Baomain BM-D702

Baomain D702 Programmable LCD Digital Thermostat User Manual

Model: BM-D702

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Baomain D702 Programmable LCD Digital Thermostat. This device is designed for controlling radiant floor heating systems in industrial, commercial, and residential environments. Please read this manual thoroughly before installation and use to ensure proper function and safety.

Safety Information

- Ensure power is disconnected at the main circuit breaker before installation or maintenance.
- Installation should be performed by a qualified electrician in accordance with local electrical codes.
- Do not expose the thermostat to water, excessive humidity, or corrosive environments.
- Operate the device only within the specified voltage range of AC 110-120V.
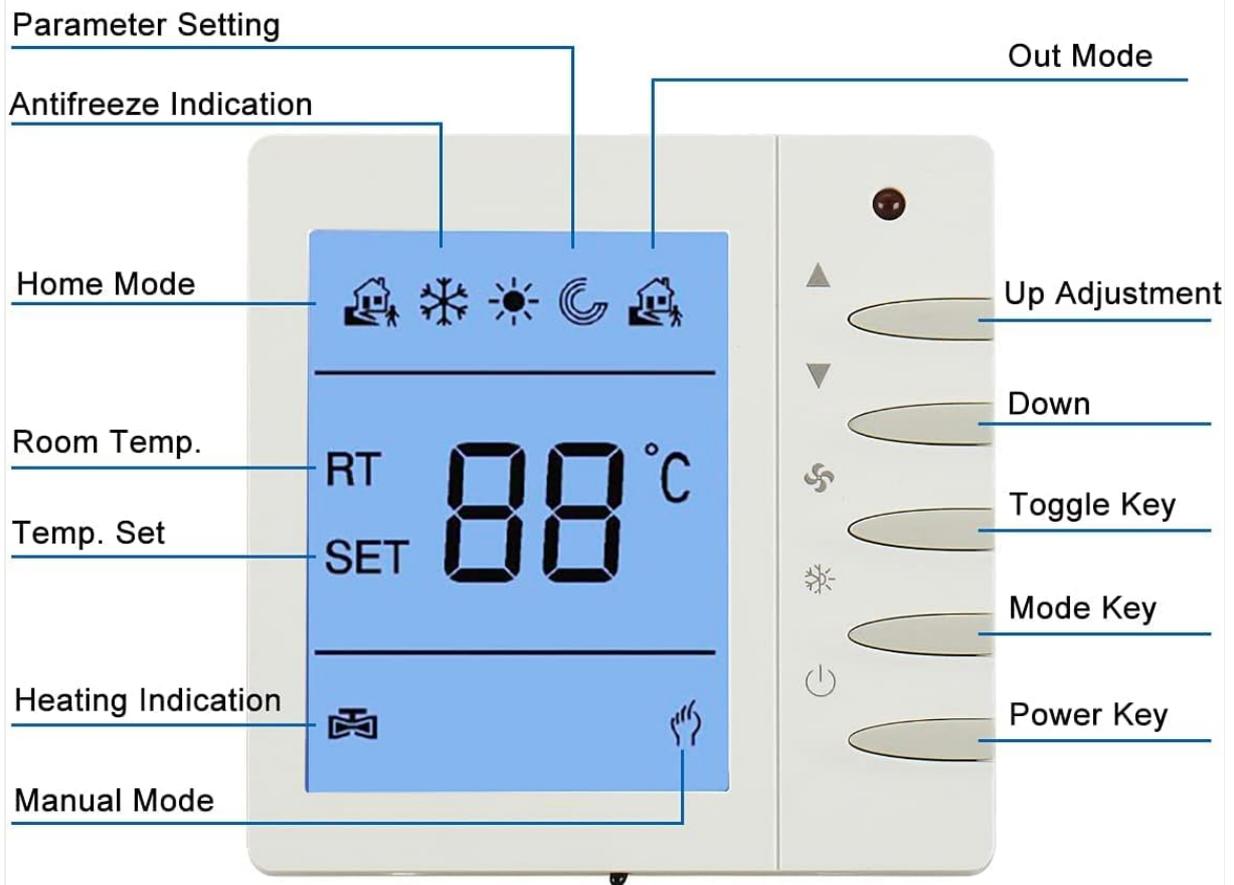
2. PRODUCT FEATURES

- Advanced electronic intelligent control technology with industrial-grade chip for strong anti-interference and high reliability.
- High-precision internal sensor for accurate and reliable temperature measurement.
- Intuitive touch button interface for setting various working modes.
- Durable housing constructed from anti-flammable PC and ABS materials.
- Clear LCD display with backlight for easy readability.
- Programmable functionality for customized heating schedules.
- Designed for concealed installation.
- Power Supply: 110V-120V AC, 50/60Hz.
- Power Consumption: Less than 2W.
- Output Signal: 0.3 mA.
- Temperature Control Accuracy: ±1℃.
- Ambient Temperature Display Accuracy: ±1℃.

3. PRODUCT OVERVIEW AND DISPLAY SYMBOLS

The Baomain D702 thermostat features an intuitive LCD display and touch buttons for easy control. Refer to the diagram below for an overview of the display symbols and button functions.

Display Symbols

Image Description: A diagram illustrating the Baomain D702 thermostat's LCD display and buttons, with labels pointing to each element. Key labels include Parameter Setting, Antifreeze Indication, Home Mode, Room Temp., Temp. Set, Heating Indication, Manual Mode, Out Mode, Up Adjustment, Down, Toggle Key, Mode Key, and Power Key.
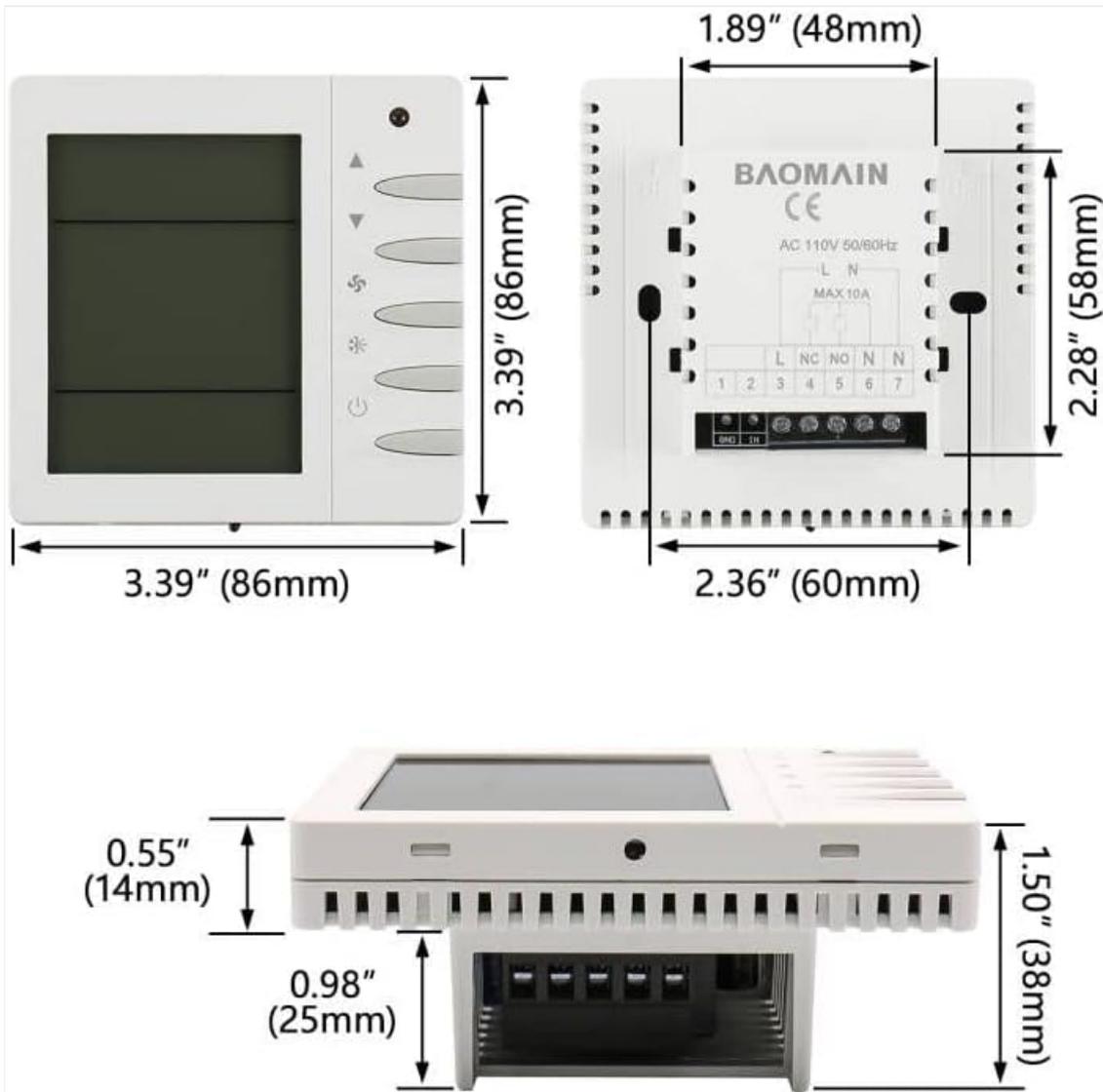
Display Symbols Explained

- **Parameter Setting:** Indicates the thermostat is in parameter adjustment mode.
- **Antifreeze Indication:** Activates when the antifreeze function is engaged to prevent freezing.
- **Home Mode:** Indicates the thermostat is operating in a pre-set home comfort mode.
- **Room Temp. (RT):** Displays the current ambient room temperature.
- **Temp. Set (SET):** Displays the target temperature set by the user.
- **Heating Indication:** Illuminates when the heating system is active.
- **Manual Mode:** Indicates the thermostat is operating in manual control mode.
- **Out Mode:** Indicates the thermostat is operating in an away or energy-saving mode.
- **Up Adjustment:** Button to increase temperature or navigate menu options.
- **Down Adjustment:** Button to decrease temperature or navigate menu options.
- **Toggle Key:** Button for switching between different settings or modes.
- **Mode Key:** Button to select operating modes (e.g., manual, programmed).
- **Power Key:** Button to turn the thermostat on or off.

4. INSTALLATION GUIDE

Proper installation is crucial for the safe and efficient operation of your thermostat. Ensure all power is disconnected at the circuit breaker before proceeding with installation.
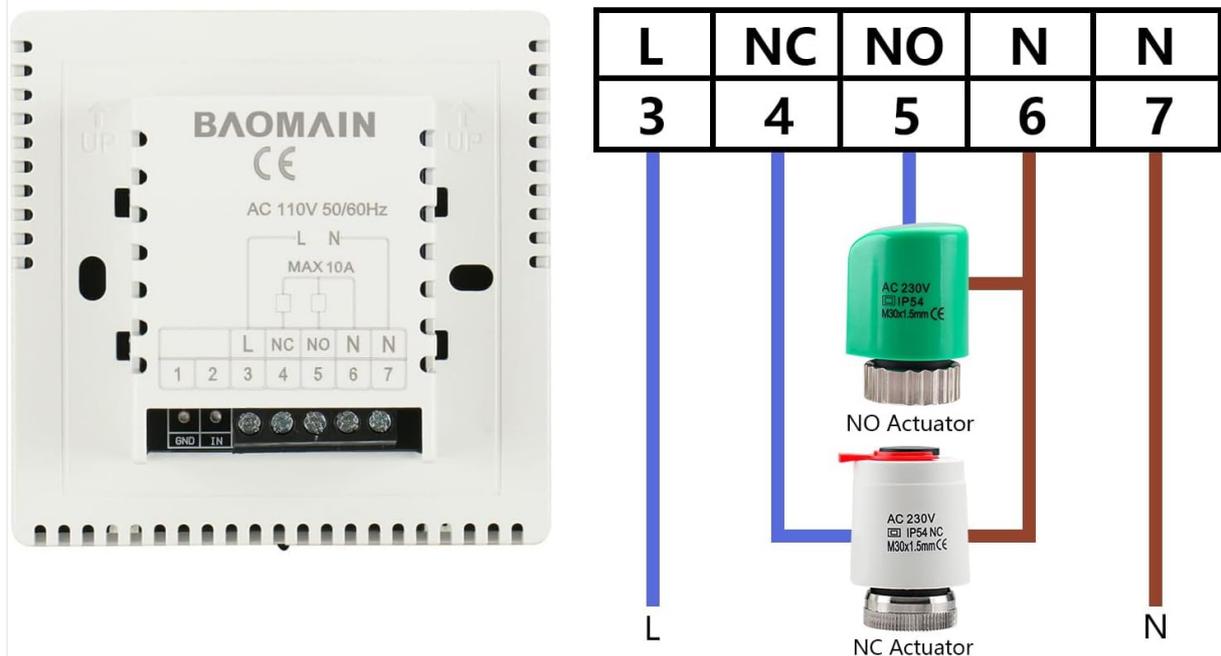
Dimensions

Image Description: A multi-view diagram showing the front, back, and side dimensions of the Baomain D702 thermostat. The front view shows a width and height of 3.39 inches (86mm). The back view shows a width of 2.36 inches (60mm) and a height of 2.28 inches (58mm) for the mounting plate, with a total depth of 1.89 inches (48mm). The side view shows a total depth of 1.50 inches (38mm) and a mounting depth of 0.98 inches (25mm).

Wiring Instructions

The thermostat is designed for concealed installation. Follow the wiring diagram carefully. Incorrect wiring can damage the thermostat or the heating system.

Wiring Diagram

Image Description: A wiring diagram for the Baomain D702 thermostat. It shows terminals labeled L (Live), NC (Normally Closed), NO (Normally Open), N (Neutral), and N (Neutral). The diagram illustrates connections for both Normally Open (NO) and Normally Closed (NC) actuators, with the Live (L) and Neutral (N) power supply connections.

1. **Step 1:** Turn off the main power supply to the heating system at the circuit breaker to prevent electrical shock.
2. **Step 2:** Carefully remove the front panel of the thermostat to access the wiring terminals.
3. **Step 3:** Connect the Live (L) wire from your AC 110-120V power supply to terminal 3 on the thermostat.
4. **Step 4:** Connect the Neutral (N) wire from your AC 110-120V power supply to terminal 6 or 7.
5. **Step 5:** Connect the heating load wires according to your specific heating system's actuator type:

    - For Normally Open (NO) actuators, connect the load wire to terminal 5.
    - For Normally Closed (NC) actuators, connect the load wire to terminal 4.

6. **Step 6:** Ensure all wiring connections are secure and properly insulated.
7. **Step 7:** Mount the thermostat base securely to the wall using appropriate screws.
8. **Step 8:** Carefully reattach the front panel to the thermostat base.
9. **Step 9:** Restore power to the heating system at the circuit breaker.

5. OPERATING INSTRUCTIONS

Power On/Off

Press the **Power Key** (indicated by a circle with a vertical line symbol) to turn the thermostat on or off.

Setting Temperature

In normal operating mode, use the **Up Adjustment** (triangle pointing up) and **Down Adjustment** (triangle pointing down) buttons to adjust the desired target temperature (SET). The display will show the new set temperature

temporarily before reverting to the current room temperature.

Mode Selection

Press the **Mode Key** (indicated by a fan symbol) to cycle through available operating modes, such as Home Mode, Out Mode, or Manual Mode. The active mode will be indicated on the LCD display.

Programming (General)

The thermostat supports various programmable modes for automated temperature control. To access programming settings, you may need to press and hold the **Mode Key** or **Toggle Key** for a few seconds to enter the programming menu. Follow the on-screen prompts and use the Up/Down adjustment buttons to set your desired schedules. Refer to the 'Parameter Setting' symbol for guidance when in programming mode.

Temperature Unit

Note:
This thermostat displays temperature in Celsius (°C) only. Fahrenheit (°F) is not an available setting on this model.

6. MAINTENANCE AND CARE

The Baomain D702 thermostat requires minimal maintenance to ensure long-term performance.

- **Cleaning:** Wipe the display and casing with a soft, dry, lint-free cloth. Do not use abrasive cleaners, solvents, or chemical sprays, as these can damage the surface or internal components.
- **Inspection:** Periodically check the wiring connections for tightness, especially after initial installation, to ensure secure electrical contact.
- **Power:** This thermostat is not battery-powered; it draws power directly from the AC 110-120V supply. No battery replacement is needed.

7. TROUBLESHOOTING COMMON ISSUES

If you encounter problems with your thermostat, refer to the table below for potential solutions.

Problem	Possible Cause	Solution
Thermostat does not power on	No power supply; incorrect wiring	Check the circuit breaker for the heating system; verify Live (L) and Neutral (N) wiring connections.
Heating system not responding	Incorrect wiring to heating load; thermostat in wrong mode	Verify NO/NC actuator wiring (terminals 4 or 5); ensure the thermostat is in an active heating mode.
Temperature reading inaccurate	Sensor obstruction; thermostat placement	Ensure the internal sensor is clear of obstructions; relocate the thermostat away from drafts, direct sunlight, or heat sources.
Cannot change temperature unit to Fahrenheit	Thermostat only supports Celsius	This model is designed to display temperature in Celsius (°C) only. Fahrenheit (°F) is not an available option.

If issues persist after attempting these solutions, it is recommended to contact a qualified technician for further assistance.

8. TECHNICAL SPECIFICATIONS

Feature	Specification
Model	BM-D702
Power Supply	110V-120V AC, 50/60Hz
Power Consumption	<2W
Output Signal	0.3 mA
Ambient Temperature Display Accuracy	±1℃
Temperature Control Accuracy	±1℃
Display	LCD
Installation Method	Concealed Installation
Material	Anti-flammable PC
Product Dimensions (W x H x D)	3.39" x 3.39" x 1.5" (86mm x 86mm x 38mm)
Item Weight	195 Grams (6.9 ounces)
Control Type	Touch Button
Mounting Type	Wall Mount
Backlight	Yes

9. WARRANTY AND CUSTOMER SUPPORT

For warranty information, technical assistance, or any product-related inquiries, please contact Baomain customer support through their official channels. It is recommended to keep your purchase receipt or proof of purchase for any warranty claims.