Weewooday Weewooday-Stretch Small-X042

Weewooday 12V Electronic Temperature Controller User Manual

Model: Weewooday-Stretch Small-X042

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of your Weewooday 12V Electronic Temperature Controller. This device is designed for precise temperature control in various applications, offering both heating and cooling modes. Please read this manual thoroughly before use to ensure proper functionality and safety.

2. Product Overview and Features

The Weewooday 12V Electronic Temperature Controller is a versatile module featuring a dual-color LED display for simultaneous monitoring of current and set temperatures. It includes a waterproof NTC sensor for reliable temperature detection across a wide range.

- **Dual Color LED Display:** Displays measured temperature (red) and set temperature (blue) concurrently, supporting both cooling and heating modes.
- **Waterproof NTC Sensor:** Equipped with a 10K 0.5% NTC waterproof probe, allowing for temperature control in various environments.
- **Precise Control:** Offers a control accuracy of 0.1 degrees Celsius and a backlash precision of 0.1 degrees Celsius.
- **Wide Application:** Suitable for intelligent home and industrial equipment, including household appliances, automatic irrigation systems, automobiles, aquariums, and fish tanks.

Image: Dual LED display showing measured (red) and set (blue) temperatures.

Image: Waterproof NTC sensor probe in an aquarium.

3. Specifications

Feature	Specification
Operating Voltage	Direct Current 12V
Power Consumption	≤ 35 mA (static), ≤ 65 mA (relay close)
Temperature Sensor Type	10K 0.5% NTC
Compatible Load	10A/250VAC, 7A/250VAC
Measurement Range	-50 to 110°C (-58 to 230°F)
Control Precision	0.1°C
Backlash Precision	0.1°C

Refresh Rate	0.5 seconds
High Temperature Protection	0 to 110°C (32 to 230°F)
Module Size	48 x 29 x 32 mm (1.89 x 1.14 x 1.26 inches)
Probe Length	1.5 inches
Cable Probe Length	1 foot (approx. 30 cm)

Image: Module dimensions and sensor cable length.

4. Setup and Wiring

Proper wiring is crucial for the safe and effective operation of the temperature controller. Ensure all connections are secure and correct before applying power.

4.1 Wiring Diagram

The controller requires a 12V DC power input. The load (e.g., heating element, cooling fan) is connected via the relay terminals. There are two primary wiring methods depending on whether the load shares the same 12V power source as the controller or uses a separate power source.

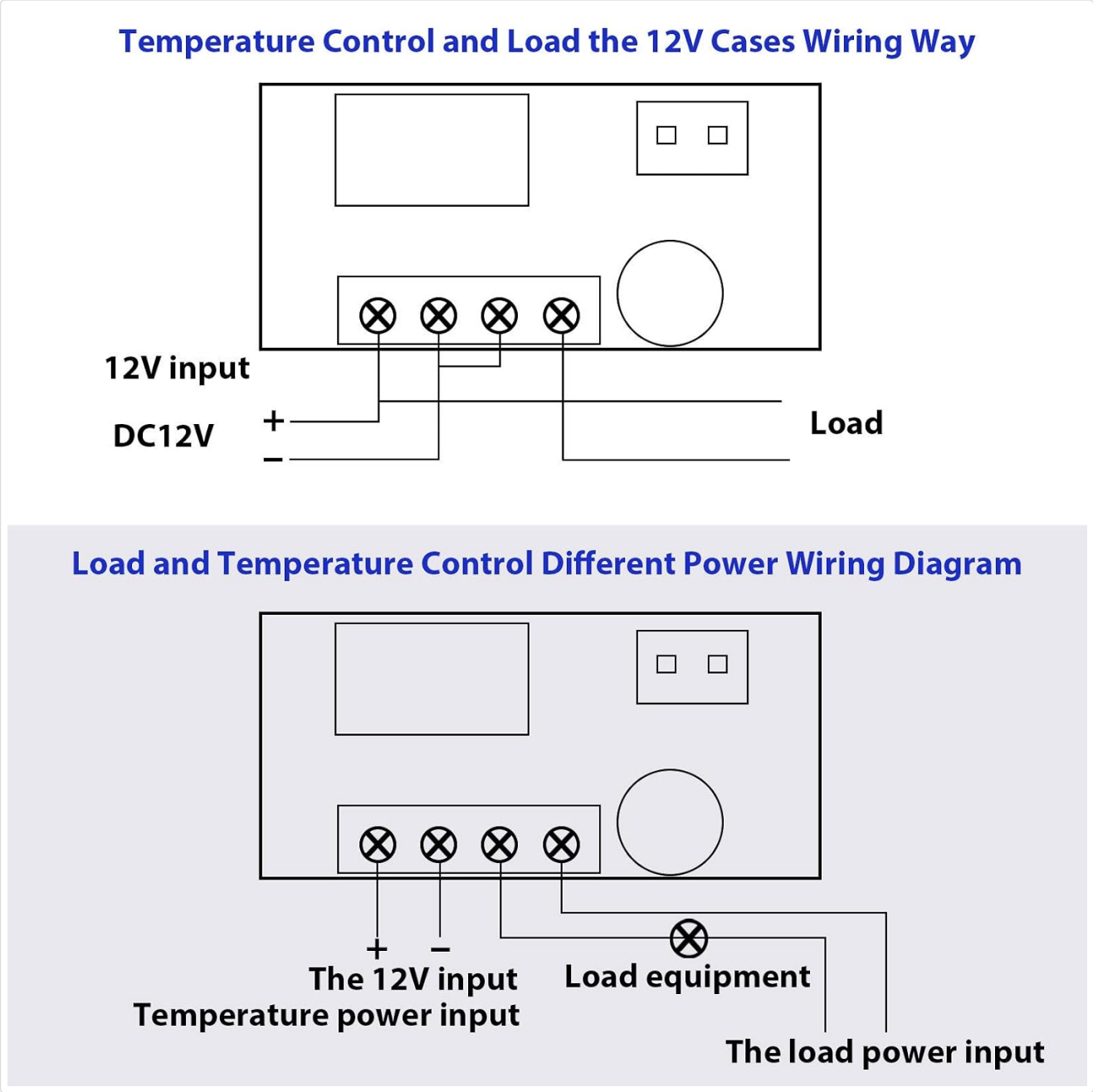

Image: Wiring diagrams for the temperature controller.

Method 1: Temperature Control and Load with Shared 12V Power

- Connect the 12V DC positive (+) and negative (-) power supply to the controller's input terminals.
- Connect the load's positive terminal to the controller's relay output (NO or NC, depending on desired operation).
- Connect the load's negative terminal directly to the 12V DC negative (-) power supply.

Method 2: Temperature Control and Load with Different Power Sources

- Connect the 12V DC positive (+) and negative (-) power supply to the controller's input terminals.
- Connect the load's power source (e.g., a separate 12V or 24V supply) to the relay terminals. The controller acts as a switch for this separate power circuit.
- Ensure the load's power source is compatible with the relay's specifications (10A/250VAC, 7A/250VAC).

Note: Always ensure the power supply voltage matches the controller's requirements (12V DC). Incorrect voltage can damage the device.

5. Operating Instructions

The controller features a simple interface for setting the desired temperature and operating mode.

5.1 Temperature Setting

1. Press the **SET** button. The LED display for the set temperature will flash.
2. Use the **C (+)** and **F (-)** buttons to adjust the set temperature value.
3. After setting the desired temperature, wait for approximately 3 seconds. The module will automatically save the parameters and exit the setting mode.

5.2 Switching Between Celsius and Fahrenheit

To switch the temperature display unit between Celsius (°C) and Fahrenheit (°F), press and hold the **C/F** button for a few seconds until the display changes.

5.3 Operating Modes (Heating/Cooling)

The controller can operate in either heating or cooling mode. The specific method to switch between these modes typically involves setting the hysteresis (backlash precision) and the set point relative to the current temperature. Consult the detailed programming instructions that may be available online by searching for similar models like "Ketotek KTF0091" if specific instructions were not included with your product.

Your browser does not support the video tag.

Video: A demonstration of the 12V Electronic Temperature Controller, showing its components and basic functionality. This video is provided by the seller, Xipshow.

6. Maintenance

To ensure the longevity and accurate performance of your temperature controller, follow these maintenance guidelines:

- **Cleaning:** Gently wipe the display and module casing with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Sensor Care:** While the NTC sensor is waterproof, avoid unnecessary physical stress or bending of the probe cable. Ensure the sensor is clean and free from debris for accurate readings.
- **Environmental Conditions:** Operate the controller within its specified temperature and humidity ranges. Avoid exposure to extreme conditions or direct sunlight for prolonged periods.

7. Troubleshooting

If you encounter issues with your temperature controller, refer to the following common problems and solutions:

7.1 Display Shows "LLL"

- **Problem:** The display shows "LLL" instead of a temperature reading.
- **Solution:** This typically indicates a problem with the temperature sensor. Check if the NTC sensor is properly connected to the module. Inspect the sensor cable for any damage or breaks. If the sensor is damaged, it may need replacement.

7.2 Controller Resets Repeatedly or Malfunctions Under Load

- **Problem:** The controller resets or turns off when a load is connected or activated, especially with higher amperage loads.
- **Solution:** This can occur if the load exceeds the controller's internal relay capacity or if there are power supply issues.
- **Check Power Supply:** Ensure your 12V DC power supply is stable and can provide sufficient current for both the controller and the load. A weak or unstable power supply can cause resets.
- **Load Capacity:** Verify that the connected load's current draw does not exceed the relay's maximum rating (10A/250VAC, 7A/250VAC). For loads close to or exceeding this limit, consider using an external relay or MOSFET to switch the high-current load, with the temperature controller activating the external switching device.
- **Wiring:** Double-check all wiring connections for looseness or short circuits.

7.3 Difficulty Programming or Setting Parameters

- **Problem:** Unable to enter programming mode or save settings.
- **Solution:** Ensure you are pressing and holding the **SET** button for the correct duration to enter programming mode. If the controller exits programming mode too quickly, try to adjust the parameters more swiftly. Some models may have a timeout feature. If specific programming steps are unclear, search online for manuals related to similar 12V programmable thermostats (e.g., "W1209 thermostat manual" or "Ketotek KTF0091 manual") as these devices often share similar interfaces and programming logic.

8. Warranty and Support

For warranty information, please refer to the documentation included with your product at the time of purchase or contact the retailer. For technical support or further assistance, please reach out to Weewooday customer service through the platform where the product was purchased.

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question