**Features:** 

Cooling or heating operation mode can be selected.

Set the maximum/minimum upper limit temperature to avoid accidents.

Automatically start cooling or heating thermostat.

Temperature calibration, the temperature can be calibrated as needed.

When the high temperature alarms, when the temperature reaches the set temperature, the controller will alarm.

**Specifications:** 

**Material: Electronic components** 

**Color: Black** 

Temperature control range: -50~120 degrees Celsius

**DIMENSIONS: 79X43X26 MM** 

**Package includes:** 

# 1 x Digital Thermostat Temperature Alarm Controller Sensor

# How to use:

Connect the power supply and equipment, you can s upply power to the controller, at this time the display is t o measure the temperature, press the SET button once, th e display temperature flashes, press +- to set the desired temperature (press and hold +- to quickly rise and fall) Af ter the setting is completed, press SET to confirm the retu rn, at this time, the controller will automatically perform th e relay on/off according to the setting! The output of the thermostat is a 20A relay to meet various high-power load s, and the control circuit is connected to supply power to the thermostat, and the display screen displays the ambien t temperature at this time.

Indicator light, digital tube status description Indicator: Flashing indicates cooling or heating start d elay, solid indicates that the relay is closed

Digital tube: LL is open to the sensor, please connect the sensor according to the instructions, HH is out of the measuring range, the thermostat will forcibly disconnect t he relay, and the --- is a high temperature alarm

### Parameter function description

Press and hold SET for 5 seconds to enter the main menu settings, press +- to switch P0... P6, press and hold SET or 10 seconds without buttons, the action controller will autom atically confirm the return.

#### P0 refrigeration, heating mode

Press and hold SET for 5 seconds to dis play P0, press SET once to set the working mode, press +- to switch [H is heating mod e] [C is cooling mode] press SET once to re turn, press and hold SET or 10 seconds wit hout buttons, the action controller will auto matically confirm the completion.

Refrigeration mode: When the temperat ure measurement  $\geq$  the temperature set poi nt, the refrigeration relay engages and the cooler starts, and when the temperature me asurement  $\leq$  the temperature setpoint-retur n difference, the refrigeration relay is discon nected and the cooler is turned off.

In heating mode: when the temperature measurement  $\leq$  the temperature set point, the heating relay engages and the heater starts, and when the temperature measurem ent value  $\geq$  the temperature set point + ba ck difference, the heating relay is disconnec ted and the heater is turned off.

### P1 Differential setting

Press and hold SET for 5 seconds to dis play P0, press +- to switch to P1, press SET once to set the return difference, press +to set the return difference to 0.1-15, pres s and hold SET once to return, press and h old SET or 10 seconds without buttons, the controller will automatically confirm the co mpletion.

In refrigeration mode, when the temper ature measurement  $\geq$  the set value, the rela y engages and the cooler starts, and when the temperature measurement  $\leq$  the setpoi nt-return difference, the relay is disconnecte d and the cooler is turned off.

For example, the environment is 30 °C, the setting value is 25 °C, the return differe nce is set to 2 °C, the relay closes the cool er after power-on, when the refrigeration re aches 23 °C, the relay disconnects the coole r and closes, at this time, because the cool er has been disconnected, the temperature begins to rise, when it rises to the set valu e of 25 °C, the relay closes the cooler and starts again, so that the repeated cycle cont rol temperature is not higher than 25 °C.

In heating mode: when the temperature measurement value  $\leq$  the set value, the rel ay is engaged and the heater starts, and w hen the temperature measurement value  $\geq$ the set value + return difference value, the relay is disconnected and the heater is turn ed off.

For example, the environment is 10 °C, the setting value is 25 °C, the return differe nce is set to 2 °C, the relay closed heater s tarts after power-on, when the heating reac hes 27 °C, the relay disconnects the heater and closes, at this time, because the heater has been disconnected, the temperature be gins to drop, when it drops to the set valu e of 25 °C, the relay closed heater starts ag ain, so that the repeated cycle control temp erature is not less than 25 °C.

## P2 maximum temperature is set at an upp er limit

In order to avoid the danger of over-se tting temperature caused by misoperation b y others, this thermostat has the function o f maximum setting limit, which limits the se tting range of the maximum temperature se tting point controlled by the thermostat.

Press and hold SET for 5 seconds to dis play P0, press +- to switch to P2, press SET once to set the maximum upper limit, pres s +- to set the maximum settable temperat ure, the maximum value is 110, press and h old SET once to return, press and hold SET or 10 seconds without buttons The action controller will automatically confirm the co mpletion.

For example, if you set the temperature set point to 60, you can only set the temp erature set point to a maximum of 60°C. If you want the temperature set point to be h igher and the temperature range is expande d, you need to adjust the upper set value f irst.

# P3 Lower limit for minimum temperature setting

In order to avoid ice jamming caused b y the low temperature caused by misoperati on by others, this thermostat has the functi on of minimum setting upper and lower lim its, which limits the setting range of the mi nimum temperature setting point controlled by the thermostat. Press and hold SET for 5 seconds to dis play P0, press +- to switch to P3, press SET once to set the minimum lower limit, press +- to set the minimum settable temperatur e, the minimum value is -50, press and hol d SET once to return, press and hold SET o r 10 seconds without buttons to automatica lly confirm the completion of the action co ntroller.

For example, if you set the temperature set point to 2, you can only set the tempe rature set point to a minimum of 2°C. If yo u want the temperature set point to be low er and the temperature range is expanded, you need to adjust the lower set value first.

## P4 temperature correction

When there is a deviation between the measured temperature and the standard te mperature or due to the special needs of t he user's hardware, this function can be use d to calibrate, the corrected temperature = the temperature before the correction + the correction value The effective range is -7.0 ~7.0.

Press and hold SET for 5 seconds to dis play P0, press +- to switch to P4, press SET once to correct, press +- to set the correc tion value, press and hold SET once to retu rn, press and hold SET or 10 seconds witho ut buttons, the action controller will automa tically confirm the completion.

For example, the normal display is 25 d egrees, the temperature correction is 0 to 2 5 degrees, the temperature correction is 1.5 to 26.5 degrees, and the temperature corre ction is -1.5 to 23.5.

## **P5 Delayed Start Time (in minutes)**

When the refrigerator or heater needs t o delay the operation, the delay function ca n be turned on to protect the life of the e quipment.

Press and hold SET for 5 seconds to dis play P0, press +- to switch to P5, press SET once to set the delay start time in minutes, press +- to set 0-10 minutes, press and h old SET once to return, press and hold SET for 10 seconds or 10 seconds without butt ons, the controller will automatically confirm the completion

Refrigeration mode: If the current temp erature  $\geq$  the set value for the first time, th e cooler will not start refrigeration immedia tely, and needs to run the set delay time b efore starting.

Heating mode: If the current temperatur  $e \leq$  the set value for the first time, the hea ter will not start heating immediately, and it needs to run the set delay time before sta rting.

The chiller starts immediately when the downtime between two adjacent starts of th e chiller or heater is greater than the set p oint of the delayed start time.

If the shutdown interval between two a djacent starts of the chiller or heater is less than the set value of the delayed start tim e, the equipment can only be started after the set delayed start time of the chiller can be run again. The delay time is calculated from the moment of downtime.

For example, the delay is set to 5 minu tes in the refrigeration state, the refrigerato r starts the delay after the start-up, the refr igerator is turned on after 5 minutes, the re frigerator stops when the required temperat ure is reached, and the timing starts at this time, and the next refrigerator starts to wo rk immediately when the timing is complete d, and the unfinished timing can only work when the timing is over, and the LED indic ator flashes during the delay.

When the delayed start is set to 0, the delay function is disabled.

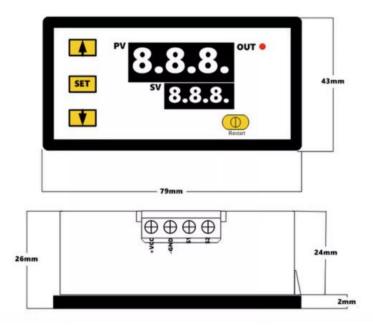
### How to save your settings

If you want to save the set data, set the P7 to ON if the power is not interrup ted after setting the temperature, so that

# the last setting will be retained no matt er how the power is off.

### **Factory reset**

Due to some human reasons caused by the internal settings of the thermostat is c haotic, one by one to set it is very time-co nsuming, at this time you can use this func tion to restore the factory settings, the spec ific method is: in the shutdown state, press and hold the + and - buttons at the same time, and then turn on, all the above para meters are restored to the factory set value.



I2V 接线方式(Connecting Mode)

