



# Service Manual

**GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI**



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# 1. Summary

## Indoor Unit:

C8 Panel:

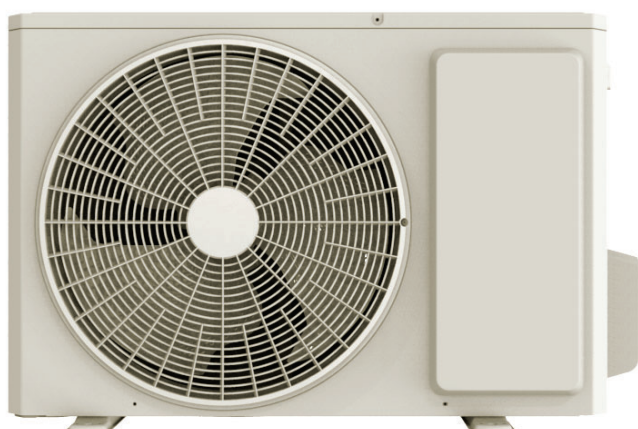


A1 Panel:



## Outdoor Unit:

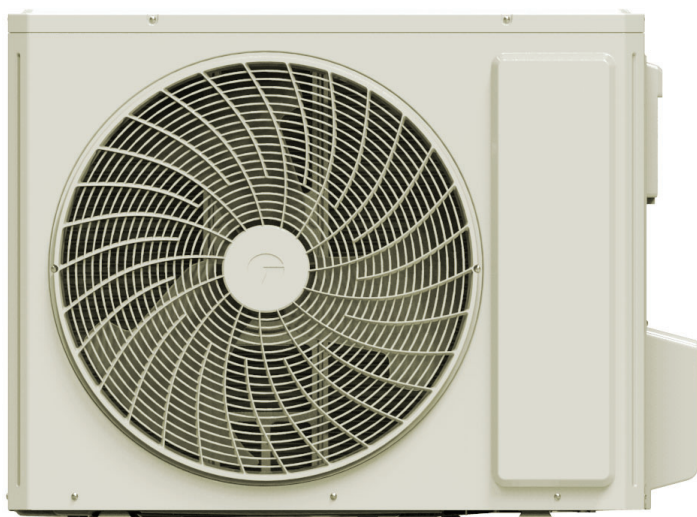
GWH15QDXE-K6DNA1A/O



GWH21AGEXF-K6DNA1A/O  
GWH18QEXF-K6DNC8A/O  
GWH24AGEXF-K6DNA1A/O



GWH28AGEXH-K6DNA1A/O  
GWH28QEXH-K6DNA1E/O



## Model list:

No	Model	Product code	Indoor model	Indoor product code	Outdoor model	Outdoor product code	Remote Controller:
1	GWH15QDXE-K6DNA1A	CB419018500	GWH15QDXE-K6DNA1A/I	CB419N18500	GWH15QDXE-K6DNA1A/O	CB419W18500	YAG1FB1 (WiFi)
2	GWH15QDXE-K6DNC8B	CB456010100	GWH15QDXE-K6DNC8B/I	CB456N10100			
3	GWH18QEXF-K6DNC8A	CB456010000	GWH18QEXF-K6DNC8A/I	CB456N10000			
4	GWH18QEXF-K6DNA1A	CB419019400	GWH18QEXF-K6DNA1A/I	CB419N19400	GWH18QEXF-K6DNC8A/O	CB456W10000	YAC1FB4 (WiFi)
5	GWH24QEXF-K6DNC8A	CB456010400	GWH24QEXF-K6DNC8A/I	CB456N10400			
6	GWH24QEXF-K6DNA1A	CB419019500	GWH24QEXF-K6DNA1A/I	CB419N19500			
7	GWH21QEXF-K6DNC8A	CB456010300	GWH21QEXF-K6DNC8A/I	CB456N10300	GWH24AGEXF-K6DNA1A/O	CB385W13900	YAC1FB4 (WiFi)
8	GWH21QEXF-K6DNA1A	CB419019700	GWH21QEXF-K6DNA1A/I	CB419N19700			
9	GWH28QEXH-K6DNC8A	CB456010200	GWH28QEXH-K6DNC8A/I	CB456N10200			
10	GWH28QEXH-K6DNA1A	CB419019600	GWH28QEXH-K6DNA1A/I	CB419N19600	GWH21AGEXF-K6DNA1A/O	CB385W14100	YAC1FB4 (WiFi)
11	GWH28QEXH-K6DNC8E	CB456010500	GWH28QEXH-K6DNC8E/I	CB456N10500			
12	GWH28QEXH-K6DNA1E	CB419019800	GWH28QEXH-K6DNA1E/I	CB419N19800			

## Remote Controller:

YAG1FB1(WiFi)



YAC1FB4(WiFi)



## 2. Specifications

### 2.1 Specification Sheet

Model			GWH21QEXF-K6DNC8A GWH21QEXF-K6DNA1A	GWH24QEXF-K6DNC8A GWH24QEXF-K6DNA1A
Product Code			CB456010300 CB419019700	CB456010400 CB419019500
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity		W	6400	7100
Heating Capacity		W	7400	8000
Cooling Power Input		W	1542	1844
Heating Power Input		W	1805	2000
Cooling Current Input		A	11.5	8.1
Heating Current Input		A	11	8.8
Rated Input		W	2600	3200
Rated Cooling Current		A	12.5	14.5
Rated Heating Current		A	12.5	13.5
Air Flow Volume		m <sup>3</sup> /h	1300/1100/1050/950/900/850/800/700	1300/1050/1000/900/820/750/650
Dehumidifying Volume		L/h	2.5	2.5
EER		W/W	4.15	3.85
COP		W/W	4.10	3.9
Application Area		m <sup>2</sup>	27-42	27-42
Indoor Unit	Model		GWH21QEXF-K6DNC8A/I GWH21QEXF-K6DNA1A/I	GWH24QEXF-K6DNC8A/I GWH24QEXF-K6DNA1A/I
	Product Code		CB456N10300 CB419N19700	CB456N10400 CB419N19500
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ98X630	Φ108X830
	Cooling Speed	r/min	1400/1150/1100/1000/900/850/800/650	1400/1150/1100/1000/900/850/800/650
	Heating Speed	r/min	1400/1200/1100/1000/900/800/750/-	1400/1200/1100/1000/900/800/750/-/-
	Fan Motor Power Output	W	60	60
	Fan Motor RLA	A	0.28	0.28
	Fan Motor Capacitor	μF	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7	Φ7
	Evaporator Row-fin Gap	mm	2-1.3	2-1.3
	Evaporator Coil Length (LXDXW)	mm	850X25.4X342.9	850X25.4X342.9
	Swing Motor Model		MP24HF/MP35CJ	MP24HF/MP35CJ
	Swing Motor Power Output	W	1.5/2.5	1.5/2.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling:49/43/41/38/35/33/29/27 Heating:39/36/33/31/29/28/27/-	Cooling:50/44/43/40/36/34/32/30 Heating:50/45/42/39/36/34/32/-
	Sound Power Level	dB (A)	Cooling:62/55/53/50/47/45/41/39 Heating:57/52/49/47/45/44/43/-	Cooling:66/60/59/56/52/50/48/46 Heating:66/61/58/55/52/50/48/-
	Dimension (WXHXD)	mm	1078X325X246	1078X325X246
	Dimension of Carton Box (LXWXH)	mm	1124X400X329	1124X400X329
	Dimension of Package (LXWXH)	mm	1129X408X339	1129X408X339
	Net Weight	kg	16	16.5
	Gross Weight	kg	19	19.5

Outdoor Unit	Outdoor Unit Model		GWH21AGEXF-K6DNA1A/O	GWH24AGEXF-K6DNA1A/O
	Outdoor Unit Product Code		CB385W14100	CB385W13900
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO.,LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD
	Compressor Model		QXFS-M180zX170	QXFS-M180zX170
	Compressor Oil		/	/
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	24.00	24.00
	Compressor RLA	A	3.50	3.50
	Compressor Power Input	W	1350	1350
	Compressor Overload Protector		HPC 115/95U1 KSD115°C	HPC 115/95U1 KSD115°C
	Throttling Method		Electron expansion valve	Electron expansion valve
	Set Temperature Range	°C	16~30	16~30
	Cooling Operation Ambient Temperature Range	°C	-10~50	-10~50
	Heating Operation Ambient Temperature Range	°C	-15~24	-15~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7	Φ7.94
	Condenser Rows-fin Gap	mm	2-1.4	2-1.4
	Condenser Coil Length (LXDXW)	mm	890X38.1X616	934X38.1X616
	Fan Motor Speed	rpm	880	880
	Fan Motor Power Output	W	60	60
	Fan Motor RLA	A	0.65	0.65
	Fan Motor Capacitor	μF	/	/
	Outdoor Unit Air Flow Volume	m³/h	3800	3600
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ520	Φ520
	Defrosting Method		Automatic Defrosting	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5	2.5
	Sound Pressure Level (H/M/L)	dB (A)	58/-/-	61/-/-
	Sound Power Level (H/M/L)	dB (A)	67/-/-	68/-/-
	Dimension(WXHXD)	mm	958X660X402	958X660X402
	Dimension of Carton Box (LXWXH)	mm	1029X453X715	1029X453X715
	Dimension of Package(LXWXH)	mm	1032X456X737	1032X456X737
	Net Weight	kg	42.5	43.5
	Gross Weight	kg	47	48
	Refrigerant		R32	R32
	Refrigerant Charge	kg	1.3	1.45
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	16	16
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	1/2	5/8
	Max Distance Height	m	10	10
	Max Distance Length	m	25	25
	Note: The connection pipe applies metric diameter.			

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



Model			GWH15QDXE-K6DNA1A GWH15QDXE-K6DNC8B	GWH18QEXF-K6DNC8A GWH18QEXF-K6DNA1A
Product Code			CB419018500 CB456010100	CB456010000 CB419019400
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity		W	4600	5200
Heating Capacity		W	4700	5600
Cooling Power Input		W	1150	1190
Heating Power Input		W	1200	1220
Cooling Current Input		A	6	5.3
Heating Current Input		A	6	5.4
Rated Input		W	2300	2500
Rated Cooling Current		A	11.5	9
Rated Heating Current		A	11.5	12.5
Air Flow Volume		m <sup>3</sup> /h	950/850/810/750/680/610/520	1250/1150/1100/1000/900/850/800
Dehumidifying Volume		L/h	1.8	1.8
EER		W/W	4	3.21
COP		W/W	3.92	3.6
Application Area		m <sup>2</sup>	23-34	27-42
Indoor Unit	Model		GWH15QDXE-K6DNA1A/I GWH15QDXE-K6DNC8B/I	GWH18QEXF-K6DNC8A/I GWH18QEXF-K6DNA1A /I
	Product Code		CB419N18500 CB456N10100	CB456N10000 CB419N19400
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ106X706	Φ108X830
	Cooling Speed	r/min	1400/1300/1150/1000/850/800/650	1200/1150/1100/1000/900/850/800/600
	Heating Speed	r/min	1400/1270/1150/1000/850/700/650	1250/1150/1100/1000/900/700/650
	Fan Motor Power Output	W	50	60
	Fan Motor RLA	A	0.25	0.28
	Fan Motor Capacitor	μF	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7	Φ7
	Evaporator Row-fin Gap	mm	2-1.4	2-1.3
	Evaporator Coil Length (LXDXW)	mm	715X25.4X304.8	850X25.4X342.9
	Swing Motor Model		MP24HF/MP35CJ	MP24HF MP24AK
	Swing Motor Power Output	W	1.5/2.5	1.5/1.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling:48/45/41/37/32/30/24 Heating:48/45/41/37/32/27/25	Cooling:45/43/42/40/36/34/33 Heating:57/44/43/40/37/29/27
	Sound Power Level	dB (A)	Cooling:60/57/53/49/44/42/36 Heating:60/57/53/49/44/39/37	Cooling:61/59/58/56/52/50/49 Heating:61/58/57/54/51/43/41
	Dimension (WXHXD)	mm	970X300X224	1078X325X246
	Dimension of Carton Box (LXWXH)	mm	1020X370X294	1124X400X329
	Dimension of Package (LXWXH)	mm	1025X378X304	1129X408X339
	Net Weight	kg	13	15.5
	Gross Weight	kg	15.5	18.5



Outdoor Unit	Outdoor Unit Model		GWH15QDXE-K6DNA1A/O	GWH18QEXF-K6DNC8A/O
	Outdoor Unit Product Code		CB419W18500	CB456W10000
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO., LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD.
	Compressor Model		QXF-M130zF170	FTz-SM151AXB
	Compressor Oil		RB68GX or equivalent	FW68DA or equivalent
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	/	/
	Compressor RLA	A	5.36	6.06
	Compressor Power Input	W	1196	1330
	Compressor Overload Protector		/	/
	Throttling Method		Electron expansion valve	Electron expansion valve
	Set Temperature Range	°C	16~30	16~30
	Cooling Operation Ambient Temperature Range	°C	-10~50	-10~50
	Heating Operation Ambient Temperature Range	°C	-15~24	-15~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7.94	Φ7
	Condenser Rows-fin Gap	mm	2-1.4	2 - 1.4
	Condenser Coil Length (LXDXW)	mm	865X38.1X528	890X38.1X616
	Fan Motor Speed	rpm	900	900
	Fan Motor Power Output	W	30	40
	Fan Motor RLA	A	0.40	0.5
	Fan Motor Capacitor	μF	/	/
	Outdoor Unit Air Flow Volume	m³/h	3000	2800
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ445	Φ445
	Defrosting Method		Automatic Defrosting	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5	2.5
	Sound Pressure Level (H/M/L)	dB (A)	58/-/-	58/-/-
	Sound Power Level (H/M/L)	dB (A)	67/-/-	69/-/-
	Dimension(WXHXD)	mm	873X555X376	958X660X402
	Dimension of Carton Box (LXWXH)	mm	948X428X591	1029X453X715
	Dimension of Package(LXWXH)	mm	951X431X620	1032X456X737
	Net Weight	kg	37	42.5
	Gross Weight	kg	40	47
	Refrigerant		R32	R32
	Refrigerant Charge	kg	1	1.2
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	12	12
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	1/2	1/2
	Max Distance Height	m	10	10
	Max Distance Length	m	25	25
	Note: The connection pipe applies metric diameter.			

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

Model			GWH28QEXH-K6DNC8A GWH28QEXH-K6DNA1A	GWH28QEXH-K6DNC8E GWH28QEXH-K6DNA1E
Product Code			CB456010200 CB419019600	CB456010500 CB419019800
Power Supply	Rated Voltage	V~	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Power Supply Mode			Outdoor	Outdoor
Cooling Capacity		W	8500	8500
Heating Capacity		W	9000	9000
Cooling Power Input		W	2297	2297
Heating Power Input		W	2647	2550
Cooling Current Input		A	10.4	10.4
Heating Current Input		A	12	12
Rated Input		W	3650	3650
Rated Cooling Current		A	18.5	18.5
Rated Heating Current		A	16.5	16.5
Air Flow Volume		m <sup>3</sup> /h	1300/1050/1000/900/800/750/700	1300/1050/1000/900/800/750/700
Dehumidifying Volume		L/h	3	3
EER		W/W	3.7	3.7
COP		W/W	3.4	3.53
Application Area		m <sup>2</sup>	32-50	32-50
Indoor Unit	Model		GWH28QEXH-K6DNC8A/I GWH28QEXH-K6DNA1A/I	GWH28QEXH-K6DNC8E/I GWH28QEXH-K6DNA1E/I
	Product Code		CB456N10200 CB419N19600	CB456N10500 CB419N19800
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ108X830	Φ108X830
	Cooling Speed	r/min	1400/1150/1100/1000/900/850/800	1400/1150/1100/1000/900/850/800
	Heating Speed	r/min	1400/1250/1100/1000/900/800/750	1400/1250/1100/1050/1000/900/850
	Fan Motor Power Output	W	60	60
	Fan Motor RLA	A	0.38	0.24
	Fan Motor Capacitor	μF	/	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ7	Φ7
	Evaporator Row-fin Gap	mm	2-1.4	2-1.4
	Evaporator Coil Length (LXDXW)	mm	850X25.4X342.9	850X25.4X342.9
	Swing Motor Model		MP35CJ/MP24HF	MP35CJ/MP24HF
	Swing Motor Power Output	W	2.5/1.5	2.5/1.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling:49/43/42/39/37/35/32 Heating:48/43/41/37/34/31/29	Cooling:49/43/42/39/37/35/32 Heating:48/43/41/37/34/31/29
	Sound Power Level	dB (A)	Cooling:65/59/58/55/53/51/48 Heating:64/59/57/53/50/47/45	Cooling:65/59/58/55/53/51/48 Heating:64/59/57/53/50/47/45
	Dimension (WXHXD)	mm	1078X325X246	1078X325X246
	Dimension of Carton Box (LXWXH)	mm	1124X400X329	1124X400X329
	Dimension of Package (LXWXH)	mm	1129X408X339	1129X408X339
	Net Weight	kg	16	16
	Gross Weight	kg	19	19

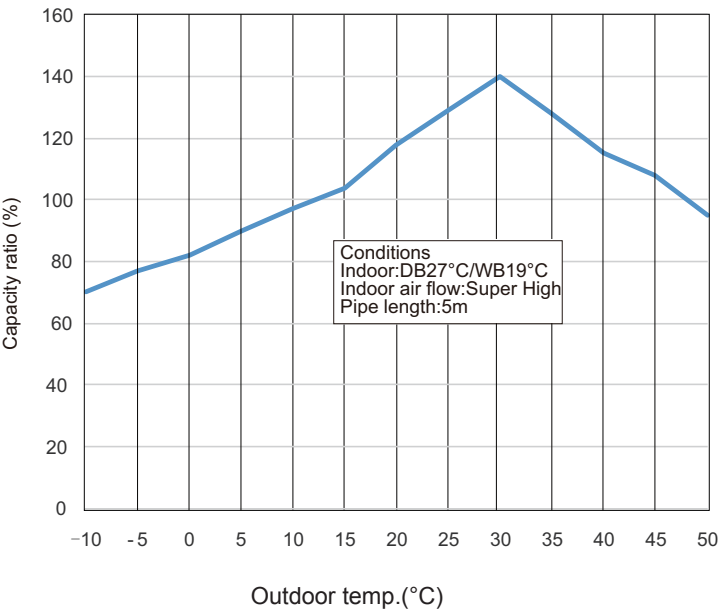
Outdoor Unit	Outdoor Unit Model		GWH28AGEXH-K6DNA1A/O	GWH28QEXH-K6DNA1E/O
	Outdoor Unit Product Code		CB385W14300	CB419W19800
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO.,LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD
	Compressor Model		QXFS-B238zX070	QXFS-B238zX070
	Compressor Oil		/	/
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	27.00	27.00
	Compressor RLA	A	4.30	4.30
	Compressor Power Input	W	2020	2020
	Compressor Overload Protector		/	/
	Throttling Method		Electron expansion valve	Electron expansion valve
	Set Temperature Range	°C	16~30	16~30
	Cooling Operation Ambient Temperature Range	°C	-10~50	-10~50
	Heating Operation Ambient Temperature Range	°C	-15~24	-15~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7.94	Φ7.94
	Condenser Rows-fin Gap	mm	2-1.4	2-1.4
	Condenser Coil Length (LXDXW)	mm	955X38.1X704	955X38.1X704
	Fan Motor Speed	rpm	850	850
	Fan Motor Power Output	W	90	90
	Fan Motor RLA	A	0.70	0.70
	Fan Motor Capacitor	μF	/	/
	Outdoor Unit Air Flow Volume	m³/h	4500	4500
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ570	Φ570
	Defrosting Method		Automatic Defrosting	Automatic Defrosting
	Climate Type		T1	T1
	Isolation		I	I
	Moisture Protection		IPX4	IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5	2.5
	Sound Pressure Level (H/M/L)	dB (A)	62/-/-	62/-/-
	Sound Power Level (H/M/L)	dB (A)	72/-/-	72/-/-
	Dimension(WXHXD)	mm	1000X746X427	1000X746X427
	Dimension of Carton Box (LXWXH)	mm	1077X480X785	1077X480X785
	Dimension of Package(LXWXH)	mm	1080X483X810	1080X483X810
	Net Weight	kg	51.5	51.5
	Gross Weight	kg	56.5	56.5
	Refrigerant		R32	R32
	Refrigerant Charge	kg	1.7	1.7
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	40	40
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	5/8	5/8
	Max Distance Height	m	10	10
	Max Distance Length	m	25	25
	Note: The connection pipe applies metric diameter.			

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

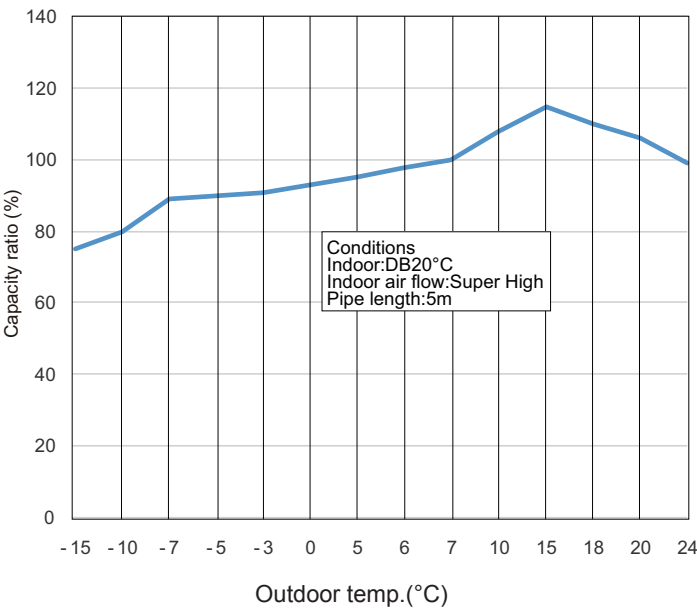
## 2.2 Capacity Variation Ratio According to Temperature

21/24K

Cooling:

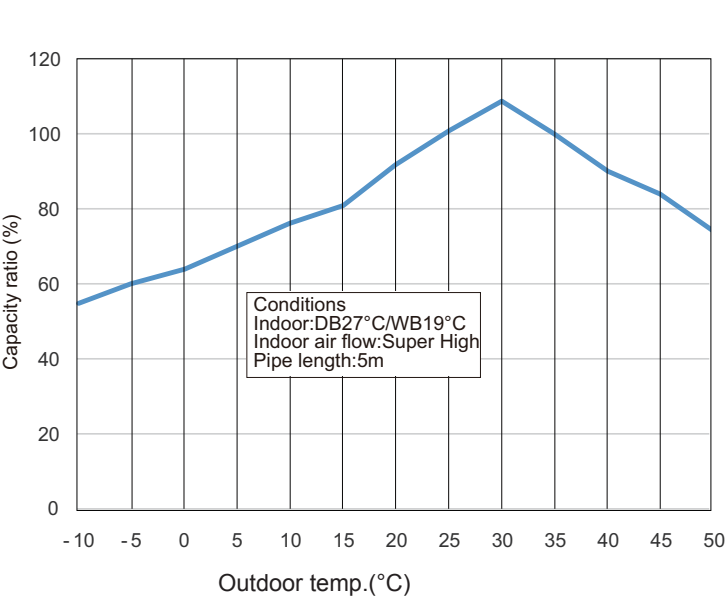


Heating:

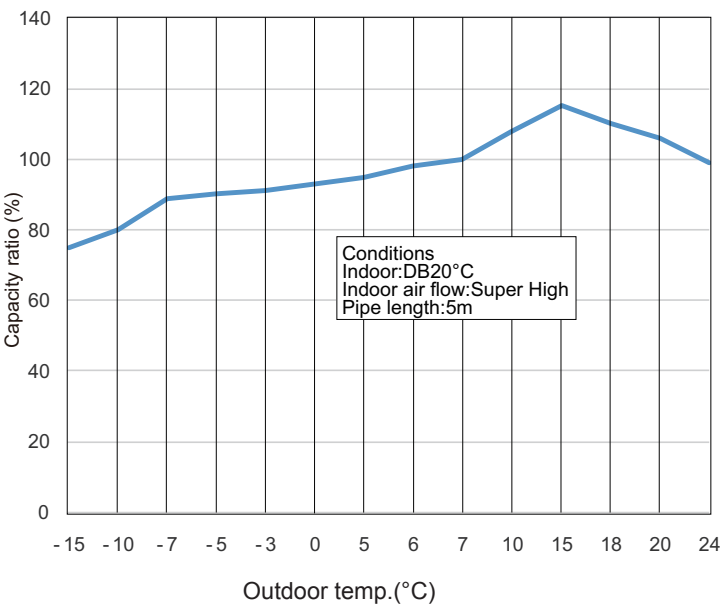


15/18/28K

Cooling



Heating:



## 2.3 Cooling and Heating Data Sheet in Rated Frequency

Cooling:

Rated cooling condition(°C) (DB/WB)		Model	Pressure of gas pipe connecting indoor and outdoor unit	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit
Indoor	Outdoor			T1 (°C)	T2 (°C)		
27/19	35/24	15/18/21/24K	0.9~1.1	12 ~ 14	75 ~ 37	TURBO	High
27/19	35/24	28K	0.7~0.9	10 ~ 12	78 ~ 37		

Heating:

Rated heating condition(°C) (DB/WB)		Model	Pressure of gas pipe connecting indoor and outdoor unit	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit
Indoor	Outdoor			T1 (°C)	T2 (°C)		
20/-	7/6	15/18/21/24K	2.2~2.4	70 ~ 35	2 ~ 4	TURBO	High
20/-	7/6	28K	2.4~2.7	71 ~ 36	1 ~ 7		

### Instruction:

T1: Inlet and outlet pipe temperature of evaporator

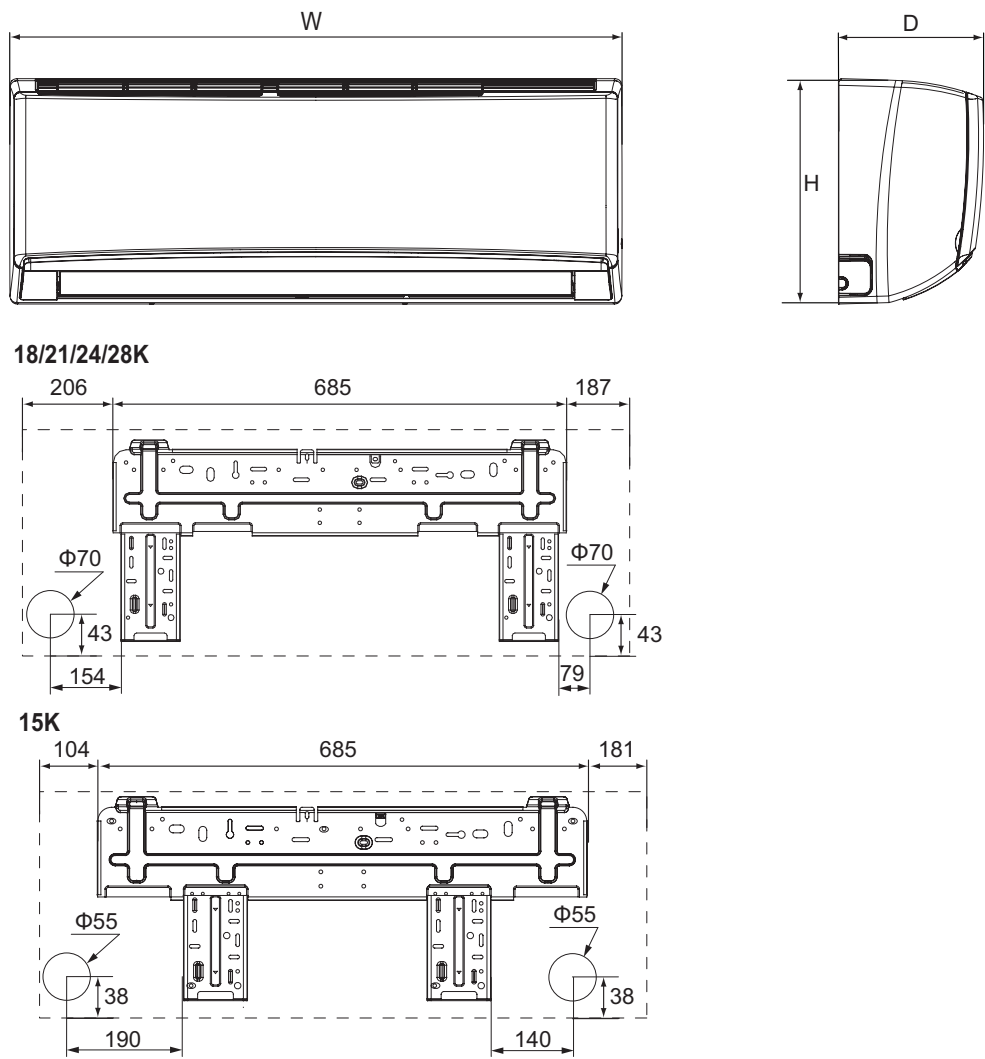
T2: Inlet and outlet pipe temperature of condenser

P: Pressure at the side of big valve

Connection pipe length: 5 m.

# 3. Outline Dimension Diagram

## 3.1 Indoor Unit



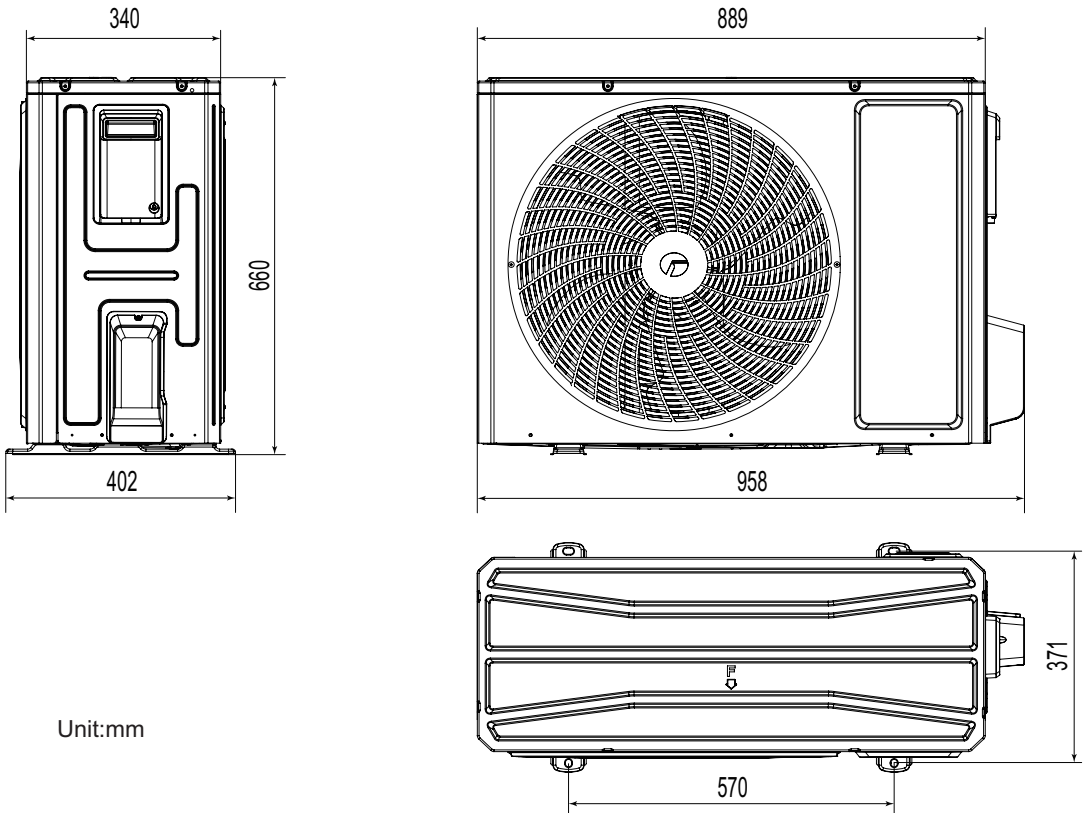
Unit:mm

Model	W	H	D
15K	970	300	224
18/21/24/28K	1078	325	246

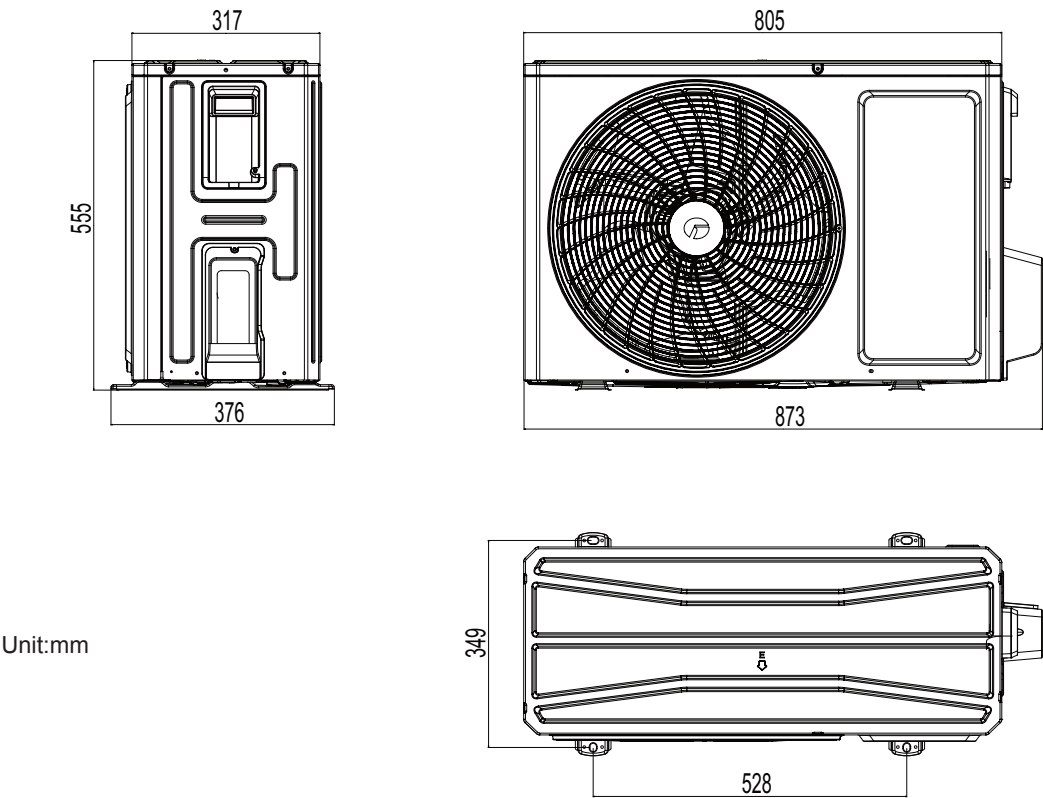
\* Recommended distance

3.2 Outdoor Unit

18/21/24K

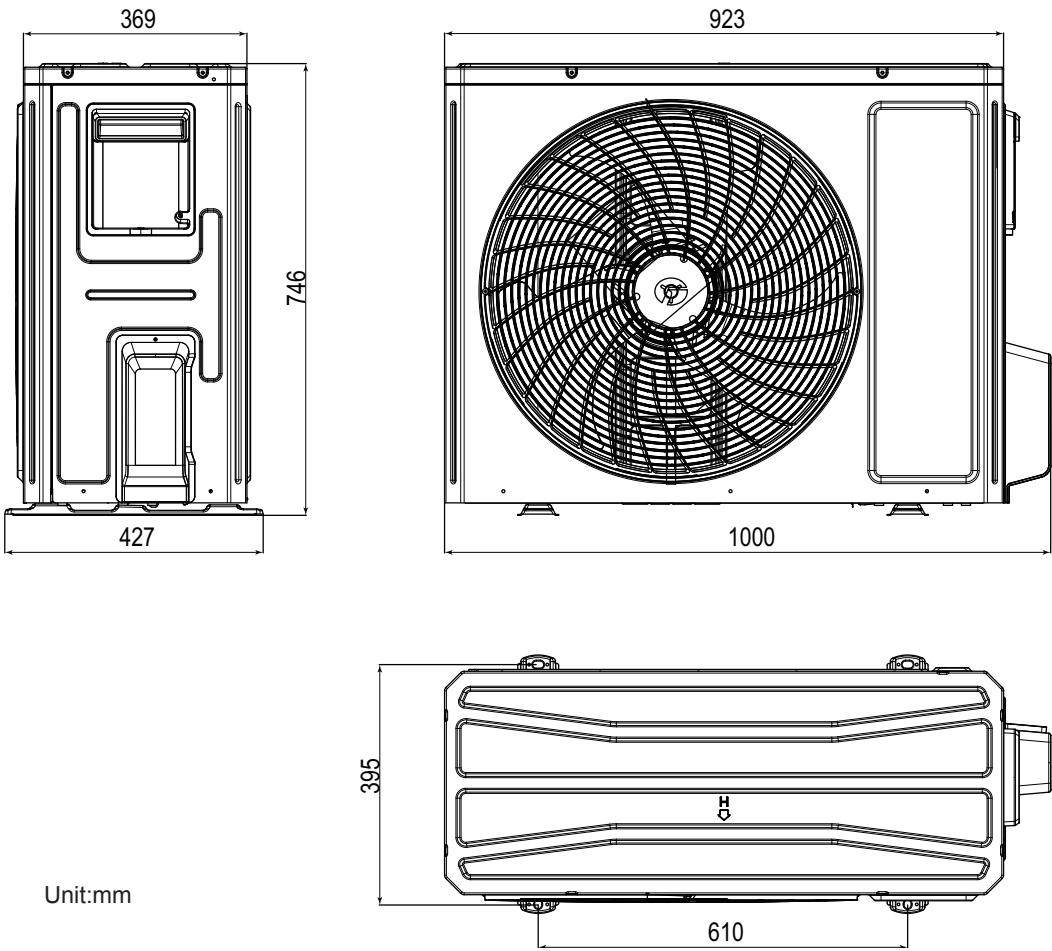


15K



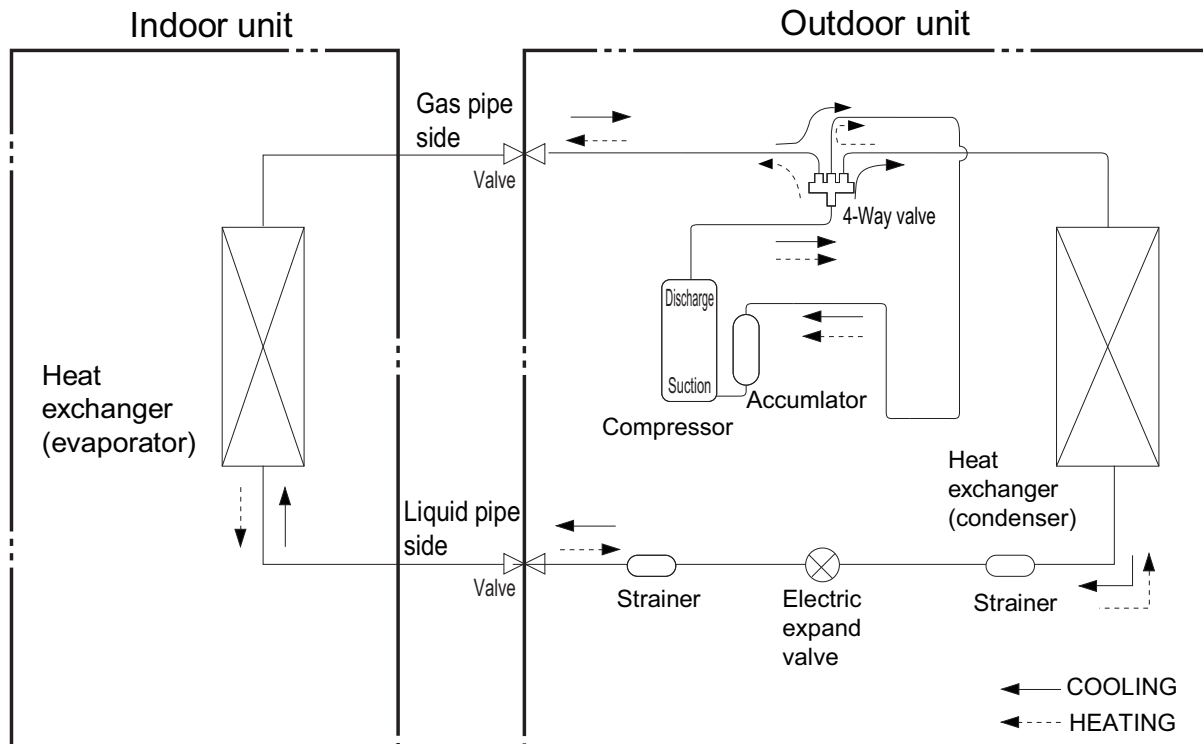


28K



## 4. Refrigerant System Diagram

### Cooling and heating model



Connection pipe specification:

Liquid pipe: 1/4"

Gas pipe: 1/2" 15/18/21K

Gas pipe: 5/8" 24/28K

# 5. Electrical Part

## 5.1 Wiring Diagram

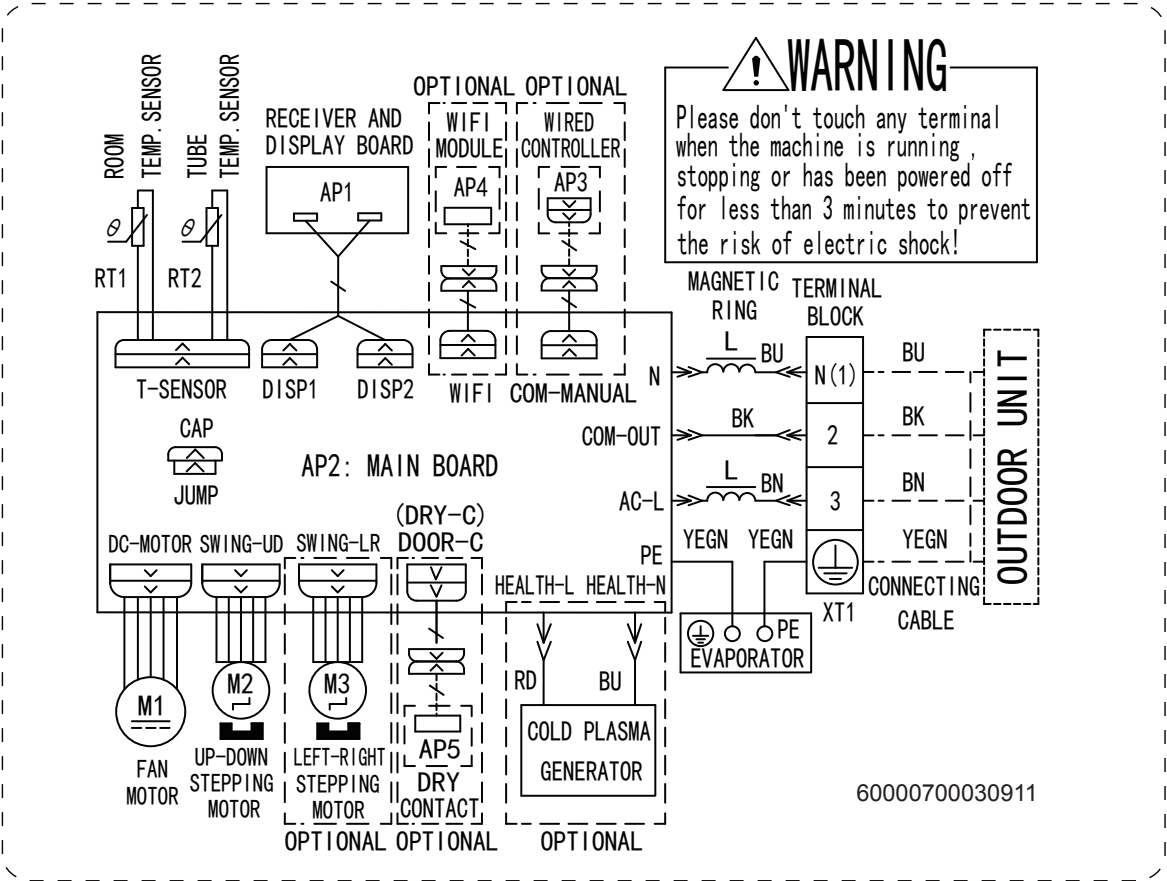
●Instruction

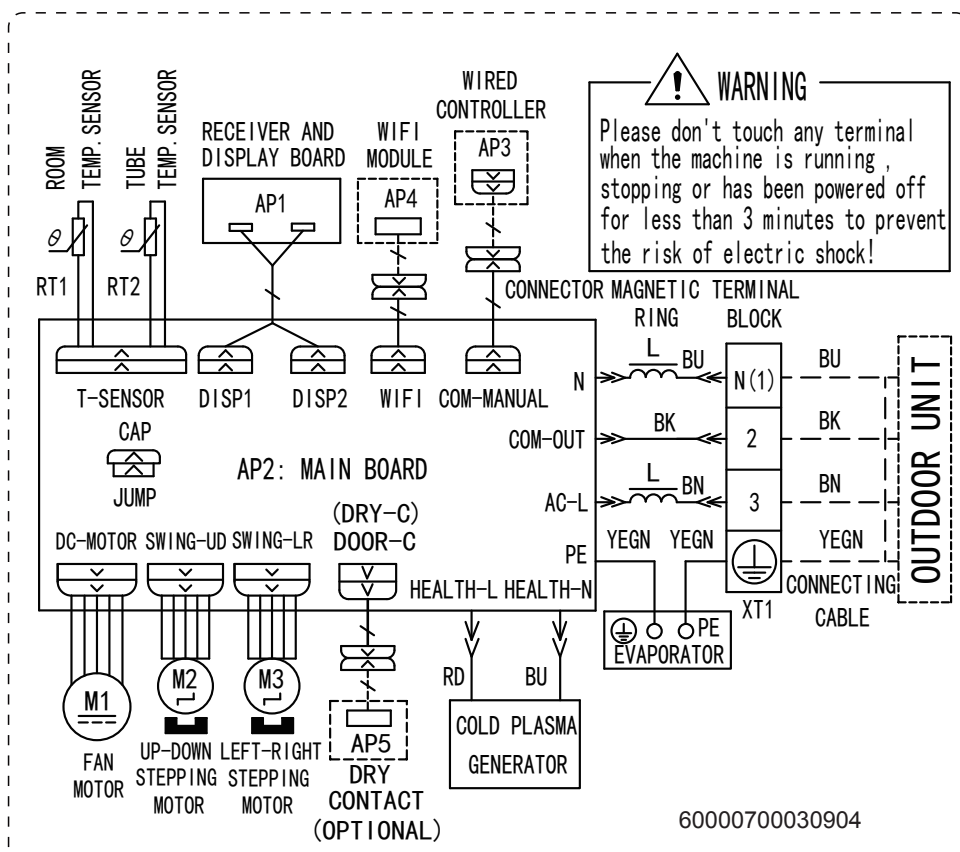
Symbol	Symbol Color	Symbol	Symbol Color	Symbol	Name
WH	White	GN	Green	CAP	Jumper cap
YE	Yellow	BN	Brown	COMP	Compressor
RD	Red	BU	Blue		Grounding wire
YEGN	Yellow/Green	BK	Black	/	/
VT	Violet	OG	Orange	/	/

Note: Jumper cap is used to determine fan speed and the swing angle of horizontal lever for this model.

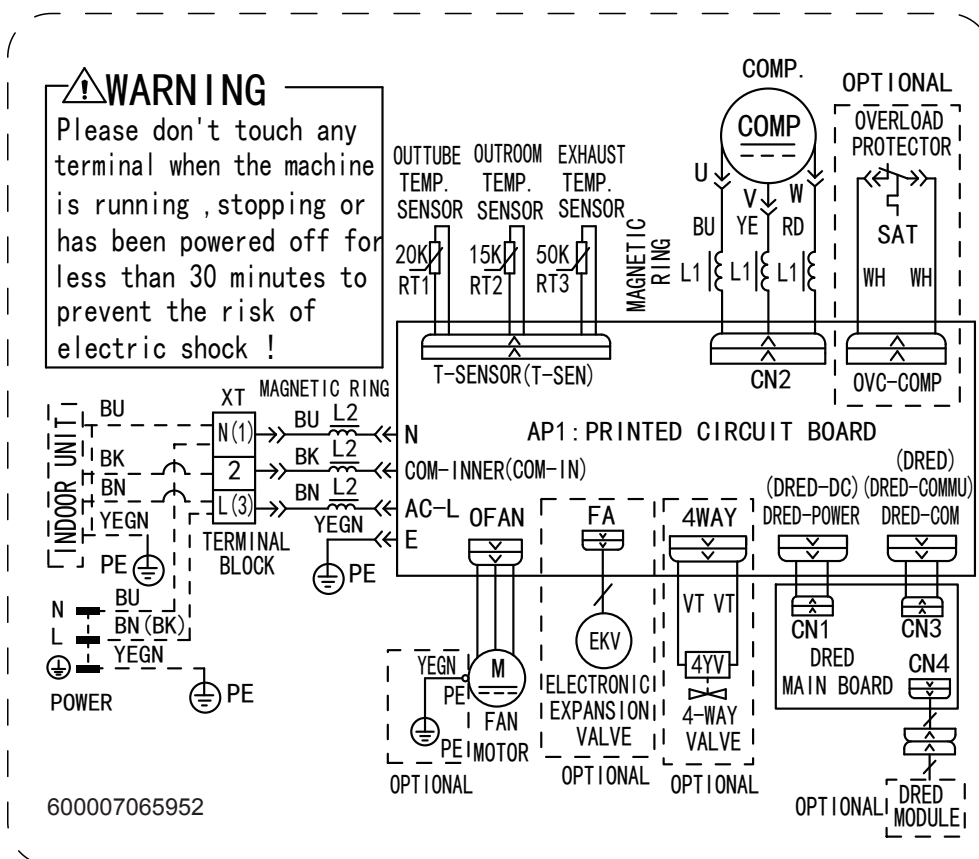
● Indoor Unit

15/21/24/28K





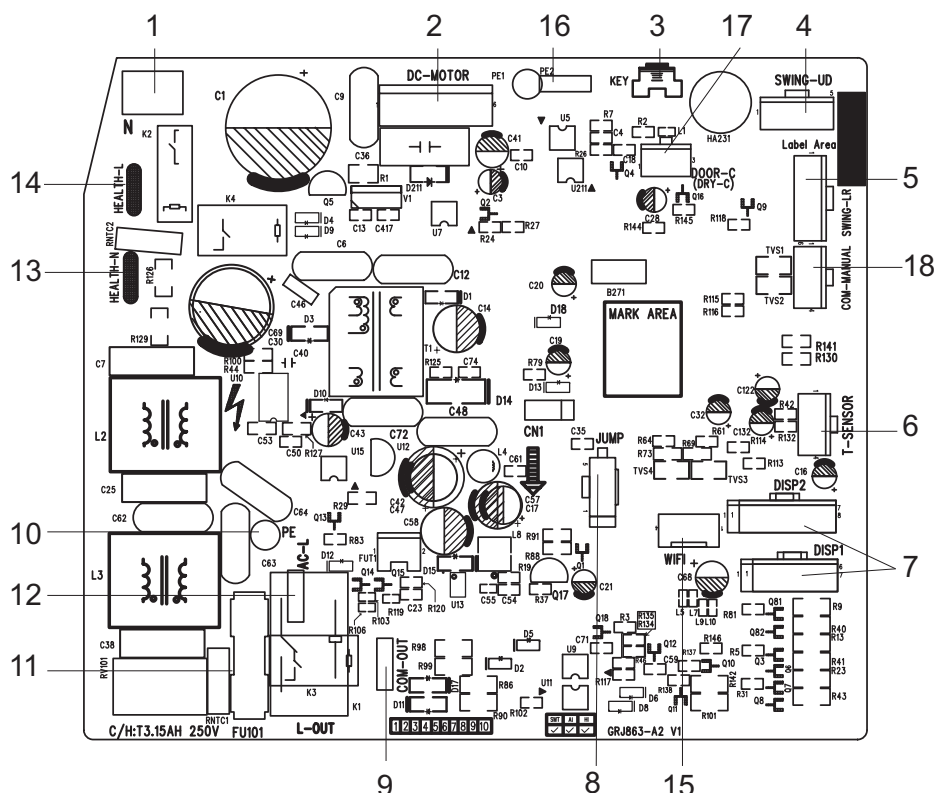
## • Outdoor Unit



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

## 5.2 PCB Printed Diagram

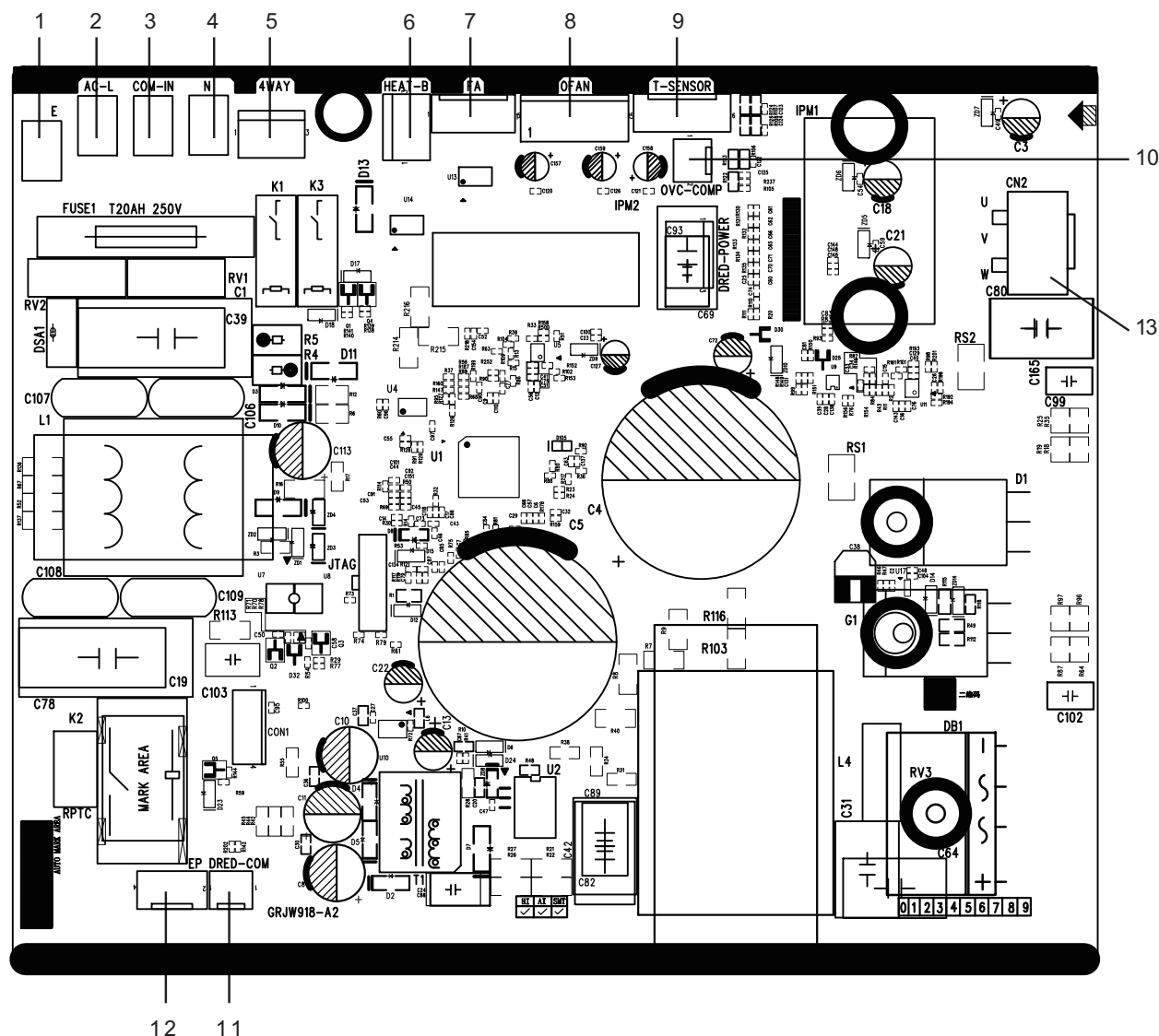
### Indoor Unit



No.	Name
1	Neutral wire
2	Needle stand for indoor fan
3	Auto button
4	Up&down swing motor
5	left&right swing motor
6	Interface of temperature sensor
7	Terminal for display board connection
8	Terminal of jumper cap
9	Communication wire

No.	Name
10	Connect earthing wire(only for the mode with this function)
11	Fuse
12	Live wire interface
13	Interface of health function neutral wire
14	Interface of health function live wire
15	Detecting plate(WIFI )
16	Connect earthing wire(only for the mode with this function)
17	Wired controller (only for the mode with this function)
18	Interface of gate control (only for the mode with this function)

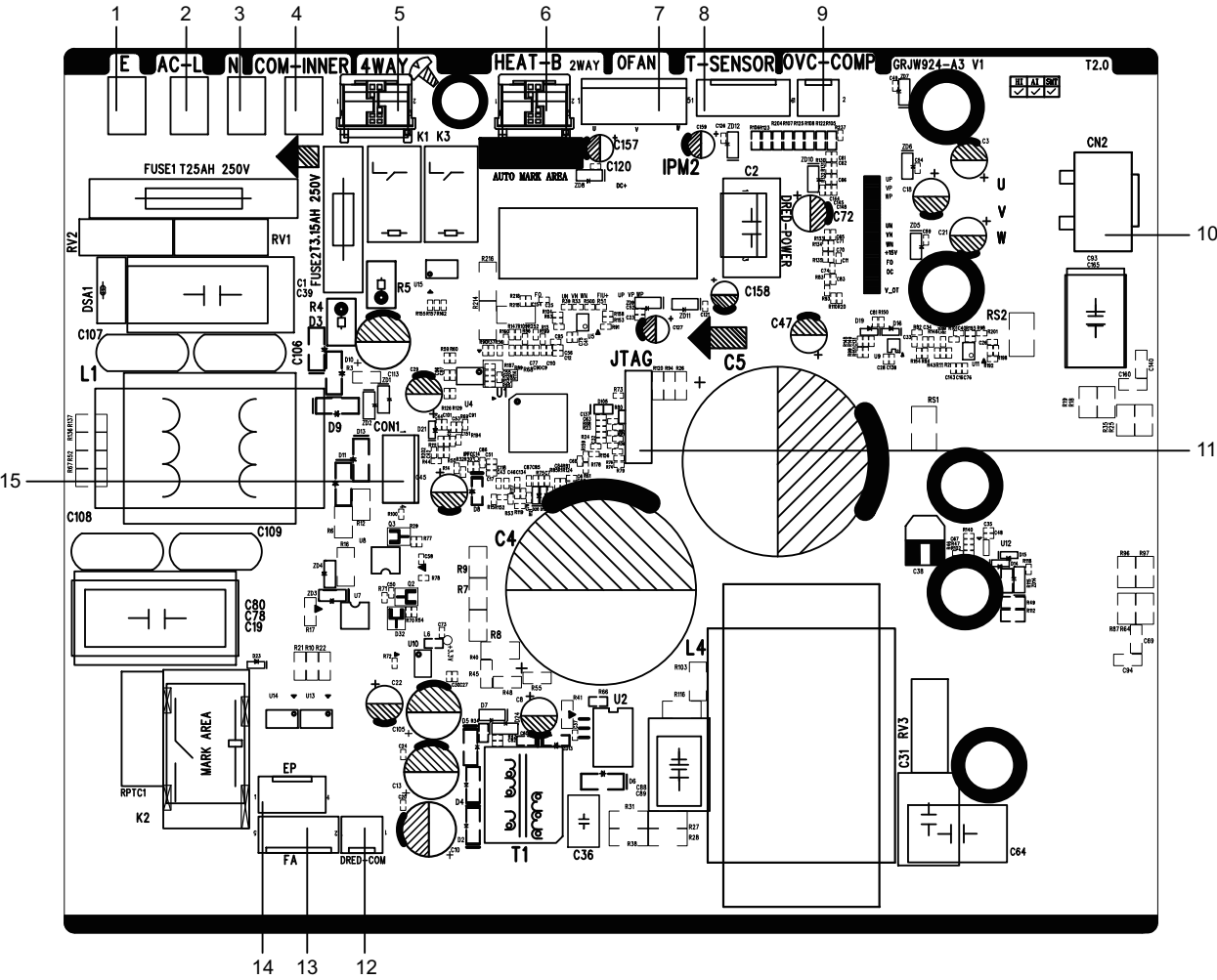
## 15K



No	Name
1	Earthing wire
2	Live wire
3	Communication cable
4	Neutral wire
5	4-way valve
6	Electric heating belt of chassis
7	Interface of electronic expansion valve

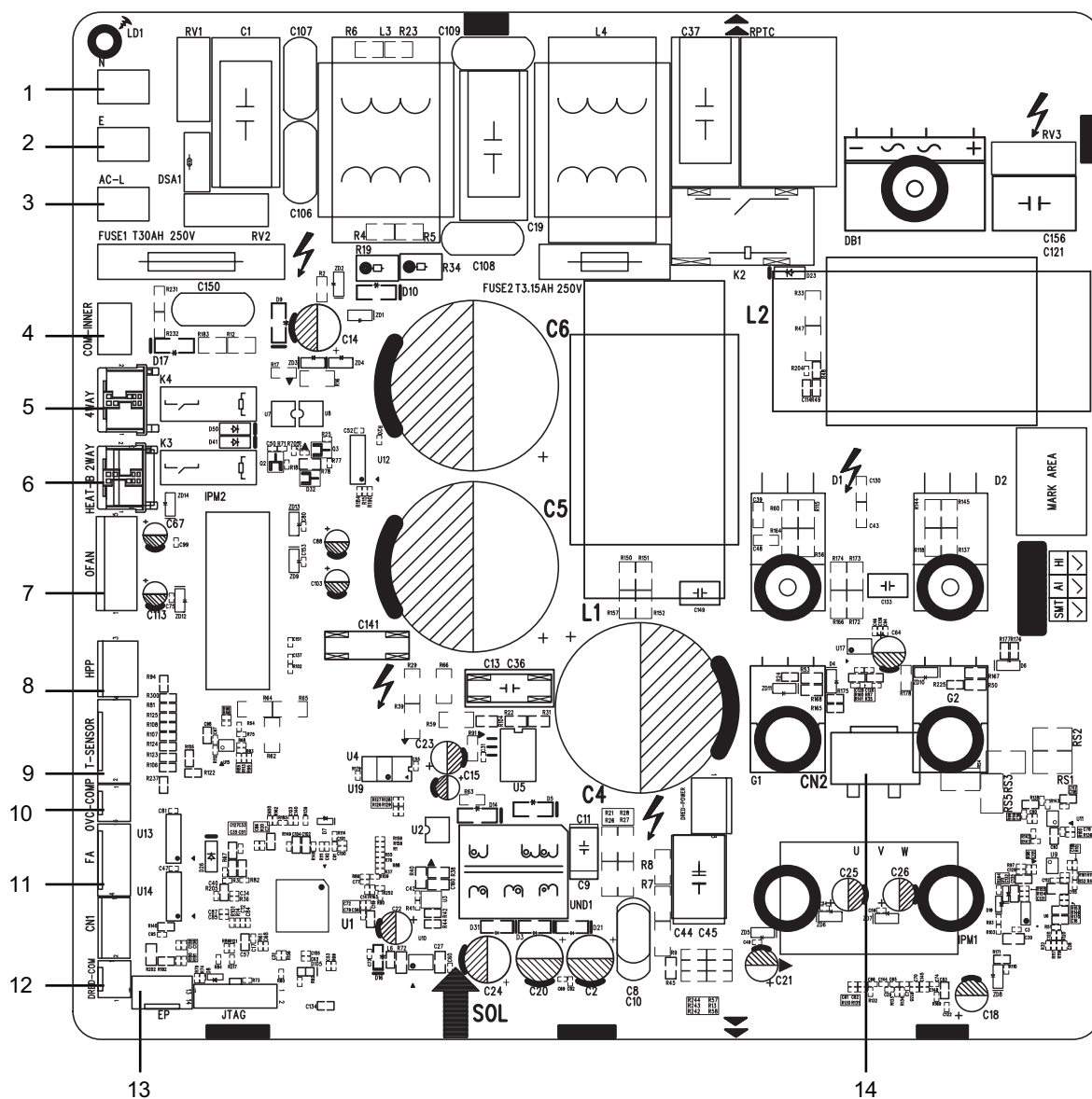
No	Name
8	Interface of outdoor fan
9	Temperature sensor
10	Overload interface of compressor
11	Dred communication
12	E disk interface
13	Interface of compressor





No.	Name
1	Eathing wire
2	Live wire
3	Neutral wire
4	Communication cable
5	4-way valve
6	Electric heating belt of chassis / 2-way valve
7	DC fan
8	Temperature sensor

No.	Name
9	Overload
10	Terminal of compressor
11	Program debugging interface
12	DRED interface
13	Electronic expansion valve interface
14	E disk interface
15	Monitor interface

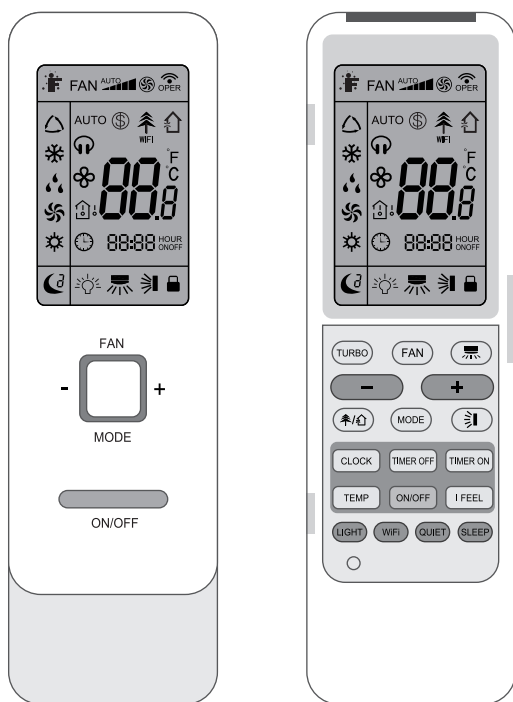


No.	Name	No.	Name
1	Neutral wire	8	Terminal of high pressure protection
2	Grounding wire	9	Temperature sensor
3	Live wire	10	Overload interface of compressor
4	Communication wire	11	Terminal of electronic expansion valve
5	4-way valve	12	Terminal of DRED
6	Electric heating belt of chassis	13	E disk(Reserved)
7	Outdoor fan	14	Terminal of compressor wire

# 6. Function and Control

## 6.1 Remote Controller Introduction for YAG1FB1(WiFi)

### Buttons on remote controller



(before opening cover)

(after opening cover)

### Introduction for icons on display screen

Icon	I feel
FAN AUTO	Set fan speed
⚙️	Turbo mode
📶	Send signal
△	Auto mode
❄️	Cool mode
💧	Dry mode
🌀	Fan mode
☀️	Heat mode
🌙	Sleep mode
🌡️	8°C heating function
🌳	Health mode
🏠	Scavenging function
WIFI	WiFi function
🔊	Quiet
🌀	X-FAN function
Temp. display type	🏠 Set temp.
	🏠 Indoor ambient temp.
	🏠 Outdoor ambient temp.
🕒	Clock
88.8	Set time
88.88	TIMER ON / TIMER OFF
💡	Light
🌀	Left & right swing
🌀	Up & down swing
🔒	Child lock

### NOTE:

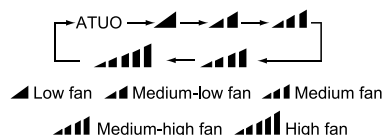
- This is a general use remote controller. It could be used for the air conditioner with multifunction. For the functions which the model doesn't have, if press the corresponding button on the remote controller, the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Power indicator "🔌" is ON. After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶" on the display of remote controller will blink once and the air conditioner will give out a "di" sound, which means the signal has been sent to the air conditioner.
- Under off status, set temperature and clock icon will be displayed on the display of remote controller (If timer on, timer off and light functions are set, the corresponding icons will be displayed on the display of remote controller at the same time); Under on status, the display will show the corresponding set function icons.

ON/OFF button

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

FAN button

Press this button, Auto, Low, Medium-low, Medium, Medium-high, High speed can be circularly selected. After powered on, auto fan speed is default. Under dry mode, low fan speed only can be set up.



### NOTE:

- It's low fan speed under dry mode.
- X-FAN function Hold fan speed button for 2s in cool or dry mode, the icon "🌀" is displayed and the indoor fan will continue operation for a few 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.
- This function indicates that moisture on evaporator of indoor unit will be blown after the unit is stopped to avoid mould.
  - Having set X-FAN function on: After turning off the unit by pressing "ON/OFF" button indoor fan will continue running for a few minutes. at low speed.
- Having set X-FAN function off: After turning off the unit by pressing "ON/OFF" button, the complete unit will be off directly.

### MODE button

Press this button, Auto, Cool, Dry, Fan, Heat mode can be selected circularly. Auto mode is default while power on. Under Heat mode, the initial value is 28°C(82°F) Under other modes, the initial value is 25°C(77°F).



### NOTE:

- Heat mode: Only for models with heating function.
- Under auto mode, temperature can be displayed; Under auto mode, set temperature can be adjusted.

### - / + button

Press " + " or " - " button once increase or decrease set temperature 0.1°C(°F). Holding " + " or " - " button, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly.

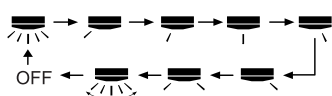
When setting TIMER ON, TIMER OFF or CLOCK, press " + " or " - " button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons)

### TURBO button

Under cool or heat mode, press this button can turn on or turn off the turbo function. After the turbo function turned on, the signal of turbo will display. The signal will be automatically cancelled if changing the mode or fan speed.

### button

Press this button to set left & right swing angle cycling as below:



### NOTE:

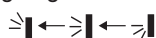
- The function is only available for some models.

### button

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



This remote controller is universal. If it receives three kinds of following status, the swing angle will remain original.



If guide louver is stopped when it is swinging up and down, it will remain its present position.

➤ indicates guide louver swings back and forth in the five places, as shown in the figure.

### CLOCK button

Press this button, the clock can be set up, signal ⌚ blink and display. Within 5 seconds, the value can be adjusted by pressing + or - button, if continuously press this button for 2 seconds above, in every 0.5 seconds, the value on ten place of minute will be increased 1. During blinking, repress the clock button or confirm button, signal ⌚ will be constantly displayed and it denotes the setting succeeded. After powered on, 12:00 is defaulted to display and signal ⌚ will be displayed. If there is signal ⌚ be displayed that denotes the current time value is clock value, otherwise is Timer value.

### TIMER OFF / TIMER ON button

- Timer On setting: Signal "ON" will blink and display, signal ⌚ will conceal, the numerical section will become the timer on setting status. During 5 seconds blink, by pressing + or - button to adjust the time value of numerical section, every press of that button, the value will be increased or decreased 1 minute. Hold pressing + or - button, 2 seconds later, it quickly change, the way of change is: During the initial 2.5 seconds, ten numbers change in the one place of minute, then the one place is constant, ten numbers change in the tens place of minute at 2.5 seconds speed and carry. During 5s blink, press the timer on button, the timer setting succeeds. The timer on has been set up, repress the timer on button, the timer on will be canceled. Before setting the timer, please adjust the clock to the current actual time.

- One press this key to enter into TIMER OFF setup, in which case the TIMER OFF icon will blink. The method of setting is the same as for TIMER ON.

### TEMP button

- Press this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor unit's display. The setting on remote controller is selected circularly as below:



When selecting "no display" with remote controller or no display, temperature indicator on indoor unit displays set temperature. When selecting "indoor set temperature" with remote controller, temperature indicator on indoor unit displays indoor ambient temperature; When selecting "indoor ambient temperature" with remote controller, temperature indicator on indoor unit displays outdoor ambient temperature. 3s later it will return to the setting temperature or it depends on the other received signal within 3s.

Attention: When displaying the outdoor ambient, the displaying range is 0-60°C. When it goes beyond the range, it keeps the threshold data (The smallest — 0°C and the largest 60°C).

Warm tips: When operating buttons on the cover please make sure the cover is closed completely.

#### NOTE:

- Outdoor temperature display is not available for some models. At that time, indoor unit receives "🏠" signal, while it displays indoor set temperature.



Press this button to turn on or turn off the health and scavenging functions in operation status. Press this button for the first time to start scavenging function simultaneously; LCD displays "🏠". Press the button for the second time to start health and scavenging functions simultaneously; LCD displays "🏠" and "🌿". Press this button for the third time to quit health and scavenging functions simultaneously. Press the button for the fourth time to start health function; LCD display "🌿". Press this button again to repeat the operation above.

#### NOTE:

- This function is applicable to partial of models.



Press this button once, to turn on the I FEEL function, then the figure of "I FEEL" will be displayed, after every press of other function button, every 200ms to send I FEEL once, after this function started, the remote controller will send temperature to the main unit in every 10 minutes. When repress this button, this function will be turned off. When I FEEL function is turned on, the remote controller should be put within the area where indoor unit can receive the signal sent by the remote controller.



Press this button to turn off display light on indoor unit. "💡" icon on remote controller disappears. Press this button again to turn on display light. "💡" icon is displayed.

Press and hold the LIGHT button for 5 seconds to activate or cancel the auto light function. When the set temperature on the remote controller blinks 3 times, it means the auto light function is successfully turned on. When this function is active, the panel lamp will light up for 20 seconds every time the indoor unit receives a signal from the remote controller and then go off automatically.

Auto light function is only available for some models.



Press "WiFi" button to turn on WiFi function, "WiFi" icon will be displayed on the remote controller;

Hold "WiFi" button for 5s to turn off WiFi function and "WiFi" icon will disappear.

Under off status, press "MODE" and "WiFi" buttons simultaneously for 1s, WiFi module will restore factory settings.

#### NOTE:

- This function is only available for some models.



Press this button, the quiet status is under the auto quiet mode (display "🔇" and "Auto" signal) and quiet mode (display "🔇" signal) and quiet off (there is no signal of "🔇" displayed), after powered on, the quiet off is defaulted.

Under the quiet mode (Display "🔇" signal).

#### NOTE:

- The quiet function is only available for some models.



- Press this button, can select Sleep 1 (🌙), Sleep 2 (🌙), Sleep 3 (🌙) and cancel the Sleep, circulate between these, after electrified, Sleep cancel is defaulted.

- Sleep 1 is sleep mode 1, in cool, dehumidify modes:

sleep status after run for one hour, the main unit setting temperature will increase 1°C, 2 hours, setting temperature increased 2°C, the unit will run at this setting temperature; In heat mode: sleep status after run for one hour, the setting temperature will decrease 1°C, 2 hours, setting temperature will decrease 2°C, then the unit will run at this setting temperature.

- Sleep 2 is sleep mode 2, that is air conditioner will run according to the presetting a group of sleep temperature curve.

In cool mode:

(1) When setting the initial temperature 16°C -23°C, after turned on sleep function, the temperature will be increased 1°C in every hour, after 3°C the temperature will be maintained, after 7 hours, the temperature will be decreased 1°C, after that the unit will keep on running under this temperature;

(2) When setting the initial temperature 24°C-27°C, after turned on sleep function, the temperature will be increased 1°C in every hour, after 2°C the temperature will be maintained, after 7 hours, the temperature will be decreased 1°C, after that the unit will keep on running under this temperature;

(3) When setting the initial temperature 28°C-29°C, after turned on sleep function, the temperature will be increased 1°C in every hour, after 1°C the temperature will be maintained, after 7 hours, the temperature will be decreased 1°C, after that the unit will keep on running under this temperature;

(4) When setting the initial temperature 30°C, under this temperature setting, after 7 hours, the temperature will be decreased 1°C, after that the unit will keep on running under this temperature;

In heat mode:

(1) Under the initial presetting temperature 16°C, it will run under this setting temperature all along.

(2) Under the initial presetting temperature 17°C -20°C, after Sleep function started up, the temperature will decrease 1°C in every hour, after 1°C decreased, this temperature will be maintained.

(3) Under the initial presetting temperature 21°C -27°C, after Sleep function started up, the temperature will decrease 1°C

in every hour, after 2°C decreased, this temperature will be maintained.

(4) Under the initial presetting temperature 28°C -30°C, after Sleep function started up, the temperature will decrease 1°C in every hour, after 3°C decreased, this temperature will be maintained.

- Sleep 3 - the sleep curve setting under sleep mode by DIY:

(1) Under Sleep 3 mode, press "Turbo" button for a long time, remote controller enters into user individuation sleep setting status, at this time, the time of remote controller will display "1 hour", the setting temperature "88" will display the corresponding temperature of last setting sleep curve and blink (The first entering will display according to the initial curve setting value of original factory);

(2) Adjust "+" and "-" button, could change the corresponding setting temperature, after adjusted, press "Turbo" button for confirmation;

(3) At this time, 1 hour will be automatically increased at the timer position on the remote controller, (that are "2 hours" or "3 hours" or "8 hours"), the place of setting temperature "88" will display the corresponding temperature of last setting sleep curve and blink;

(4) Repeat the above step (2)~(3) operation, until 8hours temperature setting finished, sleep curve setting finished, at this time, the remote controller will resume the original timer display; temperature display will resume to original setting temperature.

- Sleep3 - the sleep curve setting under sleep mode by DIY could be inquired: The user could accord to sleep curve setting method to inquire the presetting sleep curve, enter into user individuation sleep setting status, but do not change the temperature, press "Turbo" button directly for confirmation.

#### NOTE:

- In the above presetting or enquiry procedure, if continuously within 10s, there is no button pressed, the sleep curve setting status will be automatically quit and resume to display the original displaying. In the presetting or enquiry procedure, press "ON/OFF" button, "Mode" button or "Sleep" button, the sleep curve setting or enquiry status will quit similarly.

## Introduction for special function


### About AUTO RUN

When AUTO RUN mode is selected, the setting temperature will not be displayed on the LCD, the unit will be in accordance with the room temp. automatically to select the suitable running method and to make ambient comfortable.

### About turbo function



If start this function, the unit will run at super-high fan speed to cool or heat quickly so that the ambient temperature approaches the preset temperature as soon as possible

### About Child lock

Press + and - buttons simultaneously to lock or unlock the keyboard. If the remote controller is locked, the icon  will be displayed on it, in which case, press any button, the mark will flicker for three times. If the keyboard is unlocked, the mark will disappear.



### About swing up and down

1. Press swing up and down button continuously more than 2s, the main unit will swing back and forth from up to down , and then loosen the button, the unit will stop swing and present position of guide louver will be kept immediately.

2. Under swing up and down mode, when the status is switched from off to , if press this button again 2s later,  status will switch to off status directly; If press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

### About swing left and right

1. Press swing left and right button continuously more than 2s, the main unit will swing back and forth from left to right, and then loosen the button, the unit will stop swing and present position of guide louver will be kept immediately.

2. Under swing left and right mode, when the status is switched from off to , if press this button again 2s later,  status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

### About switch between Fahrenheit and Centigrade


Under status of unit off, press "MODE" and "-" buttons simultaneously to switch °C and °F.

### Combination of "TEMP" and "CLOCK" buttons: About Energy - saving Function

Press "TEMP" and "CLOCK" simultaneously in COOL mode to start energy-saving function. Nixie tube on the remote controller displays "SE".

Repeat the operation to quit the function.

### Combination of "TEMP" and "CLOCK" buttons: About 8°C Heating Function

Press "TEMP" and "CLOCK" simultaneously in heat mode to start 8°C heating function. Nixie tube on the remote controller displays  and a selected temperature of " 8°C ". (46°F if Fahrenheit is adopted). Repeat the operation to quit the function.

### About Quiet function

When quiet function is selected:



1. Under cooling mode: indoor fan operates at notch 4 speed. 10 minutes later or when indoor ambient temperature  $\leq 28^{\circ}\text{C}$ , indoor fan will operate at notch 2 speed or quiet mode according to the comparison between indoor ambient temperature and set temperature.
2. Under heating mode: indoor fan operates at notch 3 speed or quiet mode according to the comparison between indoor ambient temperature and set temperature.
3. Under dry, fan mode: indoor fan operates at quiet mode.
4. Under auto mode: the indoor fan operates at the auto quiet mode according to actual cooling, heating or fan mode.

### About Sleep function

Under the fan and auto mode, the sleep function cannot be set up, under dehumidify mode, only sleep 1 can be selected. Select and enter into any kind of sleep mode, the quiet function will be attached and started, different quiet status could be optional and turned off.

### Night mode

Under cooling or heating mode, when turning on sleep mode and turn to low speed or quiet notch, the outdoor unit would enter into night mode.

#### NOTE:

- When you feel that the cooling and heating effect is poor, please press "FAN" button to other fan speed or press "SLEEP" button to exit the night mode.
- The night mode can only work under normal ambient temperature.
- This function is only available for some models.

### Auto clean function

Under unit off status, hold "MODE" and "FAN" buttons simultaneously for 5s to turn on or turn off the auto clean function. When the auto clean function is turned on, indoor unit displays "CL".

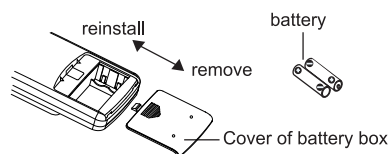
During the auto clean process of evaporator, the unit will perform fast cooling or fast heating. There may be some noise, which is the sound of flowing liquid or thermal expansion or cold shrinkage. The air conditioner may blow cool or warm air, which is a normal phenomenon. During cleaning process, please make sure the room is well ventilated to avoid affecting the comfort.

#### NOTE:

- The auto clean function can only work under normal ambient temperature. If the room is dusty, clean it once a month; if not, clean it once every three months. After the auto clean function is turned on, you can leave the room. When auto clean is finished, the air conditioner will enter standby status.
- This function is only available for some models.

### Replacement of batteries in remote controller

1. Press the back side of remote controller marked with " ", as shown in the fig, and then push out the cover of battery box along the arrow direction.
2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar are correct.
3. Reinstall the cover of battery box.



#### NOTE:

- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there's no display, please replace batteries.



## 6.2 Remote Controller Introduction for YAC1FB4(WiFi)

### Buttons on remote controller



### Introduction for icons on display screen

		I feel
	FAN	Set fan speed
		Turbo mode
Operation mode		Send signal
		Auto mode
		Cool mode
		Dry mode
		Fan mode
		Heat mode
		Sleep mode
		8°C heating function
		Health mode
		Scavenging function
		Quiet
		X-FAN function
Temp. display type		Set temp.
		Indoor ambient temp.
		Outdoor ambient temp.
		Clock
		Set temperature
	WIFI	WiFi function
	88:88	Set time
	ON/OFF	TIMER ON / TIMER OFF
		Light
		Left & right swing
		Up & down swing
		Child lock

### Introduction for buttons on remote controller

#### Notice:

- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Power indicator "⏻" is ON. After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶" on the display of remote controller will blink once and the air conditioner will give out a "di" sound, which means the signal has been sent to the air conditioner.



button

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



button

Press this button to select your required operation mode.



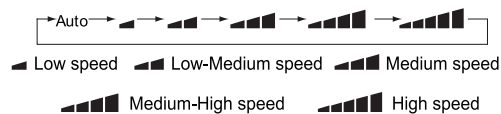
- When selecting auto mode, air conditioner will operate automatically according to the sensed temperature. Press "FAN" button can adjust fan speed. Press "📶" / "📶" button can adjust fan blowing angle.
- After selecting cool mode, air conditioner will operate under cool mode. Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "📶" / "📶" button to adjust fan blowing angle.
- When selecting dry mode, the air conditioner operates at low speed under dry mode. Under dry mode, fan speed can't be adjusted. Press "📶" / "📶" button to adjust fan blowing angle.
- When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. Press "FAN" button to adjust fan speed. Press "📶" / "📶" button to adjust fan blowing angle.
- When selecting heat mode, the air conditioner operates under heat mode. Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "📶" / "📶" button to adjust fan blowing angle.

#### Notice:

- For preventing cold air, after starting up heat mode, indoor unit will delay 1~5 minutes to blow air (Actual delay time depends on indoor ambient temperature).
- Set temperature range from remote controller: 16~30°C (61~86°F).
- This mode indicator is not available for some models.
- Cooling only unit won't receive heat mode signal. If setting heat mode with remote controller, press "⏻" button can't start up the unit.

## FAN button

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



### Notice:

- It's low fan speed under dry mode.
- X-FAN function: Holding fan speed button for 2s in cool or dry mode, the icon "☼" is displayed and the indoor fan will continue operation for a few 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.

This function indicates that moisture on evaporator of indoor unit will be blown after the unit is stopped to avoid mould.

- Having set X-FAN function on: After turning off the unit by pressing "⏻" button, indoor fan will continue running for a few minutes at low speed. In this period, hold fan speed button for 2s to stop indoor fan directly.
- Having set X-FAN function off: After turning off the unit by pressing "⏻" button, the complete unit will be off directly.

## TURBO button

Under cool or heat mode, press this button to turn to quick cool or quick heat mode. "⚡" icon is displayed on remote controller. Press this button again to exit turbo function and "⚡" icon will disappear.

If start this function, the unit will run at super-high fan speed to cool or heat quickly so that the ambient temperature approaches the preset temperature as soon as possible.

## ▲ ▼ button

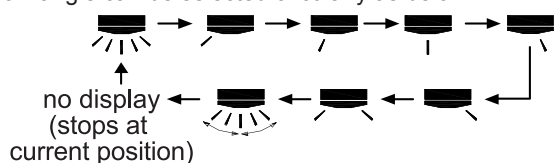
Press "▲" or "▼" button once increase or decrease set temperature 0.1°C(°F). Holding "▲" or "▼" button, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly.

When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▼" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons)

## 🌀 button

Press this button can select left & right swing angle.

Fan blow angle can be selected circularly as below:



### Notice:

- Press this button continuously more than 2s, the main unit will swing back and forth from left to right, and then loosen the button, the unit will stop swinging and present position of guide louver will

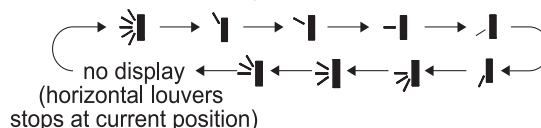
be kept immediately.

- Under left and right swing mode, when the status is switched from off to , if press this button again 2s later, status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

- The function is only available for some models.

## 🌀 button

Press this button can select up & down swing angle. Fan blow angle can be selected circularly as below:



- When selecting "🌀", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.
- When selecting "🌀", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.
- When selecting "🌀", air conditioner is blowing fan at fixed angle. Horizontal louver will send air at the fixed angle.
- Hold "🌀" button above 2s to set your required swing angle. When reaching your required angle, release the button.

### Notice:

- "🌀" may not be available. When air conditioner receives this signal, the air conditioner will blow fan automatically.
- Press this button continuously for more than 2s, the main unit will swing back and forth from up to down, and then loosen the button, the unit present position of guide louver will be kept immediately.
- Under up and down swing mode, when the status is switched from off to , if press this button again 2s later, status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

## SLEEP button

- Press this button, can select Sleep 1 (🌙), Sleep 2 (🌙), Sleep 3 (🌙) and cancel the Sleep, circulate between these, after electrified, Sleep Cancel is defaulted.

- Sleep 1 is Sleep mode 1, in Cool modes; sleep status after run for one hour, the main unit setting temperature will increase 1°C, two hours, setting temperature increased 2°C, then the unit will run at this setting temperature; In Heat mode: sleep status after run for one hour, the setting temperature will decrease 1°C, two hours, setting temperature will decrease 2°C, then the unit will run at this setting temperature.

- Sleep 2 is sleep mode 2, that is air conditioner will run according to the presetting a group of sleep temperature curve.

- Sleep 3-the sleep curve setting under Sleep mode by DIY;

(1) Under Sleep 3 mode, press "Turbo" button for a long time, remote controller enters into user individuation sleep setting status, at this time, the time of remote controller will display "1hour",

the setting temperature "88" will display the corresponding temperature of last setting sleep curve and blink(The first entering will display according to the initial curve setting value of original factory);

(2)Adjust "+" and "-" button, could change the corresponding setting temperature, after adjusted,press "Turbo" button for confirmation;

(3) At this time, 1hour will be automatically increased at the timer position on the remote control,(that are "2hours" or "3hours" or "8hours"), the place of setting temperature "88" will display the corresponding temperature of last setting sleep curve and blink;

(4) Repeat the above step (2)~(3) operation, until 8 hours temperature setting finished, sleep,curve setting finished, at this time, the remote controller will resume the original timer display; temperature display will resume to original setting temperature.

- Sleep3- the sleep curve setting under Sleep mode by DIY could be inquired:

The user could accord to sleep curve setting method to inquire the presetting sleep curve, enter into user individuation sleep setting status, but do not change the temperature, press "Turbo" button directly for confirmation. Note: In the above presetting or enquiry procedure, if continuously within 10s, there is no button pressed, the sleep curve setting within 10s, there is no button pressed, the sleep curve setting status will be automatically quit and resume to display the original displaying. In the presetting or enquiry procedure,press "⏏" button, "Mode" button, "Sleep" button, the sleep curve setting or enquiry status will quit similarly.

#### **button**

Press this button to start I FEEL function and "⌚" will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature.Press this button again to close I FEEL function and "⌚" will disappear.

Please put the remote controller near user when this function is set. Do not put the remote controller near the object of high temperature or low temperature in order to avoid detecting inaccurate ambient temperature. When I FEEL function is turned on, the remote controller should be put within the area where indoor unit can receive the signal sent by the remote controller.

#### **button**

- **TIMER ON button**

"TIMER ON" button can set the time for timer on. After pressing this button, "⌚" icon disappears and the word "ON" on remote controller blinks. Press "▲" or "▼" button to adjust TIMER ON setting. After each pressing "▲" or "▼" button. TIMER ON setting will increase or decrease 1min. Holding "▲" or "▼" button, 2s later, the time will change quickly until reaching your required time. Press "TIMER ON" to confirm it. The word "ON" will stop blinking. "⌚" icon resumes displaying.Cancel TIMER ON: Under the condition that TIMER ON is started up, press "TIMER ON" button to cancel it.

- **TIMER OFF button**

"TIMER OFF" button can set the time for timer off. After pressing this button, "⌚" icon disappears and the word "OFF" on remote controller blinks. Press "▲" or "▼" button to adjust TIMER OFF setting. After each pressing "▲" or "▼" button, TIMER OFF setting will increase or decrease 1min. Holding "▲" or "▼" button, 2s later, the time will change quickly until reaching your required time.

Press "TIMER OFF" and the word "OFF" will stop blinking. "⌚" icon resumes displaying.Under the condition that TIMER OFF is started up, press "TIMER OFF" button to cancel it.

#### **NOTE:**

- Under on and off status, you can set TIMER OFF or TIMER ON simultaneously.
- Before setting TIMER ON or TIMER OFF, please adjust the clock time.
- After starting up TIMER ON or TIMER OFF, set the constant circulating valid. After that, air conditioner will be turned on or turned off according to setting time. "⏏" button has no effect on setting. If you don't need this function, please use remote controller to cancel it.

#### **button**

Press this button to set clock time. "⌚" icon on remote controller will blink. Press "▲" or "▼" button within 5s to set clock time. Each pressing of "▲" or "▼" button, clock time will increase or decrease 1 minute. If hold "▲" or "▼" button, 2s later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. "⌚" icon stops blinking.

#### **NOTE:**

- Clock time adopts 24-hour mode.
- The interval between two operations can't exceed 5s. Otherwise, remote controller will quit setting status. Operation for TIMER ON/TIMER OFF is the same.

#### **button**

Press this button, the Quiet status is under the Auto Quiet mode (display "⌚" and "AUTO" signal ) and Quiet mode (display "⌚" signal) and Quiet OFF (there is no signal of "⌚" displayed). After powered on, the Quiet OFF is defaulted.

#### **Notice:**

- The Quiet function can be set up in all modes; Under the Quiet mode,the fan speed is not available.
- When quiet function is selected:  
Under cooling mode: indoor fan operates at notch 4 speed. 10 minutes later or when indoor ambient temperature $\leq 28^{\circ}\text{C}$ , indoor fan will operate at notch 2 speed or quiet mode according to the comparison between indoor ambient temperature and set temperature.  
Under heating mode: indoor fan operates at notch 3 speed or quiet mode according to the comparison between indoor ambient temperature and set temperature.  
Under dry, fan mode: indoor fan operates at quiet mode.  
Under auto mode: the indoor fan operates at the auto quiet mode

according to actual cooling, heating or fan mode.

- The Quiet function is only available for some models.

#### **button**

Press " WiFi " button to turn on WiFi function,"WiFi " icon will be displayed on the remote controller.


Hold " WiFi " button for 5s to turn off WiFi function and " WiFi " icon will disappear.


Under off status, press "MODE" and " WiFi "buttons simultaneously for 1s, WiFi module will restore factory settings.

#### **Notice:**





- This function is only available for some models.

#### **button**

Press this button to turn off display light on indoor unit. "  " icon on remote controller disappears.

Press this button again to turn on display light."  " icon is displayed.

#### **button**

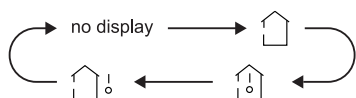
Press this button to achieve the on and off of health and scavenging functions in operation status. Press this button for the first time to start scavenging function; LCD displays "  ". Press thebutton for the second time to start health and scavenging functions simultaneously; LCD displays "  " and "  ". Press this button for the third time to quit health and scavenging functions simultaneously. Press the button for the fourth time to start health function; LCD display "  ".Press this button again to repeat the operation above.




#### **Notice:**

- This function is only available for some models.


#### **button**

By pressing this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor unit's display. The setting on remote controller is selected circularly as below:



- When selecting "  " or no display with remote controller, temperature indicator on indoor unit displays set temperature.
- When selecting "  " with remote controller, temperature indicator on indoor unit displays indoor ambient temperature.
- When selecting "  " with remote controller,temperature indicator on indoor unit displays outdoor ambient temperature.

#### **Notice:**

- Outdoor temperature display is not available for some models. At that time, indoor unit receives "  "signal, while it displays indoor set temperature.
- It's defaulted to display set temperature when turning on the unit. There is no display in the remote controller.
- Only for the models whose indoor unit has dual-8 display.
- When selecting displaying of indoor or outdoor ambient

temperature, indoor temperature indicator displays corresponding temperature and automatically turn to display set temperature after three or five seconds.

## Function introduction for combination buttons

### Energy-saving function


Under cooling mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off energy-saving function. When energy-saving function is started up, "SE" will be shown on remote controller,and air conditioner will adjust the set temperature automatically according to ex-factory setting to reach to the best energy-saving effect.

Press "TEMP" and "CLOCK" buttons simultaneously again to exit energy-saving function.

#### **Notice:**

- Under energy-saving function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under energy-saving function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and energy-saving function can't operate at the same time. If energy-saving function has been set under cool mode, press sleep button will cancel energy-saving function. If sleep function has been set under cool mode, start up the energy-saving function will cancel sleep function.



### 8°C heating function

Under heat mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off 8°C heating function. When this function is started up,"  " and "8°C" will be shown on remote controller,and the air conditioner keep the heating status at 8°C. Press "TEMP" and "CLOCK" buttons simultaneously again to exit 8°C heating function.

#### **Notice:**

- Under 8°C heating function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under 8°C heating function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and 8°C heating function can't operate at the same time. If 8°C heating function has been set under heat mode, press sleep button will cancel 8°C heating function. If sleep function has been set under heat mode, start up the 8°C heating function will cancel sleep function.
- Under °F temperature display, the remote controller will display 46°F heating.

### Child lock function

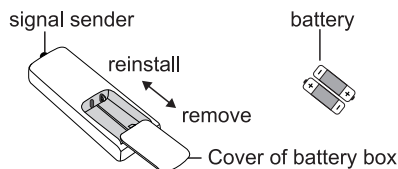
Press "▲" and "▼" simultaneously to turn on or turn off child lock function. When child lock function is on, "  " icon is displayed on remote controller.If you operate the remote controller, the "  "icon

will blink three times without sending signal to the unit.

### Temperature display switchover function

Under OFF status, press "▼" and "MODE" buttons simultaneously to switch temperature display between °C and °F.

## Replacement of batteries in remote controller



1. Press the back side of remote controller marked with "OPEN", as shown in the fig, and then push out the cover of battery box along the arrow direction.
2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar are correct.
3. Reinstall the cover of battery box.

### Notice:

- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there's no display, please replace batteries.



## 6.3 Brief Description of Models and Functions

### ● Indoor Unit

#### 1. Basic function of system

##### (1) Cooling mode

- (1) Under this mode, fan and swing operates at setting status. Temperature setting range is 16~30°C.
- (2) During malfunction of outdoor unit or the unit is stopped because of protection, indoor unit keeps original operation status.

##### (2) Drying mode

- (1) Under this mode, fan operates at low speed and swing operates at setting status. Temperature setting range is 16~30°C.
- (2) During malfunction of outdoor unit or the unit is stopped because of protection, indoor unit keeps original operation status.
- (3) Protection status is same as that under cooling mode.
- (4) Sleep function is not available for drying mode.

##### (3) Heating mode

- (1) Under this mode, Temperature setting range is 16~30°C.
- (2) Working condition and process for heating mode:  
When turn on the unit under heating mode, indoor unit enters into cold air prevention status. When the unit is stopped or at OFF status, and indoor unit has been started up just now, the unit enters into residual heat-blowing status.

##### (4) Working method for AUTO mode:

1. Working condition and process for AUTO mode:
  - a. Under AUTO mode, standard heating T<sub>preset</sub>=20°C and standard cooling T<sub>preset</sub>=25°C. The unit will switch mode automatically according to ambient temperature.
2. Protection function
  - a. During cooling operation, protection function is same as that under cooling mode.
  - b. During heating operation, protection function is same as that under heating mode.
3. Display: Set temperature is the set value under each condition. Ambient temperature is (T<sub>amb.</sub>-T<sub>compensation</sub>) for heat pump unit and T<sub>amb.</sub> for cooling only unit.
4. If theres I feel function, T<sub>compensation</sub> is 0. Others are same as above.

##### (5) Fan mode

Under this mode, indoor fan operates at set fan speed. Compressor, outdoor fan, 4-way valve and electric heating tube stop operation. Indoor fan can select to operate at high, medium, low or auto fan speed. Temperature setting range is 16~30°C.

#### 2. Other control

##### (1) Buzzer

Upon energization or availably operating the unit or remote controller, the buzzer will give out a beep.

##### (2) Auto button

If press this auto button when turning off the unit, the complete unit will operate at auto mode. Indoor fan operates at auto fan

speed and swing function is turned on. Press this auto button at ON status to turn off the unit.

##### (3) Auto fan

Heating mode: During auto heating mode or normal heating ode, auto fan speed will adjust the fan speed automatically according to ambient temperature and set temperature.

##### (4) Sleep

After setting sleep function for a period of time, system will adjust set temperature automatically.

##### (5) Timer function:

General timer and clock timer functions are compatible by equipping remote controller with different functions.

##### (6) Memory function

memorize compensation temperature, off-peak energization value. Memory content: mode, up&down swing, light, set temperature, set fan speed, general timer (clock timer can't be memorized). After power recovery, the unit will be turned on automatically according to memory content.

##### (7) Health function

During operation of indoor fan, set health function by remote controller. Turn off the unit will also turn off health function. Turn on the unit by pressing auto button, and the health is defaulted ON.

##### (8) I feel control mode

After controller received I feel control signal and ambient temperature sent by remote controller, controller will work according to the ambient temperature sent by remote controller.

##### (9) Entry condition for compulsory defrosting function

When turn on the unit under heating ode and set temperature is 16°C (or 16.5°C by remote controller), press “△, ▽, △, ▽, △, ▽” button successively within 5s and then indoor unit will enter into compulsory defrosting setting status:

- (1) If theres only indoor units controller, it enters into indoor normal defrosting mode.
- (2) If theres indoor units controller and outdoor units controller, indoor unit will send compulsory defrosting mode signal to outdoor unit and then outdoor unit will operate under normal defrosting mode. After indoor unit received the signal that outdoor unit has entered into defrosting status, indoor unit will cancel to send compulsory mode to outdoor unit. If outdoor unit hasnt received feedback signal from outdoor unit after 3min, indoor unit will also cancel to send compulsory defrosting signal.

##### (10) Refrigerant recovery function:

Enter into Freon recovery mode actively: Within 5min after energization, turn on the unit at 16°C under cooling mode, and press light button for 3 times within 3s to enter into Freon recovery mode. Fo is displayed and Freon recovery mode will be sent to outdoor unit.

##### (11) Ambient temperature display control mode

1. When user set the remote controller to display set temperature

(corresponding remote control code: 01), current set temperature will be displayed.

2. Only when remote control signal is switched to indoor ambient temperature display status (corresponding remote control code: 10) from other display status (corresponding remote control code: 00, 01, 11), controller will display indoor ambient temperature for 3s and then turn back to display set temperature.

Under this mode, indoor fan operates at set fan speed. Compressor, outdoor fan, 4-way valve and electric heating tube stop operation. Indoor fan can select to operate at high, medium, low or auto fan speed. Temperature setting range is 16~30°C.

#### **(12) Off-peak energization function:**

Adjust compressors minimum stop time. The original minimum stop time is 180s and then we change to:

The time interval between two start-ups of compressor can't be less than  $180 + T_s$  ( $0 \leq T \leq 15$ ). T is the variable of controller. That's to say the minimum stop time of compressor is 180s~195s. Read-in T into memory chip when refurbish the memory chip each time. After power recovery, compressor can only be started up after  $180 + T$  s at least.

#### **(13) SE control mode**

The unit operates at SE status.

#### **(14) X-fan mode**

When X-fan function is turned on, after turn off the unit, indoor fan will still operate at low speed for 2min and then the complete unit will be turned off. When x-fan function is turned off, after turn off the unit, the complete unit will be turned off directly.

#### **(15) 8°C heating function**

Under heating mode, you can set 8°C heating function by remote controller. The system will operate at 8°C set temperature.

#### **(16) Turbo function**

Turbo function can be set under cooling and heating modes. Press Fan Speed button to cancel turbo setting. Turbo function is not available under auto, drying and fan modes.



## ● Outdoor Unit

### 1. Cooling mode:

Working condition and process of cooling mode:

- ① When Tindoor ambient temperature  $\geq T_{\text{preset}}$ , unit enters into cooling mode. Indoor fan, outdoor fan and compressor start operation. Indoor fan operates according to set fan speed.
- ② When Tindoor ambient temperature  $\leq T_{\text{preset}} - 2^{\circ}\text{C}$ , compressor stops operation and outdoor fan will stop 30s later. Indoor fan operates according to set fan speed.
- ③ When  $T_{\text{preset}} - 2^{\circ}\text{C} < \text{Tindoor ambient temperature} < T_{\text{preset}}$ , unit operates according to the previous status.

Under cooling mode, 4-way valve is not energized. Temperature setting range is  $16 \sim 30^{\circ}\text{C}$ . If compressor stops because of malfunction in cooling mode, indoor fan and swing motor will work according to the original status.

### 2. Drying mode

(1) Working condition and process of drying mode

- ① When Tindoor ambient temperature  $> T_{\text{preset}}$ , unit will be in drying mode. Outdoor fan and compressor start operation while indoor fan will operate at low fan speed.
- ② When  $T_{\text{preset}} - 2^{\circ}\text{C} \leq \text{Tindoor ambient temperature} \leq T_{\text{preset}}$ , unit operates according to the previous status.
- ③ When Tindoor ambient temperature  $< T_{\text{preset}} - 2^{\circ}\text{C}$ , compressor stops operation and outdoor fan will stop 30s later.

(2) Under drying mode, 4-way valve is not energized. Temperature setting range is  $16 \sim 30^{\circ}\text{C}$ .

(3) Protection function: same as in cooling mode.

### 3. Fan mode

(1) Under this mode, indoor fan can select different fan speed (except Turbo) or auto fan speed. Compressor, outdoor fan and 4-way valve all stop operation.

(2) In fan mode, temperature setting range is  $16 \sim 30^{\circ}\text{C}$ .

### 4. Heating mode

Working condition and process of heating mode:

- ① When  $T_{\text{preset}} - (\text{Tindoor ambient temperature} - T_{\text{compensation}}) \geq 1^{\circ}\text{C}$ , unit enters into heating mode. Compressor, outdoor fan and 4-way valve start operation.
- ② When  $-2^{\circ}\text{C} < T_{\text{preset}} - (\text{Tindoor ambient temperature} - T_{\text{compensation}}) < 1^{\circ}\text{C}$ , unit operates according to the previous status.
- ③ When  $T_{\text{preset}} - (\text{Tindoor ambient temperature} - T_{\text{compensation}}) \leq -2^{\circ}\text{C}$ , compressor stops operation and outdoor fan will stop 30s later. Indoor fan will be in residual-heat blowing status.
- ④ When unit is turned off under heating mode or changed to other modes from heating mode, 4-way valve will be power-off 2min after compressor stops working (compressor is in operation status under heating mode).
- ⑤ When Toutdoor ambient temperature  $> 30^{\circ}\text{C}$ , compressor stops operation immediately. Outdoor fan will stop 30s later.

⑥ Under the condition that compressor is turned on, when unit is changed to heating mode from cooling or drying mode, 4-way valve will be energized in 2~3mins delay.

Note: Tcompensation is determined by IDU and ODU. If IDU controls the compensation temperature, then Tcompensation is determined according to the value sent by IDU to ODU; If IDU does not control the compensation temperature, then Tcompensation will default to  $3^{\circ}\text{C}$  by the ODU.

### 5. Freon recovery mode

After the Freon recovery signal from IDU is received, cooling at rated frequency will be forcibly turned on to recover Freon.

Indoor unit will display Fo. If any signal from remote controller is received, unit will exit from Freon recovery mode and indoor unit stops displaying Fo.

### 6. Compulsory defrosting

If unit is turned on under heating mode and set temperature is  $16^{\circ}\text{C}$  (by remote controller), press " $\Delta$ ,  $\nabla$ ,  $\Delta$ ,  $\nabla$ ,  $\Delta$ ,  $\nabla$ " within 5s, unit will enter into compulsory defrosting mode and send the signal to ODU. When the compulsory defrosting signal from ODU is received, IDU will exit from the compulsory defrosting mode and stop sending the signal to ODU.

After ODU receives the compulsory defrosting code, it will start compulsory defrosting. Defrosting frequency and opening angle will be the same as in normal defrosting mode. When compulsory defrosting is finished, the complete unit resumes original status.

### 7. Auto mode

Auto mode is determined by controller of IDU. See IDU logic for details.

### 8. $8^{\circ}\text{C}$ heating

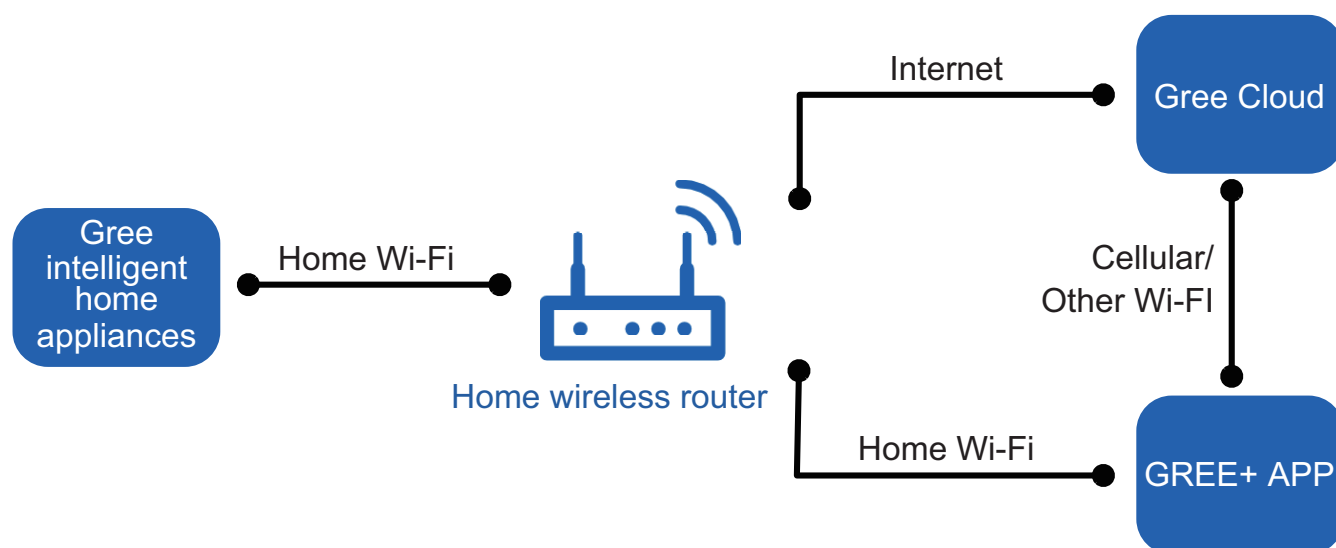
Set temperature is  $8^{\circ}\text{C}$ . Display board of IDU displays  $8^{\circ}\text{C}$ . Under this mode, "Cold air prevention" function is shielded.

If compressor is operating under this mode, fan speed will adjust according to auto fan speed; if compressor stops operation under this mode, indoor fan will be in residual-heat blowing status.

**When power on, communication light will be blinking in a normal way (after receiving a group of correct signals, blinking stops for 0.2s~0.3s). If theres no communication, communication light will be always on. If other ODU has malfunction, communication light will be on for 1s and off for 1s in a circular way.**

## 6.4 GREE+ App Operation Manual

### Control Flow Chart



### Operating Systems

Requirement for User's smart phone:



iOS system  
Support iOS7.0 and  
above version



Android system  
Support Android 4.4 and  
above version

### Download and installation

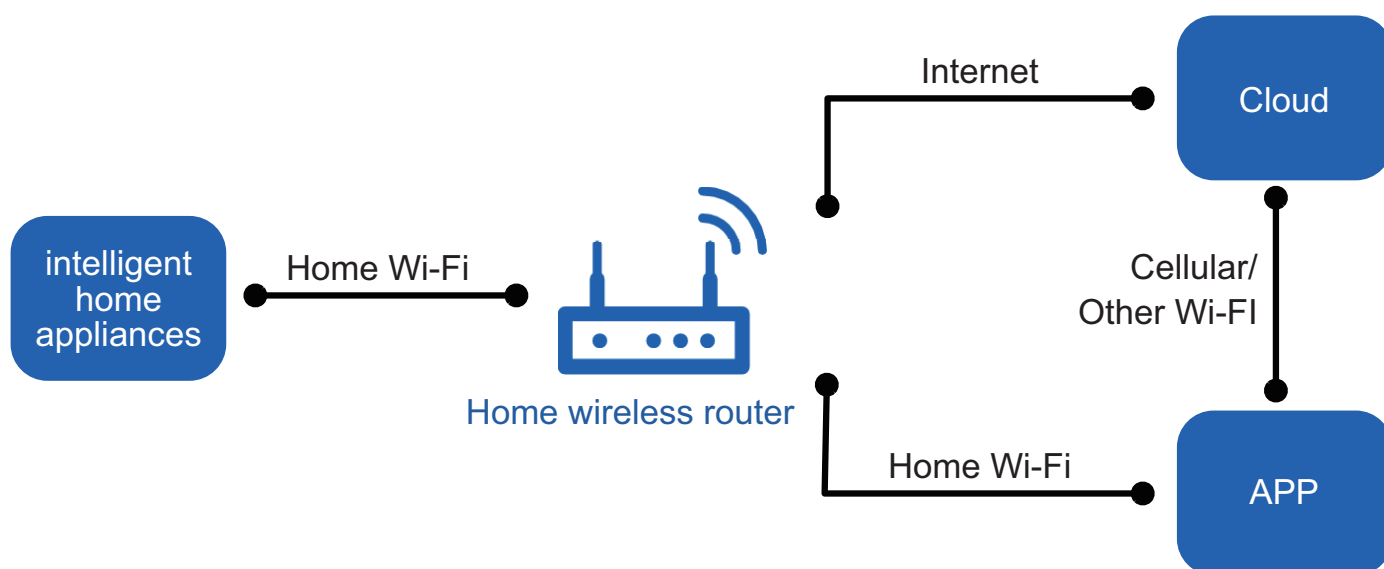


GREE+ App Download Linkage

Scan the QR code or search "GREE+" in the application market to download and install it. When "GREE+" App is installed, register the account and add the device to achieve long-distance control and LAN control of Gree smart home appliances. For more information, please refer to "Help" in App.

## 6.5 Ewpe Smart App Operation Manual

### Control Flow Chart



### Operating Systems

Requirement for User's smart phone:



iOS system  
Support iOS7.0 and  
above version



Android system  
Support Android 4.4 and  
above version

### Download and installation



App Download Linkage

Scan the QR code or search "Ewpe Smart" in the application market to download and install it. When "Ewpe Smart" App is installed, register the account and add the device to achieve long-distance control and LAN control of smart home appliances. For more information, please refer to "Help" in App.

# 7. Notes for Installation and Maintenance

## Safety Precautions: Important!

Please read the safety precautions carefully before installation and maintenance.

The following contents are very important for installation and maintenance.

Please follow the instructions below.

- The installation or maintenance must accord with the instructions.
- Comply with all national electrical codes and local electrical codes.
- Pay attention to the warnings and cautions in this manual.
- All installation and maintenance shall be performed by distributor or qualified person.
- All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.
- Be caution during installation and maintenance. Prohibit incorrect operation to prevent electric shock, casualty and other accidents.



## WARNINGS

### Electrical Safety Precautions:

1. Cut off the power supply of air conditioner before checking and maintenance.
2. The air condition must apply specialized circuit and prohibit share the same circuit with other appliances.
3. The air conditioner should be installed in suitable location and ensure the power plug is touchable.
4. Make sure each wiring terminal is connected firmly during installation and maintenance.
5. Have the unit adequately grounded. The grounding wire Can't be used for other purposes.
6. Must apply protective accessories such as protective boards, cable-cross loop and wire clip.
7. The live wire, neutral wire and grounding wire of power supply must be corresponding to the live wire, neutral wire and grounding wire of the air conditioner.
8. The power cord and power connection wires Can't be pressed by hard objects.
9. If power cord or connection wire is broken, it must be replaced by a qualified person.
10. If the power cord or connection wire is not long enough, please get the specialized power cord or connection wire from the manufacture or distributor. Prohibit prolong the wire by yourself.

11. For the air conditioner without plug, an air switch must be installed in the circuit. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.

12. Make sure all wires and pipes are connected properly and the valves are opened before energizing.

13. Check if there is electric leakage on the unit body. If yes, please eliminate the electric leakage.

14. Replace the fuse with a new one of the same specification if it is burnt down; dont replace it with a cooper wire or conducting wire.

15. If the unit is to be installed in a humid place, the circuit breaker must be installed.

### Installation Safety Precautions:

1. Select the installation location according to the requirement of this manual.(See the requirements in installation part)
2. Handle unit transportation with care; the unit should not be carried by only one person if it is more than 20kg.
3. When installing the indoor unit and outdoor unit, a sufficient fixing bolt must be installed; make sure the installation support is firm.
4. Ware safety belt if the height of working is above 2m.
5. Use equipped components or appointed components during installation.
6. Make sure no foreign objects are left in the unit after finishing installation.

### Refrigerant Safety Precautions:

1. When refrigerant leaks or requires discharge during installation, maintenance, or disassembly, it should be handled by certified professionals or otherwise in compliance with local laws and regulations.
- 2.Avoid contact between refrigerant and fire as it generates poisonous gas; Prohibit prolong the connection pipe by welding.
3. 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 or other hazards.
4. Make sure no refrigerant gas is leaking out when installation is completed.
5. If there is refrigerant leakage, please take sufficient measure to minimize the density of refrigerant.
6. Never touch the refrigerant piping or compressor without wearing glove to avoid scald or frostbite.

**Improper installation may lead to fire hazard, explosion, electric shock or injury.**

# Safety Precautions for Installing and Relocating the Unit:

To ensure safety, please be mindful of the following precautions.



## WARNINGS

**1. When installing or relocating the unit, be sure to keep the refrigerant circuit free from air or substances other than the specified refrigerant.**

Any presence of air or other foreign substance in the refrigerant circuit will cause system pressure rise or compressor rupture, resulting in injury.

**2. When installing or moving this unit, do not charge the refrigerant which is not comply with that on the nameplate or unqualified refrigerant.**

Otherwise, it may cause abnormal operation, wrong action, mechanical malfunction or even series safety accident.

**3. When refrigerant needs to be recovered during relocating or repairing the unit, be sure that the unit is running in cooling mode. Then, fully close the valve at high pressure side (liquid valve). About 30-40 seconds later, fully close the valve at low pressure side (gas valve), immediately stop the unit and disconnect power. Please note that the time for refrigerant recovery should not exceed 1 minute.**

If refrigerant recovery takes too much time, air may be sucked in and cause pressure rise or compressor rupture, resulting in injury.

**4. During refrigerant recovery, make sure that liquid valve and gas valve are fully closed and power is disconnected before detaching the connection pipe.**

If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

**5. When installing the unit, make sure that connection pipe is securely connected before the compressor starts running.**

If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

**6. Prohibit installing the unit at the place where there may be leaked corrosive gas or flammable gas.**

If there leaked gas around the unit, it may cause explosion and other accidents.

**7. Do not use extension cords for electrical connections. If the electric wire is not long enough, please contact a local service center authorized and ask for a proper electric wire.**

Poor connections may lead to electric shock or fire.

**8. Use the specified types of wires for electrical connections between the indoor and outdoor units. Firmly clamp the wires so that their terminals receive no external stresses.**

Electric wires with insufficient capacity, wrong wire connections and insecure wire terminals may cause electric shock or fire.

## Safety Precautions for Refrigerant



Appliance filled with flammable gas R32.



Before install and use the appliance, read the owner's manual first.



Before install the appliance, read the installation manual first.



Before repair the appliance, read the service manual first.

●To realize the function of the air conditioner unit, a special refrigerant circulates in the system. The used refrigerant is the fluoride R32, which is specially cleaned. The refrigerant is flammable and inodorous. Furthermore, it can lead to explosion under certain conditions. But the flammability of the refrigerant is very low. It can be ignited only by fire.

●Compared to common refrigerants, R32 is a nonpolluting refrigerant with no harm to the ozonosphere. The influence upon the greenhouse effect is also lower. R32 has got very good thermodynamic features which lead to a really high energy efficiency. The units therefore need a less filling.

### WARNING:

●Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacture. Should repair be necessary, contact your nearest authorized Service Centre. Any repairs carried out by unqualified personnel may be dangerous. The appliance shall be stored in a room without continuously operating ignition sources. (for example: open flames, an operating gas appliance or an operating electric heater.)

●Do not pierce or burn.

●Appliance shall be installed, operated and stored in a room with a floor area larger than  $Xm^2$ . (Please refer to table "a" in section of " Safety operation of flammable refrigerant " for space X.)

●Appliance filled with flammable gas R32. For repairs, strictly follow manufacturers instructions only. Be aware that refrigerants not contain odour.

●Read specialists manual.



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.

1) Frequency band(s) in which the radio equipment operates: 2400MHz-2483.5MHz

2) Maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates: 20dBm



R32: 675

This marking indicates that this product should not be disposed with other household wastes. To prevent possible harm to the environment or human health from uncontrolled waste throughout the EU.

To prevent possible harm to the environment or human health.

From uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

If it needs to install, move or maintain the air conditioner, please contact dealer or local service center to conduct it at first. Air conditioner must be installed, moved or maintained by appointed unit. Otherwise, it may cause serious damage or personal injury or death.

## Safety Operation of Flammable Refrigerant

Qualification requirement for installation and maintenance man

●All the work men who are engaging in the refrigeration system should bear the valid certification awarded by the authoritative organization and the qualification for dealing with the refrigeration system recognized by this industry. If it needs other technician to maintain and repair the appliance, they should be supervised by the person who bears the qualification for using the flammable refrigerant.

●It can only be repaired by the method suggested by the equipments manufacturer.

### Installation notes

●The air conditioner is not allowed to use in a room that has running fire (such as fire source, working coal gas ware, operating heater).

●It is not allowed to drill hole or burn the connection pipe.

●The air conditioner must be installed in a room that is larger than the minimum room area.

The minimum room area is shown on the nameplate or following table a.

●Leak test is a must after installation.

**table a - Minimum room area ( m<sup>2</sup> )**

Charge amount (kg)	floor location	window mounted	wall mounted	ceiling mounted
≤1.2	/	/	/	/
1.3	14.5	5.2	1.6	1.1
1.4	16.8	6.1	1.9	1.3
1.5	19.3	7	2.1	1.4
1.6	22	7.9	2.4	1.6
1.7	24.8	8.9	2.8	1.8
1.8	27.8	10	3.1	2.1
1.9	31	11.2	3.4	2.3
2	34.3	12.4	3.8	2.6
2.1	37.8	13.6	4.2	2.8
2.2	41.5	15	4.6	3.1
2.3	45.4	16.3	5	3.4
2.4	49.4	17.8	5.5	3.7
2.5	53.6	19.3	6	4

- Stick the label on the system after filling is finished (or haven't finished).
- Dont overfilling.
- After filling is finished, please do the leakage detection before test running; another time of leak detection should be done when its removed.

#### **Safety instructions for transportation and storage**

- Please use the flammable gas detector to check before unload and open the container.
- No fire source and smoking.
- According to the local rules and laws.

#### **Maintenance notes**

- Check whether the maintenance area or the room area meet the requirement of the nameplate.
  - Its only allowed to be operated in the rooms that meet the requirement of the nameplate.
- Check whether the maintenance area is well-ventilated.
  - The continuous ventilation status should be kept during the operation process.
- Check whether there is fire source or potential fire source in the maintenance area.
  - The naked flame is prohibited in the maintenance area; and the “no smoking” warning board should be hanged.
- Check whether the appliance mark is in good condition.
  - Replace the vague or damaged warning mark.

#### **Welding**

- If you should cut or weld the refrigerant system pipes in the process of maintaining, please follow the steps as below:
  - a. Shut down the unit and cut power supply
  - b. Eliminate the refrigerant
  - c. Vacuuming
  - d. Clean it with N<sub>2</sub> gas
  - e. Cutting or welding
  - f. Carry back to the service spot for welding
- Make sure that there isnt any naked flame near the outlet of the vacuum pump and its well-ventilated.
- The refrigerant should be recycled into the specialized storage tank.

#### **Filling the refrigerant**

- Use the refrigerant filling appliances specialized for R32. Make sure that different kinds of refrigerant wont contaminate with each other.
- The refrigerant tank should be kept upright at the time of filling refrigerant.



## Main Tools for Installation and Maintenance



Level meter



Measuring tape



Screw driver



Impact drill



Drill head



Electric drill



Electroprobe



Universal meter



Torque wrench



Open-end wrench



Inner hexagon spanner



Electronic leakage detector



Vacuum pump



Pressure meter



Pipe pliers



Pipe pliers



Pipe cutter



Pipe expander



Pipe bender



Soldering appliance



Refrigerant container

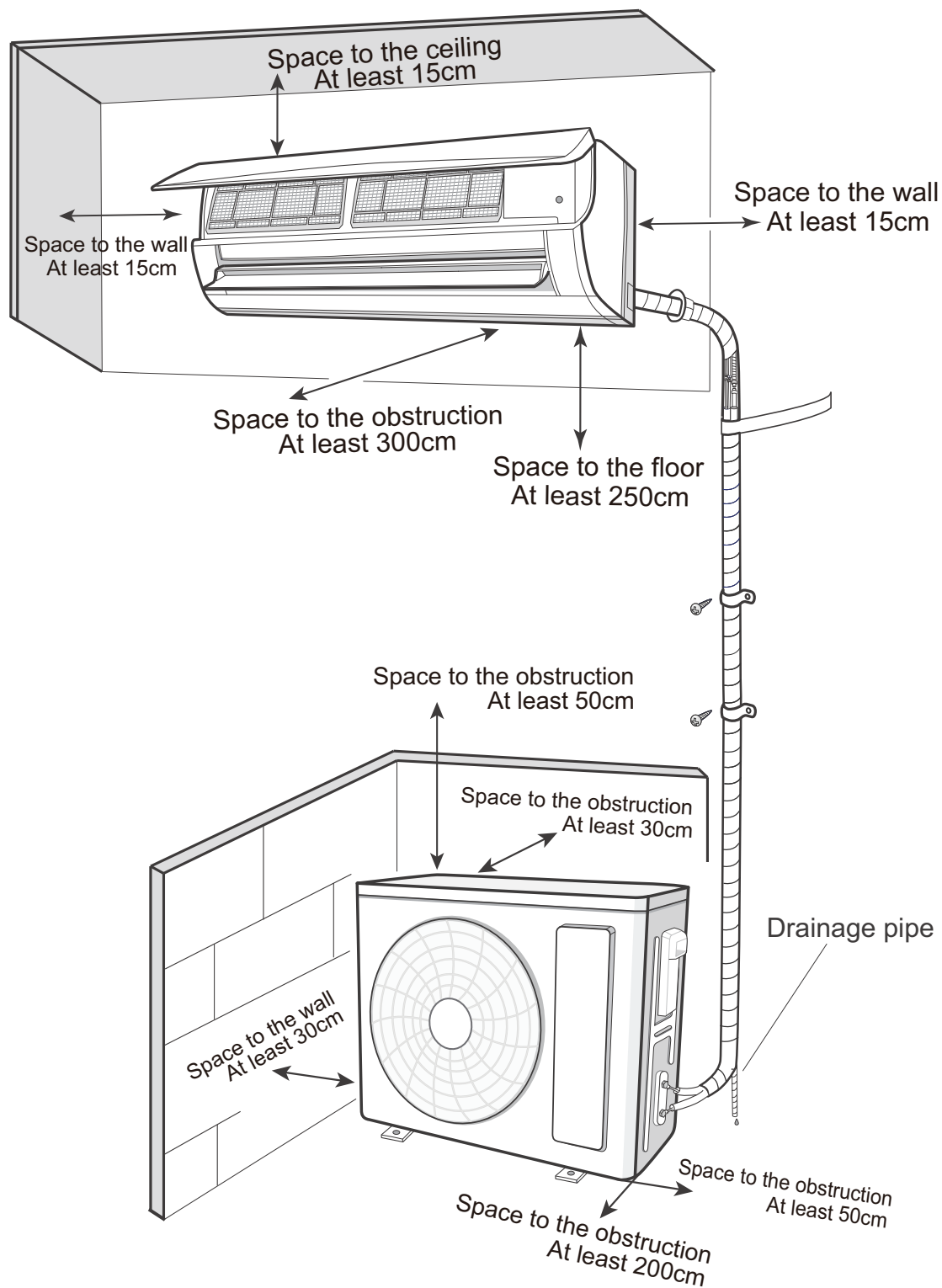


Electronic scale

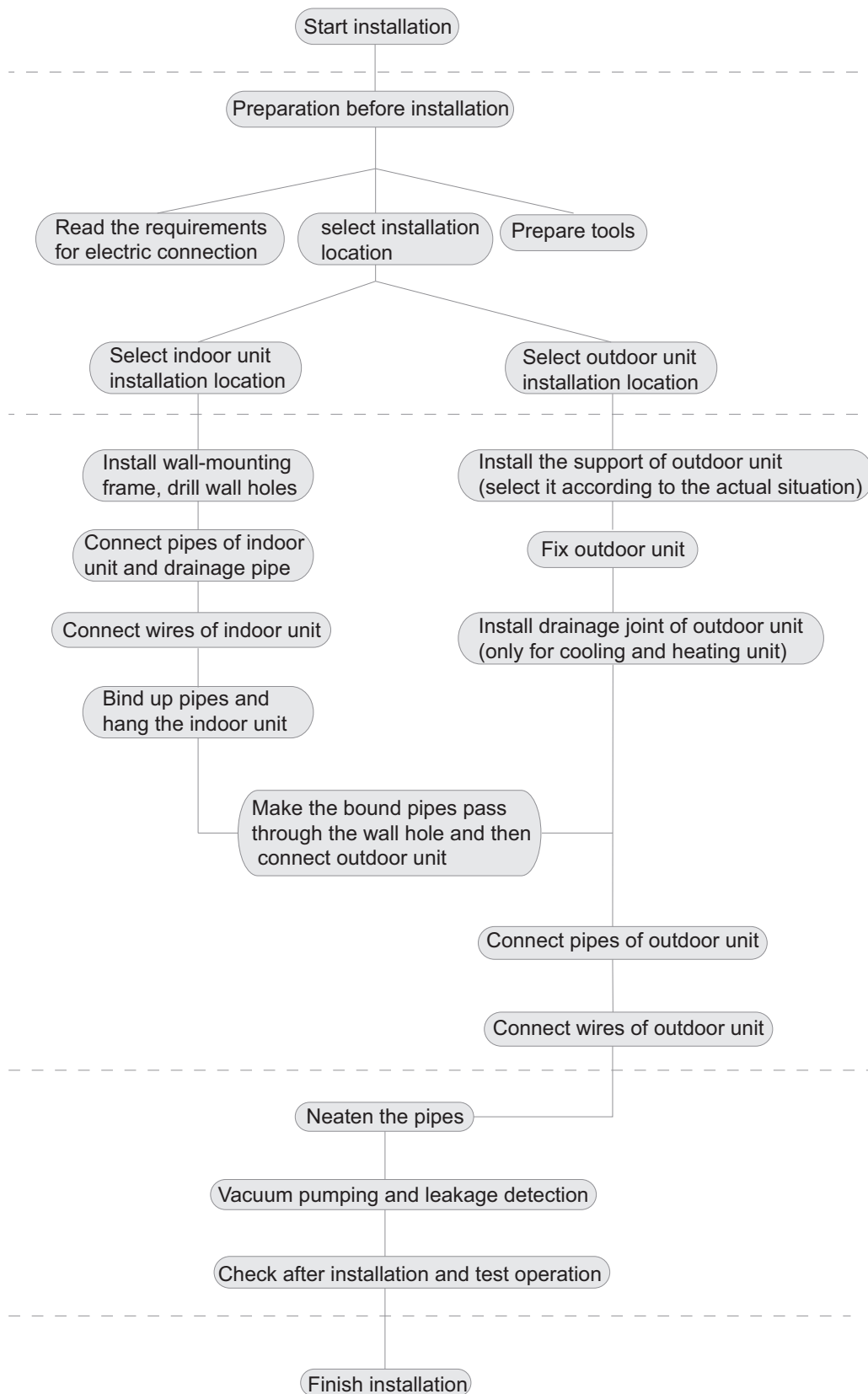


## 8. Installation

### 8.1 Installation Dimension Diagram



## Installation Procedures



Note: this flow is only for reference; please find the more detailed installation steps in this section.

## 8.2 Installation Parts-checking

No.	Name
1	Indoor unit
2	Outdoor unit
3	Connection pipe
4	Drainage pipe
5	Wall-mounting frame
6	Connecting cable(power cord)
7	Wall pipe
8	Sealing gum
9	Wrapping tape
10	Support of outdoor unit
11	Fixing screw
12	Drainage plug(cooling and heating unit)
13	Owners manual, remote controller

### ⚠ Note:

- 1.Please contact the local agent for installation.
- 2.Dont use unqualified power cord.

## 8.3 Selection of Installation Location

### 1. Basic Requirement:

Installing the unit in the following places may cause malfunction. If it is unavoidable, please consult the local dealer:

- (1) The place with strong heat sources, vapors, flammable or explosive gas, or volatile objects spread in the air.
- (2) The place with high-frequency devices (such as welding machine, medical equipment).
- (3) The place near coast area.
- (4) The place with oil or fumes in the air.
- (5) The place with sulfureted gas.
- (6) Other places with special circumstances.
- (7) The appliance shall not be installed in the laundry.
- (8) It's not allowed to be installed on the unstable or motive base structure(such as truck) or in the corrosive environment (such as chemical factory).

### 2. Indoor Unit:

- (1) There should be no obstruction near air inlet and air outlet.
- (2) Select a location where the condensation water can be dispersed easily and wont affect other people.
- (3) Select a location which is convenient to connect the outdoor unit and near the power socket.
- (4) Select a location which is out of reach for children.
- (5) The location should be able to withstand the weight of indoor unit and wont increase noise and vibration.
- (6) The appliance must be installed 2.5m above floor.
- (7) Dont install the indoor unit right above the electric appliance.
- (8) Please try your best to keep way from fluorescent lamp.

### 3. Outdoor Unit:

- (1) Select a location where the noise and outflow air emitted by the outdoor unit will not affect neighborhood.
- (2) The location should be well ventilated and dry, in which the outdoor unit wont be exposed directly to sunlight or strong wind.
- (3) The location should be able to withstand the weight of outdoor unit.
- (4) Make sure that the installation follows the requirement of installation dimension diagram.
- (5) Select a location which is out of reach for children and far away from animals or plants.If it is unavoidable, please add fence for safety purpose.

## 8.4 Electric Connection Requirement

### 1. Safety Precaution

- (1) Must follow the electric safety regulations when installing the unit.
- (2) According to the local safety regulations, use qualified power supply circuit and air switch.
- (3) Make sure the power supply matches with the requirement of air conditioner. Unstable power supply or incorrect wiring may result in electric shock,fire hazard or malfunction. Please install proper power supply cables before using the air conditioner.
- (4) Properly connect the live wire, neutral wire and grounding wire of power socket.
- (5) Be sure to cut off the power supply before proceeding any work related to electricity and safety.
- (6) Do not put through the power before finishing installation.
- (7) 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 .
- (8) The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
- (9) The appliance shall be installed in accordance with national wiring regulations.

### 2. Grounding Requirement:

- (1) The air conditioner is the first class electric appliance.It must be properly grounding with specialized grounding device by a professional.

Please make sure it is always grounded effectively,otherwise it may cause electric shock.

- (2) The yellow-green wire in air conditioner is grounding wire, which Can't be used for other purposes.
- (3) The grounding resistance should comply with national electric safety regulations.
- (4) The appliance must be positioned so that the plug is accessible.
- (5) An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
- (6) Including an air switch with suitable capacity, please note the following table. Air switch should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload. (Caution: please do not use the fuse only for protect the circuit)

Model	Air switch capacity	Power cord
15/18K	16A	3G1.5
21/24/28K	25A	3G2.5

## 8.5 Installation of Indoor Unit

### 1. Choosing Installation location

Recommend the installation location to the client and then confirm it with the client.

### 2. Install Wall-mounting Frame

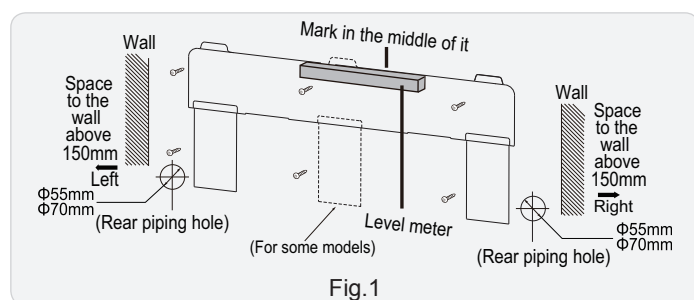
(1) Hang the wall-mounting frame on the wall; adjust it in horizontal position with the level meter and then point out the screw fixing holes on the wall.

(2) Drill the screw fixing holes on the wall with impact drill (the specification of drill head should be the same as the plastic expansion particle) and then fill the plastic expansion particles in the holes.

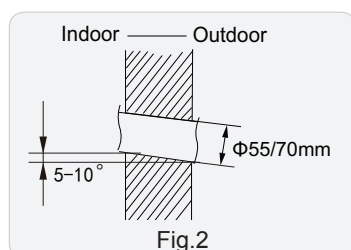
(3) Fix the wall-mounting frame on the wall with tapping screws and then check if the frame is firmly installed by pulling the frame. If the plastic expansion particle is loose, please drill another fixing hole nearby.

### 3. Install Wall-mounting Frame

(1) Choose the position of piping hole according to the direction of outlet pipe. The position of piping hole should be a little lower than the wall-mounted frame, shown as below. (As show in Fig.1)



(2) Open a piping hole with the diameter of Φ55mm or Φ70mm on the selected outlet pipe position. In order to drain smoothly, slant the piping hole on the wall slightly downward to the outdoor side with the gradient of 5-10°. (As show in Fig.2)



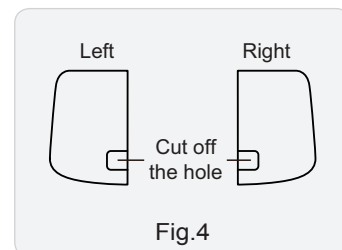
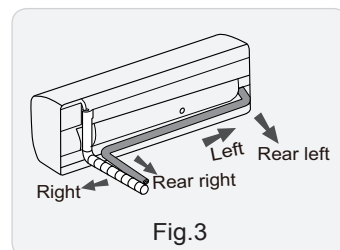
#### ⚠ Note:

Pay attention to dust prevention and take relevant safety measures when opening the hole.

### 4. Outlet Pipe

(1) The pipe can be led out in the direction of right, rear right, left or rear left. (As show in Fig.3)

(2) When selecting leading out the pipe from left or right, please cut off the corresponding hole on the bottom case. (As show in Fig.4)



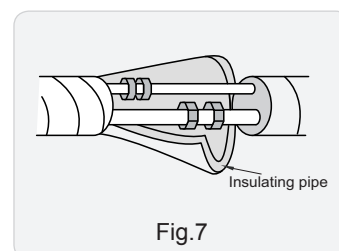
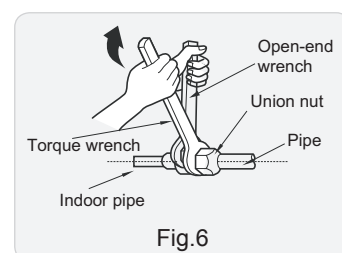
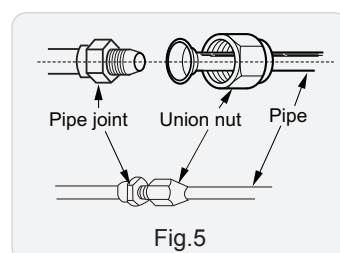
### 5. Connect the Pipe of Indoor Unit

(1) Aim the pipe joint at the corresponding bellmouth. (As show in Fig.5)

(2) Pretightening the union nut with hand.

(3) Adjust the torque force by referring to the following sheet. Place the open-end wrench on the pipe joint and place the torque wrench on the union nut. Tighten the union nut with torque wrench. (As show in Fig.6)

(4) Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape. (As show in Fig.7)



Refer to the following table for wrench moment of force:

Piping size	Tightening torque(N·m)
1/4"	15~20
3/8"	30~40
1/2"	45~55
5/8"	60~65
3/4"	70~75

## 6. Install Drain Hose

(1) Connect the drain hose to the outlet pipe of indoor unit.(As show in Fig.8)

(2) Bind the joint with tape.(As show in Fig.9)

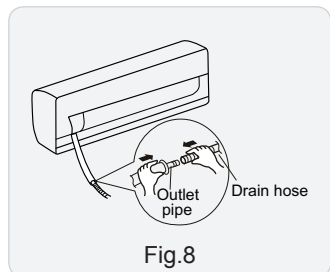


Fig.8

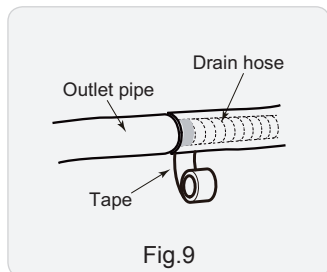


Fig.9

### ⚠ Note:

(1) Add insulating pipe in the indoor drain hose in order to prevent condensation.

(2) The plastic expansion particles are not provided.

(As show in Fig.10)

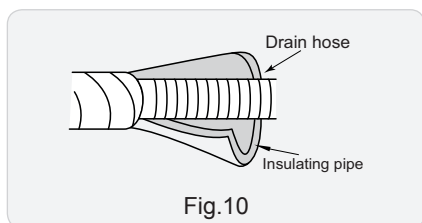


Fig.10

## 7. Connect Wire of Indoor Unit

(1) Open the panel, remove the screw on the wiring cover and then take down the cover.(As show in Fig.11)

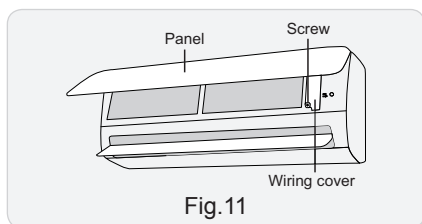


Fig.11

(2) Make the power connection wire go through the cable-cross hole at the back of indoor unit and then pull it out from the front side.(As show in Fig.12)

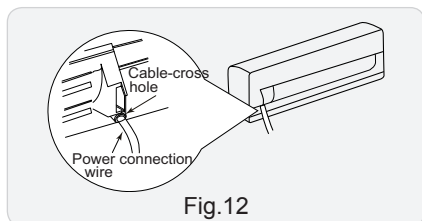
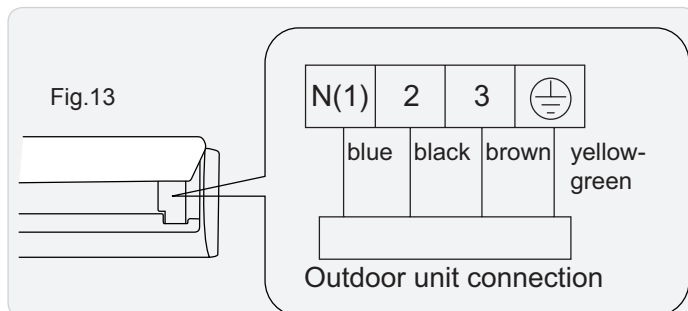


Fig.12

(3) Remove the wire clip; connect the power connection wire signal control wire (only for cooling and heating unit) to the wiring terminal according to the color; tighten the screw and then fix the power connection wire with wire clip.(As show in Fig.13)



Note: The wiring connect is for reference only, please refer to the actual one.

(4) Put wiring cover back and then tighten the screw.

(5) Close the panel.

### ⚠ Note:

(1) All wires of indoor unit and outdoor unit should be connected by a professional.

(2) If the length of power connection wire is insufficient, please contact the supplier for a new one. Avoid extending the wire by yourself.

(3) For the air conditioner with plug, the plug should be reachable after finishing installation.

(4) For the air conditioner without plug, an air switch must be installed in the line. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.

## 8. Bind up Pipe

(1) Bind up the connection pipe, power cord and drain hose with the band.(As show in Fig.14)

(2) Reserve a certain length of drain hose and power cord for installation when binding them. When binding to a certain degree, separate the indoor power and then separate the drain hose.(As show in Fig.15)

(3) Bind them evenly.

(4) The liquid pipe and gas pipe should be bound separately at the end.

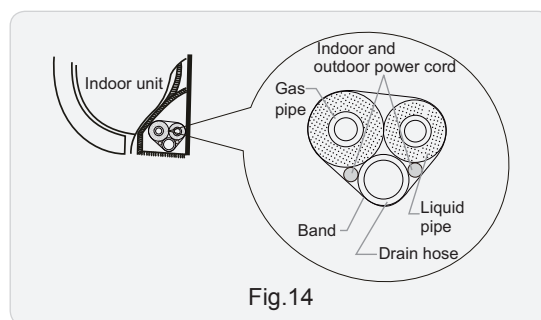


Fig.14

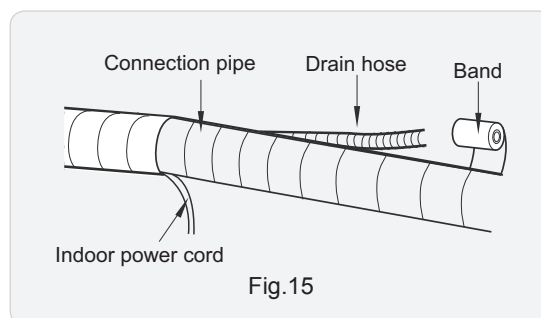


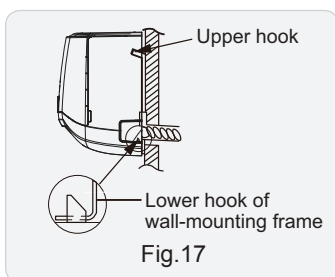
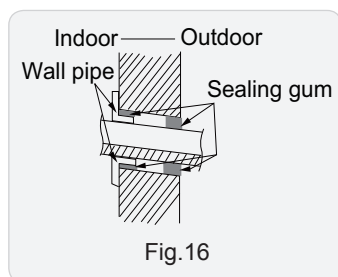
Fig.15

### ⚠ Note:

- (1) The power cord and control wire Can't be crossed or winding.
- (2) The drain hose should be bound at the bottom.

## 9. Hang the Indoor Unit

- (1) Put the bound pipes in the wall pipe and then make them pass through the wall hole.
- (2) Hang the indoor unit on the wall-mounting frame.
- (3) Stuff the gap between pipes and wall hole with sealing gum.
- (4) Fix the wall pipe.(As show in Fig.16)
- (5) Check if the indoor unit is installed firmly and closed to the wall.(As show in Fig.17)



### ⚠ Note:

Do not bend the drain hose too excessively in order to prevent blocking.

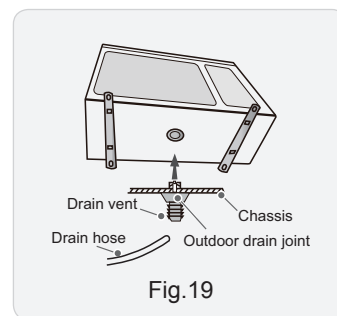
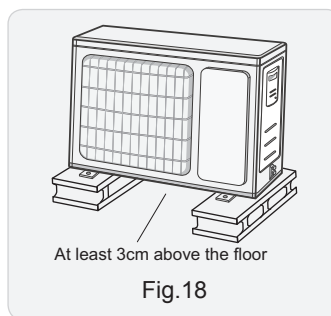
## 8.6 Installation of Outdoor unit

### 1. Fix the Support of Outdoor Unit(Select it according to the actual installation situation)

- (1) Select installation location according to the house structure.
- (2) Fix the support of outdoor unit on the selected location with expansion screws.

### ⚠ Note:

- (1) Take sufficient protective measures when installing the outdoor unit.
- (2) Make sure the support can withstand at least four times the unit weight.
- (3) The outdoor unit should be installed at least 3cm above the floor in order to install drain joint.(As show in Fig.18)
- (4) For the unit with cooling capacity of 2300W~5000W, 6 expansion screws are needed; for the unit with cooling capacity of 6000W~8000W, 8 expansion screws are needed; for the unit with cooling capacity of 10000W~16000W, 10 expansion screws are needed.

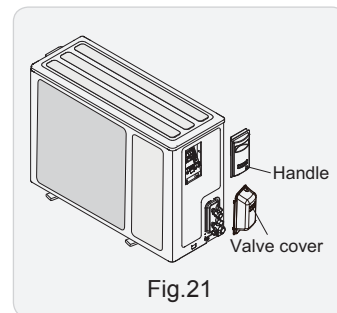
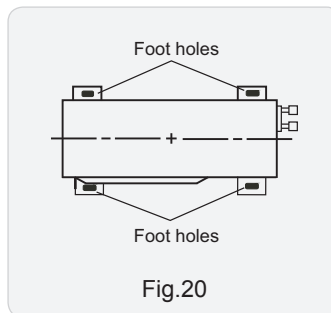


### 2. Install Drain Joint(Only for cooling and heating unit)

- (1) Connect the outdoor drain joint into the hole on the chassis.
  - (2) Connect the drain hose into the drain vent.
- (As show in Fig.19)

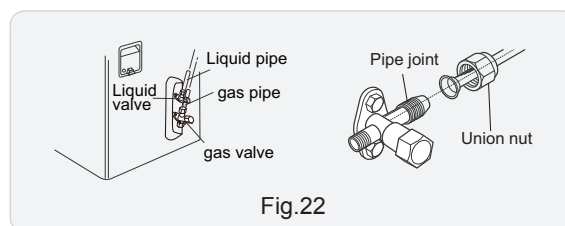
### 3. Fix Outdoor Unit

- (1) Place the outdoor unit on the support.
  - (2) Fix the foot holes of outdoor unit with bolts.
- (As show in Fig.20)



### 4. Connect Indoor and Outdoor Pipes

- (1) Remove the screw on the right handle of outdoor unit and then remove the handle.(As show in Fig.21)
- (2) Remove the screw cap of valve and aim the pipe joint at the bellmouth of pipe.(As show in Fig.22)



- (3) Pretightening the union nut with hand.
- (4) Tighten the union nut with torque wrench .

Refer to the following table for wrench moment of force:

Piping size	Tightening torque(N·m)
1/4"	15~20
3/8"	30~40
1/2"	45~55
5/8"	60~65
3/4"	70~75



## 5. Connect Outdoor Electric Wire

(1) Remove the wire clip; connect the power connection wire and signal control wire (only for cooling and heating unit) to the wiring terminal according to the color; fix them with screws.(As show in Fig.23)

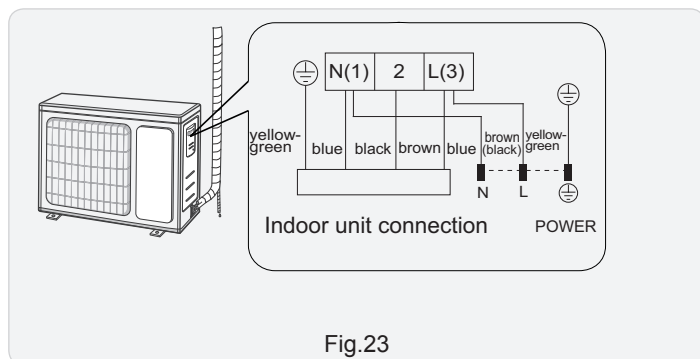


Fig.23

**Note:** the wiring connect is for reference only, please refer to the actual one.

(2) Fix the power connection wire and signal control wire with wire clip (only for cooling and heating unit).

### ⚠ Note:

(1) After tightening the screw, pull the power cord slightly to check if it is firm.

(2) Never cut the power connection wire to prolong or shorten the distance.

## 6. Neaten the Pipes

(1) The pipes should be placed along the wall, bent reasonably and hidden possibly. Min. semidiameter of bending the pipe is 10cm.

(2) If the outdoor unit is higher than the wall hole, you must set a U-shaped curve in the pipe before pipe goes into the room, in order to prevent rain from getting into the room.(As show in Fig.24)

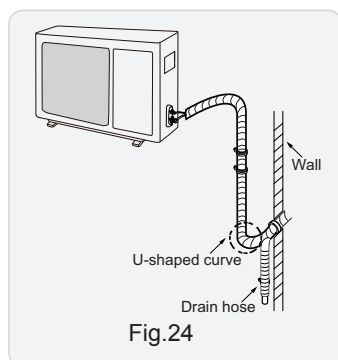


Fig.24

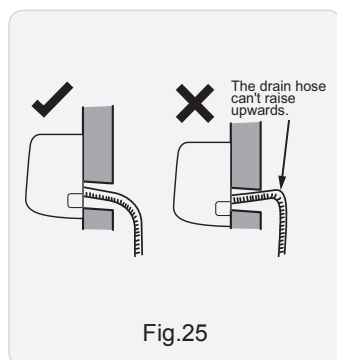


Fig.25

### ⚠ Note:

(1) The through-wall height of drain hose shouldnt be higher than the outlet pipe hole of indoor unit.(As show in Fig.25)

(2) Slant the drain hose slightly downwards. The drain hose Can't be curved, raised and fluctuant, etc.(As show in Fig.26)

(3) The water outlet Can't be placed in water in order to drain smoothly.(As show in Fig.27)

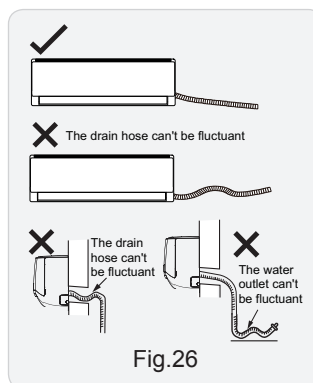


Fig.26

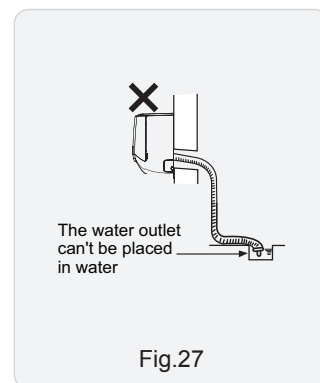


Fig.27

## 8.7 Vacuum Pumping and Leak Detection

### 1. Use Vacuum Pump

(1) Remove the valve caps on the liquid valve and gas valve and the nut of refrigerant charging vent.

(2) Connect the charging hose of piezometer to the refrigerant charging vent of gas valve and then connect the other charging hose to the vacuum pump.

(3) Open the piezometer completely and operate for 10-15min to check if the pressure of piezometer remains in -0.1MPa.

(4) Close the vacuum pump and maintain this status for 1-2min to check if the pressure of piezometer remains in -0.1MPa. If the pressure decreases, there may be leakage.

(5) Remove the piezometer, open the valve core of liquid valve and gas valve completely with inner hexagon spanner.

(6) Tighten the screw caps of valves and refrigerant charging vent.(As show in Fig.28)

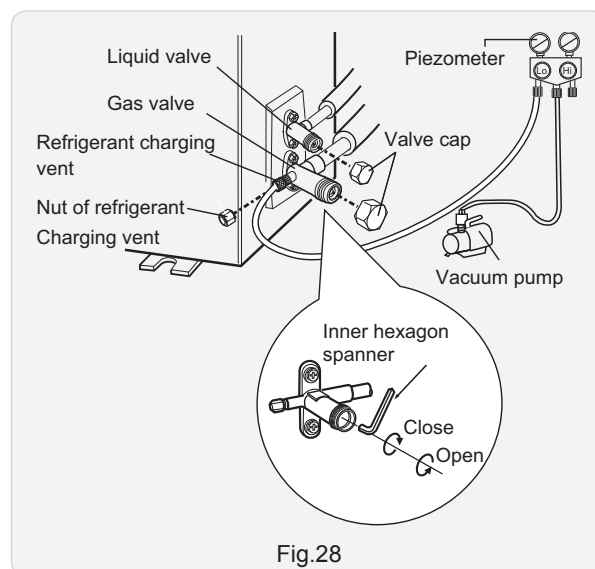


Fig.28

### 2. Leak Detection

(1) With leakage detector:

Check if there is leakage with leakage detector.

(2) With soap water:

If leakage detector is not available, please use soap water for leakage detection. Apply soap water at the suspected position and keep the soap water for more than 3min. If there are air bubbles coming out of this position, there's a leakage.

## 8.8 Check after Installation and Test operation

### 1. Check after Installation

Check according to the following requirement after finishing installation.

NO.	Items to be checked	Possible malfunction
1	Has the unit been installed firmly?	The unit may drop, shake or emit noise.
2	Have you done the refrigerant leakage test?	It may cause insufficient cooling (heating) capacity.
3	Is heat insulation of pipeline sufficient?	It may cause condensation and water dripping.
4	Is water drained well?	It may cause condensation and water dripping.
5	Is the voltage of power supply according to the voltage marked on the nameplate?	It may cause malfunction or damage the parts.
6	Is electric wiring and pipeline installed correctly?	It may cause malfunction or damage the parts.
7	Is the unit grounded securely?	It may cause electric leakage.
8	Does the power cord follow the specification?	It may cause malfunction or damage the parts.
9	Is there any obstruction in air inlet and air outlet?	It may cause insufficient cooling (heating) capacity.
10	The dust and sundries caused during installation are removed?	It may cause malfunction or damaging the parts.
11	The gas valve and liquid valve of connection pipe are open completely?	It may cause insufficient cooling (heating) capacity.
12	Is the inlet and outlet of piping hole been covered?	It may cause insufficient cooling(heating) capacity or waster eletricity.

### 2. Test Operation

(1) Preparation of test operation

- The client approves the air conditioner installation.
- Specify the important notes for air conditioner to the client.

(2) Method of test operation

- Put through the power, press ON/OFF button on the remote controller to start operation.
- Press MODE button to select AUTO, COOL, DRY, FAN and HEAT to check whether the operation is normal or not.
- If the ambient temperature is lower than 16 ℃ , the air conditioner Can't start cooling.



# 9. Maintenance

## 9.1 Error Code List

No.	Malfunction Name	Display Method of Indoor Unit	A/C status	Possible Causes
		Dual-8 Code Display		
1	High pressure protection of system	E1	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	Low pressure protection of system	E3	The Dual-8 Code Display will show E3 until the low pressure switch stop operation.	1.Low-pressure protection 2.Low-pressure protection of system 3.Low-pressure protection of compressor
3	High discharge temperature protection of compressor	E4	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	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	Communication Malfunction	E6	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	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	EEPROM malfunction	EE	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
8	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 it's no use, please replace control panel AP1.
9	Malfunction protection of jumper cap	C5	Wireless remote receiver and button are effective, but can not dispose the related command	1. No jumper cap insert on mainboard. 2. Incorrect insert of jumper cap. 3. Jumper cap damaged. 4. Abnormal detecting circuit of mainboard.
10	Gathering refrigerant	Fo	When the outdoor unit receive signal of Gathering refrigerant ,the system will be forced to run under cooling mode for gathering refrigerant	Nominal cooling mode

No.	Malfunction Name	Display Method of Indoor Unit	A/C status	Possible Causes
		Dual-8 Code Display		
11	Indoor ambient temperature sensor is open/short circuited	F1	During cooling and drying operation, indoor unit operates while other loads will stop; during heating operation, the complete unit will stop operation.	1. Loosening or bad contact of indoor ambient temp. sensor and mainboard terminal. 2. Components in mainboard fell down leads short circuit. 3. Indoor ambient temp. sensor damaged.(check with sensor resistance value chart) 4. Mainboard damaged.
12	Indoor evaporator temperature sensor is open/short circuited	F2	AC stops operation once reaches the setting temperature. Cooling, drying: internal fan motor stops operation while other loads stop operation; heating: AC stop operation	1. Loosening or bad contact of Indoor evaporator temp. sensor and mainboard terminal. 2. Components on the mainboard fall down leads short circuit. 3. Indoor evaporator temp. sensor damaged.(check temp. sensor value chart for testing) 4. Mainboard damaged.
13	Outdoor ambient temperature sensor is open/short circuited	F3	During cooling and drying operating, compressor stops while indoor fan operates; During heating operation, the complete unit will stop operation	Outdoor temperature sensor hasn't been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
14	Outdoor condenser temperature sensor is open/short circuited	F4	During cooling and drying operation, compressor stops while indoor fan will operate; During heating operation, the complete unit will stop operation.	Outdoor temperature sensor hasn't been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
16	Outdoor discharge temperature sensor is open/short circuited	F5	During cooling and drying operation, compressor will stop 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 hasn't been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) 2.The head of temperature sensor hasn't been inserted into the copper tube
17	Limit/decrease frequency due to overload	F6	All loads operate normally, while operation frequency for compressor is decreased	Refer to the malfunction analysis (overload, high temperature resistant)
18	Decrease frequency due to overcurrent	F8	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
19	Decrease frequency due to high air discharge	F9	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)
20	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

No.	Malfunction Name	Display Method of Indoor Unit	A/C status	Possible Causes
		Dual-8 Code Display		
21	Voltage for DC bus-bar is too high	PH	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 it's normal, There's malfunction for the circuit, please replace the control panel (AP1)
22	Voltage of DC bus-bar is too low	PL	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 it's normal, There's malfunction for the circuit, please replace the control panel (AP1)
23	Compressor Min frequency in test state	P0		Showing during min. cooling or min. heating test
24	Compressor rated frequency in test state	P1		Showing during nominal cooling or nominal heating test
25	Compressor maximum frequency in test state	P2		Showing during max. cooling or max. heating test
26	Compressor intermediate frequency in test state	P3		Showing during middle cooling or middle heating test
27	Overcurrent protection of phase current for compressor	P5	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	A/C status	Possible Causes
		Dual-8 Code Display		
28	Charging malfunction of capacitor	PU	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
29	Malfunction of module temperature sensor circuit	P7	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
30	Module high temperature protection	P8	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 it's no use, please replace control panel AP1.
31	Overload protection for compressor	H3	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)
32	IPM protection	H5	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.
33	Module temperature is too high	P8	During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	Radiating grease on IPM module of outdoor unit main board is not enough; screws have not been fixed tightly; Hardware malfunction of outdoor unit main board;
34	Internal motor (fan motor) do not operate	H6	Internal fan motor, external fan motor, compressor and electric heater stop operation,guide louver stops at present location.	1. Bad contact of DC motor feedback terminal. 2. Bad contact of DC motor control end. 3. Fan motor is stalling. 4. Motor malfunction. 5. Malfunction of mainboard revdetecting circuit.
35	Desynchro-nizing of compressor	H7	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.
36	Outdoor DC fan motor malfunction	L3	Outdoor DC fan motor malfunction lead to compressor stop operation,	DC fan motor malfunction or system blocked or the connector loosed

No.	Malfunction Name	Display Method of Indoor Unit Dual-8 Code	A/C status	Possible Causes
		Display		
37	power protection	L9	compressor stop operation and Outdoor fan motor will stop 30s latter , 3 minutes latter fan motor and compressor will restart	To protect the electronical components when detect high power
38	Indoor unit and outdoor unit doesn't match	LP	compressor and Outdoor fan motor can't work	Indoor unit and outdoor unit doesn't match
39	Failure start-up	LC	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
40	Cold air prevention protection	E9		Not the error code. It's the status code for the operation.
41	Anti-freezing rotection for evaporator	E2		Not the error code. It's the status code for the operation.
42	Malfunction of phase current detection circuit for compressor	U1	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
43	Malfunction of voltage dropping for DC bus-bar	U3	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
44	Malfunction of complete unit's current detection	U5	During cooling and drying operation, the compressor will stop while indoor fan will operate; During heating operating, the complete unit will stop operation.	There's circuit malfunction on outdoor unit control panel AP1, please replace the outdoor unit control panel AP1.
45	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.
46	Malfunction of zero-cross detection circuit	U8	The complete unit stops	1.Power supply is abnormal; 2.Detection circuit of indoor control mainboard is abnormal.

No.	Malfunction Name	Display Method of Indoor Unit Dual-8 Code Display	A/C status	Possible Causes
47	Refrigerant recovery mode	Fo		Refrigerant recovery. The Serviceman operates it for maintenance.
48	Undefined outdoor unit error	oE	Cool: compressor and outdoor fan stops operation, while indoor fan operates; Heat: compressor, outdoor fan and indoor fan stop operation.	1. Outdoor ambient temperature exceeds the operation range of unit (eg: less than-20°C or more than 60°C for cooling; more than 30°C for heating); 2. Failure startup of compressor? 3. Are wires of compressor not connected tightly? 4. Is compressor damaged? 5. Is main board damaged?
49	Malfunction of detecting plate(WIFI )	JF	Loads operate normally, while the unit can't be normally controlled by APP.	1. Main board of indoor unit is damaged; 2. Detection board is damaged; 3. The connection between indoor unit and detection board is not good;

## **Analysis or processing of some of the malfunction display:**

### **1. Compressor discharge protection**

Possible causes: shortage of refrigerant; blockage of air filter; poor ventilation or air flow short pass for condenser; the system has noncondensing gas (such as air, water etc.); blockage of capillary assy (including filter); leakage inside four-way valve causes incorrect operation; malfunction of compressor; malfunction of protection relay; malfunction of discharge sensor; outdoor temperature too high.

Processing method: refer to the malfunction analysis in the above section.

### **2. Low voltage overcurrent protection**

Possible cause: Sudden drop of supply voltage.

### **3. Communication malfunction**

Processing method: Check if communication signal cable is connected reliably.

### **4. Sensor open or short circuit**

Processing method: Check whether sensor is normal, connected with the corresponding position on the controller and if damage of lead wire is found.

### **5. Compressor over load protection**

Possible causes: insufficient or too much refrigerant; blockage of capillary and increase of suction temp.; improper running of compressor, burning in or stuck of bearing, damage of discharge valve; malfunction of protector.

Processing method: adjust refrigerant amount; replace the capillary; replace the compressor; use universal meter to check if the contactor of compressor is fine when it is not overheated, if not replace the protector.

### **6. System malfunction**

ie overload protection. When tube temperature (Check the temperature of outdoor heat exchanger when cooling and check the temperature of indoor heat exchanger when heating) is too high, protection will be activated.

Possible causes: Outdoor temperature is too high when cooling; insufficient outdoor air circulation; refrigerant flow malfunction.

please refer to the malfunction analysis in the previous section for handling method.

### **7. IPM module protection**

Processing method: Once the module malfunction happens, if it persists for a long time and can not be self-canceled, cut off the power and turn off the unit, and then re-energize the unit again after about 10 min. After repeating the procedure for several times, if the malfunction still exists, replace the module.

## 9.2 Procedure of Troubleshooting

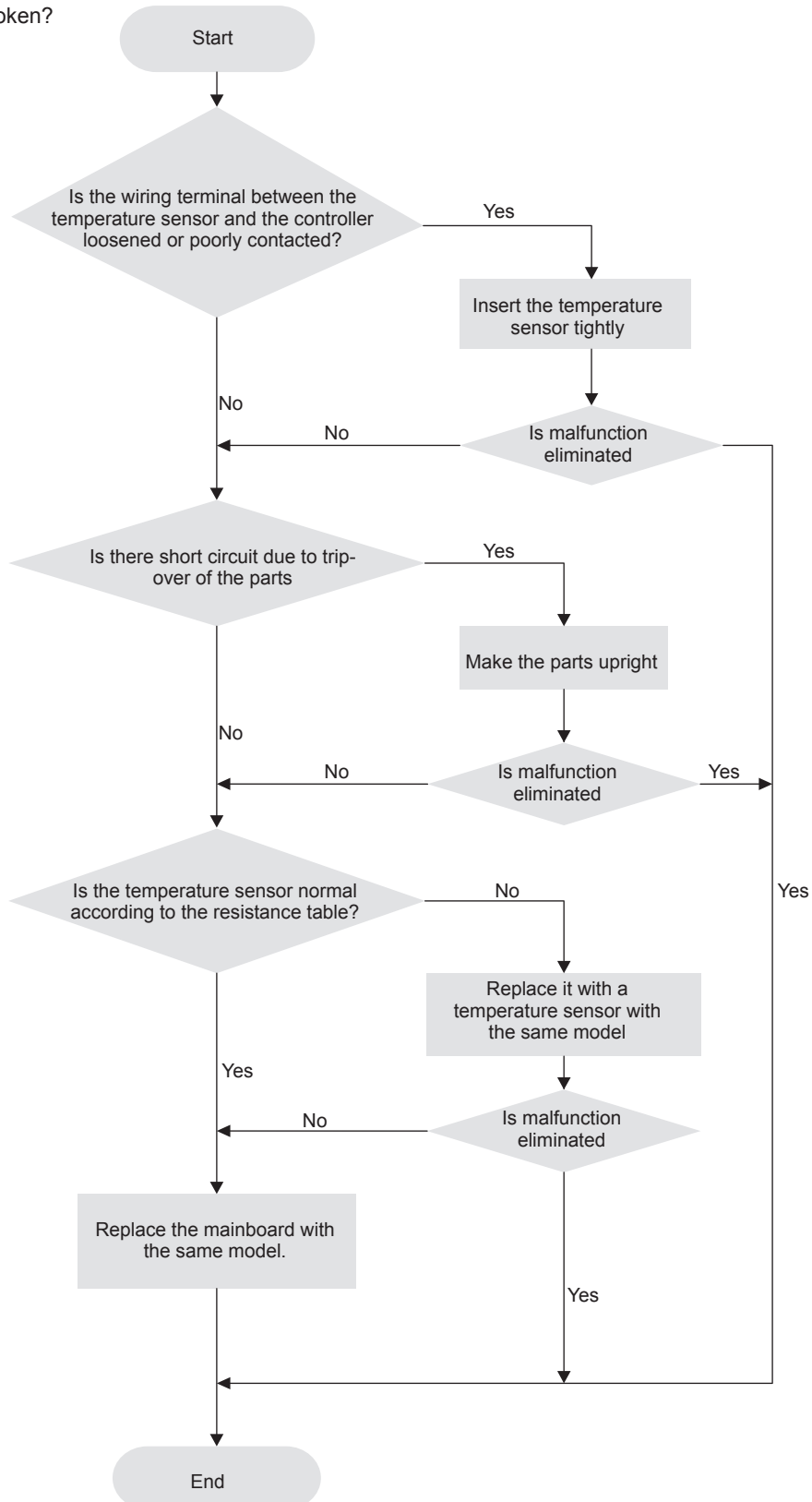
### ●Indoor unit:

#### 1. Malfunction of Temperature Sensor F1, F2

Main detection points:

- Is the wiring terminal between the temperature sensor and the controller loosened or poorly contacted?
- Is there short circuit due to trip-over of the parts?
- Is the temperature sensor broken?
- Is mainboard broken?

Malfunction diagnosis process:



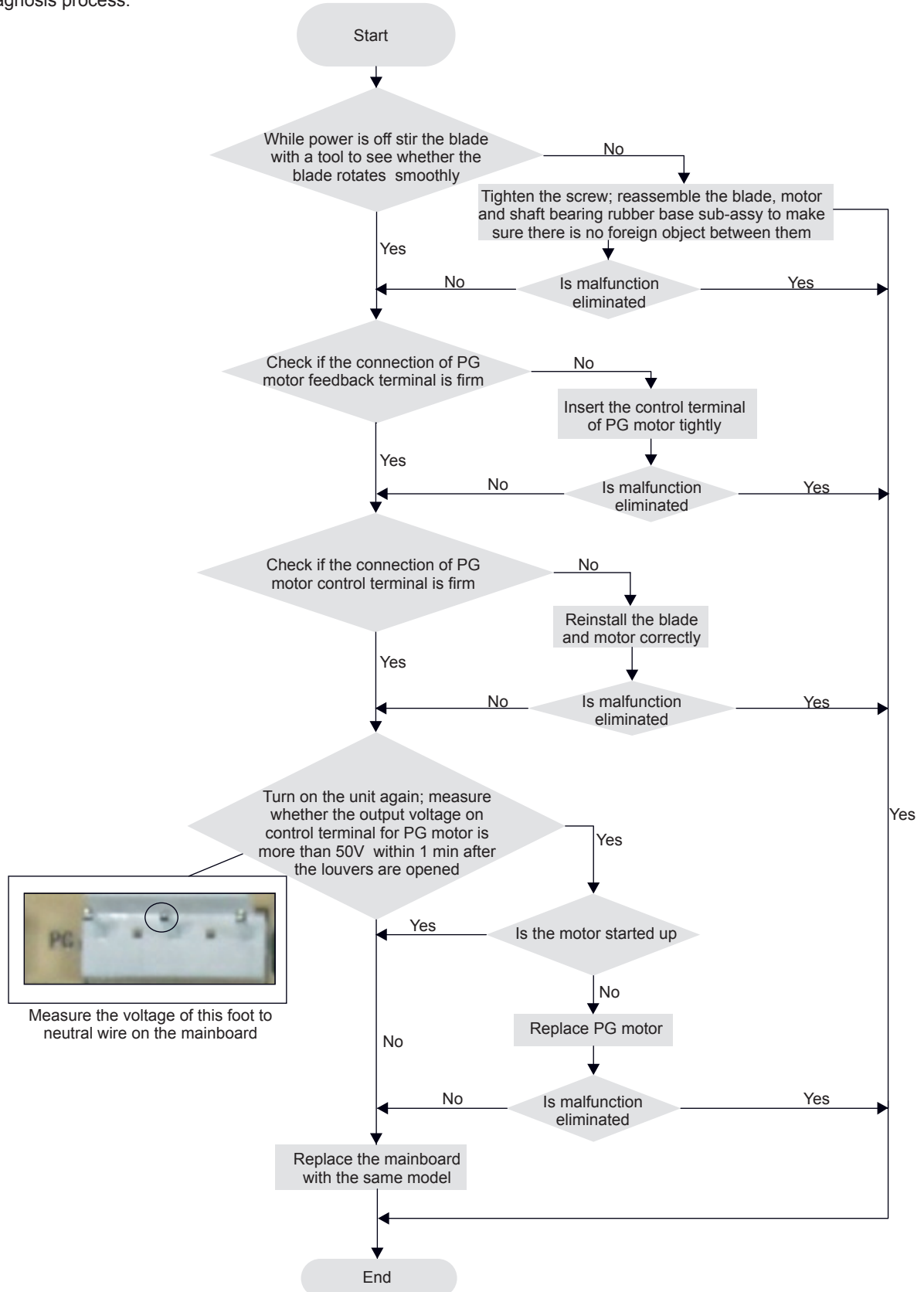


## 2. Malfunction of Blocked Protection of IDU Fan Motor H6

Main detection points:

- Smoothly Is the control terminal of PG motor connected tightly?
- Smoothly Is the feedback interface of PG motor connected tightly?
- The fan motor can't operate?
- The motor is broken?
- Detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:

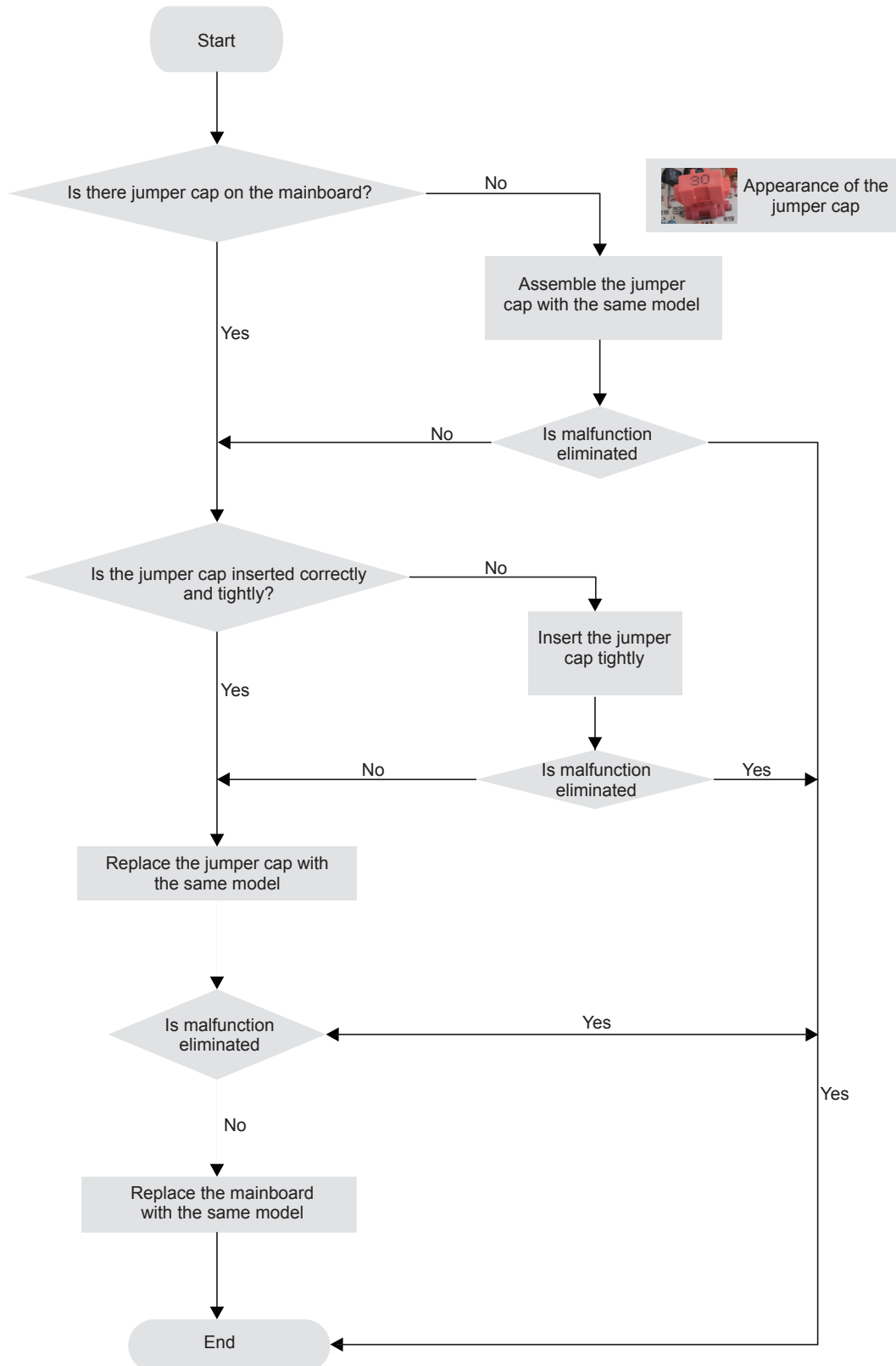


### 3. Malfunction of Protection of Jumper Cap C5

Main detection points:

- Is there jumper cap on the mainboard?
- Is the jumper cap inserted correctly and tightly?
- The jumper is broken?
- The motor is broken?
- Detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:



#### 4. Malfunction of Zero-crossing Inspection Circuit Malfunction of the IDU Fan Motor U8

Main detection points:

- Instant energization after de-energization while the capacitor discharges slowly?
- The zero-cross detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:

