

OPERATING INSTRUCTIONS

Digital Programmable Heating Thermostat

English translation. Technical values and terminology are retained from the provided source document.

Product Summary

This new heating thermostat is designed to meet market demand and features a large LCD display. It is easy to operate and provides a full range of functions. It can control a motorized ball valve, motorized valve, thermal valve, solenoid valve, heater, electric heating film, and carbon-crystal electric heating. It is intended for underfloor heating.

Technical Data

- Power supply: AC 200-240 V, 50/60 Hz
- Load current: 3 A (water heating); 12 A/16 A (electric heating)
- Accuracy: $\pm 0.5^{\circ}\text{C}$
- Temperature setting range: 5°C - 60°C
- Limit temperature range: 5 - 99°C
- Power consumption: $<0.3\text{ W}$
- Temperature sensor: NTC
- Size: 86 x 86 x 17 mm (H x W x D)

Functions

- Large touch LCD screen with blue backlight and dual-temperature display mode.
- Time display (minutes, hours, weeks).
- Programmable 6-period control-temperature setting.
- Selectable internal and external temperature sensor.
- Room-temperature display resolution is 0.5°C ; internal precision is 0.1°C .
- Temperature settings can be adjusted to meet the user's room-temperature requirements.
- Power-failure memory function protects settings during a power outage.
- Automatic room-temperature calibration function.

Button Description

No.	Button	Description
1	Power	On / off.
2	Mode	Switches between automatic/manual time-period control and temporary manual control. Press and hold to enter the time-period setting function.
3	Time	Time setting: hours, minutes and week.
4	Up	Higher temperature setting. Up + Mode / Up + Time increases a programmable parameter.
5	Down	Lower temperature setting. Down + Mode / Down + Time decreases a programmable parameter.

Functions and Their Symbols

- Manual control: temporary manual control while the symbol is flashing; automatic control when the symbol is not displayed.
- Heating: indicates that heating is active.
- Anti-freeze: indicates that the anti-freeze function is enabled.
- Morning wake-up: first time period.
- Morning departure: second time period.
- Return home at noon: third time period.
- Leave at noon: fourth time period.
- Return home at night: fifth time period.
- Night sleep: sixth time period.

Display / Operating Diagram

The source diagram identifies the following display and control areas:

Display / control area	Meaning
Manual setting	Manual-control status.
Cooling / Heating / Lock	Operating-status indicators.

Translated from the user-provided Polish manual

Display / control area	Meaning
Internal / room / external temperature	Temperature information shown by the thermostat.
Days 1-7	Day-of-week indication.
Time	Current time / time-setting field.
Time zone 1-6	Program period indication.
Lock setting	Keypad/setting lock indication.
Temperature setting	Set-temperature field.
Power / Mode / Time / Up / Down	Main control buttons.

Time and Time-Period Setting

1) Time setting

Press the Time key. When the time field (minute, hour, week) is displayed, press Up or Down to adjust the time.

2) Automatic temperature-control setting

Step 1 - Select the control cycle. Press the Mode key to display "Loop" (cycle control), then press the Up key:

- "12345" - Monday to Friday control mode.
- Press Up twice: "123456" - Monday to Saturday control mode.
- Press Up three times: "123456,7" - Monday to Sunday control mode.

Step 2 - Set the period time and temperature. When "12345", "123456" or "123456,7" is displayed, press Mode to enter the time-period temperature setting; press Time to enter the time-period time setting; use Up or Down to adjust. The settings are saved automatically.

Note: when the automatic-control symbol disappears, if necessary reset the temperature after automatic control by pressing Up or Down.

3) Modify the interval-time control setting

Press Mode first, then press Time to switch to the time option and modify the time-period time.

Programming the Time Periods

Touch version: with the controller switched off, first press the Time key and then the Power key to enter advanced settings; then press Mode to select the advanced options.

Button version: with the controller switched off, first press the Down key and then the Power key to enter advanced settings; then press Mode to select the advanced options.

Period	No.	Default time	Default period temperature
Weekdays	1	06:00	20°C
Weekdays	2	08:00	15°C
Weekdays	3	11:30	15°C
Weekdays	4	12:30	15°C
Weekdays	5	17:30	22°C
Weekdays	6	22:00	15°C
Saturday and Sunday	1	08:00	22°C
Saturday and Sunday	2	23:00	15°C

1. The factory default temperature for time periods 3 and 4 is the same as for period 2. Change the default temperature if required.

2. If the temperature setting is "00", that time period is disabled.

3. View the external temperature (floor temperature)

(1) Touch-screen version: when internal control temperature and external limit temperature (high-temperature protection) are used, with the power on first press and hold the Time button, then press the Power button at the same time to switch to and display the external temperature. The time/temperature display area shows the OUT TEMP value. Press the Time button to display the room temperature.

(2) Button version: when internal control temperature and external limit temperature (high-temperature protection) are used, with the power on first press and hold the Mode button, then press the Power button at the same time to switch to and display the external temperature. The time/temperature display area shows the OUT TEMP value. Press the Mode button to display the room temperature.

Advanced Settings (recommended to be handled by a technician)

(1) Touch-screen version: with the controller switched off, press the Time key and then the Power key to enter the advanced settings.

(2) Button version: with the controller switched off, press the Down key and then the Power key to enter the advanced settings.

No.	Symbol	Setting item	Parameter-setting function	Factory setting
1	SEN	Sensor control option	0: internal sensor 1: external sensor 2: internal control temperature + external limit temperature	0: internal sensor
2	OSV	External-sensor temperature limit	5-99°C	42°C
3	dIF	Return difference for external-sensor temperature limit	1-9°C	2°C
4	SVH	Upper temperature limit	5-99°C	35°C
5	SVL	Lower temperature limit	5-99°C	5°C
6	AdJ	Measured temperature	Measure temperature; check calibration	0.1°C calibration precision (actual temperature)
7	FrE	Anti-freeze function	00: anti-freeze off 01: anti-freeze on	00: anti-freeze off
8	POn	Power-on memory	00: power on - no memory 01: power on - memory	00: power on - no memory
9	FAC	Factory settings	08: display (no other function) 00: restore factory settings	08

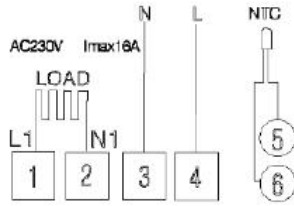
Note - hysteresis (return temperature): the default external-sensor temperature limit (OSV) is 42°C and the external-sensor temperature-limit hysteresis (dIF) is 2°C. When the temperature reaches 44°C, the relay output stops. When the temperature drops to 40°C, the relay output resumes and heating starts again (operation occurs when the room temperature is lower than the set temperature).

Sensor Fault Indication

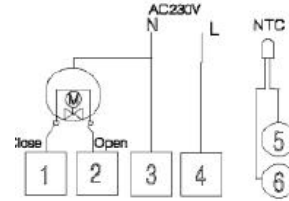
Select the correct operating mode for the internal/external sensor. If the wrong option is selected or the sensor is damaged (fault), the LCD displays "Err" and the temperature controller stops heating until the fault is removed.

Installation cable recommendation: for water heating, use a rigid conductor of 1.5-2.5 mm²; for electric heating, use a rigid conductor above 2.5 mm².

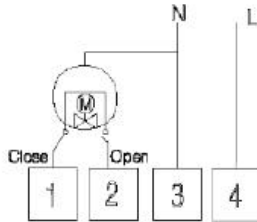
Power / Wiring Diagrams



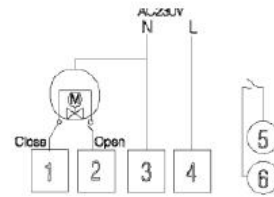
Electric-heating wiring diagram



Water-heating wiring diagram (disconnects after the valve closes)



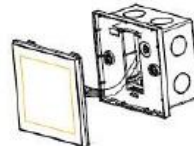
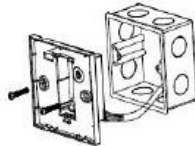
Water-heating diagram without an external sensor (disconnects after the valve closes)



Water-heating connection diagram without contact (disconnects after the valve closes)

Controller Installation

Warning: wiring must be carried out according to the electrical diagram. Avoid contact with water, plaster or other contaminants; otherwise the thermostat may be damaged.



1	Open the main control panel using a 3.5 mm flat screwdriver. Pry gently to open the panel.
2	Connect the rear panel and power supply. Wire according to the diagram and fasten the rear panel to the flush box with an M4 screw.
3	Arrange/connect the wires so that the front panel can be fitted and removed.
4	Hang the panel at an angle of about 30° on the two hooks, press the two lower corners and push the panel into place. Installation is complete.

Dimensions

Dimensions are shown in millimetres in the source drawing.

