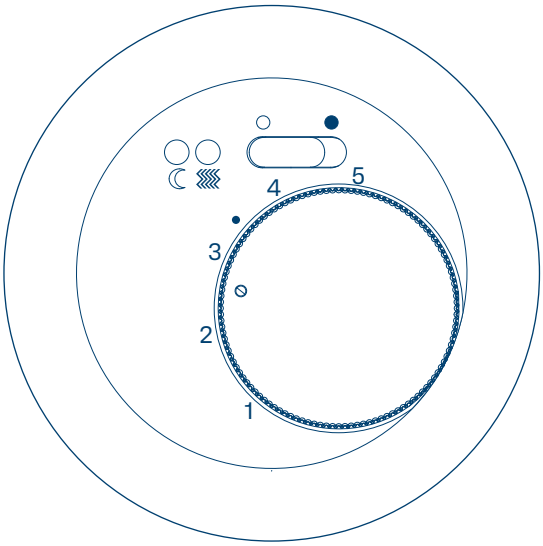
Operating and installation instructions

Switch ranges

Temperature controller



Floor temperature thermostat, change-over contact with rocker switch

WLN5034xx

CE

hager

EN

1 Safety instructions

Electrical devices may only be installed and assembled by a qualified electrician in accordance with the relevant installation standards, guidelines, regulations, directives, and safety and accident prevention regulations of the country of installation.

Failure to comply with these installation instructions may result in damage to the device, fire or other dangers.

2 Design and layout of the device

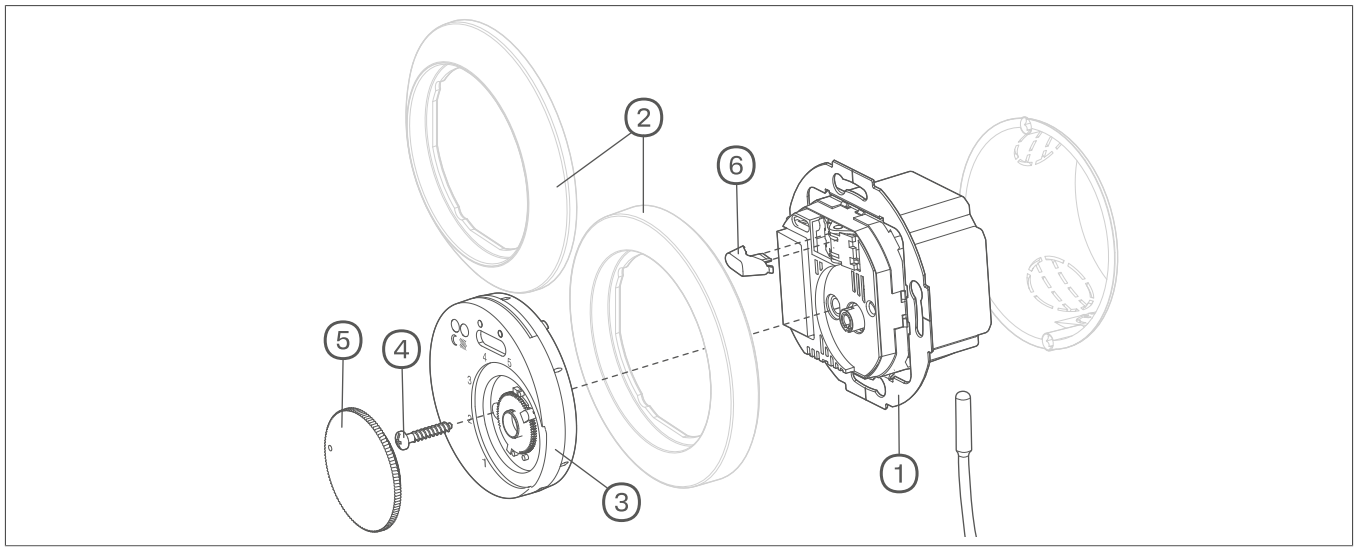


Fig. 1: Design and layout of the device

1. Thermostat module
2. Cover frame Serie 1930/R.classic (not included)
3. Centre piece with scale
4. Fastening screw
5. Setting knob
6. Rocker for ON/OFF switch

3 Function

The thermostat is used to control electrically-controlled underfloor heating and floor temperature systems.

The thermostat for underfloor heating consists of a control device and an external temperature sensor.

- External temperature sensor to measure the floor temperature
- Control device to set the desired setpoint

If the room temperature falls below the setpoint, then the bi-metal contact closes the heating load circuit until the desired temperature is reached. The control LED (8) lights up.

Note

If the temperature sensor fails or short circuits, the heating circuit is interrupted.

Temperature lowering ◴:

The time-controlled change-over from day to night temperature can be carried out using an external time switch. This reduces the set temperature by approx. 5°C. When the temperature reduction is active, the control LED (7) lights up.

Note

When the on/off switch (9) is in the ◴ position, the room thermostat is inactive.

3.1 Intended use

- For indoor floor temperature control.
- Measurement of floor temperature with an external temperature sensor (included)
- Only suitable for indoor applications
- Installation into wall box according to DIN 49075

4 Operation

Setting the floor temperature

The scale is used for visual orientation when setting the temperature.

Number	1	2	3	4	5
Temperature [°C]	10	20	30	40	50

Table 1: Setting values of the setting knob

- Use the setting knob (5) to continuously adjust the floor temperature according to the scale on the centre plate.

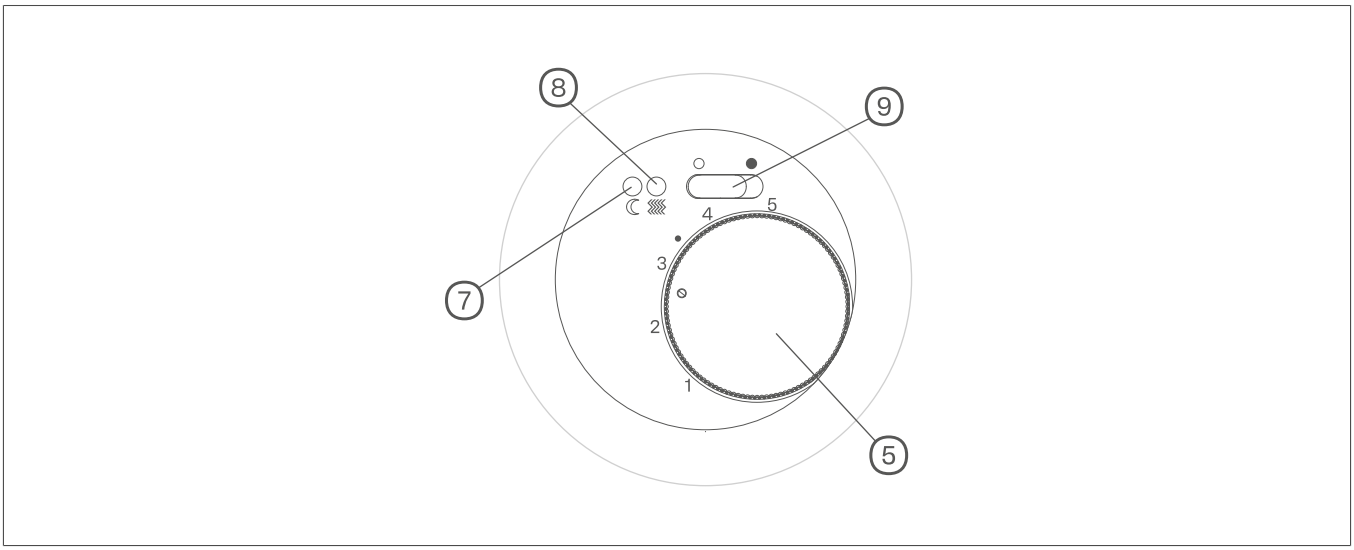


Fig. 2: Control elements

(5) Setting knob
(7) Green control LED, night-time mode
(8) Red control LED, heating
(9) On/off switch

5 Information for qualified electricians

5.1 Installation and electrical connection

Danger

Electric shock when live parts are touched!

An electric shock can lead to death!

- Disconnect all connection cables before working on the device and cover any live parts in the area!

Connection and installation of the device

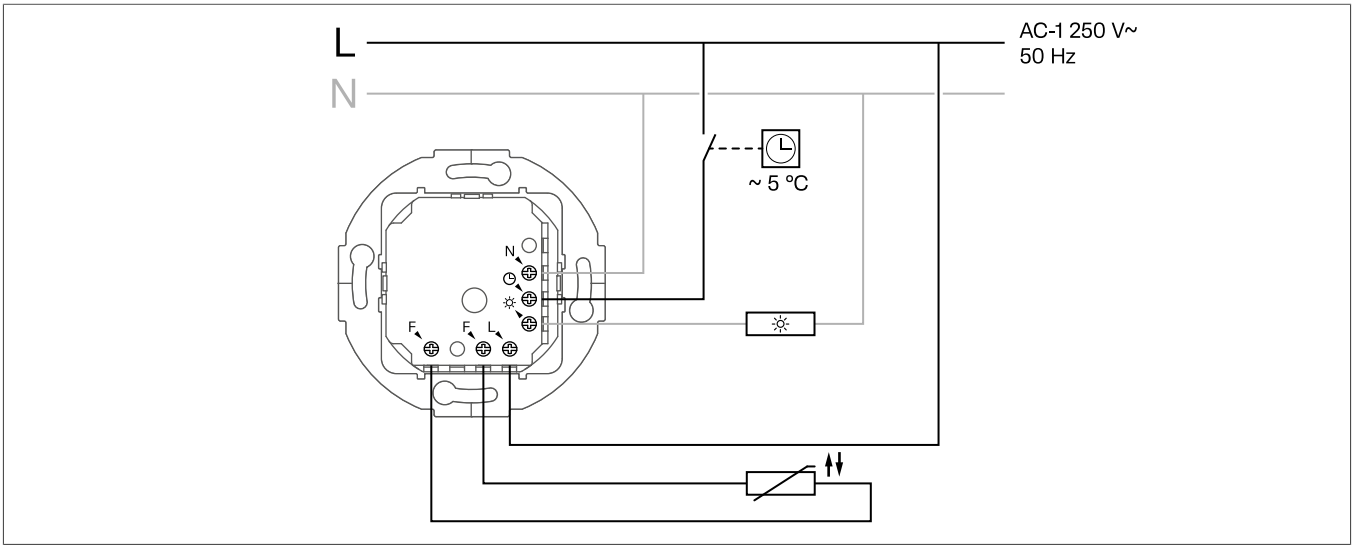


Fig. 3: Connection diagram

L	Outer conductor (phase)
N	Neutral conductor
F	External temperature sensor, neutral pole
	Temperature lowering
	Load connection, heating

Installing the temperature sensor

1. Pass the temperature sensor in the protection tube between two heating loops in the floor.
2. Close the protection tube as protection against the ingress of moisture and dirt.

Note

An extension of the connection cable of the temperature is only approved with doubled insulation, in accordance with EN 60730-2-1.

Installing the thermostat

1. Connect the controller (1) according to the connection diagram (Fig. 3).
2. Insert the rocker (6) into the upper slot of the on/off switch (9) (Fig. 1).
3. Position the centre piece (3) correctly over the cover frame (2) and secure it using the fastening screw (4).
4. Attach the setting knob (5).

Note

Mains voltage is present on the temperature sensor during operation.

Do not exceed an approved relative humidity of max. 95%. Avoid condensation.

Serie 1930

Integration into the Serie 1930 is only possible using 1-gang frames with Ø a 58 mm cut-out (WTD3191xx). Installation in multiple-gang combinations is not possible.

5.2 Commissioning

Note

The bi-metal element in the controller requires a certain amount of time to adjust itself to the room temperature. For this reason, the switching point will deviate from the room temperature directly after installation. Switching point accuracy will only occur after approx. 1 to 2 operating hours.

Limiting the setting range

The temperature setting range can be limited individually using two setting rings under the setting knob.

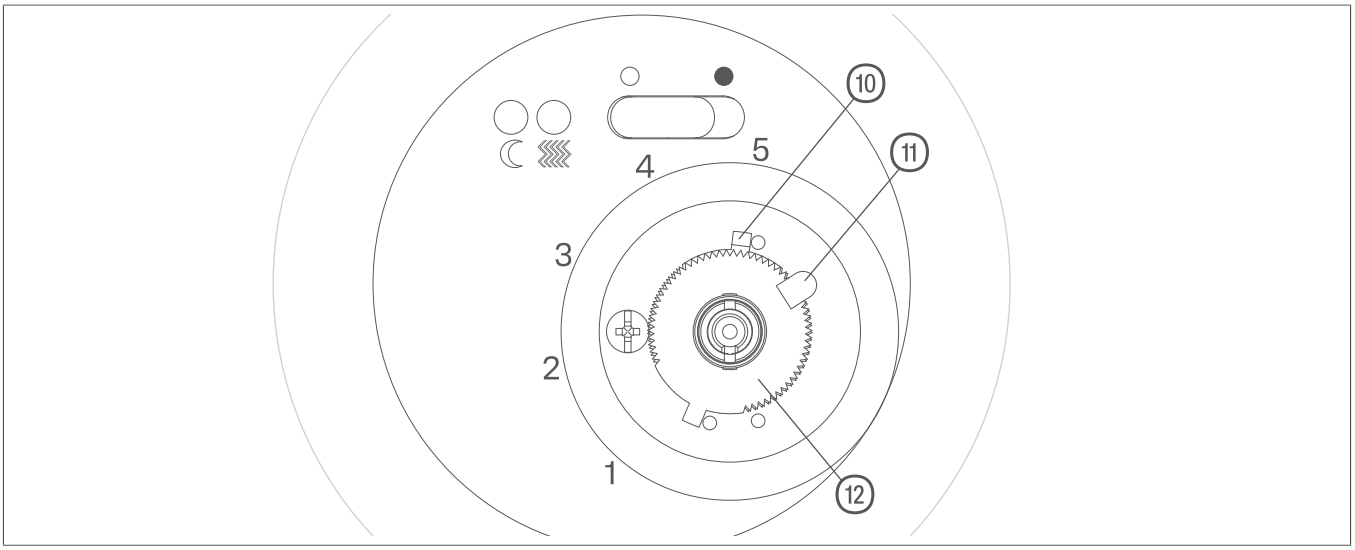


Fig. 4: Limiting the setting range on the centre piece

⑩ Setting ring, maximum temperature (red)
⑪ Locking pin
⑫ Setting ring, minimum temperature (blue)

Note

It is not necessary to switch off the mains voltage to limit the temperature range.

1. Remove the setting knob (5).
2. Pull out the locking pin (11) so that the setting rings can be moved freely against each other.
3. To set the maximum setpoint, turn the red setting ring (10) in an anti-clockwise direction into the required position.
4. To set the minimum setpoint, turn the blue setting ring (12) in a clockwise direction into the required position.
5. Push in the locking pin up to the stop.

   The setting rings are locked again.
6. Attach the setting knob. When doing this, ensure that the nose on the rotation axis is guided into the appropriate cut-out in the holder of the controller.

   The floor temperature can be adjusted within the permitted setting range.

Note

In the as-delivered state, the maximum setting range of the room thermostat (+10 ... +50 °C) is enabled.

6 Appendix

6.1 Technical data

Thermostat

Operating voltage	AC-1 250 V~, 50 Hz
Switching current	16 (2) A
Adjustment range	
– Floor temperature	+10 ... +50°C
– Room temperature	+5 ... +30°C
Night selection	approx. 5 °C
Operating temperature	0 ... +40°C
Storage temperature	-20 ... +70°C
Switching difference temperature	approx. 1 K
Output	Relay, 1 S
Pollution degree	2
Relative humidity	0 ... 95 % (without condensation)
Degree of protection	IP30
Protection class (when fully assembled)	II
Voltage & current for EMC emission test	230 V/50 Hz
Rated surge voltage	4 kV
Action type	1 C
Software class(es) and structure	Class A
Temperature of the ball pressure test	125 °C
Screw terminal connections	
– Single stranded	0.5 … 2.5 mm^2
– Finely stranded with conductor sleeve	0.5 … 2.5 mm^2

External temperature sensor according to DIN 44574

Cable length - extendable with 0.5 mm^2	Approx. 4 m Max. 50 m
Sensor head (length x Ø)	approx. 28 x 7.7 mm
Type	NTC, HF-8/4-K2

Temperature [°C]	Resistor [kΩ]
10	3.66
20	2.43
25	2.00
30	1.65
40	1.15
50	0.82

Table 2: Sensor characteristics

Note

The resistance values (Tab. 2) can only be measured when the sensor is disconnected.

6.2 Disposal note

Correct disposal of this product (electrical waste).

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its documentation indicates that it should not be disposed of with other household waste at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this device from other types of waste. Recycle the device responsibly to promote the sustainable reuse of material resources.

Household users should contact either the dealer where they purchased this product, or their local government office, for details of where and how they can take this device for environmentally safe disposal.

Commercial users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial waste for disposal.

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