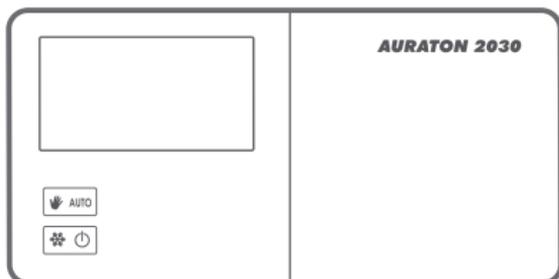
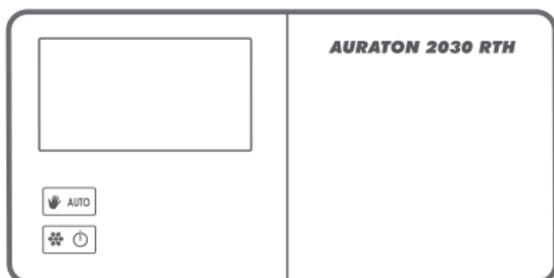
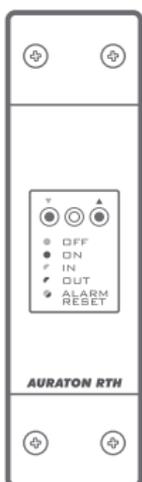


AURATON

2030 RTH 2030

www.auraton.pl

User Manual



CE



Thank you for purchasing this modern, advanced microprocessor-based **AURATON 2030 / AURATON 2030 RTH** temperature regulator



8 independently settable temperatures for day and night time – The **AURATON 2030** and **AURATON 2030 RTH** temperature regulators allow for setting up to eight independent temperatures for day and night time with the resolution of one minute. The user can select time ranges for various temperatures depending on his or her requirements.

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



Calibration of temperature indications (offset) – Allows for correcting temperature measurements within the range of $\pm 3^{\circ}\text{C}$.



Interference-free communication between devices – The transmitter and the receiver of the **AURATON 2030 RTH** set communicate using 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.

LCD Backlit LCD display – The backlit LCD display allows for supervising operation of the device even in a poorly lighted room. (Features 3 selectable backlight colours)

Optional elements of the system



AURATON H-1

Window handle (sold separately)

A window handle, equipped with a position sensor and a transmitter, is an optional element of the system. This way the handle provides information about the state of the window. The handle also differentiates between 4 window positions: opened, closed, pivoted and trickle ventilated (micro-ventilation). The handle transmits information to the **RTH** receiver that controls the relay, e.g. switching off a heater in the event of opening the window or lowering the temperature down to 3°C to conserve energy. One **RTH** receiver operates with max 25 handles.



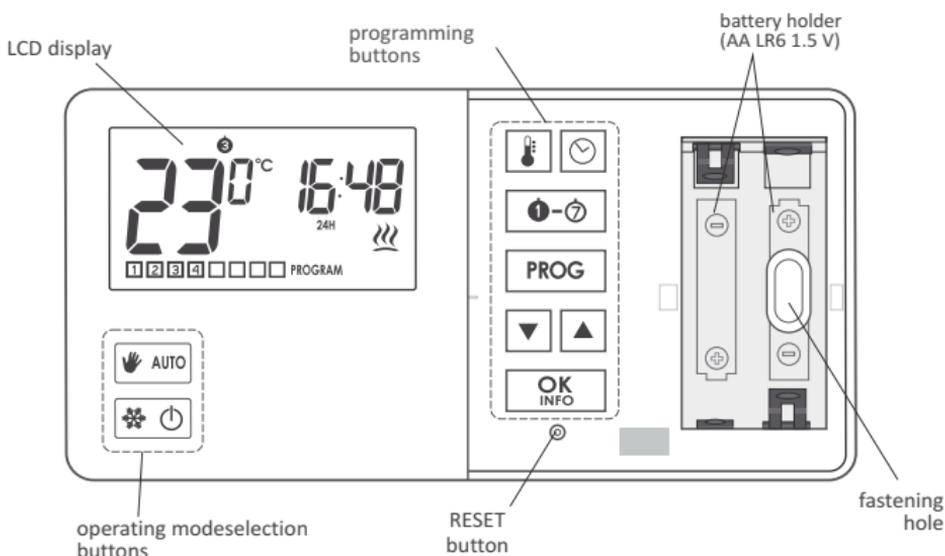
AURATON T-2

Thermometer (sold separately)

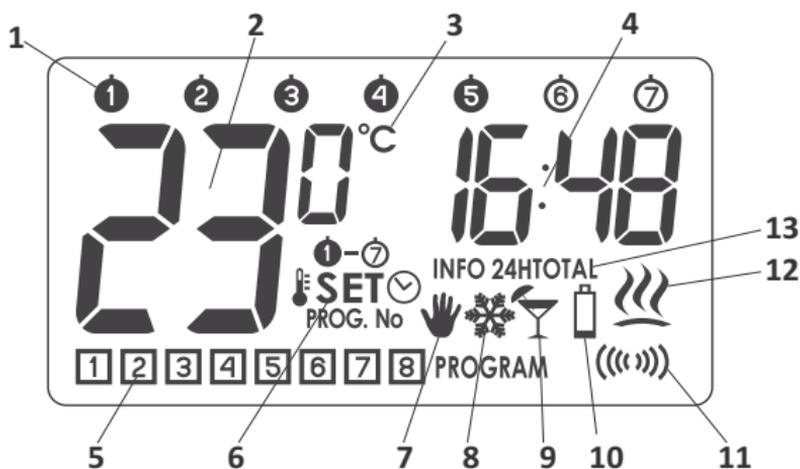
An optional element of the system allowing for controlling temperature in a room other than that with the **AURATON 2030 RTH** regulator.

Description of the AURATON 2030 and 2030 RTH temperature regulator

On the right side of the front panel of the regulator you will find a sliding cover. There are buttons under the cover. You can replace batteries by removing the cover completely.



Display



1. Day of week (☉-☿)

Indicates the current day of week. Every day is assigned a number.

2. Temperature

In the normal mode of operation, the regulator displays the temperature in the room it is installed in.

3. Temperature unit

Informs that the temperature is displayed in degrees Celsius (°C).

4. Clock

Time is displayed in the 24-hour format.

5. Program number (☐-☐)

Shows the total number of user-defined programs saved on the regulator.

6. Setting mode indicator (SET)

The word SET appears when the user changes one of the following settings of the thermostat:

↓SET - temperature

SET☉ - time

☉-☿
SET - day of week

SET
PROG. No - program

7. Manual control indicator (☞)

Appears when leaving the program-based mode of operation.

8. Anti-freeze mode indicator (❄)

Indicates that the regulator operates in the anti-freeze mode.

9. Vacation mode indicator (☹)

Indicates that the regulator operates in the vacation mode.

(See chapters: "Temperature programming" and "Vacation mode").

10. Low battery (🔋)

This indicator will be visible when the battery voltage drops below the minimal allowable level. In such an event, replace the batteries as soon as possible.

NOTE: In order to preserve the parameters programmed, duration of the replacement operation must not to exceed 30 seconds.

11. Transmission symbol (☎☎☎) – AURATON 2030 RTH only

Indicates ongoing communication with the RTH receiver.

12. Relay activation indicator (⚡)

A segment informing about the operating state of the controlled device. Visible when the controlled device is turned on (e.g. a heater).

13. Information about operation of the regulator (INFO)

INFO - current program settings

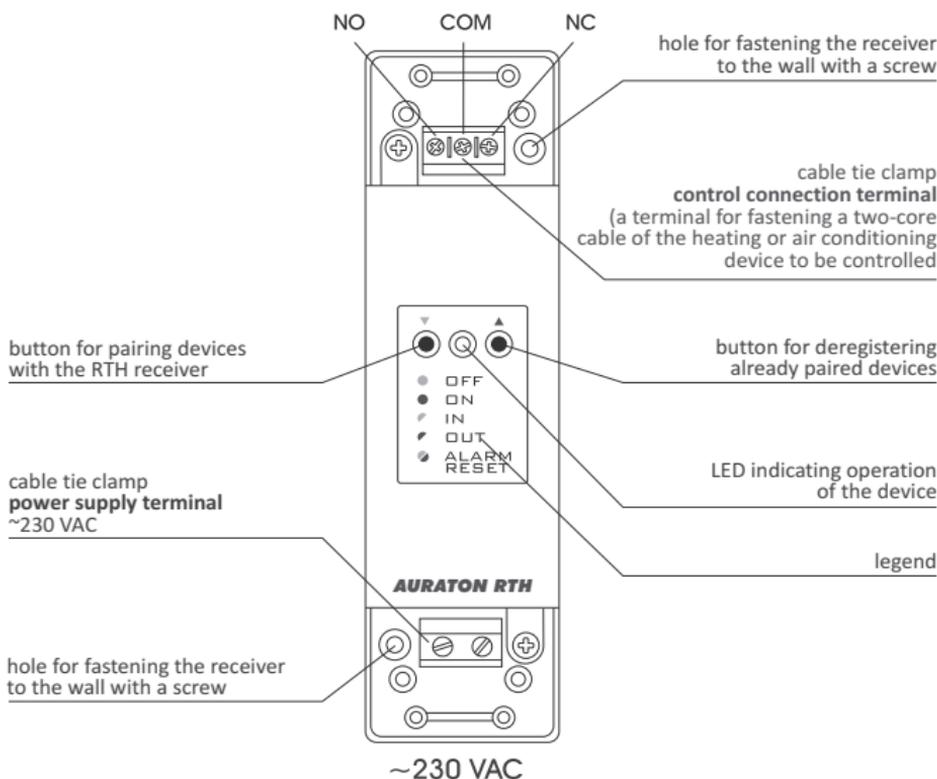
INFO 24H - relay operating time during the last 24 hours,

INFO TOTAL - total operating time of the relay since the start of the regulator.

NOTE: "RESET" causes both operating time counters to be set to zero (INFO 24H, INFO TOTAL).

Description of the AURATON RTH receiver

The **AURATON RTH** receiver cooperates with the **AURATON 2030 RTH** wireless receiver. The receiver is installed on the heating or air conditioning device and can operate under the load of 16 A.

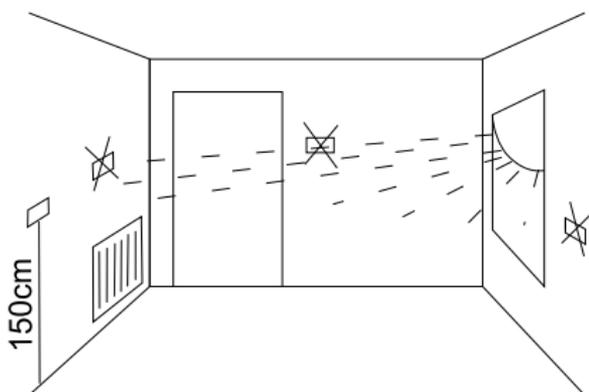


Legend - description of LED signalling

- □ 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 **RTH** receiver awaits the device to be paired (*chapter: "Pairing the AURATON 2030 RTH wireless regulator and the RTH receiver"*).
- ◐ OUT **The LED flashes red** – the **RTH** receiver awaits the device to be deregistered (*chapter: "Deregistering the regulator from the RTH receiver"*).
- ◐ ALARM
RESET **The LED flashes alternating red and green:**
ALARM - the **RTH** 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 RTH receiver"*).

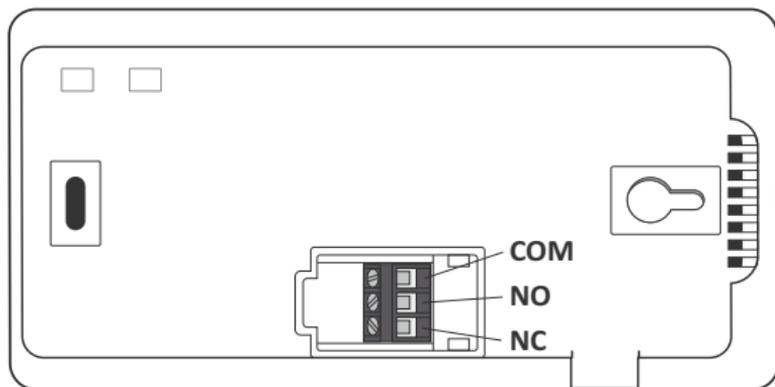
Selecting the proper location for the AURATON 2030 / 2030 RTH temperature regulator

Proper operation of the regulator is greatly affected by its location. Installing it in a place with no air circulation or exposed to direct sunlight causes improper regulation of temperature. In order to ensure proper operation, the regulator must be installed on an interior wall of a building (partition wall). A place should be selected that is occupied most frequently, providing undisturbed circulation of air. Avoid heat radiating devices (television set, heater, refrigerator etc.) or places exposed to direct sunlight. In order to avoid vibration, do not place the regulator in close vicinity of doors.



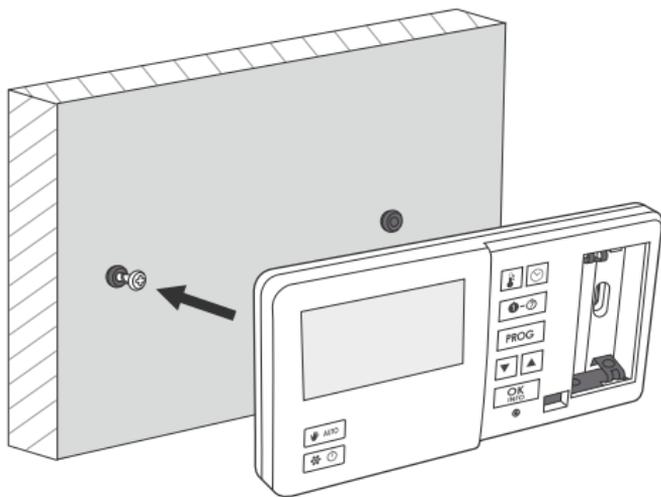
Connecting cables to AURATON 2030

Cable terminals are located on the rear wall of the regulator. This is a typical Single Pole Double Throw relay. In the majority of applications the NC terminal is unused.

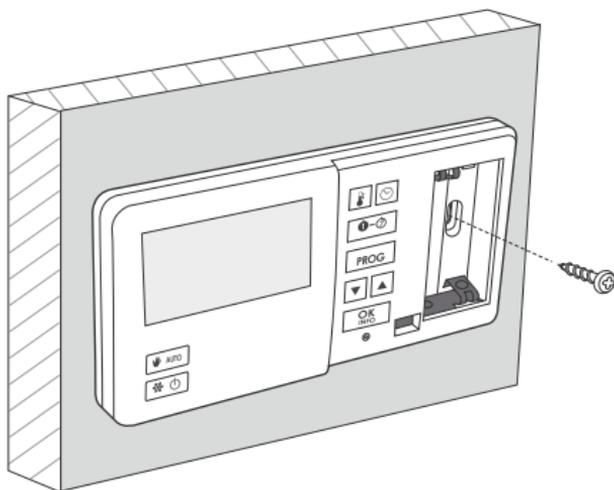


Fastening the temperature regulator to the wall

1. Drill two holes 6 mm in diameter in the wall (use the template attached to the manual to mark the spacing between these holes).
2. Insert plastic wall plugs (included in the kit).
3. Screw in the left screw with a 3 mm clearance.
4. Put the regulator over the screw head and slide it to the left (pay attention to the key-hole in the rear wall of the regulator).

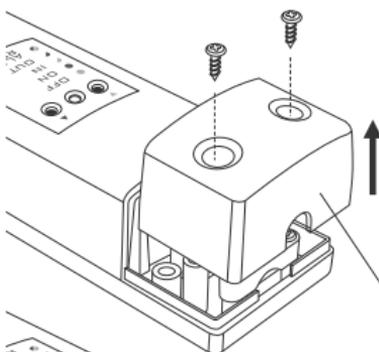


5. Screw in the right screw, making sure it holds the regulator securely.



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 6 mm, and screw the screws directly into the wood.

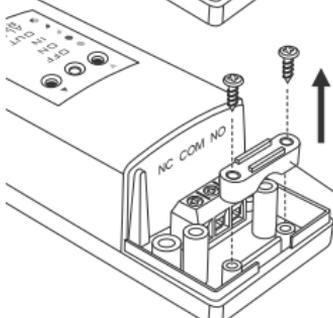
Fastening the RTH receiver



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

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

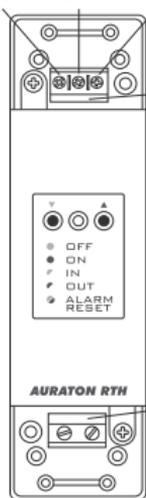
protective cover



2. Take off cable tie clamps from the lower and upper part of the **AURATON RTH** receiver.

cable tie clamp

NO COM NC

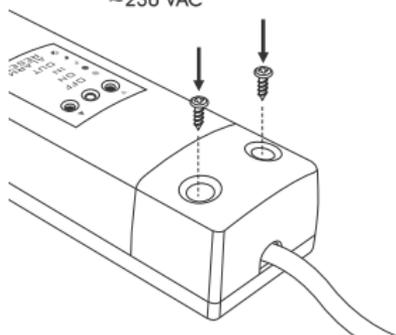


3. Connect the heating device to the **control connection terminals** of the **AURATON RTH** receiver.

Proceed in accordance with the service manual of the heating device. Most commonly, the **COM** (common) and **NO** (normally open) terminals.

4. Connect power supply conductors to the **power supply terminals** of the **AURATON RTH** receiver, observing safety rules.

~230 VAC



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

NOTE:

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

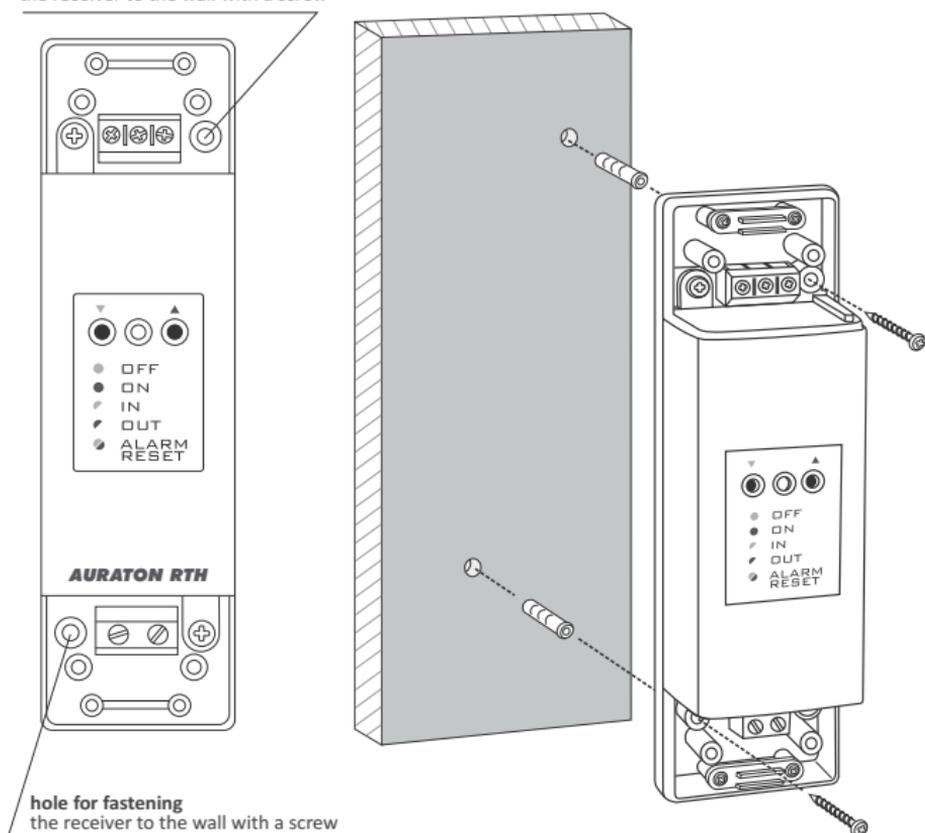


Fastening the RTH receiver to the wall

To fasten the **AURATON RTH** receiver to the wall:

- 1) Remove protective covers from the lower and upper part of the regulator.
(See chapter: "Fastening the RTH receiver").
- 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 RTH receiver to the wall with screws, making sure they hold the receiver securely.

hole for fastening
the receiver to the wall with a screw

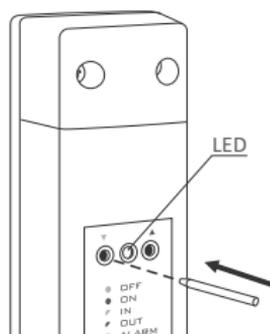


NOTE: If the wall is wooden, there is no need to use wall plugs. In such a case, drill two holes 2.7 mm in diameter instead of 5 mm, and screw the screws directly into the wood.

NOTE: The **RTH** 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 the AURATON 2030 RTH wireless temperature regulator with the RTH receiver

NOTE: The **AURATON 2030 RTH** wireless temperature regulator sold with the **AURATON RTH** receiver is already paired. Devices sold separately require “pairing”.



1. The process of pairing the **2030 RTH** regulator with the **RTH** receiver is initiated by pressing the left pairing button (marked with a green triangle - ▼) on the **RTH** receiver and holding it for at least 2 seconds, until the LED starts flashing green, and then releasing the button.

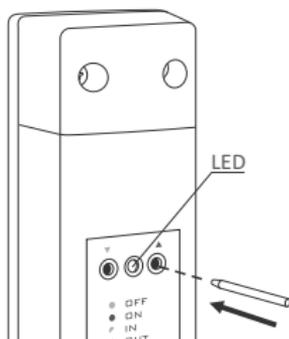
The AURATON RTH receiver waits for pairing for 120 seconds. After that time, it automatically returns back to normal operation.

2. On the **AURATON 2030 RTH** regulator, press the **PROG** button and hold it for 5 seconds until the transmission symbol (Ⓜ) appears on the display. Release the button - the regulator transmits the pairing signal for 5 seconds.
3. A properly completed pairing process is signalled by the LED on the **AURATON RTH** receiver no longer flashing green and the receiver reverting back to normal operation.

In the event of an error during the pairing process, repeat steps 1 and 2. Should more errors occur, deregister all devices by executing the RESET function of the RTH receiver (see “RESET - Deregistering all devices paired with the RTH receiver”) and attempt to pair the device again.

NOTE: One receiver can have only one temperature regulator assigned.

Deregistering the regulator from the RTH receiver



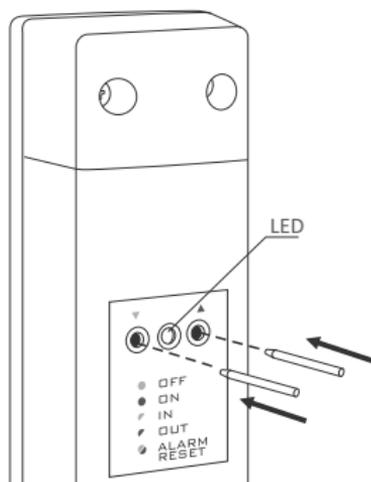
1. Deregistering the **2030 RTH** regulator from the **RTH** receiver is initiated by pressing the right deregistering button (marked with a red triangle - ▲) on the **RTH** receiver and holding it for at least 2 seconds, until the LED starts flashing red, and then releasing the button.

The AURATON RTH receiver waits for deregistering for 120 seconds. After that time, it automatically returns back to normal operation.

- On the **AURATON 2030 RTH** regulator, press the **PROG** button and hold it for 5 seconds until the transmission symbol () appears on the display. Release the button - the regulator transmits the pairing signal for 5 seconds.
- A properly completed deregistering process is signalled by the LED on the **AURATON RTH** receiver no longer flashing red and the receiver reverting back to normal operation.

In the event of an error during the deregistering process, repeat steps 1 and 2. Should more errors occur, deregister all paired devices (see “RESET - Deregistering all devices paired with the RTH receiver”) and attempt to pair the device again.

RESET - Deregistering all devices paired with the RTH receiver



In order to deregister all devices paired with the RTH receiver, simultaneously press both the pairing and the deregistering button ( and ) and hold them for at least 5 seconds until the LED flashes alternating red and green. Then release both buttons.

A properly completed process of deregistering all devices is signalled after approx. 2 seconds by the LED colour changing to green and then switching it off for a short period of time.

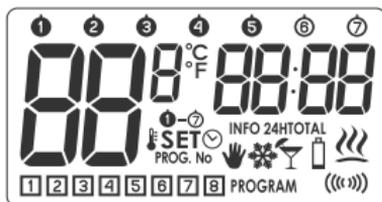
NOTE: If after executing the RESET function the RTH receiver is disconnected from power supply and then connected again, the receiver will automatically enter “pairing” mode for 120 seconds. A newly purchased RTH receiver without any factory-paired devices (i.e. not the one bundled with the regulator) will behave the same way.

Signalling operation and reception of data packet

Each radio transmission received by the **AURATON RTH** receiver from the paired device is signalled by a temporary change of LED colour to orange. Switching on the relay is signalled by the LED lit red, whereas switching it off is signalled by the LED lit green.

Starting-up the regulator for the first time

After the proper placement of batteries in the battery holder, all segments of the LCD display are displayed (display test) for one second and after that, the software version number is displayed.

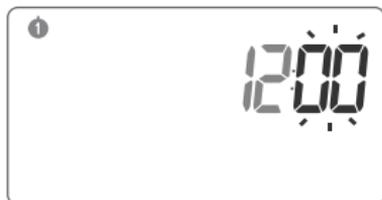


Following that, the regulator automatically enters the time setting mode; the hour field flashes, prompting for setting it.

Using the \downarrow and \uparrow buttons, set the desired hour value and confirm the setting with the $\boxed{\text{OK INFO}}$ button.



Using the \downarrow \uparrow buttons, set the desired minute value and confirm the setting with the $\boxed{\text{OK INFO}}$ button.



In the upper part of the display, the day of week symbol starts flashing. Using the \downarrow \uparrow buttons, set the desired day of week and confirm the setting with the $\boxed{\text{OK INFO}}$ button



- | | |
|---------------|--------------|
| ① – Monday | ⑥ – Saturday |
| ② – Tuesday | ⑦ – Sunday |
| ③ – Wednesday | |
| ④ – Thursday | |
| ⑤ – Friday | |

NOTE:

- 1) If no button is pressed in 60 seconds when setting the hour value for the first time, the regulator will automatically assume default time of 12:00 and Monday (①) as the day of week.
- 2) When programming any other functions, failing to press any button in 10 seconds is equivalent to pressing the $\boxed{\text{OK INFO}}$ button.

Setting the clock

In order to set the clock:

1. Press the  button until the **SET** icon is displayed, informing that the regulator has entered the time setting mode, and the hour field starts flashing.
2. Using the,   buttons, set the desired hour value.
3. Then press the  or  button again, and when the minute field starts flashing, set ( ) the desired minute value.
4. Confirm the setting with the  or  button.



Setting the day of week ①...⑦

In order to set the day of week:

1. Press and hold the  button until the  **SET** icon is displayed, informing that the regulator has entered the day of week setting mode and one of the digits representing days of week starts flashing.
2. Using the,   buttons, set the desired day of week.
3. Confirm the setting with the  or  button.



LO / HI temperature

- If the surrounding temperature is lower than 5°C, the display shows "LO".
- If the surrounding temperature is higher than 35°C, the display shows "HI".



PROGRAMMING

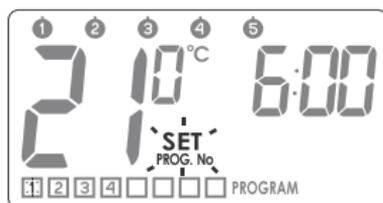
The memory of the regulator allows for saving up to eight programs for weekdays, eight programs for Saturday and the same for Sunday. This allows for exceptionally precise planning of temperature in the building depending on the time of day.

Factory programs (for modification)

① ② ③ ④ ⑤ Weekdays			⑥ Saturday			⑦ Sunday		
Prog.	Start time	Temperature	Prog.	Start time	Temperature	Prog.	Start time	Temperature
①	6:00	21°C	①	6:00	21°C	①	6:00	21°C
②	8:30	20°C	②	23:00	19°C	②	23:00	19°C
③	15:00	21°C						
④	23:00	19°C						

In order to start programming:

Press and hold the **PROG** button until the **SET** flashing icon is displayed.

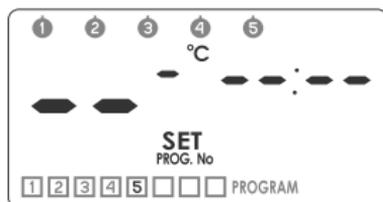


1. Selecting a program:

Using the, **▼** **▲** buttons, select the desired program number **①-⑧** to which you will assign the following parameters:

- **temperature** setpoint,
- **day of week** it applies to,
- starting **time**.

Dashes are displayed on positions corresponding to temperature and time until the program is set.

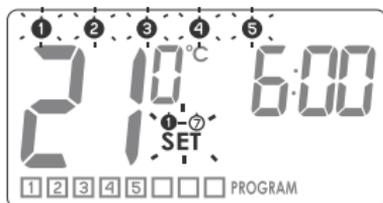


2. Assigning a day to the program :

Press the  button to select days to be assigned to the program. A segment with days of week will start flashing in the top part of the display.

Using the,   buttons, you can assign:

-      – for week days
-  – for Saturday
-  – for Sunday



Confirm selection by pressing the button .

The  icon and the number of currently edited program will start flashing on the display.

3. Assigning temperature to the program :

Press the  button to assign temperature to the program.

The   icon will start flashing, prompting for setting the temperature. Set the desired temperature, using the,  buttons.

Confirm the setting by pressing the  button.

The  icon and the number of currently edited program will start flashing on the display again.



4. Assigning starting time to the program:

Press the  button. The  icon will start flashing, prompting for setting the time.

Set the desired starting time for the program, using the,   buttons.

Confirm the setting by pressing the  button.

The  icon and the number of currently edited program will start flashing on the display again.



5. Repeat the procedure for consecutive programs.

Confirm selection by pressing the  button.

DELETING A PROGRAM:

To delete a selected program, set “dashes” in the temperature field.

**NOTES:**

- 1) Programs with the same program numbers, but assigned to other days of week can have completely different settings.
E.g.: program 1 on Saturday can start at 08:00, and program 1 on Sunday can start at 10:00.
- 2) Days from ① to ⑤ (from Monday to Friday) have the same programs.
- 3) On the same day of week, **the next program should start at least a minute after the start of the previous one.** Otherwise the regulator will renumber the programs in order to preserve the chronology of temperature setpoints.
- 4) For the selected day of week, the period of temperature programming cannot exceed 24 hours – the last program can start no later than a minute after the first one.
- 5) When all programs are inactive, the regulator remains turned off.

Programming the manual 🖐️, vacation 🍷 and anti-freezing ❄️ temperature.

The **AURATON 2030 / AURATON 2030 RTH** regulator allows for setting three kinds of temperature:

- manual temperature (🖐️) – within the range from 5°C to 30°C,
- vacation temperature (🍷) – within the range from 5°C to 30°C,
- anti-freeze temperature (❄️) – within the range from 4°C to 10°C.

To set one of the above mentioned temperatures:

1. Press the  button and wait until flashing  icon is displayed with the symbol of the currently edited kind of temperature.
2. Pressing the  button again will toggle the currently edited kind of temperature.
3. Set the desired temperature value in the currently edited kind of temperature, using the,   buttons.
4. After setting all temperature kinds, confirm the setting by pressing the  button.



Manual control

When, for any reason, you would like to suspend execution of the program for a certain period of time, the temperature can be set manually for a specified time. In such a case you have to:

1. Press the  **AUTO** button. This will cause the  **SET** and  icons to appear flashing on the display. The temperature field will become editable, with the previously programmed value set as default.
Use the,   buttons to edit the value, and the  button to confirm settings.
2. To leave the manual control mode, press the  **AUTO** button.

Vacation mode

Should there be a need for suspending execution of the programs for a prolonged time, the **vacation mode** can be used.

When this option is active, the regulator executes only the “vacation temperature” (see chapter: “Temperature programming”).

Maximal duration of operation in vacation mode is 6 days, 23 hours and 59 minutes.

In order to enter the vacation mode:

1. Press the  **AUTO** button and hold it for 3 seconds.

This will cause flashing of the **SET**  and  icons as well as the field time.



2. Using the,   buttons, set the time when the vacation mode should end.

3. By pressing the  button you can set the day when the vacation mode should end.

The  icon will start flashing on the display. Using the,   buttons, set the day when the vacation mode should end.



4. Confirm the setting by pressing the  button.

The “” symbol will be displayed on the screen while the vacation mode is active. You can leave the vacation mode earlier by pressing the  **AUTO** button.

Anti-freeze mode



The regulator is equipped with a setpoint for the anti-freeze temperature. This setpoint can be set within the range from 4 to 10°C. (Factory set at 7°C) The anti-freeze mode is used during a prolonged period of absence or outside the heating season and is designed to prevent water in the heating system from freezing.

1. To enter the anti-freeze mode, press the  button. The “ ❄ ” icon will appear on the display.
2. To leave the anti-freeze mode press the  AUTO or  button.

Switching off the receiver for a period of time

Pressing the  button and holding it for 5 seconds causes switching off the thermostat relay, setting the temperature in the receiver to 4°C and putting out all elements on the display except for current temperature, time and day of week.

To restore normal operation of all functions of the regulator, press the  button.

Viewing the currently active program

Pressing the  button in the normal operation mode causes the **INFO** segment and all the parameters of the currently executed program (day of week, temperature and ending time) to flash for 10 seconds on the display.

To restore the regulator back to normal operation, press the  button again.

Relay operating time counter

Pressing the  button and holding it for 3 seconds activates the **INFO 24H** function that counts the relay operating time during the last 24 hours.

Pressing the  button again causes the **INFO TOTAL** segment to appear, corresponding to the function of counting the accumulated number of days of relay operation.

To restore the regulator back to normal operation, press the  button again.

NOTE: To reset the total counter of days of relay operation to zero, press the  button and hold it for 5 seconds, while in the **INFO TOTAL** mode.

NOTE: “RESET” causes both operating time counters to be set to zero.

Configuration settings: backlight colour, hysteresis, delay, offset

Configuration settings are presented for changing in the following order:



To enter the configuration settings change mode press the,   buttons simultaneously and hold them for 5 seconds until the display backlight starts flashing.

1. BACKLIGHT COLOUR CHANGE:

Flashing backlight indicates that you can change the backlight colour with the   buttons.

Confirm the setting by pressing the  button.

The regulator will proceed to change the next parameter.



2. HYSTERESIS CHANGE:

Hysteresis is designed to prevent switching the controlled device on and off too frequently due to minute fluctuations of temperature.

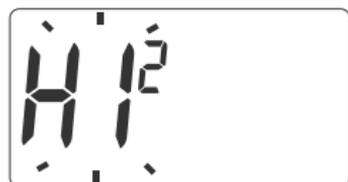
E.g. for the HI 2 hysteresis, when the temperature is set to 20°C, the boiler will be switched on at 19.8°C, and switched off at 20.2°C. For the HI 4 hysteresis, when the temperature is set to 20°C, the boiler will be switched on at 19.6°C, and switched off at 20.4°C.

The hysteresis change mode is signalled by flashing text “HI”. You can change hysteresis settings with the   buttons.

HI 2 – $\pm 0,2^{\circ}\text{C}$ (factory setting)

HI 4 – $\pm 0,4^{\circ}\text{C}$

HI P – PWM mode (see chapter “PWM mode”)



Confirm the setting by pressing the  button.

The regulator will proceed to change the next parameter.

3. DELAY CHANGE (AURATON 2030 only)

Delay is designed to prevent switching the controlled device on and off too frequently e.g. due to a momentary whiff of air caused by opening a window.

This mode is signalled by flashing text "90:SE". You can switch the delay on and off with the   buttons.

90:SE – 90s delay
(factory setting)

0:SE – without delay



Confirm the setting by pressing the  button. The regulator will proceed to change the next parameter.

4. OFFSET CHANGE

Offset allows for calibrating temperature indications within the tolerance of $\pm 3^{\circ}\text{C}$.

E.g. the temperature regulator indicates that the room temperature is 23°C , whereas a regular mercurial thermometer placed alongside indicates 24°C . Changing offset by $+1$ degree makes the regulator indicate the same temperature as the mercurial one.

The offset change mode is signalled by flashing text OFFS.

You can set the desired value ( ) within the range from 3.0 to 3.0 (factory setting is 0.0).

Confirm the setting by pressing the  button. The regulator will resume normal mode of operation.



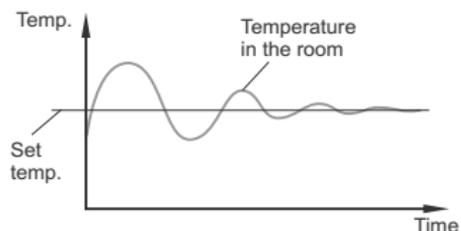
NOTE: If no button is pressed for 10 s while changing configuration settings, the regulator will resume normal mode of operation.

PWM operation mode (Pulse-Width Modulation)

When changing hysteresis settings, you can enable PWM mode. In PWM mode, the controller switches on the heating device in cycles to minimize temperature fluctuations.

The controller monitors the temperature rise and drop time.

With these values determined, the controller switches the heating device on and off in cycles that enable maintaining temperature as close to the setpoint as possible.



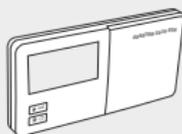


Cooperation of the RTH receiver with a heating device

Basic configuration of devices



AURATON RTH
Receiver connected
to the heating device



AURATON 2030 RTH
Wireless
temperature regulator

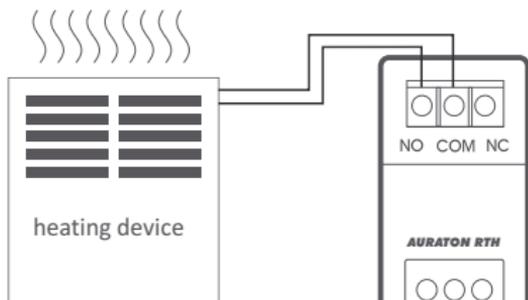
Additional system devices



AURATON T-2
Wireless thermometer
(sold separately)



AURATON H-1
Window handle
(sold separately)



A simplified schematic
of connecting the **AURATON RTH**
receiver with the heating device

Cooperation of the AURATON RTH receiver with the AURATON 2030 RTH 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 2030 RTH** 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 2030 RTH** regulator with the **RTH** receiver allows for setting the temperature manually and controlling it in the location of the fastening of the **2030 RTH** regulator.

- B) The remote setpoint** – if the **T-2** thermometer is additionally paired with the **RTH** receiver, the **AURATON 2030 RTH** 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 2030 RTH** 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 2030 RTH** 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 **RTH** receiver, it is not possible to set the temperature manually, and the **RTH** receiver maintains the factory temperature setpoint of 20°C.

NOTE!

1. The sequence of pairing the **AURATON 2030 RTH** regulator and the **T-2** thermometer is very important. If you want to maintain the remote setpoint, you must first pair the **AURATON 2030 RTH** with the **RTH** 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 **RTH** receiver can operate with one **AURATON 2030 RTH** 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 **2030 RTH** regulator and/or the **T-2** thermometer can operate with an unlimited number of receivers, e.g. one regulator can control simultaneously two independent heating devices.
4. When the **AURATON 2030 RTH** operates with the **T-2** thermometer, the operating status indicator on the display of the **2030 RTH** regulator does not reflect the operating status of the heating device.

Cooperation with the AURATON 2030 RTH regulator and/or the AURATON T-2 thermometer as well as the AURATON H-1 handles

By default, the **AURATON RTH** 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 2030 RTH** regulator and/or the **AURATON T-2** thermometer. When at least one **H-1** handle is paired with the **RTH** 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 paired with the receiver, and all windows are closed or trickle-ventilated, the relay still maintains the setpoint from the paired **AURATON 2030 RTH** 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 2030 RTH** regulator is lowered in **AURATON RTH** 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 RTH** receiver is switched off, as is the connected heating device. If all the assigned windows are again in a state other than “opened”, the **RTH** receiver returns to normal cooperation with the **AURATON 2030 RTH** 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 **RTH** receiver has lost the signal from the **H-1** handle paired (3 consecutive transmissions are lost), it changes the status of this window to “closed”. When the transmission is restored, the **H-1** handle is again properly read off by the **RTH** 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  and **RESET buttons** simultaneously.

NOTE: All user-defined programs will be erased!

Special situations

- When 3 consecutive transmissions (after 15 minutes) from the **AURATON 2030 RTH** regulator and/or the **T-2** thermometer are lost, an error is signalled on the **RTH** receiver (LED flashing continuously red and green). The **RTH** 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 2030 RTH** 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 2030 RTH** 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 2030 RTH** is missing, the RTH receiver automatically maintains the last memorised setpoint from the **AURATON 2030 RTH** regulator and also signals an error.
- When you have only the **H-1** handles and the **T-2** thermometer paired with the **RTH** receiver without the **AURATON 2030 RTH** regulator, the **RTH** 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 **RTH** receiver, the receiver switches off the heating device, but will switch it back on when the temperature falls below 7°C.

Replacing batteries

If the low battery symbol () appears on the display, it means that the battery voltage has dropped below the minimal allowable level. In such an event, replace the batteries as soon as possible.

NOTE: In order to preserve the parameters programmed, duration of the replacement operation must not to exceed 30 seconds.

NOTE: When flashing low battery symbol appears on the display, the backlight function is inactive. This feature designed to conserve energy remaining in batteries.

Unique features of AURATON 2030 RTH

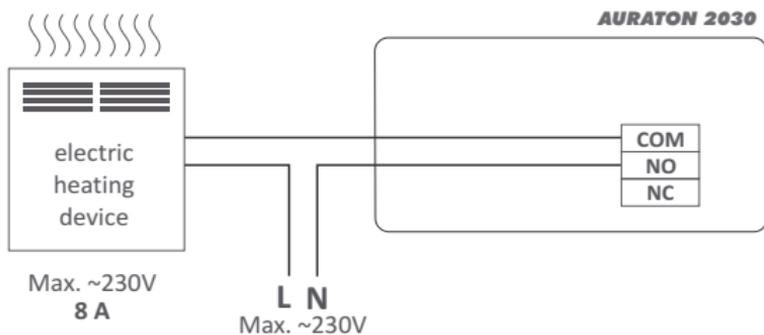
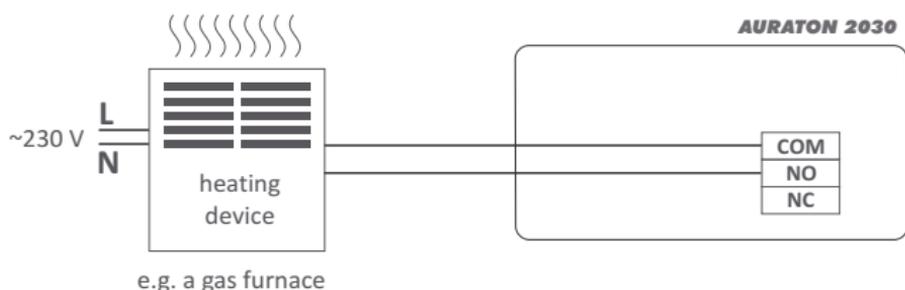
- Switching the relay is synchronised with the wave of the 230 V mains voltage, in order to ensure that closing and opening contacts of the relay occur around the zero-crossing point. This prevents the occurrence of electric arc, significantly extending the relay service time.
- The **AURATON RTH** receiver is equipped with a unique algorithm for analysing the ON - OFF cycles. The entire heating cycle from the last 24 hours is recorded in the memory of the **RTH** receiver. In the event of loss of communication with the **AURATON 2030 RTH** regulator and/or the T-2 thermometer, the RTH receiver automatically executes the ON - OFF cycle memorised during the last 24 hours. This provides the time for restoring transmission (removing interferences) or fixing the **2030 RTH** regulator and/or the T-2 thermometer without a significant deterioration of thermal comfort conditions in the controlled spaces.
- The backlit LCD display with the capability of selecting one of three available colours.
- The operating time counter of the **AURATON 2030 RTH** transmitter.
- Cooperation with optional devices (the **AURATON T-2** thermometer, the **AURATON H-1** window handle).

Additional information and notes

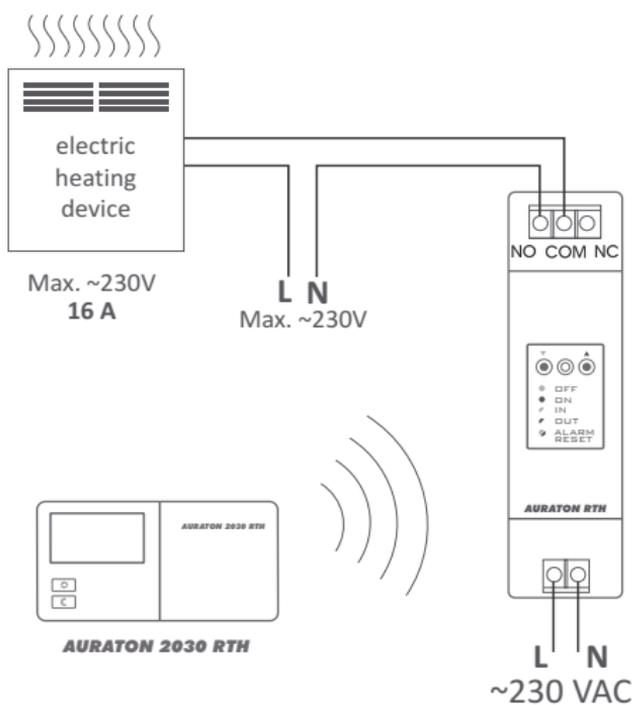
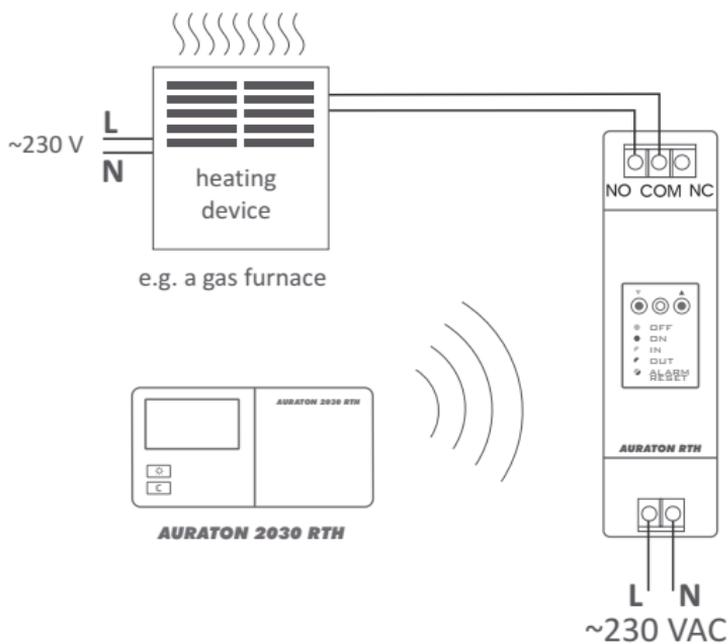
- The **AURATON 2030 RTH** regulator and/or the **T-2** thermometer must be installed at least 1 metre from the **RTH** receiver (too strong signal from the transmitters can cause interference).
- At least 30 seconds must elapse between switching the relay off and on.
- Data transmission from the **AURATON 2030 RTH** regulator to the receiver occurs upon each change of the surrounding temperature by 0.2°C. When the temperature is stable, the regulator sends heart-beat data every 5 minutes (which is signalled with the LED blinking orange on the **RTH** receiver).

- In the event of a power outage, the **RTH** receiver will switch off. When power is restored, the heating device is switched on automatically, and the **RTH** receiver awaits a signal from the paired transmitters (this signal should be received within 5 minutes from restoring power). After receiving the signal, the **RTH** receiver resumes normal mode of operation.
- The **RTH** receiver cannot be placed in metal containers (e.g. an installation cabinet, a metal enclosure of a heater), in order to not to interfere with its operation.
- **Switching off display backlight** - pressing any button for the first time switches on display backlight (if only it is configured as active), pressing any button for the second time invokes an action on the regulator, except for pressing the  button in normal operating mode. Then the backlight is switched on and the **INFO** function is invoked. When any button is pressed and held for a while, the backlight is switched on instantly, and the corresponding function is executed after the specific time of pressing the button has elapsed.

The AURATON 2030 regulator connection schematics



The AURATON RTH receiver connection schematics



**WARNING !**

Cables supplied with the regulator are designed for conducting maximal load of 2.5 A.



If devices to be connected require more power, the cables need to be replaced with cables of the appropriate cross-sectional area.

Technical specifications

Working temperature range:	0 – 35°C
Temperature measurement range:	5 – 30°C
Span:	±0,2°C / ±0,4°C / PWM
Accuracy of temperature measurement:	±1°C
Temperature levels:	8 + 3
Number of programs:	8 for week days, 8 for Saturday, 8 for Sunday
Anti-freezing temperature:	4 – 10°C
Working cycles:	weekly, programmable 5 week days + Saturday + Sunday
Working mode control:	LED (the RTH receiver) / LCD (the regulator)
Maximum load:	<i>AURATON 2030</i> ~ 8A 250VAC (inductive 5A) <i>AURATON RTH</i> ~ 16A 250VAC
Power supply <i>AURATON 2030</i> <i>AURATON 2030 RTH</i>	2x AA alkaline battery
<i>RTH</i> power supply:	230VAC, 50Hz
<i>RTH</i> radio frequency:	868MHz
<i>RTH</i> Operation range:	in a typical building, with standard construction of walls - approx. 30 m an open space - up to 300 m

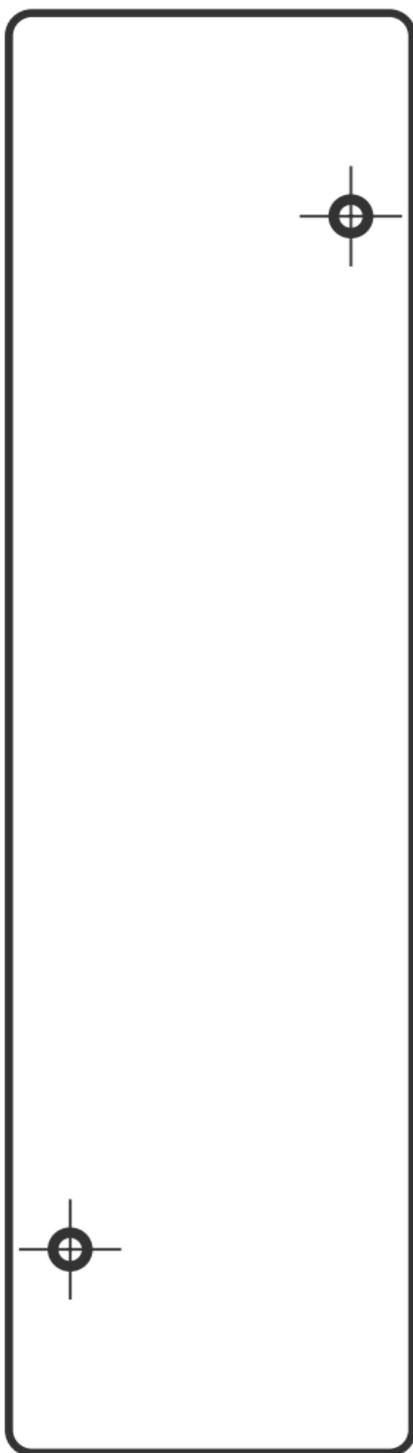
Disposing of the devices



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.

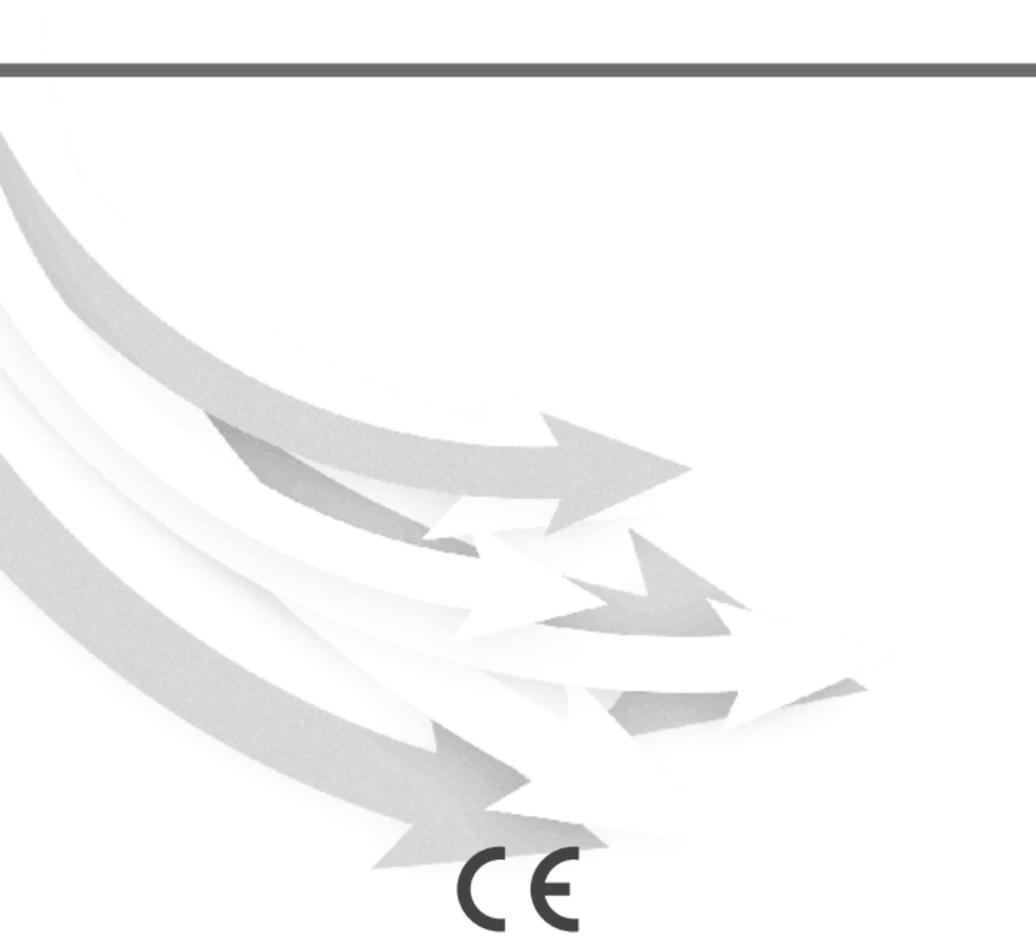
A template for drilling holes for fastening
the AURATON RTH receiver (1:1 scale)





A template for drilling holes for fastening
the AURATON 2030 and AURATON 2030 RTH regulator
(1:1 scale)





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