

Service Manual

Technical information &
specification data

CH-S09..12FTXAL2-WP(GD/BL/SC/FB)

Specification Sheet

Model			CH-S09FTXAL2-WP(GD/BL/SC/FB)
Power Supply	Rated Voltage	V~	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode			Outdoor
Cooling Capacity		W	2700
Heating Capacity		W	3000
Cooling Power Input		W	600
Heating Power Input		W	680
Cooling Current Input		A	3.1
Heating Current Input		A	3.7
Rated Input		W	1600
Rated Cooling Current		A	6.3
Rated Heating Current		A	7.1
Air Flow Volume		m ³ /h	660/590/540/490/450/420/390/180
Dehumidifying Volume		L/h	0.8
EER		W/W	4.5
COP		W/W	4.412
SEER		--	9
SCOP (Average/Warmer/Colder)		--	4.6/6.0/3.9
Application Area		m ²	12-18
Indoor Unit			
	Fan Type		Cross-flow
	Fan Diameter Length(DXL)	mm	Φ98×633
	Cooling Speed	r/min	1300/1150/1070/1000/850/700/650/500
	Heating Speed	r/min	1250/1100/1050/1000/950/900/850
	Fan Motor Power Output	W	20
	Fan Motor RLA	A	0.09
	Fan Motor Capacitor	μF	/
	Evaporator Form		Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ5
	Evaporator Row-fin Gap	mm	2-1.4
	Evaporator Coil Length (LXDXW)	mm	635×22.8×306.3
	Swing Motor Model		MP24EB/MP24HF
	Swing Motor Power Output	W	1.5
	Fuse Current	A	3.15
	Sound Pressure Level	dB (A)	Cooling: 41/38/36/34/30/26/22/19 Heating: 41/38/36/34/32/30/28
	Sound Power Level	dB (A)	Cooling: 58/52/50/48/44/40/36/33 Heating: 58/52/50/48/46/44/42
	Dimension (WXHXD)	mm	865X290X210
	Dimension of Carton Box (LXWXH)	mm	928X278X364
	Dimension of Package (LXWXH)	mm	931X281X379
	Net Weight	kg	10.5
	Gross Weight	kg	12.5

Outdoor Unit			
	Compressor Model		QXF-A082zC170
	Compressor Oil		ZE-G;ES RB68GX or equivalent
	Compressor Type		Rotary
	Compressor LRA	A	15
	Compressor RLA	A	2.56
	Compressor Power Input	W	756.6
	Compressor Overload Protector		/
	Throttling Method		Electron expansion valve
	Set Temperature Range	°C	16~30
	Cooling Operation Ambient Temperature Range	°C	-15~50
	Heating Operation Ambient Temperature Range	°C	-15~30
	Condenser Form		Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7
	Condenser Rows-fin Gap	mm	2-1.4
	Condenser Coil Length (LXDXW)	mm	666×38.1×527
	Fan Motor Speed	rpm	850
	Fan Motor Power Output	W	30
	Fan Motor RLA	A	0.4
	Fan Motor Capacitor	μF	/
	Outdoor Unit Air Flow Volume	m ³ /h	1950
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ400
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5
	Sound Pressure Level (H/M/L)	dB (A)	50
	Sound Power Level (H/M/L)	dB (A)	62
	Dimension(WXHXD)	mm	732X555X330
	Dimension of Carton Box (LXWXH)	mm	791X373X590
	Dimension of Package(LXWXH)	mm	794X376X615
	Net Weight	kg	27
	Gross Weight	kg	29.5
	Refrigerant		R32
	Refrigerant Charge	kg	0.7
Connection Pipe	Connection Pipe Length	m	5
	Connection Pipe Gas Additional Charge	g/m	16
	Outer Diameter Liquid Pipe	inch	1/4
	Outer Diameter Gas Pipe	inch	3/8
	Max Distance Height	m	10
	Max Distance Length	m	15
	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		CH-S12FTXAL2-WP(GD/BL/SC/FB)	
Product Code			
Power Supply	Rated Voltage	V~	220-240
	Rated Frequency	Hz	50
	Phases		1
Power Supply Mode		Outdoor	
Cooling Capacity		W	3500
Heating Capacity		W	3810
Cooling Power Input		W	875
Heating Power Input		W	952
Cooling Current Input		A	4.1
Heating Current Input		A	4.5
Rated Input		W	1850
Rated Cooling Current		A	7.3
Rated Heating Current		A	8
Air Flow Volume		m ³ /h	680/590/540/490/450/420/390/180
Dehumidifying Volume		L/h	1.4
EER		W/W	4
COP		W/W	4
SEER		W/W	8.5
SCOP (Average/Warmer/Colder)		--	4.4/5.4/3.5
Application Area		m ²	16-24
Indoor Unit			
	Fan Type		Cross-flow
	Fan Diameter Length(DXL)	mm	Φ98×633
	Cooling Speed	r/min	1350/1200/1120/1050/950/850/750/500
	Heating Speed	r/min	1350/1200/1140/1080/1020/960/900
	Fan Motor Power Output	W	20
	Fan Motor RLA	A	0.09
	Fan Motor Capacitor	μF	/
	Evaporator Form		Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ5
	Evaporator Row-fin Gap	mm	2-1.4
	Evaporator Coil Length (LXDXW)	mm	635×22.8×306.3
	Swing Motor Model		MP24EB/MP24HF
	Swing Motor Power Output	W	1.5
	Fuse Current	A	3.15
	Sound Pressure Level	dB (A)	Cooling: 43/39/37/35/32/29/23/19 Heating: 43/39/38/36/33/31/29
	Sound Power Level	dB (A)	Cooling: 58/53/51/49/46/43/37/33 Heating: 58/53/52/50/47/45/43
	Dimension (WXHXD)	mm	865X290X210
	Dimension of Carton Box (LXWXH)	mm	928X278X364
	Dimension of Package (LXWXH)	mm	931X281X379
	Net Weight	kg	10.5
	Gross Weight	kg	12.5

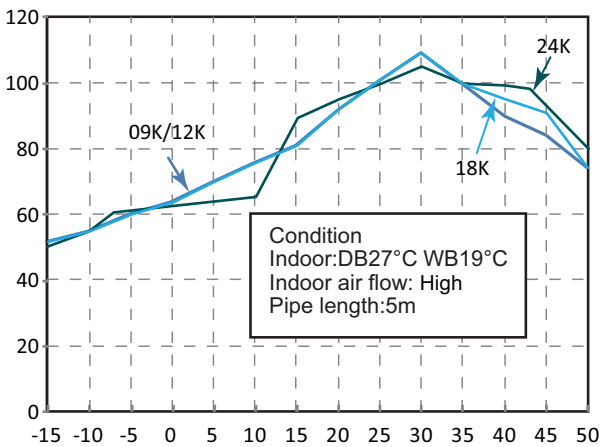
Outdoor Unit			
	Compressor Model		FTz-AN108ACBD
	Compressor Oil		FW68DA or equivalent
	Compressor Type		Rotary
	Compressor LRA	A	/
	Compressor RLA	A	4.4
	Compressor Power Input	W	/
	Compressor Overload Protector		/
	Throttling Method		Electron expansion valve
	Set Temperature Range	°C	16~30
	Cooling Operation Ambient Temperature Range	°C	-15~50
	Heating Operation Ambient Temperature Range	°C	-15~30
	Condenser Form		Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7
	Condenser Rows-fin Gap	mm	2-1.4
	Condenser Coil Length (LXDXW)	mm	761.5×38.1×528
	Fan Motor Speed	rpm	850
	Fan Motor Power Output	W	30
	Fan Motor RLA	A	0.4
	Fan Motor Capacitor	μF	/
	Outdoor Unit Air Flow Volume	m ³ /h	2200
	Fan Type		Axial-flow
	Fan Diameter	mm	Φ420
	Defrosting Method		Automatic Defrosting
	Climate Type		T1
	Isolation		I
	Moisture Protection		IPX4
	Permissible Excessive Operating Pressure for the Discharge Side	MPa	4.3
	Permissible Excessive Operating Pressure for the Suction Side	MPa	2.5
	Sound Pressure Level (H/M/L)	dB (A)	52
	Sound Power Level (H/M/L)	dB (A)	64
	Dimension(WXHXD)	mm	802X555X350
	Dimension of Carton Box (LXWXH)	mm	869X395X594
	Dimension of Package(LXWXH)	mm	872X398X620
	Net Weight	kg	29
	Gross Weight	kg	31.5
	Refrigerant		R32
	Refrigerant Charge	kg	0.8
Connection Pipe	Connection Pipe Length	m	5
	Connection Pipe Gas Additional Charge	g/m	16
	Outer Diameter Liquid Pipe	inch	1/4
	Outer Diameter Gas Pipe	inch	3/8
	Max Distance Height	m	10
	Max Distance Length	m	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.

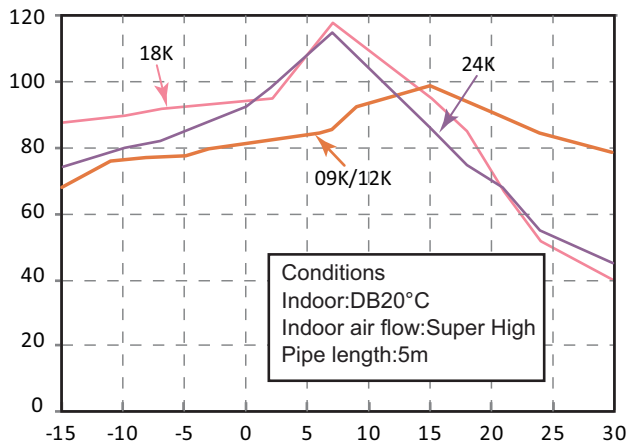
2.2 Capacity Variation Ratio According to Temperature

Heating operation ambient temperature range is -15°C~30°C

Cooling

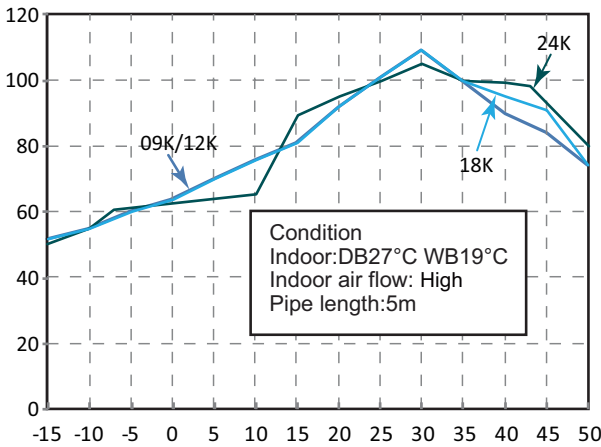


Heating

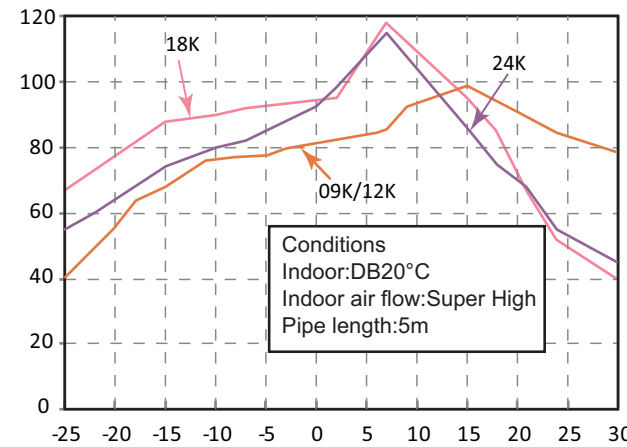


Heating operation ambient temperature range is -25°C~30°C

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		P (MPa)	T1 (°C)	T2 (°C)		
27/19	35/24	09K	0.8~1.1	12 ~ 15	65 ~ 38	Super High	High
27/19	35/24	12K	0.9~1.1	12 ~ 14	75 ~ 37	Super High	High
27/19	35/24	18K	0.9~1.1	12 ~ 14	75 ~ 37	Super High	High
27/19	35/24	24K	0.9~1.1	12 ~ 14	75 ~ 37	Super High	High

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		P (MPa)	T1 (°C)	T2 (°C)		
20/-	7/6	09K	2.8~3.2	68 ~ 30	2 ~ 5	Super High	High
20/-	7/6	12K	2.2~2.4	70 ~ 35	2 ~ 4	Super High	High
20/-	7/6	18K	2.2~2.4	70 ~ 40	1 ~ 5	Super High	High
20/-	7/6	24K	2.2~2.4	70 ~ 35	2 ~ 4	Super High	High

Instruction:

T1: Inlet and outlet pipe temperature of evaporator

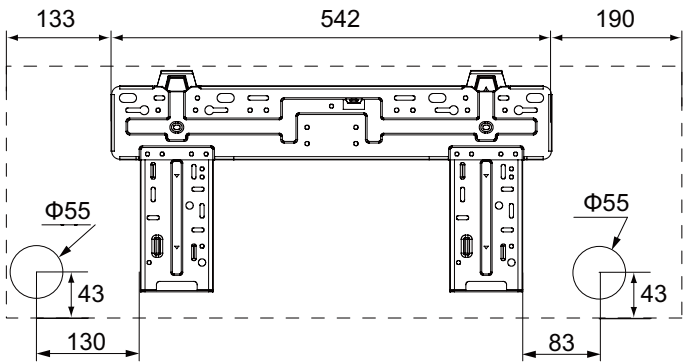
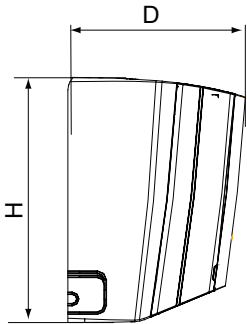
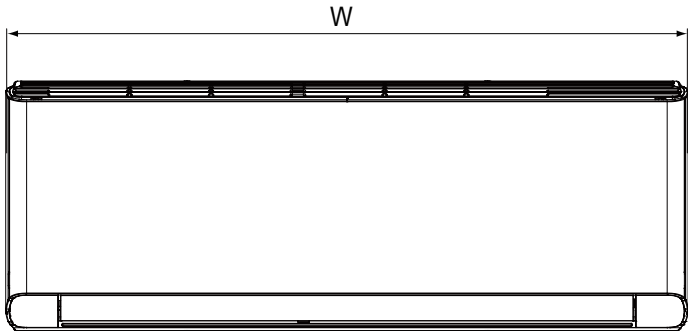
T2: Inlet and outlet pipe temperature of condenser

P: Pressure at the side of big valve

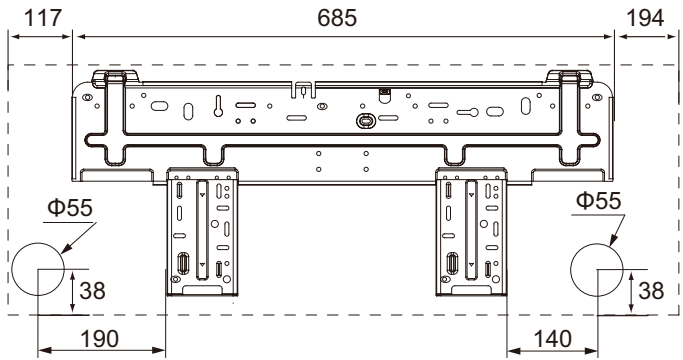
Connection pipe length: 5 m.

Outline Dimension Diagram

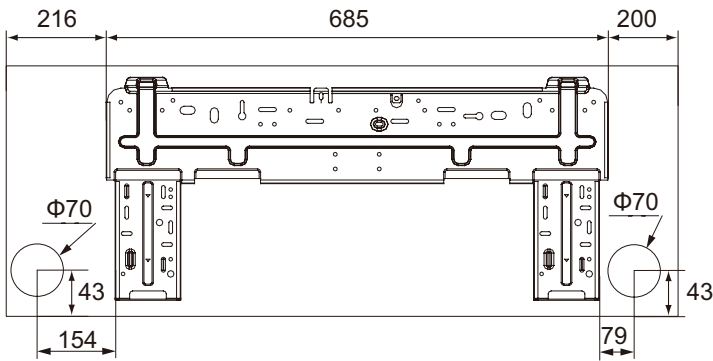
Indoor Unit



YC



YD



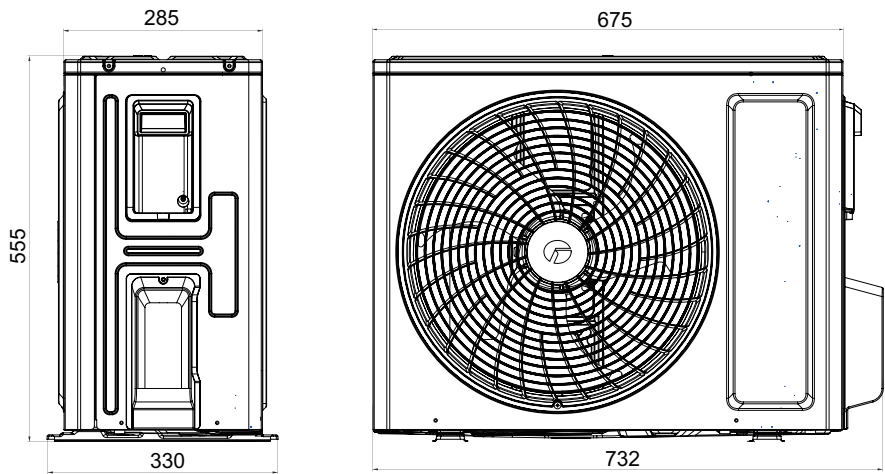
YE

Unit:mm

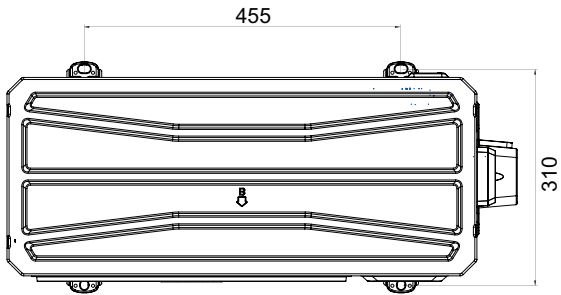
Model	W	H	D
YC	865	290	210
YD	996	301	225
YE	1101	327	249

Outdoor Unit

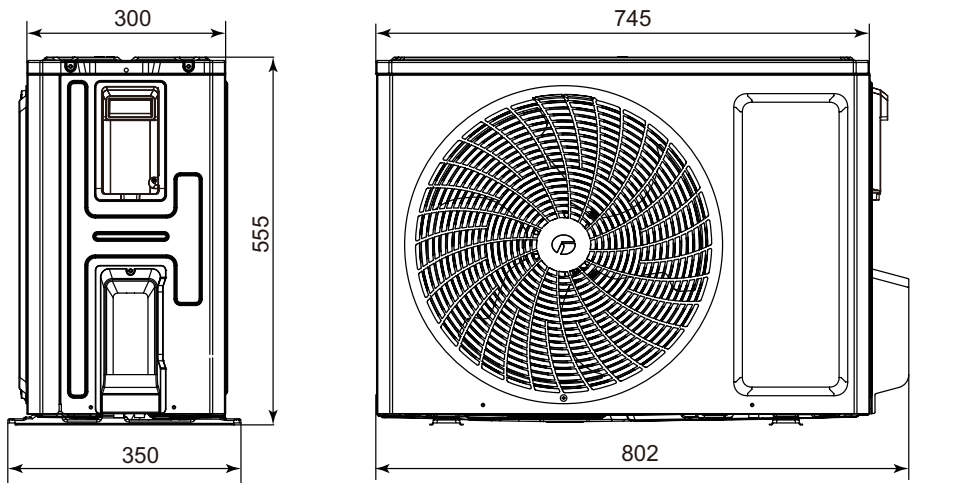
09



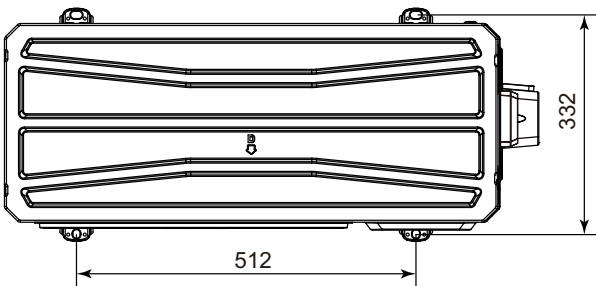
Unit:mm



12

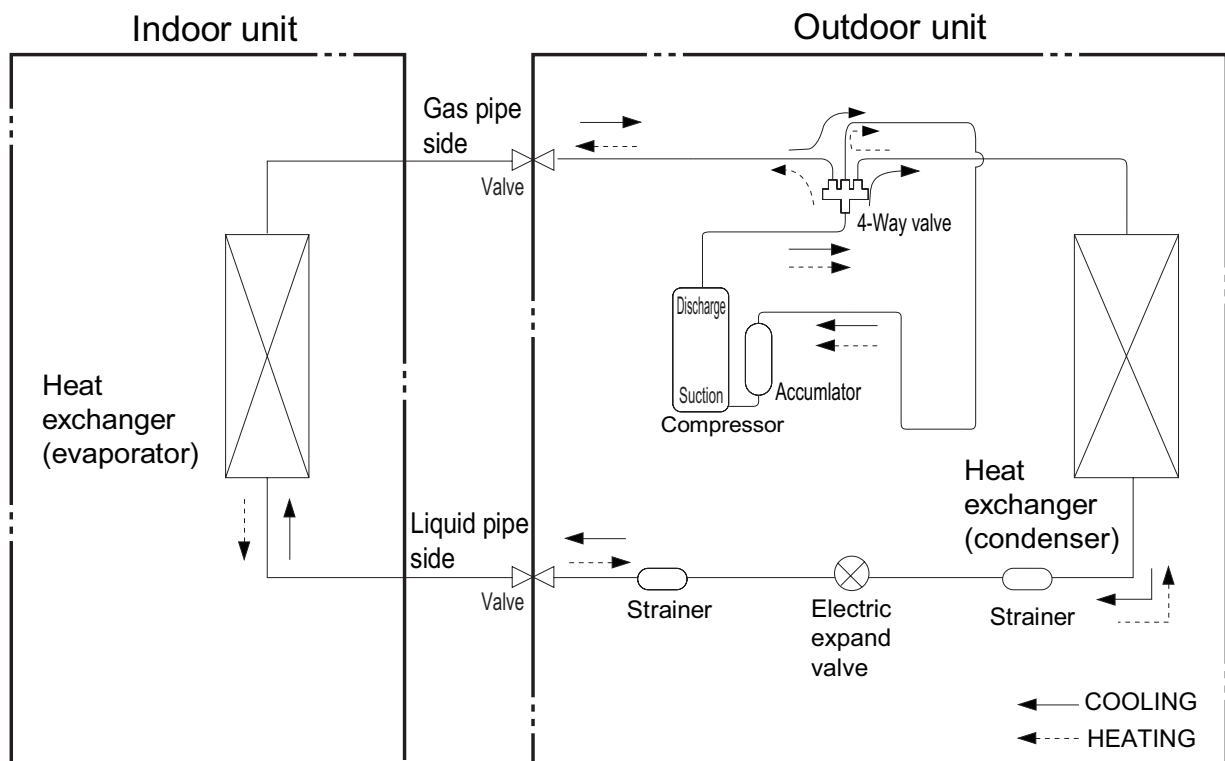


Unit:mm



Refrigerant System Diagram

Heat pump model



Connection pipe specification:


Liquid pipe: 1/4"

Gas pipe: 3/8" for 09K / 12K
1/2" for 18K
5/8" for 24K

Electrical Part

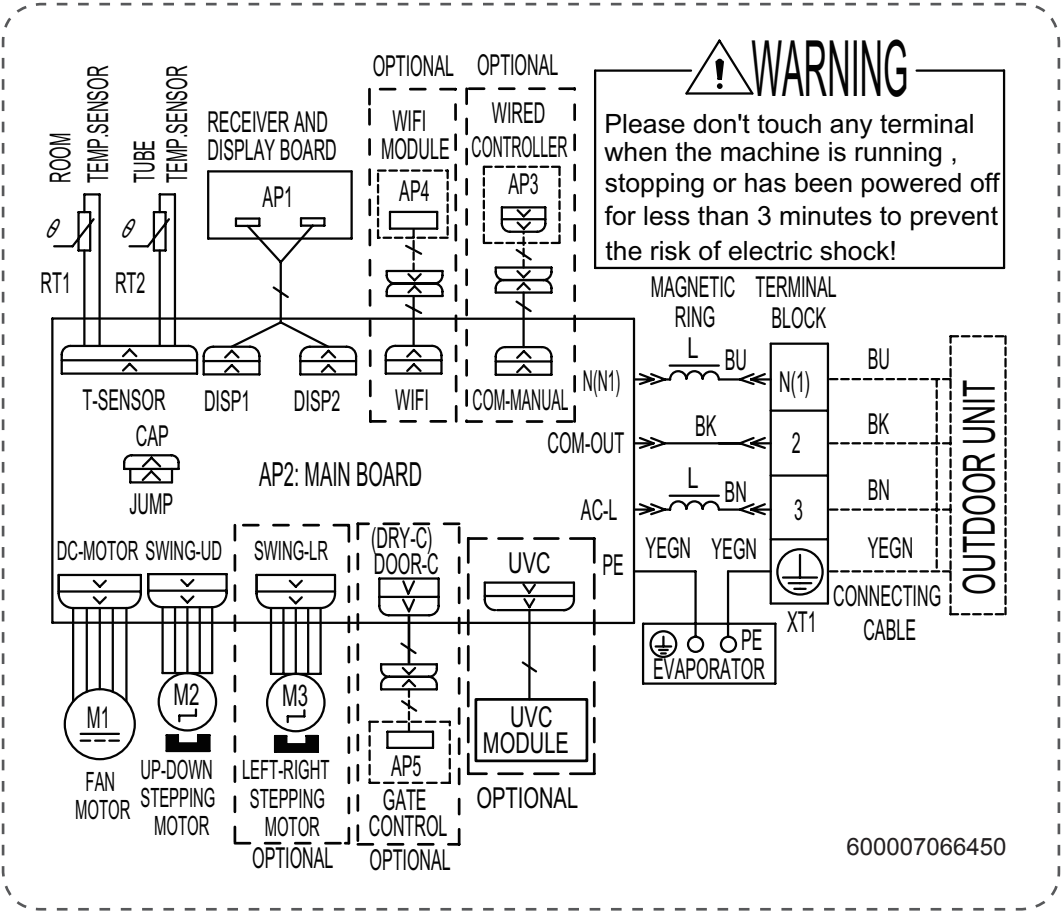
Wiring Diagram

●Instruction

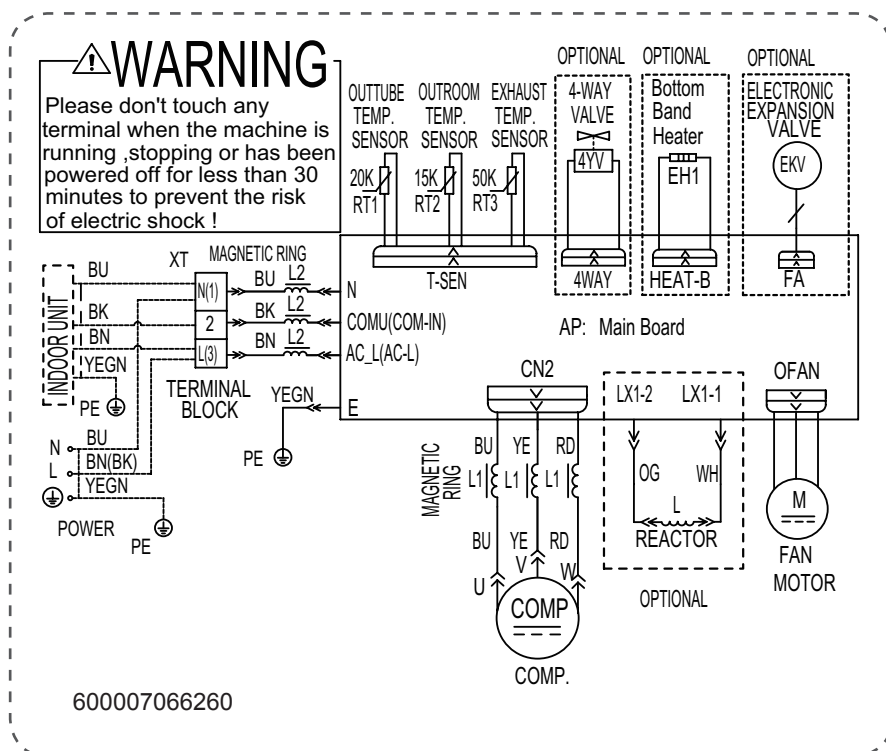
Symbol	Symbol Color	Symbol	Symbol Color	Symbol	Name
WH	White	GN	Green	CAP	Jumper cap
YE	Yellow	BN	Brown	COMP	Compressor
RD	Red	BU	Blue		Grounding wire
YEGN	Yellow/Green	BK	Black	/	/
VT	Violet	OG	Orange	/	/

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

● Indoor Unit



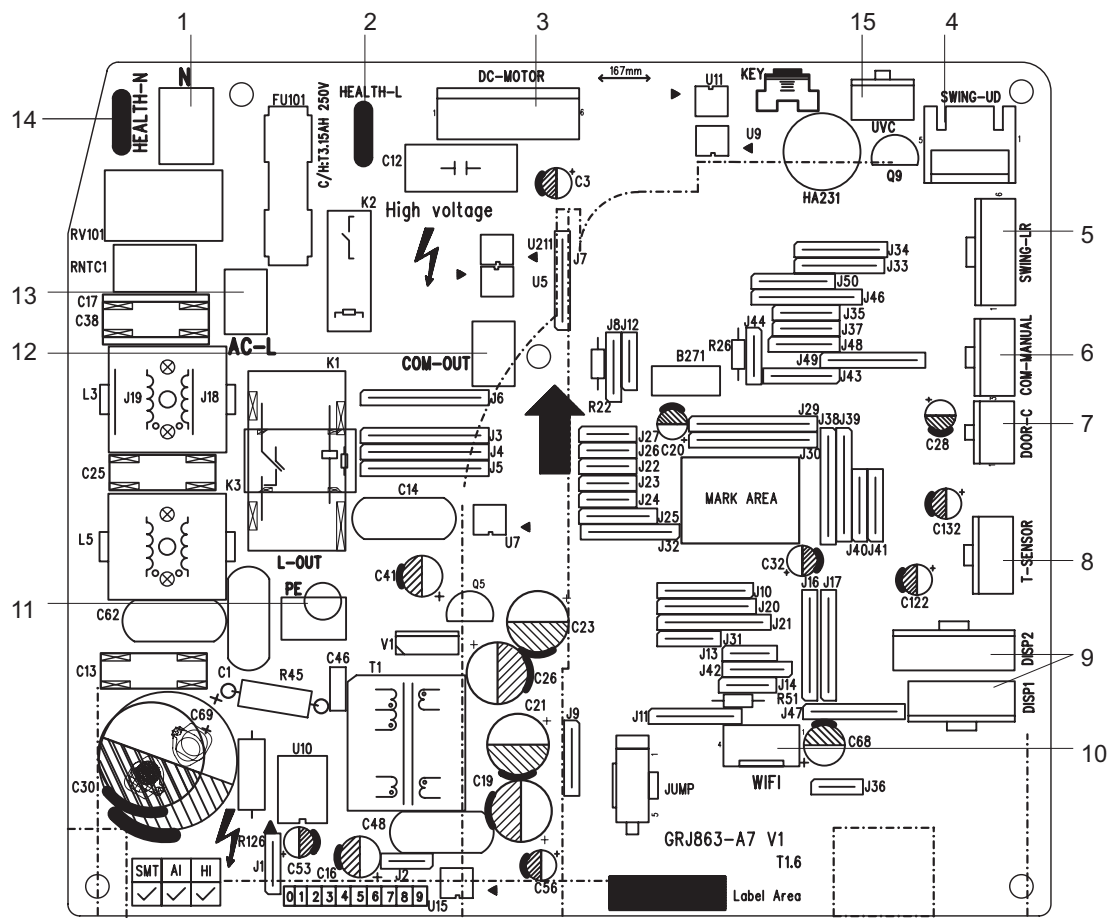
• Outdoor Unit



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

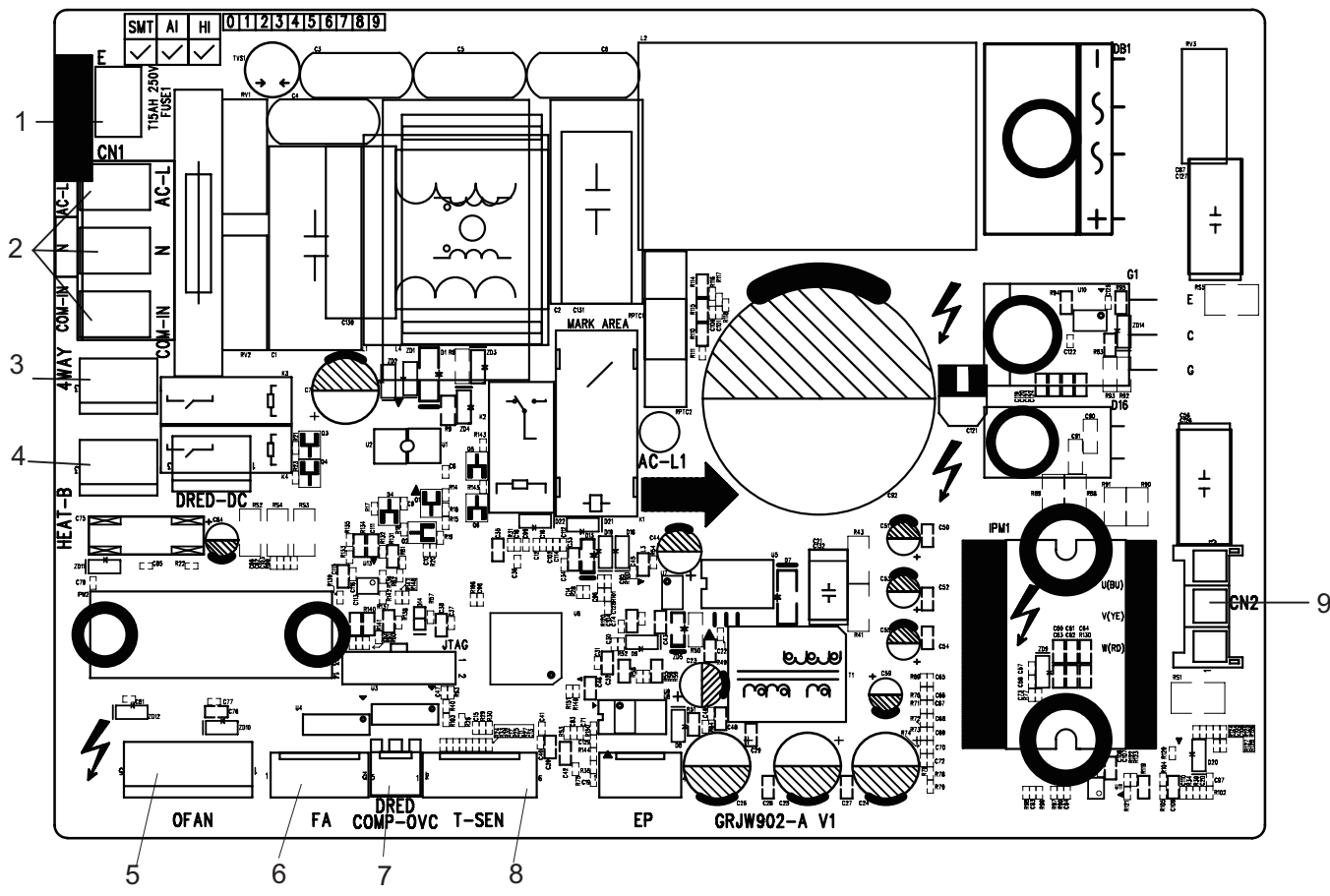
PCB Printed Diagram

Indoor Unit



No.	Name	No.	Name
1	Neutral wire	9	Display interface
2	Interface of health function live wire	10	WIFI interface
3	DC fan interface	11	Grounding wire
4	Up & down swing motor	12	Terminal with outdoor unit communication wire
5	Left & right swing motor	13	Live wire interface
6	Interface of wired controller	14	Interface of health function neutral wire
7	Interface of gate control	15	Interface of ultraviolet clean
8	Interface of temperature sensor		

Outdoor Unit

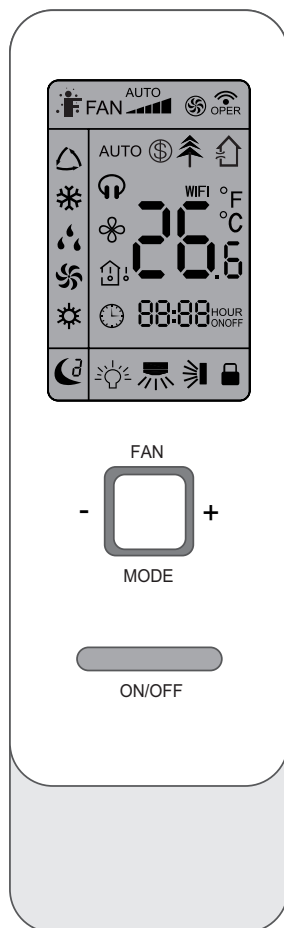


No.	Name
1	Earthing wire
2	Neutral wire, live wire and communication cable
3	4-way valve
4	Electric heating belt of chassis
5	Outdoor fan
6	Electronic expansion valve
7	Overload
8	Temperature sensor
9	Three-phase terminal of compressor

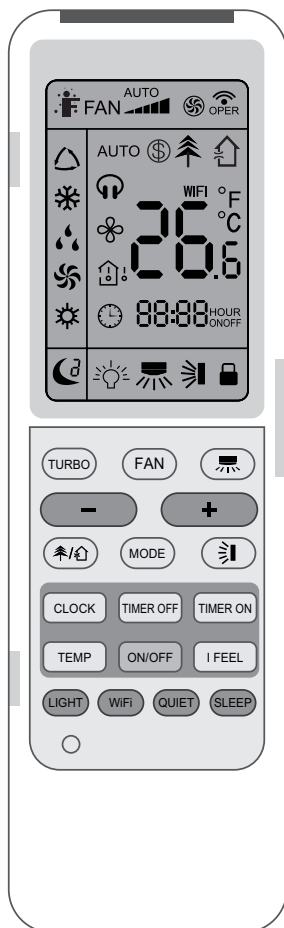
Function and Control

Remote Controller Introduction for YAG1FB3(WiFi)

Buttons on remote controller



(before opening cover)



(after opening cover)

Buttons on remote controller

	I feel
FAN	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
	Set temp.
	Indoor ambient temp.
	Outdoor ambient temp.
	Clock
	Set temperature
	Set time
	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 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. Operation 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);

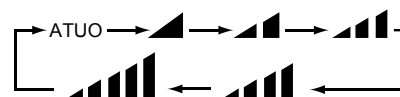
Under on status, the display will show the corresponding set function icons.

1. button

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

2. 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.



Low fan Medium-low fan Medium fan
 Medium-high fan High fan

NOTICE:

- 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. 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 ON/OFF button, the complete unit will be off directly.

3. 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).



NOTICE:

- Only for cooling and heating unit. As for cooling only unit, it won't have any action when it receives the signal of heating operation.

4. 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.

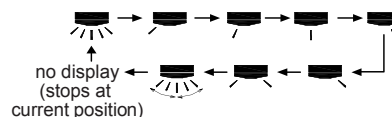
When setting TIMER ON, TIMER OFF or CLOCK, press " + " or " - " button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons)

5. button



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

6. button

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

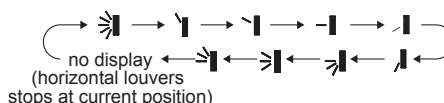












NOTICE:

- 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.






7. 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.

8. 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, 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.

9. **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.

- Timer Off setting: Signal "OFF" will blink and display, signal 🕒 will conceal, the numerical section will become the timer off setting status. The method of setting is the same as for TIMER ON.

10. **TEMP** 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 selected circularly as below:



When selecting "🏠" with remote controller or no display, 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. 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.

NOTICE:

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

11. **🌡️/🏠** 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 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.

NOTICE:

- This function is applicable to partial of models.

12. **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.

13. **LIGHT** 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.

14. **WiFi** button

Press "WiFi" button simultaneously to turn on or turn off WIFI function. When WIFI function is turned on, the "WiFi" icon will be displayed on remote controller; Under status of unit off, long press "MODE" and "WiFi" buttons simultaneously for 1s, remote controller will send WIFI reset code and then the WIFI function will be turned on. WIFI function is defaulted OFF after energization of the remote controller.

NOTICE:

- This function is applicable to partial of models.

15. **QUIET** 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.

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

NOTICE:

- This function is applicable to partial of models.

16. 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, 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.

(a) 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;

(b) 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 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.

- Sleep 3 - 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.

NOTICE:


- 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

1. About AUTO RUN

When AUTO RUN mode is selected, the unit will be in accordance with the room temp. automatically to select the suitable running method and to make ambient comfortable.

2. 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.

3. About switch between Fahrenheit and Centigrade

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

Maintenance

Error Code List

Malfunction Name	Display Method of Indoor Unit (Error Code)	A/C Status	Possible Causes(For specific maintenance method, please refer to the following procedure of troubleshooting)
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.
Antifreezing protection for evaporator	E2		Not the error code. It's the status code for the operation.
System block or refrigerant leakage	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
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).
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.
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.
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).
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
Limit/decrease frequency due to high temperature of module	EU	All loads operate normally, while operation frequency for compressor is decreased	Discharging after the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If its no use, please replace control panel AP1.
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.
Gathering refrigerant	F0	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
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.
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.

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 hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
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 hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
Outdoor discharge temperature sensor is open/short circuited	F5	During cooling and drying operation, compressor will sop after operating for about 3 mins, while indoor fan will operate; During heating operation, the complete unit will stop after operating for about 3 mins.	1.Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) 2.The head of temperature sensor hasnt been inserted into the copper tube
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)
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
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)
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
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 its normal, theres malfunction for the circuit, please replace the control panel (AP1)
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 its normal, theres malfunction for the circuit, please replace the control panel (AP1)
Compressor Min frequency in test state	P0		Showing during min. cooling or min. heating test
Compressor rated frequency in test state	P1		Showing during nominal cooling or nominal heating test
Compressor maximum frequency in test state	P2		Showing during max. cooling or max. heating test
Compressor intermediate frequency in test state	P3		Showing during middle cooling or middle heating test
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.
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

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
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 its no use, please replace control panel AP1.
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)
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.
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.
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.
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.
PFC protection	HC	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
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
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
Indoor unit and outdoor unit doesnt match	LP	compressor and Outdoor fan motor cant work	Indoor unit and outdoor unit doesnt match
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
Defrosting	Heating indicator off for 0.5s and then blinks for 10s	Defrosting will occur in heating mode. Compressor will operate while indoor fan will stop operation.	Not the error code. It's the status code for the operation
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.

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
Malfunction of voltage dropping for DC busbar	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
Malfunction of complete units 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.	Theres circuit malfunction on outdoor units control panel AP1, please replace the outdoor units control panel AP1.
Cold air prevention protection	E9		Not the error code. It's the status code for the operation.
Refrigerant recovery mode	Fo		Refrigerant recovery. The Serviceman operates it for maintenance.
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;
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?