

AURATON 1100 Z

OPERATING INSTRUCTIONS FOR AURATON 1100 Z CONTROLLERS

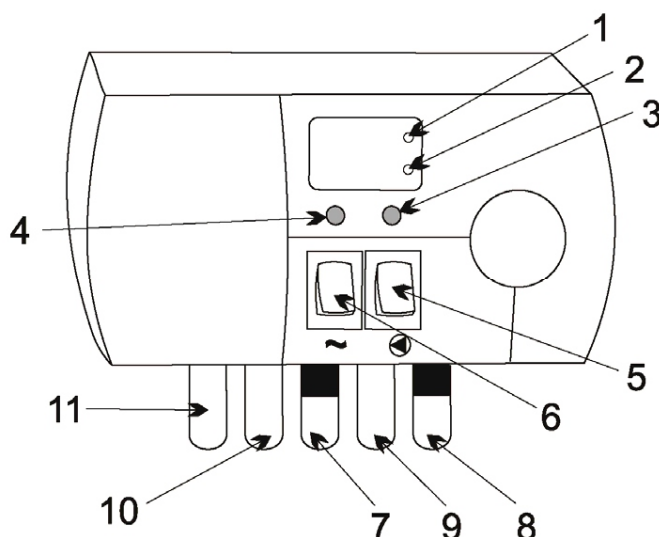
1. Application

The AURATON 1100 Z is a modern processor-based electronic controller, designed for simultaneous work with a central heating and a hot water circulating pumps. It has two sensors and two independent temperature settings. The controller can work with or without **hot water priority function**.

In a central heating system, the controller is used for forcing water circulation in a coal or gas boiler.

In a hot water system, the controller maintains a constant water temperature in the tank or in the hot water installation.

The AURATON 1100 Z controller is equipped with the ANTI-STOP system, which prevents the pump rotor from seizing when not used. After the heating season, the AURATON 1100Z automatically starts the pump every 14 days to run for 30 seconds. The controller should be left turned on for the system to work after the season end.



1. Hot water mode operation indicator
2. Central heating mode operation indicator
3. Central heating mode, temperature setting +
4. Hot water mode, temperature setting -
5. Continuous central heating or hot water operation switch
6. Power switch
7. Hot water pump power supply cable, 230 V AC
8. Hot water temperature sensor
9. Central heating temperature sensor
10. Central heating pump power supply cable, 230 V AC
11. Power supply cable, 230 V AC

2. Installation

a. Mounting the controller

- mount the controller on a wall or a console, using two screws (expansion plugs with screws are supplied with the controller),
- fix the outgoing cables to the wall, using holders.

b. Mounting the sensors

- do not immerse the sensor in liquids and do not install it in flue gas outlets,
- install the central heating sensor on an uncovered outlet pipe of the central heating boiler (as close as possible to the boiler),
- install the hot water sensor (marked with a red jacket) on the hot water tank,
- the maximum temperature measurement value is 99°C.

c. Connecting the power supply cable to the central heating pump no. 1

- connect the yellow or yellow/green wire (ground wire) to the (\perp) terminal,
- connect the blue wire to the (N) terminal,
- connect the brown wire to the (L) terminal.

d. Connecting the power supply cable (marked with a jacket) to the hot water pump no. 2

- connect the yellow or yellow/green wire (ground wire) to the (\perp) terminal,
- connect the blue wire to the (N) terminal,
- connect the brown wire to the (L) terminal.

e. Checking the correct connection

- check the correct connection of the cable and screw on the pump motor terminal box cover.

f. Connecting the controller

- after protecting the cables against accidental breaking, connect the power supply cable to a grounded 230V/50Hz mains socket.

NOTE: The ambient temperature in the place of installation of the controller should not exceed 40°C.

3. Operating the controller

a. Turning on the controller

- set the switch marked with (~) (the one on the left) in the "I" position,
- upon turning on, all display segments will light for about 2 seconds,
- the controller will then show the current central heating sensor temperature, switching on the relays according to the factory settings (the threshold temperatures are set to 50°C),
- if the hot water priority function is to be turned on or off, press and hold (for at least 5 seconds) both SWITCH buttons, until the status of the rightmost dot on the LED display changes. When the dot is lighted, the hot water priority function is on, and when the dot is not lighted, the hot water priority function is off.

b. Display description (information display)

- in normal operation mode, the controller displays the current central heating pump sensor temperature,
- in order to display the hot water pump sensor temperature, press both buttons at the same time and release them. After 5 seconds the controller will automatically return to the central heating pump sensor temperature display,
- flashing display shows the central heating or hot water pump temperature setting,
- lighted red LED – indicates the hot water pump operation,
- lighted green LED – indicates the central heating pump operation,

d. Changing the temperature values

- setting the hot water pump temperature – press the left-hand button under the display (the digits will start flashing and will indicate the current set value),
- setting the central heating pump temperature – press the right-hand button under the display (the digits will start flashing and will indicate the current set value),
- set the desired temperature using the right-hand (increasing) or the left-hand (decreasing) button,
- after setting the temperature, wait for about 4 seconds, until the display stops flashing and the temperature is stored in the memory,
- the display will show the current central heating pump sensor temperature.

d. Automatic operation

- set the right-hand switch marked with (▶) in the “0” position,
- the controller will switch the pumps on and off depending on the temperature settings,
- the hot water pump is controlled in such a way that if the central heating pump sensor temperature is below 30°C, the hot water pump relay is not switched on in order not to cool down the tank. When the central heating pump sensor temperature rises above 30°C and the hot water sensor temperature is below the hot water setting value, the hot water pump is switched on, and if the hot water priority function is on, the central heating pump is switched off. When as a result of heating the hot water temperature rises to 1°C above the set value, the hot water pump will be switched off, and switched on again when the temperature falls 2°C below the set value. The central heating pump works on the basis of its own setting.
- in the central heating system, the central heating pump is switched on, when the hot water priority function is off and the temperature at the central heating sensor location is higher than the set value by 2°C, and switched off, when the temperature falls by 3°C below the controller set value. If the hot water priority function is on, the central heating pump will be switched on, only if the hot water pump is off.

e. Continuous operation

- set the switches marked with (~) and (▶) in the “I” position,
- the central heating pump will run regardless of the temperature setting of the controller and the real temperature at the sensor location – this is indicated by a lighted green LED,
- set the switch marked with (~) in the “I” position and the switch marked with (▶) in the “II” position,
- the hot water pump will run regardless of the temperature setting of the controller and the real temperature at the sensor location – this is indicated by a lighted red LED.

4. Technical data

- a) temperature setting range: 10°C – 80°C
- b) measurement range: 1°C – 99°C
- c) central heating hysteresis (on/off value difference): 5°C
- d) hot water hysteresis (on/off value difference): 3°C
- e) supply voltage: 230V AC
- f) maximum load: 6A AC

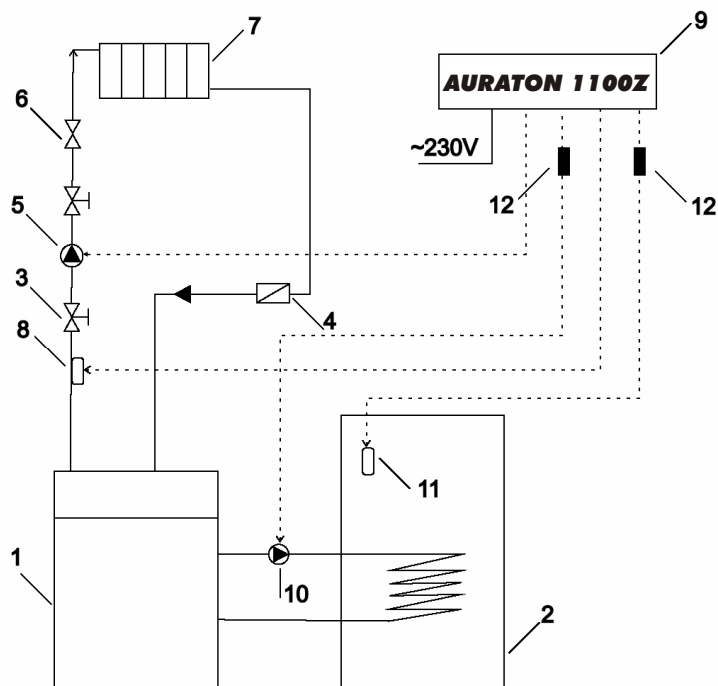
5. Kit contents

- a) controller with sensors
- b) sensor band clips
- c) expansion plugs
- d) instruction
- e) mounting template

6. Controller to central

Example connection diagram. The presented diagram is simplified and does not contain all the elements required for the correct operation of the installation.

In hot water circuit



Legend:

1. Central heating boiler
2. Hot water tank
3. Cut-off valve
4. Mesh filter
5. Central heating pump
6. Check valve
7. Heat receiver – radiator
8. Central heating temperature sensor
9. Central heating + hot water controller
10. Hot water pump
11. Hot water temperature sensor
12. Cable marked with jacket