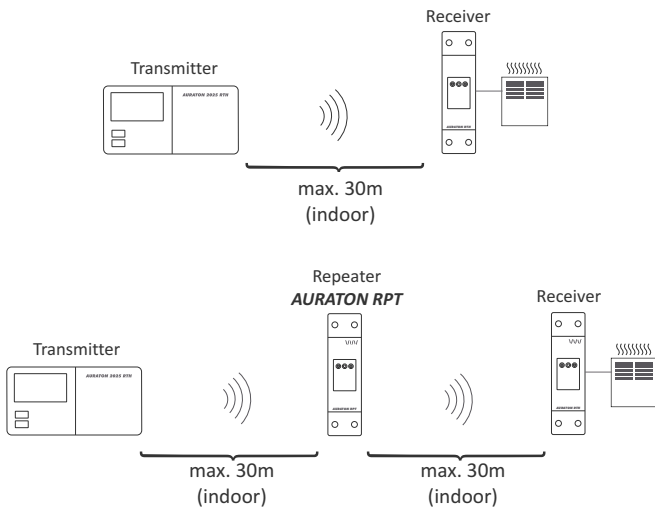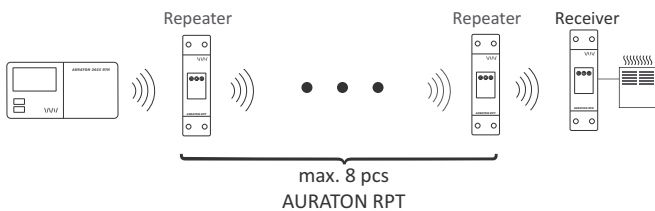## Principles of operation of the AURATON RPT

The AURATON RPT repeated is a device that repeats the signal emitted by a transmitter to the receiver, without any modification of the signal, in order to increase the range of the transmitter's radio transmission range.
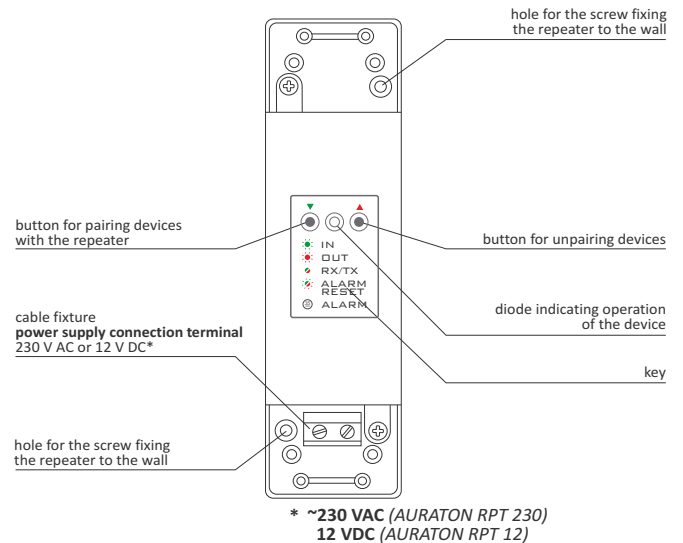
This is done, *for example, in manufacturing buildings where the receiver is out of the transmitter's range or in multi-floor buildings where thick walls hinder transmission between the transmitter and the receiver.*

Transmitter — Receiver

max. 30m
(indoor)

Transmitter — Repeater *AURATON RPT* — Receiver

max. 30m
(indoor)

max. 30m
(indoor)

It is possible to build chains consisting of up to 8 repeaters. Each AURATON RPT repeater automatically receives the signal from another repeater and forwards it without any additional user settings.

Repeater — Repeater — Receiver

max. 8 pcs
AURATON RPT

Description of the AURATON RPT 230/12 repeater

hole for the screw fixing the repeater to the wall

button for pairing devices with the repeater

IN
OUT
RX/TX
ALARM
RESET
ALARM

button for unpairing devices

diode indicating operation of the device

key

cable fixture
power supply connection terminal
230 V AC or 12 V DC*

hole for the screw fixing the repeater to the wall

* ~230 VAC *(AURATON RPT 230)*
12 VDC *(AURATON RPT 12)*

Key - description of diode signaling

IN — **Green continuous light** – the repeater is waiting for a data packet.
Green blinking light – the repeater is waiting for device pairing - *(chapter: "Pairing of LMS devices with the AURATON RPT repeater").*

OUT — **Red blinking light** – the repeater is waiting for a device to unpair - *(rozdział: „chapter: "Unpairing of devices from the AURATON RPT repeater"").*

RX/TX — **Alternating red and green light for 1-2 seconds** – the repeater receives/sends a data packet.

ALARM RESET — **Alternating red and green light**:

ALARM - the repeater's connection with one of the paired devices is broken. If AURATON RPT does not receive a data packet from a paired device for 35 minutes, then it indicates this with alternating red and greed diode light.

RESET - the repeater unpairs all the previously paired devices - *(chapter: "RESET - Unpairing all devices paired with the AURATON RPT repeater")*

## Fastening the AURATON RPT repeater.

NOTE: When installing the AURATON RPT repeater its power supply must be disconnected. It is recommended that the installation is performed by a qualified specialist.

NOTE: The permanent electrical system of a building must include a breaker and an overcurrent protection.
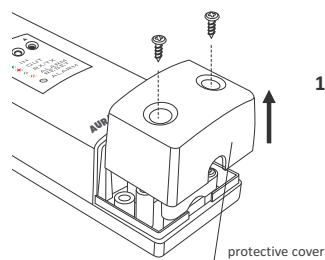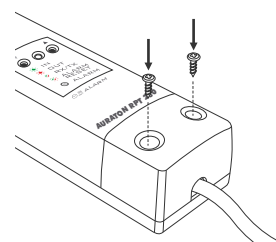

1. Take off protective covers from the lower and upper part of the *AURATON RPT* .

protective cover
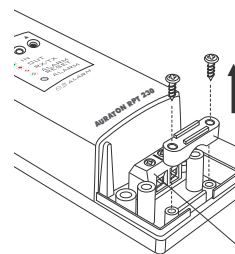
2. Take off cable tie clamps from the lower and upper part of the *AURATON RPT*.

cable tie clamp

3. Connect power supply conductors to the **power supply terminals** of the *AURATON RPT*, observing safety rules

4. After connecting the conductors, they must be secured with the cable tie clamps and reinstall protective covers of the *AURATON RPT* .

Fastening the RPT reapeater to the wall

To fasten the AURATON RPT to the wall:

1) Remove protective covers from the lower and upper part of the regulator.
2) On the wall, mark the location of holes for fastening screws.
3) In marked places, drill holes of a diameter corresponding to the bundled wall plugs (5 mm).
4) Insert wall plugs into the drilled holes.
5) Screw in the RPT repeater to the wall with screws, making sure they hold the receiver securely.

hole for fastening
the receiver to the wall with a screw

hole for fastening
the receiver to the wall with a screw
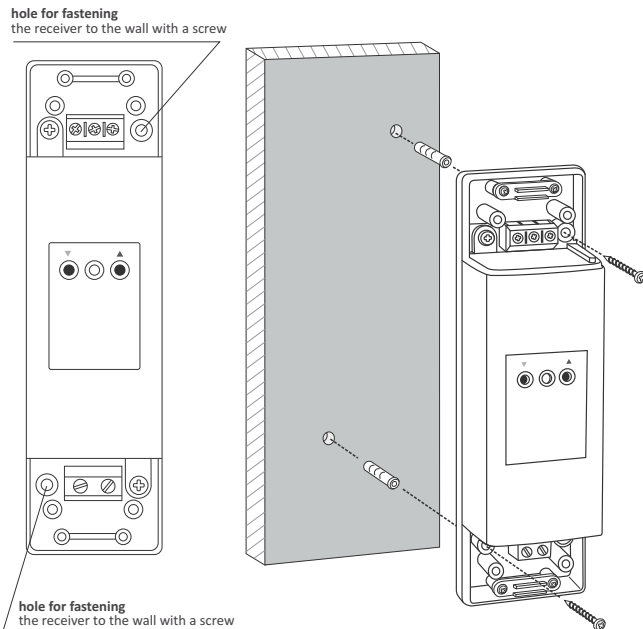
NOTE: If the wall is wooden, there is no need to use wall plugs. In such a case, drill two holes 2.7 mm in diameter instead of 5 mm, and screw the screws directly into the wood.

NOTE: The *RPT* repeater cannot be placed in metal containers (e.g. an assembly box, a metal enclosure of a heater) in order to not to interfere with its operation.

Pairing of an LMS device to several repeaters "chain" operation

It is possible to build chains consisting of up to 8 repeaters.

Repeater   Repeater   Receiver

max. 8 pcs
AURATON RPT

In such a case, the LMS device (e.g. AURATON 2025 RTH) must be paired to only the nearest AURATON RPT repeater.

Every other AURATON RPT repeater automatically receives the signal from the previous repeater and forwards it without any additional user settings.

Pairing of LMS devices with the AURATON RPT repeater

NOTE: **An LMS device (e.g. the AURATON 2025 RHT - a transmitter) must first be paired with a receiver (e.g. AURATON RTH) and only then with the AURATON RPT repeater.**
(The detailed instruction for pairing transmitters to receivers is supplied with each device separately.)

1. **Pairing of the AURATON RPT** repeater with an LMS device (e.g. AURATON 2025 RTH or T-1 RTH thermostats) is initiated by pressing the left pairing button (green triangle - ▼) on the AURATON RPT repeater and holding it for at least 2 s until the LED diode starts blinking green - then the button must be released.
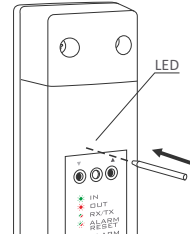
   The AURATON RPT repeater waits for pairing for 120 seconds. After this period, it automatically returns to normal operation.

2. When the LED diode on the repeater blinks green, press the "pairing button" on the device to be paired and hold it for at least 2 seconds (a detailed pairing instruction is supplied with each LMS device).

3. Successful pairing is indicated by the LED diode on the AURATON RPT repeater no longer blinking green and the repeater switching to normal operation.

In the event of a pairing error, steps 1 and 2 must be repeated. If more errors occur, all devices must be unpaired by RESETTING the AURATON RPT repeater (see "RESET - Unpairing all devices paired with the AURATON RPT repeater") and try pairing the devices again.

NOTE:
One AURATON RPT repeated can be paired to several LMS devices (max. 64).

Unpairing devices from the AURATON RPT repeater
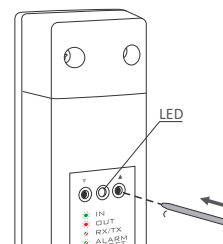
1. Unpairing of a device from the AURATON RPT repeater is initiated by pressing the right unpairing button (red triangle - ▲) on the repeater and holding it for at least 2 seconds until the LED diode starts blinking red - then the button must be released.

   The repeater waits to be unpaired for 120 seconds. After this period, it automatically returns to normal operation.

2. When the LED diode of the AURATON RPT repeater blinks red, press the "pairing button" on the device to be unpaired and hold it for at least 2 seconds (a detailed unpairing instruction is supplied with each LMS device).

3. Successful unpairing is indicated by the LED diode no longer blinking red and the repeater switching to normal operation.

   In the event of an error, steps 1 and 2 must be repeated.
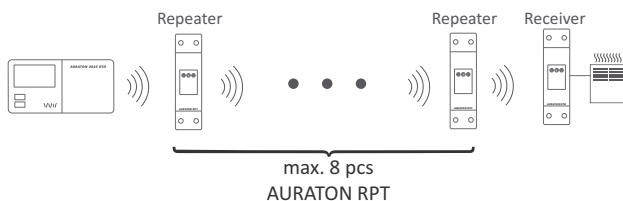
## RESET - Unpairing all devices paired with the AURATON RPT repeater

In order to unpair all devices paired with the repeater, simultaneously press and hold both pairing and unpairing buttons (▼ and ▲) for at least 5 seconds, until the LED diode starts blinking green and red alternately.

Then release both buttons.

Successful unpairing of all devices is signalized after about 2 seconds by the diode color changing to green and then switching off.
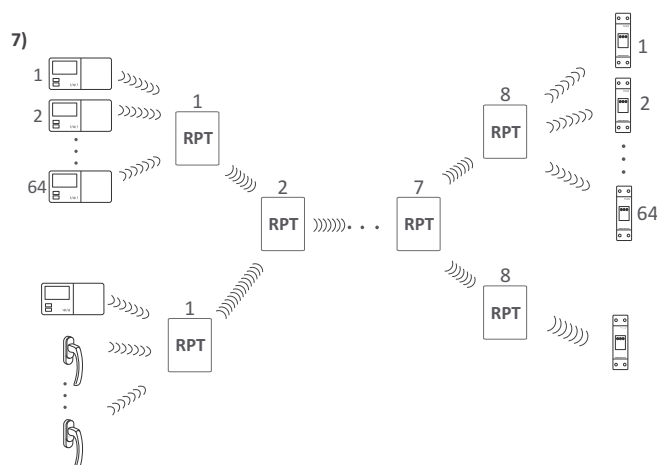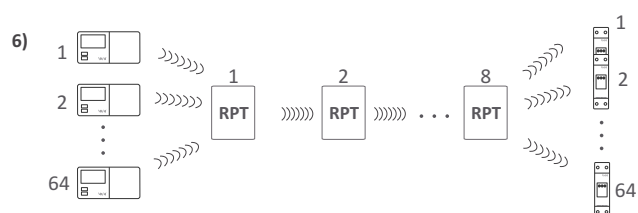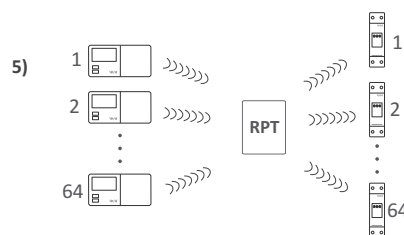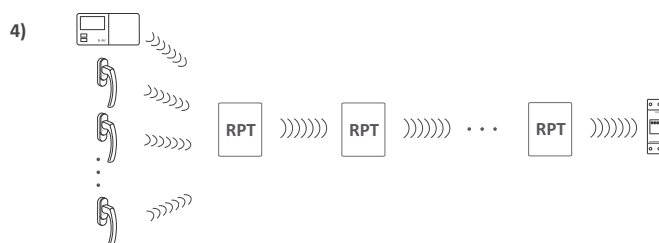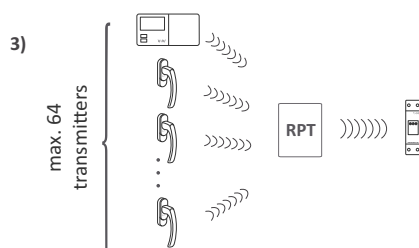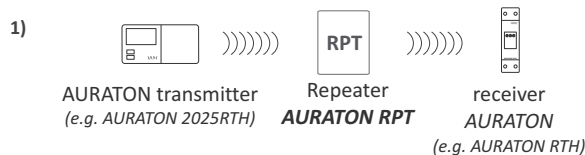
Signaling of operation and receipt of data packets

Each receipt of radio transmission by the AURATON RPT repeater is signaled by the LED diode instantaneously changing its color to orange.

Additional information and notes

- During power failures, the AURATON RPT repeater switches off. After power supply is restored, the repeater waits for a signal from the paired transmitters (it should receive the signal no later than 5 minutes after power supply is restored). After the AURATON RPT repeater receives the signal, it switches to normal operation.

- If a receiver is within the range of the transmitter and to a repeater paired with the transmitter, then the receiver receives only one data packet - the one from the transmitter, because that packet is sent a little faster. This situation can take place, for instance when the transmitter's signal received by the receiver is weak and the AURATON RPT repeater is used so as to ensure regular transmission. The receiver may then receive packets of different signal strength from the transmitter and from the repeater. In such a situation, variable signal strength is a normal situation.

- Never place the AURATON RPT repeater in metal enclosures (e.g. installation box, metal furnace enclosures) as they hinder the operation of the repeater.

Technical data

Operation status control:	LED diodes
Power supply *AURATON RPT 230*	230 VAC, 50Hz
Power supply *AURATON RPT 12*	12VDC
Radio frequency *RPT*:	868MHz
Operating range *RPT*:	in a regular building with standard wall structures - approx. 30 m| in an open area - up to 300 m

Disposing of the devices

The devices are marked with the crossed waste bin symbol. According to European Directive no. 2002/96/EU and the Act concerning used up electric and electronic equipment, such a marking indicates that this equipment may not be placed with other household generated waste.

The user is responsible for delivering the devices to a reception point for used-up electric and electronic equipment.

CE

Examples of configurations

1)

AURATON transmitter
(e.g. AURATON 2025RTH)

Repeater
AURATON RPT

receiver
AURATON
(e.g. AURATON RTH)

2)

max. 8 repeaters

3)

max. 64 transmitters

4)

5)

6)

7)