

Operating instructions

Room thermostat insert
Art. no. 1790RTR



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Product image non-binding

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1 Safety instructions

To avoid potential damage, read and follow the following instructions:



Electrical devices may be mounted and connected only by electrically skilled persons.

Danger of electric shock. Always disconnect before carrying out work on the device or load. In so doing, take all the circuit breakers into account, which support dangerous voltages to the device and or load.

Danger of electric shock. A connected remote sensor is connected to mains potential. Only use the remote sensor listed under accessories or a remote sensor with double/reinforced insulation and mains voltage suitability.

Replace remote sensor with damaged insulation immediately.

Instructions are part of the product, so keep them in a safe place.

2 Intended use

- Switching of electric underfloor heating systems and electrothermal valve drives
- Operation with room thermostat cover from the systems LB management and JUNG HOME
- Operation with KNX RF push-button
- Mounting in appliance box with dimensions according to DIN 49073

3 Product characteristics

- Output signal: pulse width modulation (PWM) or two-point control (on/off)
- Enables connection of a remote sensor (accessory)
- The **TEST** button can be used for adapting to other remote sensors
- **TEST** button for switching without cover
- Input for switching to cooling mode
- Overheating protection: Forced switch-off after 60 minutes

4 Information for electrically skilled persons



DANGER!

Electric shock when live parts are touched.

Electric shocks can be fatal.

Always disconnect device before carrying out work on it. To do so, switch off all corresponding circuit breakers, secure them against being switched on again and check that there is no voltage. Cover up any adjacent live parts.

Connecting and fitting the device

Recommended installation height: 1.50 m.

- i** When using the integrated temperature sensor of the cover: Do not mount near sources of interference, such as electric cookers, refrigerators, draughts or direct sunlight. This influences the temperature measurement of the cover.

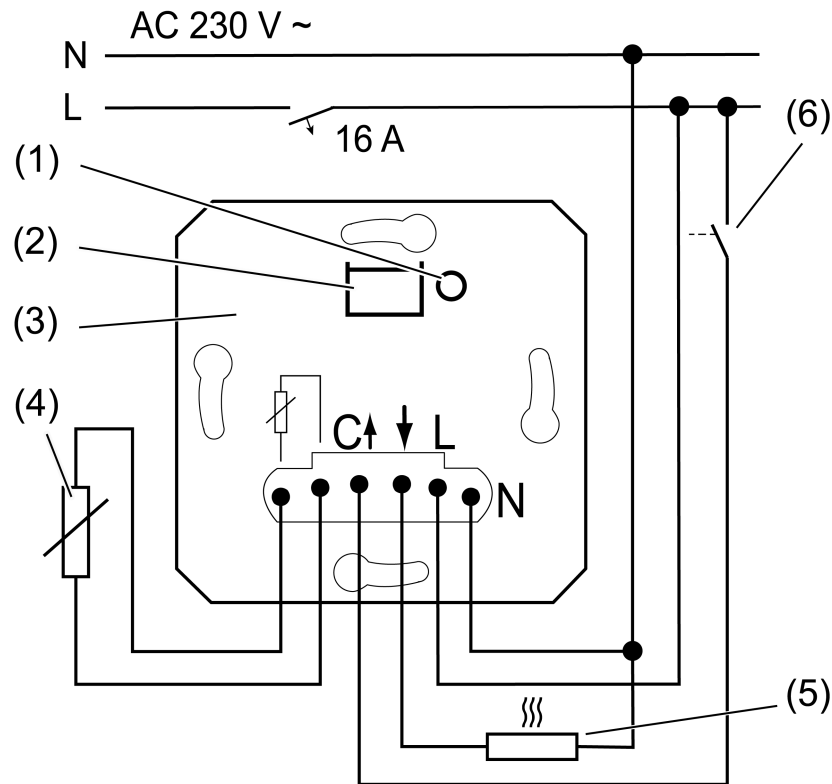


Figure 1: Connection example of the insert

- (1) Button **TEST**
 - (2) Cover interface with LED
 - (3) Insert
 - (4) Remote sensor for external temperature measurement
 - (5) Electric underfloor heating or electrothermal valve drive
 - (6) Switching contact for switching to cooling mode (optional)
- Connect insert (3) according to the connection diagram (see figure 1).
 - Optionally connecting external remote sensor (4) (accessory).
 - Install insert in appliance box, device connection terminals must be at the bottom.
 - Attach the frame and the cover.
 - Switch on mains voltage.
- i** By briefly pressing the button **TEST** (1), the load can be switched. LED (2) lights up when the load is switched on.
- i** If 230 V is applied to input C, cooling mode is active.

- i** The insert works exclusively with the KNX RF push-button and room thermostat covers. All other covers are without function.

Adapting insert to remote sensor (V03 - 10/2025)

If a remote sensor with a resistance varying from 33 k Ω at 25°C is to be used, an adjustment must be made to the insert.

We recommend using the VDE-tested remote sensor listed under accessories.

- If a remote sensor other than the recommended one is used, it must be checked for sufficient insulation.
- Press the **TEST** button (1) for more than 4 seconds.
The LED indicates the current resistance value via a flashing pattern (repeated flashing interrupted by a one-second pause), see table.
- Briefly release the **TEST** button (1) and then briefly press it repeatedly until the flashing pattern corresponds to the required resistance value.
The set value is automatically saved after 30 seconds or after pressing the **TEST** button (1) again for approx. 4 seconds. When the LED goes out, the saving process was successful.

Flashing pattern	Resistance value
Flash 1 time	10 k Ω
Flash 2 times	12 k Ω
Flash 3 times	15 k Ω
Flash 4 times	33 k Ω (default setting)
Flash 5 times	47 k Ω

5 Technical data

Rated voltage	AC 230 V ~
Mains frequency	50 / 60 Hz
Switching current	Max. 16 A (AC1)
Connected load	Max. 3600 W
Standby load depending on the cover	approx. 0.1 ... 0.5 W
Ambient temperature	-5 ... +45 °C
Installation depth	24 μ m
Clampable conductor cross-section (see figure 2)	

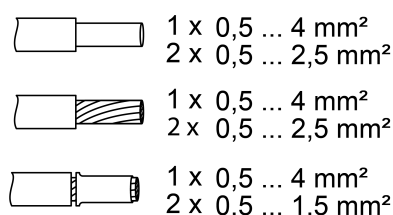


Figure 2: Clampable conductor cross-section

6 Accessories

External temperature sensor
Thermal valve drive 230 V

Art. no. FFNTC
Art. no. TSA230NCWW

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