

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.

Table of Contents

1. Introduction.....	1
2. Controller Parameters And Dimension.....	2
3. Installations.....	2
3.1 Installations of controller.....	2
3.2 Installations of temp sensor.....	3
3.3 Installations of lamp.....	4
3.4 Installations of power wire.....	4
4. Functions And Operations.....	9
5. Troubleshooting.....	10

1. Introduction

Thank you for choosing TOLO SAUNA touch screen control system for sauna heater. The touch screen control system is consist 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°C	35~100°C	90x90x19

Table 1

3. Installations

Central control box size:

For 3-9 kw: 260X210X80mm

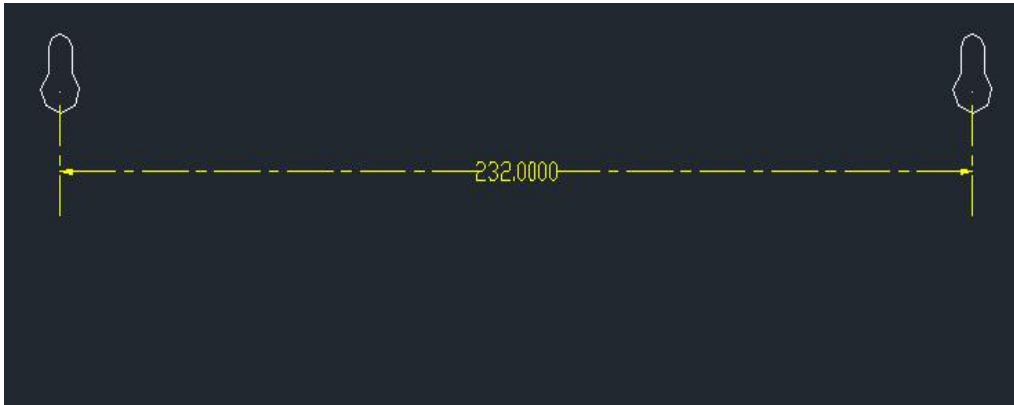
For 10.5-18 kw: 310X230X80mm

For 18-24 kw: 380X260X80mm

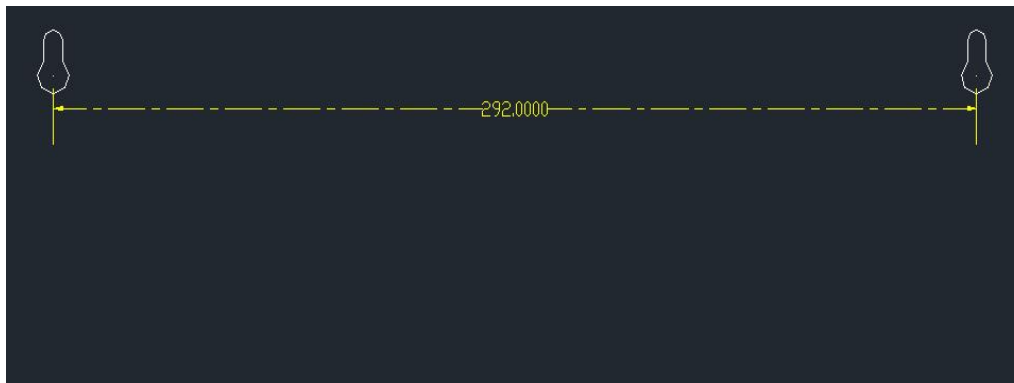
Screws distance: for 3-9kw 178mm



Screws distance: for 10.5-18kw 232mm



Screws distance: for 18-24kw 292mm



3.1. Installations of controller

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

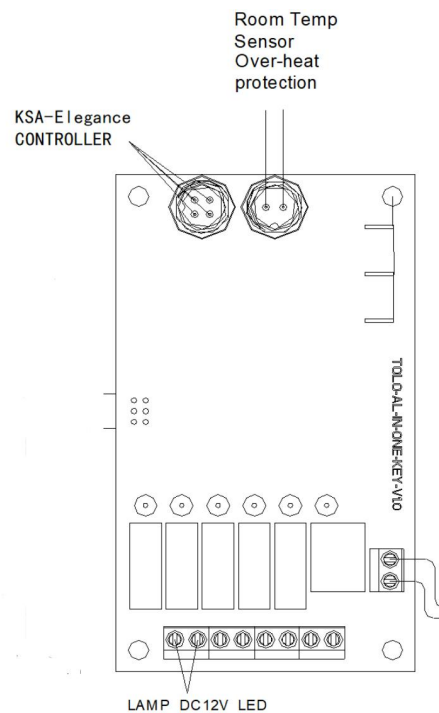
The controller should be installed with height around 1.2 m OUTSIDE the sauna room but nearby or other place where easy to operate.

Firstly drill a hole with diameter of 16mm on the installation site.

Pull the control wire through the conduit, then connect the control wire to the (4-Pin) plug on circuit board of central control box, refer to figure 1.

Finally the controller panel can be hanging by the screws on the wall.

Figure 1 Circuit board



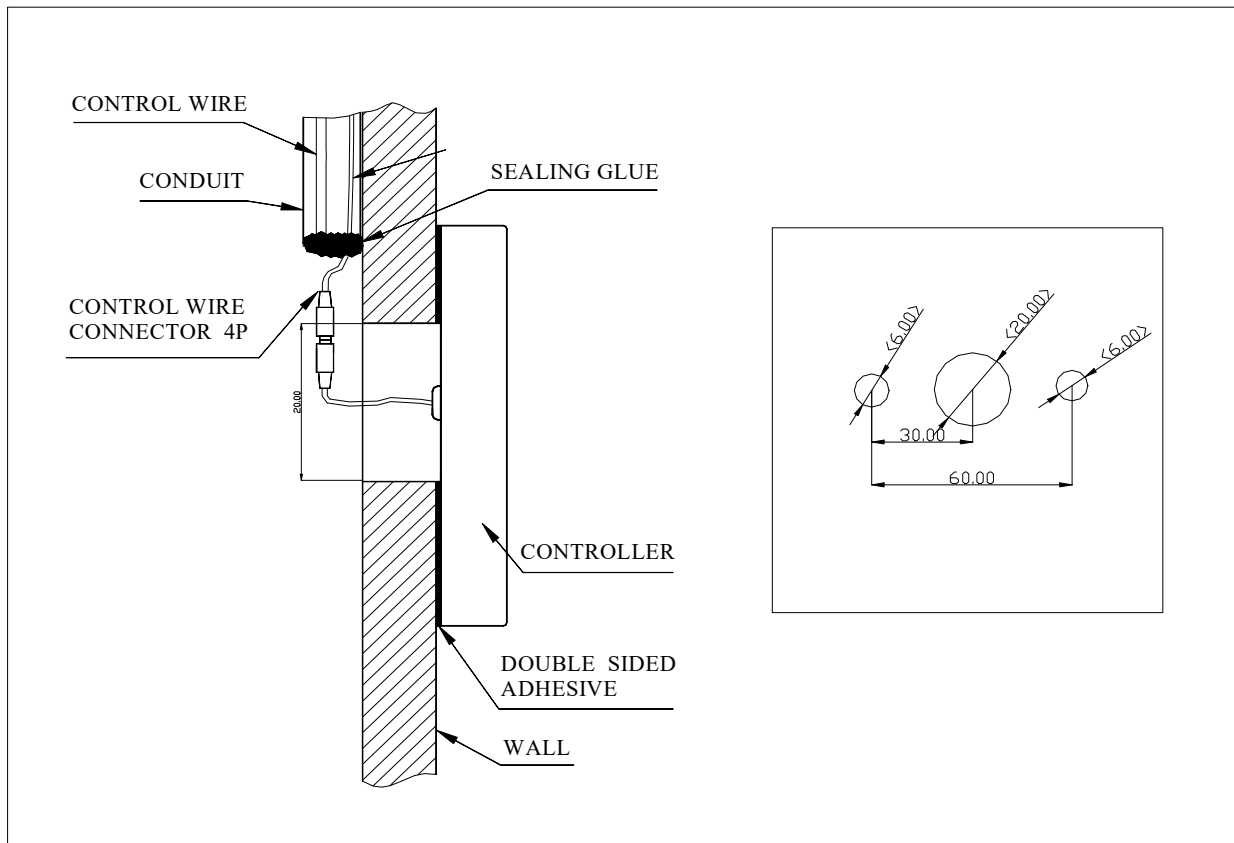
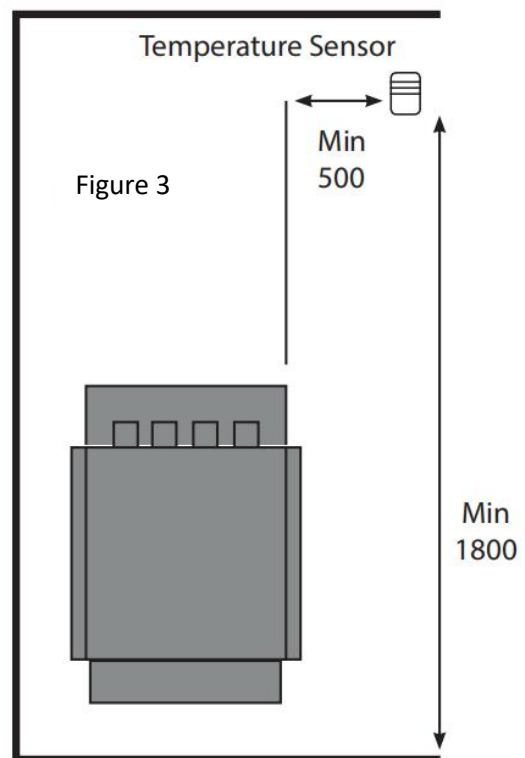


Figure 2 KSA-elegance controller installation

3.2. Installations of temp 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 3.

Please drill a hole (diameter 16mm), and then nail down the sensor in the sauna room, connect the temp sensor wire into the 2 pin plug on circuit board of central control box, see figure 1.



3.3. Installations of lamp

Open the cover of central control box, and connect lamp wire to the plug on circuit board of central control box. (See above figure 1)

Only support DC 12V lamp.

3.4. Installations 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.
- An Residual Current Device (RCD) must be installed in the power supply circuit for safety purpose.
- Choose the cable wire according to sauna heater manual table 1 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 TOLO external control sauna heater, power will be supplied into control system first, and the control system will then give power supply to sauna heater.

- (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) and connect to the "POWER INPUT" terminal in central control box, see below figure 4-6, 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 " L1, L2, L3, N, ⊥ " in central control box (see figure 4-6) to terminal labeled " L1, L2, L3, N, ⊥ " on sauna heater respectively, so that control system can give the power to sauna heater.

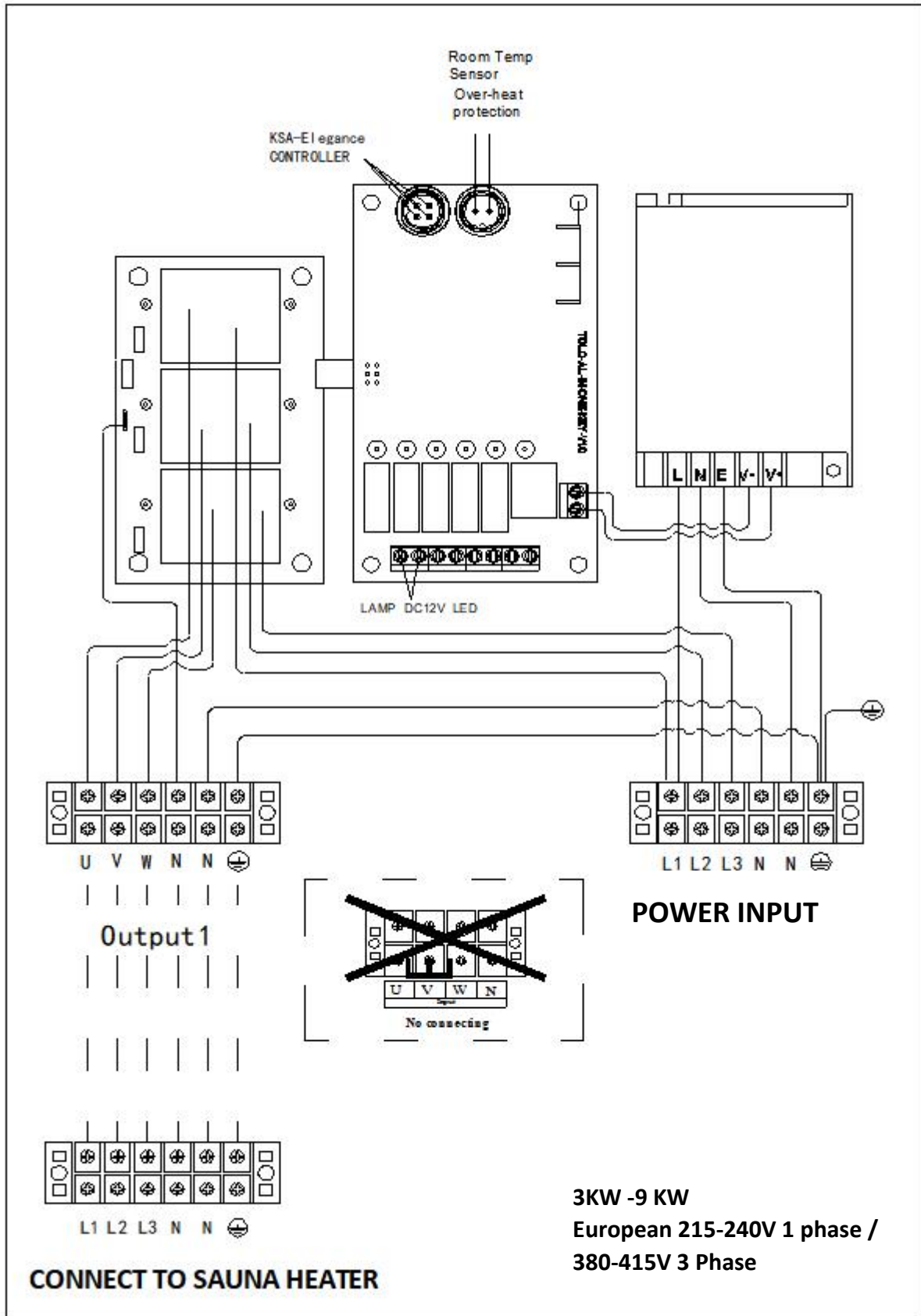


Figure 4

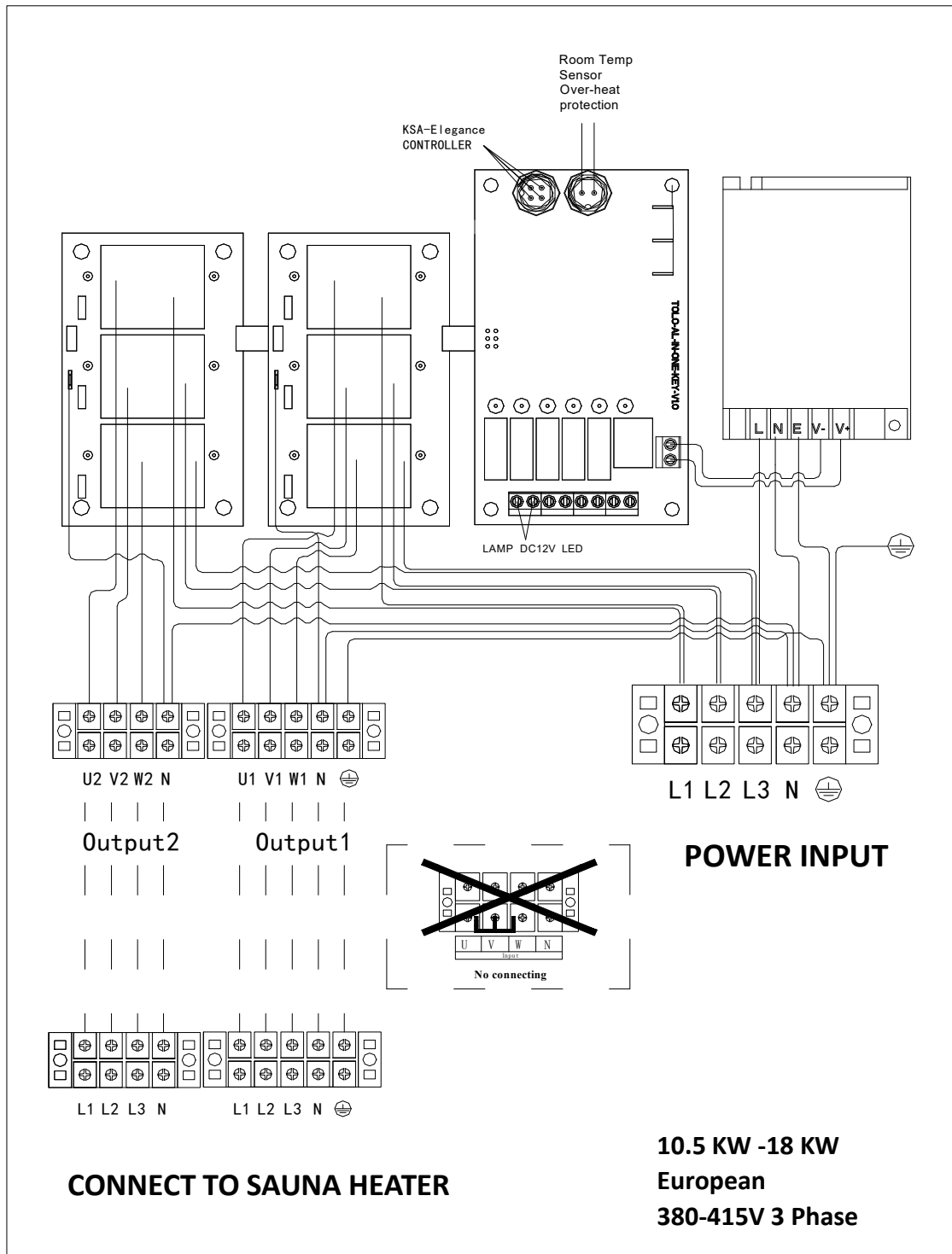


Figure 5

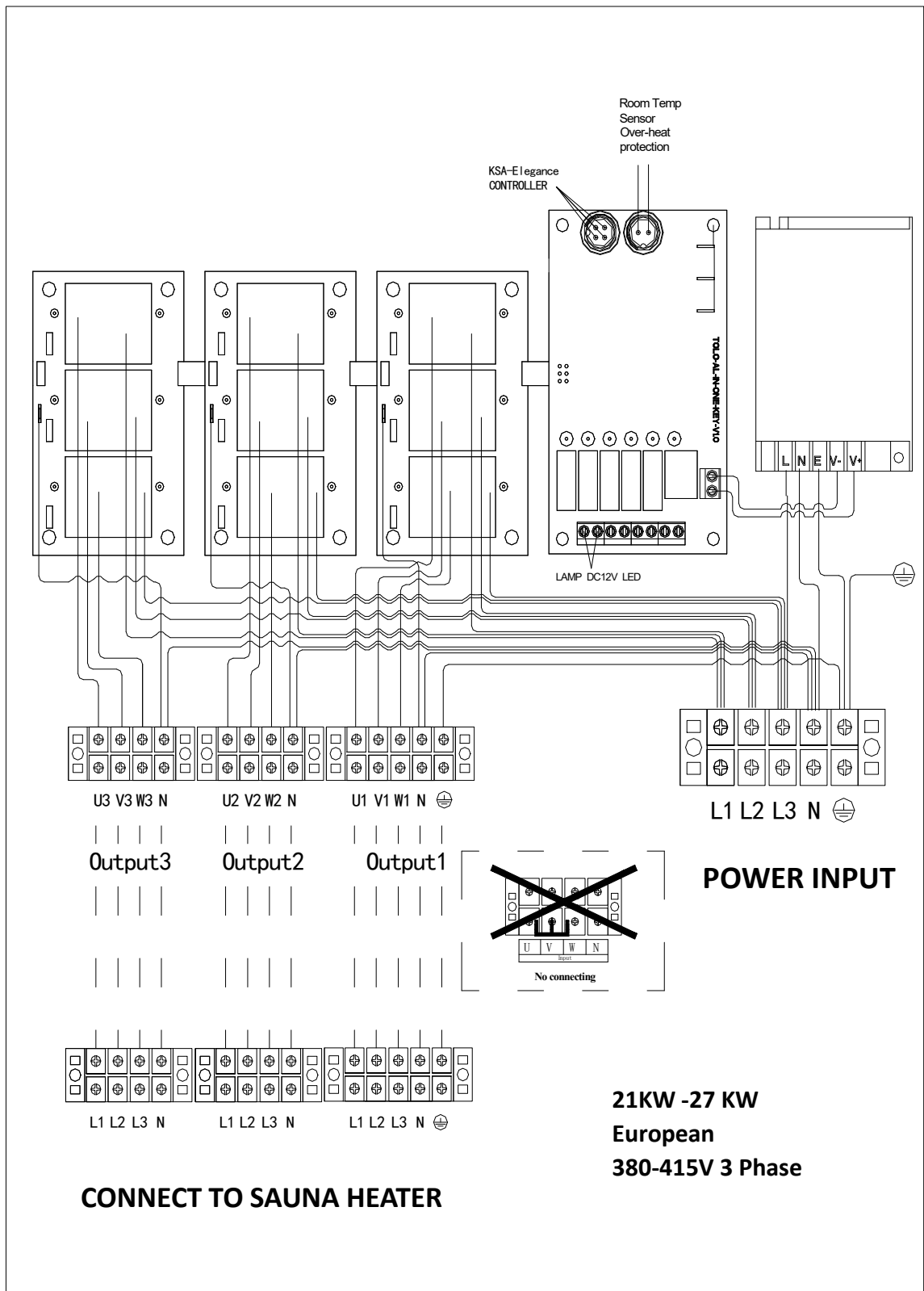


Figure 6

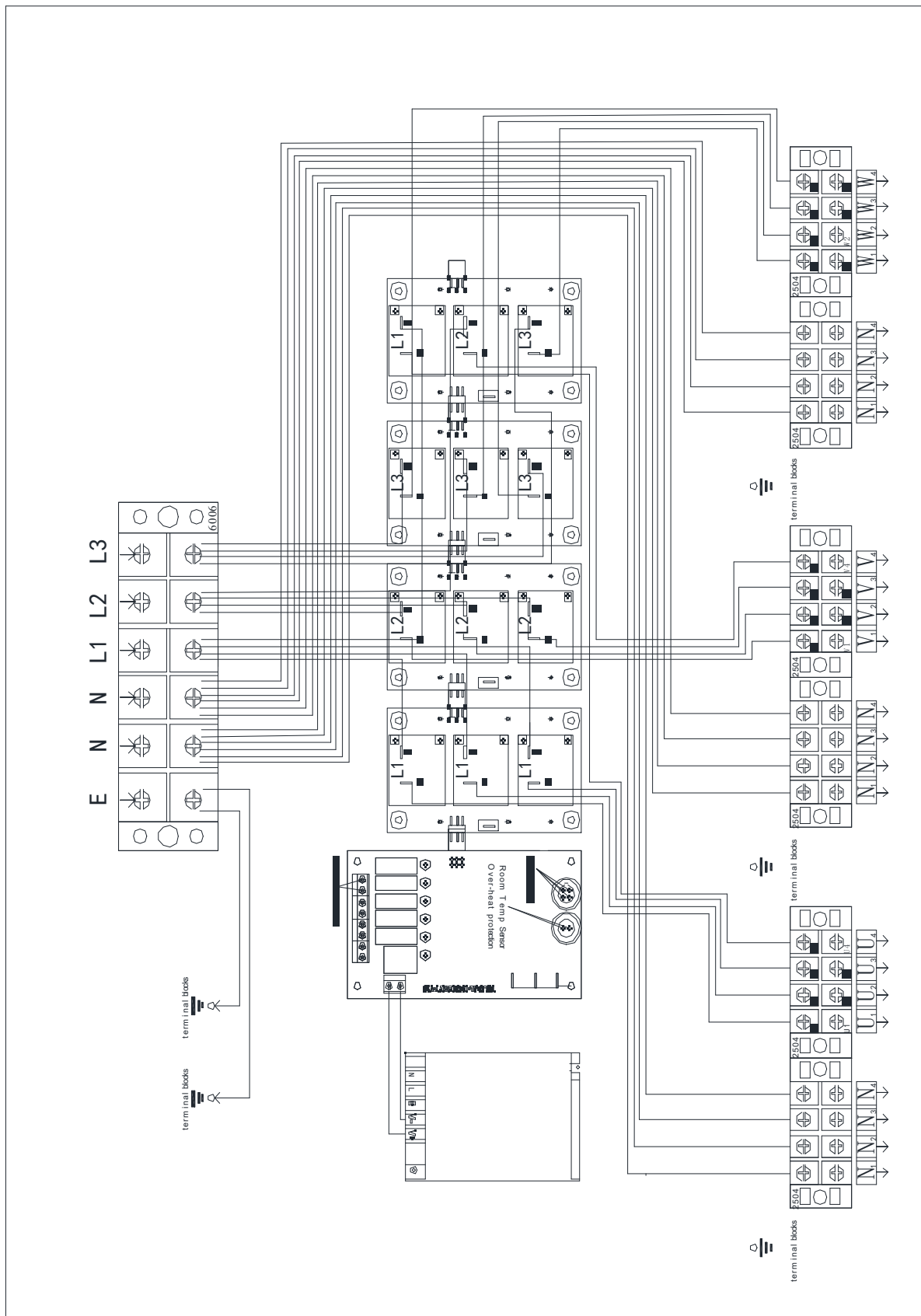


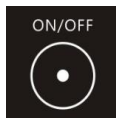
Figure 7 30KW -36 KW European 380-415V 3 Phase

4. Functions And Operations



Figure 7 KSA Elegance Controller

i. ON/OFF

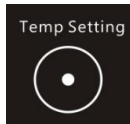


Press  to switch ON and OFF the system. This is a Toggle switch.

Pressing the button from the OFF state to the ON state powers up the generator and open the water-inlet solenoid valve to fill the water tank. When the water level reaches the required minimum water level, the system begins to heat up (if current temperature is lower than setting temperature). Once the water level reaches its maximum level, the water-inlet valve closes, and 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 switching off the circuit breakers, it will lose all of its memory and will revert to the factory-default Temperature (43°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.

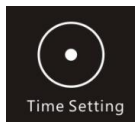
ii. Temperature set

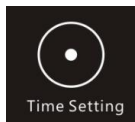


Press  to adjust the temperature.

The LCD and the white LED on the left will blink and display the previous set temperature or the default temperature. If power to the system has been interrupted before being powered ON again, the LCD displays the default temperature 43°C (109°F). Press the “▲” or “▼” button to adjust.

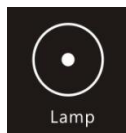
iii. **Time set**

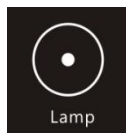


Press  to adjust the working time.

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. **LIGHT:**



This button  is a Light Switch controlling an external light – if connected.

The button can be used as the switch for the 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 via an optional 12V relay operated switch module (which can be ordered through us).

v. **▲ Button**

Increases the temperature or time.

vi. **▼ Button**

Decreases the temperature or time.

5. Troubleshooting

- Temperature display screen indicate “-L”, which means temperature sensor not connect well (or circuit break), or the temperature is below 0 °C (32°F).
- When there is “-H” indicating on screen, it means short circuit of temperature sensor, or the temperature is higher than 110°C (230°F).

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.