Operation Manual

Wired Controller

IMPORTANT NOTE:

Thank you very much for purchasing our product. Before using your unit, please read this manual carefully and keep it for future reference.

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1.General

1.1About the Manual

The original documentation is written in English. All other languages are translations. The precautions described in this document cover very important topics, follow them carefully. All activities described in the installation manual must be performed by an authorized installer.

WARNING:
Indicates a situation that could result in death or serious injury.

CAUTION:
Indicates a situation that could result in minor or moderate injury.

DANGER:
Indicates a situation that results in death or serious injury.

DANGER: RISK OF ELECTROCUTION:
Indicates a situation that could result in electrocution.

DANGER: RISK OF BURNING:
Indicates a situation that could result in burning because of extreme hot or cold temperatures.

NOTE:
Indicates a situation that could result in equipment or property damage.

INFORMATION:
Indicates useful tips or additional information.

1.2For User

- If you are not sure how to operate the unit, contact your installer.
- The appliance is not intended for use by persons, including children, with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children must be supervised to ensure that they do not play with the product.

CAUTION:

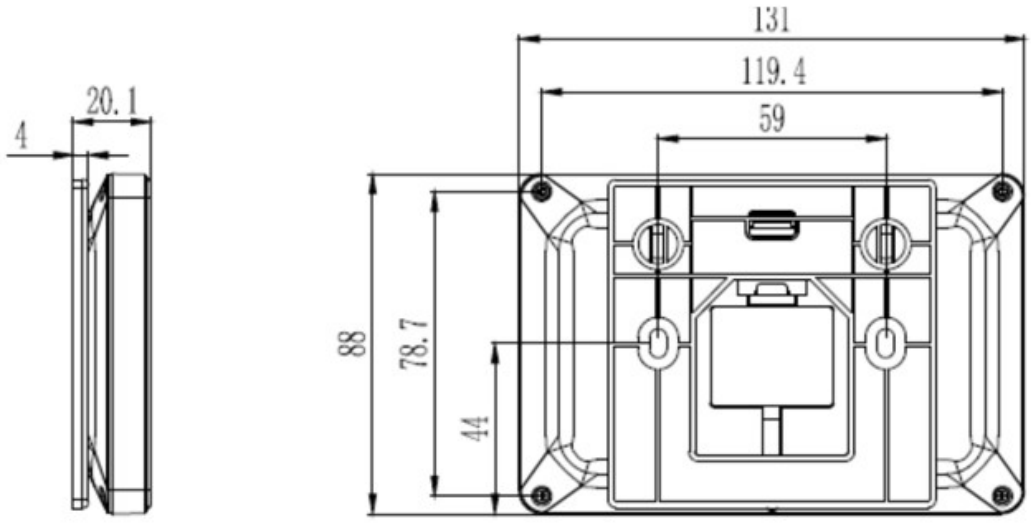
DO NOT rinse the unit. This may cause electric shocks or fire.

- Unit are marked with the symbol:

- This means that electrical and electronic products cannot be mixed with unsorted household waste. **Do NOT** try to dismantle the system yourself: the dismantling of the system, treatment of the refrigerant, of oil and of other parts must be done by an authorized installer and must comply with applicable legislation. Units must be treated at a specialized treatment facility for reuse, recycling, and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. For more information, contact your installer or local authority.
- Placed in a location away from radiation.

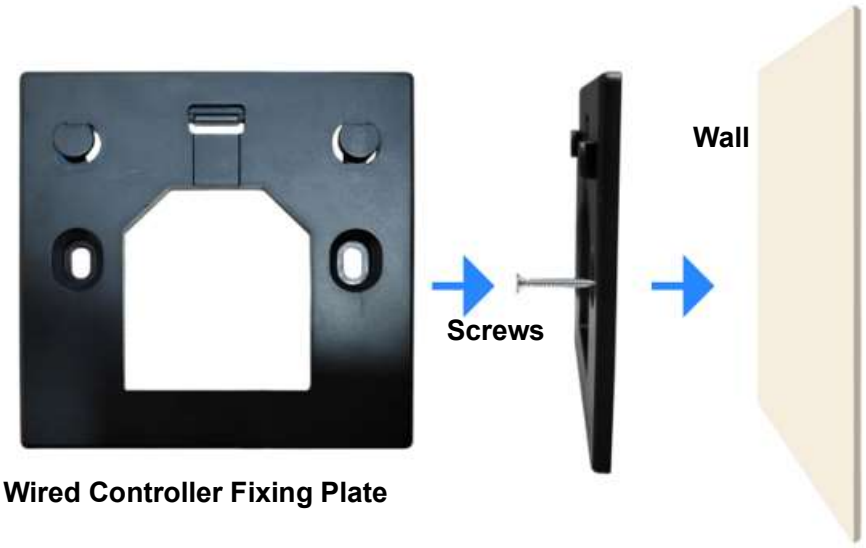
2. Wired Controller Installation

2.1 Installation Dimensions



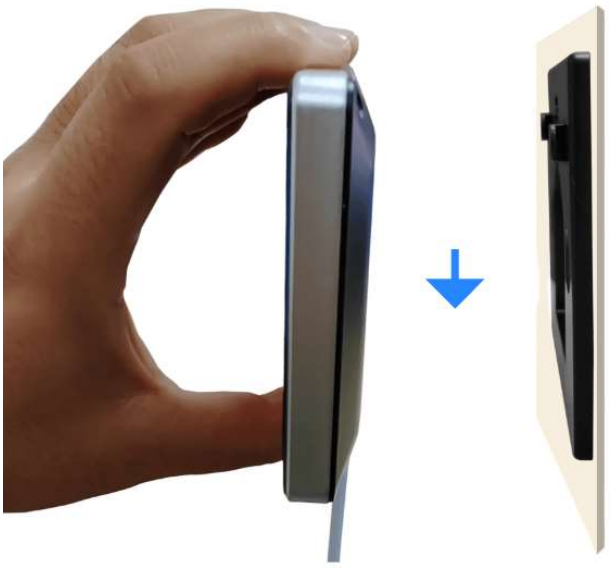
2.2 Installation Steps

①Remove the wired controller fixing plate, use screws to pass through the fixing plate, and use a screwdriver to fix it on the wall or junction box.



Wired Controller Fixing Plate

②Fasten the wired controller onto the fixing plate from top to bottom.



Wired Controller

3.Main Interface Overview

3.1Using Homepages

After connecting the power , the controller will enter the language selection interface, after selecting the language, click "NEXT" to enter the welcome page；

NOTE:

If you don't operate it after entering the language selection interface, the first language will be selected by default after 2 minutes to enter the welcome page.

INFORMATION:

After entering the welcome page 3s, the wired controller will go to the homepage.

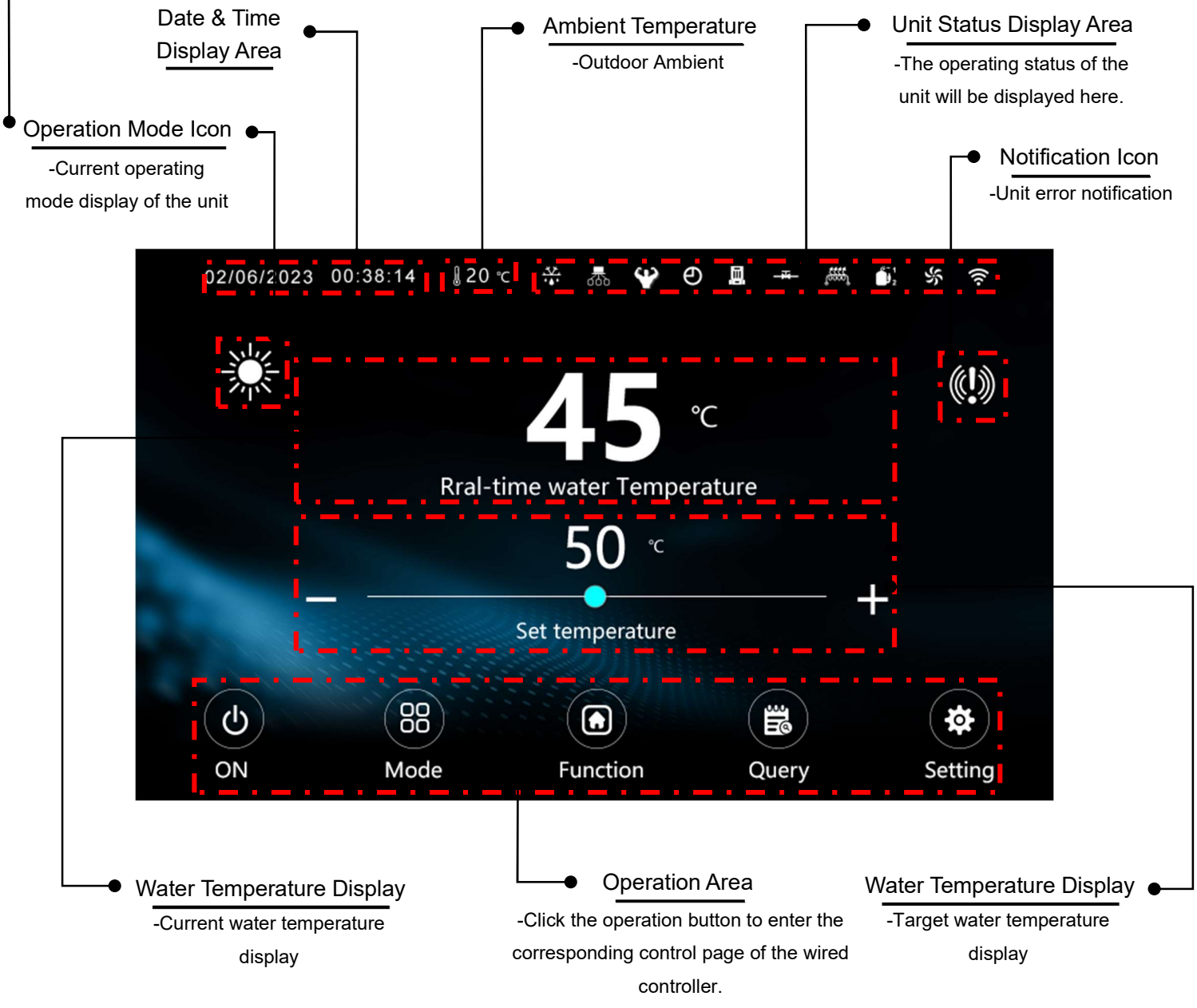
No operation for 2 minutes the screen will turn off and click on the screen to turn it back on.

(If there is a communication failure, it will stay on the welcome page.)

3.1.1Single Mode

When the heat pump is running single mode, the following page is displayed.
For example, running heating mode or cooling mode alone.

Icon				
Operation Mode	Underfloor Heating	Hot Water	Heating	Cooling



3.1.2Muti-Mode

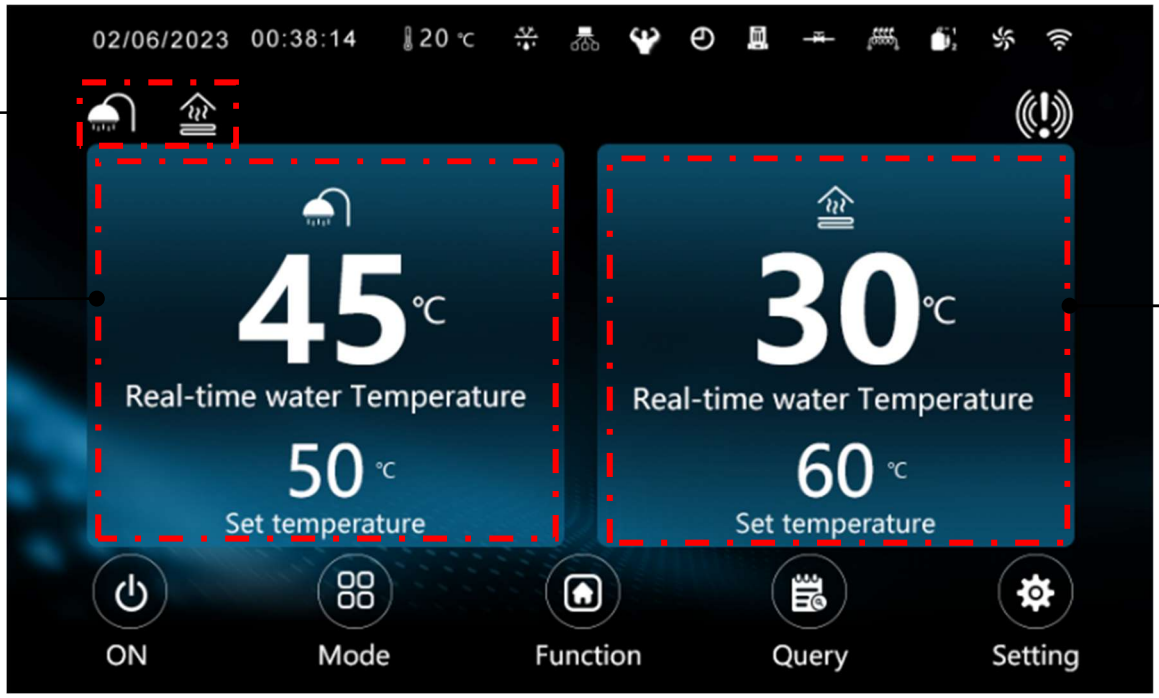
When the heat pump is running muti-mode, the following page is displayed.

For example, when hot water mode and other modes are running at the same time.

Icon			
Operation Mode	Underfloor Heating & Hot Water	Heating & Hot Water	Cooling & Hot Water

Operation Mode Icon

-Current operating mode display of the unit



Mode 1 Operation Status Area

-Current water temperature display

-Target water temperature display

Mode 2 Operation Status Area

-Current water temperature display

-Target water temperature display

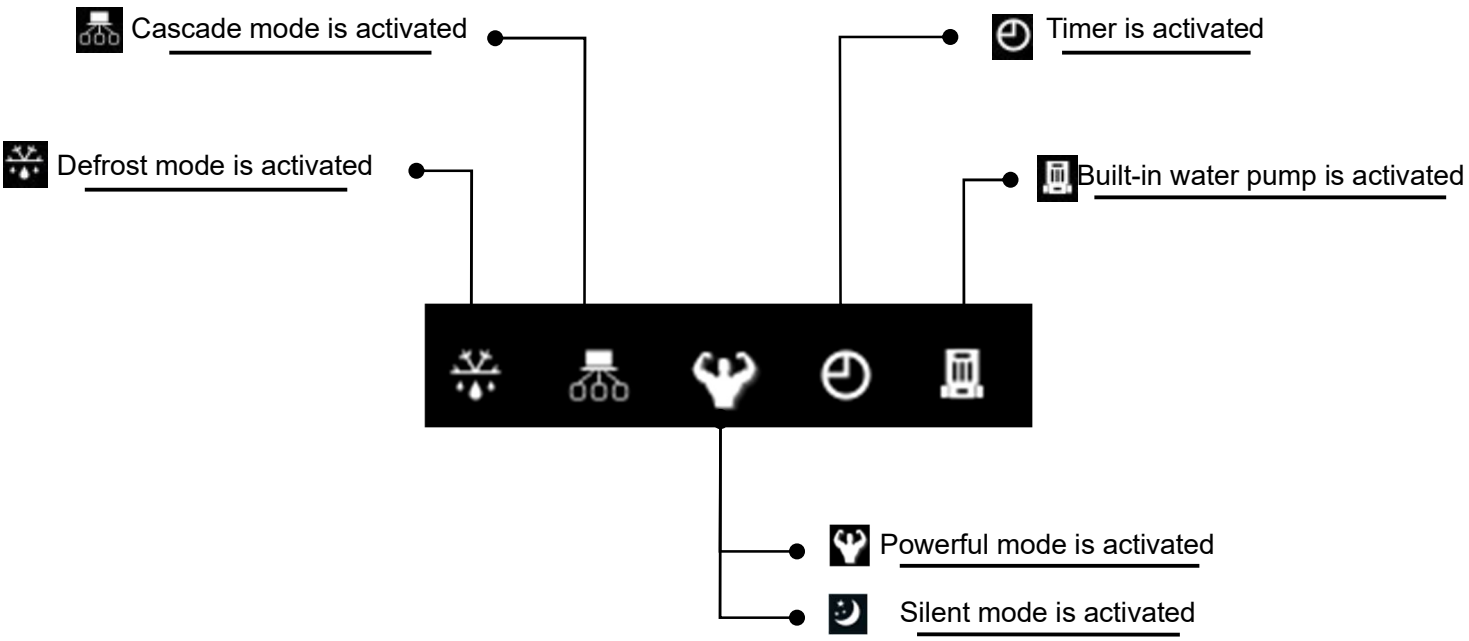
INFORMATION:

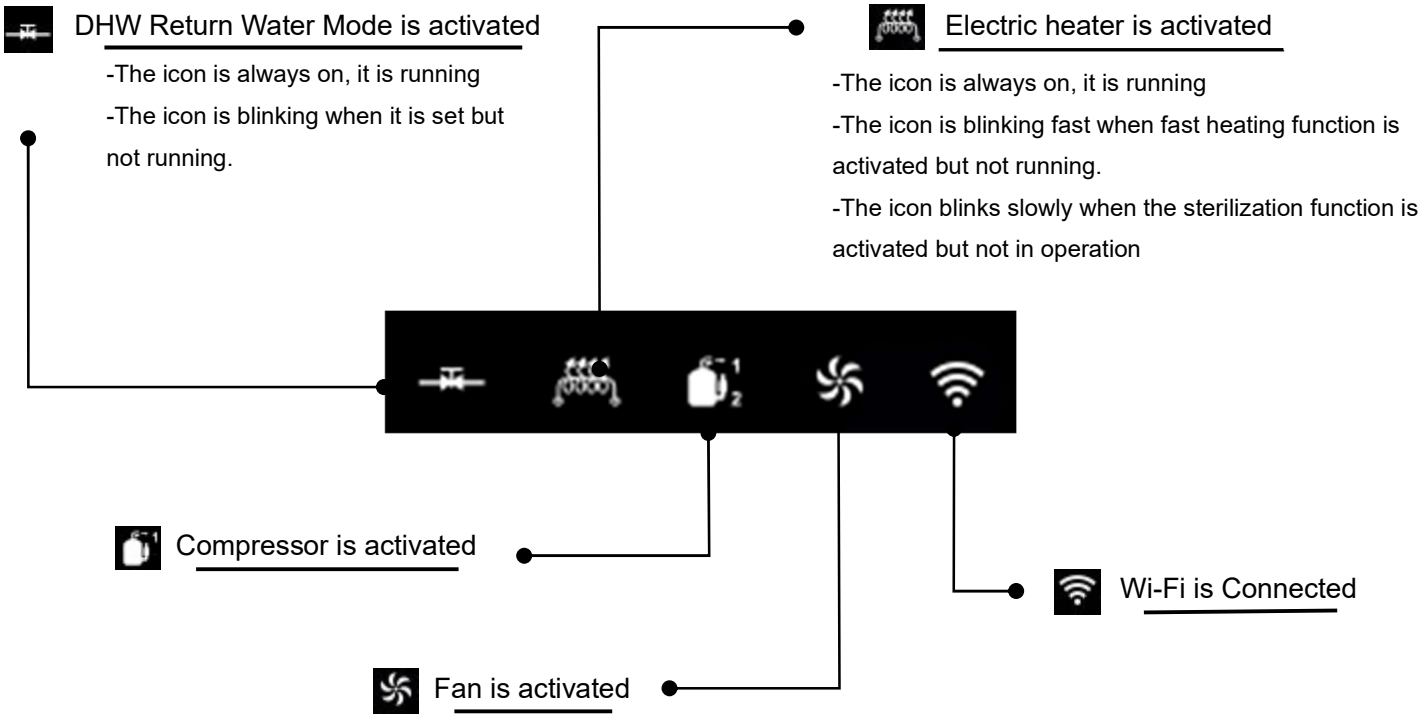
Other unlabeled areas are displayed the same as single mode.

3.2Icon Description

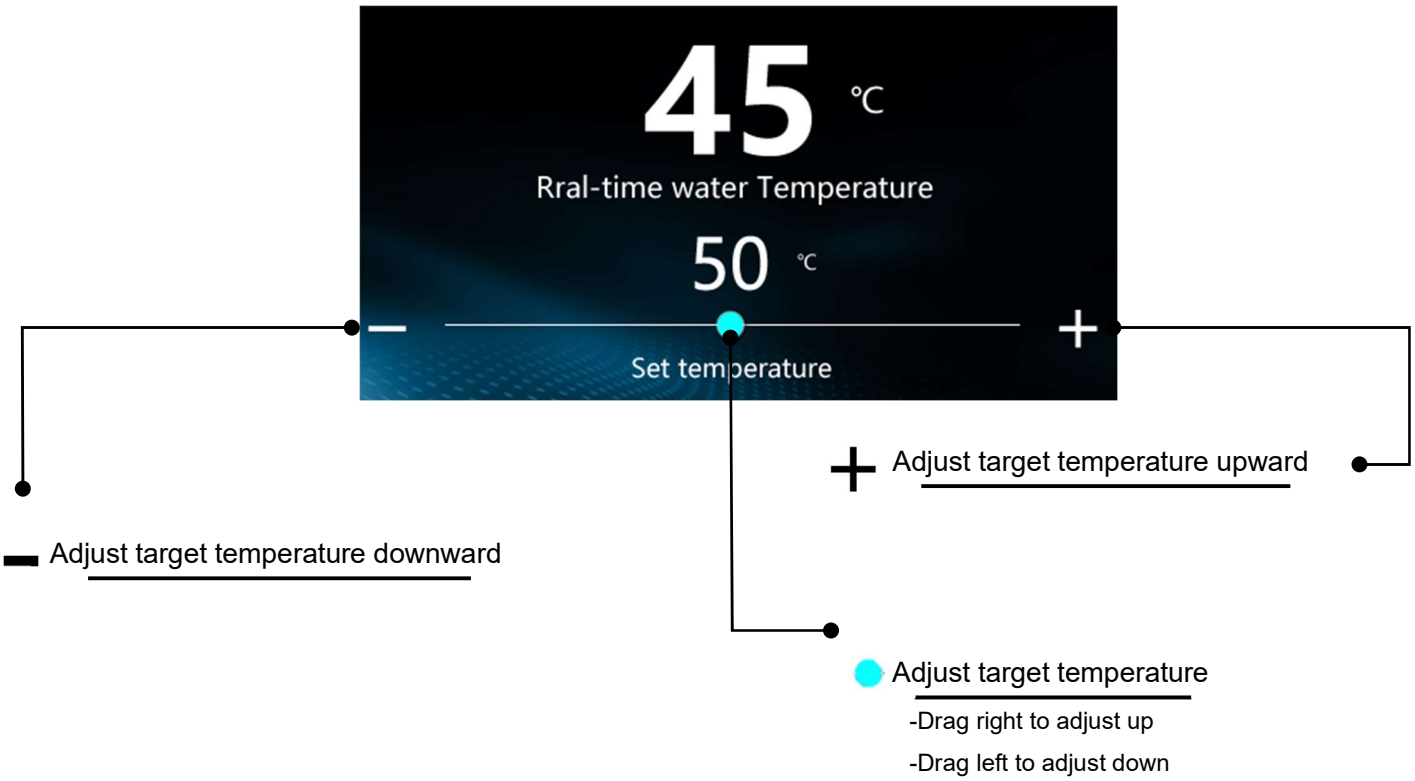
Mainly introduces the meaning represented by each display icon on the wired controller.

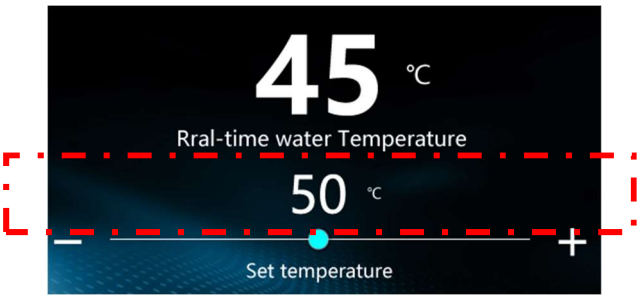
3.2.1Unit Status Icon

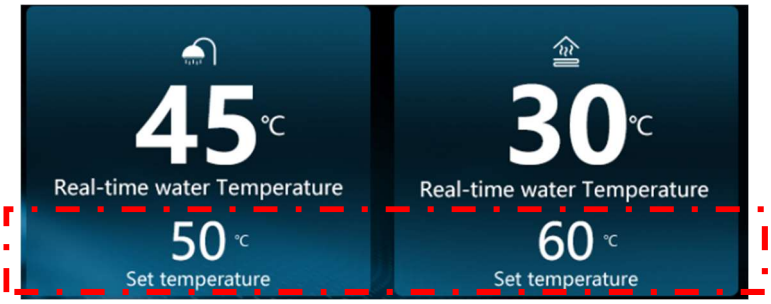




3.2.2Water Temperature Icon







INFORMATION:

Under Single mode and Muti-mode, touch the target temperature directly and enter the set temperature in the pop-up input box.

4.Operation

The 5 icons in the operation area allow access to different pages of the wired controller for different functional operations.

4.1ON/OFF Button

Touch "  " to control the unit to turn on and off.

4.2Mode Button

Touch "  " to enter the operation mode selection.

INFORMATION:

After selecting the mode, you can touch " Back to main page " to return to the home page quickly.

4.3Function Button

Touch "  " to enter the function setting page, the following will explain each function.

4.3.1User Function

Touch " User functions " to enter user function setting page.

Quite Mode

-Reduced compressor frequency and fan speed to reduce unit noise.

Powerful Mode

-Increase the compressor frequency and fan speed to increase the capacity of the unit.

Sterilization Mode

- Unit will operate sterilization mode. Parameters 9-12 are used to set the sterilization mode.

Forced Defrosting

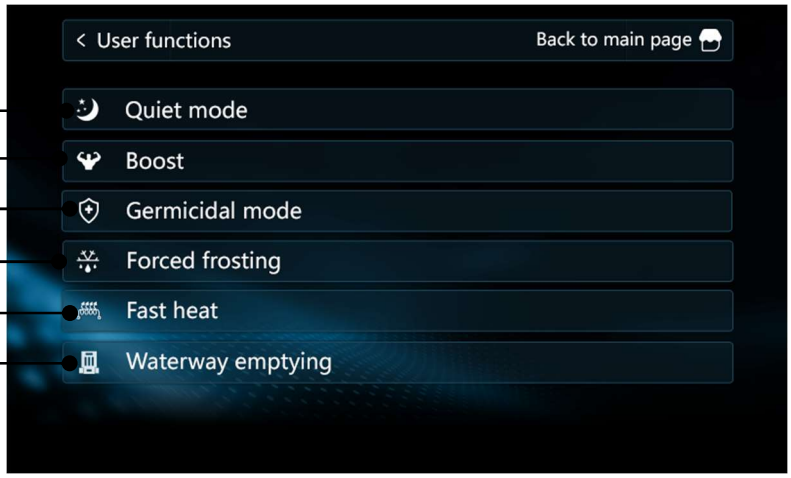
-Unit will operate the defrosting mode.

Fast Heating Mode

-Unit will turn on the AHS and electric heater for fast heating

Waterway Exhaust Mode

- Unit will run the water pump to circulate the water circuit and discharge the air.



NOTE:

When the unit operating silent mode will reduce heating capacity.
When the unit operating powerful mode will increase operating noise.

For Example:

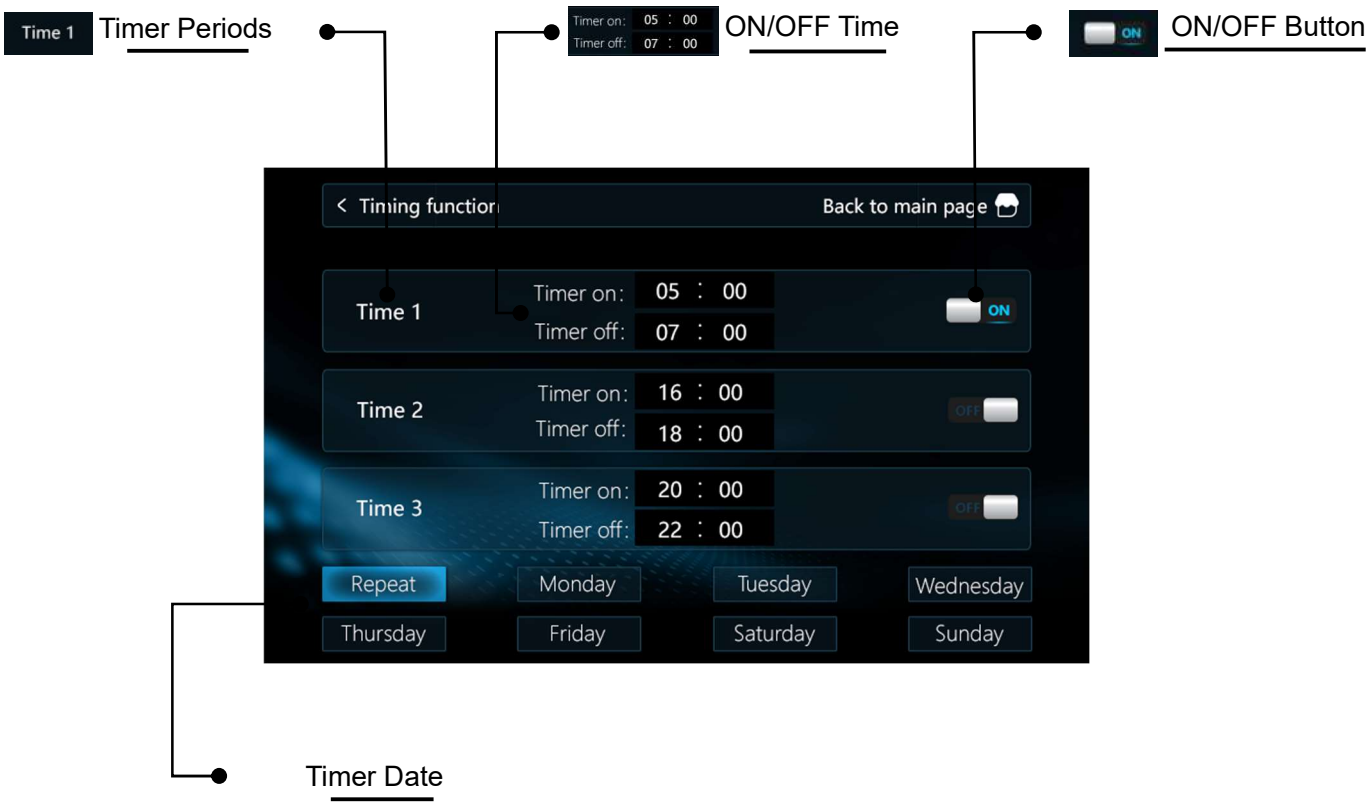
Sterilization Mode:

When 9=1,10=23,11=10,12=70 and the sterilization mode is enabled, the unit will run sterilization once at 23:00 and 7 days interval, the sterilization will continue to run at 70℃ water temperature for 10Min and then exit; the next time it will be turned on will be at 23:00 after 7 days.

4.3.2Timer Function Setting

Touch " Timing function " to enter timer function setting page.

The wired controller can set the unit to turn on or off on different days and time periods.



-Repeat: Run every day according to the set timer.

-Monday-Sunday: Run the selected date according to the set timer.

4.3.3Wi-Fi Setting

Touch " WIFI distribution " to enter Wi-Fi setting page. If you need to use your mobile phone to control the heat pump, you need to turn on Wi-Fi first and then use the app to connect.

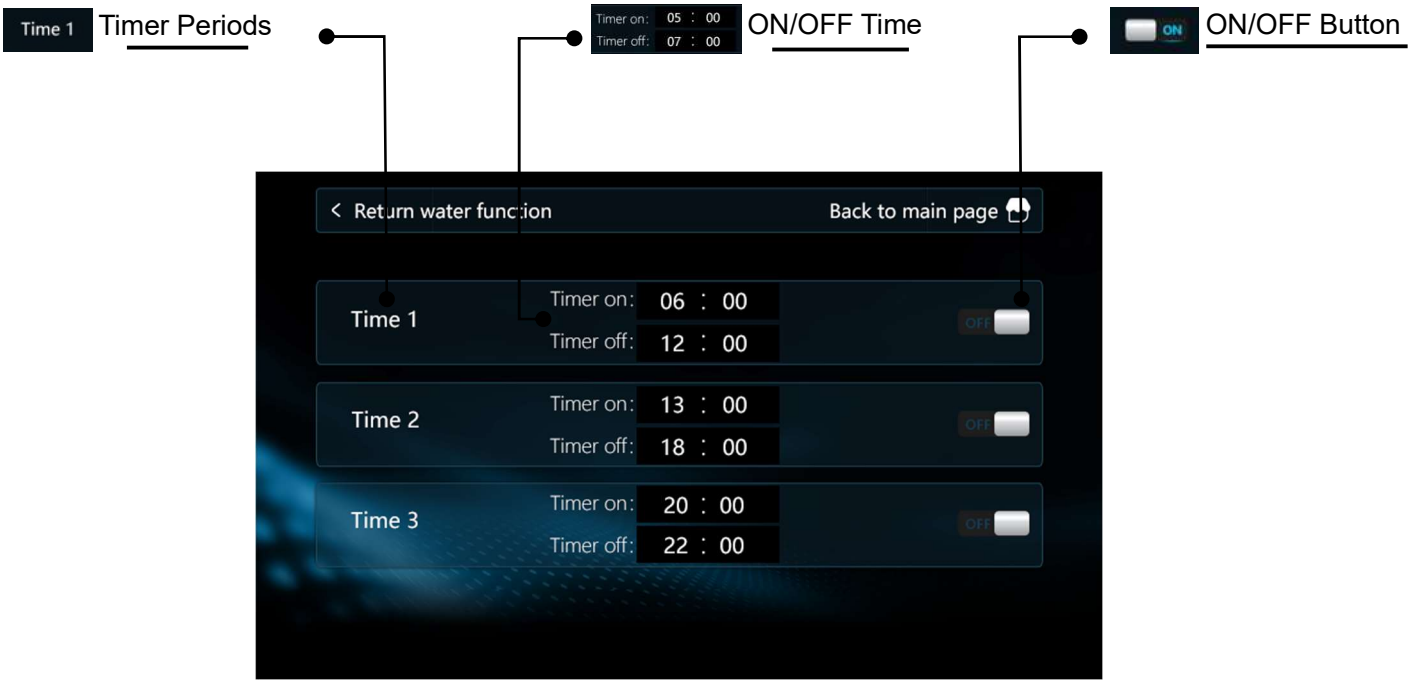
For details, refer to Chapter 5

NOTE:
It is recommended to use Intelligent distribution mode.

4.3.4DHW Return Water Function

Touch " Return water function " to enter the DHW return water setting page.

To maintain the water temperature in the domestic water pipes, the hot water return function can be turned on to keep the water in the water pipes at a constant temperature.



NOTE:

- To enable the DHW return water function, P_e water pump needs to be installed. Please consult the installer for details.
- If the scheduled water return is set, the unit will run the water return function according to the scheduled time; if the scheduled water return is not set, the unit will automatically run the water return function. Parameters 13-14 are the control water return settings.

4.3.5Factory Function

Touch " Factory function " to enter the factory function page.

INFORMATION:

Password is 1122.

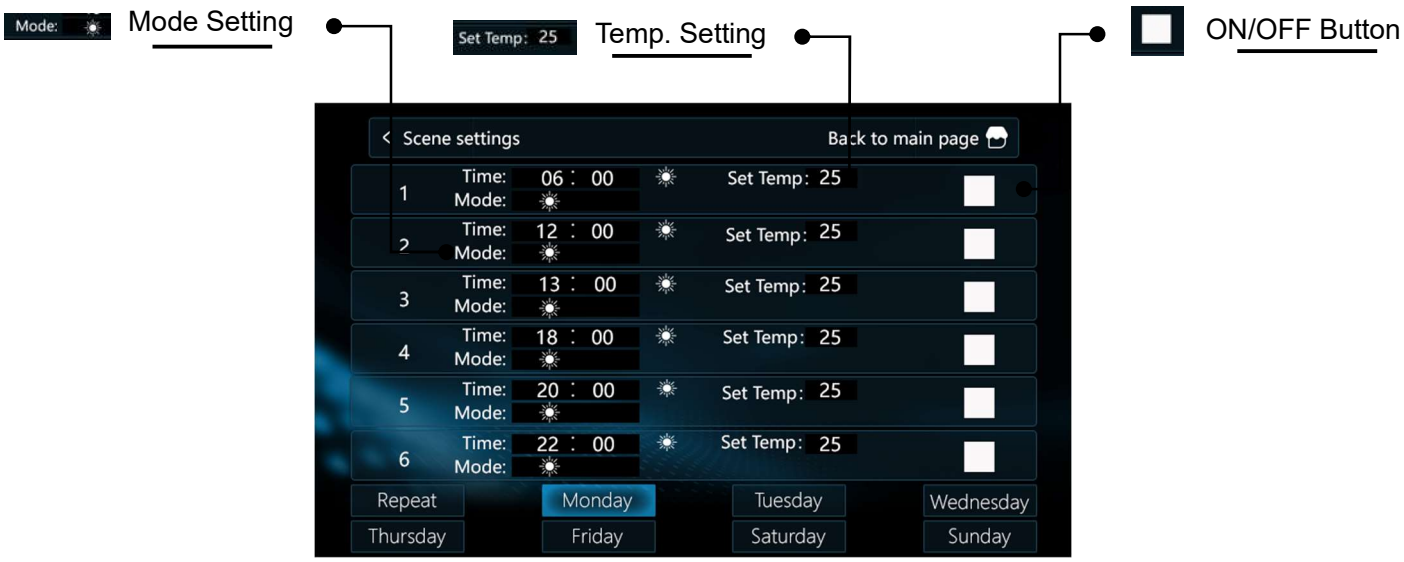
This page is for factories and installers only.

Adjusting parameters may affect the normal operation of the unit.

4.3.6Scene Setting

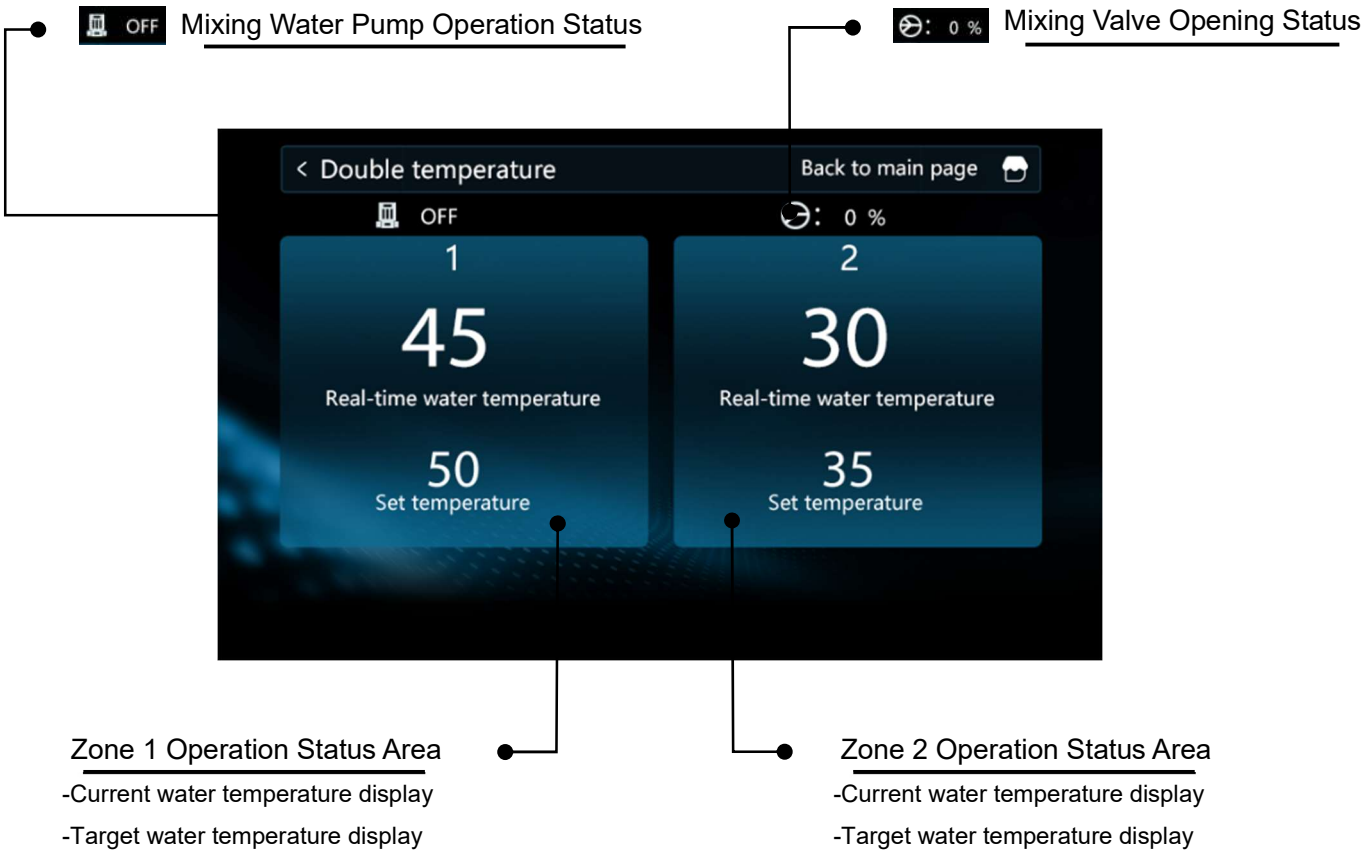
Touch " Scene settings " to enter the scene setting page.

In the scene setting, you can set the unit to run in different modes and target temperatures on different days and time periods and set different scenes according to different needs.



4.3.7Dual Temperature Zone Control

Touch " > " to enter next page and touch " Double temperature zone " to enter the dual temperature zone control setting page. If you need to set different temperatures in two areas of your house at the same time, such as when using radiators and floor heating, you can use a heat pump to control the temperatures of the two areas.



INFORMATION:

Dual Temperature Zone Control is disabled by default.

P257 is used to enable/disable functions. (0-Enable/1-Disable)

Please consult the installer for more settings

4.3.8SG Ready

Touch "  " to enter next page and touch "  " to enter the smart grid setting page. If you are connected to a smart grid, you can set it through this page.

When there is neither SG signal nor EVU signal, you can set the maximum operating time of the unit and then turn off the unit.

INFORMATION:

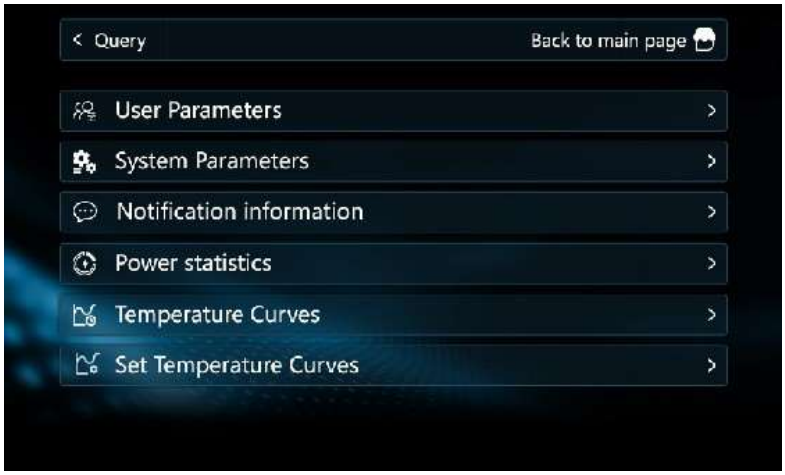
Smart grid function is disabled by default.

P255 is used to enable/disable functions. (0-Enable/1-Disable)

Please consult the installer for more settings

4.4Query Button

Touch "  " to enter the parameter query page. The following will explain each page.

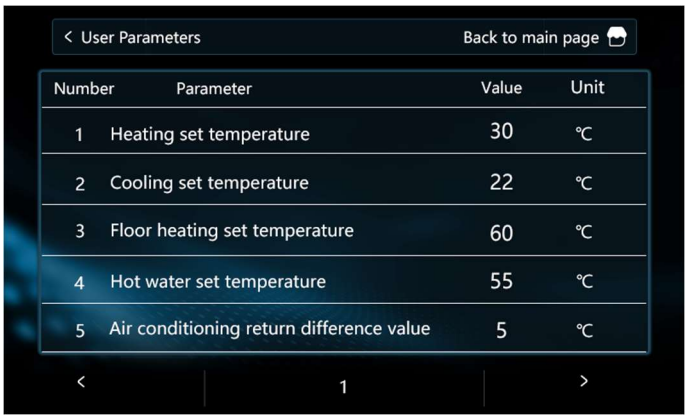


4.4.1User Parameter

All the unit's current user-set parameters can be set on this page, and you can also quickly set the target temperatures for different operating modes on this page.

Touch " User Parameters " to enter the user parameter query page, press "<" ">" to switch pages.

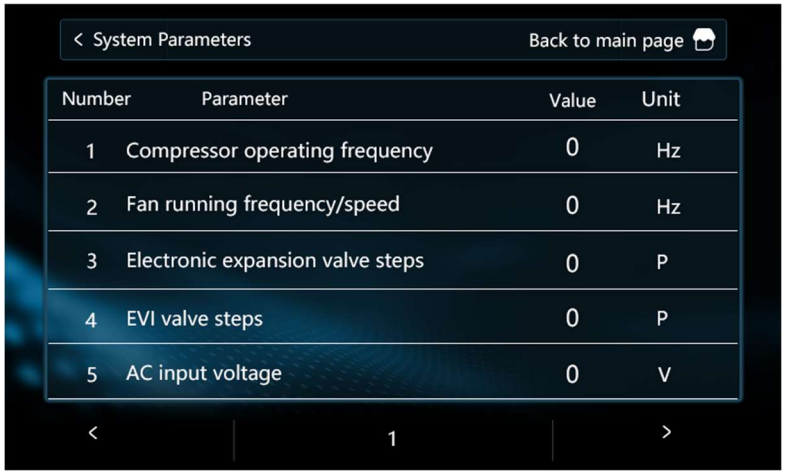
Touch the parameter valve to enter the modify page. Enter the valve on the keyboard.



4.4.2System Parameter

The system parameters provide detailed feedback on the current operation of the unit, and when the unit is operating abnormally, the system parameters can be provided to the installer for analysis.

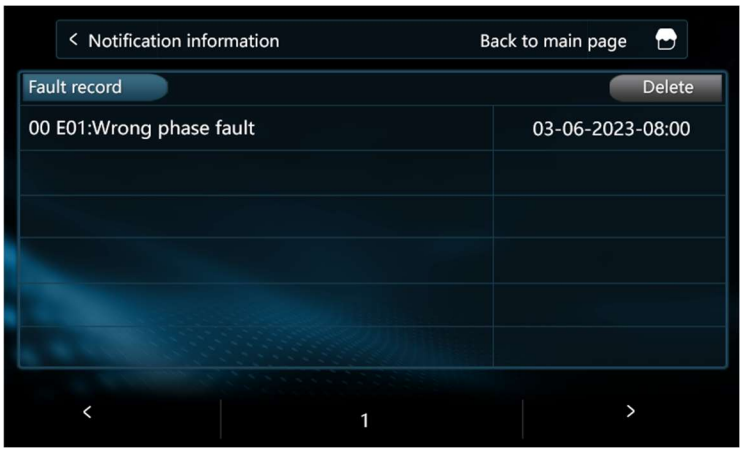
Touch " System Parameters " to enter the system parameter query page, press "<" ">" to switch pages.



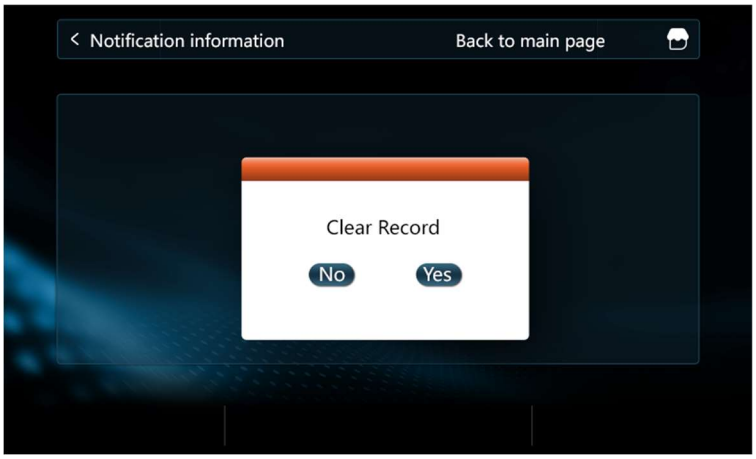
When unit in cascade mode, touch "System Parameters" and select the units you want to view. Grey means the unit is not connected.

4.4.3Notification

When the unit shows error information, " " icon will be displayed on the main page, directly touch " " or touch "Notification information" to enter the error message inquiry page.



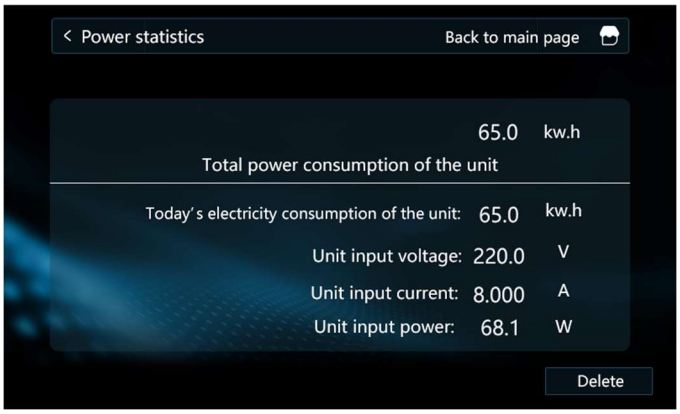
Touch" Delete " can clear history of failure.

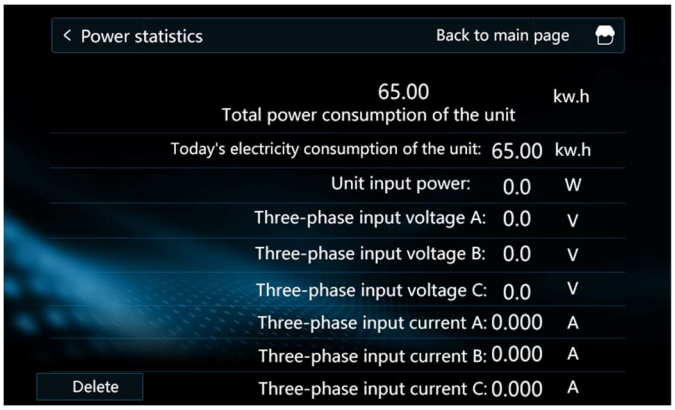


4.4.4Power Statistics

The built-in power statistics module of the unit can count the power consumption data of the unit.

Touch" Power statistics " to query the power statistics.

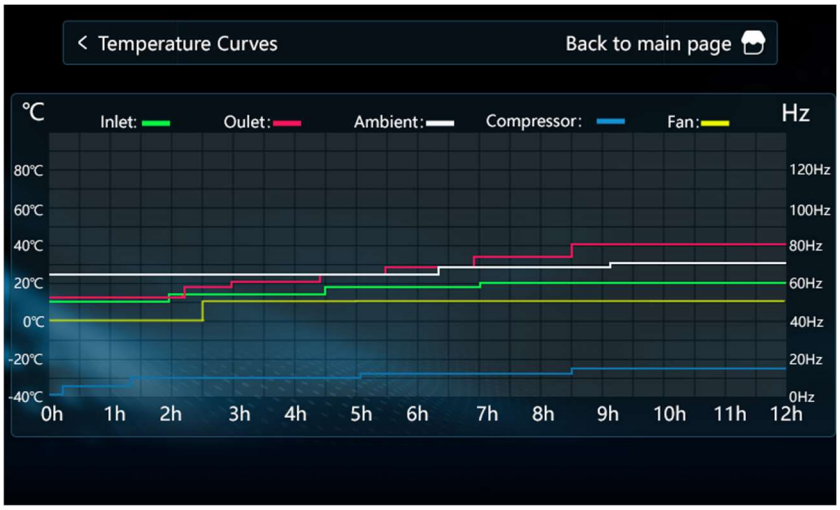




4.4.5Operation Curves

The operation curve of the unit can visualize the operation of the unit, including the change of inlet and outlet water temperature, the change of compressor and fan frequency, etc.

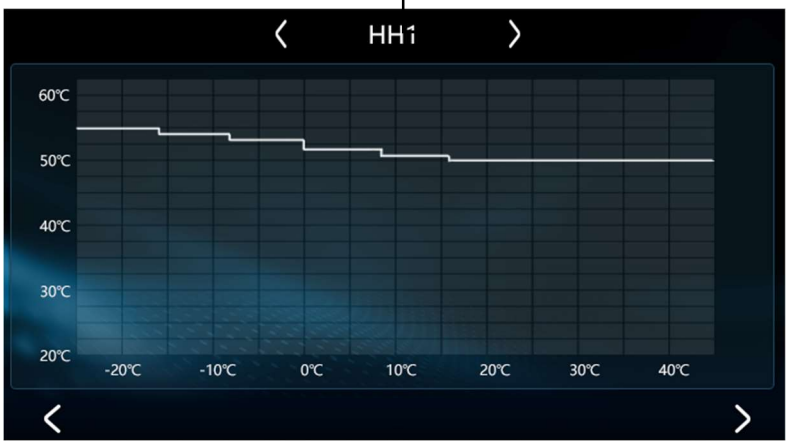
Touch" Temperature Curves " to query the unit running status.



4.4.6 Climate Temperature Curve

Climate temperature curve is used to preset the water outlet temperature depending on the ambient temperature. During the warmer weather the heating is reduced. To save energy, the climate temperature curve can decrease the water outlet temperature when the ambient temperature increased in heating mode.

Touch" Set Temperature Curves " to enter the climate temperature curve setting page. Touch" 〈 " and " 〉 " to select different temperature curve.



Curve No.

-HH: High temperature curve for heating

-HL: Low temperature curve for heating

-CH: High temperature curve for cooling

-CL: Low temperature curve for cooling

-H: Temperature curve for DHW

INFORMATION:

- Heating mode has 8 built-in curves.
- Cooling mode has 8 built-in curves.
- Hot water mode has 4 built-in curves.

NOTE:

- It only uses the curve of the high temperature setting for heating if the high temperature is set for heating.
- It only uses the curve of the low temperature setting for heating if the low temperature is set for heating.
- It only uses the curve of the high temperature setting for cooling if the high temperature is set for cooling.
- It only uses the curve of the low temperature setting for cooling if the low temperature is set for cooling.
- The water outlet temperature can't be adjusted when the temperature curve is set.
- See the appendix for a table of temperature profiles.

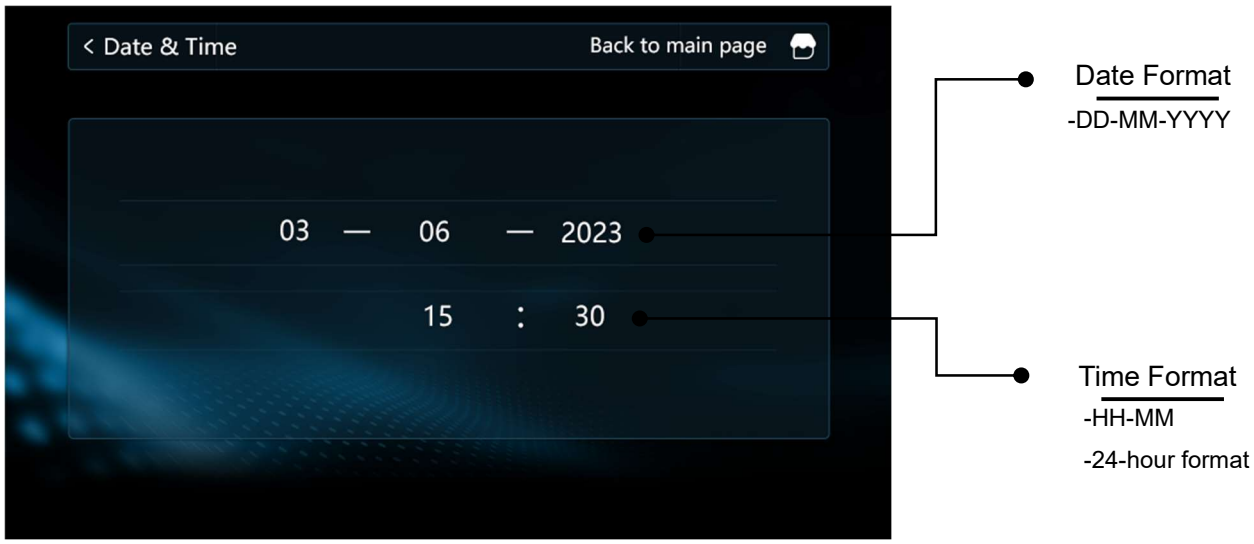
4.5Setting Button

Touch"  " to enter the setting page. For specific setting option, please refer to the following.

NOTE:
Gray options represent features to be improved.

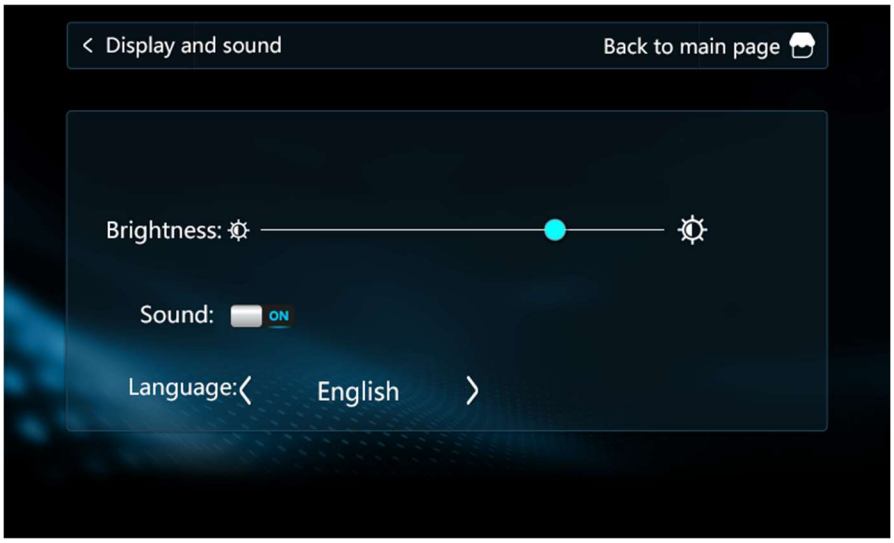
4.5.1Date & Time

Touch" Date & Time " to enter the Date & Time setting page. The first installation of the wired controller requires manual setting of the date and time.



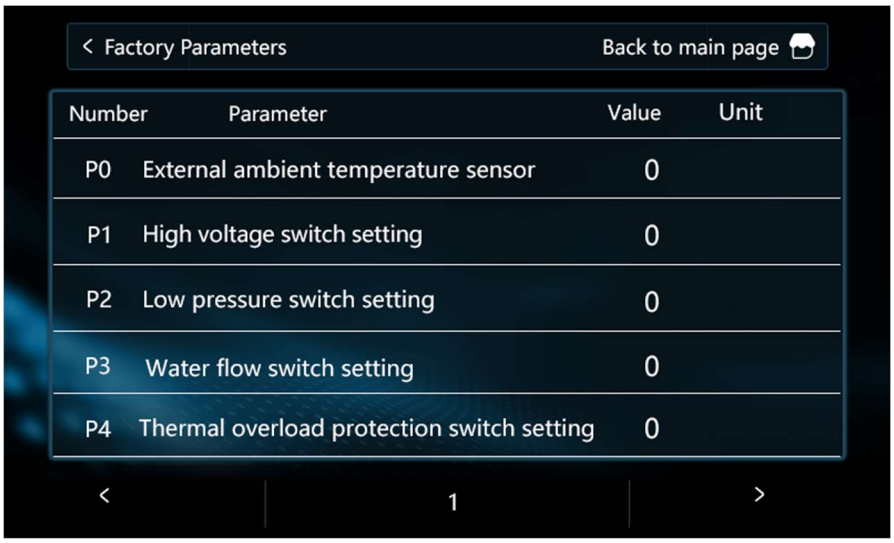
4.5.2Dispaly & Sound

Touch" Display and sound " to enter setting page. You can set the display brightness of the wired controller, turn off the touch sound and change the language display.



4.5.3Factory Parameter

Touch" Factory Parameters " to enter the factory parameter setting page. Press "<" ">" to switch pages. Touch the parameter valve to enter the modify page. Enter the valve on the keyboard.



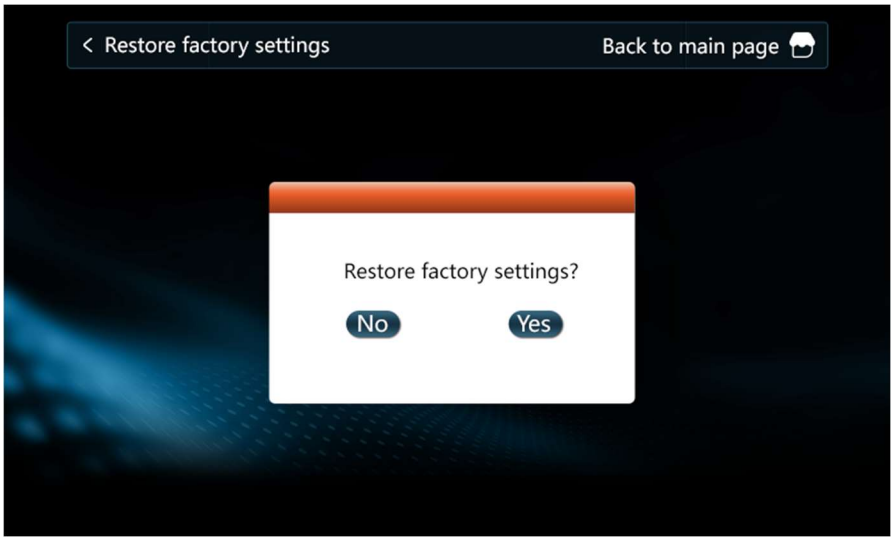
When unit in cascade mode, touch " Factory Parameters " and select the units you want to view. Grey

means the unit is not connected.

INFORMATION:
Password is 0000.
This page is for factories and installers only.

4.5.4Restore Factory Setting

If you want to restore the parameters to their default values or if the unit is running abnormally, you can touch" Restore factory settings " to enter the restore factory setting page. Touch " Yes " to confirm in the pop-up window.



4.5.5About

Touch " About " to check the motherboard and wired controller software version.

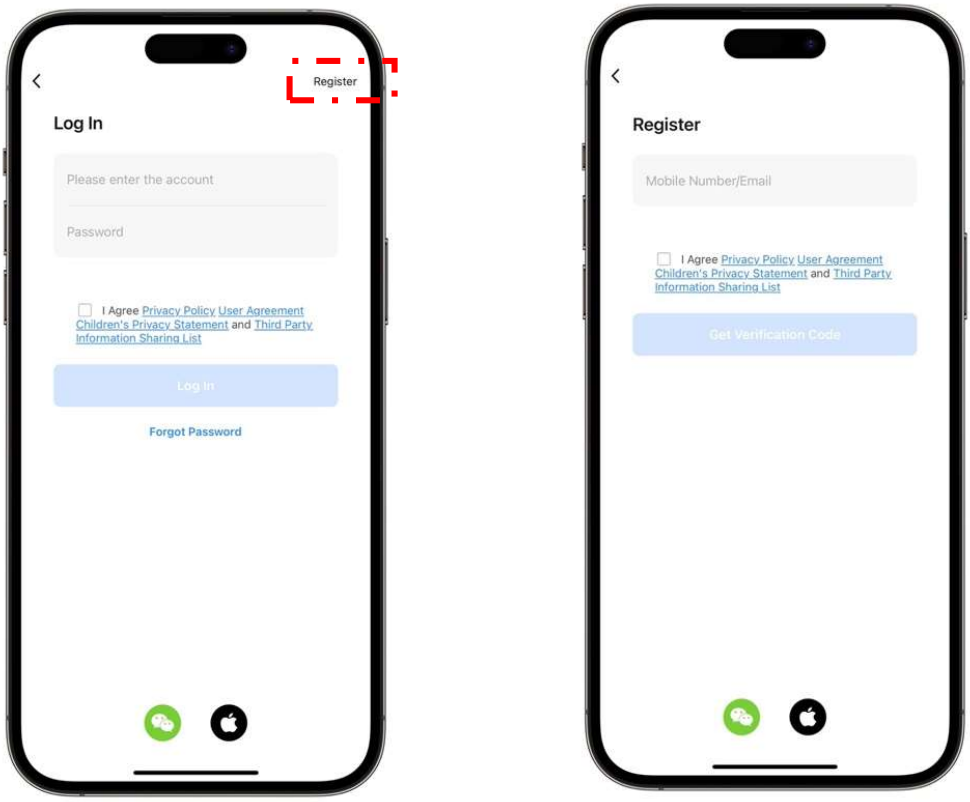
5.Smart Life APP

The unit can be controlled remotely from your cell phone, scan the QR code below or search for "Smart Life" in the App Store or Google Play to download the app.

5.1Register & Login

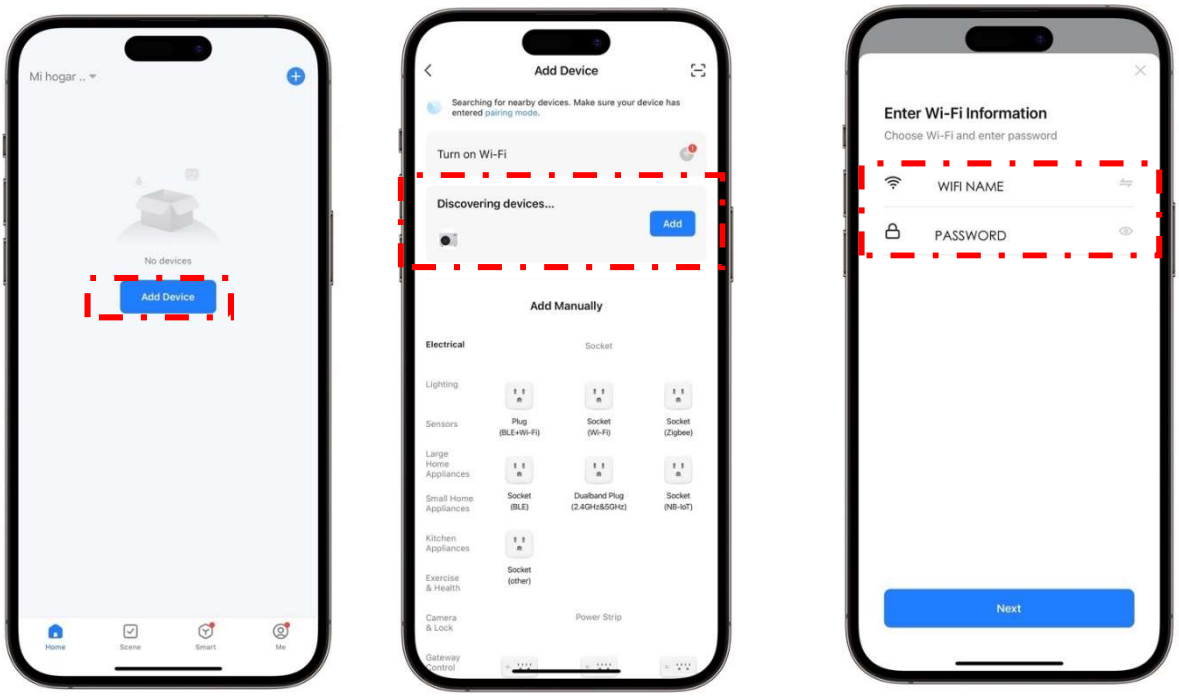
The first time you enter the APP you need to register, enter your email account and password to register.

After successful registration, enter your account and password to enter the binding page



5.2Unit Binding

The wired controller needs to be in WIFI distribution mode, refer to section 4.3.3 for details.



- Make sure the wire controller and cell phone are in the same network, the cell phone needs to be connected to WIFI, and then open the Bluetooth and authorize the APP to use, touch "Add Device".
- Wait for the device to be searched, click "Add".
- Enter the WI-FI password.
- Bind successfully.

INFORMATION:

Make sure the wire controller and cell phone are in the same network.

Make sure the phone is turn on Bluetooth and authorized APP.

5.3Using Homepage

5.3.1ON/OFF

Touch " 

" for unit ON/OFF

5.3.2Mode Setting

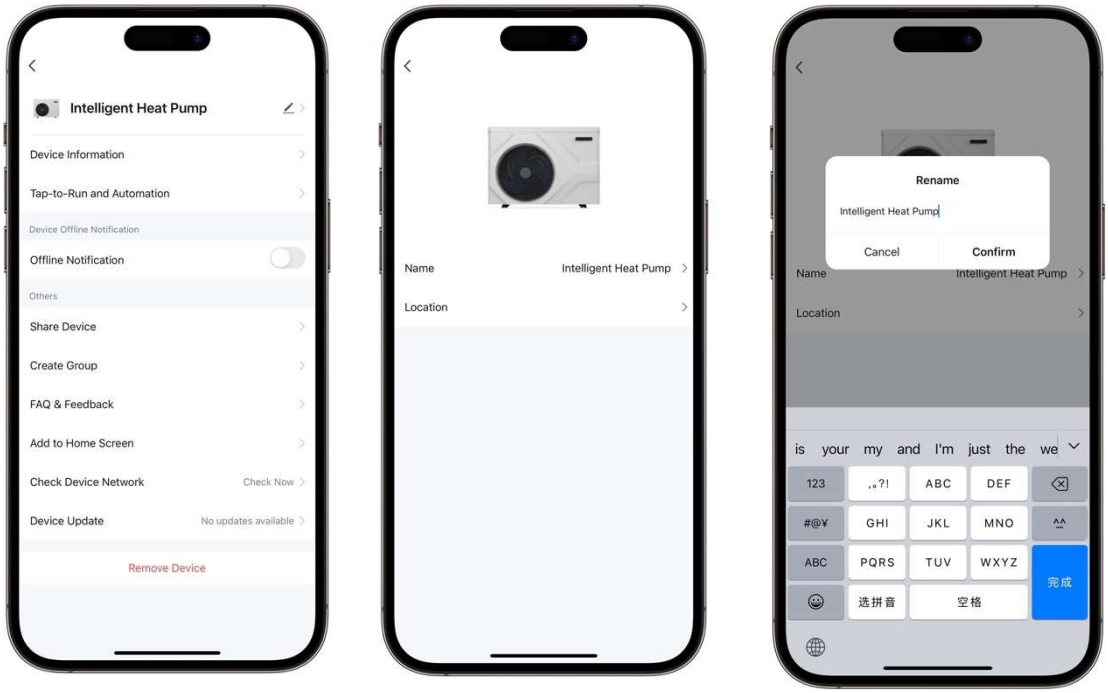
Touch"  " to switch unit operation mode.

5.3.3Rename Unit

- Touch " " to go to the unit information.

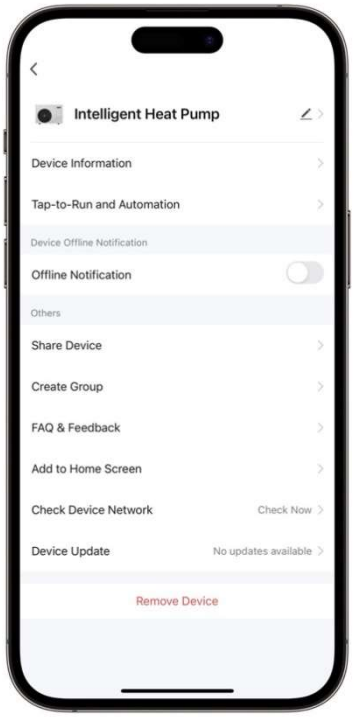
- Touch " "to view the unit's name.
- Touch "Name" to rename the unit.

- Enter the name you want to rename.



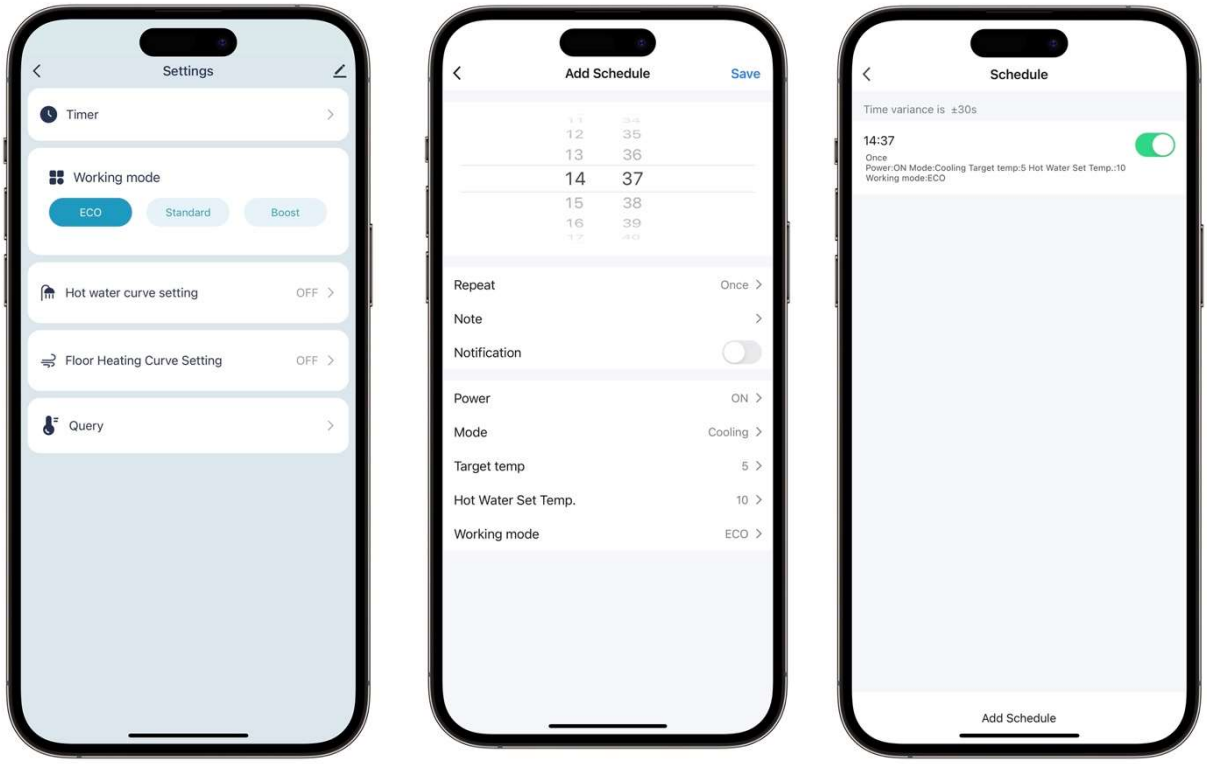
5.3.4Remove Unit

Touch "Remove Device" to unbind the device.



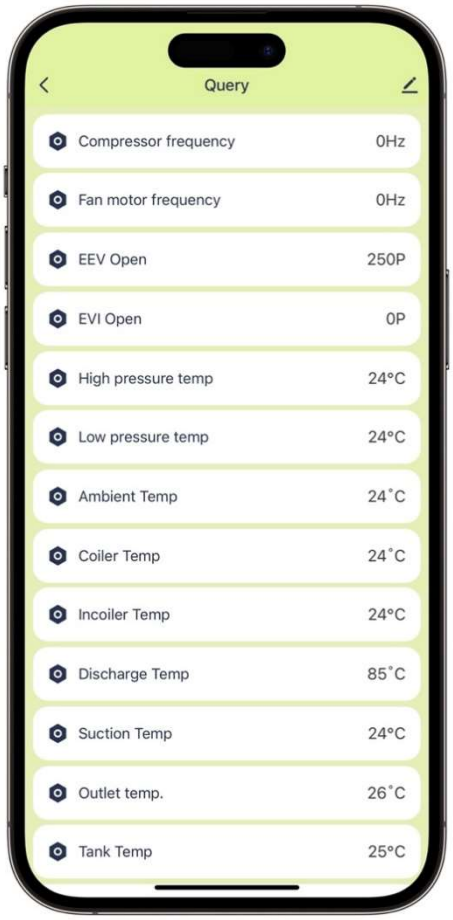
5.3.5Timer Setting

- Touch "Settings" to enter the unit settings.
- Touch "Timer" to set the timer.
- Select the time you want to set the timer.



5.3.6Operation Status Query

- Touch "Settings" to enter the unit settings.
- Touch "Query" to check the unit operation parameter.

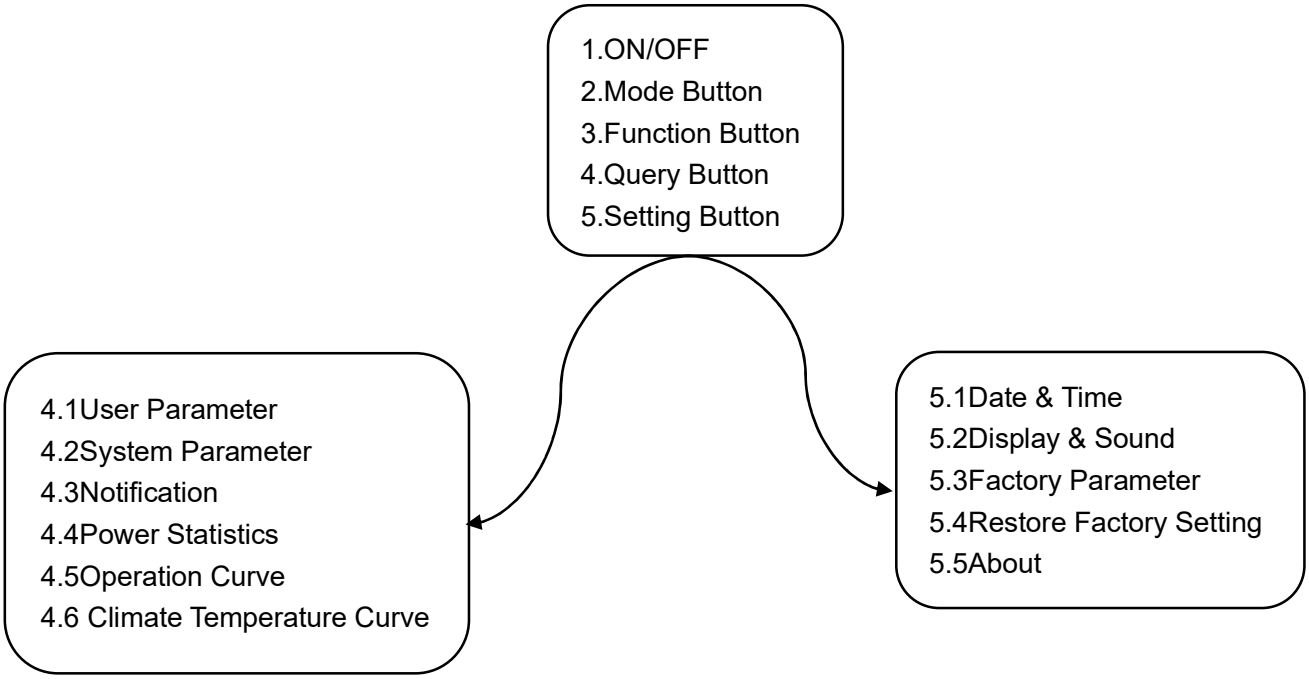


6. Wired Controller Menu Structure Overview

1.ON/OFF
2.Mode Button
3.Function Button
4.Query Button
5.Setting Button

2.1Hot Water
2.2Heating
2.3Cooling
2.4Floor Heating
2.5Hot water & Cooling
2.6 Hot water & Heating
2.7 Hot water & Floor Heating

3.1User Function
3.2Timer Function
3.3WI-FI
3.4DHW Return Water
3.5Factory Function
3.6 Scene
3.7 Dual Temperature Zone Control
3.8SG Ready



7.Appendix

7.1Climate Temperature Curves

By selecting the corresponding climate compensation curve, the unit automatically adjusts the water outlet temperature according to the ambient temperature, and the following is the designation of the climate compensation curve on the wired controller:

High Temperature Curve for Heating		Low Temperature Curve for Heating	
Curves No.	**Corresponding Curve**	**Curves No.**	**Corresponding Curve**
HH1	Heating Curve 1	HL1	Heating Curve 1
HH2	Heating Curve 2	HL2	Heating Curve 2
HH3	Heating Curve 3	HL3	Heating Curve 3
HH4	Heating Curve 4	HL4	Heating Curve 4
HH5	Heating Curve 5	HL5	Heating Curve 5
HH6	Heating Curve 6	HL6	Heating Curve 6
HH7	Heating Curve7	HL7	Heating Curve7
HH8	Heating Curve 8	HL8	Heating Curve 8

High Temperature Curve for Cooling		Low Temperature for Curve Cooling	
Curves No.	**Corresponding Curve**	**Curves No.**	**Corresponding Curve**
CH1	Heating Curve 1	CL1	Heating Curve 1

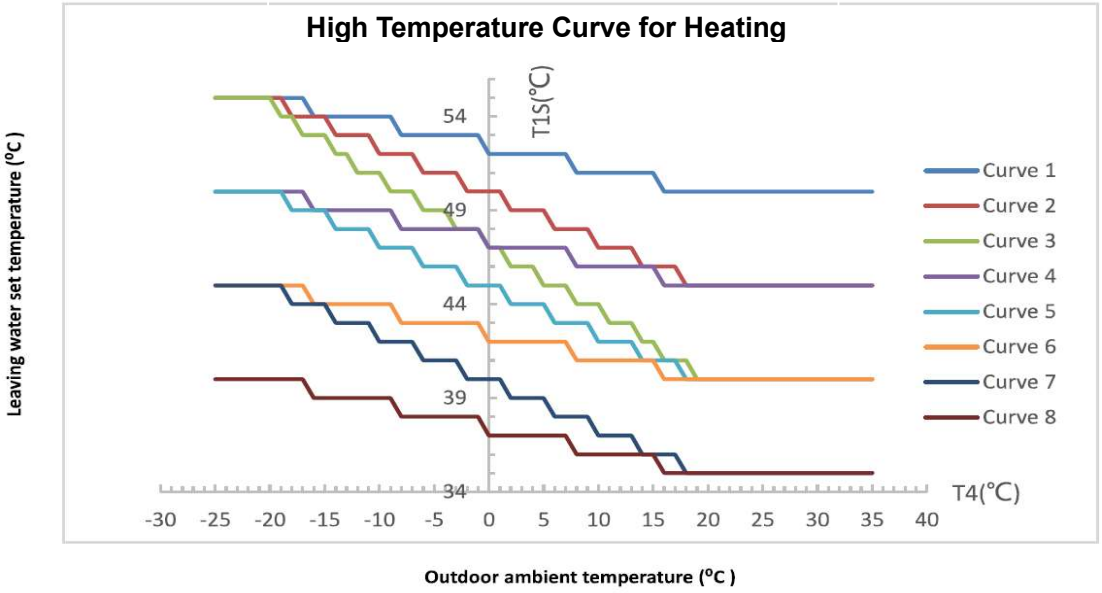
High Temperature Curve for Cooling		Low Temperature for Curve Cooling	
Curves No.	**Corresponding Curve**	**Curves No.**	**Corresponding Curve**
CH2	Heating Curve 2	CL2	Heating Curve 2
CH3	Heating Curve 3	CL3	Heating Curve 3
CH4	Heating Curve 4	CL4	Heating Curve 4
CH5	Heating Curve 5	CL5	Heating Curve 5
CH6	Heating Curve 6	CL6	Heating Curve 6
CH7	Heating Curve 7	CL7	Heating Curve 7
CH8	Heating Curve 8	CL8	Heating Curve 8

7.1.1Heating Curves

High Temperature Curve for Heating (HH Curve)							
HH1		HH2		HH3		HH4	
Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)
≥16	50	≥17	45	≥16	45	≥19	40
8≤T < 16	51	14≤T < 17	46	8≤T < 16	46	16≤T < 19	41
0≤T < 8	52	10≤T < 14	47	0≤T < 8	47	13≤T < 16	42
-8≤T < 0	53	6≤T < 10	48	-8≤T < 0	48	10≤T < 13	43
-16≤T < -8	54	2≤T < 6	49	-16≤T < -8	49	7≤T < 10	44
< -16	55	-2≤T < 2	50	< -16	50	4≤T < 7	45
/	/	-6≤T < -2	51	/	/	1≤T < 4	46
/	/	-10≤T < -6	52	/	/	-2≤T < 1	47
/	/	-14≤T < -10	53	/	/	-5≤T < -2	48
/	/	-20≤T < -14	54	/	/	-8≤T < -5	49
/	/	< -20	55	/	/	-10≤T < -8	50
/	/	/	/	/	/	-12≤T < -10	51
/	/	/	/	/	/	-14≤T < -12	52
/	/	/	/	/	/	-16≤T < -14	53
/	/	/	/	/	/	-18≤T < -16	54
/	/	/	/	/	/	< -18	55

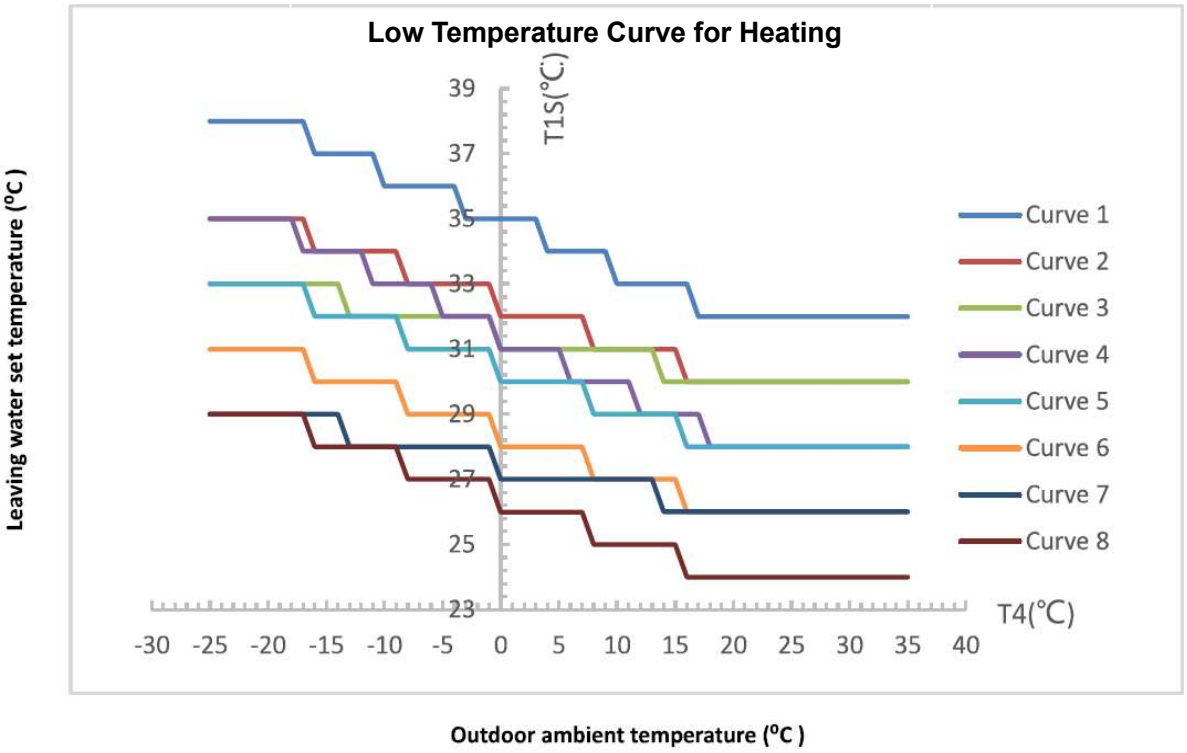
HH5		HH6		HH7		HH8	
Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)

≥17	40	≥16	40	≥17	35	≥16	35
14≤T < 17	41	8≤T < 16	41	14≤T < 17	36	8≤T < 16	36
10≤T < 14	42	0≤T < 8	42	10≤T < 14	37	0≤T < 8	37
6≤T < 10	43	-8≤T < 0	43	6≤T < 10	38	-8≤T < 0	38
2≤T < 6	44	-16≤T < -8	44	2≤T < 6	39	-16≤T < -8	39
-2≤T < 2	45	< -16	45	-2≤T < 2	40	< -16	40
-6≤T < -2	46	/	/	-6≤T < -2	41	/	/
-10≤T < -6	47	/	/	-10≤T < -6	42	/	/
-14≤T < -10	48	/	/	-14≤T < -10	43	/	/
-20≤T < -14	49	/	/	-20≤T < -14	44	/	/
< -20	50	/	/	< -20	45	/	/
NOTE: Curve 4 and Curve 6 are ECO energy saving curves							



Low Temperature Curve for Heating (HL Curve)							
HL1		HL2		HL3		HL4	
Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)
≥18	32	≥16	30	≥14	30	≥18	28
9≤T < 18	33	8≤T < 16	31	0≤T < 14	31	13≤T < 18	29
4≤T < 9	34	0≤T < 8	32	-14≤T < 0	32	6≤T < 8	30
-3≤T < 4	35	-8≤T < 0	33	< -14	33	0≤T < 6	31
-10≤T < -3	36	-16≤T < -8	34	/	/	-5≤T < 0	32
-16≤T < -10	37	< -16	35	/	/	-9≤T < -5	33
< -16	38	/	/	/	/	-16≤T < -9	34
/	/	/	/	/	/	< -16	35

HL5		HL6		HL7		HL8	
Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)
≥16	28	≥16	26	≥14	26	≥16	24
8≤T < 16	29	8≤T < 16	27	0≤T < 14	27	8≤T < 16	25
0≤T < 8	30	0≤T < 8	28	-14≤T < 0	28	0≤T < 8	26
-8≤T < 0	31	-8≤T < 0	29	< -14	29	-8≤T < 0	27
-16≤T < -8	32	-16≤T < -8	30	/	/	-16≤T < -8	28
< -16	33	< -16	31	/	/	< -16	29
NOTE: Curve 4 and Curve 6 are ECO energy saving curves							

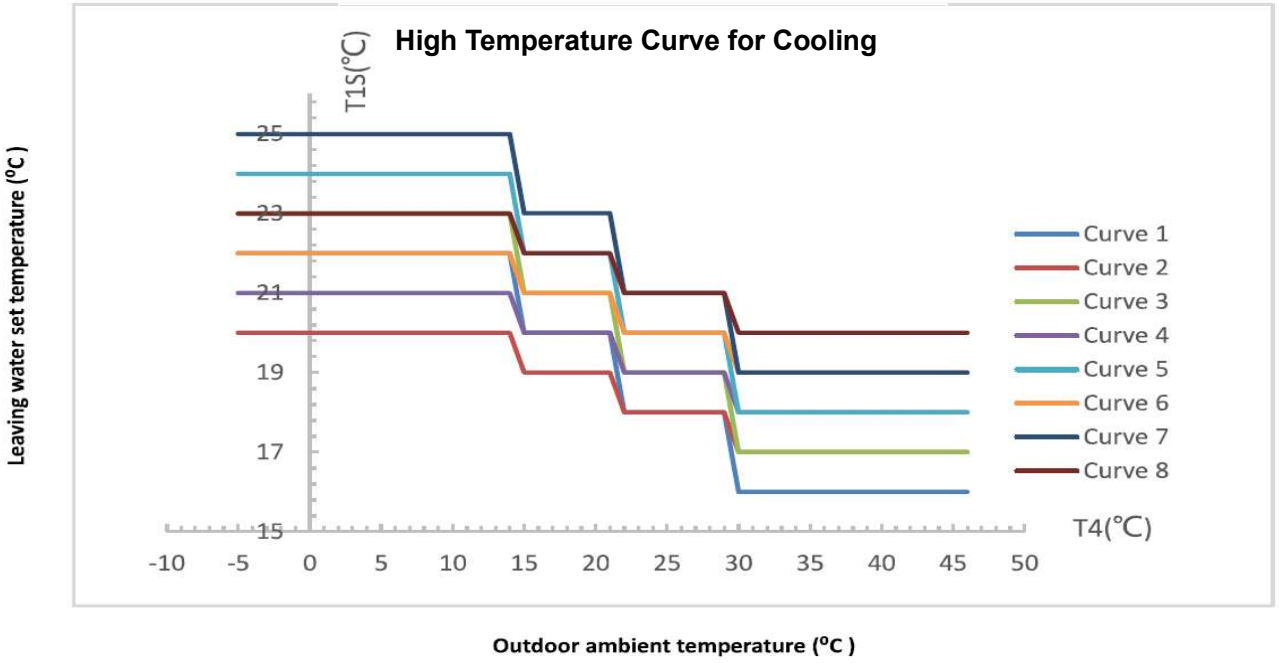


7.1.2Cooling Curves

High Temperature Curve for Cooling (CH Curve)							
CH1		CH2		CH3		CH4	
Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)
≥30	16	≥30	17	≥30	17	≥30	18
22≤T < 30	18	22≤T < 30	18	22≤T < 30	19	22≤T < 30	19
16≤T < 22	20	16≤T < 22	19	16≤T < 22	21	16≤T < 22	20

< 16	22	< 16	20	< 16	23	< 16	21

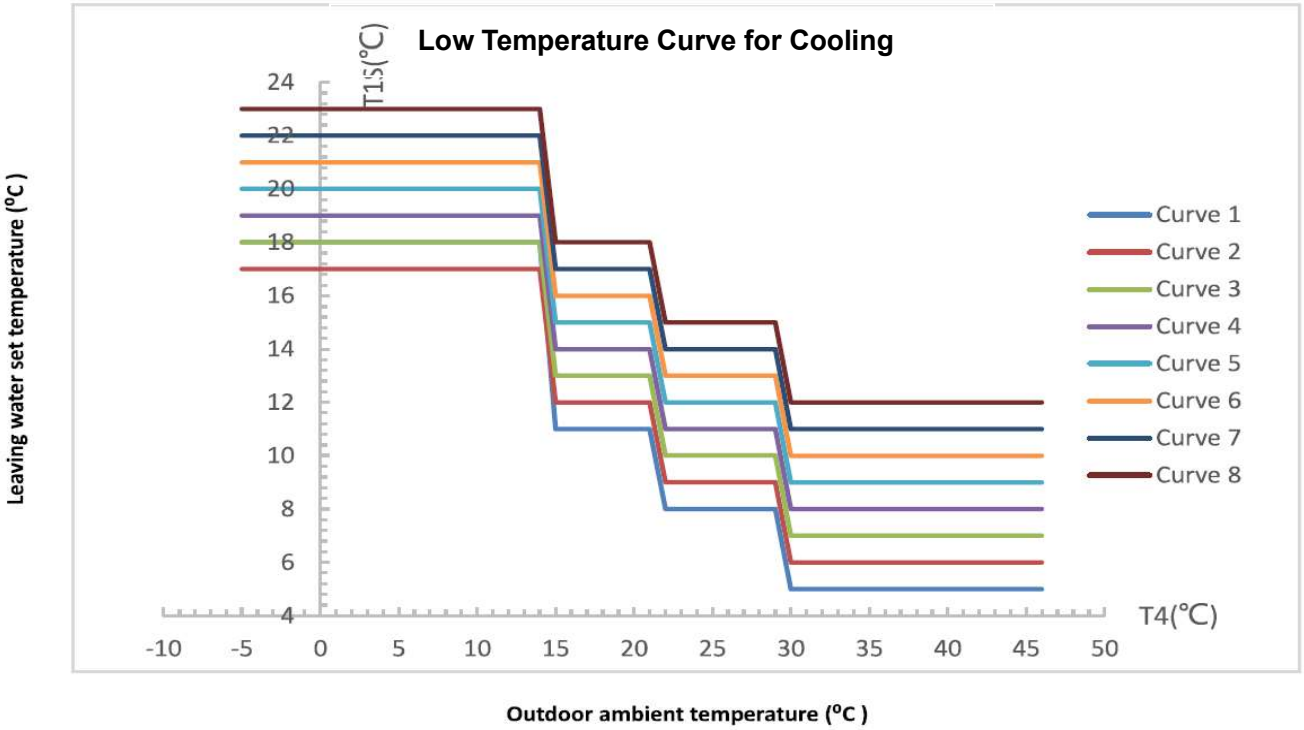
CH5		CH6		CH7		CH8	
Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)
≥30	18	≥30	19	≥30	19	≥30	20
22≤T < 30	20	22≤T < 30	20	22≤T < 30	21	22≤T < 30	21
16≤T < 22	22	16≤T < 22	21	16≤T < 22	23	16≤T < 22	22
< 16	24	< 16	22	< 16	25	< 16	23
NOTE: Curve 4 and Curve 6 are ECO energy saving curves							



Low Temperature Curve for Cooling (CL Curve)							
CL1		CL2		CL3		CL4	
Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)
≥30	5	≥30	6	≥30	7	≥30	8
20≤T < 30	8	20≤T < 30	9	20≤T < 30	10	20≤T < 30	11
16≤T < 22	11	16≤T < 22	12	16≤T < 22	13	16≤T < 22	14
< 16	17	< 16	18	< 16	18	< 16	19

CL5		CL6		CL7		CL8	
Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)	Ambient Temp.(T/℃)	Water Outlet Temp. (℃)

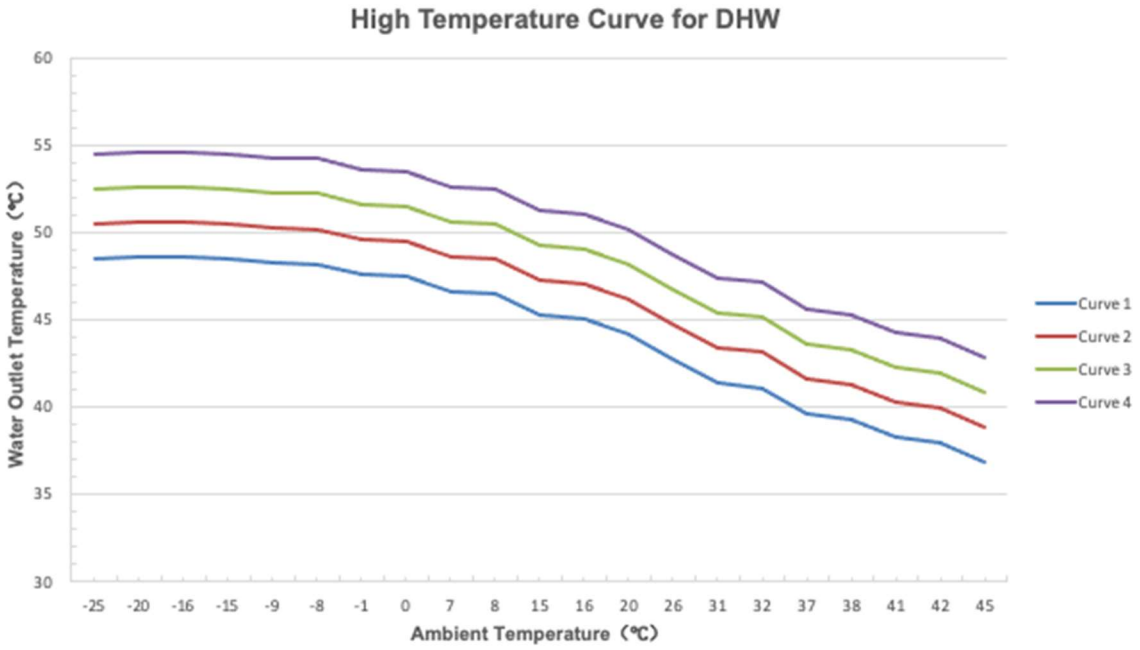
≥30	9	≥30	10	≥30	11	≥30	12
20≤T < 30	12	20≤T < 30	13	20≤T < 30	14	20≤T < 30	15
16≤T < 22	15	16≤T < 22	16	16≤T < 22	17	16≤T < 22	18
< 16	20	< 16	21	< 16	22	< 16	23
NOTE: Curve 4 and Curve 6 are ECO energy saving curves							



7.1.3DHW Curves

Temperature Curve for DHW (H Curve)				
Ambient Temp.(T/℃)	Water Outlet Temp. (℃)			
	H1	H2	H3	H4
-25	49	51	53	55
-20	49	51	53	55
-16	49	51	53	55
-15	49	51	53	55
-9	48	50	52	54
-8	48	50	52	54
-1	48	50	52	54
0	48	50	52	54
7	47	49	51	53

8	46	48	50	52
15	45	47	49	51
16	45	47	49	51
20	44	46	48	50
26	43	45	47	49
31	41	43	45	47
32	41	43	45	47
37	40	42	44	46
38	39	41	43	45
41	38	40	42	44
42	38	40	42	44
45	37	39	41	43



7.2Error Code & Troubleshooting

7.2.1 Motherboard

Error Code	Error Description	Troubleshooting
E01	Wrong Phase	Power Supply Connect Wrong Phase
E02	Missing Phase	Power Supply Missing Phase
E03	Water Flow Failure	1.Check whether the circulating water pump is normal and whether the water system is

Error Code	Error Description	Troubleshooting
		blocked.
		2.Check whether the water flow switch is normal and whether the installation direction is correct.
		3.Check whether the wiring of the water flow switch is correct or not.
		4.Check whether the water pump head meets the actual requirements
		5.Check whether the water pump is reversed and installed in the wrong direction.
E04	Abnormal Communication between Motherboard and Remote Module (Reserved)	Check the communication connection between the motherboard and the remote module
E05	High Pressure Switch Failure	1.Check pressure switch for damage, wiring error
		2.Check if there is too much refrigerant in the system.
		3.Check whether the fan is working properly and whether the water flow of the unit is normal.
		4.Check whether there is air or blockage in the fluorine system.
		5.Check whether the water-side heat exchanger is seriously caked with whitewash.
E06	Low Pressure Switch Failure	1.Check pressure switch for damage, wiring error
		2.Check if there is not enough refrigerant in the system.
		3.Check whether the fan is working properly
		4.Check whether there is air or blockage in the fluorine system.
E09	Wire Controller Communication Failure	Check the communication connection between the wire controller and the main board
E10	Reserve	Reserve
E11	Out of Use Time	The free trial period has expired, enter the boot password
E12	Exhaust Temp. Too High	1.Fluorine system clogging
		2.Lack of refrigerant in the fluorine system or bad sensor

Error Code	Error Description	Troubleshooting
E14	Water Tank Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E15	Water Inlet Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E16	Coil Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E18	Exhaust Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E20	Indoor Ambient Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E21	Outdoor Ambient Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E22	DHW Return Water Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E23	Water Outlet Temp. Too Low in Cooling Mode	1.Check whether the water flow is too low or no water flow
		2.Check if the water outlet sensor is damaged
		3.Fluorine system clogging
E24	Antifreeze Temp. Sensor Failure (Fluorine Circuit)	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E25	Reserve	Reserve
E26	Antifreeze Temp. Sensor Failure (Water Circuit)	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E27	Water Outlet Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged

Error Code	Error Description	Troubleshooting
		3. The motherboard port is damaged
E29	Suction Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E30	Suction Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E31	Water Pressure Failure	1.Water pressure switch wiring error
		2.Water pressure switch failure
E32	Water Outlet Temp. Sensor T15 Failure	1.Water flow is not enough
		2.Sensor failure
E33	High Pressure Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E34	Low Pressure Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E37	Large Temp. Difference between Water Inlet and Outlet	1.The water inlet or outlet sensor is damaged
		2.Water inlet or outlet sensor not placed or in the wrong position
		3.Water flow is not enough
E38	Fan Failure	Fan driver board or motor failure
E42	Cooling Coil Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E44	Ambient Temp. Too Low	Normal protection
E47	Economizer Inlet Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E48	Economizer Inlet Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
E49	Economizer Outlet Temp. Sensor Failure	Same as E47

Error Code	Error Description	Troubleshooting
E51	High Pressure Too High	Same as E05
E52	Low Pressure Too Low	Same as E06
E55	Expansion Board Communication Failure	1.Poor contact or broken signal wire
		2.Expansion board damage
		3.Motherboard damage
E80	Power Supply Error	Single-phase power supply unit detects a three-phase electrical signal
E88	Inverter Drive Module Protection	Compressor or compressor driver board is damaged, specific faults see 7.2.2
E94	Built-in pump over/under voltage	1. Input power supply voltage＜165V
		2. Input power supply voltage＞265V
		3. Electronic components on the pump drive board are damaged or damp
		4. Water pump failure
E96	Compressor Drive Board Communication Failure	1.Poor contact or broken signal wire
		2.Electronic components on the motherboard are damaged or damp.
		3.Compressor drive board on the electronic components are damaged or moisture
		4.Compressor drive board power supply is not powered on
E98	Fan Board Communication Failure	1.Poor contact or broken signal wire
		2.Electronic components on the motherboard are damaged or damp.
		3.Fan drive board on the electronic components are damaged or moisture
		4.Fan drive board power supply is not powered on
EA1	Cascade Model Mismatch	Different series of units are not allowed to be cascaded
EA2	Solar Water Heater Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
EA3	Zone 2 Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged

Error Code	Error Description	Troubleshooting
EA4	Buffer Tank Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged
EA5	Total Water Outlet Temp. Sensor Failure	1. The sensor wire is loose or damaged
		2. Sensor is damaged
		3. The motherboard port is damaged

7.2.2 Driver Board (Compressor)

Compressor Drive Error Description Table		
E88	P1	IPM Module Overheat and Shutdown
	P2	Compressor Driver Failure
	P3	Compressor Overcurrent
	P4	Input Voltage Missing Phase
	P5	IPM Supply Voltage Failure
	P6	Power Component Overheating and Shutdown
	P7	Pre-charge Circuit Voltage Failure
	P8	DC Bus Overvoltage
	P9	DC Bus Undervoltage
	P10	AC Input Undervoltage
	P11	AC Input Overvoltage
	P12	Input Voltage Sampling Failure
	P13	DSP and PFC Communication Failure
	P14	Board Radiator Temp. Sensor Failure
	P15	DSP and Communicate Board Communication Failure
	P16	Communication Failure with Motherboard
	P17	Compressor Overcurrent Alarm
	P18	Compressor Weak Magnetic Protection Alarm
	P19	IPM Overheat Alarm
	P20	PFC Overheat Alarm
	P21	AC Input Overcurrent Alarm
	P22	EEPROM Error Alarm

Compressor Drive Error Description Table		
	P23	N/A
	P24	EEPROM Refresh Complete
	P25	Temperature Sensing Failure Limit
	P26	AC Undervoltage Frequency Limit Protection Alarm；
	P27	N/A
	P28	N/A
	P29	N/A
	P30	N/A
	P31	N/A
	P32	N/A
	P33	IPM Module Overheat and Shutdown
	P34	Compressor Missing Phase
	P35	Compressor Overload
	P36	Input Current Sampling Failure
	P37	IPM Supply Voltage Failure
	P38	Pre-charge Circuit Voltage Failure
	P39	EEPROM Failure
	P40	AC Input Overvoltage Failure
	P41	Microelectronics Failure
	P42	Compressor Type Code Failure
	P43	Current Sampling Signal Overcurrent
Wire controller blinks to cycle through E88 and above codes		

7.3Parameter

7.3.1Operation Parameter

No.	Description	Setting Range	No.	Description	Setting Range
1	Compressor Running Frequency	0～150Hz	31	System 2 Compressor Running Frequency	
2	Fan Running Speed	0～999Hz	32	System 2 Fan Running Speed	
3	EEV Open Step	0～480P	33	System 2 EEV Open Step	
4	EVI Valve Open Step	0～480P	34	System 2 EVI Valve Open Step	
5	AC Input Voltage	0～500V	35	System 2 AC Input Voltage	

No.	Description	Setting Range	No.	Description	Setting Range
6	AC Input Current	0～50.0A	36	System 2 AC Input Current	
7	Compressor Phase Current	0～50.0A	37	System 2 Compressor Phase Current	
8	Compressor IPM Temp.	-40～140℃	38	System 2 Compressor IPM Temp.	
9	High Pressure Saturation Temp.	-50～200℃	39	System 2 High Pressure Saturation Temp.	
10	Low Pressure Saturation Temp.	-50～200℃	40	System 2 Low Pressure Saturation Temp.	
11	Ambient Temp. T1	-40～140℃	41	System 2 Outer Coil Temp.	
12	Outer Coil Temp. T2	-40～140℃	42	System 2 Inner Coil Temp.	
13	Inner Coil Temp. T3	-40～140℃	43	System 2 Suction Temp.	
14	Suction Temp. T4	-40～140℃	44	System 2 Exhaust Temp.	
15	Exhaust Temp. T5	0～150℃	45	System 2 Economizer Inlet Temp.	
16	Water Inlet Temp. T6	-40～140℃	46	System 2 Economizer Outlet Temp.	
17	Water Outlet Temp. T7	-40～140℃	47	Reserve	
18	Economizer Inlet Temp. T8	-40～140℃	48	Reserve	
19	Economizer Outlet Temp. T9	-40～140℃	49	Reserve	
20	Current Unit Tool Number	0～120	50	Reserve	
21	DHW Tank Temp.	-40～140℃	51	Solar Water Heater Temp.	
22	Plate Heat Exchanger Exhaust Temp.	-40～140℃	52	Zone 2 Temp.	
23	Driver Manufacturer	0～10	53	Butter Tank Temp.	
24	Water Pump Speed PWM	0～100%	54	Total Water Outlet Temp.	
25	Water Flow	3～100L/min	55	Unit B Phase Input Voltage	
26	DHW Return Water Temp.	-40～140℃	56	Unit B Phase Input Current	
27	Unit Input Voltage	0-500V	57	Unit C Phase Input Voltage	
28	Unit Input Current	0.00A-99.99A	58	Unit C Phase Input Current	
29	Unit Input Power	0.00-99.99KW	59	Smart Grid Status	
30	Unit Power Consumption	0-9999Kw.h	60	Zone 2 Mixing Valve Opening	

7.3.2Factory Parameter

No.	Description	Default Value	Setting Range	Note
L12	Sterilization	0	0～2	
L13	Days between Sterilizations	7	5～30	
L14	Sterilization Start-up Time	23:00	00:00-24:00	
L15	Sterilization Running Time	10	0-50Min	
L16	Sterilization Temp Setting	70℃	50-80℃	

No.	Description	Default Value	Setting Range	Note
L22	DHW return water Setting	0	0～3	0-Disable / 1-Continuous return / 2-Cycle return / 3-Temperature
L23	Return Water Temp Setting	40℃	20～65℃	
L24	Return Water Return Temp Differential	5℃	1～15℃	
L25	Return Water Interval Period	30min	3～90min	
L26	Return Water Running Period	5min	1～30min	