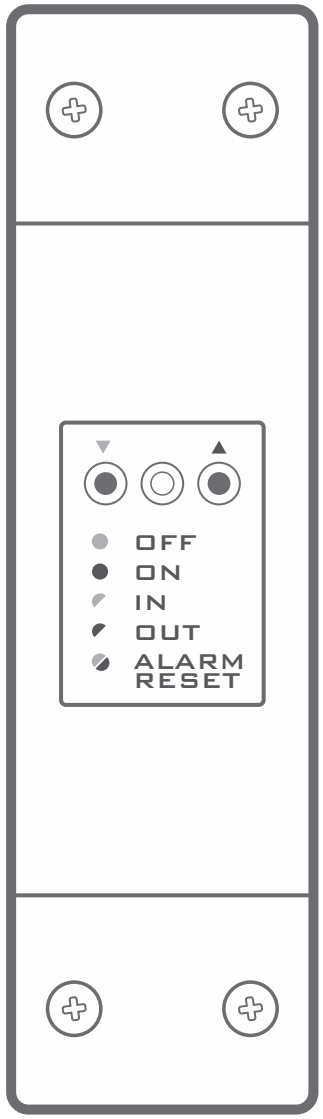
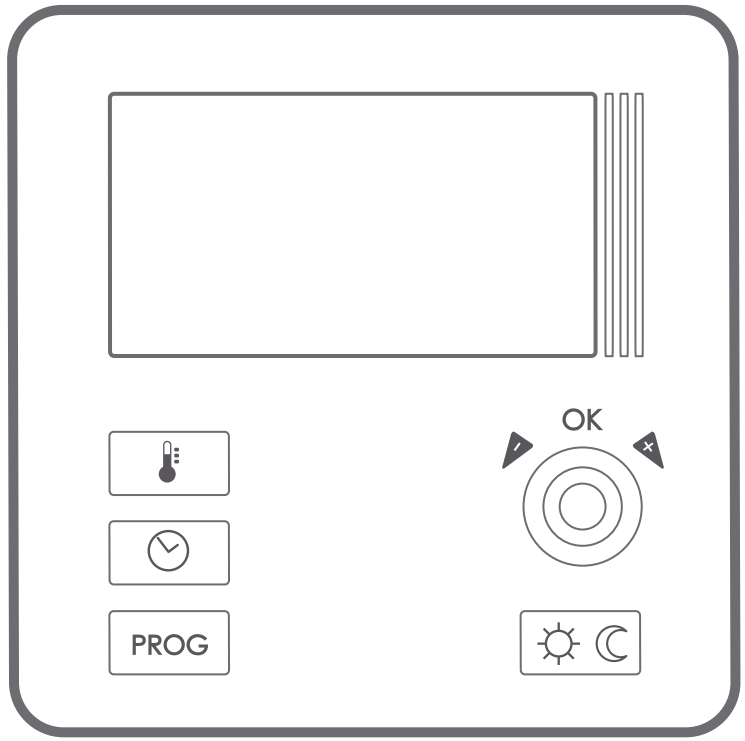
AURATON

3021
3021 P
3021 DS
3021 RTH





EN OWNER'S MANUAL

CE

Thank you for purchasing the latest temperature controller based on an advanced microprocessor.

AURATON 3021 / 3021 P / 3021 RTH / 3021 DS

3 independent temperature settings
Day, night, anti-freeze.

9 independent temperature programs
Including 6-user defined ones.

LCD

Backlit LCD display
Backlit LCD display to control the device in areas with poor lighting.

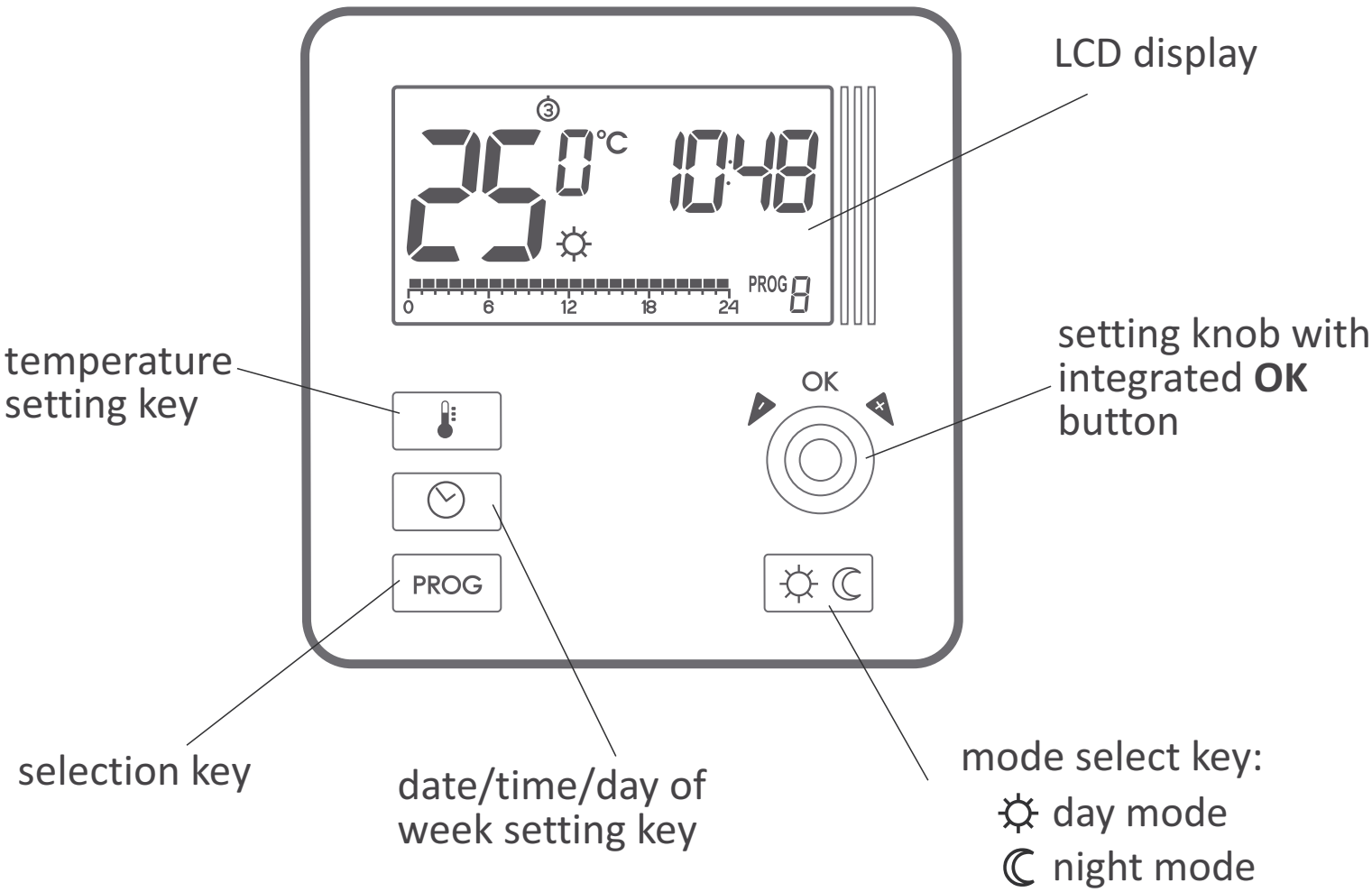
CUATION!

AURATON 3021 RTH set, consists of two devices:

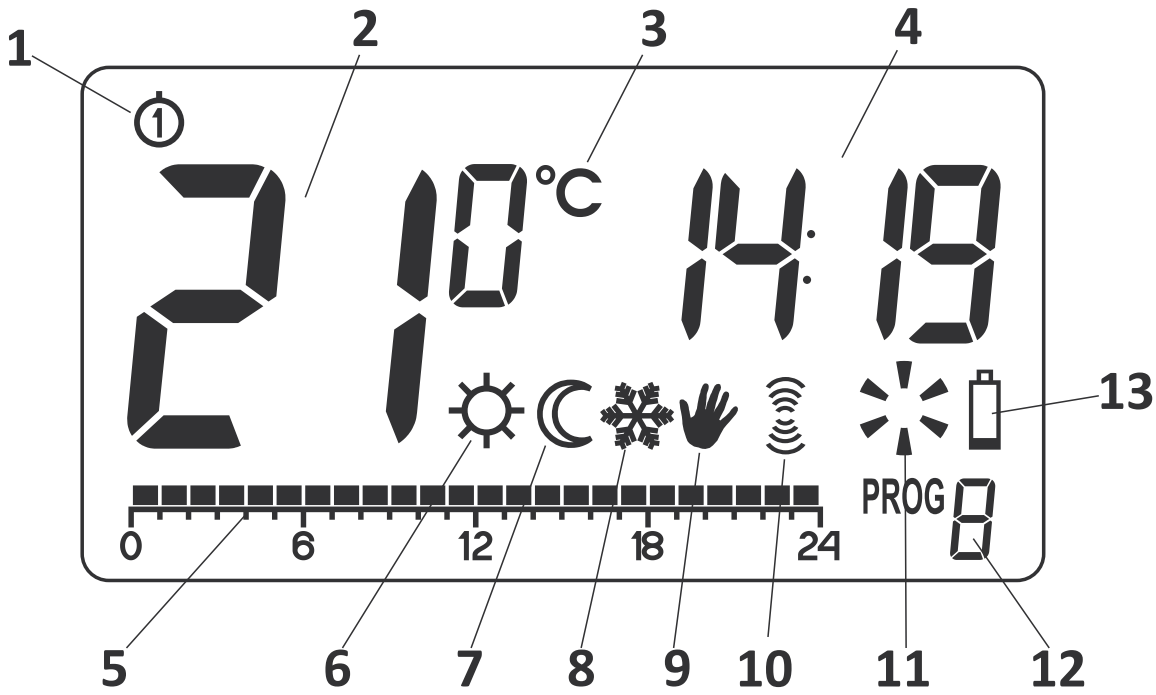
- ***AURATON 3021 R*** – transmitter *(wireless temperature controller)*
- ***AURATON RTH*** – receiver

Temperature controller explained

On the front of the enclosure, there are four function keys, backlit LCD display and temperature control knob with the **OK** button.



Display



1. **Day of week (①···⑦)** – Indicates the current day of the week.

   Each day has a number assigned.

2. **Temperature** – In normal operating mode, the controller displays the temperature of the room it is installed in.

3. **Temperature unit** – Indicates temperature displayed in centigrade (℃).

4. **Clock** – Time displayed in 24-hour mode.

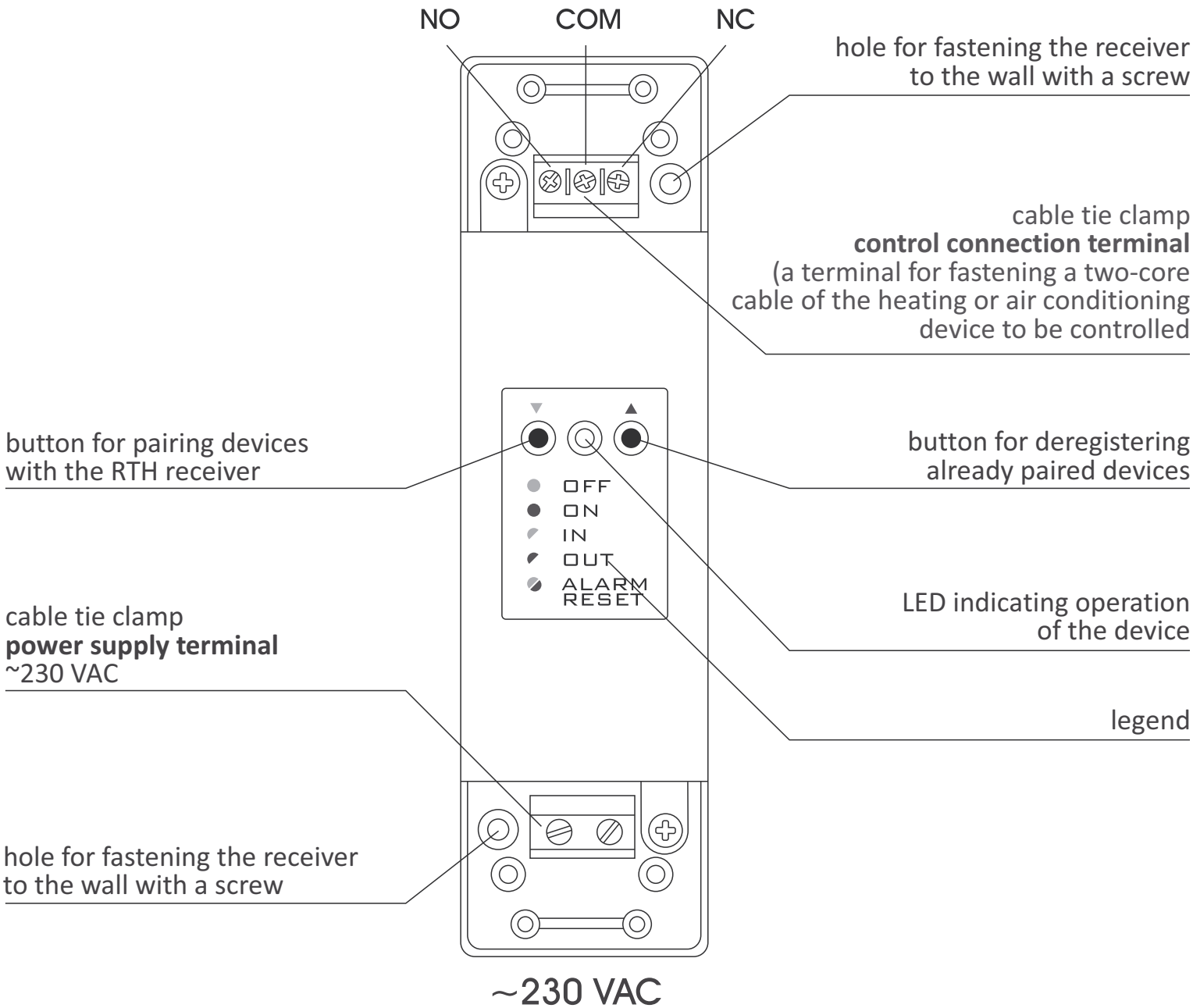
5. **Timeline** – Program progress indicator. Line divided to 24 sections, each corresponding to one hour. Indicates program execution method. *(see: "Timeline")*

6. **Day mode indicator (☼)**
   Indicates that the controller is in the day mode.
   (see: "Temperature programming")
7. **Night mode indicator (☾)**
   Indicates that the controller is in the night mode.
   (see: "Temperature programming")
8. **Anti-freeze mode indicator (❄)**
   Indicates that the controller is in the anti-freeze mode.
   (see: "Anti-freeze mode")
9. **Manual control indicator (✋)**
   Appears if the programmed mode is switched off.
   (see: "Manual control mode")
10. **Transmission symbol ( ) – *AURATON 3021R only***
    Indicates ongoing communication with the RTH receiver.
11. **Controller power on indicator ( )**
    Indicates the operating status. Visible when the controlled device is started.
12. **Program number**
    Indicates the number of program currently executed.
    (see: "Factory programs" and "Weekly programming")
13. **Battery exhausted ( )**
    Displayed when the battery voltage drops below the allowed limit. Replace the battery as soon as possible.

    NOTE: ***To save the parameters programmed, the battery exchange operation should not last longer than 30 seconds.***

Description of the RTH receiver (AURATON 3021 RTH)

The ***AURATON RTH*** receiver cooperates with the ***AURATON 3021R*** 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 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 receiver").*

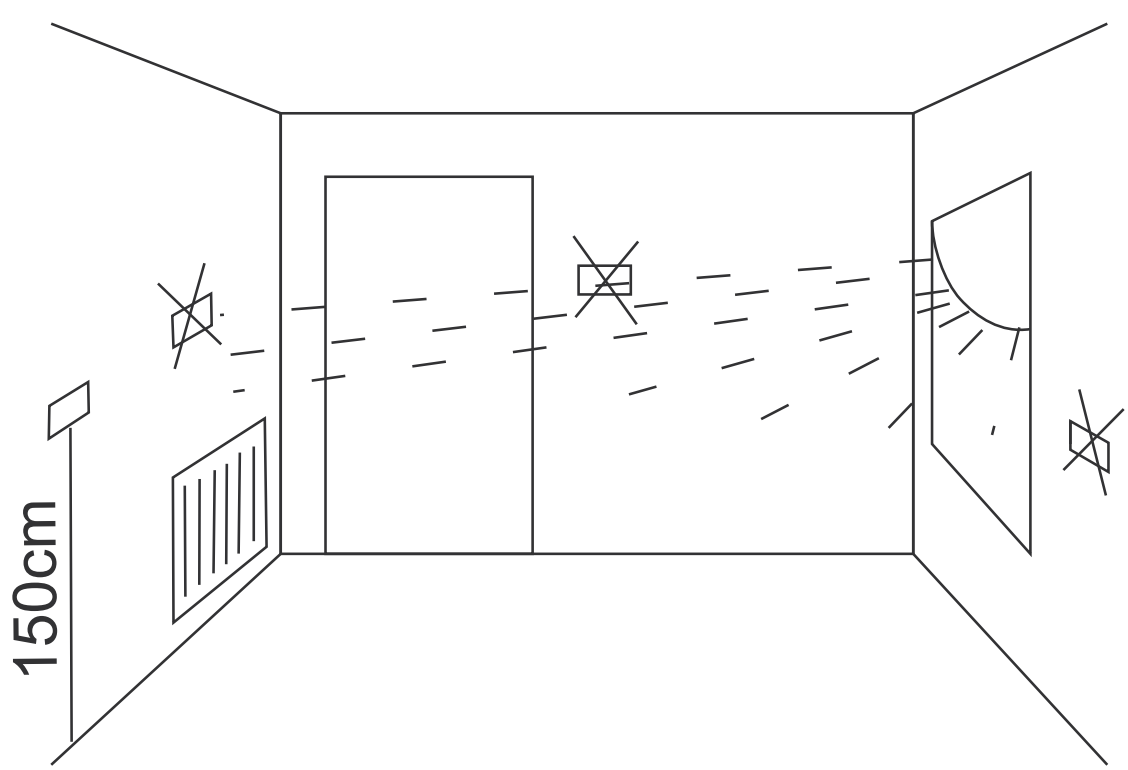
ALARM RESET — **The LED flashes alternating red and green**:

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").*

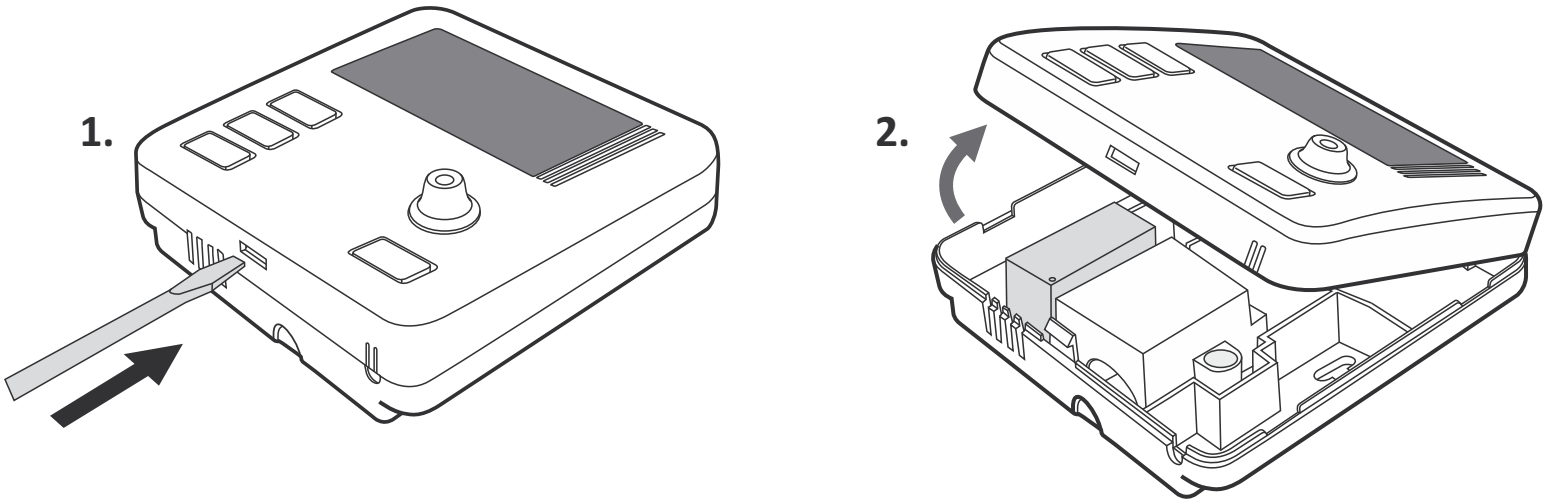
Selecting proper location for temperature controller

Controller location largely affects its proper operation. When located in a place without air circulation or exposed to direct sunlight, the controller may not control the temperature properly. The controller should be located on an internal wall of a building (partition wall) in a place with free air circulation. Avoid locations near sources of heat (TV set, heater, refrigerator) or places exposed to direct sunlight. Location near doors and the resultant vibration may cause the controller to function improperly.

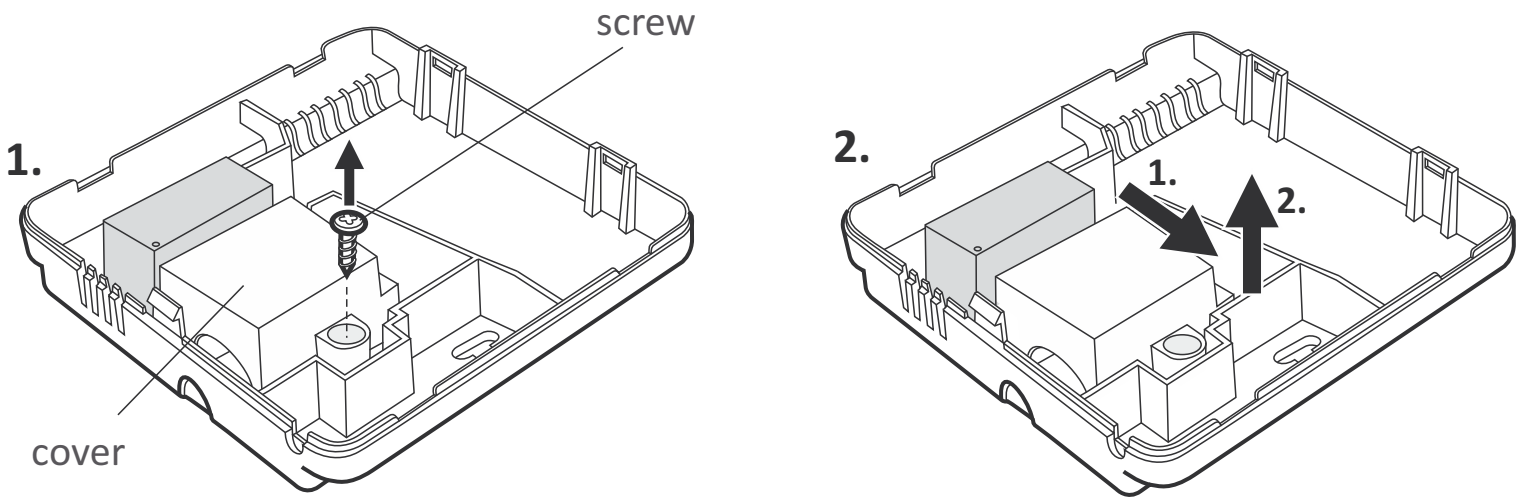


Wiring your AURATON 3021

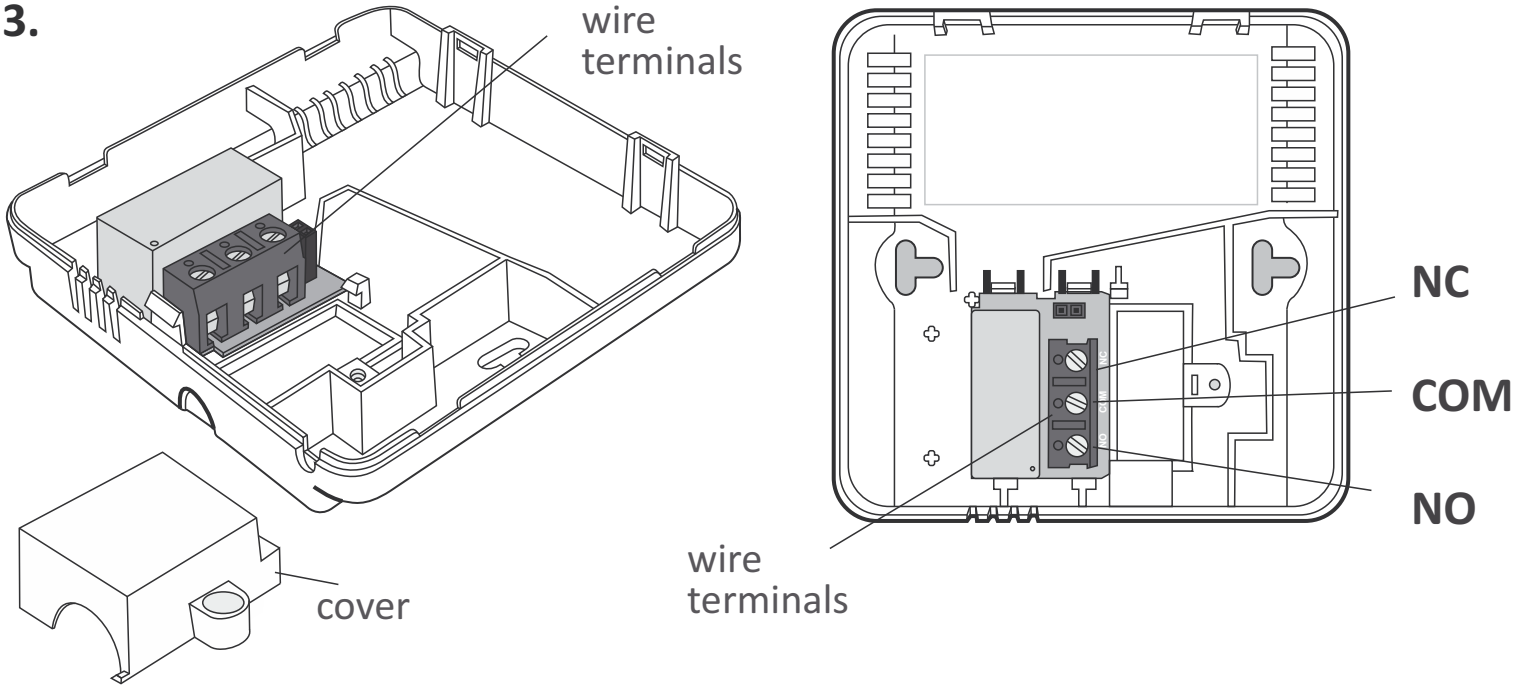
To connect the wiring, remove the enclosure as described below:



Wiring terminals are located in the controller back wall, under **the plastic cover**.



3.



It is a typical bistable relay. The NC terminal is not used in most cases.

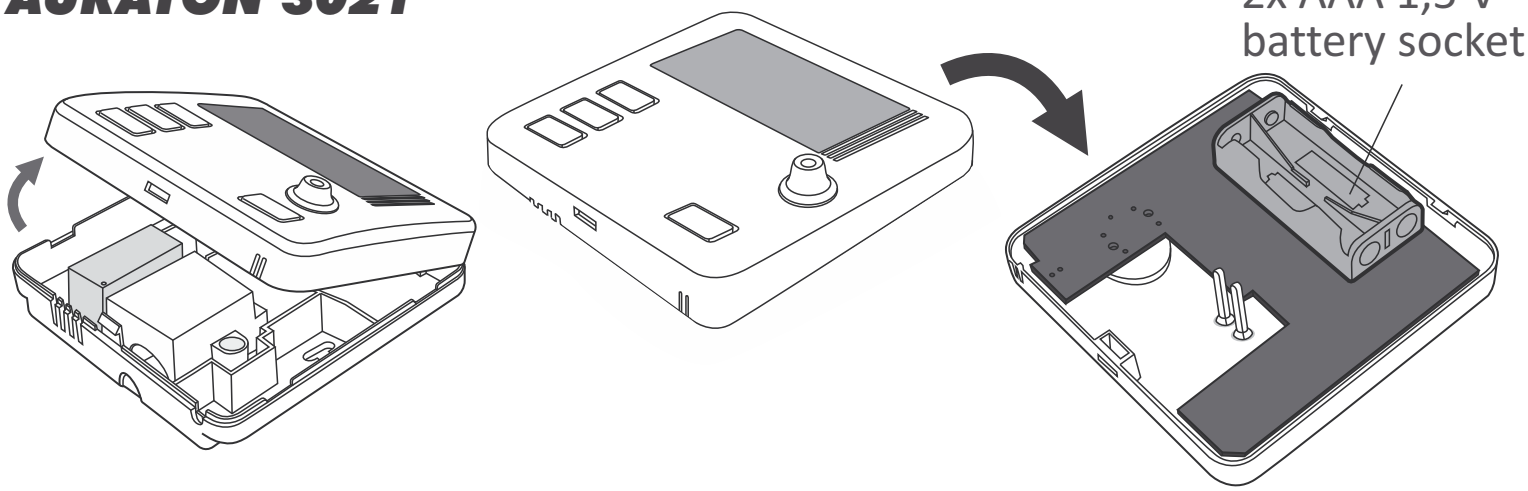
NOTE: Replace the plastic cover after wiring.

Battery installation / replacement

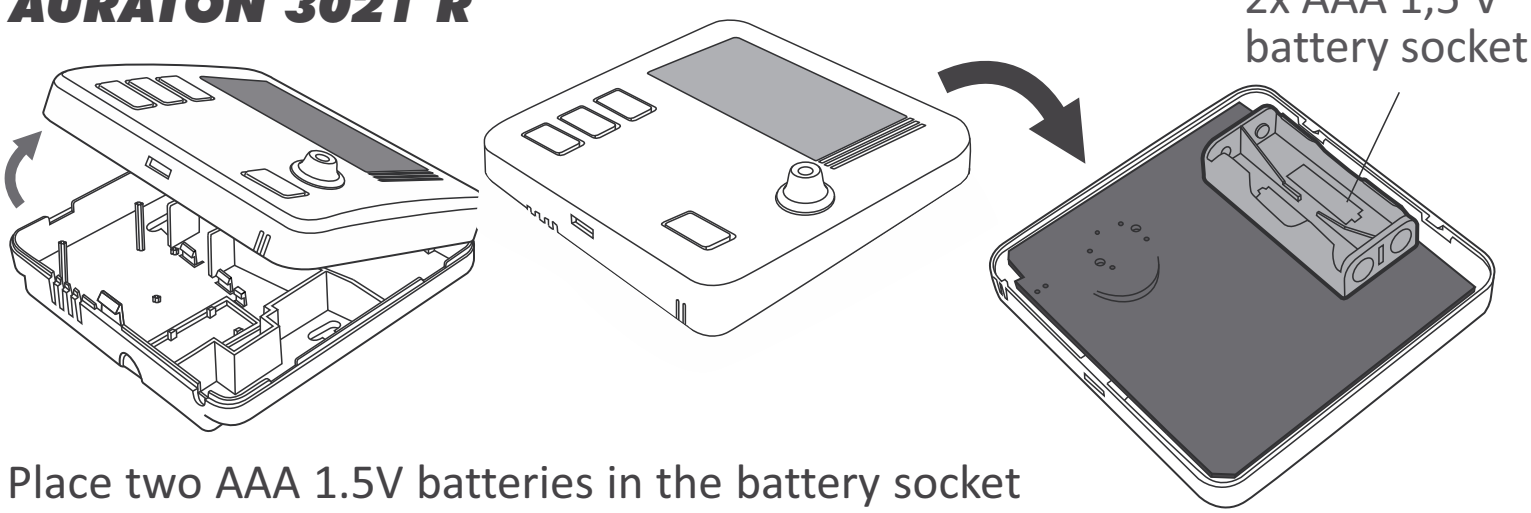
The battery socket is located inside the controller, at the front of the enclosure. To install the batteries, remove the controller enclosure as described in the "*Wiring your AURATON 3021*" section.

NOTE: We recommend using alkaline bateries to supply AURATON controllers. Rechargeable batteries should not be used because their rated voltage is too low.

AURATON 3021



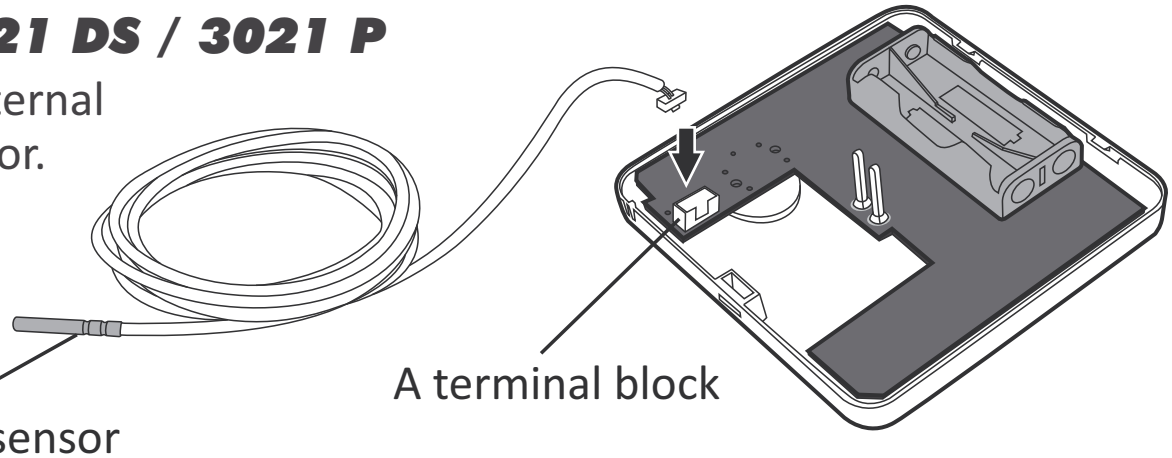
AURATON 3021 R



Place two AAA 1.5V batteries in the battery socket observing the correct polarity. ON 3021" section.

AURATON 3021 DS / 3021 P

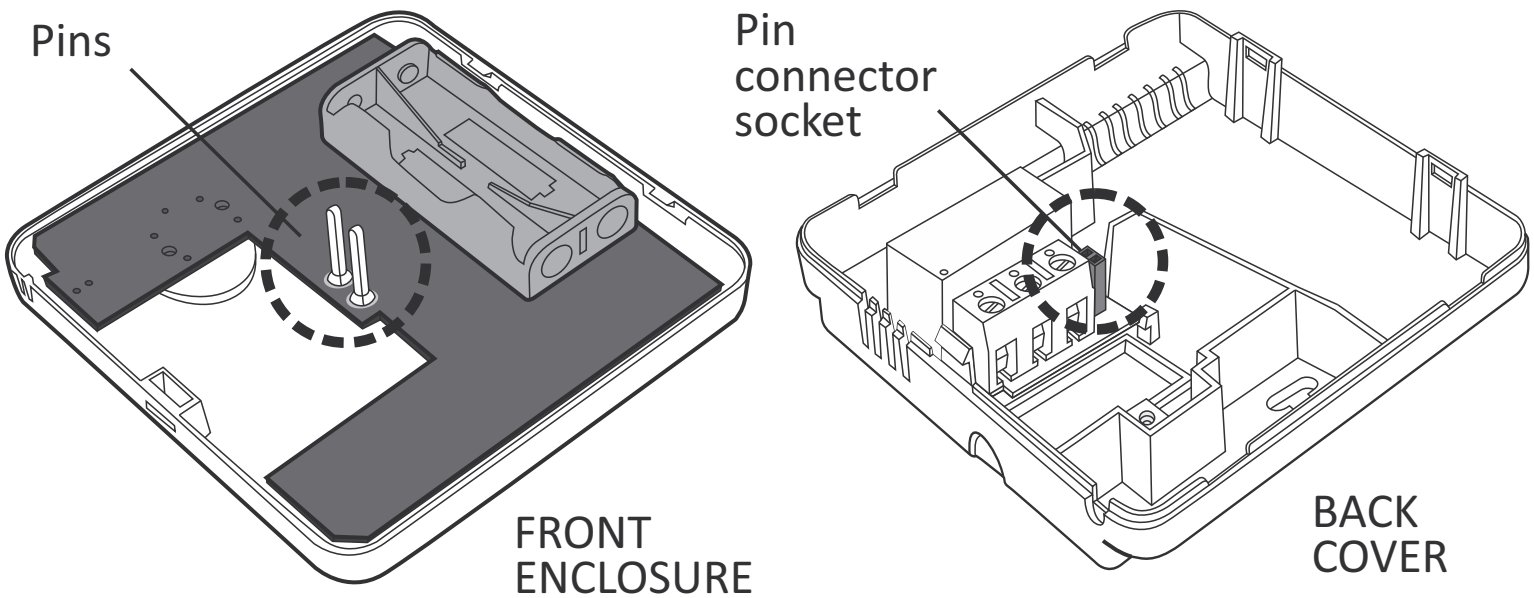
Connecting an external temperature sensor.



Replacing the enclosure 3021

CAUTION

While replacing the front part of the enclosure on the back one, pay attention to the pin connector that controls the relay.



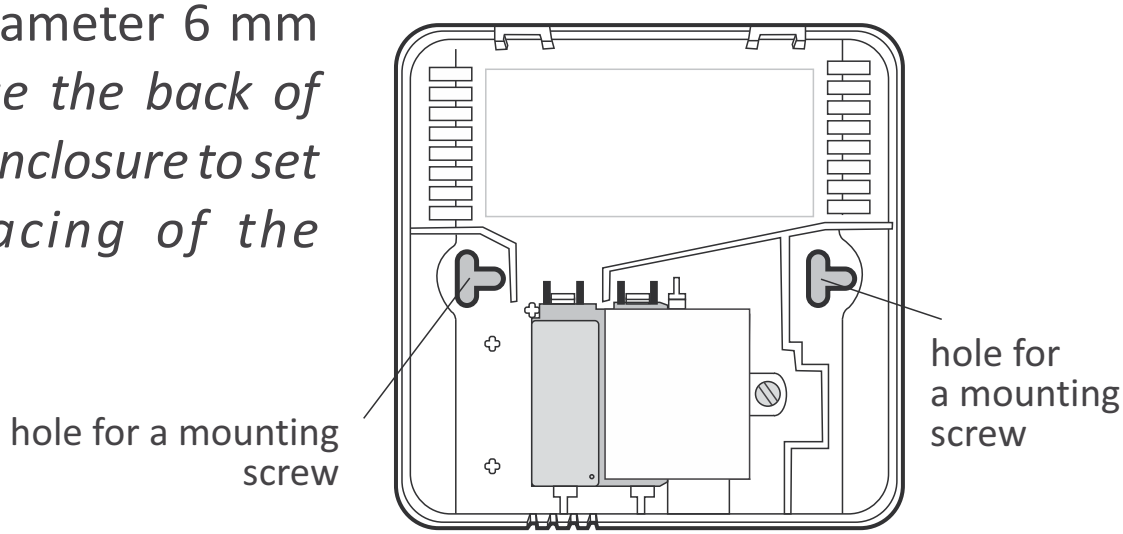
While reassembling ensure that the pins engage with the pin connector socket.

Fixing the controller to the wall

To fix the ***AURATON 3021*** controller to the wall:

1. Remove the enclosure *(as described in the "Wiring your AURATON 3021" section)*.

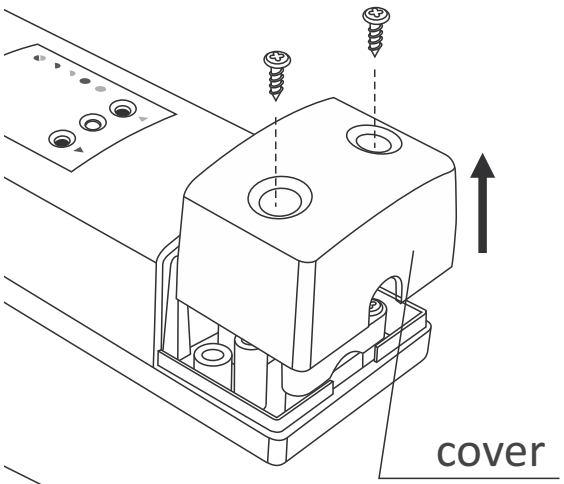
2. Drill 2 holes diameter 6 mm in the wall *(use the back of the controller enclosure to set the right spacing of the holes)*.



3. Place plastic plugs in the drilled holes.
4. Screw the back of the controller enclosure to the wall with the two screws provided.
5. Replace the controller enclosure.

NOTE*: No expansion bolts are needed for wooden walls. Just drill holes diameter 2.7 mm (instead of 6 mm) and screw the screws directly into the wood.*

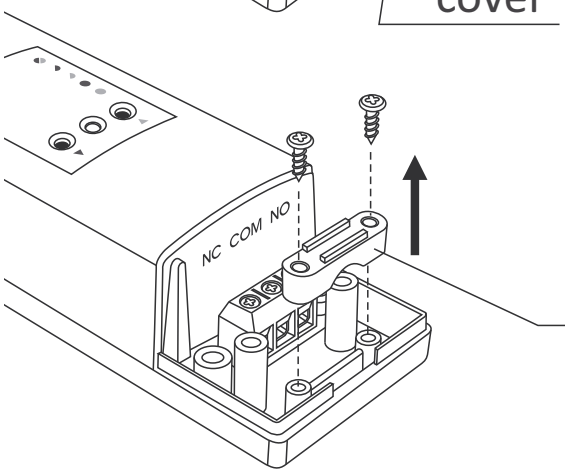
Fastening the RTH receiver



NOTE !

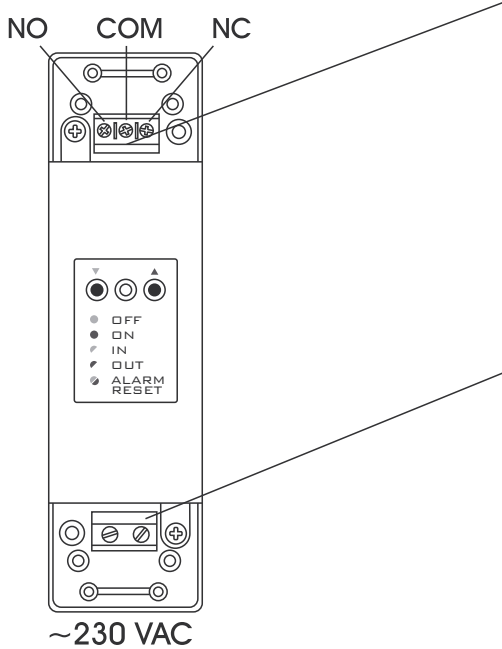
When installing the receiver its power supply must be disconnected. It is recommended that the installation is performed by a qualified specialist.

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



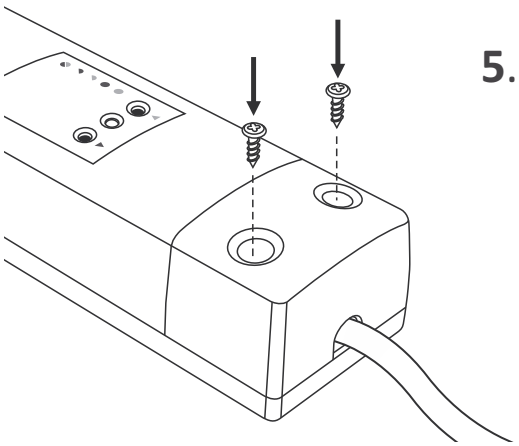
1. Take off protective covers from the lower and upper part of the receiver.

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



3. Connect the heating device to the **control connection terminals** of the 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 receiver, observing safety rules.



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

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.

Fastening the RTH receiver to the wall

To fasten the RTH receiver to the wall:

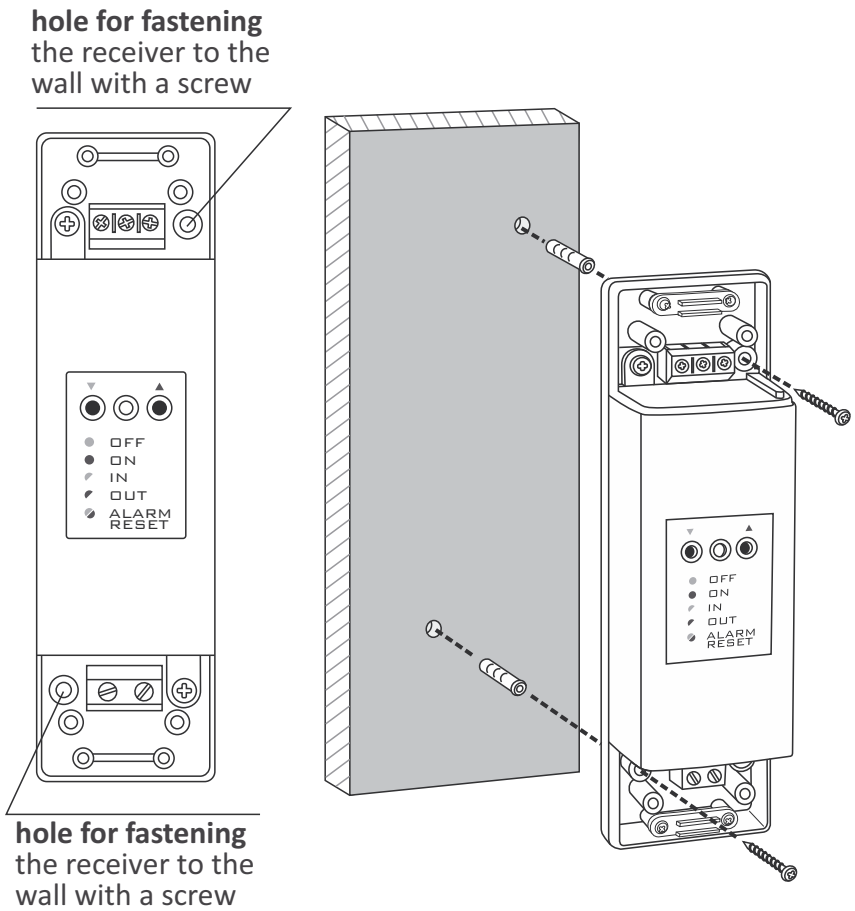
1) Remove protective covers from the lower and upper part of the regulator. *(See chapter: "Fastening the RTH receiver").*

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.

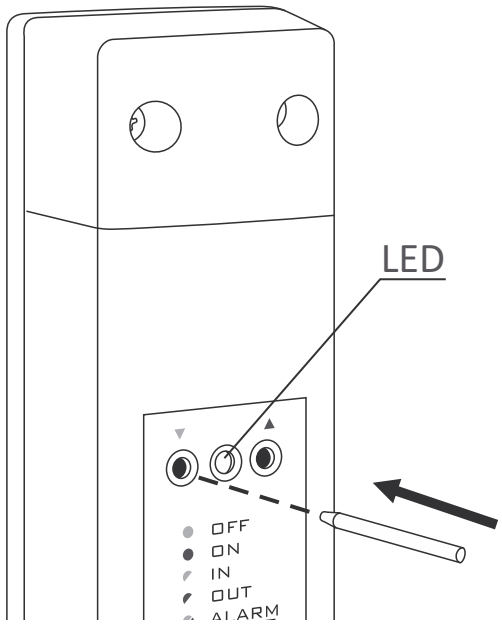


NOTE: If the wall is wooden, there is no need to use wall plugs. In such a case, drill two holes 2.7 mm in diameter instead of 5 mm, and screw the screws directly into the wood.

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 wireless temperature regulator with the RTH receiver

NOTE: The wireless temperature regulator sold with the receiver is already paired. **Devices sold separately require "pairing".**



1. The **process of pairing** the regulator with the receiver is initiated by pressing the left pairing button (marked with a green triangle - ▼) on the 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.

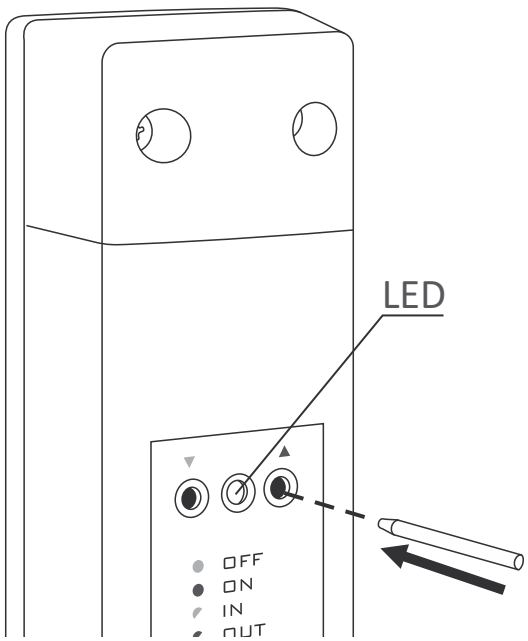
2. On the regulator, press the PROG button and hold it for 5 seconds until the transmission symbol ( ) appears on the display. Release the button - the regulator transmits the pairing signal for 5 seconds.

3. A properly completed pairing process is signalled by the LED on the 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 receiver (see "RESET - Deregistering all devices paired with the receiver") and attempt to pair the device again.

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

Deregistering the regulator from the receiver



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

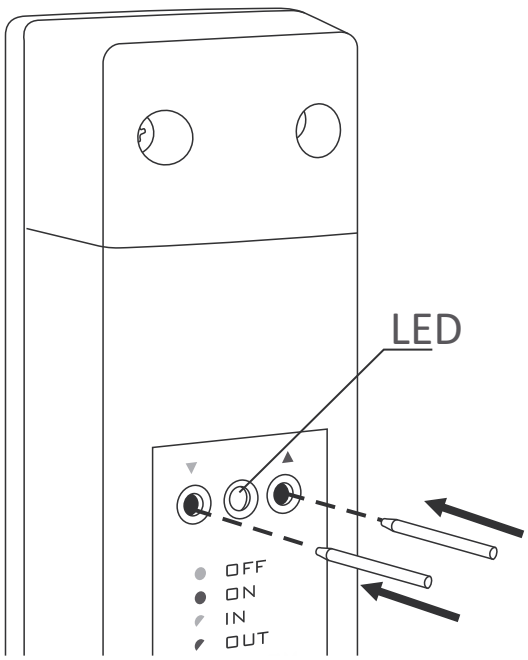
   The AURATON RTH receiver waits for deregistering for 120 seconds. After that time, it automatically returns back to normal operation.

2. On the 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 deregistering process is signalled by the LED on the 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 receiver") and attempt to pair the device again.

RESET - Deregistering all devices paired with the receiver



In order to deregister all devices paired with the 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.

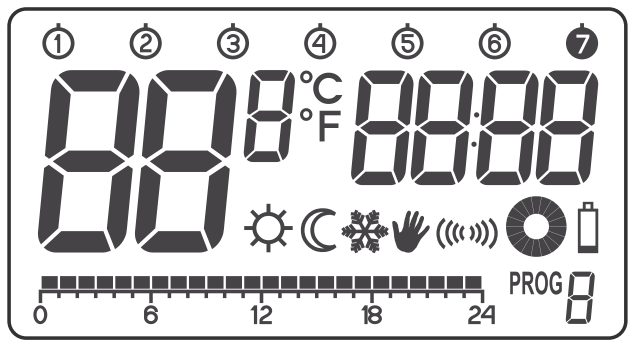
A properly completed process of deregistering all devices is signalled after approx. 2 seconds by the LED colour changing to green and then switching it off for a short period of time.

***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

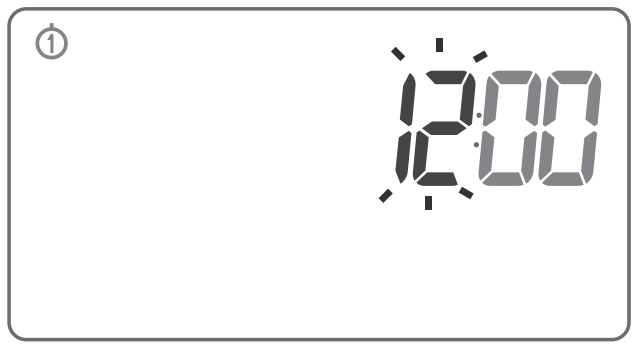
Each radio transmission received by the AURATON RTH receiver from the paired device is signalled by a temporary change of LED colour to orange. Switching on the relay is signalled by the LED lit red, whereas switching it off is signalled by the LED lit green.

Starting the controller for the first time



After correct installation of the batteries, the LCD will display, for a second, all segments followed by the firmware version number.

After a while, the controller will automatically switch to time setting mode. A blinking component on the display is in edit mode. Turn the knob clockwise or counter clockwise to set the hour desired and confirm with the key.



Turn the knob clockwise or counter clockwise to set the correct value for minutes and, again confirm setting with the OK key.

In the top left corner a blinking day symbol will appear. Turn the knob clockwise or counter clockwise to set the day desired and confirm with the OK key .

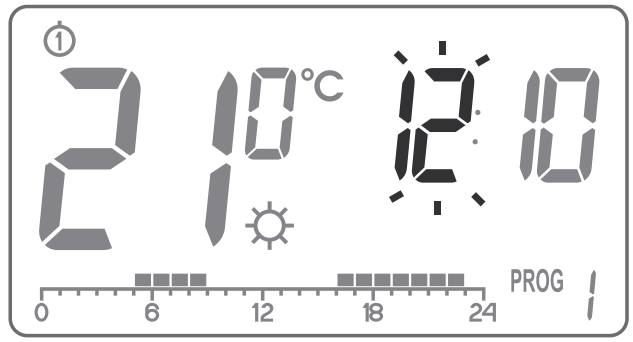
NOTE: If no key is pressed for 60 seconds in the initial edit mode, the default time 12:00 and Monday will be automatically set.

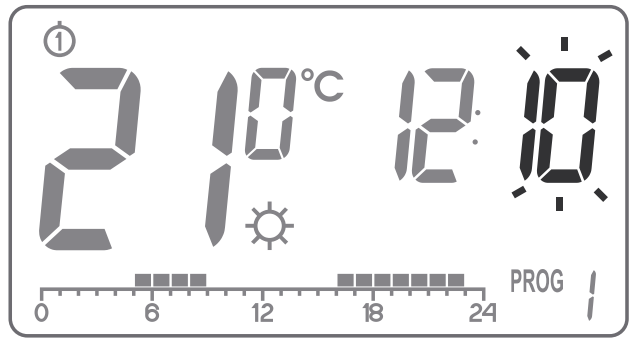
NOTE: While programming any other functions, if no key is pressed for 10 seconds, this will be interpreted as pressing the OK key.

Setting the clock and day of week

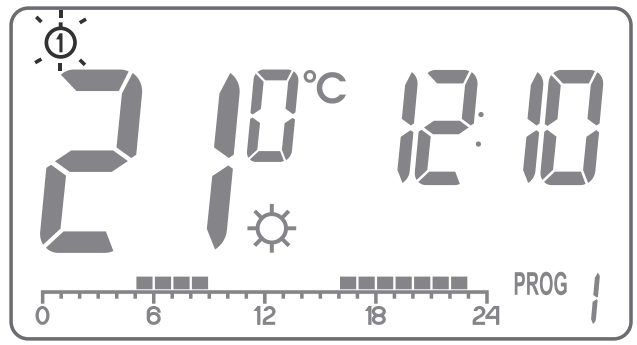
To set the clock:

1. Press the key.
   A segment with time will start blinking on the display.
2. Turn the knob clockwise or counter clockwise to set the hour desired and confirm with the OK key.
3. Turn the knob clockwise or counter clockwise to set the correct value for minutes and again confirm with the OK key.





4. In the top left corner a blinking day symbol will appear. Turn the knob clockwise or counter clockwise to set the day desired and confirm with the OK key.



NOTE: It is also possible to switch settings with the key.

Default program setting

- **Monday - Friday:**
  heaters will operate according to the day temperature (☼) between **05:00 and 8:00** and between **15:00 and 23:00**

- **Saturday - Sunday**
  heaters will operate according to the day temperature (☼) between **06:00 and 23:00**

- **default temperature settings:**
  ☼ day temperature – 21.0 °C
  ☾ night – 19.0 °C
  ❄ anti-freeze temperature – 7.0 °C
  F temperature of the external sensor – 40.0 °C (Auraton 3021 DS only)

Programming day ☼ and night ☾ temperatures

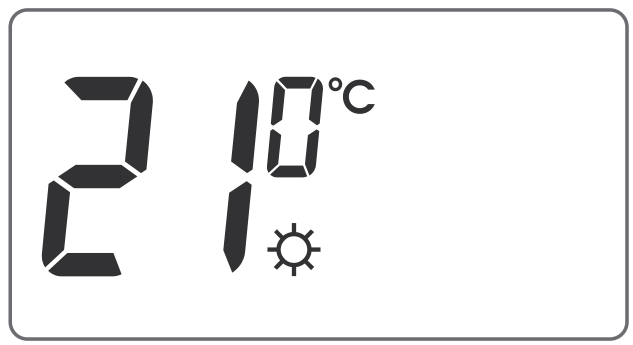
With ***AURATON 3021*** 2 temperatures can be programmed:

- Day temperature (☼) – from 5 to 30 °C
- Night temperature (☾) – from 5 to 30 °C
- Temperature of the external sensor (F) - 10 to 55 °C
  (Auraton 3021 DS only)

To set one of the temperatures:

1. Press the [🌡] key.

2. Current temperature setting will be displayed with the symbol:
☼ – day temperature;
☾ – night temperature;
F – temperature of the external sensor (Auraton 3021 DS only)



3. Turn the knob clockwise or counter clockwise to set the temperature desired.

4. Press the [🌡] key to switch edit mode between the night and day temperature (☼ , ☾).

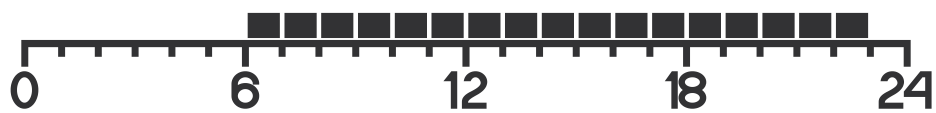
5. After the stetting is complete, press the (OK) key to confirm.

NOTE: The night temperature setting can be equal or lower than the day one. The night temperature cannot be set to the value lower than the day one.

PROGRAMMING INTRODUCTION

Timeline

The timeline on the LCD is divided to 24 sections. Each corresponds to 1 hour of the day.
Black rectangles above the timeline indicate day temperature set for the specific hours. Night temperature is set when no rectangles are present.
Example:



The above figure shows that from 6.00 to 23.00, the controller will control the heating equipment to ensure day temperature in the room (☼). From 23.00 to 6.00, the controller will switch to night temperature (☾).

Factory programs

Proper program should be set for every day of the week so that the controller know when to switch between the night and day temperatures. To do so, you can use one of the factory presets available (from 0 to 2):

Program 0 – anti-freeze ❄

Non-editable factory program. Intended for all-day anti-freeze temperature setting.

Program 1 – weekly

Non-editable factory program. Day temperature setting from 5:00 to 8:00 and from 15:00 to 23:00.

Program 2 – weekend

Non-editable factory program. Day temperature setting from 6:00 to 23:00.

Program 3, 4,....,8 – user-defined

3 to 9 are user-defined programs. They can be modified and adjusted to your demand.

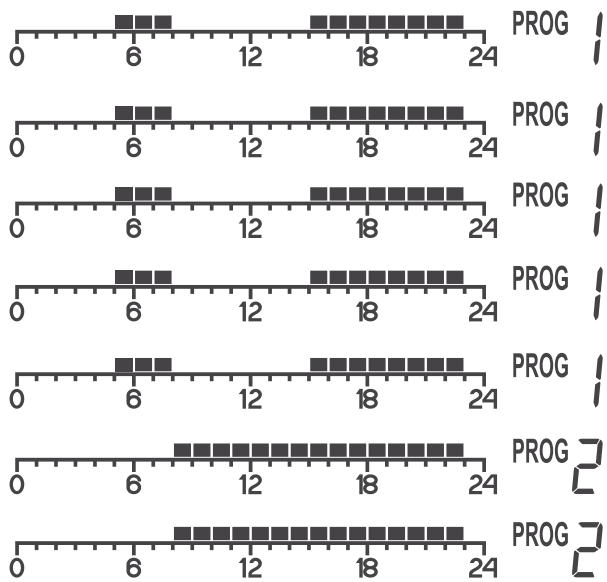
PPROGRAMMING

Weekly programming

To program the controller, set the day temperature intervals for individual days of the week. At other time, night temperature will be set.

Sample controller setting from Monday to Sunday. Outside the intervals programmed, the night temperature will be set.

Day	Day temperature	
Monday	5:00 – 8:00;	15:00 – 23:00
Tuesday	5:00 – 8:00;	15:00 – 23:00
Wednesday	5:00 – 8:00;	15:00 – 23:00
Thursday	5:00 – 8:00;	15:00 – 23:00
Friday	5:00 – 8:00;	15:00 – 23:00
Saturday	8:00 – 23:00	
Sunday	8:00 – 23:00	



PROGRAM SELECTION

To set the program:

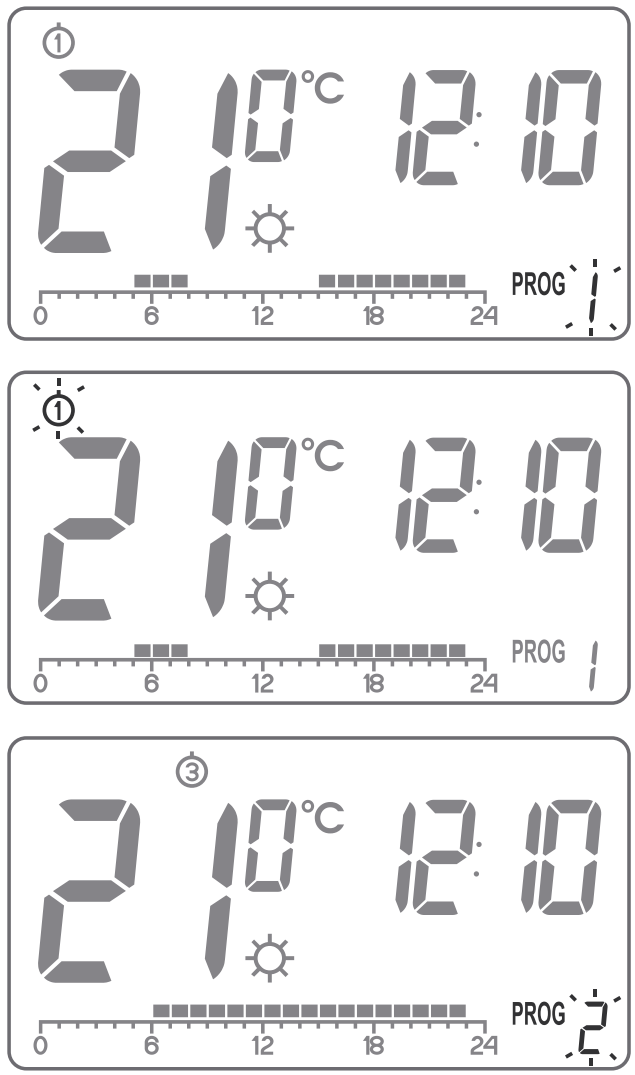
1. Press the PROG . key. Program number segment will start blinking.

2. Press the ⏲ key as many times as required to set the day of the week for the program.

3. Press the PROG key several times and select the program number requested. Programs **0-2** are factory-set, programs **3-8** can be edited.

4. Confirm selection pressing the OK key.

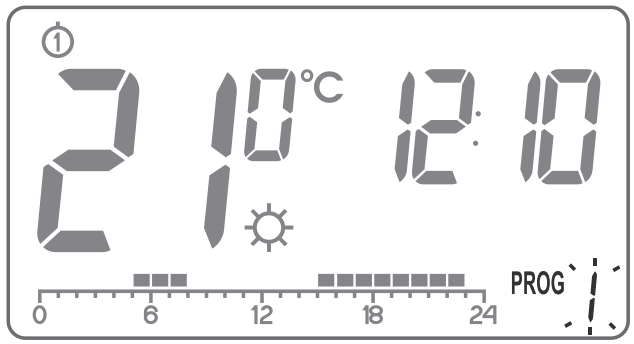
5. Repeat the procedure for the following days of the week.

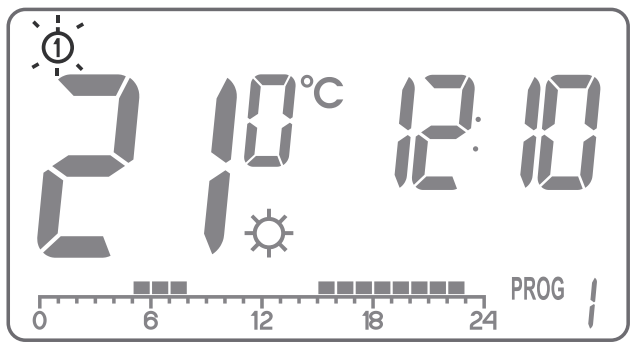


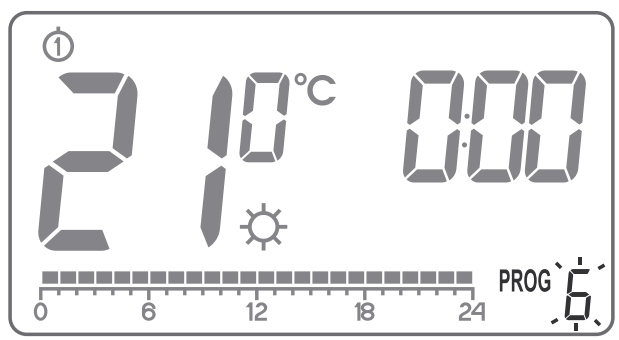
MODIFYING USER-DEFINED PROGRAMS (prog. 3...8)

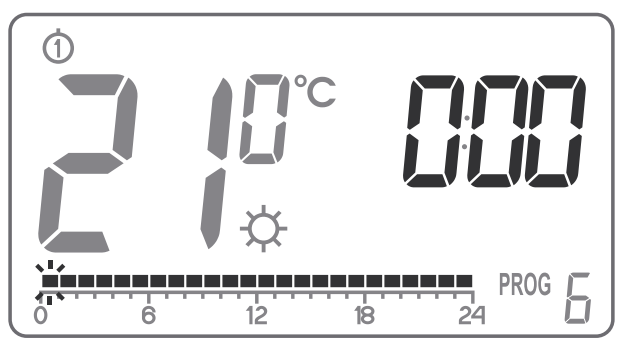
To set the program:

1. Press the PROG key. Program number segment will start blinking.
2. Press the ⏲ key as many times as required to set the day of the week for the program.
3. Press the PROG key several times to select the program number required. Programs **0-2** are factory-set, programs **3-8** can be edited.
4. All (24) black rectangles will appear on the timeline. Each of them symbolises 1 hour. A visible rectangle indicates day temperature set for the given time. If no rectangle is displayed, night temperature is set.



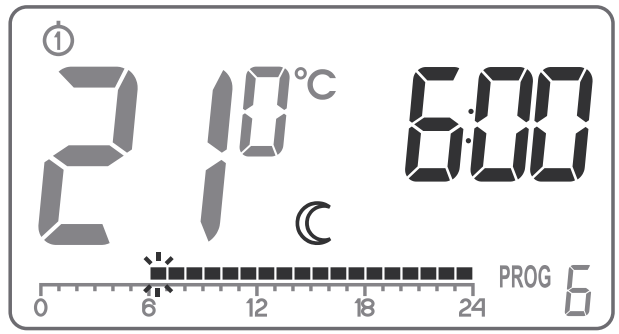






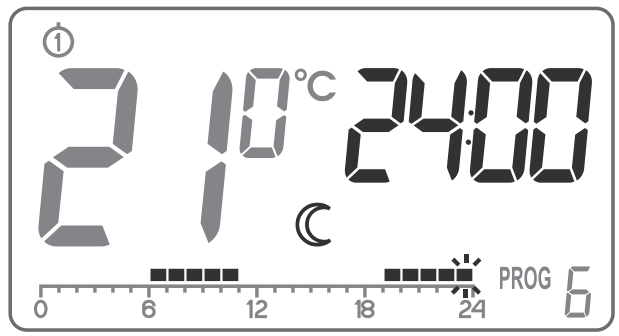
Blinking rectangle indicates the point of the timeline which is modified.

5. Press the ☼☾ key to select day (rectangle on) or night temperature (no rectangle). Then, select the time interval for the temperature selected with the knob.



6. By pressing the ☼☾ key and selecting time interval the entire program is modified.

7. Confirm selection with the OK key.



NOTE: Modified program for the individual day can be selected and executed also on a different day of the week.

Manual control

Option 1

If, for some reasons, you would like to suspend program execution for a given time, it is possible to prolong the day or night mode to max. 24 hours. To do so:
Press the ☼☾ key for 3 seconds. Then, using the knob, set the number of manual operation hours (max. 24 hours) and confirm setting with the OK key.

The controller will wait to set what of the two temperatures should be held (day or night). Press the ☼☾ key or use the knob to change the setting. Press the OK key to acknowledge the selection.

Option 2

If, for some reasons, you would like to suspend program execution, for example because of a longer party, and the controller has already started to decrease temperature for the night setting (the symbol ☾ is displayed), and you whish to keep comfortable temperature till the party ends:

Press the ☼ , key, and the ☼☾ and ✋ symbol will be displayed. The day temperature will be kept for as long as the next temperature change is made by the program.

To switch this function off, press the OK key, then the ✋ symbol will disappear.

Similarly, if you are leaving your house for a longer time, then:

Press the ☼☾ key, and the ✋ and ☾ . The night temperature will be kept for as long as the next temperature change is made by the program

To switch this function off, press the OK key, then the ✋ symbol will disappear.

Anti-freeze temperature ❄

If you leave for a longer time, you can set the anti-freeze temperature. This will prevent from the consequences of freezing of water in the heating system by automatic temperature setting to 7°C. To set the anti-freeze program, select the **program 0** at the desired day of week.

Controller RESET

Reset is done by removing the battery for as long as the data from the display disappears.

Controller MASTER RESET

MASTER RESET is done by pressing and holding the OK key and putting the battery in at the same time.
This will reset the controller to defaults.

NOTE: All user programs will be deleted!

Configuration settings

Configuration settings are presented for changing in the following order:

Heating mode / Air conditioning mode ➡ **hysteresis change** ➡ **delay change** *(3021 / 3021 DS only)* ➡ **offset change** ➡ **Pr Off/Pr On** *(3021 DS only)*

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

1. HEATING / AIR CONDITIONING MODE

The controller can work in two modes:

A heating mode (factory set) - it should be selected when the controller is to work with heating devices.

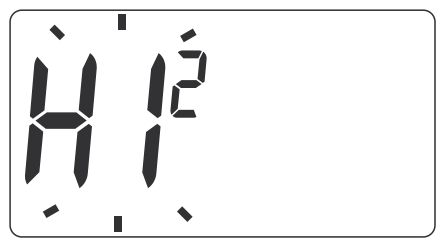
An air conditioning mode - it should be selected when the controller is to work with air conditioning devices.

The relevant mode can be selected by turning the knob counterclockwise or clockwise. Confirm the choice by pressing OK. The controller switches to the next parameter change.

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 turn the knob clockwise.



HI 2 – ±0,2°C *(factory setting),*
HI 4 – ±0,4°C.

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

3. **DELAY CHANGE** *(AURATON 3021 / 3021 DS 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**.
Turn the knob clockwise to switch the delay on and off.

90:SE – 90s delay *(factory setting)*
0:SE – without delay.

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

4. **OFFSET CHANGE**

Offset allows for calibrating temperature indications within the tolerance of ±3°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 (turn the knob clockwise) within the range from 3.0 to 3.0 *(factory setting is 0.0)*.

Confirm the setting by pressing the OK 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.

Special situations

- When 3 consecutive transmissions (after 15 minutes) from the ***AURATON 3021R*** regulator 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 signal return (from the AURATON 3021R regulator), the error is cancelled and the receiver enters its normal mode of operation.

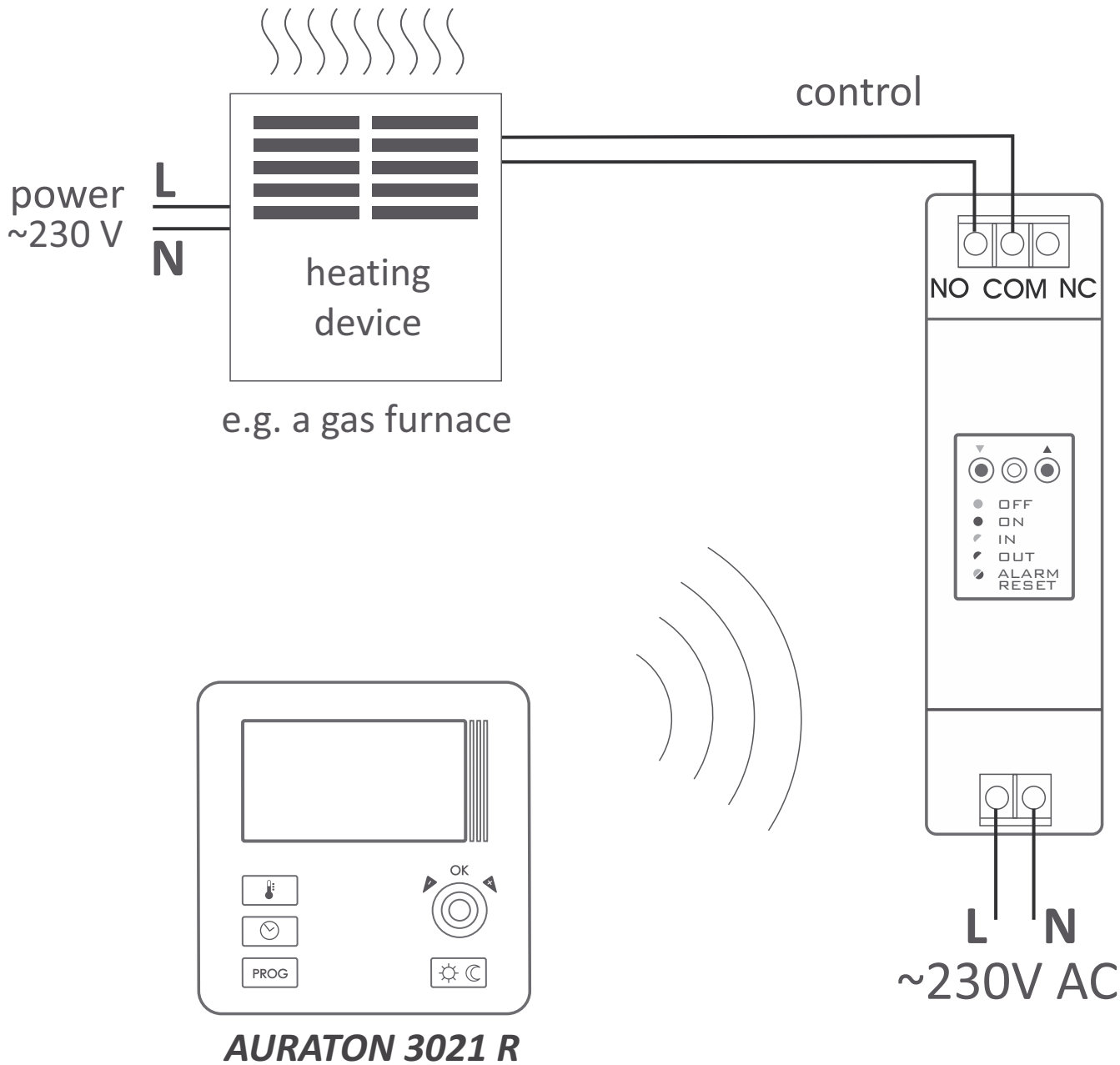
Unique features of AURATON 3021 RTH

- 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 occurs around the zero-crossing point. This prevents the occurrence of an electric arc, significantly extending the relay service time.
- The 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 losing communication with the AURATON 3021R regulator, the RTH receiver automatically executes the ON - OFF cycle memorised during the last 24 hours. This provides time for restoring transmission (removing interferences) or fixing the 3021R regulator without a significant deterioration of thermal comfort conditions in the controlled spaces.

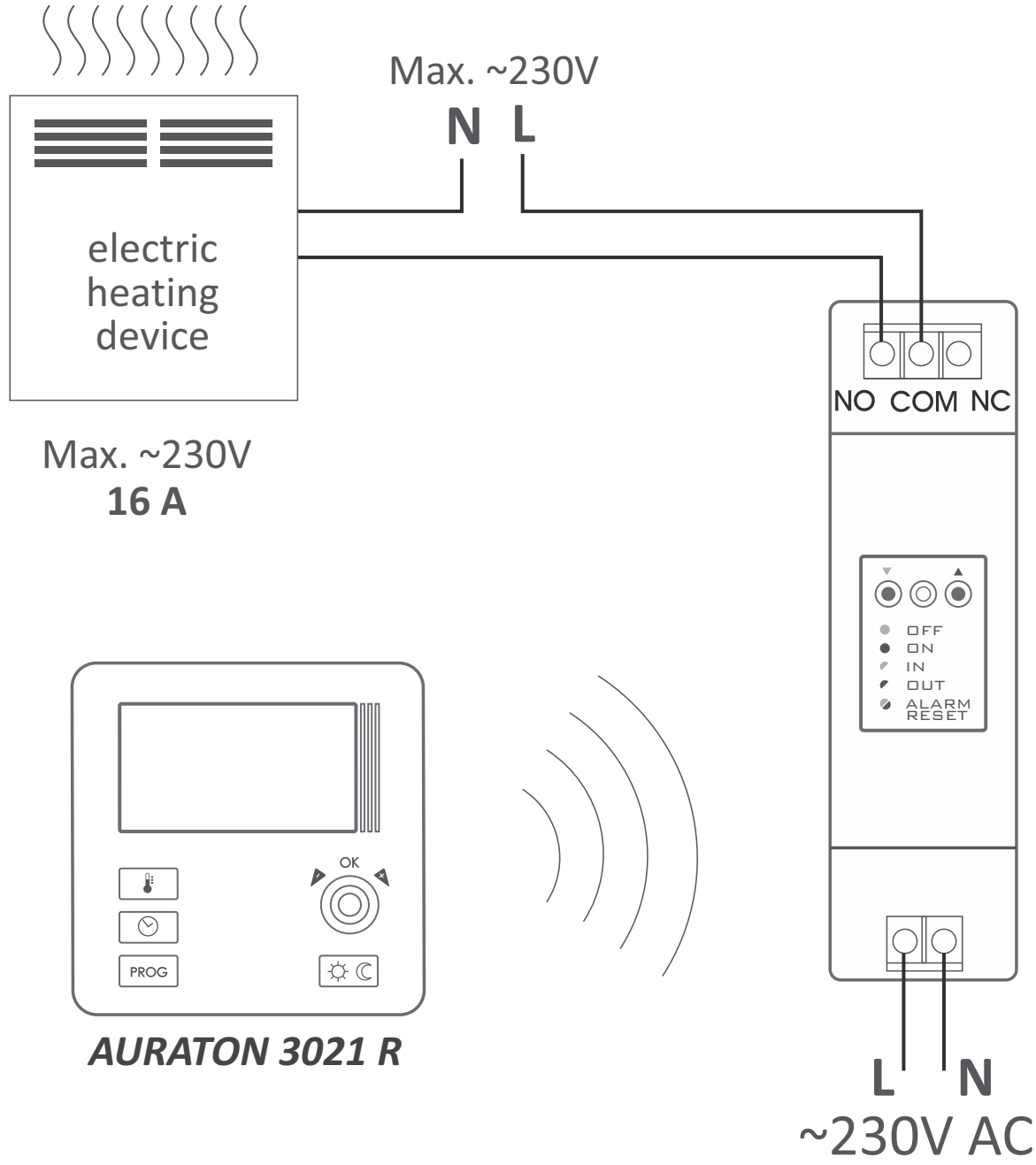
Additional information and notes

- The AURATON 3021R regulatormust be installed at least 1 metre from the RTH receiver (too strong a 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 3021R regulator to the receiver occurs upon each change of 0.2 °C of the surrounding temperature. 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 of restoring power). After receiving the signal, the RTH receiver enters the normal mode of operation.
- 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.
- Pressing any function key for the first time always starts the backlight first, and then the key function is performed.
- While programming any function, if no key is pressed for 10 seconds, this will be interpreted as pressing the OK key.
- **The control functions of the controller can be switched on and off (e.g. after heating season) by holding the OK key pressed for a while.** *(The controller will display only the current time and temperature of the room - **no "timeline"**)*.

The RTH receiver connection schematics



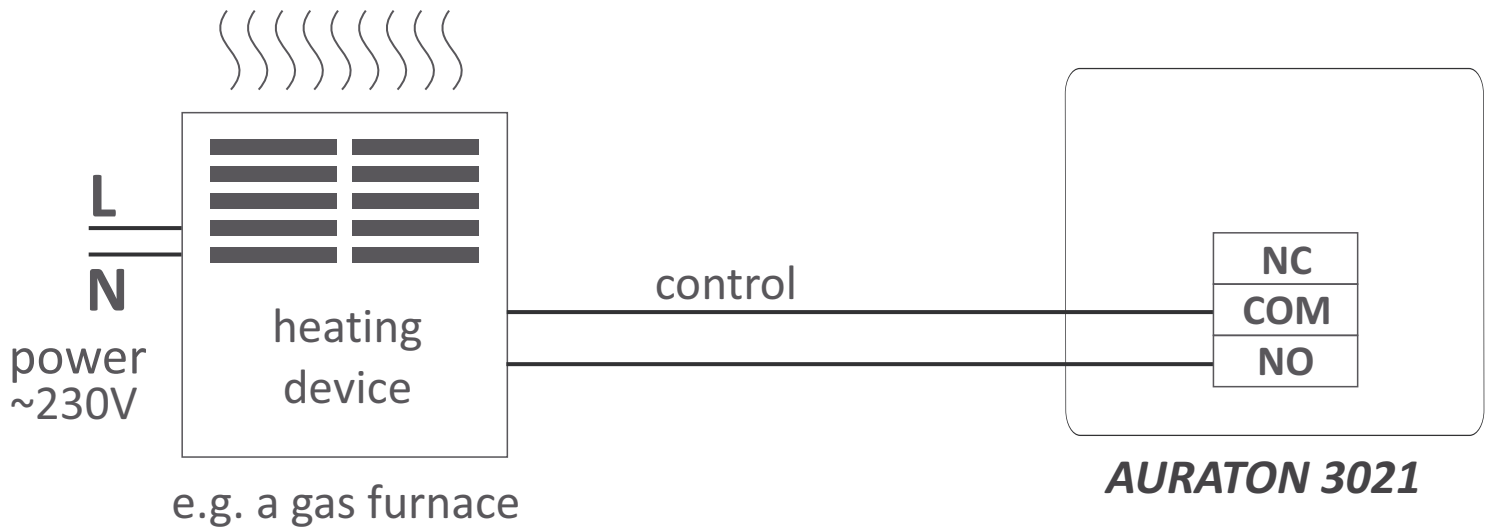
AURATON 3021 R

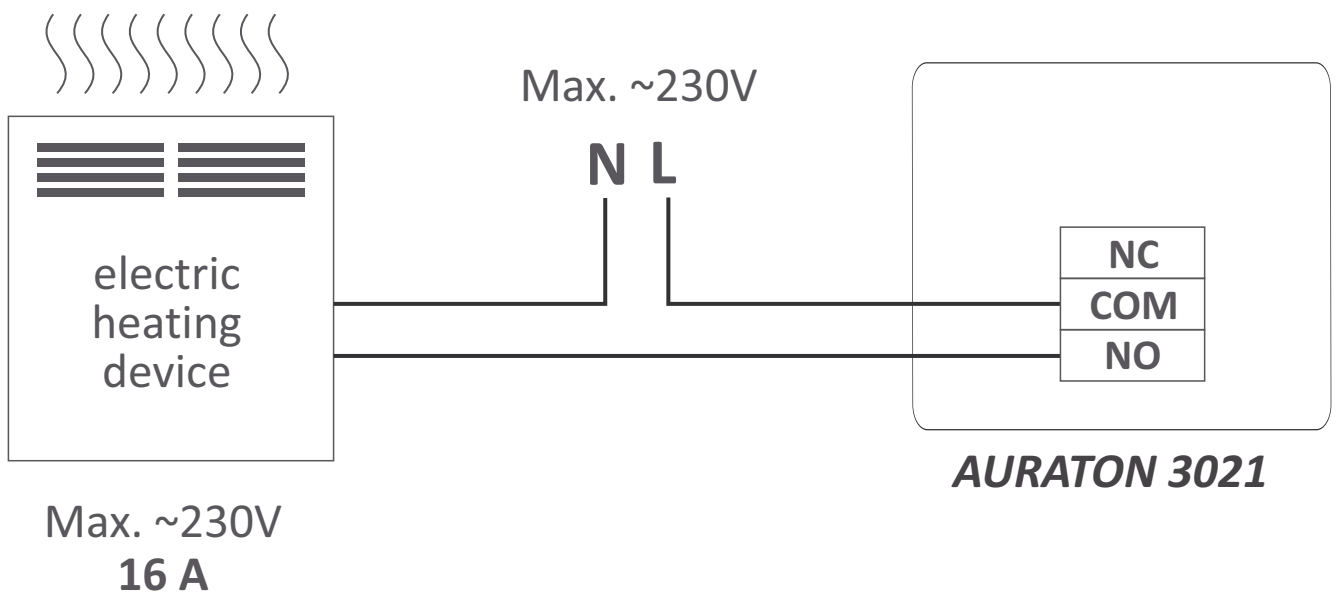


WARNING !

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.

The AURATON 3021 regulator 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.

The controller in the Dual Sensor (DS) version (with an additional temperature sensor)

A controller fitted with an additional socket enables connecting an external temperature sensor (2.5 m is supplied).
In order for the external sensor to be properly detected, first the sensor must be connected and then the supplied batteries must be installed in the controller.

After the controller with an additional sensor is switched on, it is possible to set the maximum temperature of the external sensor in the range of 10 to 55 deg. C.
In order to check the temperature of the external sensor measured by the controller, press the OK button for a short time; the measured value will blink for 5 seconds.

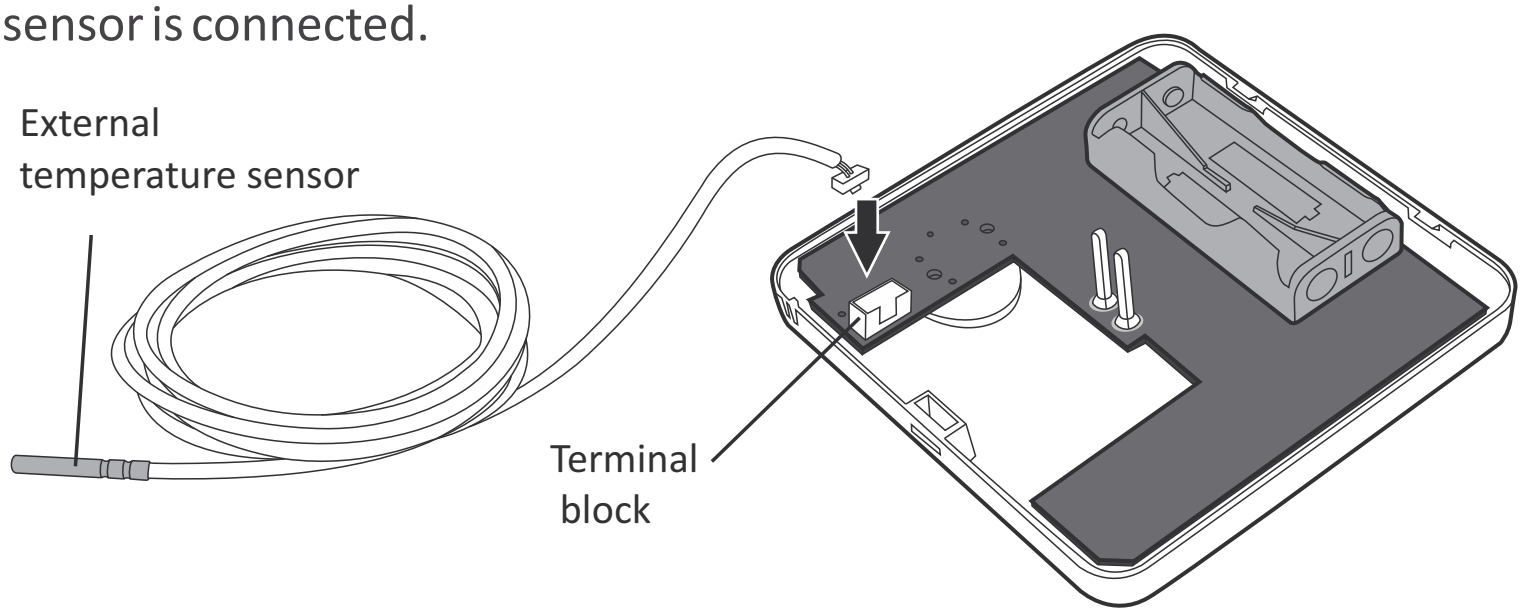
With the additional external sensor connected, the controller will maintain the temperature according to the air temperature (the temperature of the internal sensor) and the heating will be switched on until the temperature is reached by one of the sensors.
Heating may be switched off because a temperature of the external sensor is reached even though the air temperature is not reached (internal sensor).

The controller in the **Dual Sensor** version (with an additional temperature sensor) has the emergency transmitter operation function.
When the voltage battery is too low (the indicator on the display), the user may decide to switch the transmitter off or to switch it on permanently.
In the menu of the controller, the ***Pr OFF*** setting (transmitter switched off permanently) or ***Pr ON*** setting (transmitter switched on permanently) can be selected.
The controller maintains those settings until new batteries are installed (the low battery voltage indicator is switched off).

If the external sensor is disconnected or defective, the display shows two lines in the temperature measurement field and the controller switches automatically into the anti-freeze operation mode.
In such a case, a new external sensor must be installed or the controller must be reset by taking out the battery for several minutes, which causes the controller to switch into the mode of operation with an external sensor.

External temperature sensor (AURATON 3021 P)

In ***AURATON 3021 P*** it is possible to connect an external temperature sensor with the 2.5m cable.
In the default configuration the controller will display the temperature from the internal temperature sensor. The controller automatically switches to displaying the outside temperature when the external sensor is connected.



If the external sensor is disconnected or damaged, the controller goes to the emergency mode (dashes are displayed instead of temperature) which results in turning off the transmitter and then the controlled device. To leave the emergency mode, reconnect or reset the controller by pressing and holding two buttons simultaneously: PROG and ☼ ☾ .
After that, the controller will return to displaying the temperature from the internal sensor.

Technical data

Operating temperature range:	0 – 45°C
Temperature measuring range:	0 – 35°C
Temperature control range:	5 – 30°C
Range of temperature control of the external sensor:	10 – 55°C
Histereza:	±0,2°C; ±0,4°C
Default temperature settings:	day 21°C / night 19°C / *F* 40°C
Additional function:	Anti-freeze mode
Operating cycle:	Weekly
Operating mode control:	LCD
Maximum load current of the relay contacts:	*AURATON 3021* ~ 16A 250V AC *Receiver RTH* ~ 16A 250V AC
Power supply ***controller:***	2x AAA 1,5V alkaline battery
RTH Receiver power supply:	230VAC, 50Hz
RTH Receiver Radio frequency:	868MHz
RTH Receiver Operation range:	in a typical building, with standard construction of walls - approx. 30m an open space - up to 300 m

Disposal considerations

The devices are labelled with the crossed out waste bin symbol. In accordance with the European Directive 2002/96/EC and the Act on Waste electrical and electronic equipment such marking indicates that the device, after a period of use, can not be disposed of together with other household waste.

You shall return the equipment to an electronic or electrical waste collection point.

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