

AURATON 1100 W

OPERATING INSTRUCTIONS FOR AURATON 1100 W CONTROLLERS

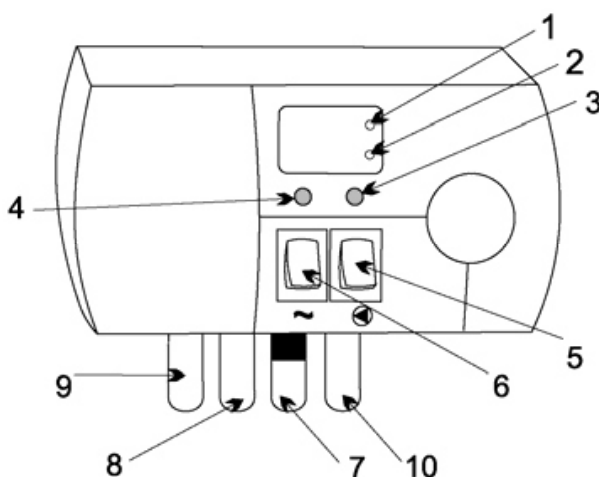
1. Application

The AURATON 1100W is a modern processor-based controller, designed for work with forced-draft central heating boilers fired with fine coal and coal.

Depending on the water temperature in the boiler, the controller automatically switches on or off the water pump in central heating installations with a coal boiler and the blower installed under the furnace. The digital sensor of the controller measures water temperature in the boiler and controls the pump and the blower based on the temperature. The controller makes it possible to change the blower activity/inactivity time values as well as to adjust the blower speed.

The AURATON 1100W controller is equipped with the ANTI-STOP system, which prevents the pump rotor from seizing when not used.

After the heating season, the AURATON 1100W starts the pump automatically 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. Blower operation indicator
2. Pump operation indicator
3. Value setting button (+)
4. Value setting button (-)
5. Continuous pump operation switch
6. Power switch
7. Blower power supply cable, 230 V AC
8. Pump power supply cable, 230 V AC
9. Power supply cable, 230 V AC
10. Temperature sensor

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 sensor
 - the sensor must not be immersed in liquids or installed in flue gas outlets,
 - install the sensor at the appropriate location on the boiler; the maximum temperature measurement value is 99°C.
- c. Connecting the power supply cable to the pump
 - 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 to the valve (cable marked with a blue strip)
 - 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.

Wait about 30 seconds after start-up for the controller to start normal operation.

3. Operating the controller

- a. Turning on the controller
 - set the switch marked with (\sim) (the one on the left) in the "I" position,
 - upon turning on, all display segments will light for about 2 seconds,
 - after 1.5 seconds the controller shows the current sensor temperature and the relays are switched on according to the factory settings (the threshold temperatures are set to 50°C).
- b. Display description (information display)
 - display is not flashing – shows the current sensor temperature,
 - display is flashing – shows the pump or blower temperature setting,
 - upper LED is lighted – blower operation,
 - lower LED is lighted – pump operation.
- c. Changing the temperature values
 - setting the blower temperature – press the left-hand button under the display,
 - setting the pump temperature – press the right-hand button under the display,
 - press the right-hand or the left-hand button under the display – the digits will start flashing and will indicate the current set value,
 - the desired temperature can be set 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 sensor temperature.

d. Changing blower activity/inactivity time values

- press and hold the right-hand (blower activity time) or the left-hand (blower inactivity time) SWITCH button for about 6 seconds, until the right-hand or left-hand digit starts flashing. The flashing digit indicates a code value from 0 to 9, which defines the current time setting value as shown in the table below. The SWITCH buttons are used for changing the code setting value. After setting the required value, release all buttons and wait for 4 seconds, until the digit stops flashing – this means that the setting has been stored in the permanent memory and the display shows the current sensor temperature.

Blower activity time

CODE:	0	1	2	3	4	5	6	7	8	9
TIME(s):	Off	5	10	15	20	30	40	60	80	100

Blower inactivity time

CODE:	0	1	2	3	4	5	6	7	8	9
TIME (min):	20 s	1	2	4	6	8	10	12	14	16

e. Setting blower speed

- press and hold both SWITCH buttons for about 6 seconds, until two flashing “00” digits appear (the initial value is set at MAX). The SWITCH buttons are used for changing the code setting value. Using the right-hand (increasing) or the left-hand (decreasing) button, set the required blower speed value. The flashing digits indicate a code from “00” to “09”, which defines the blower speed setting value in the operation mode (operation mode – the blower is ON). Depending on the needs, the blowing force is set using this parameter in the range from “00” to “09”, where “00” is the MAXIMUM and “01” is the MINIMUM blower speed.

f. Automatic operation

- set the right-hand switch marked with (▶) in the “0” position,
- the controller will switch the pump on or off depending on the temperature setting,
- in the central heating system, the pump is switched on, when the temperature at the 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,
- in the blower control system, the blower is switched on, when the temperature falls by 3°C below the set value. When the sensor temperature is lower than 30°C for about 30 minutes, the controller will switch off the blower and will enter the alarm mode (bb – the furnace is dead and the controller must be restarted – turn off/on the left-hand button). When the sensor temperature is higher than the set value, the blower turning-off process will start. The blower speed will be reduced gradually (in three stages), until it stops completely (stage four). If the measured temperature is higher than the set value, the blower will be switched on cyclically in order to blow air into the furnace. if the measured temperature is higher than 90°C, the cyclic blower switching-on process will be inactive.

g. Continuous operation

- set the switches marked with (~) and (▶) in the “1” position,
- the pump will run continuously regardless of

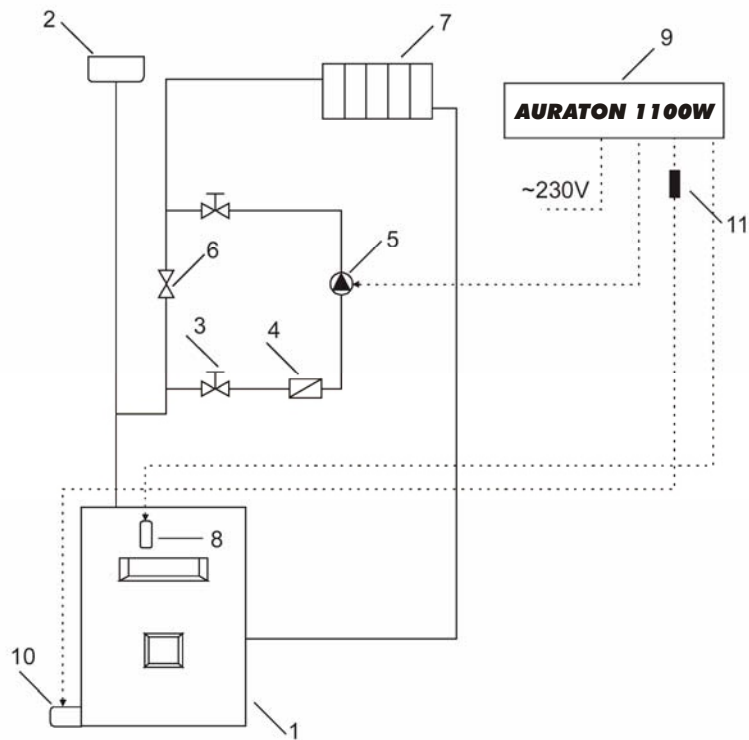
4. Technical data

- 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) blower hysteresis (on/off value difference): 5°C
- e) supply voltage: 230V AC
- f) maximum blower power: 100 W
- g) maximum pump load: 1300 W
- h) blower activity time: from 0 to 100 s
- i) blower inactivity time: from 20 s to 16 min
- j) blower speed setting: from 01 to 00

It is recommended to use WBS type fans manufactured by Konwektor.

6. Controller to central heating boiler pump and blower connection diagram

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



Legend:

1. Central heating boiler
2. Expansion tank
3. Cut-off valve
4. Mesh filter
5. Central heating pump
6. Check valve
7. Heat receiver – radiator
8. Temperature sensor
9. Controller
10. Fan
11. Cable marked with jacket