

Steamtec Sauna Heater

Touch Screen Control System Manual

Please read the manual carefully before installation.

All electrical wiring to be installed by a qualified licensed electrician in accordance
with National Electrical Code and local electrical code.

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1. Introduction

Thank you for choosing Steamtec touch screen control system for sauna heater. The touch screen control system is consisting of touch screen controller, central control box and the sauna room temperature sensor.

2. Controller Parameters and Dimension

Controller model	Controlling time range (mins)	Temperature display range	Temperature controlling range	Dimension (mm)
Steamtec-Elegance	1~60 or long-term (CH)	1~100℃	35~100℃	90*90*19
Steamtec-EA	1~60 or long-term (CH)	1~100℃	35~100℃	103*103*23

Table 1

3. Installation

Connect the sauna heater with the control system to verify proper function before installation on-site.

	Central control box size	Screws distance
For 2-3pcs heating elements (3-9kw sauna heater)	260*210*80mm	178mm 
For 6pcs heating elements (12-18kw sauna heater)	310*230*80mm	232mm 
For 9pcs of heating elements (21-27kw sauna heater)	380*260*80mm	292mm 

Table 2

3.1. Installation of controller

Attention: The controller and central control box MUST be installed OUTSIDE the sauna room.

The controller should be installed at a height of approximately 1.2m from the ground, OUTSIDE the sauna room but indoors, nearby the sauna room or another place where easy to operate.

Route the control cable through the conduit ($\phi 25\text{mm}$), with one end connecting to the controller and the other end connecting to the 4-pin aviation plug on the main board. You can see the main board after removing the cover of central control box. (Refer to Figure 1).

Figure 1 Main board

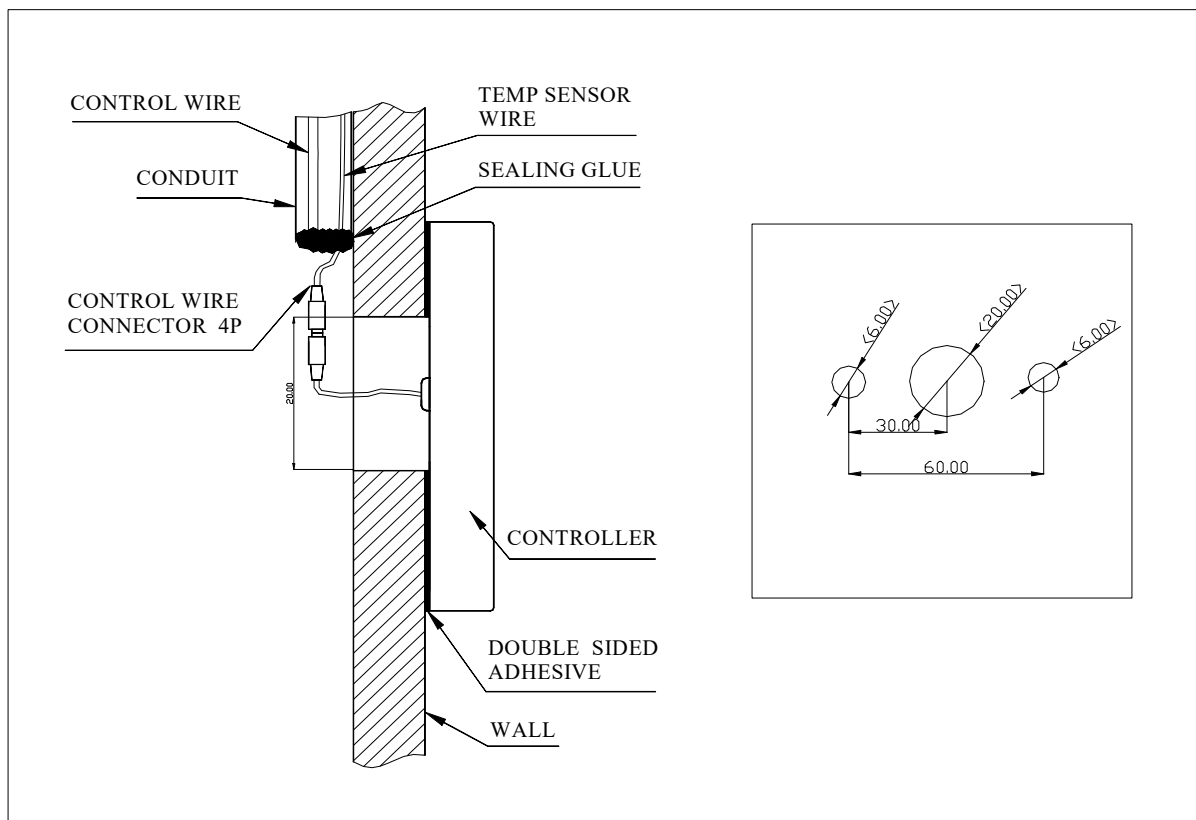
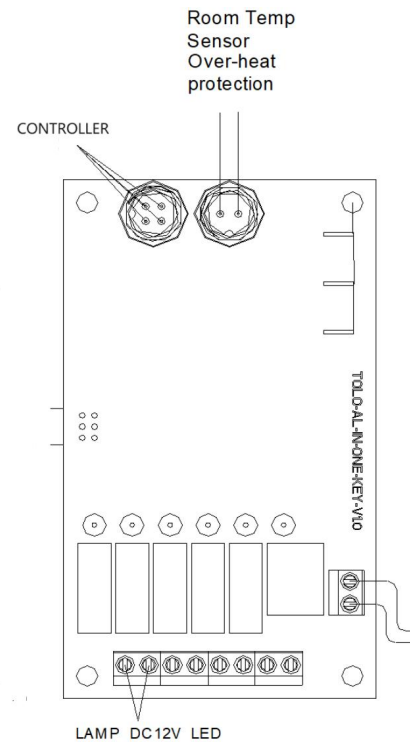


Figure 2, Steamtec-elegance controller installation

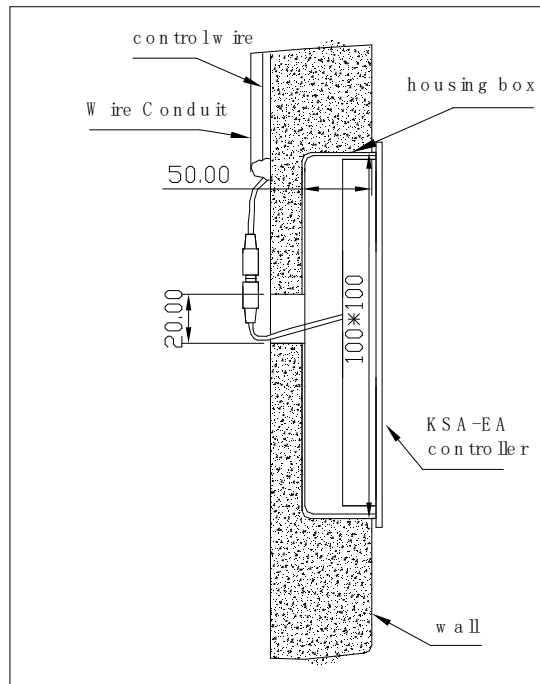


Figure 3, Steamtec-EA controller installation

3.2. Installation of temperature sensor

Attention: Temperature sensor should be installed in sauna room but not directly above sauna heater, the height must be a minimum of 1800mm from floor. The horizontal distance to sauna heater must exceed 500mm, refer to Figure 4.

Route the temperature sensor cable through the conduit ($\phi 25\text{mm}$), and connect to the 2-pin aviation plug on the main board. You can see the main board after removing the cover of central control box. (Refer to Figure 1).

NOTE: BOTH the Controller and Temperature sensor cables should be routed through the same hole at the side of the central control box and plugged into their respective circuit board mounted and labeled connectors. The other two holes should be used for routing AC power cables.

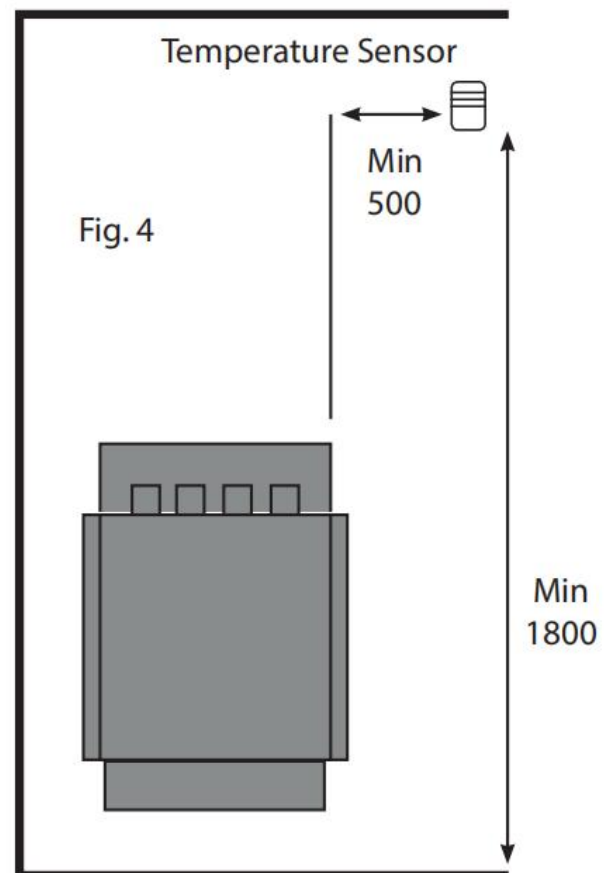


Figure 4

3.3. Installation of lamp

CAUTION: Do Not directly connect the lamp to the PCB, neither 12V nor 220V, which will lead to short circuit on PCB. If you need to connect a lamp, a converted module must be installed (which can be ordered through us).

Some batches already equipped with this module, please contact your dealer or us for further information.

3.4. Installation of power wire

Caution

- All circuits should be installed by licensed electricians and conform to local and national codes. Improper electrical connection can cause fire or electric shock.
- Power supply must be cut off before installation, maintenance and repair. Touch the on/ off button on the controller can NOT cut power from the supply.
- A Residual Current Device (RCD) must be installed in the power supply circuit for safety purpose.
- Choose the cable wire according to sauna heater manual and the cable wire need to be able to bear extremely high temperature 170°C (It is recommended to use rubber cable wire).

For All Steamtec external control sauna heater, power will be supplied to central control box first, then central control box will distribute 220V/380V power to sauna heater as well as DC12V power to the control panel.

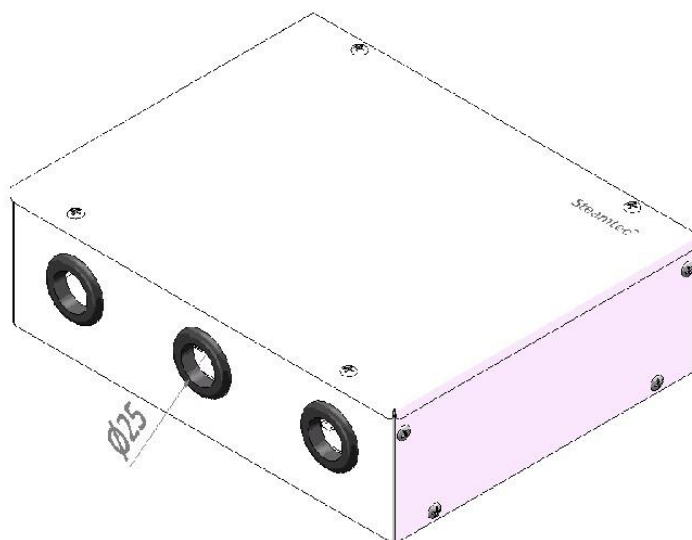
Please DO NOT put the AC power cables and DC power cables through the same hole.

There are three holes on the central control box.

One for the DC cables: controller cable and temperature sensor cable;

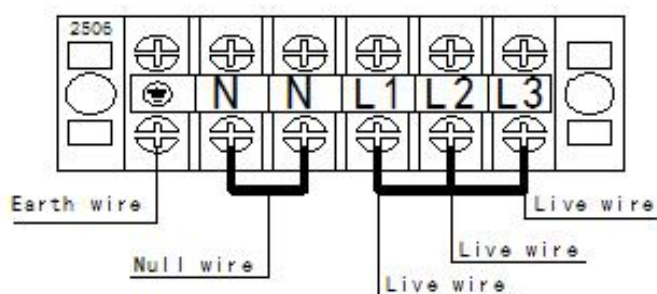
One for power input;

One for power output.

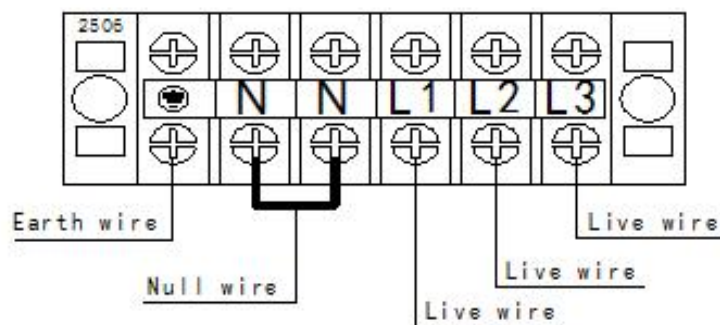


- (1). First take off the cover of the central control box, insert the 3-core power wire (single phase, 215-240V, 50/60Hz) or 5-core power wire (three phase, 380-415V, 50/60Hz) through one of the hole at the side of the central control box, connect it to the "POWER INPUT" terminal in central control box, see below Figure 5-7, so that power will be supplied to control system.

Single phase, 215-240V, 50/60Hz power supply: connect the live wire to the terminal labeled as "L"; connect the null wire to the terminal labeled as "N"; and connect the earth wire to the terminal labeled as "⊥".



Three phase, 380-415V, 50/60Hz power supply: connect 3 live wires to the terminal labeled as "L1", "L2" and "L3" respectively; connect the null wire to the terminal labeled as "N"; and connect the earth wire to the terminal labeled as "⊥".



- (2). Second, please connect "CONNECT TO SAUNA HEATER" terminal labeled "U, V, W, N, ⊥" in central control box (see Figure 5-7) to terminal labeled "L1, L2, L3, N, ⊥" on sauna heater respectively, so that control system can give the power to sauna heater.

IMPORTANT ATTENTION:

One relay can carry maximum 3KW heating element, do not connect heating elements more than 3KW to one relay, as the relay may burn down.

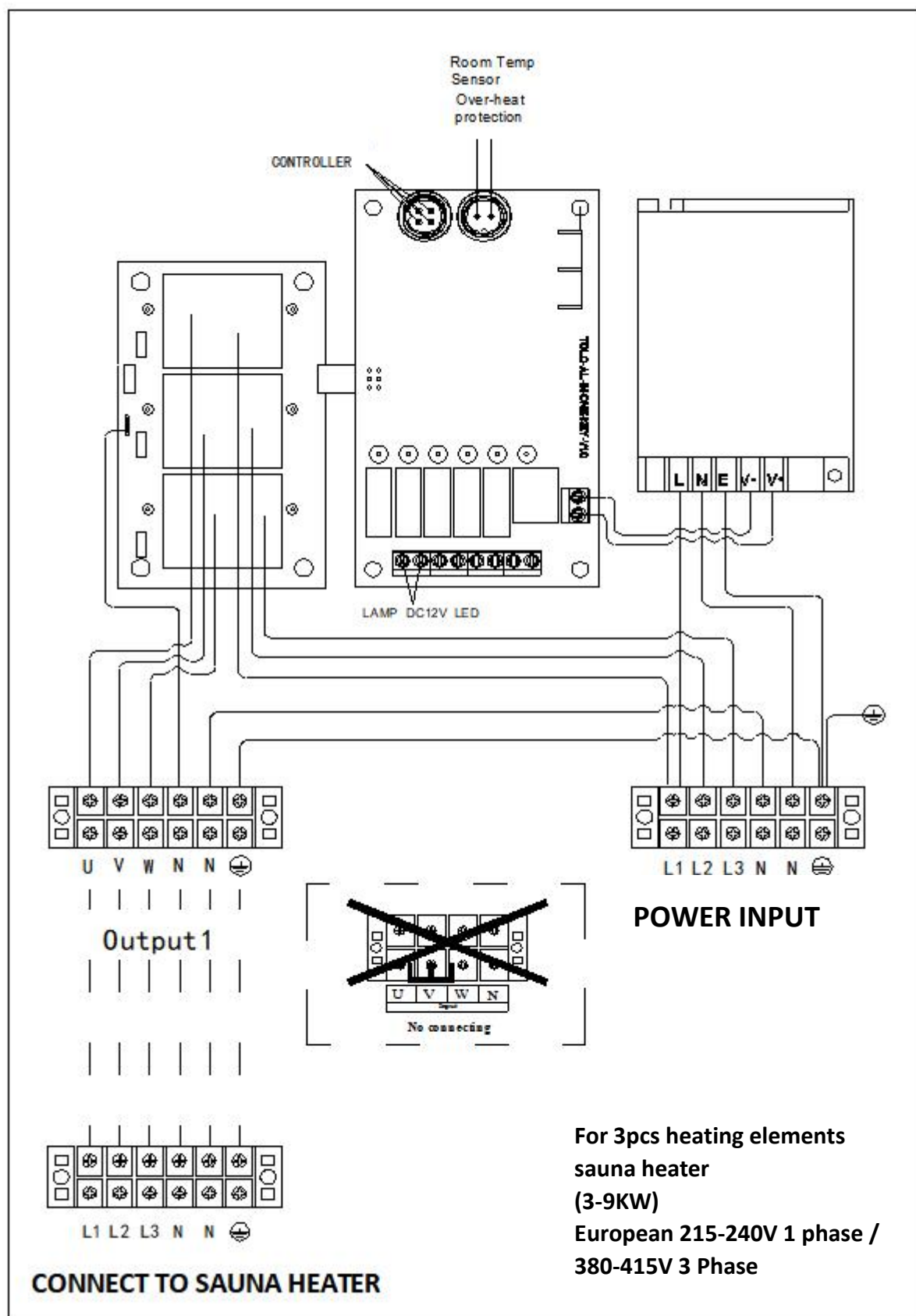


Figure 5

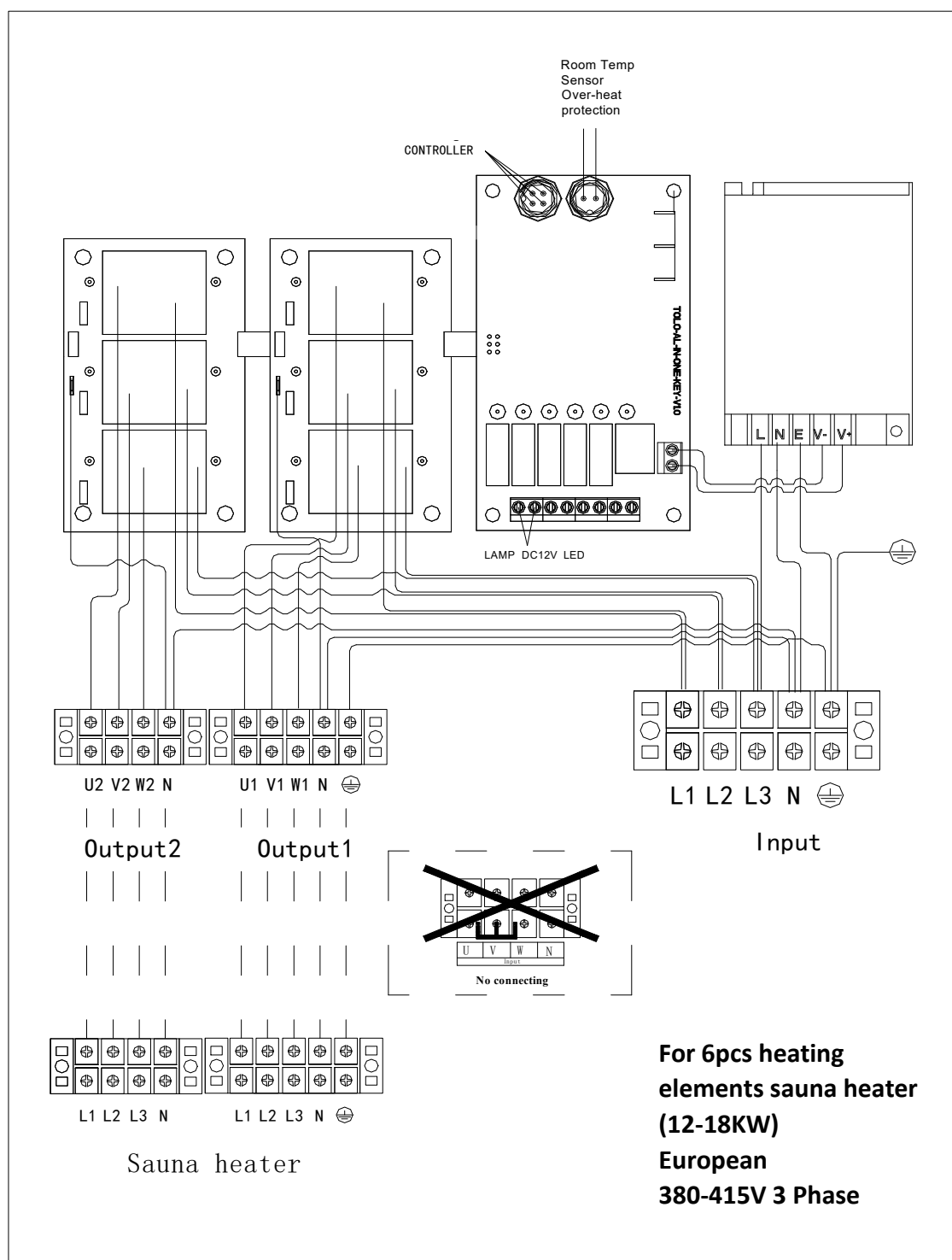


Figure 6

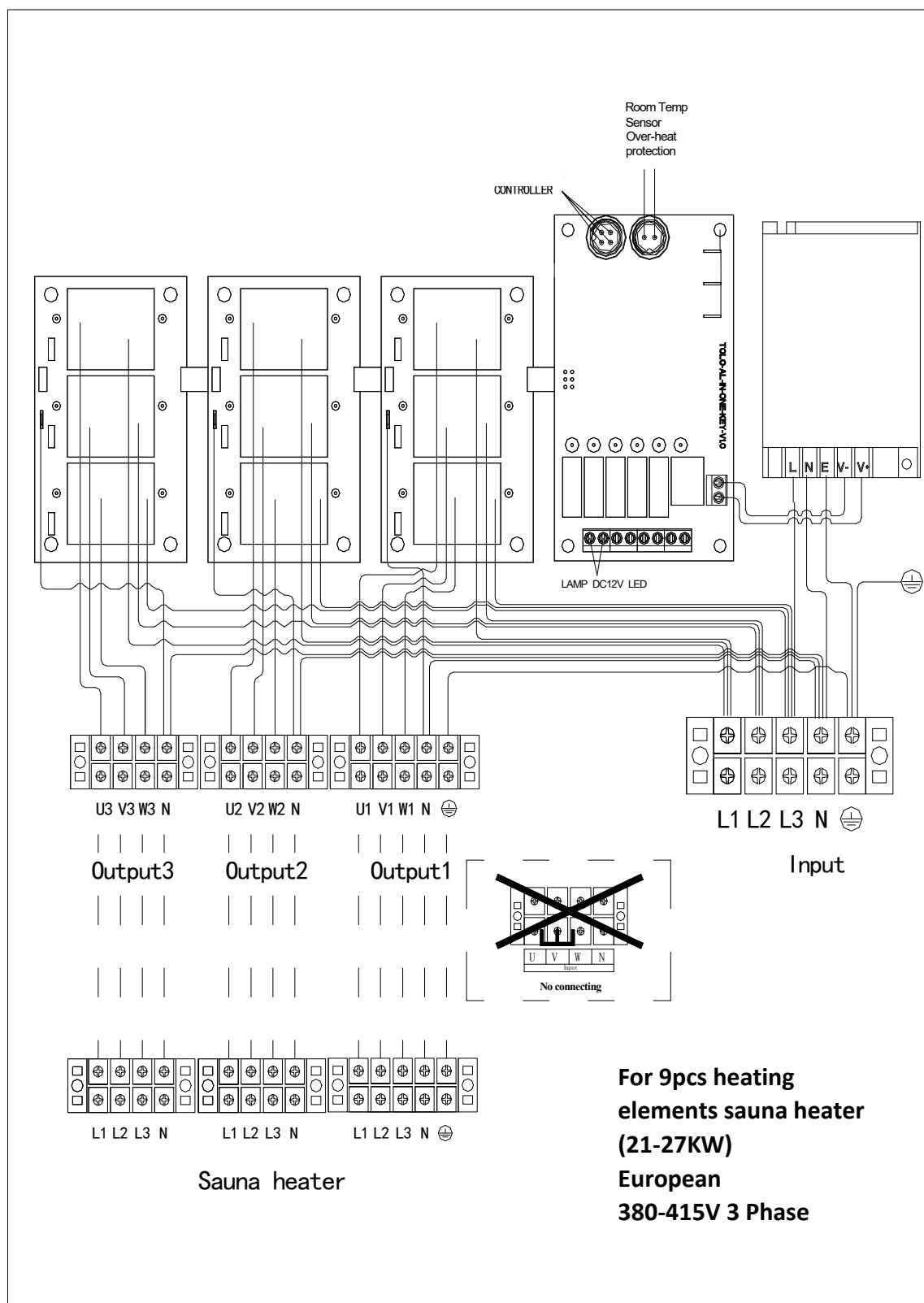


Figure 7

4. Functions And Operations



Figure 8, Controller

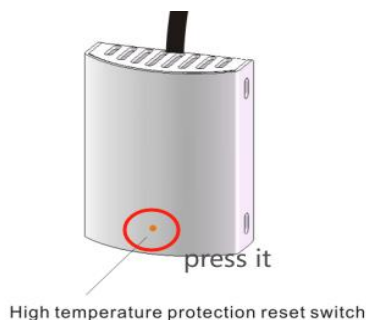
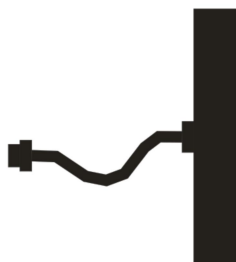


Figure 9, High temp. reset switch

i. **ON/OFF**

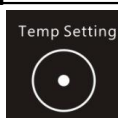


Press to switch ON and OFF the system.

Pressing the button from the OFF state to the ON state powers up the sauna heater, the system begins to heat up (if current temperature is lower than setting temperature). Once the temperature arrived setting temperature, the system enters the automatic operating mode.

The system has a memory function, it will remember the last programmed Time and Temperature settings, However, if the system loses power due to a power outage or power off, it will lose all of its memory and will revert to the factory-default Temperature (60°C) and Time (45 minutes). The machine automatically goes through a power-down sequence when the set time lapses OR when the ON/OFF button is toggled to the OFF state, and this process does not interrupt the memory function of the machine.

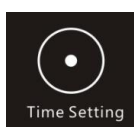
ii. **Temperature setting**



Press to adjust the temperature.

The LCD and the indicate LED on the left will blink, and the LCD will display the previous set temperature or the default temperature. If power to the system was interrupted before being powered ON again, the LCD displays the default temperature 60°C (140°F). Press the “▲” or “▼” button to adjust.

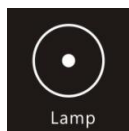
iii. **Time setting**



Press to adjust the working time.

Press “▲” or “▼” button to adjust the operating time to the desired time. Pressing “▲” button continuously until the LCD displays “CH” results in the system entering the Continuous Heating/Running mode.

iv. Lamp



The button can be used as the switch for an external light if the system is connected to the appropriate power supply. The LED is on when the light is turned on. Any externally powered lamp (drawing under 5A) can be switched if a converted module is connected, and converted module need to be ordered separately.

v. ▲ Button

Increases the temperature or time.

vi. ▼ Button

Decreases the temperature or time.

vii. Switch button on the central control box (some models may not have this button)



This button would only be used for switching off power supply temporarily. If you don't use the sauna control system or sauna heater for a long time, please make sure the main power supply is cut off.

Attention: if this button has been switched off, the control system will lose all of its memory and will revert to the factory-default Temperature (60°C) and Time (45 minutes).

5. Troubleshooting

- When the display shows "-L", it signifies poor connection (or open circuit) of the temperature sensor or temperature below 6°C (43°F).
- When the display shows "-H", it signifies short circuit of the temperature sensor or temperature exceeding 110°C (230°F). A overheat protection switch is located inside the temperature sensor box (refer to figure 9), you can manually reset it after the temperature drops down, however, before manually resetting, please make sure the fault has been located and cleared.

Sauna heater will not work in both above conditions, please check temperature sensor connection or temperature of sauna room. And seek for dealer's help if needed.