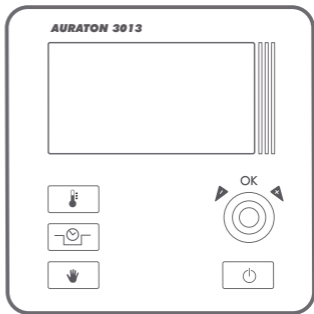


www.auraton.pl

# **AURATON 3013**

Owner's Manual

CE



Congratulations on purchasing a temperature controller based on cutting-edge technological solutions.

## **AURATON 3013**



### **FrostGuard function**

Protects your room against freezing.



### **Option to temporarily reduce the programmed temperature**

For maximum 12 hours.



### **Holiday mode**

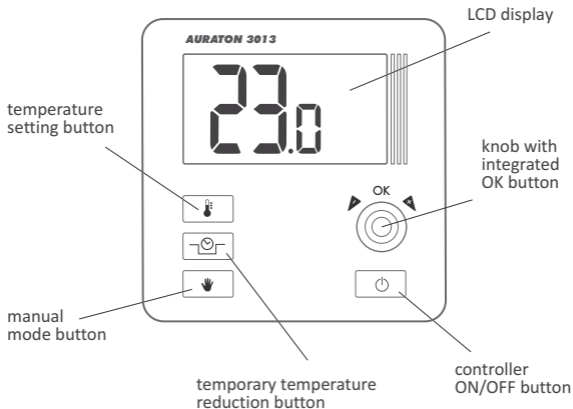
Up to eight days of temperature different than programmed.

## **LCD Backlit LCD display**

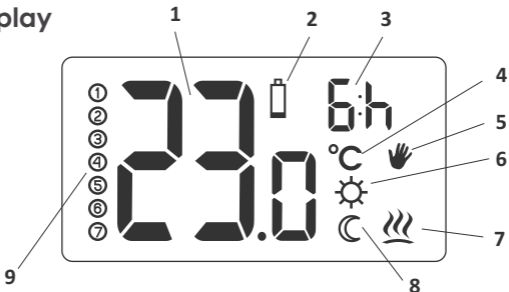
Backlit display makes it possible to supervise the device operation even in poorly lit rooms.

## Description of AURATON 3013 temperature controller

The front panel of the enclosure includes a backlit LCD display, four function buttons and temperature setting knob with OK button.



## Display



### 1. Temperature

In normal mode, the controller displays the temperature in the room in which it is installed.

### 2. Battery low ( )

This symbol appears when the battery voltage has dropped below the acceptable level. Replace the battery ASAP.

*NOTE: to maintain the settings the battery replacement should last less than 30 seconds.*

### 3. Temporary temperature reduction time

This symbols shows how long the temporary temperature reduction mode will be on.

**4. Temperature unit ( °C )**

Shows that the temperature is displayed in degrees Celsius.

**5. Manual mode symbol ( 🖐 )**

Indicates the manual (holiday) mode temperature setting.

**6. Indicator that the temporary temperature reduction is programmed ( ☀ )**

Indicates that the user has programmed the temporary temperature reduction mode. It appears when the mode is not currently on, but the function of temporary temperature reduction is active (*more information in the "Setting the temporary temperature reduction mode" section*).

**7. Controller on indicator ( 🏠 )**

Indicates the device status. It appears when the controlled equipment is turned on.

**8. Indicator of temporary temperature reduction mode ( Ⓢ )**

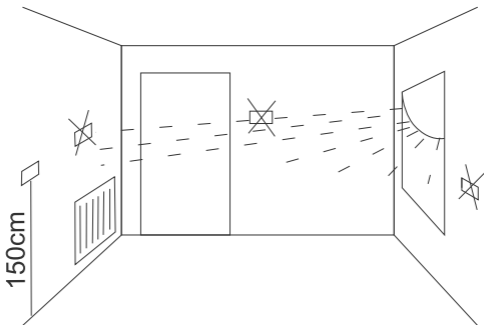
Appears when the temporary temperature reduction program is running.

**9. Number of holiday mode days ( ①...⑦ )**

Indicates the number of days for which the holiday mode has been programmed.

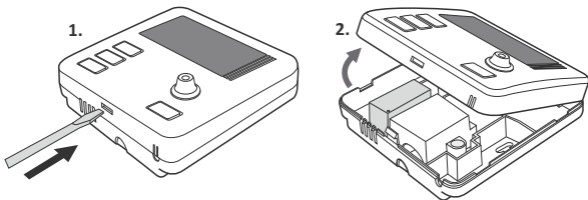
## Selecting a correct location for the AURATON 3013 temperature controller

Location can significantly affect the controller operation. Controller located in a place with no air circulation or exposed to direct sunlight may not work correctly. Install the controller on the internal wall of the building (partition wall), in a place with air circulation. Avoid installing it in the vicinity of heat generating devices (TV set, heater, fridge) or in places exposed to direct sunlight. Installing the controller near a door may also cause problems as the controller will be exposed to vibrations.

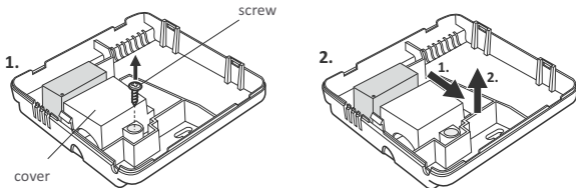


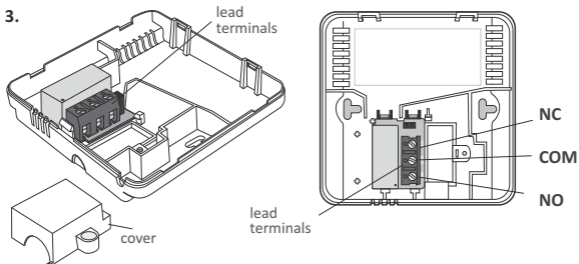
## Connecting the leads to AURATON 3013

To connect the leads remove the front panel as shown below:



The lead terminals are on the controller's back wall, under the **plastic cover**.





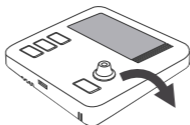
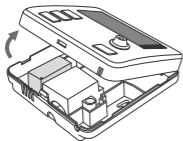
It is a typical single-pole two-state relay. In most cases, the NC terminal is not used.

**NOTE:** After connecting the leads replace the plastic cover.

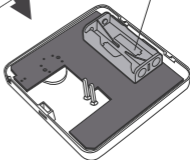
## Fastening the controller on the wall

The battery compartment is located inside the controller, in the front part of the enclosure. To place the batteries remove the front panel as shown in the section *"Connecting the leads to AURATON 3013"*.





battery  
compartment  
2x AAA 1,5 V

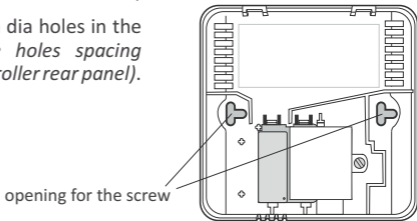


Put two AAA 1.5V batteries into the compartment, observing the polarity.

## Placing the front panel: NOTE

To fasten the AURATON 3013 controller to the wall:

1. Remove the controller front panel (*as shown in the section "Connecting the leads to 3013"*).
2. Drill two 6mm dia holes in the wall (*set the holes spacing using the controller rear panel*).

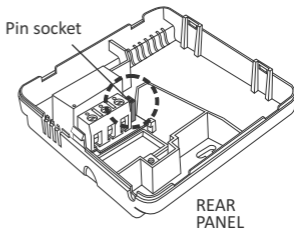
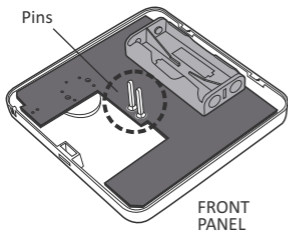


3. Place the expansion plugs into the drilled holes (*plugs are included in the kit*).
4. Fasten the rear panel to the wall using the screws included in the kit.
5. Replace the front panel.

**NOTE:** In case of wooden wall you don't have to use expansion plugs. Just drill the 2.7 mm dia holes (instead of 6 mm) in screw the bolts directly into the wood

## Placing the front panel: NOTE

When replacing the front panel onto the rear panel pay attention to the pin connection which transmits the control signals.

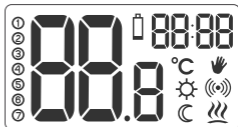


**When replacing the front cover make sure that the pins are inserted into the pin socket.**

## First start of the controller

After a correct placement of batteries in the compartment all segments will appear on the display for a second (display test), followed by the software version number (e.g. F02).

The current temperature in the room will be displayed after a moment. The controller is ready for operation.



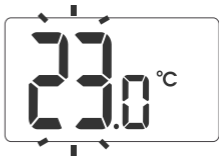
## Setting the temperature


**NOTE:** the first pressing of any function button always turns the display backlight on, only the second pressing activates a given function.

To set the required temperature in the normal operation mode:

1. Press the  button.

The temperature display segment will go into the edit mode and will start flashing.





- Turn the knob clockwise or anticlockwise to set desired temperature in the room with the  $0.2^{\circ}\text{C}$  accuracy.
- Confirm your choice by pressing the  button.  
The controller will revert to the normal operation mode.


## Setting the temporary temperature reduction mode



If for any reason you want to have the temperature in the room reduced every day at the same time, then you can reduce it temporarily by maximum  $5^{\circ}\text{C}$ . To reduce the temperature:

- Press the button  and hold it for 3 seconds.

The display will show the moon  and the hour counter (e.g. 6h). The temperature display segment will go into the edit mode and will start flashing.



- Turn the knob clockwise or anticlockwise to reduce the temperature by  $1^{\circ}\text{C}$  through  $5^{\circ}\text{C}$ . Confirm your choice by pressing the  button.



3. The hour field on the display will go into the edit mode and will start flashing. Use the knob again to set the number of hours during which the reduced temperature will be on. You can set from 1 to 12 hours.

Confirm your choice by pressing .

4. The controller will activate the temporary temperature reduction mode every day at the same time for the set number of hours.

**NOTE:** After the set time hours the controller will revert to the basic temperature setting. On the display the moon symbol  will be replaced by the sun .

**NOTE:** The temporary temperature reduction mode always starts when the function is activated. This means that the possible temporary temperature reduction should be programmed at the time when you want the temperature change to happen.

## Switching off the temporary temperature reduction mode




The controller will run the programmed temporary temperature reduction every day at the same time until you switch off that function.

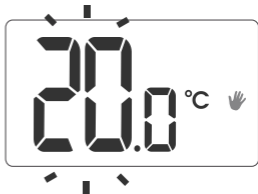
To switch off, press and hold this button  for 3 seconds.

## Setting the manual mode




If you want to suspend the normal or reduced temperature for some time, use the manual mode for maximum 8 days. To enter the manual mode:

1. Press the  button.  
The display will show the hand symbol (  ), and the temperature display segment will go into the edit mode and will start flashing.
2. Turn the knob clockwise or anticlockwise to set the desired temperature.  
Confirm your choice by pressing the  button.
3. The hour field on the display will go into the edit mode and will start flashing.  
Use the knob again to set the number of hours during which the manual mode will be on.



The days are added and subtracted automatically when you exceed 24 hours. You can set maximum 7 days and 24 hours.


Confirm your choice by pressing the  button.



**NOTE:** The manual mode is not automatically repeated. When the set time elapses, the controller reverts to previous temperature programs: normal and temporary temperature reduction, if the latter has been programmed.

## Switching off the manual mode earlier

The controller will run the programmed manual mode until the set time elapses.

To switch off the manual mode earlier press the  button again.



## Checking the set temperature

By holding the  button by minimum 2 seconds you can check the currently programmed temperature.

The set temperature display segment will flash after pressing this button. The function is active in all controller operation modes.

## FrostGuard function

The AURATON 3013 controller features a special FrostGuard function which prevents freeze damage to your room. The function is activated when the **controller is off**.




When the controller is off and the temperature in the room drops to 2°C, the display will show the symbols Fr (  ) and  , and the relay will activate. When the temperature rises to 2.2°C the display will turn off again and the relay will disconnect the contacts.



## Changing hysteresis

Hysteresis prevents the device from switching on too often due to insignificant temperature fluctuation.

*E.g. with HI2 hysteresis and temperature setting of 20°C, the boiler switches on at 19.8°C and switches off at 20.2°C. With HI4 hysteresis and temperature setting of 20°C, the boiler switches on at 19.6°C and switches off at 20.4°C.*

To change hysteresis, press ,  and  simultaneously and hold for 3 seconds. When hysteresis change mode is active, message **HI** is displayed.



Turn the knob clockwise or anticlockwise to change hysteresis settings.

**HI2** –  $\pm 0,2^{\circ}\text{C}$  (*factory setting*)

**HI4** –  $\pm 0,4^{\circ}\text{C}$

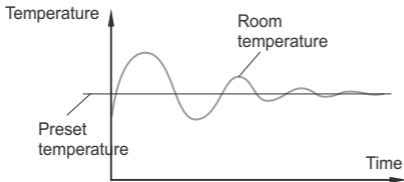
**HI P** – PWM mode (*see chapter “PWM mode”*)

Press  to confirm your selection.

The controller resumes normal operation.

## Pulse-Width Modulation mode (PWM)



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.

**CAUTION:** In PWM mode, the controller can switch on the heating device even though the temperature in the room is higher than preset temperature. This is because the PWM algorithm tries to maintain the preset temperature and stays ahead of the heating system behaviour.

## Notes

- You can switch on and off the controller any time by briefly pressing the  button.
- The first pressing of any function button always turns the display backlight on, only the second pressing activates a given function.
- During programming, failure to press any button for 10 seconds is the same as pressing the button .

## Technical specification

|  |                                   |
|--|-----------------------------------|
| Operating temperature:                     | 0 – 45°C                          |
| Temperature measurement range:             | 0 – 35°C                          |
| Temperature control range:                 | 7 – 35°C                          |
| Hysteresis:                                | ±0,2°C / ±0,4°C / PWM             |
| Default temperature setting:               | 20°C                              |
| Additional function:                       | FrostGuard                        |
| Operation cycle:                           | daily                             |
| Operation status indication:               | LCD                               |
| Maximum load current<br>on relay contacts: | ~ 16A 250VAC                      |
| Power supply:                              | 2x AAA 1.5V<br>alkaline batteries |

## Disposal



The controller bears the WEEE crossed waste bin mark. According to the Directive 2002/96/CE and the Waste Electrical and Electronic Equipment Act, this marking means that after its life such equipment may not be disposed of together with the household waste.

**The user should deliver it to a collection centre of waste electrical and electronic equipment.**

