely?	It may cause electric malfunction or damage the parts.
Has the unit been securely earthed?	It may cause electrical leakage.
Is the power cord specified?	It may cause electric malfunction or damage the parts.
Is the inlet or outlet blocked?	It may cause insufficient cooling(heating)
Is the length of connection pipes and refrigerant capacity recorded?	The refrigerant capacity is not accurate.

7.5.2 Operation Test

1.Before Operation Test

(1)Do not switch on power before installation is finished completely.

(2)Electric wiring must be connected correctly and securely.

(3)Cut-off valves of the connection pipes should be opened.

(4)All the impurities such as scraps and thrums must be cleared from the unit.

2.Operation Test Method

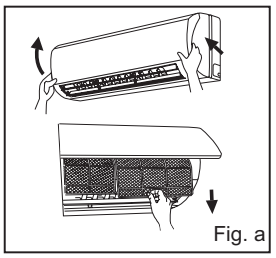
(1)Switch on power and press "ON/OFF" button on the remote controller to start the operation.

(2)Press MODE button to select the COOL, HEAT (Not available for cooling only unit), FAN to check whether the operation is normal or not.

7.6 Installation and Maintenance of Healthy Filter

7.6.1 Installation of Healthy Filter

1.Lift up the front panel from it's two ends, as shown by the arrow direction, and then remove the air filter.(As shown in Fig.a)


Fig. a

2.Attach the healthy filter onto the air filter.(As shown in Fig.b)

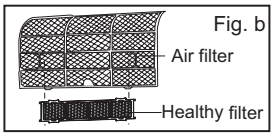
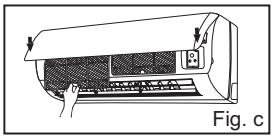


Fig. b

3. Install the air filter properly along the arrow direction in Fig.c, and then close the panel .


Fig. c

7.6.2 Cleaning and Maintenance

Remove the healthy filter and reinstall it after cleaning according to the installation instruction. Don't use brush or hard things to cleanthe filter. After cleaning, be sure to dry it in the shade.

7.6.3 Service Life

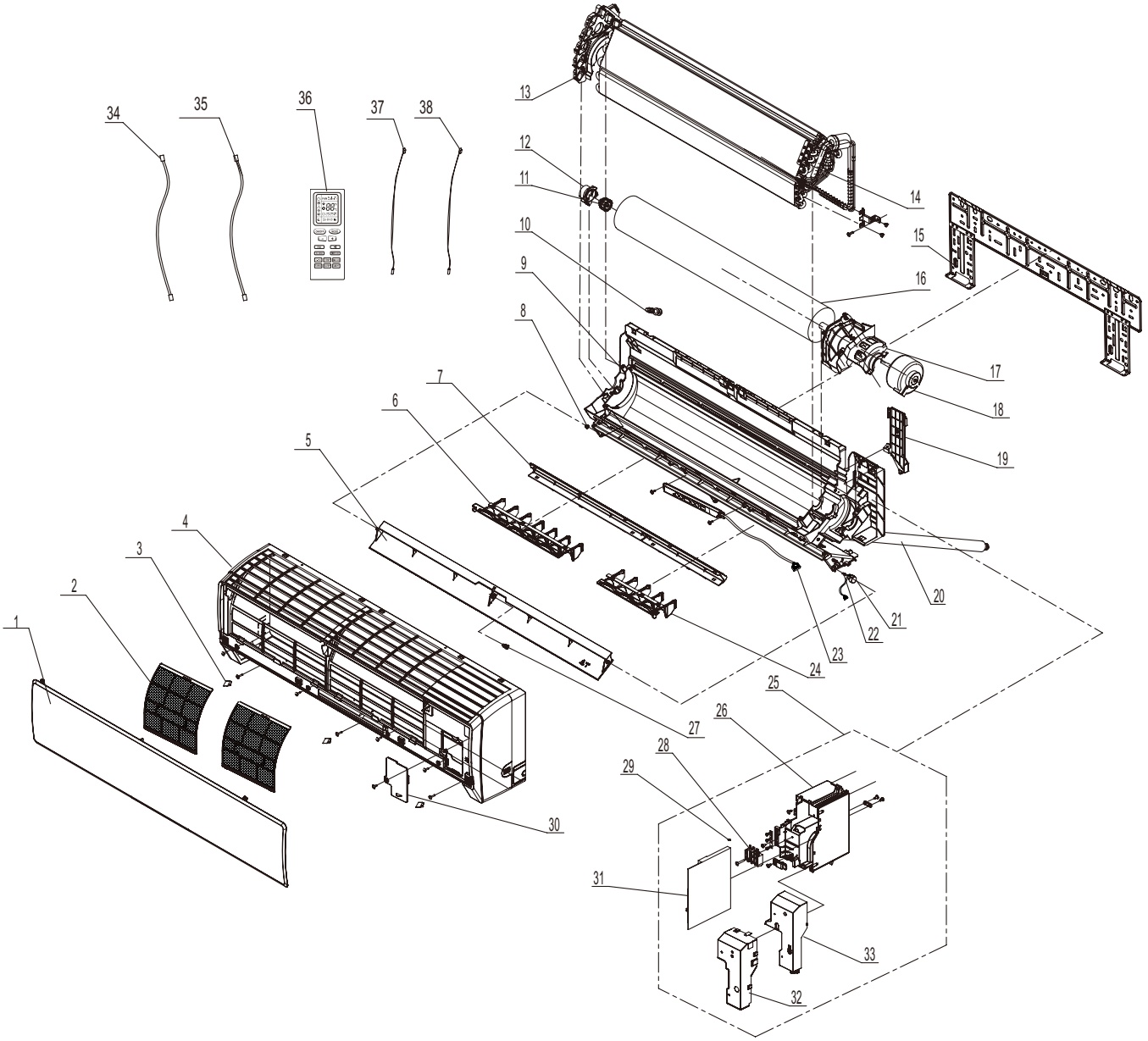
The general serive life for the healthy filter is about one year under normal condition. As for silver ion filter, it is invalid when its surface becomes black (green).

This supplementary instruction is provided for reference to the unit with healthy filter. If the graphics provided herein is different from the actualproduct, please refer to the atual product. The quantity of healthy filters is based on the actual delivery.

8. Exploded Views and Parts List

8.1 Indoor Unit

18K Unit



NO.	Description	Part Code		Qty
		GWH18MC-K3DNB8E/I(white)	GWH18MC-K3DNB8E/I (inner moulding pearl white)	
	Product Code	CB174N02300	CB174N02301	
1	Front Panel B8	2001248504	2001248534	1
2	Filter Sub-Assy	1112208901	1112208901	2
3	Screw Cover	24252016	24252016	3
4	Front Case Sub-assy	20022172	20022172	1
5	Guide Louver	10512115	10512115	1
6	Air Louver 1	10512116	10512116	1
7	Helicoid Tongue	26112238	26112238	1
8	Left Axile Bush	10512037	10512037	1
9	Rear Case assy	22202227	22202227	1
10	Rubber Plug (Water Tray)	76712012	76712012	1
11	O-Gasket sub-assy of Bearing	76512051	76512051	1
12	Ring of Bearing	26152022	26152022	1
13	Evaporator Support	24212133	24212133	1
14	Evaporator Assy	01002937	01002937	1
15	Wall Mounting Frame	01252218	01252218	1
16	Cross Flow Fan	10352019	10352019	1
17	Motor Press Plate	26112494	26112494	1
18	Fan Motor	15012146	15012146	1
19	Connecting pipe clamp	26112164	26112164	1
20	Drainage Hose	05230014	05230014	1
21	SteppingMotor	15012086	15012086	1
22	Crank	10582070	10582070	1
23	Display Board	30565038	30565038	1
24	Air Louver 2	10512117	10512117	1
25	Electric Box Assy	2030211503	2030211503	1
26	Electric Box	2011210801	2011210801	1
27	Axile Bush	10542036	10542036	1
28	Terminal Board	4201026601	4201026601	1
29	Jumper	4202300102	4202300102	1
30	Electric Box Cover2	20112081	20112081	1
31	Main Board	30138736	30138736	1
32	Shield Cover of Electric Box	01592092	01592092	1
33	Electric Box Cover1	20122154	20122154	1
34	Connecting Cable	40020318	40020318	0
35	Connecting Cable	400204056	400204056	0
36	Remote Controller	305100413	305100413	1
37	Ambient Temperature Sensor	390000453	390000453	1
38	Temperature Sensor	390000632	390000632	1

The data above are subject to change without notice.

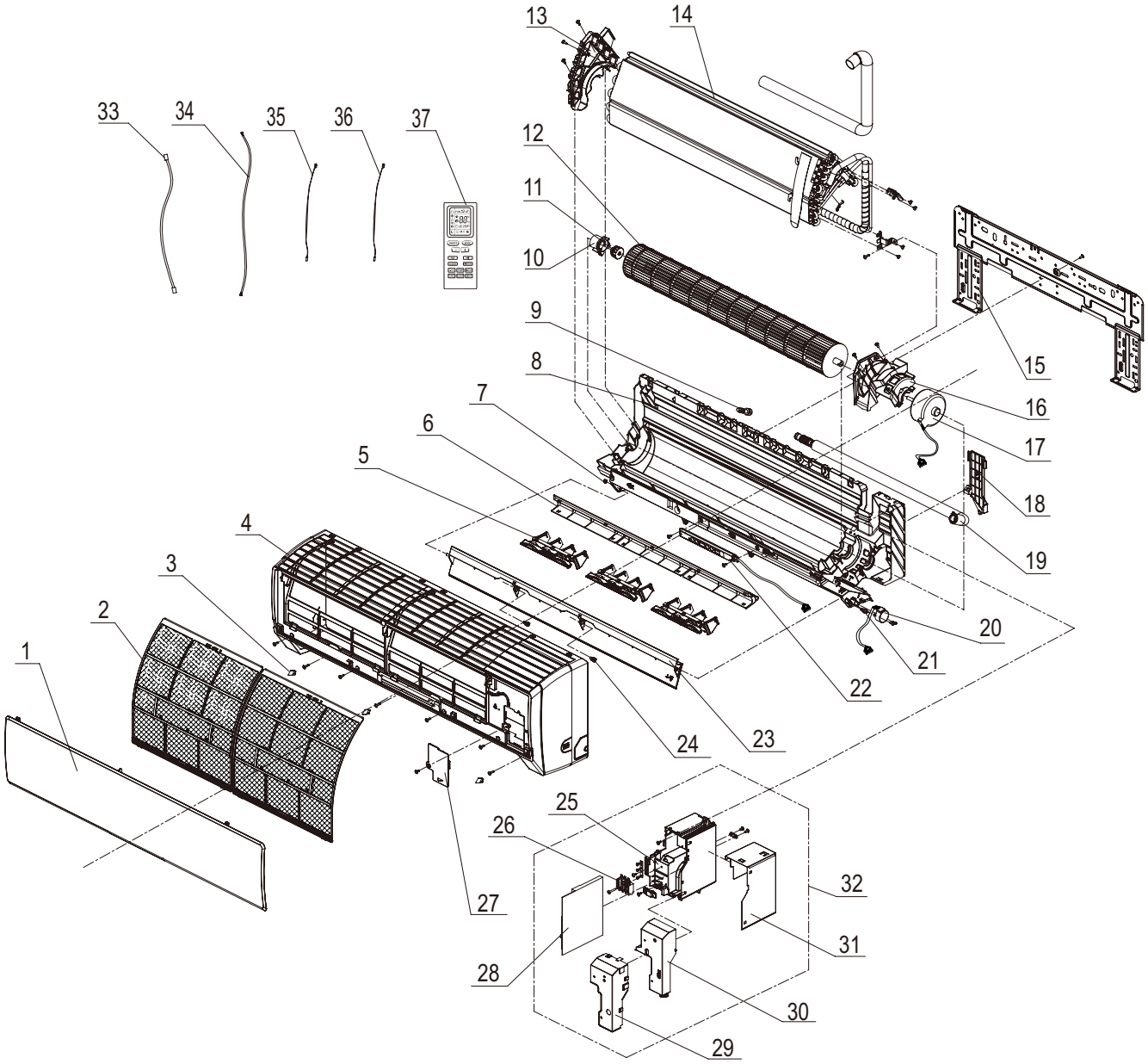
NO.	Description	Part Code		Qty
		GWH18MC-K3DNA7F/I	GWH18MC-K3DNE3E/I (white wire drawing with middle display)	
	Product Code	CB172N02700	CB404N01501	
1	Front Panel	20012270S	2001290103	1
2	Filter Sub-Assy	1112208901	1112208901	2
3	Screw Cover	24252016	24252016	3
4	Front Case Sub-assy	20022172	20022205	1
5	Guide Louver	10512115	10512115	1
6	Air Louver 1	10512116	10512116	1
7	Helicoid Tongue	26112238	26112238	1
8	Left Axile Bush	10512037	10512037	1
9	Rear Case assy	22202227	12312214	1
10	Rubber Plug (Water Tray)	76712012	76712012	1
11	O-Gasket sub-assy of Bearing	76512051	76512051	1
12	Ring of Bearing	26152022	26152022	1
13	Evaporator Support	24212133	24212133	1
14	Evaporator Assy	01002937	01002937	1
15	Wall Mounting Frame	01252218	01252218	1
16	Cross Flow Fan	10352019	10352019	1
17	Motor Press Plate	26112494	26112494	1
18	Fan Motor	15012146	15012146	1
19	Connecting pipe clamp	26112164	26112164	1
20	Drainage Hose	05230014	05230014	1
21	SteppingMotor	15012086	15012086	1
22	Crank	10582070	10582070	1
23	Display Board	30565042	30565144	1
24	Air Louver 2	10512117	10512117	1
25	Electric Box Assy	20402055	20402033	1
26	Electric Box	2011210801	2011210801	1
27	Axile Bush	10542036	10542036	1
28	Terminal Board	42011233	4201026601	1
29	Jumper	4202300109	4202300102	1
30	Electric Box Cover2	20112081	20112081	1
31	Main Board	30138649	30138736	1
32	Shield Cover of Electric Box	01592092	01592092	1
33	Electric Box Cover1	20122154	20122154	1
34	Connecting Cable	4002052317	40020318	0
35	Connecting Cable	400205401	400204056	0
36	Remote Controller	305100413	305100413	1
37	Ambient Temperature Sensor	390000453	390000453	1
38	Temperature Sensor	390000591	390000632	1

The data above are subject to change without notice.

NO.	Description	Part Code	Qty
		GWH18MC-K3DNC9E/I	
	Product Code	CB145N00800	
1	Front Panel	20012677S	1
2	Filter Sub-Assy	1112208901	2
3	Screw Cover	24252016	3
4	Front Case Sub-assy	20022172	1
5	Guide Louver	10512115	1
6	Air Louver 1	10512116	1
7	Helicoid Tongue	26112238	1
8	Left Axile Bush	10512037	1
9	Rear Case assy	12312214	1
10	Rubber Plug (Water Tray)	76712012	1
11	O-Gasket sub-assy of Bearing	76512051	1
12	Ring of Bearing	26152022	1
13	Evaporator Support	24212133	1
14	Evaporator Assy	01002937	1
15	Wall Mounting Frame	01252218	1
16	Cross Flow Fan	10352019	1
17	Motor Press Plate	26112494	1
18	Fan Motor	15012146	1
19	Connecting pipe clamp	26112164	1
20	Drainage Hose	05230014	1
21	SteppingMotor	15012086	1
22	Crank	10582070	1
23	Display Board	30565108	1
24	Air Louver 2	10512117	1
25	Electric Box Assy	20302122	1
26	Electric Box	2011210801	1
27	Axile Bush	10542036	1
28	Terminal Board	4201026601	1
29	Jumper	4202300102	1
30	Electric Box Cover2	20112081	1
31	Main Board	30138736	1
32	Shield Cover of Electric Box	01592092	1
33	Electric Box Cover1	20122154	1
34	Connecting Cable	40020318	0
35	Connecting Cable	400204056	0
36	Remote Controller	305100413	1
37	Ambient Temperature Sensor	390000453	1
38	Temperature Sensor	390000632	1

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24K Unit


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NO.	Description	Part Code		Qty
		GWH24MD-K3DNB8E/I (white)	GWH24MD-K3DNB8E/I (inner moulding pearl white)	
	Product Code	CB174N02400	CB174N02401	
1	Front Panel	2001275808	2001275807	1
2	Filter Sub-Assy	11122091	11122091	2
3	Screw Cover	24252016	24252016	3
4	Front Case Assy	20012329	20012329	1
5	Air Louver 1	10512159	10512159	3
6	Helicoid tongue	26112187	26112187	1
7	Left Axile Bush	10512037	10512037	1
8	Rear Case assy	22202265	22202265	1
9	Rubber Plug (Water Tray)	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	1
12	Cross Flow Fan	10352030	10352030	1
13	Evaporator Support	24212103	24212103	1
14	Evaporator Assy	01002269	01002269	1
15	Wall Mounting Frame	01252032	01252032	1
16	Motor Press Plate	26112316	26112316	1
17	Fan Motor	15012098	15012098	1
18	Connecting pipe clamp	26112188	26112188	1
19	Drainage Hose	0523001405	0523001405	1
20	Stepping Motor	1521300101	1521300101	1
21	Crank	10582070	10582070	1
22	Display Board	30565123	30565123	1
23	Guide Louver	10512118	10512118	1
24	Axile Bush	10542036	10542036	2
25	Electric Box	2011210801	2011210801	1
26	Terminal Board	4201026601	4201026601	1
27	Electric Box Cover2	20112081	20112081	1
28	Main Board	30138737	30138737	1
29	Shield Cover of Electric Box	01592092	01592092	1
30	Electric Box Cover1	20122154	20122154	1
31	Lower Shield of Electric Box	01592091	01592091	1
32	Electric Box Assy	20302603	20302603	1
33	Connecting Cable	400205235	400205235	0
34	Connecting Cable	400205408	400205408	0
35	Ambient Temperature Sensor	390000453	390000453	1
36	Temperature Sensor	390000591	390000591	1
37	Remote Controller	305100413	305100413	1

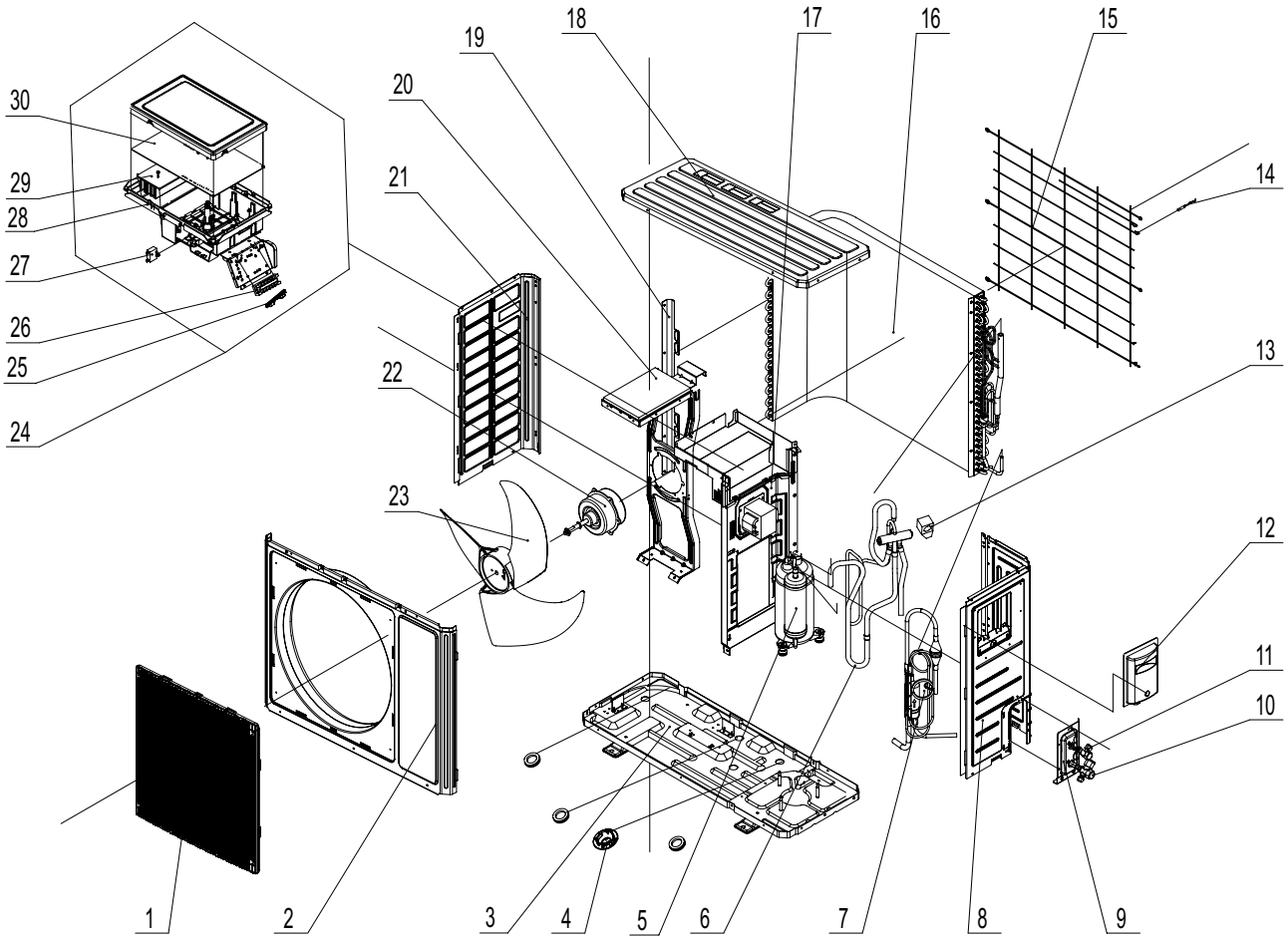
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NO.	Description	Part Code		Qty
		GWH24MD-K3DNE3E/I (white wire drawing with middle display)	GWH24MD-K3DNC9E/I	
	Product Code	CB404N01601	CB145N00900	
1	Front Panel	2002204701	20012678	1
2	Filter Sub-Assy	11122091	11122091	2
3	Screw Cover	24252016	24252016	3
4	Front Case Assy	2001232905	20012329	1
5	Air Louver 1	10512159	10512159	3
6	Helicoid tongue	26112187	26112187	1
7	Left Axile Bush	10512037	10512037	1
8	Rear Case assy	22202117	22202117	1
9	Rubber Plug (Water Tray)	76712012	76712012	1
10	Ring of Bearing	26152025	26152025	1
11	O-Gasket of Cross Fan Bearing	76512203	76512203	1
12	Cross Flow Fan	10352030	10352030	1
13	Evaporator Support	24212103	24212103	1
14	Evaporator Assy	01002269	01002269	1
15	Wall Mounting Frame	01252032	01252032	1
16	Motor Press Plate	26112316	26112316	1
17	Fan Motor	15012098	15012098	1
18	Connecting pipe clamp	26112188	26112188	1
19	Drainage Hose	0523001405	0523001405	1
20	Stepping Motor	1521300101	1521300101	1
21	Crank	10582070	10582070	1
22	Display Board	30565120	30565107	1
23	Guide Louver	10512118	10512118	1
24	Axile Bush	10542036	10542036	2
25	Electric Box	2011210801	2011210801	1
26	Terminal Board	4201026601	4201026601	1
27	Electric Box Cover2	20112081	20112081	1
28	Main Board	30138737	30138737	1
29	Shield Cover of Electric Box	01592092	01592092	1
30	Electric Box Cover1	20122154	20122154	1
31	Lower Shield of Electric Box	01592091	01592091	1
32	Electric Box Assy	20402030	20302128	1
33	Connecting Cable	400205235	400205235	0
34	Connecting Cable	400205408	400205408	0
35	Ambient Temperature Sensor	390000453	390000453	1
36	Temperature Sensor	390000591	390000591	1
37	Remote Controller	305100413	305100413	1

The data above are subject to change without notice.

8.2 Outdoor Unit

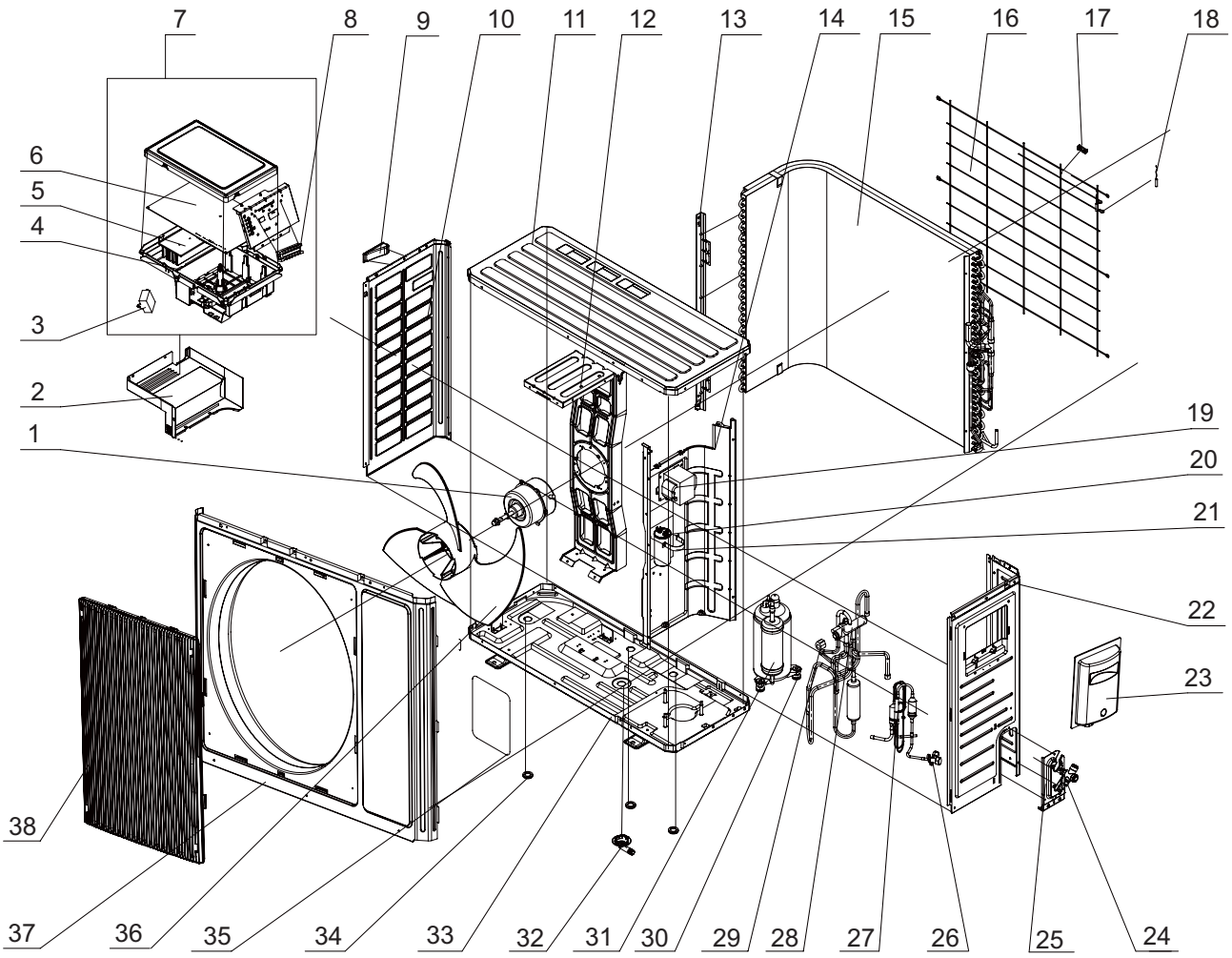
(1)GWH18MC-K3DNA7E/O GWH18MC-K3DNA7F/O



NO.	Description	Part Code		Qty
		GWH18MC-K3DNA7E/O	GWH18MC-K3DNA7F/O	
	Product Code	CB172W02500	CB172W02700	
1	Front Grill	22413015	22413015	1
2	Cabinet	01433034P	01433034P	1
3	Chassis Sub-assy	01205168P	01205168P	1
4	Drainage Joint	26113009	26113009	1
5	Compressor and fittings	00205262	00205262	1
6	4-Way Valve Assy	03123623	03123959	1
7	Capillary Sub-assy	03063505	03063505	1
8	Right Side Plate	0130326902P	0130326902P	1
9	Valve Support Sub-Assy	0171311501P	0171311501P	1
10	Cut off Valve Sub-Assy	07135070	07135070	1
11	Cut off Valve Sub-Assy	07133204	07133204	1
12	Big Handle	26233431	26233431	1
13	Magnet Coil	4300040033	4300040033	1
14	Temperature Sensor	3900030901	3900030901	1
15	Rear Grill	01475019	01475019	1
16	Condenser Assy	01163007	01163007	1
17	Clapboard Sub-Assy	01233117	01233117	1
18	Top Cover	01253034P	01253034P	1
19	Condenser Support Plate	01173165	01173165	1
20	Motor Support Sub-Assy	01703153	01703153	1
21	Left Side Plate	01303169P	01303169P	1
22	Fan Motor	1501307502	1501307502	1
23	Axial Flow Fan	10333016	10333016	1
24	Electric Box Assy	2010300608	02613290	1
25	Wire Clamp	71010003	71010102	1
26	Terminal Board	42010255	42010255	1
27	Capacitor CBB61	33010010	33010010	1
28	Electric Box	20113027	20113027	1
29	Radiator	49010252	49010252	1
30	Main Board	301386923	30148328	1

The data above are subject to change without notice.

(2)GWH24MD-K3DNA7E/O



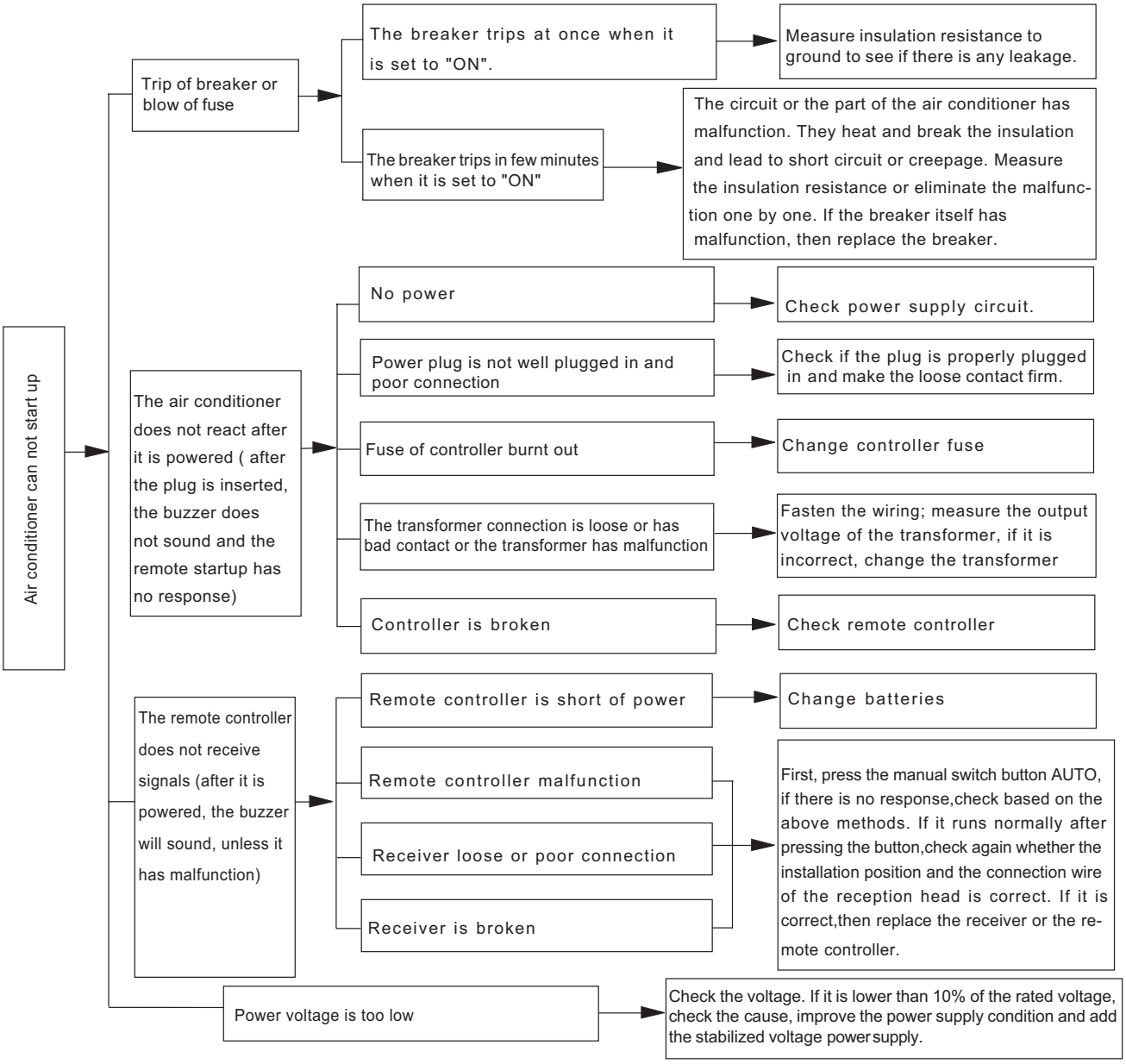
NO.	Description	Part Code	Qty
		GWH24MD-K3DNA7E/O	
	Product Code	CB172W02600	
1	Fan Motor	1501506301	1
2	Electric box (fireproofing)	01413148	1
3	Capacitor CBB61	33010010	1
4	Electric Box	20113008	1
5	Radiator	49010252	1
6	Main Board	301387291	1
7	Electric Box Assy	0260356804	1
8	Terminal Board	42010255	1
9	left handle	26235401	1
10	Left Side Plate	01305041P	1
11	Top Cover	01255005P	1
12	Motor Support Sub-Assy	01705020	1
13	Supporting board(condenser)	01795010	1
14	Clapboard Sub-Assy	01232902	1
15	Condenser Assy	0111398102	1
16	Rear Grill	01473043	1
17	Wiring clamp	26115004	1
18	Temperature Sensor	3900030901	1
19	Reactor	43130021	1
20	Capacitor CBB65	33000065	1
21	Capacitor Clamp sub-assy	01413098	1
22	Right Side Plate	01305053P	1
23	Handle	26235254	1
24	Cut-off valve Sub-Assy	07133464	1
25	Valve support assy	01715010P	1
26	Cut-off valve Sub-Assy	07133060	1
27	Capillary Sub-assy	0306348502	1
28	4-way Valve Assy	03123596	1
29	Magnet Coil	4300040045	1
30	Compressor Gasket	76815215	3
31	Compressor and fittings	00205262	1
32	Drainage Connecter	06123401	1
33	Chassis Sub-assy	01203865P	1
34	Drainage Plug	06813401	3
35	Insulated board (cover of electric box)	20113003	1
36	Axial Flow Fan	10335008	1
37	Front Panel	01535008P	1
38	Front grill	22415002	1

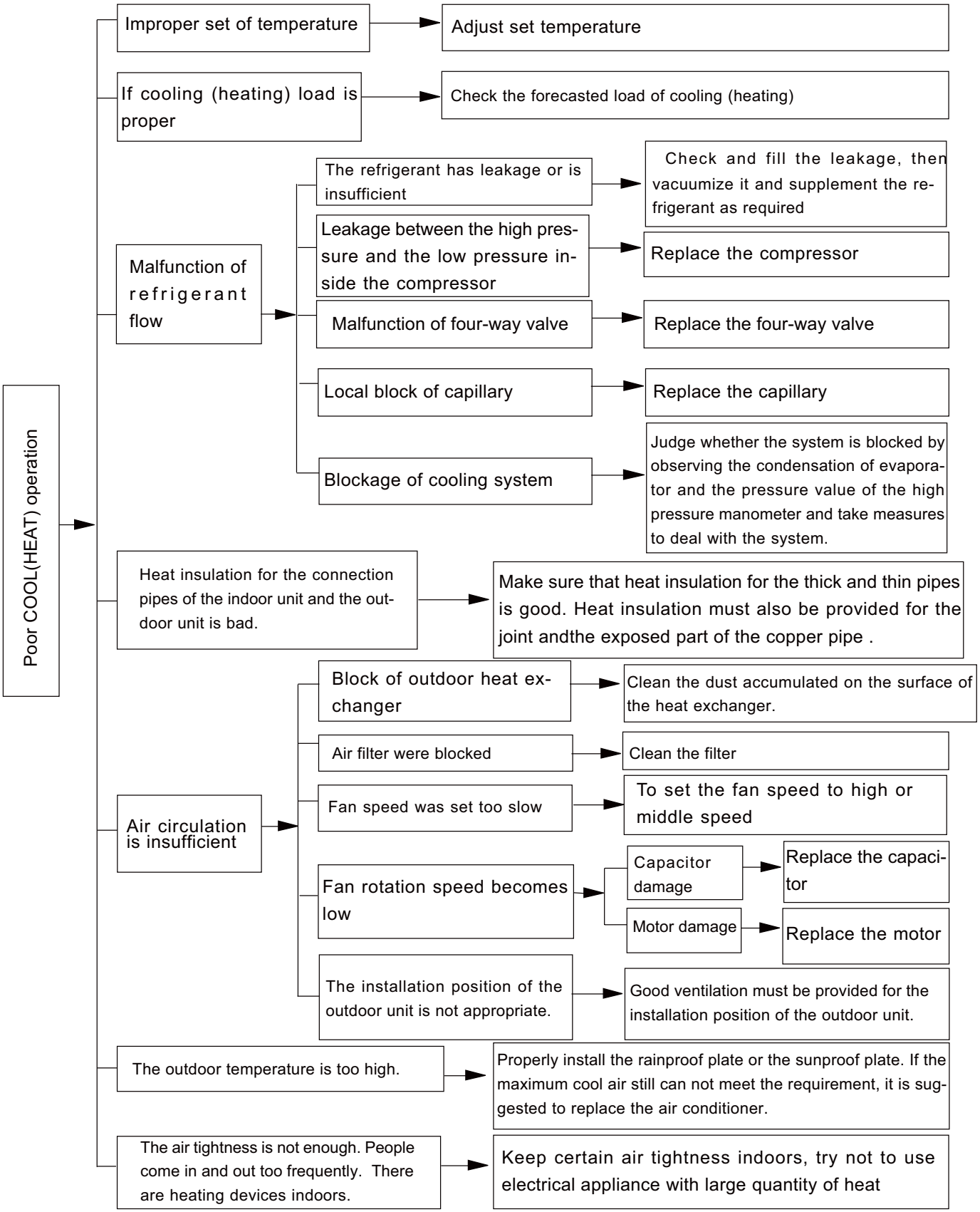
The data above are subject to change without notice.

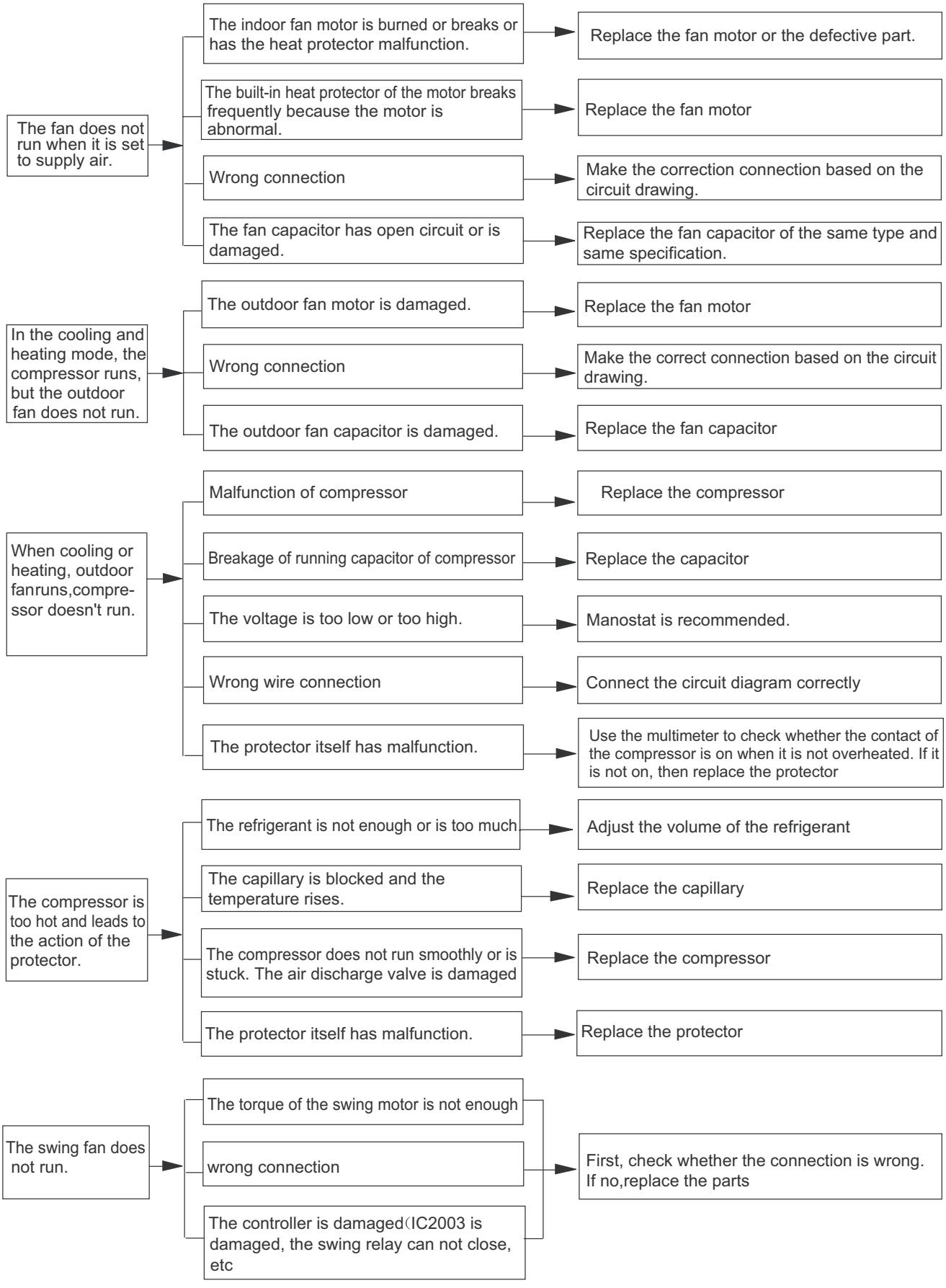
9. Troubleshooting

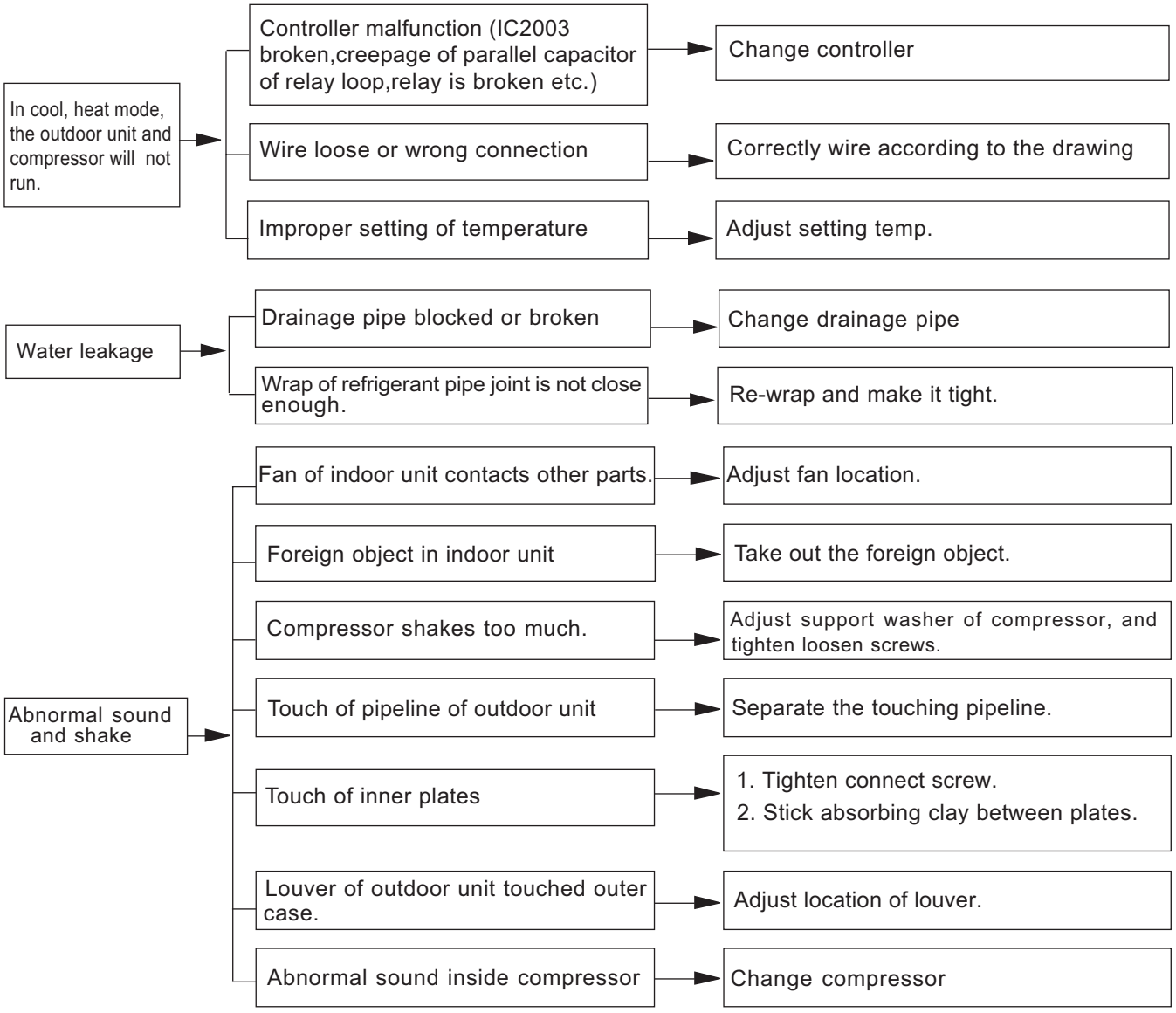
9.1 Malfunction Analysis

Note: When replacing the controller, make sure insert the wire jumper into the new controller, otherwise the unit display C5

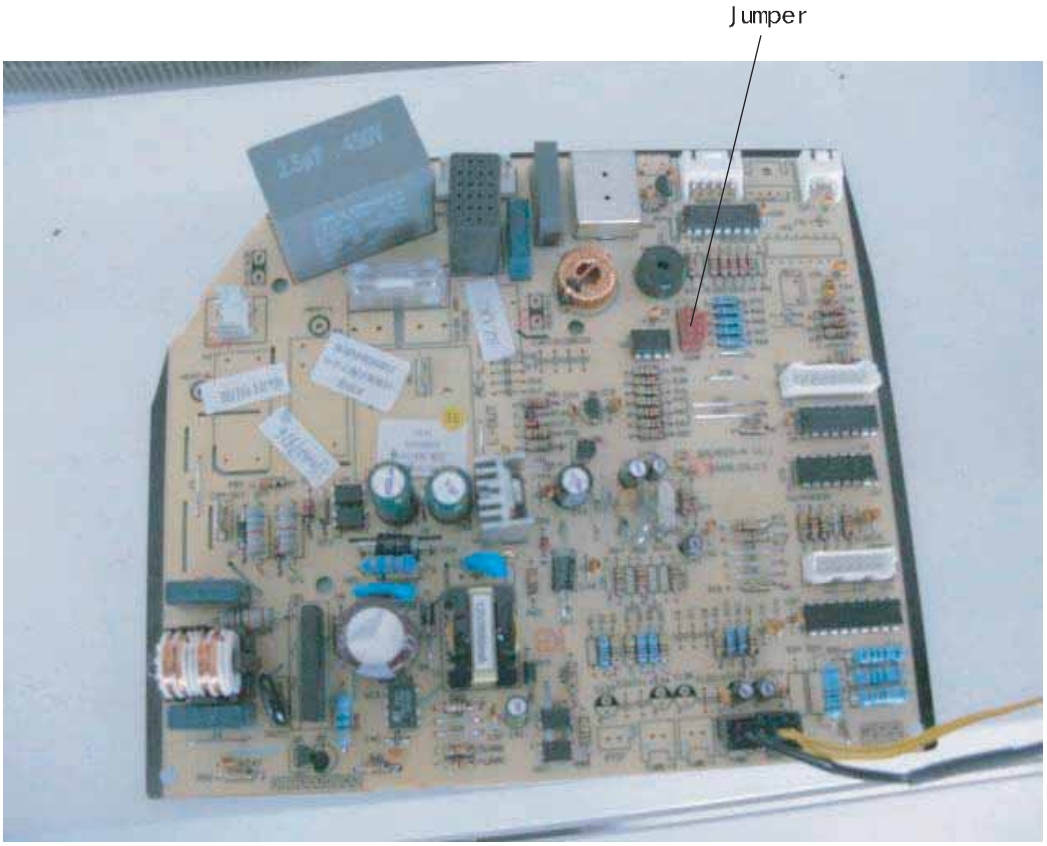



Poor COOL(HEAT) operation
Improper set of temperature
Adjust set temperature
If cooling (heating) load is proper
Check the forecasted load of cooling (heating)
Malfunction of refrigerant flow
The refrigerant has leakage or is insufficient
Check and fill the leakage, then vacuumize it and supplement the refrigerant as required
Leakage between the high pressure and the low pressure inside the compressor
Replace the compressor
Malfunction of four-way valve
Replace the four-way valve
Local block of capillary
Replace the capillary
Blockage of cooling system
Judge whether the system is blocked by observing the condensation of evaporator and the pressure value of the high pressure manometer and take measures to deal with the system.
Heat insulation for the connection pipes of the indoor unit and the outdoor unit is bad.
Make sure that heat insulation for the thick and thin pipes is good. Heat insulation must also be provided for the joint andthe exposed part of the copper pipe .
Air circulation is insufficient
Block of outdoor heat exchanger
Clean the dust accumulated on the surface of the heat exchanger.
Air filter were blocked
Clean the filter
Fan speed was set too slow
To set the fan speed to high or middle speed
Fan rotation speed becomes low
Capacitor damage
Replace the capacitor
Motor damage
Replace the motor
The installation position of the outdoor unit is not appropriate.
Good ventilation must be provided for the installation position of the outdoor unit.
The outdoor temperature is too high.
Properly install the rainproof plate or the sunproof plate. If the maximum cool air still can not meet the requirement, it is suggested to replace the air conditioner.
The air tightness is not enough. People come in and out too frequently. There are heating devices indoors.
Keep certain air tightness indoors, try not to use electrical appliance with large quantity of heat


The fan does not run when it is set to supply air.
The indoor fan motor is burned or breaks or has the heat protector malfunction.
Replace the fan motor or the defective part.
The built-in heat protector of the motor breaks frequently because the motor is abnormal.
Replace the fan motor
Wrong connection
Make the correction connection based on the circuit drawing.
The fan capacitor has open circuit or is damaged.
Replace the fan capacitor of the same type and same specification.
In the cooling and heating mode, the compressor runs, but the outdoor fan does not run.
The outdoor fan motor is damaged.
Replace the fan motor
Wrong connection
Make the correct connection based on the circuit drawing.
The outdoor fan capacitor is damaged.
Replace the fan capacitor
When cooling or heating, outdoor fanruns,compressor doesn't run.
Malfunction of compressor
Replace the compressor
Breakage of running capacitor of compressor
Replace the capacitor
The voltage is too low or too high.
Manostat is recommended.
Wrong wire connection
Connect the circuit diagram correctly
The protector itself has malfunction.
Use the multimeter to check whether the contact of the compressor is on when it is not overheated. If it is not on, then replace the protector
The compressor is too hot and leads to the action of the protector.
The refrigerant is not enough or is too much
Adjust the volume of the refrigerant
The capillary is blocked and the temperature rises.
Replace the capillary
The compressor does not run smoothly or is stuck. The air discharge valve is damaged
Replace the compressor
The protector itself has malfunction.
Replace the protector
The swing fan does not run.
The torque of the swing motor is not enough
wrong connection
The controller is damaged（IC2003 is damaged, the swing relay can not close, etc
First, check whether the connection is wrong. If no,replace the parts

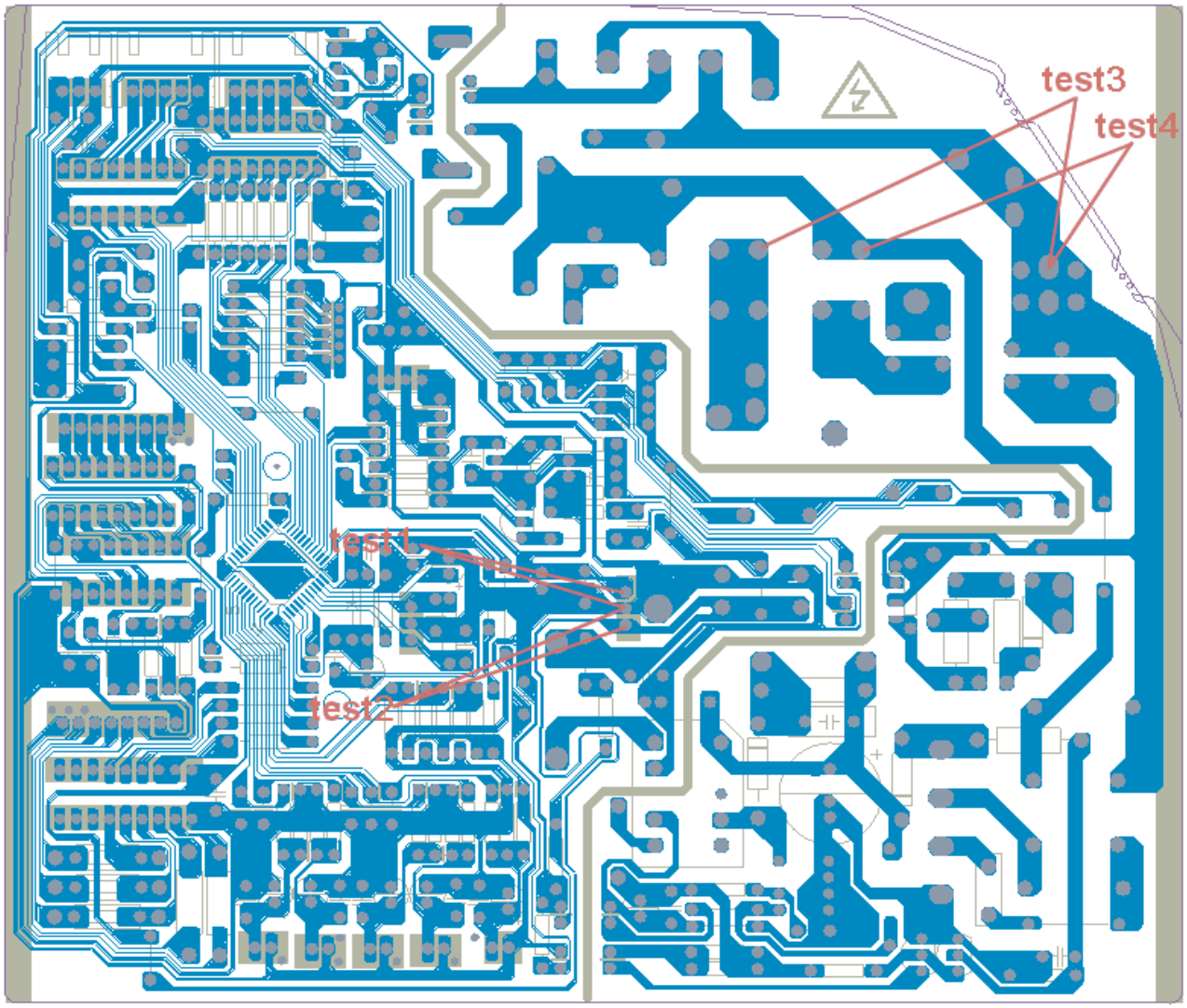

In cool, heat mode, the outdoor unit and compressor will not run.
Controller malfunction (IC2003 broken,creepage of parallel capacitor of relay loop,relay is broken etc.)
Change controller
Wire loose or wrong connection
Correctly wire according to the drawing
Improper setting of temperature
Adjust setting temp.
Water leakage
Drainage pipe blocked or broken
Change drainage pipe
Wrap of refrigerant pipe joint is not close enough.
Re-wrap and make it tight.
Abnormal sound and shake
Fan of indoor unit contacts other parts.
Adjust fan location.
Foreign object in indoor unit
Take out the foreign object.
Compressor shakes too much.
Adjust support washer of compressor, and tighten loosen screws.
Touch of pipeline of outdoor unit
Separate the touching pipeline.
Touch of inner plates
1. Tighten connect screw.
2. Stick absorbing clay between plates.
Louver of outdoor unit touched outer case.
Adjust location of louver.
Abnormal sound inside compressor
Change compressor

Appearance of Controller of Indoor Unit



Note: When replacing the controller, make sure insert the wire jumper into the new controller, otherwise the unit display C5.

The PCB above is subject to change without notice.



Test Point No.	Test Point	Relevant Component	Test result under normal conditions
Test 1	between two points	weak-current power	5V
Test 2	between two points	weak-current power	12V
Test 3	between two points	N/L line	230VAC ±10%
Test 4	between two points	N/L line	230VAC ±11%

The PCB above is subject to change without notice.

Malfunctions

Normally,diagnose troubles according to the trouble diagnosis procedure as described below.(Refer to the check points in servicing written on the wiring diagrams attached to the indoor/outdoor units.)

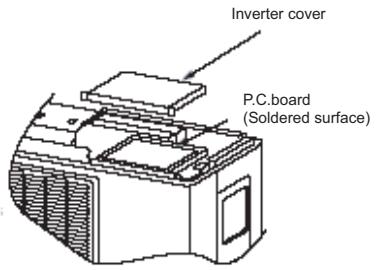
No.	Troubleshooting procedure
1	Confirmation
2	Judgement by Flashing LED of Indoor/Outdoor Unit
3	How to Check simply the main part

NOTE:

A large-capacity electrolytic capacitor is used in the outdoor unit controller(inverter).Therefore,if the power supply is turned off,charge(charging voltage DC280V to 380V)remains and disc harging takes a lot of time. After turning off the power source,if touching the charging section before discharging, an electrical shock may be caused. Discharge the electrol ytic capacitor completely by using soldering iron,etc.

<Discharging method>

(1) remove the inverter cover(Outdoor Unit)



(2)As shown below,connect the discharge resistance(approx.100Ω20W)or plug of the sold ering iron to voltage between + - terminals of the electrolytic capacitor (test3 “D ” and “E” point) on PC Board for 30s, and then peformedischarging.

9.2 Error Code

1.Confirmation

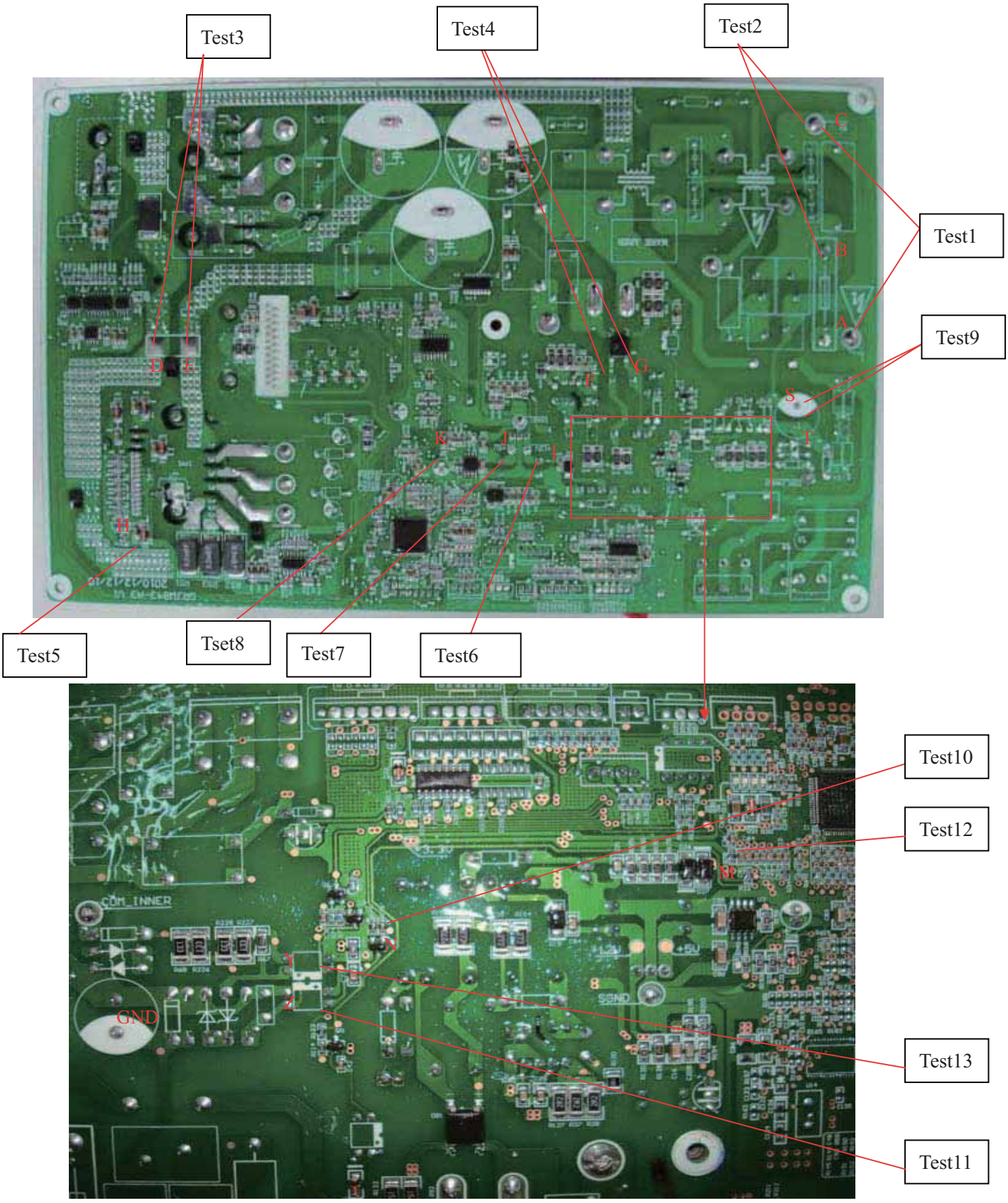
(1)Confirmation of Power Supply

Confirm that the power breaker operates(ON) normally;

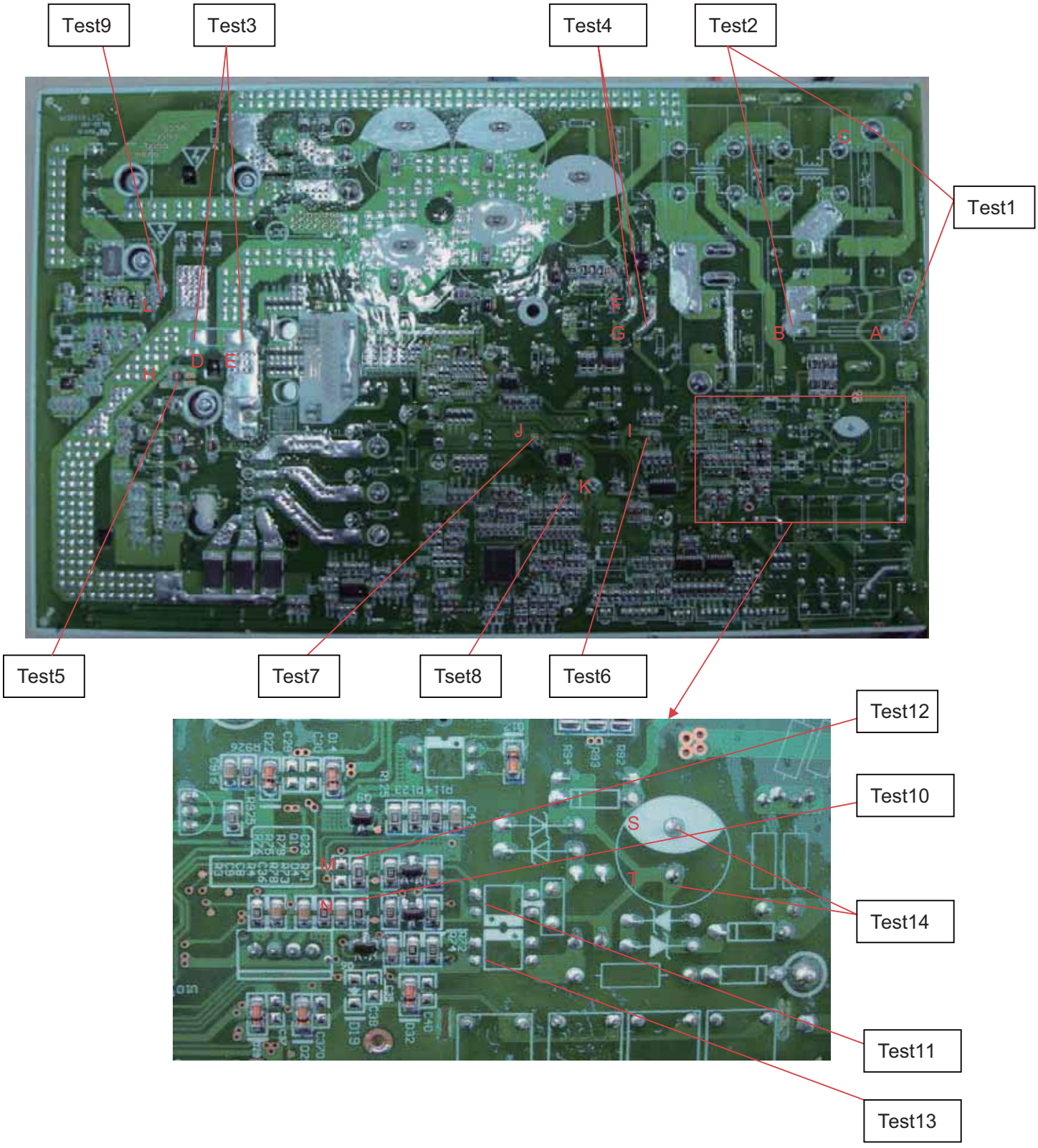
(2)Confirmation of Power Voltage

Confirm that power voltage is AC 220-240±10%. If power voltage is not in this range, the unit may not operate normally.

GWH18MC-K3DNA7E/O



GWH24MD-K3DNA7E/O



No.	Malfunction Name	Display Method of Indoor Unit				Display Method of Outdoor Unit (Indicator has 3 kinds of display status and they will be displayed circularly every 5s.)				A/C status	Possible Reasons
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)			□ OFF ■ Illuminated ☆ Blink					
			Operation Indicator	Cool Indicator	Heating Indicator	D5 (D40)	D6 (D41)	D16 (D42)	D30 (D43)		
1	High pressure protection of system	E1	OFF 3s and blink once			□	☆	☆	☆	During cooling and drying operation, except indoor fan operates, all loads stop operation. During heating operation, the complete unit stops.	Possible reasons: 1. Refrigerant was superabundant; 2. Poor heat exchange (including filth blockage of heat exchanger and bad radiating environment); Ambient temperature is too high.
2	Antifreezing protection	E2	OFF 3S and blink twice			■	□	■	□	During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates.	1. Poor air-return in indoor unit; 2. Fan speed is abnormal; 3. Evaporator is dirty.
3	High discharge temperature protection of compressor	E4	OFF 3S and blink 4 times			■	□	■	☆	During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	Please refer to the malfunction analysis (discharge protection, overload).
4	Overcurrent protection	E5	OFF 3S and blink 5 times			□	■	☆	□	During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	1. Supply voltage is unstable; 2. Supply voltage is too low and load is too high; 3. Evaporator is dirty.
5	Communi-cation Malfunction	E6	OFF 3S and blink 6 times			□	□	□	☆	During cooling operation, compressor stops while indoor fan motor operates. During heating operation, the complete unit stops.	Refer to the corresponding malfunction analysis.
6	High temperature resistant protection	E8	OFF 3S and blink 8 times			■	□	■	■	During cooling operation: compressor will stop while indoor fan will operate. During heating operation, the complete unit stops.	Refer to the malfunction analysis (overload, high temperature resistant).
7	Circuit PG motor (indoor fan) has circuit malfunction by zero cross detection	U8	OFF 3S and blink for 17 times							Operation of remote controller or control panel is available, but the unit wont act.	Control board is damaged.
8	PG motor (indoor fan motor) does not operate	H6	OFF 3S and blink 11 times							The complete unit will stop operation.	Poor connection for PGF in circuit diagram; Malfunction of indoor units control panel AP1; Malfunction of indoor units motor M1.
9	Malfunction protection of jumper cap	C5	OFF 3S and blink 15 times							The complete unit will stop operation.	Poor connection for the jumper cap on indoor units control panel AP1; please reinsert or replace the jumper cap;
10	Indoor ambient temperature sensor is open/short circuited	F1		OFF 3S and blink once						During cooling and drying operation, indoor unit operates while other loads will stop; during heating operation, the complete unit will stop operation.	1.Room temperature sensor hasnt been connected well with indoor units control panel AP1 (refer to the wiring diagram for indoor unit); 2.Room temperature sensor is damaged (please refer to the resistance table of temperature sensor)

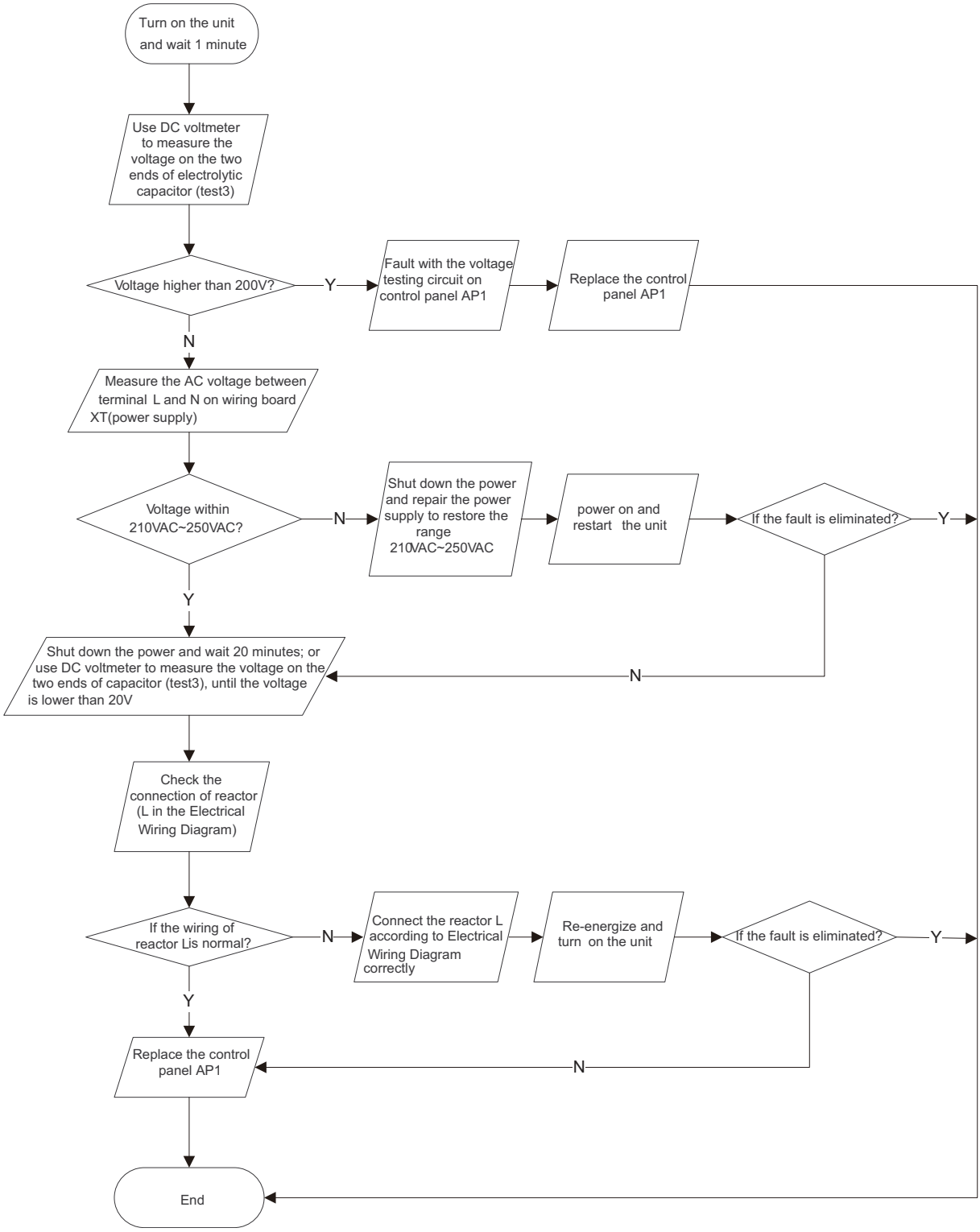
No.	Malfunction Name	Display Method of Indoor Unit				Display Method of Outdoor Unit (Indicator has 3 kinds of display status and they will be displayed circularly every 5s.)				A/C status	Possible Reasons
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)			□ OFF ■ Illuminated ☆ Blink					
			Operation Indicator	Cool Indicator	Heating Indicator	D5 (D40)	D6 (D41)	D16 (D42)	D30 (D43)		
11	Indoor evaporator temperature sensor is open/short circuited	F2		OFF 3S and blink twice						During cooling and drying operation, indoor unit will operate while other loads will stop; During heating operation, the complete unit will stop operation.	1.Room temperature sensor hasnt been connected well with indoor units control panel AP1 (refer to the wiring diagram for indoor unit); 2.Room temperature sensor is damaged (please refer to the resistance table of temperature sensor)
12	Outdoor ambient temperature sensor is open/short circuited	F3		OFF 3S and blink 3 times		□	□	☆	■	During cooling and drying operating, compressor stops while indoor fan operates; During heating operation, the complete unit will stop operation	Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
13	Outdoor condenser temperature sensor is open/short circuited	F4		OFF 3S and blink 4 times		□	□	☆	□	During cooling and drying operation, compressor stops while indoor fan will operate; During heating operation, the complete unit will stop operation.	Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
14	Outdoor discharge temperature sensor is open/short circuited	F5		OFF 3S and blink 5 times		□	□	☆	☆	During cooling and drying operation, compressor will sop after operating for about 3 mins, while indoor fan will operate; During heating operation, the complete unit will stop after operating for about 3 mins.	1.Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) 2.The head of temperature sensor hasnt been inserted into the copper tube
15	Limit/ decrease frequency due to overload	F6		OFF 3S and blink for 6 times		■	□	☆	☆	All loads operate normally, while operation frequency for compressor is decreased	Refer to the malfunction analysis (overload, high temperature resistant)
16	Decrease frequency due to overcurrent	F8		OFF 3S and blink 8 times		■	■	□	■	All loads operate normally, while operation frequency for compressor is decreased	The input supply voltage is too low; System pressure is too high and overload
17	Decrease frequency due to high air discharge	F9		OFF 3S and blink 9 times		■	■	□	□	All loads operate normally, while operation frequency for compressor is decreased	Overload or temperature is too high; Refrigerant is insufficient; Malfunction of electric expansion valve (EKV)
18	Voltage for DC bus-bar is too high	PH		OFF 3S and blink 11 times		□	■	□	☆	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 265VAC, turn on the unit after the supply voltage is increased to the normal range. 2.If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if its normal, theres malfunction for the circuit, please replace the control panel (AP1)
19	Malfunction of complete units current detection	U5		OFF 3S and blink 13 times		□	■	☆	■	During cooling and drying operation, the compressor will stop while indoor fan will operate; During heating operating, the complete unit will stop operation.	Theres circuit malfunction on outdoor units control panel AP1, please replace the outdoor units control panel AP1.
20	Overcurrent protection of phase current for compressor	P5		OFF 3S and blink 15 times		□	☆	□	□	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor.

No.	Malfunction Name	Display Method of Indoor Unit				Display Method of Outdoor Unit (Indicator has 3 kinds of display status and they will be displayed circularly every 5s.)				A/C status	Possible Reasons
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)			□ OFF ■ Illuminated ☆ Blink					
			Operation Indicator	Cool Indicator	Heating Indicator	D5 (D40)	D6 (D41)	D16 (D42)	D30 (D43)		
21	Defrosting	H1			OFF 3S and blink once					Defrosting will occur in heating mode. Compressor will operate while indoor fan will stop operation.	Its the normal state
22	Static dedusting protection	H2			OFF 3S and blink twice						/
23	Overload protection for compressor	H3			OFF 3S and blink 3 times	□	☆	☆	□	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	1. Wiring terminal OVC-COMP is loosened. In normal state, the resistance for this terminal should be less than 1ohm. 2.Refer to the malfunction analysis (discharge protection, overload)
24	System is abnormal	H4			OFF 3S and blink 4 times	■	□	■	■	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (overload, high temperature resistant)
25	IPM protection	H5			OFF 3S and blink 5 times	□	☆	□	■	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor.
26	PFC protection	HC			OFF 3S and blink 6 times	□	■	☆	☆	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis
27	Desynchron-izing of compressor	H7			OFF 3S and blink 7 times	□	☆	■	☆	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor.
28	Decrease frequency due to high temperature resistant during heating operation	H0			OFF 3S and blink 10 times	■	□	☆	☆	All loads operate normally, while operation frequency for compressor is decreased	Refer to the malfunction analysis (overload, high temperature resistant)
29	Failure start-up	LC			OFF 3S and blink 11 times	□	☆	□	☆	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis
30	Malfunction of phase current detection circuit for compressor	U1			OFF 3S and blink 13 times	□	☆	■	□	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Replace outdoor control panel AP1

No.	Malfunction Name	Display Method of Indoor Unit				Display Method of Outdoor Unit (Indicator has 3 kinds of display status and they will be displayed circularly every 5s.)				A/C status	Possible Reasons
		Dual-8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)			□ OFF ■ Illuminated ☆ Blink					
			Operation Indicator	Cool Indicator	Heating Indicator	D5 (D40)	D6 (D41)	D16 (D42)	D30 (D43)		
31	EEPROM malfunction	EE			OFF 3S and blink 15 times	□	□	□	■	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Replace outdoor control panel AP1
32	Charging malfunction of capacitor	PU			OFF 3S and blink 17 times	□	■	□	■	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Refer to the part three—charging malfunction analysis of capacitor
33	Malfunction of module temperature sensor circuit	P7			OFF 3S and blink 18 times	□	□	■	☆	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Replace outdoor control panel AP1
34	Module high temperature protection	P8			OFF 3S and blink 19 times	■	□	☆	■	During cooling operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	After the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If its no use, please replace control panel AP1.
35	Malfunction of voltage dropping for DC bus-bar	U3			OFF 3S and blink 20 times	□	■	■	■	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Supply voltage is unstable
36	Voltage of DC bus-bar is too low	PL			OFF 3S and blink 21 times	□	■	■	□	During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 150VAC, turn on the unit after the supply voltage is increased to the normal range. 2.If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if its normal, theres malfunction for the circuit, please replace the control panel (AP1)
37	Limit/ decrease frequency due to high temperature of module	EU				■	■	■	☆	All loads operate normally, while operation frequency for compressor is decreased	Discharging after the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If its no use, please replace control panel AP1.
38	The four-way valve is abnormal	U7				■	□	☆	□	If this malfunction occurs during heating operation, the complete unit will stop operation.	1.Supply voltage is lower than AC175V; 2.Wiring terminal 4V is loosened or broken; 3.4V is damaged, please replace 4V.
39	Zero-crossing malfunction of outdoor unit	U9				■	■	☆	□	During cooling operation, compressor will stop while indoor fan will operate; during heating,the complete unit will stop operation.	Replace outdoor control panel AP1
40	Limit/ decrease frequency due to antifreezing	FH				■	■	■	□	All loads operate normally, while operation frequency for compressor is decreased	Poor air-return in indoor unit or fan speed is too low

9.3 Troubleshooting

(1)Capacitor charge fault(Fault with outdoor unit)(AP1 below refers to the outdoor control panel)
Main Check Points:
Use AC voltmeter to check if the voltage between terminal L and N on the wiring board is within 210V AC~240V AC.
If the reactor(L) is correctly connected? If the connection is loose or fallen? If the reactor (L) is damaged?
Fault diagnos is process:

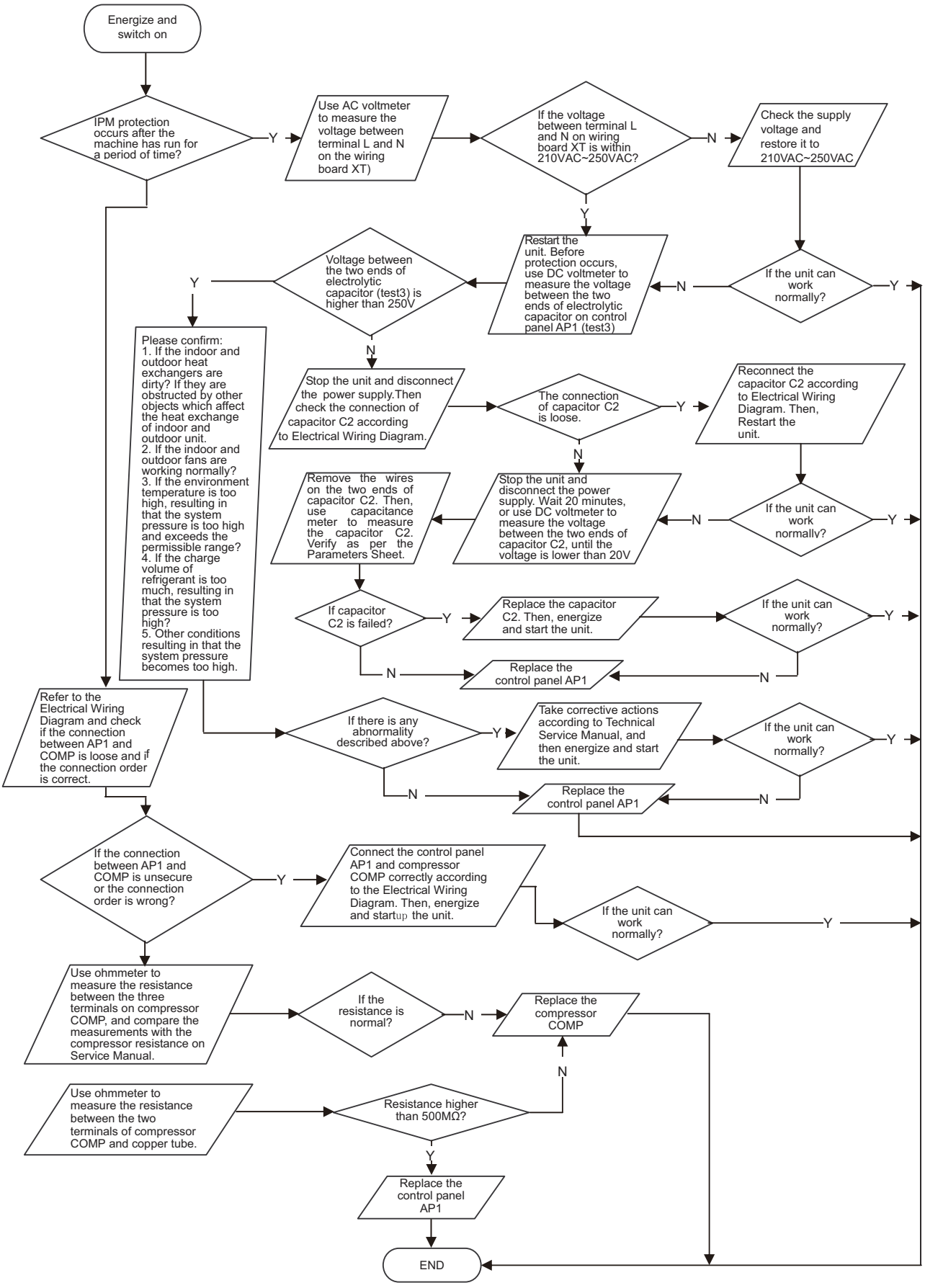


(2) IPM Protection, Out-of-step Fault, Compressor Phase Overcurrent (AP1 below refers to the outdoor control panel)

Main check points:

- If the connection between control panel AP1 and compressor COMP is secure? If loose? If the connection is in correct order?
- If the voltage input of the machine is within normal range? (Use AC voltmeter to measure the voltage between terminal L and N on the wiring board XT)
- If the compressor coil resistance is normal? If the insulation of compressor coil against the copper tube is in good condition?
- If the working load of the machine are too high? If the radiation is good?
- If the charge volume of refrigerant is correct?

Fault diagnosis process:


Energize and switch on
IPM protection occurs after the machine has run for a period of time?
Y
Use AC voltmeter to measure the voltage between terminal L and N on the wiring board XT)
If the voltage between terminal L and N on wiring board XT is within 210VAC~250VAC?
N
Check the supply voltage and restore it to 210VAC~250VAC
Y
Restart the unit. Before protection occurs, use DC voltmeter to measure the voltage between the two ends of electrolytic capacitor on control panel AP1 (test3)
N
If the unit can work normally?
Y
Voltage between the two ends of electrolytic capacitor (test3) is higher than 250V
Y
N
Please confirm:
1. If the indoor and outdoor heat exchangers are dirty? If they are obstructed by other objects which affect the heat exchange of indoor and outdoor unit.
2. If the indoor and outdoor fans are working normally?
3. If the environment temperature is too high, resulting in that the system pressure is too high and exceeds the permissible range?
4. If the charge volume of refrigerant is too much, resulting in that the system pressure is too high?
5. Other conditions resulting in that the system pressure becomes too high.
Stop the unit and disconnect the power supply.Then check the connection of capacitor C2 according to Electrical Wiring Diagram.
The connection of capacitor C2 is loose.
Y
Reconnect the capacitor C2 according to Electrical Wiring Diagram. Then, Restart the unit.
N
Stop the unit and disconnect the power supply. Wait 20 minutes, or use DC voltmeter to measure the voltage between the two ends of capacitor C2, until the voltage is lower than 20V
N
If the unit can work normally?
Y
Remove the wires on the two ends of capacitor C2. Then, use capacitance meter to measure the capacitor C2. Verify as per the Parameters Sheet.
If capacitor C2 is failed?
Y
Replace the capacitor C2. Then, energize and start the unit.
If the unit can work normally?
Y
N
Replace the control panel AP1
N
Refer to the Electrical Wiring Diagram and check if the connection between AP1 and COMP is loose and if the connection order is correct.
If there is any abnormality described above?
Y
Take corrective actions according to Technical Service Manual, and then energize and start the unit.
If the unit can work normally?
Y
N
Replace the control panel AP1
N
If the connection between AP1 and COMP is unsecure or the connection order is wrong?
Y
Connect the control panel AP1 and compressor COMP correctly according to the Electrical Wiring Diagram. Then, energize and startup the unit.
If the unit can work normally?
Y
Use ohmmeter to measure the resistance between the three terminals on compressor COMP, and compare the measurements with the compressor resistance on Service Manual.
If the resistance is normal?
N
Replace the compressor COMP
N
Use ohmmeter to measure the resistance between the two terminals of compressor COMP and copper tube.
Resistance higher than 500MΩ?
Y
Replace the control panel AP1
END

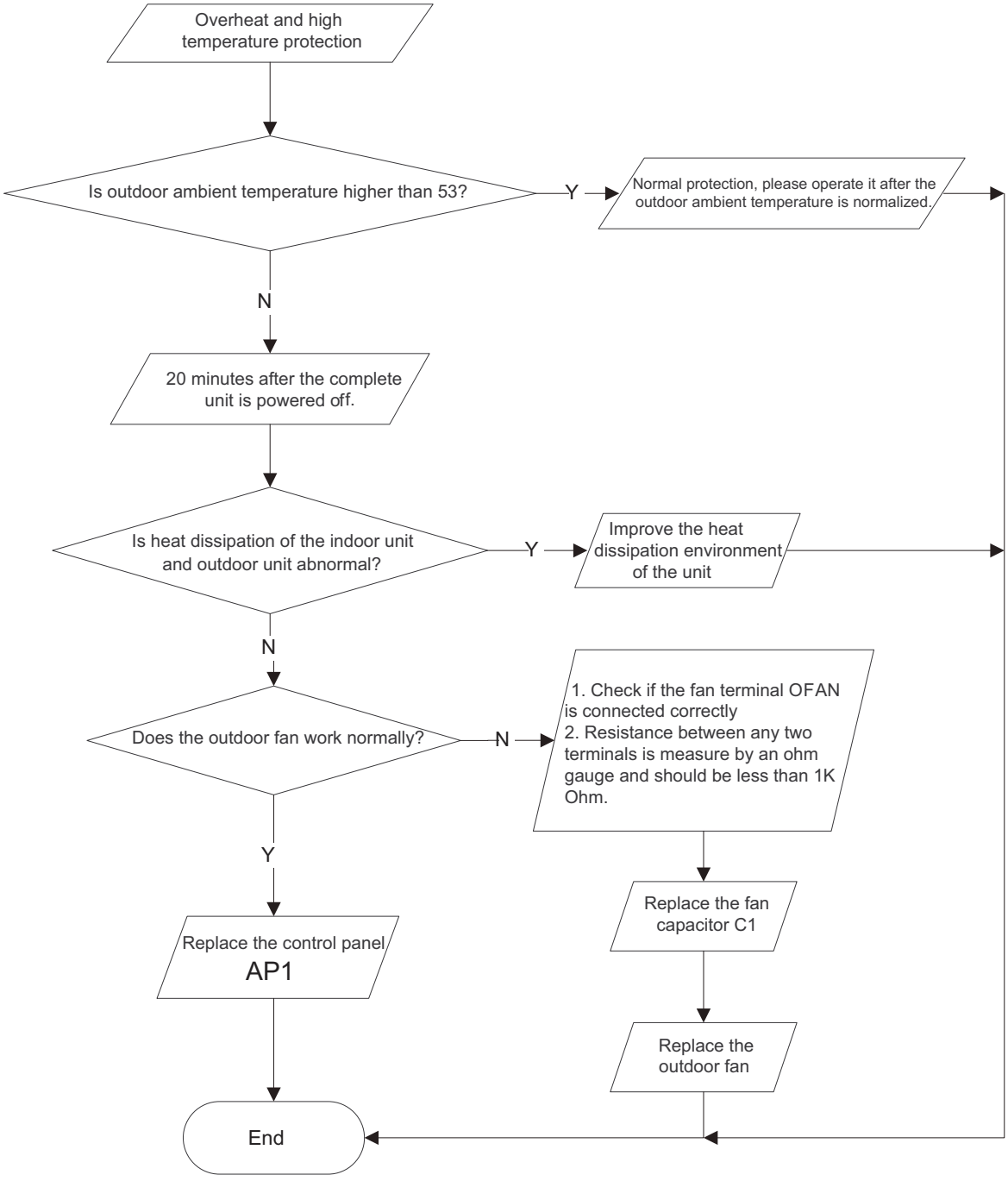
(3)High temperature and overload prection diagnosis (AP1 here in after refers to the control board of the outdoor unit)

Mainly detect:

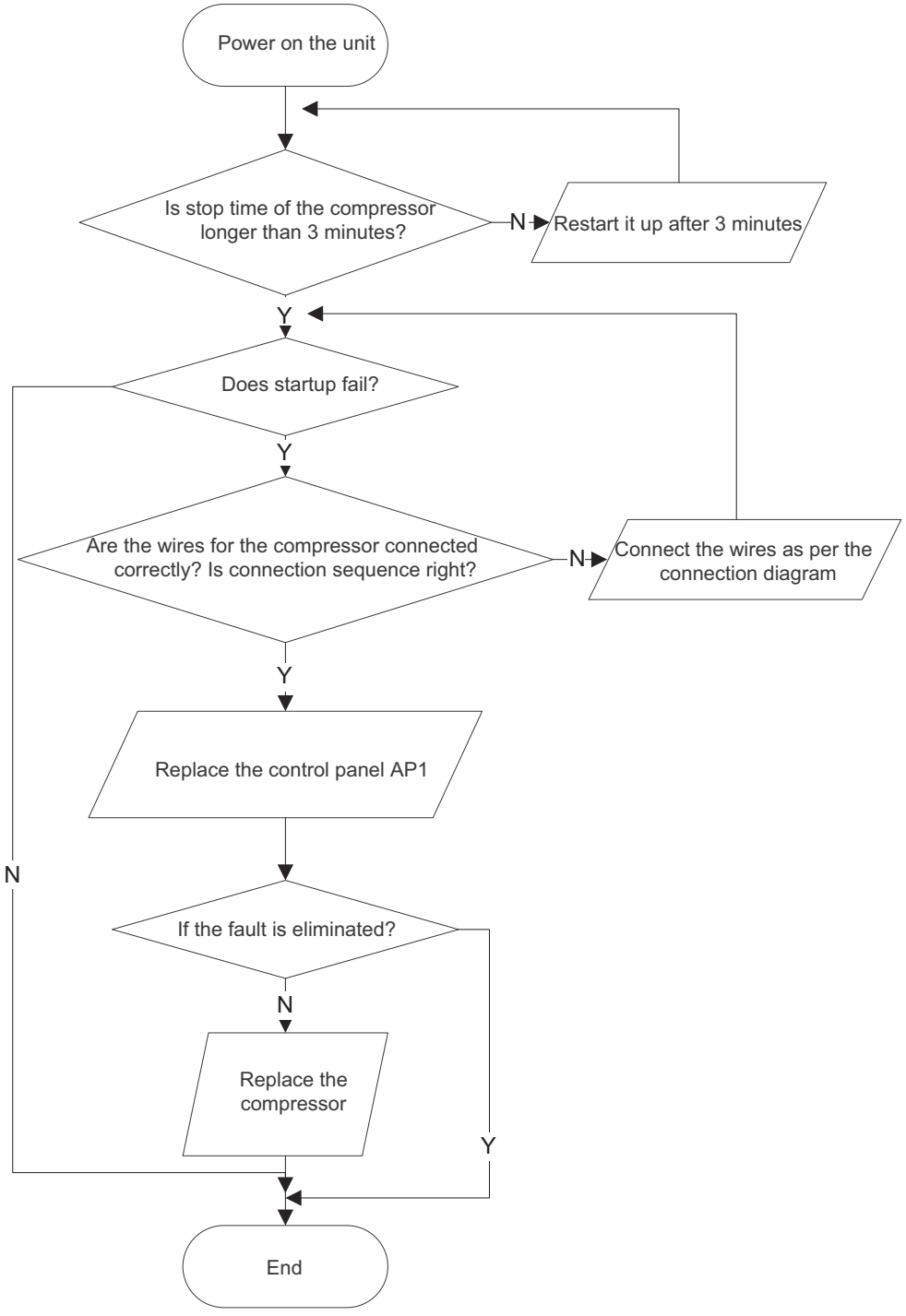
Is out door ambient temperature in normal range?

Are the outdoor and indoor fans operating normally?

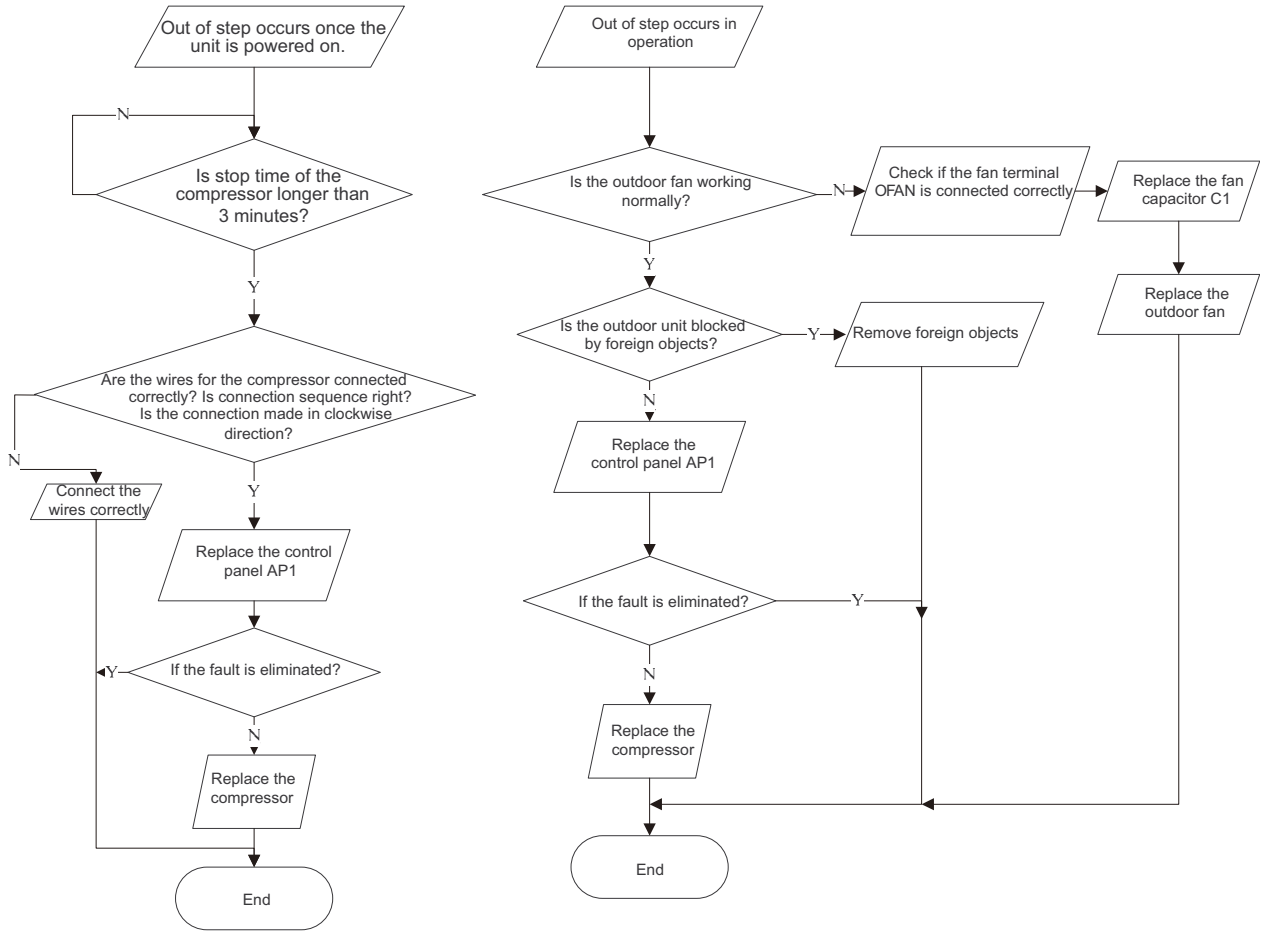
Is the heat dissipation environment inside and outside the unit is good?



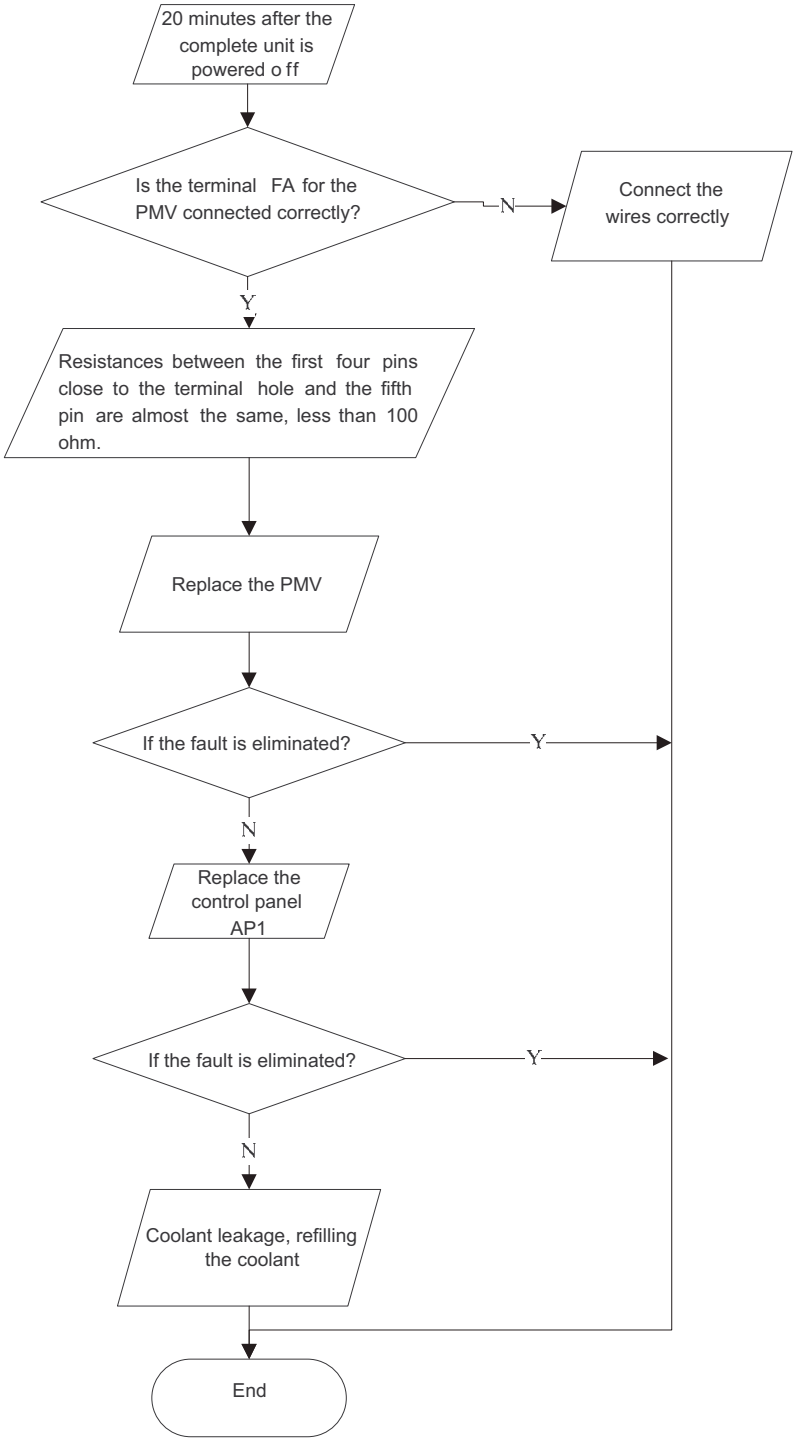
(4) Start-up failure(following AP1 for outdoor unit control board)
Mainly detect:
Whether the compressor wiring is connected correct?
Is time for compressor stopping enough?
Is compressor broken?



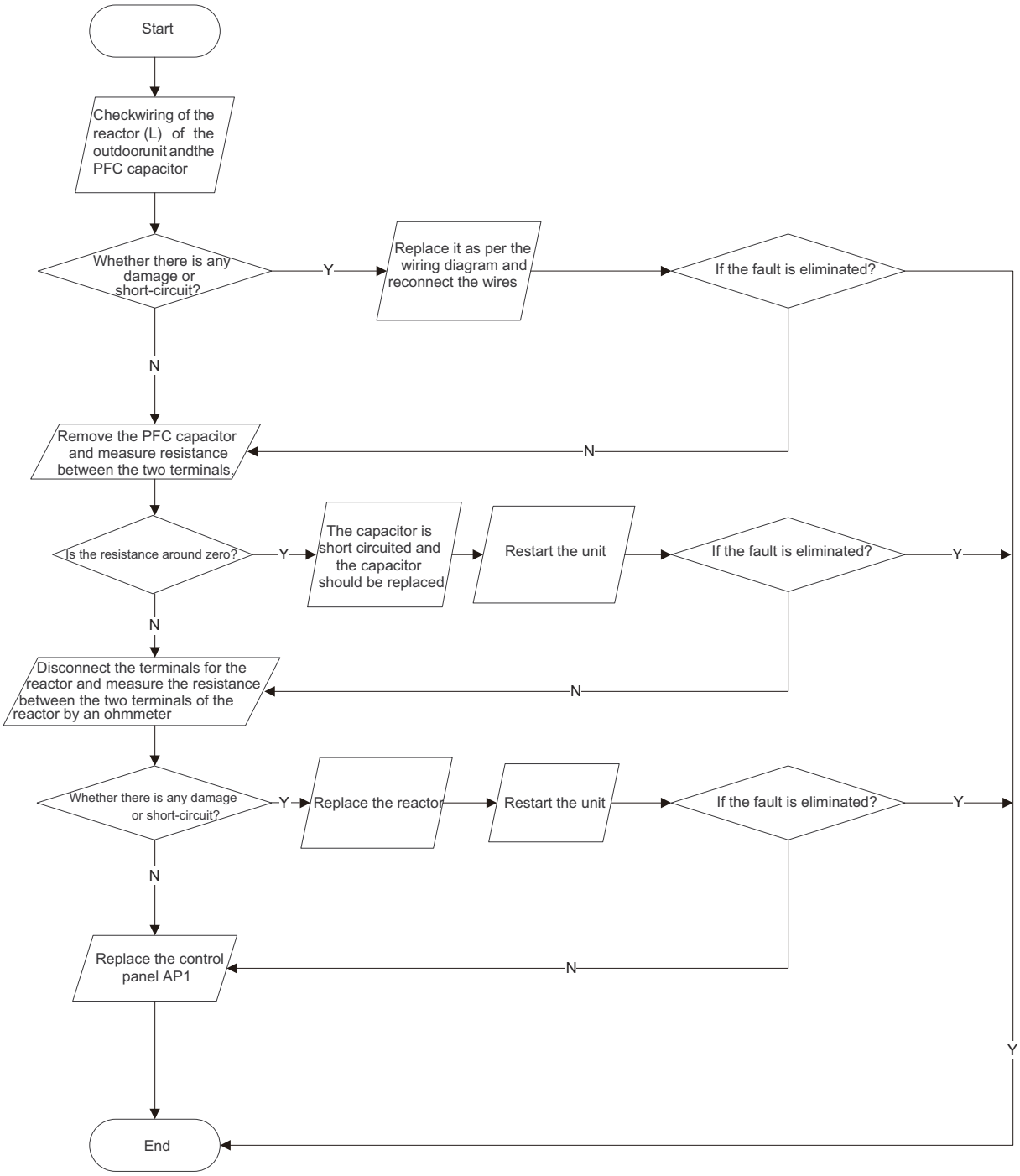
(5) Out of step diagnosis for the compressor (AP1 here in after refers to the control board of the outdoor unit)
Mainly detect:
Whether the system pressure is too high?
whether the input voltage is too low?



(6) Overload and air exhaust malfunction diagnosis (following AP1 for outdoor unit control board)
Mainly detect:
Wether the PMV is connected well or not? Is PMV damaged?
Is refrigerant leaked?



(7) Power factor correct or (PFC) fault (a fault of outdoor unit)(AP1 here in after refers to the control board of the outdoor unit)



(8) Communication malfunction: (following AP1 for outdoor unit control board)
Mainly detect:
Detect the indoor and outdoor units connection wire and indoor and outdoor units inside wiring is connect well or not. if is there any damage?
Is there any damage for the indoor unit mainboard communication circuit? Is communication circuit damaged?
The flow chart for malfunction detect:



Appendix 1: Resistance Table for Indoor and Outdoor Ambient Temperature Sensors (15K)

Temp(℃)	Resistance(kΩ)		Temp(℃)	Resistance(kΩ)		Temp(℃)	Resistance(kΩ)		Temp(℃)	Resistance(kΩ)
-19	138.1		20	18.75		59	3.848		98	1.071
-18	128.6		21	17.93		60	3.711		99	1.039
-17	121.6		22	17.14		61	3.579		100	1.009
-16	115		23	16.39		62	3.454		101	0.98
-15	108.7		24	15.68		63	3.333		102	0.952
-14	102.9		25	15		64	3.217		103	0.925
-13	97.4		26	14.36		65	3.105		104	0.898
-12	92.22		27	13.74		66	2.998		105	0.873
-11	87.35		28	13.16		67	2.896		106	0.848
-10	82.75		29	12.6		68	2.797		107	0.825
-9	78.43		30	12.07		69	2.702		108	0.802
-8	74.35		31	11.57		70	2.611		109	0.779
-7	70.5		32	11.09		71	2.523		110	0.758
-6	66.88		33	10.63		72	2.439		111	0.737
-5	63.46		34	10.2		73	2.358		112	0.717
-4	60.23		35	9.779		74	2.28		113	0.697
-3	57.18		36	9.382		75	2.206		114	0.678
-2	54.31		37	9.003		76	2.133		115	0.66
-1	51.59		38	8.642		77	2.064		116	0.642
0	49.02		39	8.297		78	1.997		117	0.625
1	46.6		40	7.967		79	1.933		118	0.608
2	44.31		41	7.653		80	1.871		119	0.592
3	42.14		42	7.352		81	1.811		120	0.577
4	40.09		43	7.065		82	1.754		121	0.561
5	38.15		44	6.791		83	1.699		122	0.547
6	36.32		45	6.529		84	1.645		123	0.532
7	34.58		46	6.278		85	1.594		124	0.519
8	32.94		47	6.038		86	1.544		125	0.505
9	31.38		48	5.809		87	1.497		126	0.492
10	29.9		49	5.589		88	1.451		127	0.48
11	28.51		50	5.379		89	1.408		128	0.467
12	27.18		51	5.197		90	1.363		129	0.456
13	25.92		52	4.986		91	1.322		130	0.444
14	24.73		53	4.802		92	1.282		131	0.433
15	23.6		54	4.625		93	1.244		132	0.422
16	22.53		55	4.456		94	1.207		133	0.412
17	21.51		56	4.294		95	1.171		134	0.401
18	20.54		57	4.139		96	1.136		135	0.391
19	19.63		58	3.99		97	1.103		136	0.382

Appendix 2: Resistance Table for Indoor and Outdoor Tube Temperature Sensor (20K)

Temp(℃)	Resistance(kΩ)		Temp(℃)	Resistance(kΩ)		Temp(℃)	Resistance(kΩ)		Temp(℃)	Resistance(kΩ)
-19	181.4		20	25.01		59	5.13		98	1.427
-18	171.4		21	23.9		60	4.948		99	1.386
-17	162.1		22	22.85		61	4.773		100	1.346
-16	153.3		23	21.85		62	4.605		101	1.307
-15	145		24	20.9		63	4.443		102	1.269
-14	137.2		25	20		64	4.289		103	1.233
-13	129.9		26	19.14		65	4.14		104	1.198
-12	123		27	18.13		66	3.998		105	1.164
-11	116.5		28	17.55		67	3.861		106	1.131
-10	110.3		29	16.8		68	3.729		107	1.099
-9	104.6		30	16.1		69	3.603		108	1.069
-8	99.13		31	15.43		70	3.481		109	1.039
-7	94		32	14.79		71	3.364		110	1.01
-6	89.17		33	14.18		72	3.252		111	0.983
-5	84.61		34	13.59		73	3.144		112	0.956
-4	80.31		35	13.04		74	3.04		113	0.93
-3	76.24		36	12.51		75	2.94		114	0.904
-2	72.41		37	12		76	2.844		115	0.88
-1	68.79		38	11.52		77	2.752		116	0.856
0	65.37		39	11.06		78	2.663		117	0.833
1	62.13		40	10.62		79	2.577		118	0.811
2	59.08		41	10.2		80	2.495		119	0.77
3	56.19		42	9.803		81	2.415		120	0.769
4	53.46		43	9.42		82	2.339		121	0.746
5	50.87		44	9.054		83	2.265		122	0.729
6	48.42		45	8.705		84	2.194		123	0.71
7	46.11		46	8.37		85	2.125		124	0.692
8	43.92		47	8.051		86	2.059		125	0.674
9	41.84		48	7.745		87	1.996		126	0.658
10	39.87		49	7.453		88	1.934		127	0.64
11	38.01		50	7.173		89	1.875		128	0.623
12	36.24		51	6.905		90	1.818		129	0.607
13	34.57		52	6.648		91	1.736		130	0.592
14	32.98		53	6.403		92	1.71		131	0.577
15	31.47		54	6.167		93	1.658		132	0.563
16	30.04		55	5.942		94	1.609		133	0.549
17	28.68		56	5.726		95	1.561		134	0.535
18	27.39		57	5.519		96	1.515		135	0.521
19	26.17		58	5.32		97	1.47		136	0.509

Appendix 3: Resistance Table for Outdoor Discharge Temperature Sensor (50K)

Temp(℃)	Resistance(kΩ)		Temp(℃)	Resistance(kΩ)		Temp(℃)	Resistance(kΩ)		Temp(℃)	Resistance(kΩ)
-29	853.5		10	98		49	18.34		88	4.75
-28	799.8		11	93.42		50	17.65		89	4.61
-27	750		12	89.07		51	16.99		90	4.47
-26	703.8		13	84.95		52	16.36		91	4.33
-25	660.8		14	81.05		53	15.75		92	4.20
-24	620.8		15	77.35		54	15.17		93	4.08
-23	580.6		16	73.83		55	14.62		94	3.96
-22	548.9		17	70.5		56	14.09		95	3.84
-21	516.6		18	67.34		57	13.58		96	3.73
-20	486.5		19	64.33		58	13.09		97	3.62
-19	458.3		20	61.48		59	12.62		98	3.51
-18	432		21	58.77		60	12.17		99	3.41
-17	407.4		22	56.19		61	11.74		100	3.32
-16	384.5		23	53.74		62	11.32		101	3.22
-15	362.9		24	51.41		63	10.93		102	3.13
-14	342.8		25	49.19		64	10.54		103	3.04
-13	323.9		26	47.08		65	10.18		104	2.96
-12	306.2		27	45.07		66	9.83		105	2.87
-11	289.6		28	43.16		67	9.49		106	2.79
-10	274		29	41.34		68	9.17		107	2.72
-9	259.3		30	39.61		69	8.85		108	2.64
-8	245.6		31	37.96		70	8.56		109	2.57
-7	232.6		32	36.38		71	8.27		110	2.50
-6	220.5		33	34.88		72	7.99		111	2.43
-5	209		34	33.45		73	7.73		112	2.37
-4	198.3		35	32.09		74	7.47		113	2.30
-3	199.1		36	30.79		75	7.22		114	2.24
-2	178.5		37	29.54		76	7.00		115	2.18
-1	169.5		38	28.36		77	6.76		116	2.12
0	161		39	27.23		78	6.54		117	2.07
1	153		40	26.15		79	6.33		118	2.02
2	145.4		41	25.11		80	6.13		119	1.96
3	138.3		42	24.13		81	5.93		120	1.91
4	131.5		43	23.19		82	5.75		121	1.86
5	125.1		44	22.29		83	5.57		122	1.82
6	119.1		45	21.43		84	5.39		123	1.77
7	113.4		46	20.6		85	5.22		124	1.73
8	108		47	19.81		86	5.06		125	1.68
9	102.8		48	19.06		87	4.90		126	1.64

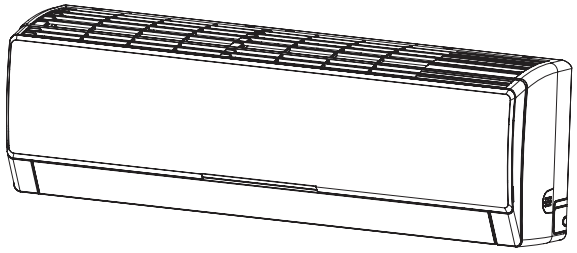
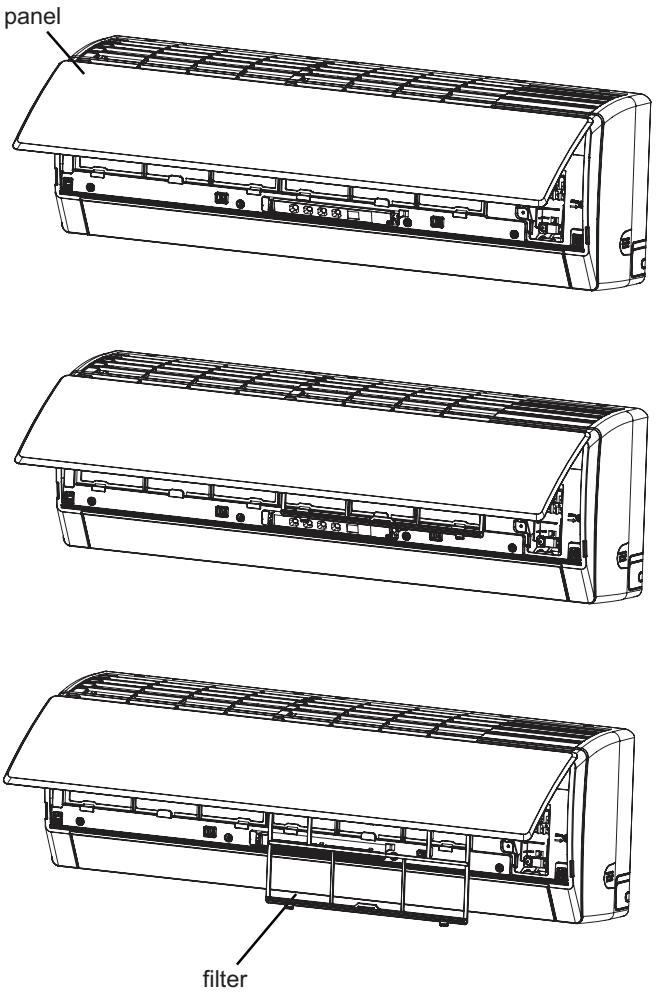
Note:The information above is for reference only.

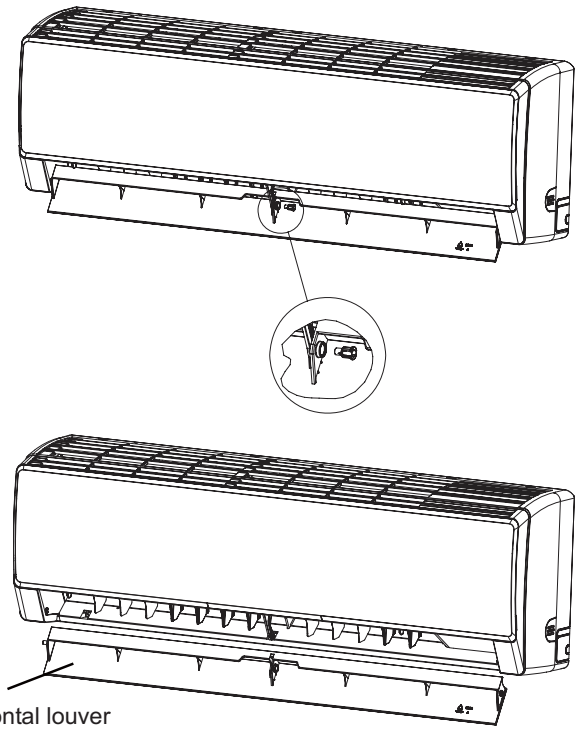
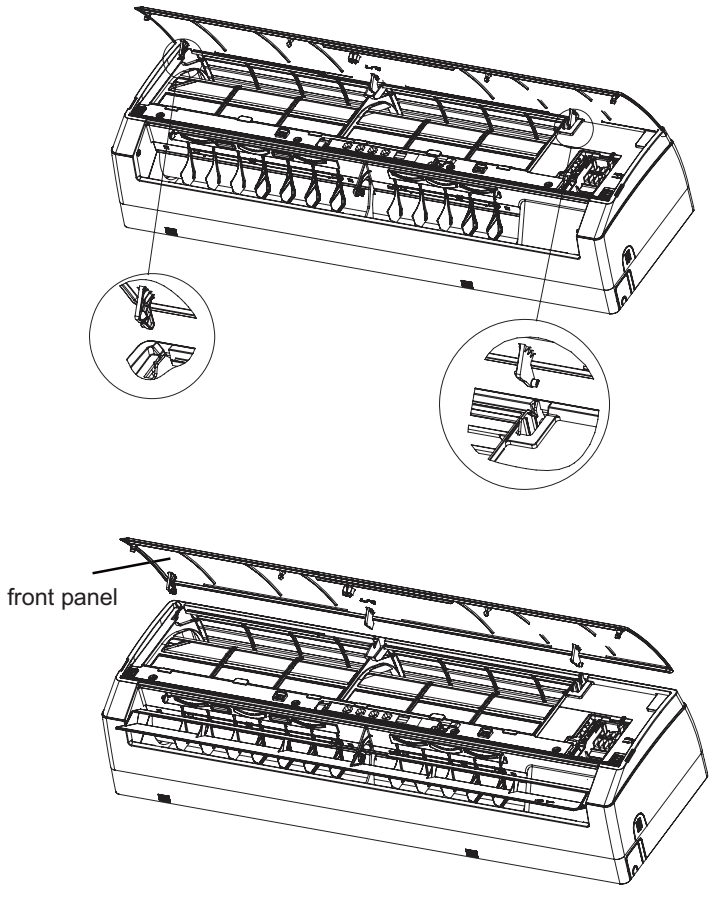
10. Removal Procedure

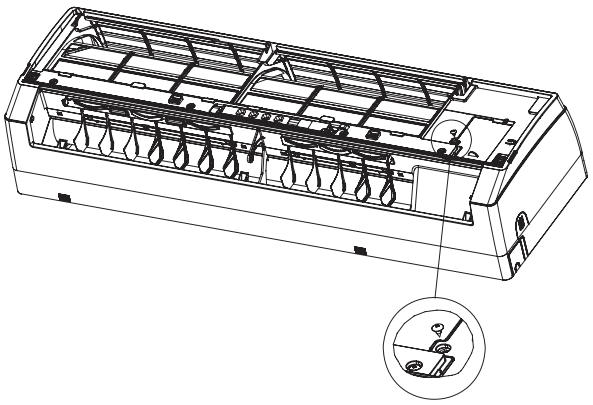
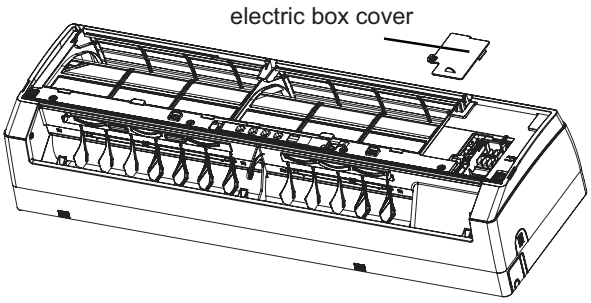
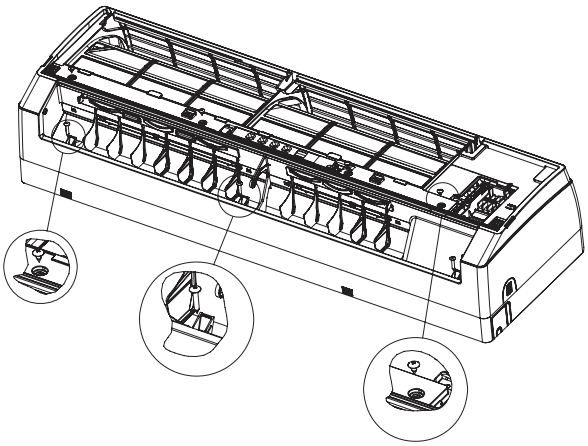
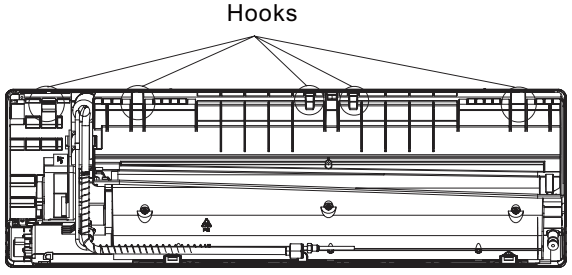
10.1 Removal Procedure of Indoor Unit

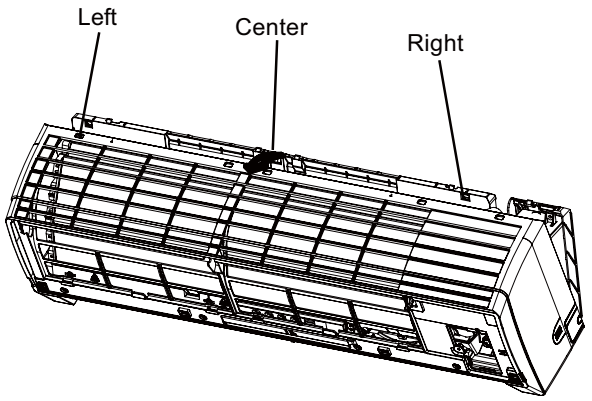
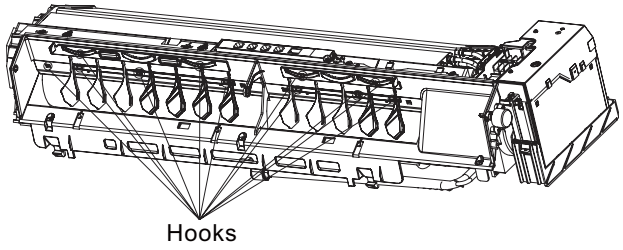
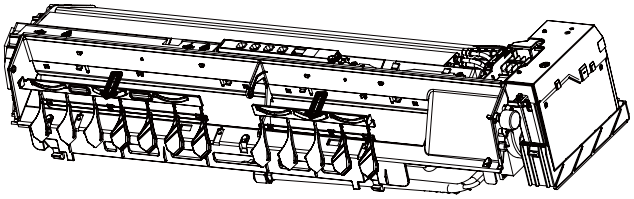
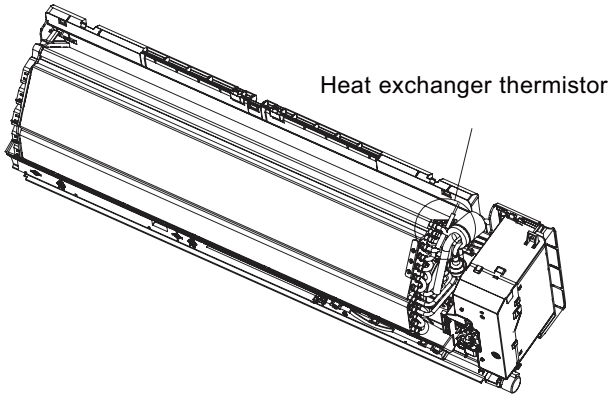
⚠ Warning Be sure to wait for a minimum of 10 minutes after turning off all power supplies before disassembly.

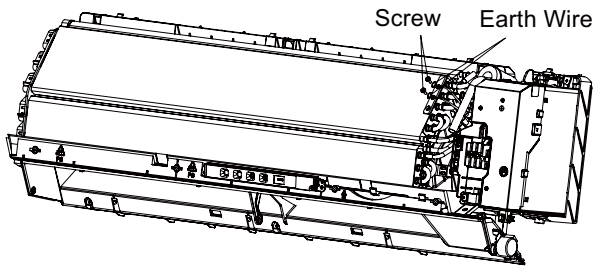
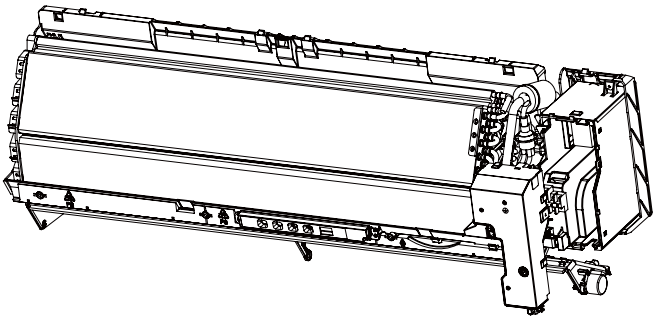
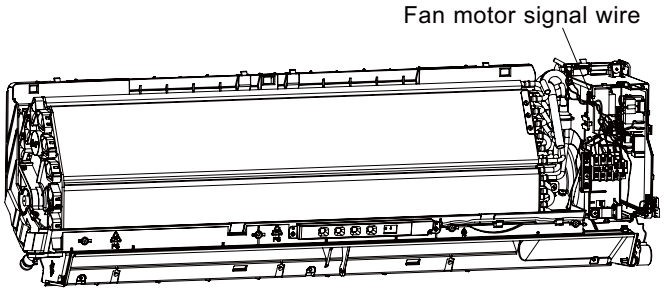
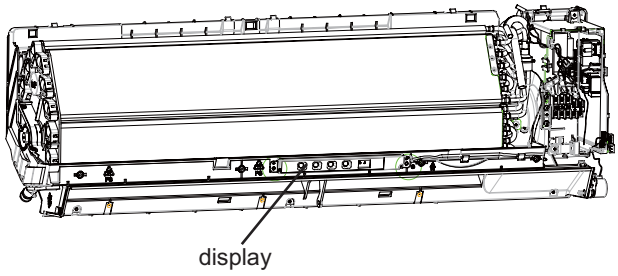
18K Unit

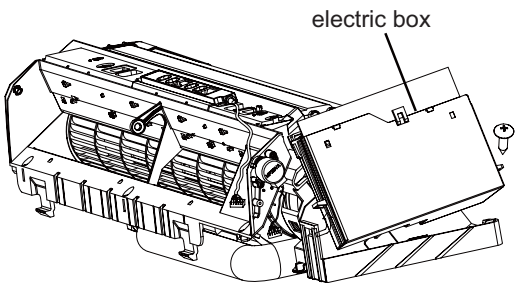
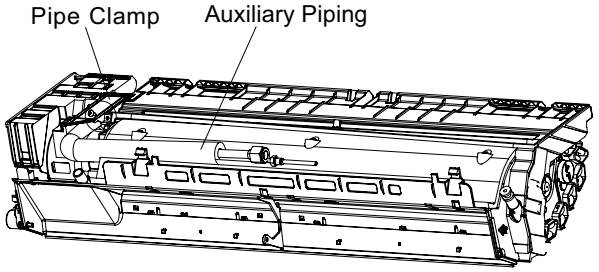
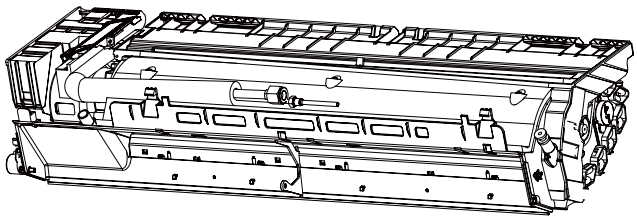
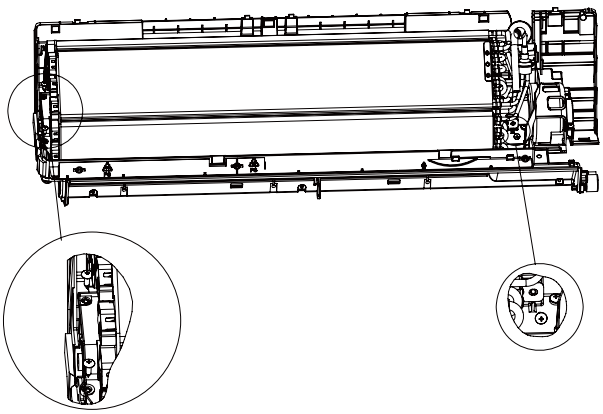
Steps	Procedure	
1. Before disassembly		
2. Remove the filter		
1	Open the panel.	
2	Push the filter inward and then raise it to remove it.	

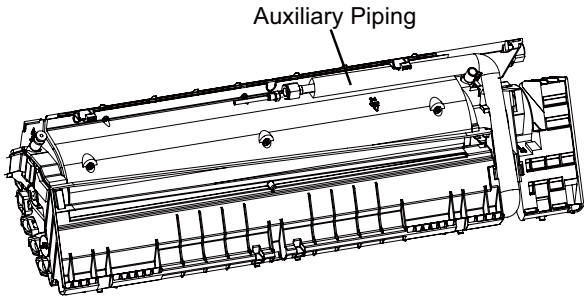
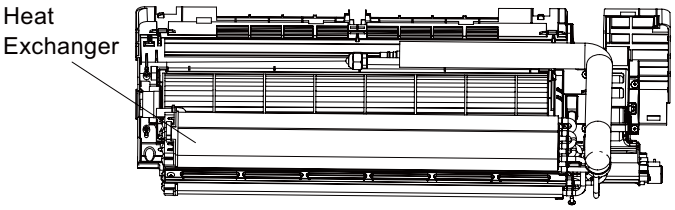
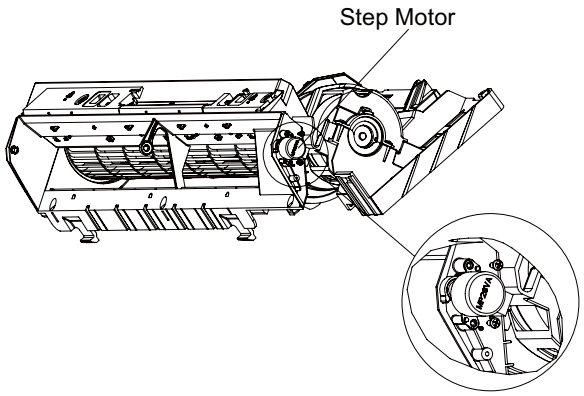
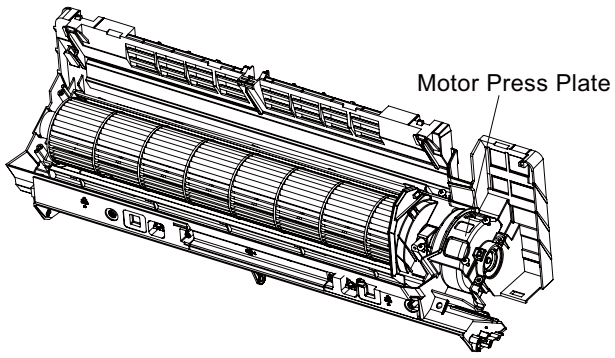
Steps	Procedure
3. Remove horizontal louver	
1 Remove axile bush of horizontal louver.	
2 Bend the horizontal louver slightly to remove it.	
4. Remove front panel	
Open the front panel and loosen the clasp in the middle of the panel. Slide the rotor shaft out of the groove. Remove the front panel.	

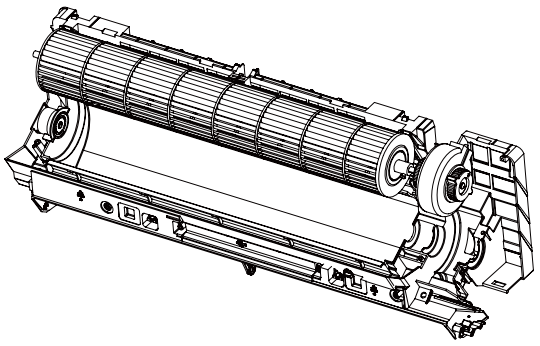
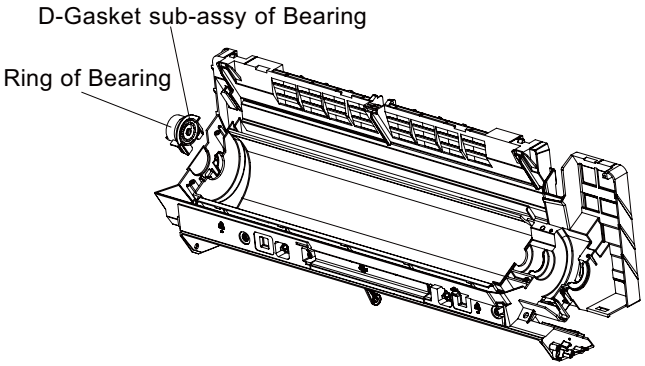
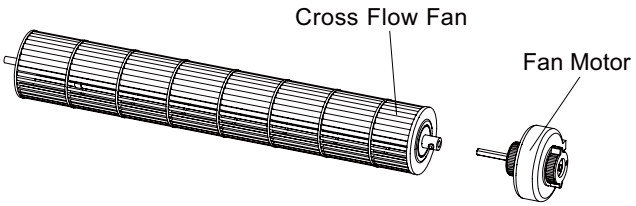
Steps	Procedure
5. Remove electric box cover	
1 Remove the screws fixing the electric box cover.	
2 Remove the electric box.	
6. Remove front case	
1 Open the screw cap on the front case. Remove the screws fixing the front case.	
2 Loosen the left, middle and right clasps.	

Steps	Procedure	
3	Remove the front case.	
7. Remove vertical louver		
1	Loosen the 10 clasps connecting vertical louver with bottom case.	
2	Remove the vertical louver.	
8. Remove electric box		
1	Disconnect the indoor pipe temperature sensor.	

Steps	Procedure	
2	Remove the 2 screws at the joint of ground wire and evaporator.	
3	Remove the clasp connecting electric box cover and electric box.	
4	Disconnect the connecting wire of the motor.	
5	Remove the screw fixing the display. Remove the display.	

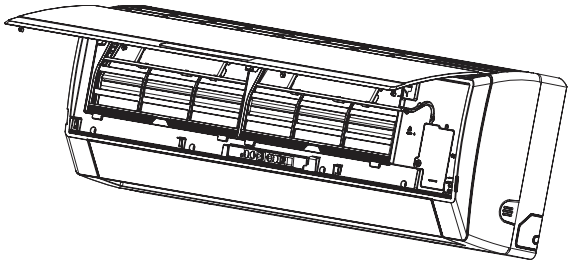
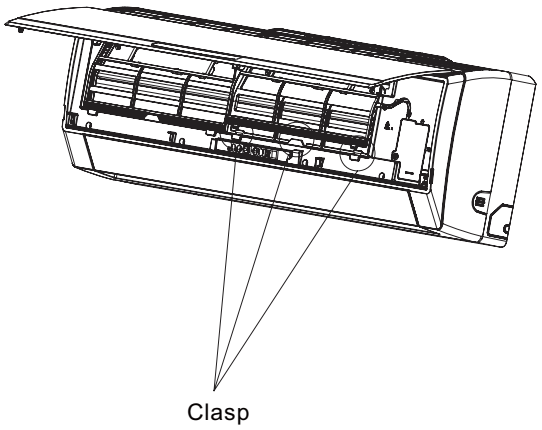
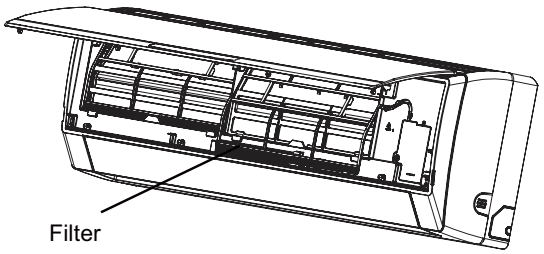
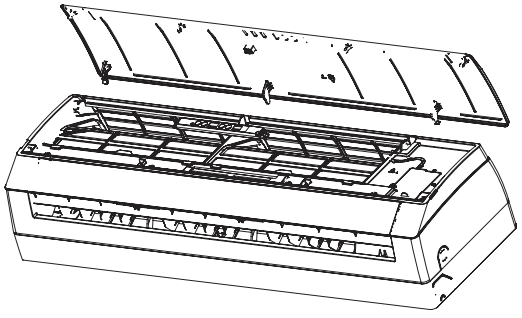
Steps	Procedure	
6	Remove the electric box.	
9. Remove press plate of connecting pipe		
1	Remove the screw fixing the press plate of the connecting pipe.	
2	Remove the press plate of the connecting pipe.	
10. Remove the evaporator		
1	Remove the 3 screws at the joint of the evaporator and bottom case.	

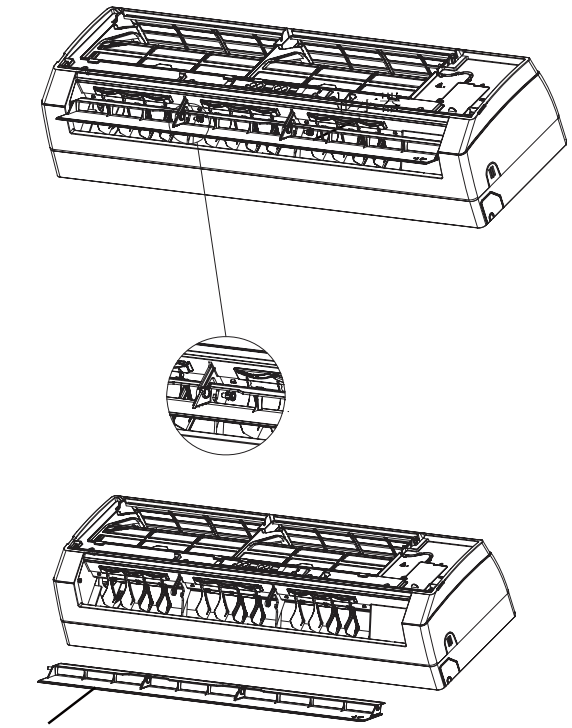
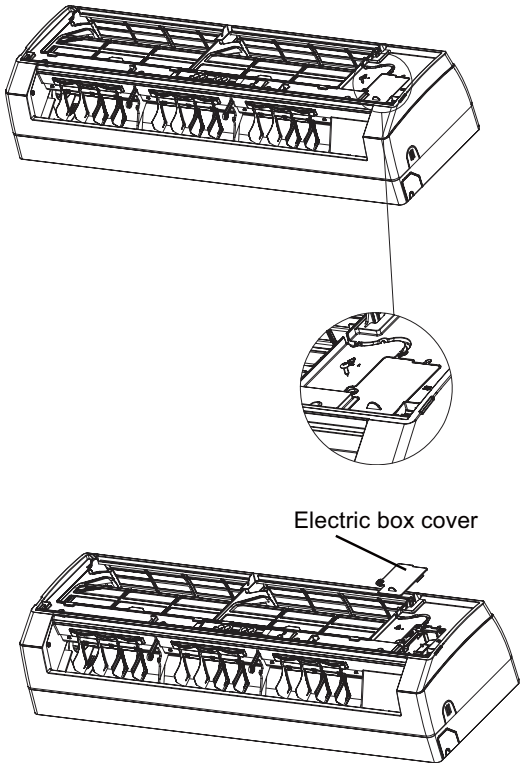
Steps	Procedure	
2	Adjust the pipe of evaporator.	
3	Remove the evaporator.	
11. Remove cross flow blade and motor		
1	Remove the 2 screws fixing the step motor. Remove the step motor.	
2	Remove the 4 screws fixing the press plate of the motor. Remove the motor.	

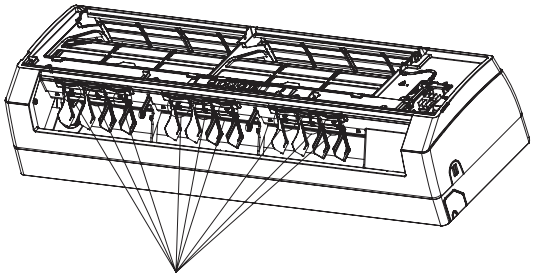
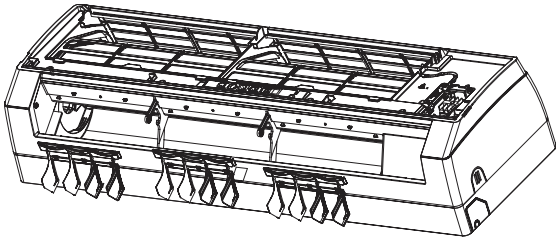
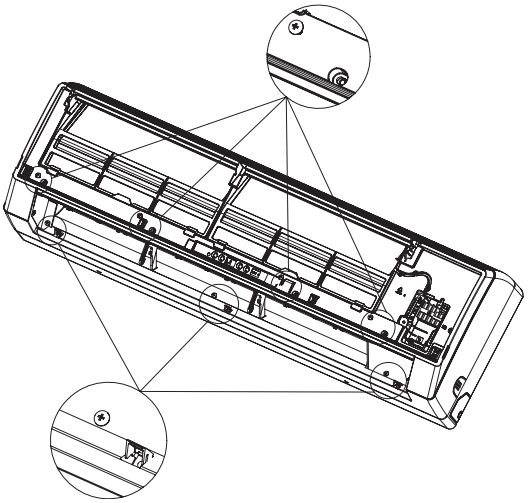
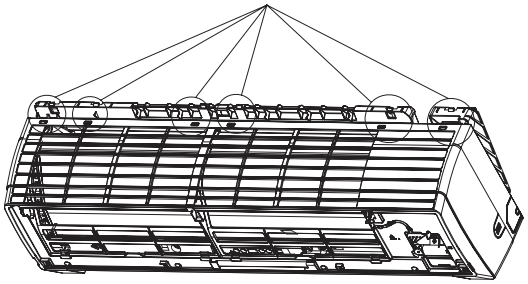
Steps	Procedure	
3	Remove cross flow blade and motor.	
4	Remove ring of bearing.	
5	Remove the screws at the joint of cross flow blade and motor. Remove the motor.	

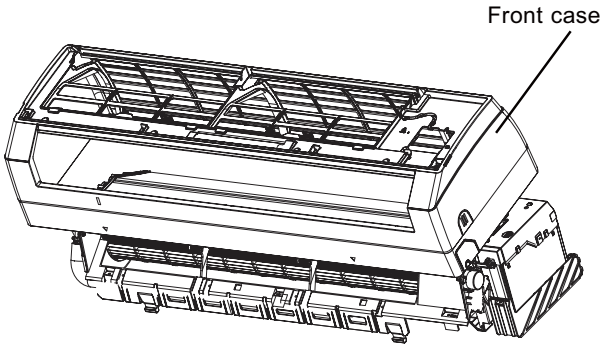
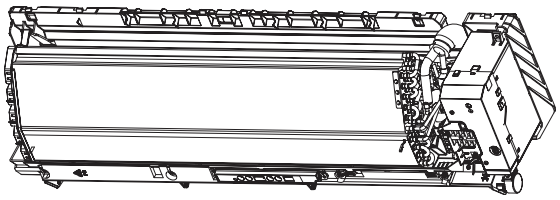
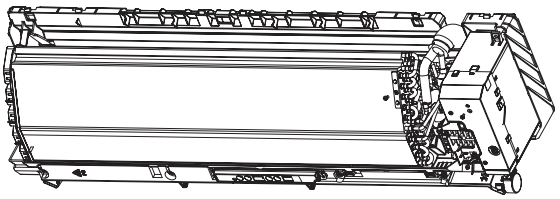
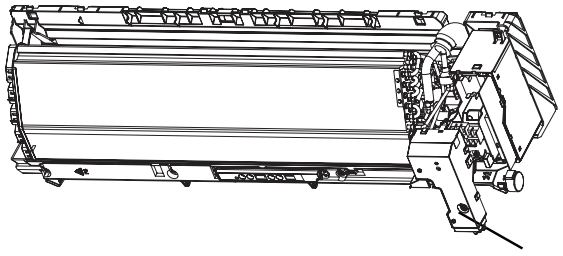
⚠ Warning Be sure to wait for a minimum of 10 minutes after turning off all power supplies before disassembly.

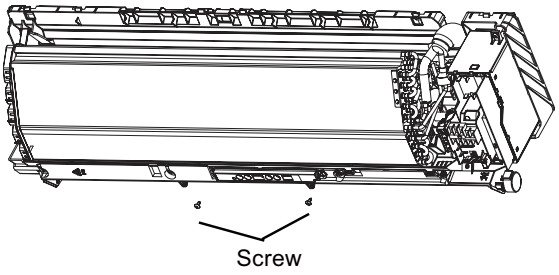
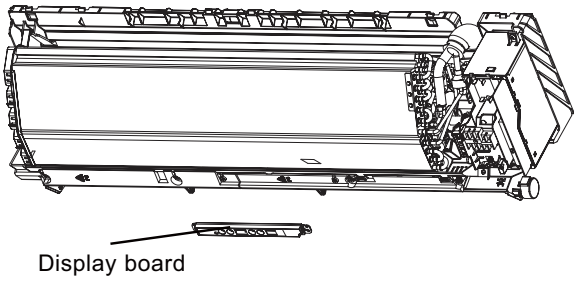
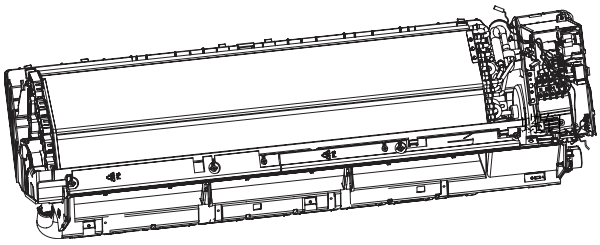
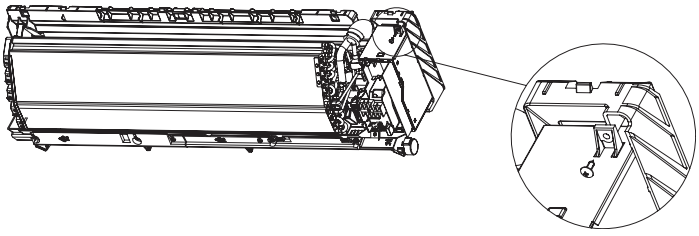
24K Unit

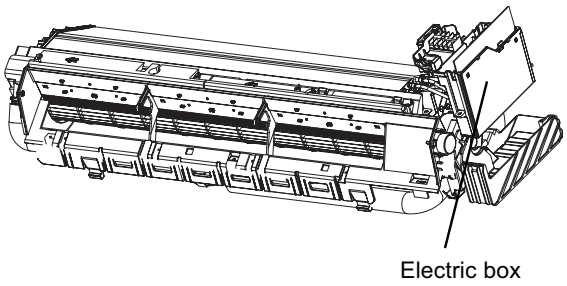
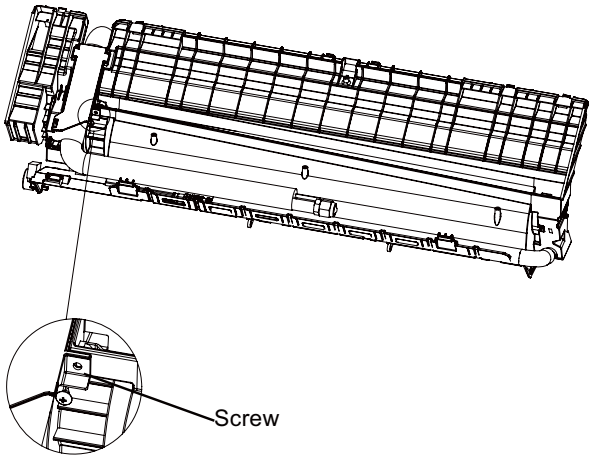
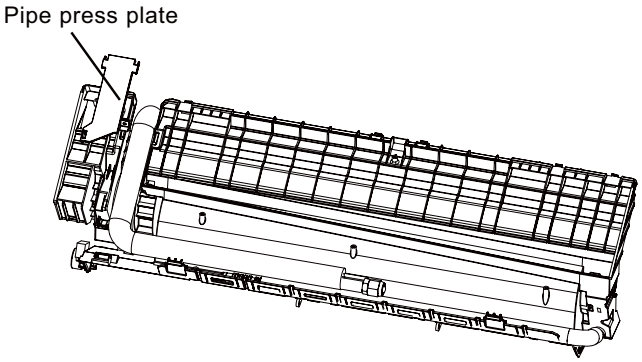
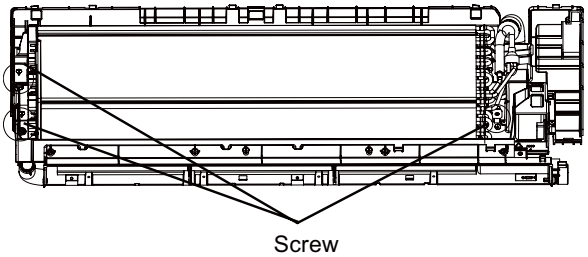
Steps	Procedure	
1. Remove filter		
1	Open the panel	
2	Loosen the clasps on filter.	
3	Remove the filter.	
2. Remove panel		
	Along the groove fixing front panel, slide the rotor shaft outward to remove the front panel.	

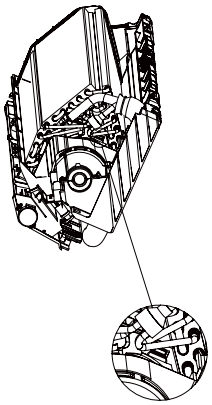
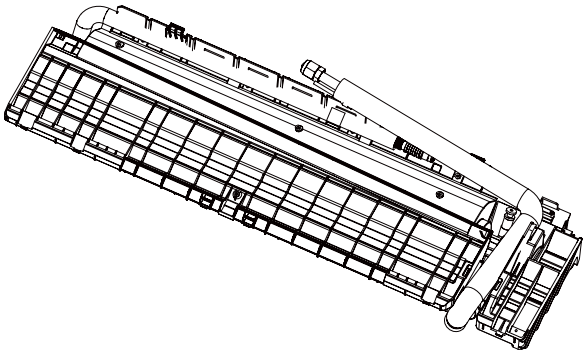
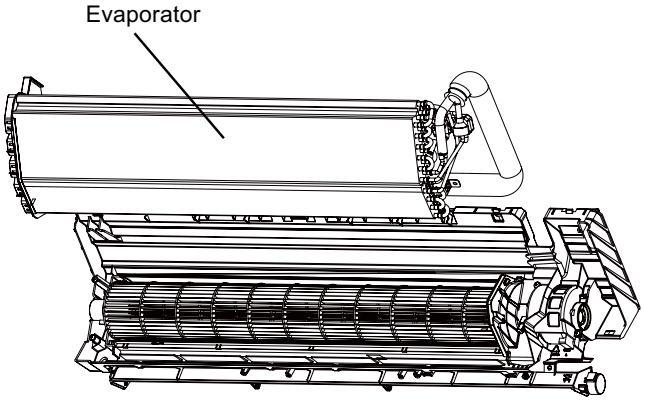
Steps	Procedure
3. Remove guide louver	
Remove the axial bush on guide louver, bend the guide louver to let the shaft come out of the groove and then remove the guide louver.	
4. Remove electric box cover	
Twist off one screw on electric box cover 2, and then remove the electric box cover 2.	

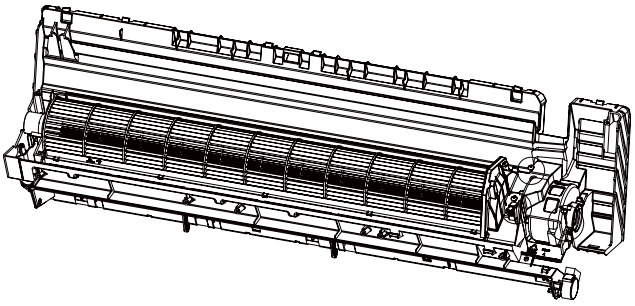
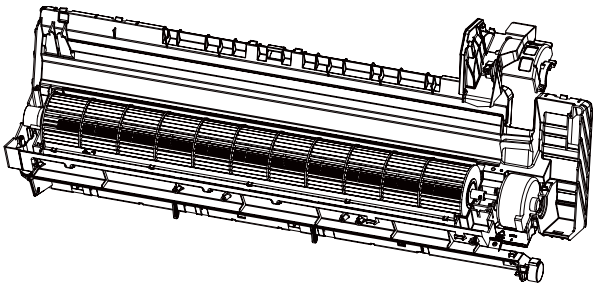
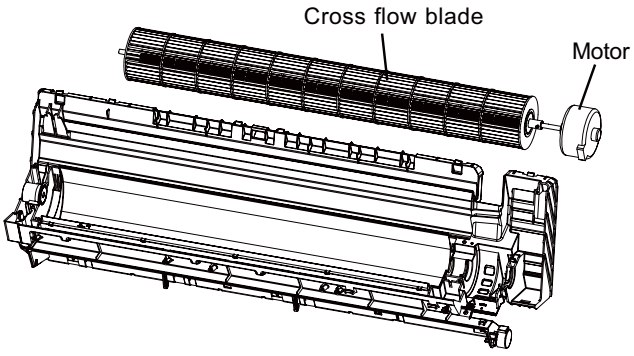
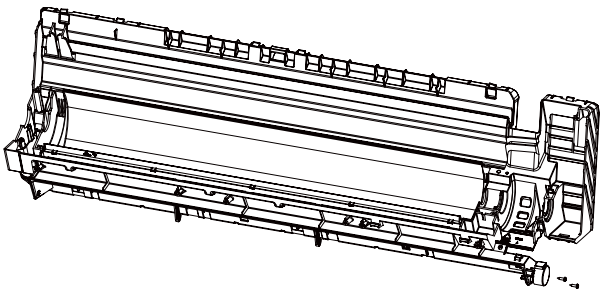
Steps	Procedure	
5. Remove swing blade		 Clasp 
	Loosen the clasps on horizontal louver and then remove the swing blade.	
6. Remove front case		 Clasp 
1	Open the screw cap on front case, and twist off the 7 screws fixing the front case with screwdriver.	
2	Loosen the 6 clasps on front case.	

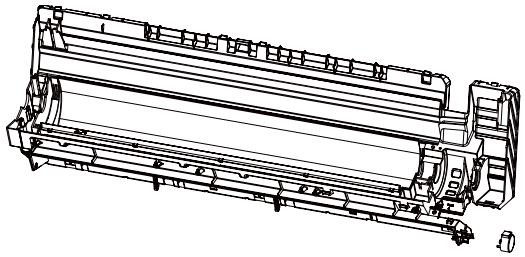
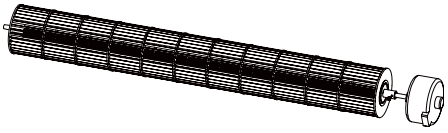
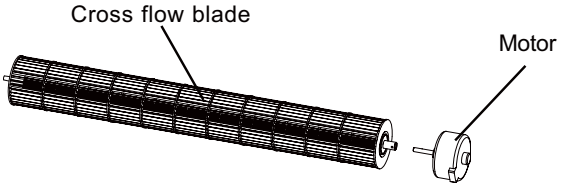
Steps	Procedure	
3	Remove the front case.	
7. Remove electric box cover		
1	Pull out the axial bush on temperature sensor.	
2	Twist off the screws fixing the earthing wire with screwdriver.	
3	Pull out the electric box cover.	

Steps	Procedure	
8. Remove electric box		
1	Twist off the screws fixing the displayer with screwdriver.	
2	Pull out the wiring terminal on displayer.	
3	Pull out the connection wire between swing motor and motor.	
4	Twist off the screws fixing the electric box with screwdriver.	

Steps	Procedure	
5	Remove the electric box.	
9. Remove evaporator		
1	Twist off the screws fixing the pipe press plate with screwdriver.	
2	Remove the pipe press plate.	
3	Twist off the 3 screws fixing the evaporator with screwdriver.	

Steps	Procedure	
4	Loosen the clasps between evaporator and chassis.	
5	Adjust the pipeline slightly	
6	Remove the evaporator.	

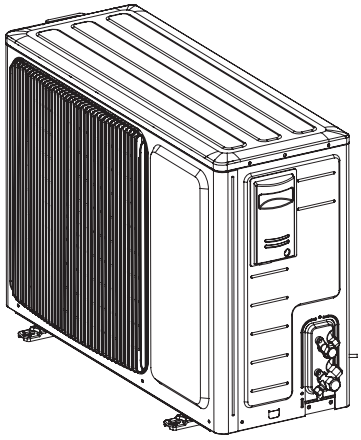
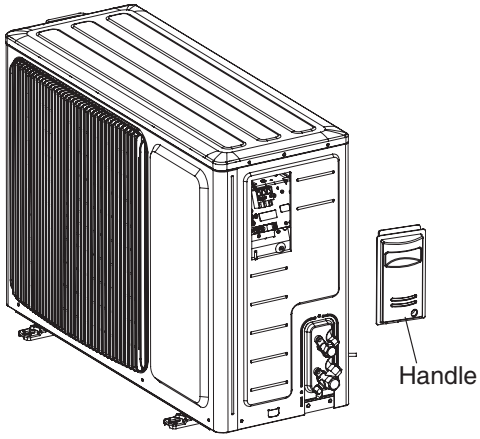
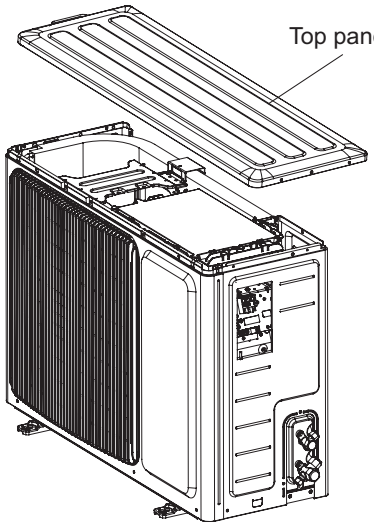
Steps	Procedure	
10. Remove motor and cross flow blade		
1	Twist off the screws fixing the motor press plate with screwdriver.	
2	Remove the motor press plate.	
3	Remove cross flow blade and motor.	
4	Twist off the screws fixing the swing motor with screwdriver.	

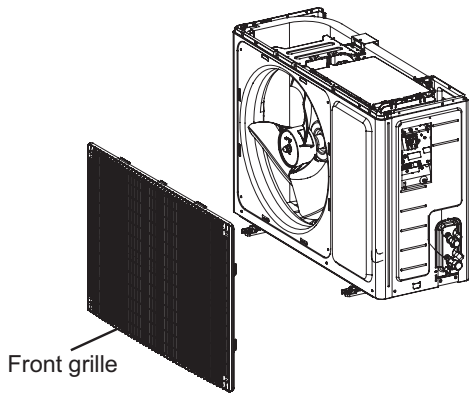
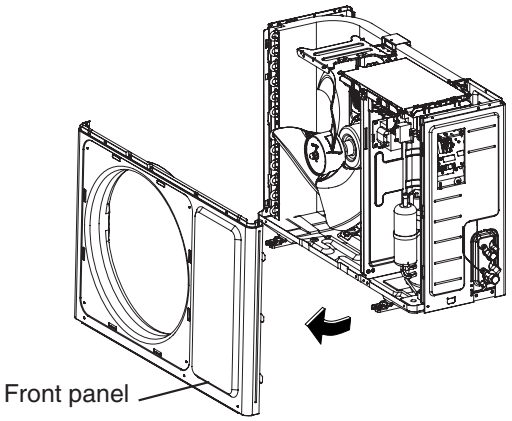
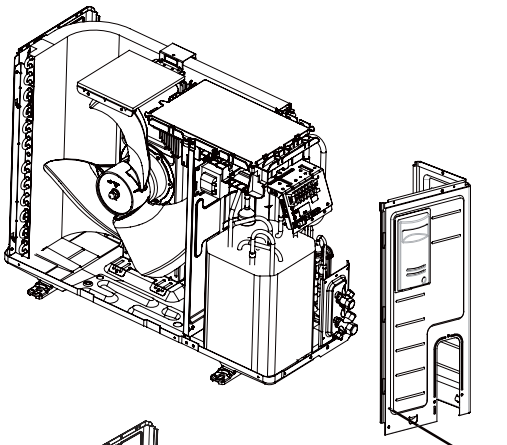
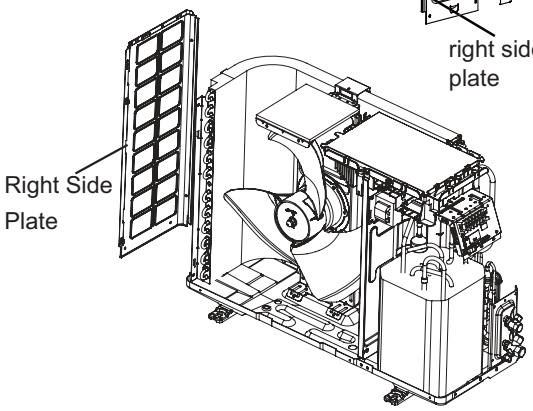
Steps	Procedure	
5	Remove swing motor.	
6	Twist off the screws fixing the cross flow blade and swing motor with screwdriver.	
7	Remove the motor.	

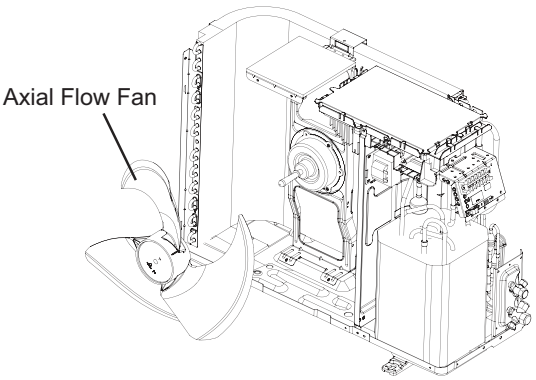
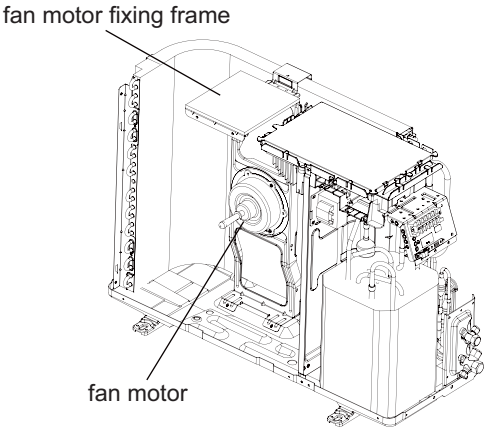
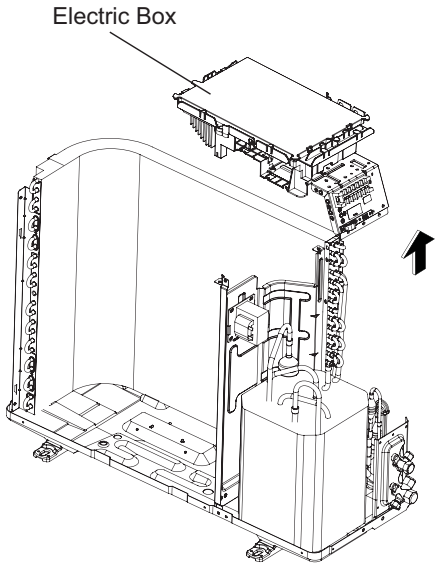
10.2 Removal Procedure of Outdoor Unit

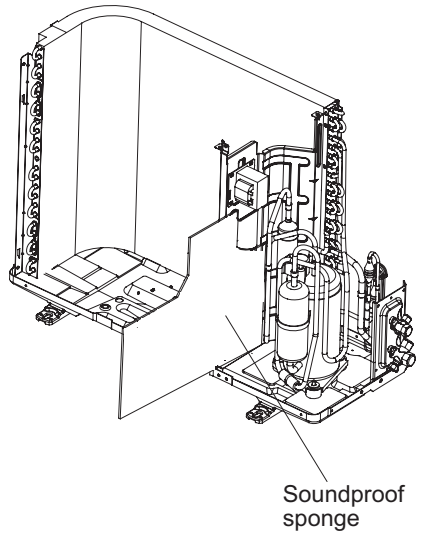
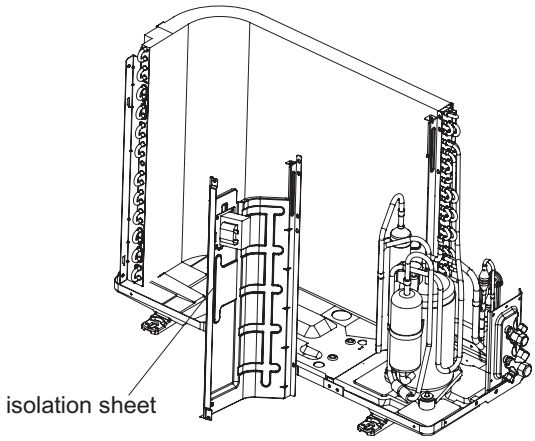
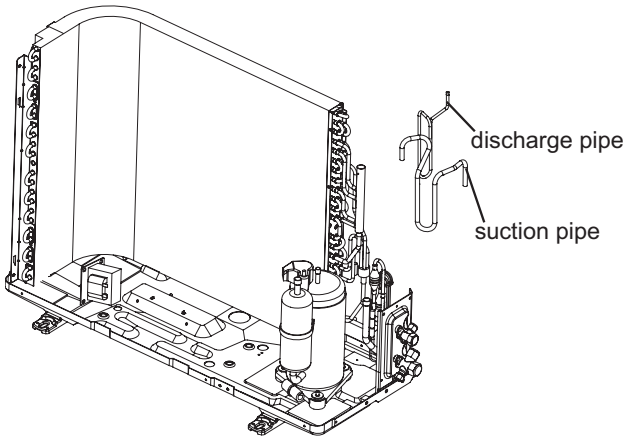
⚠ Warning Be sure to wait for a minimum of 10 minutes after turning off all power supplies before disassembly.

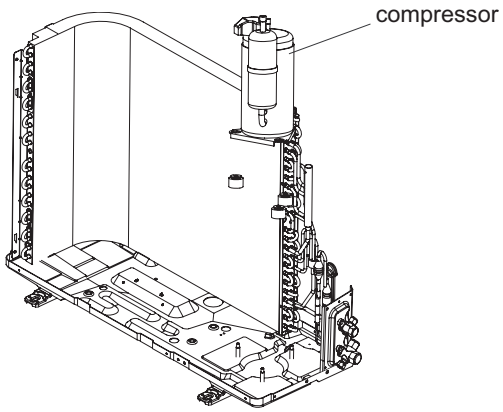
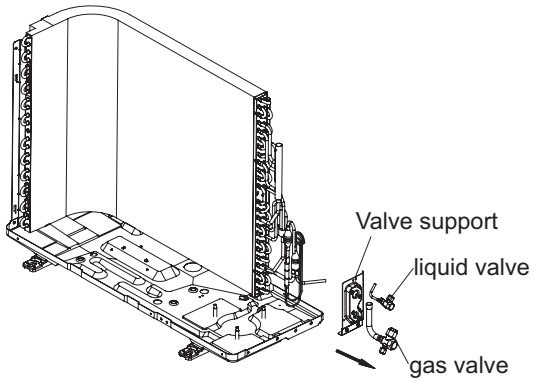
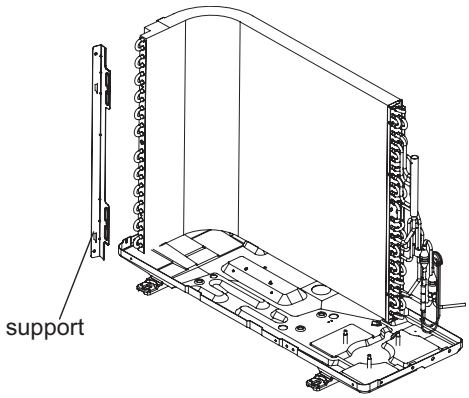
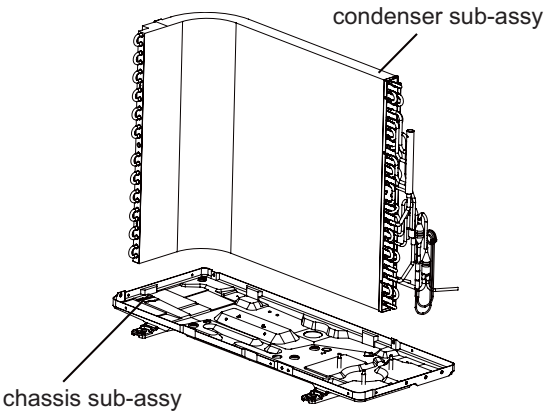
18K Unit

Steps	Procedure	
1. Remove top cover and handle		
1	Before disassembly.	
2	Twist off the screws used for fixing the handle, pull the handle upward to remove it.	
3	Twist off the screws used for fixing the top cover, pull the top cover upward to remove it.	

Steps	Procedure
2.Remove front grille and front panel	
1 Remove the screws connecting the front grille and the front panel. Remove the front grille.	
2 Twist off the screws fixing the panel, pull it upward, loosen the clasp on the right side, rotate it to the left and then remove the front panel.	
3.Remove right side plate	
1 Remove the screws connecting the right side plate with the chassis, the valve support and the electric box, and then remove the right side plate assy.	
2 Remove the screws connecting the left side plateand the chassis, and then remove the left side plateassy	

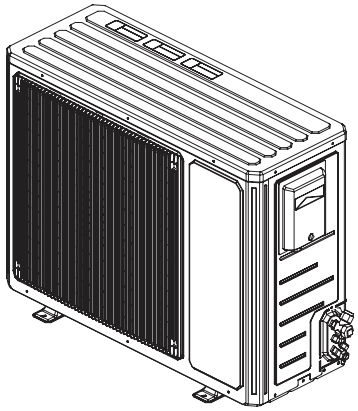
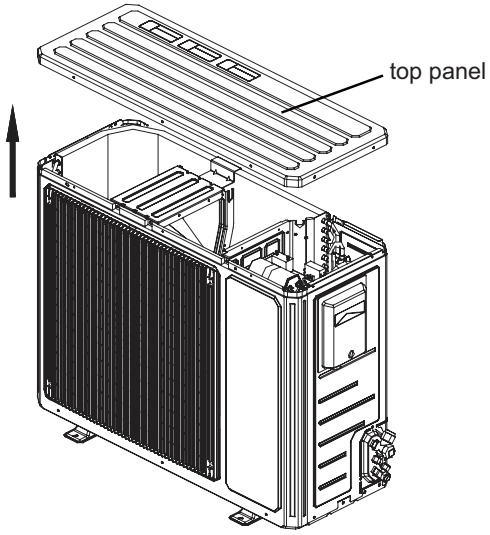
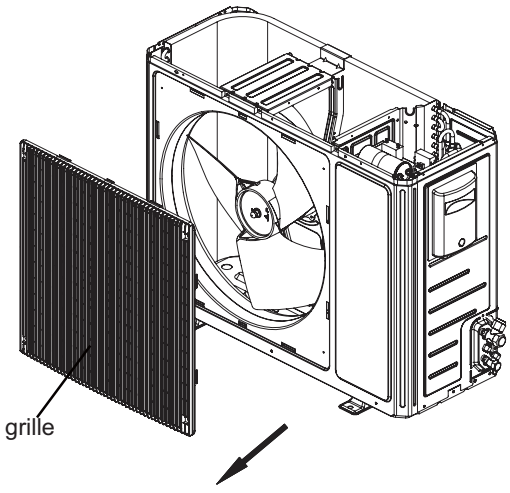
Steps	Procedure
4.Remove the axial flow fan	
1 Remove the nuts fixing the blade and thenremove the axial flow fan.	
2 Remove the 4 tapping screws fixing the motor; disconnect the leading wire insert of the motor and then remove the motor.Remove the 2 tapping screws fixing the motor support and then pull the motor support upwards to remove it.	
5.Remove Electric Box Assy	
Remove the screws fixing the electric box sub-assy; loosen the wire bundle; pull out the wiring terminals and then pull the electric box upwards to remove it.	

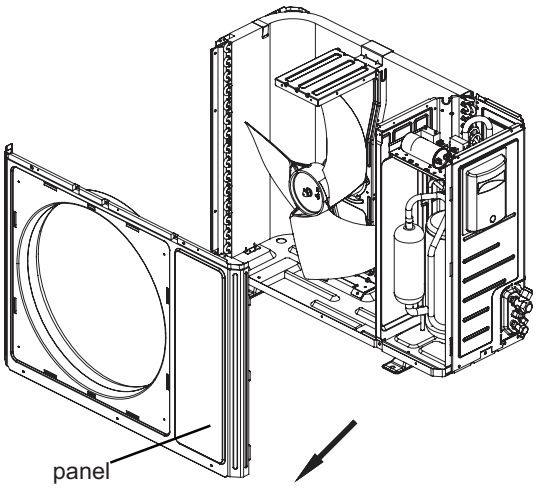
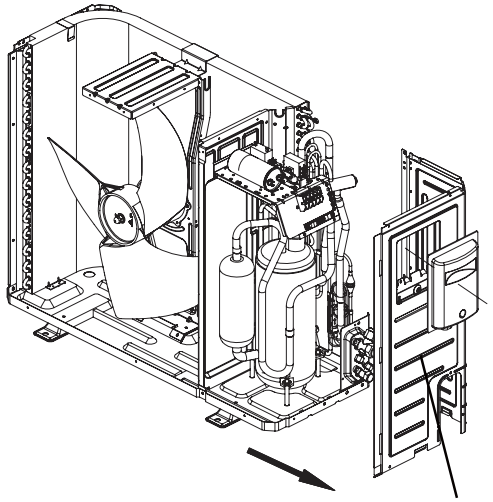
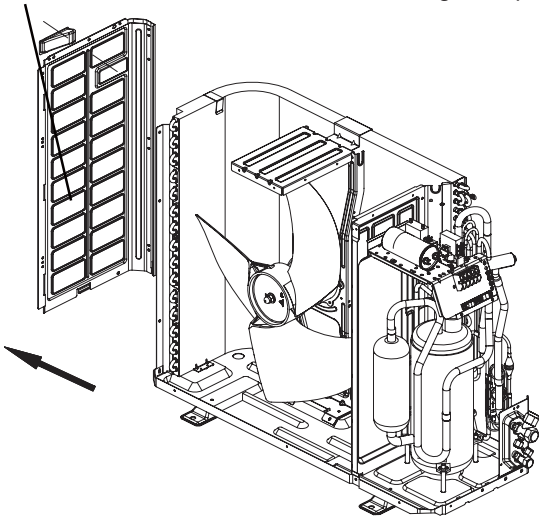
Steps	Procedure
6. Remove soundproof sponge Tear up the soundproof sponge carefully.	
7. Remove isolation sheet Remove screws fixing isolation sheet and then remove the isolation sheet.	
8. Remove gas valve and liquid valve Discharge the refrigerant completely; unsolder the pipes connecting the compressor and the condenser assy, and then remove the suction pipe and the discharge pipe. (NOTE: Before unsoldering, please discharge the refrigerant completely.)	

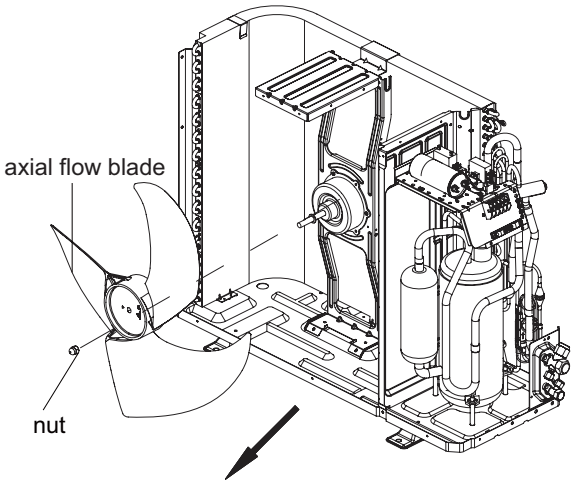
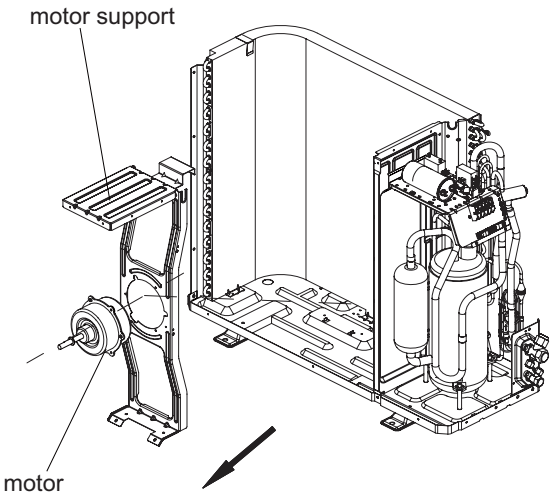
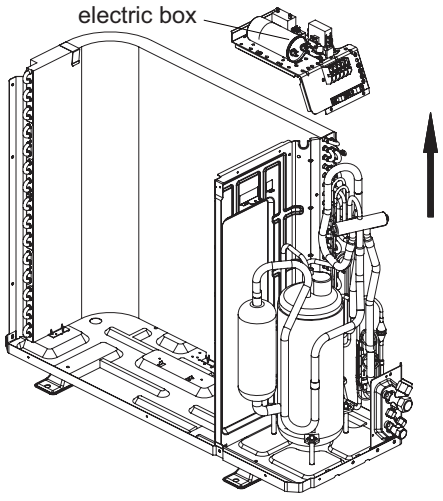
Steps	Procedure
9. Remove compressor	
Twist off the three foot nuts on compressor and then remove the compressor.	
10. Remove valve sub-assy	
Twist off the screws fixing the valve and valve support and then remove the valve support.	
11. Remove condenser sub-assy	
1 Remove the screws connecting the support (condenser) and condenser assy,and then remove the support (condenser).	
2 Dissemble the chassis sub-assy and condenser sub-assy.	

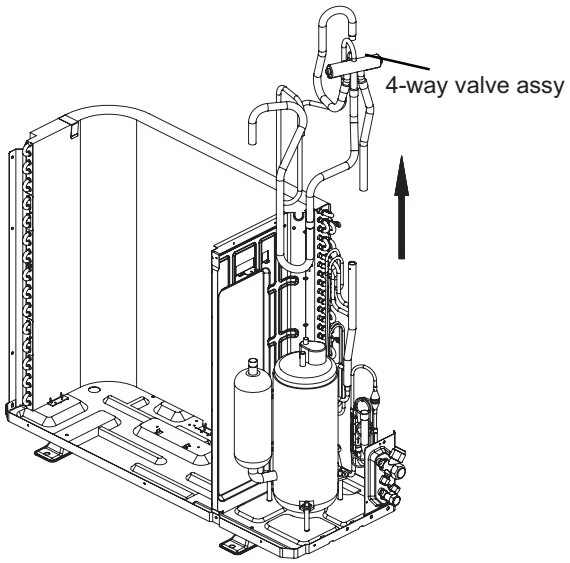
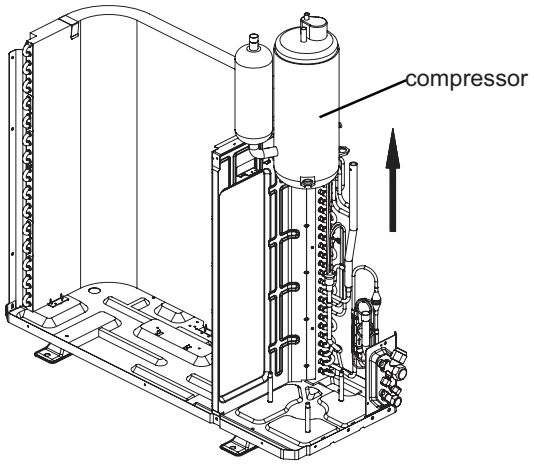
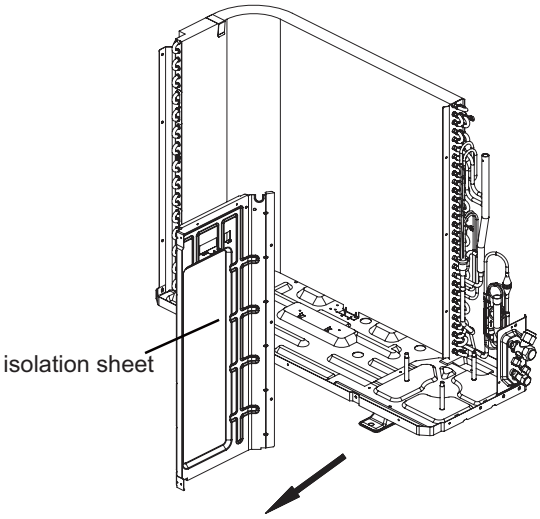
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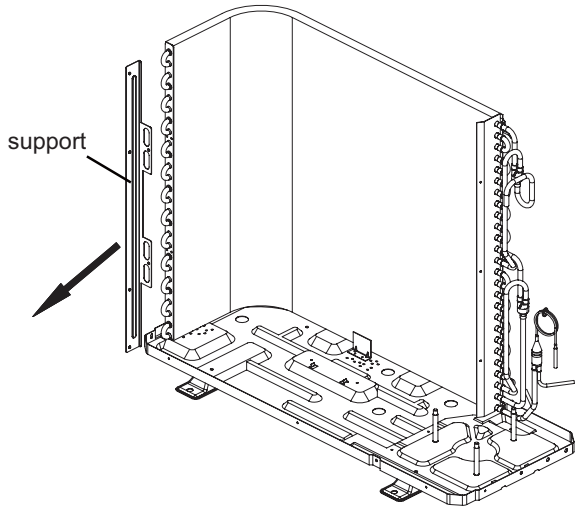
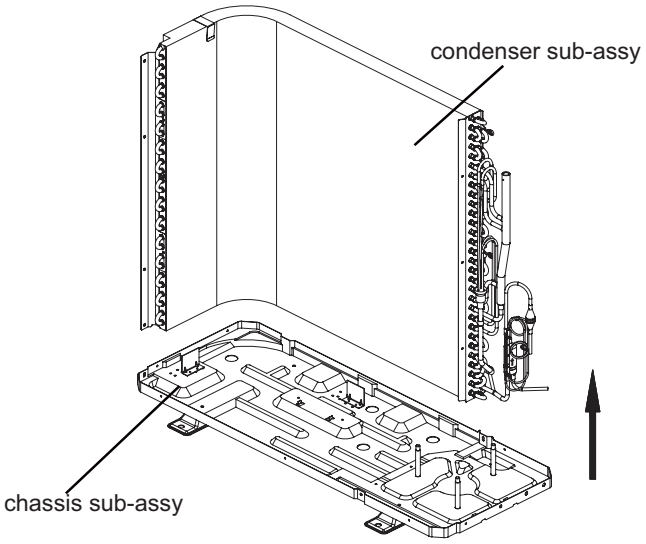
24K Unit

Steps	Procedure	
1. Remove top panel		
a	Before disassembly.	
b	Remove the screws connecting the top panel with the front panel and the right side plate, and then remove the top panel.	
2.Remove grille and panel		
a	Remove the screws connecting the grille and the panel, and then remove the grille.	

Steps	Procedure	
b	Remove the screws connecting the panel with the chassis and the motor support, and then remove the panel.	
3.Remove left side plate and right side plate		
a	Remove the screws connecting the right side plate with the chassis, the valve support and the electric box, and then remove the right side plate assy.	
b	Remove the screws connecting the left side plate and the chassis, and then remove the left side plate assy.	

Steps	Procedure	
4. Remove fan motor		
a	Remove the nut fixing the blade and then remove the axial flow blade.	
b	Remove the 4 tapping screws fixing the motor; disconnect the leading wire insert of the motor and then remove the motor. Remove the 2 tapping screws fixing the motor support and then pull the motor support upwards to r emove it.	
5. Remove electric box		
	Remove the screws fixing the electric box sub-assy; loosen the wire bundle; pull out the wiring terminals and then pull the electric box upwards to remove it.	

Steps	Procedure	
6.Remove 4-way valve assy		
	Discharge the refrigerant completely; unsolder the pipelines connecting the compressor and the condenser assy, and then remove the 4-way valve assy.(Recover the refrigerant before unsoldering)	
7.Remove compressor		
	Discharge the refrigerant completely; unsolder the pipelines connecting the compressor and the condenser assy, and then remove the 4-way valve assy.	
8.Remove chassis sub-assy and condenser sub-assy		
a	Remove the screws fixing the isolation sheet and then remove the isolation sheet.	

Steps	Procedure	
b	Remove the screws connecting the support (condenser) and condenser assy,and then remove the support (condenser).	
c	Dissemble the chassis sub-assy and condenser sub-assy.	

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