ELECTRONICS

MICROPROCESSING CONTROLLER OF TEMPERATURE OF CENTRAL HEATING (CH) BOILER AND HOT TAP WATER (H.T.W.) BOILER

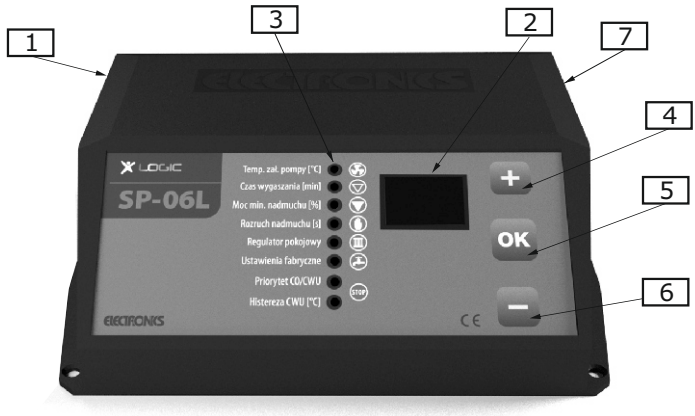
SP-06

LOGIC

OPERATING INSTRUCTIONS

CE

1. Front panel description



The view of the controller with marked functions

Description of the operating mode

	Air-blow
	CH Pump
	H.T.W. pump
	Manual operation
	CH temperature
	H.T.W. temperature
STOP	End of operation

1. Power on – off.
2. Digital display.
3. Signal lights.
4. Control button (+) (Enables CH temperature settings).
5. OK button (confirms chosen settings, enables entrance to Settings Menu).
6. Control button (-) (Enables H.T.W. temperature settings).
7. 3.15A fuse.

2. Application

The controller is equipped with an innovative, intelligent operating system Logic. It allows the boiler to automatically adjust its power to current operating conditions. The entire regulating process is based on the central heating temperature measurement. Due to an innovative solution that ensures the optimal fuel combustion, this system influences the reduction of harmful oxides emissions to the atmosphere. Through proper postcombustion of oxides and the lack of readjustments, a boiler equipped with our device is able to use up to 30% less fuel in comparison to standard solutions.

3. Technical data

1. The range of CH temperature adjustment 35°C - 80°C.
2. The range of H.T.W. temperature adjustment 35°C - 65°C.
3. The range of temperature measurement 0°C - 99°C.
4. Fluent automatic regulation of the air-blow.
5. Operating at the surroundings' temperature of 0°C - 40°C.
6. Settings are automatically saved in the event of the supply voltage drop.
7. Relative air humidity 95%.
8. Insulation class I.
9. Electrical protection 3.15 A.
10. The controller is equipped with a number of functions improving the comfort as well as safety of the user.

4. Exploitation

1. Connect power cords of CH and H.W.T. pumps
   a. to the "ground" terminal the yellow and green conductor,
   b. to the "N" terminal the blue conductor,
   c. to the "L" terminal the brown conductor,
2. After connecting the controller, pumps, air blower and the temperature sensor to the mains, the controller is ready to work.

3. Pressing button (1) activates the controller, the air-blow is activated automatically.

5. Service

(+):

- Change of CH temperature

After the change constant reading of CH temperature on the display.

- On/Off summer mode function. **Summer mode** function consist in turning off the central heating and using boiler only to heat the tap water.
Setting the temperature below 35°C (--) causes deactivation of the CH pump. The controller switches to the summer mode.
Reactivation of the CH through setting the requested temperature.

- Change of the parameter.

(OK):

- Confirmation of the previously chosen parameter.
- Activation of the **manual operating function**
- Pressing and holding for three seconds activates menu:

(-):

- Change of the hot tap water temperature.

After the change constant reading of H.T.W temperature on the display.

- On/Off **H.T.W. pump** function.
In the event of the lack of H.T.W. pump, this function on the controller should be deactivated.
Leaving this function active will cause malfunctioning of the controller.

Setting the temperature below 35°C (--) deactivates H.T.W. pump. Reactivation through resetting the temperature.

- Change of the parameter.

6. Menu functions:

Pump activation temperature - temperature that causes activation of the circulating pump is fluently regulated within the range from 30°C to 5°C below the temperature set on the boiler, e.g., if the CH temperature is set at 60°C then the pump regulation range can be set between 30°C and 55°C.

Deactivation time - this function is used to set the time after which the controller will enter deactivation mode.

Minimal power of the air-blow - this function should be set on the minimal power of air injunction. Setting this parameter incorrectly may cause abnormal operation of the controller.

Start-up of the air-blow - it is the time of the ventilator start-up; it has to be regulated due to the efficiency loss. When we notice that the ventilator is malfunctioning while being activated (it can not start), the time of start-up should be increased (from 1s to 9.9 s).

Room controller - we can connect to a room controller to the controller. It is controlling the work of the circulating CH pump. A two core cable that leads from the room controller should be connected to the jack output in the rear part of the casing. When installing a room controller no external power sources should be connected.

Factory settings - the controller has programmed settings, to which we may return at any time.

However, please remember that all your own settings will be lost.

CH/HTW priority - the controller has the possibility of altering the pumps' operation priority.

HTW PRIORITY - the H.T.W. pump activates and operates until reaching the set temperature. Temperature on the boiler amounts to +10°C in relation to the temperature set on the hot tap water pump for fast heat-up. When tap water reaches the set temperature, the H.T.W. pump turns off and the CH pump activates.

CH priority - in this mode pumps begin to operate when the temperature on the boiler reaches the temperature set in the function **pump activation temperature.**

The CH pump operates constantly, whereas the H.T.W. pump turns off after reaching the desired temperature. In this mode the H.T.W. temperature cannot exceed the CH temperature.

HTW hysteresis - this function serves the setting of tap water hysteresis and consists in delaying the H.T.W. pump activation for the set amount of degrees, e.g., hysteresis 2°C the set temperature 50°C the pump activates when the tap water temperature falls to 48°C. This function operates for H.T.W. priority and the summer mode.

7. Error messages

E1 - Program memory error.
E2 - Damage of central heating temperature sensor.
E3 - Damage of hot tap water temperature sensor.
E6 - Temperature increase above 94°C, this error cancels itself automatically when the temperature falls to 81°C (this enables the boiler's continuous operation and fuel's burn-out).-the blower is turned off and CH pump operates for the above errors.
E8 - H.T.W. temperature increase above 72°C, this error cancels itself automatically when the temperature falls to 65°C.

8. Fuse replacement

In order to replace a fuse, disconnect the power cord from the mains outlet.

9. Installation recommendations

1. It is advisable to entrust the controller's installation to an authorized person.
2. The controller should be put in a place preventing it from heating up to the temperature higher than 40°C.
3. Conduct installation in accordance with point 4 (Exploitation).
4. The appliance should be installed and operated in accordance with the principles of operating electrical devices. The controller cannot be exposed to water and conditions causing condensation of water vapour, e.g. rapid changes of the surrounding's temperature.
5. In case of malfunction of the controller, it is necessary to initially check:
   - the fuse in the back of the panel.
   - the reliability of connections on the controller's strip and the technical condition of the cooperating devices, i.e. the blower and pump.
6. The boiler should have check valves installed on the circuits of the CH and H.T.W. pumps.

CAUTION!!!
Connect air-blow motor and circulating pumps only after disconnecting the controller from the mains 230V

10. Electrical parameters

1. Supply voltage	~230V/50Hz
2. Power consumption (without load)	2W
3. Operating temperature range	0°C – 40°C
4. Output load:	
air-blow	100W
circulating pumps	2x100W

5. Weight	500g
6. Dimensions	125x75x50mm

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