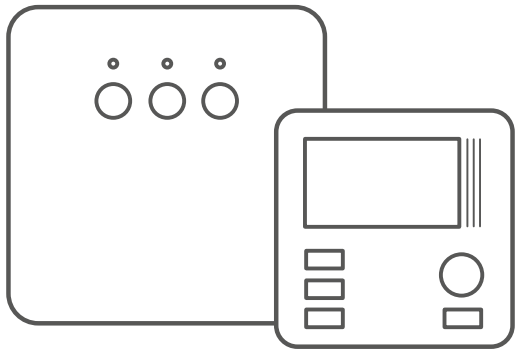


AURATON

S03 RT



EN

USER'S MANUAL

CE

Wireless central heating pump controller

AURATON S03 RT

The ***AURATON S03 RT*** controller is intended for wireless control of a central heating (CH) pump.

Before you start using the controller, please read this instruction carefully.

APPLICATION

AURATON S03 RT is intended for automatically switching on and off circulation pumps depending on the temperature. The controller-pump assembly forces the water to circulate in the central heating system with a coal-fired boiler or a gas boiler. The controller's sensor measures the temperature of the water on the supply side of the CH system. In a CH system with a coal-fired boiler, the controller switches off the circulation pump after the flame in the boiler is extinguished. Pumping of water is not recommended when the flame is extinguished because the air draft into the chimney causes faster cooling of the water in the boiler faster than in the radiators. The optimum temperature can be set on the controller's scale (most often 40 °C).

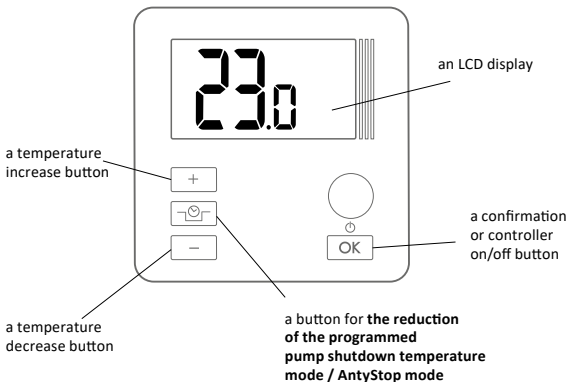
In a CH system with a gas boiler, the temperature set on the controller must be lower than the temperature set on the CH boiler. If the temperature is set on the controller above the dew point, it prevents condensation in the boiler during the heating of the water in the CH system.



AntyStop system

The **AntyStop** (AS) system installed in the Auraton S03 RT controller prevents seizure of the rotor of an unused pump. Also, a built in processor starts the pump every 14 days for 30 seconds after the heating season is over. In order for the system to work after the heating season, the controller must be switched on with the AS function active at all times.

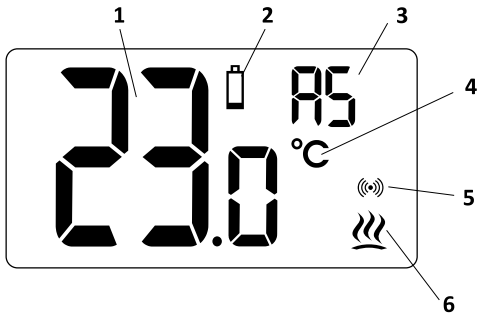
Description of the controller

On the front part of the enclosure there is a backlit LCD display and four function buttons.



- **by pressing the button for a short time**, you can confirm the temperature setting 
- **by holding the button**, you can switch the controller on/off 

Display



1. Temperature

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

2. Discharged battery (🔋)

The indicator is displayed when the permissible minimum battery voltage level is exceeded. The battery must then be replaced as soon as possible.

NOTE: In order to maintain the controller settings, the battery replacement should take not more than 30 seconds.

3. AntyStop mode activation indicator


This mode prevents seizing of the rotor of an unused pump.

4. Temperature unit (°C)

This indicates that the temperature is displayed in degrees Celsius.

5. Activated pump indicator ()

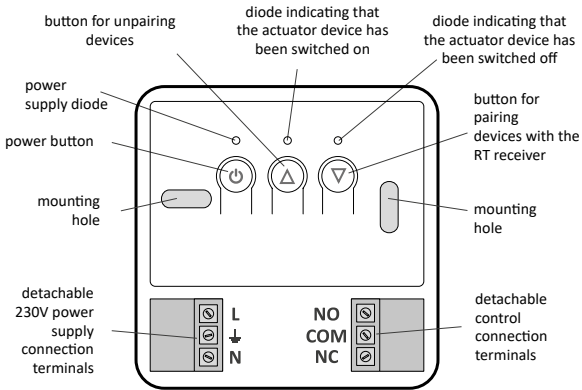
A pictogram that indicates the operating status of the pump. It is displayed when the controlled device is switched on.

6. Transmission symbol ()







Indicates communication with the receiver.

Description of the RT receiver

The AURATON RT receiver cooperates with the AURATON S03 RT wireless receiver. The receiver is installed on the heating or air conditioning device and can operate under the load of **16A/10A**.

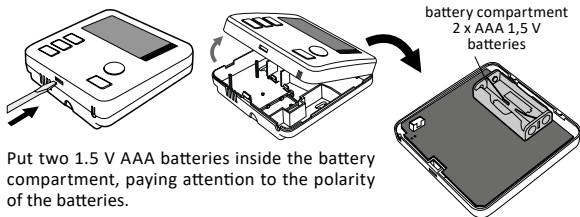


Key – description of diode signaling in the receiver

-  ● □ 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 RT receiver awaits the device to be paired (*chapter: „Pairing the wireless regulator and the RT receiver“*).
-  ◐ OUT **The LED flashes red** – the RT receiver awaits the device to be deregistered (*chapter: „Deregistering the regulator from the ceiver“*).
-  ALARM
RESET **The LED flashes alternating red and green:**
ALARM – the RT 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 RT receiver“*).
-  **Green power supply diode** – the RT receiver is switched on.

Installation/replacement of batteries

The battery compartment can be found inside the controller, on the front part of the enclosure. In order to install the batteries, take off the enclosure.

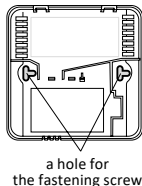


Put two 1.5 V AAA batteries inside the battery compartment, paying attention to the polarity of the batteries.

Mounting the controller on a wall

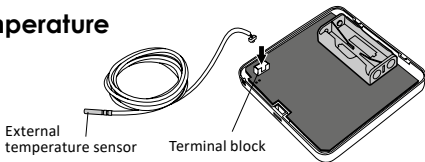
In order to mount the controller on a wall:

1. Take off the enclosure of the controller.
2. Drill two 6 mm diameter holes in the wall.
3. Put two wall plugs in the drilled holes.
4. Fasten the back part of the enclosure to the wall using the screws provided with the set.
5. Put on the controller's enclosure.





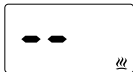
If the wall is made of wood, there is no need to use wall plugs. Only 2.7 mm diameter holes (instead of 6 mm) should be drilled and the screws should be driven directly into the wood.

External temperature sensor



As a standard, after the battery is put in, the controller without a sensor connected displays the temperature from the internal temperature sensor. When the external temperature sensor is connected, the controller automatically reads the values measured by that sensor.

If the external sensor is disconnected or defective, the controller switches into the emergency mode (dashes are shown as the temperature value) which results in switching on the relay and, consequently, the controlled device. In order to leave the emergency mode, the external temperature sensor must be reconnected or the controller must be **restarted** by simultaneously pressing and holding the  and  switches for at least 5 seconds. After this procedure is completed, the controller displays the temperature measured by the internal sensor.



Mounting the sensor

Install the sensor on an uncovered outlet pipe connected to the CH boiler (as close to the boiler as possible). Press the sensor against the tube using a clamp. It is recommended to wrap the boiler pipe from the boiler to the sensor with an insulation material.

If a coal-fired boiler and a gas-fired boiler work in the same CH system, the sensor should be installed in a location where the two outlets merge and must be insulated.

Installation of the receiver



CAUTION! The cables delivered in a set together with the controller are suitable for maximum loads equal to 2.5 A.

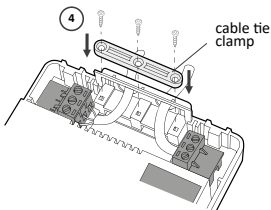
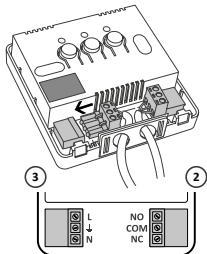
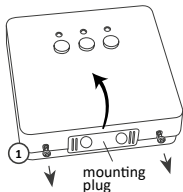


If devices with higher power are connected, the cables should be replaced with ones of appropriate cross-sections.

NOTE: When installing an AURATON RT receiver, make sure that the power supply is switched off. The receiver should be installed by a professional.

NOTE: In the permanent system of the building there must be a switch and an overcurrent protection.

NOTE: In order to facilitate installation, the terminals are fitted with extendable clamps. Before cable connections are made, they can be disconnected from the controllers. The cables may be routed from the bottom of the receiver by breaking out holes in the mounting cover or from the back of the receiver if the cables are extended from the wall. In order to connect the cables from the back, the cover must be broken out.

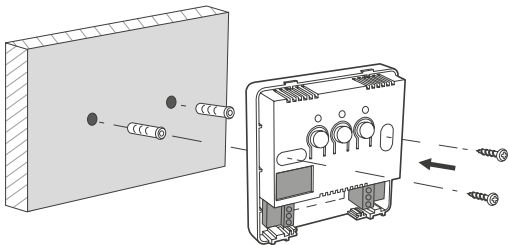


1. Take off the cover of the front part of the AURATON RT receiver by unscrewing the screws half way out.
2. Connect the heating device to the terminals of the control connection of the AURATON RT receiver. Follow the service instruction of the heating device. The COM (common) and NO (normally opened) terminals are used the most often.
3. Connect the power supply cables to the terminals of the power supply connection of the AURATON RT receiver, in observance of safety rules.
4. After the cables are connected, they must be fixed with the "cable fastening holder" and the covers must be screwed back to the AURATON RT receiver.

Fastening the AURATON RT receiver to a wall


In order to fasten the AURATON RT receiver on a wall:

1. Take off the covers from the front part of the controller (see chapter "Installation of the AURATON RT receiver").
2. Mark the location of the holes for the fastening screws on the wall.
3. In the marked locations, drill holes with diameters appropriate for the diameters of the enclosed wall plugs (5 mm).
4. Put the wall plugs in the drilled holes.
5. Fasten the AURATON RT receiver to the wall using screws so that the receiver is well fastened.




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.



Pairing of the wireless AURATON S03 RT controller with the AURATON RT receiver

After the receiver is connected to the network, the receiver must be switched on by quickly pressing the power button (). If the device is switched on, the green power supply diode becomes illuminated and a single sound signal is emitted. In order to switch off the receiver, e.g. outside of the heating season, press the power button and hold it for 3 seconds until a double sound signal is audible and the green power supply diode is switched off and, consequently, the heating device is switched off.

NOTE: If the wireless controller AURATON S03 RT is sold together with the AURATON RT receiver, the two devices are factory-paired. Devices purchased separately must be paired.

1. Pairing of the AURATON S03 RT controller with the AURATON RT receiver is initiated by pressing the right pairing button () – a single sound signal is emitted – on the AURATON RT receiver and by holding it pressed for at least 3 s until the LED diode starts blinking with green light (double sound signal) – then the button must be released.

The receiver waits for pairing for 120 seconds. After this period, it automatically returns to normal operation.

2. On the receiver, press the  button for 5 seconds until the transmission () symbol on the display is illuminated. Release the button – the controller emits the pairing signal for 5 seconds.
3. Successful end of pairing is indicated by the LED diode on the receiver no longer blinking green and the receiver switching to normal operation.

*In the event of a pairing error, steps 1 and 2 must be repeated. If more errors occur, all devices must be unpaired by **RESETTING** the receiver (see “RESET - Unpairing all devices paired with the receiver”) and then an attempt must be made to pair the devices again.*

NOTE: Only 1 controller may be assigned to one receiver.

Signaling of operation and receipt of data packets



Each reception of radio transmission from a paired device is indicated by the AURATON RT receiver by a momentary change of the color of the LED diodes. After the relay becomes activated, the LED diode is red and after it is switched off – it is green.

NOTE: When any button is pressed, a short sound signal is emitted.

Unpairing of the controller and the RT receiver



1. Unpairing of the AURATON S03 RT controller from the AURATON RT receiver is initiated by pressing the left unpairing button (Δ) on the receiver and holding it for at least 3 seconds until the LED diode starts blinking red – then the button must be released. The sound signal works in the same way as during pairing, i.e. when a button is pressed, a short sound is emitted and another short sound signal after 3 seconds.

The receiver waits for unpairing of the device for 120 seconds. After this period, it automatically returns to normal operation.

2. On the receiver, press the  button for 5 seconds until the transmission () symbol on the display is illuminated. Release the button.
3. Successful completion of unpairing is indicated by the LED diode no longer blinking red and the repeater switching to normal operation.

In the event of an unpairing error, steps 1 and 2 must be repeated. If more errors occur, all devices must be unpaired (see “RESET – Unpairing all devices paired with the receiver”).

RESET – Unpairing all devices paired with the AURATON RT receiver

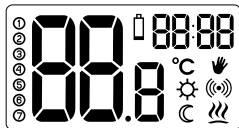
In order to unpair all devices paired with the AURATON RT receiver, simultaneously press and hold both the pairing and the unpairing button ( and ) for at least 5 seconds, until the LED diode starts blinking green and red alternately. Then release both buttons. Sound signal: when the button is pressed, a short sound signal is emitted, followed by another short signal 5 seconds later.

Successful completion of unpairing of all devices is signalized after about 2 seconds by the diode color changing to green and then switching off for a short time.

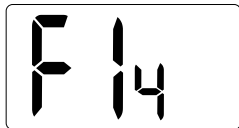
NOTE: *If the power supply of the AURATON RT receiver is switched off and then switched on after the RESET, the receiver automatically goes into the “pairing” mode for 120 seconds. A newly purchased (separately from the controller) AURATON RT receiver acts in the same way if it has no factory-paired devices.*

Switching the controller on for the first time

After the batteries are properly installed in the battery compartment, the LCD display shows all segments for one second (a display test) and then it shows the software version.



After a moment, the current temperature in the room is displayed. Then the controller is ready for operation.

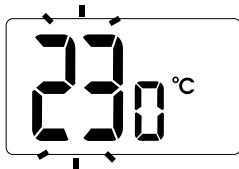





Temperature setting

NOTE: The first time any function button is pressed, the illumination is always switched on first and only then the button's function is activated.

In order to set the temperature in the normal operation mode:

1. Press the or button. The segment that shows the temperature goes into the edition mode and starts blinking.




- Use the  and  buttons to set the desired temperature in the room with the accuracy of 1 °C.
- Confirm the selection by briefly pressing the  button.

Setting the “reduction of the programmed pump shutdown temperature”





The controller has the functionality of **reduction of the pump shutdown temperature**. When the setting is e.g. 40 °C and the reduction is set to 1 °C, the pump shuts down at the temperature of 39 °C. If the reduction is set to 5 °C, the pump shuts down at 35 °C.

In order to set the reduction temperature, press the  button (*the factory setting is 3 °C*).


Each time the button is pressed, the temperature setting changes by 1 °C in a loop from 1 °C to 5 °C.



Confirm the selection by pressing the  button.

NOTE: If the  button is not pressed, the controller returns to the normal operation mode after 10 seconds.

Switching the “AntyStop” mode on/off



In order to switch the **AntyStop** mode on, press and hold the  button pressed for 3 seconds.



The display shows **AS** (the function is active).

The AntyStop mode prevents seizing of the rotor of an unused pump. Also, a built in processor starts the pump every 14 days for 30 seconds after the heating season is over. **In order for the system to work after the heating season, the controller must remain switched on with the AntyStop function active.**

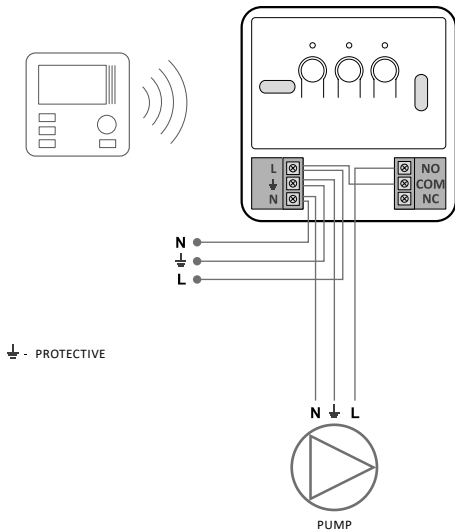
Comments:

- The controller may be switched on or off at any time by briefly pressing the  button.
- The first time any function button is pressed, the illumination is always switched on first and only then the button's function is activated.
- When programming any function, if no buttons are pressed for 10 seconds, this is equivalent to pressing the  button.

Additional functions

- After batteries are installed, the controller displays the temperature from the external temperature sensor.
- When the external sensor is connected (the terminal block is located under the enclosure), the controller automatically takes the readings from that sensor.
- If the external sensor is disconnected or defective, the controller goes into the emergency mode (dashes are shown as the measured temperature), which results in the CH pump shutting down until the defect is eliminated. This is intended to protect the heating system from overheating. In order to leave the emergency mode, connect the external temperature sensor back or reset the controller by taking out the battery until the display switches off. After this procedure is completed, the controller displays the temperature measured by the internal sensor.

The AURATON S03 RT regulator connection schematics



Technical data

| | |
|---|---|
| Operating temperature range: | 0 – 45°C |
| Temperature measurement range: | 0 – 99°C <i>(HI is shown when out of range)</i> |
| Temperature control range: | 5 – 85°C |
| Default temperature setting: | 30°C |
| Additional function: | AntyStop |
| Operation status control: | LCD display/LED diodes |
| Maximum load current on the relay: | approx. 16 A 250 V AC |
| Power supply of the S03 controller : | 2 alkaline AAA 1,5V batteries |
| Power supply of the RT receiver : | 230 V AC, 50Hz |
| Radio frequency: | 868 MHz |
| Range of operation: | in a regular building with standard wall structures – approx. 30 m; in an open field – up to 300 m |

Disposal of the device



The device is marked with a symbol of a crossed waste bin. Pursuant to European Directive 2002/96/EC and to the Act on waste electrical and electronic equipment, such a symbol indicates that the device, at the end of its service life, must not be disposed off together with other household waste.

The user is required to deliver it to a waste electrical and electronic equipment collection point.

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