



## SHT-2000

### Temperature and Humidity Controller

#### Main function

Temperature and humidity controller, switching modes between temperature and humidity; controlling temperature/humidity Set the temperature/humidity setting and the difference; Temperature/humidity calibration; cooling control output delay Protection; alarm when temperature/humidity exceeds temperature/humidity limit or When the sensor is wrong.

#### Specification and size

Front panel size: 75(L)x34.5(W)(mm)  
Mounting size: 71(L)x29(W)(mm)  
Product size: 75(L)\*34.5(W)x85(D)(mm)  
Sensor length: 1m(include the probe)

#### Technical parameters

Product Name: Temperature and Humidity Controller  
Temperature measuring range: -20°C~60°C  
Humidity measurement range: 0%~100%RH  
Power supply: DC 12-72V / AC 110-220V  
Power frequency: 50 / 60Hz  
Temperature measurement accuracy: 0.3 °C  
Humidity measurement accuracy: 3%  
Output control: relay output  
Output power: MAX 10A  
Sensor: SHT20

#### Panel instruction

Display instruction: Six-digit LED + Minus digit + Status indicator light(Status indicator light(temperature, humidity)+ Set indicator light(Set))



#### Heating/cooling mode setting

##### Heating/cooling mode setting:

Setting mode: setting (starting temperature): Press and hold the "▲" button to start the temperature flashing. Use "▲" "▼" key to set the starting temperature value.

Setting (stop temperature): Press and hold the "▼" button to stop the temperature flashing. Use "▲" "▼" to set the stop temperature value.

**CASE 1 : Heating:** control the water heater, heat to 65 ° C to stop, the temperature drops back to 50 ° C and start heating again  
Step 1: heating mode, starting temperature < stop temperature  
Step 2: Press and hold the "▲" button to start the temperature flashing. Use "▲" "▼" to set the starting temperature to 50 ° C.  
Step 3: Press and hold the "▼" button to stop the temperature flashing. Use "▲" "▼" to set the stop temperature to 65 ° C. The setting is completed!

**CASE 2 : Cooling:** the fan is ventilated to 26 ° C to stop, the temperature is raised to 30 ° C and the ventilation is started again.  
The first step: cooling mode, starting temperature > stop temperature  
Step 2: Press and hold the "▲" button to start the temperature flashing. Use "▲" "▼" to set the starting temperature to 30 ° C.  
Step 3: Press and hold the "▼" button to stop the temperature flashing. Use "▲" "▼" to set the stop temperature to 26 ° C. The setting is completed!

#### Humidification/Dehumidification mode setting

##### Humidification/Dehumidification mode setting:

Setting (start humidity): Press and hold the "▲" key to start the humidity value flashing, and set the humidity value by the "▲" "▼" key. Set [Stop Humidity]: Press and hold the "▼" key to stop the humidity value flashing. Use the "▲" "▼" key to set the stop humidity value.

##### Humidification setting steps:

Step 1: Press and hold the "▲" button for 3 seconds to start the humidity value flashing, and set the starting humidity value to 50% RH.  
Step 2: long press the "▼" button for 3 seconds to stop the humidity value flashing, set the value to 80% RH, the setting is completed, the button does not operate for 5 seconds, and automatically returns to the normal display state.

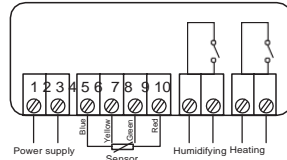
##### Dehumidification example:

workshop control exhaust dehumidification system, humidity 70% RH starts dehumidification, humidity 40% RH stops dehumidification.

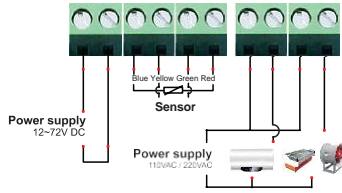
##### Setup steps:

Step 1: Press and hold the "▲" button for 3 seconds to start the humidity value flashing, and set the starting humidity value to 40% RH.  
Step 2: Press and hold the "▼" button for 3 seconds to stop the humidity value flashing, set the value to 70% RH, the setting is completed, the button does not operate for 5 seconds, and automatically returns to the normal display state.

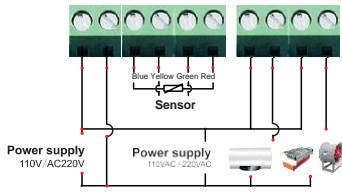
#### Wiring diagram



#### Connection 1: Independent power supply for load



#### Connection 2: Same power supply for load



**Note: There is no voltage output from the output terminal of the thermostat, So the device needs to be connected to a power supply**

#### Indicator light status instruction

Indicator light	Function	Note
Temperature indicator	On: Refrigeration/Heating starts; Off: Refrigeration/Heating stops; Flash: compressor delay	Cool/Heat indicator light can not be "on" status simultaneously
Humidity indicator	On: humidification starts; off: humidification stops	
Set indicator light	On: parameter setting status	

#### Error description

**Alarm when sensor error:** Controller activate the sensor error alarm mode when sensor open circuit or short circuit, all the running status is closed off with the buzzer alarms, and the nixie tube displays "EE", press any key can cancel alarm sound, system back to display the normal temperature when the error and the fault is cleared.

**Alarm when the measuring temperature exceeds temperature measuring range:** Controller activates the error alarm function when the measuring temperature exceeds the temperature measuring range, all the running status is closed off with the buzzer alarms, and the nixie tube displays "HH", Press any key can cancel alarm sound, system back to display the normal working mode when the temperature restore to normal measuring range.

#### Safety Regulations

##### Danger:

1. Strictly distinguish the sensor down-lead, power wire and output relay interface from one another, and prohibit wrong connections or overloading the relay

★ Dangers: Prohibit connecting the wire terminals without electricity cut-off

##### Warning:

Prohibit using the machine under the environment of over damp, high temp., strong electromagnetism interference or strong corrosion, Notice:

1. The power supply should conform to the voltage value indicated in the instruction.

2. To avoid the interference, the sensor down-lead and power wire

★ should be kept a proper distance.

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