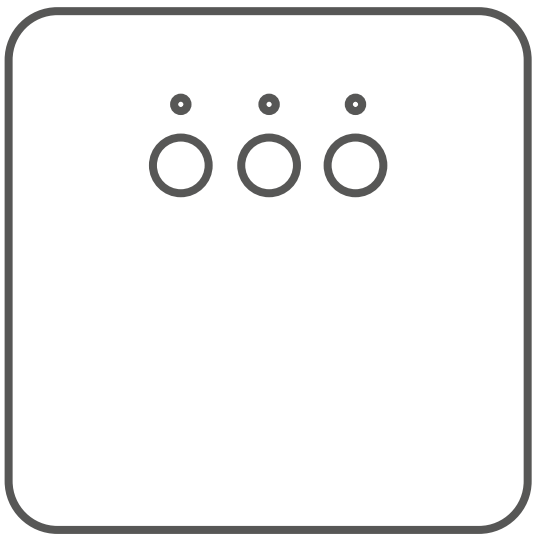
AURATON RT



EN **OWNER'S MANUAL**

CE

www.auraton.pl

AURATON RT

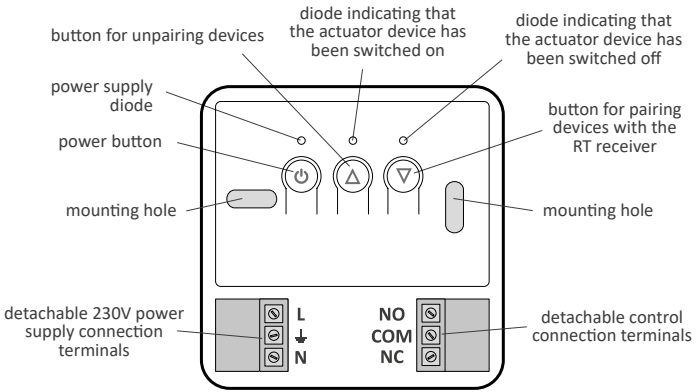
16A **Operation under the load of up to 16A/10A**
The AURATON RT receiver is equipped with a relay capable of operating with the load of up to 16A/10A. Its low-sparking technique of switching mains voltage contributes to the low wear of relay contacts.

Interference-free communication between devices
The transmitter and the receiver from the AURATON R25 RT set communicate at the frequency of 868 MHz. Very short, encrypted data transmission packets (approx. 0.004 s) ensure very efficient and interference-free operation of the device.

LED
LED's diode indicates the operation mode status of the controller.

Description of the AURATON RT receiver

The AURATON RT receiver works with the wireless AURATON R25 RT controller. The received is installed near the heating or air conditioning device and may work with the load of 16A/10A.



Legend - description of LED signalling

OFF **The LED light's green** – the output device is off (the contacts COM and NC are closed).

ON **The LED light's red** – the output device is on (the contacts COM and NO are closed).

IN **The LED flashes green** – the RT receiver awaits the device to be paired *(chapter: "Pairing the AURATON R25 RT wireless regulator and the RT receiver").*

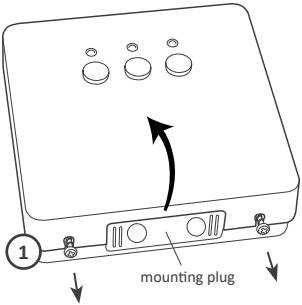
OUT **The LED flashes red** – the RT receiver awaits the device to be deregistered *(chapter: "Deregistering the regulator from the RT receiver").*

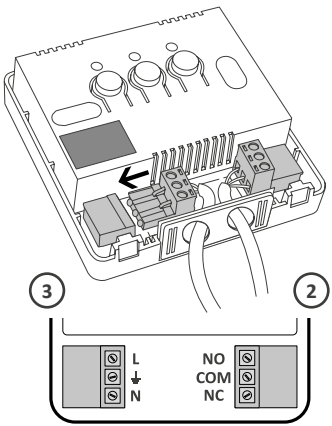
ALARM RESET **The LED flashes alternating red and green:**

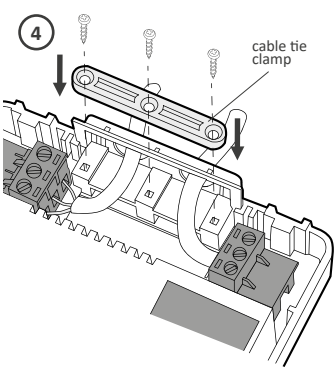
ALARM - the RT receiver has lost connection with one of the paired devices *(chapter "Special situations").*
RESET - receiver deregisters all previously paired devices *(chapter "Deregistering all devices paired with the RT receiver").*

Green power supply diode – the RT receiver is switched on.

Installation of the AURATON RT receiver







CAUTION! The cables delivered in a set together with the controller are suitable for maximum loads equal to 2.5 A.
If devices with higher power are connected, the cables should be replaced with ones of appropriate cross-sections.

NOTE: When installing an AURATON RT receiver, make sure that the power supply is switched off. The receiver should be installed by a professional.

NOTE: In the permanent system of the building there must be a switch and an overcurrent protection.

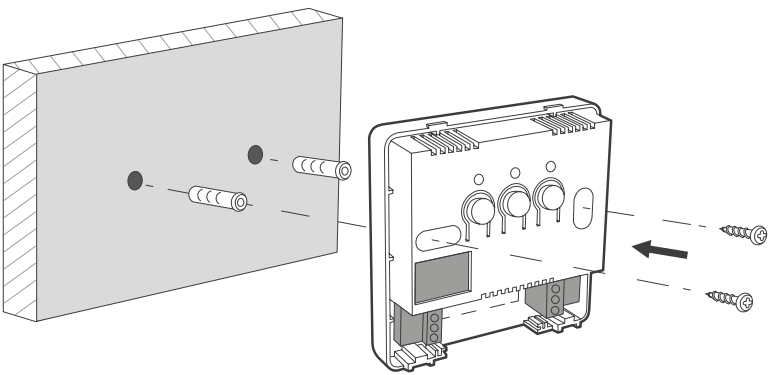
NOTE: In order to facilitate installation, the terminals are fitted with extendable clamps. Before cable connections are made, they can be disconnected from the controllers. The cables may be routed from the bottom of the receiver by breaking out holes in the mounting cover or from the back of the receiver if the cables are extended from the wall. In order to connect the cables from the back, the cover must be broken out.

1. Take off the cover of the front part of the AURATON RT receiver by unscrewing the screws half way out.
2. Connect the heating device to the terminals of the control connection of the AURATON RT receiver. Follow the service instruction of the heating device. The COM (common) and NO (normally opened) terminals are used the most often.
3. Connect the power supply cables to the terminals of the power supply connection of the AURATON RT receiver, in observance of safety rules.
4. After the cables are connected, they must be fixed with the “cable fastening holder” and the covers must be screwed back to the AURATON RT receiver.

Fastening the AURATON RT receiver to a wall

In order to fasten the AURATON RT receiver on a wall:

1. Take off the covers from the front part of the controller *(see chapter "Installation of the AURATON RT receiver").*
2. Mark the location of the holes for the fastening screws on the wall.
3. In the marked locations, drill holes with diameters appropriate for the diameters of the enclosed wall plugs (5 mm).
4. Put the wall plugs in the drilled holes.
5. Fasten the AURATON RT receiver to the wall using screws so that the receiver is well fastened.



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 RT receiver 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 the wireless AURATON R25 RT controller with the AURATON RT receiver

After the receiver is connected to the network, the receiver must be switched on by quickly pressing the power button (⏻). If the device is switched on, the green power supply diode becomes illuminated and a single sound signal is emitted. In order to switch off the receiver, e.g. outside of the heating season, press the power button and hold it for 3 seconds until a double sound signal is audible and the green power supply diode is switched off and, consequently, the heating device is switched off.

NOTE: If the wireless controller AURATON R25 RT is sold together with the AURATON RT receiver, the two devices are factory-paired. Devices purchased separately must be paired.

1. Pairing of the AURATON R25 RT controller with the AURATON RT receiver is initiated by pressing the right pairing button (green triangle ▽) - a single sound signal is emitted - on the AURATON RT receiver and by holding it pressed for at least 3 s until the LED diode starts blinking with green light (double sound signal) - then the button must be released.

   The AURATON RT receiver waits for pairing for 120 seconds. After this period, it automatically returns to normal operation.
2. On the AURATON R25 RT, the PROG button must be pressed for 5 seconds until the transmission symbol (((•))) is illuminated on the display. Release the button - the controller emits the pairing signal for 5 seconds.
3. Successful end of pairing is indicated by the LED diode on the AURATON RT receiver no longer blinking green, emission of a single sound signal, and the receiver 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 RT receiver (see „RESET - Unpairing all devices paired with the AURATON RT receiver") and then an attempt must be made to pair the devices again.

NOTE: Only 1 temperature controller may be paired with one receiver.

Unpairing of the controller and the RT receiver

1. Unpairing of the AURATON R25 RT controller from the AURATON RT receiver is initiated by pressing the left unpairing button (red triangle - △) on the receiver and holding it for at least 3 seconds until the LED diode starts blinking red - then the button must be released. The sound signal works in the same way as during pairing, i.e. when a button is pressed, a short sound is emitted and another short sound signal after 3 seconds.

The AURATON RT receiver waits for unpairing of the device for 120 seconds. After this period, it automatically returns to normal operation.

1. On the AURATON R25 RT, the PROG button must be pressed for 5 seconds until the transmission symbol (((•))) is illuminated on the display. Release the button.
2. Successful unpairing is indicated by the LED diode on the AURATON RT receiver no longer blinking red, emission of a single sound signal, and the receiver switching to normal operation.

In the event of an unpairing error, steps 1 and 2 must be repeated. If more errors occur, all devices must be unpaired (see „RESET - Unpairing all devices paired with the AURATON RT receiver").

RESET - Unpairing all devices paired with the AURATON RT receiver

In order to unpair all devices paired with the AURATON RT receiver, simultaneously press and hold both the pairing and the unpairing button (▽ and △) for at least 5 seconds, until the LED diode starts blinking green and red alternately. Then release both buttons. Sound signal: when the button is pressed, a short sound signal is emitted, followed by another short signal 5 seconds later.

Successful completion of unpairing of all devices is signalized after about 2 seconds by the diode color changing to green and then switching off for a short time.

NOTE: If the power supply of the AURATON RT receiver is switched off and then switched on after the RESET, the receiver automatically goes into the "pairing" mode for 120 seconds. A newly purchased (separately from the controller) AURATON RT receiver acts in the same way if it has no factory-paired devices.

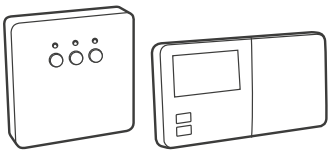
Signaling of operation and receipt of data packets

Each reception of radio transmission from a paired device is indicated by the AURATON RT receiver by a momentary change of the color of the LED diodes. After the relay becomes activated, the LED diode is red and after it is switched off - it is green.

NOTE: When any button is pressed, a short sound signal is emitted.

Cooperation of the RT receiver with a heating device

Basic configuration of devices



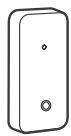
AURATON RT

Receiver connected to the heating device

AURATON R25 RT

Wireless temperature regulator

Additional system devices



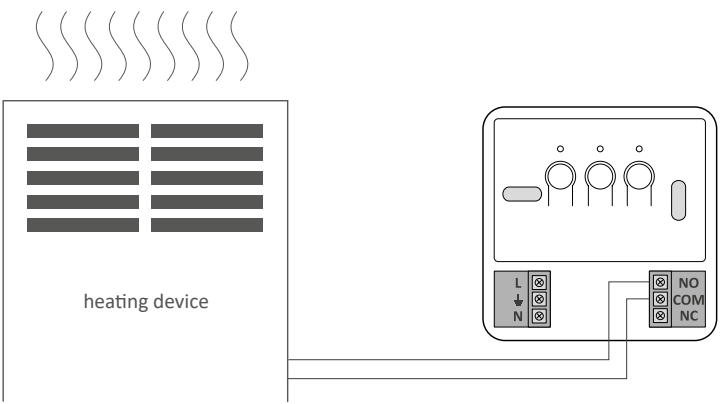
AURATON T-2

Wireless thermometer (sold separately)

AURATON H-1

Window handle (sold separately)

A simplified schematic of connecting the AURATON RT receiver with the heating device



Cooperation of the AURATON RT receiver with the AURATON R25 RT regulator and/or the AURATON T-2 thermometer

The operation of temperature regulation in the receiver is based on the binary algorithm (on/off) using one or two sensor elements.

- The AURATON R25 RT regulator allows for setting and/or monitoring the temperature.
- The AURATON T-2 thermometer provides information about the current temperature only, without the capability of changing it manually.

A) The manual setpoint – pairing the AURATON R25 RT regulator with the RT receiver allows for setting the temperature manually and controlling it in the location of the fastening of the R25 RT regulator.

B) The remote setpoint – if the T-2 thermometer is additionally paired with the RT receiver, the AURATON R25 RT regulator retains the capability of temperature setting, however its control is performed with the paired T-2 thermometer only. This feature allows for regulating the temperature in a room other than the one where the AURATON R25 RT regulator is placed.

An example: you want the temperature in the "children's room" to be always at 22°C, however you do not want children to be able to change it - in that room, you install the T-2 thermometer, and the AURATON R25 RT regulator in e.g. the kitchen. This way the temperature in the "children's room" will always be at 22°C regardless of temperature fluctuations in the kitchen.

C) The factory setpoint (20°C) – if the T-2 thermometer is the only device paired with the RT receiver, it is not possible to set the temperature manually, and the RT receiver maintains the factory temperature setpoint of 20°C.

NOTE!

1. The sequence of pairing the AURATON R25 RT regulator and the T-2 thermometer is very important. If you want to maintain the remote setpoint, you must first pair the AURATON R25 RT with the RT receiver, and then the T-2 thermometer. Reversing the pairing sequence will cause automatic deregistering of the previously paired T-2 thermometer and entering the mode of operation described in item A.

2. The RT receiver can operate with one AURATON R25 RT regulator and/or one T-2 thermometer only. Pairing a new regulator causes deregistering the previously paired regulator and the T-2 thermometer. Pairing a new T-2 thermometer causes deregistering the previously paired T-2 thermometer only.

3. The R25 RT regulator and/or the T-2 thermometer can operate with an unlimited number of receivers, e.g. one regulator can simultaneously control two independent heating devices.

Cooperation with the AURATON R25 RT regulator and/or the AURATON T-2 thermometer as well as the AURATON H-1 handles

By default, the AURATON RT receiver does not have any AURATON H-1 handle or AURATON W-1 window position sensor paired, therefore the relay is controlled by the paired AURATON R25 RT regulator and/or the AURATON T-2 thermometer. When at least one H-1 handle is paired with the RT receiver, the relay is controlled in the following manner:

A) The window is closed or trickle-ventilated (micro-ventilation).

When the H-1 window handles is paired with the receiver, and all windows are closed or trickle-ventilated, the relay still maintains the setpoint from the paired AURATON R25 RT regulator and/or the T-2 thermometer.

B) The window is pivoted.

If at least one window is pivoted, the temperature set in the AURATON R25 RT regulator is lowered in AURATON RT receiver down to 3°C. This state will be maintained until closing. This state will last until all windows are closed or trickle-ventilated.

C) The window is opened.

When you open a window equipped with the H-1 handle paired for longer than 30 seconds, the relay in the AURATON RT receiver is switched off, as is the connected heating device. If all the assigned windows are again in a state other than “opened”, the RT receiver returns to normal cooperation with the AURATON R25 RT regulator and/or the T-2 thermometer no earlier than 90 seconds after switching off the relay. The purpose of this delay is to prevent too rapid transitions of the connected heating devices between the ON and OFF states. However, if the temperature in the room drops below 7°C, the relay inside the receiver is switched on regardless of the positions of windows in order to prevent the room from freezing.

D) The signal is lost.

When the RT receiver has lost the signal from the H-1 handle paired (3 consecutive transmissions are lost), it changes the status if this window to “closed”. When the transmission is restored, the H-1 handle is again properly read off by the RT receiver.

RESET of the regulator

Pressing the **RESET button** (⊙) causes the time and day setting to be erased, and the regulator to be restarted.

MASTER RESET of the regulator

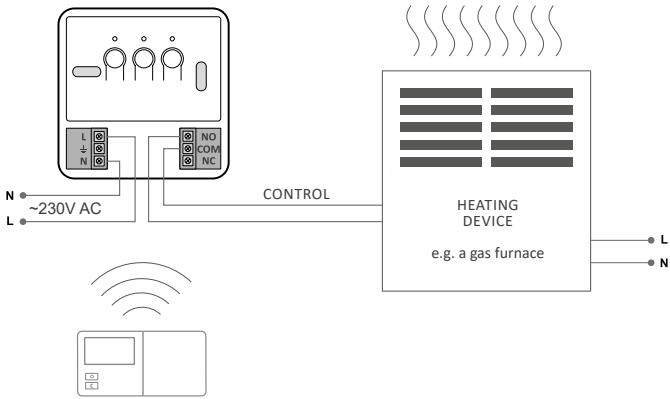
The MASTER RESET function restarts the regulator and restores factory settings. This function is invoked by pressing the OK and RESET buttons simultaneously.

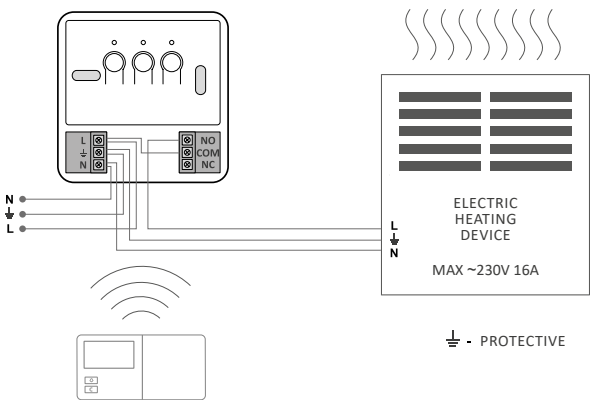
NOTE: All user-defined programs will be erased!

Special situations

- When 3 consecutive transmissions (after 15 minutes) from the AURATON R25 RT regulator and/or the T-2 thermometer are lost, an error is signalled on the RT receiver (LED flashing continuously red and green). The RT receiver starts executing the ON - OFF cycle memorised during the last 24 hours of operation until the problem is removed.
- When both signals return (from the AURATON R25 RT regulator and the T-2 thermometer), the error is cancelled and the receiver enters its normal mode of operation.
- When only the T-2 thermometer signal returns, the receiver uses the last memorised setpoint value and maintains it while signalling the error.
- When the H-1 handles, the T-2 thermometer and the AURATON R25 RT regulator (the temperature is measured with the T-2 thermometer) are paired with the receiver, then maintaining the work cycle from the last 24 hours occurs only after losing the signal from the T-2 thermometer. When only the signal from the AURATON R25 RT is missing, the RT receiver automatically maintains the last memorised setpoint from the AURATON R25 RT regulator and also signals an error.
- When you have only the H-1 handles and the T-2 thermometer paired with the RT receiver without the AURATON R25 RT regulator, the RT receiver maintains a constant, factory-defined temperature of 20°C. If you pivot any window equipped with the H-1 handle paired with the receiver, a temperature of 17°C is maintained. If you open any window equipped with the H-1 handle paired with the RT receiver, the receiver switches off the heating device, but will switch it back on when the temperature falls below 7°C.

The AURATON RT receiver connection schematics





Technical specifications

Working mode control:	LED
Maximum load:	resistive 16 A inductive / capacitive 10 A
AURATON RT power supply:	230V AC, 50Hz
AURATON RT radio frequency:	868 MHz
AURATON RT operation range:	in a typical building, with standard construction of walls - approx. 30 m; an open space - up to 300 m

Cleaning and maintenance

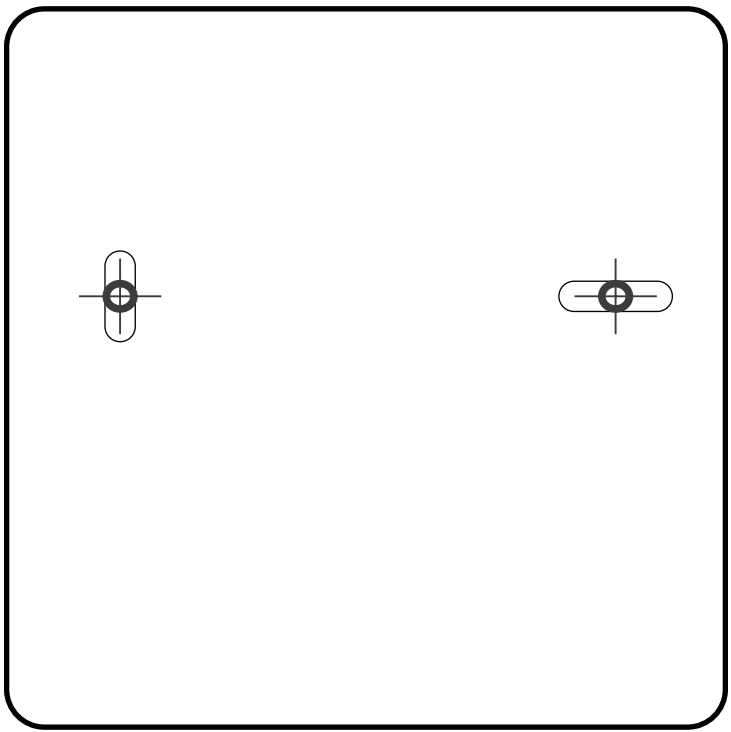
- Clean the outside of the device with a dry cloth. Do not use from solvents (such as benzene, thinner or alcohol).
- Do not touch the device with wet hands. It may cause electric shock or serious damage to the device.
- Do not expose the device to excessive smoke or dust.
- Do not touch the screen with a sharp object.
- Avoid contact of the device with liquids or moisture.

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.

A template for drilling holes for fastening
the AURATON RT receiver (1:1 scale)



HEAT UNDER CONTROL

CE

www.auraton.pl

ver. 20190408