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SLMLSGB STC-3030

SLMLSGB STC-3030 Dual Digital Humidity Controller

User Manual

1. Introduction

The SLMLSGB STC-3030 is an AC110-220V dual digital humidity controller designed for precise soil moisture detection and control. This device is suitable for various applications including water-saving irrigation, greenhouses, plant culture, and incubators, providing automatic start and stop functionality to maintain desired humidity levels. It features two independent channels for soil moisture detection and output control.

2. Product Features

- **Reliable Performance:** Engineered for high working efficiency and stable operation.
- **Accurate Sensing:** Utilizes priority materials and advanced chip technology for precise humidity measurement.
- **Dual-Channel Control:** Features two independent soil sensor inputs and two output channels, allowing for distinct control settings based on different soil moisture requirements.
- **Wide Application Range:** Ideal for water-saving irrigation, greenhouses, flower and vegetable cultivation, and plant culture.
- **Fast Response Speed:** Provides quick and accurate feedback on humidity changes.
- **Large Screen Display:** Equipped with a clear, high-definition digital display for real-time readings.
- **Waterproof Soil Sensors:** Durable sensors designed for reliable outdoor and indoor use.



Image: The STC-3030 controller highlighting its large screen display and two detection probes for multi-directional detection to maintain numerical accuracy.

3. Product Layout and Components

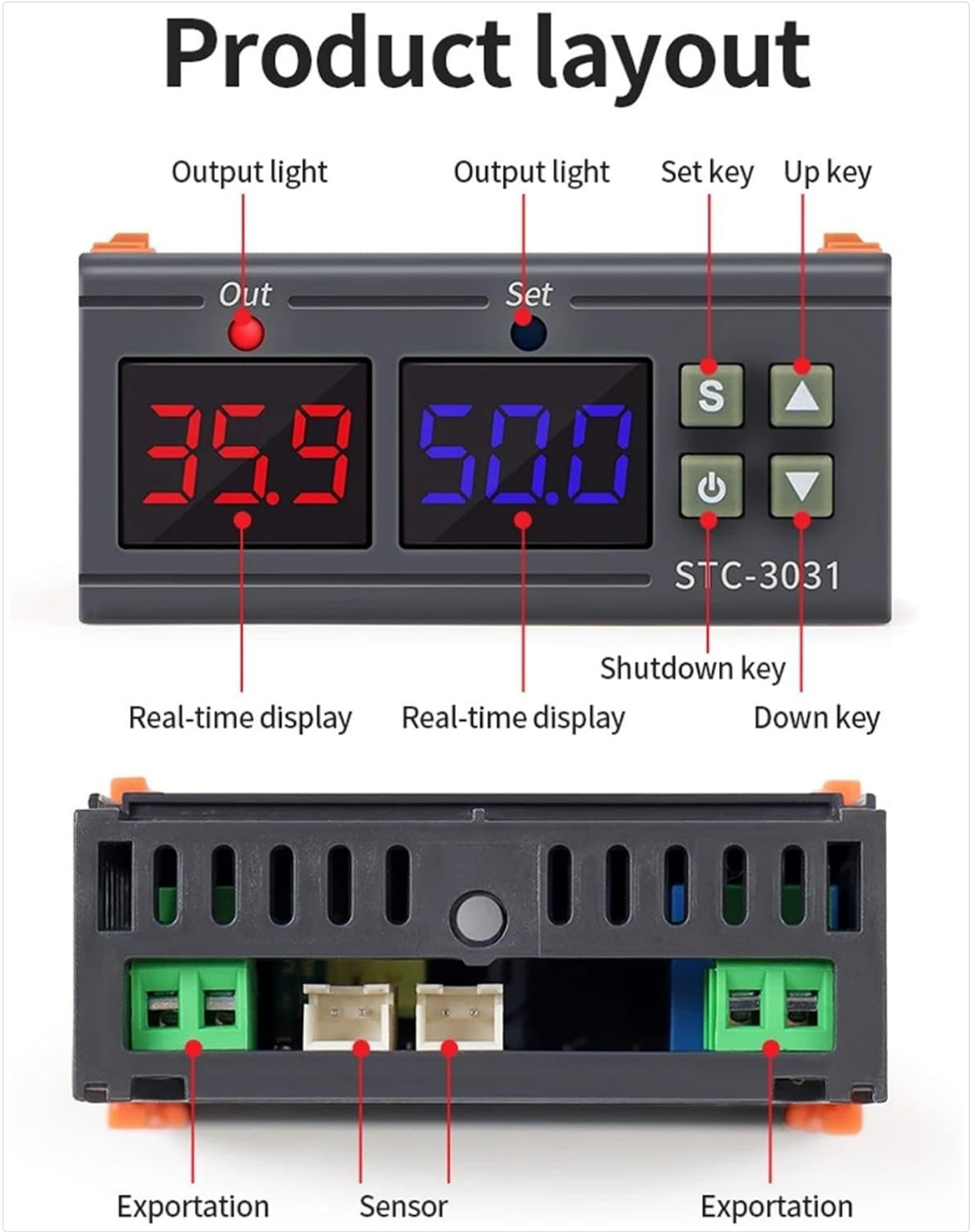


Image: Front and back view of the STC-3030 controller, illustrating its various components and their functions.

Front Panel:

- **Output Light (Out):** Indicates when the output relay is active.
- **Set Key (S):** Used to enter and confirm settings.
- **Up Key (▲):** Used to increase values or navigate menus.

- **Down Key (▼):** Used to decrease values or navigate menus.
- **Shutdown Key (Power Symbol):** Turns the device on/off or exits settings.
- **Real-time Display:** Two digital displays show current humidity readings and set points.

Back Panel:

- **Exportation Terminals:** Connection points for external devices (e.g., pumps, fans) to be controlled.
- **Sensor Ports:** Connectors for the soil moisture sensors.



Image: A close-up view of the two waterproof soil sensors, which are essential for accurate moisture detection.

4. Specifications

Product information



Product name: Humidity controller	Model: STC-3031
Power supply voltage: DC12V/DC24V/AC110-220V	Optional relay: 10A
Output power: 120W/240W/1500W	Humidity range: 0-100%RH
Control accuracy: 0.1%RH	
Product size: 75*34.5*85mm	Installation size: 71*29mm
Weight: 142g	

Image: Detailed product information including dimensions, power supply voltage, output power, humidity range, and control accuracy.

- **Product Model:** STC-3030
- **Supply Voltage:** AC110-220V
- **Relay:** 10A
- **Output Power:** 1500W (for AC110-220V model)
- **Humidity Range:** 0-100%RH
- **Control Accuracy:** 0.1%RH
- **Sensor Length:** 1 meter (default)
- **Product Size:** 75mm x 34.5mm x 85mm
- **Installation Size:** 71mm x 29mm
- **Item Weight:** Approximately 50 Grams

5. Setup Instructions

1. **Mounting:** Install the STC-3030 controller into a suitable panel cutout (71mm x 29mm) in a dry, protected location.
2. **Power Connection:** Connect the AC110-220V power supply to the designated power input terminals on the back of the controller. Ensure all connections are secure and insulated.
3. **Sensor Connection:** Connect the two soil moisture sensor cables to the sensor ports on the back of the controller. Ensure the connectors are fully seated.
4. **Output Device Connection:** Connect your external humidity control devices (e.g., water pumps, humidifiers, dehumidifiers) to the respective exportation terminals. The STC-3030 supports two independent output channels. Refer to the wiring diagram provided with the product for specific connections.
5. **Sensor Placement:** Insert the soil moisture sensors into the soil or medium where humidity needs to be monitored. Ensure good contact with the medium for accurate readings.
6. **Initial Power On:** Once all connections are verified, apply power to the controller. The display should illuminate, showing current humidity readings.

> **Important:** Always disconnect power before making any wiring changes. If you are unsure about electrical connections, consult a qualified electrician.

6. Operating Instructions

Setting Humidity Parameters:

1. **Enter Setting Mode:** Press and hold the 'S' (Set) key for approximately 3 seconds until the display starts flashing or shows a parameter code.
2. **Navigate Parameters:** Use the 'Up' (▲) and 'Down' (▼) keys to scroll through different parameters (e.g., start humidity, stop humidity, calibration).
3. **Adjust Values:** Once the desired parameter is selected, press 'S' again to enter its adjustment mode. Use the 'Up' (▲) and 'Down' (▼) keys to change the value.
4. **Confirm and Exit:** Press 'S' to confirm the new value. To exit the setting mode, press the 'Shutdown' key or wait for approximately 10 seconds for the device to automatically return to normal operation.

Dual-Channel Control:

The STC-3030 allows for independent control of two output channels. Each channel can be configured with its own start and stop humidity values. Refer to the detailed programming guide in the full product manual for specific parameter codes and their functions for each channel.

7. Maintenance

- **Cleaning:** Regularly wipe the controller's display and casing with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Sensor Care:** Periodically inspect the soil moisture sensors for dirt, debris, or corrosion. Gently clean them with water and a soft brush if necessary. Ensure sensors are not damaged.
- **Connection Check:** Annually, or as needed, check all electrical connections for tightness and signs of wear or corrosion.
- **Environmental Conditions:** Ensure the controller is operated within its specified temperature and humidity ranges to prolong its lifespan.

8. Troubleshooting

- **Display Not On:** Check power supply connections. Ensure the power switch is on.
- **Inaccurate Readings:** Verify sensor placement and ensure good contact with the soil. Clean sensors if dirty. Check sensor cable connections. Consider calibrating the sensor if available in settings.
- **Output Not Activating:** Check if the set humidity range is correctly configured. Ensure the output device is properly connected and functional. Verify relay status (output light).
- **Erratic Behavior:** Disconnect power, wait a few minutes, then reconnect. Ensure the controller is not exposed to extreme temperatures or moisture.

9. Applications

The STC-3030 humidity controller is versatile and can be used in various settings requiring precise moisture management:



Image: Visual examples of the STC-3030's wide range of applications, including water-saving irrigation, greenhouse environments,

cultivation of flowers and vegetables, general plant culture, and scientific training setups.

- **Water-saving Irrigation:** Automate watering based on actual soil moisture levels.
- **Greenhouses:** Maintain optimal humidity for plant growth and prevent disease.
- **Flowers and Vegetables:** Ensure consistent moisture for delicate crops.
- **Plant Culture:** Critical for hydroponics, aeroponics, and other controlled growing environments.
- **Scientific Training/Research:** For experiments requiring precise soil moisture control.

10. Warranty and Support

This product comes with a standard manufacturer's warranty. For specific warranty terms, duration, and conditions, please refer to the documentation included with your purchase or contact SLMLSGB customer support.
For technical assistance, troubleshooting, or further inquiries, please contact your retailer or the manufacturer directly. Keep your purchase receipt and product model number (STC-3030) handy when seeking support.

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