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# AURATON 3021

CE

## Instrukcion manual



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

## **AURATON 3021**



### **3 independent temperature settings**

Day, night, anti-freeze.



### **9 independent temperature programs**

Including 6-user defined ones.

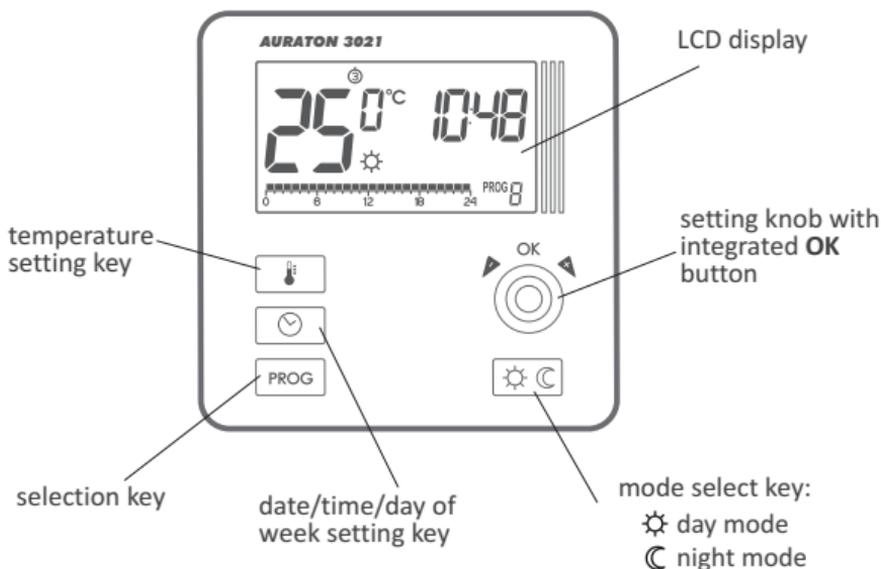
**LCD**

### **Backlit LCD display**

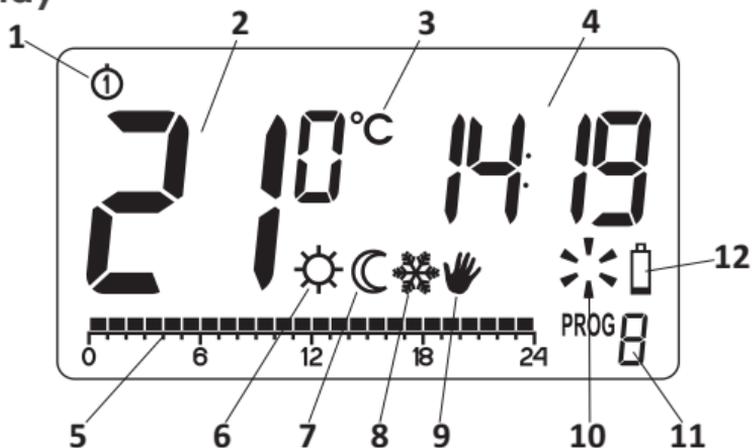
Backlit LCD display to control the device in areas with poor lighting.

## AURATON 3021 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

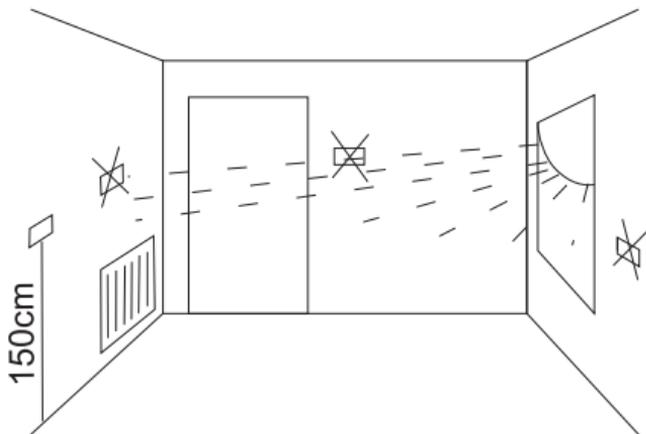


- 1. Day of week (①...⑦)** – Indicates the current day of the week. Each day has a number assigned.
- 2. Temperature** – In normal operating mode, the controller displays the temperature of the room it is installed in.
- 3. Temperature unit** – Indicates temperature displayed in centigrade (°C).
- 4. 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. Controller power on indicator (⚡)**  
Indicates the operating status. Visible when the controlled device is started.
- 11. Program number**  
Indicates the number of program currently executed.  
*(see: "Factory programs" and "Weekly programming")*
- 12. 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.**

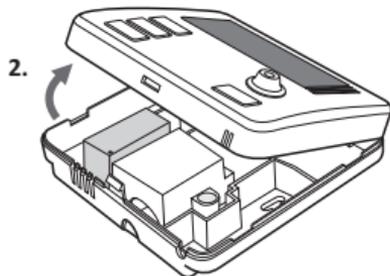
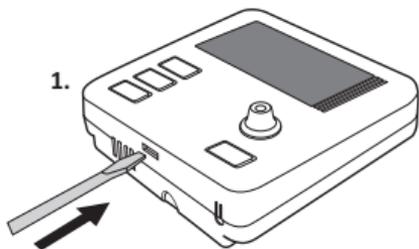
## Selecting proper location for AURATON 3021 temperature controller

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.

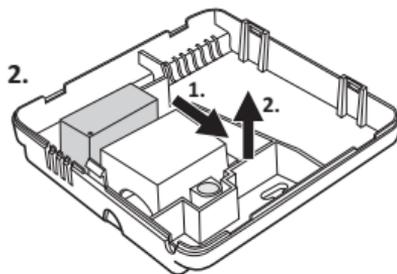
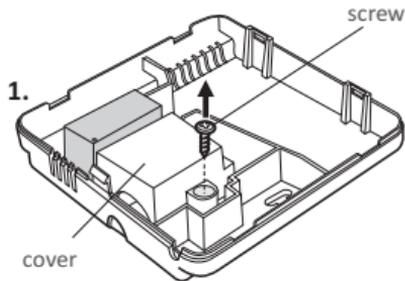


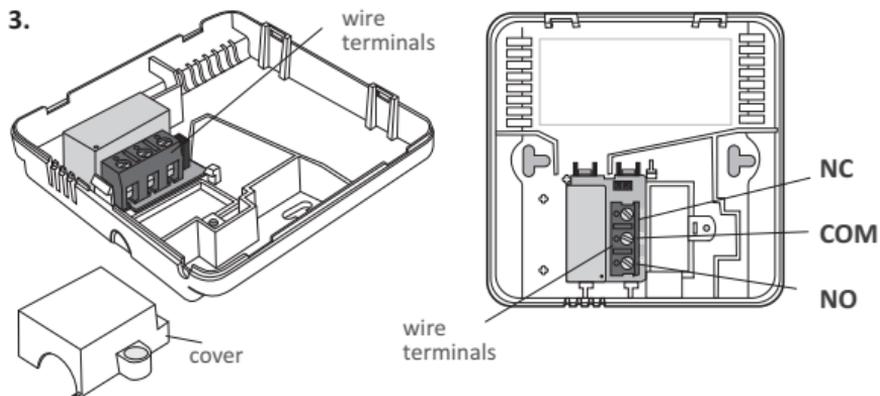
## Wiring your AURATON 3021

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



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



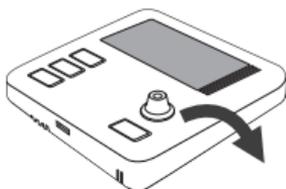
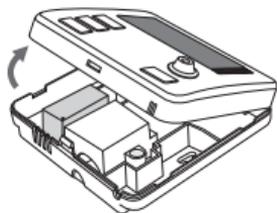


It is a typical bistable relay. The NC terminal is not used in most cases.

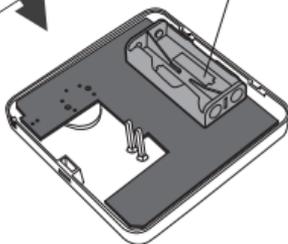
**NOTE:** Replace the plastic cover after wiring.

## 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.



2x AAA 1,5 V  
battery socket

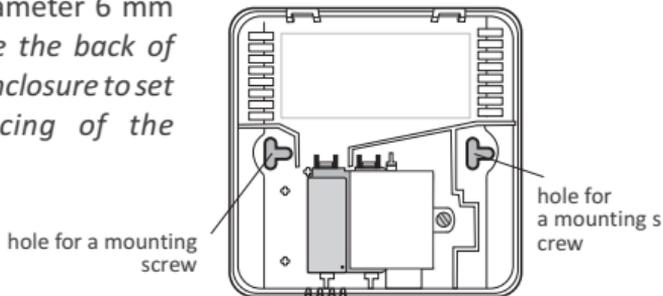


Place two AAA 1.5V batteries in the battery socket observing the correct polarity. ON 3021" section.

## 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*).

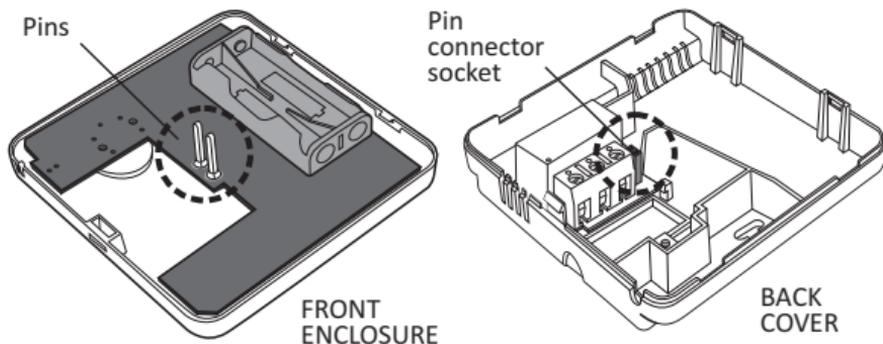


3. Place plastic plugs in the drilled holes.
4. Screw the back of the controller enclosure to the wall with the two screws provided.
5. Replace the controller enclosure.

**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.

## Replacing the enclosure: NOTE

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.

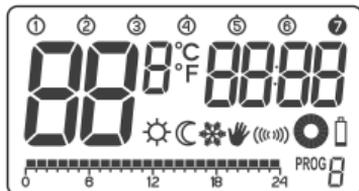
## Starting the controller for the first time

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.



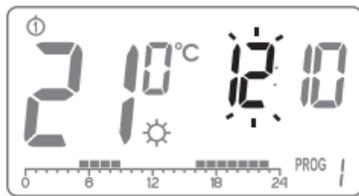
**NOTE:** If no key is pressed for 60 seconds in the initial edit mode, the default time 12:00 and Monday will be automatically set.

**NOTE:** While programming any other functions, if no key is pressed for 10 seconds, this will be interpreted as pressing the  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  key.
3. Turn the knob clockwise or counter clockwise to set the correct value for minutes and again confirm with the  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  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

## 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

To set one of the temperatures:

1. Press the  key.

2. Current temperature setting will be displayed with the symbol:

- ☀ – day temperature;
- ☾ – night temperature;
- ❄ – anti-freeze temperature.



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 setting is complete, press the  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.

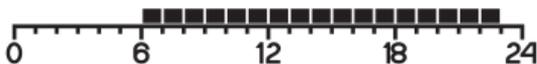
## PROGRAMMING INTRODUCTION

### 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	6:00–8:00; 15:00–23:00
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Tuesday	6:00–8:00; 15:00–23:00
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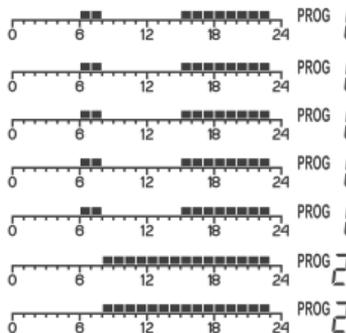
Wednesday	6:00–8:00; 15:00–23:00
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Thursday	6:00–8:00; 15:00–23:00
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Friday	6:00–8:00; 15:00–23:00
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Saturday	8:00–23:00
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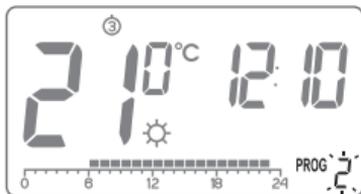
Sunday	8:00–23:00
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## PROGRAM SELECTION

To set the program:

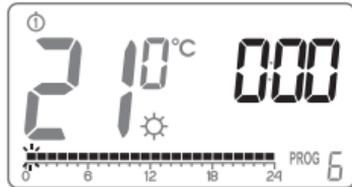
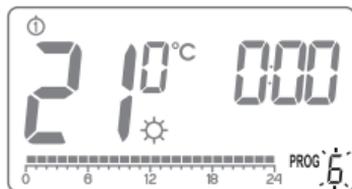
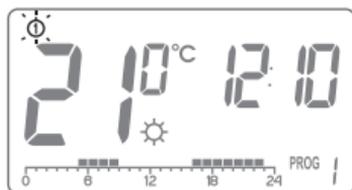
1. Press the **PROG** key. Program number segment will start blinking.
2. Press the  key as many times as required to set the day of the week for the program.
3. Press the **PROG** key several times and select the program number requested. Programs **0-2** are factory-set, programs **3-8** can be edited.
4. Confirm selection pressing the  key.
5. Repeat the procedure for the following days of the week.



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

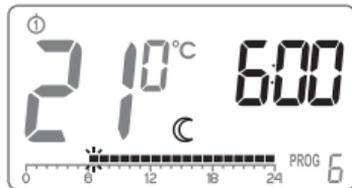
To set the program:

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  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  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  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 wish 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  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  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  key and putting the battery in at the same time.

This will reset the controller to defaults.

**NOTE: All user programs will be deleted!**

## Comments

- The control functions of the controller can be switched on and off (e.g. after heating season) by holding the  key pressed for a while. *(The controller will display only the current time and temperature of the room - **no "timeline"**).*
- Pressing any function key for the first time always starts the backlight first, and then the key function is performed. Any use of the knob will prolong the backlight.
- While programming any function, if no key is pressed for 10 seconds, this will be interpreted as pressing the  key.

## Technical data

Operating temperature range:	0 – 45°C
Temperature measuring range:	0 – 35°C
Temperature control range:	5 – 30°C
Hysteresis:	±0,2°C
Default temperature settings:	day 21°C / night 19°C
Additional function:	Anti-freeze mode
Operating cycle:	Weekly
Operating mode control:	LCD
Maximum load current of the relay contacts:	~ 16A 250V AC
Power supply:	2x AAA 1,5V alkaline battery

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CE

## 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.**