Air Cooled Scroll Chiller

Operation Manual

Shanghai FeiZhong Refeigration Co., Ltd

TEL：+86-21-62255526 62255361 57722374

WhatsApp:+86 136 6144 5351

FAX：+86-21-54152372

Https://www.bestnorper.com

E-mail: anna@shzhongyou.com

Service Hotline: 400-021-9919

Address: Room902, Dongbao Building, No.19,Dongbao Road, Songjiang Industrial Zone, Shanghai。

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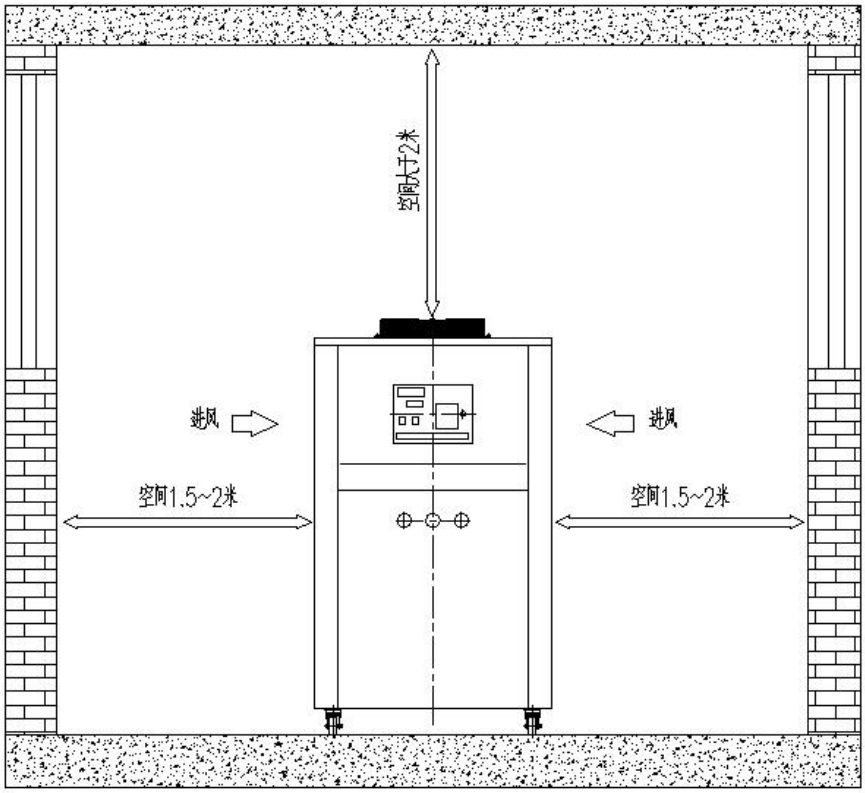
一、The Unit Installation

1、Installation Location Selection

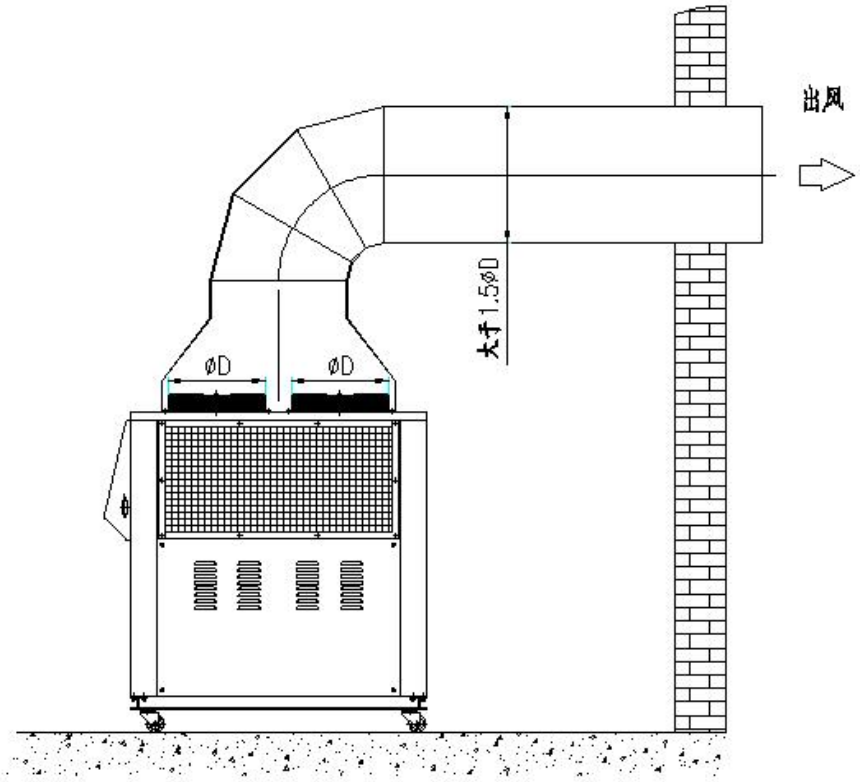
Box type chillers are suitable for installation in rainproof sheds or indoors with good ventilation conditions to the outside environment. The space in the exhaust direction should not be less than 2.0m, so that the hot air discharged by the cooling fan during refrigeration work can be dissipated into the outside environment. There should be a space of 1.5-2 meters in the inlet direction of the condenser on the side of the chiller to ensure the normal working environment of the chiller. The unit is required to be placed on a level and solid concrete foundation of no less than 20cm. For units above 10HP, shock absorption devices should be installed and fastened with anchor bolts; A certain working space should be left around the unit for easy operation, inspection, and maintenance.

The box type chiller requires an installation environment temperature of -10 ℃ to 43 ℃, and a relative humidity of no more than 80%。



2、Air Duct

For rooms with poor ventilation conditions, air ducts should be added to guide the hot air discharged from the unit out of the room. The following figure is for reference only:



3、Pipeline installation

The unit has undergone strict testing and inspection before leaving the factory. Users only need to install the unit and connect the frozen water and cooling water circulation pipeline system properly; The air-cooled unit can be used as long as the chilled water system is connected and the power supply is connected as required.

A water flow switch must be installed in the chilled water system to avoid accidents caused by "ice blockage" in the evaporator when there is no water on the chilled water side of the unit. For box type units, it is recommended to install it outside the unit.

二、Electrical Appliances Installation

1. The chiller unit is equipped with a temperature controller and a low-voltage electrical control box when leaving the factory, and the client only needs to directly introduce the power supply to use it;

2. If the customer wants to add other controls (such as installing an air switch), please follow the relevant local electrical regulations and standards, and equip other control appliances to ensure the safe and stable operation of the unit;

3. It is recommended to select and design the wire diameter of the box type chiller based on 1.25~1.3 times the total current of the chiller and other auxiliary equipment (such as water pumps).

4. Unit power distribution requirements

Power supply voltage: within ± 10% of rated voltage. Power frequency: Within ± 2% of rated frequency. When the voltage fluctuation exceeds the specified range, it is not allowed to start the chiller, otherwise it will be deemed as improper operation, and the damage caused by this is not within the maintenance scope of our company.

5. The water flow switch, water pump motor, cooling tower fan motor, and other control appliances of the water system should be interlocked with the control circuit of the box type chiller to ensure that the start-up and shutdown sequence of the chiller and its auxiliary equipment can be accurately achieved.

三、Operation Debugging

1. Preparation before startup

A. Check for any abnormalities around the unit.

B. Check if the power supply connection of the unit is appropriate (whether the phase voltage meets the voltage requirements of the chiller).

C. Check whether the chilled water valve has been opened and whether the chilled water pump is in a fault free standby state after pressure testing, sewage discharge, air release, and trial operation.

D. Check whether the water tank of the chiller is filled with water, whether the water replenishment interface of the water tank is connected, and whether the overflow interface is connected to the sewer.

2. Chiller system operation

A. Frozen water should be treated for water quality, as high alkaline water can exacerbate corrosion of copper pipes and reduce the service life of heat exchangers. The pH value of the system water should be within the range of 7.0-8.5.

B. After the installation of the unit and its auxiliary equipment is completed, water pipe cleaning and drainage, pressure testing and leakage detection, air release, and trial operation of the chilled water system should be carried out. The unit debugging and trial operation can only be carried out after everything is normal.

C. Operation of the operating system

a. Power on the unit for no less than 12 hours before startup;

b. Start sequence of air-cooled unit: chilled water pump → unit;

c. Shutdown sequence of air-cooled unit: unit → chilled water pump;

D. Setting of frozen water temperature

Press the "SET" button on the temperature controller once, and the display screen will display the current temperature controller setting value. At this time, press the "▲" and "▼" buttons on the temperature controller to adjust the temperature controller setting value. After adjustment, press the "SET" button again to confirm the new temperature controller setting value. Attention: Do not set the temperature of the frozen water too low. If the temperature is too low, it will reduce the refrigeration efficiency of the unit and may cause the low temperature protection action to alarm and shut down. Adjust the water temperature to slightly lower than the required temperature.

E. After starting up, observe the index of the high and low pressure gauge to determine whether the unit is operating normally.

a. When starting an air-cooled unit, it should be checked whether the direction of rotation of the fan is correct. If it is turned forward, it can be started and operated. If it is reversed, it indicates that the power wiring is in reverse phase, and the phase sequence must be changed before starting.

b. The set values of various protection devices for the unit have been adjusted in the factory, and users are not allowed to change them arbitrarily.

c. When the unit experiences a fault alarm and shuts down, first press the stop button of the unit (the alarm light will turn off), and then check the cause of the fault. It is not allowed to forcibly start and run until the fault is resolved.

d. If it is not an emergency, it is not allowed to shut down the unit by cutting off the main power supply; If the unit is stopped for a long time in winter, first turn off the unit, then turn off the main power supply, and drain the water in the system.

e. To maintain the cleanliness and good ventilation of the computer room, regular cleaning and masonry removal of the condenser should be carried out to ensure the normal and stable operation of the unit.

3. Unit maintenance

A. For air-cooled chillers, please keep the surface of the cooling coil (condenser) of the chiller clean, ensure the surrounding air circulation, and regularly clean the scale on the coil to ensure good heat exchange effect.

B. If the high/low pressure switch trips and alarms or the cooling capacity decreases after using the chiller for a period of time, please arrange for staff to clean the condenser.

C. (Applicable to chillers below 5 horsepower) If the chiller is out of service for a period of time, the water pump blades may solidify due to the accumulation of water pollutants. When restarting, the water pump rotor must be loosened first to avoid the pump blades not rotating, which may cause fuse burning。

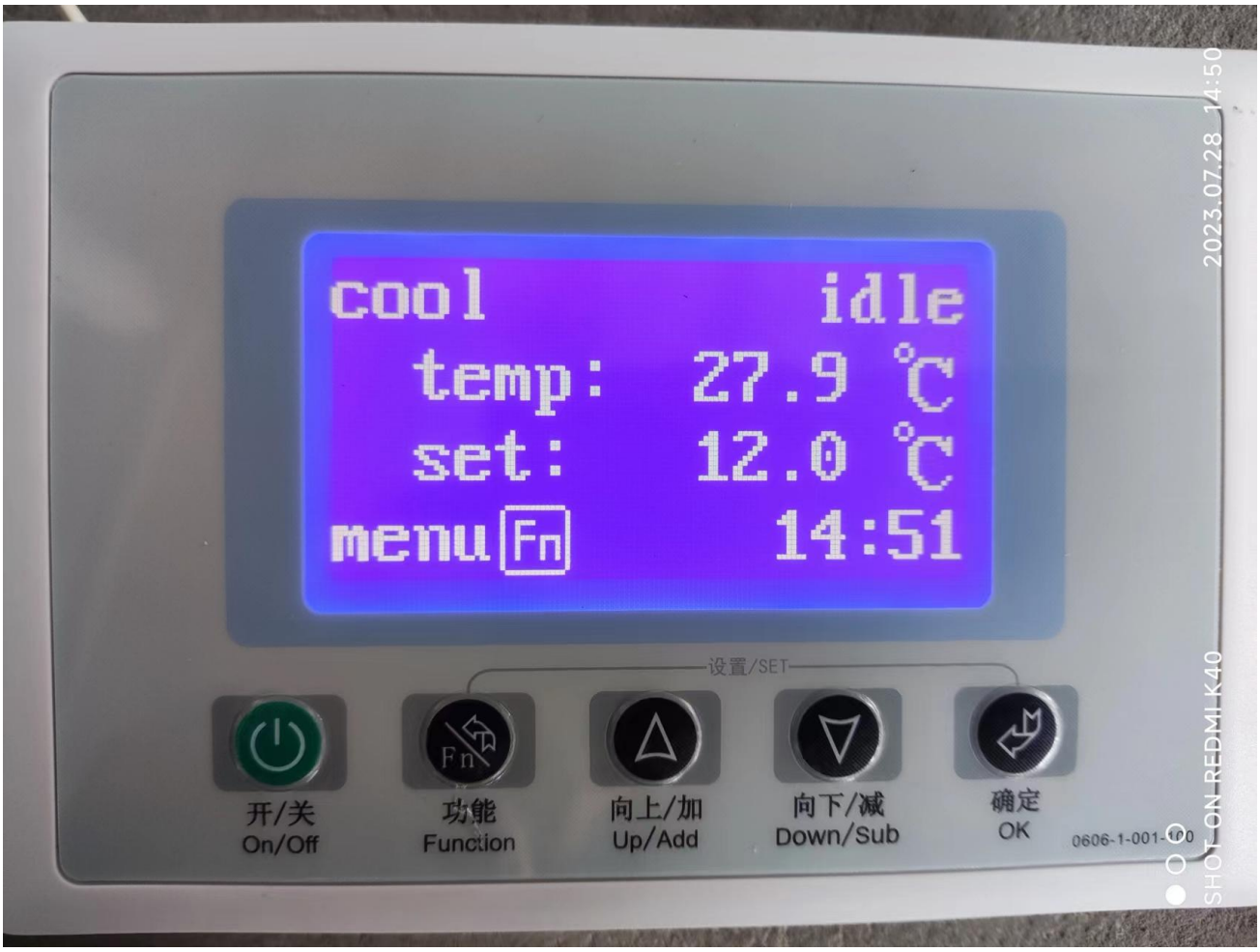
四、Common Faults

Faults	Possible Reason	Troubleshooting
The unit cannot start or immediately stops after starting	1. Power outage or low voltage 2. Improper setting of the temperature controller causing the contact to remain open 1. Overload protection not reset after	1. Eliminate circuit faults and power on according to unit requirements 2. Readjust the temperature control settings 3. Press the overload protection reset button
Excessive high pressure during unit operation	1. The copper tube of the condenser has a lot of fouling and poor heat exchange effect 2. Excessive refrigerant 3. The opening of the expansion valve is too small	1. Clean the condenser 2. Discharge some refrigerant 3. Adjust the opening of the expansion valve appropriately
Low pressure during unit operation	1. Insufficient refrigerant 2. Filter blockage 3. The opening of the expansion valve is too small	1. Leak detection, refrigerant replenishment, or adjustment of expansion valve 2. Clean or replace the filter 3. Adjust the opening of the expansion valve appropriately
Frost on the return pipe and compressor casing	1. Excessive opening of expansion valve 2. Excessive refrigerant 3. The heat load is too small	1. Adjust the expansion valve 2. Discharge some refrigerant 3. Increase heat load
The freezing pump does not discharge water	1. Reverse direction of water pump rotation 2. Impeller blockage	1. Correct the rotation of the water pump motor 2. Clean the water pump impeller
Insufficient water pump flow	1. Impeller or water pipe blockage 2. Impeller damage	1. Clean the impeller or water pipe 2. Replace the impeller

五、 Operation interface description

1. Introduction to Display Panel

DK150001A



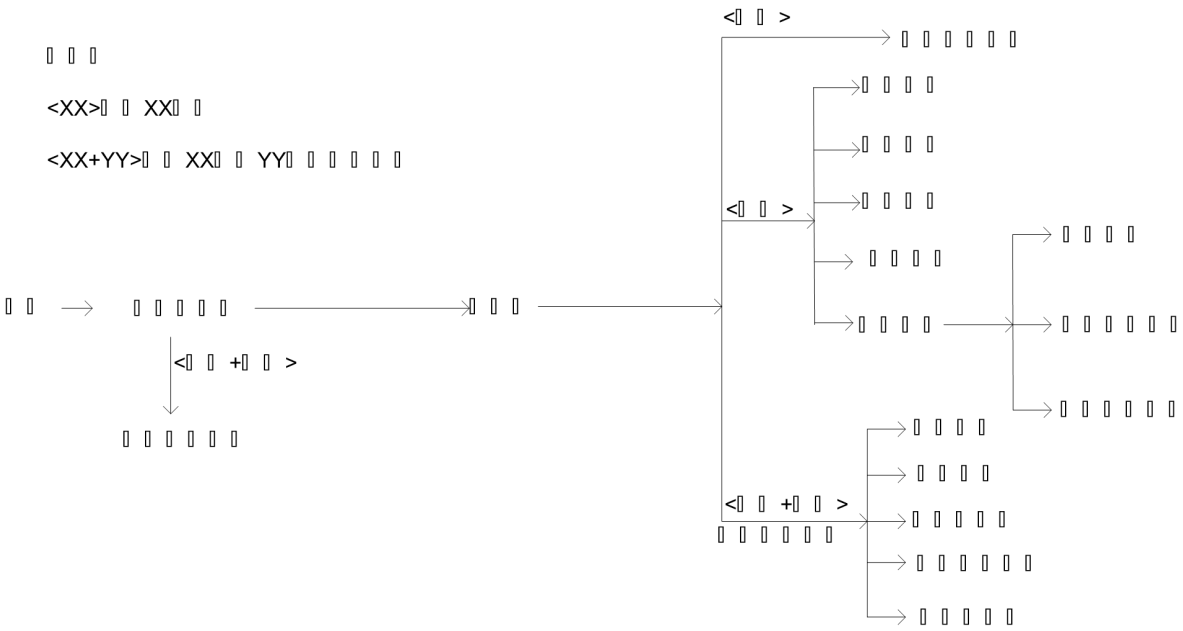
DK020002A

2. Display interface

2.1 Interface Overview

2.1.1 Interface Switching

There are a total of 5 physical buttons, namely: switch, function, up, down, and confirm keys.



Note: 1. In the branch interface (except the countdown interface and the Home screen), if there is no key for one minute, the system will automatically return to the Home screen.

2. When "▲" is displayed on the right side of the interface, it means that you can press<Up>to page up.

3. When "▼" is displayed on the right side of the interface, it means that you can press<Down>to page down.

4. When the interface prompts "Operation is currently prohibited, it can be operated in XX seconds", it indicates that another screen is operating and needs to wait.

After XX seconds, the operation can be performed on this screen.

2.1.2 Noun icon

1. Explanation of Terms

① Operating status: Indicates the current operating status of the unit, including standby, startup, operation, and shutdown.

② Operation mode: represents the current operation mode of the unit, including refrigeration, heating, and ventilation.

③ Unit status: Indicates the current state of the unit, including defrosting and antifreeze.

④ A Chinese character position: represents a 16 * 16 dot matrix occupying the LCD display position.

⑤ One character position: represents an 8 * 16 dot matrix occupying the LCD display position.

⑥ Physical button: Refers to the physical button corresponding to the hardware.

⑦ Key function: represents the actual meaning of pressing a physical button, where one physical button can correspond to multiple key functions.

2、Icon Description

Icon	content	Note
	Indicates the ability to page up, select parameters, and add values	
	Indicates the ability to page down, select parameters, and decrease numerical values.	
	Indicates whether the unit is using the timing function	
Fn	Represents a function key icon, only used for menu, cancel, return, and shift.	
	Indicates the confirmation button icon, only used for entering, confirming, silencing, resetting, and switching modules.	
	Indicates the switch button icon, only used for starting and stopping the unit.	

2.2 Password operation

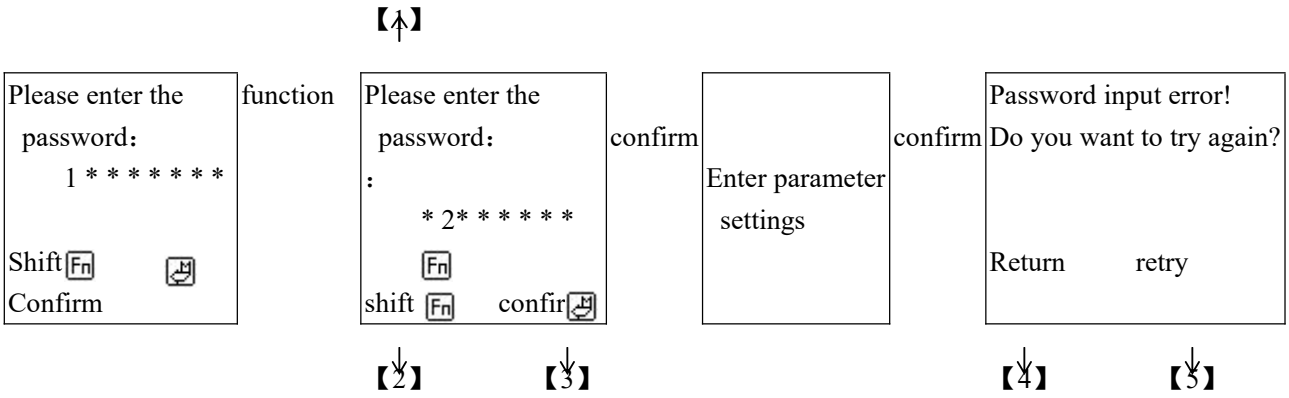
2.2.1 Password

Obtain

manufacturer password	123456

Note: The passwords in the above table are all factory default passwords. Please remember to modify the password after modification.

2.2.2 Password input



Annotation Description:

【1】 Prompt for the manufacturer's password.

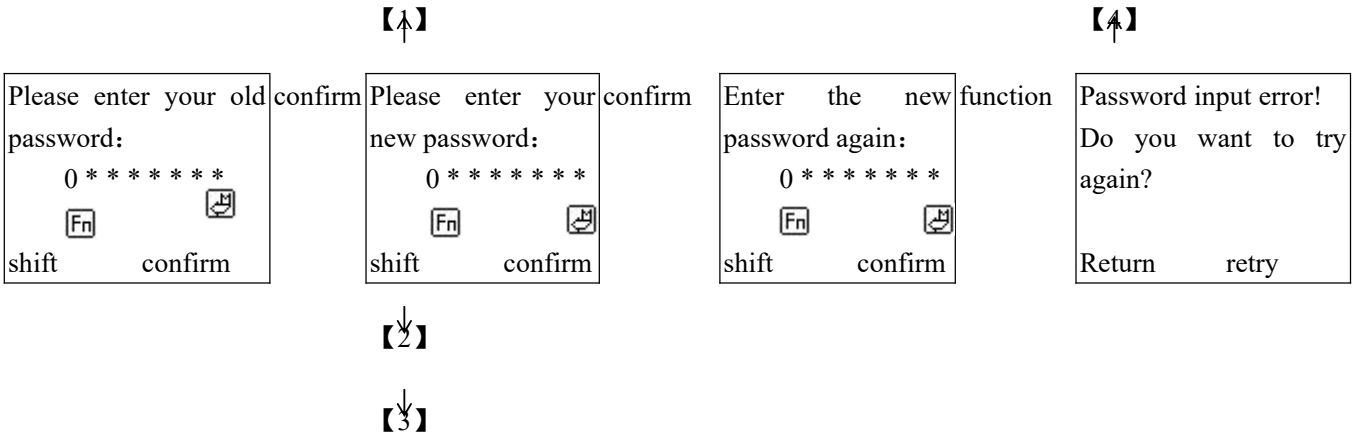
【2】 Indicates pressing the<Function>key to shift the current input password. Press up or down to enter the current password value.

【3】 Press the<OK>key to confirm entering the password and enter parameter settings.

【4】 Press the<OK>key to re-enter the password.

【5】 Press the<Function>key to return to the previous level of interface.

2.2.3 Password modification



Annotation Description:

【1】 Prompt the user to enter the old password, which includes the user and manufacturer passwords respectively. Change different passwords at different levels.

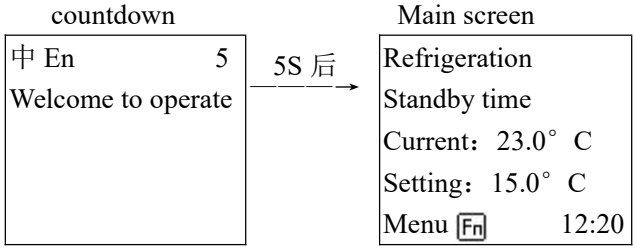
【2】 Press the<OK>key to confirm entering the modified password. If the modification is correct, the prompt is successful; Failed to modify the error prompt.

【3】 Press the<Function>key to return to the previous level of interface.

Note: If the old password is entered incorrectly, it will prompt that the old password was entered incorrectly;
If the new password is entered incorrectly, it will prompt that the new password is entered incorrectly.

2.3 Boot interface

2.3.1 Countdown interface



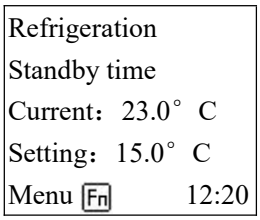
The countdown startup screen can be switched between Chinese and English by pressing the [Up] or [Down] buttons,

When the icon in the upper left corner is "Middle En", it indicates that the language is Chinese;

When the icon in the upper left corner is "Middle En", it indicates that the language is English.

2.3.2 Home Screen

【2】 【3】



【1】 【4】

In the above figure, the current represents the current temperature, while the setting represents the set temperature. Display the system evaporation temperature during refrigeration and heating. When displaying When, it indicates that the probe is faulty or the measured value is out of range. Press the<Up>or<Down>button directly to modify the temperature value.

Annotation Description:

【1】 Enter the user settings channel: Press the<Function>button to enter the user settings, as prompted by the button icon above.

【2】 Current operating mode of the unit: When "operating mode"=refrigeration, it displays refrigeration;

When "operating mode"=heating, it displays heating.

When "Run Mode"=Ventilation, ventilation is displayed.

When "Run Mode"=Automatic, it displays automatic.

Press the<Up>or<Down>keys, and the set temperature "15.0" will be modified and flashing.

Press the<OK>button again, and switch to the mode "Cooling" flashing. (<OK key>can switch between setting temperature and setting mode)

Press the<Up>or<Down>button again, and the mode "Cooling" will be modified and flashing.

Note: The "Operation Mode" can be modified immediately only when "Standby" is displayed in the upper right corner of the Home screen. (Including the modification of the operation mode of the Home screen and user setting interface.)

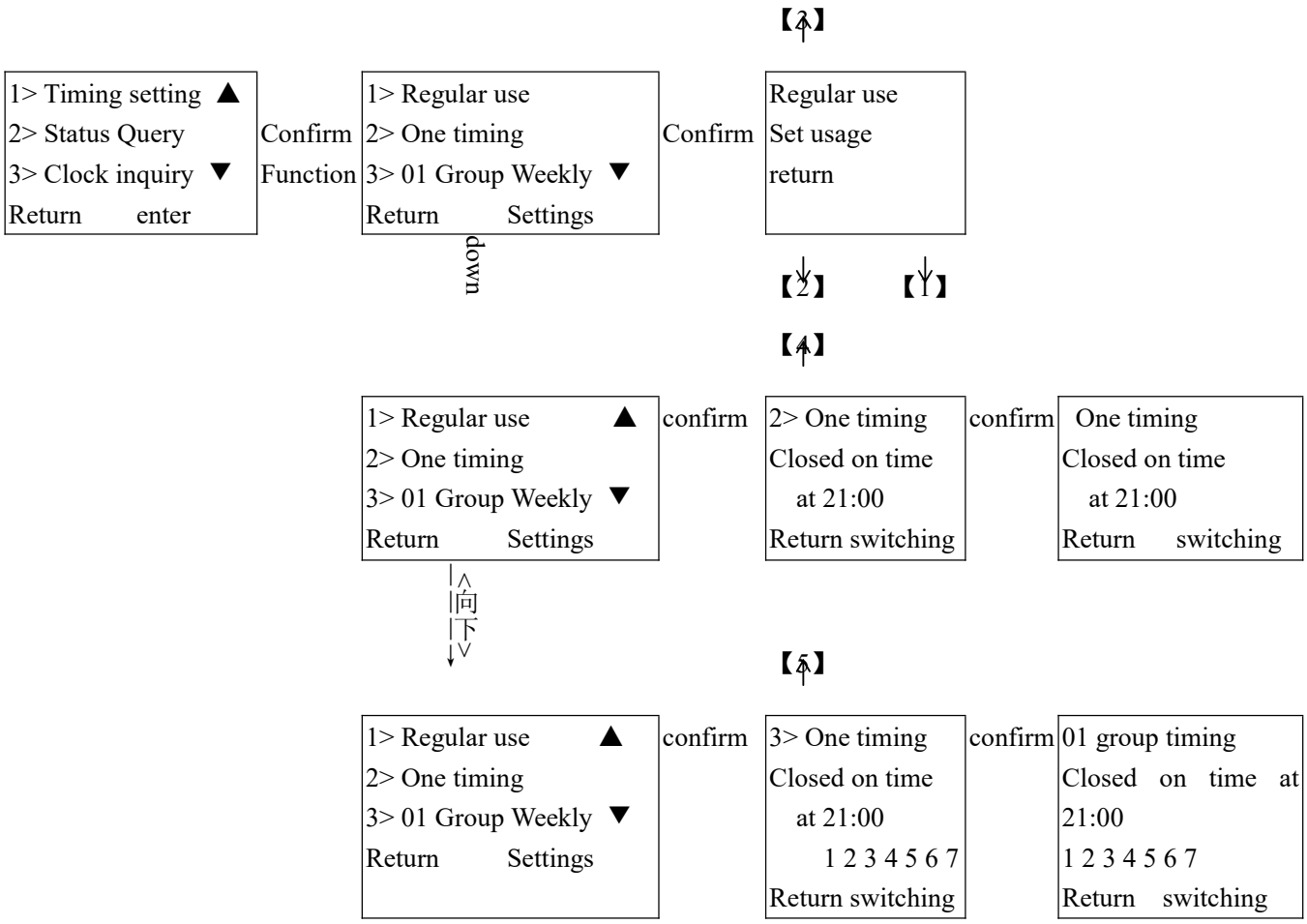
【3】 Indicates the current status of the unit: displays whether the unit is in antifreeze or defrost mode, or the operating status of the unit.

【4】Current fault query of the unit: When there is a fault in the unit, the<OK>button will be prompted to enter the fault query;

When the unit has no faults, it will directly display the current system clock;

2.4 User Query Settings

2.4.1 Timing settings



Annotation Description:

【1】 Press the<OK>key to confirm the settings.

【2】 Press the<Function>key to cancel the setting.

【3】 Indicates that setting timing settings is selected.

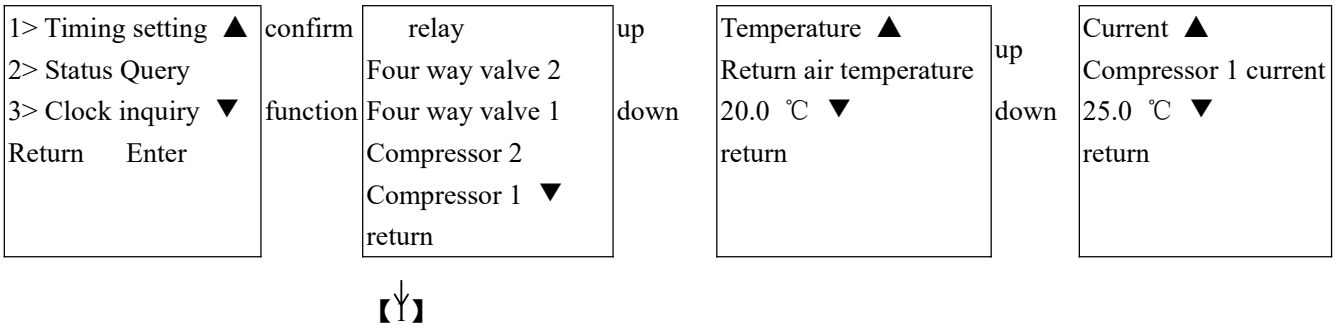
【4】 Indicates that a timing is selected once.

【5】 Indicates the selection of 01 sets of weekly timings, or you can cycle through the use of timings, one-time timings, and 01 to 06 sets of weekly timings by pressing<up>or<down>; Then press the<OK>key to enter. After entering the selected timing item, press the<OK>key to modify the set timing on/off, hour and minute, and week (1, 2 •• 7; its value will flash when the week is selected); Press the<Up>or<Down>keys to modify the selected item value. The reverse display of week (1, 2, 7) indicates that the timing is valid on that day. The figure shows that the computer will shut down on Friday and Saturday at 21:00.

Note: If the timing time is 00:00, it means that the timing function is not used.

2.4.2 Status Query

Enter the status query interface and press<OK>to switch module status query:



【1】

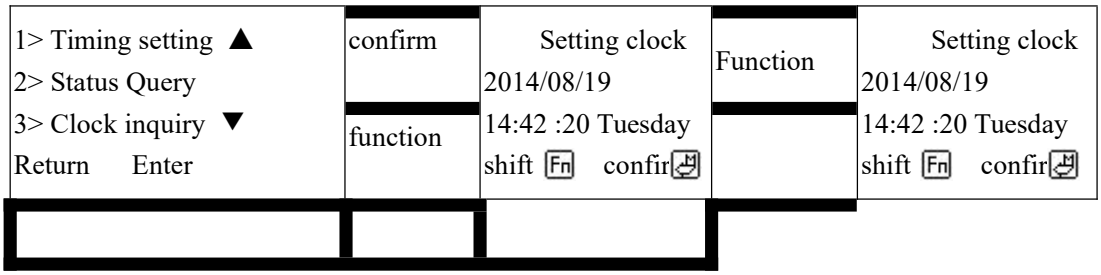
Annotation Description:

【1】 Press the<Function>key to return to the previous level of interface.

2.4.3 Clock Query

After entering the status query interface, press<Down>or<Up>to select Clock Query.

【2】



Annotation Description:

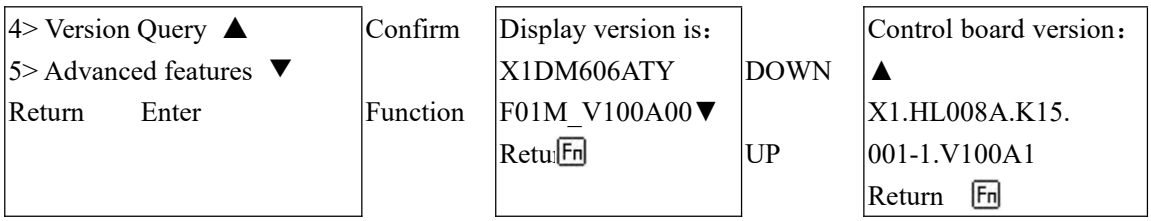
【1】 Press the<Function>key to select year, month, day, hour, minute, and second in order.

【2】 Press the<OK>key to complete the setting and return to the previous level of interface.

【3】 On this interface, you can press<Function>to shift and select year, month, day, hour, minute, and second; Press<add>or<subtract>to set its value;

Press<OK>to save the settings and exit the settings.

2.4.5 Versions Query



The above are the version numbers of the function codes for the display screen and control board.

2.4.6 Advanced Features

4>Version Query ▲ 5> Advanced features ▼ Return to enter	confirm	User settings Run time query Historical Fault Inquiry ▼ Return to enter

2.4.6.1 User Settings

User settings Run time query Historical Fault Inquiry ▼ Return enter	confirm	01 Control mode Heating ▼ Return Settings	confirm	01 Control mode Cooling mode Return Settings	confirm	01 Control mode Cooling mode Return Settings	

向下

01 Control mode Heating Return Settings	confirm	01 Control mode Heating mode Return Confirm

The above is the process of entering parameter settings and setting the "control mode", and the settings for other parameters are similar.

2.4.6.2 Running time query

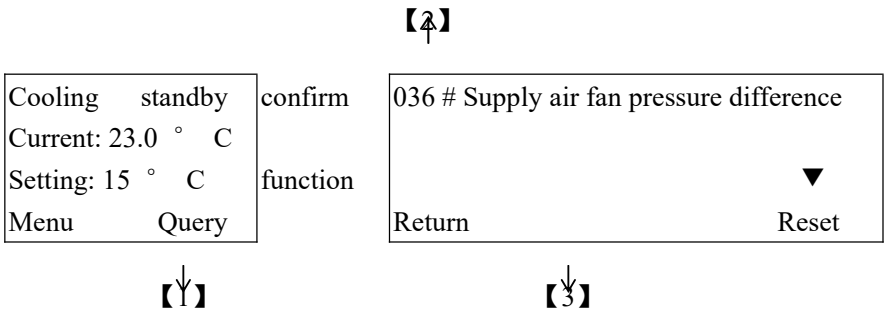
User settings Run time query Historical Fault Inquiry ▼ Return to enter	confirm function	Compressor 1 38H Compressor 2 38H Return Fn

2.4.6.3Historical Fault Query

User settings Run time query Historical Fault Inquiry ▼ Return Enter	confirm function	08/19 14:15:16 Fault number: 001 Power failure Return

2.5 Fault Inquiry

When a fault occurs on the Home screen, press the<OK>key to enter the current fault query.



Annotation Description:

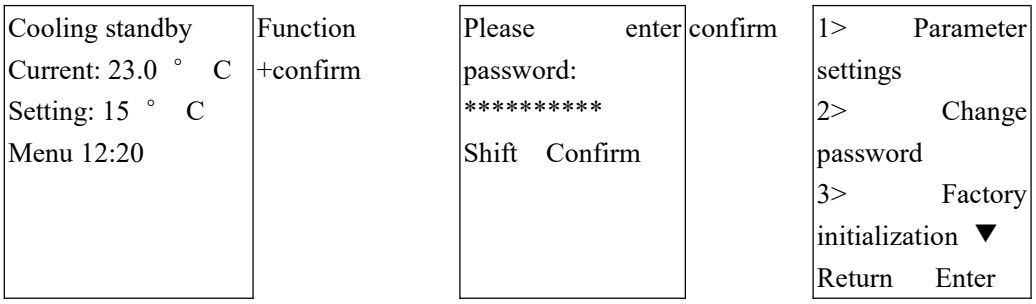
【1】 Only when this area is "query" and constantly flashing, can you press the<OK>button to enter the fault query interface.

【2】 Indicates the fault code and corresponding fault information found in the corresponding fault type for the current fault. Please refer to Appendix: Fault Table for the specific content of the fault code.

【3】 Press the<OK>key to reset the fault. If there is no fault at present, return to the Home screen; If there is a fault, continue to display the current fault.

2.6 Manufacturer settings

2.6.1 Password Entry



To enter the factory settings, you need to follow the password input steps in 2.2.1. Enter the factory default password as "123456".

2.6.2 Parameter Settings

>1 Parameter settings >2. Change password >3. Manufacturer initialization ▼ Return enter	Confirm	01 User parameter settings 02 Device parameter settings 03 Time parameter setting Return Settings	c o n fi r m	01 Control mode Cooling mode Return Settings	confirm	01 Control mode Cooling mode Return Confirm down

01 Control mode Heating mode Return Settings	Confirm	01 Control mode Heating mode Return Confirm

2.6.3 Change Password

Please refer to 2.2.3 Password Modification for password modification.

2.6.4 Initialization parameters

>1 Parameter settings >2. Change password >3. Manufacturer initialization ▼ Return Enter	Confirm Function	Are you sure to initialize? Cancel Confirm	Wait a few seconds	Initialization successful! return

Initialization parameters: Restore all parameters in the parameter table to their default values;

⚠ Note: The unit is in operation and cannot initialize parameters, or it may prompt initialization parameter failure.

After the initialization parameters of the unit are successful, please make sure to power on the unit again and confirm that the parameters are effective before use.

2.6.5 Initializing the press

>4.When resetting the compressor ▲ >5. Clear historical faults Return Enter	Confirm Function	Are you sure to initialize? Cancel Confirm	Wait a few seconds	Initialization successful! return

Initialize the compressor: The running time of the compressor and the cumulative running time of the unit are zero.

2.6.7 Clear History Faults

>4.When resetting the compressor ▲ >5. Clear historical faults Return Enter	Confirm function	Are you sure to initialize? Cancel Confirm	Wait a few seconds	Initialization successful! Return	

2.7 System Maintenance

1.7.1 Password Entry

中 En 5 Welcome to use	Confirm Function	Please enter password: ********** Shift Confirm	Confirm	1> System maintenance settings 2> Change password 3> Run time query Return Enter

To enter system maintenance, you need to follow the password input procedure in 2.2.2. Enter the factory default password as "66666666".

2.7.2 System Maintenance Settings

1> System maintenance settings 2> Change password 3> Run time query Return Enter	Confirm	1> System maintenance settings 10 days Cancel Confirm	UP	1> System maintenance settings 10 days Cancel Confirm

2.7.3 Change Password

Please refer to 2.2.3 Password Modification for password modification.

2.7.4 Running time query

1> System Maintenance Settings 2> 2>Change Password 3> Run Time Query Return Entry	Confirm Function	1> Run time query 2 days Return Confirm	

Appendix: Fault Table

Reset method: A=automatic reset; M=manual reset;

Fault number	Fault name	Reset model	Trigger conditions	Fault action	Troubleshooting
00	EEPROM Verification error	Power on again	Detect after power on	Shutdown group	1. Initialize all parameters. 2. If the problem cannot be resolved after initialization, please contact us!
01	Power Failure	M	The 'power failure' switch remains disconnected [fault delay]。		1. Check if the normally open and normally closed settings are correct. 2. Check the wiring.
02	Misphase protection	M	[Three-phase electric power detection] is set to use.		1. Check the setting of [Three-phase electric power detection]. 2. Check the wiring.
03	Phase loss protection	M			
05	Fire alarm	M	Heat pump and electric heating and cooling models are only available for use when setting up a fire alarm		1. Check if the normally open and normally closed settings are correct. 2. Check the wiring.
16	Compressor 1 low pressure	M		Stop the corresponding compressor	1. Check if the normally open and normally closed settings are correct. 2. Check the setting of the number of presses. 3. Check the wiring.
17	Compressor 1 high voltage/overload	M			
18	Compressor 2 low pressure	M			
19	Compressor 2 high pressure/overload	M			
20	Compressor 3 low pressure	M			
21	Compressor 3 high pressure/overload	M			
22	Compressor 4 low pressure	M			
23	Compressor 4 high pressure/overload	M			

24	Electric auxiliary thermal overload	M		Stop corresponding electric heating.	
25	Electric heating 1 overload	M			
26	Electric heating 2 overload	M			
27	Electric heating overtemperature	M		Stop all electric heating	
32	Insufficient water supply and flow	M		Stop all compressors and water source pumps.	
33	Water source pump overload	M			
34	Insufficient air conditioning water flow	M		Shutdown group.	
35	Air conditioning pump overload	M			
36	Pressure difference of forced draft fan	M	After the air supply fan is started, the "air supply pressure difference" switch continues to disconnect [fault delay].		
37	Supply fan overload	M			
38	Fan 1 overload	M		Stop the corresponding compressor and fan.	
39	Fan 2 overload	M			
48	Compressor 1 current too high	M		Stop the corresponding compressor	1. Check the wiring. 2. Check the 'Device Parameter Settings'.
49	Compressor 2 current too high	M			
50	Compressor 3 current too high	M			
51	Compressor 4 current too high	M			
52	Fan 1 current too high	M		Stop the corresponding compressor and fan.	
53	Fan 2 current too high	M			
54	Supply air current too high	M		Shutdown group	

55	Water source pump current high	M		Stop the corresponding compressor and water source pump	
56	Air conditioner pump current is high	M		Shutdown group	
64	Compressor 1 current too low	M		Stop the corresponding compressor	
65	Compressor 2 current too low	M			
66	Compressor 3 current too low	M			
67	Compressor 4 current too low	M			
68	Fan 1 current too low	M		Stop the corresponding compressor and fan.	
69	Fan 2 current too low	M			
70	Supply air fan current too low	M		Shutdown group	
71	Low current of water source pump	M		Stop the corresponding compressor and water source pump.	
72	Air conditioning pump current is low	M		Shutdown group	
80	Compressor 1 current fault	M		Stop the corresponding compressor	
81	Compressor 2 current fault	M			
82	Compressor 3 current fault	M			
83	Compressor 4 current fault	M			
84	Fan 1 current fault	M		Stop the corresponding compressor and fan.	
85	Fan 2 current fault	M			
86	Supply air fan current fault	M		Shutdown group	
87	Water source pump current fault	M		Stop the corresponding compressor and	

				water source pump.	
88	Air conditioner pump current fault	M		Shutdown group	
96	Evaporation return water fault	A	Detect after power on	Set the control object to "return to temperature" and shut down the group.	1. Check if the probe wires are connected incorrectly. 2. Check if the probe wire has poor contact; 2. Check if the probe has good contact with the measured object.
97	Evaporation water failure	A		Shutdown group	
98	Condensate return water fault	A		Stop all compressors and water source pumps。	
99	Condensate water failure	A			
100	Return air probe malfunction	A		Set the control object to "return to temperature" and shut down the group.	
101	Air outlet probe malfunction	A		Shutdown group	
102	Fin 1 probe failure	A		Stop the corresponding compressor。	
103	Fin 2 probe failure	A			
104	Environmental probe failure	A		Defrosting and anti freezing。	
105	Air conditioning water outlet too high	A		Stop all compressors, electric heating, and water source pumps.	
106	Air conditioning water outlet too low	A			
107	Excessive water outlet from the water source	A		Stop all compressors and water source pumps.	
108	Water source outlet too low	A			
109	The outlet temperature is too low	A		Stop all compressors and water source pumps.	

Appendix: Parameter Table

All parameters of the machine have been set before leaving the factory. If there are no special needs, it is not advisable to change the parameters to avoid affecting the normal operation of the machine. Please confirm that the parameters are suitable for your machine before starting for the first time!

Parameters of type N cannot be modified while the unit is in operation;

1. 2 represents parameter operation permissions (representing user and manufacturer levels respectively), and the larger the number, the higher the level. High level operators can operate low level parameters.

Setting item	Setting Range	Default value	Unit	Type	Note
User settings					
Control model	Ventilation, refrigeration, heating, automatic	Refrigeration,	/	1/N	
Refrigeration set temperature	【Lower refrigeration】limit～35.0	12.0	℃	1	
Heating setting temperature	0 ～ 【 Heating upper limit】	40．0	℃	1	
Incoming call activation settings	Disable, call hold, call start	Forbidden	/	1	
Automatic temperature setting	【 Lower refrigeration limit】～【Heating upper limit】	25.0	℃	1	
Is compressor 1 used?	Start, Stop	Start	/	1	
Is compressor 2 used?	Start, Stop	Start	/	1	
Is compressor 3 used?	Start, Stop	Start	/	1	
Is compressor 4 used?	Start, Stop	Start	/	1	
Screen saver time	0～500	1	分	1	When it is 0, it indicates that there is no screen saver function. This parameter only applies to the text screen and has no effect on the touch screen
Device parameter settings					
Model	Air cooled water supply; Water cooled water supply; Water cooled air supply; Air cooled air supply;	Water cooled air supply	/	2/N	Set different values according to engineering needs
Mode	Single cooling, heat pump, electric heating and cooling	Heap pump	/	2/N	
Compressor Qty	1～4	2	/	2/N	

Electric heating Qty	0～2	1	/	2/N	
Control object	Return temperature and outlet temperature	Return temperature	/	2/N	
Condenser	Independence; Two shared Three shared; Four shared	Independence	/	2/N	The main setting is for independent and shared use of fans. When two machines are shared, compressor 1 and compressor 2 share fan 1, and compressor 3 and compressor 4 share fan 2.
Three-phase electric power detection	Deactivation and use	Deactivation	/	2/N	
Air conditioning pump protection	Unprotected Mainboard built-in current protection Thermal relay current protection	Mainboard built-in current protection	/	2/N	The mainboard has its own current protection, which uses the current analog input point on the board to obtain the current value for protection. Thermal relay current protection: Use the onboard switch input point to obtain the external thermal relay input switch signal for protection。
Water source pump protection	Unprotected Mainboard built-in current protection Thermal relay current protection	Mainboard built-in current protection	/	2/N	
Supply air fan protection	Unprotected Onboard current protection Thermal relay current protection	Mainboard built-in current protection	/	2/N	
Condensation fan protection	Unprotected Onboard current protection Thermal relay current protection	Mainboard built-in current protection	/	2/N	
Fire alarm usage	Stop、Start	Start	/	2/N	This parameter is only available for heat pump and electric heating and cooling models
Anti cold air function	Stop、Start	Start	/	2/N	
Time parameter settings					
Energy control cycle	0～255	120	S	2	Compressor loading and unloading interval time
Anti frequent startup time	0～255	180	S	2	Restart time after the compressor stops

Delay of supply air fan	0～255	10	S	2	Delayed opening of the water source pump or fan by the supply fan or air conditioning pump.
Water source pump delay	0～255	15	S	2	Delayed start of compressor
Supply air fan paused	0～30	0	M	2	In non ventilation mode, if this parameter is not 0, after both the compressor and electric heating are turned off, delay the time to stop the supply fan or air conditioning pump. This parameter is 0, and the supply fan and air conditioning pump are always on.
Low voltage detection during startup	0～255	10	S	2	Delay detection of low voltage after the compressor is turned on
Refrigeration low pressure vibration reduction	0～255	5	S	2	In refrigeration mode, the alarm is triggered only after the low voltage switch is activated for a certain period of time after starting to detect low voltage。
Refrigeration low pressure vibration reduction	0～255	30	S	2	In the heating mode, the alarm is triggered only after the low voltage switch is activated for a certain period of time after starting to detect low voltage.
Fault delay	0～99	2	S	2	The vast majority of faults delay the alarm by this time.
Insufficient water flow delay	0～255	10	S	2	The fault of insufficient evaporation water flow delays the alarm for this time.
Temperature parameter settings					
Loading deviation	1.0～25.0	2.0	℃	2	
Unloading deviation	1.0～25.0	2.0	℃	2	
Lower refrigeration limit	-25.0～35.0	7.0	℃	2	
Heating upper limit	0.0～85.0	50.0	℃	2	
Cooling air conditioning water subcooling	-30～20	4	℃	2	

Heating air conditioning water overheating	0～99	55	℃	2	
Heating source water subcooling	-20～20	3	℃	2	
Cooling water source overheated	0～100	40	℃	2	
Cooling tower start-up temperature	0～79	30	℃	2	During water cooling and heating, if the condensate return water temperature is greater than the starting temperature of the cooling tower, the cooling tower will start
The outlet temperature is too low	-30～40	0	℃	2	
Current parameter settings					
Compressor 1 Rated current		5	A	2	Set different values based on the power of the press. When this parameter is set to 0, it indicates that no current is used, so the relevant display of current is hidden and current fault alarm will not appear.
Compressor 2 Rated current	0～25	5	A	2	
Compressor 3 Rated current	0～25	5	A	2	
Compressor 4 Rated current	0～25	5	A	2	
Supply air fan rated current	2～25	5	A	2	
Air conditioning pump Rated current	2～25	5	A	2	
Water source pump rated current	2～25	5	A	2	
fan 1 rated current	2～25	5	A	2	
Fan 2 rated current	2～25	5	A	2	
Compressor current too low	0～15	1	A	2	
Low current detection	0～180	30	S	2	
Fan current detection	0～20	2	S	2	Excessive fan current alarm delay detection
Defrost parameter settings					

Defrosting ambient temperature 1	-9～10	0	℃	2	
Defrosting ambient temperature 2	-9～10	-5	℃	2	
Defrost cycle 1	0～255	30	M	2	
Defrost cycle 2	0～255	25	M	2	
Defrost cycle 3	0～255	20	分	2	
Defrostable fin temperature	-9～20	0	℃	2	
Poor defrosting ring fins	0～20	8	℃	2	
Defrost and defrost fan on	0～255	15	S	2	
Defrosting fin temperature	-9～50	15	℃	2	
Antifreeze parameter settings					
Antifreeze cycle	0～255	30	分	2	
Water pump antifreeze	-9～10	6	℃	2	
Compressor antifreeze	-9～10	4	℃	2	
Electric heating antifreeze	-9～10	2	℃	2	
Compressor return antifreeze	0～25	15	℃	2	
Electric heating and anti freezing	0～25	8	℃	2	
Entering the antifreeze ambient temperature	-9～10	2	℃	2	
Temperature compensation settings					
Thawing	-9～9	0	℃	2	
Outlet temperature	-9～9	0	℃	2	
ambient temperature	-9～9	0	℃	2	
Condensation return temperature	-9～9	0	℃	2	
Condensation outlet temperature	-9～9	0	℃	2	
Fin 1 temperature	-9～9	0	℃	2	

Fin 2 temperature	-9～9	0	℃	2	
Switching value setting					
Press high pressure/overload	Normally open, normally closed	Normally closed	/	2	
Low pressure of the compressor	Normally open, normally closed	Normally closed	/	2	
Supply fan overload	Normally open, normally closed	Normally closed	/	2	
Supply air pressure difference	Normally open, normally closed	Normally closed	/	2	
Air conditioning pump overload	Normally open, normally closed	Normally closed	/	2	
Evaporative water flow switch	Normally open, normally closed	Normally closed	/	2	
Water source pump overload	Normally open, normally closed	Normally closed	/	2	
Insufficient condensate water flow	Normally open, normally closed	Normally closed	/	2	
Condensate fan overload	Normally open, normally closed	Normally closed	/	2	
Electric heating overheating	Normally open, normally closed	Normally closed	/	2	
Power failure	Normally open, normally closed	Normally closed	/	2	
Electric heating overtemperature	Normally open, normally closed	Normally closed	/	2	
Fire alarm	Normally open, normally closed	Normally closed	/	2	This parameter is only available when the heat pump and electric heating and cooling models are set to use [fire alarm]
Probe used or not					
ambient temperature	Stop、Start	Start	/	2/N	
Condensation return temperature	Stop、Start	Start	/	2/N	
Condensation outlet temperature	Stop、Start	Start	/	2/N	
Fin 1 temperature	Stop、Start	Start	/	2/N	
Fin 2 temperature	Stop、Start	Start	/	2/N	