MMUNNA W1088

MMUNNA W1088 Dual LED Digital Temperature Controller User Manual

Model: W1088 (DC 12V)

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the MMUNNA W1088 Dual LED Digital Temperature Controller. This device is designed for precise temperature control in various applications such as aquariums, incubators, and other heating or cooling systems. Please read this manual thoroughly before use to ensure proper functionality and safety.

1.1. Package Contents

- 1 x W1088 Temperature Controller
- 2 x Waterproof NTC 10K Temperature Sensors (1m length each)

Image 1.1: The MMUNNA W1088 Dual LED Digital Temperature Controller, showing the main unit with two LED displays, control buttons, and two attached waterproof temperature sensors with their respective wiring.

2. Features

- Dual LED display for simultaneous viewing of two independent temperature zones.
- Independent dual-way temperature control for heating or cooling applications.
- Temperature display resolution of 0.1 °C.
- Direct power output for connected devices.
- Support for high/low temperature alarms.
- Memory function for power loss (parameters are retained after power failure).
- Wide application range including home temperature control, farm environments, cold storage, greenhouses, and aquariums.

3. Specifications

Parameter	Value
Display Type	Digital LED
Shell Material	ABS + PCB
Temperature Sensor	NTC 10K
Sensor Length	1m

Parameter	Value
Temperature Measuring Range	-55 °C ~ 120 °C
Resolution	0.1 °C
Accuracy	±1 °C
Power Supply (This Model)	12V DC
Relay Contact Capacity	Two Relays, Max 10A each
Output Type	Direct Output
Dimensions	72mm x 56mm x 31mm

Image 3.1: Dimensional drawing of the W1088 controller, indicating its length (88mm), width (72mm), and height (56mm), along with the 0.96m sensor cable length.

4. Setup and Installation

The W1088 controller requires careful wiring. Ensure all connections are secure and correct before applying power. This model operates on 12V DC power.

4.1. Wiring Diagram (DC 12V)

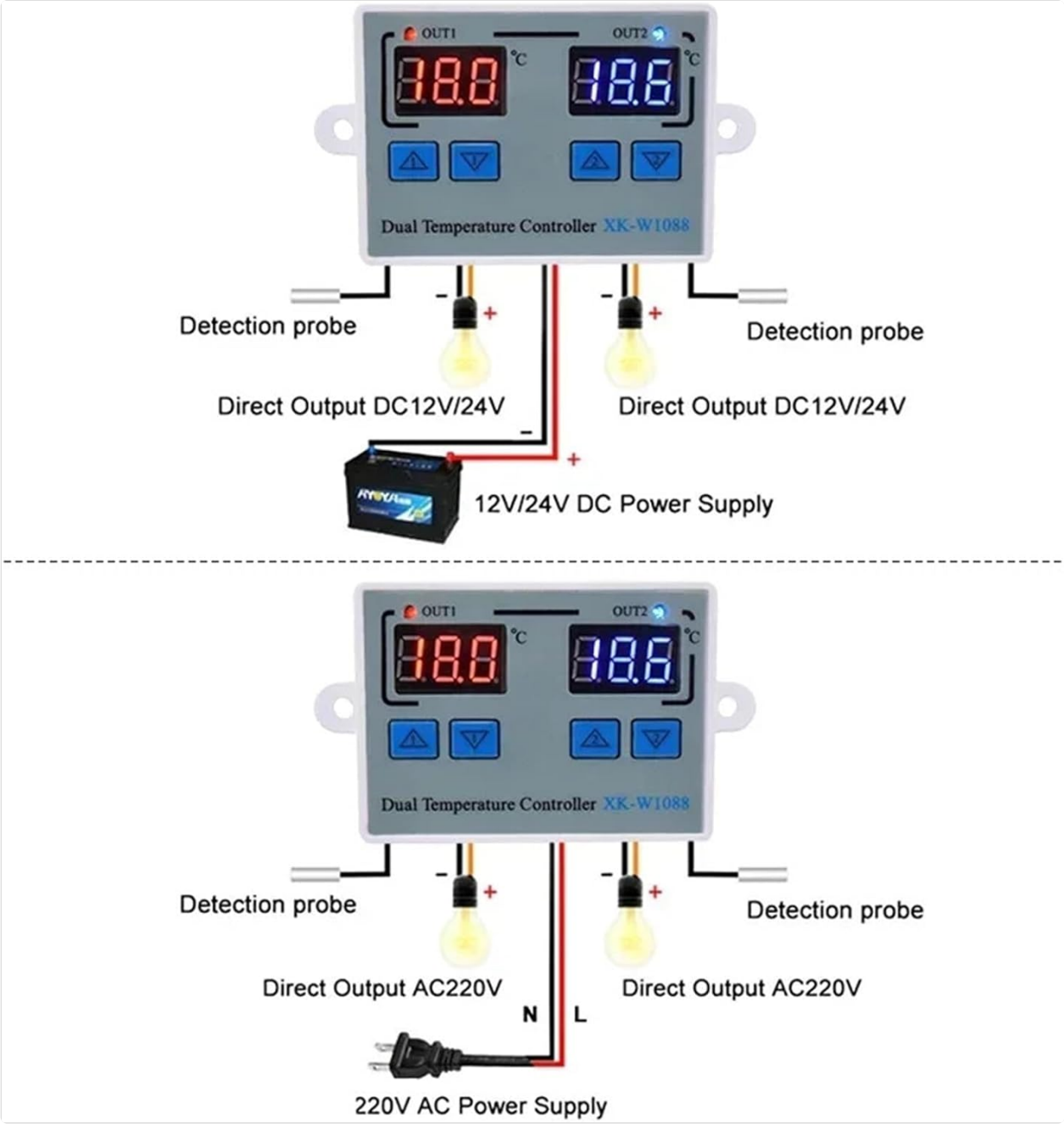

Image 4.1: Wiring diagram for the W1088 controller. The top diagram illustrates connections for a DC 12V power supply, showing how detection probes, direct outputs (for loads like lights), and the 12V DC power source are connected to the controller.

4.2. Connection Steps

1. **Power Supply:** Connect the 12V DC power supply to the designated input terminals on the controller. Ensure correct polarity (positive and negative).
2. **Temperature Sensors:** Connect the two waterproof NTC 10K sensors to the 'Sensor1' and 'Sensor2' input terminals. The sensors are non-polar and can be connected in either orientation.
3. **Output Devices:** Connect your heating or cooling devices (e.g., heaters, fans, pumps) to the 'Output1 Power' and 'Output2 Power' terminals. Each output can handle up to 10A. Ensure the devices are compatible with 12V DC power.
4. **Secure Connections:** Double-check all wiring to ensure secure connections and prevent short circuits.

Warning: Incorrect wiring can damage the device or connected equipment. Always disconnect power before making or changing any connections.

5. Operation

The W1088 controller features two independent temperature control channels (OUT1 and OUT2), each with its own display and control buttons.

5.1. Setting the Starting Temperature (OUT1 / OUT2)

1. Press the **UP** button once for the desired channel (OUT1 or OUT2) to display the current starting temperature setting.
2. Long press the **UP** button for approximately 3 seconds until the displayed temperature flashes.
3. Use the **UP** and **DOWN** buttons to adjust the starting temperature to your desired value.
4. The setting will automatically save after a few seconds of inactivity, or you can press any other button to confirm.

5.2. Setting the Stopping Temperature (OUT1 / OUT2)

1. Press the **DOWN** button once for the desired channel (OUT1 or OUT2) to display the current stopping temperature setting.
2. Long press the **DOWN** button for approximately 3 seconds until the displayed temperature flashes.
3. Use the **UP** and **DOWN** buttons to adjust the stopping temperature to your desired value.
4. The setting will automatically save after a few seconds of inactivity, or you can press any other button to confirm.

5.3. Accessing Setting Mode (P0 Parameters)

To access advanced settings (e.g., temperature delay, calibration), follow these steps:

1. Simultaneously press and hold both the **UP** button of OUT1 and the **UP** button of OUT2 for approximately 3 seconds.
2. The display will show 'P0', indicating entry into the setting mode.
3. Use the **UP** and **DOWN** buttons of either channel to navigate through the P-parameters (P0, P1, P2, etc.).
4. To modify a parameter, press the **UP** or **DOWN** button of the corresponding channel. The value will flash.
5. Adjust the value using the **UP** and **DOWN** buttons.
6. Press any other button or wait for a few seconds to save the setting and exit the parameter editing.
7. To exit the setting mode, long press the **UP** button of OUT1 and the **UP** button of OUT2 simultaneously again, or wait for a period of inactivity.

Note:

- If the starting temperature is set higher than the stopping temperature, the controller will operate in **cooling mode**.
- If the starting temperature is set lower than the stopping temperature, the controller will operate in **heating mode**.

6. Maintenance

- **Cleaning:** Gently wipe the controller's surface with a soft, dry cloth. Do not use abrasive cleaners or solvents.

- **Sensor Care:** Ensure the temperature sensors are kept clean and free from debris that could affect readings. Avoid bending the sensor cables sharply.
- **Environmental Conditions:** Operate the controller within its specified temperature and humidity ranges to ensure longevity. Avoid direct sunlight or extreme temperatures.
- **Power Disconnection:** Always disconnect power before performing any maintenance or cleaning.

7. Troubleshooting

Problem	Possible Cause	Solution
Display is off	No power supply or incorrect wiring.	Check power connections and ensure 12V DC is supplied correctly. Verify wiring according to the diagram.
Temperature reading is inaccurate	Sensor fault, incorrect sensor placement, or environmental interference.	Check sensor connection. Ensure sensor is properly immersed/placed in the measurement area. Avoid placing sensors near heat sources or drafts. Consider sensor calibration if available in P-parameters.
Output device not turning on/off	Incorrect temperature settings, faulty output wiring, or device malfunction.	Verify start and stop temperature settings. Check wiring to the output device. Test the output device independently. Ensure the load does not exceed 10A.
Settings not saving	Buttons not pressed long enough, or power interruption during setting.	Ensure buttons are pressed for the required duration until the display flashes. Settings are saved automatically after a few seconds of inactivity.

8. Support

For further assistance or technical support, please contact your retailer or the manufacturer, MMUNNA. Refer to your purchase documentation for contact details.