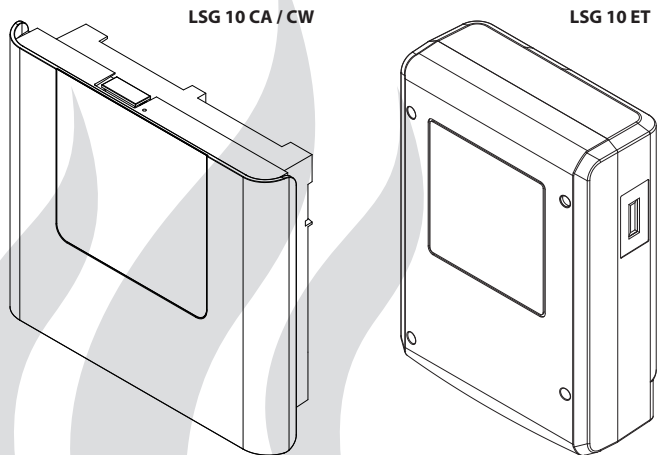


LSG 10

Contactor box



EN Installation and Operating Instructions

Made in Germany

Documentation

Manufacturer

EOS Saunatechnik GmbH

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Original installation instructions EN

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English

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General safety instructions

Safety levels

Safety instructions and important operating instructions are classified. Please familiarise yourself with the following terms and symbols:

WARNING

Warning

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Caution

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Notice

Indicates a hazardous situation which, if not avoided, will result in damage to the unit.

Mounting and electrical installation



These installation instructions are intended for qualified personnel familiar with the laws and regulations applicable to electrical installations at the installation site. Observe the following general safety instructions during mounting, configuration and commissioning of the product.

Risk to life and limb and risk of fire

Risk to life and limb from electric shock and fire in the event of improper or faulty electrical connection. This risk also applies following completion of the installation work.

- The electrical installation of the relay box and other electrical systems or equipment with a fixed mains connection must only be performed by a trained electrician from an authorised electrical company.
- Observe the stipulations in VDE 0100 part 703 or the applicable local legal requirements.
- The system must be completely disconnected from the mains supply before commencing installation and repair work.
- The housing cover must only be removed by a specialist.

Fire hazard from overheating

Insufficient ventilation can lead to device overheating and fire.

- Do not install control panels, relay boxes and modules in enclosed cabinets or wood panelling.
- Observe the sauna heater and control unit manufacturer's safety and installation instructions.
- Observe the cabin manufacturer's safety and installation instructions.

Damage to the unit

Corrosive or heavy saline atmospheres damage the contacts in the control panel, in the relay box and in the sensors.

- The device should not be installed in a corrosive or heavy saline atmosphere.

Damage due to incorrect mounting location

The device is not suitable for outdoor use!

- It may be operated only inside buildings and may not be exposed to environmental conditions such as extreme humidity and moisture or the possible formation of condensation or corrosive substances in the ambient air, as well as other weather conditions.
- Similarly, excessive cold and extreme exposure to sunlight must be prevented.
- Protect the unit accordingly if there is an increased risk of mechanical damage.

Operator instruction

The operator of the infrared or sauna cabin must be instructed on the general safety instructions during commissioning. The operator must be given a copy of the operating instructions.

The operator must make the end user aware of safety instructions that are relevant to the end user.

Risk of electric shock

A risk to life and limb from electric shock and fire arises in the event of improper repair work. This risk also applies after work is completed.

- The housing covers must only be removed by a specialist.
- Repairs and installations may only be performed by a trained specialist.
- The system must be completely disconnected from the mains supply before commencing repair work.
- Use only original spare parts from the manufacturer.

Operation by children or persons with reduced mental capacity

Children and persons with reduced mental capacity can put themselves at risk.

- Children must be supervised to ensure they do not play with the unit.
- This device is not intended to be used by children or by persons with reduced mental capacity, or limited physical or sensory abilities.
- Children and persons who have not received proper instruction must not clean or service the system.

- Additionally make sure to observe the installation and operation instructions of the control unit, sauna heater and/or steam generator.

Standards and regulations

For an overview of the standards that were observed during design and construction of the units, please refer to the individual product's technical data sheet that can be downloaded from www.eos-sauna.com.






Local regulations also apply to the installation and operation of heating, sauna, and steam room systems.

Identification

The LSG10 device is a relay box for power extension of sauna control units and in conjunction with a sauna heater is used to operate a sauna cabin.

Identification

The nameplate is attached to the underside of the base of the housing.

A —	Leistungsschaltgerät	
B —	Type EOS LSG 10	
C —	Art. Nr. 94 xxxx 00	
D —	400V 3N ~ 50 Hz max. Schaltleistung 10 kW	
E —	Made in Germany	 IPX4
F —	EOS SAUNATECHNIK GmbH, Schneiderstr. 1, 35759 Riedorf	  
	S-No. 50.21	00002
	G	H

- A Name
- B Model
- C Item number
- D Operating voltage and voltage
- E Country of origin
- F Manufacturer
- G Manufacturing date
- H Serial number

Intended use

The LSG device in conjunction with a suitable control unit and a sauna heater control unit is intended to be used only to heat sauna cabins. It is suitable for cabins used in private and commercial settings. The device is intended only for mounting on the wall.



The device is not suitable for outdoor use. It must be operated only inside buildings and may not be exposed to environmental conditions such as extreme humidity and moisture or the possible formation of condensation or corrosive substances in the ambient air, as well as other weather conditions. Similarly, excessive cold and extreme exposure to sunlight must be prevented. Protect the unit accordingly if there is an increased risk of mechanical damage.

Foreseeable misuse

The following are considered instances of foreseeable misuse:

- Incorrect electrical connection.
- The unit is operated without knowledge of or compliance with the safety instructions.
- Operating, service and maintenance requirements are not observed.
- The unit is operated after technical or other modifications are made to the relay box.
- The unit is operated by children under 8 years of age or by children above 8 years of age and persons with reduced mental capacity who have not been thoroughly instructed in its use or are not supervised.

The manufacturer is not liable for unauthorised modifications made to the equipment and damages resulting from these modifications. The person modifying the equipment alone shall bear the associated risk.

See also the General Safety Instructions.

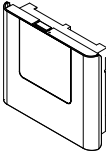
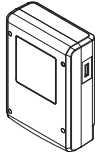
Scope of delivery

Check the device for completeness upon receipt.

The delivery includes:

- 1 power extension unit
- 1 plastic bag with
 - 8 rubber cable glands
 - 3 mounting screws
- 1 installation and operating instruction

Technical data

Typ	LSG 10 CA/CW	LSG 10 ET
Model		
Voltage (power supply):	400 V 3N ~ 50 Hz	
Switching output	max. 10 kW	
Fuse protection (power supply)	3 x 16 A	
To be used with the control units	EOS Econ, Compact, EmoTec, EmoStyle, EmoTouch 3 series	
Dimensions (H x W x D)	220 x 255 x 65 mm	270 x 190 x 90 mm
Weight	approx. 1,2 kg	approx. 1,5 kg
Protection class	IPx4 water splash protection	
Ambient temperature	-10°C to +40°C	
Storage temperature	-20°C to +60°C	

Installation

This chapter describes how to install the relay box, the control panel and the most important components.

Cables to connect sauna heater, vaporizer (steam generator) or another heating system, lighting(s), fan(s) or other components must have appropriate cross section.

All electrical installations and all connecting lines that are installed inside a cabin must be suitable for an ambient temperature of at least 170°C and protection class IPx4 or be suitable for use in a steam room (IP 65).

All lines must be routed in such a way that they are well-protected, e.g. in a cable duct.

NOTICE

Damage due to incorrect mounting location

The control unit is not suitable for outdoor use!

- It must be operated only inside buildings and may not be exposed to environmental conditions such as extreme humidity and moisture or the possible formation of condensation or corrosive substances in the ambient air, as well as other weather conditions..
- Similarly, excessive cold and extreme exposure to sunlight must be prevented.
- Protect the unit accordingly if there is an increased risk of mechanical damage.

NOTICE

Electronics malfunctions

Routing data and power supply lines together can lead to electronics malfunctions because, e.g. because the sensor will not be detected.

- Do not route sensor and sauna bus lines together with power supply lines.
- Route cable conduits separately.

Requirements for installation site

- Ambient temperature during operation -10°C to +40°C
- Relative air humidity during operation 30% to 75%
- Ambient atmosphere must not be corrosive or have high salt content
- Ambient storage temperature -20°C to +60°C
- Stable wall surface
- Near the place of installation: power supply 400 V 3N ~
- All cables and connections must be accessible for servicing.

Installation site

The device must be installed only outside of the sauna cabin. Recommended installation locations are:

- Outer wall of the sauna cabin, however not outside of the building
- Plant room or a similar suitable place

If empty conduits for electrical installations are already present, this dictates the position of the relay box.

LSG 10 CA/CW - Installation

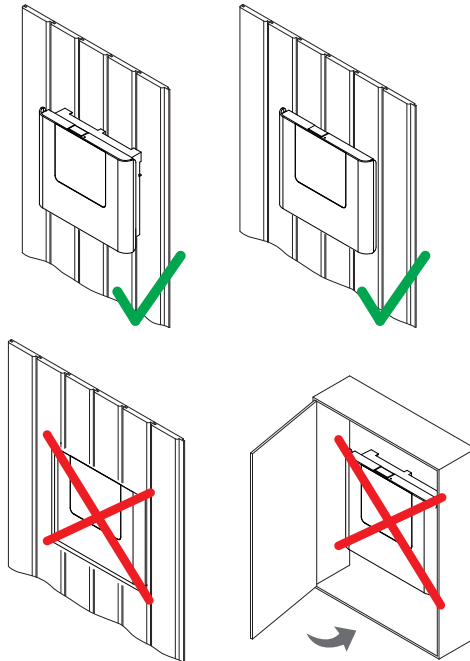
Guidelines

WARNING

Risk to life and limb and risk of fire

Risk to life and limb from electric shock and fire in the event of improper or faulty electrical connection. This risk also applies following completion of the installation work.

- Do not mount the device in enclosed cabinets or wood panelling.



Proper and improper mounting of the control unit

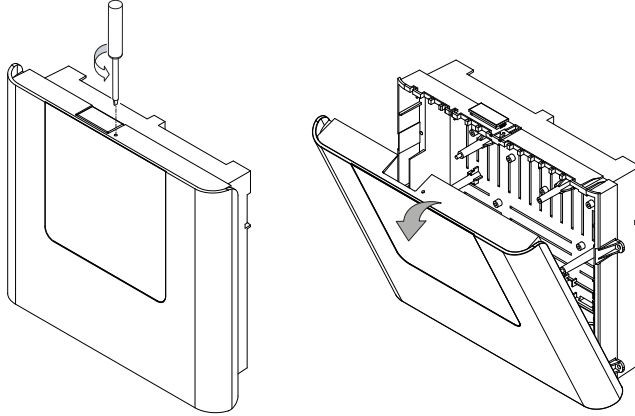
Installation preparation

1. Determine the mounting site.
2. Route the lines.

Removing the front cover

Remove the front cover from the housing.

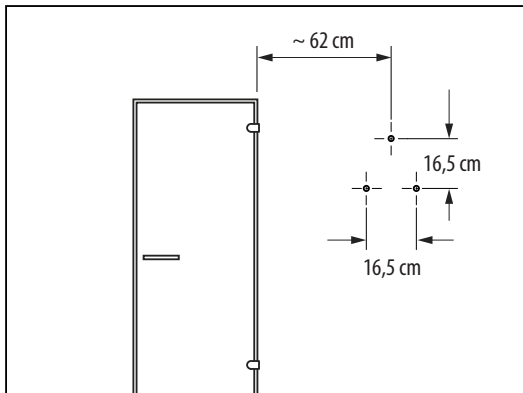
- Unscrew the screw on the top of the housing.
- Swivel the front cover and remove it downward.



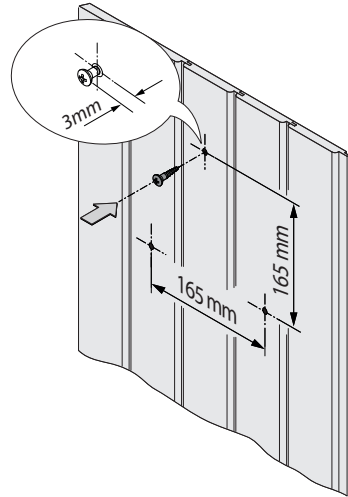
Notice: Remove the protective film from the panel after mounting is completed.

Wall-mounting installation

1. Drill one (1) hole above and two (2) holes below.. Note the distances as indicated.



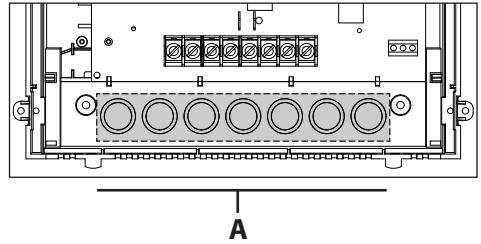
2. Insert and tighten the upper screw, use dovel if necessary. Allow the screw to protrude approx. 3 mm so you can hook in the housing.



3. Prepare the line openings in the housing by breaking the corresponding plates at the rear or at the bottom side.

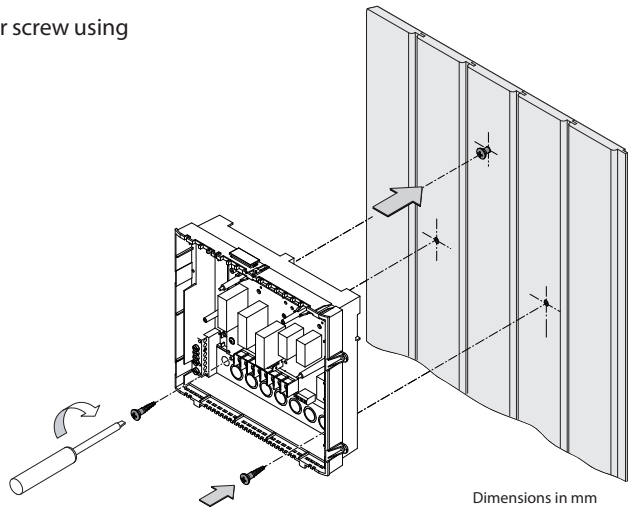
4. Insert the supplied bushings into the prepared openings.

5. Draw the connection cables into the control unit through these openings.

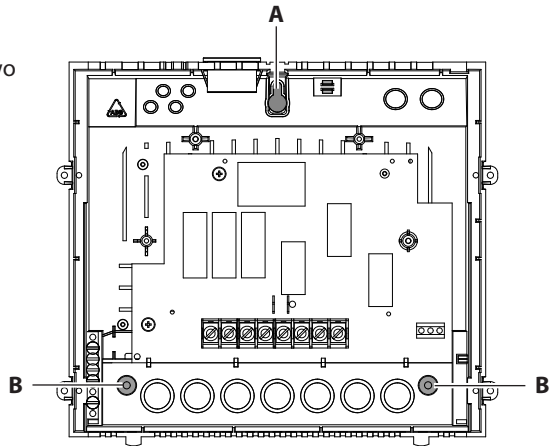


A. Openings for power supply line, heater line, control unit line

6. Hook the housing into the upper screw using the upper mounting hole.



7. Securely tighten the housing in the two lower mounting holes (B).

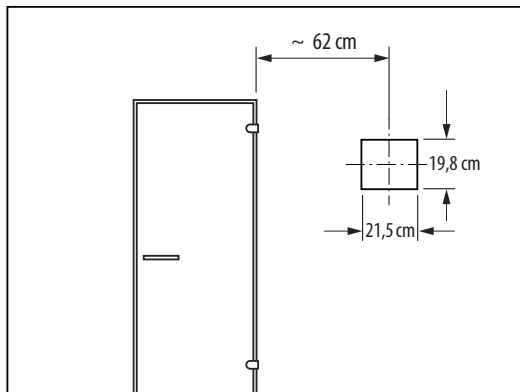


8. Connect power supply and consumers (see Electrical Installation).
9. Finally mount the front cover back on the control unit and secure it at the top with the mounting screw.

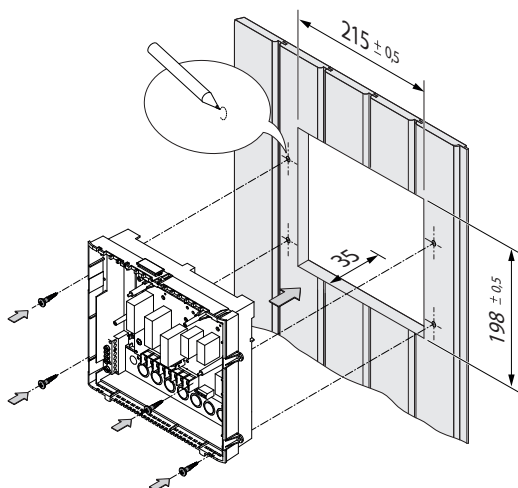
A oberes Befestigungsloch
B untere Befestigungslöcher

Semi-recessed installation

1. Prepare a wall cut-out (height x width 198 x 215 mm as indicated)
2. Drill 4 holes:
 - a) Set the housing in the wall cut-out..
 - b) Use a pencil to mark the four drill holes in the tabs.
 - c) Remove the housing.
 - d) Drill four holes.

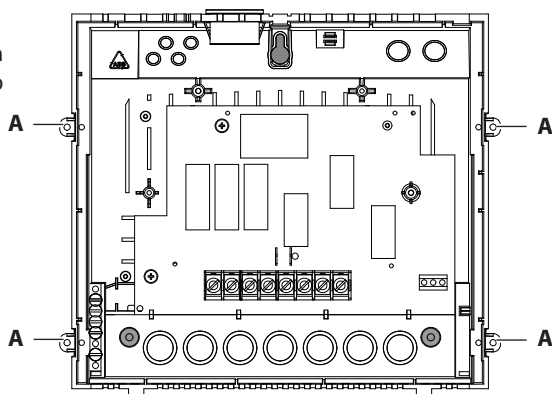


3. Prepare the line openings in the housing by breaking the corresponding plates at the rear or at the bottom side.
4. Insert the supplied bushings into the prepared openings.
5. Draw the connection cables into the control unit through these openings.
6. Insert the housing into the wall cut-out and secure it with 4 screws as indicated.



Dimensions in mm

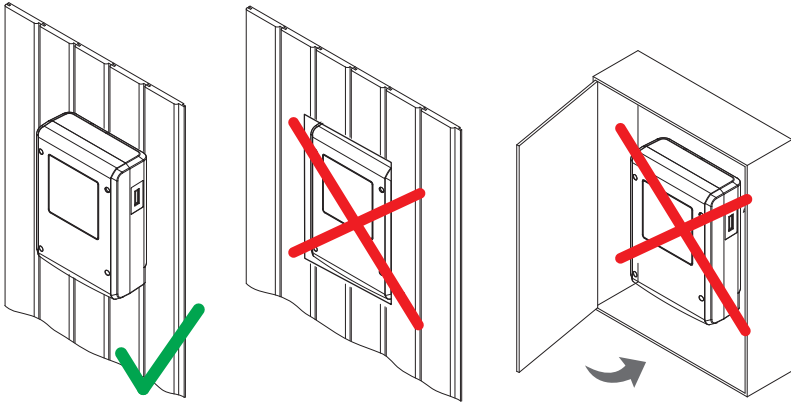
7. Connect power supply and consumers (see Electrical Installation).
8. Finally mount the front cover back on the control unit and secure it at the top with the mounting screw.



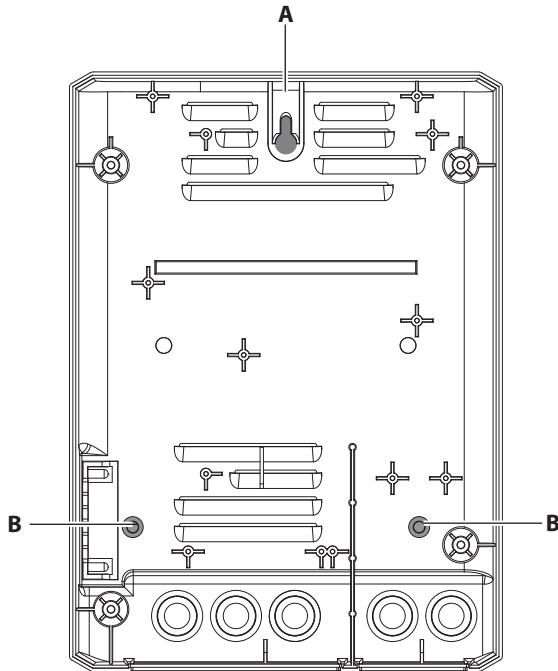
A Tabs with mounting holes for screws

LSG 10 ET - Installation

Guidelines



Proper and improper mounting of the control unit



- A Top mounting hole
- B Lower mounting holes

Installing the relay box

Necessary steps:

1. Preparing for installation

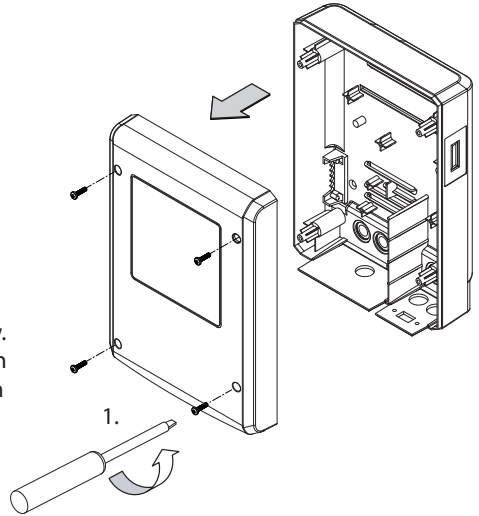
- Determine a suitable location for the installation.
- Route the lines.

2. Removing the housing cover (see Fig.)

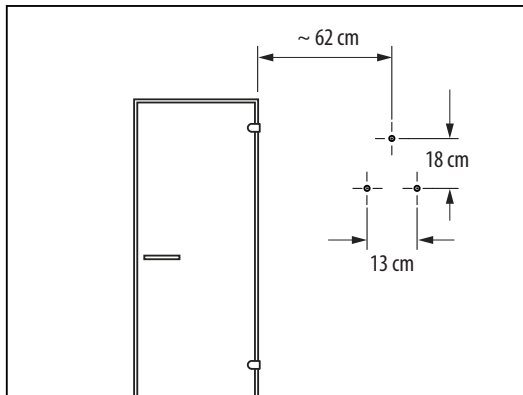
- Loosen 4 screws in the front cover panel.
- Removing the housing cover

3. Installing the relay box

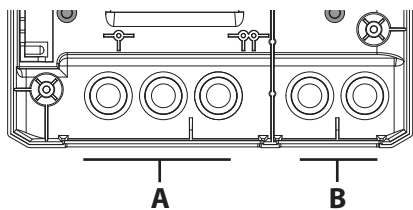
- Drill one hole above and two holes below.
Horizontal distance between drill holes: 130 mm
Vertical distance between drill holes: 180 mm



- Insert the dovels as needed and screw in the top screw. Allow the screw to protrude approx. 3 mm so you can hook in the housing.

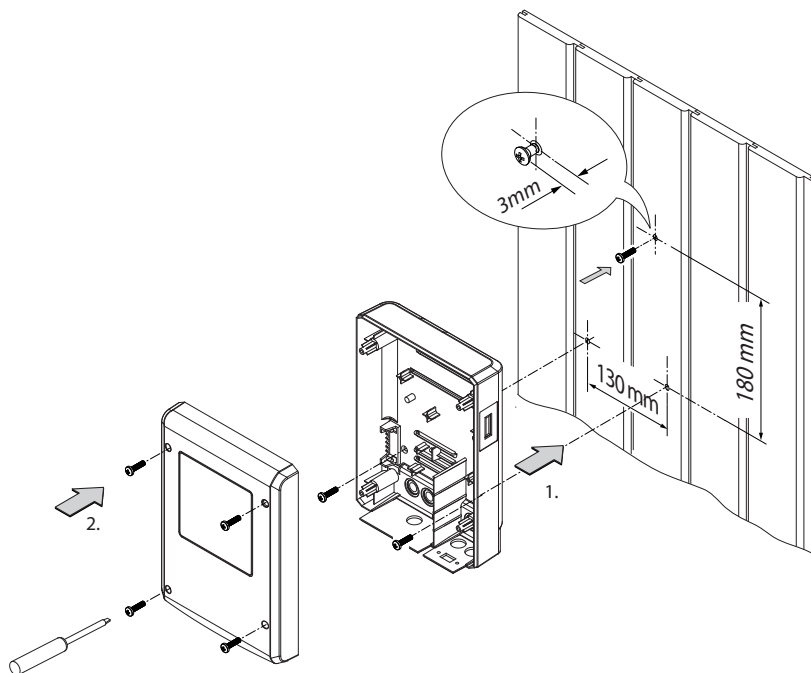


4. Open the relay box conduits for the lines.
5. Insert supplied rubber grommets into the openings of the lower part of the housing..
6. Route the connecting cables through the openings.



- A** Lines with mains voltage,
e.g. mains supply line, heat system, light
- B** Connection line to sauna control unit

7. Hook the relay box into the upper screw using the upper mounting hole.
8. Securely tighten the relay box using the two lower mounting holes.
 - Once you have completed all installation work you can connect the consumers and plug in the lines.
 - Connecting data lines (Elektroinstallation).
 - Connecting and configuring consumers (Elektroinstallation).
9. Finally mount the front cover back on the control unit and secure it with 4 screws.



Electric connections

This chapter describes how to connect lines to the LSG device's circuit board.

You can connect sauna heaters for dry Finnish sauna and also Bi-O type heaters. By Bi-O type heaters only the heater section connects to the LSG device. The vaporizer should be connected to the sauna control unit.

Recommended installation sequence:

- Connect the sauna heater.
- Connect the control unit.
- Connect the power supply line.

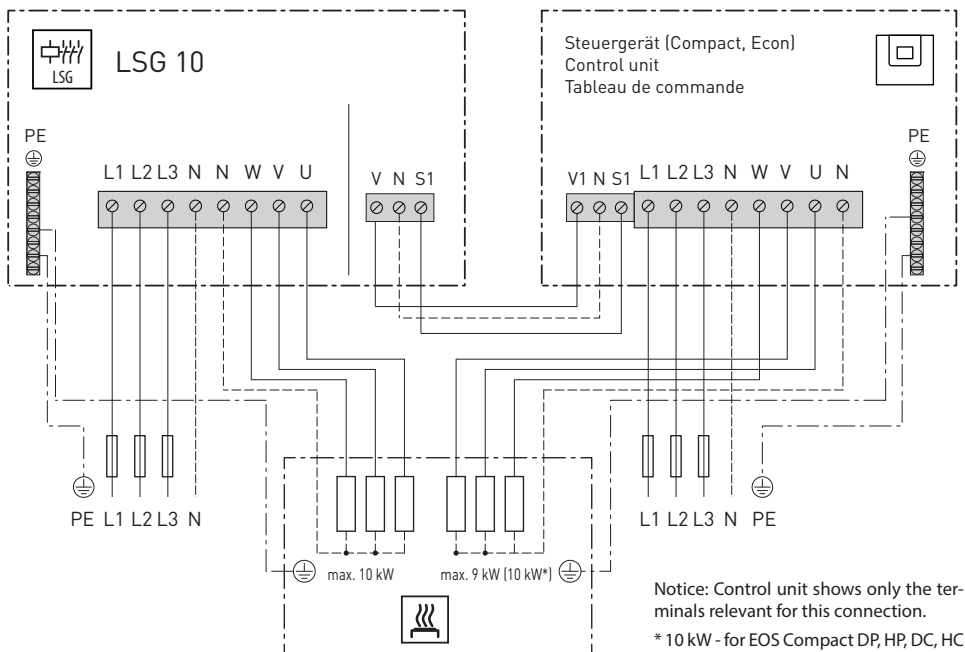
The total power load of connected consumers must not exceed 16 A current per phase.

Connections

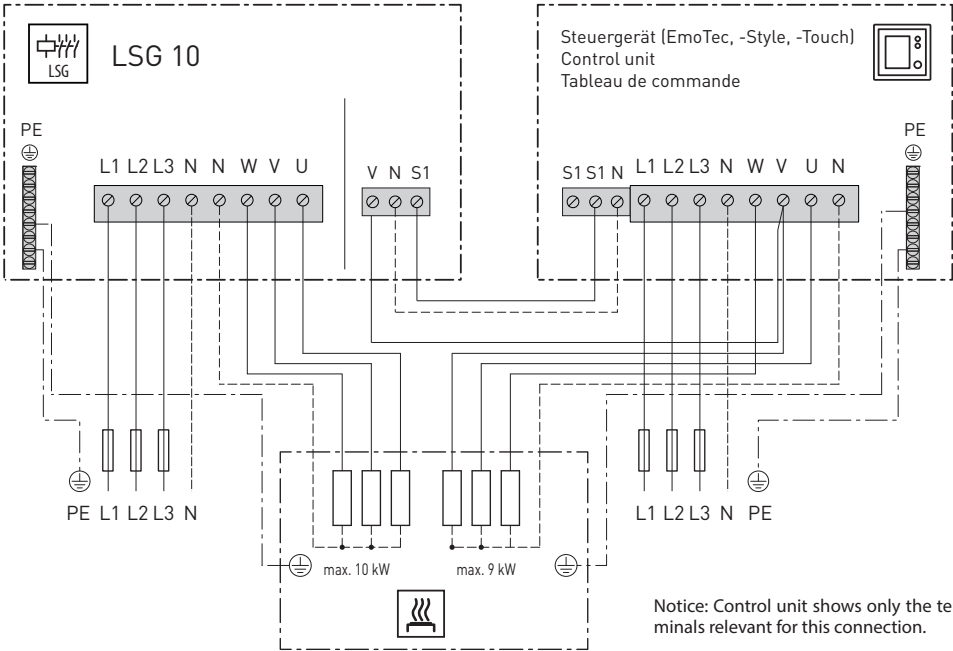
The LSG device is connected with a live current of 400 V 3 N ~ 50 Hz and fused separately with 3 x 16 A. A 16 A cut-out with at least K characteristic must be used for fuse protection.

As a rule, only a fixed connection may be connected to the mains supply, whereby a configuration is provided that makes it possible to separate the system from the mains supply with a contact opening width of at least 3 mm (all poles).

Circuit board assignment and general overview of connections (Compact, Econ)



Circuit board assignment and general overview of connections (EmoTec, EmoStyle, EmoTouch)



Terminals

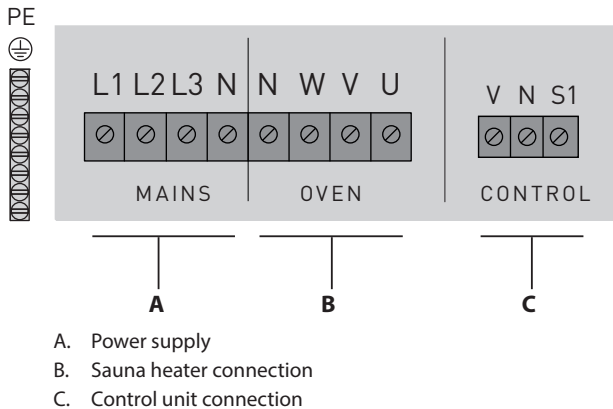
All lines must be connected to the corresponding terminals. Heat-resistant cables must be used for the sauna heater connection.

WARNUNG

Risk of electric shock

A faulty electrical connection poses the risk of an electric shock. This risk remains also after completion of the installation work.

- Disconnect the system entirely from the mains supply.
- If retrofitting is required, the housing must only be opened by trained personnel.
- Electrical installation must only be carried out by a qualified and licensed electrician.
- The unit must be connected to the power supply according to the circuit diagram and the terminal scheme.



WARNING! Ensure that the LSG relay box has no power.

Draw the lines into the unit through the knock-out openings and proceed with the connections.

Sauna heater

Connect the sauna heater to the terminals **(B)**.

Control unit

Connect the control unit line to the terminals **(C)**.

Power supply

Connect the power supply 400V 3N ~ to the terminals **(A)**.

Once all connections have been made, mount the front cover and secure it (see also Installation).



Recycling

Devices or lighting elements that will not be used any longer have to be handed in at a recycling station according to regulation 2012/19/EU. Do not dispose it with the normal household waste.



Additional disposal note for commercial users:

Further disposal instructions can be found under the link www.eos.sauna.de/recycling

Service Address:

EOS Saunatechnik GmbH
Schneiderstriesch 1

35759 Driedorf, Germany

Tel: +49 (0)2775 82-514

Fax: +49 (0)2775 82-431

servicecenter@eos-sauna.de

www.eos-sauna.de

Please retain this address together with the installation guide for further references.

To help us answer your questions quickly and competently please provide the information printed on the type shield including the model, item no. and serial no., in all inquiries.

Equipment commissioning date:

Stamp and signature of the authorized electrician:

General Terms and Conditions of Service

I. Scope

Unless otherwise agreed in writing in a specific case, these terms and conditions of service shall apply to service operations, including examining and repairing complaints. All our existing or future legal relationships shall be governed solely by the following terms and conditions of service. Our recognition of any conflicting terms and conditions of the Ordering Party shall be conditional upon our having given our express written consent to their applicability. We hereby expressly object to any terms and conditions of the Ordering Party contained in its General Terms and Conditions of Business or order confirmation. If order confirmations or deliveries are accepted without reservation, this shall not be deemed to constitute recognition of such terms and conditions. Any ancillary agreements or amendments must be confirmed in writing.

II. Costs

The Ordering Party shall bear the following costs in connection with the service operation:

- De-installation/installation and electrical works (connection / disconnection).
- Transportation, postage and packaging.
- Function testing and troubleshooting including inspection and repair costs.

There shall be no third-party billing.

III. Obligations / Ordering Party's cooperation

The Ordering Party shall provide free-of-charge assistance to the manufacturer in carrying out the service operation.

In the case of a warranty claim the manufacturer shall provide the required replacement parts to the Ordering Party free of charge.

IV. Service visit by the manufacturer

In the event that it is essential that a manufacturer employee carry out the service operation on site, this must be agreed in advance. Where the main reason for the service call is not the fault of the manufacturer, any costs incurred shall be recharged to the Ordering Party after the service visit and shall be paid as per agreed payment terms.

V. Liability

The manufacturer shall assume liability in accordance with the currently applicable statutory regulations. The packaging for all of our products is designed for the shipping of individually packed goods (pallet). We expressly

point out that our packaging is not suitable for individual shipments via parcel post. The manufacturer shall accept no liability for damage incurred as a result of improper packaging in an individual shipment.

VI. Manufacturer's Guarantee

The manufacturer's guarantee shall apply only in the event that installation, operation and maintenance have been carried out in accordance with the manufacturer's specifications contained in the installation instructions and instructions for use.

- The guarantee period shall commence from the date on which proof of purchase is provided and shall be limited, in principle, to 24 months.
- Guarantee services shall be performed only if the original proof of purchase relating to the equipment can be presented.
- Any and all guarantee claims shall become void if modifications are made to the equipment without the manufacturer's express consent.
- Any guarantee claim shall likewise become void in the case of defects that arise due to repairs or interventions made by unauthorized persons or due to improper use.
- In the case of guarantee claims, the serial and article numbers must be indicated together with the product name and a meaningful description of the fault.
- This guarantee shall cover defective equipment parts, with the exception of usual wear parts. Wear parts are, among others, lamps, glass parts, heating elements and sauna stones.
- Only original replacement parts may be used within the warranty.
- Service visits by outside companies shall require a written order to be issued by our service department.
- The equipment in question shall be sent to our service department by the Ordering Party and at its expense.
- Electrical installation and connection works in the event of service or replacement shall be carried out at the Customer's expense and shall not be borne by the manufacturer.

Complaints in respect of our products shall be reported to the responsible authorized dealer and shall be exclusively handled via the latter.

The manufacturers General Terms and Conditions of Business, which can be found at www.eos-sauna.com/agb, shall apply in addition to the foregoing terms and conditions of service.

As of 08/2018