

User and installation manual

Contactor box **WE - 50 (2005 – 50) 400-415V 3N~**
 WE - 51 (2005 – 51) 400-415V 3N~
 WE - 52 (2005 – 52) 230-240V 3~

Control panels

- Premium Wifi (1601 – 33)
- Trend (1601 – 31)



Premium Wifi



Trend



Contactor box WE - 50

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WARNINGS

1.1. Check before taking a sauna bath

1. The sauna room is suitable for taking a sauna bath.
2. The door and the window are closed.
3. The sauna heater is topped with stones that comply with the manufacturer's recommendations, the heating elements are covered with stones, and the stones are piled sparsely.

NOTE! Ceramic rocks are not allowed.

The heater's main switch is located at the bottom of the heater, on the right side as seen from the front.

The main switch is marked with a 0 – 1 sticker.

1.2. Sauna room

The walls and ceiling of a sauna room should be thermally well insulated. All surfaces that store heat, such as tiled and plastered surfaces must be insulated. It is recommended to use wooden panel cladding inside the sauna room. If there are heat storage elements in the sauna room, such as decorative stone, glass etc., note that these elements may extend the pre-heating period even though the sauna room is otherwise well insulated (see page 4, section 1. Preparing for sauna heater installation).

1.3. Operation of the sauna heater controls

This appliance may not be used by children aged less than eight years, by persons with reduced physical, sensory or mental capabilities, or by persons lacking experience and knowledge regarding its operation only if such have been given instructions on the safe use of the device and the risks involved. Children must not be allowed to play with the appliance or to clean and service it without supervision. (7.12 EN 60335-1:2012)

1.4. Operation of the sauna heater controls

Refer to the specific control panel operating instructions.

Rearrange the sauna stones at least once a year and replace any weathered stones. This enhances air circulation between the stones, which extends the useful life of the thermal resistors.

If you encounter any problems, please contact the manufacturer's warranty service shop.

For additional information about enjoying a sauna bath, please visit our website at : www.tylohelo.com

1. Preparing for sauna heater installation

Check the following before installing the sauna heater.

- The ratio of the heater's input (kW) and the sauna room's volume (m³). Volume recommendations are presented in Tables 1, 2 and 3 on page 5, 6 and 7. The minimum and maximum volumes must not be exceeded.
- The height of the sauna room must be at least 1900 mm or 2200 mm depending on the heater power.
- Uninsulated and masonry stone walls extend the preheating time. Each square metre of plastered ceiling or wall surface adds 1.2 m³ to the sauna room's volume.
- Check page 7 Table 4, 5 and 6 for a suitable fuse size (A) and the correct diameter of the power supply cable (mm²) for the sauna heater in question.
- Conform to the specified safe clearance around the sauna heater.
- There should be enough room around the control panel for maintenance purposes. Also a doorway can be considered as a maintenance area.

2. Installation

Follow the safety clearance specifications on pages 5, 6 and 7 on tables 1, 2 and 3 when installing the sauna heater.

The sauna heater is a floor-standing model. The base must be solid, because the sauna heater weighs about 80-130 kg.

The sauna heater is levelled by the adjustable legs.

The sauna heater is fixed on the floor from its legs by the provided metal fasteners (2 pcs). This will keep the safety clearances intact during use.

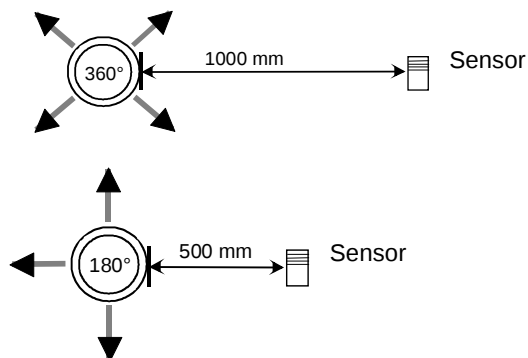
Walls or ceilings must not be clad with fibre-reinforced plaster board or other light-weight cladding, because they may cause a fire hazard.

Installing the sensor near a supply air vent

The sauna room air should be exchanged six times in an hour. The diameter of the supply air pipe should be between 50 and 100 mm.

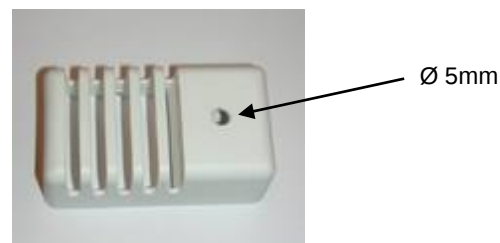
A circular air supply vent (360°) must be installed at least 1000 mm away from the sensor.

An air supply vent with a flow-directing panel (180°) must be installed at least 500 mm away from the sensor. Air flow must be directed away from the sensor.



Ceiling installation of the sensor

In ceiling installation, a 5-mm hole must be drilled to the sensor case to allow any condensed water to drain. Do not spray water directly towards the sensor or splash water at it with a sauna scoop.



Installing the Extra NTC sensor

The additional OLET 31 sensor is connected to the Ext NTC connector on the RJ10 circuit board. For more details, refer to the switch diagram. The additional sensor is installed on the sauna room wall no more than 500 mm from the ceiling. Once the additional sensor has been connected to the circuit board, it is automatically activated. This means that the temperature shown on the control panel is measured by the additional sensor.

The primary sensor installed above the sauna heater only has the limiter circuit that limits the maximum temperature to 110 °C. Even if the temperature is set to 110 °C on the control panel, the maximum temperature that can be shown on the panel is approximately 90 °C, as the primary sensor above the heater limits the maximum temperature to 110 °C. Depending on individual preferences, the temperature of a sauna room is typically set between 70 and 80 °C.

3. Safety clearances for sauna heaters 1101 and 1105 – XX (SKLE / Laava and SKLA / Magma)

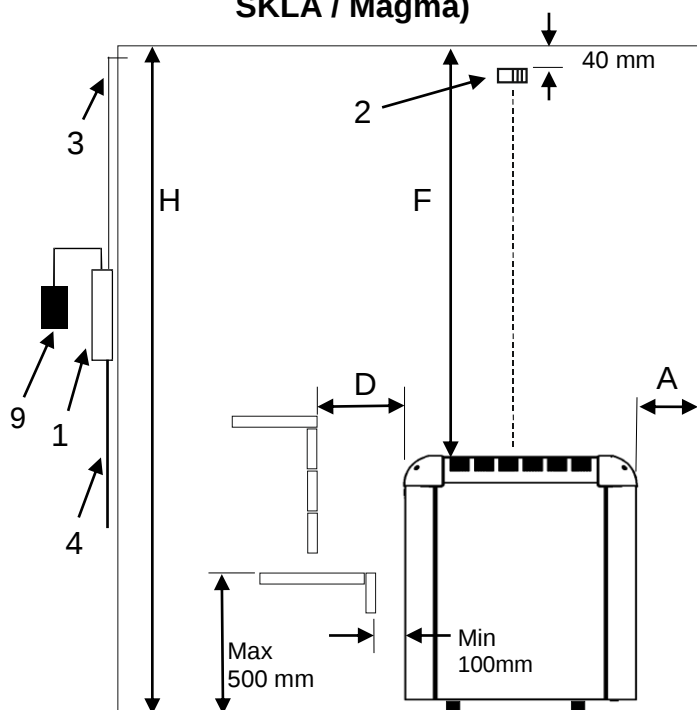


Figure 1. Installation location of the OLET 31 sensor 40 mm from the ceiling in the centre of the heater. The safety distance between the heater and the wall behind the heater must be at least the minimum distance listed in tables 1 SKLE / Laava and tables 2 for the SKLA and Magma heaters.

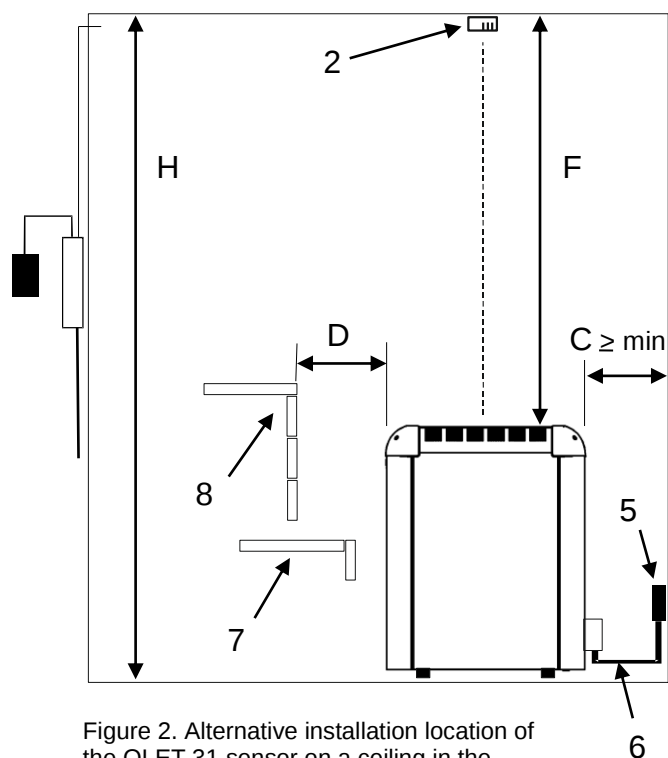
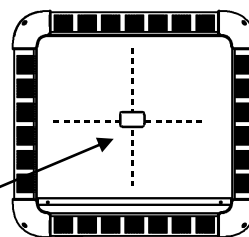


Figure 2. Alternative installation location of the OLET 31 sensor on a ceiling in the centre above the heater.

1. Contactor box WE - 50
2. Sensor OLET 31
3. Temperature resistant cable for sensor
4. Feed cable to the sauna heater
5. Connection box
6. Connection cable to the sauna heater
7. Lower bench or railing
8. Upper bench or railing
9. Control centre Trend or Premium wifi

Note! Alternative installation location of the OLET 31 sensor on a ceiling in the centre above the heater.



1105-... SKLE / Laava

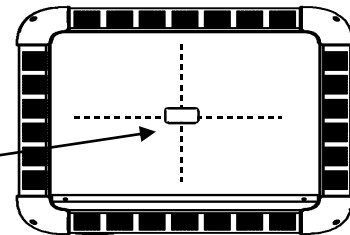
Power kW	Sauna volum			Minimum distances				Adequate amount of stones Approx. kg
	Min. m ³	Max. m ³	Minimi- height H mm	To the side wall A mm	To the front D mm	To the cei- ling F mm	To the back C mm	
9,0	8	13	1900	80	80	1200	110	60
10,5	9	15	1900	80	80	1200	110	60
12,0	10	18	2100	120	120	1400	120	60
15,0	14	24	2100	120	120	1400	120	60

Table 1 Safety clearances to heater 1105 – xx (SKLE / Laava)

Power kW	Sauna volum			Minimum distances				Adequate amount of stones Approx. kg
	Min. m³	Max. m³	Minimi- height H mm	To the side wall A mm	To the front D mm	To the cei- ling F mm	To the back C mm	
18	18	30	2100	140	160	1400	160	100
21	24	36	2100	140	160	1400	160	100
26	30	46	2200	140	160	1500	160	100

Table 2 Safety clearances 1101 – xx (SKLA / Magma)

Note! Alternative installation location of the OLET 31 sensor on a ceiling in the centre above the heater.



1101-... SKLA / Magma

4. Safety clearances for sauna heaters 1106 – XX (SKLF / Octa)

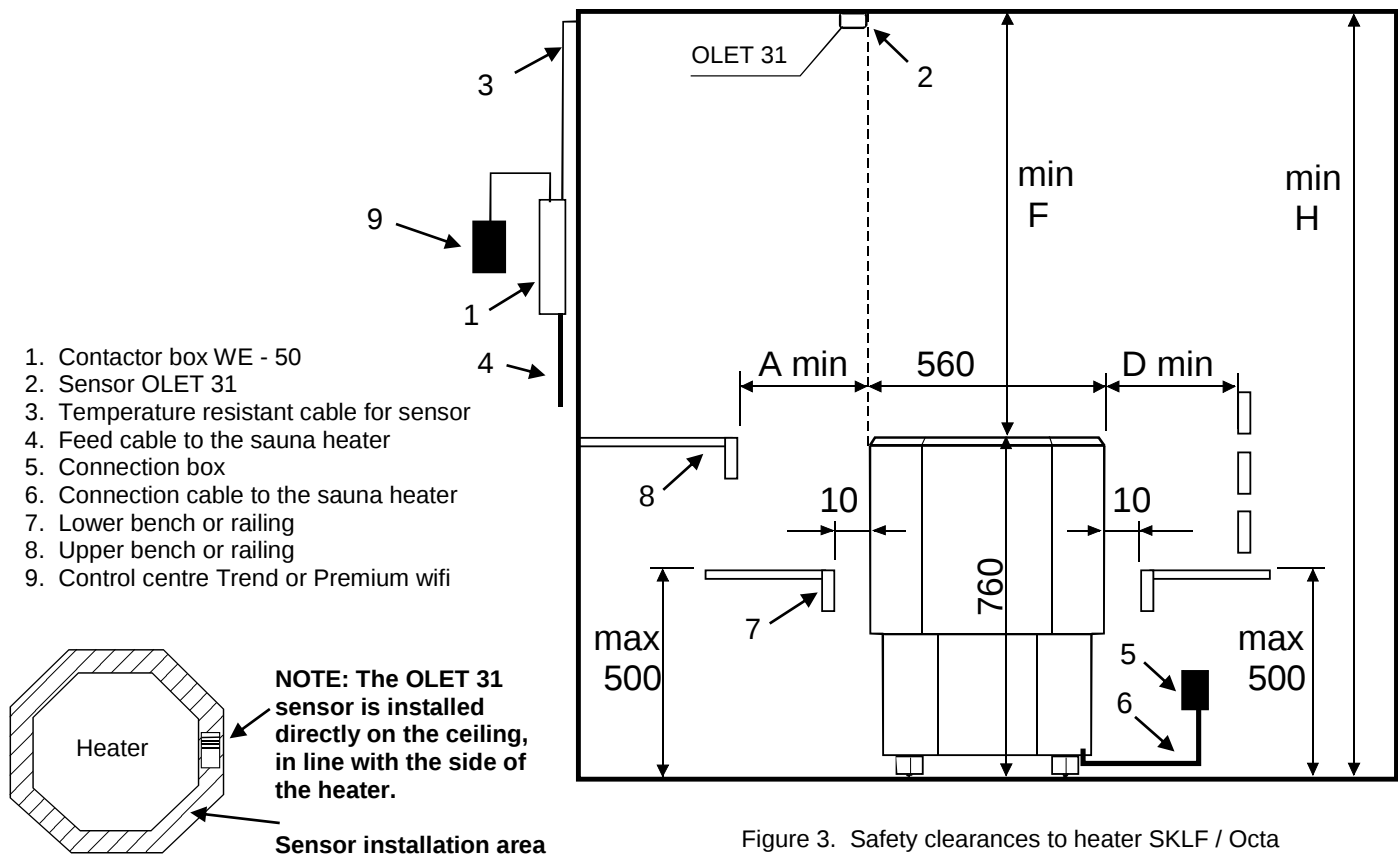


Figure 3. Safety clearances to heater SKLF / Octa

Power	Sauna room		Safety clearances min			Adequate amount of stones
kW	Volum m ³	Min height H mm	On the sides A mm	In front D mm	To the ceiling F mm	Approx. kg
9,0	8-13	1900	25	25	1150	60
10,5	9-15	1900	25	25	1150	60
12,0	10-18	2100	65	65	1350	60
15,0	14-24	2100	65	65	1350	60

Table 3 Safety clearances to heater 1106 – xx (SKLF / Octa)

5. Cables and fuses for heaters 1105 – XX (SKLE / Laava)

Model	Power	Sauna heaters connection cable H07RN-F / 60245 IEC 66 mm ² 400 – 415V 3N~ 1 – Power Group	Fuse A	Sauna heaters connection cable H07RN-F / 60245 IEC 66 mm ² 230V 3~ 2 – Power Group	Fuse A
1105 - 901	9,0	5 x 2,5	3 x 16	2 x (4 x 2,5)	2 x (3 x 16)
1105 -1051	10,5	5 x 2,5	3 x 16	2 x (4 x 2,5)	2 x (3 x 16)
1105 -1201	12,0	5 x 6	3 x 25	2 x (4 x 2,5)	2 x (3 x 16)
1105 -1501	15,0	5 x 6	3 x 25	2 x (4 x 6)	2 x (3 x 25)

Table 4 Kables and fuses for heater 1105 – XX (SKLE / Laava)

6. Cables and fuses for heaters 1101 – XX (SKLA / Magma)

Model	Power	Sauna heaters connection cable H07RN-F / 60245 IEC 66 mm ² 400 – 415V 3N~ 2 – Power Group	Fuse A	Sauna heaters connection cable H07RN-F / 60245 IEC 66 mm ² 230V 3~ 2 – Power Group	Fuse A
1101 -181	18 (9 + 9)	2 x (5 x 2,5)	2 x (3 x 16)	2 x (4 x 6)	2 x (3 x 25)
1101 -210	21 (9 + 12)	5 x 2,5 5 x 6	3 x 16 3 x 25	4 x 6 4 x 10 WE - 52	3 x 25 3 x 35 WE - 52
1101 -260	26 (13+13)	2 x (5 x 6)	2 x (3 x 25)	2 x (4 x 10) WE - 52	2 x (3 x 35) WE - 52

Table 5. Kables and fuses for heater 1101 – XX (SKLA / Magma)

7. Cables and fuses for heaters 1106 – XX (SKLF / Octa)

Model	power kW	Sauna heaters connection cable H07RN-F/60245 IEC 66 mm ² 400V – 415V 3N~ 1 – Power Group	Fuce A
1106 – 901	9,0	5 x 2,5	3 x 16
1106 – 1050	10,5	5 x 2,5	3 x 16
1106 – 1201	12,0	5 x 6	3 x 25
1106 – 1501	15,0	5 x 6	3 x 25

Table 6. Kables and fuses for heater 1106 – XX (SKLF / Octa)

8. Using the contactor cases

The contactor case 2005 – 50 (WE – 50), 2005 – 52 (WE - 52) as well as an additional contactor case 2005 – 51 (WE – 51) supplied with the second heater can be used with the following sauna heaters:

- SKLE, LAAVA....1105 -	WE - 50	Power group 1 or 2	9 – 15 kW 230V 3~ / 400V – 415V 3N~
- SKLA, MAGMA...1101 -	WE - 50	Power group 2	18 – 26 kW 400V – 415V 3N~
- SKLA, MAGMA...1101 -	WE - 52	Power group 2	18 – 26 kW 230V 3~
- SKLF, OCTA.... 1106 -	WE - 50	Power group 1	9 – 15 kW 400V – 415V 3N~

The models of the control panels that can be used to control contactor cases WE - 50 and WE - 52 are 1601 – 31 (Trend) and 33 (Premium Wifi).

Refer to the control panel operating manual for more specific instructions.

The contactor box is intended to be installed outside the sauna room. The cables must be installed using a fixed installation. A connection box must be installed in the sauna room with a semi-fixed installation on the sauna heater.

Failure to follow the minimum clearances in the installation instructions may cause a fire hazard.

Always check the sauna room before switching the sauna heater on.

9. Locating the connecting box for the connection cable in the sauna room

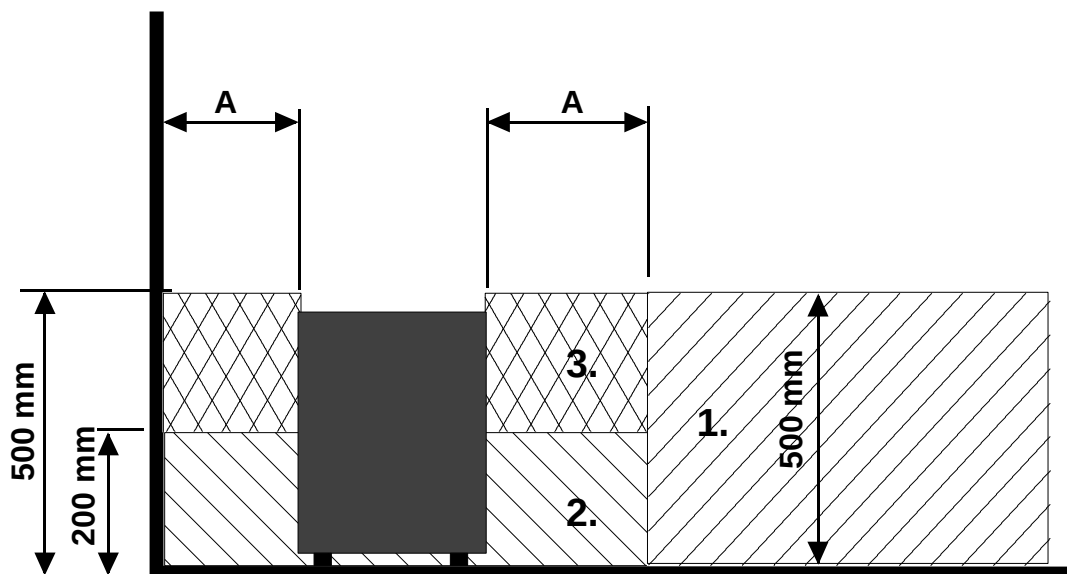


Figure 4. Location for the connection box

A = Specified minimum safety clearance, see table 1, 2 or 3

1. Recommended location for the connecting box
2. Silumin box recommended in this area.
3. This area should be avoided. Always use a silumin box.

In other areas, use a heat-resisting box (T 125 °C) and heat-resisting cables (T 170 °C). The connection box must be clear of obstacles. When installing the connection box to zones 2 or 3, refer to the instructions and regulations of the local energy supplier.

10. Door switch

The door switch refers to the switch on the sauna door. This switch complies with regulations. Public and private saunas must have a door switch, i.e. saunas where the heater can be switched on from outside the sauna, e.g. using an On/Off button or a similar method.

If the door is opened before the heating sequence is started, (pre-set heating) automatic use (remote use) is disabled after one minute. The door must be closed and the function restarted from the control panel.

If the door has been left open for more than five minutes while the heater is on, the heater is automatically turned off. The heater can be turned on again from the control panel after the door is closed. The fault indicator light, if installed, will start flashing. See installation instructions below.

Door switch instructions for installation and connection

The door switch is installed outside the sauna room on the upper edge of the door, at least 300 mm from the inner corner. The switch part is installed on the door frame and the magnet is installed on the door. The distance between the switch and the magnet is 18 mm.

When the door switch is installed on the top part of the door, TylöHelo recommends using the TylöHelo model with product number 0043233, SSTL 8260371.

When the door switch is installed on the bottom part of the door, TylöHelo recommends using the TylöHelo model with product number SP11000326, SSTL 8263280.

See the installation and user instructions supplied with the heater for instructions.

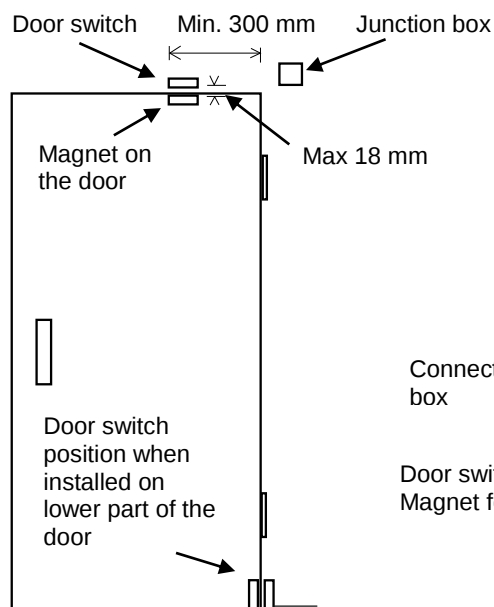


Figure 6. installing the door switch

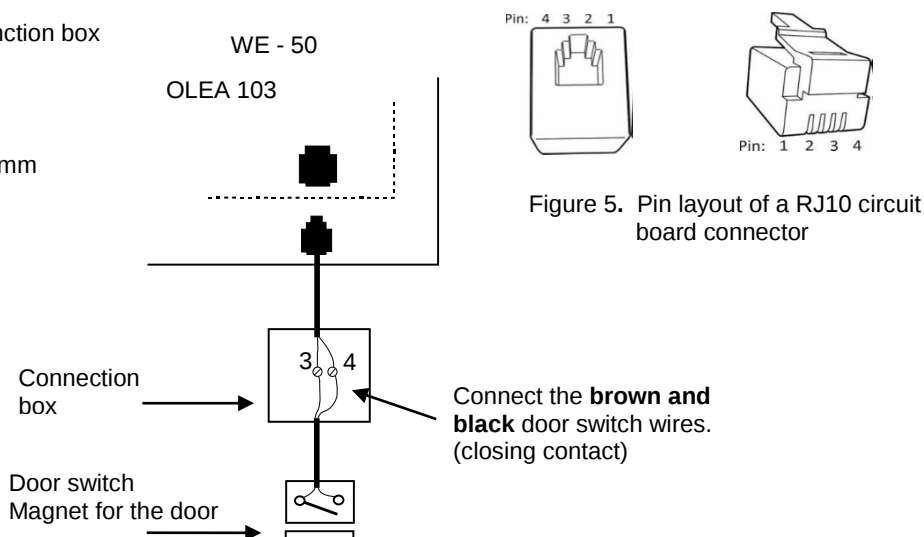


Figure 5. Pin layout of a RJ10 circuit board connector

Door switch			Conductor colour
Pin 1			
Pin 2			
Pin 3	Door switch	GND	Orange
Pin 4	Door switch	12 VDC	Green/white

Table 7. Connecting the door switch to an RJ10 connector.

11. Remote controlling

The contactor case can be controlled remotely by a closing contact, which can also be pulse triggered for on-off, wire the contacts to pins 3 and 4 of a RJ10 connector. The cable size is 24 AWG or 26 AWG. The maximum length of the 24 AWG cable is 200 m, while the 26 AWG cable must be no longer than 130 m.

Remote control switch (Ex switch)			
Pin 1			
Pin 2			
Pin 3	From switch	GND	
Pin 4	To switch	12 VDC	

Table 8. Instructions for connecting OLEA 103 RJ 10 circuit board for remote control

12. Wiring diagram WE - 50 and 52

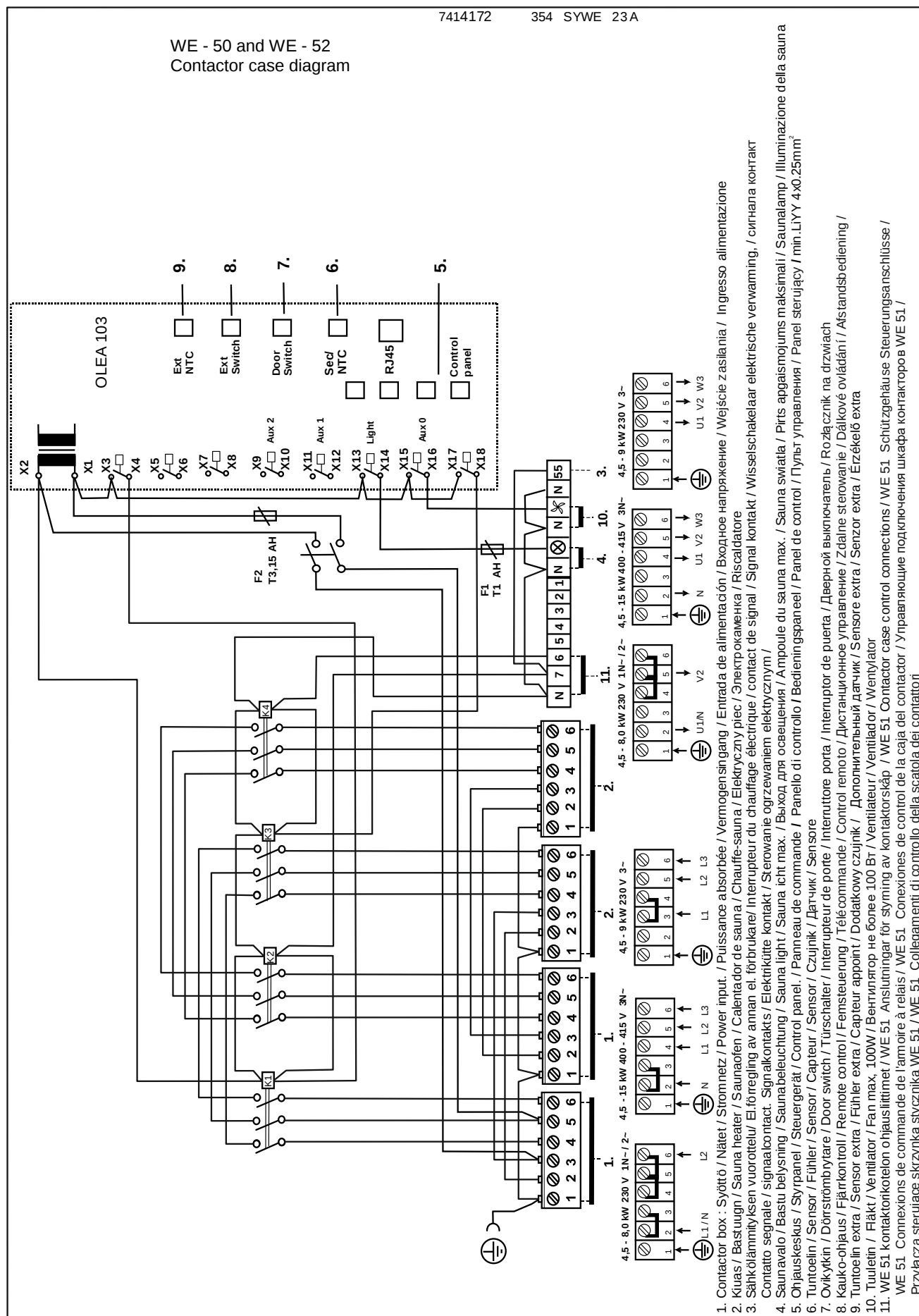
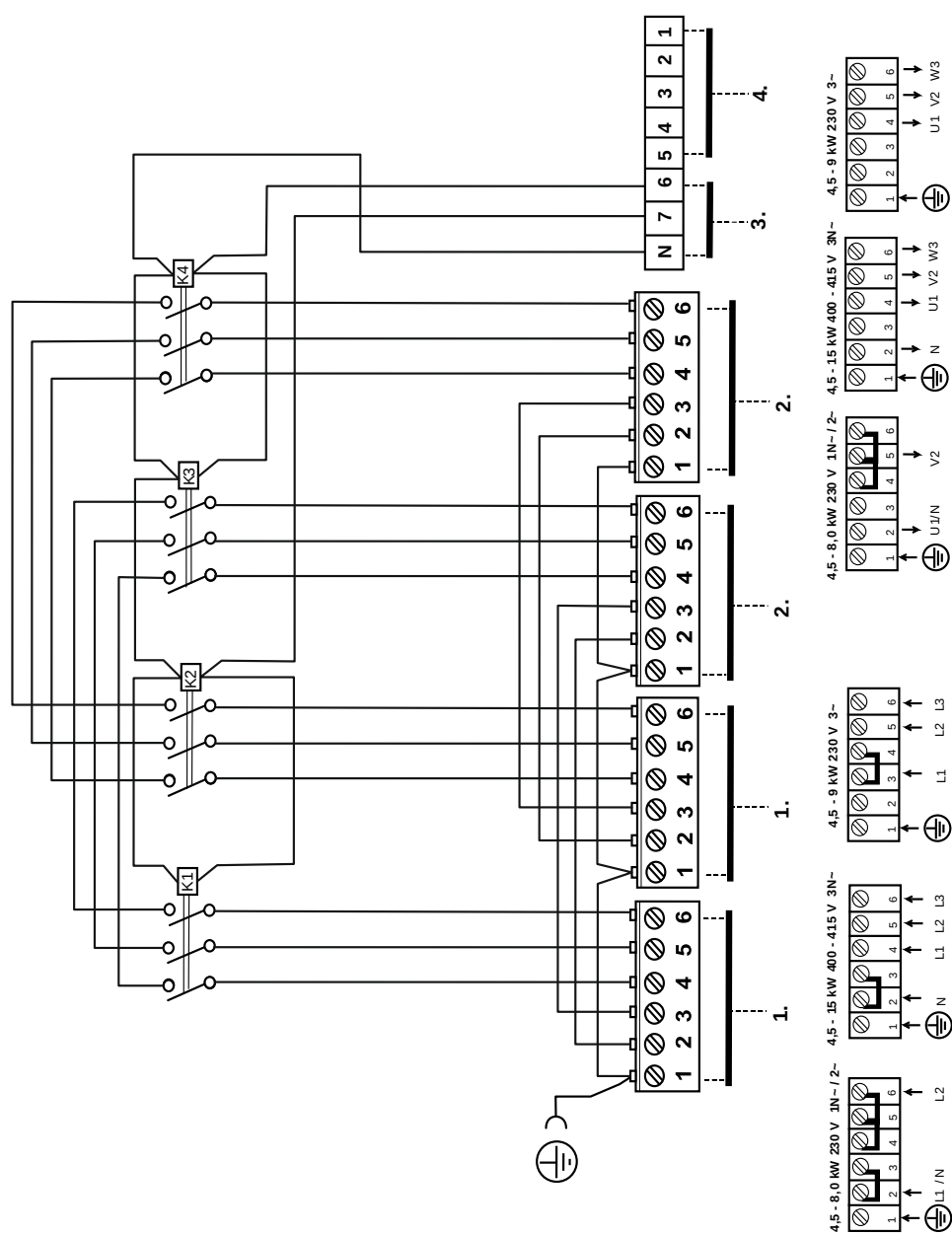


Figure 7 Wiring diagram for contactor box WE - 50 and 52

13. Wiring diagram WE - 51

Additional contactor case WE - 51 for controlling two Power group 2 sauna heaters.



1. Contactor box : Svýttö / Nätet / Stromnetz / Power input. / Puissance absorbée / Entrada de alimentación / Входное напряжение / Wejście zasilania / Ingresso alimentazione
2. Kúas / Bastuugn / Sauna heater / Saunaöfen / Chauffe-sauna / Elektrokoamenka / Riscaldatore.
3. Kontaktonen ohjauks / Styra kontaktorena / Controlling the contactors / Steuerung der Schütze / Commande des contacteurs / Control de los contactores / Управляющие контакторами / Sterowanie stycznikami / Controllo dei contattori
4. Tuntiolein ohjauks / Styra sensor / Controlling the sensor / Steuerung des Fühlers / Commande du capteur / Управляющие датчиком / Sterowanie prąsa czujnika / Controllo de sensore

Figure 8 Wiring diagram for contactor box WE - 51

14. Principle diagram

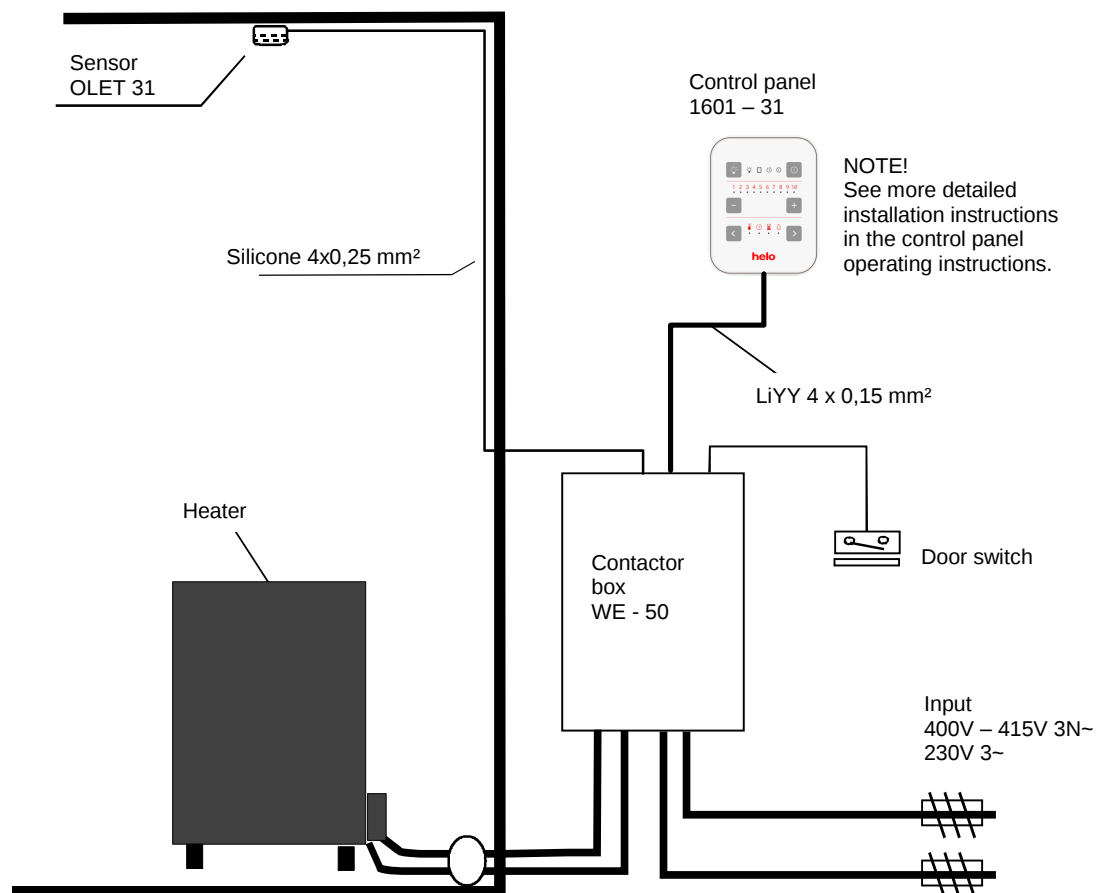
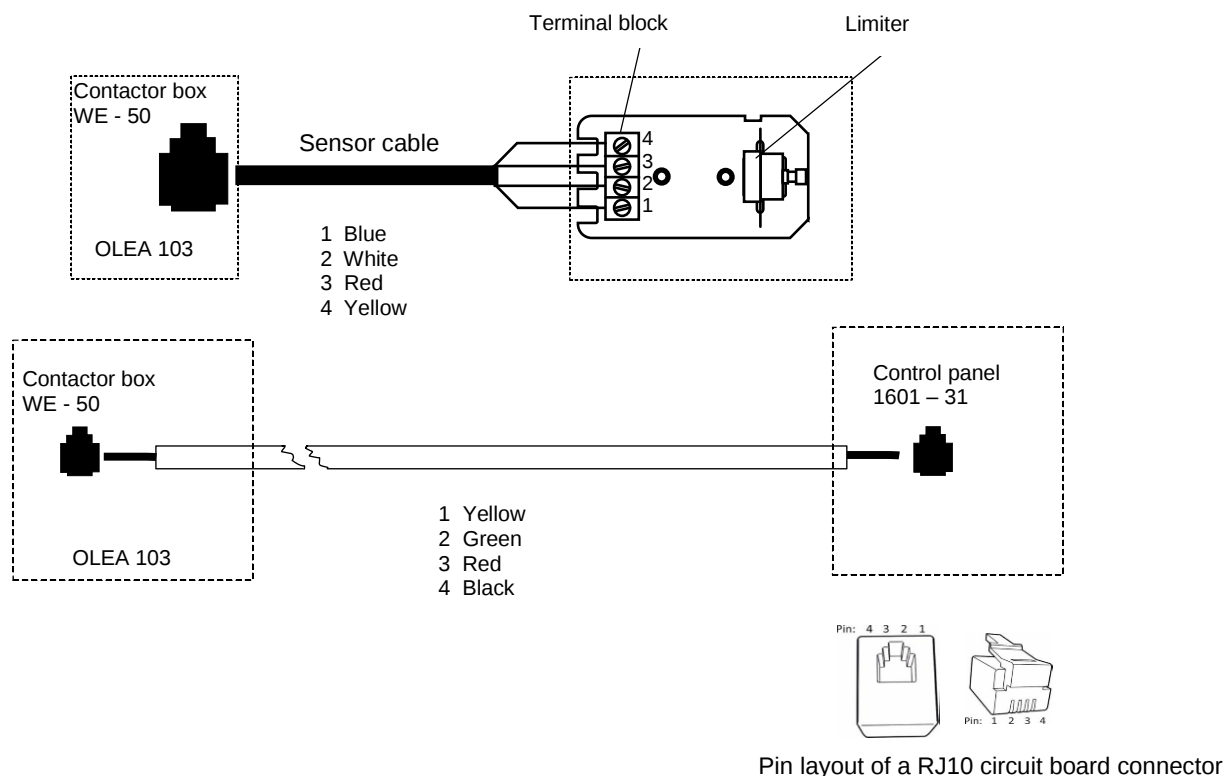
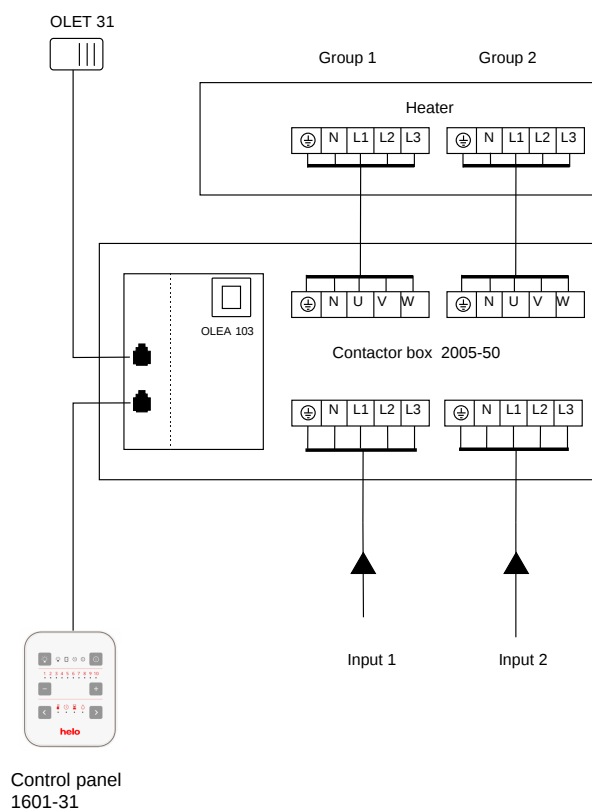


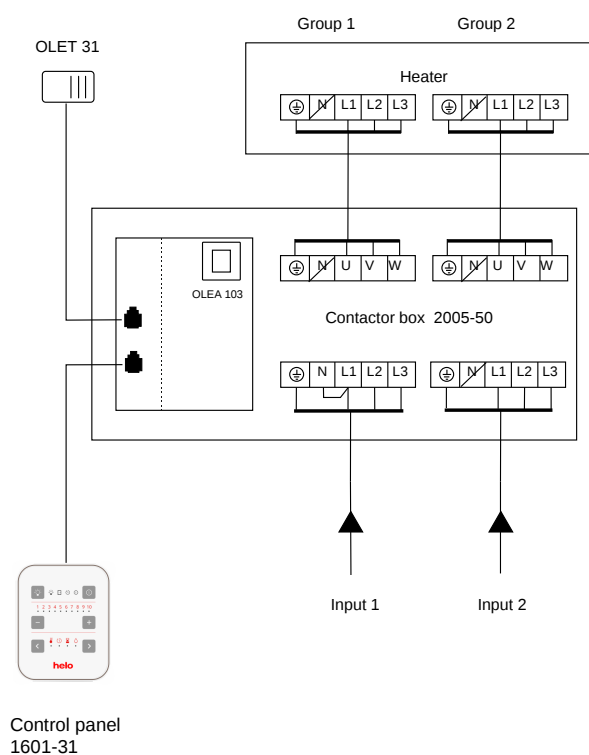
Figure 9 Principle diagram of connection

15. Connection principle

400V – 415V 3N~ 2 power group



230V 3~ 2 power group



400V – 415V 3N~ 1-Power group

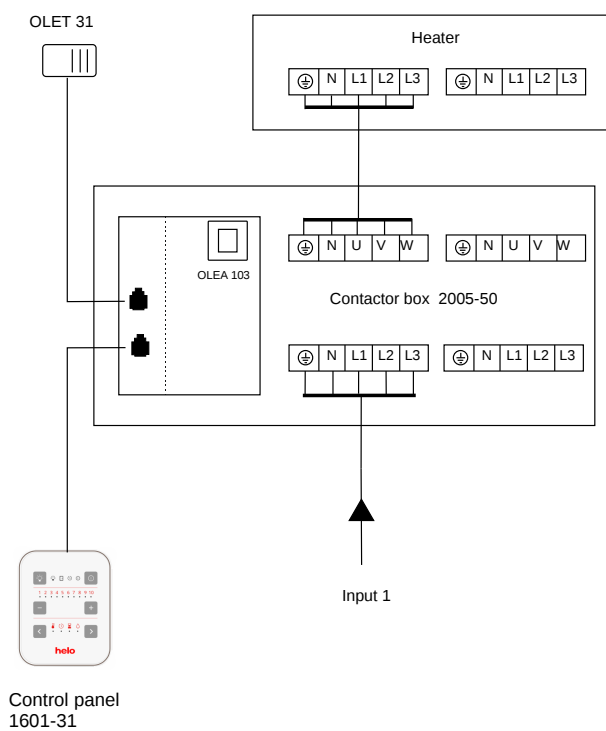


Figure 10 Principle diagram of connections

16. Internal connection for sauna heaters SKLE / LAAVA

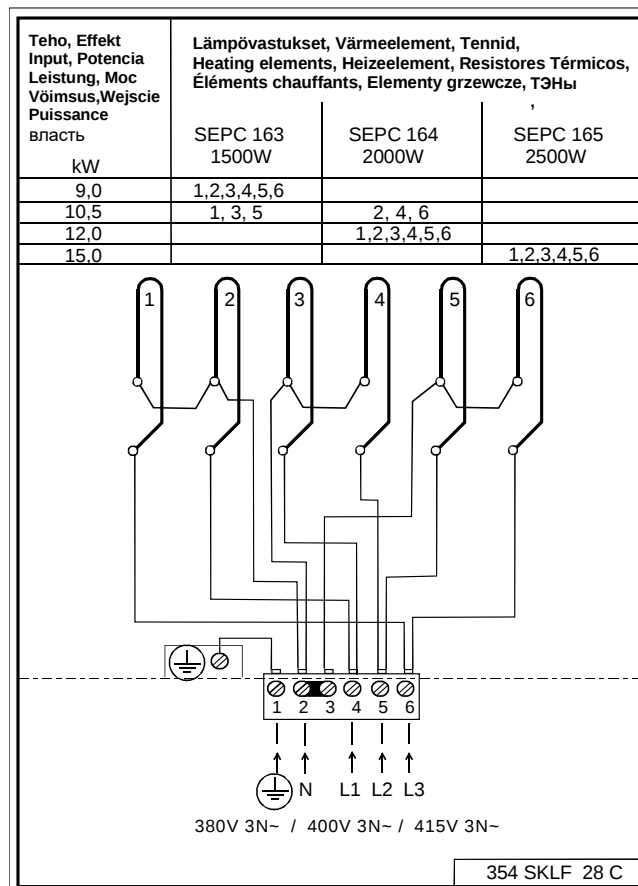
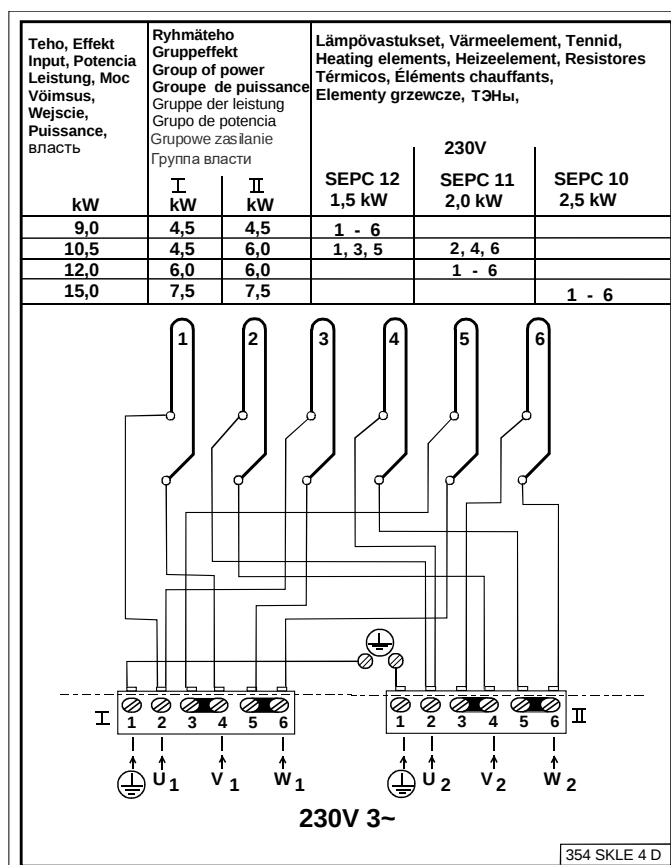
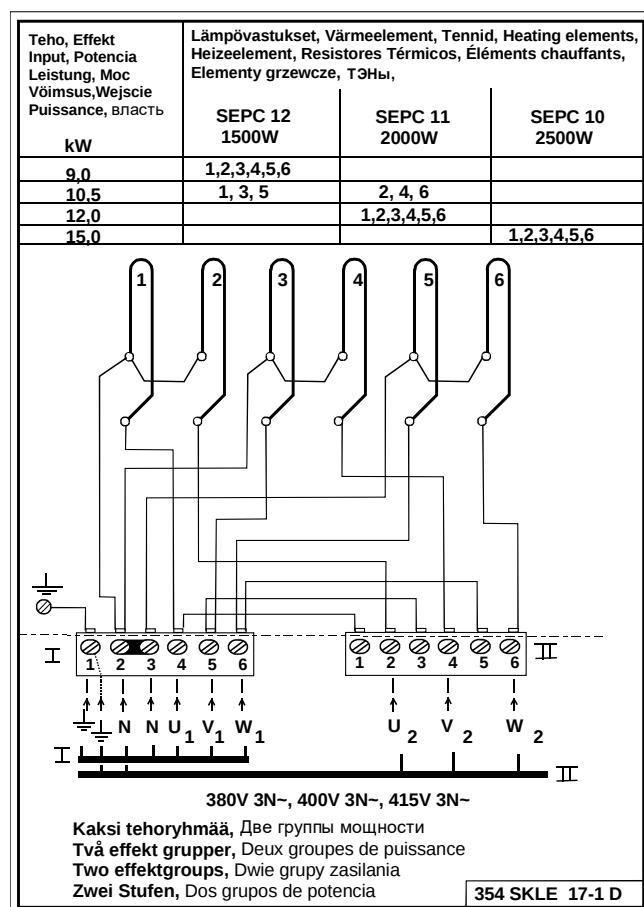
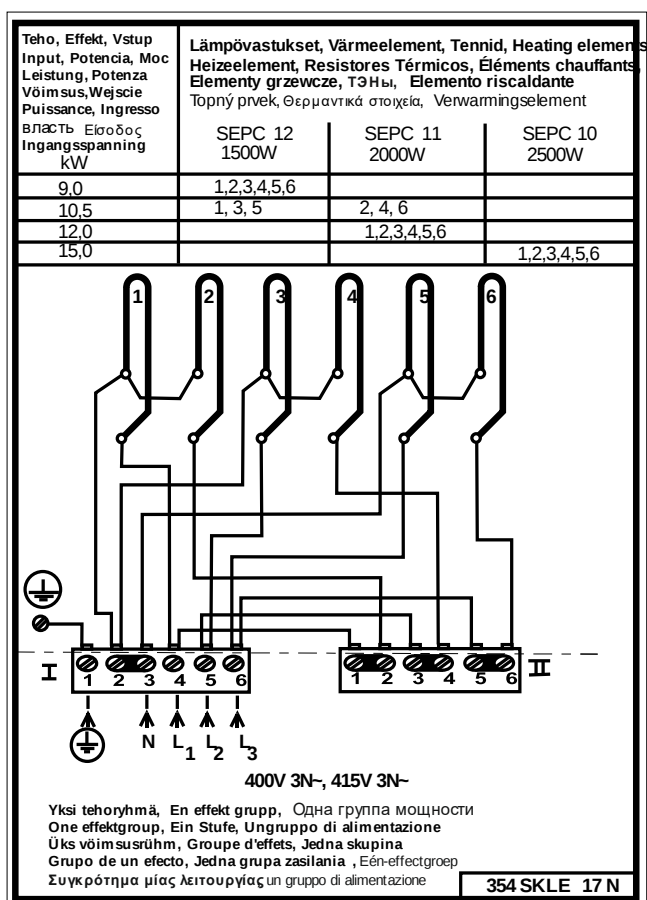


Figure 11 Internal connection for sauna heaters SKLE / Laava

Figure 12 Internal connection for sauna heaters SKLF / Octa

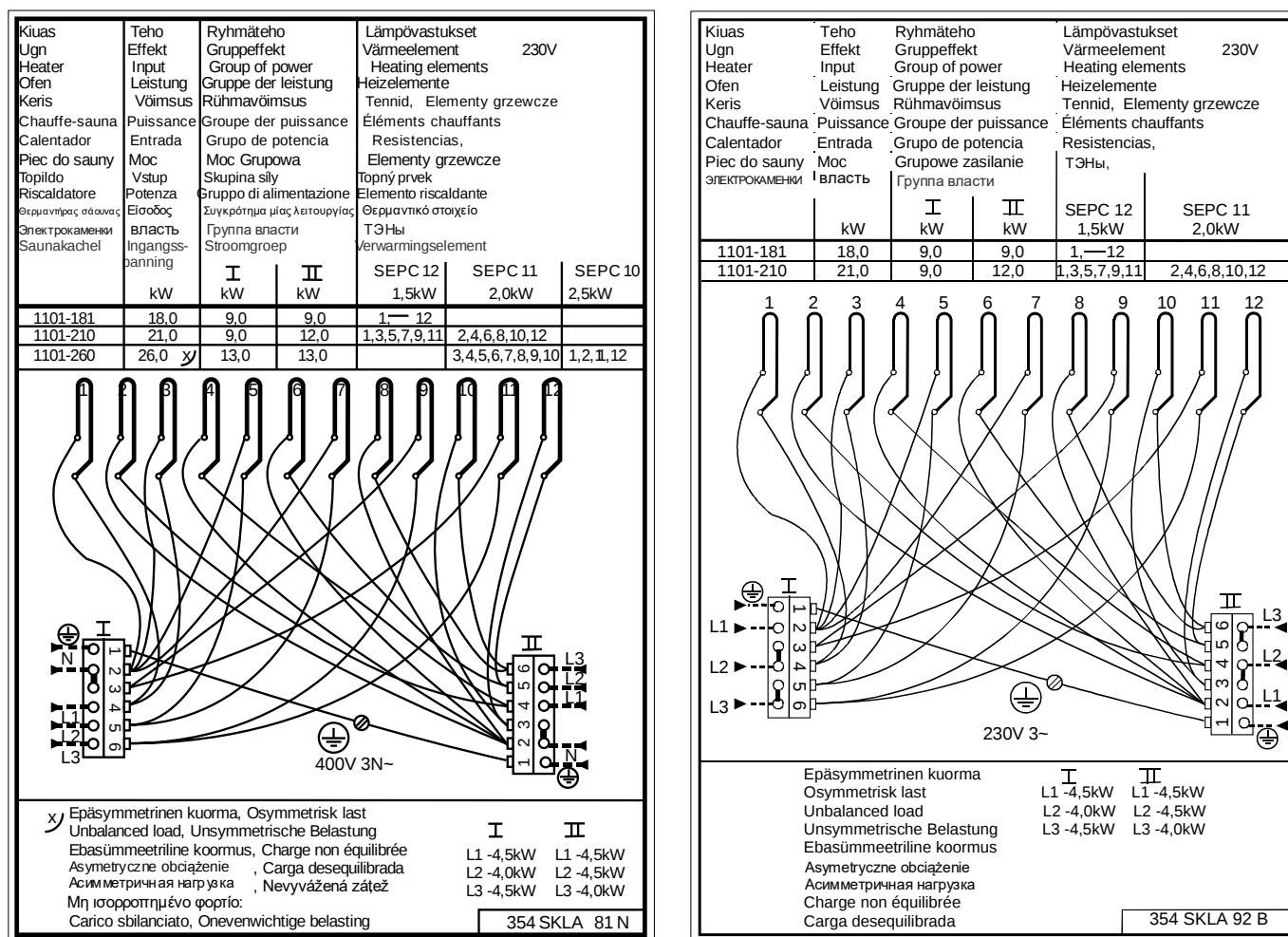
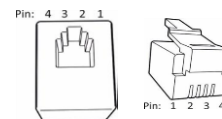


Figure 13 Internal connection for sauna heaters SKLA / Magma



17. Circuit board RJ connectors

Pin layout of a RJ10 circuit board connector

NOTE: Incorrect connections may break a circuit board.

Additional sensor (NTC)			Remote control switch (Ext switch)			Door switch		
Pin 1			Pin 1			Pin 1		
Pin 2	NTC 10 kOhm	3.3 V	Pin 2			Pin 2		
Pin 3	NTC 10 kOhm	CPU	Pin 3	To switch	GND	Pin 3	Door switch	GND
Pin 4			Pin 4	To switch	12 VDC	Pin 4	Door switch	12 VDC

Sensor (Sec/NTC)			4 units of RS 485			Additional relay board (Add-on) RJ45 cable from a relay board to an additional relay board.
Pin 1	End stop	GND	Pin 1	Serial traffic	A	
Pin 2	NTC 10 kOhm	3.3 V	Pin 2	Serial traffic	B	
Pin 3	NTC 10 kOhm	CPU	Pin 3	Power supply	12 VDC	
Pin 4	End stop	10V	Pin 4	Power supply	GND	

Table 9. Circuit board RJ connectors

18. Installation of two SKLA/Magma heaters in a sauna room.

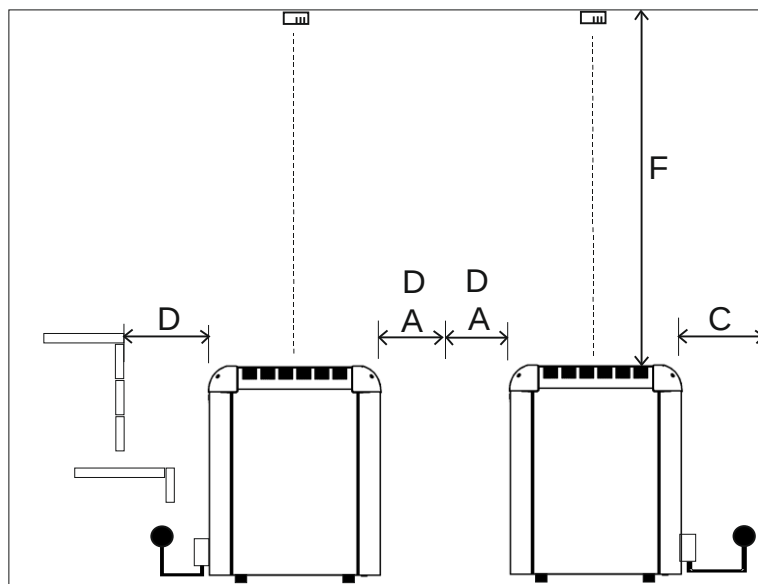
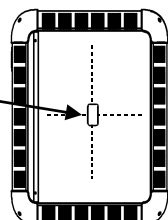


Figure 14 Installation of two heaters in a sauna room.

NOTE: When installed in parallel, the heaters must be spaced at least twice the A length between them.
When installed in a row, the heaters must be spaced at least twice the D length between them.

Installation location of the OLET 28 sensor on a ceiling in the centre above the heater.
Sauna heater 1



Installation location of the OLET 28 sensor on a ceiling in the centre above the heater.
Sauna heater 2

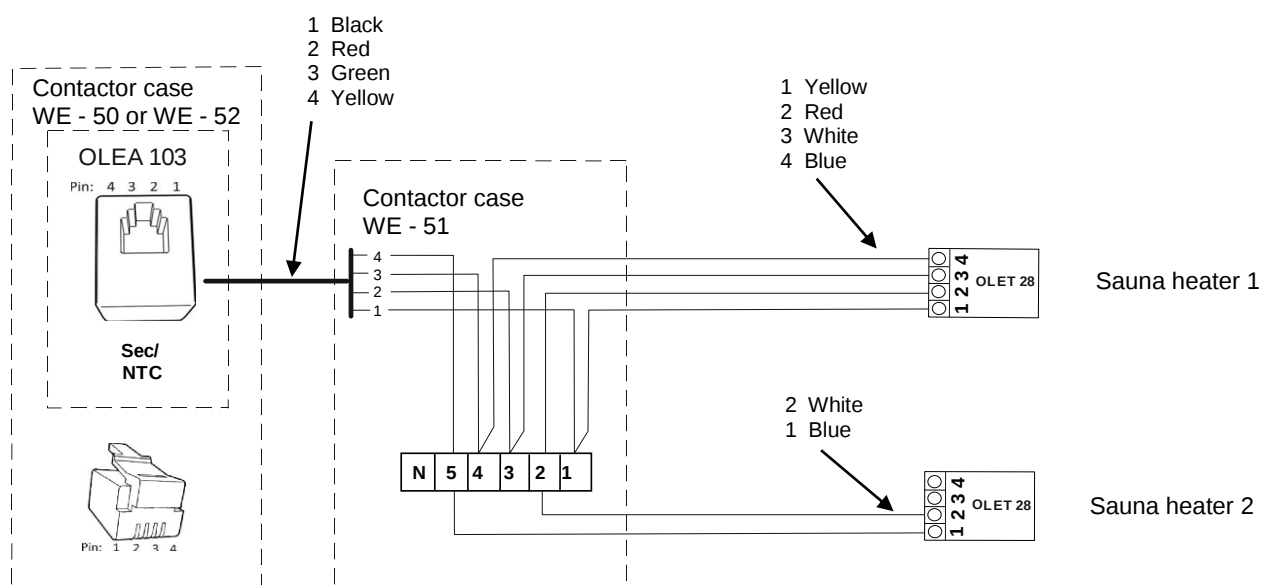
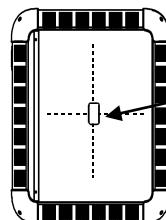


Figure 15 Installation of the sensors of two sauna heaters. The control panel components of the sauna heater 2 to be connected are the limiter circuit and connectors 1 and 2

Output kW	Sauna room			Minimum safety distances				Appropriate amount of stones In kg, approx.
	Min.	Max.	Minimum height	At sides	In front	To ceiling	To back wall	
	m ³	m ³	H mm	A mm	D mm	F mm	C mm	
18 + 18 = 36	39	61	2300	140 + 140 = 280	160 + 160 = 320	1600	160	100 + 100 = 200
21 + 21 = 42	46	71	2400	140 + 140 = 280	160 + 160 = 320	1700	160	100 + 100 = 200
26 + 21 = 47	52	80	2500	140 + 140 = 280	160 + 160 = 320	1800	160	100 + 100 = 200
26 + 26 = 52	57	88	2500	140 + 140 = 280	160 + 160 = 320	1800	160	100 + 100 = 200

Table 10. Safety distances in a two-heater installation.

19. ROHS

Ympäristönsuojeluun liittyviä ohjeita

Tämän tuotteen käyttöön päätyttyä sitä ei saa hävittää normaalin talousjätteen mukana, vaan se on toimitettava sähkö- ja elektroniikkalaitteiden kierrätykseen tarkoitettuun keräyspisteeseen.

Symboli tuotteessa, käyttöohjeessa tai pakkauksessa tarkoittaa sitä.



Valmistusaineet ovat kierrätettävissä merkintänsä mukaan. Käytettyjen laitteiden uudelleenkäytöllä, materiaalien hyödyntämisellä tai muulla uudelleenkäytöllä teet arvokkaan teon ympäristömme hyväksi. Tuote palautetaan ilman kiuaskiviä ja verhouskiviä kierrätyskeskukseen.

Tietoa kierrätyspaikoista saat kuntasi palvelusteestä.

Anvisningar för miljöskydd

Denna produkt får inte kastas med vanliga hushållssopor när den inte längre används. Istället ska den levereras till en återvinningsplats för elektriska och elektroniska apparater.

Symbolen på produkten, handboken eller förpackningen refererar till detta.



De olika materialen kan återvinnas enligt märkningen på dem. Genom att återanvända, nyttja materialen eller på annat sätt återanvända utsliten utrustning, bidrar du till att skydda vår miljö.

Produkten returneras till återvinningscentralen utan bastusten och eventuell täljstensmantel.

Vänligen kontakta de kommunala myndigheterna för att ta reda på var du hittar närmaste återvinningsplats.

Instructions for environmental protection

This product must not be disposed with normal household waste at the end of its life cycle. Instead, it should be delivered to a collecting place for the recycling of electrical and electronic devices.

The symbol on the product, the instruction manual or the package refers to this.



The materials can be recycled according to the markings on them. By reusing, utilising the materials or by otherwise reusing old equipment, you make an important contribution for the protection of our environment. Please note that the product is returned to the recycling centre without any sauna rocks and soapstone cover.

Please contact the municipal administration with enquiries concerning the recycling place.

Hinweise zum Umweltschutz

Dieses Produkt darf am Ende seiner Lebensdauer nicht über den normalen Haushaltsabfall entsorgt werden, sondern muss an einem Sammelpunkt für das Recycling von elektrischen und elektronischen Geräten abgegeben werden.

Das Symbol auf dem Produkt, der Gebrauchsanleitung oder der Verpackung weist darauf hin.



Die Werkstoffe sind gemäß ihrer Kennzeichnung wiederverwertbar. Mit der Wiederverwendung, der stofflichen Verwertung oder anderen Formen der Verwertung von Altgeräten leisten Sie einen wichtigen Beitrag zum Schutze unserer Umwelt. Dieses Produkt soll ohne Steine und Specksteinmantel an dem Sammelpunkt für Recycling zurückgebracht werden.

Bitte erfragen Sie bei der Gemeindeverwaltung die zuständige Entsorgungsstelle.