DIN301 Two zone Temperature Controller

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Technical Parameters:

Temperature measuring range: -50-120
Accuracy: 0.1 Celsius
Power consumption< 3W
Sensors: Two NTC 10K with 1m wire length
Power supply: DC 12V, DC 24V, AC 100-240V (check the model no.)
Output: 2 outputs with 10 or 30 Amp load (check the model no.)

Features:

2 relay and 2 sensors with 2 independent zones temperature controller.
2 zones (2 Heating mode, 2 Cooling mode or 1 Heating and 1 Cooling).
2 color display (red and blue) for each zone.
Control temperature by setting the start and stop temperature setting value.
High and Low Alarm function (buzzer and flash alarm).
Refrigerating control output delay protection for Out1 and Out2.
Temperature calibration for each sensor.
Setting memory and factory default setting option.

Parameter Setting summery :

Ⓐ
- **Press ▲1 button for 3 seconds → Set Start Temp Zone 1**
- **Press ▲2 button for 3 seconds → Set Start Temp Zone 2**
- **Press ▼1 button for 3 seconds → Set Stop Temp Zone 1**
- **Press ▼2 button for 3 seconds → Set Stop Temp Zone 2**

Press ▲1▲2 button for 3 second →
- Ⓑ **P0 : Set Compressor 1 Delay**
- Ⓑ **P1 : Set Compressor 2 Delay**
- Ⓒ **P2 : Set High Alarm Temp**
- Ⓒ **P3 : Set Low Alarm Temp**

Ⓓ **Press ▼1▼2 button for 3 second → factory default setting**

Ⓔ
- **Press ▼1▲1 button for 3 second → Calibration of sensor 1**
- **Press ▼2▲2 button for 3 second → Calibration of sensor 2**

Parameter setting description:

After setting each parameter mode, wait 5 seconds and controller will exit the parameter setting.

Ⓐ Setting start, stop temperature and heating or cooling mode:

You can set the start and stop temperature value of each output with this mode. The controller automatically recognize the heating or cooling mode,
Heating mode: When the start temp value is less than stop temperature.
Cooling mode: When the start temp value is higher than stop temperature.
By quick pressing of keys, you can check each sensor, start and stop temperature.

Ⓑ Delay Protection (P0 , P1 parameters) :

In the cooling mode, you can use this parameter for compressor boot delay protection. It
prevents breaking the compressor as a result of frequent boot or power cut and then power on. The default setting is 0, but you can define the delay time for starting of your cooling machine between 0 to 60 minutes.

Ⓒ High and low temperature alarm functions (P2 , P3 parameters) :

If the temperature passes the higher or lower alarm temperature values the controller makes a beeping sound and the display will show ”H” or “L”. The default settings are “P2=120” and “P3=-50”.

Ⓓ Factory default setting:

All of your parameter settings will remain on your controller memory even you turn off the controller, but you can always set the parameters back to factory default setting with this function.

Ⓔ Temperature Calibration:

You can calibrate both temperature reading with this function. The value can be positive, negative or 0 from -10 to 10.

Error messages and troubleshooting:

1) When the controller displays “LLL“ it shows that the sensor is disconnected. The controller will make a beeping sound and the output relay will be closed for safety.
2) When the controller displays “LLL” or “HHH” it shows that the measured temperature by sensor is out of controller temperature range

Caution:

◆ The maximum current load of the heating or cooling source must not exceed the output relay contact capacity. It will damage the unit and may cause fire.

◆ Check the wiring diagram before wiring the unit. Wrong wiring will damage the controller and may cause fire.

◆ Applying extra force on the screws of controller terminals will break the base. Please tighten the screws gently.

◆ For your safety, turn the power supply off when you are wiring the controller.

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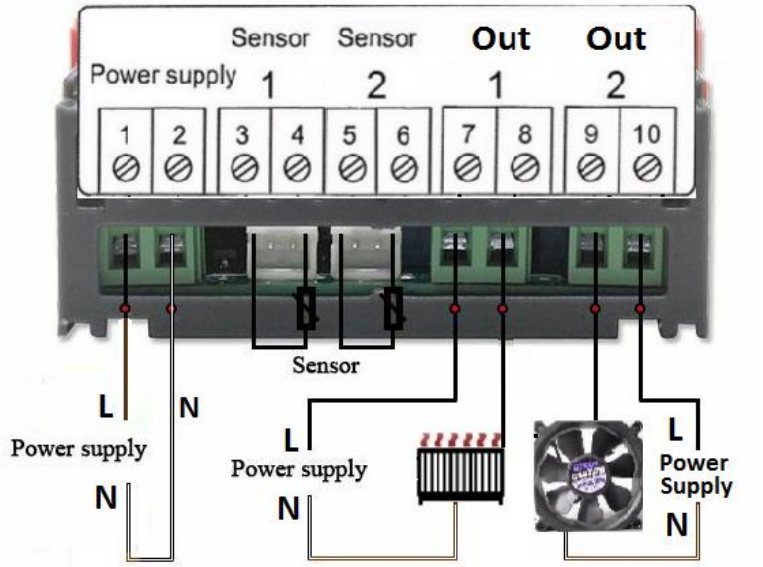
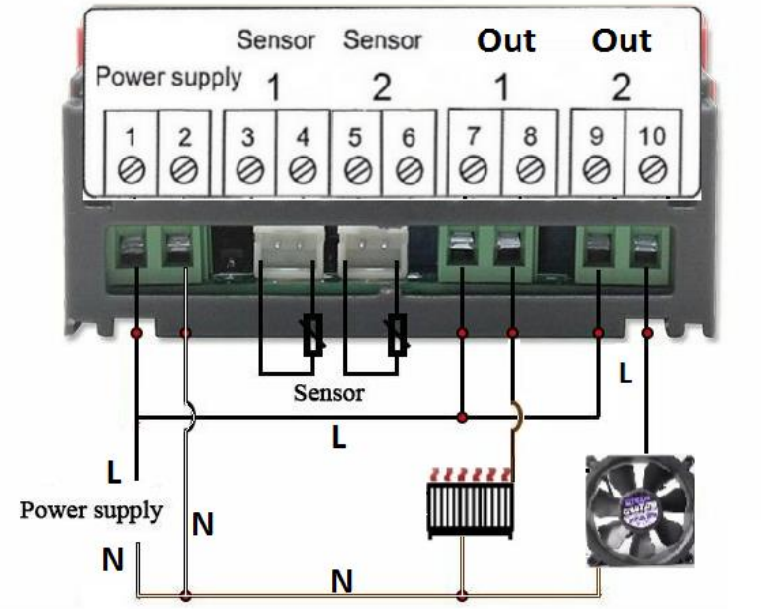
Wiring Diagram:

You can wire your temperatur controller with two type of diagram,

1- Independent power supply for load:



2- One power supply for load:



Wiring Diagram for Series Outputs:

You can wire Out1 and Out2 in series for applications like solar water heater. You need to control the temperature of both water heater storage tank (T1) and solar panel collector (T2) together.
For example you can set the controller to turn the solar pump ON when T1 drops to 40°C and T2 reaches to 65°C and turn the pump OFF when T1 reaches to 55°C or T2 drops to 58°C. Please check the following diagrams for more clarification.