

Narvi



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NARVI BASIC

- FI** ASENUS – JA KÄYTTÖOHJE
- SE** INSTALLATIONS- OCH BRUKSANVISNING
- EN** INSTALLATION AND INSTRUCTION MANUAL
- DE** INSTALLATIONS- UND BETRIEBSANLEITUNG
- RU** ИНСТРУКЦИЯ ПО МОНТАЖУ И ЭКСПЛУАТАЦИИ

EN INSTALLATION AND OPERATING INSTRUCTIONS

NARVI BASIC

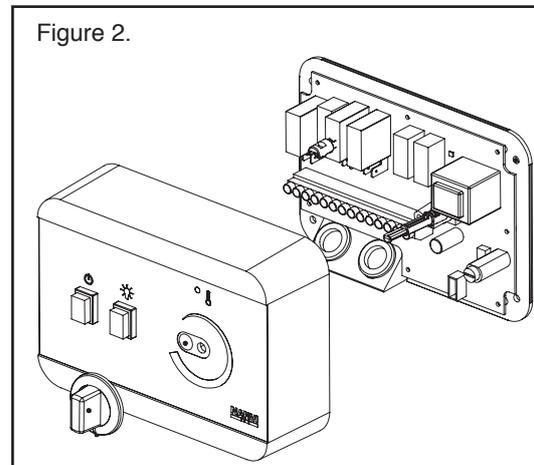
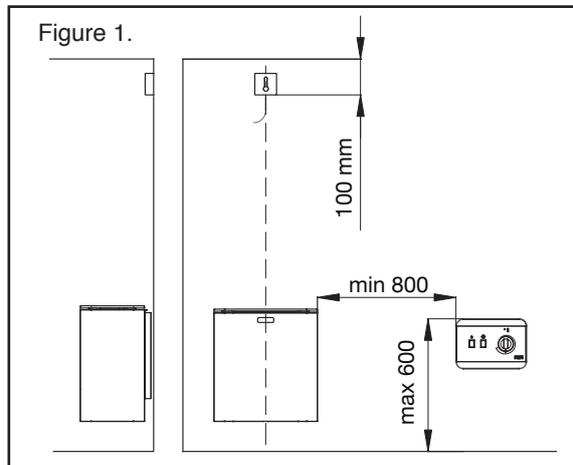
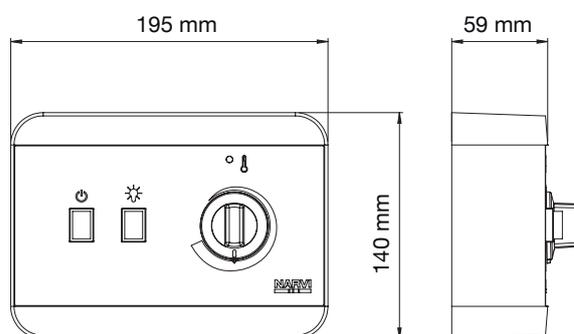
Please read the manual carefully before you start installing and using it and keep the manual for future reference. The products are meant only to be used as a electrical sauna heater controller.

1. THE ELECTRIC HEATER SET INCLUDES:

- Temperature sensor
- Control unit

Table 1.

Capacity kW	400 V 3N~ mm ²	Fuses A
4,5	5 x 1,5	3 x 10
6,0	5 x 1,5	3 x 10
6,8	5 x 1,5	3 x 10
9,0	5 x 2,5	3 x 16
10,5	5 x 2,5	3 x 16



2. INSTALLATION:

2.1 Installation instructions for the heater, the temperature sensor and the control unit

- **Connection of the sauna heater to the power supply may only be carried out by an authorised electrician in accordance with the valid regulations.**
- A rubber-sheathed cable of type H07RN-F or similar must be used as the connection cable.
- If you want to make use of the temperature control feature, we recommend using a rubber cable with at least seven wires. The cross-section of the cable and the fuse size are presented in Table 1.

2.11 Connection the power supply cable

- Install control unit as shown in figure 1 and 2.
- Connect the power cable. Do not connect voltage to the heater before adding the temperature sensor and the controller.

2.12 Installing the temperature sensor

- Install temperature sensor to the wall, above the sauna heater so it is located 100mm below the ceiling. (see Fig. 1)
- The supply air valve must not be located closer than 1000mm from the temperature sensor. If the valve is located 500-1000 mm from the sauna heater, an adjustable valve is needed and set to channel the air away from the sauna heater. If the supply air valve is too close to the temperature sensor, the heater will receive false data and it might result in overheating the sauna heater.
- If the heater is installed more than 200mm away from the wall, the temperature sensor must be placed into the ceiling 100mm away from the heaters outer surface.
- Install the temperature sensor on the wall with the screws included in the delivery (2 pcs. Ø 2,9 x 16).
- The wiring for the temperature sensor can be embedded.
- Connect the sensor to the circuit plate.
- Connect the end of the conductor, the one with no connector in place, to the temperature sensor. You can cut the conductor to a suitable length.

2.13 Installing the control unit

- The control unit can be installed inside or outside the steam room. The control unit is moisture-proof, so it can be installed in the wash room. It is recommended to install the controller in the sauna room. This is because of safety reasons, and means that the sauna room will be checked when setting heater power on.
- The installation height of the control unit is a maximum of 60 cm and a minimum of 80 cm from the side of the heater (see Fig. 1).
- Attach the control unit to the wall using screws
- Surface mounting only! The Controller must not be flush mounted.

3 USING THE HEATER

BEFORE PLUGGING IN THE HEATER, INSPECT THE SAUNA ROOM!

3.1 Overview

- The heater is switched on and off by toggling the I/O button.
- Unless the heater is switched off, the heater will remain on for a preset fixed time.
- When the heater has been switched off after the preset time has ran off, it can be switched back on by pressing the "ON/OFF" switch.
- The On/Off LED is illuminated red whenever the heating elements are turned on; at all other times it is illuminated green.

3.2 Temperature

- The temperature can be set by rotating the regulation knob.

4. TECHNICAL SPECIFICATIONS

4.1 Technical specifications

The switches are set on the controllers circuit board and the adjustment should be done by a professional electrician during the electrical connection of the heater.

	Position of DIP switch (J8)			
Max temperature	110°C	90°C	110°C	90°C
Max switching-on time	1 h	2 h	4 h	6 h
	Factory setting			

4.2 Upper card

- enclosure class IPX4

4.3 Lower card

- voltage 400 V 3N~ 50 Hz
- heater capacity max. 10.5 kW
- overheating protection 135°C
- light max 100W
- fuse 1A

5. AIR EXCHANGE FOR THE STEAM ROOM:

- The air exchange in the steam room must be as efficient as possible, in order to guarantee sufficient oxygen content and availability of fresh air. The air in the steam room should be changed 3-6 times in an hour.
It is recommended that the ventilation be realised in accordance with the HVAC designer's plan
- The fresh air is directed through a ca. 100-mm diameter duct. The outlet duct should be larger in diameter than the inlet duct. If the ventilation is mechanical, we recommend placing the inlet air valve in the ceiling near the heater. Locate the temperature sensor at a sufficient distance from the inlet air valve!
- **There must be a space of at least 1,000 mm between the temperature sensor and the fresh air duct or 500 mm if the duct end can be turned.**
- If the ventilation is natural, we recommend placing the inlet air valve on the side of the heater or under it, either in the wall or in the floor.
- It is important to introduce fresh air, so that the air mixes with the air and the steam.
- The exiting air should be exhausted from near the floor as far as possible from the incoming air.
- The air exhaust valve may be located under the sauna benches.
- The exiting air may be directed out of the steam room through the washroom, for instance under the door. There must be an approximately 100-150-wide slit between the door and the floor.
- If you provide your sauna with a separate drying valve, place it in the ceiling of the steam room. (This valve shall be closed during the use of the sauna.)

6. IMPORTANT ADDITIONAL INSTRUCTIONS:

- Only use the sauna room for bathing. Do not store your belongings in the sauna. One should not be using the sauna as a storage or to dry clothes.
- A suitable temperature for the sauna room is between 60–80 °C.
- Staying in the hot sauna for a longer time, makes the body temperature rise, which may be dangerous.
Do not sleep in sauna.
- You should be careful in the vicinity of the hot heater, because the stones and metal parts of the heater may cause burns.
- Only a small amount of water (1-2 dl) should be thrown onto the heater stones, because the steaming water is scalding hot.
- This equipment is not to be used by children or people whose physical and psychological traits, mental functions, lack of experience or knowledge may hinder the safe operation of the equipment, if the person who is responsible for safety cannot supervise them or instruct them in the use of the equipment.
- Do not go to the sauna if you are under the influence of substances causing intoxication.

- Children may not be left unsupervised and they should be supervised to make sure they do not play with the equipment.
- Always inspect the steam room before plugging in the heater.
- The improperly filled stone container is a fire hazard.
- Covering the stove will cause a fire hazard.
- Do not place any objects top over the heater or dry clothes near by the heater.
- Door and window must be closed when using the heater.

7. CONNECTION SCHEME:

When measuring the insulation barrier of the heater, some leakage may occur, which is caused by the humidity that has seeped into the insulation material during transport or warehousing. The moisture will evaporate after the heater is heated a few times.

Do not connect the power supply for the electric heater through a fault current protection!

The location of the connectors in the wiring diagram is indicative.
See the markings on the circuit board (page 23).

8. TROUBLESHOOTING:

All service operations must be done by professional maintenance personnel.

Electricity supply to the heater must be switched off from the fuse panel before any service measures.

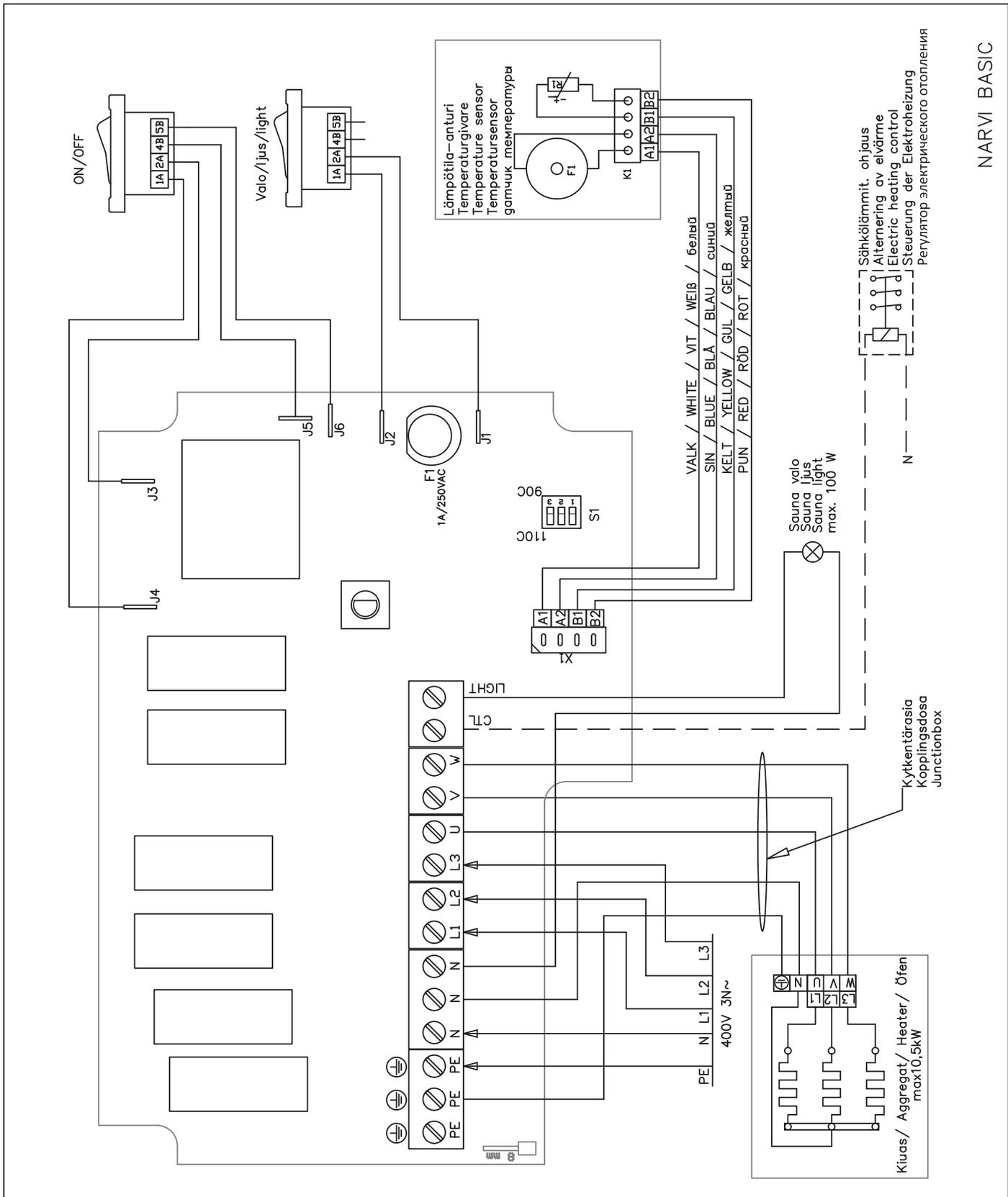
The temperature sensor offers an option to reset the overheat protection switch after it has tripped. The reset requires a strong push.

NOTE! In case of malfunction, the sauna heater will be switched off.

Find out the cause of the error.

- **The heater does not work or its function is abnormal.**
 - Check fuses of the heater.
- **The sauna heater does not heat up properly**
 - Check fuses of the heater.
 - Check if the heaters temperature is set on a low temperature on control unit.
 - The sauna rooms air ventilation is too active or the outgoing air channel is located in a wrong place (often too high).
 - Check that the sauna stones are fitted properly. Too tightly piled stones does not allow air flow between the stones. Pile the stones again to ensure good air flow.
 - Make sure that all heating elements are heating up when the heater is turned on. The Heating elements should glow after only a short moment after turning on the heater. Do not touch the heating elements. If necessary, carefully remove a few sauna stones from the heaters surface to see if the heating elements are glowing.
 - Check the temperature sensor (should be ~10 kΩ / 25°C)
- **The fuse from the houses electrical cabinet breaks down**
 - Make sure that the power supply's cabel and fuses are matching with the heaters power (see table 1.)
 - The electric heating control function may be wrongly connected.
 - Short circuit, for example if one of the heating elements has broken.
- **The paneling of the sauna room near by the heater gets darker.**
 - Check the safety distances
 - Check the piling of the sauna stones
 - Check the location of the temperature sensor

**KYTKENTÄKAAVIO
KOPPLINGSSCHEMA
CONNECTION SCHEME
ANSCHLUSSSCHEMA
СХЕМА ЭЛЕКТРОСОЕДИНЕНИЙ**



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