# Wired controller Instructions

- For the purpose of easy operation, please read this manual carefully and follow its instructions.
- Please keep the manual carefully for reference.
- For A-thermal Unit.

## Notice for use

To ensure correct use, please read and follow these notes carefully.

| | |
|---|---|
| Warning | There is a great possibility of serious accidents such as death, serious injury, fire or property damage caused by ignoring the contents of the warning. |
| Note | There is a great possibility that the optimum operation result cannot be obtained due to ignoring the contents of the precautions. |

- Please entrust a local dealer or local service network station to arrange professional personnel who have air conditioner installation certificate to carry out the installation, users are strictly prohibited to carry out the installation.
- Before cleaning or maintenance, please cut off power switch; water washing is prohibited, which has the risk of electric shock.
- Wet hand operation is prohibited, which has the risk of electric shock.
- Pesticides, disinfectants, and flammable spray materials are prohibited for direct spraying; otherwise, it may cause a fire or the deformation of devices.
- Do not peel off the display panel by hand, which has the risk of electric shock.
- The wire controller is low-voltage circuit, it is prohibited to directly contact with a high-voltage line or be placed together with a high-voltage line in the same wiring pipe, and interval shall be 500mm at least or more.

- During the period of not being connected to the internet, the power consumption information on the APP and the wire controller cannot be synchronized, so it is normal for the APP to display abnormal power consumption on the day of connection.
- During the power outage, the power cannot be reported. To avoid abnormal power curve on the APP on the day of power on, it is recommended to manually reset the power once (Manual reset should be achieved by restoring factory settings).

## Technical indicators

- Power voltage range: DC 24V;
- Mounting hole spacing: 58-62mm;
- Button: Touch button;
- Humidity:RH20%~RH90%;
- Max communication line length:60m;
- Working ambient humidity: 0°C-50°C;
- Dimensions(W*H*D): 120*120*20mm.
- Wi-Fi:2.4GHz, The Max E.I.R.P.: 18.52dBm;
  Frequency band of operation:2400-2483.5MHz.

## Main functions

- 9-key touch button input;
- Display the failure of main controller;
- Color LCD.

# Icon Explanation

| Icon | Name | Icon | Name | Icon | Name | Icon | Name |
|---|---|---|---|---|---|---|---|
|  | SCREEN LOCK |  | WLAN |  | WIFI FAULT |  | WLAN WITHOUT CLOUD |
|  | SCHEDULE |  | TIME BOOKING |  | DEFROST |  | ECO |
|  | HOLIDAY |  | FREE ELEC. |  | CURRENT LIMITION |  | GAS |
|  | ERROR |  | PEAK ELEC. |  | VALLEY ELEC |  | SILENT |
|  | SOLAR |  | OUTDOOR TEMP |  | Zone1 |  | Zone2 |
|  | INDOOR TEMP |  | WATER TEMP |  | WEATHER TEMP |  | SETTING TEMP |
|  | COOL |  | HEAT |  | AUTO |  | EMERGENCY |
|  | FLOOR PREHEAT |  | FLOOR DRYING |  | IBH |  | DHW PUMP |
|  | ANTIFREEZE |  | COMPRESSOR |  | USB |  | Adjust temp |
|  | TEMP KEEP |  | TEMP UP |  | TEMP DOWN |  | DHW |
|  | FAST DHW |  | DISINFECT |  | TBH |  | RADIATOR |
|  | 2-WAY VALVE |  | KIT ROOM NUMBER |  | OFF |  | ON |
|  | | FLOOR HEAT | |  | | FAN COIL | |

## Instructions


Note: The product adopts touch buttons. To ensure the validity of operation, please touch the center of each icon.

## The wired controller button

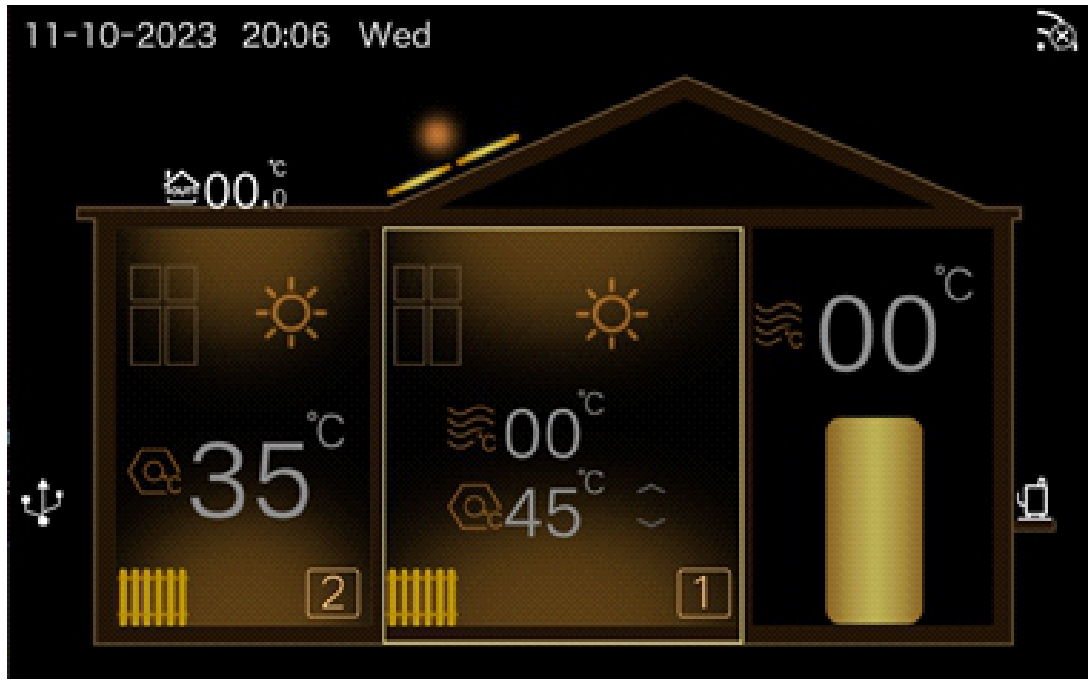
| Logo | Name | Description |
|---|---|---|
|  | Menu | Enter to menu interface |
|  | Confirm | setting confirmation |
|  | Upward | Upward selection/value increase or content change |
|  | Downward | Downward selection/decrease value or content change |
|  | Back | Return to the previous level |
|  | Mode | Mode Switch |
|  | Leftward | Change selected item |
|  | Rightward | Change selected item |
|  | ON/OFF | Control unit on/off |

## Instructions

### 1 Area selection

In the main interface, the regions from left to right are Zone2, Zone1, and DHW (Domestic hot water). you can switch area by pressing the [ < ] or [ > ].

When an area is selected, the area is highlighted (the surrounding is lighted up).




### 2 Power [ ⏻ ]

By pressing the [ ⏻ ],you can control the unit on and off, the color of the device turn to bright orange or bright blue (depending on which operation mode you select), which means the heat pump is now working on Heating or Cooling for that area.

## 3 Mode Setting

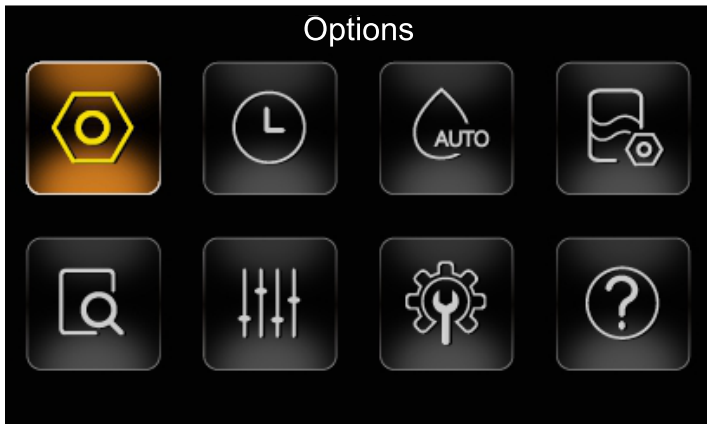
By selecting the Zone1 display area and pressing the [ ], the unit will switch according to the following order:

HEAT → COOL → AUTO → HEAT

## 4 Temperature Setting

When the unit is running, press [ ] or [ ] to increase or decrease the setting temperature by 1°C or 0.5°C (depending on which temp type you select)

## 5.Function Setting



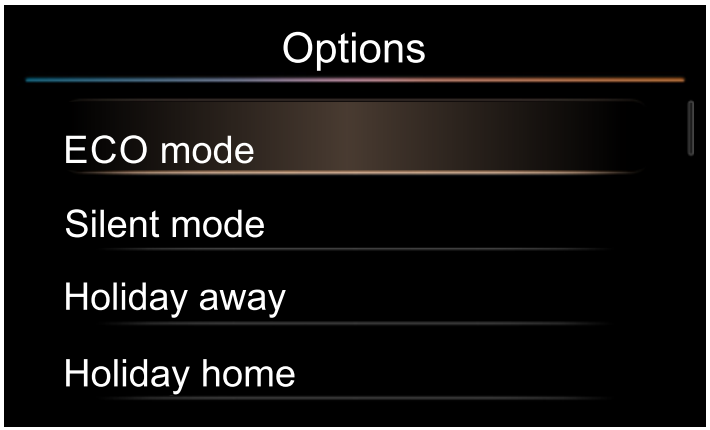

On the home screen, press [ ] to enter the menu page.

Switch to different sub menu by pressing [ ] or [ ] or [ ] or [ ].

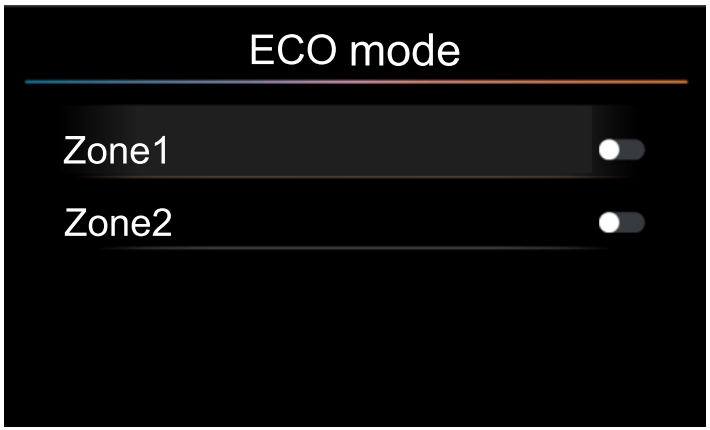
### 5.1 Options

On the Menu page, select Options and press [ ] to enter Options page.

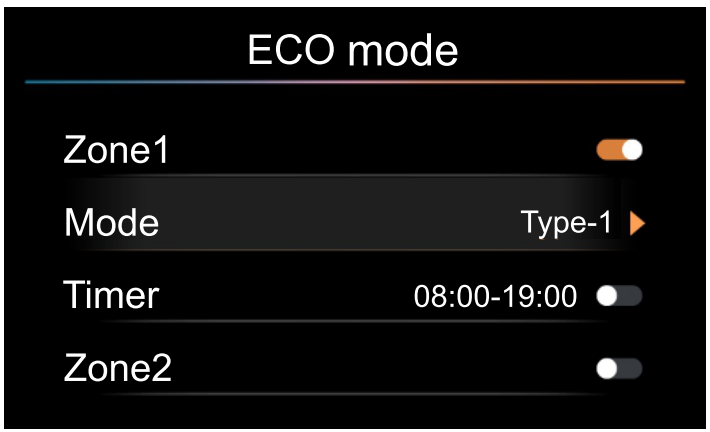
## 5.1.1 ECO MODE



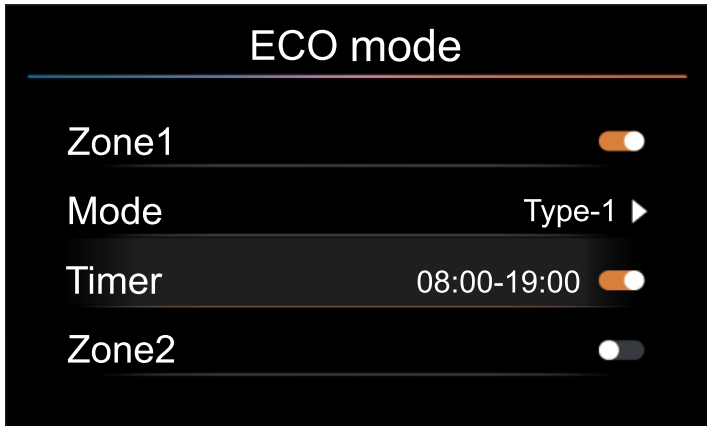

On the Options page, select ECO mode and press the [ ○ ] to enter the ECO mode page.




On the ECO mode page, select Zone1 or Zone2 and press the [ < ] or [ > ] to set On/Off .
Zone2 appears only when the DOUBLE ZONE is enabled.

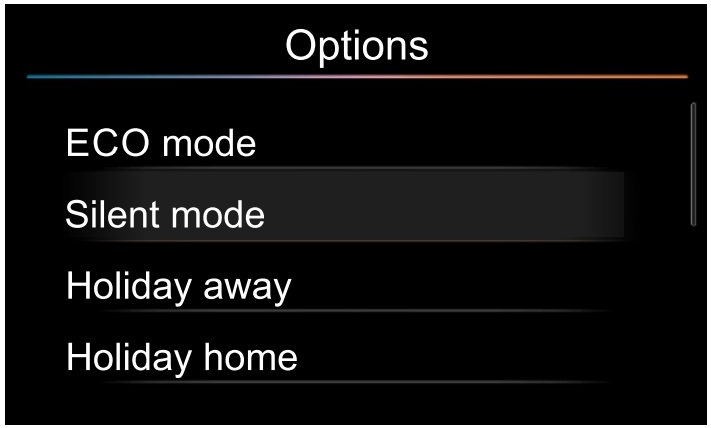



On the ECO page, Select Mode and press the [ < ] or [ > ] to select the different level according to the following order:
TYPE-1→TYPE-2→TYPE-3→TYPE-4→ TYPE-5→TYPE-6→TYPE-7→TYPE-8→ TYPE-9→TYPE-1.

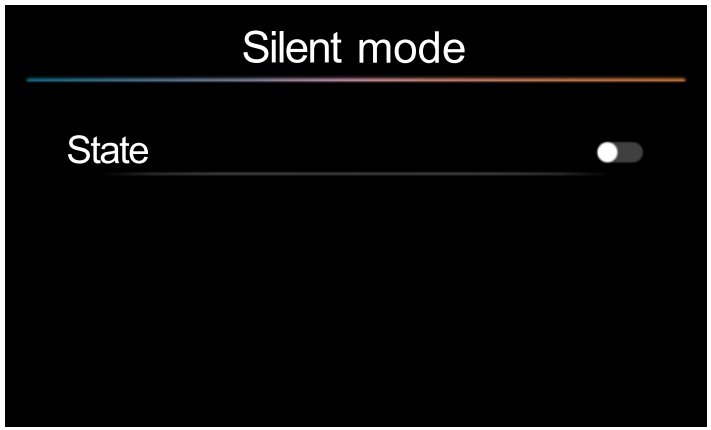



On the ECO mode page, select Timer and press the [ < ] or [ > ] to set On/Off.
When set Timer off, the unit operates in ECO mode all the way. By pressing [ ○ ] and pressing the [ < ] or [ > ] to select hour/minute of the start time and hour/minute of the end time, you can change time.

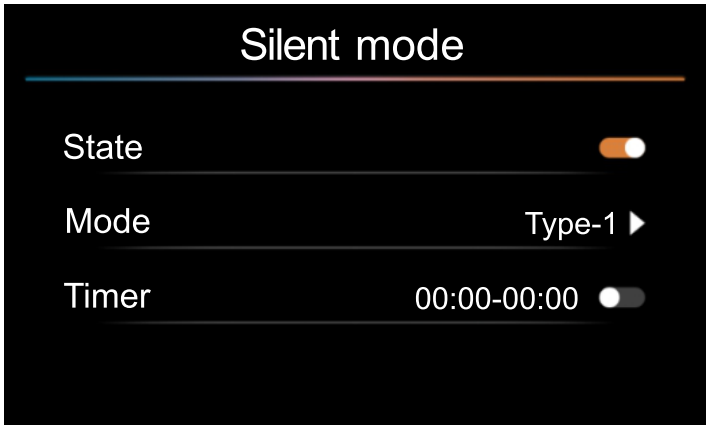
### 5.1.2 Silent mode



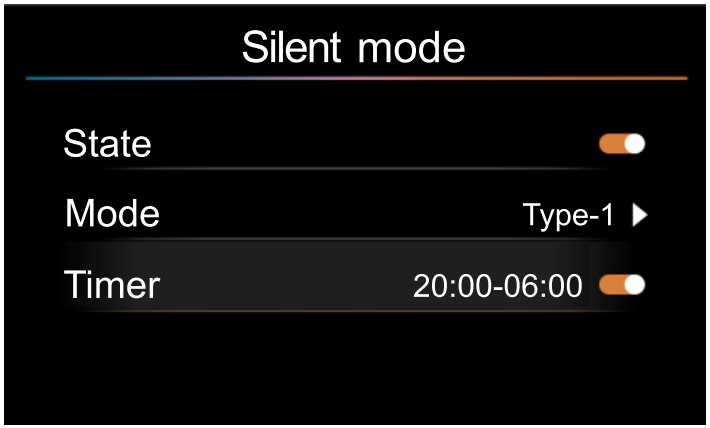

On the Options page, select Silent mode and press the [ ○ ] to enter the Silent mode page.




On the Silent mode page, select State and press the [ < ] or [ > ] to set On/Off.
If the Silent mode is inactive, the page looks as left.

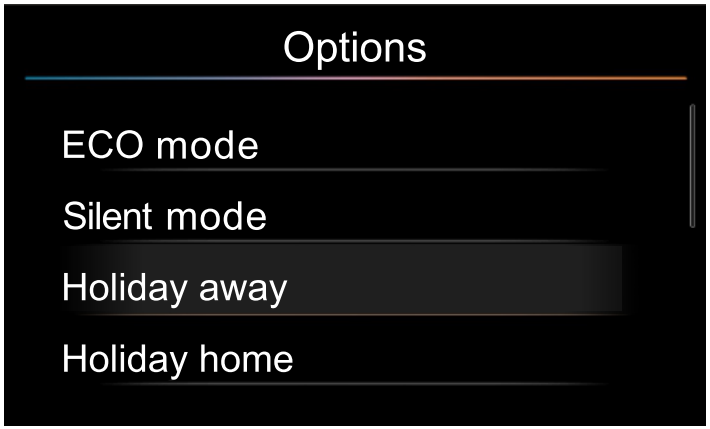



On the Silent mode page, select Mode and press the [ < ] or [ > ] to select the different level according to the following order: TYPE-1→TYPE-2→TYPE-1.



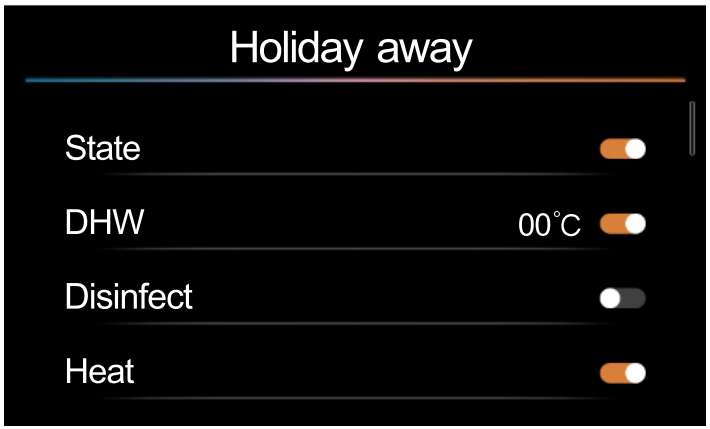

On the Silent mode page, select Timer and press the [ < ] or [ > ] to set On/Off. When set Timer off, the unit operates in Silent mode all the way. By pressing [ ○ ] and pressing the [ < ] or [ > ] to select hour/minute of the start time and hour/minute of the end time, you can change time.

### 5.1.3 Holiday away



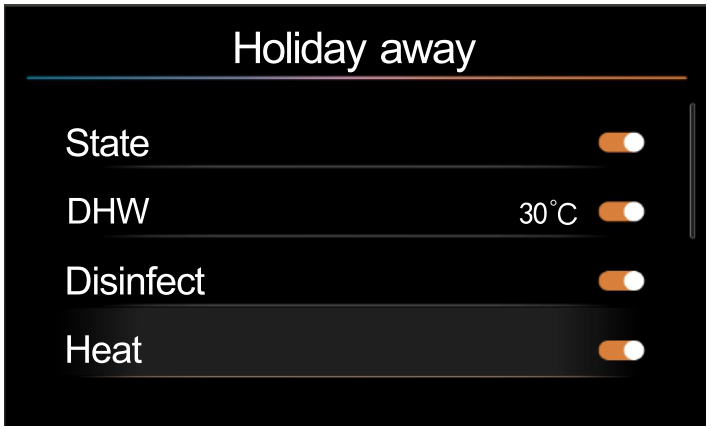

On the Options page, select Holiday away and press the [ ○ ] to enter the Holiday away page.


On the Holiday away page, select STATE and press the [ < ] or [ > ] to set On/Off.
If the Holiday away is inactive, the page looks as left.



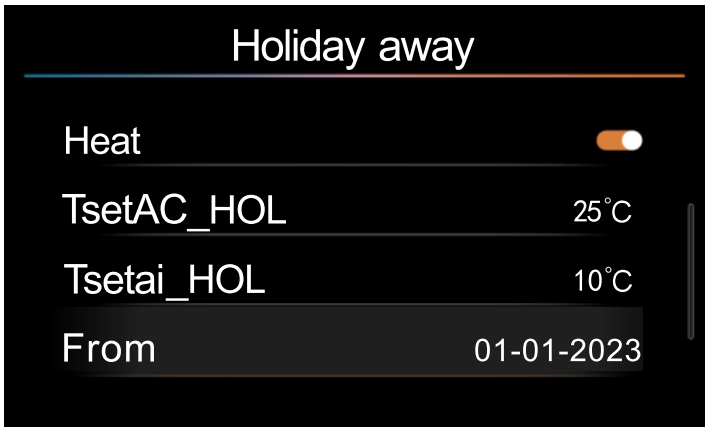

On the Holiday away page, Select DHW and press the [ < ] or [ > ] to set On/Off.
On the Holiday away page, Select DHW and press the [ ○ ] to activate setting temp, if DHW is On.


On the Holiday away page, select Disinfect and press the [ < ] or [ > ] to set On/Off.



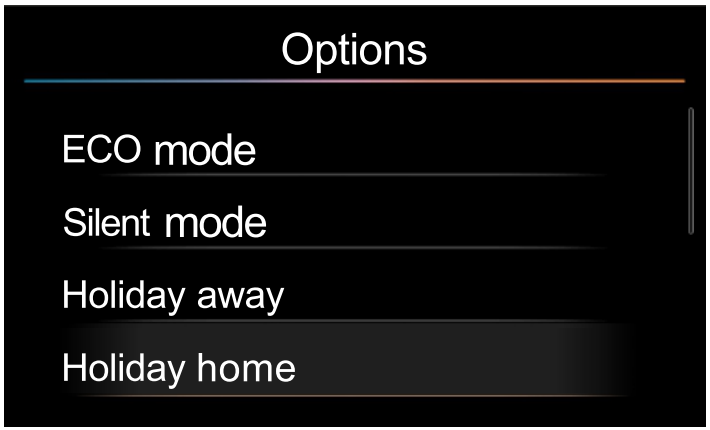

On the Holiday away page, select Heat and press the [ < ] or [ > ] to set On/Off.


On the Holiday away page, TsetAC_HOL means setting water temperature, and Tsetai_HOL means setting room temperature.
Select TsetAC_HOL and press [ < ] or [ > ] to set temp.
Select Tsetai_HOL and press [ < ] or [ > ] to set temp.

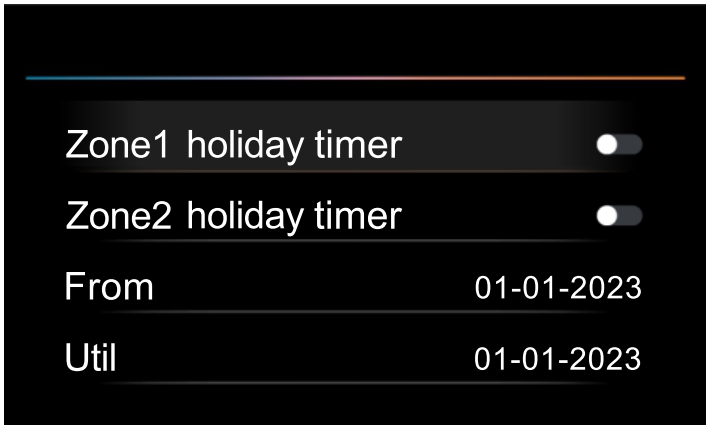



On the Holiday away page, select From and press the [ ○ ] to set the start date.
On the Holiday away page, select until and press the [ ○ ] to set the end date.
Press the [ < ] or [ > ] to select day/month/year, and the [ ∧ ] or [ ∨ ] to set the date.

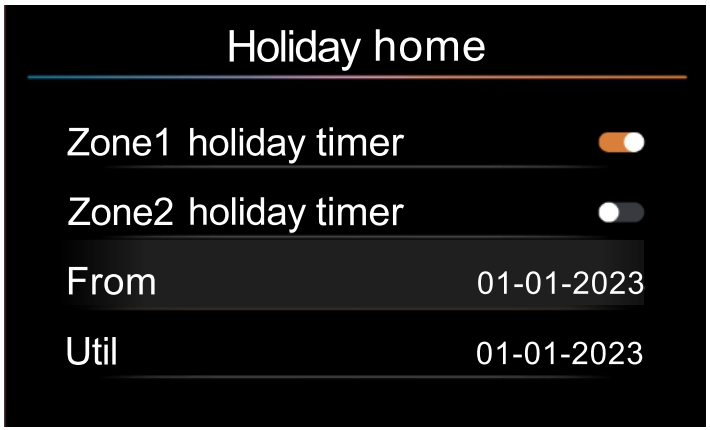
## 5.1.4 Holiday home




On the OPTIONS page, select Holiday home and press the [ ○ ] to enter the Holiday home page.

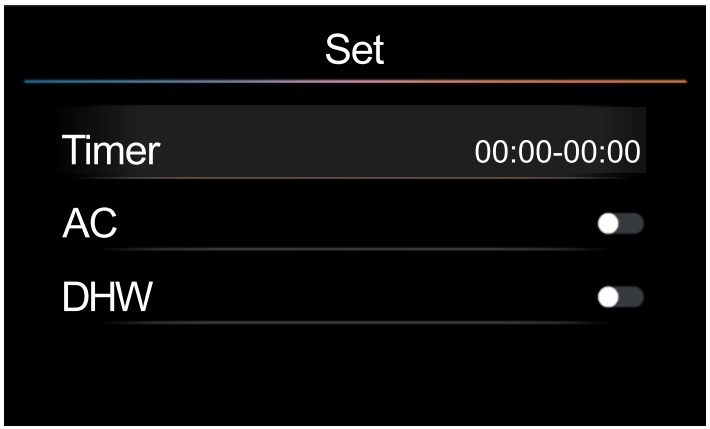



On the Holiday home page, select Zone1 holiday timer or Zone2 holiday timer and press the [ < ] or [ > ] to set On/Off.
Zone2 holiday timer appears only when the DOUBLE ZONE is enabled.

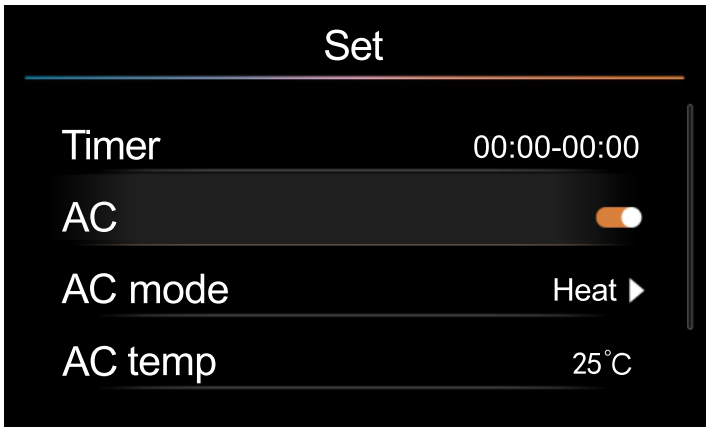



On the Holiday home page, select From and press the [ ○ ] to set the start date.
On the Holiday home page, select until and press the [ ○ ] to set the end date.
Press the [ < ] or [ > ] to select day/month /year, and the [ ∧ ] or [ ∨ ] to set the date.

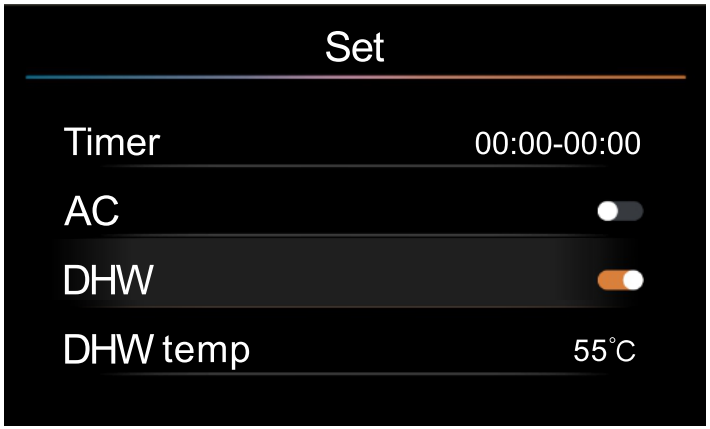

On the Holiday home page, select Zone1 holiday timer and press the [ ○ ] to enter the Zone1 Timer page.
Select Timer and Press the [ < ] or [ > ] to set On/Off, select Timer and Press the [ ○ ] to Set page.




On the Set page, select Timer and press the [ ○ ] to active setting the start and end time. Press the [ < ] or [ > ] to select hour/minute, and the [ ∧ ] or [ ∨ ] to set the time.




On the Set page, select AC and Press the [ < ] or [ > ] to set On/Off.
On the Set page, select AC mode and Press the [ < ] or [ > ] to select AC mode according to the following order: Heat→Cool→Heat. On the Set page, select AC temp and press the [ < ] or [ > ] to set temperature.

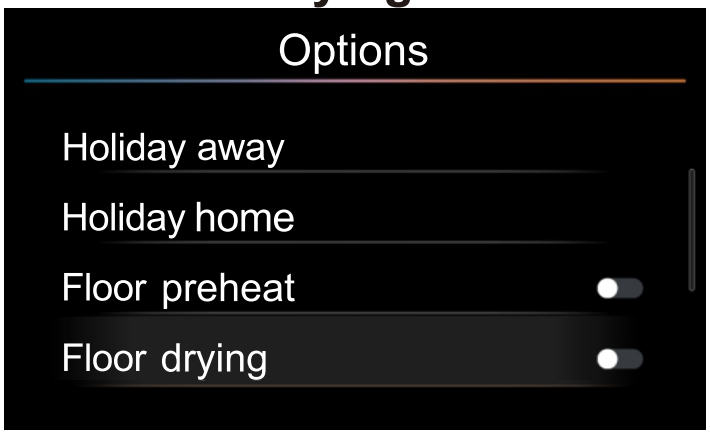



On the Set page, select DHW and press the [ < ] or [ > ] to set On/Off.
On the Set page, select DHW temp and press the [ < ] or [ > ] to set water temperature.

### 5.1.5 Floor preheat

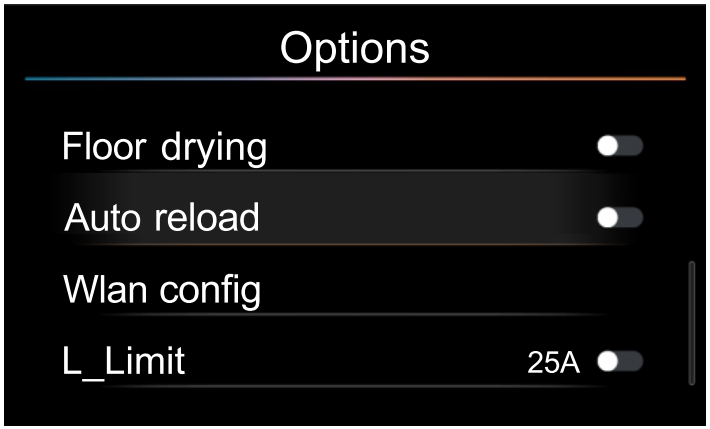

On the Options page, select Floor preheat and press the [ < ] or [ > ] to set On/Off.

### 5.1.6 Floor drying



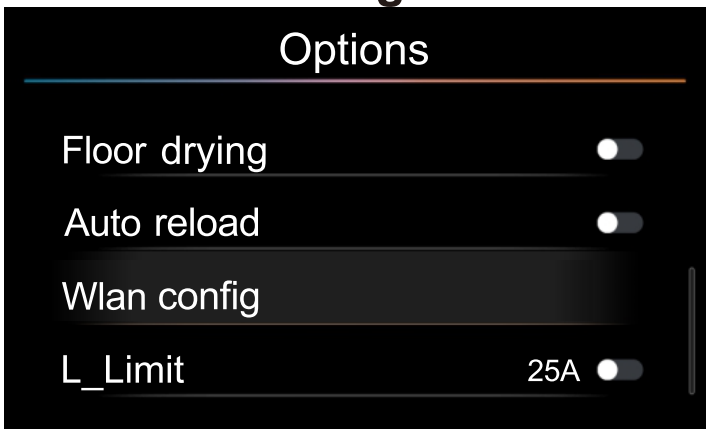

On the options page, select Floor drying and press the [ < ] or [ > ] to set On/Off.

### 5.1.7 Auto reload




On the options page, select Auto reload and press the [ < ] or [ > ] to set On/Off.

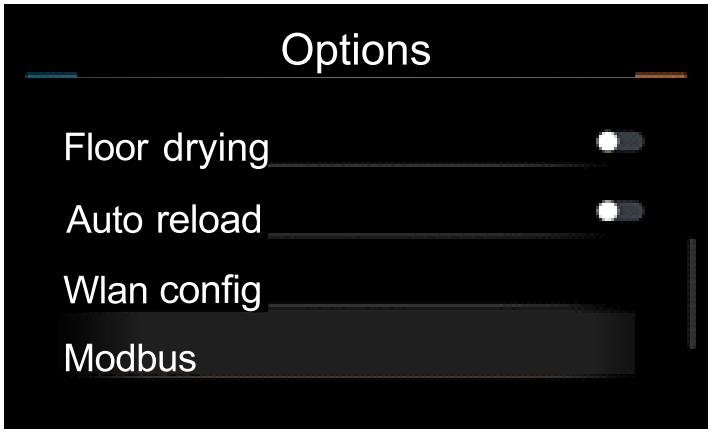
### 5.1.8 Wlan config



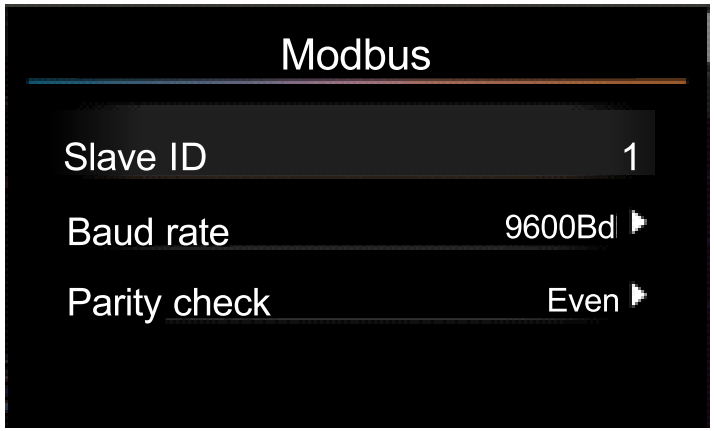

The wird controller realizes intelligent control with a built-in module, which receives control signal from the APP.
Wlan equipment is connected normally, On the options page, select Wlan Config and press the [ ○ ] to enter Wlan Config.


Press the [ < ] or [ > ] to select Yes/No.
Select "Yes" to reset Wlan.

### 5.1.9 Modbus

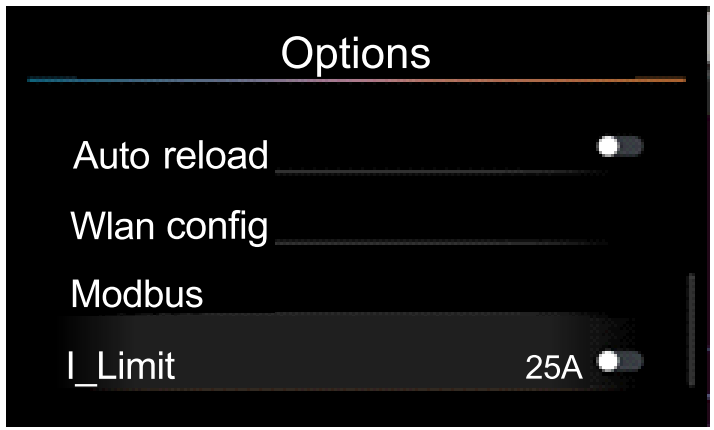



On the Options page, select Modbus and press the [ ○ ] to enter the Modbus page.

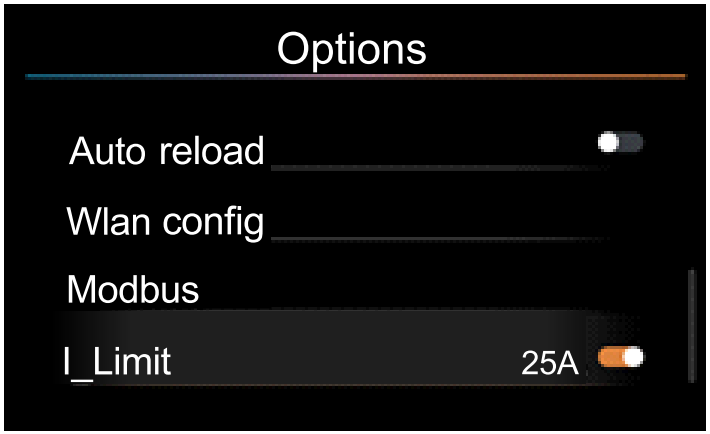



On the Modbus page, select Slave ID and press the [ < ] or [ > ] to set it.
On the Modbus page, select Baud rate and press the [ < ] or [ > ] to set it.
On the Modbus page, select Parity check and press the [ < ] or [ > ] to set it.

### 5.1.10 I_Limit

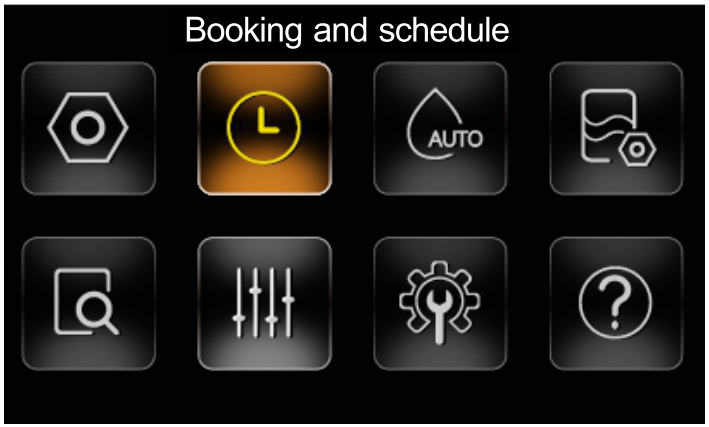



On the Options page, Select I_Limit and press the [ < ] or [ > ] to set On/Off.

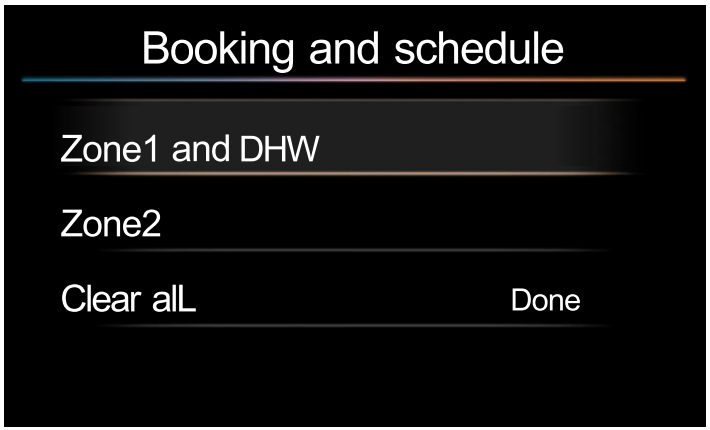



On the Options page, Select I_Limit and press the [ ○ ] to activate current settting , if I_Limit is On.

## 5.2 Booking and schedule

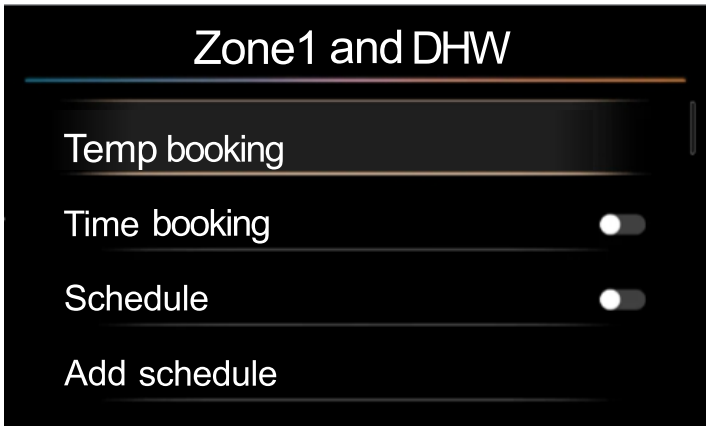



On the Menu page, select Booking and schedule and press the [ ○ ] to enter the Booking and schedule page.

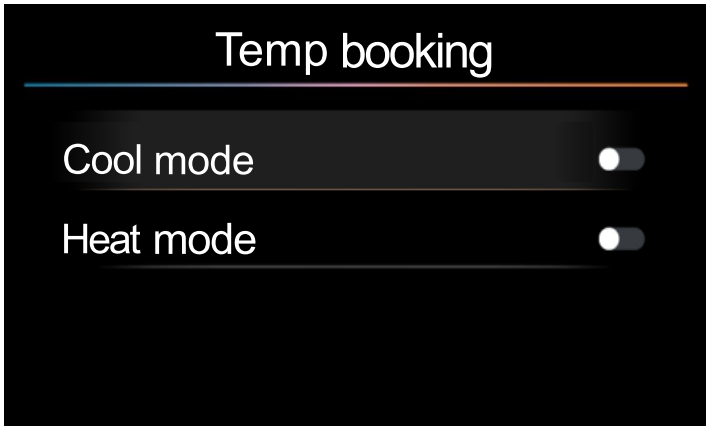



On the Booking and schedule page, select Zone1 and DHW or Zone2 and press the [ ○ ] to set.
Zone2 appears only when the DOUBLE ZONE is enabled.

## 5.2.1 TEMP BOOKING

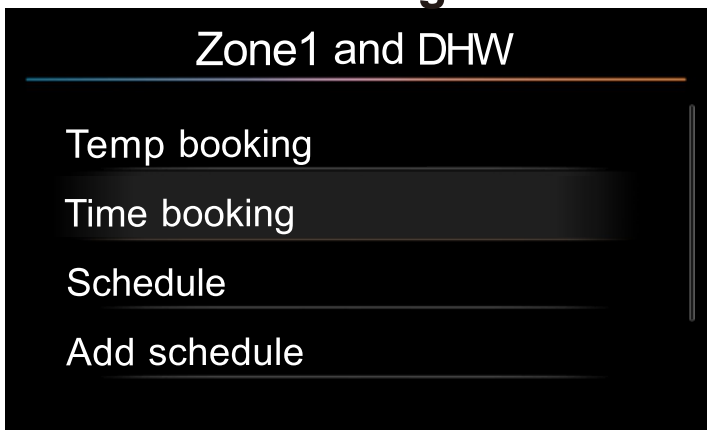



On the Zone1 and DHW page, select Temp booking and press the [ ○ ] to enter the Temp booking page.

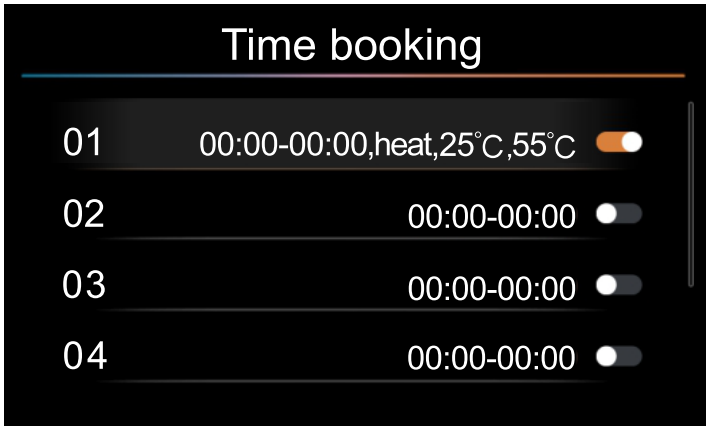



On the Temp booking page, select Cool mode/Heat mode and press the [ ○ ] to enter the Cool mode/Heat mode page.

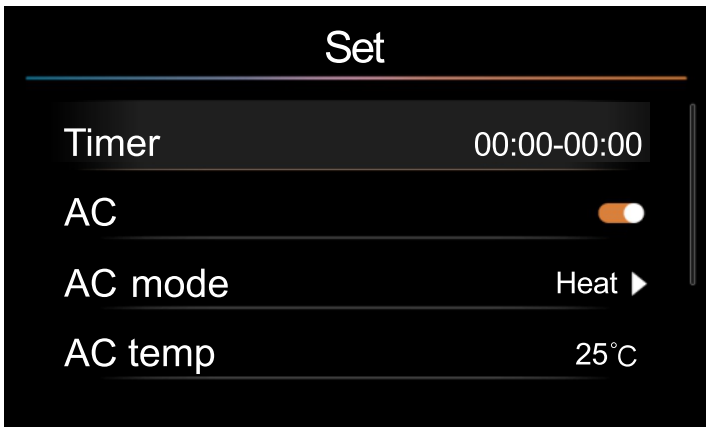
## 5.2.2 Time booking



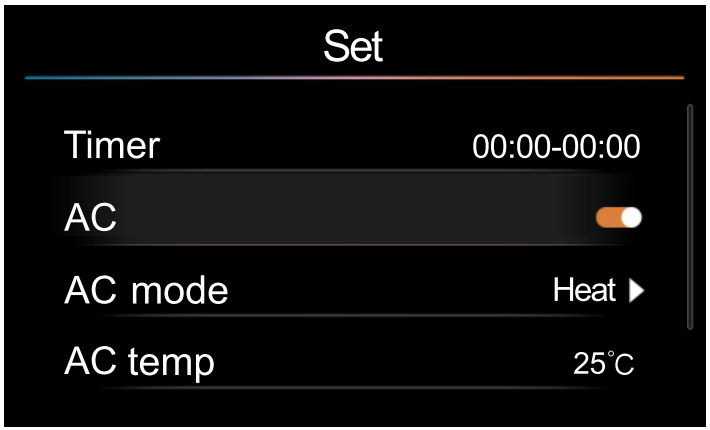

On the Zone1 and DHW page, select Time booking and press the [ ○ ] to enter the Time booking page.



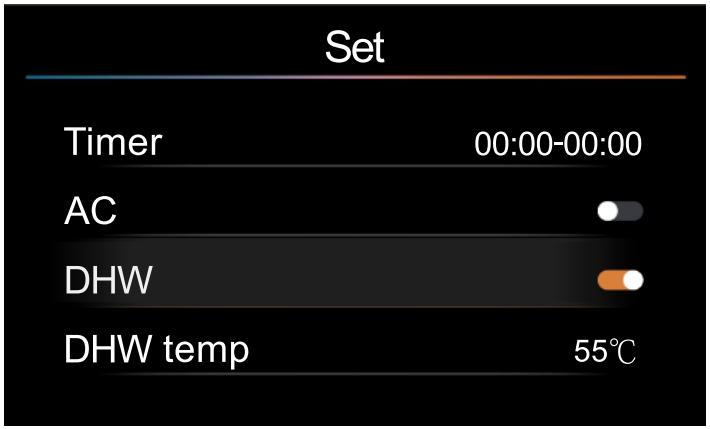

On the TIME BOOKING page, select any one and press the [ ○ ] to enter the Set page. Switch to different sub menu by pressing [ ∧ ] or [ ∨ ].




On the Set page, select Timer and press the [ ○ ] to set the start and end time. Press the [ < ] or [ > ] to select hour/minute, and the [ ∧ ] or [ ∨ ] to set the time.

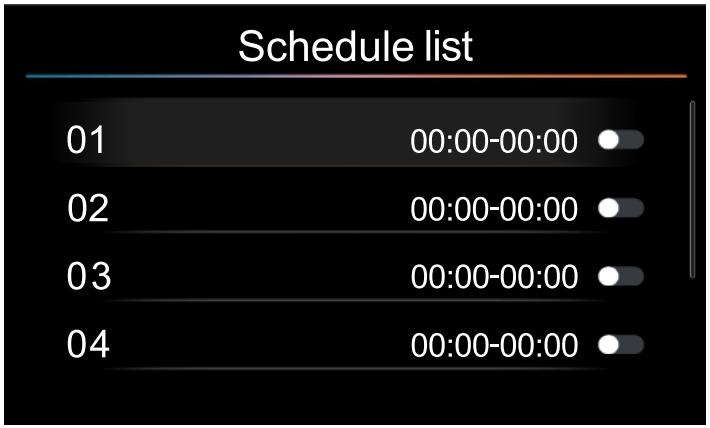



On the Set page, select AC and Press the [ < ] or [ > ] to set On/Off.
On the Set page, select AC mode and Press the [ < ] or [ > ] to select AC mode according to the following order: Heat→Cool→Heat. On the Set page, select AC temp and Press the [ < ] or [ > ] to set temperature.

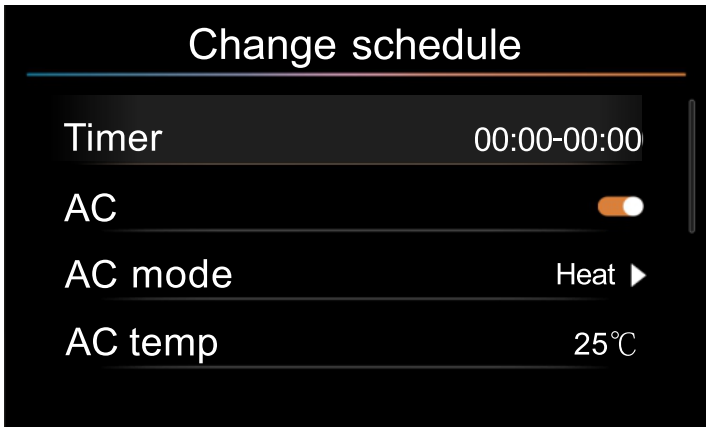



On the Set page, select DHW and Press the [ < ] or [ > ] to set On/Off.
On the Set page, select DHW temp and Press the [ < ] or [ > ] to set water temperature.

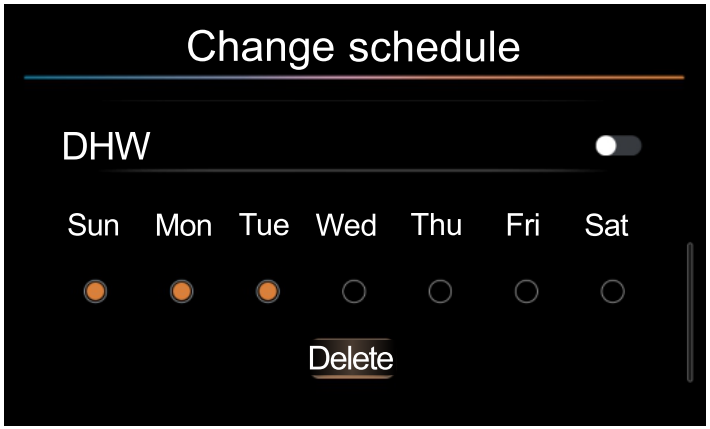
### 5.2.3 Schedule




On the Zone1 and DHW page, select Schedule and press the [ ○ ] to enter the Schedule list page.



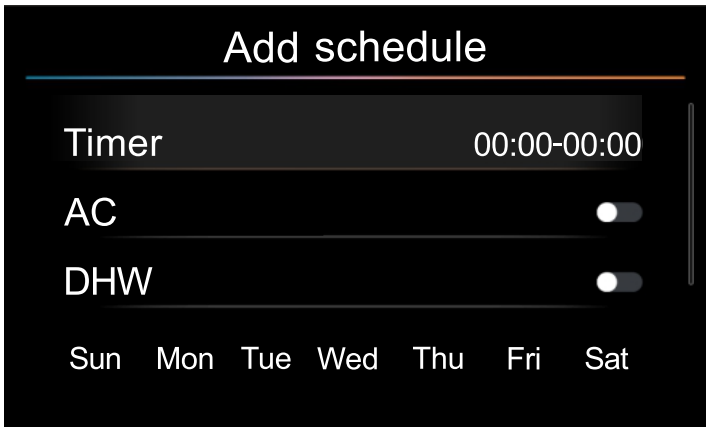

On the LIST page, select any one and press the [ ○ ] to enter the Change schedule page.




Select WEEK and press the [ ○ ] whether to select.


Select Delete and press the [ ○ ] ,the following prompts will appear. Press the [ < ] or [ > ] to select Yes/No.

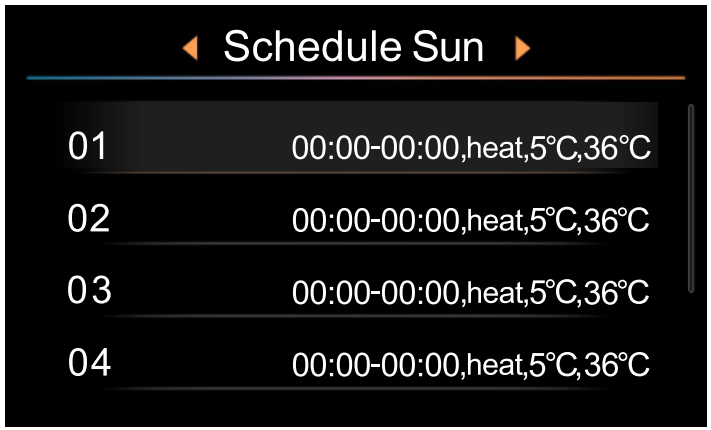
### 5.2.4 Add schedule



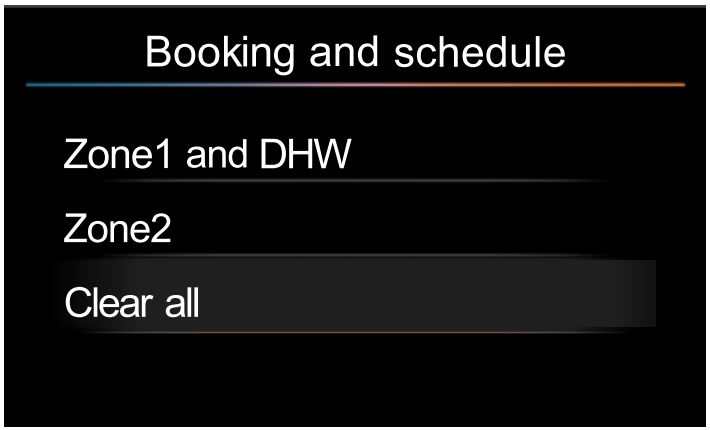

On the Zone1 and DHW page, select Add schedule and press the [ ○ ] to enter the Add schedule page.
The setting method is the same as the schedule setting.


When the settings are completed, select SAVE by pressing the [ ﹀ ], and press the [ ○ ], the following prompts will appear.
Select Yes, then the settings are valid, otherwise, it does not take effect.

### 5.2.5 schedule check



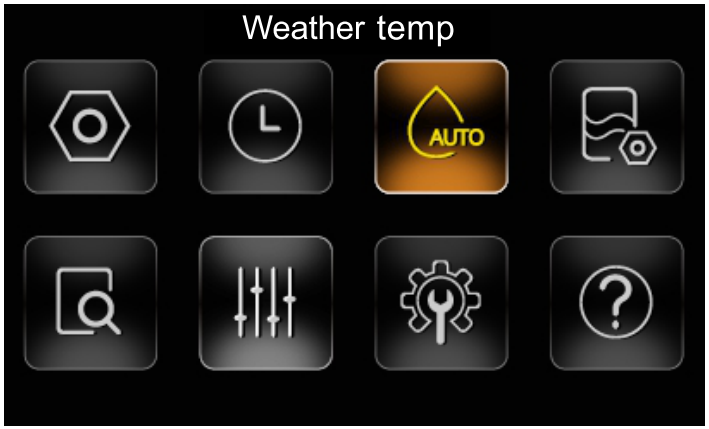

On the Zone1 and DHW page, select Schedule check and press the [ ○ ] to enter the Schedule check page.
On the Schedule check page, switch weekly schedule by press the [ < ] or [ > ].
The weekly schedule is displayed on the title bar, and the page is displayed according to the content of the schedule setting.



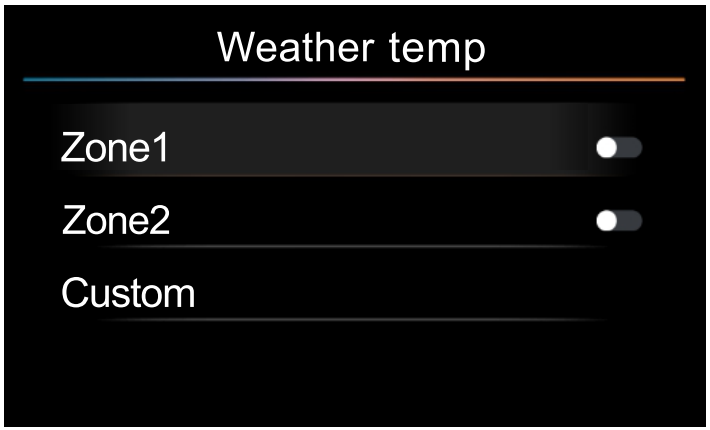

On the Booking and schedule page, select Clear all and press the [ ○ ] , the following prompts will appear.


Press the [ < ] or [ > ] to select Yes/No.

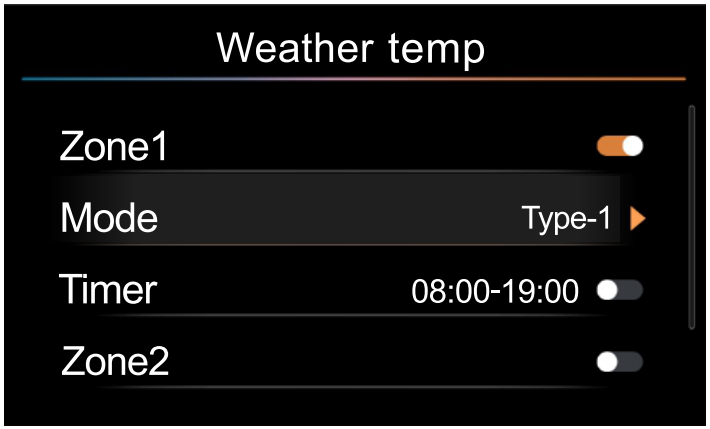
## 5.3 Weather Temp



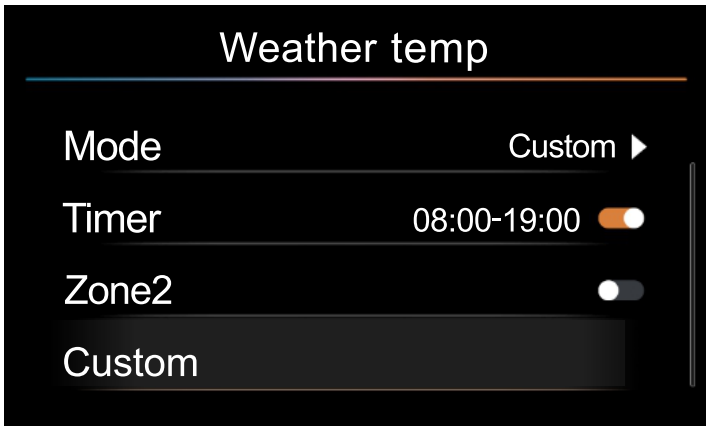

On the Menu page, Select Weather Temp, press the [ ○ ] to enter the Weather Temp page.



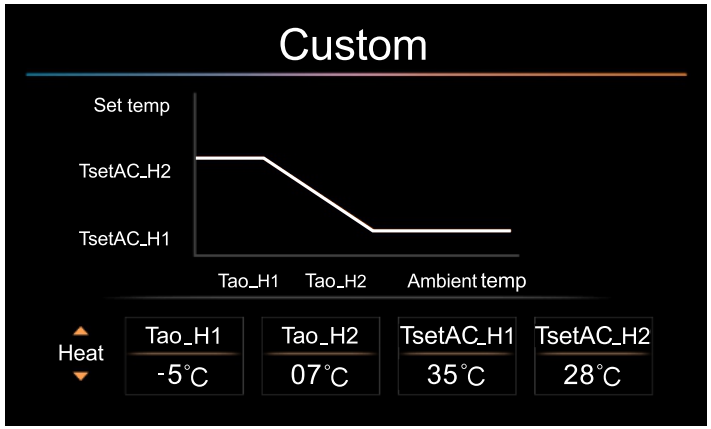

On the Weather Temp page, select Zone1 and press the [ < ] or [ > ] to set On/Off.




On the Weather Temp page, Select MODE and press the [ < ] or [ > ] to select the different level according to the following order: TYPE-1→TYPE-2→TYPE-3→TYPE-4→ TYPE-5→TYPE-6→TYPE-7→TYPE-8→ Custom→TYPE-1.

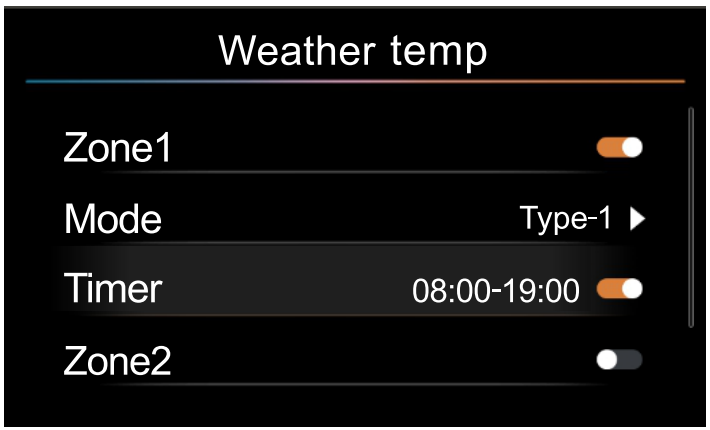



For Custom curve, you can customize the curve according to your demand.



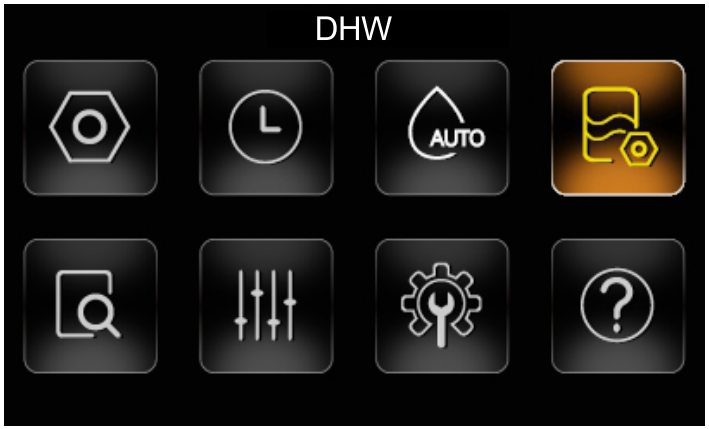

Take heating as example:
TsetAC_H1 and TsetAC_H2 is the set temperature for heating. Tao_H1 and Tao_H2 is the ambient temperature for heating.
For cooling, the corresponding parameter is TsetAC_C1, TsetAC_C2, Tao_C1, Tao_C2.
If TsetAC_H2<TsetAC_H1 or Tao_H1>Tao_H2, the system will switch them automatically.

E.g.
TsetAC_H1=35℃, TsetAC_H2=28℃, Tao_H1=-5℃, Tao_H2=7℃.
When Tao(outdoor ambient temperature)= 7℃, then Tset (set temperature)= 28℃.
When Tao(outdoor ambient temperature)= -5℃, then Tset (set temperature)= 35℃.
When Tao(outdoor ambient temperature)= -2℃, then Tset (set temperature)= 33℃.
When Tao(outdoor ambient temperature)= 3℃, then Tset (set temperature)= 30℃.



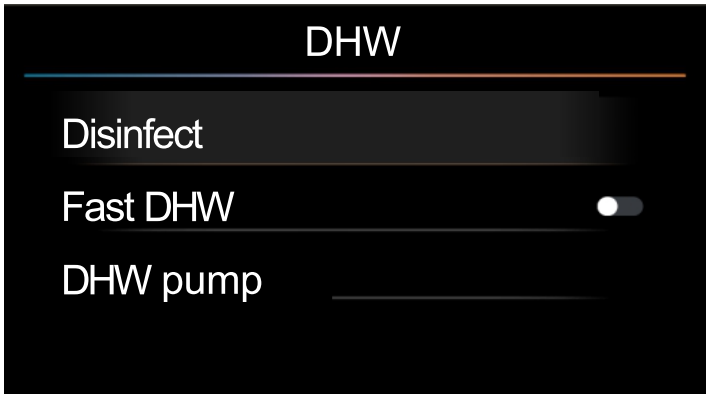

On the Weather Temp page, select Timer and press the [ < ] or [ > ] to set On/Off.
When set Timer off, the unit operates in Weather Temp all the way.
By pressing [ ○ ] and pressing the [ < ] or [ > ] to select hour/minute of the start time and hour/minute of the end time, you can change time.

## 5.4 Domestic Hot Water(DHW)

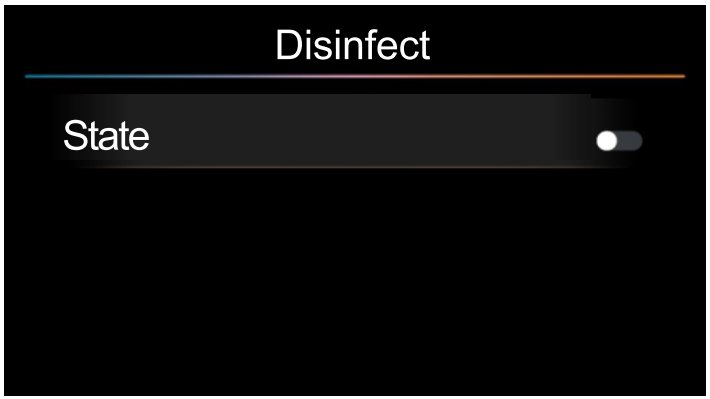



On the Menu page, select Domestic Hot Water and press the [ ○ ] to enter the Domestic Hot Water page.

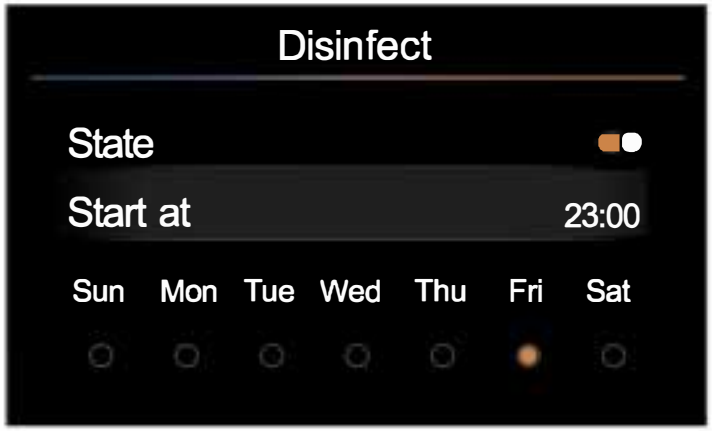
### 5.4.1 Disinfection setting




On the DHW page, select Disinfect and press the [ ○ ] to enter the Disinfect page.



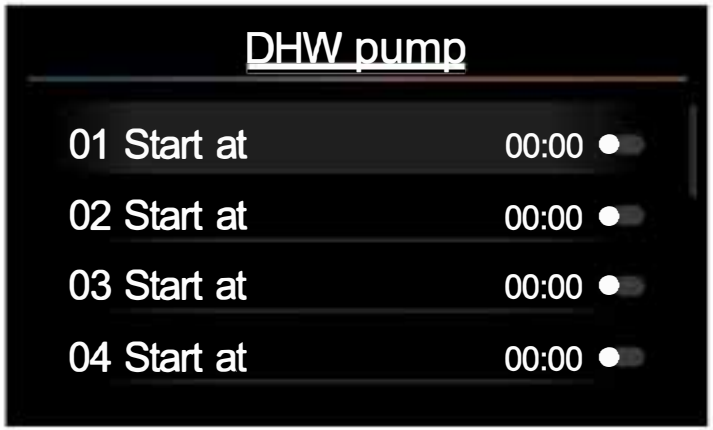

On the Disinfect page,Select State and press the [ < ] or [ > ] to set On/Off.



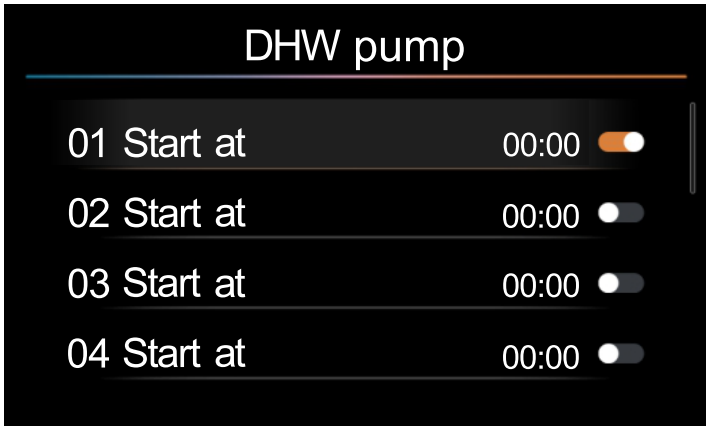

Select Start at and press the [ ○ ] to start the time setting.
Press the [ < ] or [ > ] to select hour/minute, and press the [ < ] or [ > ] to set the clock.
Select Week and press the [ ○ ] whether to select.

### 5.4.2 Fast DHW setting


On the DHW page, select Fast DHW and Press the [ < ] or [ > ] to set On/Off.



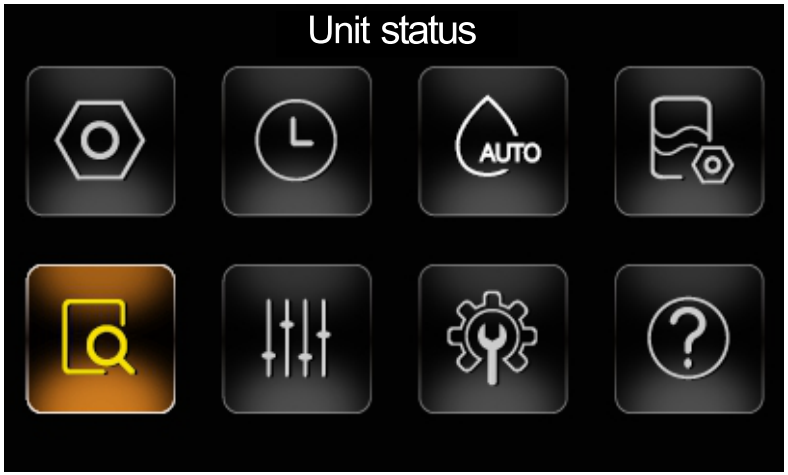

On the DHW page, select DHW pump and press the [ ○ ] to enter the DHW pump page.

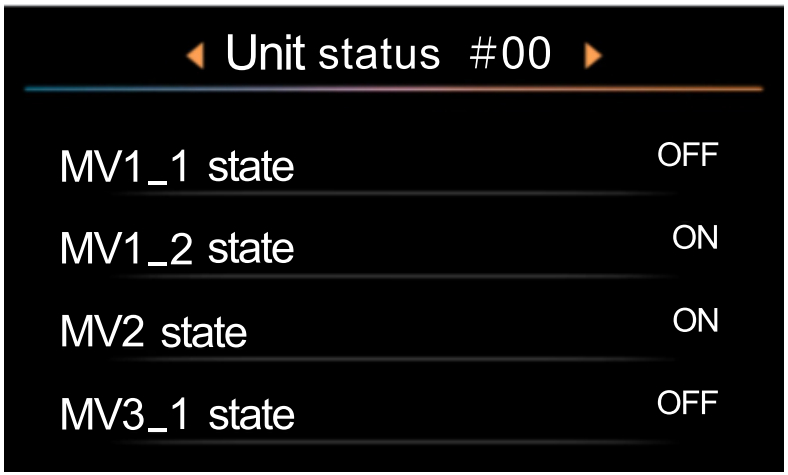



Select Start at and Press the [ ○ ] to active start time setting, then press the [ < ] or [ > ] to select hour/minute, and press the [ ^ ] or [ v ] to change the clock number.

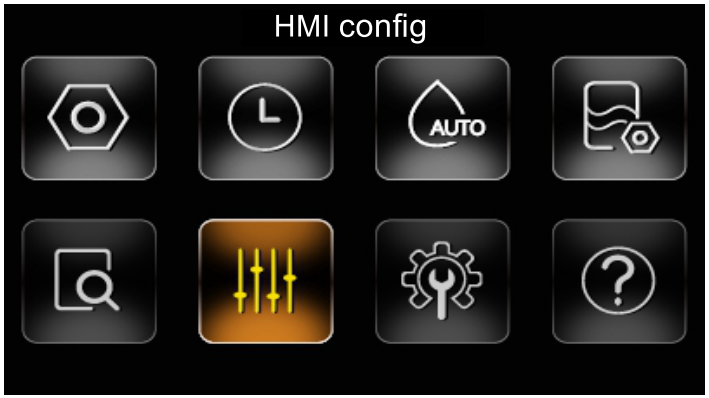
## 5.5 Unit status

On the MENU page, select Unit status and press the [ ○ ] to enter the Unit status page.



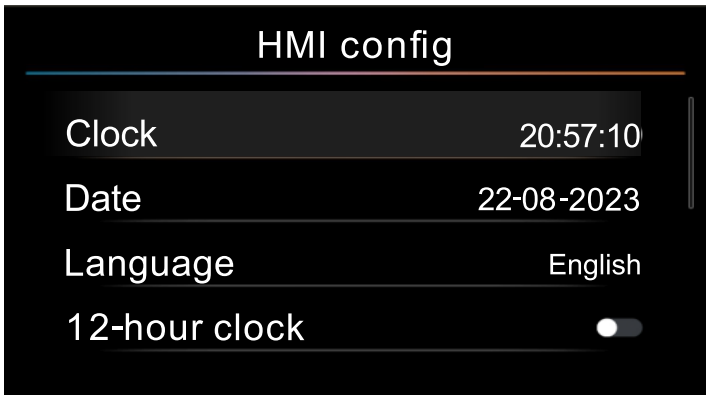



## 5.6 HMI config



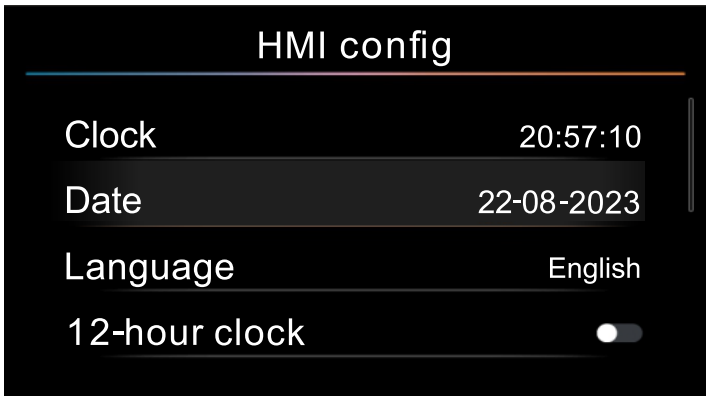

On the Menu page, select HMI config and press the [ ○ ] to enter the HMI config page.

### 5.6.1 Clock



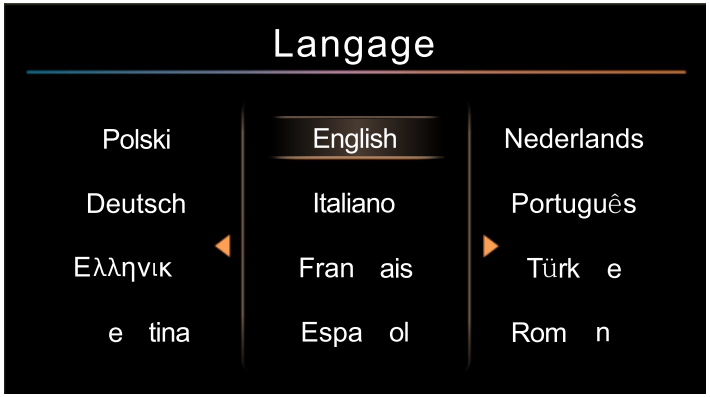

On the HMI config page, select Clock and press the [ ○ ] to set the time. Press the [ < ] or [ > ] to select hour/minute/second, and press the [ ∧ ] or [ ∨ ] to set the clock.

### 5.6.2 Date



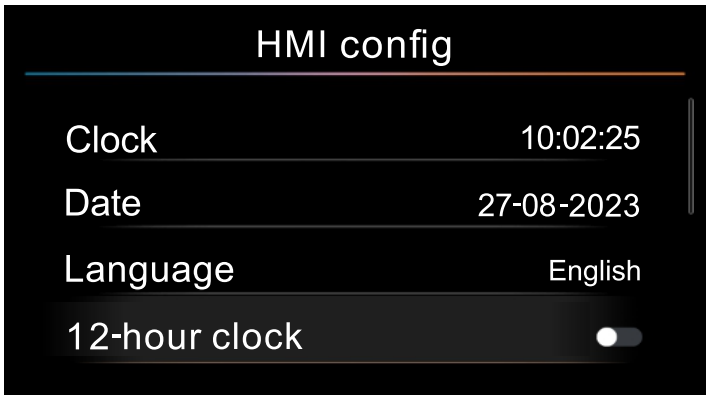

On the HMI config page, select Date and press the [ ○ ] to set Date.
Press the [ < ] or [ > ] to select day/month /year, and the [ ∧ ] or [ ∨ ] to set the date.

## 5.6.3 Language



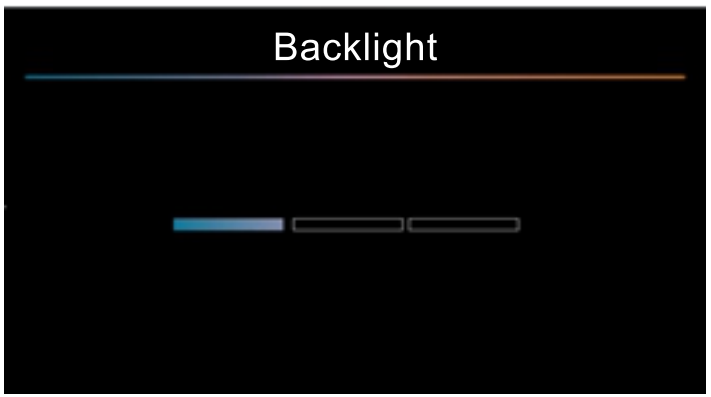

On the HMI config page, select Language and press the [ < ], [ > ], [ ^ ] or [ v ] to select different language.

## 5.6.4 12-hour clock



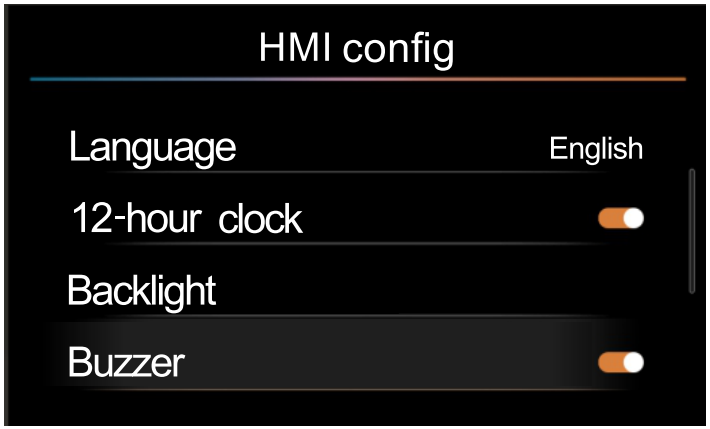

On the HMI config page, select 12-hour clock and press the [ < ] or [ > ] to set On/Off.

## 5.6.5 Backlight




On the HMI config page, select Backlight and press the [ ○ ] to enter the Backlight page.
On the Backlight page, press the [ < ] or [ > ] to set screen brightness

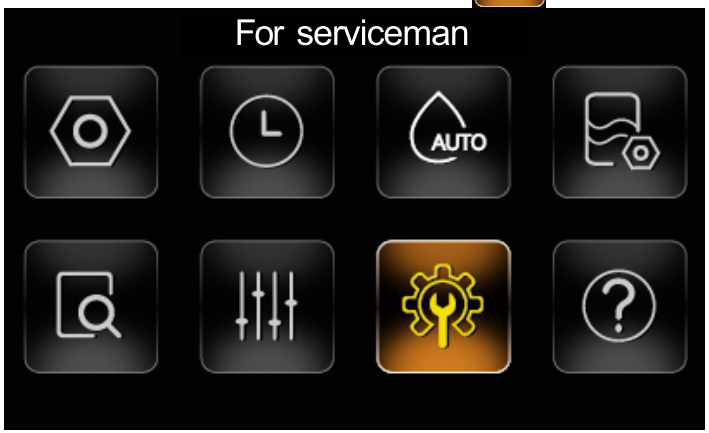
### 5.6.6 Buzzer



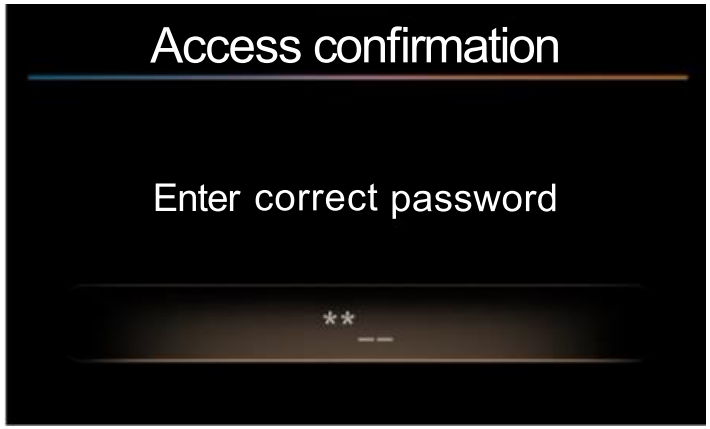

On the HMI config page, select Buzzer and press the [ < ] or [ > ] to set On/Off.


On the HMI config page, select Screen lock and press the [ < ] or [ > ] to set On/Off.
On the HMI Config page, select Screen lock time and press the [ < ] or [ > ] to set the time. The time range is 10-120s (default 60s).

## 5.7 For Serviceman



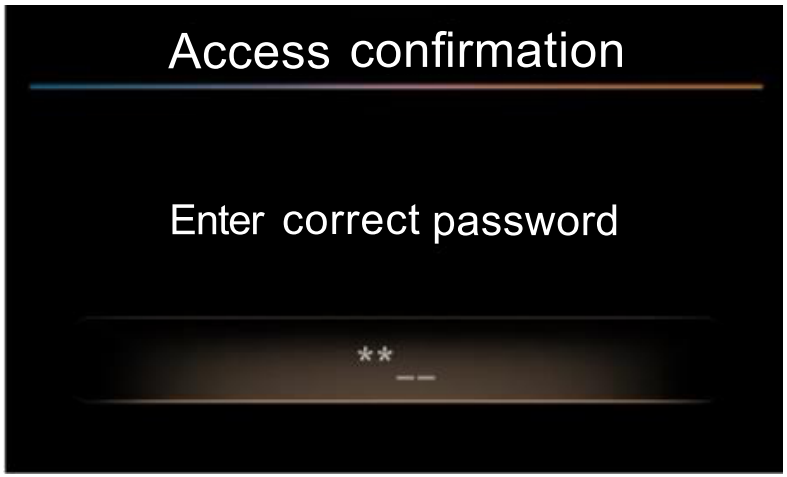

On the Menu page, select For Serviceman and press the [ ○ ] to enter the For Serviceman page. Initial password is "1234".

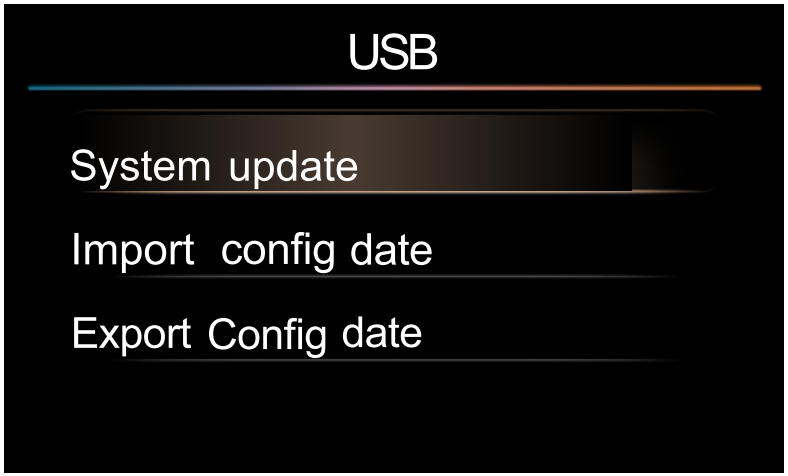



Enter For Serviceman page requires the password, and this only for serviceman.

## 5.8 USB

When a USB signal is detected, serviceman can operate system update, import config data, and export config data after entering right password. Initial password is "1120".



# WIFI Module Instruction Manual

## 1.ARV WIFI Module Configuration

1.1 APP Download

Mobile terminal scan the following dimensional code to download APP, or search “AC Freedom” in APP STORE and Google store.

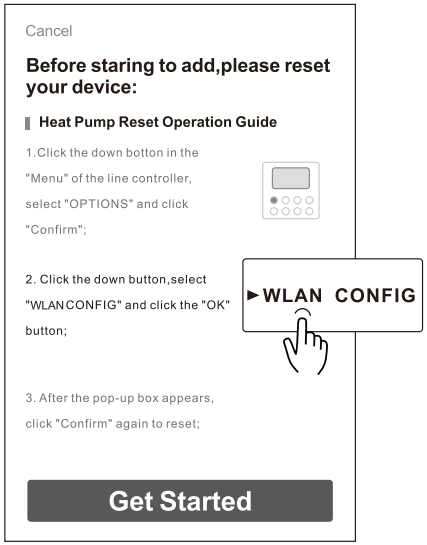
Note: If the current version of your APP is not version 2.0 or higher, please update the APP before proceeding with device network configuration.

## 1.3 APP Configuration

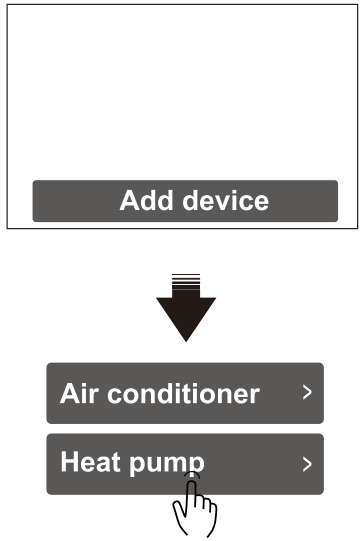
a) Device reset: Confirm after selecting "OPTIONS" in the "Menu" of the wired controller, select "WLAN CONFIG" and confirm, and confirm again after a pop-upbox appears;

b) Connect the mobile phone to the wireless network, open the APP, click "Add Device" , select "Heat Pump", and start adding;

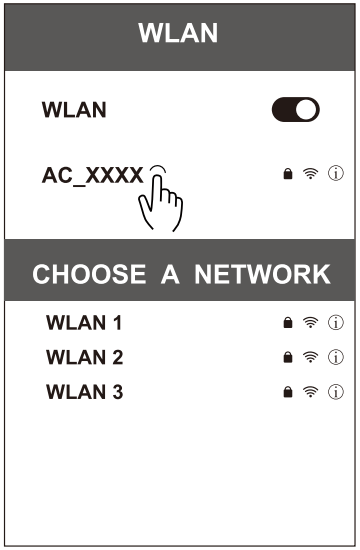
c) Connect the mobile phone WLAN to "AC-xxxx" ( xxxx consists of letters and numbers, which are randomly generated), and return to the APP;




a




b




c


d

d ) Enter the wireless network password and click "Connect to Wi-Fi"
(And roid and IOS phones have different operation sequences in steps **c** and **d**, the specific situation is subject to the APP display)

**Note:** If the configuration fails or you change the password of wireless router, you need to reset the WIFI module to reconnect: repeat the steps above for APP configuration.

**2. AC Management**

2.1 Remote control with wireless router

Once the wireless router is connected to the internet, activating the GPRS on the mobile terminal will enable the remote control of the devices.

2.2 For other instructions, please refer to "HELP" in APP.

## Modbus

1.Modbus introduction

Product can be used to BMS system by Modbus RTU protocol.255 Slave ID can be chosen. Max 1 million control order can be send to a indoor unit through the gateway, please make sure no exceed this limit.

2.Signal port

2 core signal wiring(shielding) be connected to gateway's RS485 and central controller or BMS system

Note: the power cable and communication cable of the gateway must be routed separately. Otherwise, the gateway may be damaged.

3.Anti-interference-Matching resistance setting

in order to eliminate the signal reflection caused by impedance mismatch or discontinuity in long-distance communication, when the communication distance exceeds 300m,a terminal matching resistance must be configured, that is, the matching resistance should be add on the both ends of the RS485 communication, so network is effectively connected.

4.Function code

The following function codes are supported. If the function code outside this table is received, it will be regarded as illegal function code and abnormal code will be fed back.

| Function code | Definition | Broadcast |
|---|---|---|
| 0×03(03) | Read holding register | / |
| 0×06(06) | Preset single holding register | Support |
| 0×10(16) | Preset multiple holding register | Support |

5.Address

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 0 | Indoor unit ON/OFF setting | W/R | 0:OFF, 1:ON | Signed word | / |
| 1 | Indoor unit running mode | W/R | 0: Auto, 1: cooling, 4: heating | Signed word | / |
| 2 | Indoor unit setting temperature | W/R | cooling:[5,25]℃, heating:[25,80]℃ | Signed word | 0.1℃ |
| 3 | Hot water ON/OFF setting | W/R | 0:OFF, 1:ON | Signed word | / |
| 4 | Hot water setting temperature | W/R | [30,75]℃ | Signed word | 0.1℃ |
| 5 | ECO mode | W/R | 0: Cancel ECO<br>1: ECO mode1<br>…<br>9: ECO mode9 | Signed word | / |
| 6 | Weather temp | W/R | 0: cancel automatic water temperature<br>1: Automatic water temperature mode1<br>…<br>9: Automatic water temperature mode 9 | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 7 | DHW Pump | W/R | 1:ON(after opening the water module automatically closes) | Signed word | / |
| 8 | Fast DHW | W/R | 0:OFF, 1:ON | Signed word | / |
| 9 | Disinfect | W/R | 1:ON(After opening the water module automatically closes) | Signed word | / |
| 10 | Air purge | W/R | 0:OFF, 1:ON | Signed word | / |
| 11 | Floor drying | W/R | 0:OFF, 1:ON | Signed word | / |
| 12 | Floor preheat | W/R | 0:OFF, 1:ON | Signed word | / |
| 13 | Silent mode | W/R | 0:OFF, 1:type-1, 2:type-2 | Signed word | / |
| 14 | Zone1 Room temp set | W/R | Cooling/heating: [16,32]℃ | Signed word | 0.1℃ |
| 15 | Zone2 heat mode ON/OFF | W/R | 0:OFF, 1:ON | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 16 | Zone2 heating target water temp set | W/R | [25,45]℃ | Signed word | 0.1℃ |
| 17 | Zone2 ECO | W/R | 0: Cancel ECO<br>1: ECO mode1<br>…<br>9: ECO mode9 | Signed word | / |
| 18 | Zone2 room temp set | W/R | Cooling/heating: [16,32]℃ | Signed word | 0.1℃ |
| 19 | Weather temp mode (Zone2) | W/R | 0:cancel automatic water temperature<br>1:Automatic water temperature mode1<br>…<br>8:Automatic water temperature mode 8 | Signed word | / |
| 20 | I_LIMIT | W/R | 0:OFF, 1:ON | Signed word | / |
| 21 | I_LIMIT SET | W/R | [0-50]A | Signed word | 1A |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 40 | ODU CAP | R | / | Signed word | 100W |
| 41 | ODU operate mode | R | 0:stop, 1:Cooling, 2:heating, 3:hot water | Signed word | / |
| 42 | Comp frequency | R | / | Signed word | 0.1rps |
| 43 | Fan speed | R | / | Signed word | 1rpm |
| 44 | Expansion valve | R | / | Signed word | 1pls |
| 45 | Comp current | R | / | Signed word | 0.1A |
| 46 | Target frequency | R | / | Signed word | 0.1rps |
| 47 | DC bus voltage | R | / | Signed word | 1V |
| 48 | INV input current | R | / | Signed word | 0.1A |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 49 | INV module temp | R | / | Signed word | 0.1℃ |
| 50 | Suction temp | R | / | Signed word | 0.1℃ |
| 51 | Discharge temp | R | / | Signed word | 0.1℃ |
| 52 | Exchanger temp | R | / | Signed word | 0.1℃ |
| 53 | Outdoor temp | R | / | Signed word | 0.1℃ |
| 54 | Comp pressure | R | / | Signed word | 1kpa |
| 55 | MV1_1 | R | 0:OFF, 1:ON | Signed word | / |
| 56 | MV1_2 | R | 0:OFF, 1:ON | Signed word | / |
| 57 | MV2 | R | 0:OFF, 1:ON | Signed word | / |
| 58 | pump-I | R | 0:OFF, 1:ON | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 59 | pump-O | R | 0:OFF, 1:ON | Signed word | / |
| 60 | pump-D | R | 0:OFF, 1:ON | Signed word | / |
| 61 | Pipe backup heater | R | 0:OFF, 1:ON | Signed word | / |
| 62 | Tank backup heater | R | 0:OFF, 1:ON | Signed word | / |
| 63 | Two_B | R | / | Signed word | 0.1℃ |
| 64 | Plate w - in temp | R | / | Signed word | 0.1℃ |
| 65 | Plate w - out temp | R | / | Signed word | 0.1℃ |
| 66 | Water tank temp | R | / | Signed word | 0.1℃ |
| 67 | Plate F - OUT temp | R | / | Signed word | 0.1℃ |
| 68 | Plate F - IN temp | R | / | Signed word | 0.1℃ |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 69 | Room temp (zone1) | R | / | Signed word | 0.1℃ |
| 70 | ODU error code | R | [0,255]. For example,0×A1 indicates that A1 is faulty. Communication data B corresponds to display character H Communication data D corresponds to display character J | Signed word | / |
| 71 | IDU error code | R | | Signed word | / |
| 72 | ODU software | R | BCD code, 0x10 indicates V1.0 | Signed word | / |
| 73 | IDU software | R | | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 74 | MV3_1 | R | 0:OFF, 1:ON | Signed word | / |
| 75 | MV3_2 | R | 0:OFF, 1:ON | Signed word | / |
| 76 | PUMP - M | R | 0:OFF, 1:ON | Signed word | / |
| 77 | PUMP - S | R | 0:OFF, 1:ON | Signed word | / |
| 78 | Plate E - heater | R | 0:OFF, 1:ON | Signed word | / |
| 79 | ET E - heater | R | 0:OFF, 1:ON | Signed word | / |
| 80 | GAS | R | 0:OFF, 1:ON | Signed word | / |
| 81 | Target water temp(Zone1) | R | Main zone current target water temp | Signed word | 0.1℃ |
| 82 | Target water temp (Zone2) | R | Second zone current target water temp | Signed word | 0.1℃ |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 83 | Buffer tank 1 temp | R | Current buffer tank 1 temp | Signed word | 0.1℃ |
| 84 | Floor heating inlet water temp | R | Current floor heating inlet water temp | Signed word | 0.1℃ |
| 85 | Solar temp | R | Current water flow | Signed word | 0.1℃ |
| 86 | Water flow | R | Current water flow | Signed word | 0.01m³/h |
| 87 | Total power consum of today | R | Total power consum of today | Unsigned Word | 1KWh |
| 88 | Defrost | R | 0: NON-defrost, 1: defrosting | Signed word | / |
| 89 | Chassis heater | R | 0:OFF, 1:ON | Signed word | / |
| 90 | Wired controller software | R | Current version | Signed word | / |
| 91 | Unit capacity | R | Current unit capacity | Unsigned Word | 0.01kW |
| 92 | Average unit capacity of 1h | R | Current average unit capacity of 1h | Unsigned Word | 0.01kW |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 93 | power | R | Current power | Unsigned Word | 0.01kW |
| 94 | Average power of 1h | R | Current average power of 1h | Unsigned Word | 0.01kW |
| 95 | cop | R | Current cop | Unsigned Word | 0.01 |
| 96 | Average cop of 1h | R | Current Average cop of 1h | Unsigned Word | 0.01 |
| 97 | Room temp (Zone2) | R | / | Signed word | 0.1℃ |
| 98 | Current limit percent | R | [0,100]% | Unsigned Word | 1 |
| 99 | COMP RUN TIME | R | / | Unsigned Word | 1min |
| 100 | Buffer tank2 temp | R | Current buffer tank2 temp | Signed word | 0.1℃ |
| 200 | DHW mode | W/R | 0:OFF, 1:ON | Signed word | / |
| 201 | Disinfect | W/R | 0:OFF, 1:ON | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 202 | DHW priority | W/R | 0:OFF, 1:ON | Signed word | / |
| 203 | DHW pump | W/R | 0:OFF, 1:ON | Signed word | / |
| 204 | Tao_DHWMAX | W/R | [35,43]℃ | Signed word | 1℃ |
| 205 | Tao_DHWMIN | W/R | [-25,5]℃ | Signed word | 1℃ |
| 206 | Twt_DI | W/R | [60,70]℃ | Signed word | 1℃ |
| 207 | t_TBH_DELAY | W/R | [0,240]min | Signed word | 1min |
| 208 | t_DI_HIGHTEMP | W/R | [5,60]min | Signed word | 1min |
| 209 | t_DI_MAX | W/R | [90,300]min | Signed word | 10min |
| 210 | t_DHWHP_ RESTRICT | W/R | [10,600]min | Signed word | 10min |
| 211 | t_DHWHP_max | W/R | [10,600]min | Signed word | 10min |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 212 | DHW PUMP RUN TIME | W/R | [5,120]min | Signed word | 5min |
| 213 | COOL MODE | W/R | 0:OFF, 1:ON | Signed word | / |
| 214 | TAO_CMAX | W/R | [35,60]℃ | Signed word | 1℃ |
| 215 | TAO_CMIN | W/R | [-5,25]℃ | Signed word | 1℃ |
| 216 | Tset AC_C1 | W/R | [5,25]℃ | Signed word | 1℃ |
| 217 | Tset AC_C2 | W/R | [5,25]℃ | Signed word | 1℃ |
| 218 | Tao_C1 | W/R | [-5,46]℃ | Signed word | 1℃ |
| 219 | Tao_C2 | W/R | [-5,46]℃ | Signed word | 1℃ |
| 220 | dTSC-OFF | W/R | [2,10]℃ | Signed word | 1℃ |
| 221 | dTSC-ON | W/R | [2,10]℃ | Signed word | 1℃ |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 222 | ZONE1 C_EMISSION | W/R | 1:RAD, 2:FLH, 3:FCU | Signed word | / |
| 223 | ZONE2 C_EMISSION | W/R | 1:RAD, 2:FLH, 3:FCU | Signed word | / |
| 224 | HEAT MODE | W/R | 0:OFF, 1:ON | Signed word | / |
| 225 | Tao_HMAX | W/R | [20,35]℃ | Signed word | 1℃ |
| 226 | Tao_HMIN | W/R | [-25,15]℃ | Signed word | 1℃ |
| 227 | TsetAC_H1 | W/R | [25,60]℃ | Signed word | 1℃ |
| 228 | TsetAC_H2 | W/R | [25,60]℃ | Signed word | 1℃ |
| 229 | Tao_H1 | W/R | [-25,35]℃ | Signed word | 1℃ |
| 230 | Tao_H2 | W/R | [-25,35]℃ | Signed word | 1℃ |
| 231 | dTSH-OFF | W/R | [2,10]℃ | Signed word | 1℃ |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 232 | dTSH-ON | W/R | [0,10]℃ | Signed word | 1℃ |
| 233 | ZONE1 H_EMISSION | W/R | 1:RAD, 2:FLH, 3:FCU | Signed word | / |
| 234 | ZONE2 H_EMISSION | W/R | 1:RAD, 2:FLH, 3:FCU | Signed word | / |
| 235 | Tao_AUTOCMIN | W/R | [20,35]℃ | Signed word | 1℃ |
| 236 | Tao_AUTOCMAX | W/R | [10,17]℃ | Signed word | 1℃ |
| 237 | WATER FLOW TEMP | W/R | 0:OFF, 1:ON | Signed word | / |
| 238 | ROOM TEMP (ZONE1) | W/R | 0:OFF, 1:ON | Signed word | / |
| 239 | DOUBLE ZONE | W/R | 0:OFF, 1:ON | Signed word | / |
| 240 | ROOM THERMOSTAT | W/R | 0:OFF, 1:ON | Signed word | / |
| 241 | INNER BACKUP | W/R | 0:OFF, 1:ON | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 242 | dTSDHW_ON | W/R | [2,10]℃ | Signed word | 1℃ |
| 243 | Tao_IBH_ON | W/R | [-15,10]℃ | Signed word | 1℃ |
| 244 | Tao_TBH_ON | W/R | [-5,20]℃ | Signed word | 1℃ |
| 245 | Tao_AHS_ON | W/R | [-25,10]℃ | Signed word | 1℃ |
| 246 | t_IBH_DELAY | W/R | [15,120]min | Signed word | 5min |
| 247 | t_AHS_DELAY | W/R | [5,120]min | Signed word | 5min |
| 248 | dTwi_FLH_ON | W/R | [2,10]℃ | Signed word | 1℃ |
| 249 | dTwi_FLH_OFF | W/R | [-10,-2]℃ | Signed word | 1℃ |
| 250 | Tset_FLH | W/R | [30,35]℃ | Signed word | 1℃ |
| 251 | Two_H_H.A | W/R | [25,35]℃ | Signed word | 1℃ |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 252 | Twt_DHW_H.A | W/R | [30,35]℃ | Signed word | 1℃ |
| 253 | Tset_B_ PREHEATING | W/R | [30,45]℃ | Signed word | 1℃ |
| 254 | t_fristFH | W/R | [24,72]Hrs | Signed word | 1Hour |
| 255 | t_DRYPEAK | W/R | [35,45]℃ | Signed word | 1℃ |
| 256 | t_DRYUP | W/R | [2,8]days | Signed word | 1day |
| 257 | t_HIGHPEAK | W/R | [1,5]days | Signed word | 1day |
| 258 | t_DRYDOWN | W/R | [0,5]days | Signed word | 1day |
| 259 | Twi_FLH | W/R | 0:OFF, 1:ON | Signed word | / |
| 260 | Twt_BT1 | W/R | 0:OFF, 1:ON | Signed word | / |
| 261 | EXPANSION BOARD | W/R | 0:OFF, 1:ON | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 262 | SMART GRID | W/R | 0:OFF, 1:ON | Signed word | / |
| 263 | SOLAR INPUT | W/R | 0:NON, 1:Tsolar, 2:SL1SL2 | Signed word | / |
| 264 | SMART GRID RUN TIME | W/R | [0,24]Hrs | Signed word | 1Hour |
| 265 | AUTO RELOAD | W/R | 0:YES, 1:NO | Signed word | / |
| 266 | E-HEATER1 POWER | W/R | [0,40]kw | Signed word | 0.5KW |
| 267 | E-HEATER2 POWER | W/R | [0,40]kw | Signed word | 0.5KW |
| 268 | TBH | W/R | 0:OFF, 1:ON | Signed word | / |
| 269 | TANK E-HEATER POWER | W/R | [0,40]kw | Signed word | 0.5KW |
| 270 | MODE_ PUMP_FLH | W/R | 0:Mode1, 1:Mode2 | Signed word | / |
| 271 | POWER INPUT LIMITATION | W/R | 0-100% | Signed word | 10% |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 272 | TIME ADJUST | W/R | [1,60]min | Signed word | 1min |
| 273 | PER START | W/R | 0-100% | Signed word | 20% |
| 274 | Tao_PUMP_ON | W/R | [-25,10]℃ | Signed word | 1℃ |
| 275 | WC_T_ROOM | W/R | 0:IDU，1:WIRED CONTROLLER | Signed word | / |
| 276 | MODE_PUMP_I | W/R | 0:NORMAL，1:EMERGENCY | Signed word | / |
| 277 | TH_INITIAL_FLH | W/R | [25,40]℃ | Signed word | 1℃ |
| 278 | TH_INITIAL_RAD | W/R | [35,60]℃ | Signed word | 1℃ |
| 279 | TH_INITIAL_FCU | W/R | [30,50]℃ | Signed word | 1℃ |
| 280 | TC_INITIAL_FCU | W/R | [5,25]℃ | Signed word | 1℃ |
| 281 | t_REFRESH | W/R | [1,30]min | Signed word | 1min |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 282 | TC_ADJUST_UP | W/R | [0,15]℃ | Signed word | 1℃ |
| 283 | TC_ADJUST_ DOWN | W/R | [-15,0]℃ | Signed word | 1℃ |
| 284 | TH_ADJUST_UP | W/R | [0,15]℃ | Signed word | 1℃ |
| 285 | TH_ADJUST_ DOWN | W/R | [-15,0]℃ | Signed word | 1℃ |
| 286 | TH_MAX_FLH | W/R | [35,60]℃ | Signed word | 1℃ |
| 287 | TH_MIN_FLH | W/R | [25,35]℃ | Signed word | 1℃ |
| 288 | TH_MAX_RAD | W/R | [35,60]℃ | Signed word | 1℃ |
| 289 | TH_MIN_RAD | W/R | [25,35]℃ | Signed word | 1℃ |
| 290 | TH_MAX_FCU | W/R | [35,60]℃ | Signed word | 1℃ |
| 291 | TH_MIN_FCU | W/R | [25,35]℃ | Signed word | 1℃ |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 292 | dTRC_OFF | W/R | [-5,0]℃ | Signed word | 0.1℃ |
| 293 | dTRC_ON | W/R | [0, 5]℃ | Signed word | 0.1℃ |
| 294 | dTRH_OFF | W/R | [0, 5]℃ | Signed word | 0.1℃ |
| 295 | dTRH_ON | W/R | [-5,0]℃ | Signed word | 0.1℃ |
| 296 | t_PUMP_ON | W/R | [1,10]min | Signed word | 1min |
| 297 | t_PUMP_OFF | W/R | [3,30]min | Signed word | 1min |
| 298 | IBH POWER SELECTION | W/R | 1:3kW, 2:6kW, 3:9kW | Signed word | 3kW |
| 299 | TC_CORRECT | W/R | [-5,5]℃ | Signed word | 0.5℃ |
| 300 | TH_CORRECT | W/R | [-5,5]℃ | Signed word | 0.5℃ |
| 301 | TC_INTERVAL | W/R | [0. 1,3]℃ | Signed word | 0.1℃ |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 302 | TH_INTERVAL | W/R | [0. 1,3]℃ | Signed word | 0.1℃ |
| 303 | TW_AV | W/R | [0. 1,3]℃ | Signed word | 0.1℃ |
| 304 | ROOM TEMP (ZONE2) | W/R | 0:OFF, 1:ON | Signed word | / |
| 305 | Twt_BT2 | W/R | 0:OFF, 1:ON | Signed word | / |
| 306 | MODE_GAS | W/R | HEAT& DHW/HEAT/DHW | Signed word | / |
| 307 | Tao_(-∞, -16)_L | W/R | TYPE1-TYPE8 | Signed word | / |
| 308 | Tao_(-∞, -16)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 309 | Tao_ [-16, -8)_L | W/R | TYPE1-TYPE8 | Signed word | / |
| 310 | Tao_ [-16, -8)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 311 | Tao_ [-8, 0)_L | W/R | TYPE1-TYPE8 | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 312 | Tao_ [-8, 0)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 313 | Tao_ [0, 8)_L | W/R | TYPE1-TYPE8 | Signed word | / |
| 314 | Tao_ [0, 8)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 315 | Tao_ [8, 16)_L | W/R | TYPE1-TYPE8 | Signed word | / |
| 316 | Tao_ [8, 16)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 317 | Tao_ [16, +∞)_L | W/R | TYPE1-TYPE8 | Signed word | / |
| 318 | Tao_ [16, +∞)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 319 | Tao_(-∞, 15)_L | W/R | TYPE1-TYPE8 | Signed word | / |
| 320 | Tao_(-∞, 15)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 321 | Tao_ [15, 22)_L | W/R | TYPE1-TYPE8 | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 322 | Tao_ [15, 22)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 323 | Tao_ [22, 30)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 324 | Tao_ [22, 30)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 325 | Tao_ [30, +∞)_L | W/R | TYPE1-TYPE8 | Signed word | / |
| 326 | Tao_ [30, +∞)_H | W/R | TYPE1-TYPE8 | Signed word | / |
| 327 | V_ADJUST | W/R | 1-100% | Signed word | 1% |
| 328 | dTSH_ADJUST | W/R | 0.2-3℃ | Signed word | 0.2℃ |
| 329 | V_INITIAL | W/R | 2-8V | Signed word | 1V |
| 330 | V_MIN | W/R | 0-4V | Signed word | 1V |
| 331 | V_MAX | W/R | 5-10V | Signed word | 1V |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 332 | t_DURATION | W/R | 1-30min | Signed word | 1min |
| 333 | BACKUP POWER | W/R | 0:OFF, 1:ON | Signed word | / |
| 334 | Static pressure | W/R | 0:OFF, 1:ON | Signed word | / |
| 335 | Cascade | W/R | 0:OFF, 1:ON | Signed word | / |
| 336 | t_Tao_FRESH_C | W/R | 1-30min | Signed word | 1min |
| 337 | t_Tao_FRESH_H | W/R | 1-30min | Signed word | 1min |
| 338 | kit | W/R | 0:OFF, 1:ON | Signed word | / |
| 339 | Room1 | W/R | 0:OFF, 1:ON | Signed word | / |
| 340 | Room2 | W/R | 0:OFF, 1:ON | Signed word | / |
| 341 | Room3 | W/R | 0:OFF, 1:ON | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 342 | Room4 | W/R | 0:OFF, 1:ON | Signed word | / |
| 343 | Room5 | W/R | 0:OFF, 1:ON | Signed word | / |
| 344 | Room6 | W/R | 0:OFF, 1:ON | Signed word | / |
| 345 | Room7 | W/R | 0:OFF, 1:ON | Signed word | / |
| 346 | Room8 | W/R | 0:OFF, 1:ON | Signed word | / |
| 347 | ROOM1 H_EMISSION | W/R | 1:RAD, 2:FLH 3:FCU | Signed word | / |
| 348 | ROOM2 H_EMISSION | W/R | 1:RAD, 2:FLH 3:FCU | Signed word | / |
| 349 | ROOM3 H_EMISSION | W/R | 1:RAD, 2:FLH 3:FCU | Signed word | / |
| 350 | ROOM4 H_EMISSION | W/R | 1:RAD, 2:FLH 3:FCU | Signed word | / |
| 351 | ROOM5 H_EMISSION | W/R | 1:RAD, 2:FLH 3:FCU | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 352 | ROOM6 H_EMISSION | W/R | 1:RAD, 2:FLH 3:FCU | Signed word | / |
| 353 | ROOM7 H_EMISSION | W/R | 1:RAD, 2:FLH 3:FCU | Signed word | / |
| 354 | ROOM8 H_EMISSION | W/R | 1:RAD, 2:FLH 3:FCU | Signed word | / |
| 355 | KIT_T_ROOM1 | W/R | 0:WIRED, 1:WIRELESS | Signed word | / |
| 356 | KIT_T_ROOM2 | W/R | 0:WIRED, 1:WIRELESS | Signed word | / |
| 357 | KIT_T_ROOM3 | W/R | 0:WIRED, 1:WIRELESS | Signed word | / |
| 358 | KIT_T_ROOM4 | W/R | 0:WIRED, 1:WIRELESS | Signed word | / |
| 359 | KIT_T_ROOM5 | W/R | 0:WIRED, 1:WIRELESS | Signed word | / |
| 360 | KIT_T_ROOM6 | W/R | 0:WIRED, 1:WIRELESS | Signed word | / |
| 361 | KIT_T_ROOM7 | W/R | 0:WIRED, 1:WIRELESS | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 362 | KIT_T_ROOM8 | W/R | 0:WIRED, 1:WIRELESS | Signed word | / |
| 363 | TR1_CORRECT | W/R | [-5, 5]℃ | Signed word | 0.5℃ |
| 364 | TR2_CORRECT | W/R | [-5, 5]℃ | Signed word | 0.5℃ |
| 365 | TR3_CORRECT | W/R | [-5, 5]℃ | Signed word | 0.5℃ |
| 366 | TR4_CORRECT | W/R | [-5, 5]℃ | Signed word | 0.5℃ |
| 367 | TR5_CORRECT | W/R | [-5, 5]℃ | Signed word | 0.5℃ |
| 368 | TR6_CORRECT | W/R | [-5, 5]℃ | Signed word | 0.5℃ |
| 369 | TR7_CORRECT | W/R | [-5, 5]℃ | Signed word | 0.5℃ |
| 370 | TR8_CORRECT | W/R | [-5, 5]℃ | Signed word | 0.5℃ |
| 371 | P_SHIELD_C1 | W/R | [2.5, 72.5]% | Signed word | 7% |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 372 | P_SHIELD_C2 | W/R | [2.5, 72.5]% | Signed word | 7% |
| 373 | P_SHIELD_C3 | W/R | [2.5, 72.5]% | Signed word | 7% |
| 374 | P_SHIELD_C4 | W/R | [2.5, 72.5]% | Signed word | 7% |
| 375 | P_SHIELD_C5 | W/R | [2.5, 72.5]% | Signed word | 7% |
| 376 | P_SHIELD_H1 | W/R | [2.5, 72.5]% | Signed word | 7% |
| 377 | P_SHIELD_H2 | W/R | [2.5, 72.5]% | Signed word | 7% |
| 378 | P_SHIELD_H3 | W/R | [2.5, 72.5]% | Signed word | 7% |
| 379 | P_SHIELD_H4 | W/R | [2.5, 72.5]% | Signed word | 7% |
| 380 | P_SHIELD_H5 | W/R | [2.5, 72.5]% | Signed word | 7% |
| 381 | TC_INITIAL_FLH | W/R | [18, 25]℃ | Signed word | 1℃ |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 382 | TH_CORRECT _FLH | W/R | [-5, 5]℃ | Signed word | 0.5℃ |
| 383 | FLOOR HEATING setting temperature | W/R | [30, 40]℃ | Signed word | 1℃ |
| 400 | MV1_1 | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 401 | MV1_2 | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 402 | MV2 | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 403 | MV3_1 | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 404 | MV3_2 | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 405 | pump-I | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 406 | pump-O | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 407 | pump-D | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 408 | PUMP-M | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 409 | PUMP-S | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 410 | Pipe backup heater | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 411 | Tank backup heater | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 412 | ET E-heater | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 413 | Plate E-heater | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 414 | FORCED DEFROSTING | W/R | 0:NON-defrost, 1:defrosting | Unsigned word | / |
| 415 | Fan speed | W/R | [0,1200]rpm, 32768 (0x8000H): cancel | Unsigned word | 1rpm |
| 416 | Chassis heater | W/R | 0:OFF, 1:ON, 32768 (0x8000H): cancel | Unsigned word | / |
| 417 | Expansion valve | W/R | [0,480]pls, 32768 (0x8000H): cancel | Unsigned word | 1pls |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 418 | Comp frequency | W/R | [0,130]rps, 32768 (0x8000H): cancel | Unsigned word | 0.1rps |
| 500+100* (n-1) | ODU CAP | R | / | Signed word | 100W |
| 500+100* (n-1)+1 | ODU operate mode | R | 0:stop, 1:Cooling 2:heating, 3:hot water | Signed word | / |
| 500+100* (n-1)+2 | Comp frequency | R | / | Signed word | 0.1rps |
| 500+100* (n-1)+3 | Fan speed | R | / | Signed word | 1rpm |
| 500+100* (n-1)+4 | Expansion valve | R | / | Signed word | 1pls |
| 500+100* (n-1)+5 | Comp current | R | / | Signed word | 0.1A |
| 500+100* (n-1)+6 | Target frequency | R | / | Signed word | 0.1rps |
| 500+100* (n-1)+7 | DC bus voltage | R | / | Signed word | 1V |
| 500+100* (n-1)+8 | INV input current | R | / | Signed word | 0.1A |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 500+100*(n-1)+9 | INV module temp | R | / | Signed word | 0.1A |
| 500+100*(n-1)+10 | Suction temp | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+11 | Discharge temp | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+12 | Exchanger temp | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+13 | Outdoor temp | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+14 | Comp pressure | R | / | Signed word | 1kpa |
| 500+100*(n-1)+15 | MV1_1 | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+16 | MV1_2 | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+17 | MV2 | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+18 | pump-I | R | 0:OFF, 1:ON | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 500+100*(n-1)+19 | pump-O | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+20 | pump-D | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+21 | Pipe backup heater | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+22 | Tank backup heater | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+23 | Two_B | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+24 | Plate w-in temp | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+25 | Plate w-out temp | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+26 | Water tank temp | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+27 | Plate F-OUT temp | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+28 | Plate F-IN temp | R | / | Signed word | 0.1℃ |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 500+100*(n-1)+29 | Room temp (zone1) | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+30 | ODU error code | R | [0, 255]. For example, 0×A1 indicates that A1 is faulty. Communication data B corresponds to display character H Communication data D corresponds to display character J | Signed word | / |
| 500+100*(n-1)+31 | IDU error code | R | | Signed word | / |
| 500+100*(n-1)+32 | ODU software | R | BCD code, 0x10 indicates V1.0 | Signed word | / |
| 500+100*(n-1)+33 | IDU software | R | | Signed word | / |
| 500+100*(n-1)+34 | MV3_1 | R | 0:OFF, 1:ON | Signed word | / |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 500+100*(n-1)+35 | MV3_2 | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+36 | PUMP-M | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+37 | PUMP-S | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+38 | Plate E-heater | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+39 | ET E-heater | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+40 | GAS | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+41 | Target water temp (Zone1) | R | Main zone current target water temp | Signed word | 0.1℃ |
| 500+100*(n-1)+42 | Target water temp (Zone2) | R | Second zone current target water temp | Signed word | 0.1℃ |
| 500+100*(n-1)+43 | Buffer tank1 temp | R | Current buffer tank temp | Signed word | 0.1℃ |
| 500+100*(n-1)+44 | Floor heating inlet water temp | R | Current floor heating inlet water temp | Signed word | 0.1℃ |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 500+100*(n-1)+45 | Solar temp | R | Current water flow | Signed word | 0.1℃ |
| 500+100*(n-1)+46 | Water flow | R | Current water flow | Signed word | 0.01m3/h |
| 500+100*(n-1)+47 | Total power consum of today | R | Total power consum of today | Unsigned word | 1KWh |
| 500+100*(n-1)+48 | Defrost | R | 0:NON-defrost, 1:defrosting | Signed word | / |
| 500+100*(n-1)+49 | Chassis heater | R | 0:OFF, 1:ON | Signed word | / |
| 500+100*(n-1)+50 | Wired controller software | R | Current version | Signed word | / |
| 500+100*(n-1)+51 | Unit capacity | R | Current unit capacity | Unsigned word | 0.01kW |
| 500+100*(n-1)+52 | Average unit capacity of 1h | R | Current average unit capacity of 1h | Unsigned word | 0.01kW |
| 500+100*(n-1)+53 | power | R | Current power | Unsigned word | 0.01kW |
| 500+100*(n-1)+54 | Average power of 1h | R | Current average power of 1h | Unsigned word | 0.01kW |

| Address | Content | Access type(W/R) | Definition | Type | Unit |
|---|---|---|---|---|---|
| 500+100*(n-1)+55 | cop | R | Current cop | Unsigned word | 0.01 |
| 500+100*(n-1)+56 | Average cop of 1h | R | Current Average cop of 1h | Unsigned word | 0.01 |
| 500+100*(n-1)+57 | Room temp (Zone2) | R | / | Signed word | 0.1℃ |
| 500+100*(n-1)+58 | I_LIMIT PERCENT | R | [0, 100]% | Unsigned word | 1 |
| 500+100*(n-1)+59 | COMP RUN TIME | R | / | Unsigned word | 1min |
| 500+100*(n-1)+60 | Buffer tank2 temp | R | Current buffer tank temp | Signed word | 0.1℃ |
| ... | ... | ... | ... | ... | ... |
| 500+100*(n-1)+99 | / | / | / | Unsigned word | / |

## Installation schematic (For the monobloc unit only)

1.Cut off the power of indoor unit.
2.As shown in Fig. 1, use a flathead screw driver to pry the bottom groove of the wire controller lightly (too much force would damage circuit board), pry rotationally to open the back cover.

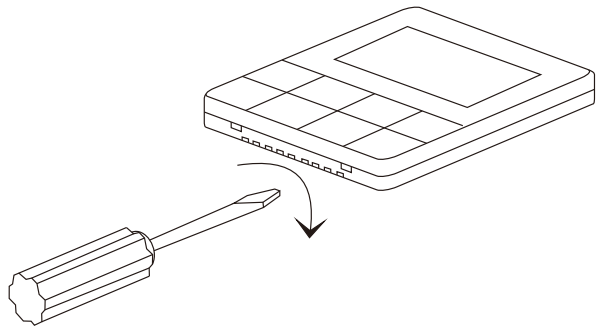


Fig.1

3.As shown in Fig.2,fix the wire controller to the wall with three screws through the three oval holes on the back cover of the wire controller.
(Prepare three screws which are readily available in the market)

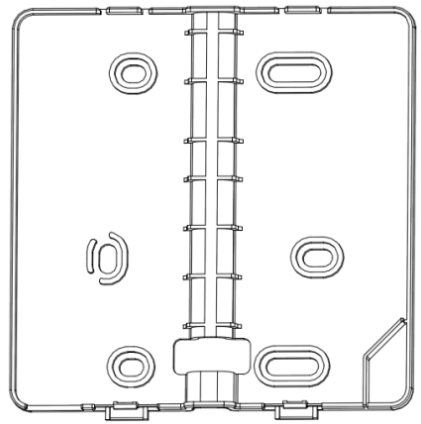


Fig.2

4. Connect port introduction

①Signal to BMS/Central to controller
②Signal to Main control board of hydraulic module (plug-in connection)
③Signal to Main control board of hydraulic module (screw connection) For "②" and "③", you can select one of them depending on your installation conditions

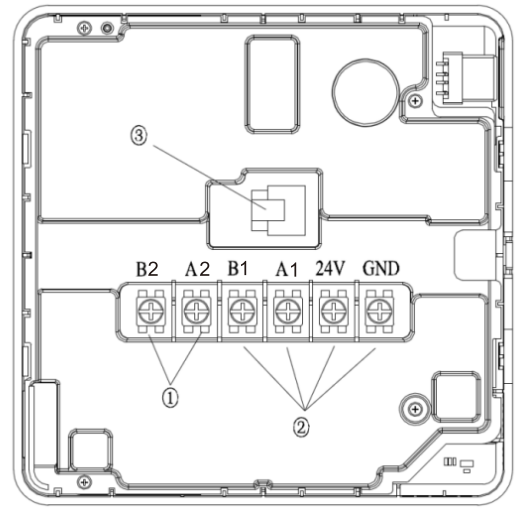



Fig.3

5.If the plug-in connection 485 communication wiring mode is selected, Connect the wire controller and main control board of hydraulic module through two communication wirings. (Check to prevent reverse connection of terminals) Communication wiring.

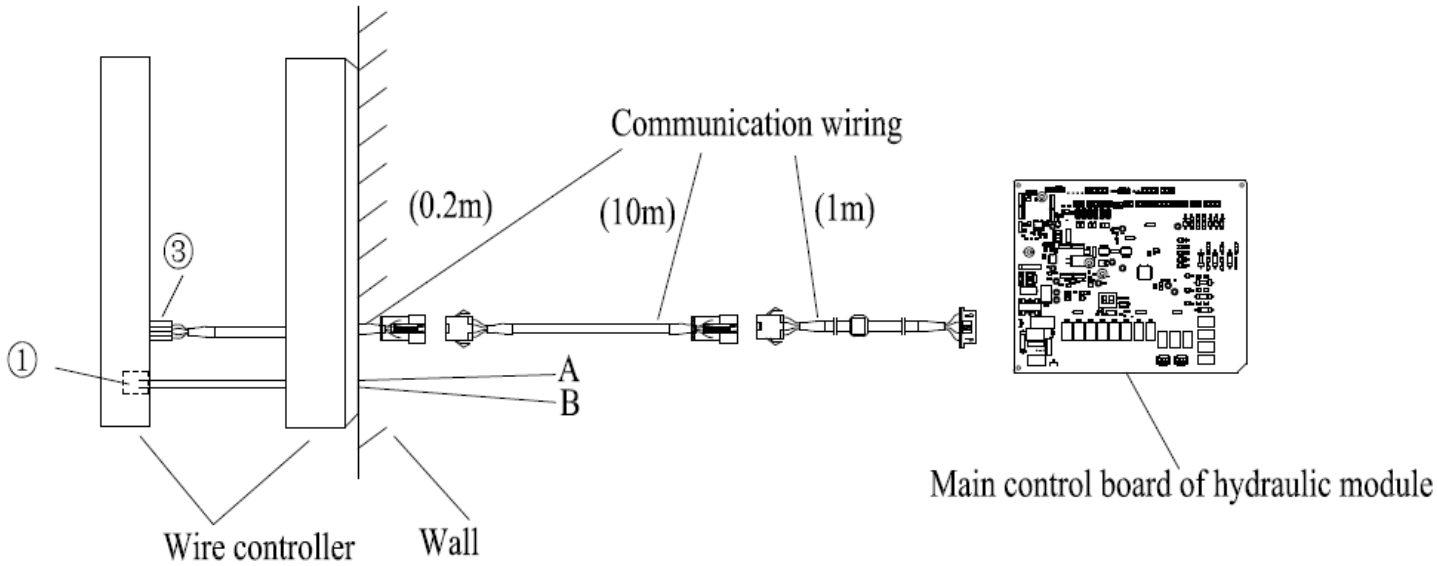



Fig.4

6.If screw connection 485 communication wiring mode is selected,Connect the wire controller and main control board of hydraulic module with screws.
(Check to prevent reverse connection of terminals)

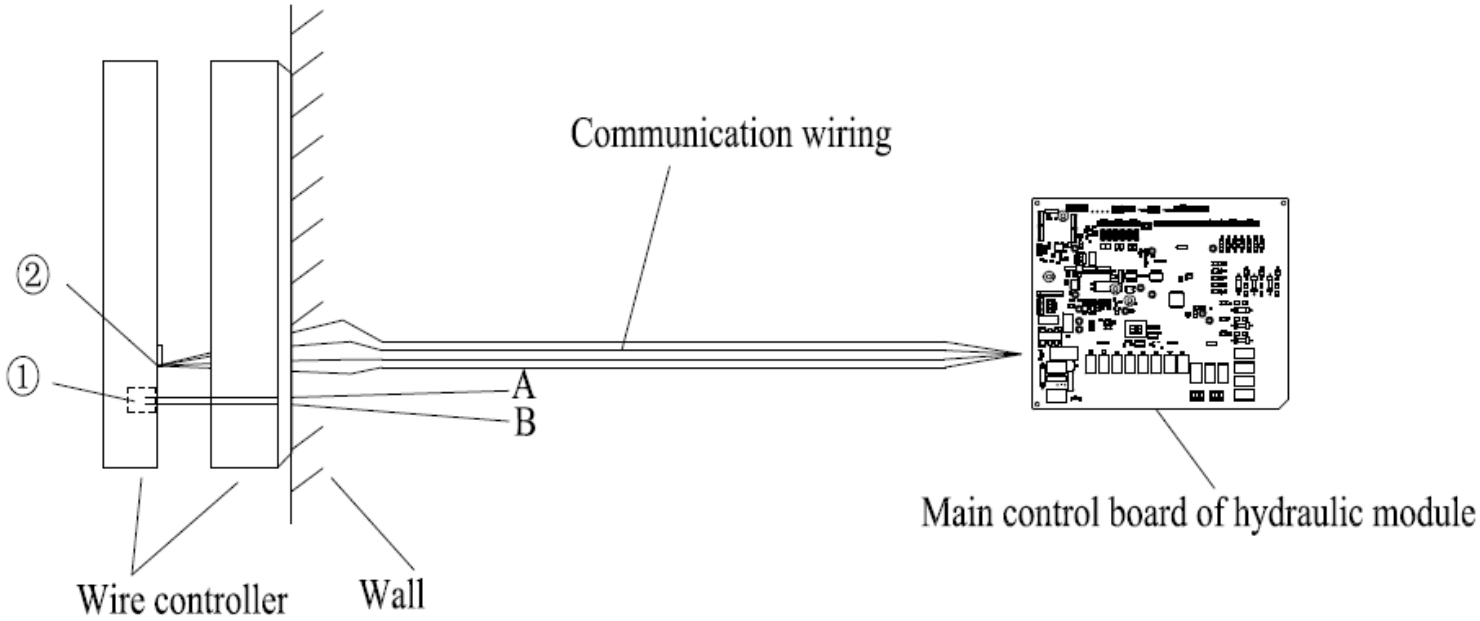



Fig.5

7.After connecting the connecting wire to the main body of the wire controller, as shown in Fig. 6, install main body part according to the following steps:
1).Push the upper part of main body into the clip.
2). Use the force of inclined top to install the lower part of main body (horizontal installation is prohibited,which is easy to damage the structural slot).

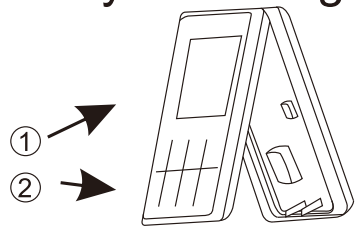



Fig.6