

IMMERSING HEATER WITH ELECTRONIC THERMOSTAT

1. TECHNICAL INSTRUCTIONS

2. Heater with electronic thermostat type QS is a device used exclusively for heating fluids in heating appliances, such as radiators and towel dryers, which are installed as a stand-alone heating elements, or as part of the central heating system.

3. Note

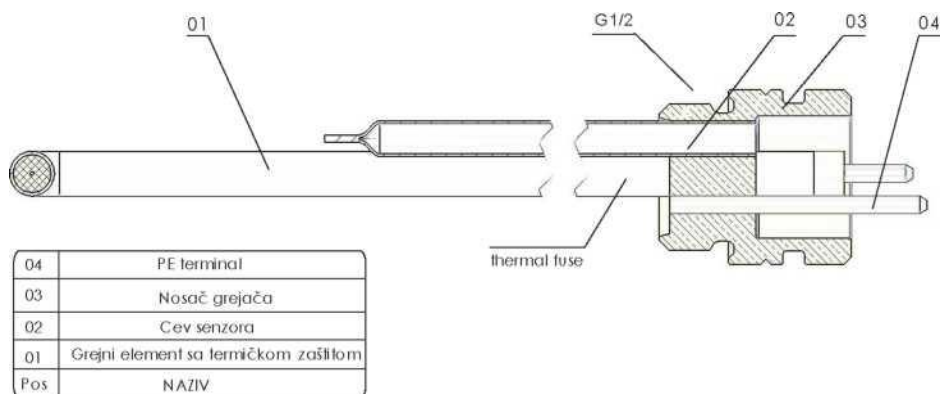
3.1 For proper and optimal performance, as well as the optimal heating effects, the right choice of the heating appliance and the heater is very important

3.2 Installation of devices and choice of the heating appliance should be entrusted to a qualified person

4. TECHNICAL DATA

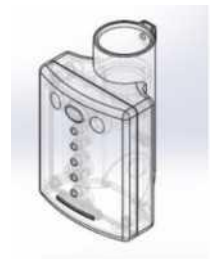
4.1 HEATING ELEMENT QSO

Type	Power(W) ± 5%	Rated Voltage (VAC)	L (mm)	Thermal fuse
QSO 150	150	230	252+/-3	102C
QSO 300	300	230	294+/-3	102C
QSO 600	600	230	344+/-4	102C
QSO 900	900	230	394+/-5	102C



Basic parts of the QSO element:

- Parts for connection to the power supply
- Tubular immersion heater
- Built-in thermal fuse
- Tube with temperature sensor
- Elements for temperature signal transmission
- Rotating connector element that provides a connection to the thermostat housing
- Seals and screw for thermostat fixing
- Flange on which all QSO parts are mounted all the parts



4.2 QS THERMOSTAT

4.2.1 Element description and working principle

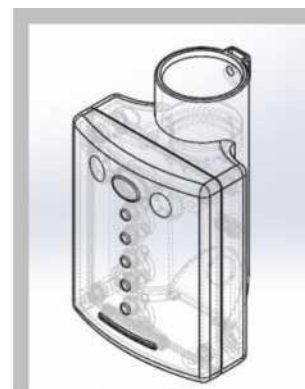
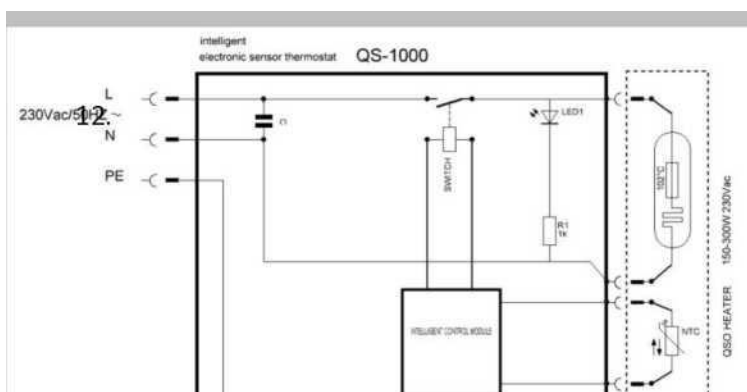
4.2.2 General characteristics

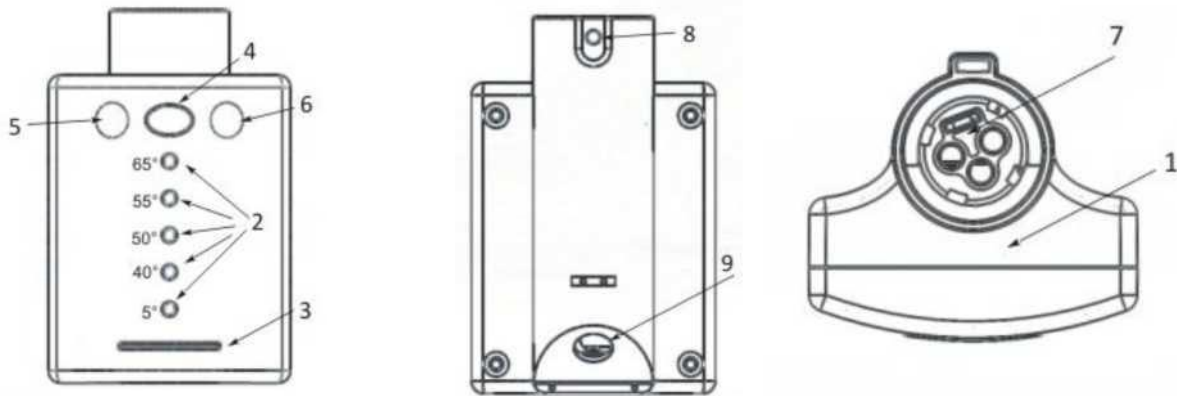
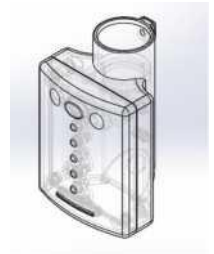
- Modern *touch-control* user interface
- Simple adjustment by touching the marked spot on the thermostat
- Increased levels of sealing, reduced the possibility of moisture penetration
- Intelligent Control System

4.2.3 Basic elements of the QS thermostat

1. thermostat housing
 2. temperature range indicators
 3. heater indicator
 4. temperature level indicator
 5. range/function selection switch ON-OFF
 6. timer sensor
 7. swivel joint
 8. fixing screw
 9. inlet
 10. connection cable
 11. electrical characteristics
- connection voltage - 230Vac-50Hz
 - MAX allowed heater power - 1000W
 - Temperature regulation: 5-65°C +/- 3°C
 - Timer - 2h
 - Connection cable: OMY 3x0,75, L=1,3m
 - Weight : 212/262g (straight/spiral cable)
 - Dimensions (HxWxL): 91x60x51mm

ELECTRICAL DIAGRAM





4.2.4. User interface

4.2.4.1 testing program - *self test* – after connecting to the network all led lights will light up at the preset sequence with the aim of checking all functions as well as the presence of required elements.

After the *self test*, if operating conditions are met, the thermostat will activate the ❄️ (5°C) and the indicator (4).

If all led lights are flashing simultaneously, there is a problem with the temperature sensor function. It is necessary to check the connection between the heating element and the thermostat.

4.2.4.2 Sensors – contactless controls (5, 6)

Touching the marked spot of the sensor with your thumb, you will activate the following functions:

-ON 🏠 : keep your thumb on the sensor for 4 s to turn the QS on

-OFF 🏠 : if the QS is in the ON and/or TIME mode keep your thumb on the sensor for 4 s to turn the QS off

- touching the same sensor for 1 s, the preset temperature will change in cycles ranging from ❄️ to 65° C

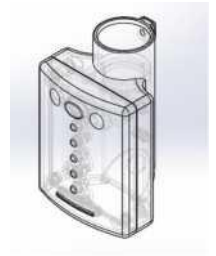
- touching the 🏠 sensor for 3 s the heating period will be activated in fixed duration of 2 hours at the preselected temperature

4.2.4.3 Heater function indicator - Illuminated line at the bottom of the thermostat housing (3)

4.2.4.4 Displaying the temperature with elliptical indicator (4)

Indication levels

- blue – temperature up to 20°C
- green – radiator temperature 40°C, 50 °C
- red – temperature up to 55°C, 65°C.
- flashing red light – radiator temperature exceeds 65 degrees, possible radiator overheating



Displaying the temperature is independent of the heating manner, heating element or the central heating system.

4.2.4.5 Temperature ranges

- ❄️ - 5°C, protection from freezing. The thermostat will enter this mode after the *self test* every time there is network power shortage.
- 40°C, 50°C – temperature ranges recommended for heating and drying.
- 65°C, 55°C – temperature ranges recommended for heating only.

4.2.4.6 Time settings - sensor ⌚

Possibility of selecting the heating period in duration of 2 h at a preset temperature.

If this mode is active the indicator light will flash slowly during the first hour and faster during the second hour of heating.

After the expiration of 2 hours, the thermostat will exceed the range marked ❄️ (stops the heating and continues to maintain the minimum temperature)

If there is a need to terminate the preset time period, switch off the heater and start again with the ON / OFF function according to the previously described ON/OFF procedure – 4.2.4.2

5. INSTALLATION

5.1 The QSO heating element is designed so as to be installed independently from the thermostat

5.2 Entrust the heater installation to a qualified person.

5.3 The heater is designed only for direct installation into the radiators or towel dryers.

5.4 The heating element is installed in the ½” opening on the heater body bottom.

Unscrew the plug from the heater and screw in the QSO heating element. Use standard wrench No. 22 for installation.

- The QSO element is the immersion type, which requires installation only at the bottom of the heating body (installing the heater on top of the heating body may lead to accidents and damages)
- The heating element has gaskets that provide a proper seal to the heating the body and to the thermostat so that additional parts and materials for the same purpose are not to be used.

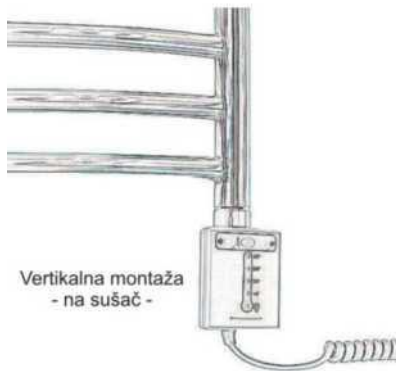
5.5 After properly installed QSO, approach to filling in the radiator with fluid.

Allowed fluid for proper functioning is demineralized water (H₂O).

Other fluids used for filling in the central heating system are not allowed.

Fill in the heating body to 90% volume, bigger fluid quantity than required may cause damage to the heating body.

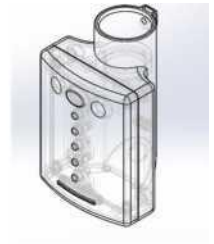
5.6 Once you fill the radiator with fluid, you may install the thermostat, rotate to the desired visual zone and fix with the screw on the back of the heater.



VERTICAL INSTALLATION ON THE DRYER



HORIZONTAL INSTALLATION ON THE RADIATOR



5.7 If you are sure whether you installed the heater and thermostat in accordance with previous instructions, you can connect the thermostat to the power network, in the socket with grounding. Cable cross-section in the installation and the type of connection must be appropriate.

5.8 Immediately after the connection to the power network, the thermostat indicators will turn on and off in an easily discernible sequence, and the indicator marked with a snowflake ❄️, the temperature indicator ↓ and the heater operation indicator (3) will remain turned on. If after 10 seconds after turning on the heater to an electrical installation all indicators flash in the same regime, there has been an error while installing the thermostat on the heating element. Turn off the thermostat from the electrical wiring, loosen the screw on the back of the thermostat, remove the thermostat from the heater and carefully repeat the thermostat installation procedure.

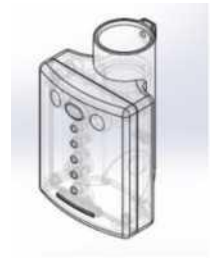
6. USE

If you are sure that you have installed all the elements in accordance with these instructions, you may plug the cable into the socket with protective grounding. Installation cable cross-section and the type of connection must be appropriate.

After the *self-test*, the indicator ❄️ will illuminate. You may choose the wanted temperature range in accordance with the procedure described in 4.2.4.2 above.

WARNING

- The heater is designated exclusively for direct installation on radiators or towel dryers –heater power must not exceed 70% of the power in the heating body that incorporates the heater – it is prohibited to connect the electric heater to power supply if is not completely submerged in water – it is prohibited to install the heater in heating bodies that are filled with aggressive fluids.



- **Thermostat housing must not be covered and it must be at least 400mm away from flammable objects and materials.**
- **connection to the electrical installation must be performed only in the manner prescribed by the manufacturer**
- **allow cable replacement, servicing and installation to qualified persons only**
- **if you want to place the thermostat completely out of operation, disconnect the cable from the electrical installation**
- **if there is mechanical damage, disconnect the cable from the power supply and contact the authorized technician**
- **the device must not be handled by children and people of limited mental and physical abilities- the appliance is not intended for fun and entertainment**