W3230 Manual

Name;High-precision digital display thermostat

Temperature control range:-55~120℃

Resolution:-9.9℃~99.9℃

Temperature measurement precision:0.1℃

Refresh frequency:about 0.5S

Input power supply:DC 12V

Measurement input: 1 meter NTC (10K waterproof metal probe)

Output: one way 10A relay

Specification size: shape 79*43mm opening 76*39mm

P0	Celsius C/F Fahrenheit Toggle
P1	Cooling C/H Heating Switching
P2	Return difference setting 0.1-30 degree Celsius
P3	Maximum temperature setting upper limit 120℃
P4	Minimum temperature lower limit -55℃
P5	Temperature correction
P6	Delay start time (unit: minutes) 0-10min
P7	Alarm temperature setting -55~120℃
P8	Data lock function ON/OFF
P9	Restore factory settings

Method of use

Connect the power supply and equipment, you can supply power to the controller, this time the display for the measurement of temperature, press the SET key once, the display temperature flashes, press ↑ ↓ to set the required temperature (hold down the ↑ ↓ can be quickly raised and lowered) set the completion of the SET to confirm the return, this time the controller according to the setting of the automatic implementation of the relay on and off. The thermostat output for 20A relay, to meet a variety of high-power loads, connect the control circuit, you can power the thermostat, the display shows the ambient temperature.

Indicator, digital tube and buzzer status description

Indicator light: flashing that the cooling or heating start delay, bright that the relay has been closed digital tube: display LL for the sensor open circuit, please connect the sensor according to the instructions; display HH for the measurement range beyond the thermostat will be forced to disconnect the relay; display --- for the high temperature alarm

Parameter Function Description

Long press SET for 5 seconds to enter the main menu setting, press ↑↓ to switch P0...P9, short press Restart or 10 seconds without key action controller automatically confirms the return. P9, short press Restart or 10 seconds without key action controller automatically confirms the return.

p0 Celsius/Fahrenheit switching mode

Long press SET for 5 seconds to display P0, click ↑↓ to switch (C is Celsius, F is Fahrenheit)

P1 Cooling, heating mode

After entering the setup click SET to select to P1 press ↑ ↓ switch [H for heating mode] [C for refrigeration mode] Press SET once to return, press SET for a long time or 10 seconds without key action controller automatically confirms the completion. Refrigeration mode: when the temperature measurement value ≥ temperature set point, the refrigeration relay is absorbed, the chiller starts; when the temperature measurement value ≤ temperature set point - return difference, the refrigeration relay is disconnected, the chiller is closed. In heating mode: when the temperature measurement value ≤ temperature set point, the heating relay is absorbed and the heater starts; when the temperature measurement value ≥ temperature set point + return difference, the heating relay is disconnected and the heater turns off.

P2 Tolerance setting

After entering the setting, click SET several times to select P2, press SET once to set the return difference value, press ↑ ↓ to set the return difference as 0.1-15, after finishing, press SET once to return, press SET for a long time or 10 seconds without key action, the controller will confirm the completion automatically.

Refrigeration mode: when the temperature measurement value ≥ set value, the relay will be closed and the refrigerator will start; when the temperature measurement value ≤ set value - return difference value, the relay will be disconnected and the refrigerator will be closed. For example, the environment for the 30 ℃ set value of 25 ℃, the return difference is set to 2 ℃, after power on the relay closure chiller start, when the cooling to 23 ℃, the relay disconnect chiller closed, at this time due to the chiller has been disconnected the temperature began to rise, when the rise to the set value of 25 ℃, the relay closure chiller start again, and so on repeated cycles to control the temperature is not higher than 25 ℃.

Heating mode: when the temperature measurement value ≤ set value, the relay is closed, the heater starts; when the temperature measurement value ≥ set value + back to the difference value, the relay is disconnected, the heater is closed. For example, the environment is 10 ℃ set value of 25 ℃, the return difference is set to 2 ℃, after power on the relay closure heater start, when heated to 27 ℃, the relay disconnect heater off, at this time due to the heater has been disconnected the temperature began to fall, when down to the set value of 25 ℃, the relay closure heater start again, and so on repeated cycles to control the temperature is not lower than 25 ℃.

P3 Maximum temperature setting limit

After entering the setup, click SET several times to select to P3, press SET once to set the highest upper limit, press ↑ ↓ to set the most settable temperature, the maximum value of 110, after finishing, press SET once to return, short press Restart or 10 seconds without key action controller automatically confirms the completion.

P4 Minimum temperature setting lower limit

After entering the setup click SET several times to select to P4, press SET once press ↑ ↓ to set the lowest settable temperature, the lowest value is -50, after completing, press SET once to return, long press SET or 10 seconds without key controller automatically confirms the completion.

P5 Temperature Correction

When the measured temperature and the standard temperature deviation or due to the user's hardware have special needs, you can use this function to correct, the corrected temperature = the pre-correction temperature + correction value Effective range of -7.0 ~ 7.0. Enter the setup after clicking SET several times to select to P5, press SET once for correction, press ↑ ↓ to set the calibration value, after completing, press SET once to return to, a short press Restart Or 10 seconds without key action controller automatically confirms the completion. For example, the normal display is 25 degrees; when the temperature correction is 0, it shows 25 degrees; when the temperature correction is 1.5, it shows 26.5 degrees; when the temperature correction is -1.5, it shows 23.5 degrees.

P6 Delayed start time (in minutes)

When the cooler or heater work with a delay need, you can open the delay function to protect the life of the equipment.

After entering the setup, click SET several times to select to P6, press SET once to set the delay start time unit is minutes, press ↑ ↓ to set the time, after completion, press SET once to return, short press Restart or 10 seconds without key action controller automatically confirms the completion of the refrigeration mode: the first time the power is turned on, if the current temperature ≥ the set value, the chiller will not immediately start refrigeration, it is necessary to run the set time delay time after starting. It needs to run for a set delay time before starting. Heating mode: the first time the power is turned on, if the current temperature ≤ set value, the heater will not start heating immediately, you need to run the set delay time after the start. If the downtime between two adjacent starts of the chiller or heater is greater than the set value of delayed start time, the chiller will start immediately. When the downtime between two adjacent starts of the chiller or heater is less than the set value of the delayed start time, the unit will start again only after running the set delayed start time of the chiller. The delay time is calculated from the moment of shutdown. For example, under the cooling state set the delay time for 5 minutes, after power on the chiller start delay, 5 minutes after turning on the chiller when the desired temperature when the chiller stops, this time to start timing, when the next chiller start timing is completed immediately work, not completed timing to wait for the end of the timing to work, the delay LED indicator blinking. Delay start set to 0 is equal to close the delay function.

P7 Temperature Alarm Setting

After entering the setting, click SET several times to select to p7, press “↑” or “↓” to adjust the parameters.

P8 Data lock

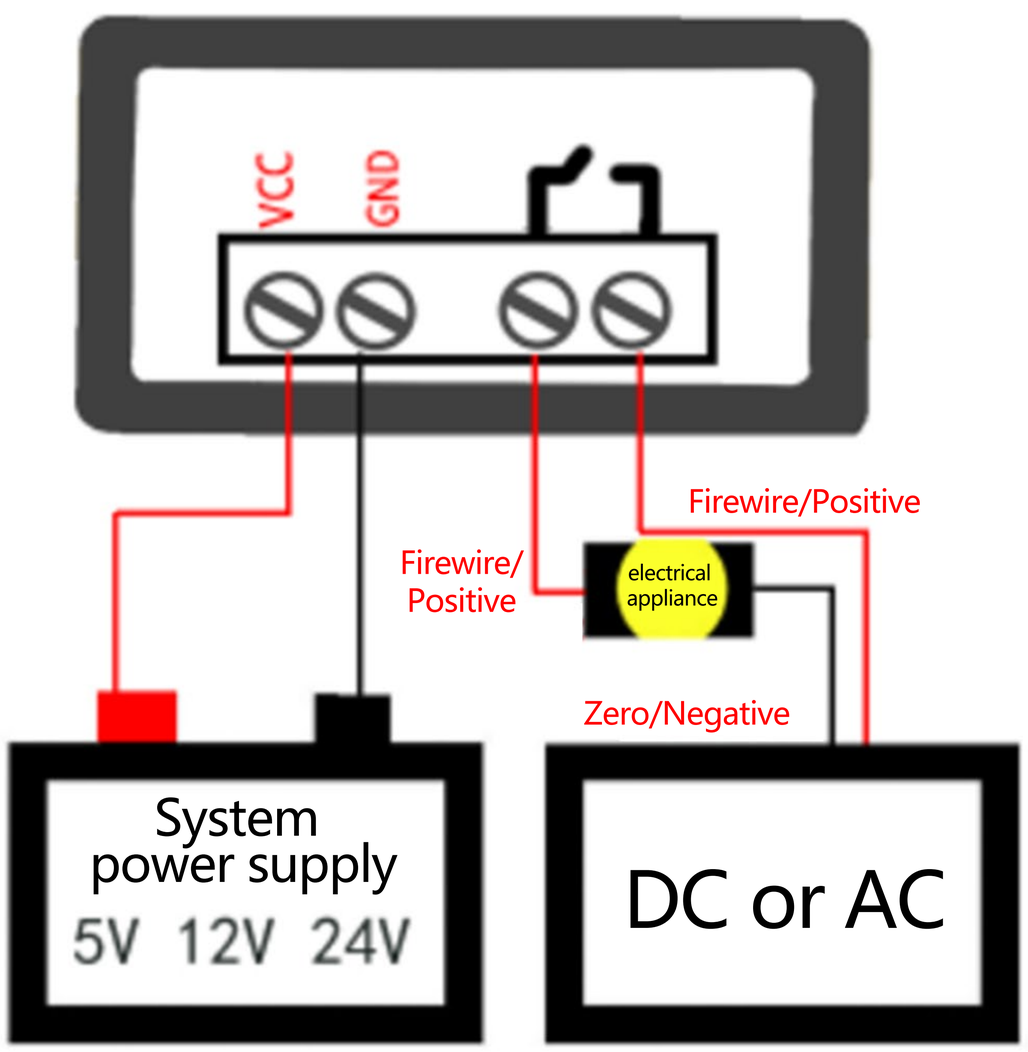
OFF/ON will be displayed after selecting to p8, ON is ON, set P8 to ON, you can't change other parameters after ON.

P9 Restore Factory Settings

OFF/ON will be displayed after selecting p9, ON is ON, ↑↓ Staying in ON interface for 5 seconds will restore the factory settings.

wiring diagram

12V Wiring



110-220V wiring

