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Mi-Heat E51

Mi-Heat E51 Digital Room Thermostat User Manual

Model: E51

Brand: Mi-Heat

1. INTRODUCTION

The Mi-Heat E51 digital room thermostat is designed for precise temperature control of electric and water-based underfloor heating systems. It features a backlit display, a 7-day weekly programming function, and frost protection. The thermostat utilizes both an internal room sensor and an external floor sensor to maintain your desired temperature, ensuring comfort and energy efficiency.

Key Features:

- Backlit LCD Display
- Weekly Programmable (5/2, 6/1, or 7-day modes)
- Integrated Room Sensor and External Floor Sensor
- Display Calibration/Offset Function
- Frost Protection Function
- Key Lock / Child Lock

2. SAFETY INFORMATION

- Installation must be performed by a qualified electrician in accordance with local wiring regulations.
- Always disconnect power at the main circuit breaker before installation, maintenance, or removal of the thermostat.
- Do not expose the thermostat to moisture or extreme temperatures.
- Ensure all connections are secure to prevent electrical hazards.
- This device is designed for indoor use only.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Mi-Heat E51 Room Thermostat
- External Floor Sensor (NTC 10 kOhm with 2m lead)
- Mounting Screws
- User Manual



Figure 3.1: Mi-Heat E51 Thermostat and included accessories. The image shows the white thermostat unit, a coiled white floor sensor cable, two mounting screws, and a small instruction manual.

4. TECHNICAL SPECIFICATIONS

Feature	Specification
Mounting Type	Flush-mounted
Version	Wired

Feature	Specification
Operating Voltage	230 V
Max. Switching Power	16A / 3680 W
Control Type	Two-point control ON/OFF
Operating Temperature	5-50°C
Sensor	Internal and external, NTC with 2m lead
Temperature Control Range (Internal)	0-55°C (Room sensor)
Temperature Control Range (External)	5-55°C (Floor sensor)
Frost Protection	Yes
Floor Limit Range	5-50°C
Display/Backlight	Yes/Yes
Protection Class IP	IP21
Dimensions (WxHxD)	80x90x13/43mm

5. INSTALLATION

The Mi-Heat E51 thermostat is designed for flush-mounted installation in standard wall boxes. Ensure power is disconnected before proceeding.

5.1. Dimensions

ABMESSUNGEN | MEASUREMENTS



Figure 5.1: Detailed measurements of the Mi-Heat E51 thermostat and its components. The image shows the front view (8.6 cm width, 9 cm height, 6.5 cm display), side view (1.3 cm depth from wall, 4.3 cm total depth), and back view (5 cm width, 5 cm height for mounting). It also indicates the 3m length of the external floor sensor cable.

5.2. Wiring

Refer to the wiring diagram below for proper connection. The thermostat supports both electric underfloor heating and water-based underfloor heating (via an actuator).



Figure 5.2: Wiring diagram for the Mi-Heat E51 thermostat. The diagram illustrates connections for electric underfloor heating (top) and water-based underfloor heating with an actuator (bottom). It shows L (Live) and N (Neutral) inputs, and outputs for the heating element or actuator, along with the floor sensor connection.

Wiring Steps:

1. Ensure power is OFF at the main circuit breaker.
2. Connect the Live (L) and Neutral (N) power supply wires to the corresponding terminals on the thermostat.
3. Connect the heating element or actuator wires to the designated output terminals.
4. Connect the external floor sensor cable to the sensor terminals.
5. Carefully place the thermostat into the wall box and secure it with the provided screws.
6. Restore power and test the thermostat.



Figure 5.3: Rear view of the Mi-Heat E51 thermostat, showing the terminal block for electrical connections. The image highlights the various connection points for power input, heating output, and sensor input.

6. OPERATION

The Mi-Heat E51 thermostat features an intuitive interface with a backlit LCD display and several control buttons.

6.1. Display and Buttons Overview

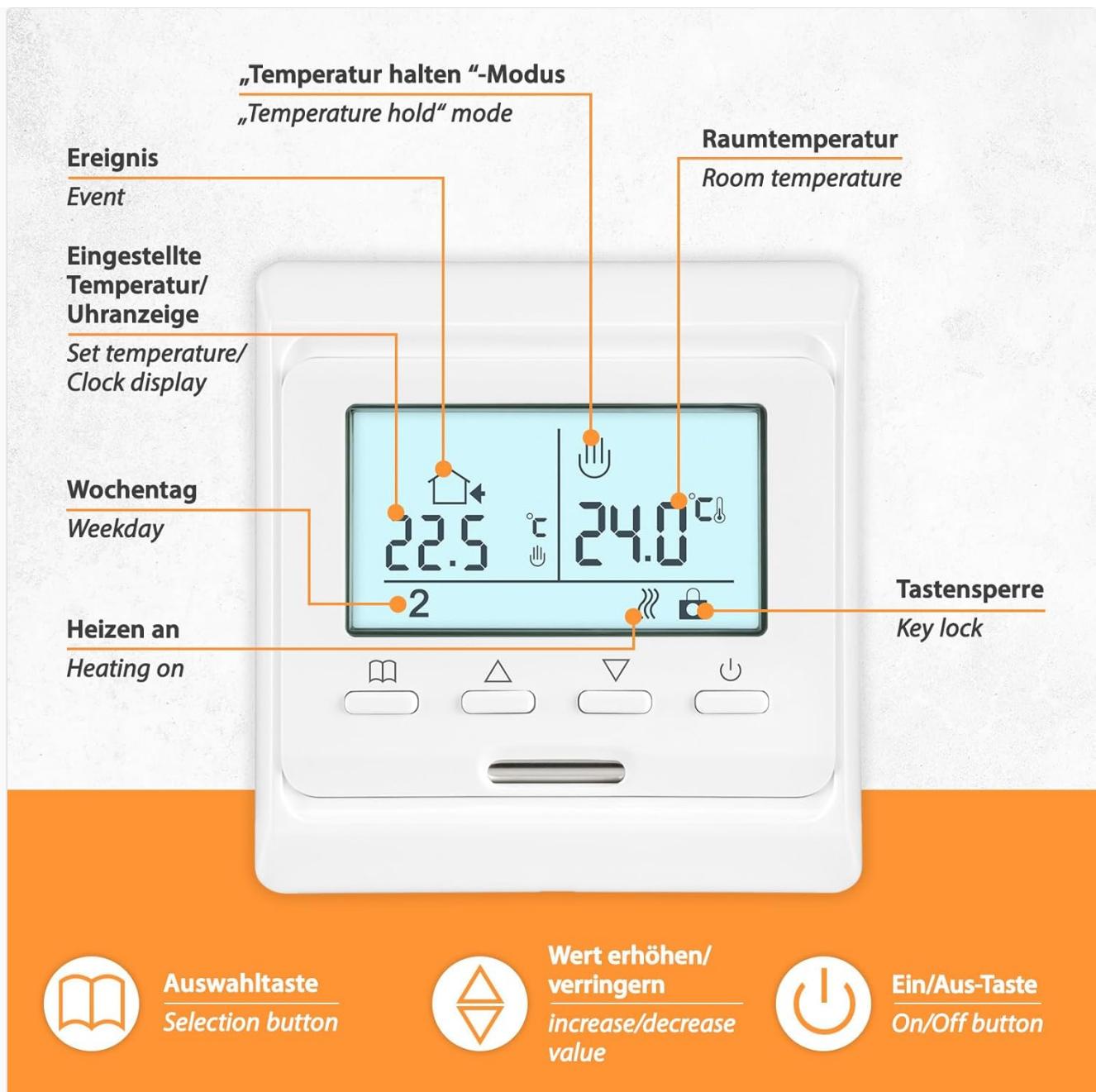


Figure 6.1: Overview of the Mi-Heat E51 thermostat display and button functions. Labels indicate the room temperature, set temperature, weekday, heating status, key lock, selection button, value increase/decrease buttons, and On/Off button.

Button Functions:

- **Selection Button (Book icon):** Used to enter menu, confirm settings, or switch modes.
- **Increase Value Button (Up arrow):** Used to increase temperature, time, or navigate menu options.
- **Decrease Value Button (Down arrow):** Used to decrease temperature, time, or navigate menu options.
- **On/Off Button (Power icon):** Turns the thermostat on or off.

6.2. Basic Operation

1. **Power On/Off:** Press the Power button to turn the thermostat on or off.
2. **Adjusting Temperature:** When the thermostat is on, use the Up/Down arrow buttons to adjust the desired set temperature.
3. **Key Lock / Child Lock:** To activate or deactivate the key lock, press and hold the Selection button for a few seconds until the key icon appears/disappears on the display.

6.3. Weekly Programming

The thermostat allows for 7-day weekly programming with options for 5/2 (weekday/weekend), 6/1 (6 days/1 day), or 7-day individual programming. This feature enables you to set different temperatures for various times of the day across the week.

WOCHENPROGRAMM
5+2 REGELBAR
WEEKLY PROGRAM
5+2 ADJUSTABLE





BEISPIEL FÜR DAS WOCHENPROGRAMM | EXAMPLE OF THE WEEKLY PROGRAMM

5+2 MODUS 5+2 MODE	EREIGNIS EVENT	☀	🏡→	🏡◀	🏡→	🏡◀	🌙
MONTAG BIS FREITAG MONDAY TO FRIDAY	ZEIT TIME	06:00	08:00	11:30	12:30	17:00	22:00
	TEMPERATUR TEMPERATURE	20°C	15°C	15°C	15°C	22°C	15°C
SAMSTAG UND SONNTAG SATURDAY AND SUNDAY	ZEIT TIME	08:00					23:00
	TEMPERATUR TEMPERATURE	22°C					15°C

Figure 6.2: Example of a 5+2 weekly program for the Mi-Heat E51 thermostat. The table shows programmed events and corresponding temperatures for Monday-Friday and Saturday-Sunday, with multiple time slots per day.

To set up weekly programming:

1. Press and hold the Selection button to enter the programming menu.
2. Use the Up/Down arrows to navigate through the programming options (e.g., 5/2, 6/1, 7-day mode, time settings, temperature settings for each event).
3. Press the Selection button to confirm each setting and move to the next.
4. Repeat for all desired time periods and days.
5. Exit the menu by pressing the Selection button until the main display reappears, or wait for it to time out.

6.4. Frost Protection Function

The frost protection function prevents the temperature from dropping below a set minimum (typically 5°C) to protect

pipes and the heating system from freezing. This function is active when the thermostat is in standby or when specifically enabled in the settings.



Figure 6.3: Overview of key features including Frost Protection, Key Lock, Weekly Programming, and Actual/Set Temperature Display. The image also indicates compatibility with both electric and water-based underfloor heating.

7. MAINTENANCE

The Mi-Heat E51 thermostat requires minimal maintenance.

- **Cleaning:** Wipe the display and casing with a soft, dry cloth. Do not use abrasive cleaners, solvents, or chemical sprays, as these can damage the surface.
- **Inspection:** Periodically check the thermostat for any visible damage or loose connections. If any issues are found, disconnect power and consult a qualified technician.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Thermostat not powering on	No power supply; Loose wiring; Blown fuse/tripped breaker	Check main power supply; Verify wiring connections; Check and reset circuit breaker/replace fuse.
Heating not turning on	Set temperature is below room/floor temperature; Thermostat in OFF mode; Wiring issue	Increase set temperature; Ensure thermostat is ON; Check wiring connections to heating system.
Inaccurate temperature reading	Sensor malfunction; Incorrect sensor type selected; Thermostat placed near heat source/draft	Check sensor connection; Verify sensor type in settings; Relocate thermostat if possible or use calibration function.
Display not working or flickering	Power fluctuation; Internal fault	Cycle power to the thermostat; If problem persists, contact support.
Cannot change settings (Key Lock active)	Key Lock / Child Lock is enabled	Press and hold the Selection button until the key icon disappears to deactivate the lock.

9. WARRANTY AND SUPPORT

For support or inquiries regarding your Mi-Heat E51 thermostat, please contact us Monday - Friday from 09:00 to 16:00. We offer support and shipping directly from Germany.

Refer to your purchase documentation or retailer for specific warranty details and terms.