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# **AURATON Cetus**

User manual ver. 20200926 The document contains information on the safety, installation and use of the AURATON Cetus device.

# A daily, wired temperature controller

AURATON Cetus is a daily, wired, temperature controller, designed to work with a gas or electric heating device.



# **Description of AURATON Cetus**

### daily, wired temperature controller

On the front part of the controller housing there is a backlit LCD display, four function buttons and a temperature setting knob with a button  $\widehat{(ok)}$ .



- 1. LCD display
- 2. Setting knob with integrated push button (or)
- 3. On / off button regulator
- 4. Manual mode button
- 5. "Temporary temperature reduction" button
- 6. Temperature setting button

### Display



- 1. **Temperature** In the normal operation mode, AURATON Cetus displays the temperature of the room in which it is installed.
- 2. Battery exhausted ( 1)

The indicator is visible when the minimum permissible battery voltage is exceeded. Replace the batteries as soon as possible.

NOTE: To maintain the programmed parameters, the time of the battery replacement operation should not exceed 30 seconds.

3. Temporary temperature reduction duration indicator

Shows how long the temporary temperature reduction mode will remain active.

4. Temperature unit

Indicates that the temperature is displayed in degrees Celsius (  $^{\circ}\mathbf{C}$  ).

5. Manual mode indicator ( \ )

Indicates that you are in manual (vacation) temperature setting.

- 6. Temporary temperature reduction mode programming indicator (☆) Indicates the user scheduled "temporary temperature reduction" mode. It appears when the mode is not currently implemented, but the "temporary temperature reduction" function is active. (more information in the chapter "Setting the temporary temperature reduction mode")
- 7. AURATON Cetus activation indicator ( 🖄 )

Pictogram informing about the operating status of the device. Visible when the controlled device is turned on.

8. Temporary temperature decrease mode indicator (  $\mathbb C$  )

Appears while the temporary temperature decrease program is running.

9. Number of days in "vacation" mode ( 1-

Indicates the number of days for which vacation mode is scheduled.

### **Choosing the right location for AURATON Cetus**



The correct operation of AURATON Cetus is largely influenced by its location. Location in a place with no air circulation or direct sunlight may result in incorrect temperature control. AURATON Cetus should be installed on the internal wall of the building (partition wall), in an environment of free air circulation. Avoid proximity to heat emitting devices (TV, heater, refrigerator) or locations exposed to direct sunlight. Problems in proper operation may be caused by the vicinity of the door, exposing AURATON Cetus to possible vibrations.

### **Connecting cables to AURATON Cetus**

To connect the wires, remove the cover as shown below:



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A daily, wired temperature controller

The cable clamps are located on the back of the AURATON Cetus, **under the plastic cover.** 









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- 1. cover
- 2. screw
- 3. wire clamps

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

#### NOTE:

After connecting the wires, put the plastic cover back on.

### **Battery change**

The battery socket is located inside the AURATON Cetus on the front of the housing. To install the batteries, remove the controller housing as shown in the chapter "Connecting the cables to the AURATON Cetus".

#### NOTE:

We recommend alkaline batteries to power AURATON regulators. Do not use "rechargeable batteries" because the rated voltage is too low.



1. - 1.5V AAA battery socket

Insert two AAA 1.5V batteries into the battery socket, paying attention to the correct polarity of the batteries.

#### NOTE:

After replacing the battery and folding the housing, we recommend pressing the button twice (OK) to stabilize the relay operation.

# Mounting AURATON Cetus - a daily, wired temperature controller

To fix the AURATON Cetus controller to the wall:

- 1. Remove the regulator casing (as shown in the section "Connecting the cables to the AURATON Cetus")
- 2. Drill two holes 6 mm in diameter in the wall (*mark the spacing between the holes* using the rear part of the AURATON Cetus housing).
- 3. Put the wall plugs in the drilled holes.
- 4. Screw the rear part of the AURATON Cetus housing to the wall using the screws included in the kit.
- 5. Put the AURATON Cetus housing on.

#### NOTE:

In the case of a wooden wall, there is no need to use expansion bolts. It is enough to drill holes with a diameter of 2.7 mm (instead of 6 mm) and screw the screws directly into the wood.



1. fixing screw hole

### Putting the cover on: NOTE

When putting the front part of the housing back on the rear part, pay attention to the pins that control the relay.



- 1. Front housing
- 2. Rear housing
- 3. Pins
- 4. Pin connector socket or the place where pins contact the board

#### **ATTENTION:**

When assembling the housing, make sure that the connection "pins" are not bent and fall into their place on the relay board. This is crucial for the proper operation of the regulator. A daily, wired temperature controller Description of AURATON Cetus The first launch of AURATON Cetus "Manual" mode setting FrostGuard function Hysteresis change PWM operating mode Remarks Connection diagram of AURATON Cetus Cleaning and maintenance Technical data Disposal of the device To download

# The first launch of AURATON Cetus

After the batteries are properly inserted into the sockets, all segments (display test) will appear on the LCD display for a second, followed by the software version number (eg F12).

After a while, the current room temperature will be displayed automatically. AURATON Cetus is ready to work.





### **Temperature setting**

#### NOTE:

The first pressing of any function button always turns on the backlight, and only the next call of the button function.

After a while, the current room temperature will be displayed automatically. AURATON Cetus is ready to work. To set the desired temperature in the normal operation mode:

1. Press the **I** button . The segment displaying the current room

temperature will start blinking.

- 2. By turning the knob to the left or right, with an accuracy of 0.2 ° C, you set the desired temperature in the room.
- 3. Confirm the selection with the button  $\overrightarrow{OK}$



# Setting the "temporary temperature reduction" mode

If, for various reasons, we would like to lower the temperature in the room at a certain time of the day, it is possible to temporarily reduce it by a maximum of 5 ° C. To do this:

Press and hold the button for 3 seconds . The display will show the moon ( ℂ ), the hour field (e.g. bh ), and the segment responsible for showing the temperature will enter the edit mode and start blinking.



2. By turning the knob to the left or right, we set the temperature reduction by a value from 1 ° C to 5 ° C. Confirm the selection with the button OK.



- 3. The hour field on the display changes to edit mode and starts blinking. Using the knob again, we set the number of hours for which the reduced temperature programmed by us is to apply. You can choose from 1 to 12 hours. Confirm your selection by pressing (or).
- 4. For the selected number of hours, AURATON Cetus will be in the "temporary temperature reduction" mode and will start it every day at the same time.

#### NOTE:

After the set hourly time, AURATON Cetus will return to the basic temperature setting. Instead of the moon (  $\bigcirc$  ), the sun (  $\oiint$  )will appear on the screen

#### NOTE:

The temporary temperature reduction mode always starts at the moment of confirming the edition of the function. This means that any temporary temperature reduction should be programmed at a time when we want such a change to take place.

### Disabling the "temporary temperature reduction"

AURATON Cetus will implement the programmed temporary temperature reduction mode every day at the same time until the temporary temperature reduction is not turned off. Exclusion is the repeated pressing and holding the button for 3 seconds  $\neg \bigcirc \neg$ .

# "Manual" mode setting

If we want to temporarily suspend the normal or temporarily reduced temperature, it is possible to set the "manual" program, valid for a maximum of 8 days. To do this:

1. Press the 🐨 button .

The hand symbol (  $\checkmark$  ) will appear on the display , and the segment responsible for showing the current temperature will enter the edit mode and start blinking.



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2. By turning the knob to the left or

right, we set the desired temperature value. Confirm the selection with the button  $( \circ k )$ .

 The hour field on the display changes to edit mode and starts blinking. You can use the knob to select the number of hours during which the manual temperature setting is to apply. Days are added or subtracted automatically when the value of 24 hours is exceeded. You can select a maximum of 7 days and 24 hours. Confirm your selection by pressing OK.



NOTE:

Manual mode is not automatically repeated. After the programmed time has elapsed, AURATON Cetus returns to the implementation of previous temperature programs: normal mode and temporary temperature reduction, if the latter was previously planned.

### Early deactivation of the "manual" mode

AURATON Cetus will continue the programmed manual mode until the programmed time has elapsed. To deactivate the "manual" mode, press the 💌 button again .

### Checking the set temperature

Holding down the button (or) for at least 2 seconds allows you to check the currently programmed temperature of the controller. Correct performance of the operation results in the display of a flashing segment responsible for showing the set temperature of the device. The function is active in each of the AURATON Cetus operating modes.

# **FrostGuard function**

AURATON Cetus is equipped with a special FrostGuard function that protects the room against possible freezing. This function is activated when **AURATON Cetus is turned off**.

With AURATON Cetus turned off, when the temperature in the room drops to 2 ° C, the symbols ( $\frac{1}{5}$ ) And ( $\underline{\mathscr{U}}$ ) appear on the display and the relay will turn on. When the temperature rises to 2.2 ° C, the display will turn off again and the relay will disconnect the contacts.

### Hysteresis change

The hysteresis is to prevent too frequent switching on of the actuator due to small temperature fluctuations.

For example, for the **HI 2** hysteresis, when the temperature is set to 20 ° C, switching on will take place at 19.8 ° C, and switching off at 20.2 ° C. For the **HI 4** hysteresis, when the temperature is set to 20 ° C, switching on will take place at 19.6 ° C, and switching off at 20.4 ° C.

To switch to the hysteresis change mode, hold down the , and  $\underbrace{}$  buttons simultaneously for 3 seconds.



The hysteresis change mode is signaled by the flashing text HI. Turn the knob to the left or right to set the required hysteresis.

HI 2 - ± 0.2 ° C (factory set),

**HI 4 -** ± 0.4 ° C,

HIP - PWM operating mode (chapter "PWM operating mode").

Confirm the selection by pressing the button  $\bigcirc k$ . The controller will return to normal operation.

### PWM operating mode (Pulse-Width Modulation)

By changing the hysteresis settings (chapter "Configuration settings), we can turn on the **PWM** operating mode . In this mode, AURATON Cetus cyclically turns on the heating device in order to minimize temperature fluctuations. AURATON Cetus checks the temperature rise times and the temperature drop times.

Knowing these values, AURATON Cetus turns the heating device on and off in such cycles to keep the temperature as close as possible to the set value.



- 1. Temperature
- 2. Time
- 3. Set temperature
- 4. Room temperature

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#### NOTE:

In the PWM mode, AURATON Cetus can turn on the heating device despite the fact that the temperature in the room is higher than the preset temperature. This is due to the PWM algorithm that aims to maintain the set temperature and anticipate the behavior of the thermal system.

# Remarks

- AURATON Cetus can be turned on or off at any time by momentarily holding down the 
  button .
- The first pressing of any function button always turns on the backlight, and only the next call of the button function. When using the knob, each step keeps the backlight working.
- When programming any function, not pressing any button for 10 seconds is tantamount to pressing the button .
- After the relay is turned off (heating function), it can be turned on again not earlier than after 90 seconds.

# Connection diagram of AURATON Cetus

#### NOTE:

AURATON Cetus can work with a gas or electric heating device.



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- 1. Heating device, e.g. gas stove
- 2. Electric heater (MAX 230 V AC, 16 A)

### **Cleaning and maintenance**

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

# **Technical data**

Power supply:	2 x AAA (2 x 1.5V), alkaline
Working temperature range:	0-45 ° C
Operation status signaling:	LCD display

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Number of temperature levels:	1		
Anti-freeze temperature:	2 ° C		
Temperature measuring range:	0-35 ° C		
Temperature control range:	5 - 35 ° C		
Temperature setting accuracy:	0.2 ° C	A daily, wired temperature controller Description of AURATON Cetus The first launch of AURATON Cetus	
Hysteresis:	± 0.2 ° C / ± 0.4 ° C / PWM		
Relay load capacity:	Max. 250 V AC, max. 16 A.	"Manual" mode setting FrostGuard function	
Work cycle:	Daily	Hysteresis change PWM operating mode	
Level of security:	IP20	Remarks Connection diagram of AURATON Cetus	
Dimensions [mm]:	90 x 90 x 36	Cleaning and maintenance Technical data	
		Disposal of the device	

# **Disposal of the device**

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Address and contact to the manufacturer: LARS, ul. Świerkowa 14

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