ICs & Robot Gadgets
Easy Deal Easy Fun

XY-DT01 30A NTC Temperature Controller

1.Description:

XY-DT01 is a 30A NTC Temperature Controller. It can be widely used at Smart home,Industrial control.

Automatic irrigation, Indoor ventilation.

Protection equipment for DIN35 rail.

High precision digital display and relay output automatic constant temperature panel.

Product adopts industrial-grade chip, high-precision NTC and DS18B20 temperature sensor.

2.Features:

1>.Standard 35mm DIN rail mounting
2>.Power-down memory function
3>.Adjustable work mode
4>.Automatic constant temperature control
5>.Real time monitoring display

3.Parameters:

1>.Product name:XY-DT01 30A NTC Temperature Controller
2>.Model:XY-DT01
3>.Working Voltage:DC 6V-30V
4>.Control Load Current:30A(Max)
5>.LCD refresh rate:0.5 second
6>.Sensor:NTC 10K sensor(Included) or DS18B20(Not included)
7>.Temperature range:-40℃~110℃
8>.Temperature Control precision:0.1℃
9>.Output type:Relay switch output(No voltage output!)
10>.Size of Controller:88*55*44mm
11>.Length of Sensor cable:50cm

4.Functions:

1>.Setting parameters:

1.1>.Set work mode by Cooling mode and Heating mode.

1.2>.Set the Set Temperature and Hysteresis Temperature. User can set start delay time if necessary.

1.3>.Set ON/OFF the high and low temperature alarm function and threshold if necessary.

2>.Cooling Mode C:

2.1>.Relay turn ON and Refrigeration equipment starts working if connect load when Current Temperature is greater than (Set Temperature + Hysteresis Temperature). LCD will display symbol ‘OUT’ on left.

2.2>.Relay turn OFF and Refrigeration equipment stops working if connect

load when Current Temperature is less than Set Temperature. Symbol 'OUT' will disappear.

2.3>.Example: Set Temperature 30℃ and Hysteresis Temperature 5℃.

2.3.1>.Relay turn ON and Refrigeration equipment starts working if Current Temperature is greater than 35℃(30+5=35).

2.3.2>.Relay turn OFF and Refrigeration equipment stops working if Current Temperature is less than 30℃.

3>.Heating mode H:

3.1>.Relay turn ON and Heating equipment starts working if connect load when Current Temperature is less than (Set Temperature - Hysteresis Temperature). LCD will display symbol 'OUT' on left.

3.2>.Relay turn OFF and Heating equipment stops working if connect load when Current Temperature is more than Set Temperature. Symbol 'OUT' will disappear.

3.3>.Example: Set Temperature 30℃ and Hysteresis Temperature 5℃.

3.3.1>.Relay turn ON and Heating equipment starts working if Current Temperature is less than 25℃(30-5=25).

3.3.2>.Relay turn OFF and Heating equipment stops working if Current Temperature is more than 30℃.

4>.High Temperature Alarm Function ALA:

4.1>.Buzzer alarm and all screen flashing.

4.2>.Press anyone button to stop alarm if turn ON this function.But symbol 'OUT' or 'W' keep flashing.

4.3>.Relay turn OFF and load stop work if Current Temperature is more than High Temperature Threshold.

5>.Delay start function OPH:

5.1>.It means the load can allow the next heating or cooling after delay time T and the time unit is second if turn ON OPH function.

5.2>.Relay can not turn ON if the heating/cooling temperature is met at H/C mode during delay time T if turn ON OPH function.

6>.Temperature Correction OFE(-10.0~10.0℃):

6.1>.The system may have errors if it works for a long time, it can be corrected by this function.

6.2>.Actual Temperature = Measured Temperature + Calibration Value.

7>.Reset:

7.1>.Keep press STOP and SET buttons more than 3 second to reset.

8>.ON/OFF Output:

8.1>.Symbol 'OUT' keep flashing if turn OFF output by press STOP button.

5.Set Methods:

1>.Set work mode and temperature:

1.1>.**Enter Set Mode**: Press 'SET' button enter into set parameter mode. Then display symbol 'SET' at bottom left and mode H or C keep flashing. Note: It will automatically save the parameters and exit the setting mode if there is no operation within 6 second.

1.2>.**Set Mode**: Symbol 'H' or 'C' flashing at second line after enter set mode. Then press 'UP' or 'DOWN' to switch work mode 'H' or 'C'.

1.3>.**Set the Set Temperature**: Press 'SET' button again and 3bit flashing behind 'H' or 'C'. These 3bit is the Set Temperature. Then press 'UP' or 'DOWN' to change value.

1.4>.**Set the Hysteresis Temperature**: Press 'SET' button again and the first line flashing which is the flashing the Hysteresis Temperature. Then press 'UP' or 'DOWN' to change value.

1.5>.**Save and Exit**: Keep press 'SET' about 3second to save parameters and exit set mode. It will also automatically save the parameters and exit the setting mode if there is no operation within 6 second.

2>.Set system parameter:

2.1>.**Enter Set System Mode**: Keep press 'SET' button 3second enter into set system parameter mode.

2.2>.**Set High Temperature Alarm ALA**:

2.2.1>.Symbol 'ALA' is displayed on the second line and the first line flashing '----' or High Temperature Alarm Value after enter set system mode.

2.2.2>.Press 'STOP' button to turn ON or OFF high temperature alarm function. '----' means turn OFF this function, otherwise turn ON this function.

2.2.3>.Press press 'UP' or 'DOWN' to change value if turn ON this function.

2.3>.**Set Delay Start Function OPH**:

2.3.1>.Press 'SET' button again and then symbol 'OPH' is displayed on the second line and the first line flashing '----' or delay start time. The time unit is second.

2.3.2>.Press 'STOP' button to turn ON or OFF delay start function. '----' means turn OFF this function, otherwise turn ON this function.

2.3.3>.Press press 'UP' or 'DOWN' to change value if turn ON this function.

2.4>.**Calibration Display Temperature OFE**:

2.4.1>.Press 'SET' button again and then symbol 'OFE' is displayed on the second line and the first line flashing calibration temperature value.

2.4.2>.Press press 'UP' or 'DOWN' to set calibration temperature value.

2.4.3>.Its set range is -10 to 10.

6.Use steps:

1>.Connect sensor to controller.
2>.Connect to power supply to controller.
3>.Adjust Start Temperature,Stop temperature and Temperature Correction.
4>.Remove power supply.
5>.Connect to load with power supply at relay output terminal if need at Step5.
6>.Connect to power supply for controller again.
7>.Test and working!

7.Application:

1>.Control cabinet
2>.Production workshop
3>.Hatching aquaculture control
4>.Tobacco industry
5>.Printing house
6>.Aquarium temperature control
7>.Bedroom

8.Note:

1>.It is a relay output mode and cannot be used as a power module.
It cannot output voltage. The load needs to be connected to a separate power supply.
2>.User can replace with DS18B20 temperature sensor but it not include.
3>.Please read use manual and description before use.

9.Package:

1>.1pcs XY-DT01 30A NTC Temperature Controller
2>.1pcs 50cm NTC 50K Temperature Sensor