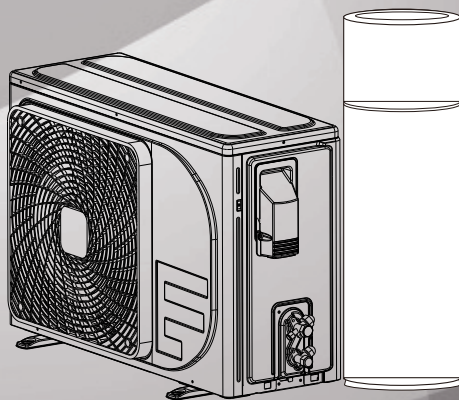


# Solar+air-source DC inverter heat pump water heater installation and operation manual





# Director

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## 1. Product Introduction

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Air energy heat pump water heater is a new generation of hot water making device following boiler, gas water heater, electric water heater and solar water heater.

And photovoltaic (pv) + air can heat pump water heater is in the air can heat pump hot water unit on the basis of increasing solar photovoltaic power generation, solar dc supply unit directly, achieve just a small amount of mains or use can making hot water, electric, both air can all advantages, and higher energy efficiency, is the real green, section can, environmental protection, comfortable, safe products.

Photovoltaic + air heat pump water heater core features:

- ◆ Safety: no waste water exhaust emissions, water and electricity completely separated, fundamentally eliminate the common water heater flammable, explosive, electric shock, dry burning, carbon monoxide poisoning and other safety hazards, care for family health and safety;
- ◆ Power saving: the COP value of operation is as high as 4.0 (that is, 1 KWH of electricity consumption can generate heat equivalent to 4 KWH of electricity), and the water temperature can be heated directly by the solar photovoltaic power generation drive unit during the day, and the water temperature can be heated directly without mains electricity or only a small amount of mains electricity, so the usage fee is very low.
- ◆ Rest assured: solar heat pump water heater heating water temperature is fast, and the reserves are large, not only can provide the whole family to use, and the water tank insulation effect is better, high temperature, can use hot water at any time.

## 2.Specifications

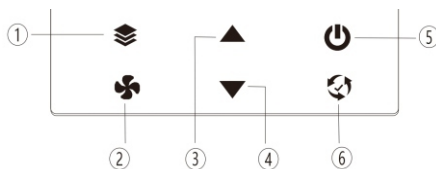
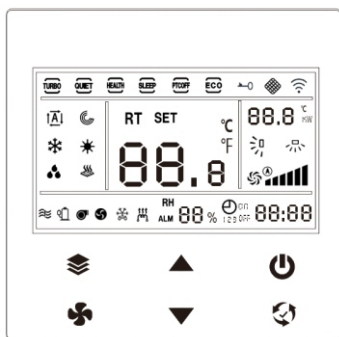
Complete unit		DRSA1-ACDC-80/200N1	DRSA1-ACDC-90/300N1
Outdoor unit		DRSA1-ACDC-80	DRSA1-ACDC-90
Water tank Model		DSX-200/G	DSX-300/G
Power (AC)	Ph-V-Hz	1Ph/208-240V/50-60HZ	
Power (DC)	V	80V-380V	
Rated Heating Capacity	W	3700	4100
Rated water Volume	L/h	79.5	88.1
Rated COP	W/W	4.30	4.22
Rated Input	W	860	972
Rated Current	A	4.0	4.5
Max Power Input	W	1300	1600
AC Max Current Input	A	6.0	7.4
DC Max Current Input	A	10	10
Waterproof level		IPX4	
Anti-shock protection type		Ⅲ类	
Gas Type		R410A	
Compressor Type		旋转式 (双转子)	
Water side heat exchanger		外置微通道	
Air side heat exchanger		高效管翅式	
Fan motor rated input	W	40	40
Water tank rated capacity	L	200	300
User qty	Person	3-5	4-6
Rated water pressure	Mpa	0.8	
Inlet and outlet pipe diameter	inch	G3/4"	
Noise	dB(A)	50	52
Connecting pipe diameter	inch	1/4"+3/8"	
N. W/ G. W (Outdoor)	kg	33.5/37.5	
N. W/ G. W (Indoor)	kg	60/68	80/92
Dimension (Outdoor)	mm	802×564×323	
Dimension (Water tank)	mm	Φ520×1600	Φ580×1820
Packing dimension (Outdoor)	mm	910×622×405	
Packing dimension (Water tank)	mm	550×550×1665	605×605×1915
Rated Outlet Temperature	°C	55	
Safety Outlet Temperature	°C	60	
Environmental Running temperature	°C	-15~43	

Note:

- 1.Rated heating test conditions: outdoor dry/wet bulb temperature 20°C/15°Cz unit initial/final water temperature 15°C/55°C;
2. Above SPEC would be updated accordingly by the new generation;

### 3.Operation

#### Control Display

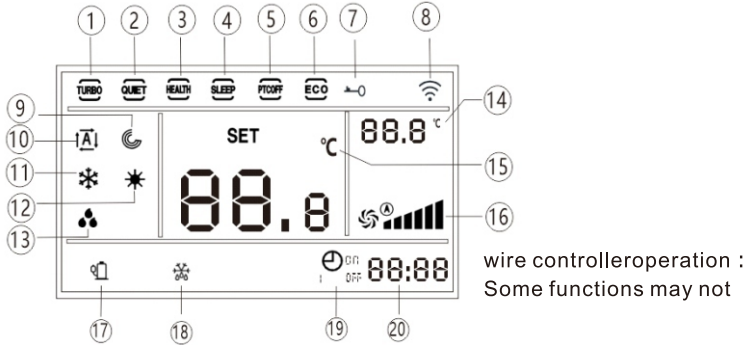


#### Touch keys and functions of wire controller

No.	graphic	The keyboard
1	Parameter setting/timing	1. Press to enter timing setting; 2. Hold down for 5 seconds to enter the parameter setting screen.
2	Time Setting	1. Hold down for 5 seconds to enter the time setting, and press the mode key to return to the time setting.
3	“+”, Button “-”, Button	1. The increase and decrease of setting temperature, setting time, setting parameters and serial number; 2. Long press to speed up the scrolling speed of time and parameters; 3. The increase and decrease of setting temperature, setting time, setting parameters and serial number; 4. Long press to slow down the scrolling speed of time and parameters.
4	On/Off button	Short press can control the switch machine.
5	Model switch button	Press to switch mode by cooling/heating sequence.

### 3.Operation

#### □ LCD display description and functions





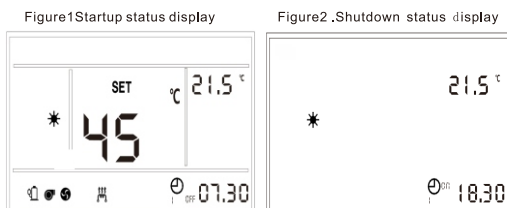
Serial	Name of the chart	According to the content
1	Strong mode	Unit to the maximum load operation, quickly achieve heating or cooling effect
2	Silent mode	Indoor machine noise reduced to small state □
3	Health mode	Comfortable power saving mode □
4	Sleep patterns	The noise is low and the temperature is suitable for sleeping.
5	Auxiliary heating function	The heating mode can be turned on to increase power consumption while increasing heating effect
6	Energy saving mode	The unit operates with minimum power consumption
7	The key lock	Hold down the up and down button for 5s at the same time to lock the button; The same operation is performed to unlock the device.
8	WIFI	The cable controller connects to WIFI successfully.
9	Automatic mode	Automatically adjust the temperature and wind speed according to the ambient temperature to reach the set temperature.
10	Air supply mode	Open the fan separately to increase indoor air flow.
11	Cooling mode	Cooling mode.
12	Heating mode	Heating mode.
13	Dehumidification mode	Turn on the cooling effect while reducing room humidity
14	1. Room temperature 2. Real-time power	1. Display real-time room temperature, accuracy 0.1 °C. 2. Display real-time mains power, unit: KW
15	1. Set the temperature 2. Room temperature	Corresponding to automatic/refrigeration/dehumidification/air supply/heating five modes of setting temperature, accuracy of 0.10 Display real-time room temperature, accuracy 0.1.
16	The wind speed	Display air speed inside air conditioner.
17	Compressor start display	The icon is displayed when the compressor starts. This icon is not displayed when the compressor is shut down.
18	defrost	This icon is displayed when the unit is in defrosting operation: this icon is not displayed when the unit is not in defrosting operation.
19	Timing switch display	ON displays the scheduled startup time;OFF Displays the shutdown time.
20	Time to show	Displays the current time or timing time.

### 3.Operation

#### □ Instructions for wire controller operation

##### ◆ On/Off

ently press  , Press the button to start the unit. In the boot state, the interface displays the set temperature and other states;In startup model, Press the button  , the unit stops running. In the shutdown state, the interface does not display the set temperature.



##### ◆ Model switch


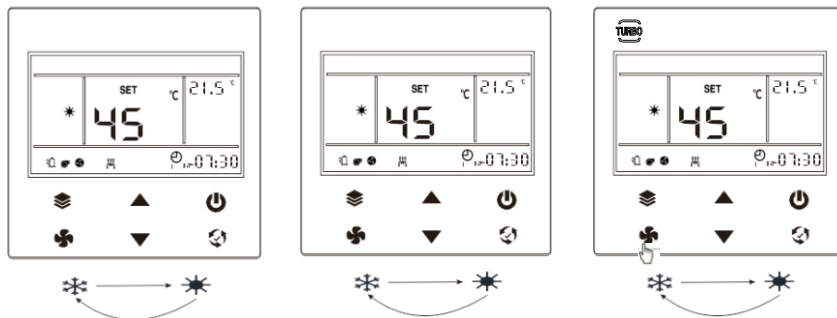
In startup state, every time you press the "" button (O), the operation mode will proceed as shown in Figure 3 (cooling and heating).

Figure 3. Mode switching Diagram



##### ◆ Strong modec

When "Turbo" is lit up by pressing "" once in the startup state, the unit will heat up according to the maximum power and exit automatically when the water temperature reaches the set temperature.

##### ◆ Solar energy saving mode

This product leaves the factory by default to turn on the photovoltaic energy saving mode, using photovoltaic power generation to heat during the day, at night or when there is no sunlight, the main machine does not turn on heating, full advantage of photovoltaic + air energy water heater.



### 3.Operation

When the hot water demand is large or the lighting condition is not good, you can press "fan" and "Down" at the same time to cancel the energy saving mode, and the "ECO" icon is off.

After canceling the energy saving mode, the unit will conduct rapid heating according to the set water temperature (when the photovoltaic power generation is insufficient, AC mains electricity will be consumed);

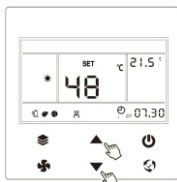


Figure3.2. ECO light up

#### ◆ Temperature setting

Under startup state, press ▲ or ▼ to set the temperature, as shown in Figure 4.

Figure 4. Operation diagram of setting temperature



Pay attention to.

1. In cooling mode, set the temperature range from 10 to 50°
2. In heating mode, set the temperature range from 30 to 58°

#### ◆ Time setting

The steps for setting time are as follows:

1. After long pressing ⚙ for 3 seconds, the time display module will blink at the frequency of 1 second and enter the timing setting state;
2. Long press or short press ▲ or ▼ to scroll to the current time point, such as 10:00 in Figure 5 and 6:00 in Figure 8;
3. When the time reaches the correct time, press the 0 button, then the time display module will stop flashing, and the time setting is complete.

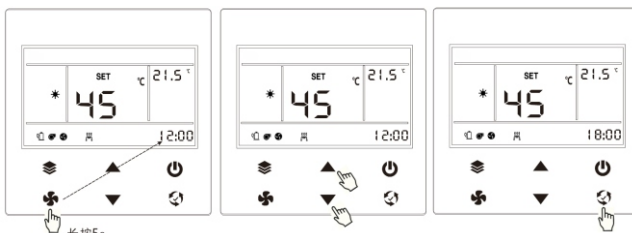




Figure 5. Set time operation steps

### 3.Operation

#### ◆ Set the timer

At present, the wire controller can realize the timing setting of 3 periods in 1 day atmost. Users can set the opening or closing time as well as the opening and closing time of eachperiod according to their own requirements. After setting the time, you can set the time.

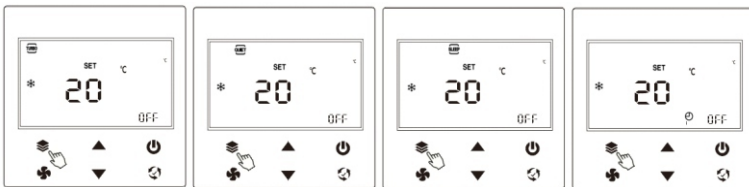
Setting steps:



1. Press . The screen enters the timing setting interface, and the timing period and timing status are displayed. If the button  is pressed continuously, the timing period will be switched between time period 1, time period 2 and time period 3. In addition, in the time period, when the nixet displays On, it means that the time period is enabled, and when OFF is realized, it means that the time period is not enabled, as shown in Figure 6.

Special note:

A, If periodic period 1 is enabled, it only uses solar energy (ECO), restricting the use of mains electricity; Enable the INTRA-segment EC. Automatically in the open state; ECO in the shutdown section is automatically shut down.

B, Periods 2 and 3 are the periods when the host starts and stops running.



After selecting a time period (for example, time period 1), press  or  to enable or disable the time period. If the time period is disabled, the time period is disabled. "OFF" means disabled, and "enable" means enabled, as shown in Figure 7:

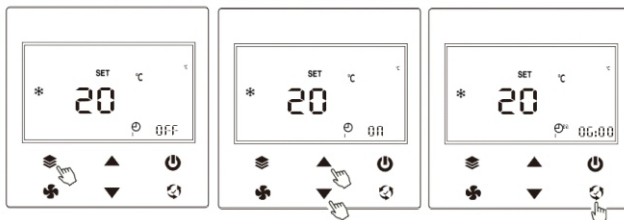


Figure 7. Press  or  to enable or disable time period timing

### 3.Operation

3. After selecting the timing enable, that is, after the timing display is on at that time, press the spoon button to enter the timing start time setting, as shown in the picture on the right of 10S in FIG. , the time is blinking at this time.

4. Through the short or long press seconds ▲ or ▼ by the keys to set boot time, such as 6 set to boot, when time to adjust to 6, said to push the 3 short period of time (as shown in figure 8) timing boot time setting is complete, the interface will jump into the session 1 regular shutdown time setting, a shutdown time duration. Figure 9. Left-most diagram.

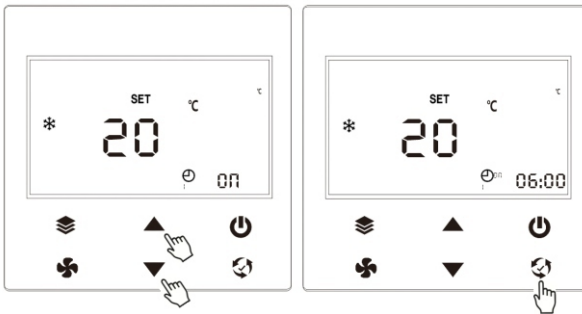


Figure 8. Set time period 1 boot timing time

After the interface jumps to the shutdown time period, long press or short press ▲ or ▼ to adjust the time, such as 23:00, and then short press again. Button, indicating that the setting of time period 1 is completed

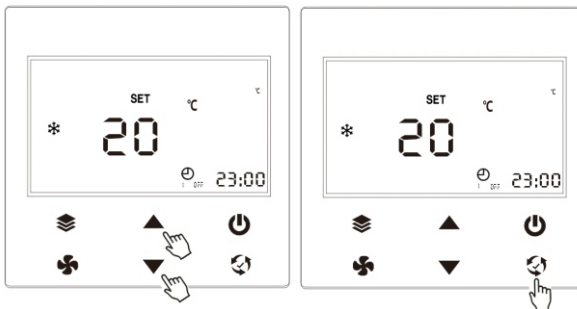


图9.设定时段1关机定时时间

## 3.Operation

5. After the scheduled time period is complete, the scheduled time stops blinking and displays the scheduled task that will be executed first. For example, if the current time is 10:00 and the unit is on, the unit shutdown task at 23:00 of period 1 will be executed first. The display interface is shown in Figure 10:

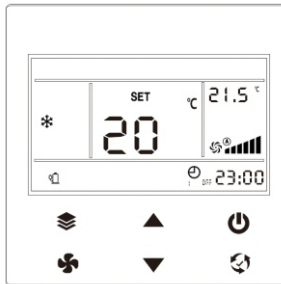


Figure 10. When the timing setting is complete, the latest scheduled task is displayed by default

The above are the steps for setting scheduled tasks in scheduled time period 1. The steps for setting scheduled tasks in scheduled time period 2 and 3 are the same as those in scheduled time period 1

### ❑ Troubleshooting

When the unit runs out of fault, if the fault time lasts for 10 seconds, the fault code will be displayed on the LCD panel of the wire controller. In addition, when the wire controller itself has problems, such as communication problems, the flash display "8 888"; If a fault occurs, contact professional maintenance personnel in time. Figure 11 shows the fault code for F3.

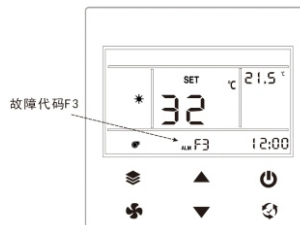


Figure 11 Fault code F3

### 3.Operation

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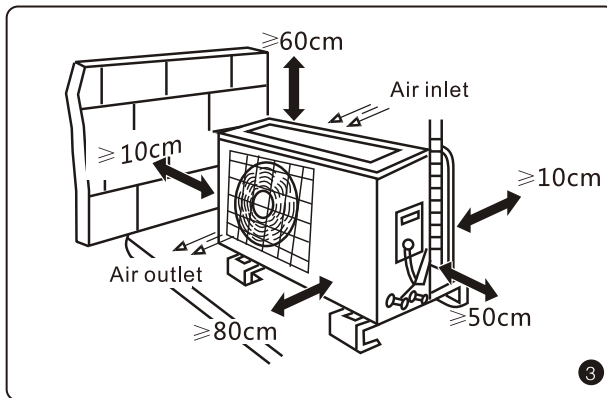
#### □ Fault code table

The Fault Name	Fault Code	Note
The wire controller communication is faulty	03	
Inoorrect outdoor parameters	05	
The water tank temperature sensor is faulty	J1	
The evaporator outlet sensor is faulty	J2	obligate
The outdoor air temperature sensor is faulty	J5	
The outdoor heat exchanger sensor is faulty	J6	
The exhaust temperature sensor is faulty	J7	
Press feedback failure	L5	
Refrigerant leakage is faulty	L7	obligate
Outdoor fan failure	L8	
The input current control is faulty	73	
PFC flow	81	
The IPM module is in high temperature	91	
The compressor lacks	92	
Press stall failure	93	
The IPM module overflows. Procedure	95	
High voltage switch disconnection protection	H4	
Low -voltage switch disconnection protection	H5	
Oil return failure protection	L0	

## 4. Installation environment requirements

### □ Host

- ◆ Can be installed on external wall, roof, balcony or ground, installation must be firm. However, it is not allowed to change the load-bearing structure of the house without authorization to affect the safety of the house (it is recommended to install the host on the wall of the brick structure);
- ◆ The distance between the host and the water storage tank shall not be greater than 3 meters (the length of the connecting pipe is limited);
- ◆ The installation location requires good ventilation to ensure that the air inlet and outlet are unobstructed, as shown in the figure below.

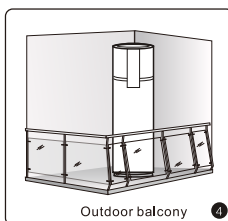
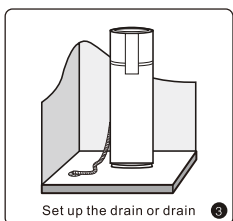
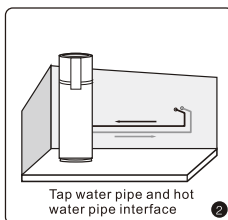
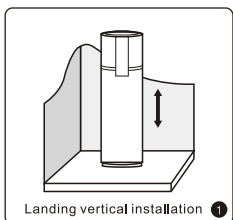


- ◆ Ensure that the main machine is installed upright, not tilt, to prevent noise;
- ◆ Condensate water should flow into the sewer or special container along the drainage pipe of the building.

## 4. Installation environment requirements

### ❑ water tank

- ◆ The water storage tank must be installed upright on the floor, and the site foundation must be solid, firm, and free of pollution and corrosive substances;
- ◆ There should be tap water pipes and hot water pipe connections near the water storage tank;
- ◆ Drainage ditches or outlets are set near the installation location to facilitate drainage;
- ◆ It is recommended to install it in a non-indoor location (outdoors such as a balcony, etc.). Try to avoid installing the water tank into a decorative wall or cabinet to avoid failure in maintenance.

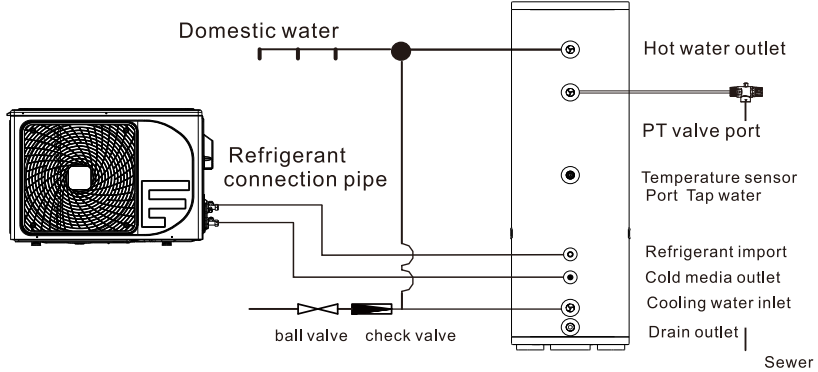


The water quality of the air-source heat pump heaters should meet the following standards:

PH value	total hardness	electric conductivity	sulfion	chloridion	Ammonium
6.5-8.0	<50ppm	<200uV/cm(25°C)	None	<50ppm	None
sulfate ion	silicon	iron content	sodion	calcium ion	calcium ion
<50ppm	<30ppm	<0.3ppm	no requirement	<50ppm	

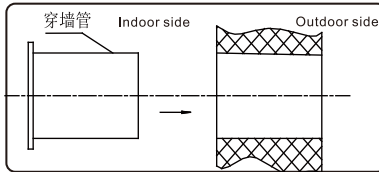
Remarks: Groundwater, well water, river water, sea water, industrial water and other resources must be purified, otherwise the resulting unit problems will not be covered by the warranty.

## 5. Installation Process



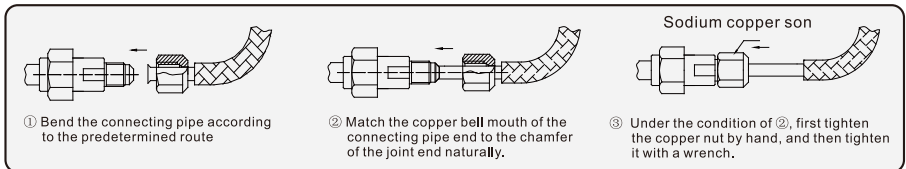
According to the actual situation of the installation site, and the installation requirements of the host and the water tank, select the appropriate installation location and position the water tank and the host

### ❑ Install through wall pipe (depending on actual situation)



- ◆ According to the relative position of the main engine water tank and the direction of the water pipes, determine the location of the hole on the wall;
- ◆ The position of the wall hole should be chosen to be most conducive to the installation of the host or water pipe, and the overall beauty of the room should be considered;
- ◆ When drilling holes on walls, ceilings, and floors, first confirm whether there are buried cables or pipes, and avoid them if any.

### ❑ Refrigerant pipe connection



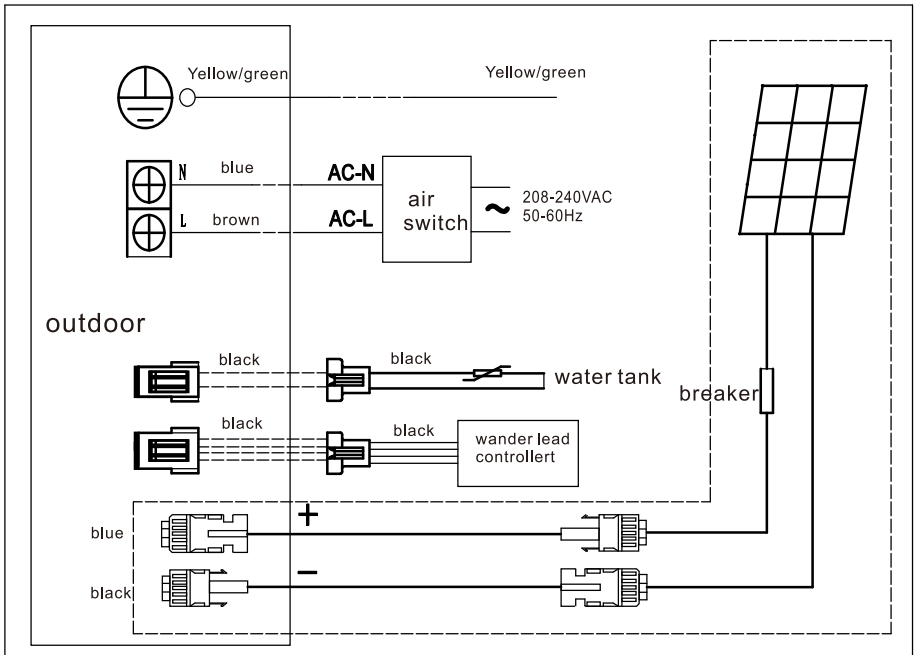
- ◆ Unfold the connecting pipe first, slowly unfold the connecting pipe a short section at a time, and do not yank the connecting pipe;
- ◆ Bend the connecting pipe according to a predetermined route, with a bending radius greater than 100mm;



## 5. Installation Process

- ◆ Connect the unit and the water tank with a bell-mouth connector, drip a small amount of refrigerating oil into the bell-mouth connector and then tighten;
- ◆ Loosen the connecting nut of the large valve by two turns, and open the small valve with an Allen key. When the refrigerant flows into the water tank from the host, the air in the copper pipe of the heat pump water tank is discharged, when the temperature of the exhaust gas becomes low, tighten the valve connecting nut;
- ◆ Use an Allen key to open the large and small valves to the maximum opening;
- ◆ Use soap bubble to check the joints of copper pipes for leaks. After confirming that there is no leakage, heat the joints of copper pipes with insulation pipes to prevent heat loss.

### □ Electrical wiring



Note: if there is any change due to product improvement, the unit's internal label shall prevail.

## 5. Installation Process

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- ◆ Connect the wiring according to the electrical wiring diagram.
- ◆ Power and wiring requirements
  - ★ Insert the water tank temperature probe into the temperature sensing port of the water tank and fix it; the other end is plugged into the water tank temperature wire from the main board;
  - ★ The voltage and frequency of the user's power supply should be the same as the voltage and frequency marked on the nameplate. If the user's power supply is not consistent with the machine requirements, the user should be asked to modify the power supply;
  - ★ Special switches and sockets installed indoors must be provided for the machine to prevent rainwater leakage accidents; the machine should be grounded reliably, and the L and N poles of the power plug and the socket must be consistent.

### Water pipe connection

- ◆ The construction should be carried out according to the schematic diagram of the project installation and the corresponding national construction standards;
- ◆ The user's water pressure should be less than 0.8 MPa;
- ◆ Connect the supplied safety valve (note → point to the water storage tank) with the cold water inlet (blue color code) of the water storage tank, connect the other end of the safety valve to tap water, and install the water inlet valve. A drain pipe should be installed at the pressure relief port of the safety valve. The drain pipe should be unblocked and not bendable.
- ◆ After the water pipe is installed, open the water inlet valve to check that there should be no water leakage in the pipe and connection parts, and drain to ensure that the system is clean;
- ◆ After the inspection is qualified and there is no leakage, the system pipeline should be insulated to avoid freezing and cracking in winter

### Refrigerant filling or recycling

- ◆ Filling refrigerant: Fill the refrigerant directly from the refrigerant charging port.
- ◆ Recycling refrigerant: Use an Allen key to tighten the small pipe stop valve first, and then quickly tighten the big pipe stop valve after 20-25 seconds. Press any key to stop the unit and complete the refrigerant recycle.

## 6. Installation of photovoltaic panels

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### ◆ Disclaimer

With the update of Volta technology, the relevant information of the existing manual will be improved without notice. This manual is only for land installation, users and installers should carefully read and abide by it.

### ◆ General safety rules

- 2.1 The installation of solar photovoltaic power generation system requires specialized skills and knowledge, which must be completed by a professionally qualified engineer.
- 2.2 When the installer tries to install, operate and maintain the photovoltaic modules, please make sure that you fully understand the information in this installation instruction manual and understand the risk of injury that may occur during the installation process.
- 2.3 Photovoltaic modules produce electricity when there is sufficient sunlight or other light sources. When operating, please take corresponding protective measures to avoid direct contact with 30VDC or higher voltage.
- 2.4 Solar photovoltaic modules can convert light energy into direct current electricity, and the amount of electricity will change with the change of light intensity.
- 2.5 When the component has current or has an external power supply, the component must not be connected or disconnected.
- 2.6 When installing, using modules or wiring, opaque materials should be used to cover the front of the modules in the solar photovoltaic module array to stop power generation.
- 2.7 All local, regional and national laws and regulations shall be complied with, and construction permits shall be obtained first if necessary.
- 2.8 There are no user-repairable originals for solar photovoltaic modules. Do not disassemble, move or modify any attached parts.
- 2.9 Do not wear metal rings, watch straps, earrings, nose rings, lip rings or other metal accessories when installing solar photovoltaic modules.
- 2.10 Please do not install or operate the module when it is humid or windy.
- 2.11 Do not use or install damaged components, and do not artificially condense light on the components.
- 2.12 Only PV modules of the same model can be combined together. Avoid uneven shadows on the surface of photovoltaic modules. The shaded cells can become hot (the "hot spot" effect), which can cause permanent damage to the components.
- 2.13 When an accident occurs, please turn off the isolating switch immediately.
- 2.14 Defective or damaged components may still emit electricity. If you need to transport, please take measures to cover to ensure that the components are completely shaded.
- 2.15 Keep children away from the module when transporting and installing the module.
- 2.16 Please keep the photovoltaic modules in the original packing box before installation.

### ◆ Select location

- 3.1.1 The location where the module is installed should not be shaded or blocked all year round, and have sufficient sunlight
- 3.1.2 Solar photovoltaic modules generate electricity by light, please choose an appropriate installation angle to ensure that the modules can get the maximum amount of sunlight

## 6. Installation of photovoltaic panels

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3.1.3 The selection of module location should meet the requirements of various electrical and fire protection codes.

3.2 Choosing a bracket

3.2.1 The instructions and safety rules attached to the bracket should be followed

3.2.2 When the components leave the factory, the design has been completed. Please do not try to change the component structure or construction, etc.

3.2.3 For standard installation, use the four symmetrical mounting holes on the inner side of the frame to fix the module on the bracket

3.2.4 The bracket and other required materials (such as bolts, etc.) should be made of durable, anti-corrosion, and anti-ultraviolet materials

### 3.3 Land installation

3.3.1 When installing on the ground, choose a suitable installation height to prevent the lower part of the module from being covered by snow for a long time when it snows in winter. In addition, make sure that the lowest part of the module is high enough to avoid being blocked by plants or trees or being damaged by blowing sand.

3.3.2 Check the building codes used during roof installation to ensure that the building and its structure (roof, exterior, load-bearing, etc.) to be installed have sufficient bearing capacity. When installing modules, make sure that the modules are installed on a fire-proof roof, and the roof inclination angle is less than 5in/ft, to ensure its fireproof level

3.3.3 When the module is installed on the roof or building, make sure that it is securely fixed and will not be damaged by strong wind or heavy snow

3.3.4 Ensure smooth ventilation on the back of the module (the minimum distance between the module and the mounting surface is 10cm).

3.3.5 When installing on the roof, the roof that needs to be penetrated when installing the fixed components should be properly sealed to prevent leakage.

### 3.4 Installation Guide

3.4.1 The components and supporting structure should be fixed with bolts through the mounting holes, which are only located at the rear flange position of the frame. No additional drilling is required.

3.4.2 Use appropriate anti-corrosion fastening materials

3.4.3 There are many different ways to tighten up or down, and the installation method depends on the installation structure.

3.4.4 The installation design should be checked by a professional engineer. Installation design and procedures should comply with local regulations and all legal functions

3.4.5. A torque wrench should be used during installation

## 4 Electrical installation

In some cases, the current or voltage generated by the component may be greater than the optimal operating current or voltage under its standard test conditions (STC). Therefore, when determining the original rating and load value, the open circuit voltage and open circuit current of the component under STC should be multiplied by 1.25. When determining the appropriate wire and fuse, the short-circuit current should be multiplied by 1.25 in accordance with Section 690-8 of the USNEC.

## 6. Installation of photovoltaic panels

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### ◆ Electrical installation details

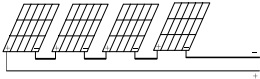
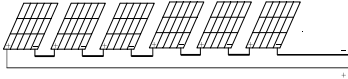
- 1 Components with the same configuration should be used on the same photovoltaic power generation system.
- 2 If photovoltaic modules are connected in series, the total voltage is equal to the sum of the voltage of each module.
- 3 If pv modules are connected in parallel, the total current is equal to the sum of the current of each module.
- 4 Components provide prefabricated connectors for electrical connection of the system.
4. 5 The cross-sectional area and connector capacity of the selected cables should meet the maximum short-circuit current of the system.
4. 6 Install the components with one end with a junction box on the back facing upwards.
4. 7 Loop should be avoided when designing the system.
4. 8 Check whether the wiring is correct before starting.
4. 9 Ensure that the connection is secure and tight, and the plug shall not bear external pressure. It can only be used to connect the line, and shall not be used to open or close the circuit.
4. 10 Components and component support shall be properly grounded. Use the recommended connection terminals and connect the ground cable properly.
4. 11 You are advised to use a ground cable accessory (wiring nose) to connect the ground cable. (Wiring nose supplier is Gat.No. Gbl4-dbt).
- 4.12 All contacts in conducting connections shall be secured. Ferrous metals used in conductive connections should be treated with corrosion protection to prevent rust.

### ◆ maintenance

- 5.1 Clean the glass surface of the component if it is dirty. Clean with a soft sponge dipped in water.
- 5.2 Perform mechanical and electrical inspection every 6 months to ensure that the components are clean and connected reliably.
- 3 If there is any doubt, please have qualified personnel check.
4. Observe the maintenance instructions for all components used in the system, such as bracket, charging rectifier, inverter, battery, etc.
- 5.5 If there is snow, use a brush with soft bristles to clean the surface of the component

## 6. Installation of photovoltaic panels

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Model	Solar panels in series	quantity
200L		(280-360W) 4pcs (360-450W) 3pcs
300L		(280-360W) 5pcs (360-450W) 4pcs

## 7. Commissioning and operation

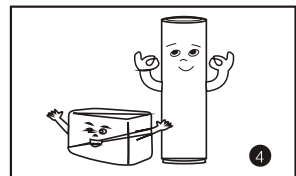
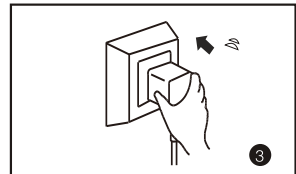
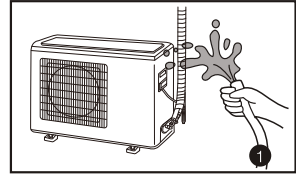
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- ❑ For the first use, make sure that the water tank is full before plugging in the power source.

### ! NOTE

Fill with water: open the tap water inlet valve. Turn on any hot water faucet in the hot water pipeline and start filling water until the hot water faucet overflows

- ❑ The trial operation of the unit must be operated by professionals!
- ❑ When the entire system is fully inspected to confirm that it meets the requirements, the overall trial operation can be carried out.
- ❑ Turn on the power and turn on their source heat pump water heater.
- ❑ Check whether the unit operation meets the requirements.



## 8. Safety Precautions



### NOTE

- Improper use may cause personal injury or machine damage, and in some cases may also cause serious consequences
- The seller is responsible for installing the machine. Improper installation may cause electric shock.
- If any abnormality is found, please cut off the power immediately and contact the seller for a solution.
- Please do not put your hands or metal sticks into the host.
- Please contact the dealer when maintenance and repair are required.
- Please do not clean the host directly with water. The host must be cleaned by professionals. Before cleaning, be sure to cut off the power supply.
- When connecting the grounding wire, the grounding wire must not be connected to the gas pipe, waterway, lightning rod or telephone grounding wire.
- Please install a leakage circuit breaker. No leakage circuit breaker is installed, which is easy to get an electric shock.
- If the power cord is damaged, a special power cord must be purchased from the dealer to replace it.
- If the compressor needs to be replaced when repairing the machine, the filter drier must be replaced at the same time.



## 9. Non-fault Phenomenon

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The following phenomena are normal performance of the water heater:

- urn on the power, turn on the switch, the host does not start immediately. This is a 3 minute delay protection, and the host will work normally after 3 minutes.
- The condensed water is discharged after the host has been working for a period of time, especially in a humid air environment.
- When the host is working, you may hear a low water flow or "hissing" sound , which is the sound made when the refrigerant flows.
- When the pressure of the water storage tank rises above the unloading pressure of the safety valve, a small amount of water will be discharged from the pressure relief port of the safety valve, there is no need to worry.

## 10. Common Faults and Solutions

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- The unit is running, the water temperature does not rise

- ★ The fan is running but the compressor is not running-check the compressor circuit.
- ★ Refrigerant leakage—check the refrigerant pipeline and add refrigerant after repair.
- ★ If the evaporator is too thick in winter, check the defrosting function, check

- Control panel does not display

- ★ Check whether the power indicator of the leakage protection plug is off-Press the reset button and the power indicator is on, indicating that the host is powered on.
- ★ Signal cable disconnection-check the signal cable.
- ★ Signal cable jack, short circuit or poor contact due to damp - remove the connection terminal, dry it with a hair dryer, and then reinsert it .

- High noise of host

- ★ Set screw loose -- retighten.
- ★ Copper pipe jitter impact shell - adjust the pipeline

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- ★ Water leakage at the inlet or outlet of the valve body-tighten the thread of the water inlet/outlet.
- ★ Water leakage at the outlet pressure relief port. Check whether the water pressure of the tap water is too high, and install a reducing valve if necessary.



