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› FACULX W3103 Digital High-Power Temperature Controller (AC220V 5000W) User Manual

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FACULX W3103 Digital High-Power Temperature Controller (AC220V 5000W) User Manual

Brand: FACULX | Model: W3103 (AC220V 5000W)

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your FACULX W3103 Digital High-Power Temperature Controller. Please read this manual thoroughly before use to ensure proper functionality and safety.

The FACULX W3103 is a versatile digital thermostat designed for precise temperature control in high-power heating applications. It features a wide temperature measurement range, multiple control functions, and flexible power input options.

2. SAFETY INFORMATION

WARNING: This device operates with high voltage (AC220V) and high power (5000W). Improper installation or use can result in electric shock, fire, or personal injury. Always follow safety guidelines and consult a qualified electrician if unsure.

- Ensure the power supply is disconnected before any installation, wiring, or maintenance.
- Do not operate the device in wet or damp environments.
- Verify all wiring connections are secure and correct according to the wiring diagram.
- Do not exceed the maximum current rating of 30A.
- Keep the device away from flammable materials.
- This product is not a toy. Keep out of reach of children.

3. PRODUCT OVERVIEW

The FACULX W3103 Digital Temperature Controller features a clear digital display, control buttons, and a remote temperature sensor for accurate readings.



Figure 3.1: Front view of the FACULX W3103 Digital Temperature Controller with its wired temperature sensor.

Key Components:

- **Digital Display:** Shows current temperature, set points, and operational status.
- **"Start Setting" Buttons (Up/Down Arrows):** Adjust the start temperature.
- **"Stop Setting" Buttons (Up/Down Arrows):** Adjust the stop temperature.
- **"SET" Button:** Enters setting mode and confirms selections.
- **Temperature Sensor:** External probe for accurate temperature measurement.
- **Wiring Terminals:** For power input and load output connections.

4. SPECIFICATIONS

Refer to the table below for detailed technical specifications of the FACULX W3103 (AC220V 5000W) model.

Size



Figure 4.1: Physical dimensions of the temperature controller (96mm x 70mm x 46mm).

Feature	Specification
Product Name	Digital Temperature Controller
Model	W3103
Input Voltage (Current Model)	AC 220V
Output Power (Current Model)	5000W (Max 30A)
Function Type	Temperature Control
Output Type	Voltage Output
Control Type	Position Control
Measurement Input	NTC10K / B3435 / L = 1 meter
Temperature Measurement Range	-50 °C to 110 °C
Temperature Control Range	-19 °C to 99 °C
Temperature Measurement Accuracy	± 0.2 °C
Control Accuracy	1 °C
Dimensions (L x W x H)	96 mm x 70 mm x 46 mm
Material	Plastic, Metal

5. SETUP AND INSTALLATION

Careful installation is crucial for the safe and effective operation of the temperature controller. Ensure power is disconnected before proceeding.

Product details



Figure 5.1: Detailed view of the controller's wiring terminals and display interface.

Wiring Instructions:

1. **Power Supply Connection:** Connect the AC 220V power supply to the designated input terminals. Refer to the diagram on the device for correct polarity and terminal identification.
2. **Load Connection:** Connect your heating device (load) to the output terminals. Ensure the load's power consumption does not exceed 5000W or 30A.
3. **Sensor Connection:** Plug the NTC temperature sensor into its dedicated port. The sensor cable length is 1 meter. Position the sensor in the area where temperature needs to be measured and controlled.
4. **Mounting:** Mount the controller in a suitable, dry location, away from direct heat sources or excessive moisture. Ensure adequate ventilation.

IMPORTANT: Double-check all wiring before applying power. Incorrect wiring can damage the device or connected equipment and poses a safety risk.

6. OPERATING INSTRUCTIONS

Once installed and powered on, the controller will display the current temperature. Follow these steps to set your desired temperature range.

AC220V



Figure 6.1: Controller display indicating AC220V power input and temperature readings.

Setting Temperature Parameters:

- 1. Power On:** Connect the device to the AC 220V power supply. The display will show the current temperature measured by the sensor.
- 2. Set Start Temperature:**
 - Press the "SET" button once. The "Start Setting" value will flash.
 - Use the "Start Setting" Up/Down arrow buttons to adjust the desired temperature at which the heating should activate.
 - Press "SET" again to confirm and move to the Stop Temperature setting, or wait a few seconds for it to auto-save.
- 3. Set Stop Temperature:**
 - After setting the Start Temperature, the "Stop Setting" value will flash.

- Use the "Stop Setting" Up/Down arrow buttons to adjust the desired temperature at which the heating should deactivate.
- Press "SET" again to confirm and exit setting mode, or wait a few seconds for it to auto-save.

The controller will now maintain the temperature within the set range. If the current temperature falls below the "Start Setting", the heating element will activate. If it rises above the "Stop Setting", the heating element will deactivate.

Advanced Functions (Intermittent Operation, Timed On/Off):

This model supports advanced functions like intermittent operation and timed on/off settings. Specific instructions for these modes are typically accessed by pressing and holding the "SET" button for several seconds to enter a parameter menu. Refer to the on-screen codes and a more detailed functional diagram (if available with the product packaging) for precise configuration of these advanced features.

7. MAINTENANCE

The FACULX W3103 is designed for reliable operation with minimal maintenance. Regular checks can help ensure its longevity and performance.

- **Cleaning:** Periodically wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Connections:** Annually inspect all wiring connections to ensure they are tight and free from corrosion.
- **Sensor:** Ensure the temperature sensor is clean and free from debris that could affect its accuracy. Do not bend or damage the sensor cable.
- **Ventilation:** Ensure the controller's ventilation openings are not obstructed to prevent overheating.

Always disconnect power before performing any maintenance.

8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Display is off	No power supply; incorrect wiring; blown fuse.	Check power connections; verify wiring; check circuit breaker/fuse.
Temperature reading is inaccurate	Sensor damaged or improperly placed; sensor cable faulty.	Inspect sensor and cable for damage; reposition sensor; replace sensor if damaged.
Heating device not turning on/off	Incorrect temperature settings; faulty wiring to load; load malfunction.	Verify Start/Stop temperature settings; check load wiring; test heating device independently.
Controller displays "HHH" or "LLL"	Temperature sensor open circuit (LLL) or short circuit (HHH); temperature out of range.	Check sensor connection; replace sensor if faulty; ensure operating within specified temperature range.

If the problem persists after attempting these solutions, please contact customer support.

9. WARRANTY AND SUPPORT

This product comes with a standard manufacturer's warranty. Please refer to the warranty card included with your purchase for specific terms and conditions, including the warranty period and coverage details.

For technical assistance, troubleshooting beyond this manual, or warranty claims, please contact your retailer or the manufacturer directly. Keep your purchase receipt and product model information handy when contacting support.

Manufacturer: FACULX

Model Number: W3103 (AC220V 5000W)