UCTRONICS B01L1DLPWG

UCTRONICS Digital Temperature Meter User Manual

Model: B01L1DLPWG

1. Introduction

Thank you for choosing the UCTRONICS Digital Temperature Meter. This device is designed for accurate temperature measurement and display, featuring a clear blue LED display and an NTC thermistor sensor. This manual provides essential information for the proper setup, operation, and maintenance of your temperature meter.

Please read this manual thoroughly before using the product to ensure safe and efficient operation.

2. Product Features

- **Easy Setup and Readability:** Designed for straightforward installation and clear temperature readings.
- **Reverse Polarity Protection:** Features built-in protection against incorrect wiring. If positive and negative wires are reversed, the device will not burn out, though the screen will remain blank.
- **Wide Temperature Measuring Range:** Capable of measuring temperatures from 0-167°F Fahrenheit.
- **Durable NTC Thermistor Sensor:** Utilizes an MF55 type NTC thermistor, epoxy potted for water resistance. *Note: The water temperature should not exceed 167°F (75°C).*
- **Flexible Operating Voltage:** Operates within a voltage range of 4.5V to 28V.
- **Simple 2-Wire Connection:** Easy wiring with clearly marked positive (red) and negative (black) connections.

3. Product Specifications

Specification	Value
Brand	UCTRONICS
Special Feature	Waterproof (Sensor)
Color	Black (Meter), Blue (LED Display)
Included Components	1x Digital Temperature Meter (Blue LED Display), 1x NTC Thermistor Sensor
Display Type	Digital
Operating Voltage	4.5-28V DC

Temperature Range	0-167°F (approx. -17.8°C to 75°C)
Sensor Type	MF55 Type NTC Thermistor
Item Length	1.7 Inches (approx. 43mm)

4. Product Overview and Components

Familiarize yourself with the main components of your UCTRONICS Digital Temperature Meter.

Figure 4.1: Front view of the UCTRONICS Digital Temperature Meter displaying a temperature reading with its blue LED digits. The NTC thermistor sensor is visible in the foreground.

Figure 4.2: The digital temperature meter shown alongside its power wiring harness (red and black wires) and the NTC thermistor temperature sensor with its black cable.

Figure 4.3: Side view of the temperature meter illustrating its approximate dimensions: 48mm (length), 29mm (width), and 29mm (height).

Figure 4.4: Front view of the digital temperature meter when the display is not active, showing the black casing and the segmented display area.

Figure 4.5: Rear perspective of the temperature meter, highlighting the circuit board and the two white connectors for power (V+ / V-) and the sensor input.

Figure 4.6: An angled rear view of the temperature meter, providing a clearer look at the power input and sensor input terminals on the circuit board.

5. Setup and Installation

5.1 Wiring Instructions

1. **Identify Wires:** The temperature meter comes with a simple 2-wire connection. The**red wire** is for the positive (+) power input, and the **black wire** is for the negative (-) power input.
2. **Connect Power:** Connect the red wire to your DC power source's positive terminal and the black wire to the negative terminal. Ensure your power source provides a voltage between **4.5V and 28V DC**.
3. **Sensor Connection:** The NTC thermistor sensor connects to the dedicated sensor input on the meter. This connection is typically non-polarized, but ensure it is securely seated.
4. **Reverse Polarity Protection:** The device is designed with reverse polarity protection. If the power wires are connected incorrectly (red to negative, black to positive), the meter will not be damaged, but the display will remain blank. Correct the wiring to resolve this.

5.2 Sensor Placement

The NTC thermistor sensor is epoxy potted, making it suitable for use in water or other liquids. When placing the sensor:

- Ensure the sensor is fully submerged or in direct contact with the medium you wish to measure.
- Avoid placing the sensor near heat sources or in direct sunlight if measuring ambient air temperature, as this can affect accuracy.
- For liquid measurements, ensure the liquid temperature does not exceed**167°F (75°C)** to prevent damage to the sensor.

6. Operating Instructions

Once properly wired and powered, the UCTRONICS Digital Temperature Meter will automatically display the current temperature in Fahrenheit on its blue LED screen.

- **Power On:** Connect the meter to a 4.5-28V DC power source. The blue LED display should illuminate and show the temperature.
- **Reading Temperature:** The three-digit display will show the temperature in Fahrenheit. The decimal point indicates the tenths place.
- **Temperature Range:** The meter accurately measures temperatures between 0°F and 167°F. Readings outside this range may be inaccurate or display an error.

7. Maintenance

To ensure the longevity and accuracy of your temperature meter, follow these simple maintenance guidelines:

- **Cleaning:** The meter's casing can be wiped clean with a soft, damp cloth. Do not submerge the main meter unit in water. The sensor itself is waterproof and can be cleaned with water.
- **Sensor Care:** Avoid bending or sharply creasing the sensor cable. Protect the sensor from physical damage.
- **Storage:** When not in use, store the meter in a dry, cool place, away from direct sunlight and extreme temperatures.
- **Power Disconnection:** Always disconnect power before performing any cleaning or maintenance on the wiring or meter unit.

8. Troubleshooting

Problem	Possible Cause	Solution
Display is blank or off.	◦ No power supply. ◦ Incorrect power wiring (reverse polarity). ◦ Power supply voltage is outside 4.5-28V range.	◦ Ensure power is connected. ◦ Check wiring: Red wire to positive (+), Black wire to negative (-). ◦ Verify power supply voltage is within 4.5-28V.
Inaccurate temperature reading.	◦ Sensor not properly placed or damaged. ◦ Temperature is outside the 0-167°F range. ◦ External interference.	◦ Ensure sensor is correctly positioned and undamaged. ◦ Confirm the measured temperature is within the specified range. ◦ Relocate the meter away from strong electromagnetic fields.

Display shows "---" or "LLL".	◦ Sensor disconnected or faulty. ◦ Temperature is below the measurable range.	◦ Check sensor connection. Replace sensor if damaged. ◦ Ensure the environment temperature is within 0-167°F.
Display shows "HHH".	◦ Temperature is above the measurable range.	◦ Ensure the environment temperature is within 0-167°F.

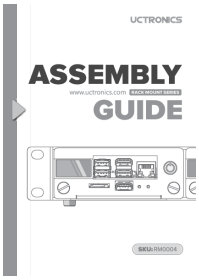
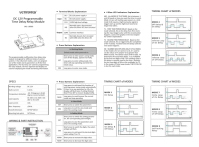
9. Warranty and Support

UCTRONICS is committed to providing high-quality products. While specific warranty details are not provided in this manual, please retain your proof of purchase.

For technical support, troubleshooting assistance, or inquiries regarding warranty claims, please contact UCTRONICS customer service through their official website or the platform where you purchased the product. You can often find support contact information on the UCTRONICS Amazon Store page.

Always refer to the latest information available from the manufacturer for the most up-to-date support options.

Related Documents

	UCTRONICS RM0004 Pi Rack Pro Assembly Guide | Rack Mount Enclosure for Raspberry Pi This document provides a comprehensive assembly guide for the UCTRONICS RM0004 Pi Rack Pro, a 19" 1U rack mount enclosure for Raspberry Pi 4B. It details the package contents, step-by-step installation instructions, and configuration for the 0.96" color OLED display and secure shutdown features. Supports up to four 2.5" SSDs.
	UCTRONICS DC 12V Programmable Time Delay Relay Module (U6030) User Guide Comprehensive guide to the UCTRONICS DC 12V Programmable Time Delay Relay Module (SKU: U6030), detailing its 18 preset modes, terminal block explanations, button functions, LED indicators, and timing charts for various operational modes.
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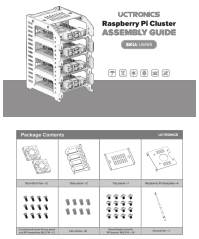

[UCTRONICS Raspberry Pi Cluster Assembly Guide - SKU U6169]

Detailed assembly guide for the UCTRONICS Raspberry Pi Cluster (SKU: U6169). Includes package contents, exploded view, step-by-step assembly instructions, wiring information, and fan specifications.