

SERVICE MANUA

[U-CROWN SERIES]

GWH12UB-K6DNA4A (GWH12UB-K6DNA4A/I + GWH12UB-K6DNA4A/O)

Part | : Technical Information

1. Summary

Indoor Unit:

GWH09UB-K6DNA4A/I GWH12UB-K6DNA4A/I GWH18UC-K6DNA4A/I



Outdoor Unit:

GWH09UB-K6DNA4A/O



GWH12UB-K6DNA4A/O



GWH18UC-K6DNA4A/O



Remote Controller:

SAA1FB1



Models List:

No	Model	Product code	Indoor model	Indoor product code	Outdoor model	Outdoor product code	Remote Controller
1	GWH09UB-K6DNA4A	CB264002100	GWH09UB-K6DNA4A/I	CB264N02100	GWH09UB-K6DNA4A/O	CB264W02100	
2	GWH12UB-K6DNA4A	CB264002200	GWH12UB-K6DNA4A/I	CB264N02200	GWH12UB-K6DNA4A/O	CB264W02200	SAA1FB1
3	GWH18UC-K6DNA4A	CB264002000	GWH18UC-K6DNA4A/I	CB264N02000	GWH18UC-K6DNA4A/O	CB264W02000	

2. Specifications

2.1 Specification Sheet

Parameter Unit			Value		
Model GWH09			GWH09UB-K6DNA4A	GWH12UB-K6DNA4A	
Product Code)		CB264002100	CB264002200	
	Rated Voltage	V~	220-240	220-240	
Power	Rated Frequency	Hz	50	50	
Supply	Phases		1	1	
Power Supply	/ Mode		Outdoor	Outdoor	
Cooling Capa	icity	W	2700	3530	
Heating Capa	icity	W	3200	4000	
Cooling Powe	er Input	W	600	883	
Heating Powe	er Input	W	780	1000	
Cooling Powe	er Current	A	3.68	5.8	
Heating Powe	er Current	A	4.42	6.8	
Rated Input		W	2300	2400	
Rated Curren	t	A	10.5	10.5	
Air Flow Volu	me (SH/H/MH/M/ML/L/SL/SM)	m³/h	550/450/390/330/290/250/220/-	650/500/450/400/330/250/200/180	
Dehumidifying	g Volume	L/h	0.8	0.8	
EER		W/W	4.50	4.00	
COP		W/W	4.10	4.00	
SEER			7.5	7.2	
SCOP(Average/Warmer/Colder)			4.6/5.7/3.6	4.6/5.5/3.6	
Application Area		m²	12-18	16-24	
	Model		GWH09UB-K6DNA4A/I	GWH12UB-K6DNA4A/I	
	Product Code		CB264N02100	CB264N02200	
	Fan Type		Cross-flow	Cross-flow	
	Diameter Length(DXL)	mm	Ф92Х616	Ф92Х616	
	Fan Motor Cooling Speed	r/min	1350/1127/1000/870/780/690/600/550	1400/1185/1053/920/829/741/650/550	
	Fan Motor Heating Speed	r/min	1400/1151/1074/1000/930/842/750/-	1500/1185/1119/1053/958/842/750/-	
	Output of Fan Motor	W	10	10	
	Fan Motor RLA	A	0.3	0.3	
	Fan Motor Capacitor	μF	1	1	
	Input of Heater	W	1	1	
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube	
	Pipe Diameter	mm	Φ7	Φ7	
Indoor Unit	Row-fin Gap	mm	2-1.5	2-1.5	
	Coil Length (LXDXW)	mm	623X25.4X304.8	623X25.4X304.8	
	Swing Motor Model	ļ	MP24HD/MP20AC	MP24HD/MP20AC	
	Output of Swing Motor	W	1.5/1.5	1.5/1.5	
	Fuse	A	3.15	3.15	
	Sound Pressure Level	dB (A)	Cooling:41/36/32/28/25/23/20/19 Heating:41/36/34/32/29/26/24/-	Cooling:42/37/33/29/26/23/21/19 Heating:58/51/47/43/40/37/35/33	
	Sound Power Level	dB (A)	Cooling:57/50/46/42/39/37/34/33 Heating:57/50/48/46/43/40/38/-	Cooling:43/37/35/33/29/26/24/- Heating:58/51/49/47/43/40/38/-	
	Dimension (WXHXD)	mm	860X305X170	860X305X170	
	Dimension of Carton Box (LXWXH)	mm	932X385X280	932X385X280	
	Dimension of Package (LXWXH)	mm	935X388X295	935X388X295	
	Net Weight	kg	11.5	11.5	
	Gross Weight	kg	14	14	

	Model		GWH09UB-K6DNA4A/O	GWH12UB-K6DNA4A/O				
	Product Code		CB264W02100	CB264W02200				
			ZHUHAI LANDA COMPRESSOR	ZHUHAI LANDA COMPRESSOR				
			CO., LTD	CO., LTD				
	Compressor Model		QXFT-B123zE170B	QXFT-B123zE170B				
	Compressor Oil		FW68DA	FW68DA				
	Compressor Type		Rotary	Rotary				
	L.R.A.	A	20	20				
	Compressor RLA	A	7.9	7.9				
	Compressor Power Input	W	1230	1230				
	Overload Protector		HPC115/95U1/KSD115°C	HPC115/95U1/KSD115°C				
	Throttling Method		Electron expansion valve	Electron expansion valve				
	Operation temp	°C	16~30	16~30				
	Ambient temp (cooling)	°C	-18~54	-18~54				
	Ambient temp (heating)	°C	-30~24	-30~24				
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube				
	Pipe Diameter	mm	Φ7	Φ7				
	Rows-fin Gap	mm	2-1.4	2.5-1.4				
	Coil Length (LXDXW)	mm	783X38.1X550	763X57X550				
	Fan Motor Speed	rpm	850	850				
	Output of Fan Motor	W	30	30				
Outdoor Unit	Fan Motor RLA	A	0.24	0.24				
	Fan Motor Capacitor	μF	1	1				
	Air Flow Volume of Outdoor Unit	m³/h	2400	2400				
	Fan Type		Axial-flow	Axial-flow				
	Fan Diameter	mm	Ф438	Ф438				
	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)	52/-/-	53/-/-				
	Sound Power Level (H/M/L)	dB (A)	62/-/-	63/-/-				
	Dimension (WXHXD)	mm	899X596X378	899X596X378				
	Dimension of Carton Box (LXWXH)	mm	945X417X630	945X417X630				
	Dimension of Package (LXWXH)	mm	948X420X645	948X420X645				
	Net Weight	kg	42	43.5				
	Gross Weight	kg	45	46.5				
	Refrigerant		R32	R32				
	Refrigerant Charge	kg	0.95	0.9				
	Length	m	5	5				
	Gas Additional Charge	g/m	16	16				
Connection	Outer Diameter Liquid Pipe	mm	Ф6	Ф6				
Pipe	Outer Diameter Gas Pipe	mm	Ф9.52	Ф9.52				
	Max Distance Height	m	10	10				
	Max Distance Length	m	15	20				
	Note: The connection pipe applies metric diameter.							

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

Parameter		Unit	Value
Model			GWH18UC-K6DNA4A
Product Code	9		CB264002000
_	Rated Voltage	V~	220-240
Power	Rated Frequency	Hz	50
Supply	Phases		1
Power Suppl	y Mode		Outdoor
Cooling Capa	acity	W	5300
Heating Capa	acity	W	5300
Cooling Pow	er Input	W	1450
Heating Pow	er Input	W	1430
Cooling Pow	er Current	A	6.5
Heating Pow	er Current	A	6.5
Rated Input		W	2500
Rated Currer	nt	A	10.6
Air Flow Volu	me (SH/H/MH/M/ML/L/SL)	m³/h	850/750/650/600/500/400/340
Dehumidifyin	g Volume	L/h	2.0
EER		W/W	3.66
COP		W/W	3.70
SEER			6.8
SCOP(Average/Warmer/Colder)			4/5.1/3.1
Application Area		m²	23-34
	Model		GWH18UC-K6DNA4A/I
	Product Code		CB264N02000
	Fan Type		Cross-flow
	Diameter Length(DXL)	mm	Ф107Х699
	Fan Motor Cooling Speed	r/min	1350/1150/1050/930/800/700650/600
	Fan Motor Heating Speed	r/min	1400/1200/1100/1000/900/800/750
	Output of Fan Motor	W	20
	Fan Motor RLA	A	0.44
	Fan Motor Capacitor	μF	1
	Input of Heater	W	/
	Evaporator Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
Indoor Unit	Row-fin Gap	mm	2-1.5
	Coil Length (LXDXW)	mm	706X25.4X303.8
	Swing Motor Model		MP24HV/MP24AQ
	Output of Swing Motor	W	1.5/1.5
	Fuse	A	3.15
	Sound Pressure Level	dB (A)	Cooling:46/40/37/33/28/24/22/21 Heating:56/50/47/43/38/32/31/-
	Sound Power Level	dB (A)	Cooling:49/43/41/38/36/32/28/- Heating:59/53/51/48/46/42/38/-
	Dimension (WXHXD)	mm	960X320X205
	Dimension of Carton Box (LXWXH)	mm	1040X400X318
	Dimension of Package (LXWXH)	mm	1043X403X333
	Net Weight	kg	14
	Gross Weight	kg	17

	Model		GWH18UC-K6DNA4A/O
	Product Code		CB264W02000
	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR
		ļ	CO., LTD
	Compressor Model	ļ	QXFT-B123zE170B
	Compressor Oil		FW68DA or equivalent
	Compressor Type		Rotary
	L.R.A.	A	20
	Compressor RLA	A	7.9
	Compressor Power Input	W	1230
	Overload Protector		HPC115/95orKSD115°C
	Throttling Method		Electron expansion valve
	Operation temp	°C	16~30
	Ambient temp (cooling)	°C	-18~54
	Ambient temp (heating)	°C	-30~24
	Condenser Form		Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7
	Rows-fin Gap	mm	2-1.4
	Coil Length (LXDXW)	mm	852X38.1X660
	Fan Motor Speed	rpm	820
	Output of Fan Motor	W	60
Outdoor Unit	Fan Motor BLA	A	0.5
	Fan Motor Capacitor	uF	/
	Air Flow Volume of Outdoor Unit	m ³ /h	3200
	Fan Type		Axial-flow
	Fan Diameter	mm	φ520
	Defrosting Method		Automatic Defrosting
			T1
			1
			IPX4
	Pressure for the Discharge Side	MPa	4.3
	Permissible Excessive Operating	MPa	2.5
	Pressure for the Suction Side		F7 / /
			577-7-
	Sound Power Level (H/M/L)	dB (A)	6//-/-
		mm	965X700X396
	Dimension of Carton Box (LXWXH)	mm	1026X455X735
	Dimension of Package (LXWXH)	mm	1029X458X750
	Net Weight	kg	50.5
	Gross Weight	kg	55
	Refrigerant		R32
	Refrigerant Charge	kg	1.4
	Length	m	5
	Gas Additional Charge	g/m	20
Connection	Outer Diameter Liquid Pipe	mm	Ф6
Pipe	Outer Diameter Gas Pipe	mm	Ф12
	Max Distance Height	m	10
	Max Distance Length	m	25
	Note: The connection pipe applies metr	ric diamete	r.

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

2.2 Operation Characteristic Curve

09/12K



18K

Cooling



Heating



2.3 Capacity Variation Ratio According to Temperature

09/12K



18K



Heating



2.4 Cooling and Heating Data Sheet in Rated Frequency

Cooling:

Rated condition(°	cooling 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	Compressor revolution
Indoor	Outdoor		P (MPa)	T1 (°C)	T2 (°C)			(112)
27/19	35/24	09/12K	0.9 to 1.1	12 to 14	75 to 37	Super High	High	66
27/19	35/24	18K	0.9 to 1.0	in:8~11 out:11~14	in:75~83 out:37~48	Super High	High	73

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	Compressor revolution	
Indoor	Outdoor		P (MPa)	T1 (°C)	T2 (°C)			(HZ)
20/-	7/6	09/12K	2.8 to 3.0	70 to 35	2 to 4	Super High	High	66
20/15	7/6	18K	2.2 to 2.4	in:75~83 out:37~45	in:1~3 out:2~6	Super High	High	75

Instruction:

T1: Inlet and outlet pipe temperature of evaporatorT2: Inlet and outlet pipe temperature of condenserP: Pressure at the side of big valveConnection pipe length: 5 m.

2.5 Noise Curve







3. Outline Dimension Diagram

3.1 Indoor Unit



Model	W	Н	D
09/12K	860	305	170
18K	960	320	205

Unit:mm

D

Т

3.2 Outdoor Unit

GWH09UB-K6DNA4A/O







Unit:mm

GWH18UC-K6DNA4A/O







GWH12UB-K6DNA4A/O









6. Function and Control

6.1 Remote Controller Introduction

Specialties note

Matching instructions



This model adopts RF remote control. The remote controller shall be matched with the air conditioner before operation, otherwise the remote control will be invalid. Before operation, please read the instructions in this page carefully and then do the corresponding matching operation.

Note:

- Please done the following operation within 6.56ft from the unit. Matching is not needed anymore once it is done.
- During matching, please keep the remote controller and air conditioner under standby status.
- When the signal of remote controller cant be received, please match the remote controller with the unit again.

Matching of remote controlle

When the unit is under standby status, please get close to the air conditioner within 6.56ft and then hold on pressing $\frac{1}{2}$ button for 3s. The remote controller and air conditioner will enter matching automatically. If matching is done, the unit will give out three sounds; if matching is failed, please get closer to the unit and arrange matching again.

Buttons on Remote Controller



ON/OFF button +/- button 3 Cool button 4 Heat button Fan button 5 6 I Feel button 7 Up down swing button 8 Mode button 9 Left right swing button 10) T-ON/T-OFF button 11 Clock button Temp button 14 X-Fan button 15 Light button 16) Sleep button Wifi button



Introduction for Buttons on Remote Controller

Note:

•This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model dont 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. Operation indicator "()" is ON (red indicator the colour is different for different models). 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 "de" sound, which means the signal has been sent to the air conditioner.

1. ON/OFF Button

Press this button can turn on or turn off the air conditioner. After turning on the air conditioner, operation indicator "()" on indoor unit's display is ON (green indicator.

The colour is different for different models), and indoor unit will give out a sound

2. +/- button

• Press "+" or " - " button once increase or decrease set temperature 0.5 °C. Holding "+" or " - " button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly. (Temperature cant be adjusted under auto mode)

• When setting TIMER , press "+" or " - " button to adjust time.

3. Cool button

Press this button, unit will operate in cool mode.

4. Heat button

Press this button, unit will operate in heat mode.

5. FAN button

super(),auto(AUTO),quiet().

Note:

\frown			- 111 -	→ n11		► 11111 -	_
	P	◄	Auto	◄	\$	-	

• Turbo function is not available under dry and auto mode.

- Automatically operate slient speed when starting sleep fuction.
- The unit operates at low speed under dry and auto dry mode. The speed cant be adjusted.
- Under AUTO speed, air conditioner will select proper fan speed automatically according to ambient temperature.

6. I FEEL 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.



7. 💻 button

Under simple swing mode, press this button can turn on (display " 🖟 " icon) or turn off (not display " 🖟 " icon) left&right swing function.

Under OFF status, press "+" button and " 🖟 " button simultaneously can switch between simple swing mode and fixed swing mode. During switching time, " 🖟 " icon on remote controller will flash twice.

Under fixed-angle swing mode, press this button and the left and right swing status will change in the sequence as below:



8. MODE button

Press this button to select your required operation mode.



When selecting auto mode, air conditioner will operate automatically according to ambient temperature. Set temperature cant be adjusted and will not be displayed as well. 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 speed.Press " ," / " ,")" / " ,")" / " ,")" / " ,")" / " ,")" / " ," / " ,")" / " ,")" / " ," / " ,")" / " ," / " ,")" / " ," / (" ,")" / " ,")" / " ," / " ,")" / " ," / " ,")" / " ," / " ,")" / " ," / " ,")" / " ," / " ,")" / " ," / " ," / " ,")/ / " ," / " ,")/ / " ," / " ," / " ,")/ / " ," / " ," / " ,")/ / " ," / " ," / " ," / " ," / " ,")/ / " ," / " ,")/ / " ," / " ," / " ," / " ,")/ / " ," /

When selecting dry mode, the air conditioner operates at low speed under dry mode. Under dry mode, fan speed cant be adjusted. Press

When selecting fan mode, the air conditioner will only blow fan, Press "FAN" button to adjust fan speed. Press " 🖟 " / " 🔰 " button to adjust fan blowing angle.

When selecting heating 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. (Cooling only unit wont receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button cant start up the unit).

Note:

• For preventing cold air, after starting up heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).

• Set temperature range from remote controller: 16~30°C (61-86°F);

9. 🔰 button

Under simple swing mode, press this button can turn on (display " ≱ " icon) or turn off (not display " ≱ " icon) up&down swing function. Under OFF status, press "+" button and " ≱ " button simultaneously can switch between simple swing mode and fixed swing mode. During switching time, " ≱ " icon on remote controller will flash twice.

Under fixed swing mode, press this button and up and down swing status will change in the sequence as below:



10. T-ON/T-OFF button

T-ON button

"T-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 T-ON setting. After each pressing "+" or "-"button, T-ON setting will increase or decrease 1min. Hold "+" or "-"button, 2s later, the time will change quickly until reaching your required time. Press"T-ON" to confirm it. The word "ON" will stop blinking. " ()" icon resumes displaying.Cancel TIMER ON: Under the condition that T-ON is started up, press "T-ON" button to cancel it. **T-OFF button**

"T-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 T-OFF setting. After each pressing "+" or "-" button, T-OFF setting will increase or decrease 1min. Hold "+" or "-" button, 2s later, the time will change until reaching your required time. Press"T-OFF" to confirm it. The word "ON" will "OFF" will stop blinking. " () " icon resumes displaying. Cancel T-OFF.Under the condition that T-OFF is started up, press "T-OFF" button to cancel it.

Service Manual

Note:

- Under on and off status, you can set T-OFF or T-ON simultaneously.
- Before setting T-ON or T-OFF, please adjust the clock time.

• After starting up T-ON or T-OFF, set the constant circulating valid. After that, air conditioner will be turned on or turned off according to setting time. ON/OFF button has no effect on setting. If you dont need this function, please use remote controller to cancel it.

11. CLOCK 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. 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.

• Clock time adopts 24-hour mode.

• The interval between two operations cant exceeds 5s. Otherwise, remote controller will quit setting status. Operation for TIMER ON/ TIMER OFF is the same.

12. 추/纪 button

Press this button to activate health function with " \clubsuit " displayed; press this button for the second time to activate health and air in function with " \clubsuit " and " \bigcirc " displayed; press this button for the third time to activate health and air out function with " \clubsuit " and " \bigcirc " displayed; press this button for the fourth time to activate air in function with " \bigcirc " displayed; press this button for the fourth time to activate air in function with " \bigcirc " displayed; press this button for the fifth time to activate air out function with " \bigcirc " displayed; press this button for the fifth time to activate air out function with " \bigcirc " displayed; press this button for the sixth time to exit health, air in or air out function.

$$\overset{} \stackrel{\bigstar}{\longrightarrow} \stackrel{\bigstar}{\longrightarrow} \stackrel{\bigstar}{2} \xrightarrow{} \stackrel{?}{\longrightarrow} \stackrel{?}{\rightarrow} \stackrel{?}{\rightarrow} \stackrel{?}{\rightarrow} \stackrel{?}{\rightarrow} \stackrel{?}{\rightarrow} \stackrel{?}{\rightarrow} \stackrel{?}{\rightarrow} \stackrel{?}{\rightarrow} \stackrel{?}$$

Note: there is no this function for this unit. If press this button, the main unit will click, but it also runs under original status.

13 TEMP button

By pressing this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor units display. The setting on remote controlleris selected circularly as below:



- When selecting " 1 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 "

Note:

• Outdoor temperature display is not available for some models. At that time, indoor unit receives "

- Its 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.

14. X-FAN button

Pressing this button in COOL or DRY mode, the icon " $\langle \cdot \rangle$ " is displayed and the indoor fan will continue operation for 2 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 blowed 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 about 2 min. at low speed. In this period, press X-FAN button to stop indoor fan directly.
- Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

15. LIGHT button

Pressing this button to turn off display light on indoor unit. Press this button again to turn on display light.

16. SLEEP button

• Pressing this button can select Sleep 1, Sleep 2, Sleep 3, Sleep 4 or cancel Sleep circularly as below:



•In Sleep 1 and Sleep 2, the air conditioner will run according to a group of presetting temperature curves.

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

(1) Under Sleep 3 mode, long press "TEMP" button, the remote controller will enter the setting of personalized sleep. In this case, the timer zone of remote controller will display "1 hr" and the set temperature zone "88" will display the corresponding temperature of the last set sleep curve and blink (The first entering will display according to the initial curve setting value of manufacturer);

(2) Press "+" and "-" button to adjust the corresponding temperature. After adjusting, press "TEMP" button to confirm it;

(3) At this time, the timer time on the remote controller will increase automatically by 1hr (that is "2 hr" or "3 hr" ... or "8 hr"). The set temperature zone "88" will display the corresponding temperature of the last set sleep curve and blink;

(4)Repeat step(2) and step (3) until 8-hour temperature setting is finished, then the sleep curve is set successfully. After that, remote controller will resume displaying the original timer time and temperature zone will resume displaying the original set temperature.
Sleep 3 - the sleep curve inquiry under DIY Sleep mode:

User can inquire the set sleep curve according to the setting method of sleep curve. Enter the setting of personalized sleep but do not change the temperature. Then press "TEMP" button to confirm the setting.

Note: In the above setting or inquiry procedure, if there is no button pressing within 10s, remote controller will automatically exit the sleep curve setting and resume the original display. If ON/OFF, MODE, TIMER, SLEEP, COOLING or HEATING button is pressed during the setting or inquiry procedure, remote controller will also exit the sleep curve setting.

•Sleep 4 is Siesta mode. The set temperature will change automatically according to the features of siesta.

•Sleep function will be disabled if the air condition is restarted after power failure; when sleep function is turned on, quite fan speed will be also turned on.

•Sleep function can not be set in AUTO mode.

17. Wifi button

Press this button 3s can set wifi function on or OFF.

At OFF status, press mode button and wifi button, can reset wifi mode parameter and open wifi function.

If "H1" is displayed on the remote controller while it's not operated by the professional person/after-sales person, it belongs to the misoperation.

Please operate it as below to cancel it.Under the OFF status of remote controller, hold the "MODE" button and "X-FAN" buttons simultaneously for 5s to cancel "H1" display.

Note:

• If remote controller displays "H1", it belongs to the normal function reminder. If the unit is defrosting under heating mode, it operates according to H1 defrosting mode. "H1" won't be displayed on the panel of indoor unit;

• Once you set H1 mode, if you turn off unit by remote controller, H1 will display 3 times on the remote controller and then disappear;

• Also, when you set H1 mode, when you change to heating mode, H1 will display 3 times on the remote controller and then disappear.

About X-FAN function

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

1. Having set X-FAN function on: After turning off the unit by pressing ON/OFF button indoor fan will continue running for about 2 min. at low speed. In this period, press X-FAN button to stop indoor fan directly.

2. Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

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 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 switch between Fahrenheit and Centigrade

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

Energy-saving function

Under cooling mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off energy-saving function. When energysaving 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.

Note:

- Under energy-saving function, fan speed is defaulted at auto speed and it cant be adjusted.
- Under energy-saving function, set temperature cant be adjusted.

• Sleep function and energy-saving function cant operate at the same time. If energy-saving function has been set under cooling mode, press sleep button will cancel energy-saving function. If sleep function has been set under cooling mode, start up the energy-saving function will cancel sleep function.

8°C heating function

Under heating 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.

Note:

- Under 8°C heating function, fan speed is defaulted at auto speed and it cant be adjusted.
- Under 8°C heating function, set temperature cant be adjusted.

• Sleep function and 8°C heating function cant operate at the same time. If 8°C heating function has been set under heating mode, press sleep button will cancel 8°C heating function. If sleep function has been set under heating mode, start up the 8°C heating function will cancel sleep function.

• Under °F temperature display, the remote controller will display 46 °F heating.

Operation guide

1. After putting through the power, press "ON/OFF" button on remote controller to turn on the air conditioner.

- 2. Press "MODE" button to select your required mode: AUTO, COOL, DRY, FAN, HEAT.
- 3. Press "+" or " " button to set your required temperature. (Temperature cant be adjusted under auto mode).
- 4. Press "FAN" button to set your required fan speed: auto, low, medium and high speed.
- 5. Press " 🔅 " button to select fan blowing angle.

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.

Battery level will be displayed on the remote controller. When " []" is flickering, please replace the batteries, otherwise, remote controller cant operate normally.

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 26.25ft, 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 dont use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or theres no display, please replace batteries.



Cover of battery box



6.2 GREE+ App Operation Manual

Control Flow Chart



Operating Systems

Requirement for Users smart phone:





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.

6.3 Ewpe Smart App Operation Manual

Control Flow Chart



Operating Systems

Requirement for Users smart phone:





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.

6.4 Brief Description of Modes and Functions

Conversion formula for Fahrenheit degree and Celsius degree: Tf=Tcx1.8+32

Indoor unit

1. This controller includes functions as below

(1) Auto; (2) Cooling; (3) Dry; (4) Fan; (5) Heating

2.Control object of controller

(1)Indoor unit :

Cooling mode: seven kinds of fan speed in total (including quiet, fan 1, fan 2, fan 3, fan 4, fan 5, turbo).

Heating mode: five kinds of fan speed in total (including quiet, fan 1, fan 2, fan 3, fan 4, fan 5, turbo).

Fan mode: Fan speed is same as that under cooling mode.

Dry mode: Low fan and quiet can be set under this mode. The fan speed is same as that for low fan under cooling mode.

Auto mode: Turbo is not available for this mode and the fan speed is same as that under each operation mode (cooling mode, fan mode, heating mode).

(2)Stepping motor for up&down swing.

(3)Stepping motor for swing mechanism.

(4)Stepping motor for left&right swing.

(5)E-heater.

(6)Health function(cold plasma reserved).

(7)Normal buzzer.

3.Basic functions of system

(1)Cooling mode

① Operation condition and process for cooling mode (refer to outdoor unit instruction for inverter unit).

2 Protection function (refer to outdoor unit instruction for inverter unit).

(2)Dry mode

① Operation condition and process for dry mode.

2 Protection function (refer to outdoor unit instruction for inverter unit).

(3)Heating mode (not for cooling only unit)

① Operation condition and process for heating mode.

⁽²⁾ Defrosting condition and process (refer to outdoor unit instruction for inverter unit): As for normal intelligent defrosting; the unit will defrost automatically according to frosting condition and operation indicator will be on 10s and off 0.5s circularly. As for non-strop defrosting, the indoor fan will be started up according to the frosting condition and the operation indicator will be on 10s and off 0.5s circularly.

③ Protection function (refer to outdoor unit instruction for inverter unit).

(4)Fan mode

Under this mode, indoor fan operates at set fan speed. Compressor, outdoor fan, 4-way valve and electric heating tube all stop operation. Under this mode, the temperature setting range is 16~30°C. Operation icon and set temperature is displayed.

(5)Auto mode

Under auto mode, the system, the system will select the operation mode (cooling, heating, fan) according to the change of ambient temperature. Operation icon, actual operation mode icon and set temperature will be displayed. Theres 30s time delay for protection for mode switchover. Protection function is same as that under each mode.

4.Display status of indoor indicator

(1)Display status of indoor unit

① After energization, all display icons will be displayed and then only the power indicator is on. When turning on the unit with remote controller, the operation indicator is on and the current set operation mode will be displayed.

② During defrosting, the operation indicator will be on 10s and off 0.5s circularly. Under auto mode, the dual-8 nixie tube displays 25 under cooling mode or fan mode, and 20 under heating mode. Mode indicator is displayed according to the mode.

③ Dual-8 nixie tube displays set temperature.

(2)Error indicator display on indoor unit

Display table for error status			
Error name	Error definition	Dual-8 code display	
Freon recovery mode	Operation status is displayed immediately	Fo	
Malfunction of indoor fan	Malfunction of hardware	H6	
Malfunction of middle temperature sensor of indoor evaporator	Malfunction of hardware	F2	
Malfunction of indoor ambient temperature sensor	Malfunction of hardware	F1	
Communication malfunction between indoor unit and outdoor unit	Malfunction of hardware	E6	
Malfunction of jumper cap	Malfunction of hardware	C5	
Limit/decrease frequency due to module current protection	Display through adjustment with remote controller	En	
Limit/decrease frequency due to module temperature protection	Display through adjustment with remote controller	EU	
Limit/decrease frequency due to overload protection	Display through adjustment with remote controller	F6	
Limit/decrease frequency due to freeze precention protection	Display through adjustment with remote controller	FH	
Limit/decrease frequency due to discharge protection	Display through adjustment with remote controller	F9	
Limit/decrease frequency due to AC current protection of outdoor			
unit	Display through adjustment with remote controller	F8	
Mlafunction overload temperature sensor	Malfunction of hardware	FE	
Malfunction of outdoor discharge temperature	Malfunction of hardware	F5	
Malfunction of outdoor ambient temprature sensor	Malfunction of hardware	F3	
Malfunction of outdoor condenser temperature sensor	Malfunction of hardware	F4	
Circuit malfunction of module temperature senso	Malfunction of hardware	P7	
Overload protection of compressor	Other malfunction	H3	
Discharge protection	Other malfunction	F4	
Overload protection	Other malfunction	F8	
AC current protection of outdoor unit	Other malfunction	E5	
Module current protection	Other malfunction	Н5	
Module temperature protection	Other malfunction	P8	
Freeze prevention protection	Other malfunction	F2	
High power protection	Other malfunction	10	
Lacking/inverse phase protection of compressor	Other malfunction		
	Other malfunction		
High DC hus her voltage protection	Other malfunction		
Low DC hus har voltage protection	Other malfunction		
Eroon looking protection	Other malfunction		
	Molfunction of bordware		
Non matching between indeer unit and outdeer unit	Malfunction of hardware		
Non-matching between indoor unit and outdoor unit	Malfunction of hardware		
Read-write malfunction of memory chip	Malfunction of hardware	EE	
Abhormal changeover for 4-way valve	Malfunction of hardware	07	
Malfunction of outdoor fan 2	Malfunction of hardware	LA	
		L3	
Low pressure protection	Other malfunction	E3	
Hgn pressure protection	Other malfunction	E1	
Drop malfunction of DC bus bar voltage	Other malfunction	03	
Current detection malfunction for the complete unit	Malfunction of hardware	05	
Charing malfunction for capacity	Malfunction of hardware	PU	
Phase curent detection malfunction of compressor	Malfunction of hardware	U1	
Desynchronizing of compressor	Other malfunction	H7	
Demagnetizing protection of compressor	Other malfunction	HE	
Failure startup of compressor	Other malfunction	Lc	
High peak curent of compressor	Other malfunction	P5	
Conglutination malfunction of relay of refrigerant electric heater	Malfunction of hardware	A2	
Refrigerator heater of outdoor unit is invalid	Display through adjustment with remote controller	A3	
Malfunction of temperaure sensor of refrigerant heater	Malfunction of hardware	A4	
Malfunction exit tube temperature sensor for condenser	Malfunction of hardware	A5	
Oil return	Display through adjustment with remote controller	F7	
Norminal cooling and heating (capacity test code)	Operation status is displayed immediately	P1	
Maximum cooling and heating (capacity test code)	Operation status is displayed immediately	P2	
Medium cooling and heating (capacity test code)	Operation status is displayed immediately	P2	
Minimum cooling and heating (capacity test code)	Operation status is displayed immediately		
Imminum cooling and heating (capacity test code)			

5.Other control

(1)Timer function

Timer ON: Timer ON can be set under off status. After time is over, the unit will operate at original setting mode. The timer interval is 0.5h and the timer setting range is 05~24h.

Timer OFF: Timer OFF can be set under on status. After time is over, the unit will be turn off. The timer interval is 0.5h and the timer setting range is 05~24h.

(2)Auto button

Press this button and the unit will operate at auto mode. Indoor fan operates at auto fan speed and the swing motor operates. Press this button again to turn off the unit.

(3)Buzzer

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

(4)Sleep function

In SLEEP mode, the unit will automatically select appropriate sleep curve to operate according to different temperature setting.

(5)Turbo Function

This function can be set in cooling or heating mode.

(6)X-fan function

X-fan function can be set in cooling or drying mode.

(7)Compulsory defrosting function

① turn on compulsory defrosting function

Under on status, set heating mode with remote controller and adjust the temperature at 16°C. When pressing "+, -, +, -, +, -, * button successively within 5s and the complete unit will enter into compulsory defrosting status. Meanwhile, operation indicator on indoor unit is on 10s and off 0.5s circularly. (Note: If the complete has malfunction or stops operation due to protection, compulsory defrosting function can be started up only after malfunction or protection is resumed.)

2 Exit copulsory defrosting mode

After compulsory defrosting is started up, the complete unit will exit defrosting according to actual defrosting result automatically. The complete unit will resume heating operation normally.

(8)Refrigerant recovery function (applicable for movement or maintenance)

① Start up refrigerant recovery function

Within 5min after energization (on or off status), set cooling mode with remote controller and adjust the temperature at 16°C. When pressing light button on remote controller to any one indoor unit for 3 times within 3s, the complete unit will enter into refrigerant recovery status after setting is succeeded and all indoor unit displayed F0. After that, maintenance staff turns off all liquid valves. 5min later, hold all thimbles at service valves in turn with tools. If theres no refrigerant spurting out, turn off corresponding gas valve immediately, turn off the unit with remote controller and then you can disassemble the connection pipe.

2 Quit refrigerant recovery function

During refrigerant recovery process, if any one indoor unit receives any remote control signal or refrigerant recovery function has operated for 25min, the unit will exit refrigerant recovery function. If the complete unit is at standby status before refrigerant recovery, the unit is still at standby status after refrigerant recovery. If the complete unit is at operation status before refrigerant recovery, the unit will operate at original operation mode after refrigerant recovery.

③ After entering refrigeratn recovery function

Indoor unit operates at cooling mode. Fan speed is super high fan speed and the set temperature is 16°C. The horizontal louver will stay at the minimum operation angle.

(9)Auto fan speed control

Under this mode, indoor fan will select high, high-medium, medium, medium-low or low fan speed according to ambient temperature sensor.

(10)Left&right swing control

Select different left&right swing direction according to remote control status of left&right swing.



(11)Up&down swing control

Up&down swing is composed of swing mechanism and swing blade;

After energization, the swing mechanism will perform reset action. The horizontal louver will open to the maximum angle and then be closed;

After turning on the unit, the swing mechanism will extend different length according to remote control status. By view of the position



of swing blade, there are upper swing and lower swing.

When selecting fixed-angle swing, you can select 5 kinds of swing position for blowing fan; After selecting free swing, lower swing for heating mode and upper swing for cooling mode.



(12)Display

① Display of operation icon and mode icon

After energization, all icon will be displayed for once. Under standby status, operation icon will be in white. After turning on the unit with remote controller, the icon for the current operation mode will be displayed (mode: cooling, heating, 0.5, defrosting, frequency visual). After pressing light button to turn off light, all displays will be turned off. When turning on the unit, the backlight indicator will be turned on; when turning off the unit or light button, backlight indicator wont be turned on.

2 Dual-8 nixie tube display

When turning on the unit after energization for the first time, the nixie tube is defaulted to display current set temperature (the temperature setting range is16~30°C). When it received the signal of display set temperature, the nixie tube displays set temperature; when it received the signal of display ambient temperature, the nixie tube will display current indoor ambient temperature; if remote control to set other status, the display wont change. F1 will be displayed for the malfunction of ambient temperature sensor; F2 will be displayed for the malfunction of indoor tube temperature sensor; C5 will be displayed for the malfunction of jumper cap.

(13)Locked protection to motor

After turning on the fan, when the motor operates at low speed for a period of time, it will stop operation for preventing auto protection of motor and lockage will be displayed. If its at on status, dual-8 nixie tube displays lockage error code H6; if its at off status, lockage information wont be displayed.

6.Special Functions

(1)Rf control function

There are three optional mode—air, humidify and air purifier. After matching is succeeded, you can control the related mode through remote controller.

(2)I Feel function

When I FEEL command is received, the controller will operate according to the ambient temperature sent by the remote controller (For defrosting and cold blow prevention, the unit operates according to the ambient temperature sensed by the air conditioner). The remote controller will regularly send ambient temperature data to the controller. When the data has not been received for a long time, the unit will operate according to the temperature sensed by the air conditioner. If I FEEL function is not selected, the ambient temperature will be that sensed by the air conditioner. I FEEL function is not to be memorized.

(3)Malfunction detecting of temperature sensor

When it detected that theres malfunction of indoor ambient temperature sensor, it will display F1; when it detected that theres malfunction of indoor tube temperature sensor, it will display F2.

(4)Low power consumption standby function

When the air conditioner is in power off and at standby status, it will enter into low power consumption standby status 6 minutes later, and the operation indicator will be turned off.

7.Error Analysis

(1)Error 1: No response after energization, and buzzer does not give out a beep.

Solution: Please check the power supply or replace the controller.

(2)Error 2: Dual-8 nixie tube of display board displays "C5".

Solution: The jumper cap has not been firmly connected to the controller, please reinsert or replace the jumper cap with the same specification.

(3)Error 3: Dual-8 nixie tube of display board displays "F1".

Solution: The ambient temperature sensor of air conditioner has not been firmly connected to the controller, please reinsert or replace an ambient temperature sensor.

(4)Error 4: Dual-8 nixie tube of display board displays "F2".

Solution: The tube temperature sensor of air conditioner has not been firmly connected to the controller, please reinsert or replace a tube temperature sensor.

(5)Error 5: Dual-8 nixie tube of display board displays "H6".

Solution: The feedback wire of indoor fan has not been firmly connected to the controller or the indoor fan motor fails to work, please reinsert the feedback line of indoor fan or replace the main board of controller, or replace the motor.

(6)Error 6: Dul-8 nixie tube of display board displays "FC".

Solution: It is malfunction of swing mechanism, which is caused by the looseness of connecting wire or damage of swing mechanism or main board. Please reconnect the connecting wire, or replace the swing mechanism or controller.

(7)Error 7: Dul-8 nixie tube of display board displays "JF" or "rF".

Solution: It is abnormal of detecting board, which is caused by the looseness of communication line between the main board and detecting board, or the malfunction of detecting board or main board. Please reinsert the connecting wire, or replace the detecting board or controller.

8.Blockage protection to Motor

(1) When turning on the fan, the motor speed is not more than 300rpm/min for 1 min consecutively, its blockage protection to motor.
 (2) During lockage protection to motor, all load stop operation (indoor fan, outdoor fan, compressor, and electric heating tube stop operation; 4-way valve should delay 2mins to stop operation and then horizontal louver will stop at the current position.

(3)Once theres blockage protection to motor, cut off the power to resume operation.

(4)During blockage protection to motor, remote controller and buttons are valid and they can turn on or turn off the unit, while they wont perform detailed target (indoor fan, outdoor fan, compressor, and electric heating tube stop operation, and 4-way valve should delay 3mins to stop operation; horizontal louver will stop at current position).

(5)During motor blockage protection, if the unit is at on status, the dual-8 nixie tube displayed blockage error code H6; if the unit is at off status, it wont display blockage malfunction information.

9.Communication malfunction

If the unit hasnt received correct signal for 3mins consecutively, its the communication malfunction. Outdoor fan stop operation and stop operation after blowing residual heat under auto heating mode or heating mode. Indoor fan operated at set fan speed under other modes.

10.Auto inspection function

Maflunction of jumer cap

After energization, when its detected the jumper cap outlet is blank, its the malfunction of jumper cap, which cant resumed. During malfunction protection of jumper cap, if the unit is at on status, the nixie tube displays error code: "C5" and operation indicator is blinking. If the unit is at off status, it wont display error code.

Note: The controller without this function wont detection this malfunction.

Outdoor unit

1. System function

1.1 Cooling mode

1.1.1 Working condition and process for cooling

When the compressor is at off status, turn on the unit under cooling mode. When indoor unit reaches the condition of turning on the unit, the unit operates under cooling mode. Meanwhile, indoor fan, outdoor fan and compressor stops operation.

1.1.2 Stop operation under cooling mode

Compressor stopped operation, compressor stops operation immediately and outdoor fan delay 30s to stop operation.

1.1.3 Switch to heating mode from cooling mode

When switching to heating mode, 4-way will delay 3min to be energized after compressor is stopped. Others are same with that stopped operation under cooling mode.

1.1.4 4-way valve: 4-way valve will be closed under this mode

1.1.5 Outdoor fan control under cooling mode

After compressor stops operation, outdoor fan will operate at current fan speed for another 30s and then stops operation.

1.2 Drying mode

1.2.1 Working condition and process for drying mode: same with that for cooling mode

1.2.2 Status of 4-way valve: OFF.

1.2.3 Temperature setting range: 16~30°C.

1.2.4 Protection function: Same with that under cooling mode.

1.2.5 The startup condition for electronic expansion valve, outdoor fan and compressor is same as that for cooling mode.

1.3 Heating mode

1.3.1 Working condition and process for heating mode

When indoor unit reaches the startup condition of heating, indoor unit will operate under heating mode.

1.3.2 Stop operation under heating mode:

a. When indoor unit reached OFF or stop operation conditioner, compressor stop operation, and outdoor fan will delay 1min to stop operation.

b. Switch to cooling(drying) or fan mode

(a) compressor stops operation; (b) 4-way valve will delay 2min to be de-energized;

(c) outdoor fan will delayed 30s to stop operation; (d) status of 4-wayvalve: energized.

1.3.3 Outdoor fan control under heating mode

When compressor stops operation, outdoor fan will delay 30s to stop operation.

1.3.4 Defrosting function

When it satisfied defrosting condition, compressor stops operation. After compressor stoped for 30s, outdoor fan stops operation and 4-way valve will change direction; After 4-way valve chaging direction, compressor will be startup, defrosting will start counting time and compressor frquency will be increased to defrosting frequency.

1.4 Fan mode

1.4.1 Compressor, outdoor fan and 4-way valve will all be stopped or closed.

1.4.2 Temperature setting range is 16~30°C.

2. Protection function

2.1 Overload protection function

During cooling mode, measure the temperature of outdoor heat exchanger; during heating mode, measure the temperature of indoor heat exchanger.

(1)When Ttube≤T1, resume original operation status;

(2)When Ttube≥T2, prohibit increasing frequency;

(3)When Ttube≥T3, compressor will decrease frequency to operate.

(4)When Ttube≥T4, compressor stops operation;

During cooling or drying mode: T1=52; T2=55; T3=58; T4=62;

During heating mode: T1=50; T2=53; T3=56; T4=60;

Under auto heating or heating mode, indoor unit will stop operation after blow residual heat. Under other modes, indoor fan operates at set fan speed.

Service Manual

2.2 Delay protection of compressor

When compressor is stopped, it needs 3min to restart up the compressor. Once compressor is started up, compressor wont stop operate within 6in according to the change of temperature.

2.3 Discharge temperature protection of compressor

(1)When TBdischarge B≥98°C, prohibit increasing frequency;

(2)When TBdischarge B≥103°C, prohibit decreasing frequency;

(3)When TBdischarge B≥110°C, compressor stops operation;

(4)When TBdischarge B≤90°C, protection is released.

2.4 Communication malfunction

When the unit hasnt received correct signal for 3mins consecutively, its the communication malfunction. The complete unit will stop operation.

2.5 Module protection

During module protection, compressor stops operation. When compressor has stopped operation for 3min, compressor will resume opeation. When module protection occurs all the time when starting up compressor for 6 times consecutively, compressor cant be started any more (turn off the unit with remote controller can clear up module, and the accumulative times of module protection). When the operation time of compressor is more than 6mins, the accumulative times will be cleared up.

2.6 When DC bus voltage is lower than 150V or more than 420V, compressor will delay 30s to stop operation. When DC bus voltage is more than 200C and less than 400V, protection will be resumed. Compressor will resume operation after it has stopped for 3mins. During low pressure protection, main relay will break off. When low voltage protection is resumed, main relay will be closed.

2.7 When overload malfunction is occurred, compressor stopped operation and outdoor fan will delay 30s to stop operation; when malfunction is cleared up and compressor has stopped for 3min, the unit will resume operation.

2.8 Power protection of compressor

(1)When PCB≥1500w, prohibit increasing frequency;

(2)When PCB≥1600w, decrease frequency to operate;

(3)When PCB≥1700w, compressor stops operation;

(4)When PCB≤1400w, protection is released.

2.9 Malfunction of temperature sensor

Name of temperature sensor	Malfunction condition
Outdoor ambient	Its detected that the temperature sensor is open/short-circuited for
	5s consecutively
Quitdoor tubo tomporaturo	Its detected that the temperature sensor is open/short-circuited for
	5s consecutively; it wont be detected within 10mins after defrosting
Air diagharga	After compressor operates for 3min,its detected that the
	temperature sensor is open/short-circuited for 5s consecutively

2.10 When outdoor fan is open-circuited or current is more than 0.8aA, outdoor fan will stop operation and then be restarted up 4s later. If the fan stops operation for 6 times successively, its the malfunction of fan. And then compressor will stops operation. 3mins later, the malfunction of fan will be cleared and restart up outdoor fan and compressor. If malfunction of fan occurs for 6 times successively, outdoor fan wont be restarted up. Turn off the unit with remote controller can clear up malfunction and the accumulated timer of malfunction. After compressor operates for 6mins successively, the accumulated malfunction times of fan will be cleared.

