

Sinilink XY-WT04 WIFI Remote thermostat module
Temperature controller module refrigeration and heating
High low temperature alarm Temperature control board of
K-type thermocouple high temperature controller - 99 ~
999 °C



The advertisement features a central image of the Sinilink XY-WT04 thermostat module. The device is a rectangular grey box with a blue LCD screen displaying 'OUT 30.2°C' and 'H35.5'. It has four green buttons: two for temperature adjustment (up and down arrows) and two for settings (gear and power icons). A K-type thermocouple cable is connected to the left side, and a blue WiFi module is connected to the right side. The background is a light blue gradient with a dark blue header and footer.

Sinilink 欣易云联 | official product

XY-WT04

High temperature digital thermostat

WeChat notification Cloud recording Email notification Operation log

heating/cooling High and low temperature alarm

Mobile APP Sinilink control Support Android and IOS

Temperature control range: -99~999°C

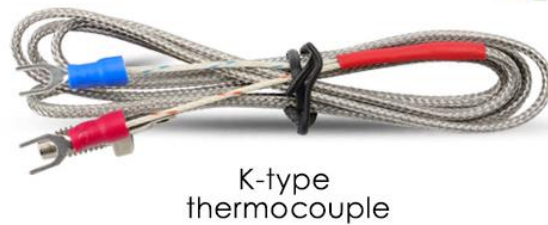
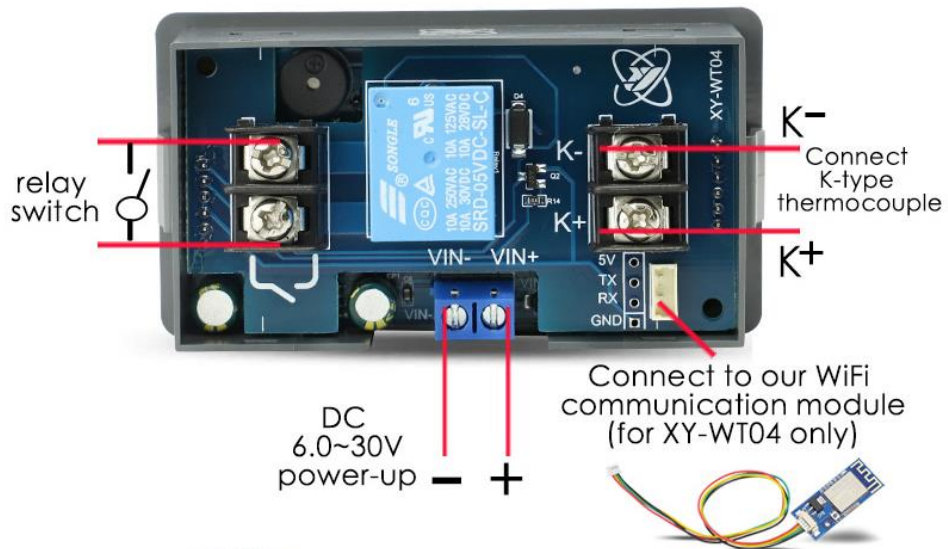
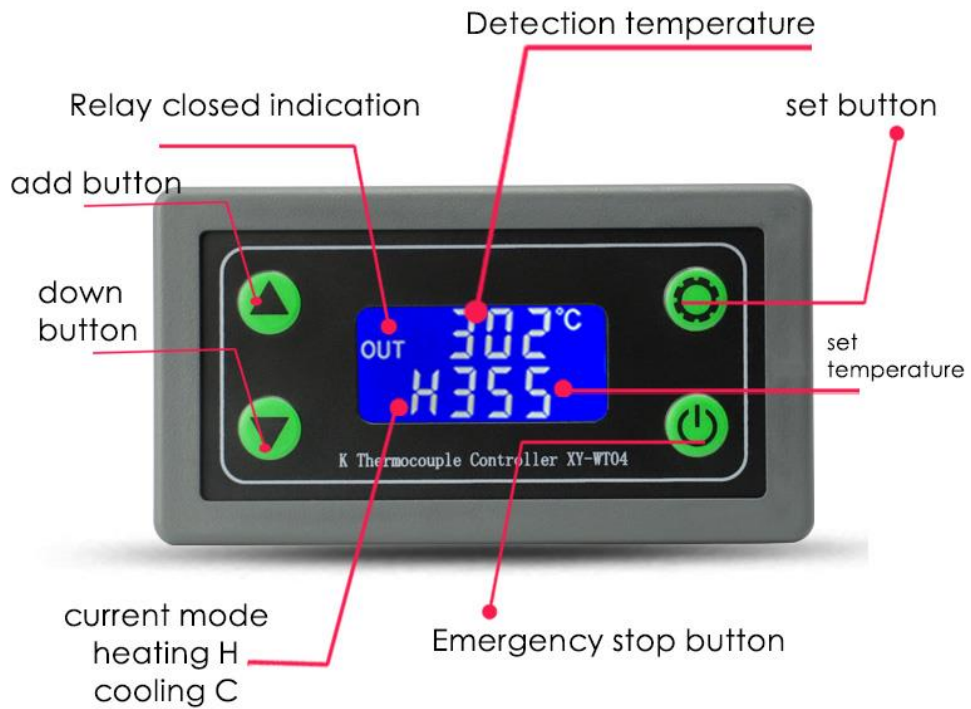
Output type: 1-way relay switch

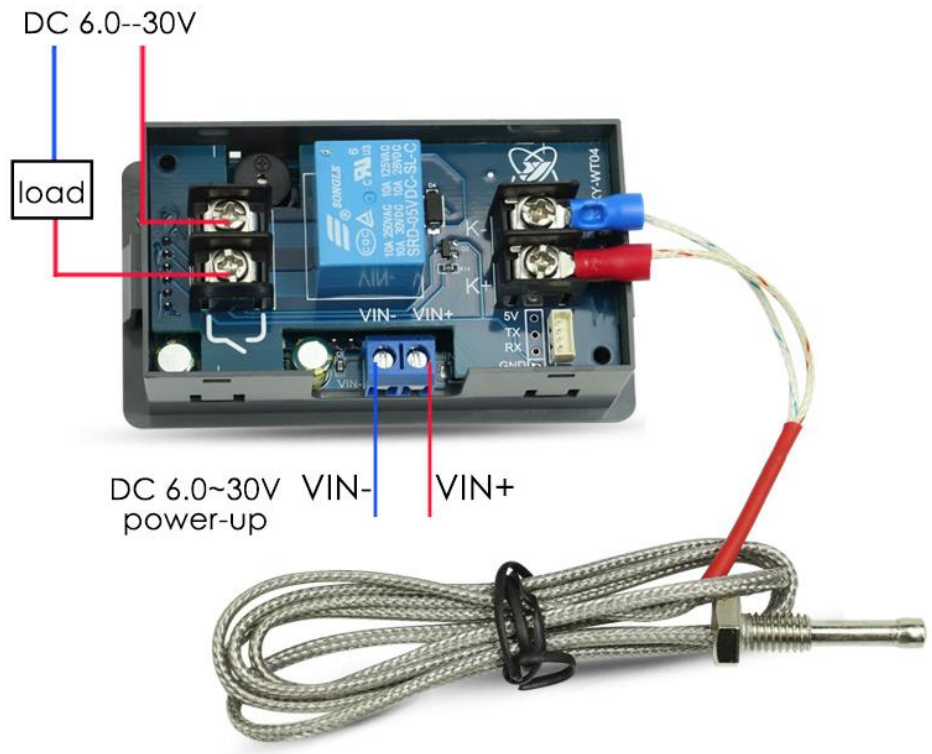
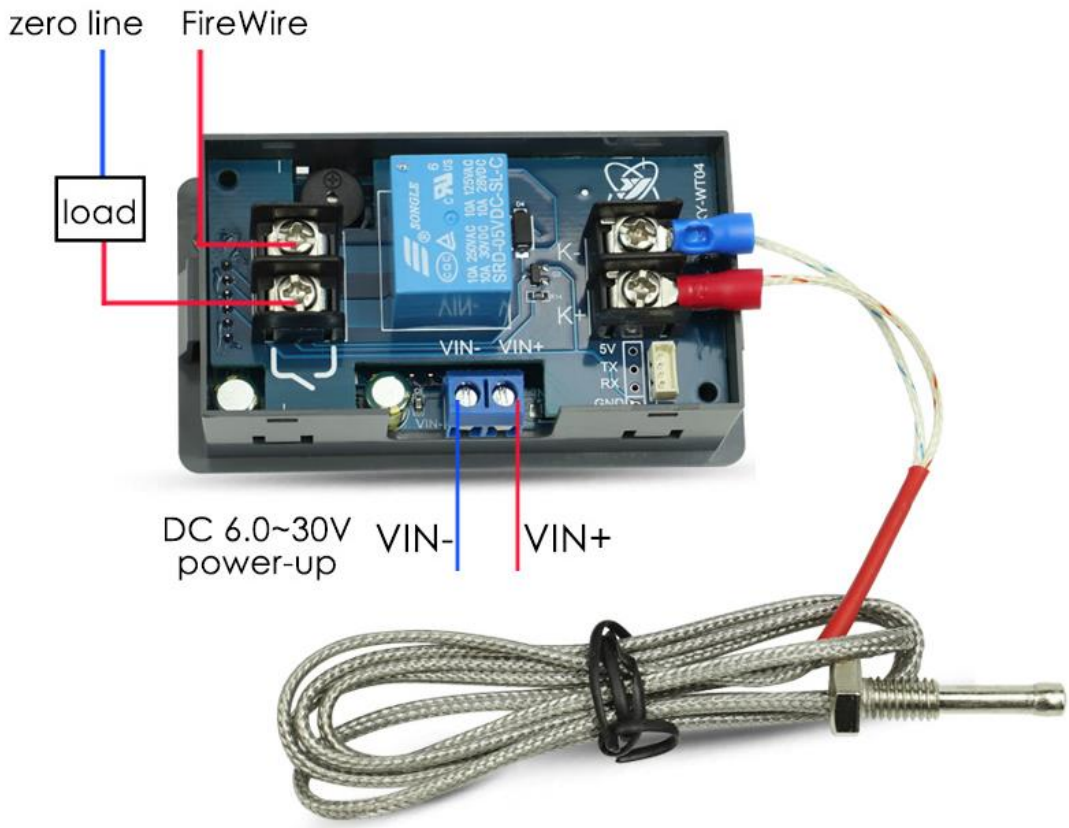
Content

Sinilink XY-WT04 WIFI Remote thermostat module Temperature controller module refrigeration and heating High low temperature alarm Temperature control board of K-type thermocouple high temperature controller - 99 ~ 999 °C	1
Content.....	2
1. Product introduction and parameters.....	4
2. Product function description	8
2.1 Heating mode (H).....	8
2.2 Refrigeration mode (C).....	8
2.3 Delay startup function(dLY).....	8
2.4 Temperature correction function(OFE).....	8
2.5 High and low temperature alarm function	8
2.6 Emergency brake function (emergency stop function).....	9
2.7 Sleep function.....	9
2.8 Relay status indication.....	9
2.9 Modbus protocol.....	9
3. Description of the product parameters.....	9
3.1 How to modify the working mode and temperature	9
3.2 How to view and modify the system parameters(OTP LTP ...).....	9
3.3 Alarm parameter setting	9
3.4 Working temperature setting	10
3.5 Delay start setting	10
3.6 Buzzer settings.....	10
3.7 Set temperature units.....	10
3.8 Modbus slave address setting	10
4. Automatic mode function description(Only WT04-W).....	10
4.1 Remote parameter settings.....	11
4.2 Support the timing delay cycle function.....	12
4.3 Whether the product can be run offline offline	12
4.4 LAN data export function.....	12

4.5 Share Settings.....	12
4.6 operation note.....	12
4.7 Cloud recording and upload frequency.....	13
5.Manual mode description(Only WT04-W).....	14
5.1Manual mode function description.....	15
5.2 Description of power status setting.....	15
5.3 Can the product be run offline in manual mode.....	15
5.4 Additional functional description in manual mode	15
6.WIFI Module key function and indicator light status.....	16
6.1Keybutton function.....	16
6.2 Description of the indicator lamp function.....	16
7.Mail notification function:.....	17
7.1 How to bind a mailbox	17
8 How to distribution network.....	18
8.1 Touch pairing	18
8.2 AP pairing	19
9.How to download a mobile APP.....	20
Scan the code to download APP, foreign customers please download in the Google market, search for 'sinilink' download.....	20
10.Modbus Detailed solution of communication protocol.....	20
10.1 Protocol profile	20
10.2 Data frame structure:	20
10.3 Example of communication	20
10.34Register introduction.....	20

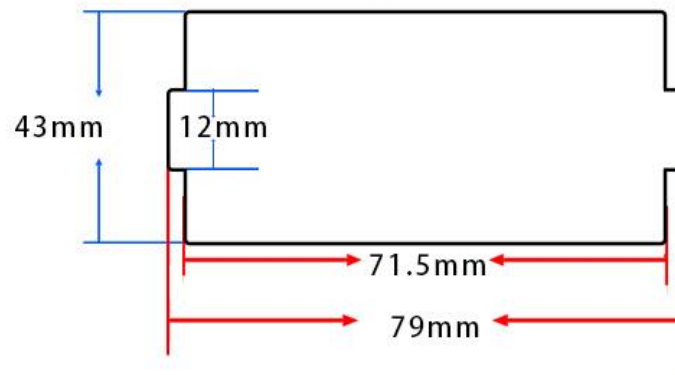
1. Product introduction and parameters







The recommended opening size is as shown in the figure below:



Product Specifications

Product name: High temperature digital thermostat

Product number: XY-WT04 Supply voltage: DC 6~30V

Temperature control range: -99~999°C Resolution: 1°C

Measurement input: K-type thermocouple

Temperature measurement accuracy: $\pm 2^{\circ}\text{C}$

Output type: 1-way relay switch

Maximum control: current within 10A

Appearance size: 79*43*30mm



2. Product function description

2.1 Heating mode (H)

When the detection temperature (current temperature) \leq sets the temperature - return temperature, the relay leads on and the heating equipment starts working;

When the detection temperature (current temperature) \geq sets the temperature, the relay is disconnected and the heating device stops working;

Example: set temperature 30°C, return temperature 5°C;

When the temperature is $20^{\circ}\text{C} \leq 25^{\circ}\text{C}$ ($30 - 5 = 25$), the relay suction starts to start heating, when the temperature reaches $30^{\circ}\text{C} \geq$ set temperature 30°C, the relay is disconnected and the heating is stopped;

2.2 Refrigeration mode (C)

When the detection temperature (current temperature) \geq sets the temperature + return temperature, the relay is turned on and the refrigeration equipment starts working;

When the detection temperature (current temperature) \leq sets the temperature, the relay is disconnected and the refrigeration equipment stops working;

Example: set temperature 30°C, return temperature 5°C;

When the temperature is $36^{\circ}\text{C} \geq 35^{\circ}\text{C}$ ($30 + 5 = 35$), the relay suction starts to cool, and when the temperature reaches $30^{\circ}\text{C} \leq$ the set temperature is 30°C, the relay is disconnected and the cooling is stopped;

2.3 Delay startup function(dLY)

If the delay start (unit of seconds) is opened, when one heating or cooling is completed, if the heating or cooling conditions are met again during the delay period, the product will not be executed, and must wait for the delay to be completed;

2.4 Temperature correction function(OFE)

The system may work for a long time, and through this function correction, the current temperature = measures temperature + calibration value; After the relay is closed, the digital tube will display "OUT", which can quickly check the working status of the product;

2.5 High and low temperature alarm function

buzzer open and off: on, the buzzer will sound after the alarm. After you press the button, the buzzer will stop sounding;

OTP High temperature alarm: After the high temperature alarm is turned on, after the current temperature is higher than the high temperature alarm temperature, the relay is disconnected;

LTP low temperature alarm: After the low temperature alarm is turned on, after the current temperature is below the low temperature alarm temperature, the relay is disconnected

Note: In the alarm state, the relay remains disconnected;

2.6 Emergency brake function (emergency stop function)

After the emergency stop, the relay will be off in any state; after the emergency stop is off, the relay returns to normal state;

2.7 Sleep function

At the operation interface, press STOP 2 seconds to switch, if the hibernation function is on, no button operation for 10 minutes, automatically turn off the backlight;

2.8 Relay status indication

After the relay suction, the digital tube displays that "OUT", can quickly view the working status of the product;

2.9 Modbus protocol

This product supports modbus standard communication protocol, please refer to modbus section for more details;

Conval Address: 1~247

Potter rate: 0: 9600 1: 14400 2: 19200 3: 38400 4: 56000 5: 57600 6: 115200

3. Description of the product parameters

3.1 How to modify the working mode and temperature

1. Press SET briefly at the product running interface to enter the Quick Settings interface (Up: return temperature; Down: mode + set temperature);
2. Press SET briefly to switch the parameters and flash showing the currently modified parameters;
3. Short press UP DOWN key to adjust the corresponding parameters, long press SET key for more than 2 seconds, exit and save;

3.2 How to view and modify the system parameters(OTP LTP ...)

1. shall press SET key for the product operation interface for more than 2 seconds to enter the parameter setting interface;
2. shortswitch parameters by SET, OTP: high temperature alarm; LTP: low temperature alarm; dLY: delay start time; OFE: temperature correction; bEP: buzzer switch; F-C: temperature unit; Add: modbus equipment address
3. Short press UP DOWN key to adjust the corresponding parameters; Long press SET key for more than 2 seconds, exit and save;

3.3 Alarm parameter setting

- 1.. Refer to step 3.1 to get the product into the system parameter setting interface;
2. short press SET switch parameters, OTP: high temperature alarm LTP: low temperature alarm;

3. If OTP/LTP displays "- -" indicates that this feature is not turned on, you can press STOP to turn it on / off;

4. Short press UP DOWN key to adjust the corresponding parameters, long press SET key for more than 2 seconds, exit and save;

3.4 Working temperature setting

1. refers to step 3.1 to bring the product to the system parameter setting interface;

2. short press SET to switch parameters, OFE: temperature correction;

3. Short press UP DOWN key to adjust the corresponding parameters, long press SET key for more than 2 seconds, exit and save;

3.5 Delay start setting

1. refers to step 3.1 to bring the product to the system parameter setting interface;

2. short press SET to switch parameters, dLY: delay start, per seconds;

3. If dLY displays "- -" indicates that this feature is not turned on, you can press STOP to turn it on / off;

4. Short press UP DOWN key to adjust the corresponding parameters, long press SET key for more than 2 seconds, exit and save;

3.6 Buzzer settings

1. Refer to step 3.1 to get the product into the system parameter setting interface;

2. short press SET switch parameters, bEP: buzzer switch (ON: open OFF: off)

3. Short press UP DOWN key to adjust the corresponding parameters, long press SET key for more than 2 seconds, exit and save;

3.7 Set temperature units

1. Refer to step 3.1 to get the product into the system parameter setting interface;

2. short press SET switch parameters, F-C: temperature unit F: ° F C: ° Celsius;

3. Short press UP DOWN key to adjust the corresponding parameters, long press SET key for more than 2 seconds, exit and save;

3.8 Modbus slave address setting

1. Refer to step 3.1 to get the product into the system parameter setting interface;

2. short press SET to switch parameters, Add: modbus device address;

3. Short press UP DOWN key to adjust the corresponding parameters, long press SET key for more than 2 seconds, exit and save;

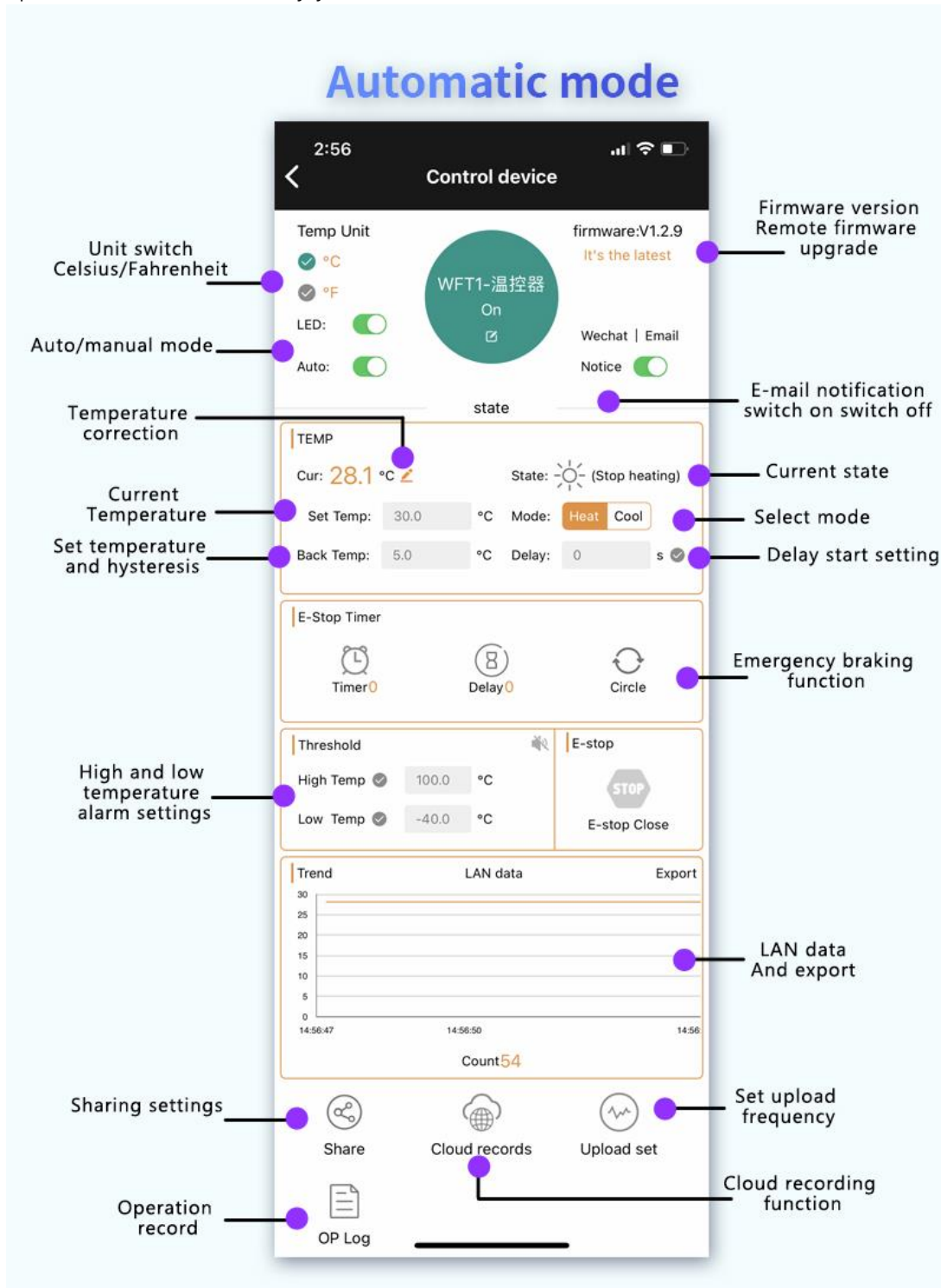
4. Automatic mode function description(Only WT04-W)

1) First, select the heating mode / cooling mode;

2) Set the temperature and return difference. If the delay start is required, set the delay start time

3) If the high and low temperature alarm is necessary to be set, then set the high and low

temperature alarm threshold by yourself



4.1 Remote parameter settings

First of all, we should ensure that the "port rate and equipment address" of the app communication column are consistent with the product. After successful communication, the product operation parameters can be set through the app, such as working mode, working

temperature, temperature unit, etc., which is convenient and fast;

4.2 Support the timing | delay | cycle function

Timing, delay and cycle can be added through app, and this function controls the state of the emergency stop switch of the product to meet the needs of the timing scene;

4.3 Whether the product can be run offline offline

When the parameters are set, the product can run offline, parameter power is not lost; timing, delay, circulation and other functions need time information, the network cannot be run;

4.4 LAN data export function

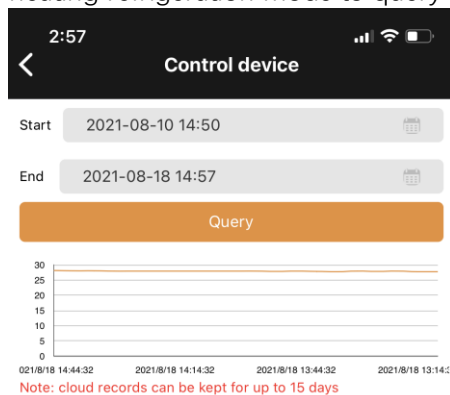
A temperature data will be transmitted from the LAN for 1 second. After clicking "Export", it will be automatically exported to the EXCEL to analyze the temperature data

4.5 Share Settings

You can share with others, realize multiple people to share a device, can control its functions.

4.6 operation note

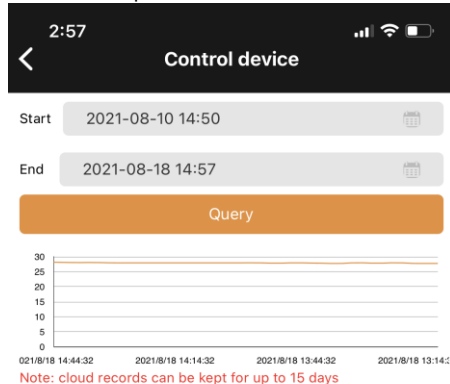
All operation records can be stored in the background, and the + timer + button +APP+ heating refrigeration mode to query the operation status of the relay ;



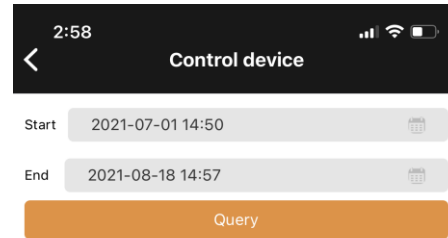
Serial	Time	Temp(°C)
1	2021-08-18 14:44:32	28.1
2	2021-08-18 14:39:32	28.0
3	2021-08-18 14:34:32	28.0
4	2021-08-18 14:29:32	27.9
5	2021-08-18 14:24:32	27.9
6	2021-08-18 14:19:32	27.9
7	2021-08-18 14:14:32	27.9
8	2021-08-18 14:09:32	27.9
9	2021-08-18 14:04:32	27.9
10	2021-08-18 13:59:32	27.9
11	2021-08-18 13:54:32	27.9
12	2021-08-18 13:49:32	27.8
13	2021-08-18 13:44:32	27.9
14	2021-08-18 13:39:32	27.8
15	2021-08-18 13:34:32	27.7
16	2021-08-18 13:29:31	27.9
17	2021-08-18 13:24:31	27.8
18	2021-08-18 13:19:31	27.9

4.7 Cloud recording and upload frequency

Temperature data can be stored in the background, the log upload frequency of can be set, can set 1 second / bar (one default 5 minutes); data can be inquired for any time period at will to retain data within 15 days; cloud data export function can be added to make the next analysis of the temperature data;



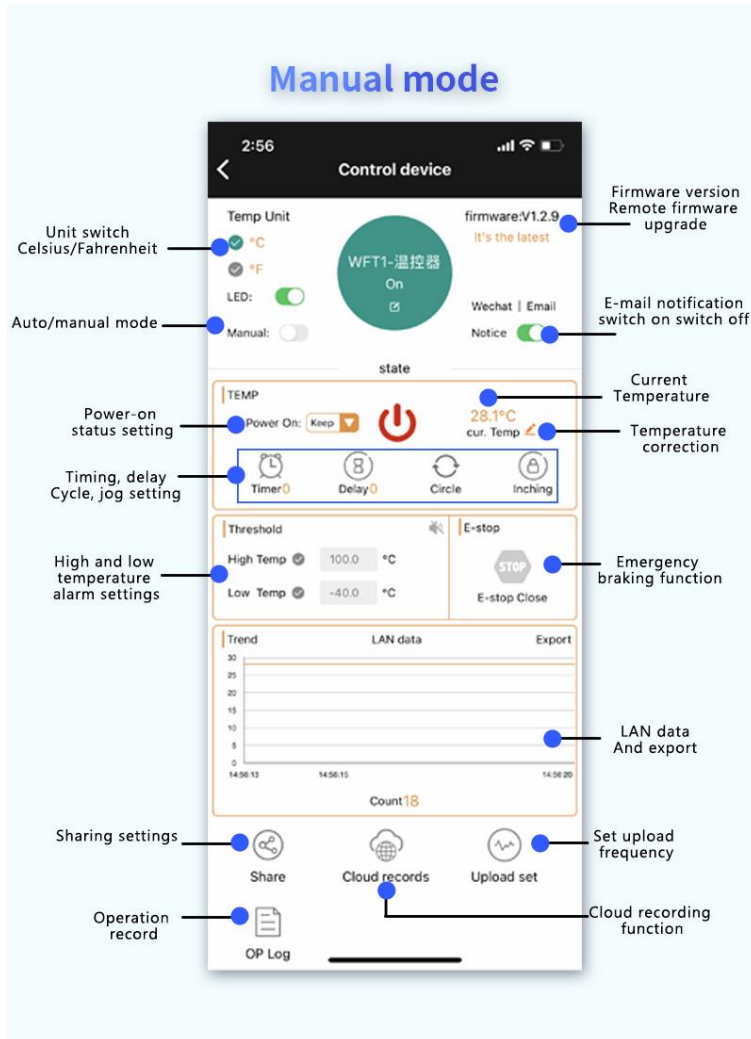
Serial	Time	Temp(°C)
1	2021-08-18 14:44:32	28.1
2	2021-08-18 14:39:32	28.0
3	2021-08-18 14:34:32	28.0
4	2021-08-18 14:29:32	27.9
5	2021-08-18 14:24:32	27.9
6	2021-08-18 14:19:32	27.9
7	2021-08-18 14:14:32	27.9
8	2021-08-18 14:09:32	27.9
9	2021-08-18 14:04:32	27.9
10	2021-08-18 13:59:32	27.9
11	2021-08-18 13:54:32	27.9
12	2021-08-18 13:49:32	27.8
13	2021-08-18 13:44:32	27.9
14	2021-08-18 13:39:32	27.8
15	2021-08-18 13:34:32	27.7
16	2021-08-18 13:29:31	27.9
17	2021-08-18 13:24:31	27.8
18	2021-08-18 13:19:31	27.9



Serial	Time	Execute
INCHING	2021-08-18 14:55:51	Relay OFF
APP	2021-08-18 14:55:46	Relay ON
APP	2021-08-17 09:31:36	Relay OFF
APP	2021-08-17 09:31:33	Relay ON
RESTART	2021-08-16 08:04:22	Relay OFF
RESTART	2021-08-09 08:05:55	Relay OFF
APP	2021-08-07 09:43:50	Relay OFF
APP	2021-08-07 09:43:49	Relay ON

Click load more

5. Manual mode description(Only WT04-W)



5.1 Manual mode function description

Timing, delay, cycle and point can be set in manual mode;

5.2 Description of power status setting

Upper charging state-on: default suction of the relay after charging;

Up state-off: the relay is switched off by default;

Power up-hold: automatically restore the relay state after power up

5.3 Can the product be run offline in manual mode

In manual mode, the product can not run offline.。

5.4 Additional functional description in manual mode

Other features are the same as in automatic mode

6.WIFI Module key function and indicator light status

6.1Keybutton function

Long press for 5 seconds: switch the pairing mode Touch/AP, to let the product enter the pairing state;

6.2 Description of the indicator lamp function

Blue indicator lamp: the network status indicator lamp

1. is not connected to the router: bright 1S out of 0.1S so reciprocating;
2. link router but not connected: flash, flash so backwards;
3. Touch pairing mode: flash 4 times and then wait 1S so reciprocating;
4. AP pairing mode: blue light continuous flash;
5. networking success: The blue indicator light is always on ;

7.Mail notification function:

7.1 How to bind a mailbox

- 1) Turn on the mail notification



1. Open the APP into the device operation interface, the top left corner is the switch of the mail notification function; if the email notification is turned on, when the computer status sends the change will send the latest status and operation type of the computer in real time through the mailbox used to register the APP;

Operation types are divided into five types: 1. Equipment power 2. Key operation 3. Timer operation 4.APP operation 5. Point operation operation; as shown in the figure below



Sinilink Notice: Your Device [Sinilink] now status is power on,oprete type:



Sinilink Notice: Your Device [Sinilink] now status is power off,oprete type:


8 How to distribution network

8.1 Touch pairing

1. Press the WIFI module for more than 5 seconds to get the product into Touch pairing (the blue lights flash 4 times and then extinguish 1S)
2. The APP operation is shown in Fig


Product networking steps

First step




Click on the small plus sign

Second step



Select the pairing mode. If it is a **WIFI** device, the **"Touch"** mode is preferred. If the pairing fails, please select the **"AP"** mode for pairing; if it is a **Bluetooth device**, click **"Bluetooth device"** to pair and connect.

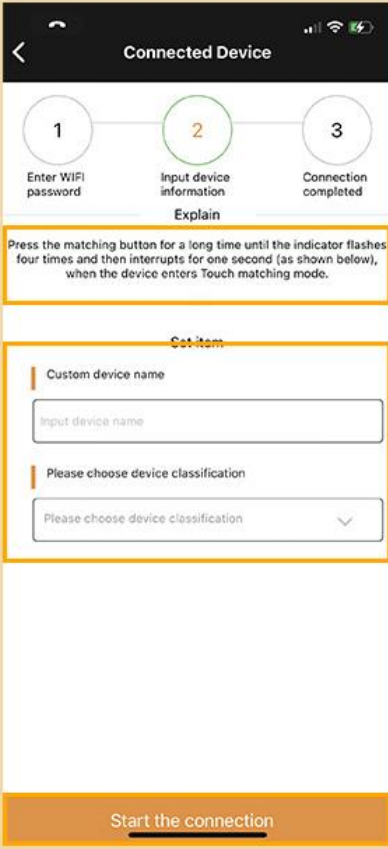
Third step



Next step

During the pairing process, the WIFI network must be 2.4G, and the 5G network cannot be paired. (If your WIFI router 2.4G and 5G are network merged, please reconfigure the router, separate it, and select 2.4G network.)

Fourth step



Start the connection

The product enters Touch by default after power-on Pairing mode.

Customize device name and classification.

Click "Start Connection".

8.2 AP pairing

Long press WIFI module for more than 5 seconds to let the product enter compatible mode (AP mode) pairing state (blue light continuous flash)

Product networking steps

First step

Click on the small plus sign

Second step

Please select "AP" mode to pair

Third step

During the pairing process, the WIFI network must be 2.4G. Yes, the 5G network cannot be paired. (If your WIFI router 2.4G and 5G are network mergers Please reconfigure the router, separate it, and select Take 2.4G network)

Fourth step

Customize the device name and category, click "start connection"

Fifth step

Enter the phone setting interface and connect the WIFI network to SinilinkProduct (password is 12345678)

Sixth step

Go back to Sinilink APP and click "Next"

Seventh step

Click "Finish adding" and waitfor the mobile phone to connect successfully, and then automatically return to the app device interface

9.How to download a mobile APP

扫码下载APP



Scan Download APP

Scan the code to download APP, foreign customers please download in the Google market, search for 'sinilink' download

10.Modbus Detailed solution of communication protocol

10.1 Protocol profile

Communication protocol is MODBUS-RTU protocol, this product only supports function code 0x03,0x06,0x10; communication interface for TTL serial port;

10.2 Data frame structure :

Data frame interval	address part	function code	data field	CRC checksum
3.5 Bytes and Up	1 Bytes	1 Bytes	N Bytes	2 Bytes

10.3 Example of communication

0x03 Read function host format

address part	function code	Register start address	Number of register addresses n(1~32)	CRC checksum
1 Bytes	1 Bytes	1 Bytes	2 Bytes	2 Bytes

0x03 Read function returns the format from the machine

address part	function code	Register start address	Number of registers n	Register data	CRC checksum
1 Bytes	1 Bytes	2 Bytes	1 Bytes	2*n Bytes	2 Bytes

0x06 Write a single register function host format

address part	function code	Register start address	Register data	CRC checksum
1 Bytes	1 Bytes	2 Bytes	2 Bytes	2 Bytes

0x06 Write a single register function returns the format from the machine

address part	function code	Register start address	Register data	CRC checksum
1 Bytes	1 Bytes	2 Bytes	2*n Bytes	2 Bytes

0x10 Write in a multiple - register function host format

address part	function code	Register start address	Number of register addresses n(1~32)	Write the number of bytes 2*n	Register data	CRC checksum
1 Bytes	1 Bytes	2 Bytes	2 Bytes	1 Bytes	2*nBytes	2 Bytes

0x10 Write multiple registers from the host format

address part	function code	Register start address	Number of register addresses n(1~32)	CRC checksum
1 Bytes	1 Bytes	2 Bytes	1 Bytes	2 Bytes

10.34 Register introduction

Protocol register introduction (data within a single register address is double - byte data)

name	instruction	Bytes	decimal	unit	Register type	Register address
RELAY	Current relay status	2	0	-	holding register	0000H
SENSOR	Sensor status	2	0	-	holding register	0001H
TIME	Delay remaining time	2	0	MIN	holding register	0002H
TEMP	Current temperature	2	1	°C	holding register	0003H
F_C	degree-day	2	0	-	holding register	0004H
OPE	work pattern	2	0	-	holding register	0005H

TEP	Set the temperature	2	1	°C	holding register	0006H
BTE	Reverse temperature	2	1	°C	holding register	0007H
OTP	High temperature alarm threshold	2	1	°C	holding register	0008H
LTP	Low temperature alarm threshold	2	1	°C	holding register	0009H
DLY	Delay start time	2	0	Min	holding register	000AH
OFE	temperature correction	2	1	°C	holding register	000BH
ALARM	Alarm status	2	0	-	holding register	000CH
BEP-SW	The buzzer switch	2	0	-	holding register	000DH
OTP-SW	High temperature alarm switch	2	0	-	holding register	000EH
LTP-SW	Low temperature alarm development	2	0	-	holding register	000FH
DLY-SW	Delay start switch	2	0	-	holding register	0010H
STOP	emergency stop	2	0	-	holding register	0011H
ADDR	From the machine equipment address	2	0	-	holding register	0012H
BAUDRATE	The serial port rate	2	0	-	holding register	0013H
SLEEP	Sleep switch	2	0	-	holding register	0014H
BL	Backlight grade	2	0	-	holding register	0015H