

Finlandia Control unit S

Instructions for installation and use

MAX 10,5 kW electric heaters

CE IP X4

These instructions are intended for the owner of the sauna or the person responsible for its maintenance, as well as for the electrician who installs the sauna stove. The electrician will give these instructions to the owner of the sauna or the person responsible for its maintenance after the stove has been installed successfully. The owner of the sauna stove or the person responsible for its maintenance must store these instructions for the entire lifespan of the sauna stove, because changes may be made to the components. Keeping the original instructions ensures that the circuit diagrams and the connection methods used during maintenance works are intended for this particular sauna stove.

The owner of the sauna must read these instructions carefully before first using the sauna stove. The instructions contain full operating and maintenance instructions, installation instructions, a troubleshooting guide and the warranty terms for the sauna stove and its parts.

The electrician must ensure that the device has been disconnected from the power supply before performing any installation or maintenance work. The fitter should avoid touching the internal components and integrated circuits of the device unnecessarily. Touching can result in a discharge of static electricity, which may damage the device or one of its electrical components. The electrician must ensure that the device is grounded correctly and that all connections have been completed according to the instructions.

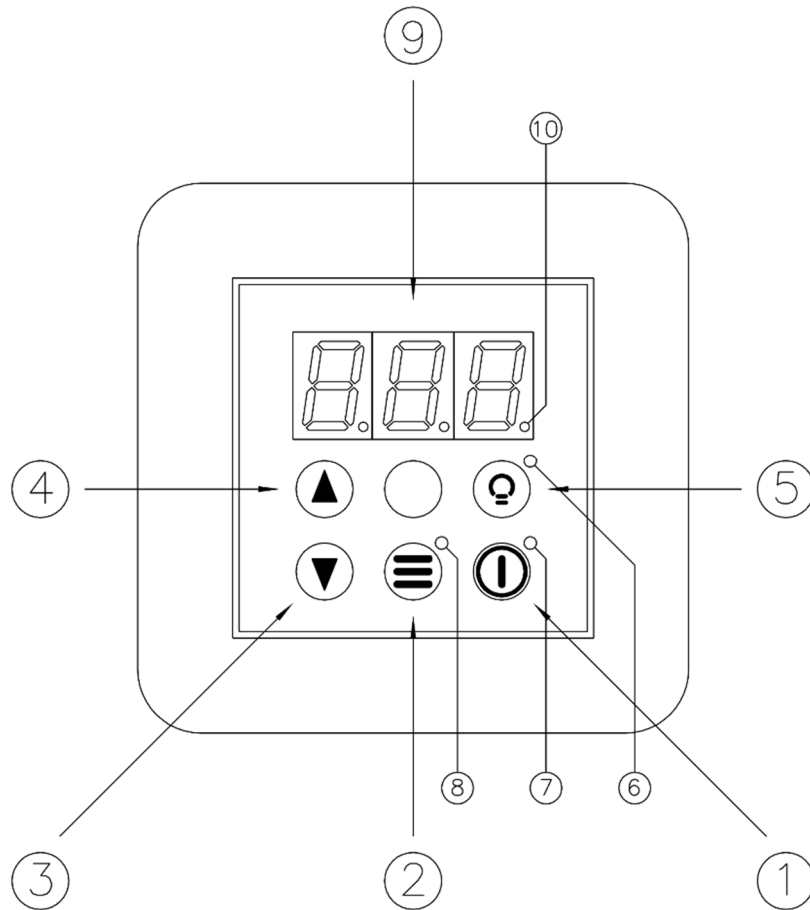
The only purpose of this sauna stove is to heat the sauna to a suitable sauna temperature. The sauna stove must not be used for any other purpose.
Heater's maximum power 10,5kW

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1. USING THE DEVICE – FINLANDIA CONTROL CENTER

1.1 – CONTROL PANEL FUNCTIONS



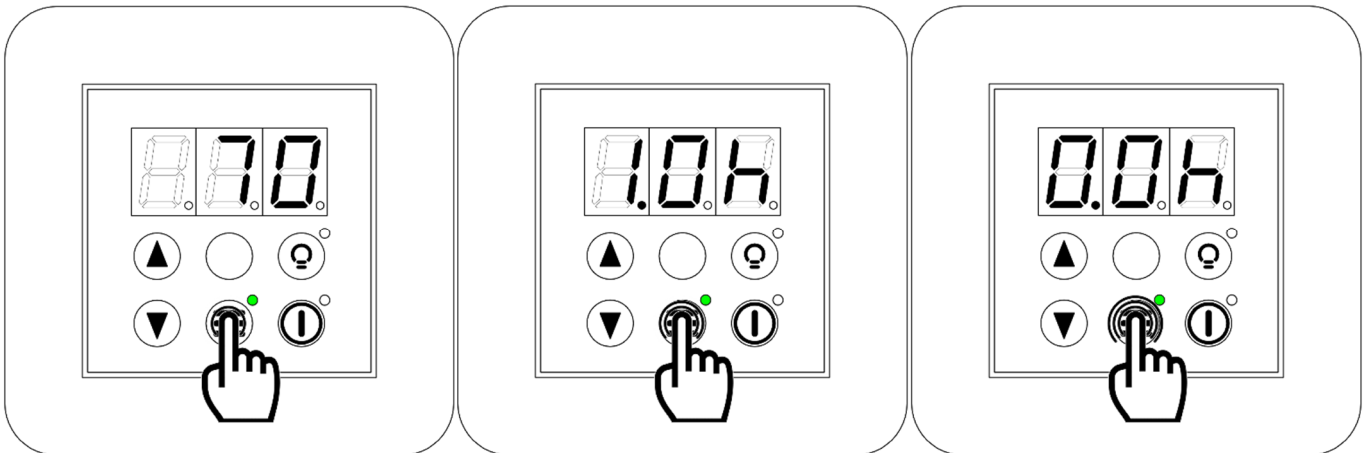
1. On/Off button. Pressing this button turns the sauna stove on and off. If the timer has been set, pressing this button starts the timer for heating the sauna.
2. Menu button: by pressing this, you can move through the menus of the device as follows:
Default mode → Target temperature → Heating time → Timer → Default mode)
3. Downwards button. This button is used to decrease the default values
4. Upwards This button is used to increase the default values.
5. Lights button: by pressing this, you can turn on the sauna stove's light. Pressing it again turns the light off.
(Only used in models with lights or a separate fibre kit)
6. Sauna stove light's indicator light. This light is on as an indicator of the fibre light kit of the sauna stove / sauna being on.
7. "Device on" indicator light. This light is constantly on while the sauna stove is on. The light "glows" when the timer is in use. The light is turned off when the sauna stove is not on.
8. Menu settings indicator light. This light comes on when a menu setting is adjusted. (timer, the time the device is on, the target temperature of the sauna stove)
9. Three-digit display.
10. Heating resistor indicator light. When light is on, that means that control Center is heating sauna room and heating resistors have full power on. If light turns off while heating sauna room, that means sauna room has reached its target temperature and resistors will be turned off.

1.2 – MENU STRUCTURE – FINLANDIA CONTROL PANEL

Press once – Target Temperature

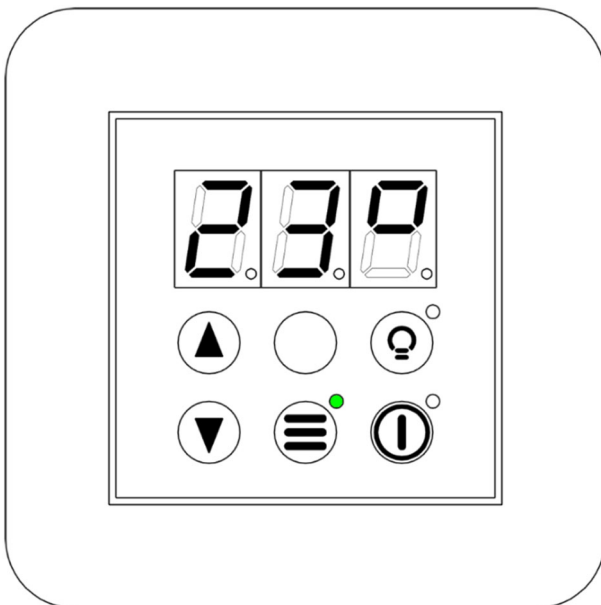
Press twice – Heating Time

Press Trice - Timer



The adjustment menus of the device are shown in the image above. The user can move from one menu to another using the Menu button. When the sauna stove is on, the (▲) and (▼) buttons can be used to adjust the settings, as shown in the image above. When menu is active, there will be green light on right side of menu button.

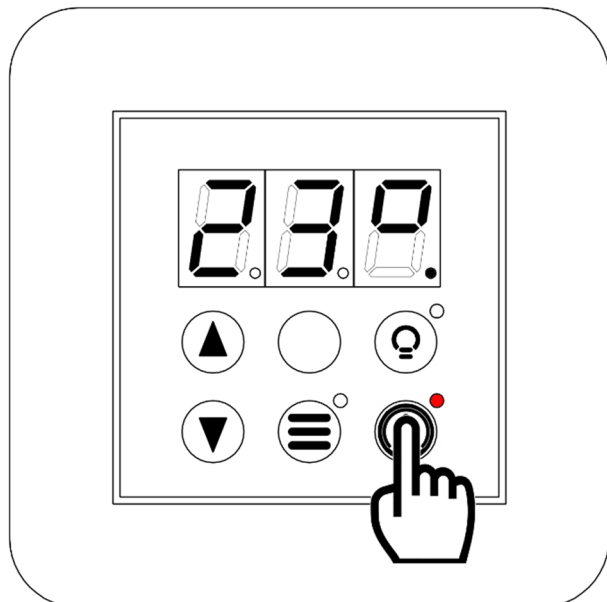
1.3 – POWER SAVING MODE



In the default mode, three-digit display will show sauna room temperature. In 2024, an energy-saving mode has been added to the control panel, where the temperature display is turned off. When active, green light flashes for one second every five seconds. By pressing any button, the control panel returns to normal mode from the energy-saving mode.

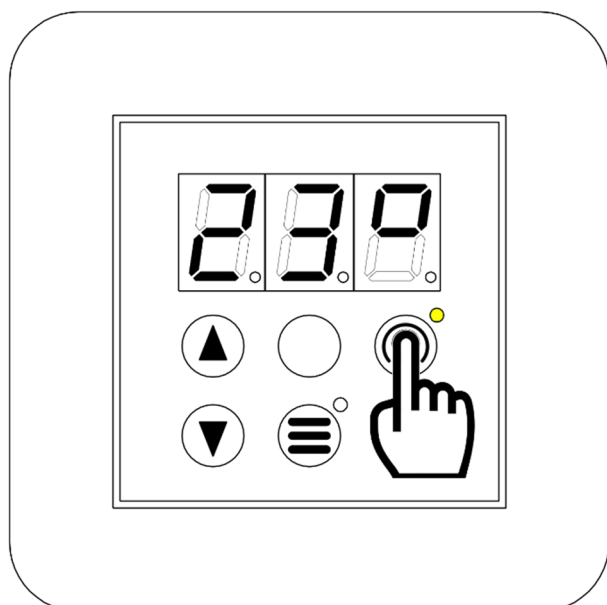
2. USING THE SAUNA STOVE

2.1 – TURNING ON THE HEATER



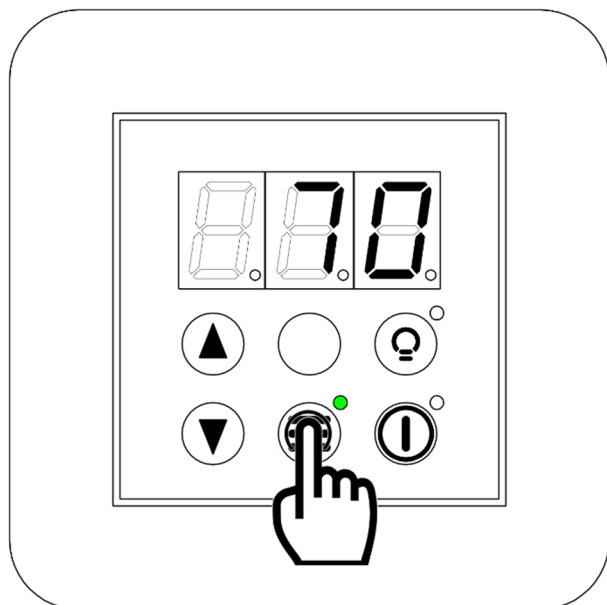
Make sure that control switch is on in power unit. Make sure that the sauna stove is not covered, and that there is nothing in the sauna that does not belong there. Pressing the Controller's On/Off button makes the sauna stove start heating until the target temperature has been reached. The stove heating indicator light in the controller will switch on. The decimal mark lights up on the lower right side of the screen to indicate that the resistors are on. (If the timer has been set, the on/Off button turns the timer on and the sauna stove begins heating only after the timer has run out). The On/Off button turns the sauna stove off.

2.2 – TURNING ON SAUNA LIGHTS



If there are lights in the sauna stove or if other sauna lights are controlled through the sauna stove, the lights are turned on from the control panel's light switch. The light switch is located to the right top of the keypad, just above the stove power switch. The lights remain on even if the sauna stove is off, unless they are specifically turned off from the control panel's light switch. If power has been taken from the sauna stove for lights other than those of the stove, and they only light up when the stove heats up, the lights have been installed in the wrong place on the circuit board.

2.3 – TARGET TEMPERATURE ADJUSTMENT



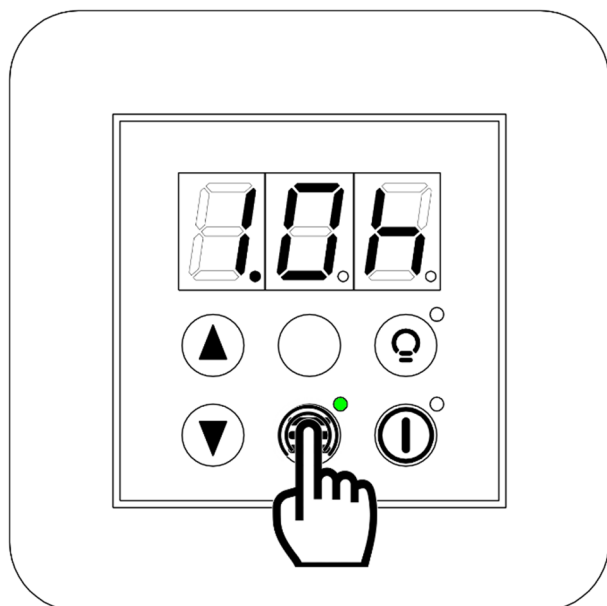
The sauna's target temperature can be adjusted with one-degree Celsius precision. The minimum is 40 degrees, and the maximum is 110 degrees. The setting is saved in memory. The default target temperature is 60°C.

To adjust the temperature, press the Menu button once, and the target temperature will appear on the display.

The target temperature is adjusted by pressing the $\wedge$ and $\vee$ buttons. The controller automatically exits the target temperature setting menu after about 10 seconds if no button is pressed. You can also manually exit the menu by repeatedly pressing the Menu button.

Tip: You can also adjust the temperature in the basic mode by pressing the $\wedge$ and $\vee$ buttons. You don't need to adjust the temperature through the menu when the sauna stove is already on.

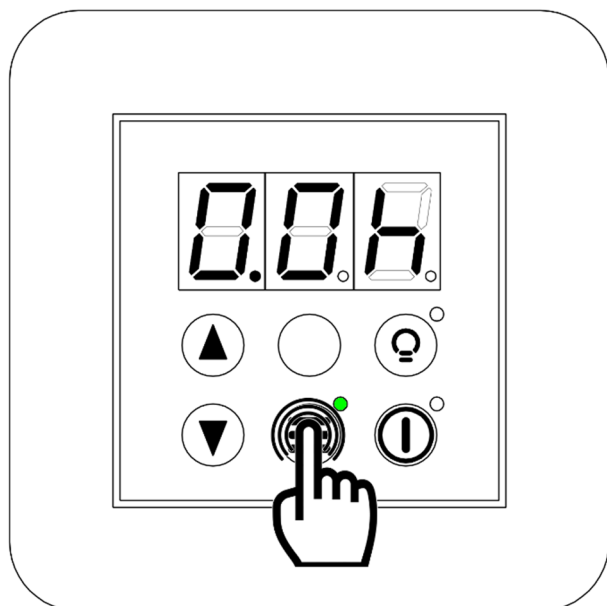
2.4 – HEATING TIME ADJUSTMENT



You can set the sauna stove's heating time to be between 1 h and 6 h. The adjustment takes place in increments of 0.5 h. The time value has to be set when the device is turned off. You can move to this setting from the default mode by pressing the Menu button twice.

It is possible to reduce the time the stove is on when the sauna is heating. You can increase or decrease the time of the sauna session by pressing the ($\wedge$) or ($\vee$) button when the remaining time is on the display. In this case, the adjustment increment is 15 min. This setting is not saved to the memory. This setting can also be changed by pressing the Menu button twice in default mode.

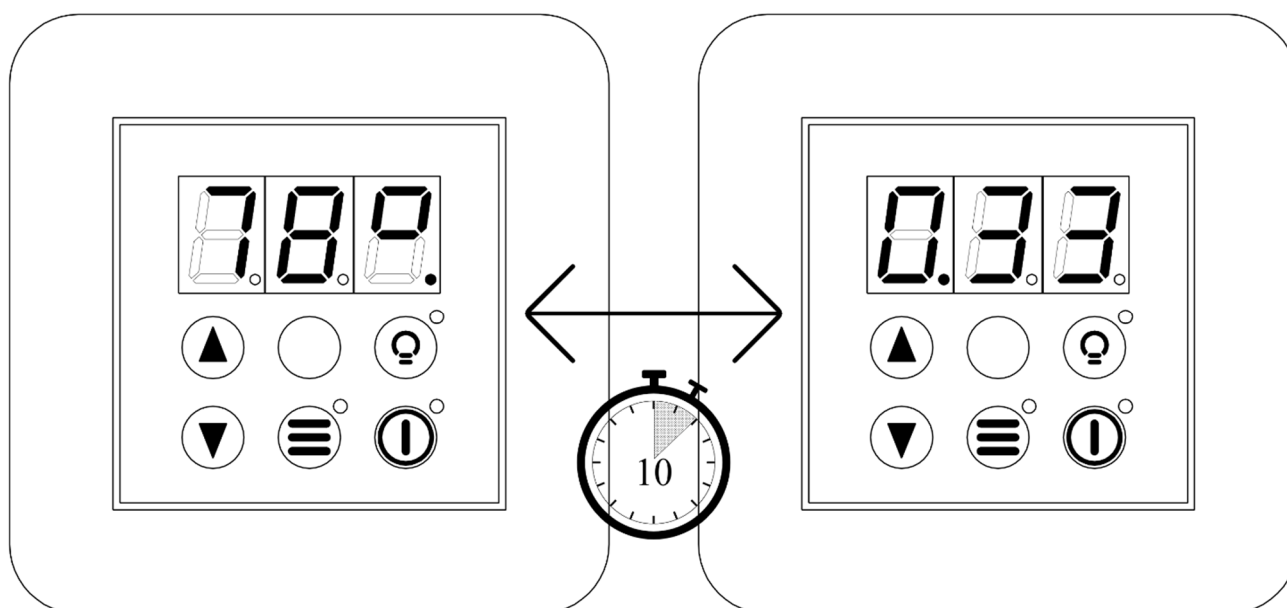
2.6 – TIMER ADJUSTMENT



You can move from the default mode to the timer by pressing the Menu button three times in a row. The (▲) and (▼) buttons are used to change the timer's setting. The adjustment range is 0.5 h – 24 h, and the adjustment increment is 0.5 h. If this value is zero, the timer is not in use.

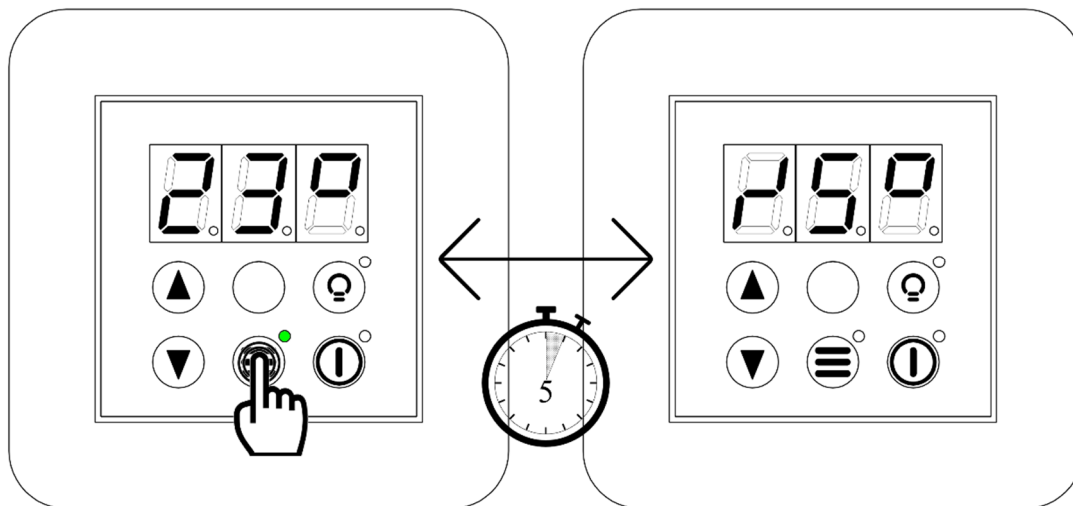
This setting can only be changed when the device is off.

2.7 – CONTROL PANEL DEFAULT MODE WHEN HEATER IS TURNED ON



When the device is on, the display alternates between basic mode (temperature display) and remaining time. The display alternates approximately every 10 seconds.

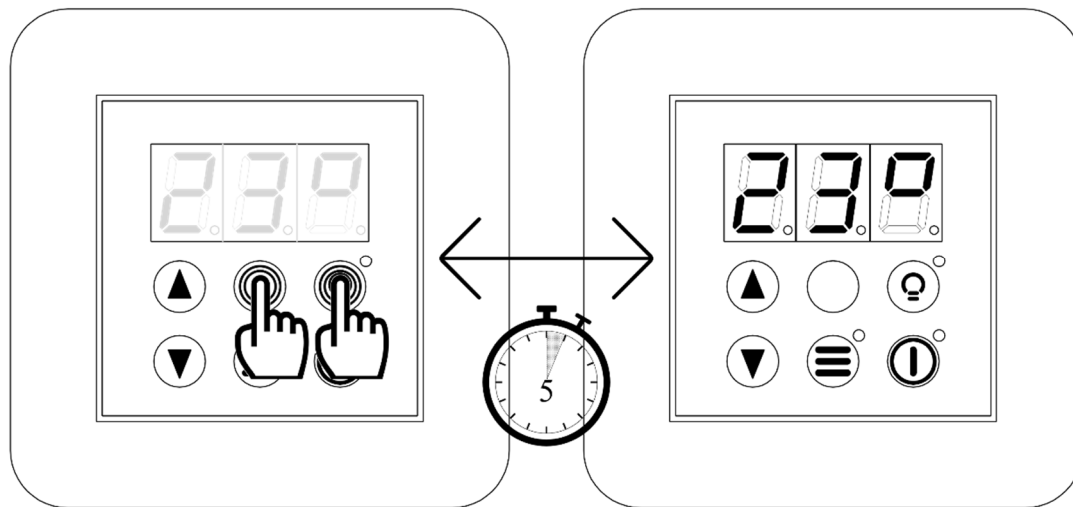
2.8 – HYSTERESIS



The control unit allows you to select a hysteresis of 2–5 degrees. The default setting is five degrees. This means that when the heater reaches the target temperature, the heating elements stop heating. When the sauna temperature drops by N degrees below the target temperature (N = the selected hysteresis), the heating elements start heating again at full power. This is called hysteresis. If the heater has a small number of stones or the heater's power is borderline for the size of the sauna, adjusting the hysteresis helps maintain heat in the sauna for a longer time.

Press the menu button for five seconds until the hysteresis menu opens. Adjust the hysteresis up or down using the arrow buttons. The number range is 2–5 degrees Celsius.

2.9 – RESTRICTED MODE



It is possible to set restrictions on the control panel for temperature adjustment, operating time, and timer duration. This feature is recommended for locations that are used for rental purposes, for example.

Make sure the heater is not turned on. Wait until the control panel display is dim. Press and hold the middle top button and the light button until the display becomes brighter. Restricted mode is now activated.

In restricted mode:

The maximum heater temperature is 85 °C. Adjustment range: 60–85 °C.

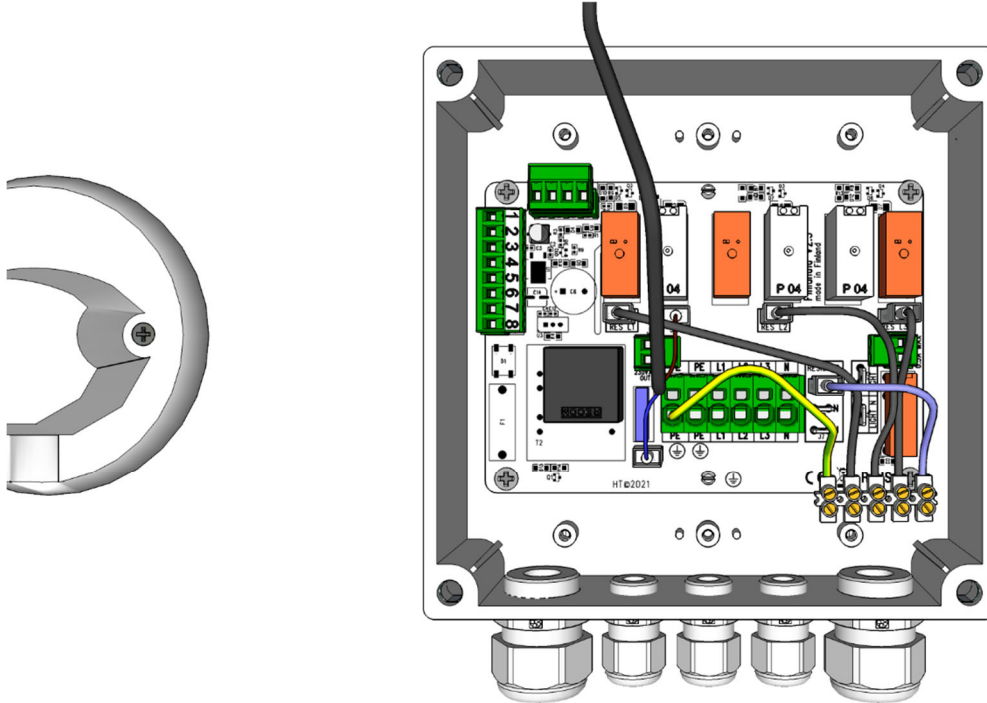
The maximum operating time of the heater is 1.5 hours. Adjustment range: 0.5–1.5 hours.

The maximum timer delay is six hours. Adjustment range: 0–6 hours.

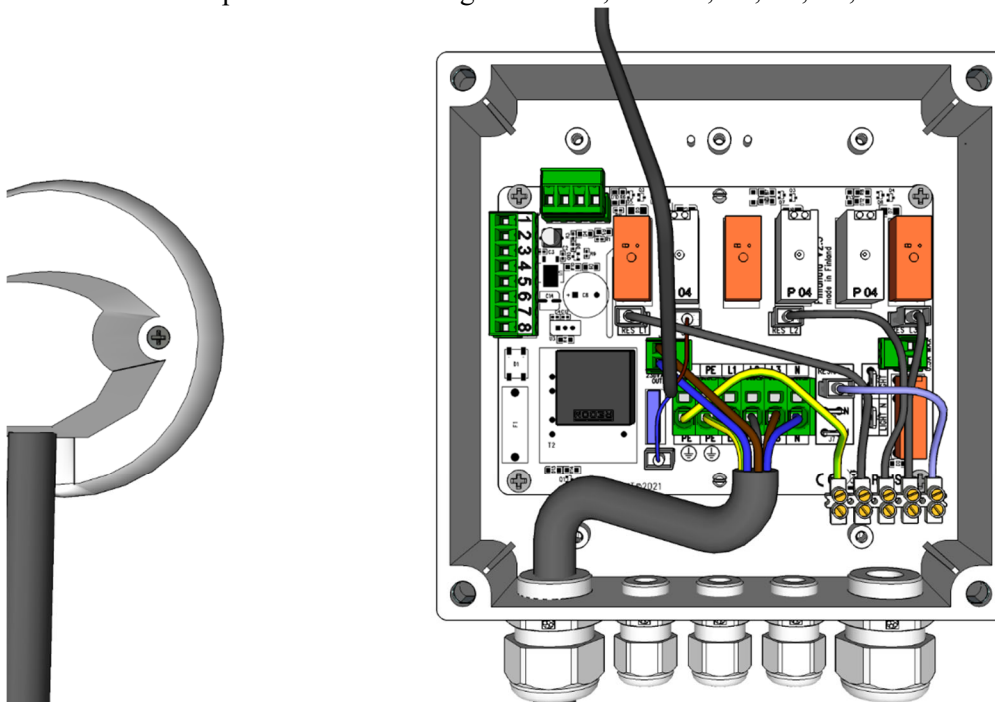
You can return to normal mode by pressing and holding the middle top button and the light button until the display becomes brighter. Normal mode is restored. Make sure the heater is not turned on and the control panel display is dim.

3. INSTALLATION STEPS – POWER UNIT

1. Install power unit into desired location. Power unit can be installed into sauna or outside sauna room. Unit has IP65 classification. In sauna room, maximum height for power unit is 600mm from floor. Power unit must be installed outside 500mm from heater. Install sleeves **downwards**.

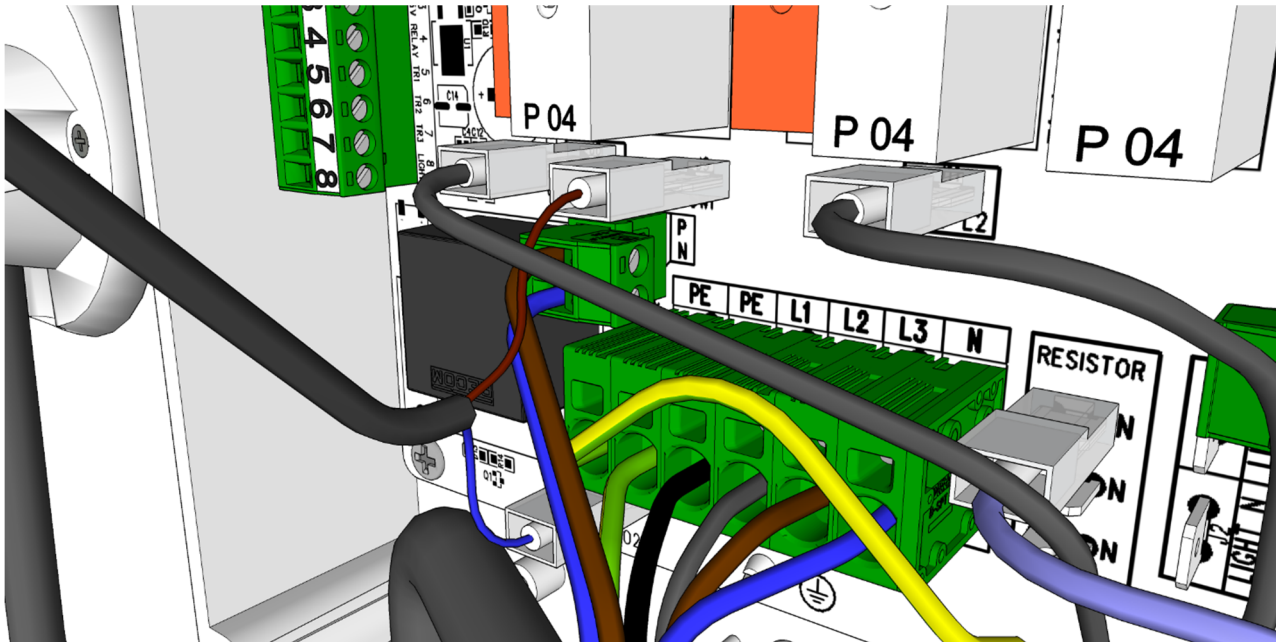


2. Install feed cable from house electrics into power unit. If you use temperature reduction feature is recommended to use a seven-stranded cable for wiring the sauna stove. Feed the supply cable through the upmost cable gland and connect the feeder line to the quick connector on the circuit board. Wires with glands can be pressed directly into the connector, otherwise, the spring lever might have to be loosened. Tighten the cable gland after the installation is complete. From left to right: Ground, Ground, L1, L2, L3, N.

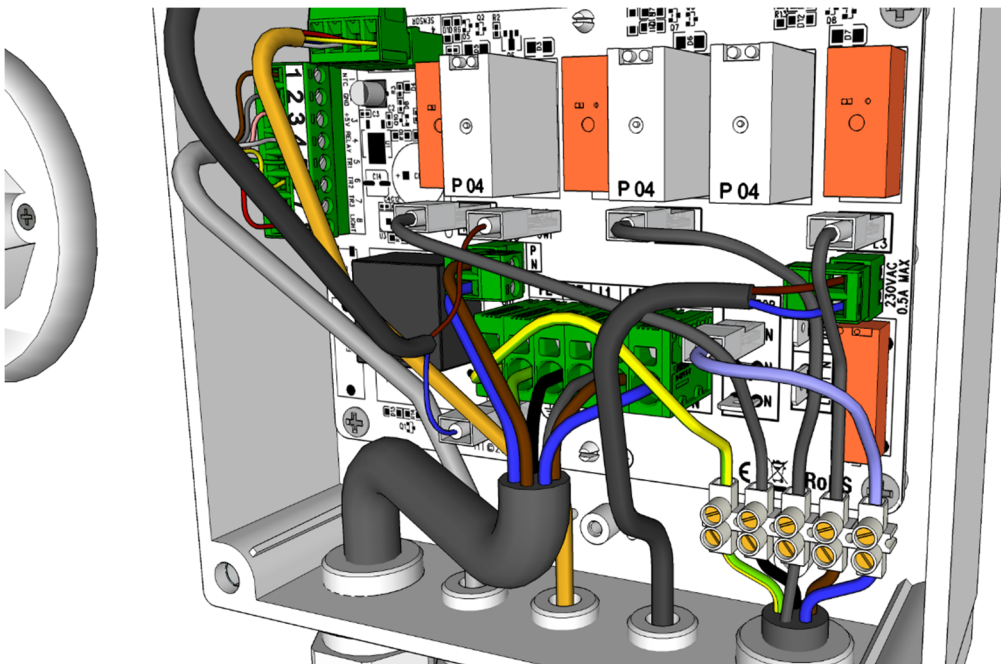


3. Temperature reduction (Connector J5) (the lower connector on the photo above). If this feature is in use, it is possible to connect a relay or contactor coil to the output, which controls the heating of the building. It is recommended to use a seven-stranded cable for wiring the sauna stove. Detach the connector from the circuit board and screw the cables to the connector. Then, press the connector back onto the circuit board.

- P – External – Brown – Above
- N – 230VAC OUT Below

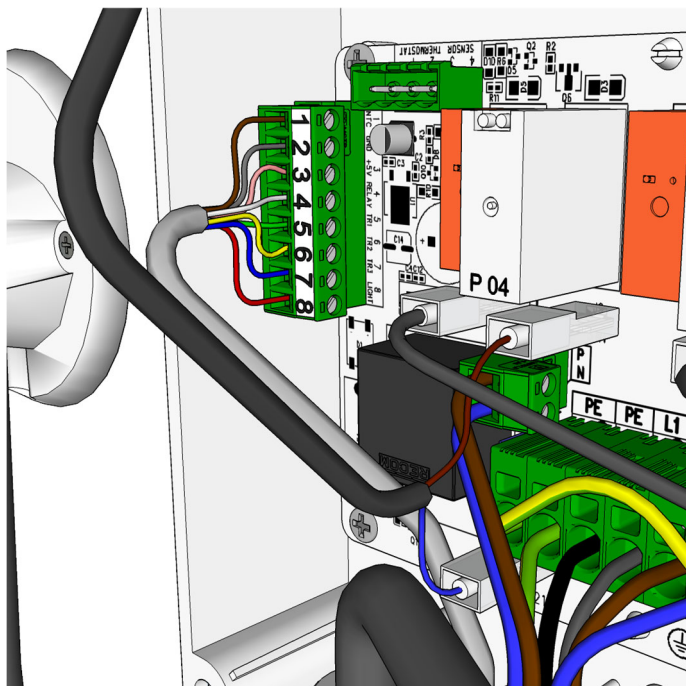


4. You can power sauna lights from the control Center. Install cable gland to the box and bring wiring inside control Center. In sauna-installations, always use rubber cable. **Max output power is 100w / 0.5A**



- N – Blue Above
- L – Brown Below

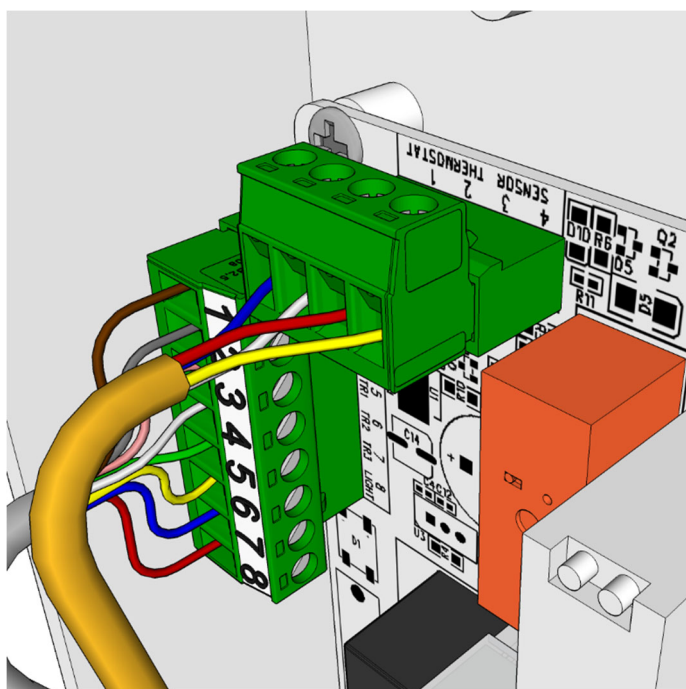
5. Feed the Finlandia panel wire (8x0.25 mm² LYII grey cable) through the lowest cable gland and connect the wires on the circuit board on the terminal block with the numbers 1-8. The terminal block can be detached from the main board for easier installation. The terminal block is located in the lower left section. Tighten the cable gland after the installation is complete.



Order of wires on the board

1. Brown
2. Grey
3. Pink
4. White
5. Green
6. Yellow
7. Blue
8. Red

6. Install the temperature sensor into sauna room. Guide in [Section 3.1](#). Feed the thermostat sensor wire (4x0.25 mm² silicone cable, beige wire) through the second-lowest cable gland and connect the wires on the circuit board, to the 4-slot terminal block adjacent to the Finlandia panel block. The terminal block can be detached from the main board for easier installation. Tighten the cable gland after the installation is complete.

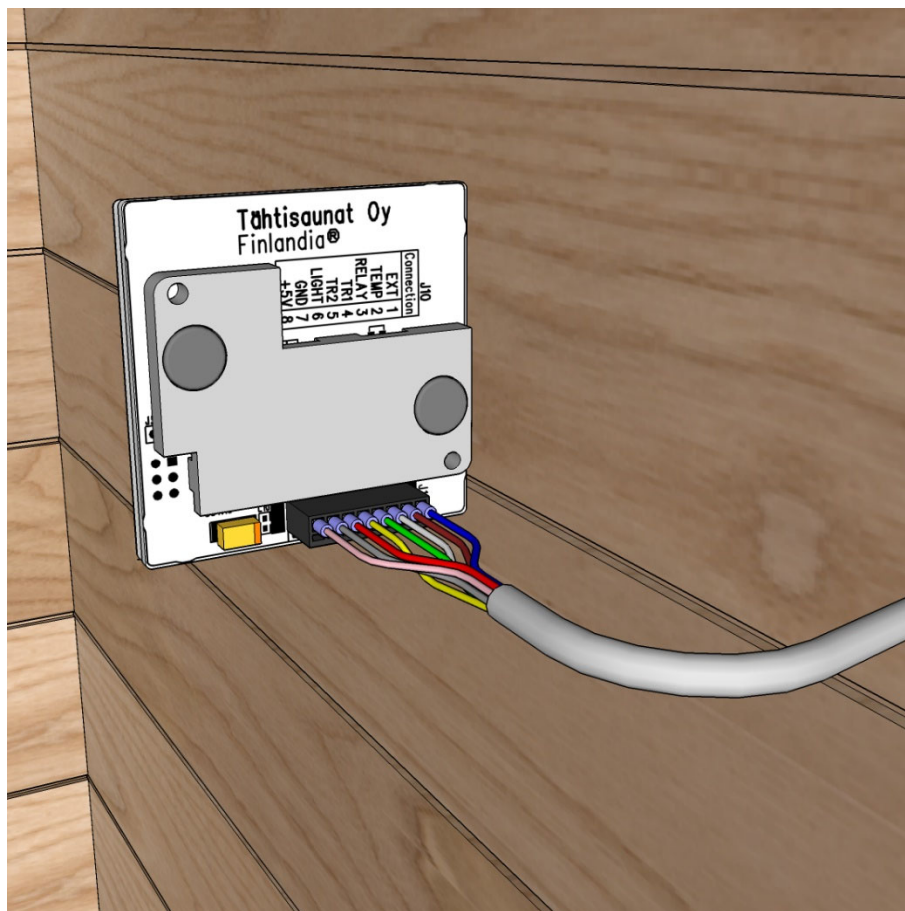


The wire order on the board, from right to left.

1. Blue
2. White
3. Red
4. Yellow

PLEASE NOTE! If the wire needs to be shortened, shorten it from the stove's side. The wire must not be continued. For longer wiring, please contact seller.

7. Install control panel according to [Section 3.2](#). Wiring order below.



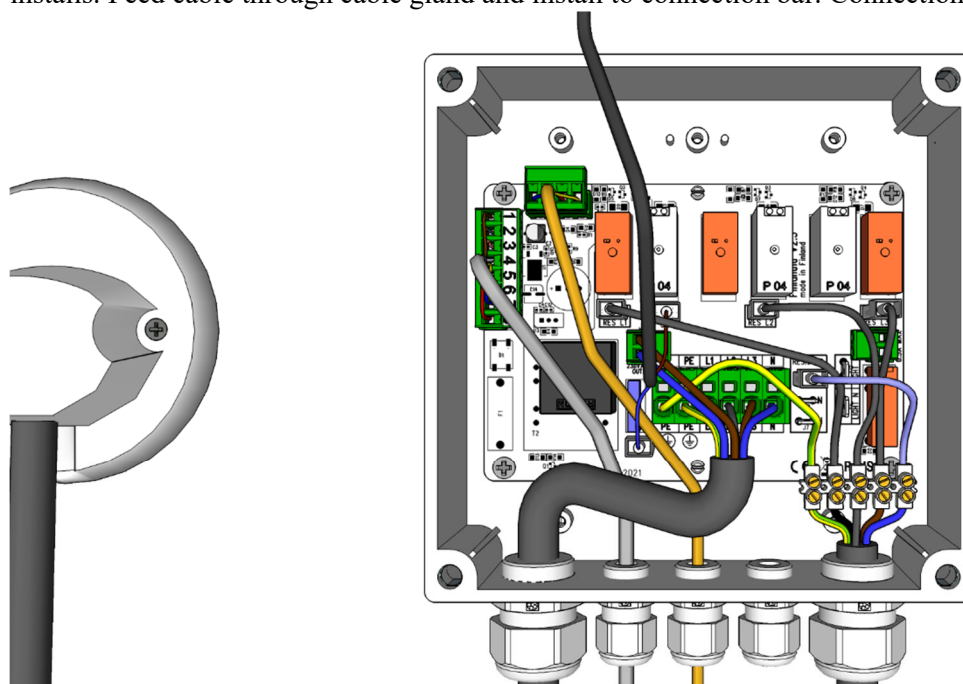
From left to right, viewed from behind:

8. Pink
7. Grey
6. Red
5. Yellow
4. Green
3. White
2. Brown
1. Blue

The panel wiring is not identical to the control centre wiring, because we wish to keep the product compatible with old systems.

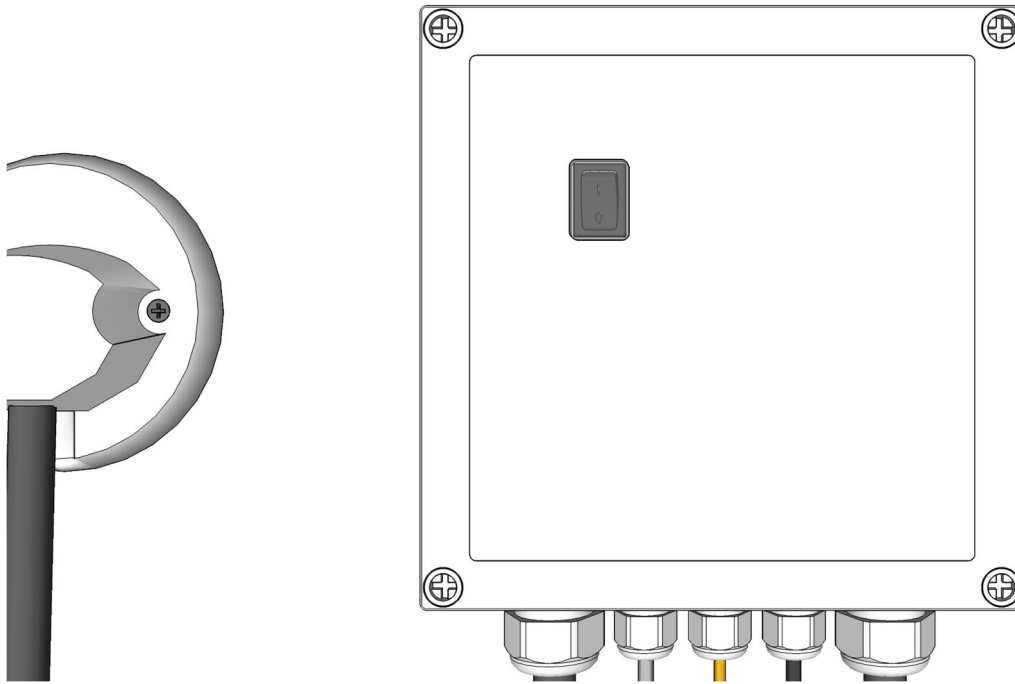
It is not recommended to shorten wires from the panel's side, as the wires have been fitted with quick connectors. If necessary, shorten the wires from the centre's side.

8. Make feed cable from power unit to heater. **Always use rubber cable H07RN-F** equivalent cable in sauna installs. Feed cable through cable gland and install to connection bar. Connection = Ground, L1, L2, L3, N.



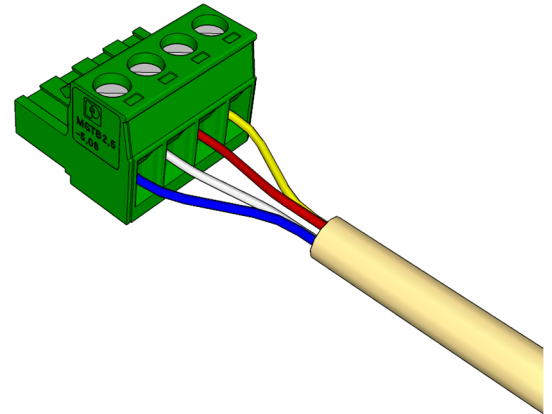
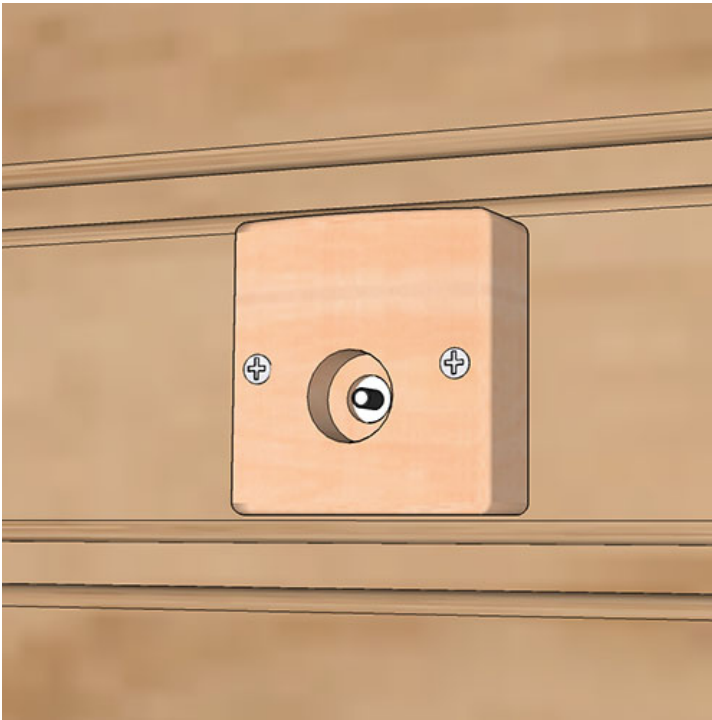
9. Close lid and put control switch in position I. Check that heater works and all heating resistors are warming up. Make sure that no cables are between lid and box is sealed correctly.

If Finlandia panel has any error codes, check connections.



3.1- THERMOSTAT SENSOR

TERMOSTAATTIANTURI



WIRING ORDER

Connector	Blue	White	Red	Yellow
Circuit board	1	2	3	4

The thermostat sensor is wooden; its external casing is made from black alder.

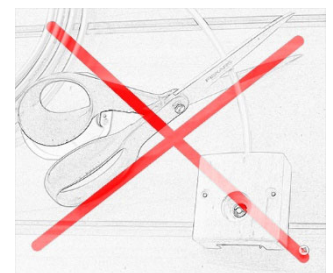
The external casing can be painted to match the sauna panels using sauna wax, but remember to detach all electronic components from the sensor before painting. Electronic components could be damaged by paint.

Connect the connector to the designated connector on the circuit board, press the connector carefully all the way down.

Thermostat sensor is installed on the wall so that the distance between the ceiling and the upper edge of the sensor is 100 mm. The sensor must be located 500 – 1000 mm from the upper edge of the sauna stove. Furthermore, the sensor must be located at least 1000 mm from a non-directed incoming air valve or 500 mm from an incoming air valve which is located away from the device. **Illustration SECTION 4.1**

Install the thermostat cable behind the panel in the air vent; if this is not possible, use an installation baseboard. Make sure that the incoming air does not disturb the heat sensor.

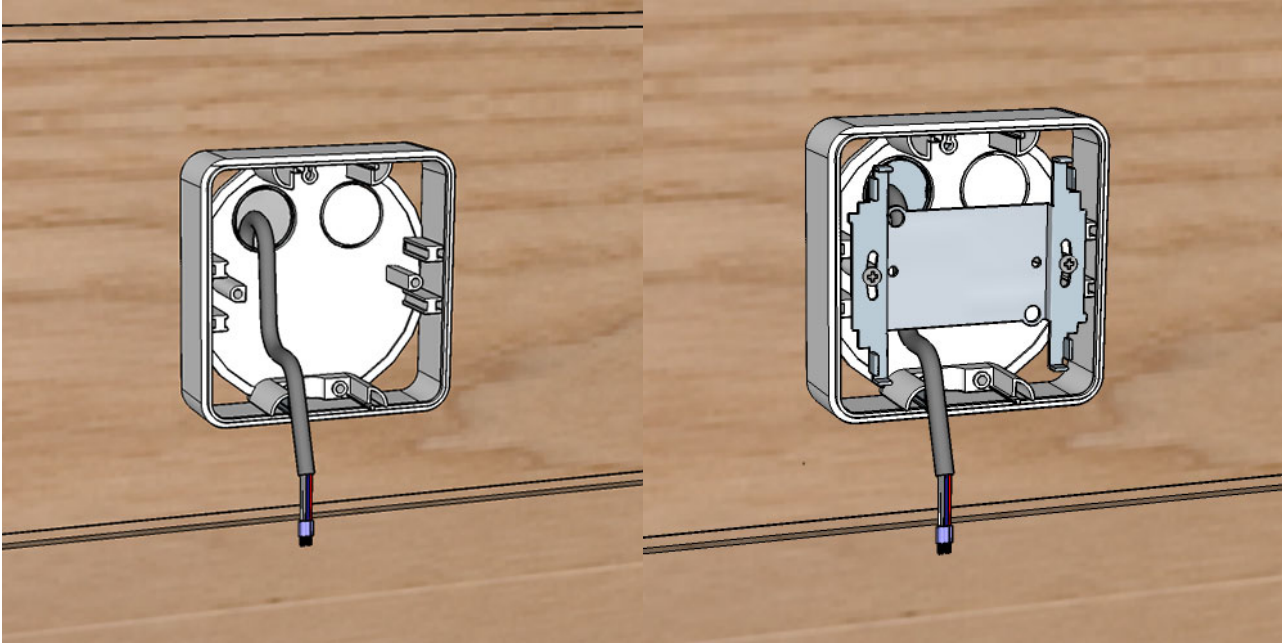
Do NOT cut the wire from the thermostat's side. The thermostat sensor does not function if the wires are continued/reconnected. If the wire needs to be shortened, shorten it from the connector's side. In other cases, contact the technical support.



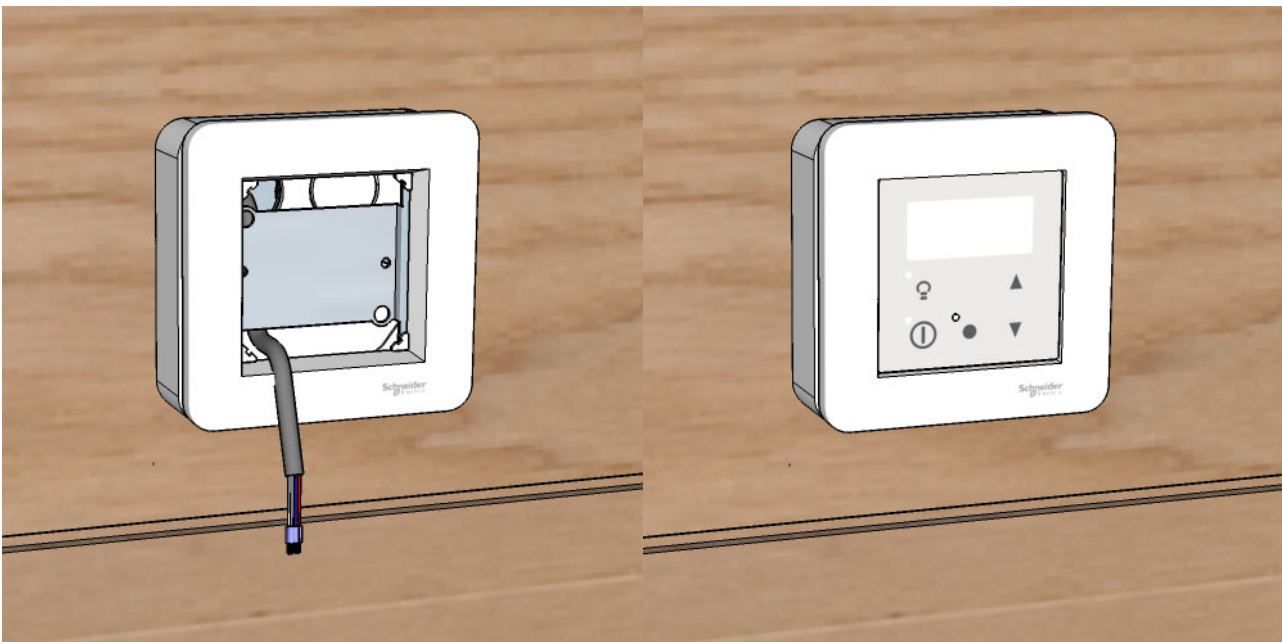
3.2 – FINLANDIA CONTROL PANEL INSTALLATION

There are many installation options for the Finlandia control panel. The maximum height of the control panel from the floor of the sauna or the washroom floor is 1000 mm. The requirements of the electrical wiring standard SFS 6000, sections 7-701, are applicable to the washroom. The ingress protection of the Finlandia panel is IPX4. The standard length of the control panel's wire is 10 metres.

3.3.1 – SURFACE INSTALLATION:

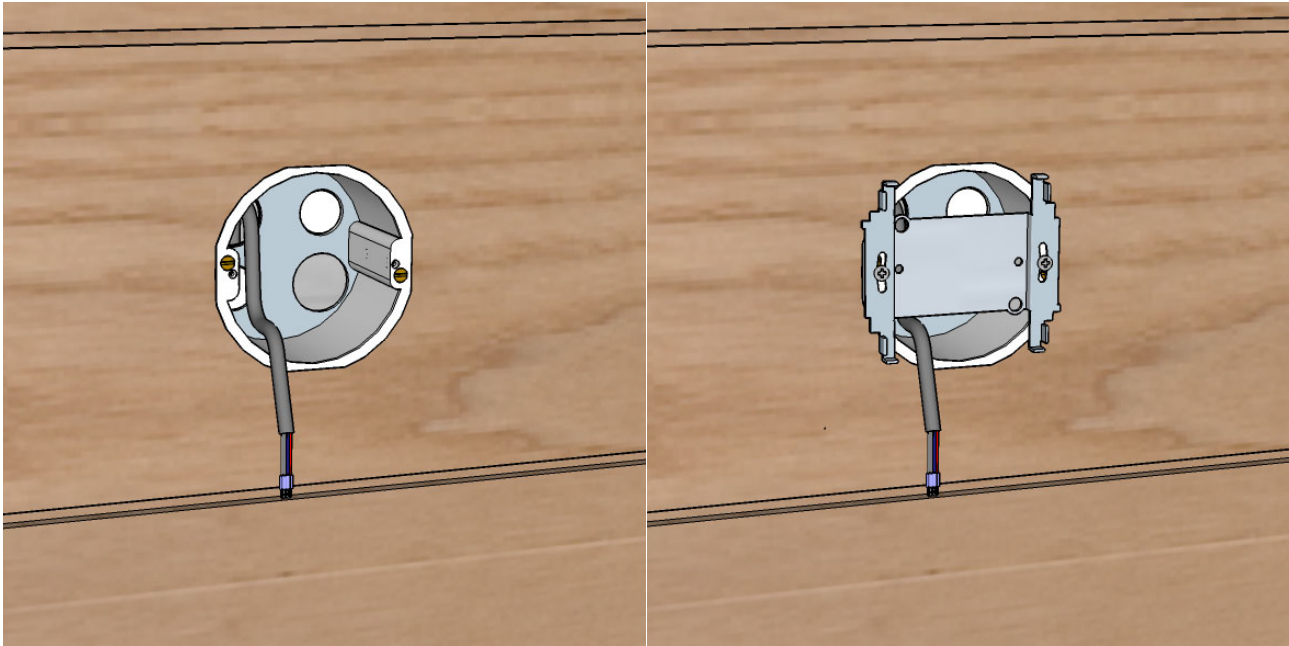


In the sauna: Install the surface box at a max height of 1000mm from the floor, and bring the wire out of the box. Screw the panel's mounting bracket to the box. **In the washroom:** no height restrictions, but the recommended height is 1500mm or at the same height as the light switches.

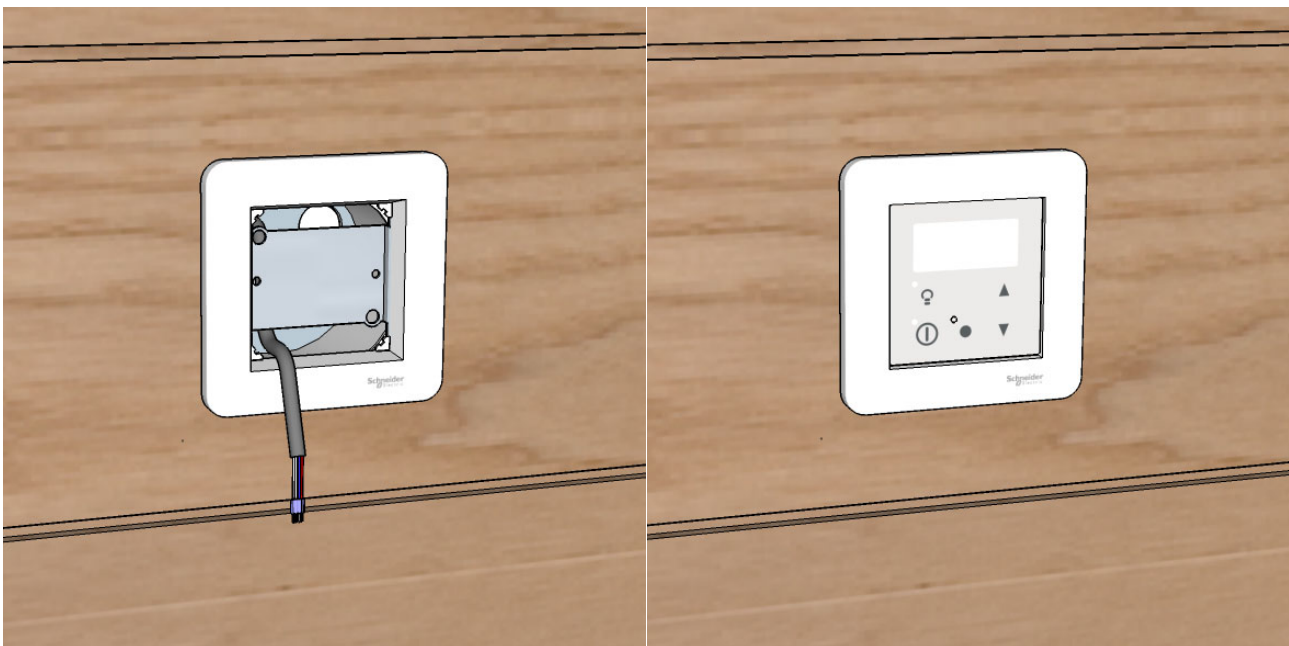


Place the frame on the bottom of the box, connect the wires to the panel, and press the control panel to fasten it in the middle of the frame. The panel will be attached to the bracket with magnets. Wiring instructions on page 13.

3.3.2 – RECESSED INSTALLATION:

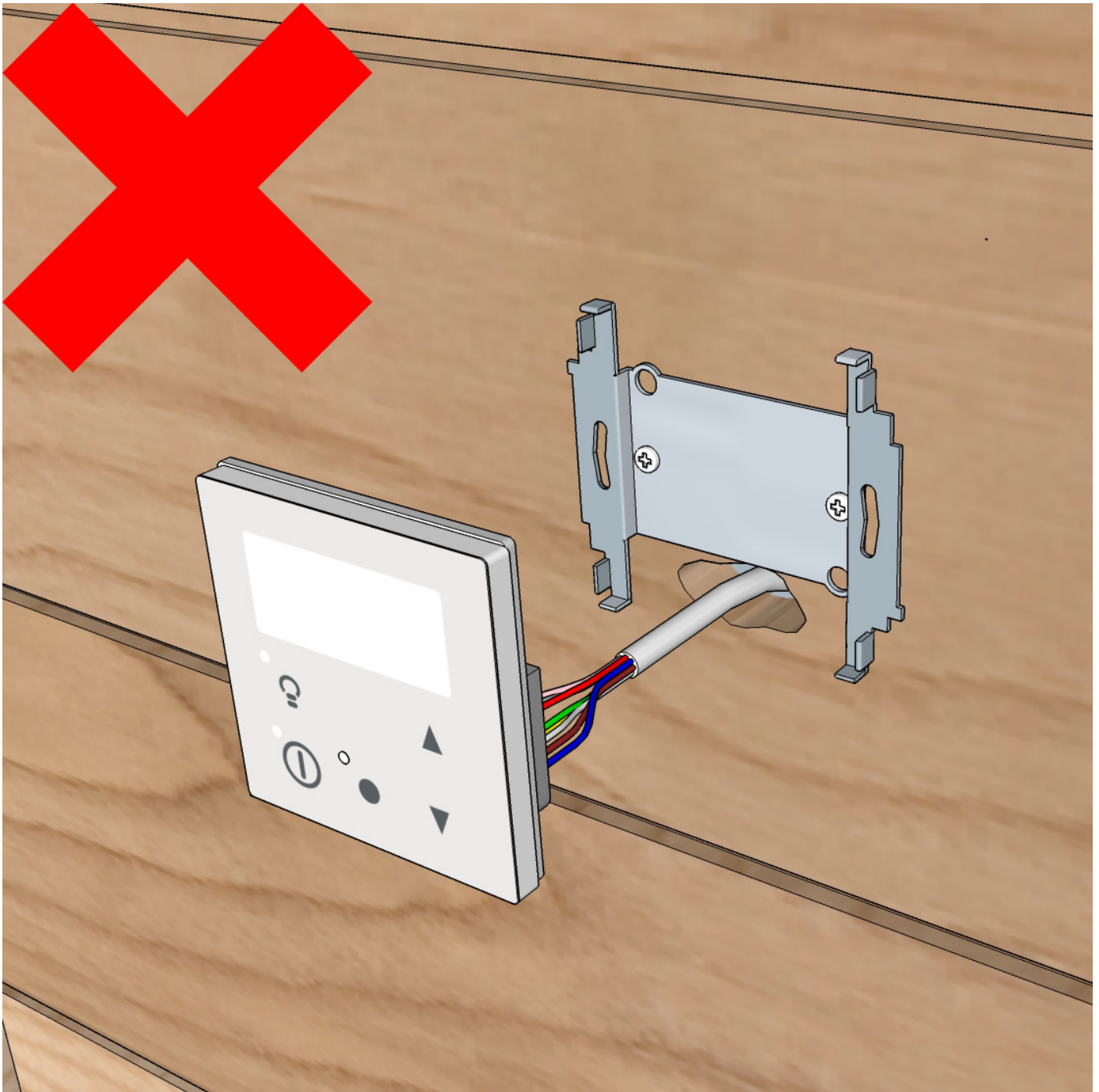


In the sauna: Drill a hole in the panel for the recess box. Be careful not to drill all the way to the insulation. Panel max height in the sauna 1000mm from the floor. Bring the panel wire out of the box. Screw the panel's mounting rod to the box. **In the washroom:** no height restrictions, but the recommended height is 1500mm or at the same height as the light switches. When installing on a tiled surface, recessed mounting has to be taken into consideration already during the construction stage. Suitable box e.g. ABB AUS 15.2 "Renovation box". Hole 70mm – Box drill AT1.



Place the frame on the bottom of the box, connect the wires to the panel, and press the control panel to fasten it in the middle of the frame. The panel will be attached to the bracket with magnets. Wiring instructions on page 11.

The panel can be integrated into the light switches using a double frame. Any frame from the Schneider Electric Exxact range can be used.



The panel must not be installed without a surface-mounted or flush-mounted installation box. The warranty of the control unit becomes void if the panel is installed contrary to the instructions.

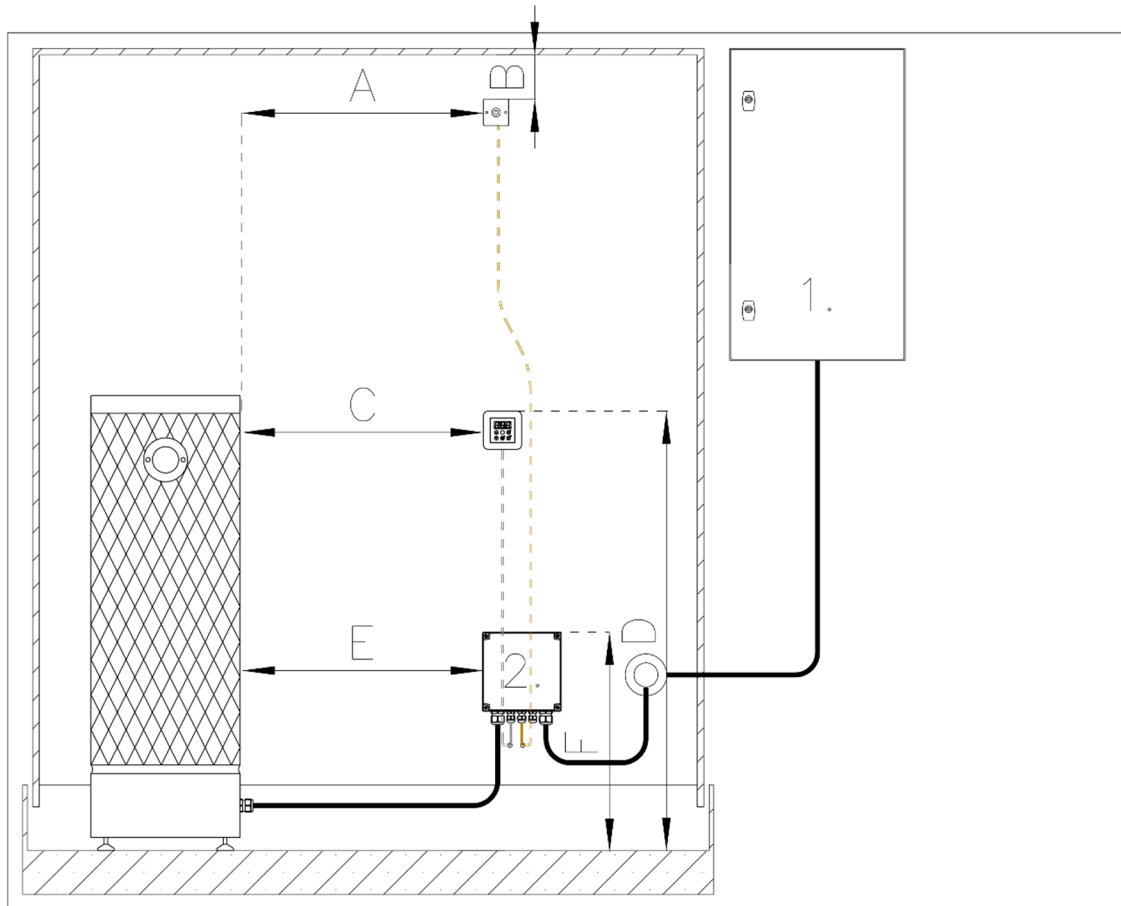
In the sauna and washroom, the installation box must be rated IP44, for example WDE002851 or equivalent, and installed together with the sealing kit WDE002870.

For flush-mounted installations, the sealing kit WDE002870 must be used when installing in a sauna or other wet area.

For dry areas, a surface-mounted box such as WDE002751 or equivalent is suitable.

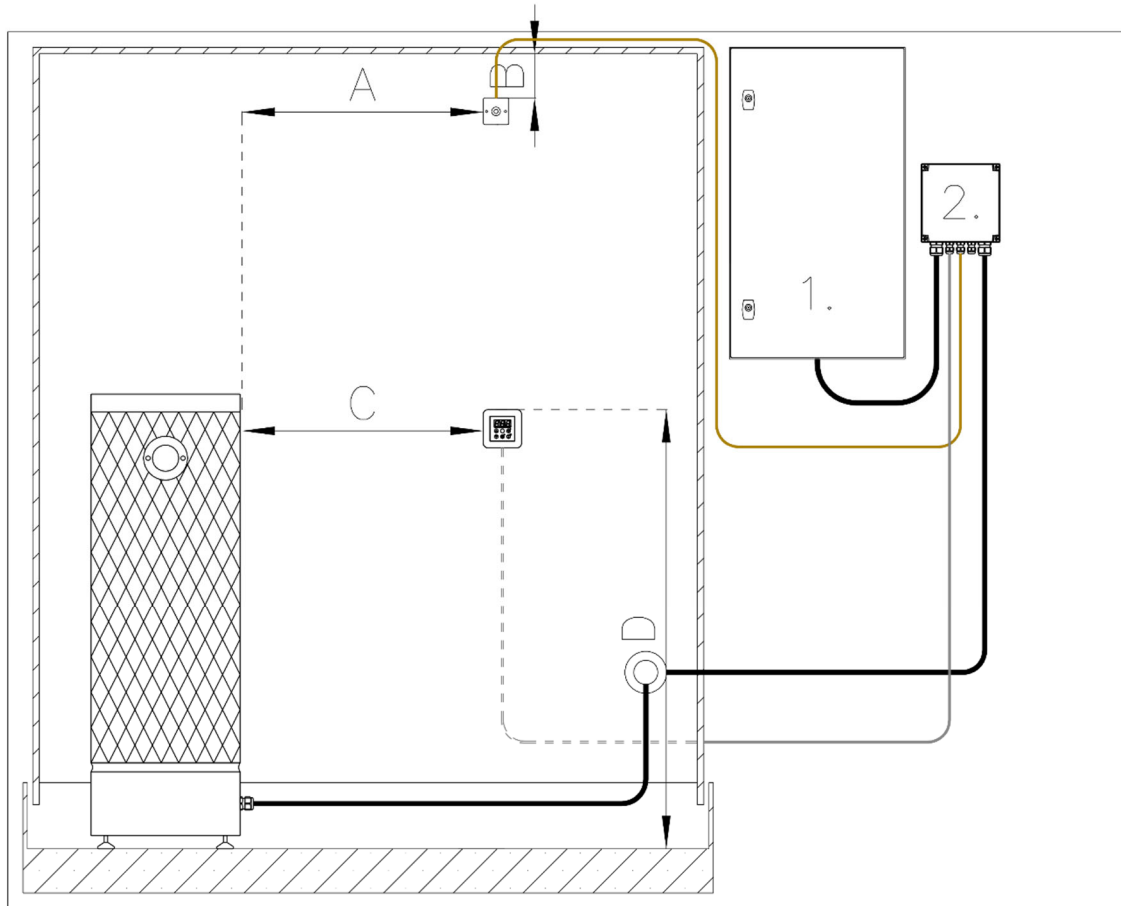
4. INSTALLATION ILLUSTRATIONS AND RENDERINGS

4.1- SAUNA INSTALLATION. CONTROL PANEL, THERMOSTAT AND POWERUNIT IN SAUNA



- A. The distance of the thermostat from the outer edge of the sauna stove is 100 – 400 mm. **PAY ATTENTION TO THE INCOMING AIR VALVE.** If incoming air cannot be directed away from the thermostat, the valve may not be installed **less than 1000 mm** from the incoming air valve. Distance from directed inlet valve can be 500mm
 - B. The distance of the thermostat from the ceiling is 100 mm.
 - C. The minimum distance of the control panel from the sauna stove is 500 mm.
 - D. The maximum height of the control panel from the floor is 1000 mm.
 - E. Power unit's minimum distance from heater 500mm
 - F. Power unit's maximum height from floor 600mm
1. House electrics
 2. Heater power unit

4.2- SAUNA INSTALLATION – CONTROL PANEL AND THERMOSTAT IN SAUNA - POWER UNIT OUTSIDE SAUNA

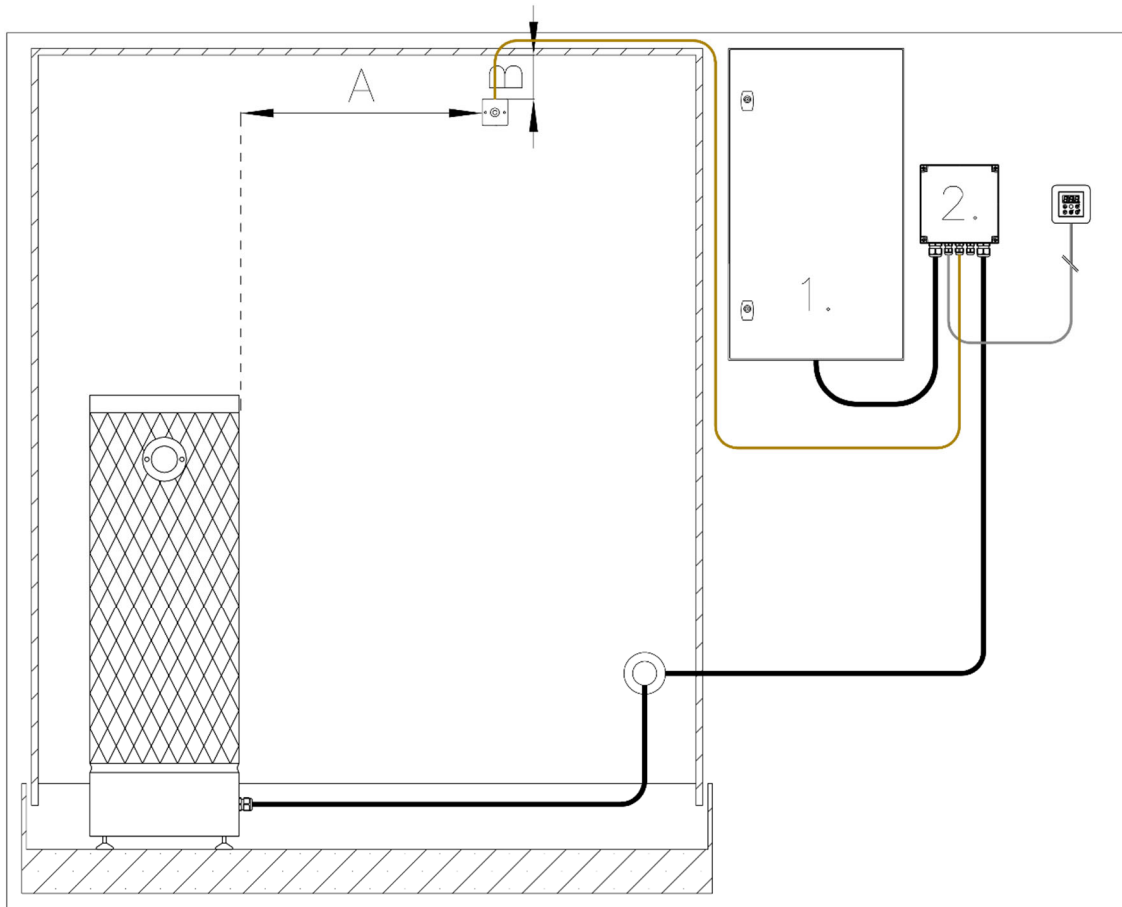


- A. The distance of the thermostat from the outer edge of the sauna stove is 100 – 400 mm. **PAY ATTENTION TO THE INCOMING AIR VALVE.** If incoming air cannot be directed away from the thermostat, the valve may not be installed **less than 1000 mm** from the incoming air valve. Distance from directed inlet valve can be 500mm
- B. The distance of the thermostat from the ceiling is 100 mm.
- C. The minimum distance of the control panel from the sauna stove is 500 mm.
- D. The maximum height of the control panel from the floor is 1000 mm.

- 1. House electrics
- 2. Heater power unit

Note that installation method requires thermostat with longer cables. Stock thermostat has 5000mm cable and you can buy thermostat with longer cable from your retailer.

4.3- SAUNA INSTALLATION – THERMOSTAT IN SAUNA - POWER UNIT AND CONTROL PANEL OUTSIDE SAUNA.



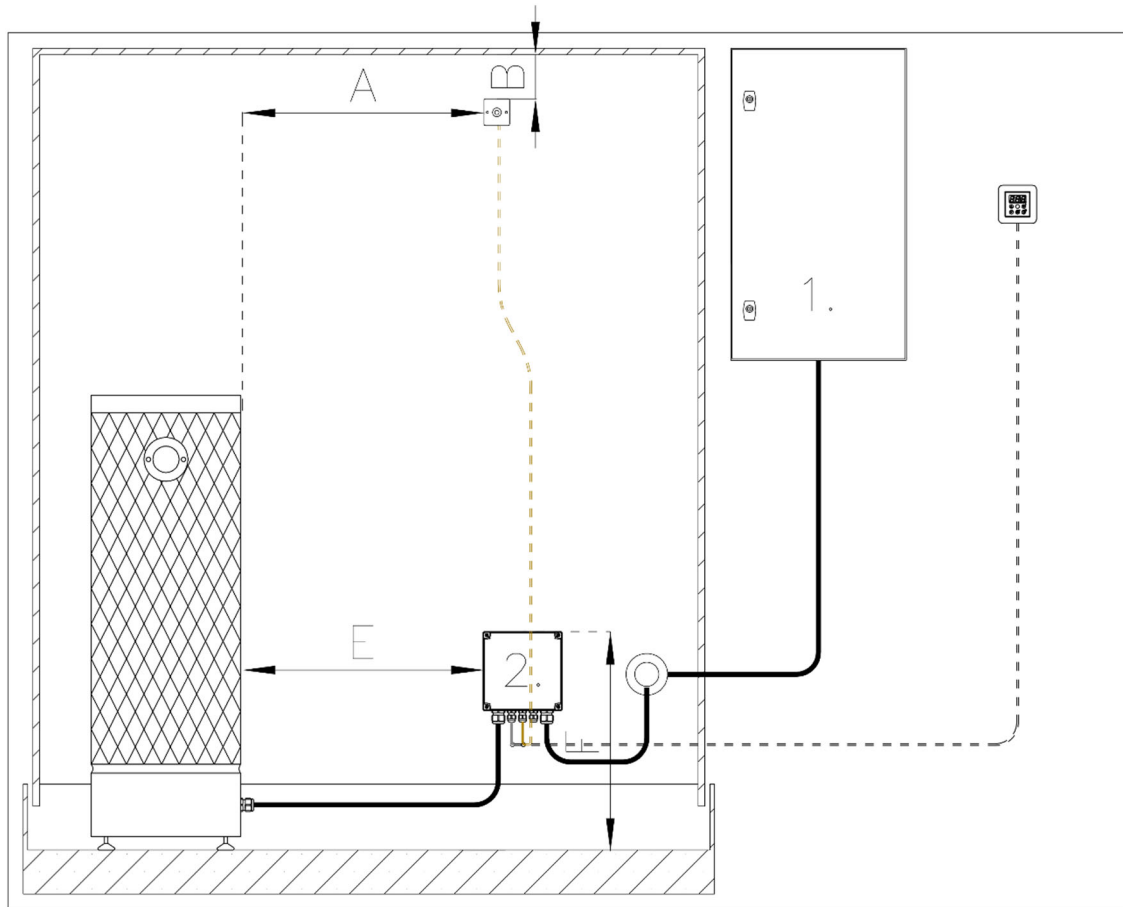
1. The distance of the thermostat from the outer edge of the sauna stove is 100 – 400 mm. **PAY ATTENTION TO THE INCOMING AIR VALVE.** If incoming air cannot be directed away from the thermostat, the valve may not be installed **less than 1000 mm** from the incoming air valve. Distance from directed inlet valve can be 500mm
2. The distance of the thermostat from the ceiling is 100 mm.
 1. House electrics
 2. Heater power unit

Fixed cabling is installed from the main distribution board to the power unit. Fixed cabling is installed from the power unit to the electrical junction box in the sauna. From the junction box to the sauna heater, the connection is semi-fixed using a rubber cable.

Recommended height for Finlandia panel outside sauna is 1500mm, approx. eye height.

Note that installation method requires thermostat with longer cables. Stock thermostat has 5000mm cable and you can buy thermostat with longer cable from your retailer.

4.4 – SAUNA INSTALLATION – THERMOSTAT AND POWER UNIT - CONTROL PANEL OUTSIDE SAUNA.

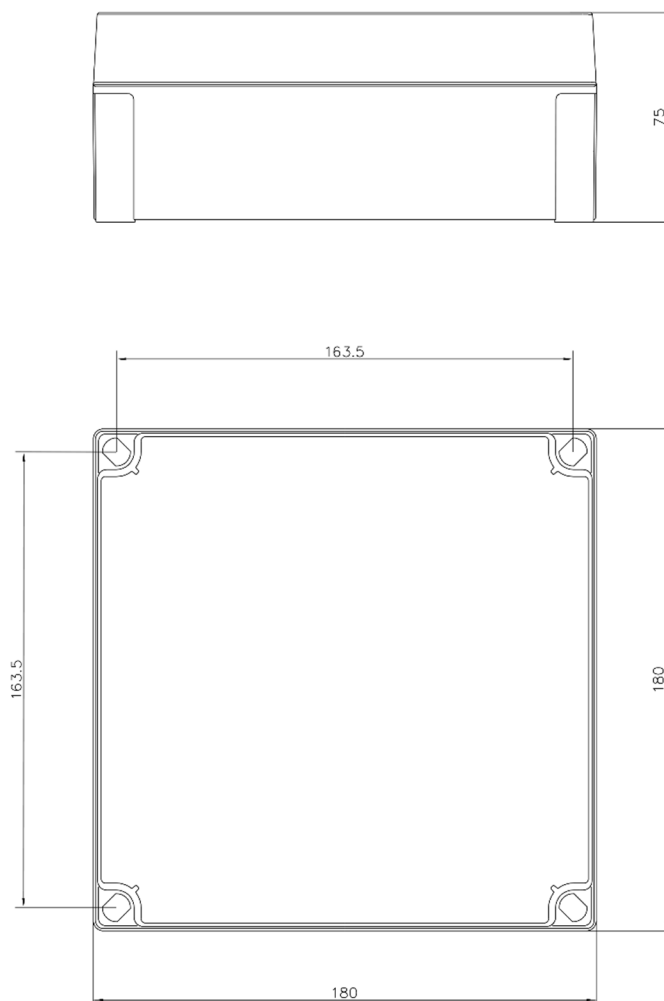


- A. The distance of the thermostat from the outer edge of the sauna stove is 100 – 400 mm. **PAY ATTENTION TO THE INCOMING AIR VALVE.** If incoming air cannot be directed away from the thermostat, the valve may not be installed **less than 1000 mm** from the incoming air valve. Distance from directed inlet valve can be 500mm.
- B. The distance of the thermostat from the ceiling is 100 mm.
- C. Power unit's minimum distance from heater 500mm
- D. Power unit's maximum height from floor 600mm

- 1. House electrics
- 2. Heater power unit

Recommended height for Finlandia panel outside sauna is 1500mm, approx. eye height.

5. MEASURES AND TECHNICAL DATA



Power unit width	180 mm
Power unit length	180 mm
Power unit thickness	75 mm
Finlandia panel cable length	10000 mm
Thermostat cable length	5000 mm
Power unit IP classification	IP67
Finlandia panel IP classification	IPX4
Power unit mounting hole pattern	163 mm x 163 mm
Heater maximum power	10,5kW

5.1 FEED CABLE SIZE CHART

Model	Power kW	Fuses A	Cable mm²
IKI 4,5	4,5	3x10	5x1,5
IKI 6,6	6,6	3x10	5x1,5
IKI 6,9	6,9	3x10	5x1,5
IKI 9	9	3x16	5x2,5
IKI 10	10	3x16	5x2,5
IKI 10,5	10,5	3x16	5x2,5

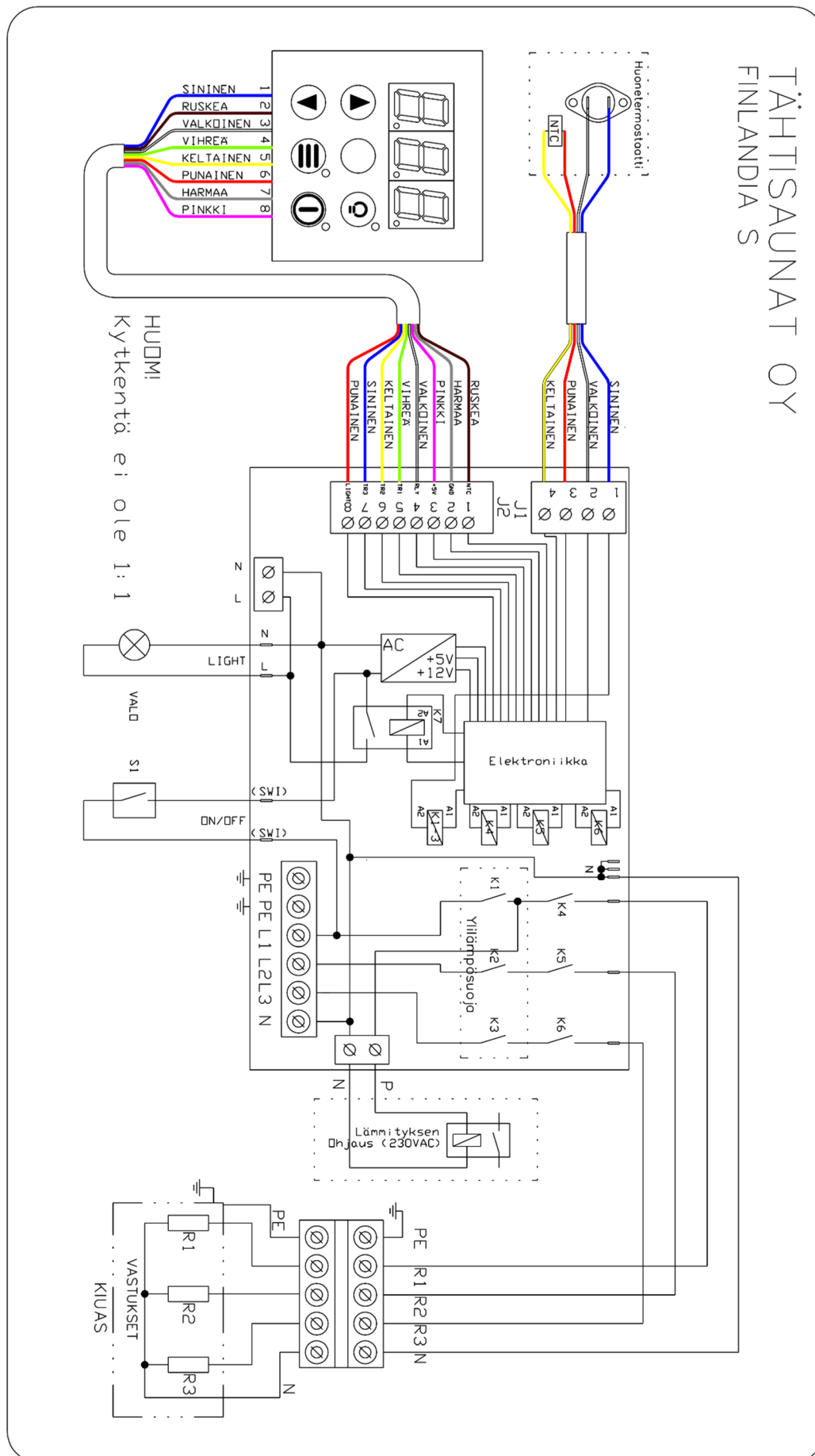
6. WARRANTY

The warranty period for private and residential use is 24 months from the delivery date. Proof of warranty shall be the purchase receipt, order confirmation of the heater, the handover protocol of the building project, or an equivalent document.

The warranty is valid only if the manufacturer's installation and operating instructions have been carefully followed. The warranty does not cover faults caused by improper installation and/or misuse.

- The installation of the heater control unit to the electrical network must be carried out by a licensed professional company / certified electrician with valid electrical installation qualifications. The installation must be performed in accordance with the installation instructions.
- In the event of a malfunction, the product must never be dismantled or repaired without the manufacturer's written consent and/or instructions. If the control unit or any other control device has been opened or dismantled, the manufacturer reserves the right to refuse warranty compensation for the product or any part thereof during the warranty period. The manufacturer may charge for spare parts if the warranty terms have been violated. In fault situations beyond the scope of the troubleshooting instructions, the buyer should contact the manufacturer for a possible solution before replacing any components.
- During fault investigation or repair, the manufacturer does not compensate for any costs arising from the removal of sauna furniture.
- During fault investigation, the warranty does not cover the removal and reinstallation of sauna stones or the removal of the heater from the sauna room.
- For institutional and professional use, the warranty for Finlandia control units is limited to three (3) months. Institutional use refers to facilities that are kept continuously hot, such as swimming pools, fitness centers, etc. The control unit is not recommended to be used for more than six (6) hours at a time.
- For warranty-covered repairs, IKI-Kiuas LTD reimburses installer costs up to one hundred euros (€100, incl. 25.5% VAT). This includes travel expenses and on-site labor. Reimbursement is paid once the defective product has been returned to the manufacturer and confirmed defective by the manufacturer. If the defective part is not returned, no reimbursement will be paid. No reimbursement will be made if the damage has been caused by misuse or incorrect wiring. In such cases, the manufacturer reserves the right to charge the buyer the full price according to the spare parts price list. Any reimbursement claim must be submitted in writing to the manufacturer and must include proof of warranty showing the date of purchase. Proof of warranty may be a receipt, order confirmation of the heater purchase, building handover protocol, or equivalent documentation.
- The return of spare parts to the manufacturer is at the buyer's expense. The manufacturer pays the freight costs for shipping spare parts to the buyer.
- The warranty for spare parts is six (6) months from the delivery date.
- In repair cases, the manufacturer's warranty is limited solely to the repair or replacement of the control unit and does not cover any other electrical systems in the building.

7. CONNECTION DIAGRAM



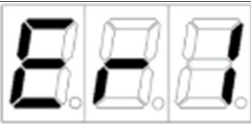
8. PROBLEM/TROUBLESHOOTING GUIDE

Why is the sauna stove not heating up?

Check the following:

1. Is the power on and the control switch in position I (**Chapter 2.5**)?
2. Is the adjusted temperature higher than the temperature of the sauna?
3. Has the temperature limiter gone off? (The cause must be determined before the next use)
4. Are the fuses on the building's switchboard intact?
5. Is there an error code on the control panel display? If the device malfunctions, the display will show an error code. You can attempt to solve the problem with the following error codes. If the problem is not solved with these instructions, contact technical support or maintenance.
6. Is the switchboard's fuse intact? It is located in the upper right corner of the switchboard, when viewed from the bottom.

Error codes will not be displayed after the error situation has been resolved. E.g. when the sensor short circuit has been dealt with or if the device has cooled sufficiently after overheating. After that, you can try to switch the device on again.

Error code / symptom:	Legend:
	ER1 = There is no heat sensor or the temperature is too low. Check the heat sensor's cabling and installation.
	ER2 = Heat sensor has short-circuited or the temperature is too high. Check the heat sensor's cabling and ensure that the sensor is intact and that there are no short circuits. Also check the Finlandia centre's wiring on page 14.
	The temperature in the device's control electronics is too high. See the previous part.
No error codes on the screen, but the sauna is not heating up.	Check the overheating protection and ensure that it has not gone off. The overheating protection may be turned off by carefully pressing the button in the heat sensor box.
The stove light does not work	First confirm that the sauna stove's model features lights. If the light is not turned on, contact technical support.
The sauna stove does not heat properly	Remove the stones and check the condition of the resistors. If the resistors are in working condition, contact technical support.



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