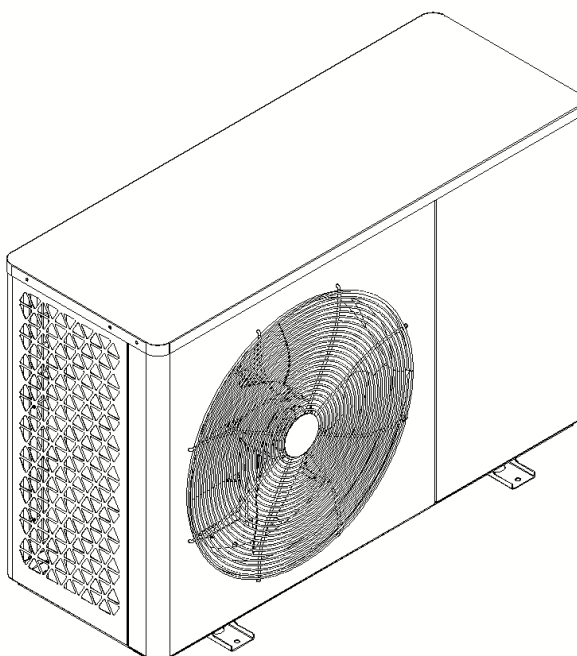




User's Manuel

Multi-Supply Air Source Heat Pump



Dear user:

Thank you for choosing Hien air source heat pump!

- In order to ensure the safe use of the product, please read this manual carefully before installation and use, and keep it properly for reference when necessary.
- Be sure to install leakage protection device.
- The heat pump must be reliably grounded. It is strictly forbidden to use the unit without reliable grounding, and it is strictly forbidden to connect the grounding wire to the neutral line or the tap water pipe.
- For safe use, be sure to refer to the wiring diagram when wiring, and do not modify or repair the unit without authorization.
- To avoid accidents, it is strictly forbidden to insert anything into the unit, or cover it.
- The hot water pipe of the device is a high-temperature pipe. It is strictly forbidden to touch it with hands or open the gate valve to take water directly.
- The device must be equipped with a Y-shape filter on the water inlet pipe. The damage caused by no filter is not covered by the warranty.
- In order to ensure the normal operation of the product for a long time, the unit can only be connected to tap water and it is strictly forbidden to use poor quality water sources such as groundwater.
- When the ambient temperature is lower than 0°C and the unit is not in use for a long time, please drain the accumulated water in the waterway of the unit to avoid freezing and cracking the heat exchanger and pipeline.
- Circulation pumps, solar pumps, lower return water pumps, electric heating and other electrical components connected to the device must be equipped with AC contactors.
- In case of any difference between the nameplate, technical parameters and circuit diagram of this book and the actual contents pasted on the machine, the actual contents shall prevail.

■ When designing the engineering scheme of the device, please select the unit type according to the local minimum temperature, so as to avoid the unit being too small, failing to meet the temperature requirements, and failing to meet customer needs. Or, electric auxiliary heating should be added to the water pipeline of the unit engineering system to achieve the purpose of supplementing heat in bad weather. Electric auxiliary heating power is calculated and selected according to the actual situation of customers.

■ The device has an automatic antifreeze function. In winter, the power supply of the unit must be kept and the power supply must not be cut off. When the ambient temperature is lower than 0°C and the normal power supply cannot be guaranteed, please drain the water in the pipeline, or add a suitable type of antifreeze to the water system to prevent the waterway from freezing and cracking.

■ After the life of the device expires, please contact a qualified home appliance recycling company to dispose of the unit according to the local Regulations of Recycling and Disposal.

■ This unit uses R32 refrigerant, do not disassemble the machine for maintenance on your own, please contact a designated or qualified after-sales company for repair.

Reminder

For R32 Refrigerant appliance:

- The Refrigerant (R32) is contained within the refrigerant circuit of the appliance, a natural gas with a high level of environmental compatibility, which is nevertheless flammable.
- During transportation and installation of the appliance, ensure that none of the components of the refrigerant circuit becomes damaged.
- The refrigerant (R32) is flammable.
- If the refrigerant circuit was damaged:
 - Avoid opening flames and sources of ignition.
 - Thoroughly ventilate the room in which the appliance is situated.
 - Appliance is supplied with flammable refrigerant (R32). It must be transported and installed with the utmost care since any excessive knocking or shaking could damage the refrigerating circuit.
 - Keep ventilation openings in the appliance enclosure or in the built-in structure clear of obstruction.
 - Do not use mechanical devices or other means to accelerate defrosting process, other than those recommended by the manufacturer.
 - Do not damage the refrigerant circuit.
 - Do not use electrical appliance inside the food storage compartments of the appliance, unless they of the type recommended by the manufacturer.

Service operations

WARNING:

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).

Do not pierce or burn.

Be aware that refrigerants may not contain an odor.

– Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorises their competence to handle refrigerants safely in accordance with an industry recognised assessment specification.

– Servicing shall only be performed as recommended by the equipment manufacturer.

Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.

Service personnel who shall be instructed to undertake the following when servicing an appliance that employs a flammable refrigerant.

Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimised. For repair to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system.

Work shall be undertaken under a controlled procedure so as to minimise the risk of a flammable gas or vapour being present while the work is being performed.

All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO₂ fire extinguisher adjacent to the charging area.

No person carrying out work in relation to a refrigeration system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space. Prior to work taking

place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt consult the manufacturer's technical department for assistance.

The following checks shall be applied to installations using flammable refrigerants:

- the charge size is in accordance with the room size within which the refrigerant containing parts are installed;
- the ventilation machinery and outlets are operating adequately and are not obstructed;
- if an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;
- marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
- refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised. that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking; that there is continuity of earth bonding.

During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an

electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.

Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.

Ensure that apparatus is mounted securely.

Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres.

Intrinsically safe components do not have to be isolated prior to working on them.

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of ageing or continual vibration from sources such as compressors or fans.

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used. accordance with the manufacturer's specifications. that no live electrical components and wiring are exposed while charging, recovering or purging the system;

The following leak detection methods are deemed acceptable for systems containing flammable refrigerants.

Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed.

Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

If a leak is suspected, all naked flames shall be removed/extinguished.

If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak.

Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

When breaking into the refrigerant circuit to make repairs – or for any other purpose – conventional procedures shall be used. However, it is important that best practice is followed since flammability is a consideration. The following procedure shall be adhered to:

- ✧ remove refrigerant;
- ✧ purge the circuit with inert gas;
- ✧ evacuate;
- ✧ purge again with inert gas;
- ✧ open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be “flushed” with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for this task.

Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system. When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipe-work are to take place.

Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

In addition to conventional charging procedures, the following requirements shall be followed.

- Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.
 - Cylinders shall be kept upright.
 - Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
 - Label the system when charging is complete (if not already).
 - Extreme care shall be taken not to overfill the refrigeration system.

Prior to recharging the system it shall be pressure tested with OFN. The system shall be leaktested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that

electrical power is available before the task is commenced.

a) Become familiar with the equipment and its operation.

b) Isolate system electrically.

c) Before attempting the procedure ensure that:

mechanical handling equipment is available, if required, for handling refrigerant cylinders;

all personal protective equipment is available and being used correctly;

the recovery process is supervised at all times by a competent person;

recovery equipment and cylinders conform to the appropriate standards.

d) Pump down refrigerant system, if possible.

e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.

f) Make sure that cylinder is situated on the scales before recovery takes place.

g) Start the recovery machine and operate in accordance with manufacturer's instructions.

h) Do not overfill cylinders. (No more than 80 % volume liquid charge).

i) Do not exceed the maximum working pressure of the cylinder, even temporarily.

j) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site dialog boxly and all isolation valves on the equipment are closed off.

k) Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge are available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of flammable refrigerants.

In addition, a set of calibrated weighing scales shall be available and in good working order.

Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer Note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

2, Instructions link

<https://www.hien-ne.com/download/>

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Chapter 1 Product Introduction

Air source heat pump is one of the latest environmental protection and energy saving units after gas water heater, electric water heater, solar water heater and oil boiler. According to the principle of reverse Carnot cycle, it is driven by electric energy, which effectively absorbs the unusable low-grade thermal energy in the natural air by refrigerant (heat transfer working medium), and compresses it into usable high-grade thermal energy and transmits it to the water tank to heat the water.

Chapter 2 Product Features

◆ **Green.** The use of air source heat pumps have no pollution to the environment, and have extremely low energy consumption. It is a green and environmentally friendly product, which meets the current basic policies of energy saving, environmental protection and low carbon.

◆ **Energy Saving.** Every 1 kWh of electricity consumed can absorb 2-4 kWh of heat from the air, saving you 50-80% of electricity bills.

◆ **Safe.** No fuel transmission pipelines and fuel storage, no hidden dangers such as fuel leakage, fire, explosion, etc; The separation of water and electricity greatly avoiding the risk of electric shock to personnel.

◆ **Smart.** This heat pump system utilizes digital intelligent control to collect and process the ambient temperature and the temperature of the inlet and outlet water in real time, so as to ensure that the unit operates in the best state at all times.

◆ **Reliable and durable.** The key components of the unit are all produced by world-class brand companies, ensuring the reliability of the unit.

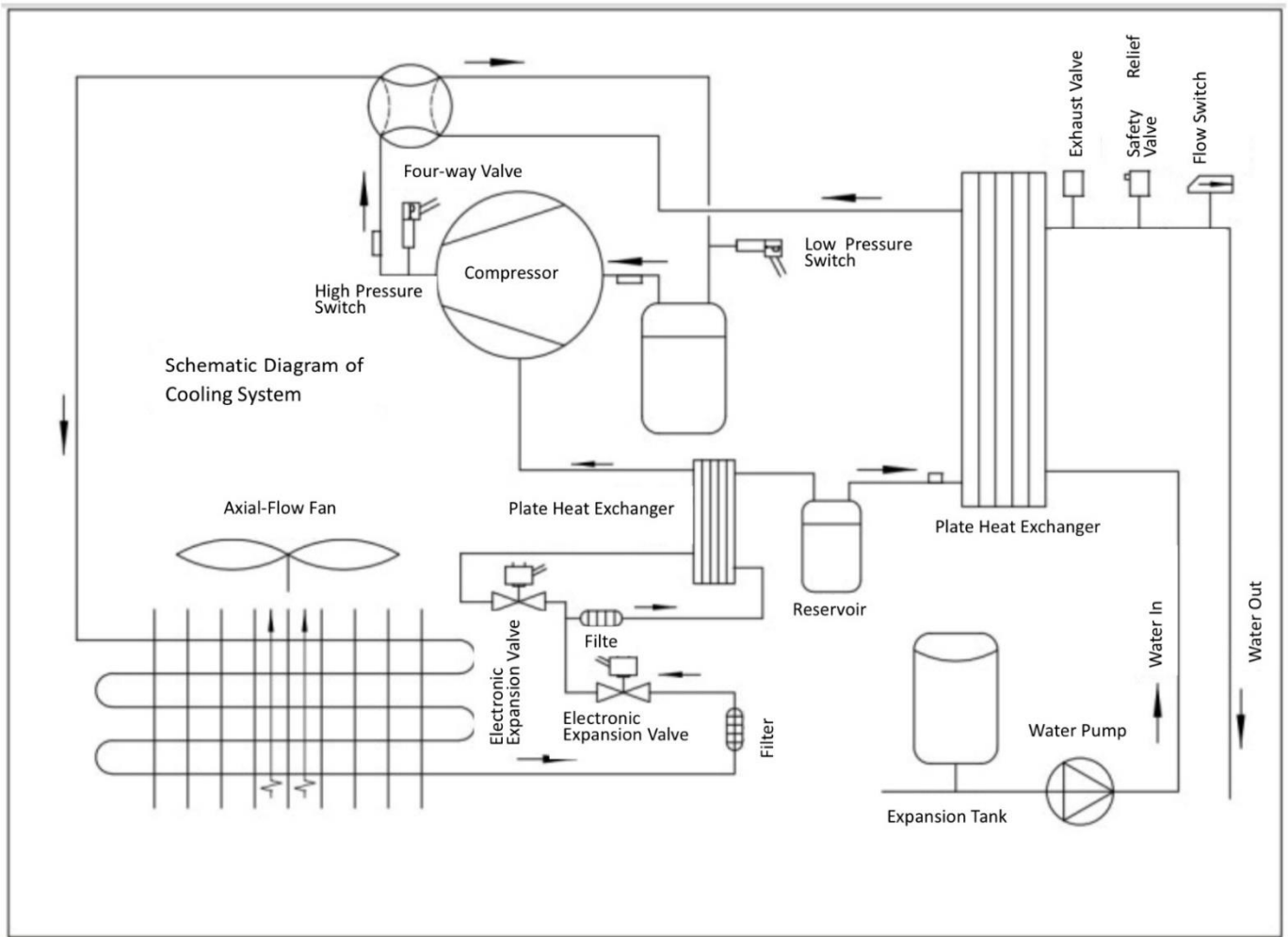
◆ **Easy to use.** The heat pump unit is fully automatic in and out of water, without the need for special measures.

Chapter 3 Operation Principle of Air Source Heat Pump

Air source heat pump adopts a reverse Carnot cycle system, which is generally composed of components such as a compressor, condenser, expansion valve (throttling device), evaporator, and electrical controller. By driving compressors, fans, water pumps to do work, the refrigerant undergoes a physical phase transition (liquid \leftrightarrow gas) within the system. By utilizing the characteristics of uninterrupted heat absorption and release during the cyclic phase transition process, the refrigerant absorbs heat energy from a low-temperature heat source and transfers it to a high-temperature heat source, achieving energy transfer from low to high.

■ Operating Principle of Cooling

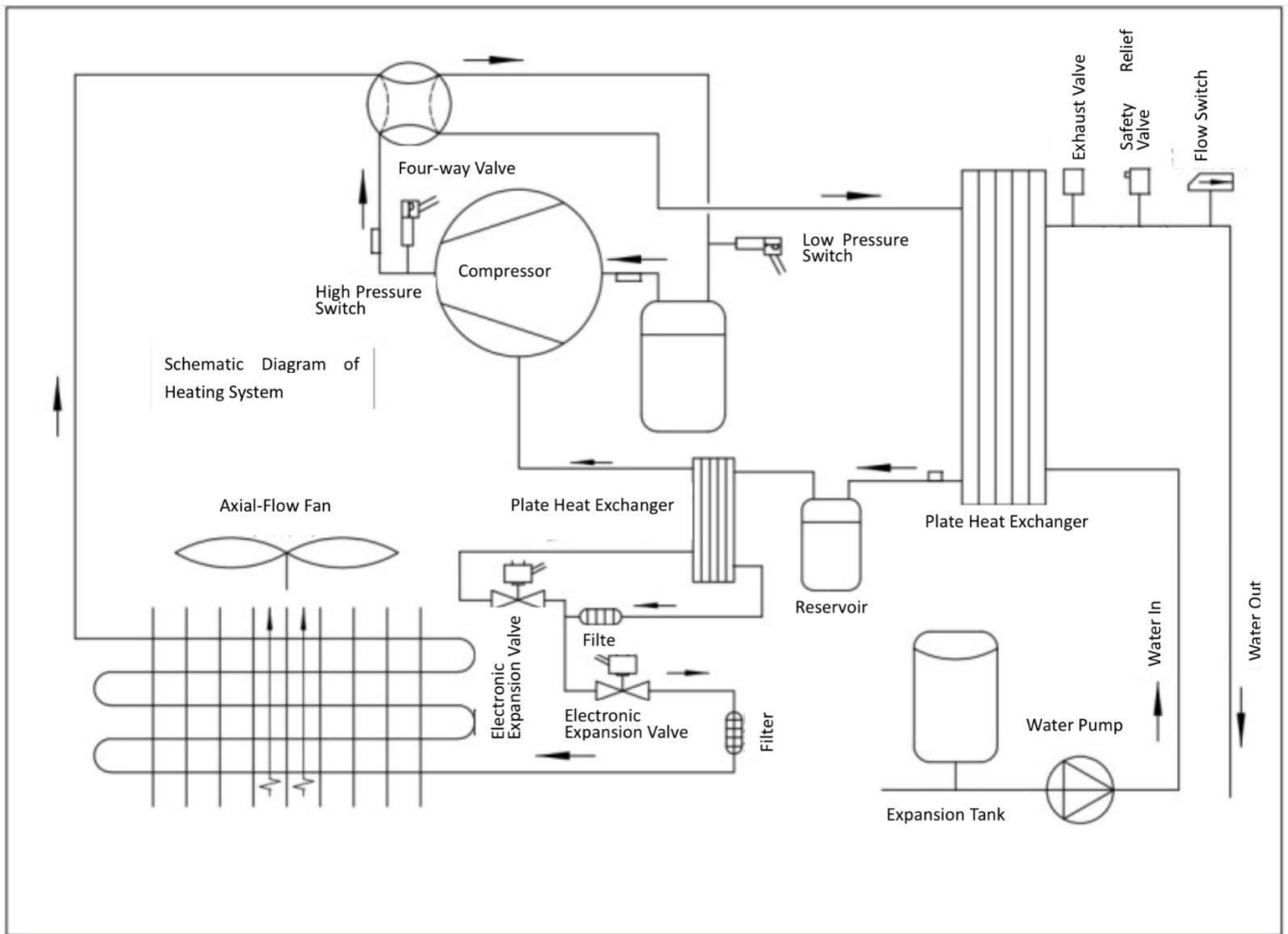
The compressor sucks in low-temperature and low-pressure gaseous refrigerant from the plate heat exchanger (evaporator), and through the compressor's work, compresses the gaseous refrigerant into high-temperature high-pressure gaseous refrigerant. The high-temperature high-pressure gaseous refrigerant enters the finned heat exchanger (condenser) and condenses, releasing a large amount of heat through heat exchange with the air before becoming a medium-temperature and high-pressure liquid refrigerant. Then, the medium-temperature high-pressure liquid refrigerant is throttled and depressurized by the expansion valve (throttling device) to become a low-temperature low-pressure gas-liquid mixed refrigerant. The low-temperature low-pressure gas-liquid mixed refrigerant absorbs heat from water in the plate heat exchanger (evaporator) and evaporates into a low-temperature and low-pressure gaseous refrigerant (which absorbs heat from water and causes the water temperature to continuously decrease), which is then sucked into the compressor for compression. In this repeated cycle, cold water is produced. The system diagram is as follows:



■ Operating Principle of Heating

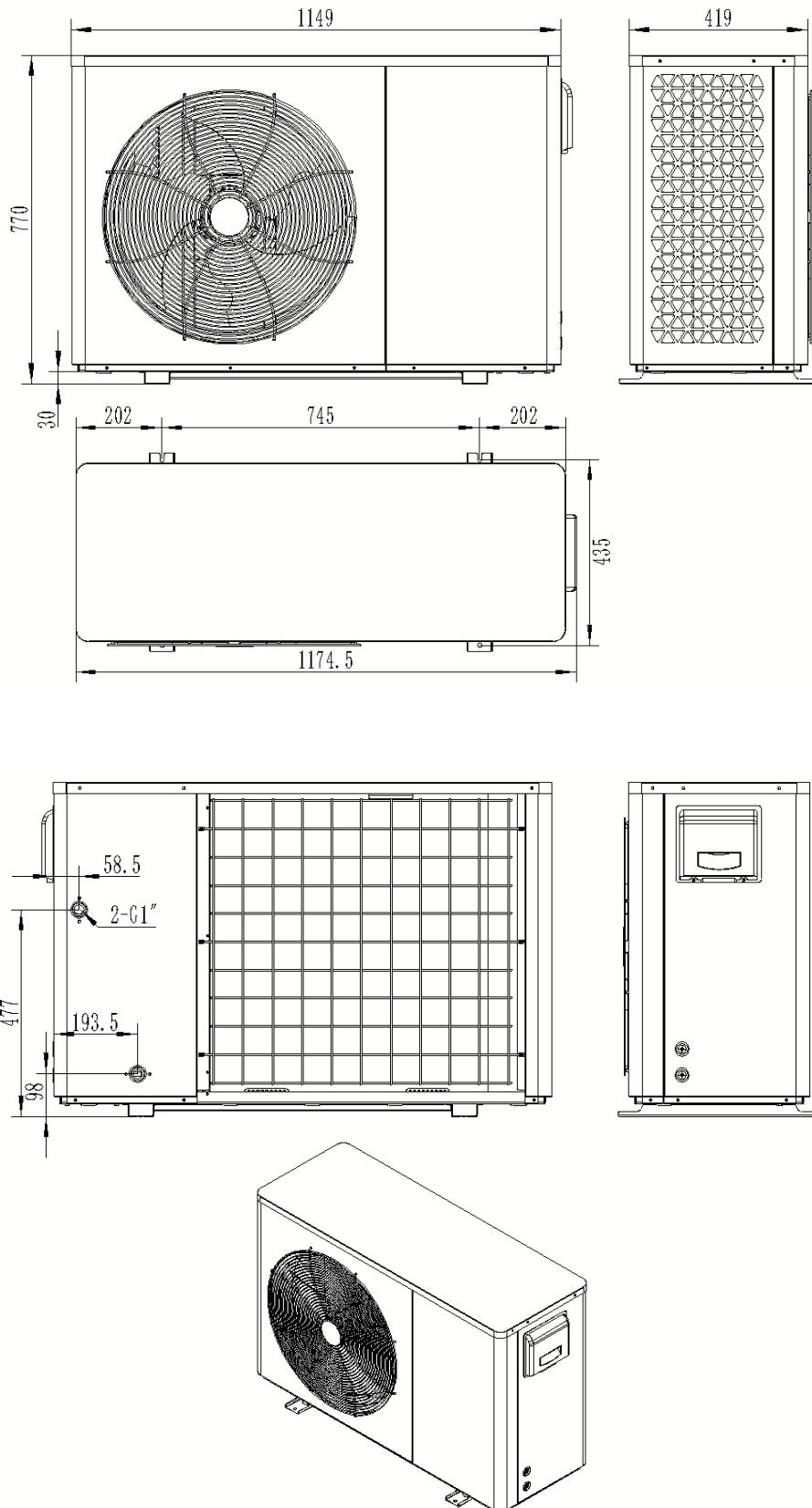
The compressor sucks in low-temperature low-pressure gaseous refrigerant from the finned heat exchanger (evaporator), and through the compressor's work, compresses the gaseous refrigerant into high-temperature high-pressure gaseous refrigerant. The high-temperature high-pressure gaseous refrigerant enters the plate heat exchanger (condenser) for condensation, and releases a large amount of heat during heat exchange (water absorbs the heat released and the temperature continues to rise) before becoming a medium-temperature and high-pressure liquid refrigerant. Then, the medium-temperature high-pressure liquid refrigerant is throttled and depressurized by the expansion valve (throttling device) to become a low-temperature low-pressure gas-liquid mixed refrigerant. The low-temperature low-pressure gas-liquid mixed refrigerant absorbs heat from the air in the finned heat exchanger (evaporator) and

evaporates into a low-temperature low-pressure gaseous refrigerant, which is then sucked into the compressor for compression. In this repeated cycle, hot water is produced. The system diagram is as follows:



Chapter 4 Dimensions

Model: WDLRK-10 I BM/A1



Chapter 5 Product Parameters

Model	WDLRK-10 I BM/A1	WDLRK-12 II BM/A1
Rated heating Capacity	10 kW	11.8 kW
Heating Rated Input	2.18 kW	2.59 kW
Rated Heating Current	9.5 A	3.94 A
COP	4.59	4.55
Rated Cooling Capacity	11.2 kW	13.3 kW
Rated Cooling Input	3.4 kW	3.78 kW
Rated Cooling Current	14.78 A	5.74A
EER	3.29	3.52
Rated Voltage/Frequency	220-240V~ 50Hz	380V~/3N 50Hz
Max Input Power	4.26 kW	4.85 kW
Max Input Current	19.5 A	7.75 A
HP.PS	4.2MPa	4.2MPa
LP.PS	1.6MPa	1.6MPa
Max Allowable Pressure	4.2MPa	4.2MPa
Refrigerant Type/Volume/GWP value	R32/1.7kg/675	R32/1.9kg/675
Potential Value of Carbon Dioxide	1.15	1.28
Waterproof Grade	IPX4	IPX4
Electrical Shockproof	I	I
Noise(Lw)	65dB(A)	68dB(A)
Max Outlet Water Temp	60°C	60°C
Operating Ambient Temperature	-25°C ~ 43°C	-25°C ~ 43°C
Diameter of Water Pine Connection	DN25	DN25
Rated Water Flow	1.72m ³ /h	2.03m ³ /h
Water resistance at rated water flow	23.2kPa	51kPa
Min/Max Heating Water Pressure	0.05MPa/0.3MPa	0.05MPa/0.3MPa
Net Size	1150/420/770mm	1150/420/770mm
Net Weight	103kg	118kg

Note 1:



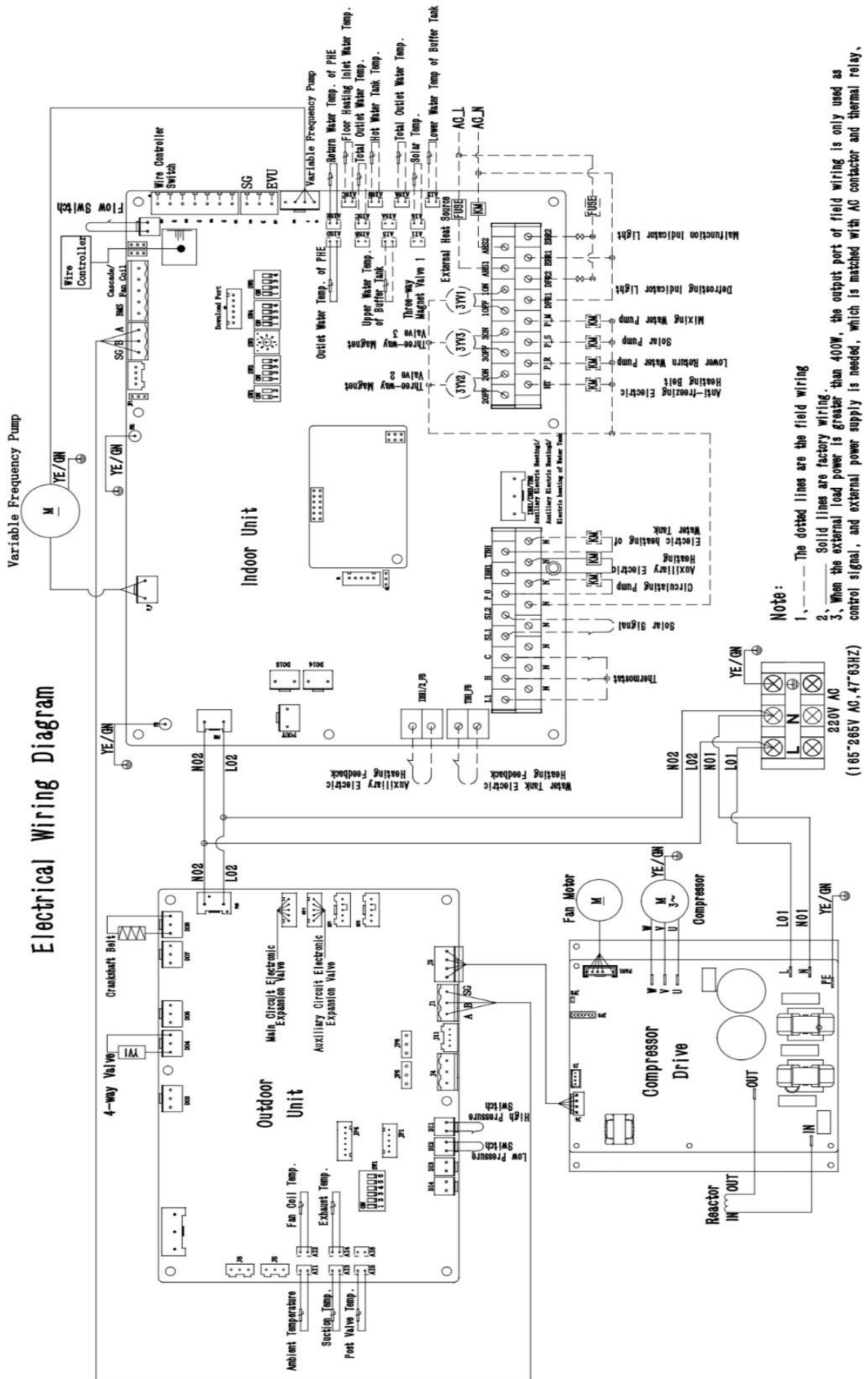
- ✧ Rated heating conditions: ambient Dry-bulb temperature 7 °C, Wet-bulb temperature 6 °C, inlet water temperature 30 °C, outlet water temperature 35 °C;
- ✧ Rated cooling condition: ambient Dry-bulb temperature 35 °C, Wet-bulb temperature 24 °C, inlet water temperature 23 °C, outlet water temperature 18 °C;
- ✧ During actual use, consideration should be given to the loss of approximately 6% of heat in system pipelines, water pumps, valves, and dirt after the installation of the unit;
- ✧ If the performance parameters of the purchased unit do not match this table, the nameplate of the purchased unit shall prevail.

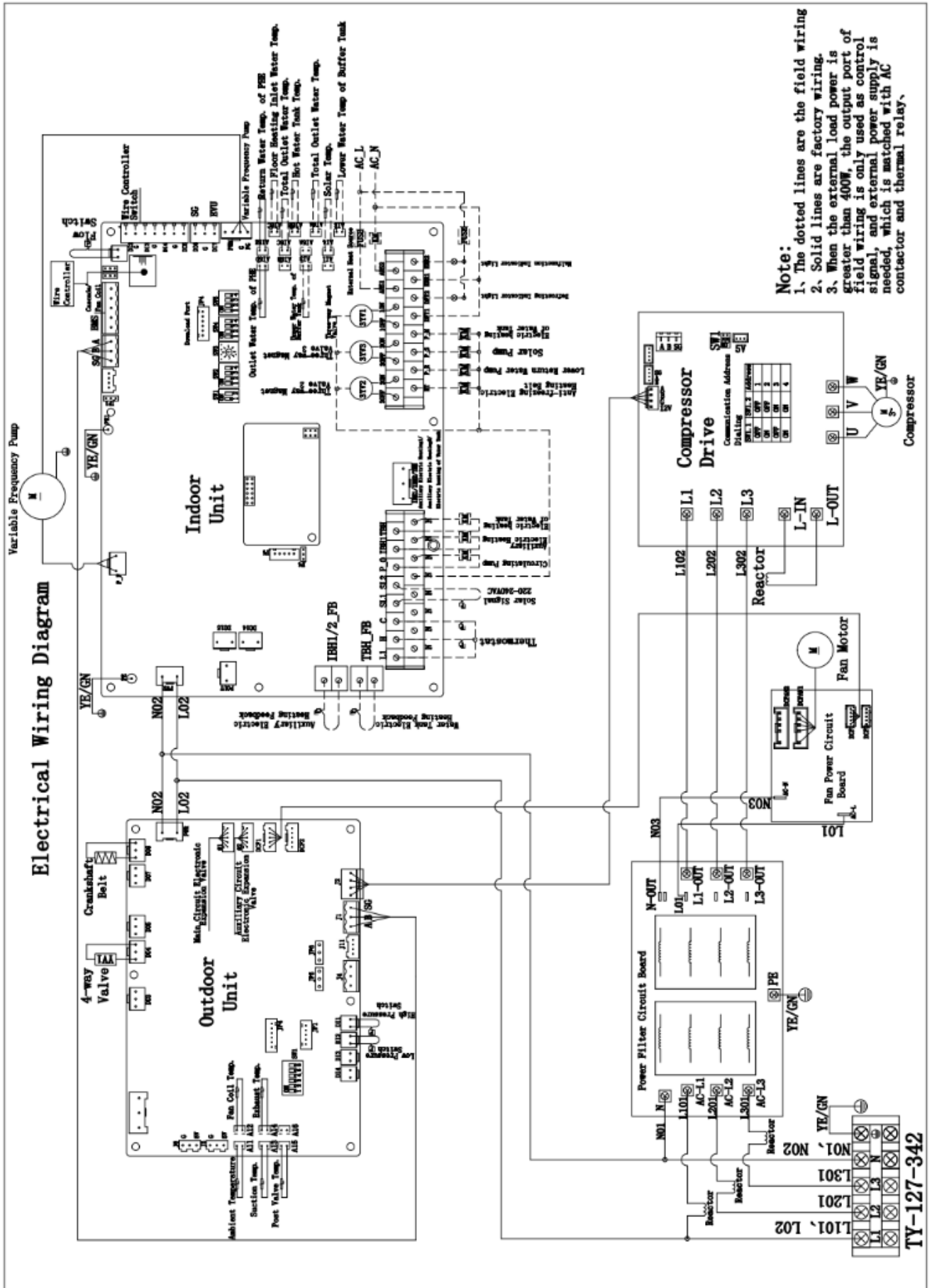
Note 2: Specification of Fuses

- ✧ Fuse specifications for circuit boards of indoor and outdoor units : 10A/250V
- ✧ Fuse specifications for Inverter: 30A/250V

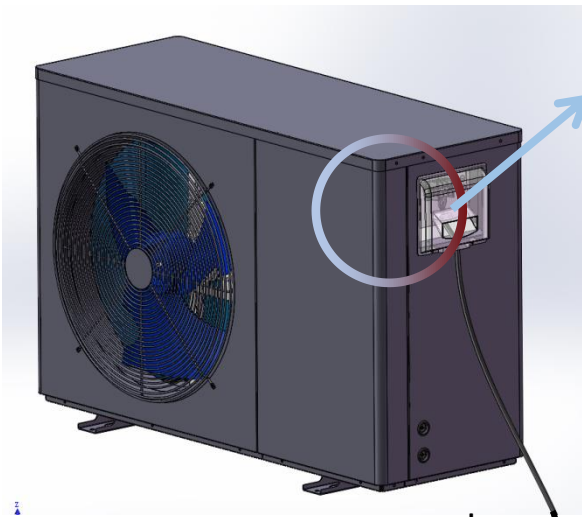
Chapter 6 Electrical Wiring Diagram

AC contactors must be added to the electrical devices such as circulating pump, solar water pump, lower return pump and auxiliary electric heating.

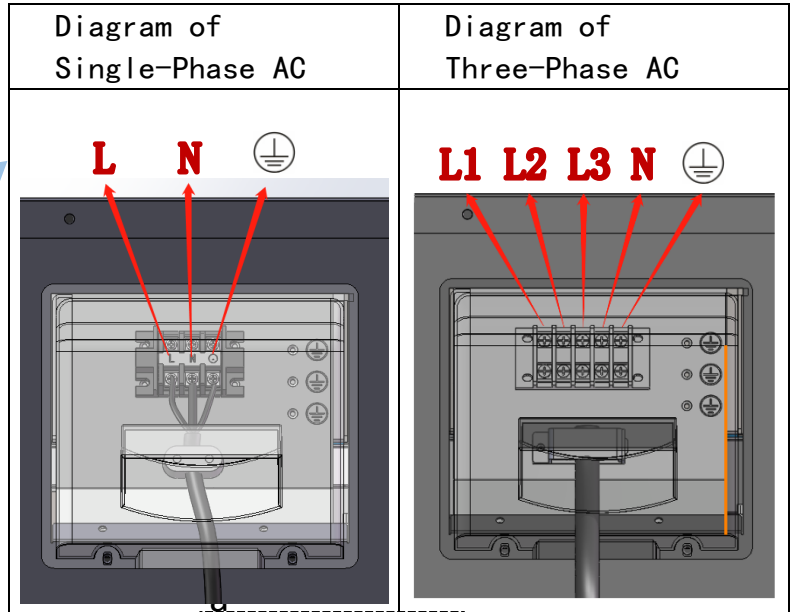




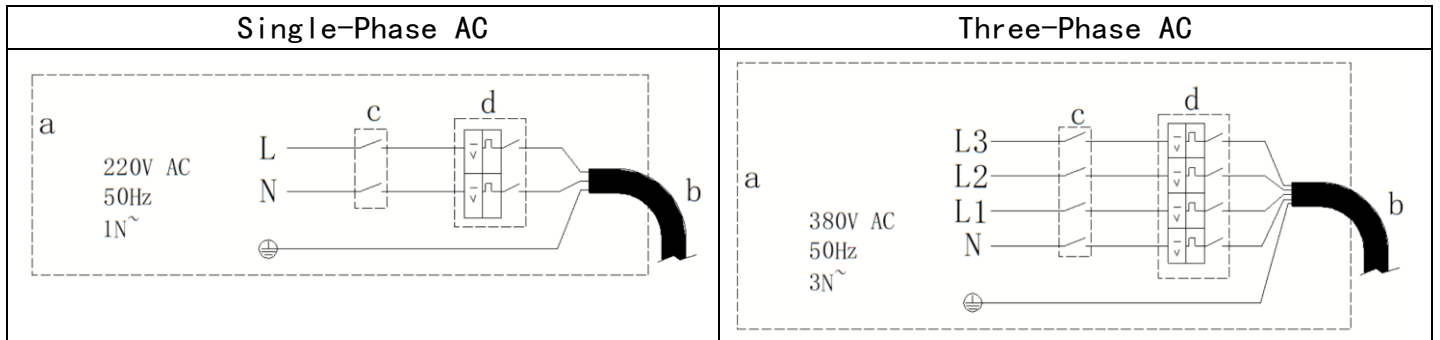
Main Power Connection



Main Power Cord



AC Power Supply



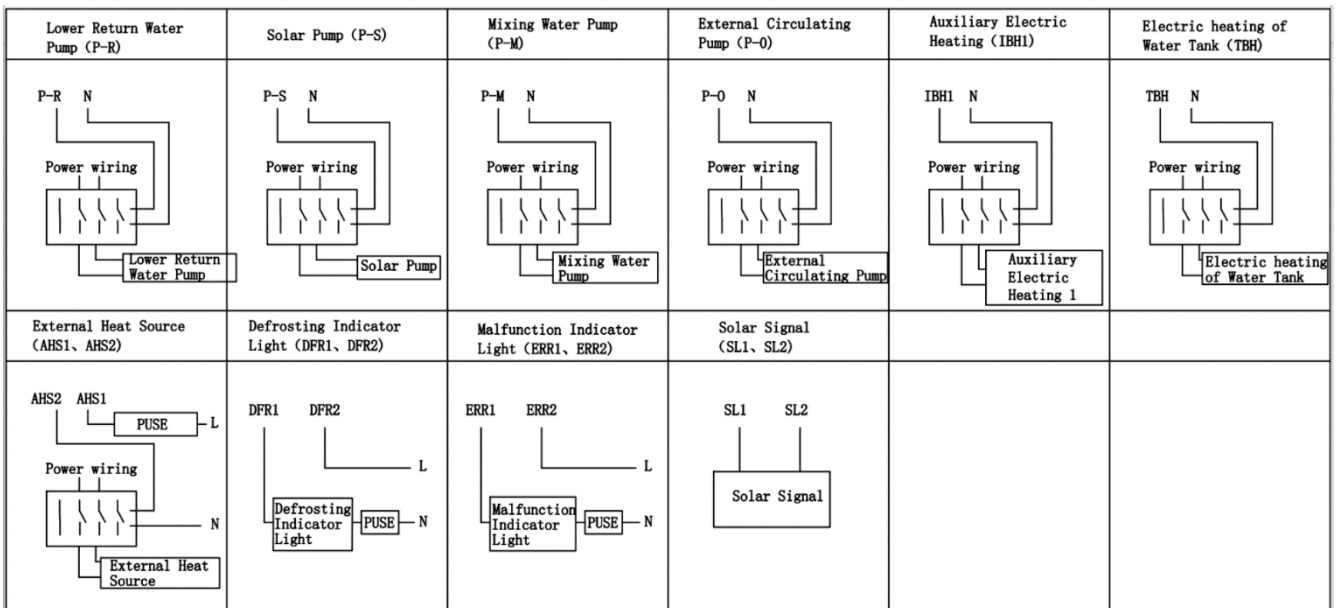
a: Field Wiring

b: Cable

c: Leakage Switch

d: Overload Fuse

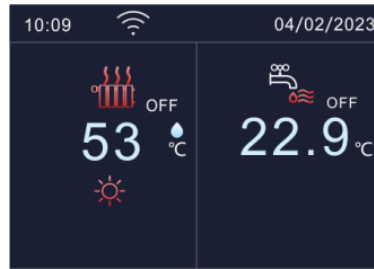
Engineering signal line connection of the unit (attention should be paid to separate strong and weak current wiring).




Chapter 7 Language Settings

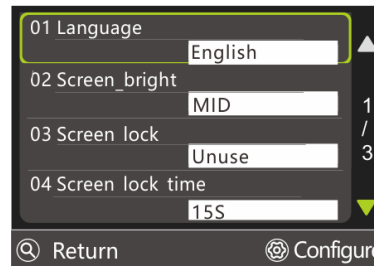
1, The device provides eight languages for selection, including English, Polish, Hungarian, Spanish, Greek, French, Italian and Chinese, which can be switched through the language setting, as follows:





In the main interface, press  to enter the setting menu,

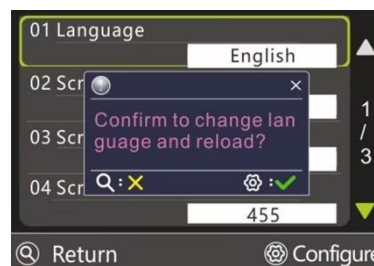


2, In the settings menu", select "Display Settings" and press  to confirm;

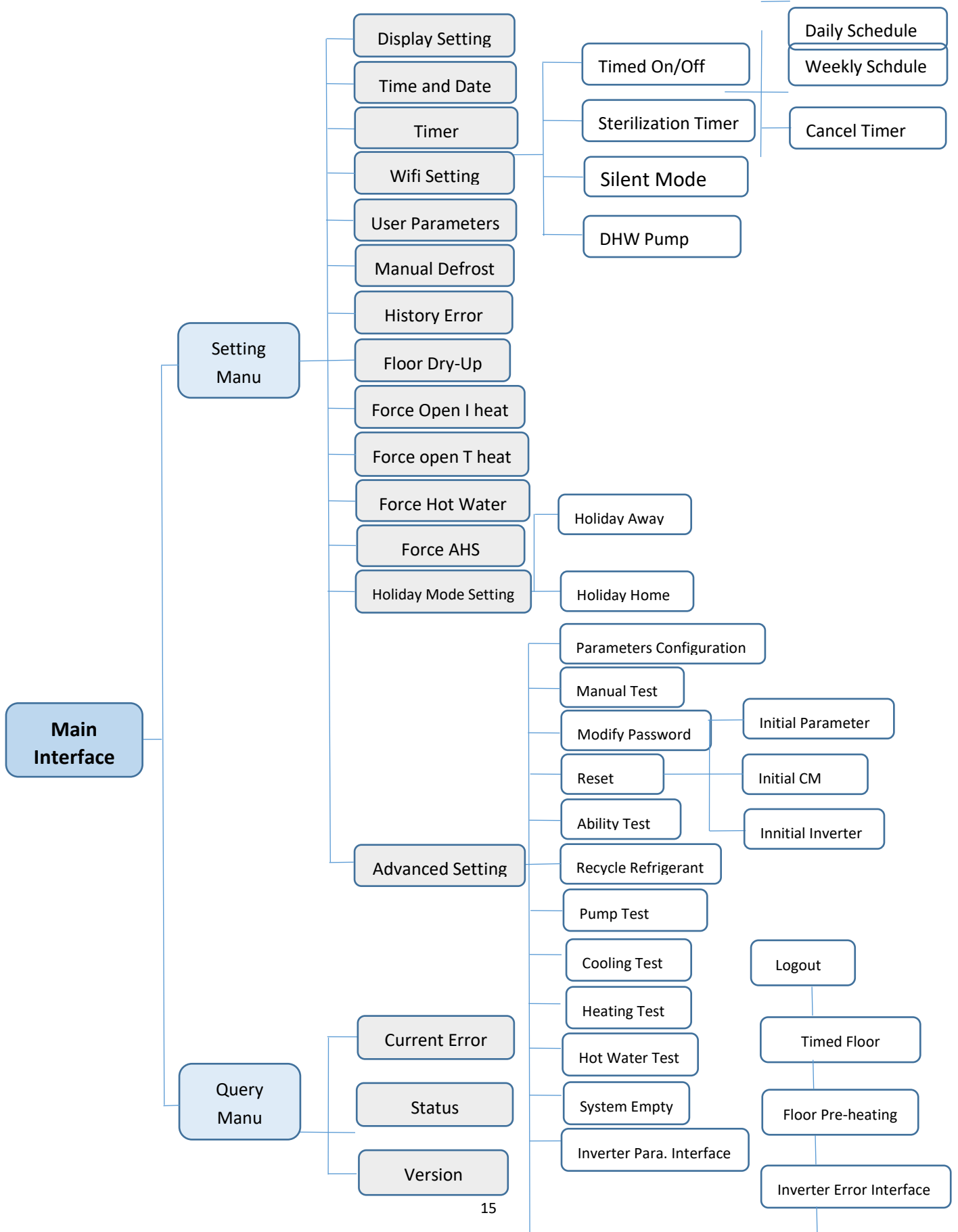
Enter "Display Settings", the first item is "Language", press  again to enter;



3, In the language menu, the first selection is “English”, while the last is “Chinese”. Press  or  to select the desired language, and press  to have the “Confirm to change language and reload?” dialog box, press  again to confirm, the interface will be reloaded and wait for a few seconds to complete the language setting.



Chapter 8 Operational Manual for Wire Controller



8.1 Main Interface

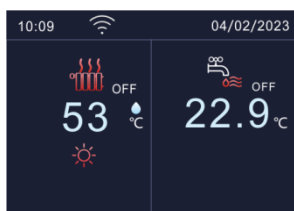


Icons	Meaning	Item
⏻	Switch on/off	Switch on/off
🔍	Used to enter the query menu or return to the previous level	Query/Return
^	Used to page up or adjust parameter values	Page up
v	Used to page down or adjust parameter values	Page down
⚙️	Used to enter the settings menu or confirm	Set/Confirm
M	Used to set the mode	Mode

The main interface varies according to the application scenarios. The following are several possible situations:

Main interface 1:

(single-zone water temp + hot water):

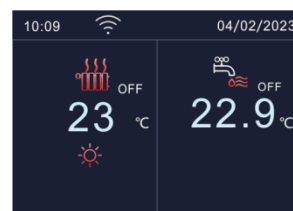


This system includes single-zone air-conditioning water temp control and domestic hot water control.

Tips: All icons in the manual are for explanation, and there may be some differences from the actual content on the screen.

Main interface 2 :

(single-zone room temp + hot water):

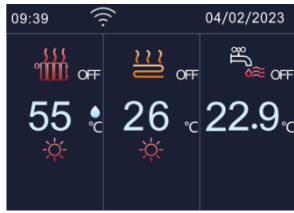


This system includes single-zone air-conditioning room temp control and domestic hot water control.

Tips: The wire controller should be installed indoors to detect the indoor temperature.

Main interface 3:

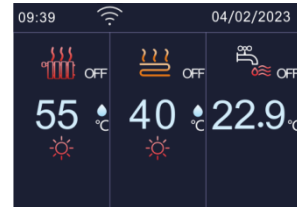
(dual-zone mixing + hot water):



This system includes dual-zone air-conditioning water temp (zone A) + room temp control (zone B); Zone A can be heating or cooling, while zone B can only be heating.

Main interface 4 :

(dual-zone water temperature + hot water):



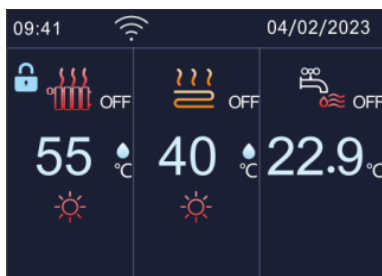
This system includes dual-zone air-conditioning water temp control (zone A can be heating or cooling, zone B can only be heating) and domestic hot water control.


Note: When using thermostat control, the heat pump unit can control the water temperature only.

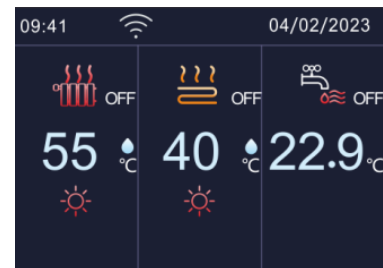
8.2 Basic Usage

8.2.1 Screen Un-locking



If the lock screen icon appears on the screen, the wire controller will not be able to operate, as shown below:

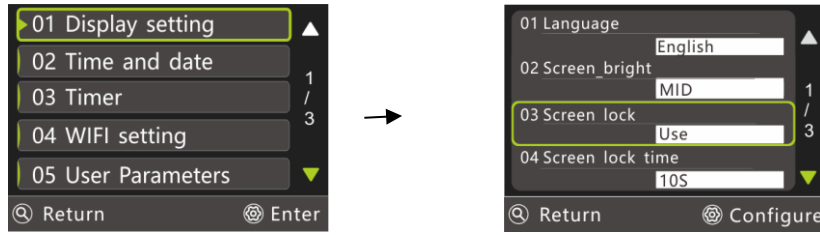


Press and hold the key  for three seconds, the lock icon will disappear, and the wire controller can be operated, as shown below:



Set the lock screen function to use/disable:

Press  on the main interface to enter the settings menu interface, find 'Display Settings', and press  to enter and adjust the "Screen Lock".



8.2.2 On/Off

8.2.2.1 Wire Controller Switches on/off Air-conditioning Area

Press \wedge or \vee in the main interface, select the air-conditioning area to be turned on/off, then press the key ⏻ , and press ⚙ to confirm turn on/off the cooling or heating of the air-conditioning area.

Take the single-zone water temperature as an example, first press the \wedge or \vee key to select the air-conditioning area, then press the key ⏻ , and press ⚙ to confirm to turn on the air-conditioning area A, as shown below:



8.2.2.2 Thermostat Switches on/off Air-conditioning Area

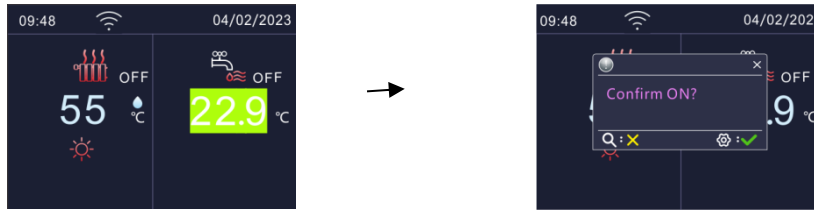
- 1, When selecting "Single Zone Mode Switching", the operation mode and switch of zone A are controlled by the thermostat.
- 2, When selecting "Single Zone Switch" or "Dual Zone Switch", the SWITCH of the air-conditioning area is controlled by the thermostat, and the OPERATING MODE of the air-conditioning area is set by the wire controller.

Note: When using a thermostat, the wire controller will fail and the heat pump unit will be controlled by the thermostat!

8.2.2.3 Wire Controller Switches on/off Domestic Hot Water

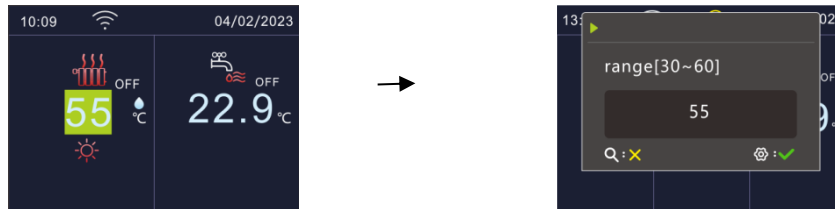
First, ensure that the "Hot Water" is set to "Use", otherwise the hot water will not be turned on.

Press \wedge or \vee in the main interface, select the hot water area, then press the key power , and press gear to turn on/off the hot water, as shown below :

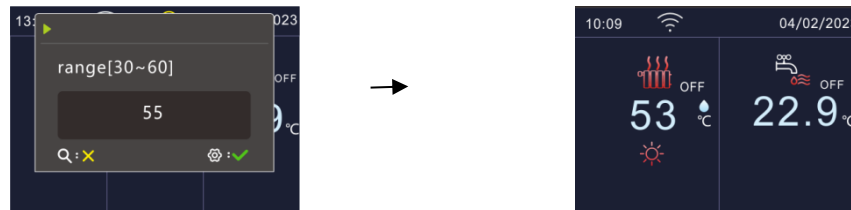


8.2.3 Adjust the Temperature

Press \wedge or \vee on the main interface, select the area where the temperature needs to be adjusted, and press gear to display the temperature adjustment box, as shown below:



Then, adjust the temperature value by pressing the \wedge or \vee key, and then press gear to save the adjusted temperature value, as shown below:

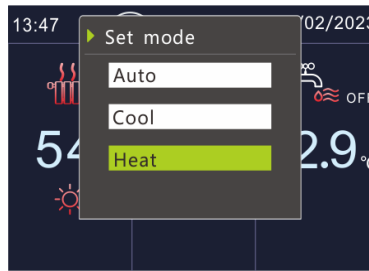


8.2.4 Spatial Mode Settings

There are three space modes:

1. Cooling mode;
2. Heating mode;
3. Automatic mode.

Press the key **M** on the main interface to display the “Set Mode” window, as shown below:

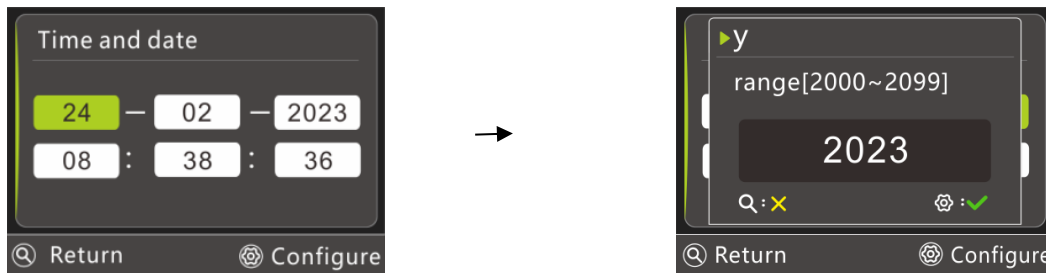


Press **^** or **v** to select the desired mode, and then press **⚙** to confirm setting. If pressed the key **Q**, the “Set Mode” window will be closed directly to cancel the current mode setting.

8.2.5 Time Setting:

All time modifications (such as year, month, day, hour, minute, second) of the wire controller are operated in the same way. Here is the example of the modification of the "year":

Enter the 'Date and Time' interface. For the path, please refer to 8.4. 2 Date and Time → press **^** and **v** to select the “year” option, press **⚙** to display the year modification box → press **^** and **v** to modify the year value. After the modification is completed, press **⚙** to save this modification. If press the key **Q**, the display window will be closed directly without keeping this modification.



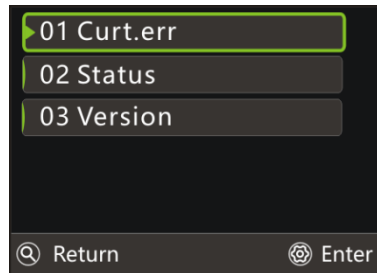
8.3 Query Menu




There are three Queries::



- 1) Error;
- 2) Status;
- 3) Version.

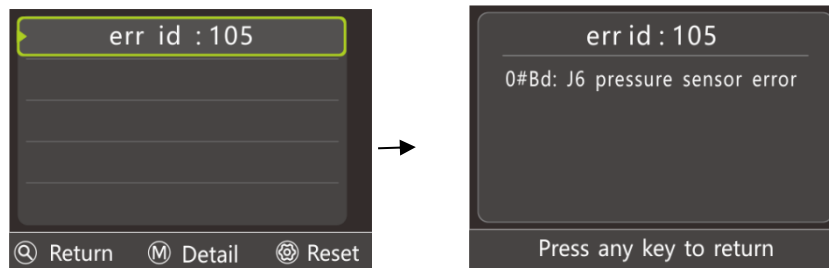
8.3.1 Error Query Interface

Press  on the main interface to enter the Query interface.



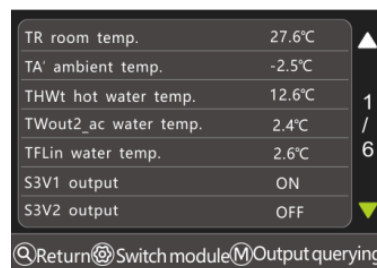
You can see three options: Error, Status, and Version. Use  and  to select, and press  to enter the option.

When there is an error, the error interface is as shown in the figure below (press  to eliminate the error that meets the reset condition) → press  to view the specific meaning of the error code.

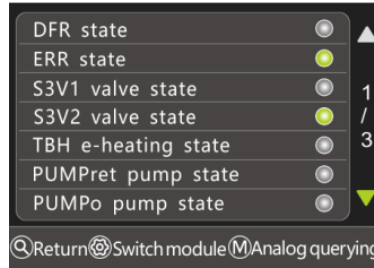


8.3.2 Status Query Interface

When you need to view the current information of the heat pump unit (such as temperature, electrical components that have been turned on, etc.), enter the STATUS to view it.



Press the M key to switch and view the switch quantity status (the green circle on the right indicates that the component has output), and press the M key again to return to the analog quantity status.



8.3.3 Version Query Interface

When dealing with after-sales issues, in order to locate the problem better, it may be necessary to provide the software information of the heat pump unit, which can be viewed through the version query interface.



8.4 Setting Menu

8.4.1 Display Setting

Display settings can set the needs of daily use, such as language, screen brightness, lock screen, key sound, etc., enter the display setting interface through the following path:

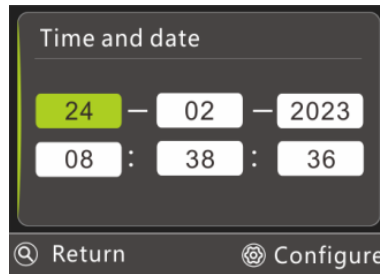
Main interface > Setting menu > Display settings



Note: If the "screen saver time" is set to 0, there will be no screen saver function and the screen will remain on.

8.4.2 Time and Date

If the date and time do not correspond to the actual time, modify the date and time through the following path: Main interface > Setting menu > Date and time





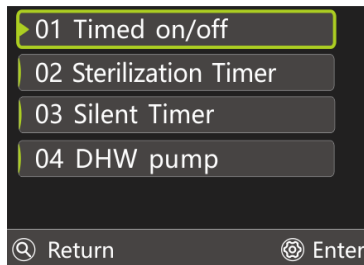
For time modification, please refer to the time setting operation.







8.4.3 Timer

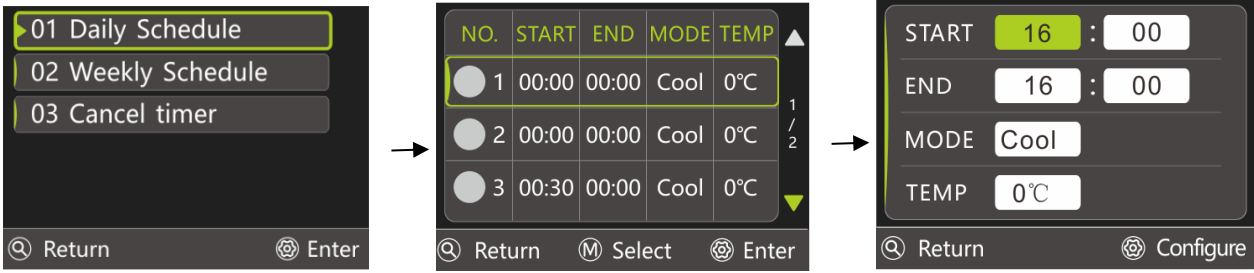
8.4.3.1 Timed on/off

8.4.3.1.1 Regularly turn on/off every day

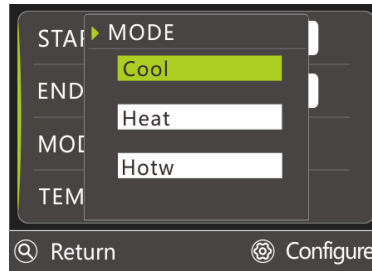
Press  on the main interface to enter the setting menu, and select "Timer". Press  to enter the timer menu.



Select "Timed on/off" and press the key  to enter the menu of time switch → Select "Daily Schedule" and press  to enter the setting interface of daily timing → Press  or  to browse, press the  key to use or cancel this group of timing, and press the key  to enter the setting interface of this group of timing (refer to 8.2.5 Time Setting Operation for time setting).



Press \wedge or \vee to the " MODE" and press the key to pop up the display window.



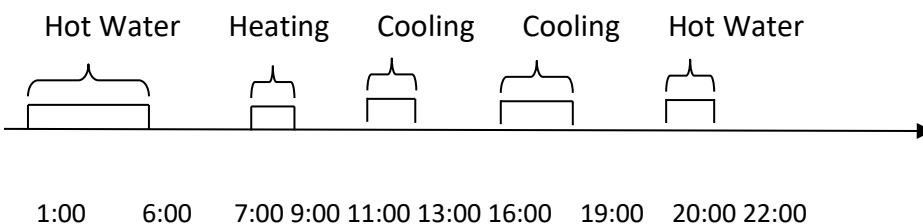
Press \wedge or \vee to adjust the setting value. If press the key , the display window will be closed without saving any changes. If press the key , the setting will be saved and the display window will be closed.

The temperature setting is the same as above.

Example: 5 sets of timing settings are shown in the following table:

Sq.	Start	End	Mode	Temperature
1	1: 00	6: 00	Hot Water	50°C
2	7: 00	9: 00	Heating	30°C
3	11: 00	13: 00	Cooling	20°C
4	16: 00	19: 00	Cooling	20°C
5	20: 00	22: 00	Hot Water	50°C

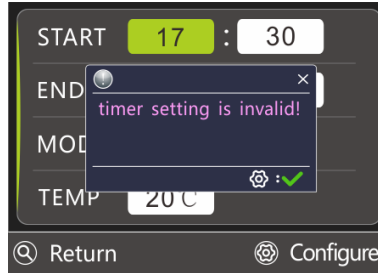
The heat pump unit will be controlled as shown below :



The specific action of the heat pump unit is described as follows:

Time	Action
1: 00	Hot Water Mode On
6: 00	Hot Water Mode Off
7: 00	Heating Mode On
9: 00	Heating Mode Off
11: 00	Cooling Mode On
13: 00	Cooling Mode Off
16: 00	Cooling Mode On
19: 00	Cooling Mode Off
20: 00	Hot Water Mode On
22: 00	Hot Water Mode Off

Reminder: If the start time and end time are the same, the start time is later than the end time, the cross day setting or the temperature exceeds the allowable range of this mode, the group timing setting will be invalid, and the following interface will appear.

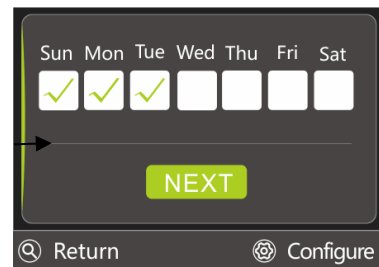
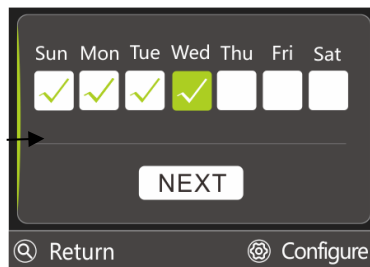
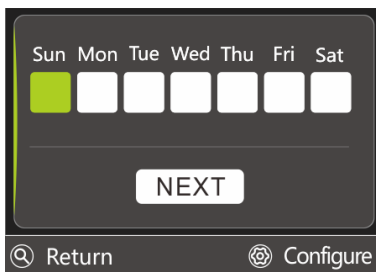
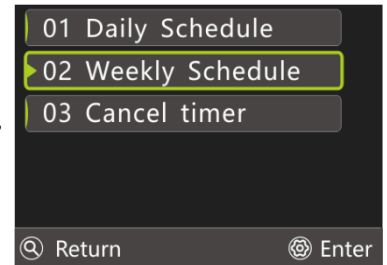


8.4.3.1.2 Weekly scheduled on/off

Select "Weekly Schedule" in the Timer on/off menu.

Press to enter the week selection interface → press

or to go to the day or days that need to take effect in a week, press to select or cancel → press or to move to the "next page".



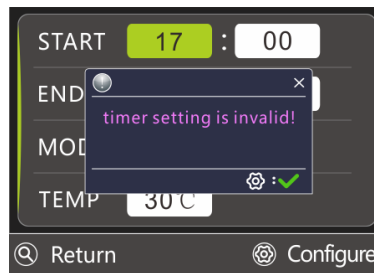
Press to enter the timing group interface.

NO.	START	END	MODE	TEMP
1	04:00	05:00	Cool	20°C
2	06:00	07:00	Cool	20°C
3	07:30	08:00	Cool	20°C

Return Select Enter


Note: The timer setting operation is the same as the daily timing on/off operation.

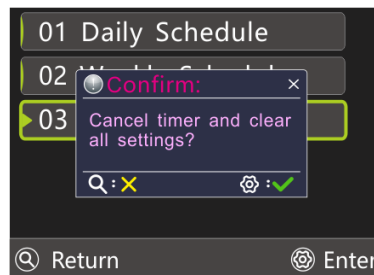
Tips: If the start time and end time are the same, the start time is later than the end time, or the setting spans across days or the temperature exceeds the allowable range of this mode, this settings will be invalid, and the following window will appear:





8.4.3.1.3 Scheduled Cancellation

If you want to cancel all settings at one time (without affecting other scheduled settings), please follow the instructions in this chapter.

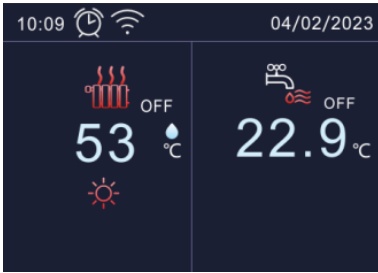
Select "Cancel Timer" in the timed on/off menu, and press  to display a confirmation window.



Press  to confirm cancelling the timer and close the pop-up window. Press  to cancel and close the window.

If the daily or weekly timing is effective, the timer icon will be displayed in the main interface.

If the daily or weekly timing fails, the timer icon will not be displayed in the main interface.



8.4.3.2 Sterilization Timer









There are two ways to use the Sterilization Timer:

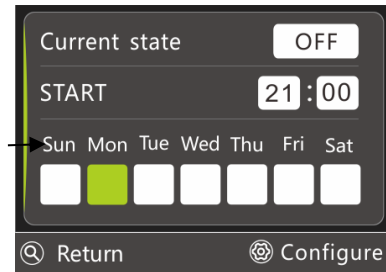
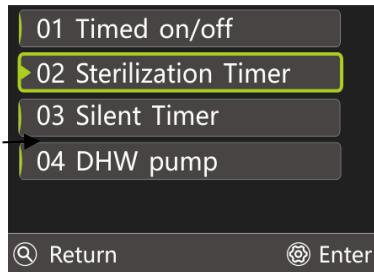
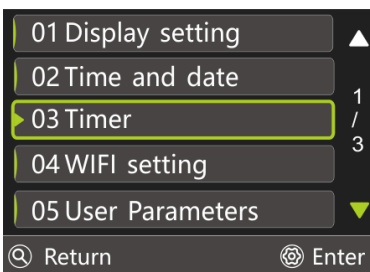
1. Timed use;
2. Manual use.



The sterilization function is used to kill bacteria and germs in the hot water tank. The temperature of the hot water tank will be forced to reach 61-70 degrees, and the sterilization temperature can be set in the advanced settings.

Before using the sterilization function, please ensure that the 'User Parameter' > 'Sterilization Timer' is set to 'Use' (see the parameter table in 7.4.5 User Parameters for details). If the parameter value is disabled, the sterilization function cannot be used. The timing method and manual method are introduced below.

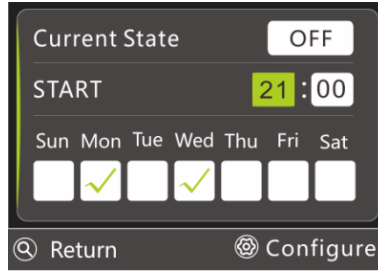
- The method of timing is as follows:

Press  on the main interface to enter the setting menu, press  to select "Timer" → press  to enter the timer menu, press  to select "Sterilization Timer" → after setting the start time, press  or  to the day or days that need to take effect in a week . Take setting Monday as an example, press  or  to move to "Monday".



If the box is not ticked, press the  tick to take effect. If the box is ticked, pressing  to un-tick it will not take effect on the same day.

As shown, the setup will go into sterilization on Mondays and Wednesdays at 21:00.



- The manual method is as follows:

The priority of manual control is higher than that of timing control, press \wedge or \vee move to "Current State".

If the Current State is "off", press ⚙ to manually enable the sterilization function.

If the Current State is "on", press ⚙ to manually exit the sterilization function.

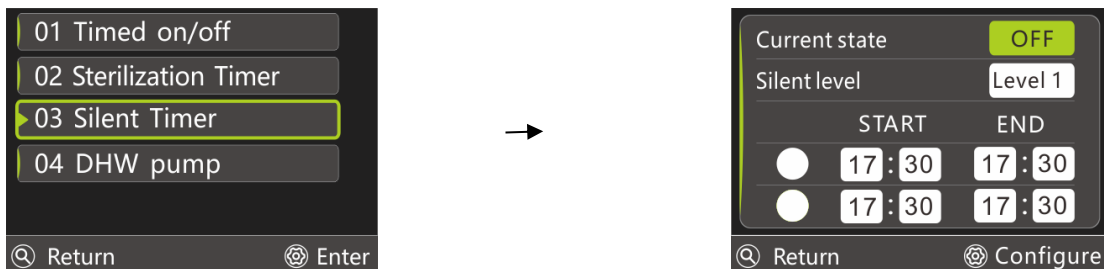
8.4.3.3 Silent Timer

There are two ways to use silent mode:


- 1, Timed;
- 2, Manual.

There are two levels of silent mode, level 1 and level 2. The maximum speed of the fan and compressor in level 2 is smaller than that in level 1. Here is the Time Silent:

Press ⚙ to enter the setting menu in the main interface, press \wedge or \vee find the 'Timer' and press ⚙ to enter the timer menu, press \vee find the 'Silent Timer' and press ⚙ to enter the setting interface.



Press \wedge or \vee move to 'Silent Level' and press ⚙ to switch the silent level (Level 1 and Level 2).

There are two groups of timers, press \wedge or \vee move to the circle box, press  to use or cancel this group of timers (the used circle box will be ticked).

Note: For time setting, please refer to 7.2.5 Time Setting.

The Manual Silent method is as follows:

The priority of manual control is higher than that of timing control, press or move to "Current State".

If the current state is 'off ', press  to manually turn on the silent mode.





If the current state is 'on ', press  to manually exit the silent mode.

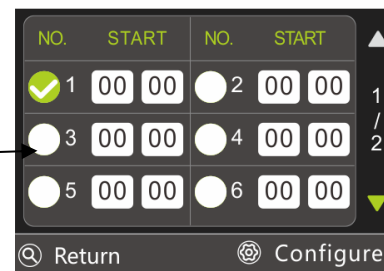
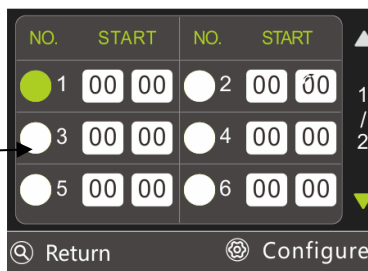
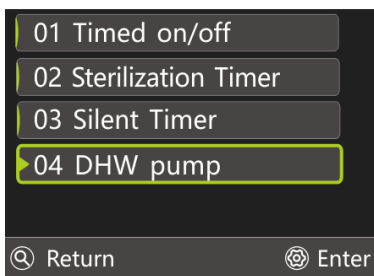
Check whether there is a silent icon on the main interface to confirm the silent mode, as shown below, it has entered the silent mode.



8.4.3.4 Timed Turn On the Lower Return Water Pump


The function of the lower return water pump is to return the water in the water network.

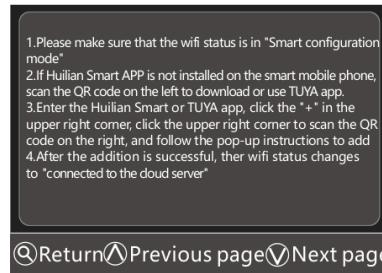
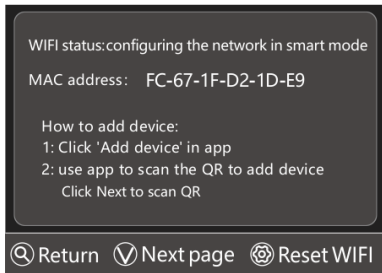
Press  on the main interface to enter the setting menu, select "Timer" and press  to enter, find "DHW pump" → press  to enter the setting interface → press \wedge or \vee move to set the round box on the serial number of each group , and press  to make this group of timing effective or, to cancel this group of timing.



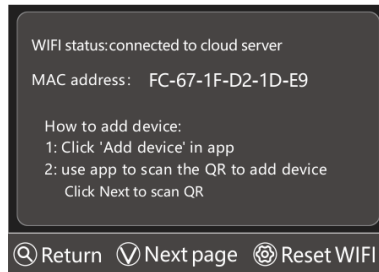
8.4.4 Network Configuration Guidelines

The wire controller has a built-in WI-FI module, which can establish communication with the mobile APPs. Allow users to use the mobile APPs to control the unit.


When configuring the wire controller to a WI-FI network for the first time, it is necessary to ensure that the wire controller and the mobile phone are under the same WI-FI signal, and the signal cannot be too weak. Through “Main Interface > Setting Menu > WIFI Settings”, press  to enter the distribution network interface. The interface displays the current WI-FI status, MAC address, and network configuration instructions.

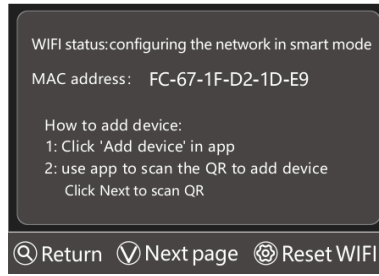


If it shows "WIFI status connected to the cloud server", then the wire controller has already been provisioned, and it can be operated on the account that has completed the network provisioning before.



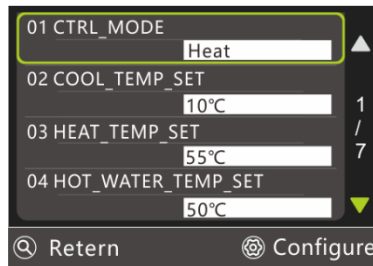
If the WIFI status shows other content or you need to cancel the previously completed network configuration, the following steps can be followed (Note: Accounts that have completed network configuration and successfully communicated will no longer be able to operate the unit).

Press  on the first page of the distribution network interface, and when the WIFI status shows 'configuring the network in Smart mode', you can use the mobile APP for network configuring and connection. Please see Chapter 9 for details.



8.4.5 User Parameters

User parameters can be directly used by end users, as shown in the interface:



For more user parameters, please refer to the following table (the actual parameters are subject to the display of the wire controller):

Setting	Range	Unit
Control Mode	Cooling Mode Heating Mode Automatic Mode	
Cooling Temp Setting	min...max	°C
Heating Temp Setting	min...max	°C
Hot Water Temp Setting	min...max	°C
Cooling Room Temp Setting	16...30	°C
Heating Room Temp Setting	16...30	°C
Heating Temp Setting(B)	40...60	°C
Heating Room Temp Setting(B)	16...30	°C
Power Mode	Standard; Strong; Energy-saving.	





Sterilization	Forbidden、 Use	
Sterilization Temperature	60...70	°C
Sterilization Cycle Max	90...300	min
High Temp Sterilization Time	5...60	min
Zone A Cooling Curve	Forbidden Low-Temp Curve1 Low-Temp Curve2 Low-Temp Curve3 Low-Temp Curve4 Low-Temp Curve5 Low-Temp Curve6 Low-Temp Curve7 Low-Temp Curve8 High-Temp Curve1 High-Temp Curve2 High-Temp Curve3 High-Temp Curve4 High-Temp Curve5 High-Temp Curve6 High-Temp Curve7 High-Temp Curve8 Curve9	
Zone A Heating Curve	Forbidden Low-Temp Curve1 Low-Temp Curve2 Low-Temp Curve3 Low-Temp Curve4 Low-Temp Curve5 Low-Temp Curve6 Low-Temp Curve7	

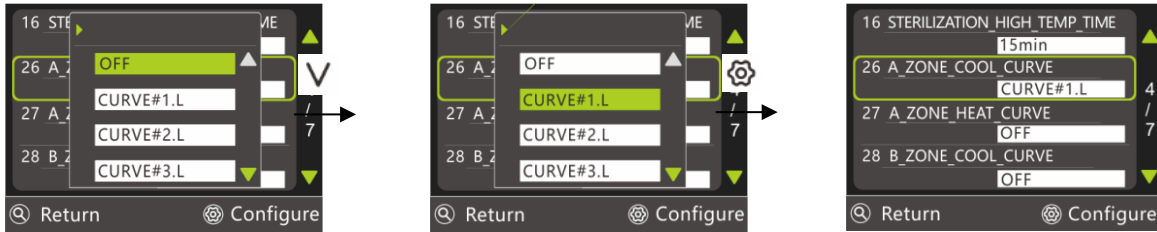
	<p>Low-Temp Curve8 High-Temp Curve1 High-Temp Curve2 High-Temp Curve3 High-Temp Curve4 High-Temp Curve5 High-Temp Curve6 High-Temp Curve7 High-Temp Curve8 Curve9</p>	
<p>Zone B Cooling Curve</p>	<p>Forbidden Low-Temp Curve1 Low-Temp Curve2 Low-Temp Curve3 Low-Temp Curve4 Low-Temp Curve5 Low-Temp Curve6 Low-Temp Curve7 Low-Temp Curve8 High-Temp Curve1 High-Temp Curve2 High-Temp Curve3 High-Temp Curve4 High-Temp Curve5 High-Temp Curve6 High-Temp Curve7 High-Temp Curve8 Curve9</p>	
<p>Zone B Heating Curve</p>	<p>Forbidden Low-Temp Curve1</p>	

	Low-Temp Curve2 Low-Temp Curve3 Low-Temp Curve4 Low-Temp Curve5 Low-Temp Curve6 Low-Temp Curve7 Low-Temp Curve8 High-Temp Curve1 High-Temp Curve2 High-Temp Curve3 High-Temp Curve4 High-Temp Curve5 High-Temp Curve6 High-Temp Curve7 High-Temp Curve8 Curve9	
Curve #9 - TA - Cooling 1	-5...46	°C
Curve #9 - TA - Cooling 2	-5...46	°C
Curve #9 - TW out2 - Cooling 1	5...25	°C
Curve #9 - TW out2 - Cooling 2	5...25	°C
Curve #9 - TA - Heating 1	-25...35	°C
Curve #9 - TA - Heating 2	-25...35	°C
Curve #9 - TW out 2 - Heating 1	25...65	°C
Curve #9 - TW out 2 - Heating 2	25...65	°C
00#UNIT	Forbidden、 Use	

8.4.6 Pre-set Function of Ambient Temperature

The ambient temperature preset temperature function can preset the target water temperature according to the external ambient temperature.

In the user parameter interface, select one of the "A zone cooling curve", "A zone heating curve", "B zone cooling curve", "B zone heating curve" as needed or multiple, press the key , disable or use a different temperature curve of ambient temperature preset by using the  key or  key, and press  to save the modification.

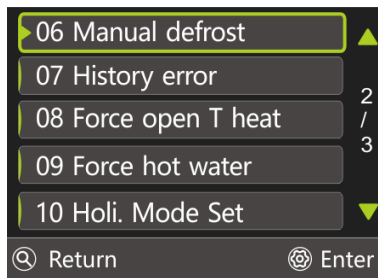



Note: The preset temperature curve for ambient temperature is divided into cooling and heating, which use different curves. There are a total of 8 low-temp curves, 8 high-temp curves, and one curve made by setting for cooling. There are a total of 8 low-temp curves, 8 high-temp curves, and one curve made by setting for heating.

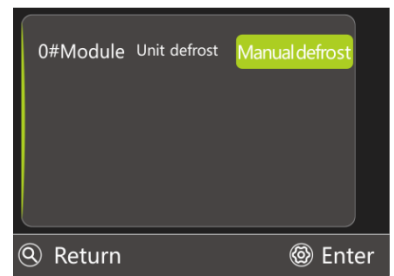
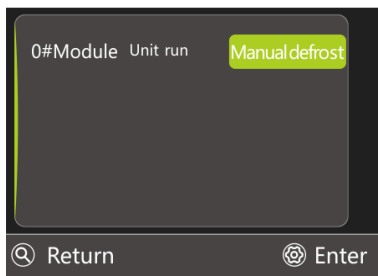
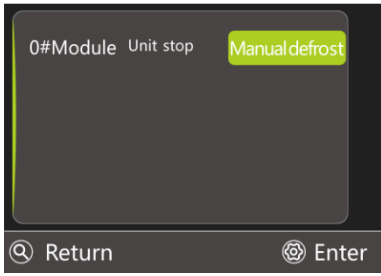
8.4.7 Manual Defrost

The heat pump unit is equipped with automatic intelligent defrosting function during normal operation, but manual defrosting function may be required in some cases. Use the manual defrosting function via the following path:

“Main interface” > “Setting menu”> “Manual defrost”, as shown in the figure:



Press  to enter the manual defrost setting interface, the interface will display the Current State of each module, such as Unit Stop, Unit Run, and Unit Defrost.




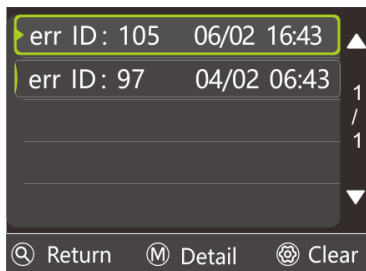
Only when the module is in a running state and the water temperature, fin temperature, and other conditions are met can the key be pressed to successfully enter defrosting. The current state of the module will switch to being defrosted, otherwise, maintain the original state.


8.4.8 History Error

Errors that have occurred on the unit (including those that have been reset) will be recorded in the controller, and the query method is as follows:

First, find the option "History Error" through the path:

Main Interface > Settings Menu > History Error, and press  to enter the history error interface.

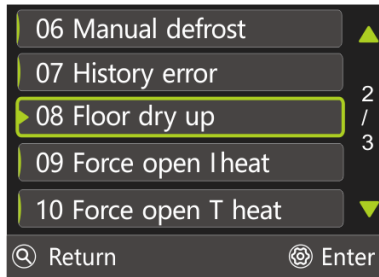





Through this interface, the code and occurrence time of each error in the past can be seen. Pressing the  key will clear all historical errors. Please operate with caution. Press **M** to view the specific meaning of the error ID.

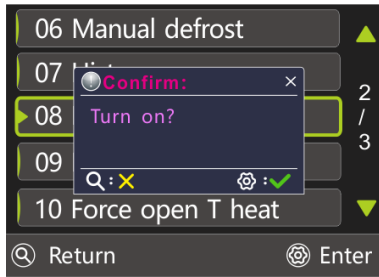





8.4.9 Floor Dry-Up

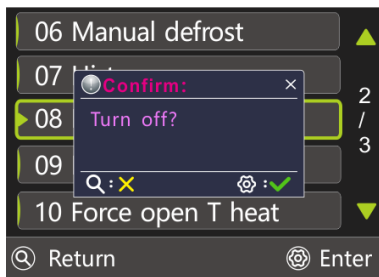
This function can only be enabled when the "floor heating water temp probe" is in use and the unit is in standby mode. Find "Main interface" > "Setting menu" > "Floor Dry Up"



Press the  key to display the confirmation window (as shown), press  again to confirm the use of this function and close the window. Press the key  to cancel and close the pop-up window.



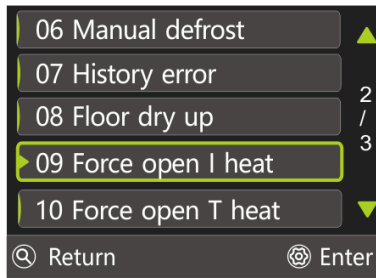
If the floor dry-up function has been enabled, press  on the 'Floor Dry-up' option, and a confirmation window will pop up to close the function (as shown). Press the key  to confirm closing the floor dry-up function and close the window. Press the key  to cancel and close the pop-up window.






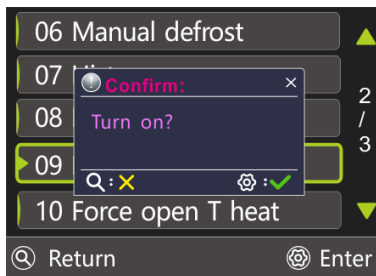
8.4.10 Force open I heat




Follow the path below to find the 'Forced Auxiliary Electric Heating' function.

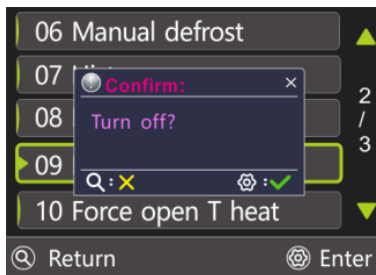
Main interface > Setting menu > "Force open I heat" .



Press the key  to display a confirmation window (as shown below), press the key  to confirm the use of this function and close the window, press the key  to cancel and close the window.






If the auxiliary electric heating function has been turned on, press the key  in the option of "force open I heat", and a confirmation window (as shown) will appear. Press  to confirm the closing of the forced auxiliary electric heating function and close the window. Press the key  to cancel and close the window.

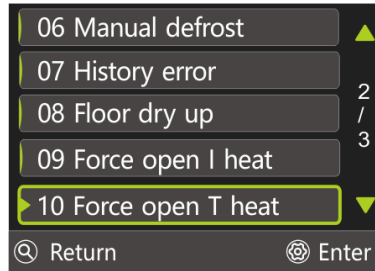





8.4.11 Force open T heat

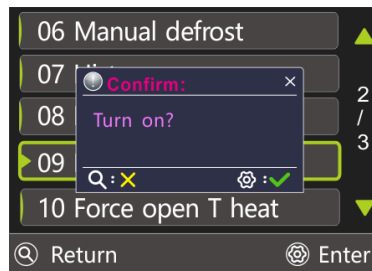
“Force open T heat” is used to forcibly turn on the electric heater in the water tank to produce hot water.




When there is a cooling or heating demand and the heat pump is in cooling or heating mode, there may be still a demand for hot water. The electric heating function of the "Force open T heat" can be used for hot water production.

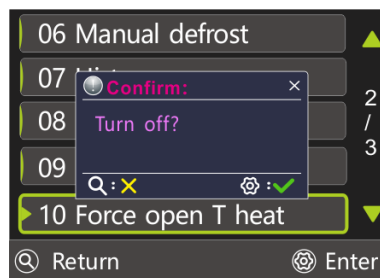
On the main interface, press the key  to enter the setting menu, and press  or  to find the option of "Force open T heat".



Press on the key  to display the window for confirmation. Press on the key  to confirm turning on the Force open T heat and close the window. Press  to cancel and close the pop-up window.






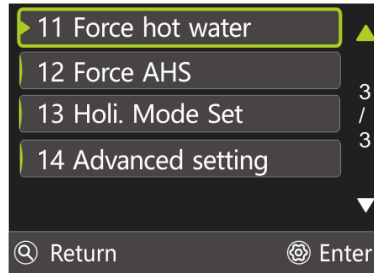
If the forced opening water tank electric heating function is enabled, press  on the 'Force open T heat' option and a confirmation window will appear, press  is to confirm the closing and close the window, and press on the cancel key  is to close the pop-up window.






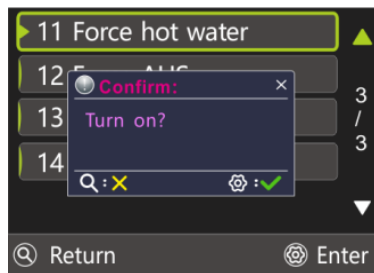
8.4.12 Force Hot Water




The forced hot water mode function forces the system to operate in the hot water production mode, and the heat pump and auxiliary electric heating, water tank electric heating, and external heat source will all operate in the forced hot water mode.

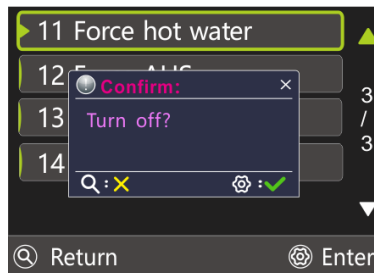
Press on the key  in the main interface to enter the settings menu, and press  or  to find the option of "Force Hot Water".



Press the key  to display the confirmation window, press  to confirm turning on the force hot water mode and close the window. Press the key  to cancel and close the pop-up window.



If the forced hot water function is enabled, press the key  in the 'Force Hot Water' option to display a confirmation window for closing the function. Press  to confirm closing the forced hot water function and close the window. Press  to cancel and close the pop-up window.

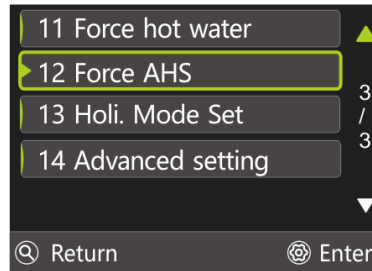





8.4.13 Force AHS

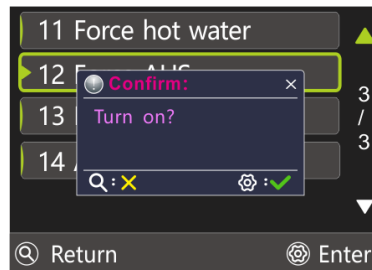
In heating or hot water mode, heat can be provided by manually forcing an additional heat source on.


Follow the following path to find the function of "Force AHS":

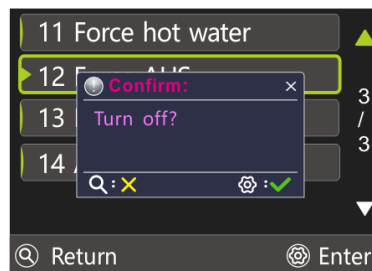
"Main interface" > "Settings menu" > " Force AHS".



Press  to display the confirmation window, press  to confirm the opening of the force AHS and close the window. Press  to cancel and close the pop-up window.



If the forced opening of additional heat source function is enabled, press on the 'Force AHS' option to display a confirmation window to close the function. Press on  confirm to close the 'Force AHS'.









8.4.14 Holiday Mode

8.4.14.1 Holiday Away Mode

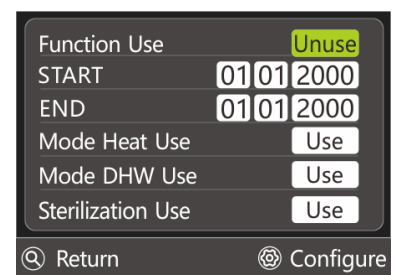
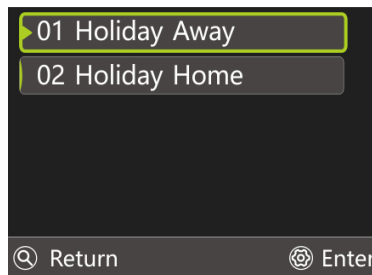
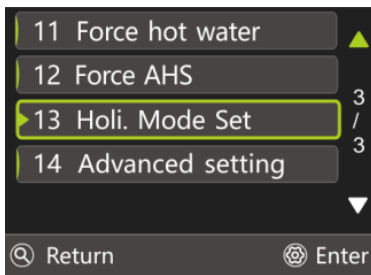
If entering holiday away mode, the following icon will appear in the main interface.



The Holiday Away mode is often used to go out during winter holidays to prevent waterways from freezing. Enter this mode after leaving home and end it before returning home.

Press the key  in the main interface to enter the settings menu, and press  or  to find 'Holiday Mode Set'. Press  to enter the holiday mode selection interface, press  or  to find 'Holiday Away'

→ Press  to enter the holiday away mode setting interface

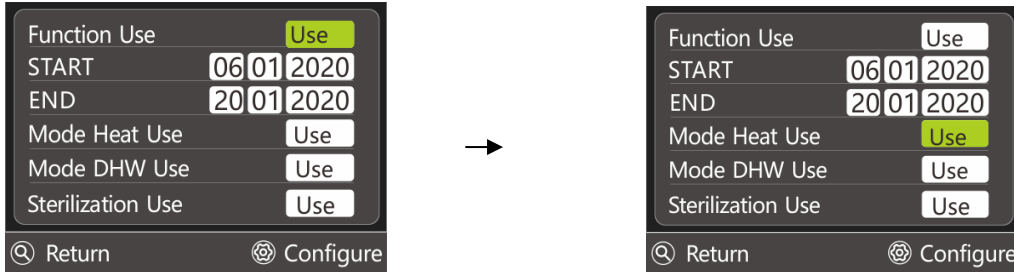


Application example: Assuming it is January 3, 2020, and you will be out for two weeks in three days, that is, on January 6, 2020, and back home on January 20, 2020. In order to prevent the waterway from freezing, you can set it according to the following table:

Parameter	Value
Function Use	Use
Start	06-01-2020
End	20-01-2020
Mode Heat Use	Use
Mode DHW use	Use

The setting is as follows:

Press \wedge or \vee move to 'Function use', press ⚙ to set to 'Use' (press ⚙ again to disable), use the holiday away function \rightarrow press \wedge or \vee move to ' Mode Heat Use', press ⚙ to set to 'Use'.

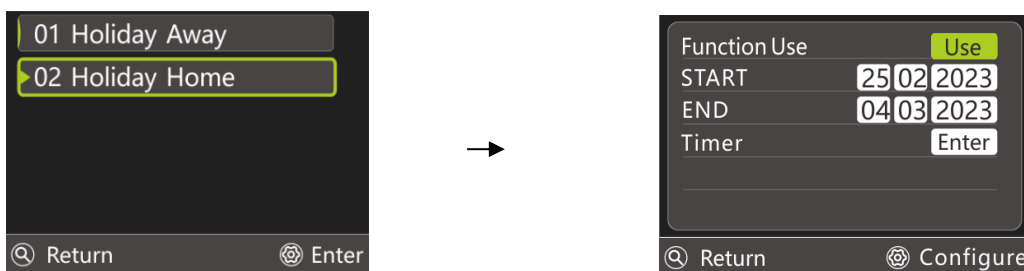


The settings for domestic hot water use and sterilization use are the same as heating mode use .

8.4.14.2 Holiday Home Mode

Holiday Home Mode is similar to Timing Mode. When Holiday Home Mode takes effect, the setting of Timing function will be invalid. For example, the holiday home function is enabled, and it is set to enter this mode from July 1, 2020 to July 7, 2020. Then, before July 1, 2020, and after July 7, 2020, the regular timing function is performed. From July 1, 2020 to July 7, 2020, the holiday home function is performed.

"Main Interface" > "Settings Menu" > "Holiday Mode Settings" > "Holiday Home", as shown in the left figure below \rightarrow Press \wedge or \vee to select " Function Use ', press ⚙ Set to 'Use' (press ⚙ set to Disable again), and use the Holiday Home function.



Please refer to 7.2.5 Time Setting Operation for the settings of 'Start Time' and 'End Time'.

Press \wedge or \vee select "Timing setting", press ⚙ to enter the timing setting interface, please refer to 7.4.3.1.1 Daily Time switch.

NO.	START	END	MODE	TEMP
1	00:00	00:00	Cool	0°C
2	00:00	00:00	Cool	0°C
3	00:30	00:00	Cool	0°C

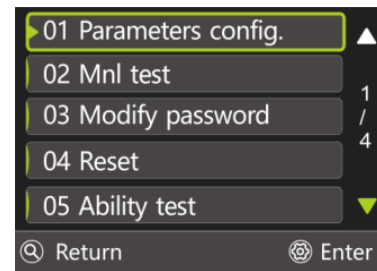
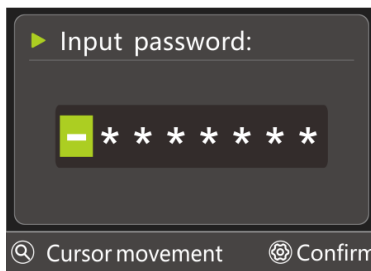
1 / 2

Return Select Enter

8.4.15 Advanced Setting

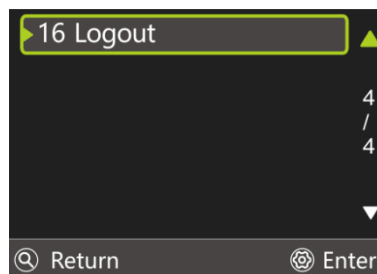
For installation and service needs, authorized engineers or service personnel can modify the parameters of the controller through the following path and enter passwords. The path to the advanced settings interface is as follows:

“Main interface” > “Settings menu” > “Advanced settings”, enter the correct password in the following interface and press the key to confirm.



8.4.15.1 Logout of Advanced Settings

After confirming that all parameters have been modified, you need to choose to log out the password, find “Logout” in the advanced setting interface, and press . The next time you re-enter the advanced setting interface, you will need to re-enter the password.

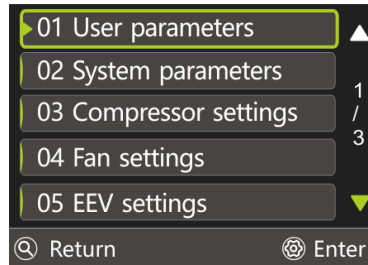


If you do not press to log out, you do not need to enter a password for the next time you re-enter the advanced setting interface (unless you re-power up or do not operate for a long time).

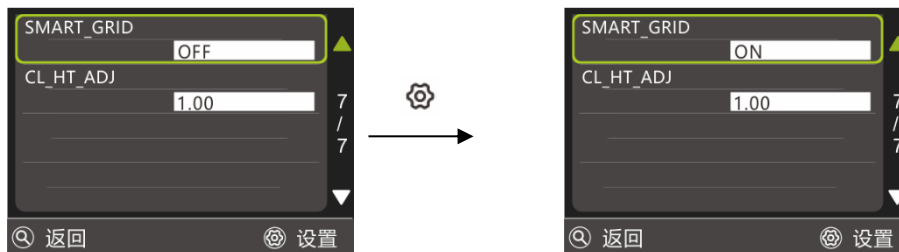
8.4.15.2 Smart Grid

Enter the password of high-level permission when entering advanced settings, so as to obtain the setting permission of smart grid function.

After entering the password in 'Advanced Settings', entering 'Parameter Configuration' will display multiple parameter groups.



Use \wedge or \vee move to 'System Parameters' and select 'Smart Grid'. If the 'Smart Grid' is disabled, press ⚙ to change to 'on'. If the 'Smart Grid' is in use, press ⚙ to change it to disabled.



Chapter 9 Network Configuration Instruction

9.1 Download the "Huilian Smart" APP

Download the "Huilian Smart" APP by scanning the QR code on your mobile phone, complete the registration and login, and allow all access rights of this application to get the best user experience.



9.2 Connecting Wi-Fi

Ensure that the mobile phone is under the same Wi-Fi as the device to be connected, select the 2.4 GHz Wi-Fi network on the mobile phone and enter the password to connect the mobile phone to Wi-Fi.

Note: If the Wi-Fi in the current environment is 5GHz, please set the router to 2.4 GHz first. The router setting methods are as follows normally.

If the router supports both 2.4 GHz and 5GHz Wi-Fi, but only one Wi-Fi name can be found on the Wi-Fi search page on your mobile phone, please refer to the following steps (due to different setup processes of different brands, please refer to the router user manual for final instructions):

1. Enter the "Wireless" page of the router (the entry method is usually marked on the label on the back of the router).
2. Find the 2.4 GHz setting interface, change the Wi-Fi name (SSID) to "xxx-2.4G", and save the settings.
3. Find the 5GHz setting interface, change the Wi-Fi name (SSID) to "xxx-5G", and save the settings.

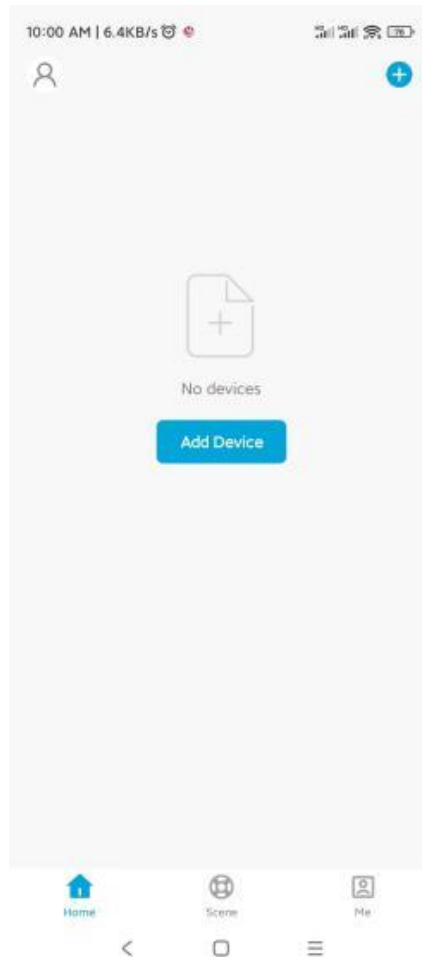
4. After the renaming is completed, both Wi-Fi names, "xxx-2. 4G" and "xxx-5G", can be found on the Wi-Fi search page of the mobile phone.

9.3 Add Device

1) Turn on the Wi-Fi and Bluetooth of the mobile phone and enable location access. Please ensure that both Wi-Fi and Bluetooth are turned on;

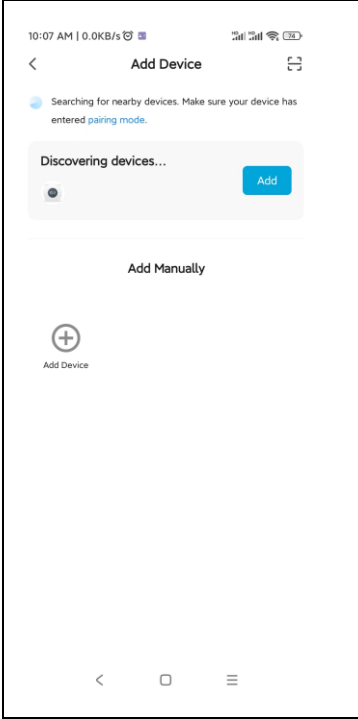
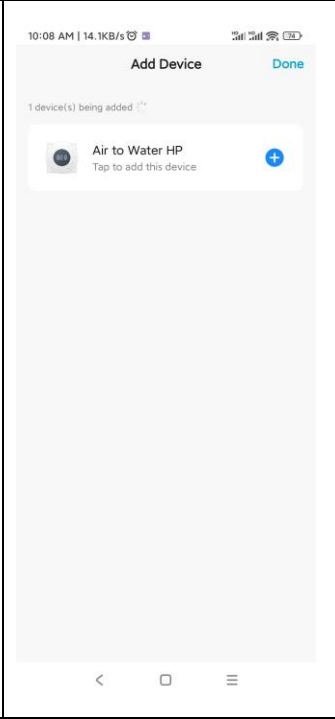
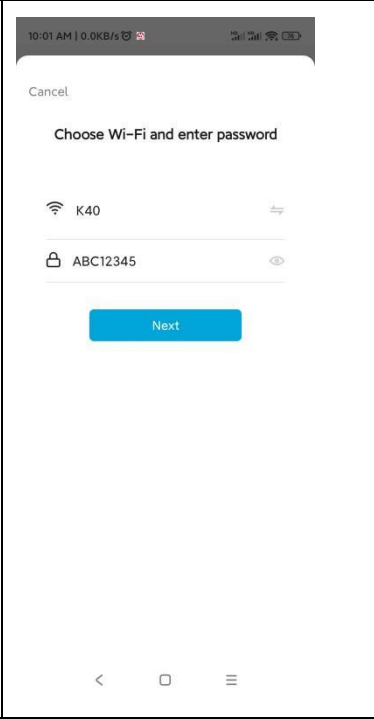
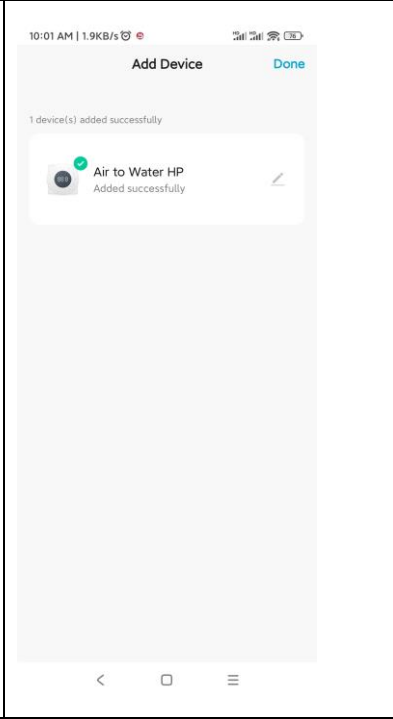
2) Turn on the "Huilian Smart" APP on the mobile phone and select "Home Page" in the bottom navigation bar;

3) Press the "+" key in the upper right corner of the homepage, or press the "Add Device" key in the center of the homepage to enter the device adding interface.



Method 1:

When the phone enters the Add Device interface, just wait for a moment to display the list of devices to be added. And then, select the devices to add, as shown in the following:

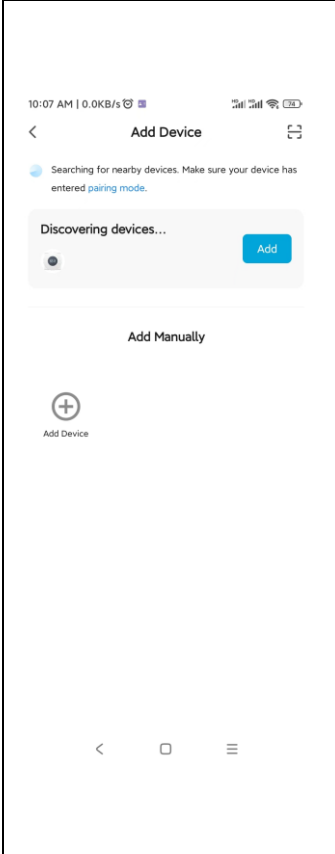
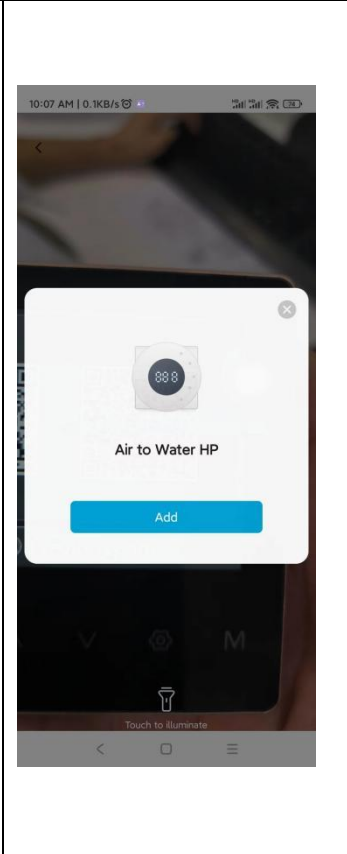
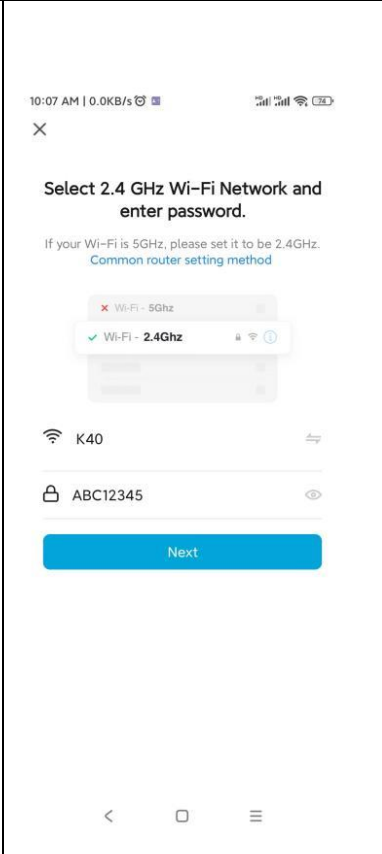
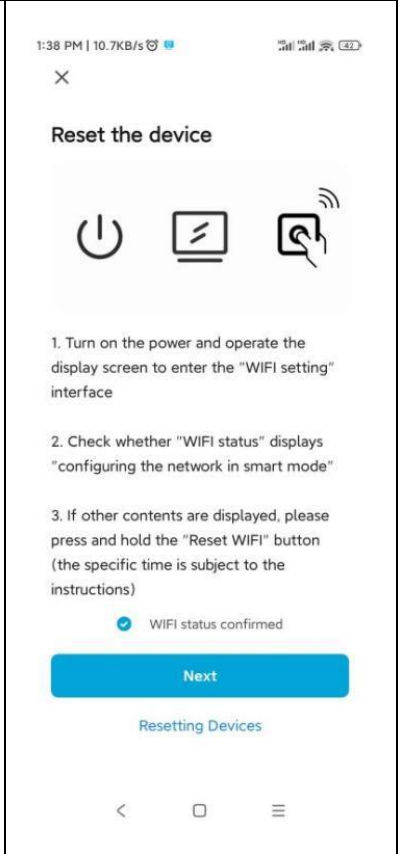
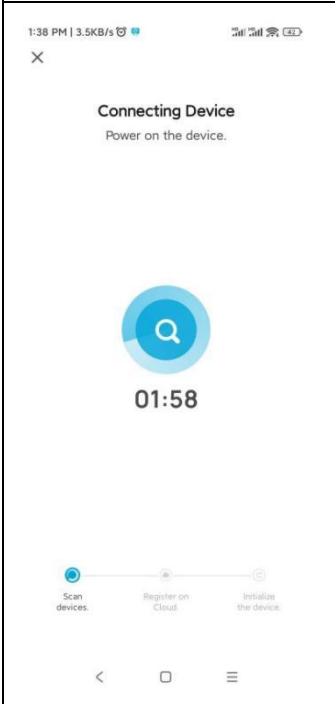
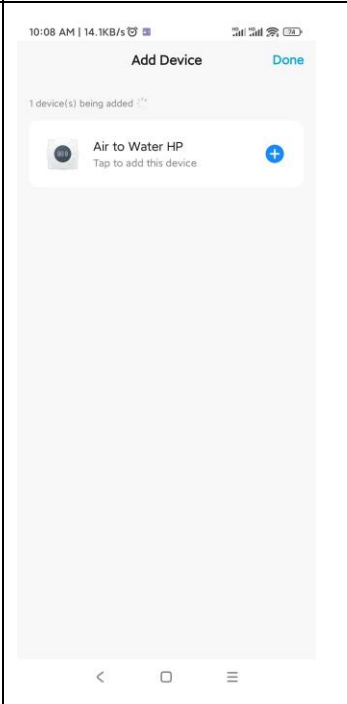
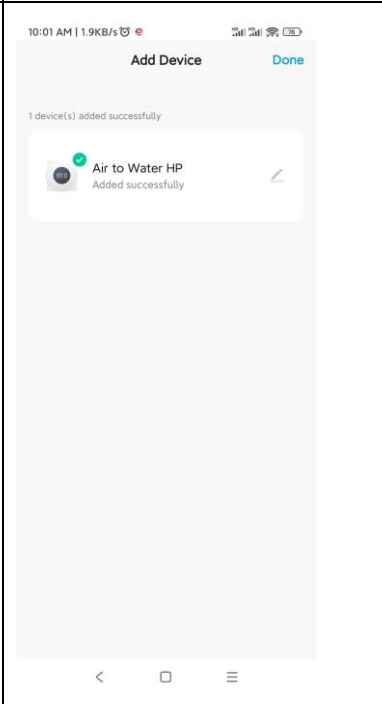
			
<p>1. Wait for a moment, select the device to be added, and press the "Add" icon;</p>	<p>2. Press the "+" icon on the right;</p>	<p>3. Enter the WI-FI account number and password of the mobile phone connection, and press the "Next" icon;</p>	<p>4. Wait for a moment, when the progress bar is finished, press the "Finish" icon in the upper right corner to complete the device addition.</p>

Method 2:

Press on the "Scan" icon in the upper right corner of the "Add Device" interface, scan the QR code, and follow the steps shown in the following to complete the adding device operation.

Note :

- 1, Please obtain the device network QR code from the control panel of the product.
- 2, If the Wi-Fi status of the device has been checked and confirmed to be correct, under the step of "Please reset the device first", please directly check "Wi-Fi status confirmed" and press the "Next" icon to directly connect the device without resetting the device.

			
<p>Press on the "Scan" icon in the upper right corner;</p>	<p>Scan the device network QR code. After scanning, as shown in the window above, press the "Add" icon;</p>	<p>Enter the Wi-Fi account number and password of the mobile phone connection, and press the "Next" icon;</p>	<p>Check the 'WI-FI Status Confirmed' and press on' Next 'icon;</p>
			

<p>Searching for the device.</p>	<p>After the search is completed, press the "+" icon on the right</p>	<p>Wait for a moment. When the progress bar is finished, press the "Done" icon in the upper right corner to complete the device addition</p>
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9.4 Complete the Spatial Information

1) Enter the "Huilian Smart" APP on your mobile phone, and press "Me" - "Space Management" - "My Space" to complete the spatial information. The contents that can be improved includes: space name, home location and new areas in the space. Please enter the "Complete Space Information" interface according to the guidelines below.

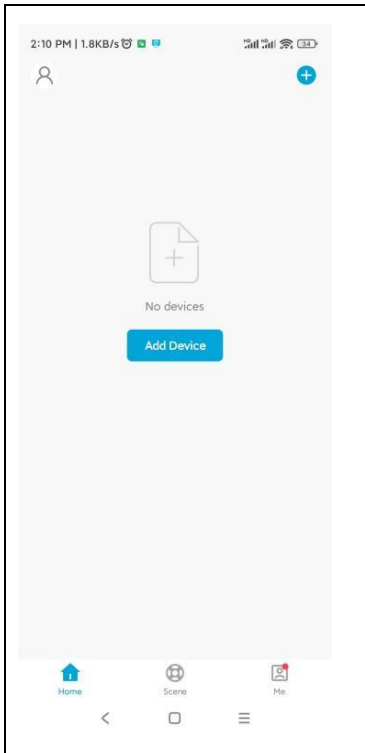
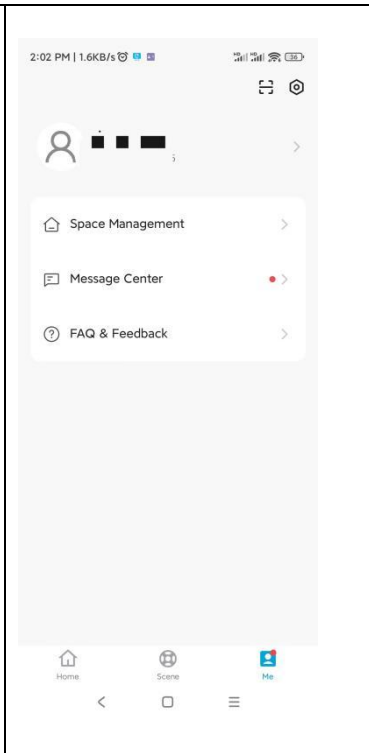
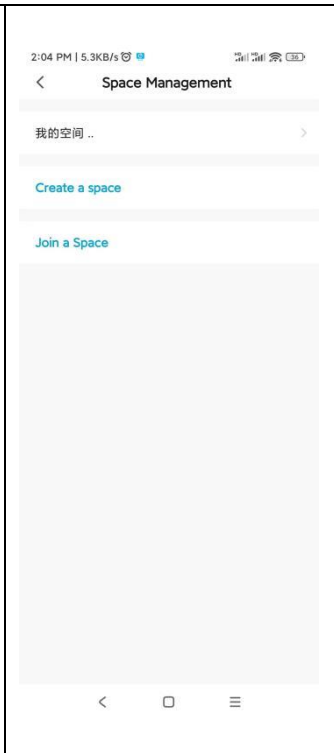
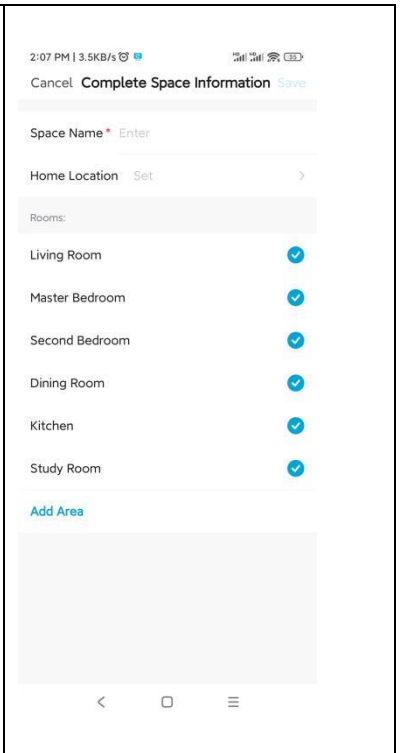
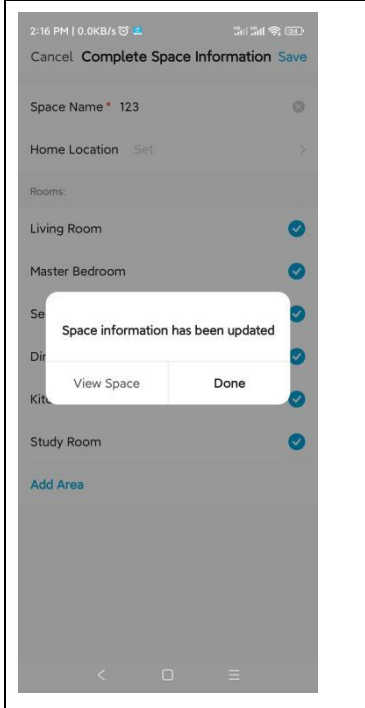
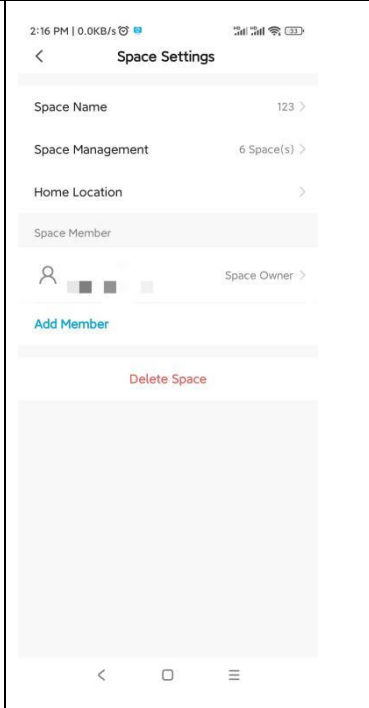
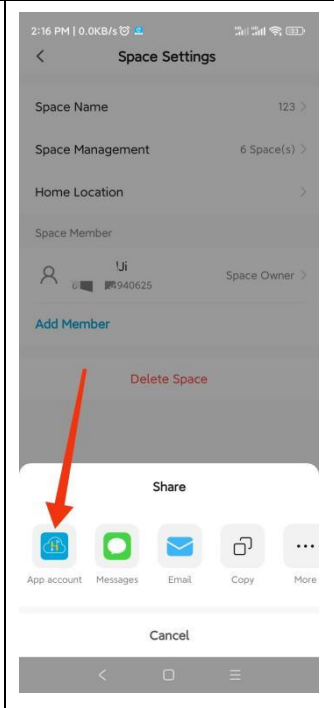
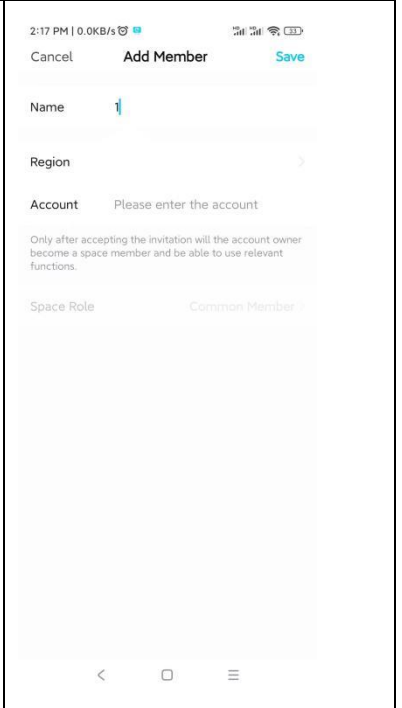
Note: If you need to create an additional space, please press on "Add Area" to create it yourself.

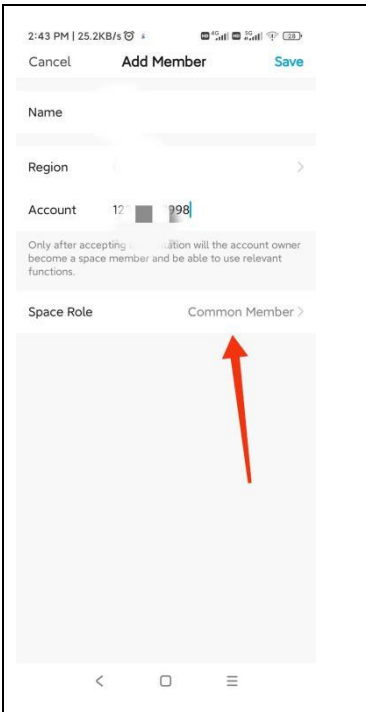
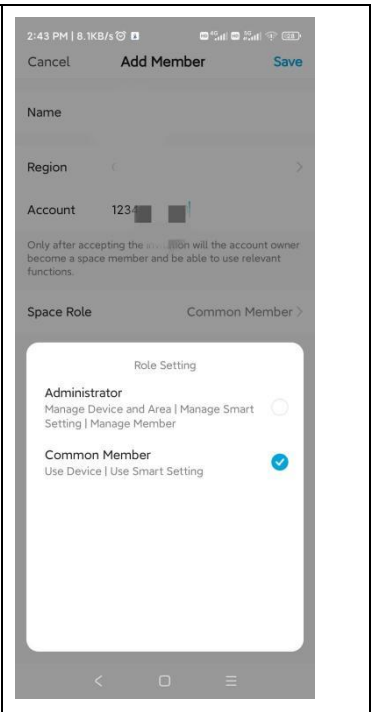
Adding multiple areas in the space is good for refining device management.

2) After completing the spatial information, please press "Save" in the upper right corner to save the completed spatial information. After the space information is updated, press "View Space" in the Tooltip to further add new members to the space. By adding members, relevant personnel can access all devices in the current space. Please follow the guidelines below to complete space information and add space members.

Note: The invitation methods for adding space members include: adding an app account, sending invitation codes through SMS and messages, etc. Here, let's take adding an app account as an example.

3) Each space has one space owner only, and the member role of each space member defaults to 'common member'. Common members have permission to use devices and Scene. If you would like a space member to manage devices and scene, you can set their space role to "administrator", as shown below:

			
<p>Press on the 'Me' icon in the bottom right corner</p>	<p>Press on the "Space Management" icon;</p>	<p>Press on the 'My Space' icon;</p>	<p>Fill in the space information, and then press the "Save" icon in the upper right corner;</p>
			
<p>Press on 'View Space'</p>	<p>Press on the "Add Member" icon below</p>	<p>Select the invitation method;</p>	<p>Fill in member information;</p>

	
<p>Press on the "Space Role" icon;</p>	<p>After role setting, press the 'Save' icon in the upper right corner.</p>

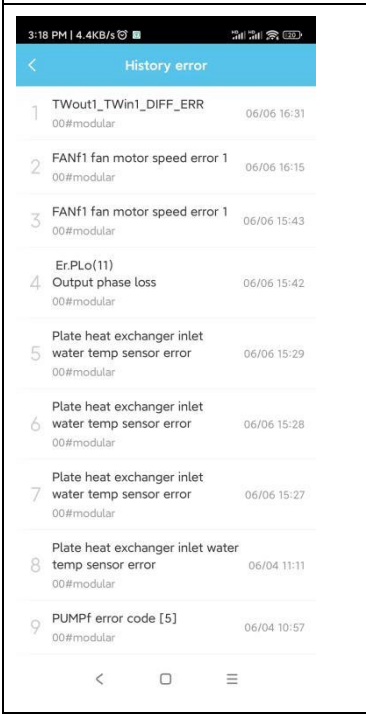
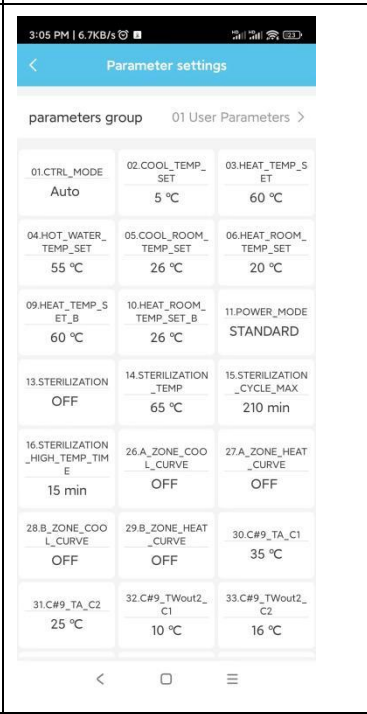
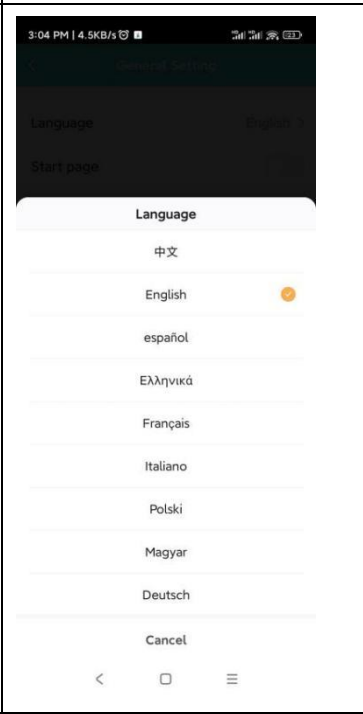
9.5 Share Device

After entering the device panel, press the "Modify" icon key in the upper right corner to enter the device details interface. Press "Share Device"->"Add Sharing", and enter the App account you want to share (the App account is the mobile phone number or email address at the time of registration), so as to share your own device with other users separately. Please follow the instructions below to complete the device sharing alone.

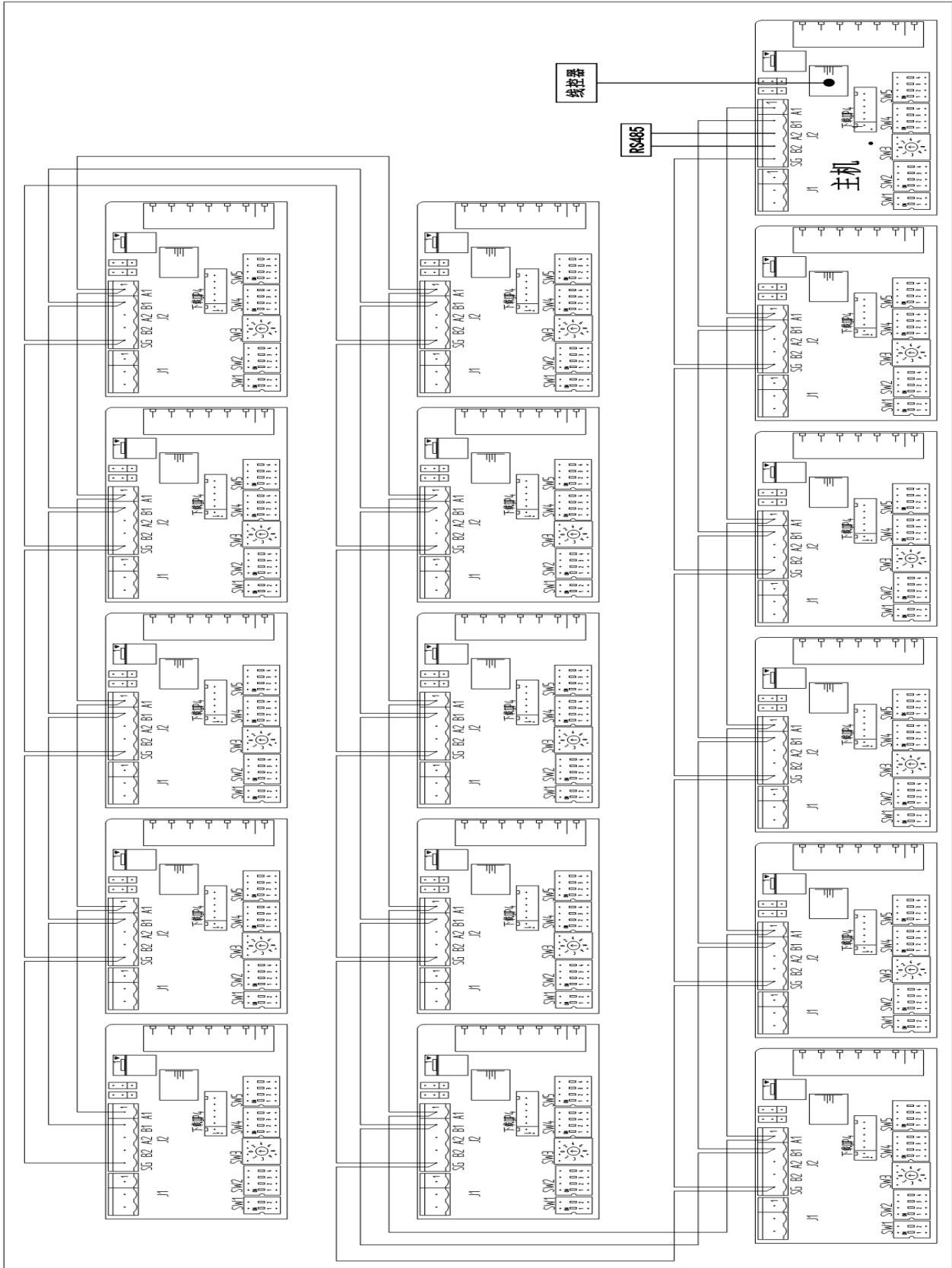
<p>1、 Press the "Modify" icon in the upper right corner;</p>	<p>2、 Press on the 'Share Device' icon;</p>	<p>3、 Press on the "Add Sharing" icon below;</p>	<p>4、 Select the sharing method to fill in the account, and press the 'Finish' icon to complete the sharing.</p>

9.6 The Device Interface Style

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<p>main interface</p>	<p>Status Query Interface (main interface - more - advanced - status query)</p>	<p>More menu (main interface - More)</p>	<p>Setting Mode Menu (main interface - Mode)</p>																				
 <p>3:18 PM 4.4KB/s</p> <p>History error</p> <ol style="list-style-type: none"> 1 TWout1_TWin1_DIFF_ERR 06/06 16:31 2 FANf1 fan motor speed error 1 06/06 16:15 3 FANf1 fan motor speed error 1 06/06 15:43 4 Er.PLo(11) Output phase loss 06/06 15:42 5 Plate heat exchanger inlet water temp sensor error 06/06 15:29 6 Plate heat exchanger inlet water temp sensor error 06/06 15:28 7 Plate heat exchanger inlet water temp sensor error 06/06 15:27 8 Plate heat exchanger inlet water temp sensor error 06/04 11:11 9 PUMPF error code [5] 06/04 10:57 	 <p>3:05 PM 6.7KB/s</p> <p>Parameter settings</p> <p>parameters group 01 User Parameters ></p> <table border="1"> <tr> <td>01.CTRL_MODE Auto</td> <td>02.COOL_TEMP_SET 5 °C</td> <td>03.HEAT_TEMP_SET 60 °C</td> </tr> <tr> <td>04.HOT_WATER_TEMP_SET 55 °C</td> <td>05.COOL_ROOM_TEMP_SET 26 °C</td> <td>06.HEAT_ROOM_TEMP_SET 20 °C</td> </tr> <tr> <td>09.HEAT_TEMP_SET_B 60 °C</td> <td>10.HEAT_ROOM_TEMP_SET_B 26 °C</td> <td>11.POWER_MODE STANDARD</td> </tr> <tr> <td>13.STERILIZATION OFF</td> <td>14.STERILIZATION_TEMP 65 °C</td> <td>15.STERILIZATION_CYCLE_MAX 210 min</td> </tr> <tr> <td>16.STERILIZATION_HIGH_TEMP_TIME 15 min</td> <td>26.A_ZONE_COOL_CURVE OFF</td> <td>27.A_ZONE_HEAT_CURVE OFF</td> </tr> <tr> <td>28.B_ZONE_COOL_CURVE OFF</td> <td>29.B_ZONE_HEAT_CURVE OFF</td> <td>30.C#9_TA_C1 35 °C</td> </tr> <tr> <td>31.C#9_TA_C2 25 °C</td> <td>32.C#9_TWout2_C1 10 °C</td> <td>33.C#9_TWout2_C2 16 °C</td> </tr> </table>	01.CTRL_MODE Auto	02.COOL_TEMP_SET 5 °C	03.HEAT_TEMP_SET 60 °C	04.HOT_WATER_TEMP_SET 55 °C	05.COOL_ROOM_TEMP_SET 26 °C	06.HEAT_ROOM_TEMP_SET 20 °C	09.HEAT_TEMP_SET_B 60 °C	10.HEAT_ROOM_TEMP_SET_B 26 °C	11.POWER_MODE STANDARD	13.STERILIZATION OFF	14.STERILIZATION_TEMP 65 °C	15.STERILIZATION_CYCLE_MAX 210 min	16.STERILIZATION_HIGH_TEMP_TIME 15 min	26.A_ZONE_COOL_CURVE OFF	27.A_ZONE_HEAT_CURVE OFF	28.B_ZONE_COOL_CURVE OFF	29.B_ZONE_HEAT_CURVE OFF	30.C#9_TA_C1 35 °C	31.C#9_TA_C2 25 °C	32.C#9_TWout2_C1 10 °C	33.C#9_TWout2_C2 16 °C	 <p>3:04 PM 4.5KB/s</p> <p>Language</p> <p>Start page</p> <p>Language</p> <ul style="list-style-type: none"> 中文 English <input checked="" type="radio"/> español Ελληνικά Français Italiano Polski Magyar Deutsch Cancel
01.CTRL_MODE Auto	02.COOL_TEMP_SET 5 °C	03.HEAT_TEMP_SET 60 °C																					
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<p>History Error Interface (main interface - more - advanced - history error)</p>	<p>Parameter Settings Interface</p>	<p>Language setting interface (main interface - more - setting - language)</p>																					

Chapter 10 Units Cascading Instructions



Cascading Units Installation Instructions:

The above diagram shows the wiring diagram of 16 (maximum) modular units cascading.

The steps for cascading modules are as follows:

- ✧ Step 1: Power off all units;
- ✧ Step 2. Corresponding wiring of the cascading interface; As shown, the terminal of controller J2 is a module cascading terminal. When module cascading is required, connect A1 to A1, B1 to B1, SG to SG of the J2 terminal of each module from the master unit to slave 2, slave 2 to slave 3, slave 3 to slave 4,... And so on, connecting one by one.
- ✧ Step 3: Module address dialing; As shown, the circular dial of the controller SW3 is the module address dial. It can be seen that the dial is 16 digits from 0 to F. When grouping the units, you need to dial the master address SW3 to 1, the slave 2 module SW3 address to 2, the slave 3 module SW3 address to 3,... And so on, dial the address one by one.
- ✧ Step 4: Power on all modular units;
- ✧ Step 5: Enter the module parameter settings and set the module number parameter based on the actual number of modules in the group.

Note: If the module address is dialed during power on, the unit needs to power on the controller again to read the address.

Operation instructions for cloud service connection:

After the cascading operation is completed, make sure the mater address SW3 is dialed to 1. Find the controller J2 terminal, connect A2 of the J2 terminal to A of the cloud service device, B2 to B of the cloud service device, and then connect the cloud service device to the computer.

Chapter 11 Common Errors and Solving Methods

Errors	Re	Detection Conditions	Alarm Action	Solutions
Device Errors				
Insufficient water flow	A/ M	30s after the water pump is started, it starts to detect insufficient water flow; When the switch is continuously disconnected [Insufficient Water Flow Detection Delay], an alarm will be issued.	Stop the unit, stop the air conditioning pump; the terminal pump does not stop; If [Start pump due to insufficient water flow] is set to "Use" and the ambient temperature TA is lower than 2°C, the air conditioner pump will not be turned off.	Check whether its corresponding input point is closed.
Auxiliary Electric Heating overload	M	Auxiliary electric heating overload signal detected	Alarm only, no shut down	Check whether the auxiliary heating wiring is normal.
Water tank electric overload	M	Water tank electric heating overload signal detected.	Alarm only, no shut down	Check whether the heating wiring of the water tank is normal
The compressor is under high pressure protection	A/ M	The detection starts after the compressor is running; If it is defrosting, stop defrosting and no alarm.	Shut down the compressor “non frequency-down shutdown”	Check whether the input status of the compressor high pressure signal [LDIhp] is normal.

<p>The high pressure of the pressure sensor is too high</p>	<p>A/ M</p>			<p>Check high pressure PRSd</p>
<p>The compressor is under low pressure protection</p>	<p>A/ M</p>	<p>After the compressor is running [low pressure detection delay], or when [standby detection low pressure] is set to use and standby, it starts to detect low pressure. When the low pressure continues [cooling/heating low pressure delay]: alarm.</p> <p>If the compressor is defrosting, the low pressure will not be detected; the low pressure will be re-detected after a delay after exiting defrosting.</p>	<p>Shut down the compressor</p>	<p>Check whether the input status of the compressor low pressure signal [LDIIP] is normal.</p>
<p>The low pressure of the pressure sensor is too low</p>	<p>A/ M</p>			<p>Check low pressure PRSs.</p>
<p>Temperature of discharge too high</p>	<p>A/ M</p>	<p>If the “Compressor Top Temperature Setting” is set to use, use the higher one of Compressor Top Temperature and Temperature of discharge TD” for making judgments:</p> <p>When temperature of discharge TD > [temperature of discharge is too high], alarm;</p> <p>When the temperature of discharge TD ≤ [temperature of discharge too high] - [temperature difference of exiting the temperature of discharge too high protection], reset is allowed.</p>	<p>Shut down the compressor “non frequency-down shutdown”</p>	<p>Check whether the temperature probe is normal;</p> <p>Check for lack of refrigerant.</p>

<p>The outlet water temperature of the plate heat exchanger is too low</p>	<p>A/ M</p>	<p>Detection during cooling: When the plate heat exchanger outlet water temperature $T_{Wout1} \leq$ [cooling outlet water temperature is too low], alarm; When the plate heat exchanger outlet water temperature $T_{Wout1} >$ [cooling outlet water temperature is too low] + [the temperature difference for exiting the cooling water outlet temperature protection], reset is allowed.</p>	<p>Shut down the compressor “non frequency-down shutdown”</p>	<p>Check the outlet water temperature T_{Wout1} and the return water temperature T_{Win1} of the plate heat exchanger.</p>
<p>Plate heat exchanger return water temperature is too low</p>	<p>A/ M</p>	<p>Detection during cooling: When the return water temperature of the plate heat exchanger T_{Win1} is \leq [cooling water outlet temperature too low]+1, alarm; When the return water temperature T_{Win1} of the plate heat exchanger $>$ [cooling outlet water temperature is too low]+[temperature difference when exiting the heating outlet water temperature protection]+1, reset is allowed.</p>		
<p>The outlet water temperature of the plate heat exchanger is too high</p>	<p>A/ M</p>	<p>Detection during heating: When the plate heat exchanger outlet water temperature $T_{Wout1} \geq$ [heating outlet water temperature is too high], alarm;</p>	<p>Shut down the compressor</p>	

		<p>When the plate heat exchanger outlet water temperature $T_{Wout1} < [\text{heating outlet water temperature is too high}] - [\text{temperature difference when exiting the heating outlet water temperature protection is too high}]$, reset is allowed.</p>		
<p>The return water temperature of plate heat exchanger is too high</p>	<p>A/ M</p>	<p>Detection during heating:</p> <p>When the return water temperature of the plate heat exchanger $T_{Win1} \geq [\text{heating outlet water temperature is too high}] - 1$, the alarm will be issued;</p> <p>When the return water temperature T_{Win1} of the plate heat exchanger $< [\text{heating outlet water temperature is too high}] - [\text{temperature difference when exiting the heating outlet water temperature protection is too high}] - 1$, recovery is allowed.</p>		
<p>The temperature difference between the outlet water and the return water of the plate heat exchanger is too large.</p>	<p>A/ M</p>	<p>Detection during Compressor on and non-defrost running:</p> <p>When the temperature difference between the outlet and return of the plate heat exchanger is greater than $[\text{the temperature difference between the outlet and return water is too large}]$ and lasts for 1 minute, an alarm will be given.</p> <p>When the temperature difference</p>	<p>Shut down the compressor</p>	<p>Check the temperature probe of the plate heat exchanger outlet water temperature and return water temperature;</p> <p>Check water flow, air flow, etc.</p>

		between the outlet and return of the plate heat exchanger is less than [excessive temperature difference between outlet and return water] -5, automatic reset is allowed.		
The temperature difference between the outlet water and the return water of the plate heat exchanger is abnormal	A/ M	<p>Detection during compressor on and non-defrosting operation:</p> <p>When the temperature difference between the outlet and return water of the plate heat exchanger is greater than [abnormal temperature difference between outlet and return water] and lasts for 10 minutes, alarm.</p> <p>After the compressor is turned off, automatic reset is allowed.</p>	Shut down the compressor	<p>Check the temperature probe of the plate heat exchanger outlet water temperature and return water temperature;</p> <p>Check water flow, air flow, etc.</p>
Frequent emergency defrosting	M	3 times Emergency defrosting within two hours	Shut down the compressor	Detect Refrigerant Volume
Low Refrigeration suction	A/ M	<p>During cooling operation:</p> <p>Within 3 minutes after the compressor is started, if the suction temperature TS <[cooling suction is too low]-5 and remains for 30 seconds, an alarm will be issued;</p> <p>3 minutes after the compressor is started, if the suction temperature TS <[cooling suction is too low] and remains for 30 seconds, an alarm will be issued;</p> <p>If the suction temperature TS ></p>	<p>Shut down the compressor</p> <p>“non frequency-down shutdown”</p>	Detect Refrigerant Volume

		<p>【cooling suction too low】 +2, reset is allowed;</p>		
<p>The speed of fan 1 is abnormal;</p> <p>The speed of fan 2 is abnormal.</p>	M	<p>This error is only detected when the Variable Frequency Fan Setting is PWM fan; After the fan is on, if the continuous “PWM wind speed detection delay” time of the wind speed is less than “PWM wind speed too low”, alarm.</p>	<p>Shut down the compressor</p>	<p>Check whether the PWM fan wiring is normal.</p>
<p>Abnormal temperature difference between suction and discharge</p>	M	<p>Disabled When “Suction and discharge abnormal detection delay” is 0; no detection during defrosting; after the compressor is turned on the “Suction and discharge abnormal detection delay”, if the suction temperature $T_S >$ temperature of discharge $T_D + 5$, alarm.</p>	<p>Shut down the compressor “non frequency-down shutdown”</p>	<p>Check whether the suction temperature and temperature of discharge are normal.</p>
<p>Low refrigeration evaporation</p>	A/ M	<p>During cooling operation: 3 minutes before the compressor is turned on, if the evaporating temperature (or the temperature behind the valve) $<$ [refrigeration evaporation is too low] -3°C and maintain it for 30 seconds, or 3 minutes after the compressor is turned on, if the evaporating temperature (or the temperature behind the valve) $<$ [Refrigeration evaporation is too low] and maintain for 30 seconds, alarm;</p> <p>When the evaporating</p>	<p>Shut down the compressor “non frequency-down shutdown”</p>	<p>Check whether the low pressure or the temperature behind the valve is normal.</p>

		temperature (or the temperature behind the valve) > [cooling evaporating too low] + 2, reset is allowed;		
Low ambient temperature limits the opening of the compressor.	A	When the compressor is in the ambient temperature shutdown zone, an alarm will sound. See "Ambient Temperature Limits" for details.	Shut down the compressor	Check whether the ambient temperature probe operates normally.
Communication failure between internal and external units.	A	Detect after power on.	Shut down the compressor	Check whether the communication line is properly connected and in good contact.
Protocol version too low	A	Detect after power on.	Shut down the compressor	Upgrade Protocol Version
Sensor Error				
Ambient temperature error	A	Detect after power on.	Shut down the compressor	Check whether the probe is connected properly; check whether the temperature probe is functioning normally.
Fin temperature error	M			
Temperature of discharge error	M			
Suction temperature error	M			
J5 pressure sensor malfunction	M			
J6 pressure sensor malfunction	M			

Hot water tank temperature error	A		Shut down the compressor	
Total outlet water temperature error	A		Shut down the compressor	
Total outlet water temperature error of the system	A		Shut down the AHS	
Floor heating water inlet temperature error	A		Shut down the compressor	
Outlet water temperature error of plate heat exchanger	A		Shut down the compressor	
Return water temperature error of plate heat exchanger	A		Shut down the compressor	
Temperature Error on the refrigerant liquid side	A		Alarm only	
Temperature error on the refrigerant air side	A		Alarm only	
Solar temperature error	A		Shut down the solar pump {PUMPS}	
Indoor temperature error	A		shut down the unit.	

Four reset methods for errors:

1) Power-on reset

After the errors are eliminated, the error can only be reset by powering on again;

Errors requiring power-on reset: please check the error table.

2) Limited automatic reset (A/M)

After the error alarm is triggered, when the error is eliminated, a delay of [error reset time] will occur.

Within this time, when the same error no longer occurs, it will automatically reset;

Within the set time [i.e. the allowable time for automatic reset], it can be automatically reset twice.

When the alarm is triggered for the third time, it is locked and needs to be shut down for a “specific time” before automatic reset; "Specific time": Starting from 30 minutes, each time the lock is triggered, it will increase by 30 minutes until the upper limit is 4 hours;

After manual reset, the number of alarms will be accumulated again, and the "specific time" will start from 30 minutes again.

Limited errors: see error table.

3) Automatic reset A

The alarm will automatically reset after the error is eliminated;

Automatic reset with no limit on the number of times;

4) Manual reset M

The alarm can only be manually reset through the controller after the error is eliminated;

Type 2) Type 3) errors can also be manually reset.

Please note: If the above operation fails to solve the problem, please contact your local dealer or designated maintenance unit in a timely manner. Do not dismantle the machine for maintenance without authorization!

Chapter 12 Installation Requirements for Water System

- The installation should be carried out according to the engineering installation diagram and corresponding construction standards;
- The drain pipe of the water tank should be installed near the drainage ditch and the drain outlet as much as possible to facilitate drainage;
- The water pressure used by the user should be less than 0.6MPa and greater than 0.1MPa;
- The pipes used should be metal pipes (such as stainless steel, plastic-lined, stainless steel-lined steel pipes or thin-walled copper pipes, etc.), if plastic pipes (such as PP-R pipes, ABS pipes, etc.) The expansion and contraction of the pipeline;
- Water pipes should be installed horizontally and vertically, and the pipes should be arranged reasonably to minimize bending; reduce the resistance loss of the water system;
- There must be no water leakage in the pipes and connecting parts. When the water pump is running, please remove the air in the water system pipes;
- After the tap water supply pipe, the connecting pipe between the unit and the pipe are installed, a tightness hydraulic test should be carried out, and the sewage should be discharged to ensure the cleanliness of the system;
- After the test is qualified and there is no leakage, the water supply valve and other valves of the water system and the circulating water pipeline should be insulated to avoid freezing and cracking in winter.

Chapter 13 Commissioning and Trial Run

◆ Preparations before trial run

- ✧ Check whether there is any abnormality in the device (whether the pipeline system in the device is damaged, whether the fan blades rotate well and do not interfere with other components);
- ✧ Check the power distribution system (whether the power supply is consistent with the needs of the device, whether all electrical connections are correct and firm, whether the grounding is reliable, whether the circuit is damaged, etc.);
- ✧ Check the circulation system (whether the water system is securely connected, whether the water inlet and outlet are connected correctly, whether there is air in the water circulation system, whether the valve switch position of the water circulation system is correct, whether the pipeline is well insulated, etc.).

◆ Trial Run

- ✧ After a full check of the entire system and confirmation that it meets the requirements, the trial run of the whole unit can be carried out;
- ✧ Turn on the power and the unit, and the host will start automatically after a delay of 3 minutes. Firstly, check whether the rotation of the fan and water pump is correct. If the direction is incorrect, turn off the power immediately, and readjust it. Listen to the compressor for any abnormal sounds;
- ✧ After the unit has been running for a period of time (3 days normally), it can be put into daily use if there is no abnormality.

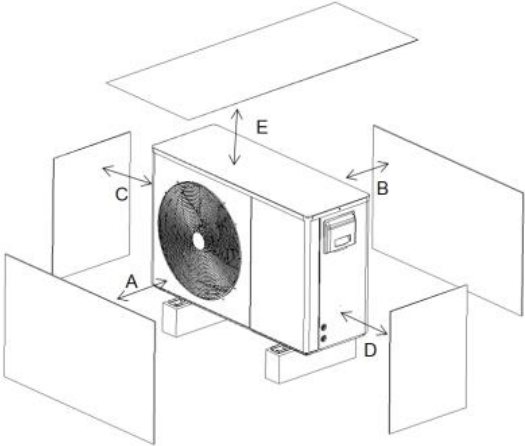
Chapter 14 Site Requirements for Heat Pump Installation

The Master Unit

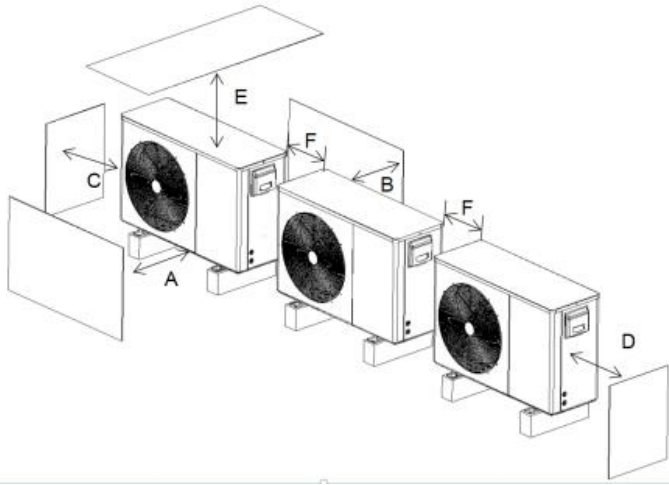
- ✧ The air source heat pump should be installed in a large space with good ventilation;
- ✧ The installation location should ensure that the air inlet and outlet are unobstructed;
- ✧ Set up a drainage ditch or an outlet near the installation location to facilitate drainage;
- ✧ The installation foundation or bracket should be solid and firm to ensure stable running of the unit;
- ✧ Ensure that the entire machine is installed upright and, must not tilted;
- ✧ Do not install the main unit in a place where pollution, corrosive gas, dust, sand, fallen leaves and other pollutants are easy to gather.
- ✧ The installation location should not be close to flammable, explosive or open flame places;
- ✧ The installation location of the unit must not exceed an altitude of 1000m or more. If it exceeds, please contact the maintenance technician.

The Water Tank

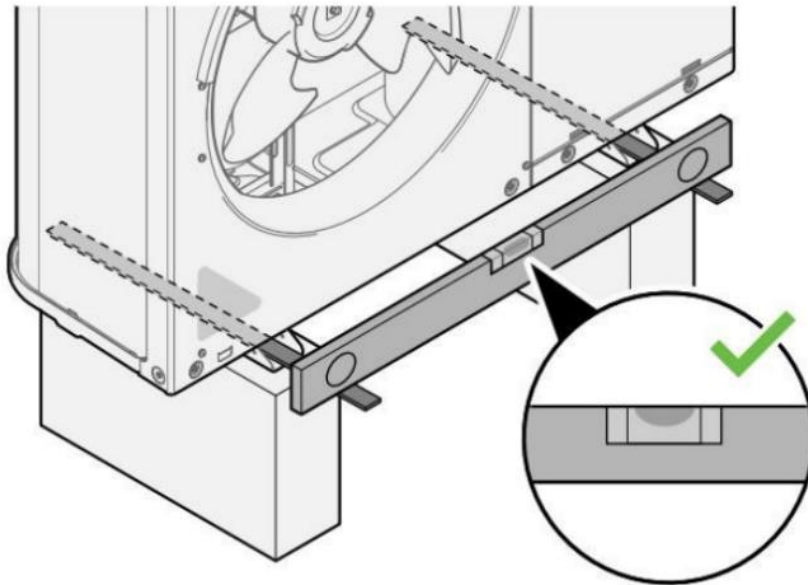
- ✧ The water tank should be installed in a place with an ambient temperature above 0 °C;
- ✧ Drainage ditch or outlet is set near the installation location, which can facilitate drainage;
- ✧ The installation foundation or bracket should be solid and firm, and the design should meet the weight bearing capacity of the water tank;
- ✧ Do not install the water tank in areas with contaminated or corrosive gases.

Installation Mode	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
<p>Single unit installation</p> 	<p>≥20 00</p>	<p>≥50 0</p>	<p>≥50 0</p>	<p>≥50 0</p>	<p>≥10 00</p>	<p>/</p>

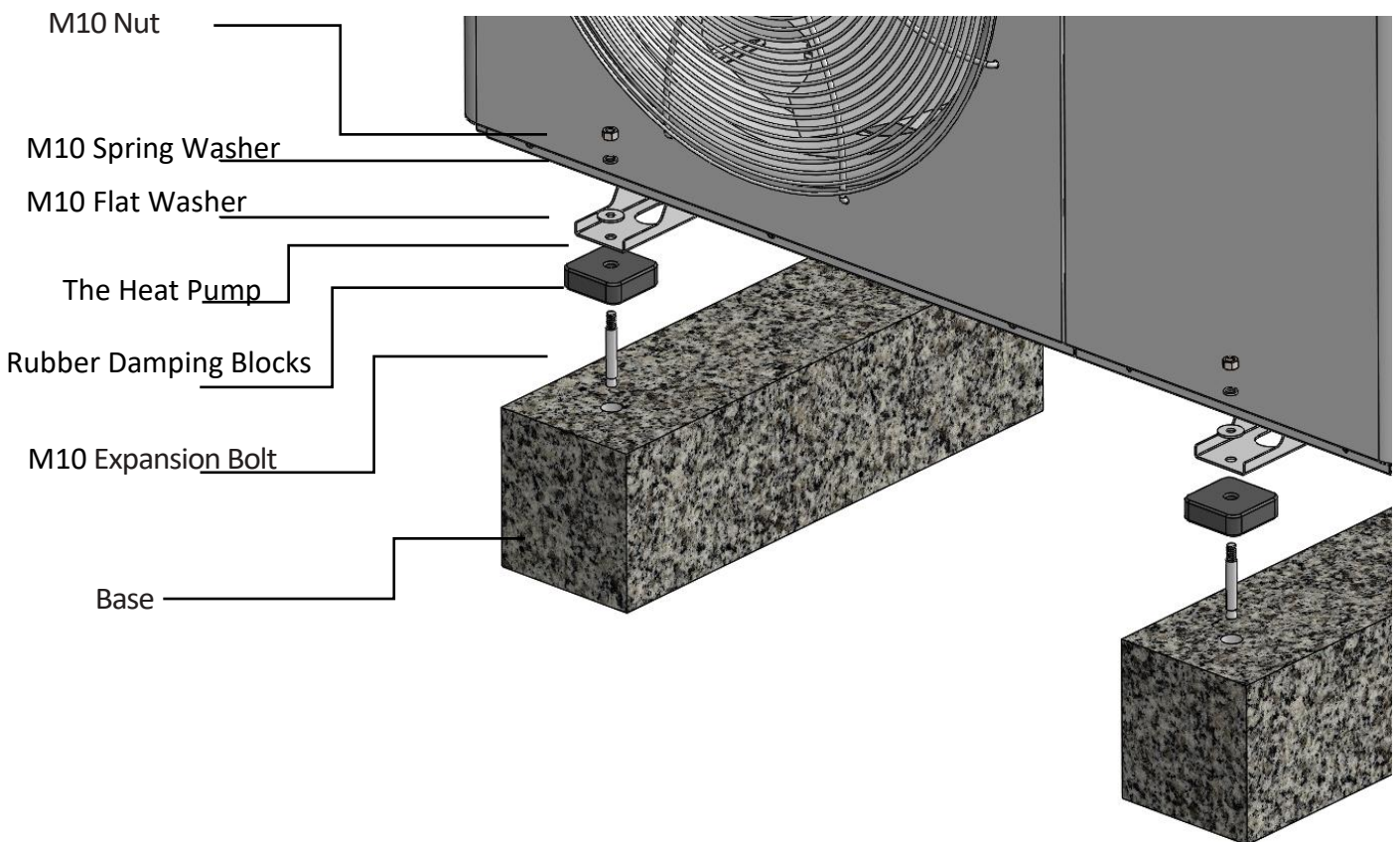
Cascade Installation



	≥ 20	≥ 50	≥ 50	≥ 50	≥ 10	≥ 10
00	0	0	0	0	00	00



Please ensure that the device is in a horizontal state during installation!

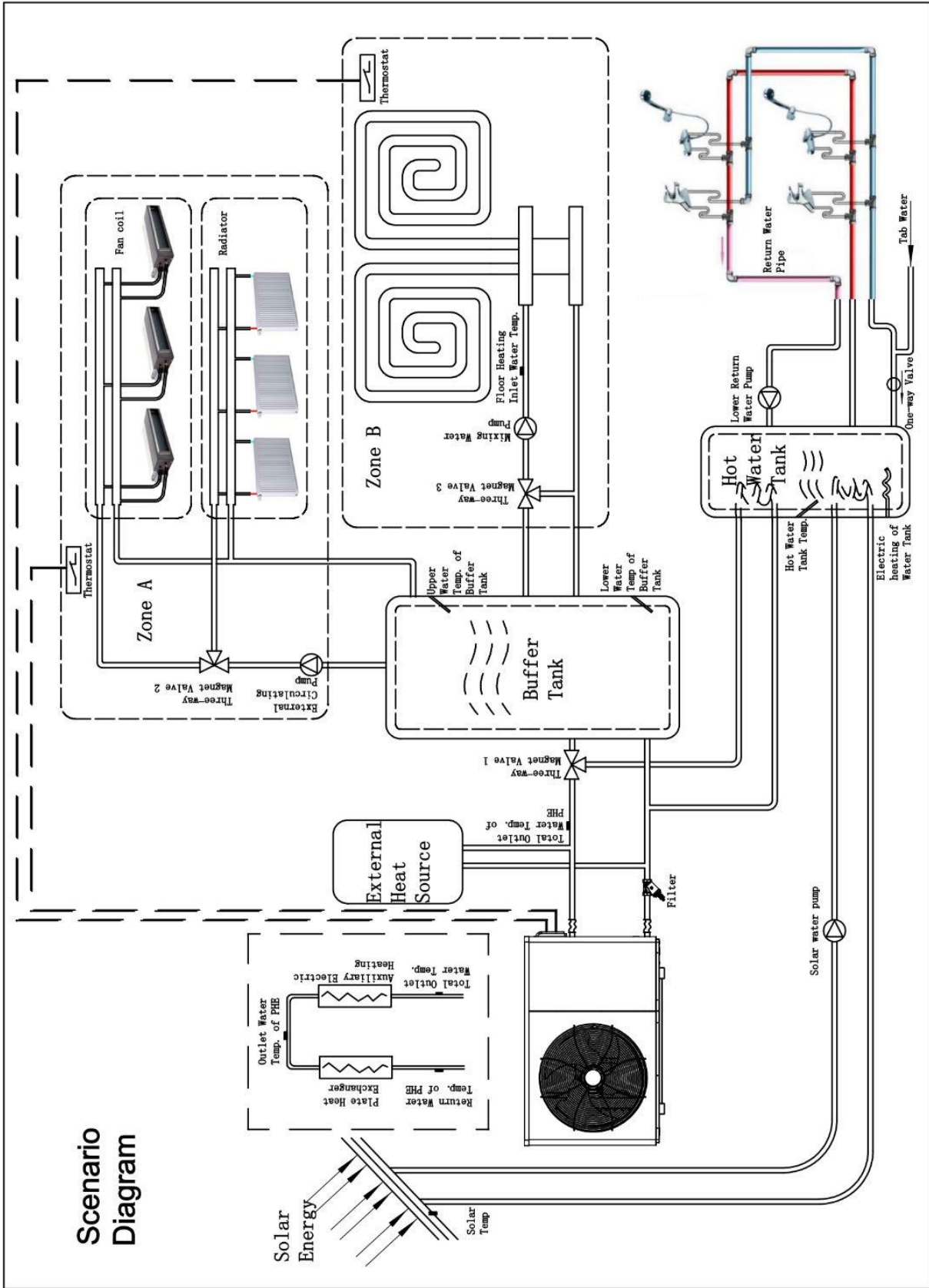


Chapter 15 Maintenance

- Air source heat pumps are highly automated equipment that requires regular status checks during use. If long-term and effective maintenance can be carried out from time to time, the reliability and service life of the device will be improved.
- The water filter installed outside the machine should be cleaned regularly to ensure that the water quality inside the system is clean, in order to avoid damage to the unit caused by blockage of the water filter.
- When using and maintaining this unit, users should be aware that all safety protection devices in this unit have been set before leaving the factory, and do not adjust them on your own!
- Regularly check whether the power supply and electrical system wiring of the unit are secure, and whether the electrical components act abnormally. If there are any, they should be repaired and replaced in a timely manner.
- Frequently check whether the water supply of the water system, the safety valve of the water tank, the liquid level controller and the discharge device are working normally, so as to avoid the reduction of water circulation volume caused by air entering the system, which will affect the heating capacity of the device and the reliability of the device operation.
- Regularly check whether the water pump and water pipeline valves are working properly, and whether the water pipes and water pipe joints are leaking.
- Please do not stack debris around the machine to avoid blocking the air inlet and outlet. The surroundings of the unit should be kept clean, dry, and well ventilated. Regularly clean (1-2 months) the air side heat exchanger to maintain a good heat exchange performance.
- Check the working condition of each part of the device frequently. Check whether there is oil on the pipe joints and valves inside the machine to ensure that there is no refrigerant leakage.
- If the shutdown time is long, the water in the device pipeline should be drained, the power supply should be cut off, and a protective cover should be put on. When running again, conduct a comprehensive inspection of the system before starting up.
- When the device malfunctions and the user is unable to solve it, please call the local authorized maintenance company so that personnel can be dispatched for repair in a timely manner.

- To clean the condenser of the main machine, our company recommends using citric acid solution with a concentration of 5% at 50 °C - 60 °C. Start the built-in circulating pump of the main machine to clean for 2 hours, and finally rinse it 3 times with tap water. (It is recommended to reserve a three-way connection when installing the pipeline, and seal one connection with a gate valve or plug to prepare for connection during cleaning.) It is forbidden to clean the condenser with corrosive cleaning fluid.
- The water tank needs to be cleaned of scale after a period of use (usually two months, depending on the local water quality).

Chapter 16 Scenario Diagram



Appendix

- Installation and Configuration of Power Cords.
- The power cord connected to the main unit must use wires that comply with local regulations and be fastened with wire fixing devices. Improper connection or fastening will cause fire, etc.
- If the power cord is damaged, it must be replaced by qualified personnel in order to avoid danger;
- When the unit is installed, refer to the following table for the configuration of the power cord:

Model	Power supply	Cross-sectional area						Air Switch Capacity
		Phase Line		Neutral Line		Ground Line		
		Wire Diameter (CWG)	Wire Number (AWG)	Wire Diameter (CWG)	Wire Number (AWG)	Wire Diameter (CWG)	Wire Number (AWG)	
WDLRK-8 I BM/A1	220~240V 50Hz	2.5 mm ²	12 #	2.5 mm ²	12 #	2.5 mm ²	12 #	16A
WDLRK-10 I BM/A1	220~240V 50Hz	4.0 mm ²	10 #	4.0 mm ²	10 #	4.0 mm ²	10 #	25A
WDLRK-12 I BM/A1	220~240V 50Hz	4.0 mm ²	10 #	4.0 mm ²	10 #	4.0 mm ²	10 #	32A

Note:

1. The wire diameter selection must be greater than the above requirements;
2. The above wire diameters are selected based on the distance between the unit and the distribution box within 100 meters. If the distance exceeds 100 meters, please contact a professional for selection.

QC Card



Packlist

Seq.	Items	Qty. (unit)	Remark
1	Heat Pump	1	
2	Wire Controller	1	
3	Connection Wire	1	5 meters
4	Y Shaped Filter	1	60-mesh filter screen
5	Temperature Sensor	7	6 meters
6	Rubber Damping Blocks	4	
7	QC Card	1	included in the manual
8	Packlist	1	included in the manual
9	Manuel Instruction	1	