



The Tulikivi power unit is used to control Tulikivi D-framed heaters. When used to control heaters from other manufacturers, the country-specific instructions and regulations related to the installation, safety distances and controls of each manufacturer's heater and its heat sensor must be observed.

The Tulikivi power unit needs a Tulikivi Touch Screen or KNX home automation system as well as a KNX controller and an optional SIM KNX card to operate. The Touch Screen can also be used in the KNX system as a close control. The power unit has a switch start possibility option as standard.

Scope of delivery and technical data



Tulikivi Power Unit SS1385BN, 1 pcs

Maximum load: 10,5 kW

Supply voltage: 3 x 220V

Protection class: IP X4

Dimensions (wxdxh): 380 mm x 300 mm x 120 mm

Lighting control: max 1A (Touch Screen controlled)

Compatible with KNX systems (using the SIM KNX module of the SIM card)

Switch start possibility

Alternation of electric heating (55)

Temperature sensor SS1392, 1 pcs



Equipped with reversible overheating protection and temperature measuring NTC thermistor (100 k Ω /T=25 °C) heat-resistant silicon cable 4x0,5mm² 10 meter

Tulikivi Touch Screen SS298, 1 pcs (black or white)



Area classification: IP54

Dimensions (wxdxh): 197 x 62 x 130 mm

Connection cable 6 m

Sauna temperature range 30-110°C

For home use, the maximum time the sauna heater can be on is set at 6 hours. Adjustable in other cases.

Pre-selection time 0-12 h

ELECTRICAL CONNECTION

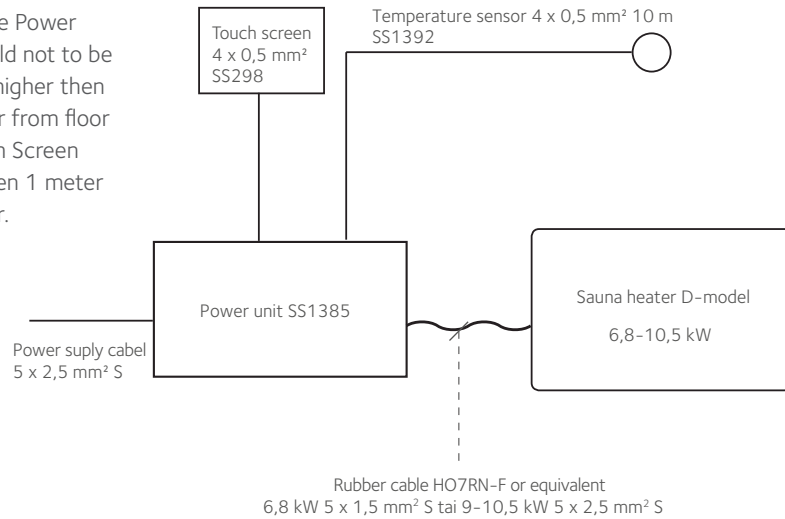
The electrical work for the sauna heater may only be performed by a qualified electrician authorised to undertake such work, in accordance with the relevant regulations. The heater should be connected to the mains semi-permanently. The Power Unit must be splashproof and placed at a minimum of the safety distance from the heater (500 mm) and at a height of no more than 1 meter above the floor. The main on/off switch for the sauna heater is at the bottom left on the front of the heater.

The connecting cable must be a rubber cable of type H07RN-F or equivalent. The heater must not be connected using a cable with PVC insulation. The specifications for the connecting cables and fuses are presented in Table 2. Do not connect the heater's power feed through an earth leakage circuit breaker (ELCB). In the final inspection of electrical installation work, the heater's insulation resistance test may show leakage. This is due to moisture having been concentrated in the heating elements' insulating material during storage or transport. The moisture can be removed from the heating elements by running the sauna once or twice. The temperature sensor should be installed in accordance with Figure 1. Make sure that the air intake is sufficiently far away from the sensor (recommended minimum distance 1 m, figure 2).

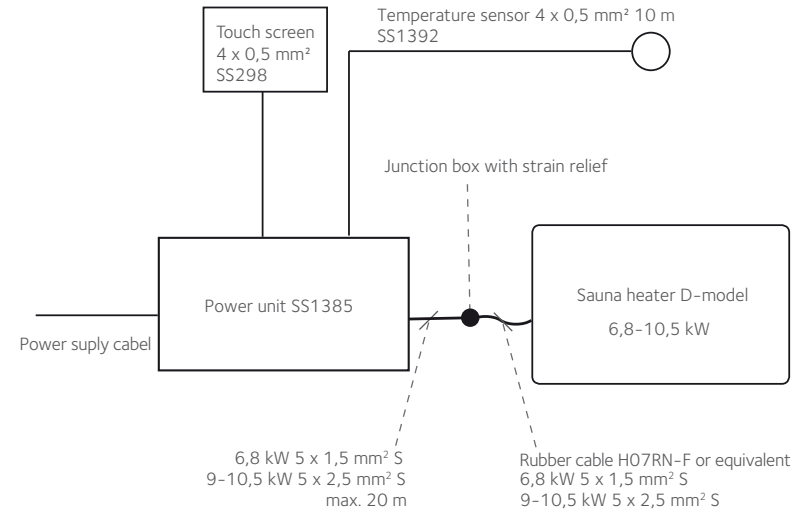
Power Box Connection

The temperature sensor (SS1392) is already connected to 10 meter heat-resistant siliconen cable and Touch Screen on 6 meter cable. KNX bus coupled to power unit with e.g 2x0,7mm² cable.

Note. The Power Unit should not be installed higher than 0,6 meter from floor and Touch Screen higher than 1 meter from floor.



POWER UNIT, EG IN TECHNICAL CONDITION OR SIMILAR



Instructions on environmental protection

After its useful life, this product must not be disposed of with ordinary household waste. It must be delivered to a collection point intended for recycling electric and electronic devices. The product should be delivered without the sauna stones or lining stone.

Recycling of the product must comply with the local sorting regulations for electrical and electronic waste.

Information on recycling locations is available from municipal service points.

Tulikivi Corporation is a member of the producer organisation SELT Association and pays the recycling fee on your behalf.

By returning the product to a recycling point, you are promoting the reuse and appropriate waste treatment of electrical and electronic equipment, which will benefit the well-being of people and the environment.

The reuse of old equipment and materials as well as other forms of reuse represent a valuable deed for the environment.

EXPLANATION OF SYMBOLS SHOWN ON THE PRODUCT, IN THE OPERATING MANUAL OR ON THE PACKAGING



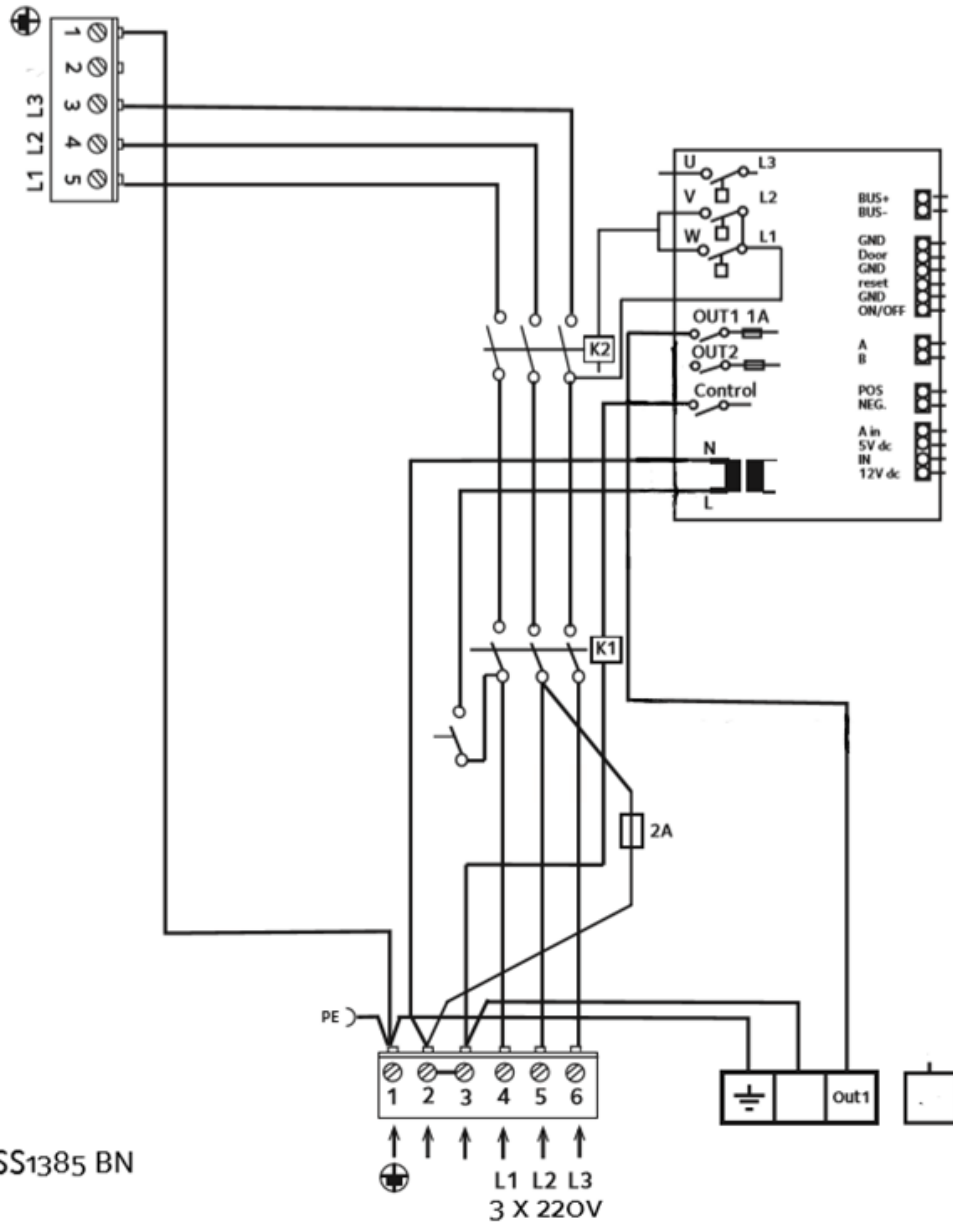
A rubbish bin crossed out: this product must not be disposed of with household waste, but must be recycled appropriately.



A fee for recycling the product packaging has been paid to the appropriate national organisation in the product's country of manufacture.

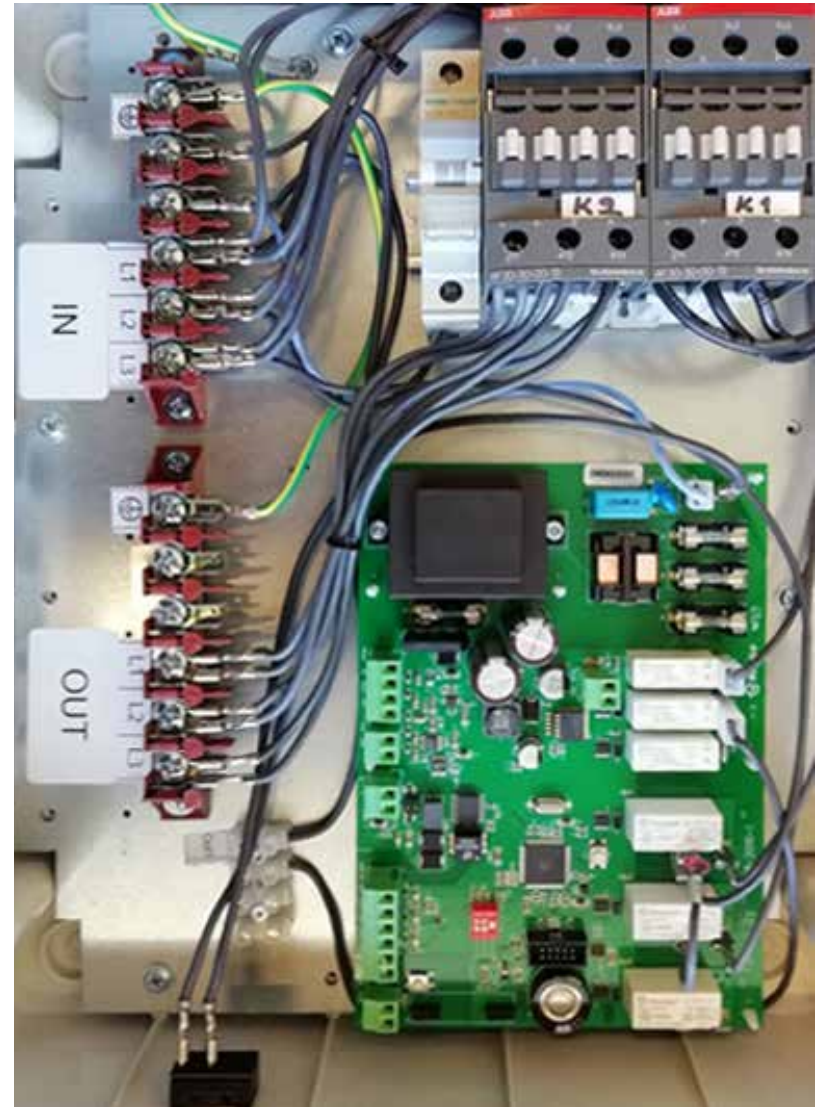
Circuit diagram

For Sauna

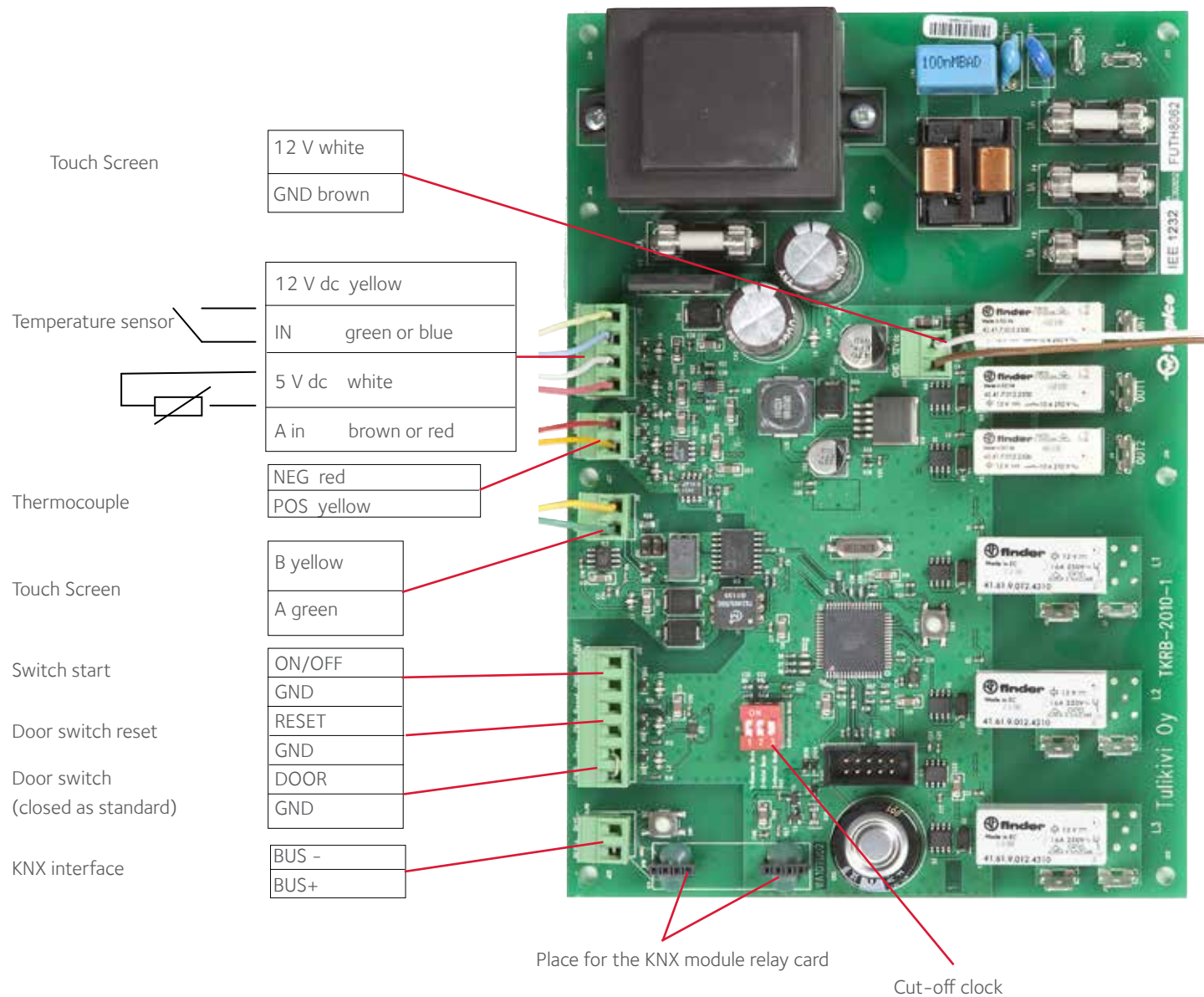


SS1385 BN

SS1385BN



Circuit board connectors



CUT-OFF CLOCK

Tulikivi sauna heaters have a built-in cut-off clock that restricts the heating time as follows:

1. Apartment block shared saunas: can be switched on and off without restriction over a 12-hour period. If the heater has been in continuous use for 12 hours, it will revert to standby status and will be operable again after a 6-hour break. (DIP switches set at 100)
2. Hotel saunas: the default 24-hour setting for the sauna heater is 4 hours on, 6 hours off, 8 hours on and 6 hours off. (DIP switches set at 010)
3. For home use, the maximum time the sauna heater can be on is set at 6 hours. (DIP switches set at 001)
4. In supervised commercial use, there is no cut-off clock. (DIP switches set at 111)

The operation of the cut-off clock is determined using the DIP switches on the relay card. **FOR HOME USE, THE CUT-OFF MUST ALWAYS BE USED AND THE DIP SWITCH SETTING MUST NOT BE CHANGED.**

KÄRKIKÄYNNISTYS

ON/OFF SWITCH



Startup takes place when the electrical circuit is completed. When the gap is closed, the sauna will be switched on with the previous sauna session's temperature setting. When the circuit is broken, the sauna heater is switched off.

OTHER CONNECTIONS: DOOR SWITCH AND RESET BUTTON (OPTIONAL ACCESSORY)

In order to use the heater's remote startup function, the door switch and reset button must be installed. When the heater is set to switch on with the weekly timer, the system checks that the sauna door is closed and the reset button has been pressed in order to ensure that the sauna is ready for use. If the door is open or if the reset button has not been pressed, the sauna will not be heated.

Install the door switch outside the sauna room at the top edge of the door at least 300 mm from the door's inner corner. Install the switch in the doorframe and the magnet in the door. The distance between the switch and the magnet must not exceed 18 mm. The reset button should be installed outside the sauna room in a suitable place.



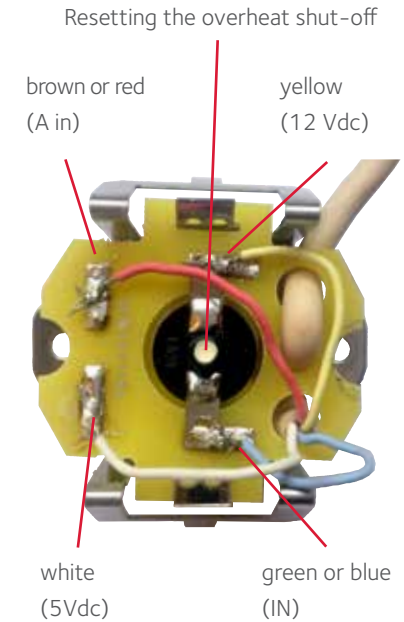
THERMOCOUPLE (OPTIONAL ACCESSORY)

THERMOCOUPLE INSTALLATION

1. Connect the thermocouple to the sauna heater control card. (NEG) red (POS) yellow
2. Pass the thermocouple through the hole near the top edge of the connection box.
3. First fill the stone compartment with sauna stones up to the height of the thermocouple.
4. Push the end of the thermocouple right to the end of the installation pipe.
5. Position the installation pipe in the stone compartment. At each the pipe by slotting it in place in the hole in the stone compartment wall.
Note: the pipe must not touch the heating elements.
6. Place the rest of the sauna stones in the stone compartment.

TEMPERATURE SENSOR INSTALLATION

The temperature sensor should be screwed to the wall above the heater about 50 mm from the ceiling, or directly to the ceiling above the heater (figure 1). The ceramic cover for the sensor should then be pressed into place. Make sure that the air intake is sufficiently far away from the sensor (recommended minimum distance 1 m). (figure 2).



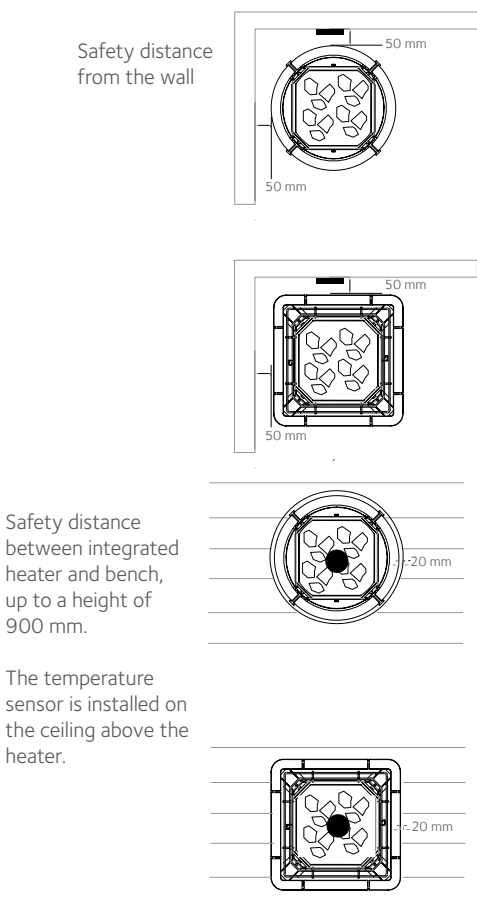
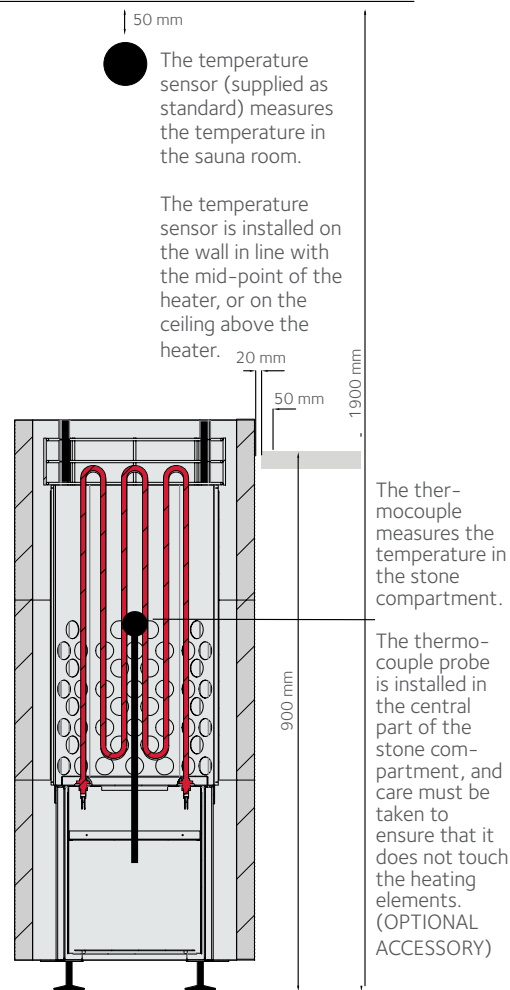


FIGURE 1



Troubleshooting

PROBLEMS AND ERROR MESSAGES

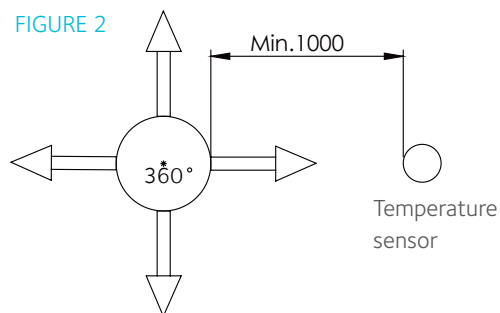
If a problem occurs, an error message will appear on the control unit display. If a problem causes the temperature in the sauna room to rise too high, the overheat shut-off will disconnect the power supply from the heater. If the overheat shutoff is triggered, the reason for this must be ascertained before resetting it. Once the sauna heater has cooled down, the shutoff can be reset by inserting a screwdriver into the hole located in the middle of the temperature sensor cover and pressing (see Figure 3 for resetting the overheat shut-off).

If any problems arise, please contact our technical support, tel. +358 40 3063 005.

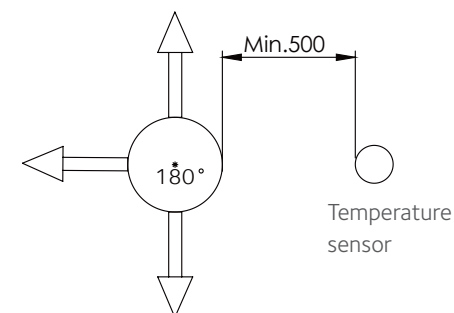


FIGURE 3

FIGURE 2



Note. Ventilation blowing around (360 °) must be at least 1000 mm away from the heat sensor. Ventilation equipped with a baffle plate (180 °) must be at least 500 mm away from the heat sensor. ventilation air must not be directed at the heat sensor!



Keep the product purchase receipt in the same place as these instructions for installation and use. The instructions for installation and use include important manufacturing information.



Sauna

Tulikivi Oyj, FI-83900 Juuka, Finland, Tel. +358 (0)403 063 100, www.tulikivi.com