

Rakstore XY-WT01

XY-WT01 Temperature Controller User Manual

Model: XY-WT01 | Brand: Rakstore

1. PRODUCT OVERVIEW

The Rakstore XY-WT01 is a versatile digital temperature controller designed for precise heating and cooling applications. It features a clear LED display for easy monitoring and adjustment of temperature settings. This device is suitable for a wide range of industrial and scientific uses, providing reliable temperature regulation within its specified operating range.

2. KEY FEATURES

- **Power Supply:** DC 6-30V, ensuring broad compatibility.
- **Temperature Range:** Operates effectively from -50°C to 110°C .
- **High Accuracy:** Temperature control accuracy of 0.1°C for precise regulation.
- **Communication Standard:** Supports 9600bps for potential integration.
- **Compact Size:** Dimensions of 79mm*43mm for easy installation.
- **Dual Mode:** Supports both heating (H) and cooling (C) modes.
- **Digital Display:** Clear LED display for current and set temperatures.

3. PRODUCT COMPONENTS AND INTERFACE

The XY-WT01 temperature controller consists of the main control unit and a wired temperature sensor. Below are images illustrating the device and its key components.



Figure 3.1: Front view of the XY-WT01 Temperature Controller, showing the digital display and control buttons, with the attached temperature sensor cable.



Figure 3.2: Close-up front view of the XY-WT01, highlighting the LED display and the four control buttons: Up, Down, Set, and Power/Emergency Stop.



Figure 3.3: Internal view of the XY-WT01, showing the circuit board, relay, and terminal blocks for power and load connections.



Figure 3.4: Labeled diagram of the XY-WT01's front panel, indicating the functions of each button and display element: Relay

closing indication, Add button, Detection temp, Setting temp, Setting key, Reduce button, Emergency stop button, and Current mode (heating H/cooling C).

4. TECHNICAL SPECIFICATIONS

Parameter	Value
Power Supply	DC 6-30V
Temperature Range	-50°C ~ 110°C
Temperature Control Accuracy	0.1°C
Communication Standard	9600bps
Dimensions (L*W)	79mm * 43mm
Manufacturer	Rakstore
ASIN	B09JZBDS82
UPC	768788751285

5. SETUP AND INSTALLATION

Before connecting the XY-WT01, ensure all power sources are disconnected to prevent electrical shock or damage to the device.

- Power Connection:** Connect the DC 6-30V power supply to the designated power input terminals on the controller. Observe polarity carefully. Refer to Figure 3.3 for terminal locations.
- Sensor Connection:** Plug the temperature sensor into the sensor input port. Ensure a secure connection.
- Load Connection:** Connect the heating or cooling device (load) to the relay output terminals. The controller acts as a switch for your load. Ensure the load's power requirements do not exceed the relay's specifications.
- Mounting:** The controller is designed for panel mounting. Cut an appropriate opening (79mm x 43mm) and secure the device using the integrated clips or screws if available.
- Initial Power-Up:** Once all connections are secure, apply power. The display should illuminate, showing the current detected temperature.

Warning: Incorrect wiring can damage the device or cause safety hazards. If you are unsure about wiring, consult a qualified electrician.

6. OPERATING INSTRUCTIONS

The XY-WT01 features a simple four-button interface for operation.

- **Power Button ():** Press to turn the device ON/OFF. A long press may act as an emergency stop.
- **Set Button ():** Press to enter setting mode. In setting mode, press to cycle through parameters.
- **Up Button (▲):** Increase the value of the selected parameter or navigate up in menus.
- **Down Button (▼):** Decrease the value of the selected parameter or navigate down in menus.

6.1. Setting the Target Temperature

1. Press the **Set** button (). The "Setting temp" value on the display will start blinking.
2. Use the **Up** (▲) and **Down** (▼) buttons to adjust the desired target temperature.
3. Press the **Set** button () again to confirm the setting and exit the setting mode.

6.2. Selecting Heating (H) or Cooling (C) Mode

The device automatically determines whether to operate in heating or cooling mode based on the current temperature and the set target temperature, along with a hysteresis setting (not explicitly detailed in provided data, but common for thermostats).

- If the "Current mode" indicator shows **H**, the device is configured for heating. The relay will activate when the detected temperature falls below the set temperature.
- If the "Current mode" indicator shows **C**, the device is configured for cooling. The relay will activate when the detected temperature rises above the set temperature.

Note: Specific advanced parameter settings (e.g., hysteresis, calibration) are typically accessed via a long press of the Set button or a combination of buttons. Refer to the full manufacturer's manual for detailed advanced settings if needed.

7. MAINTENANCE

Regular maintenance ensures the longevity and accurate operation of your XY-WT01 temperature controller.

- **Cleaning:** Use a soft, dry cloth to wipe the display and casing. Do not use abrasive cleaners or solvents, as they may damage the plastic or screen.
- **Sensor Care:** Ensure the temperature sensor is clean and free from debris. Avoid bending or damaging the sensor cable.
- **Environmental Conditions:** Operate the controller within its specified temperature and humidity ranges. Avoid exposure to excessive moisture, dust, or corrosive environments.
- **Connection Check:** Periodically inspect all wiring connections to ensure they are secure and free from corrosion.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Display is blank	No power supply; Incorrect wiring; Device fault.	Check power connections (DC 6-30V). Verify wiring polarity. If problem persists, contact support.
Temperature reading is inaccurate	Sensor damaged or disconnected; Sensor placed incorrectly; Environmental interference.	Check sensor connection. Ensure sensor is clean and properly positioned. Avoid strong electromagnetic fields.
Load (heating/cooling device) not activating	Incorrect wiring of load; Set temperature not reached; Relay fault.	Verify load wiring. Check if current temperature is within the activation range of the set temperature and mode (H/C).
Buttons unresponsive	Device frozen; Physical damage.	Disconnect power for 10 seconds, then reconnect. Inspect buttons for physical damage.

9. WARRANTY AND SUPPORT

The Rakstore XY-WT01 Temperature Controller is manufactured to high quality standards. For warranty information, technical support, or service inquiries, please contact Rakstore directly or refer to their official website.

Please have your product model (XY-WT01) and ASIN (B09JZBDS82) ready when contacting support.

Manufacturer: Rakstore

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This manual is for informational purposes only. Specifications are subject to change without notice.