

diymore SHT2000

diymore SHT2000 Digital Temperature and Humidity Controller User Manual

Model: SHT2000 | Brand: diymore

1. INTRODUCTION

The diymore SHT2000 AC 110~230V 10A Temperature and Humidity Controller is designed to provide precise control over environmental conditions. This versatile device can manage both temperature and humidity, making it suitable for a wide range of applications including domestic water heaters, freezers, refrigerators, aquariums, home brewing, chicken incubators, breeding, planting, and laboratory use.

It features a digital LED display for clear readings and offers distinct operating modes for heating, cooling, humidifying, and dehumidifying, ensuring optimal environmental management.

2. SPECIFICATIONS

Technical Parameters of SHT2000

| Parameter | Value |
|----------------------------------|---------------------------------|
| Product Name | Temperature Humidity Controller |
| Product Model | SHT2000 |
| Supply Voltage | AC 110-230V |
| Power Supply Frequency | 50/60Hz |
| Temperature Range | -20~60°C |
| Humidity Measurement Range | 0%~100%RH |
| Temperature Measurement Accuracy | 0.3 °C |
| Humidity Measurement Accuracy | 3% |

| Parameter | Value |
|--------------------|---------------------------|
| Output Control | Relay Output |
| Output Power | MAX 10A |
| Product Dimensions | 1.97 x 1.57 x 0.79 inches |
| Item Weight | 4.87 ounces |



Figure 2.1: SHT2000 Technical Parameters Overview.

3. SETUP AND WIRING

Proper wiring is crucial for the safe and effective operation of the SHT2000 controller. Please follow the instructions carefully. Note: There is no voltage output from the output terminal of the thermostat; the device needs to be connected to a separate power supply.

3.1. Power Connection

Connect the AC 110-230V power supply to terminals 1 and 2 on the controller. The controller is designed to work with alternating current, so the polarity of the wires (positive/negative) does not matter for these terminals. Ensure a secure connection to power the module.



Figure 3.1: diy more SHT2000 Controller and components.

3.2. Sensor Connection

The temperature and humidity sensor connects to terminals 3, 4, 5, and 6. Refer to the diagram on the controller for the correct wire color-to-terminal mapping (Blue, Yellow, Green, Red). Ensure the sensor wires are stripped back slightly and securely fastened into their respective terminals.

* detailed Description *

High Quality Humidity Sensitive Capacitive Sensor



Figure 3.2: Close-up of the high-quality humidity sensitive capacitive sensor.

3.3. Device Connection (Heating/Humidifying/Cooling/Dehumidifying)

The SHT2000 provides relay outputs to control external devices such as heaters, humidifiers, fans, or dehumidifiers. These connections are made to terminals 7, 8, 9, and 10.

- **Heating/Cooling Control:** Connect your heating or cooling device to terminals 7 and 8.
- **Humidifying/Dehumidifying Control:** Connect your humidifying or dehumidifying device to terminals 9 and 10.

It is recommended to use a contactor to prevent overloading the controller, especially with high-power devices. Ensure all connections are secure and properly insulated.

* Wiring Diagram *

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

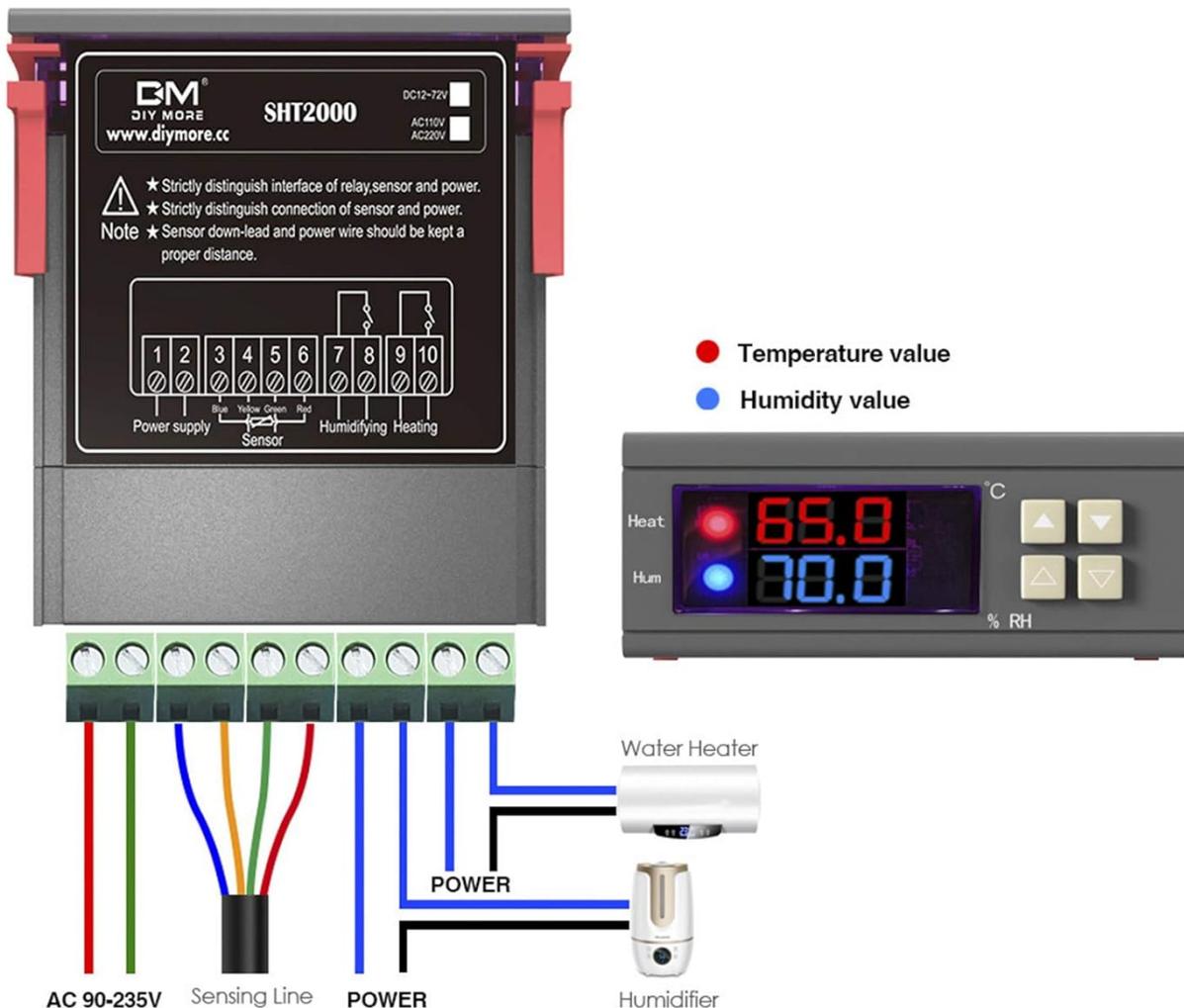


Figure 3.3: Detailed wiring diagram for the SHT2000 controller, showing connections for power, sensor, water heater, and humidifier.

4. OPERATING INSTRUCTIONS

The SHT2000 controller allows you to set precise start and stop values for both temperature and humidity to manage your environment effectively.

4.1. Temperature Setting (Heating & Cooling Modes)

To set the temperature parameters:

- Setting Start Temperature:** Press and hold the ▲ (Up) button for 3 seconds until the Start Temperature value flashes. Use the ▲ or ▼ buttons to adjust the desired starting temperature.
- Setting Stop Temperature:** Press and hold the ▼ (Down) button for 3 seconds until the Stop Temperature

value flashes. Use the ▲ or ▼ buttons to adjust the desired stopping temperature.

The controller automatically determines the working mode based on your settings:

- **Heating Mode:** If the Start Temperature is less than the Stop Temperature (Start Value < Stop Value). For example, to control a water heater, set it to heat to 65°C and stop, then restart heating if the temperature drops back to 50°C.
- **Cooling Mode:** If the Start Temperature is greater than the Stop Temperature (Start Value > Stop Value). For example, in a farm setting, set a fan to ventilate until 26°C is reached and stop, then restart ventilation if the temperature rises to 30°C.

The display will return to the normal operating state after 5 seconds of inactivity.

* Temperature Setting *



▲ Up ▼ Down

● Temperature value

45.0 < 50.0

Starting Temperature Stop Temperature



Heating

32.0 > 30.0

Starting Temperature Stop Temperature



Cooling

Heating and Cooling Mode Setting

Setting (Starting Temperature):
Press and hold the ▲ button 3 seconds to Start Temperature flashing, Use ▲▼ button to set Start Temperature value

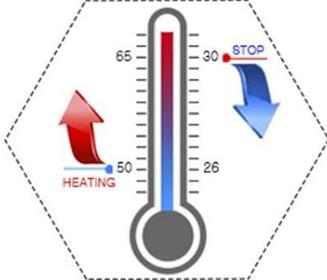
Setting (Stop Temperature):
Press and hold the ▼ button 3 seconds to Stop Temperature flashing, Use ▲▼ button to set Stop Temperature value.

Cases 01 Control Water Heater

Heating 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 3 seconds to Start Temperature value flashing. Use ▲▼ to set the Starting Temperature to 50 °C .
Step 3: Press and hold the ▼ button 3 seconds to Stop Temperature value flashing. Use ▲▼ to set the Stop Temperature to 65 °C and the setting is completed.
The button does not operate for 5 seconds and automatically returns to the normal display state.



Cases 02 Control Farm Fan

The fan is ventilated to 26 °C to stop, the temperature is raised to 30 °C and the ventilation is started again.



Step 1: Cooling mode, Starting Temperature > Stop Temperature.
Step 2: Press and hold the ▲ button 3 seconds to Start Temperature value flashing. Use ▲▼ to set the Starting Temperature to 30 °C.
Step 3: Press and hold the ▼ button 3 seconds to Stop Temperature value flashing. Use ▲▼ to set the Stop Temperature to 26 °C and the setting is completed.
The button does not operate for 5 seconds and automatically returns to the normal display state.

Figure 4.1: Visual guide for setting temperature parameters and understanding heating/cooling modes.

4.2. Humidity Setting (Humidifying & Dehumidifying Modes)

To set the humidity parameters:

1. **Setting Start Humidity:** Press and hold the ▲ (Up) button for 3 seconds until the Start Humidity value flashes. Use the ▲ or ▼ buttons to adjust the desired starting humidity.

2. **Setting Stop Humidity:** Press and hold the ▼ (Down) button for 3 seconds until the Stop Humidity value flashes. Use the ▲ or ▼ buttons to adjust the desired stopping humidity.

The controller automatically determines the working mode based on your settings:

- **Humidifying Mode:** If the Start Humidity is less than the Stop Humidity (Start Value < Stop Value). For example, in a fresh supermarket, control a humidifier to start at 50% RH and stop humidifying at 80% RH.
- **Dehumidifying Mode:** If the Start Humidity is greater than the Stop Humidity (Start Value > Stop Value). For example, in a workshop, control an exhaust dehumidification system to start at 70% RH and stop dehumidifying at 40% RH.

The display will return to the normal operating state after 5 seconds of inactivity.

* Humidity Setting *



Humidification and Dehumidification Mode Setting

Setting (Starting Humidity):

Press and hold the ▲ button 3 seconds to Start Humidity flashing, Use ▲▼ button to set Start Humidity value

Setting (Stop Humidity):

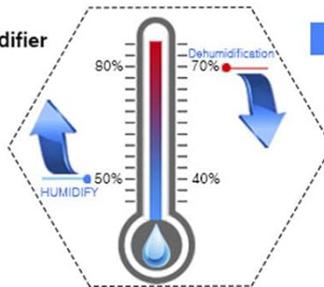
Press and hold the ▼ button 3 seconds to Stop Humidity flashing, Use ▲▼ button to set Stop Humidity value.

Cases 01 Control Fresh Supermarket Humidifier

50% RH began to humidify, humidified to 80% RH to stop humidification.



- Step 1: Press and hold the ▲ button 3 seconds to Start Humidity value flashing. Use ▲▼ to set Starting Humidity to 50%RH.
- Step 2: Press and hold the ▼ button 3 seconds to Stop Humidity value flashing. Use ▲▼ to set Stop Humidity to 80%RH and the setting is completed.
- The button does not operate for 5 seconds and automatically returns to the normal display state.



Cases 02 Workshop Control Exhaust Dehumidification

70% RH began to humidify, humidified to 40% RH to stop humidification.



- Step 1: Press and hold the ▲ button 3 seconds to Start Humidity value flashing. Use ▲▼ to set Starting Humidity to 40%RH.
- Step 2: Press and hold the ▼ button 3 seconds to Stop Humidity value flashing. Use ▲▼ to set the Stop Humidity to 70%RH and the setting is completed.
- The button does not operate for 5 seconds and automatically returns to the normal display state.

Figure 4.2: Visual guide for setting humidity parameters and understanding humidifying/dehumidifying modes.

5. MAINTENANCE

To ensure the longevity and accurate performance of your diymore SHT2000 controller, regular maintenance is recommended:

- **Cleaning:** Periodically wipe the exterior of the controller and the sensor with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Sensor Care:** Keep the sensor clean and free from dust, debris, or moisture buildup, especially in high-humidity environments. While the sensor is designed for various conditions, extreme or prolonged exposure to condensation may affect its accuracy over time.
- **Connection Check:** Occasionally inspect all wiring connections to ensure they remain secure and free from corrosion.
- **Environmental Conditions:** Operate the controller within its specified temperature and humidity ranges to prevent damage.

6. TROUBLESHOOTING

If you encounter issues with your SHT2000 controller, consider the following common troubleshooting steps:

- **No Power/Display:**
 - Check if the power cable is securely connected to terminals 1 and 2.
 - Verify that the power source (AC 110-230V) is active.
 - Ensure the power supply frequency is 50/60Hz.
- **Inaccurate Readings:**
 - Ensure the sensor is clean and free from obstructions.
 - Verify that the sensor wires are correctly connected to terminals 3, 4, 5, and 6 as per the diagram (Blue, Yellow, Green, Red).
 - Avoid placing the sensor directly in extreme conditions (e.g., direct sunlight, strong airflow, or excessive condensation) that might not represent the overall environment.
- **Device Not Activating (Heater/Humidifier/Fan):**
 - Check the wiring of your external device to the controller's output terminals (7, 8 for heating/cooling; 9, 10 for humidifying/dehumidifying).
 - Verify that the set start and stop values are appropriate for the desired operation (e.g., for heating, Start Temp < Stop Temp).
 - Ensure the external device itself is functional and properly powered.
 - Confirm that the current draw of your device does not exceed the controller's MAX 10A output power.
- **Settings Not Saving:**
 - Ensure you hold the respective button (Up for Start, Down for Stop) for 3 seconds until the value flashes, make your adjustment, and then wait for 5 seconds for the setting to be saved automatically.

If issues persist after following these steps, please contact diymore customer support for further assistance.

7. WARRANTY AND SUPPORT

The diymore SHT2000 Digital Temperature and Humidity Controller comes with a standard return policy. For specific details regarding warranty coverage, returns, or replacements, please refer to your purchase documentation or the retailer's policy.

For technical support, product inquiries, or to explore other diymore products, please visit the official diymore store:

[Visit the diymore Store](#)

You may also find additional resources and FAQs on the diymore brand page or by contacting their customer service directly.