Yuecoom STC-3018

Yuecoom STC-3018 Digital Temperature Controller

INSTRUCTION MANUAL

1. Introduction

The Yuecoom STC-3018 is a microcomputer intelligent digital display thermostat designed for precise temperature control. It features a dual screen for simultaneous display of current and set temperatures, and includes an NTC sensor for accurate measurement. This controller is suitable for various applications requiring automatic switching of refrigeration or heating devices, such as in refrigerators, seafood machines, and cooling water systems.

Image 1: Yuecoom STC-3018 Digital Temperature Controller with NTC sensor.

2. Product Features

- **Dual Display Dual Temperature:** Microcomputer intelligent digital display thermostat with dual screens for current and set temperatures.
- **High Precision:** Large and clear digital display shows measuring temperature with high accuracy.
- **NTC Sensor:** Equipped with an NTC sensor for convenient usage, featuring a 1-meter cable length.
- **Durable Construction:** Features an ABS flame retardant plastic shell for enhanced safety.
- **Wide Applications:** Suitable for automatic switching of refrigeration and heating devices in various settings, including seafood machines and cooling water systems.

3. Specifications

Product Model	STC-3018
Optional Voltage	12V / 24V (Please check your specific model)
Temperature Control Range	-55°C to 120°C

Screen Display	Dual Screen Dual Display
Machine Power Consumption	Less Than 3W
Temperature Measurement Accuracy	±1 °C (-50 °C ~ 70 °C)
Resolution	0.1 °C
Sensor Type	NTC Sensor (line length approx. 1 meter)
Ambient Temperature	0°C to 60°C
Relative Humidity	20% to 85% (non-condensing)
Machine Size	Approx. 75 x 34.5 x 85mm (3 x 1.4 x 3.3in)
Installation Opening	Approx. 71 x 29mm (2.8 x 1.1in)
Housing Material	ABS Flame Retardant Plastic Shell

4. Package Contents

- 1 x STC-3018 Digital Temperature Controller with NTC Sensor

5. Safety Information

- Ensure the power supply voltage matches the controller's specified voltage (12V or 24V).
- All wiring should be performed by a qualified professional to prevent electrical hazards.
- Do not operate the device in environments exceeding its specified ambient temperature and humidity ranges.
- Keep the device away from water and excessive moisture.
- Do not disassemble or modify the controller. Refer all servicing to qualified personnel.
- Ensure proper ventilation around the controller to prevent overheating.

6. Setup

6.1 Physical Installation

The STC-3018 controller is designed for panel mounting. Ensure the installation opening dimensions are approximately 71 x 29mm (2.8 x 1.1in).

Image 2: STC-3018 controller with installation dimensions (71mm x 29mm).

6.2 Wiring Diagram

Refer to the following wiring diagrams for connecting the temperature controller. It is crucial to distinguish between the power supply, sensor, and load connections, and to maintain proper distance between wires to avoid interference.

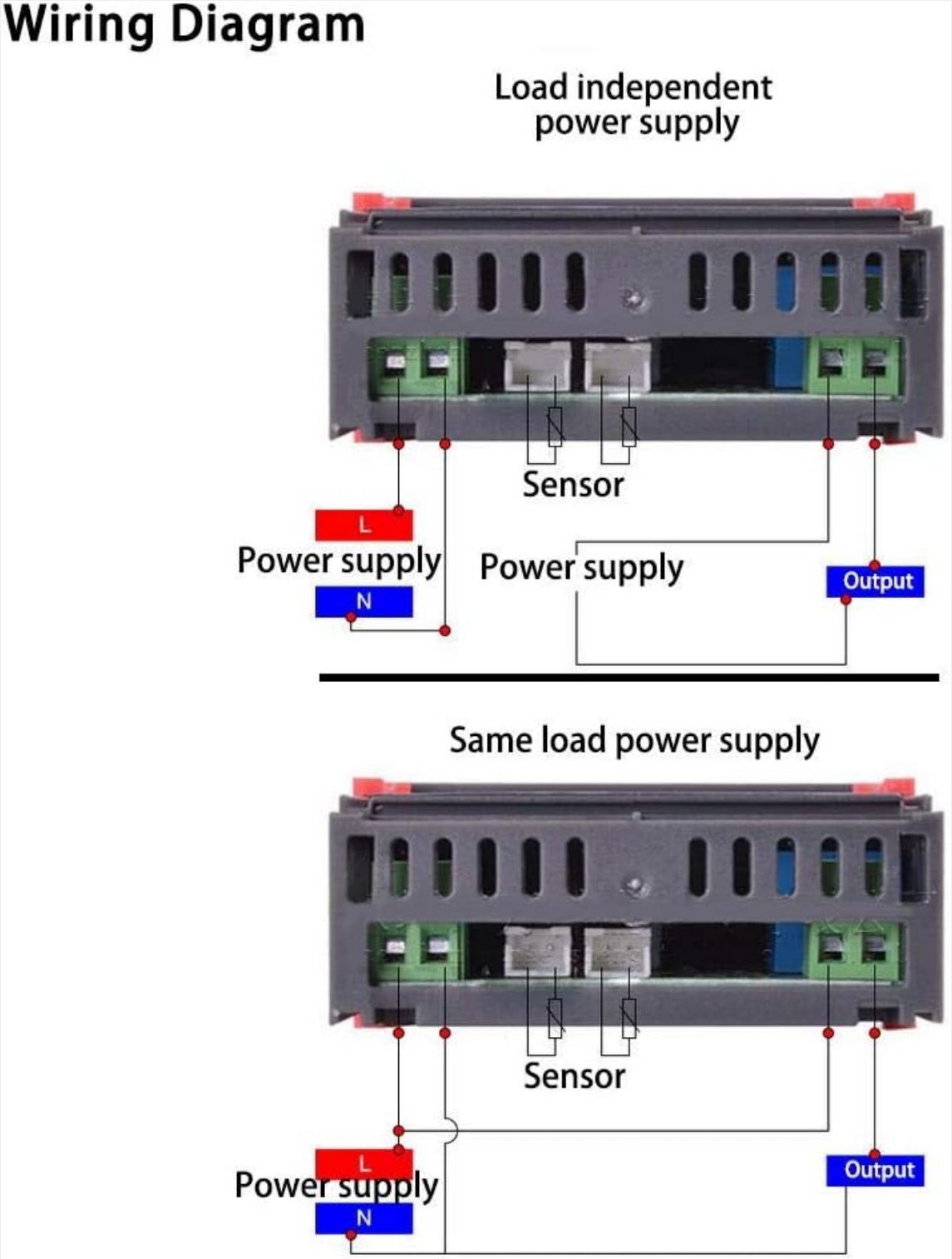

Image 3: Wiring diagrams for STC-3018, showing independent and same load power supply configurations.

- **Load Independent Power Supply:** In this configuration, the controller's power supply and the load's power supply are separate. Connect the controller's power (L and N) to its designated terminals. Connect the sensor to the sensor terminals. The output terminals (for the load) are then connected to the load's power supply and the load itself.
- **Same Load Power Supply:** Here, the controller and the load share the same power supply. Connect the main power (L and N) to the controller's power input. The sensor connects to its terminals. The output terminals for the load will then connect to the load, drawing power from the same source as the controller.

Note: Always ensure correct polarity and secure connections. Incorrect wiring can damage the device or pose a safety risk.

7. Operating Instructions

7.1 Panel Overview

The STC-3018 features a user-friendly control panel with dual digital displays and several buttons.

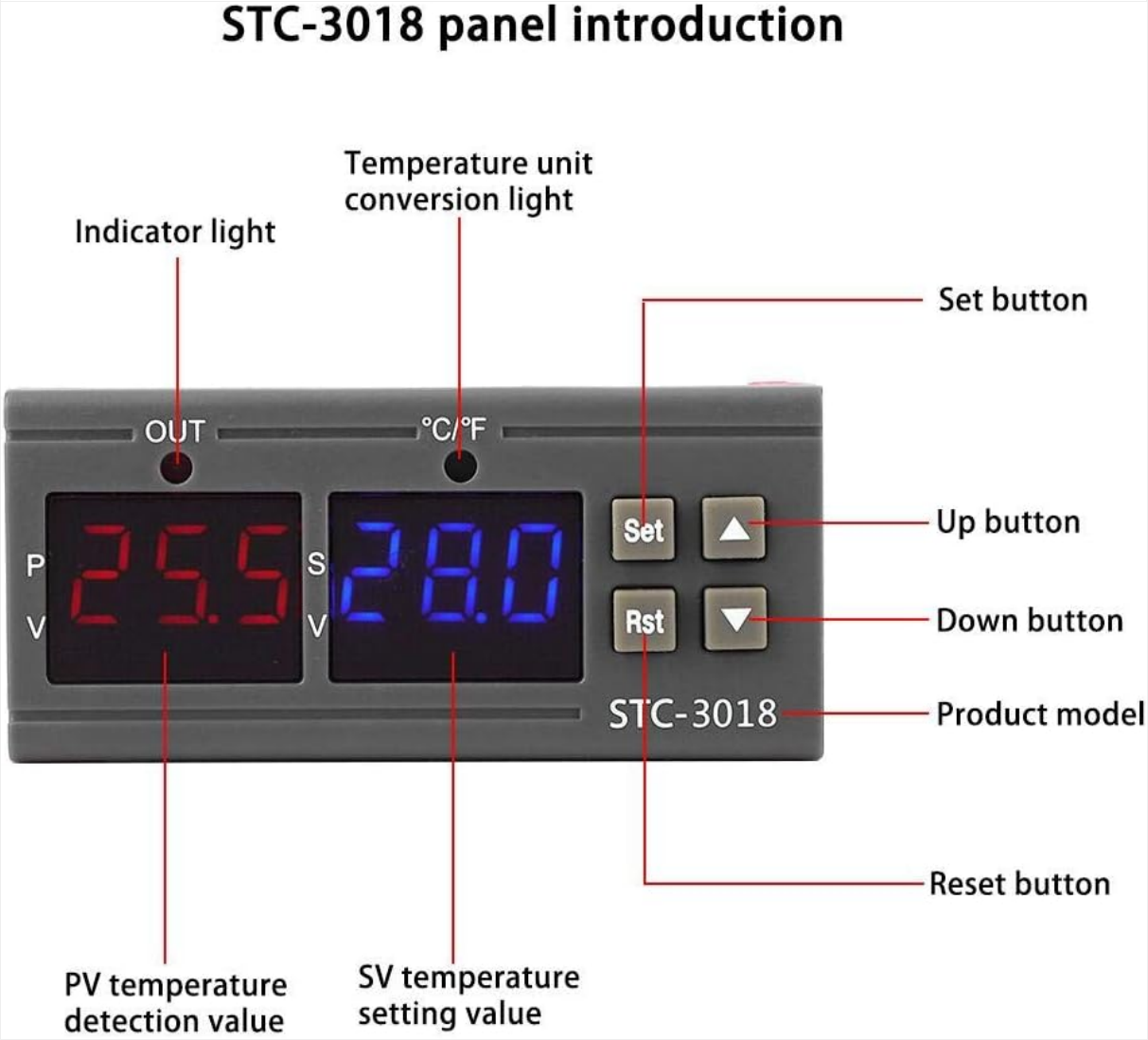

Image 4: STC-3018 control panel with labeled components.

- **PV Temperature Detection Value (Red Display):** Shows the current measured temperature.
- **SV Temperature Setting Value (Blue Display):** Shows the target temperature set by the user.
- **OUT Indicator Light:** Illuminates when the output relay is active (heating or cooling).
- **°C/°F Indicator Light:** Indicates the current temperature unit.
- **Set Button:** Used to enter and confirm parameter settings.
- **Up Button (▲):** Used to increase values or navigate menu options.
- **Down Button (▼):** Used to decrease values or navigate menu options.
- **Rst Button (Reset):** Used to reset settings or exit menus.

7.2 Setting Temperature Parameters

To set the desired temperature and other operational parameters:

1. **Enter Setting Mode:** Press and hold the **Set** button for approximately 3 seconds until the SV display starts flashing.
2. **Adjust Set Temperature:** Use the **Up (▲)** or **Down (▼)** buttons to adjust the desired target

temperature.

3. **Confirm Set Temperature:** Press the **Set** button again to confirm the temperature and move to the next parameter (if any) or exit the setting mode.
4. **Advanced Parameters (if applicable):** Some models may have additional parameters like hysteresis, calibration, or delay. These are typically accessed by pressing and holding the **Set** button for a longer duration or by a specific button combination. Refer to the detailed parameter list for your specific model if available.
5. **Exit Setting Mode:** If no further adjustments are needed, wait for a few seconds, and the controller will automatically exit the setting mode, saving the changes. Alternatively, press the **Rst** button to exit without saving changes if you are in a sub-menu.

7.3 Temperature Unit Conversion (°C/°F)

To switch between Celsius (°C) and Fahrenheit (°F), press and hold the **Up (▲)** button for approximately 3 seconds. The corresponding indicator light will illuminate.

8. Maintenance

- **Cleaning:** Wipe the controller's surface with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Sensor Inspection:** Periodically check the NTC sensor and its cable for any signs of damage or corrosion. Ensure it is securely placed in the area where temperature is to be measured.
- **Ventilation:** Ensure that the ventilation slots on the controller are not obstructed to allow for proper heat dissipation.
- **Power Disconnection:** Always disconnect power before performing any maintenance or inspection.

9. Troubleshooting

Problem	Possible Cause	Solution
Display is blank or not working.	No power, incorrect wiring, or internal fault.	Check power connections. Verify wiring according to the diagram. If problem persists, contact support.
Incorrect temperature reading.	Sensor damaged, improperly connected, or placed incorrectly.	Check sensor cable for damage. Ensure sensor is securely connected and positioned correctly in the measurement area.
Controller not switching load (heating/cooling).	Set temperature not reached, hysteresis setting, or wiring issue.	Verify set temperature and current temperature. Check hysteresis settings. Inspect load wiring.
Buttons are unresponsive.	Temporary software glitch or physical button issue.	Disconnect power for 10 seconds and reconnect. If problem persists, contact support.

10. Warranty and Support

This product comes with a standard manufacturer's warranty. For specific warranty terms, duration, or technical support, please refer to the documentation provided at the time of purchase or contact your retailer/seller directly. Please have your product model (STC-3018) and purchase information ready when seeking support.