

# Instruction Manual

## TH101 TEMPERATURE AND HUMIDITY CONTROLLER INSTRUCTION MANUAL *Version 1.1*

### 1. Overview

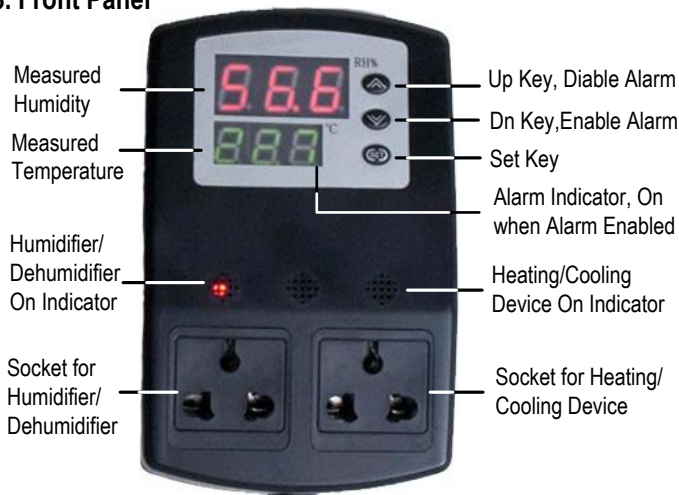
This plug-n-play temperature and humidity controller can be used for green house and incubator applications. The controller has a two-line LED display, two output sockets, one sensor module and one input power cord. The top display shows the measured humidity value and bottom display shows the measured temperature value. The left output socket is for humidifier/dehumidifier. Right output socket is for heating/cooling device. The sensor module contains both temperature and humidity sensor.

### 2. Specification

Temperature Control Range	0~99.9 1 °C
Temperature Resolution	0.1 °C
Temperature Accuracy	0.5 °C
Temperature Control Mode	On/Off Control. Heating or Cooling
Temperature Control Output	10A, 120V or 240V AC *
Humidity Control Range	20~99.9% RH
Humidity Resolution	0.1% RH
Humidity Accuracy	3% RH
Humidity Control Mode	On/Off Control. Humidifying or Dehumidifying
Humidity Control Output	10A, 120V or 240V AC *
Operating Temperature	0~50
Dimension	87x135x45mm
Input Power	85 ~242VAC, 50Hz/60Hz

\* Please note: Although both temperature and humidity output can handle up to 10 Amp of power (or 1400 Watt for 120VAC), the combined total power of the two channels are limited to 1500 Watts due to the limitation of input power cord.

### 3. Front Panel



### 4. Parameter Setting

When the controller is powered on, it will display the measured humidity and temperature. The controller will keep running according to the saved setting. If the humidity or temperature sensor is shorted, the controller will display "Err".

To change the parameter setting, press and hold SET key for 2 seconds to enter the menu mode. Use the Up key or Down key to change the parameter value. Press Set key to confirm the change, or wait 10 seconds, the controller will save the setting automatically and go back to the normal display mode.

Table 1. Parameters Description

Code	Description	Setting range	Initial	Note
H1	Humidity Upper Limit	0~99.9 % RH	50	1
L1	Humidity Lower Limit	0~99.9 % RH	49	
H2	Temperature Upper Limit	0~99.9 °C	27	2
L2	Temperature Lower Limit	0~99.9 °C	26	
HH1	Humidity High Limit Alarm	1~99.9 % RH	90	3
LL1	Humidity Low Limit Alarm	0~99.0 % RH	5	
HH2	Temperature High Limit Alarm	1~99.9 °C	95	4
LL2	Temperature Low Limit Alarm	0~99.0 °C	10	
HC1	Humidity Control Mode	00: Humidifying 01: Dehumidifying	00	
HC2	Temperature Control Mode	00: Heating 01: Cooling	00	

**Note 1.** The H1 should be higher than L1.

On humidifying mode, the controller will turn the humidity device on when the measured humidity < L1; turn off when > H1.  
On dehumidifying mode, the controller will turn the dehumidify device on when the measured humidity > H1; turn off when < L1.  
If H1 < L1, On humidifying mode, the controller will turn the humidity device on when the measured humidity < H1-0.1; turn off when > H1.  
On dehumidifying mode, the controller will turn the dehumidify device on when the measured humidity > H2; turn off when < H2-0.1.

**Note 2.** The output for heating/cooling device acts the same as the output for humidifier/dehumidifier.

The H2 should be higher than L2.  
On heating mode, the controller will turn the heater on when the measured temperature < L2; turn off when > H2.  
On cooling mode, the controller will turn the cooler on when the measured temperature > H2; turn off when < L2.  
If H2 < L2, On heating mode, the controller will turn the heater on when the measured temperature < H2-0.1; turn off when > H2.  
On cooling mode, the controller will turn the cooler on when the measured temperature > H2; turn off when < H2-0.1.

**Note 3.** When alarm is enabled, alarm will be on when humidity > HH1 or < LL1; will be off when humidity is < HH1 and > LL1.

**Note 4.** When alarm is enabled, alarm will be on when temperature > HH2 or < LL2; will be off when temperature < HH2 or > LL2.