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## BN-LINK T9

# BN-LINK Digital Temperature Controller T9 User Manual

Model: T9

## 1. INTRODUCTION

Thank you for choosing the BN-LINK Digital Temperature Controller T9. This device is designed to precisely control temperature for various applications requiring both heating and cooling, such as reptile enclosures, aquariums, home brewing, seed germination, and fermentation. This manual provides detailed instructions for safe operation, setup, and maintenance to ensure optimal performance.

## 2. PRODUCT OVERVIEW

The BN-LINK T9 features a clear digital display, intuitive controls, and dual outlets for simultaneous heating and cooling device management. It includes a waterproof temperature probe for accurate readings.



Image 2.1: Front view of the BN-LINK Digital Temperature Controller T9, showing the digital display, control buttons, and power cord.

## 2.1 Key Components

- **Digital Display:** Shows current temperature and set temperature.
- **Control Buttons:** POWER, UP, DOWN, CF/ST (Celsius/Fahrenheit/Status), SET, CLR (Clear).
- **Heating Outlet:** Controls the heating device.
- **Cooling Outlet:** Controls the cooling device.
- **Temperature Probe:** Waterproof sensor for accurate temperature measurement.



Image 2.2: Close-up of the controller's digital display and control buttons, highlighting the Heating and Cooling indicator lights.



Image 2.3: Close-up of the side of the controller, showing the clearly labeled Heating and Cooling three-prong outlets.

### 3. SAFETY INFORMATION

Please read and understand all safety instructions before using this device. Failure to follow these instructions may result in electric shock, fire, or property damage.

- Ensure the total load connected to the controller does not exceed 15A/1875W.
- This device is designed for indoor use only.
- Do not immerse the controller unit in water or expose it to excessive moisture. The probe is waterproof, but the main unit is not.
- Always plug the controller into a grounded 125VAC 60Hz outlet.
- Do not disassemble or modify the device.
- Keep out of reach of children.
- In case of an overload, the power output and screen display will automatically cut off for protection.



Image 3.1: Diagram illustrating the overload protection feature and the independent control of heating and cooling devices.

### 4. PACKAGE CONTENTS

- 1 x BN-LINK Digital Temperature Controller T9
- 1 x Waterproof Temperature Probe (71 inch / 1.8m cord)

- 1 x User Manual

## 5. SETUP

Follow these steps to set up your temperature controller:

1. **Connect the Temperature Probe:** Insert the waterproof temperature probe into the designated port on the side of the controller. Ensure it is securely connected.
2. **Position the Probe:** Place the temperature probe in the environment where you need to monitor and control the temperature. For liquids, ensure the probe tip is fully submerged. For air, position it away from direct heat or cold sources. The probe includes a suction cup for easy placement.



Image 5.1: The waterproof temperature probe with its suction cup for secure placement.

3. **Plug in Devices:** Connect your heating device (e.g., heat mat, heater) to the outlet labeled 'HEATING' and your cooling device (e.g., fan, chiller) to the outlet labeled 'COOLING'.
4. **Power On:** Plug the controller's power cord into a standard 125VAC 60Hz electrical outlet. The display will illuminate, showing the current temperature.



Image 5.2: The BN-LINK T9 controller mounted on a wall, demonstrating its keyhole mounting feature for convenient placement.

## 6. OPERATING INSTRUCTIONS

The controller allows you to set a target temperature and define temperature differentials for both heating and cooling.

## 6.1 Button Functions

- **POWER:** Turns the unit on or off.
- **UP (▲):** Increases values or scrolls through options.
- **DOWN (▼):** Decreases values or scrolls through options.
- **CF/ST:** Toggles between Celsius and Fahrenheit display. Press and hold to view status parameters.
- **SET:** Enters setting mode or confirms a selection.
- **CLR:** Clears current settings or exits setting mode without saving changes.

## 6.2 Setting Temperature Unit (°C/°F)

Press the **CF/ST** button once to switch between Celsius (°C) and Fahrenheit (°F).

## 6.3 Setting Target Temperature (SV)

1. Press the **SET** button once. The 'SV' (Set Value) will flash on the display.
2. Use the **UP** or **DOWN** buttons to adjust the desired target temperature.
3. Press **SET** again to confirm and save the setting.

## 6.4 Advanced Settings (Differentials and Delay)

These settings allow you to customize how the heating and cooling cycles operate to prevent rapid cycling and maintain stable temperatures.

1. Press and hold the **SET** button for 3 seconds to enter advanced settings. The display will show 'Hd' (Heating Differential).
2. Use **UP** or **DOWN** to adjust the value for the current parameter.
3. Press **SET** to move to the next parameter. The parameters are:
  - **Hd (Heating Differential):** The temperature difference below the Set Value (SV) at which the heating device will turn on. For example, if SV is 70°F and Hd is 2°F, heating turns on at 68°F.
  - **Cd (Cooling Differential):** The temperature difference above the Set Value (SV) at which the cooling device will turn on. For example, if SV is 70°F and Cd is 2°F, cooling turns on at 72°F.
  - **PT (Protection Time Delay):** A delay (in minutes) before the heating or cooling output activates after the temperature crosses the threshold. This prevents short cycling of compressors or heaters.
4. After adjusting all desired parameters, press **SET** to cycle through them until the display returns to normal operation, or press **CLR** to exit without saving changes.

## 7. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your BN-LINK T9 controller.

- **Cleaning:** Wipe the controller unit with a dry, soft cloth. Do not use abrasive cleaners or immerse the unit in water.
- **Probe Care:** Regularly inspect the temperature probe for any signs of damage or corrosion. Clean the probe

tip gently if residue builds up, especially in aquatic or humid environments.

- **Storage:** When not in use, store the controller in a cool, dry place away from direct sunlight and extreme temperatures.

## 8. TROUBLESHOOTING

If you encounter issues with your BN-LINK T9 controller, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Display is off or blank.	No power; Overload protection activated.	Check power connection. Reduce total load if an overload occurred. Press POWER button.
Temperature reading is inaccurate.	Probe improperly placed; Damaged probe.	Ensure probe is correctly positioned and clean. Replace probe if damaged.
Heating/Cooling device not turning on.	Incorrect temperature settings (SV, Hd, Cd); Device not plugged in; Device malfunction.	Verify SV, Hd, and Cd settings. Ensure devices are securely plugged into correct outlets. Test devices independently. Check PT setting for delay.
Controller cycles too frequently.	Differential settings (Hd, Cd) are too small.	Increase the Hd and Cd values to allow for a wider temperature fluctuation before activation. Adjust PT for longer delays.

## 9. SPECIFICATIONS

Feature	Specification
Model Number	BNQ-T9
Voltage	125VAC, 60Hz
Max Loading	15A/1875W, 1/2HP, TV-5
Temperature Control Range	-40°F to 176°F (-40°C to 80°C)
Probe Measurement Range	-58°F to 230°F (-50°C to 110°C)
Temperature Accuracy	0.1°F / 0.1°C
Probe Cord Length	71 inches (1.8 meters)
Power Cord Length	71 inches (1.8 meters)
Product Dimensions	4.5 x 4.5 x 1.57 inches
Item Weight	1.48 pounds
Display Type	LCD
Material	Plastic

## Specification

125VAC, 60Hz, 1/2HP, TV-5  
Probe measurement range: -58°F~230°F/-50°C~110°C  
Temperature Control Range: -40°F~176°F/-40°C~80°C



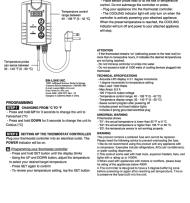
Image 9.1: Diagram showing the physical dimensions of the controller and the lengths of the power cord and sensor cable.

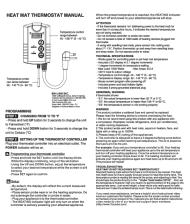
## 10. WARRANTY AND SUPPORT

BN-LINK products are designed for reliability and performance. For warranty information or technical support, please refer to the official BN-LINK website or contact their customer service. Keep your purchase receipt for warranty claims.

For more information, visit the [BN-LINK Store](#).

### Related Documents - T9

 <p>Please keep this handbook BN-LINK INC. 2501 Diamond Avant Model 12500 125th Street, Fremont, CA 94536 Phone: 800-234-1234 Fax: 510-252-1234 Email: <a href="mailto:info@bn-link.com">info@bn-link.com</a> Web: <a href="http://www.bn-link.com">www.bn-link.com</a> Design and Manufacture in China</p>	<p><a href="#">BN-LINK BNQ-T10 Temperature Controller User Manual and Guide</a></p> <p>Comprehensive guide for the BN-LINK BNQ-T10 Temperature Controller, detailing its features, ratings, operation, parameter settings, advanced configurations, and troubleshooting steps for precise temperature management.</p>
 <p>Please keep this handbook QANTARY PRODUCTS INC. 2501 Diamond Avant Model 12500 125th Street, Fremont, CA 94536 Phone: 800-234-1234 Fax: 510-252-1234 Email: <a href="mailto:info@bn-link.com">info@bn-link.com</a> Web: <a href="http://www.bn-link.com">www.bn-link.com</a> Design and Manufacture in China</p>	<p><a href="#">BN-LINK BNQ-T9 Digital Temperature Controller User Manual</a></p> <p>Comprehensive guide to the BN-LINK BNQ-T9 Digital Temperature Controller, covering product features, specifications, operation, settings, and troubleshooting for heating and cooling applications.</p>
 <p>COOLING THERMOSTAT MANUAL BN-LINK INC. 2501 Diamond Avant Model 12500 125th Street, Fremont, CA 94536 Phone: 800-234-1234 Fax: 510-252-1234 Email: <a href="mailto:info@bn-link.com">info@bn-link.com</a> Web: <a href="http://www.bn-link.com">www.bn-link.com</a> Design and Manufacture in China</p>	<p><a href="#">BN-LINK T7B Cooling Thermostat Controller Manual &amp; Setup Guide</a></p> <p>Comprehensive manual for the BN-LINK T7B Cooling Thermostat Controller. Learn how to set up, program, and troubleshoot your device for optimal temperature control. Features include LED display, 1000W capacity, and 120V operation.</p>

 <p><b>BN-LINK BNQ-T10WT Smart Temperature Controller Manual</b></p> <p>User manual for the BN-LINK BNQ-T10WT Smart Temperature Controller, detailing its features, installation, operation, and troubleshooting.</p>	
 <p><b>BN-LINK Heat Mat Thermostat Manual - Setup and Programming Guide</b></p> <p>Comprehensive manual for the BN-LINK Heat Mat Thermostat Controller. Learn how to set up, program, and troubleshoot your device for optimal temperature control of heat mats, aquariums, and more.</p>	
 <p><b>BN-LINK BNQ-T9 Digital Temperature Controller Specifications and Features</b></p> <p>Detailed information on the BN-LINK BNQ-T9 Digital Temperature Controller, including its function description, appearance, ratings, approvals, and packing specifications. This controller is designed for dual heating and cooling applications with a clear LED display and accurate temperature control.</p>	