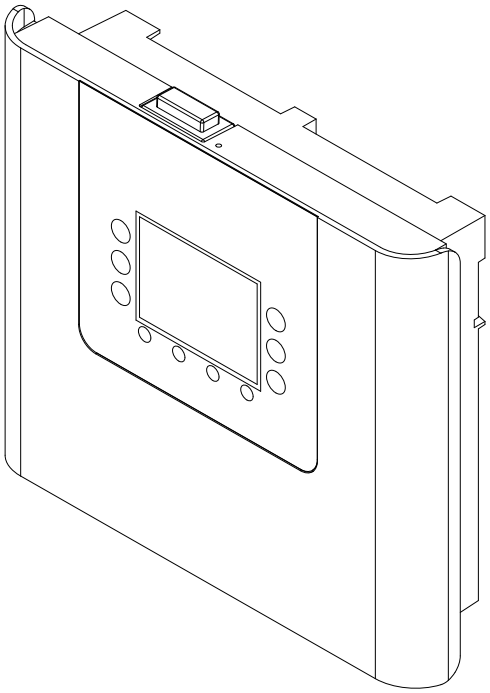
EN

EOS
INNOVATIVE SAUNA TECHNOLOGY

EOS Compact DC/HC

Control Unit for Sauna Cabins



Installation and Operating Instructions

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Documentation

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Original installation instructions EN

Characters, symbols and illustrations

- ⓘ Additional information about an operating step
- 🗋 Cross-reference to a page
- 🕮 Read instructions
- ☑ Result of a step
- Table title
- Title of figure

Revision history

Date	Version	Description
24.01.2022	01.10	Sensor mounting diagram replaced, cover page updated
01.05. 2021	01.00	First version

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1 General safety instructions

1.1 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.

1.2 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 control unit and other electrical systems or equipment with a fixed mains connection may be performed only by a trained electrician from an authorised electrical company.
- ▶ Ensure compliance with the applicable standards and regulations for electrical installation.
- ▶ The system must be disconnected and removed entirely 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 manufacturer's safety and installation instructions.
- ▶ Observe the cabin manufacturer's safety and installation instructions.
- ▶ Touchable glass surfaces on the outside of the cabins could reach a maximum of 76°C. Attach safety systems if needed.

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 control panel and sensors should not be installed in a corrosive or heavy saline atmosphere.

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.

1.3 Operator instruction

The operator of the sauna cabin must be instructed in 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.
The operator must be familiar with the settings for the heating period and understand how it is controlled.

Fire hazard

Objects left on the heater and/or directly in front of an IR emitter can catch fire and lead to fires.

- ▶ Do not place objects on the heater and/or directly in front of an IR emitter.
- ▶ Fill the rock store as directed.
- ▶ Inspect the sauna cabin prior to each commissioning.
- ▶ If you switch on the heater using pre-set timers or a remote control, attach a protective cover to the heater or install a suitable safety device.
- ▶ When using control units with a remote control* option (see EN 60335-1), protection from switching on a covered sauna heater is required.
  * Remote control = setting up, controlling and/or regulating a device with a command that can be given outside of the visual range of a device, whereby the transmission media such as telecommunication, audio engineering or bus systems are used; also included are pre-set timers and weekly timers.

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

Health risks

Spending time in an infrared or sauna cabin can lead to serious health risks or even death for persons with health impairments.

- ▶ Persons with health impairments who spend time in a sauna must consult a doctor before entering an infrared or sauna cabin.

Equipment damage due to overuse

Excessive humidity in commercial infrared or sauna cabins can lead to property damage.

- ▶ In a commercial infrared or sauna cabin, the heating period must be set so that it switches off automatically after a specific period of time.
- ▶ If the heating does not switch off automatically after a defined heating period, cabin use must be supervised at all times.
- ▶ Inspect the cabin before each use.

Operation by children or persons with reduced mental capacity

Children and persons with reduced mental capacity can be a risk.

- ▶ Children must be supervised to ensure they do not play with the unit.
- ▶ Children under 8 years of age should not operate the sauna cabin.
- ▶ The settings for the heating period must only be used by children under 8 years of age if they are supervised by an adult.
- ▶ The sauna cabin must only be used by persons with reduced mental capacity, or limited physical or sensory abilities under supervision or if they have already been instructed in its use and understand the risks.
- ▶ Children and persons who have not received proper instruction must not clean or service the system.

1.4 Standards and regulations

For an overview of the standards that were observed during design and construction of the sauna heaters, 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.

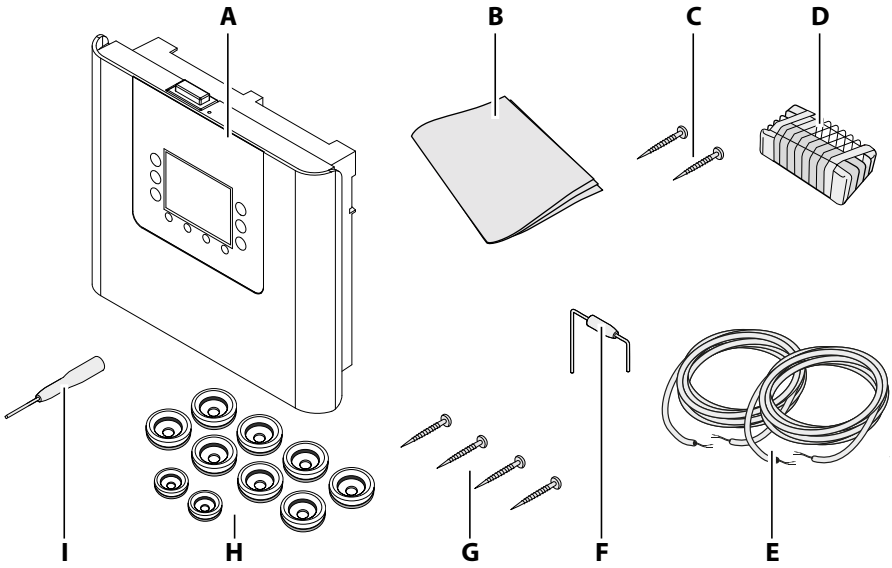
2 Identification

The scope of delivery of the EOS Compact control unit includes a control unit, a heater sensor with connecting cables for the sensor, and safety temperature limiter. The unit is used to operate a sauna cabin.
EOS Compact is available in two models:

- EOS Compact DC: Finnish sauna mode
- EOS Compact HC: Finnish or steamy hot air bath mode

This documentation describes both models.

2.1 Scope of delivery



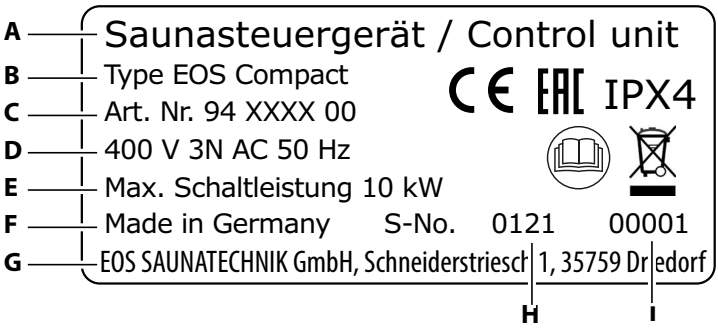
A EOS Compact control unit
B Installation and Operating Instructions
C 2 screws to attach the heater sensor (3 x 25 mm)
D Heater sensor with safety temperature limiter
E Sensor cable (2 m) and safety temperature limiter (2 m)
F Replacement safety temperature limiter (in control unit housing)
G 4 screws to attach the control unit (4 x 25 mm)
H Bushings: 8 large, 2 small
I Screwdriver 2 mm

Scope of delivery

Check the scope of delivery for completeness prior to installation.

2.2 Nameplate

The nameplate is attached to the top of the control panel housing cover.



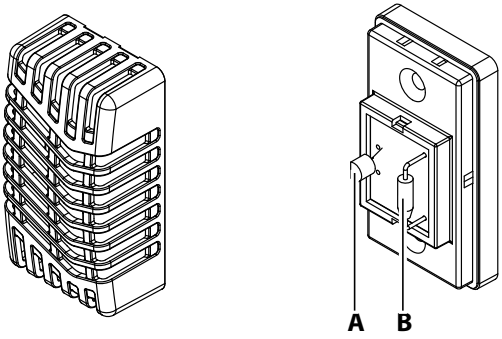
A Name
B Model
C Item number
D Operating voltage
E Switching output
F Country of origin
G Manufacturer
H Manufacturing date
I Serial number

Nameplate (example)

2.3 Sensors

Heater sensor

The temperature/humidity in the sauna cabin is set via the control unit. The set values are checked by the sensor. The heater sensor controls the temperature in the sauna cabin. The heater sensor has a safety temperature limiter, which ensures that the temperature does not exceed 140°C.



A Temperature sensor
B Safety temperature limiter

Internal view of heater sensor

Bench sensor (optional, EOS Compact DC/HC)

You can improve heat distribution in very large saunas where air circulation is a challenge by using an additional bench sensor.
If a bench sensor is installed, it assumes control of the temperature. However, the heater sensor does not control the cabin temperature, rather it limits the temperature within the maximum permissible range via the heater. Exceeding the permissible temperature range would trigger the safety temperature limiter.
If the bench sensor fails, the heater sensor regulates the temperature.

Multisensor (optional, for EOS Compact HC only)

The multisensor is a special sensor that can function as a humidity sensor and a temperature sensor (bench sensor). The multisensor checks either the humidity or the temperature in the sauna cabin. In Bi-O mode, the multisensor controls the relative air humidity in %. At the same time, the control unit attempts to keep the set humidity as precisely as possible.
If the sauna is in Finnish mode, the temperature is measured and controlled, not the humidity.
The heater sensor continues to monitor the temperature behaviour and only intervenes for safety reasons when it is necessary prevent overheating via the heater.
If the multisensor fails, the heater sensor regulates the temperature.

2.4 Technical data

Technical data	
Ambient temperature	-10°C to +40°C
Storage temperature	-20°C to +70°C
Housing	Plastic
Dimensions (H x W x D)	220 x 255 x 65 mm
Weight	Approx. 1.2 kg
Power supply	400 V 3N AC 50 Hz
Switching output	10 kW
Protection class	IPx4 splash-proof
Temperature control range	Finnish sauna mode: 30–115°C Steamy hot air bath (Bi-O): 30–70°C
Humidity control (HC only)	Without humidity sensor: Cycle (1–100) in proportion to time for active humidity mode
	With humidity sensor: according to relative air humidity in %
Water level monitoring (HC only)	Detects water shortage with automatic switch off after 3 minutes (only with compatible sauna heater)
Connection for lighting	Min. 5 W (20 mA)
	Resistive load: max. 100 W
	Energy-saving bulbs, max. 35 W
	Light source with conventional transformers, max. 60 VA.
	Fan and light connections are protected by a joint 2A F fuse.
Light dimming	Possible for light sources with phase-cut dimmer. Resistive loads (e.g. light bulbs) and inductive loads (e.g. LED light source) are suitable. Capacitive loads (phase control) are not supported.
Connection for fan	Max. 100 W
Sensor system (Temperature)	KTY sensor with safety temperature limiter 139°C
Temperature display for heater sensor	Current value at heater sensor minus 7 K to offset higher temperatures directly under the cabin ceiling

Technical data	
Temperature display for bench sensor, multisensor	Current value at bench sensor, multisensor
Display for humidity multisensor	Current value at multisensor
Heating period limitation	6 hrs (factory setting), 12 hrs, 18 hrs, infinite

2.5 Accessories

An additional output controller must be connected if the heater output is above 10 kW or the phase load is above 16 A and an output of over 3 kW is drawn at the vaporiser.

Output controller (LSG)	Item no.
LSG 18	94.5730
LSG 18 H	94.5731
LSG 36	94.4392
LSG 36 H	94.5921
EmoTec L09 R	94.4998

Add-on modules	Item no.
SBM remote start	94.5782
SBM-HOT	94.6800
SBM-ECO	94.6980
SBM-GLT-KNX	94.7078
SBM-GLT-Mod	94.7077

Sensors	Item no.
Temperature sensor (beige)	94.7438
Additional safety temperature limiter housing (beige)	94.7443
Temperature sensor (anthracite)	94.7437
Additional safety temperature limiter housing (anthracite)	94.7444
Bench sensor (beige)	94.7439

Sensors	Item no.
Bench sensor (anthracite)	94.7440
Multisensor (beige)	94.7441
Multisensor (anthracite)	94.7442

Connecting cables for add-on modules	Item no.
Connecting cable 6P6PC 10 m	94.5861
Connecting cable 6P6PC 25 m	94.4647
Connecting cable 6P6PC 50 m	94.4648

Modular distributor	Item no.
Modular distributor RJ 12 for connecting cable and Sauna bus	2001.5298

2.6 Intended use

In conjunction with a suitable sauna heater, the EOS Compact control unit is intended to be used only to heat sauna cabins. It is suitable for cabins used in private and commercial settings. The control unit must be mounted on a wall.

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.

3 Installation

3.1 Routing the lines

All lines should be routed before installing the control unit. The connections can be plugged in after installation, since the control unit's front panel can be removed.

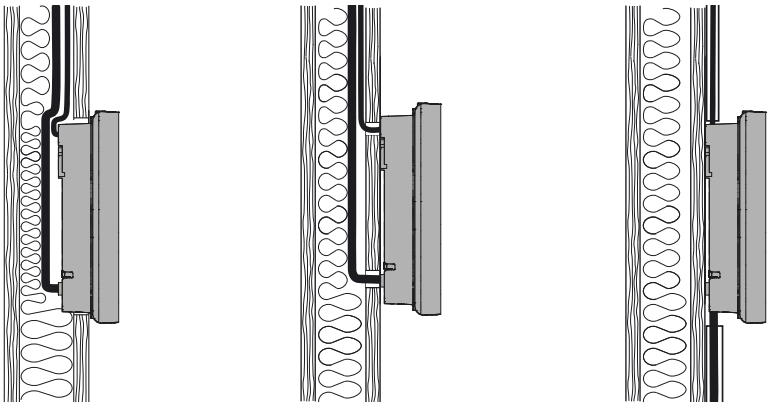
NOTICE

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.

Data lines must be routed and connected in such a way that they are not openly accessible. They should be routed between the insulation and the outer wall of the cabin. Cabin insulation must be installed in such a way that the temperature in the area in which cables are routed cannot exceed 65°C.
If the data lines are installed outside on the wall, they should be protected by a cable duct.



Data line(s) routing

Additional lines

If an optional module is connected, a 6P6C line with RJ12 jack is required. This line is available in various lengths.

See Connecting cables for add-on modules, 🗋 EN-17.

3.2 Installation site

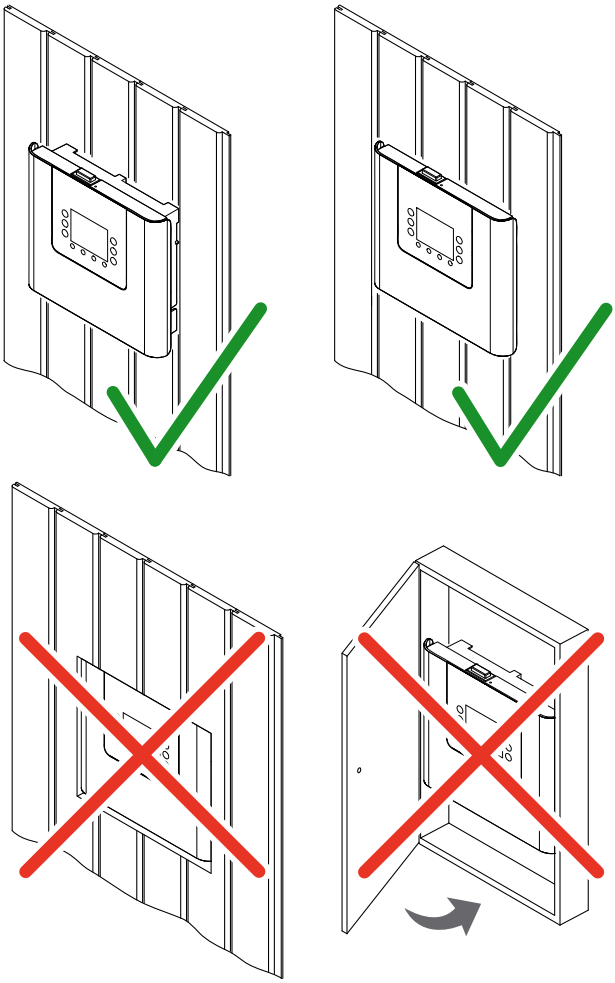
The control unit may be mounted only outside of the sauna cabin. Observe the following guidelines.

⚠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 control unit in enclosed cabinets or wood panelling.



Proper and improper mounting of the control unit

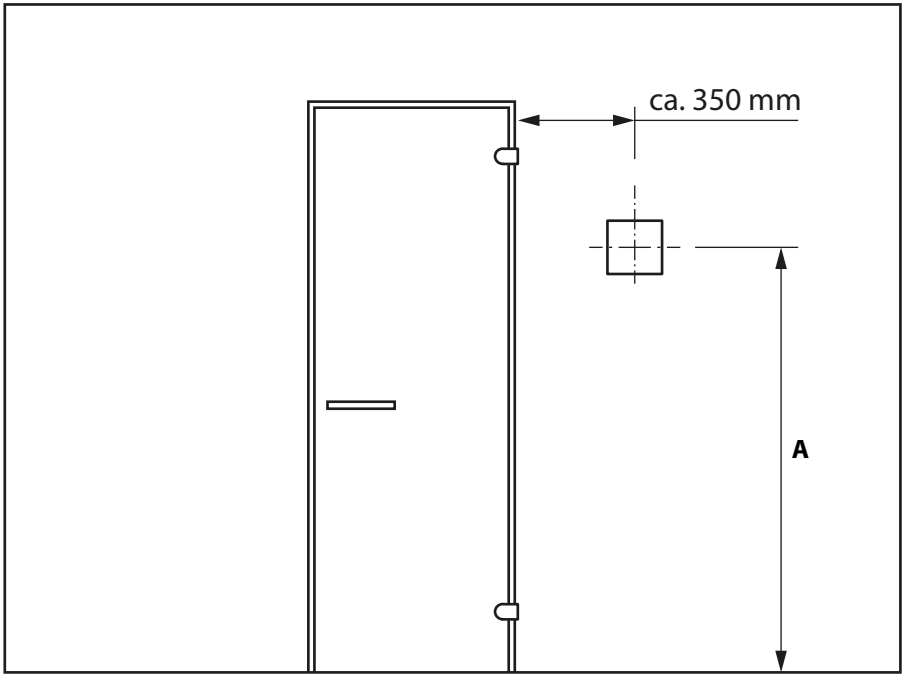
NOTICE

Damage due to weather conditions

Precipitation, humidity, extremely high/low outdoor temperatures and direct sunlight can damage the unit, since it was not designed for outdoor use.

▶ Mount the control unit inside the building.

We recommend mounting the control unit on the cabin's exterior wall.



A Eye level

Mounting on the cabin's exterior wall

3.3 Mounting the control unit

The following work must be completed before you mount the control unit:

- Determine the mounting site, see 3.2 Installation site, 🗋 EN-19.
- Route the lines, see 3.1 Routing the lines, 🗋 EN-18.

NOTICE

Damage due to steam and humidity

Condensation can form when the door is opened, which can fog over the display. This can lead to the formation of condensation in the control unit and system downtime.

▶ Mount the control unit outside of the area in which the humid warm air mixture can spread.

▶ Mount the control unit on the hinge side of the door.

Tools required:

- Saw for cutting the wall (only when mounting in the wall)
- Screwdriver 2 mm (included in the scope of delivery)
- Taut wire, as needed
- Wooden screws (included in the scope of delivery):
  3 pcs when mounting on the wall

The control unit can be mounted on the wall or partially inset in the wall. A description is given for both options.

▶ Removing the front cover, 🗋 EN-23

▶ Preparing the air inlets, 🗋 EN-24

▶ Mounting the control unit on the wall, 🗋 EN-25

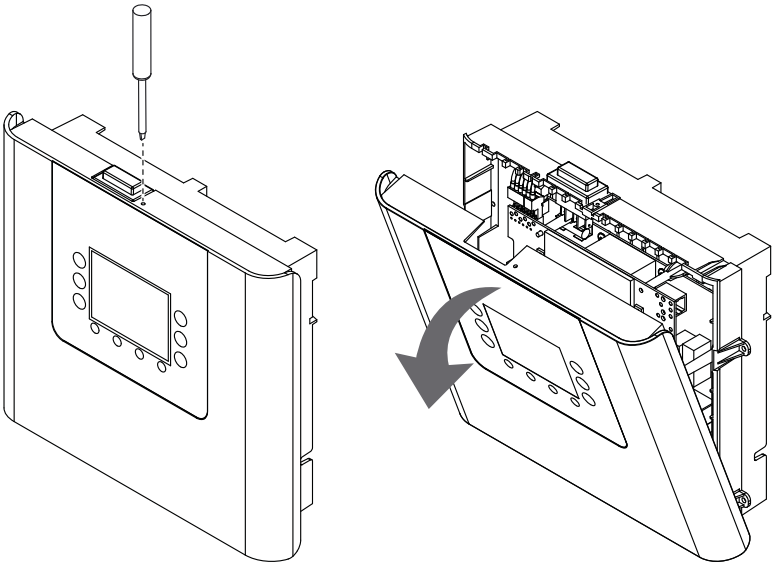
▶ Mounting the control unit in the wall, 🗋 EN-28

▶ Removing the front cover

1 Remove the front cover from the housing.

a) Unscrew the screw on the top of the housing.

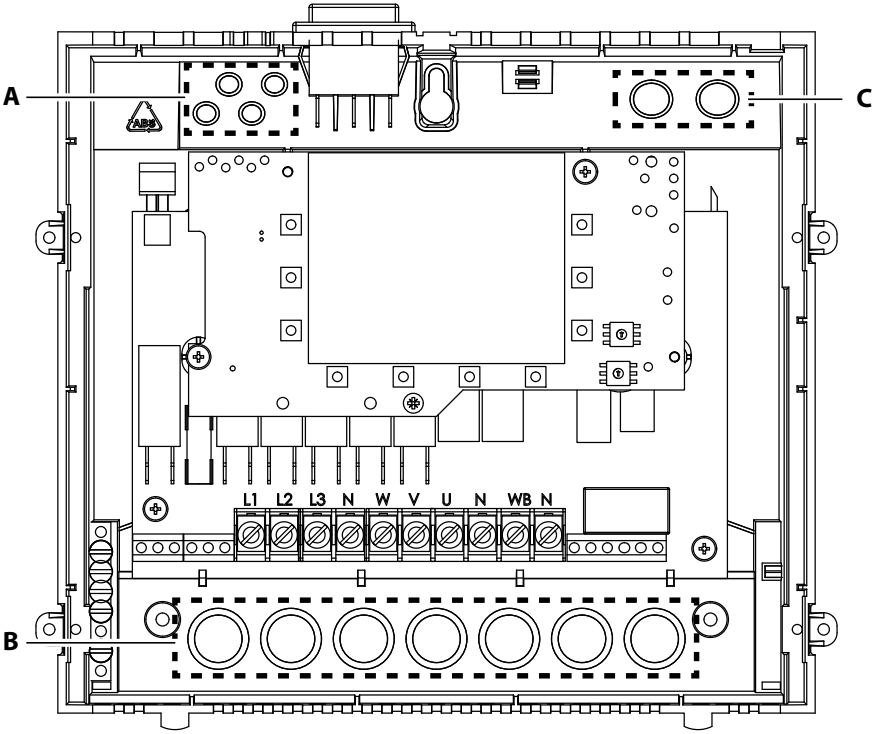
b) Swivel the front cover and remove it downward.



ⓘ Remove the protective film from the panel after mounting is completed.

▶ Preparing the air inlets

1 Specifying the line openings in the housing.



A Openings: sensor line(s)

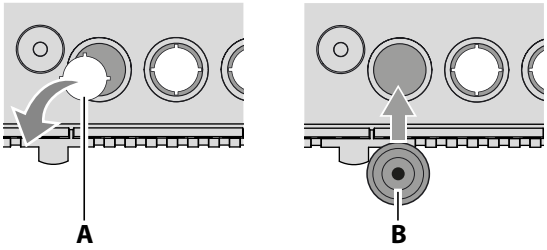
B Openings: mains supply line, heater output, vaporiser supply line, light, fan, load expansion (optional)

C Openings: sauna bus line(s)

2 Preparing the line openings:

a) Break the plates from out of the openings.

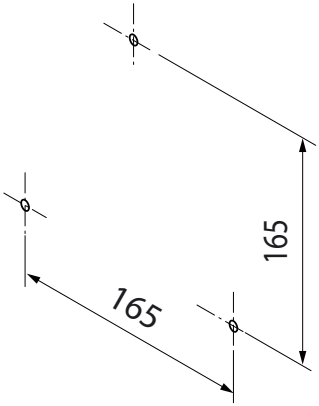
b) Insert the bushings.



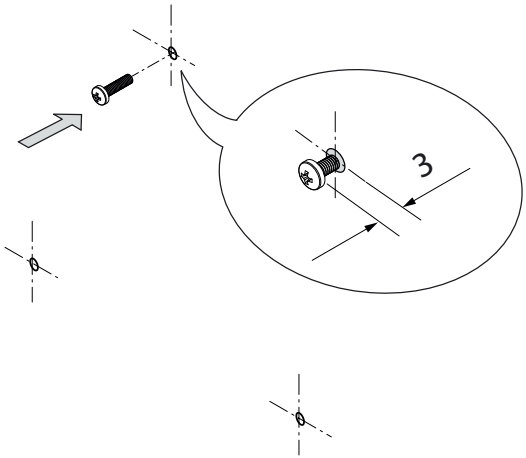
A Plates **B** Bushings

▶ Mounting the control unit on the wall

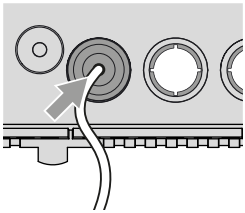
1 Drill one (1) hole above and two (2) holes below.



2 Tighten the upper screw.
ⓘ Allow the screw to protrude approx. 3 mm so you can hook in the housing.



3 Pull the lines through the openings in the housing.

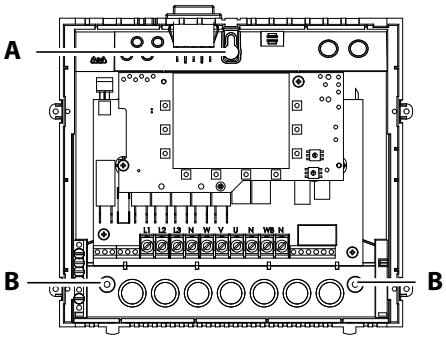


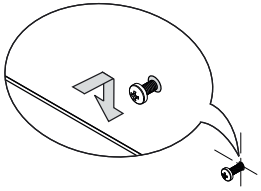
ⓘ See ▶ Preparing the air inlets, 🗋 EN-24.

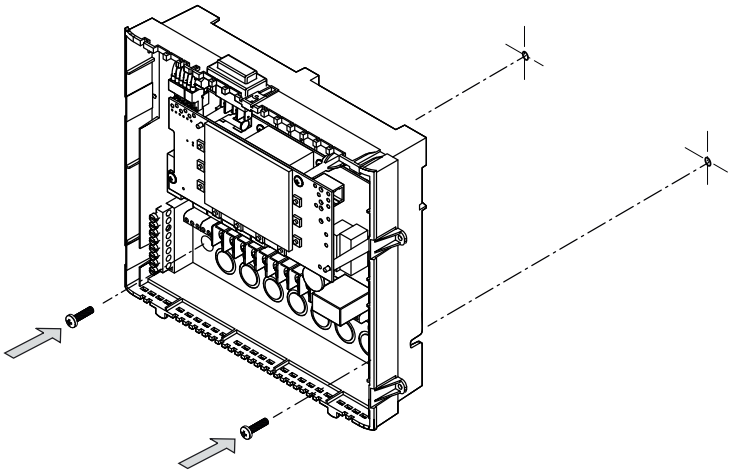
4 Mount the housing on the wall:

a) Hook the housing into the upper screw using the upper mounting hole (**A**).

b) Securely tighten the housing in the two lower clearance holes (**B**).







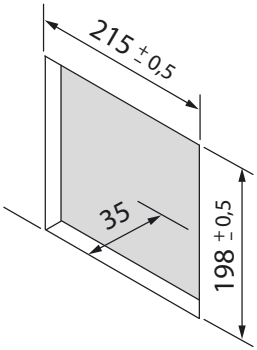
A Upper mounting hole for screw

B Lower mounting holes for screws

ⓘ Next step: 4 Connecting the lines, 🗋 EN-39.

▶ Mounting the control unit in the wall

1 Prepare a wall cut-out:
Height x width: 198 x 215 mm, mounting depth: min. 35 mm.



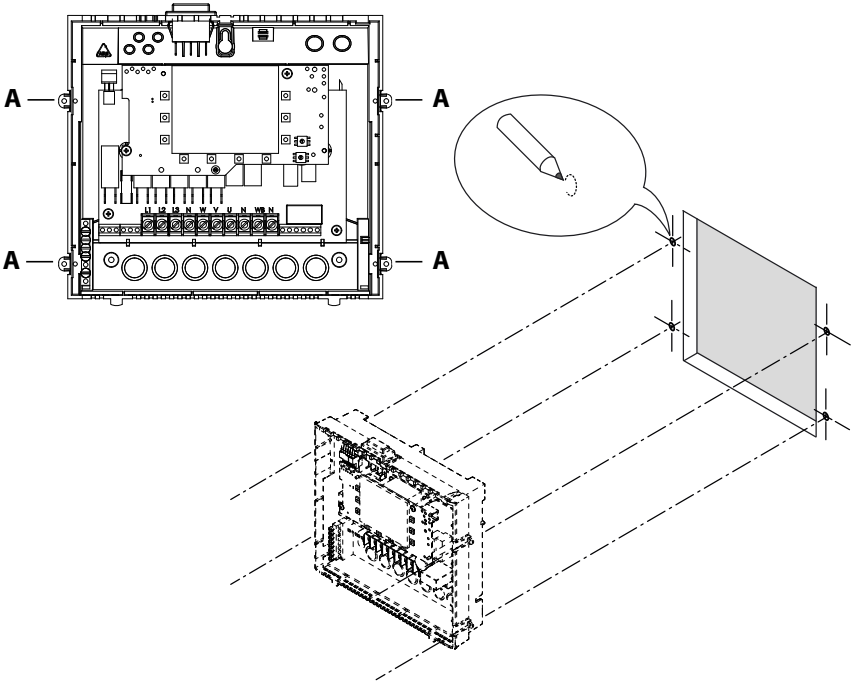
2 Drill four holes:

a) set the housing in the wall cut-out.

b) Use a pencil to mark the four drill holes in the tabs.

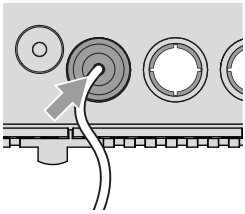
c) Remove the housing.

d) Drill four holes.



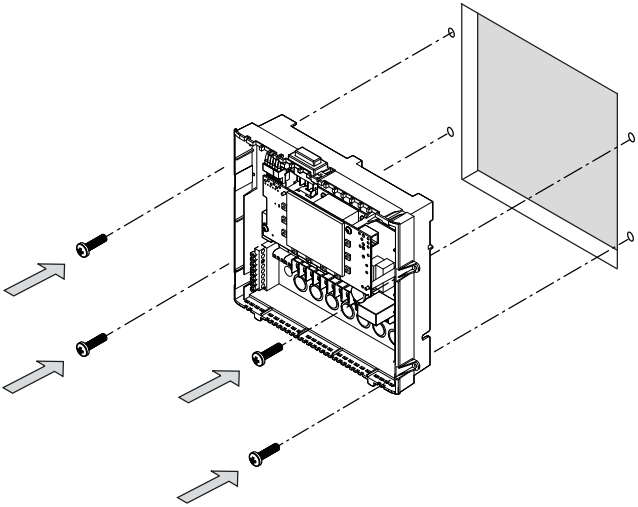
A Tabs with mounting holes for screws

3 Pull the lines through the openings in the housing.



ⓘ See ▶ Preparing the air inlets, 🗋 EN-24.

4 Securely tighten the housing using the four mounting holes.



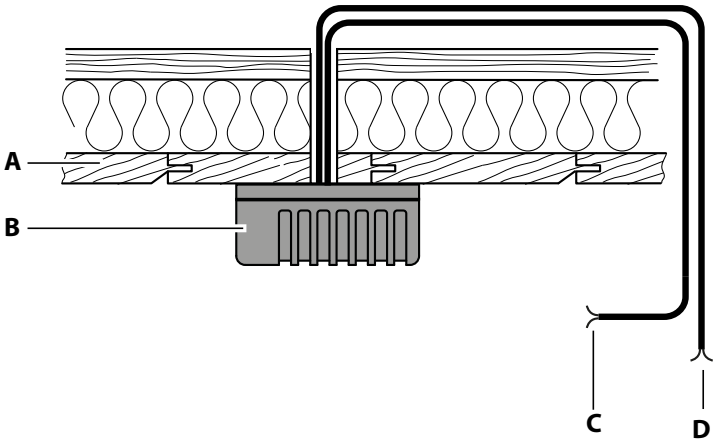
ⓘ You can connect the lines after mounting the housing. See 4 Connecting the lines, 🗋 EN-39.

3.4 Mounting the heater sensor

The heater sensor must be installed where expected temperatures are the highest, meaning directly above the sauna heater. Proper installation is necessary to ensure compliance with the temperature limits and to ensure that there is only a very slight fluctuation in temperature in the areas of the sauna cabin where there are reclining options.

Hardware + tools:

- Heater sensor and connecting cables
- Drill used to drill a hole in the cabin ceiling
- Screwdriver
- Taut wire, as needed



A Cabin ceiling
B Heater sensor housing
C Line for temperature sensor (2-pole)
D Line for safety temperature limiter (2-pole)

Installation diagram

⚠CAUTION

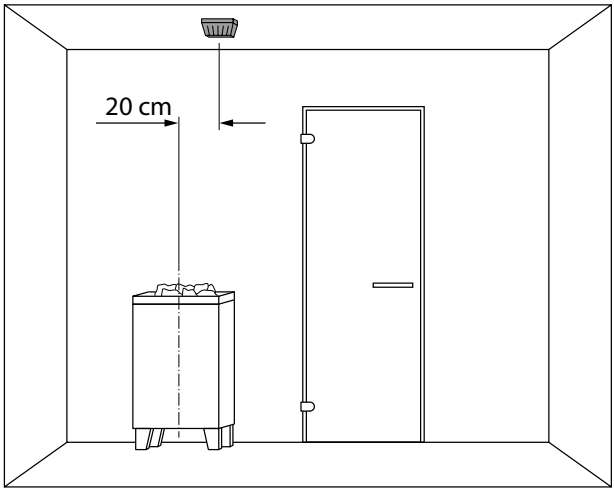
Fire hazard from overheating

Requirements that apply to installing the heater sensor may exist for certain sauna heaters.

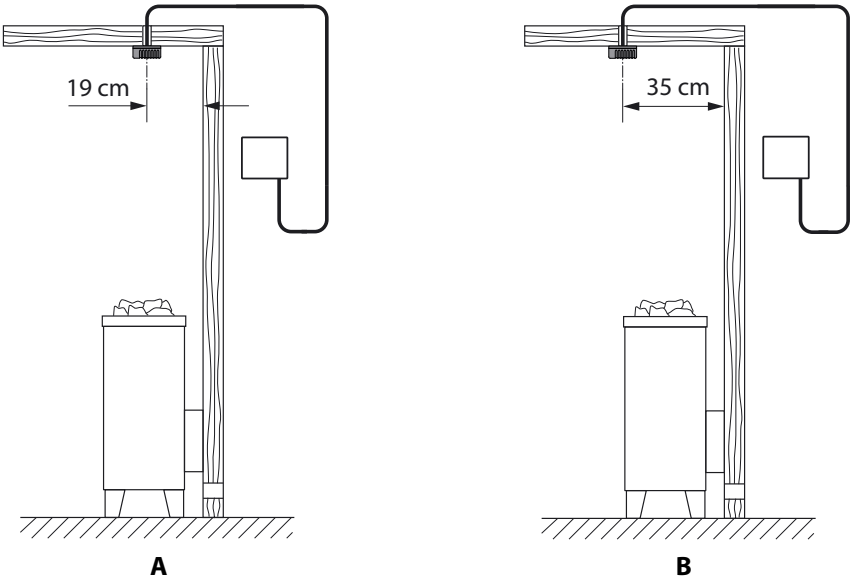
- ▶ Ensure that there are no heater-specific requirements that apply to installing the sensor.
- ▶ Observe the installation and operating instructions for the sauna heater.

▶ Mounting the heater sensor in the cabin

1 Determine a suitable location for the installation.
ⓘ The heater sensor must be installed on the cabin ceiling above the sauna heater. It is installed in observance of the following distances from the cabin wall, depending on the cabin size.



Mounting position: above sauna heater



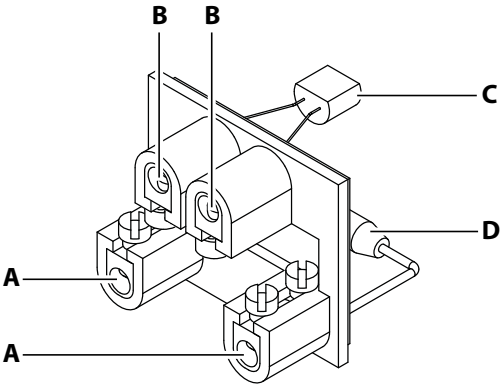
A Cabin < 2 x 2 m **B** Cabin > 2 x 2 m

Mounting position: distance sauna wal – sauna heater rear

2 Drill a hole in the cabin ceiling for the cable.

3 Route the sensor cable through the hole.
ⓘ Attach a taught wire to the cable as needed.

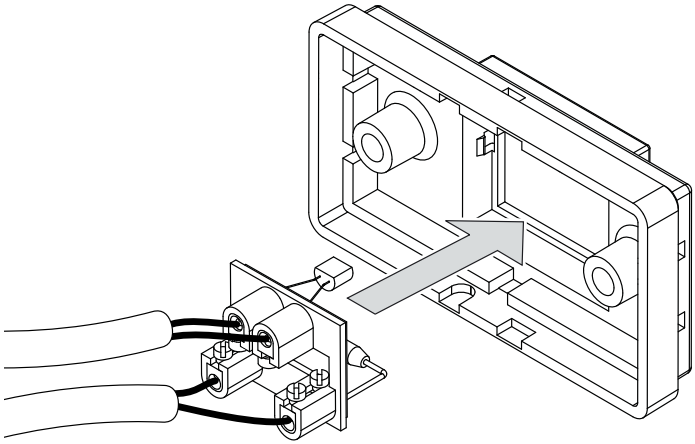
4 Open the heater sensor housing, remove the receiving disk and connect the cable to the receiving disk.



A Connection for safety temperature limiter
B Connection for temperature sensor line
C Temperature sensor
D Safety temperature limiter
Connection for lines to the receiving disk

ⓘ The safety temperature limiter is available only in the heater sensor. These work steps do not apply to the bench sensor and multisensor.
ⓘ If multiple sauna heaters are installed in a sauna cabin, it may be necessary to install additional safety temperature limiters and connect them in series.

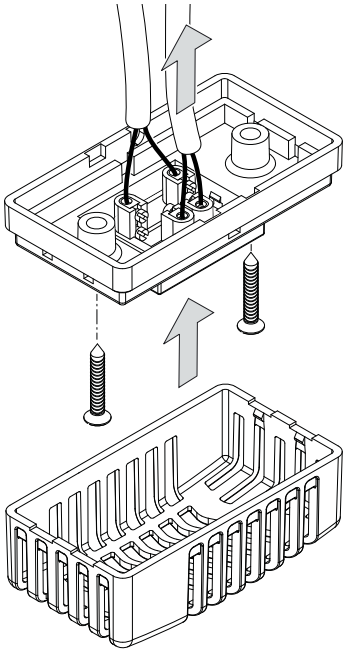
5 Insert the receiving disk in the bottom of the housing.



6 NOTICE Do not damage the sensor cables when installing.
Attach the housing to the cabin ceiling.

a) Screw in the bottom of the housing with the receiving disk to the cabin ceiling.

b) Attach the top of the housing.



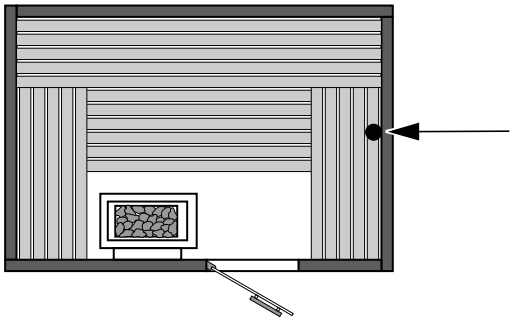
3.5 Mounting the multisensor (optional)

Hardware + tools:

- Multisensor and connecting cables
- Drill for drilling a hole in the cabin wall
- Screwdriver
- Taut wire, as needed

▶ Mounting the multisensor in the cabin

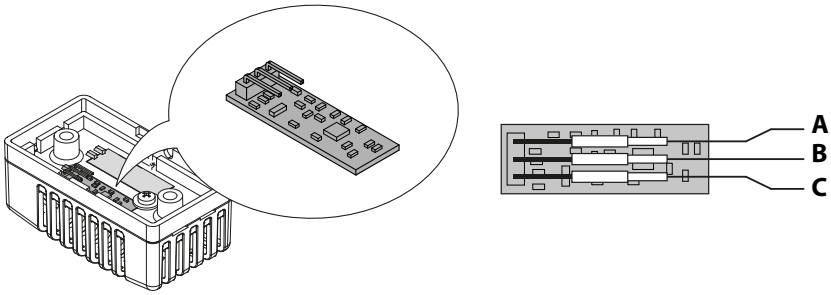
1 Determine a suitable location for the installation.
ⓘ The multisensor is installed in the middle of the side wall facing away from the sauna heater and door, at a height of approx. 150 cm.



2 Drill a hole in the cabin wall for the cable.

3 NOTICE Do not pull the lines at the plug when laying them. Doing so could damage the line. Attach the taut wire only to the cable.
Route the sensor cable through the hole.

4 Open the multisensor's housing and connect the sensor bus cable.



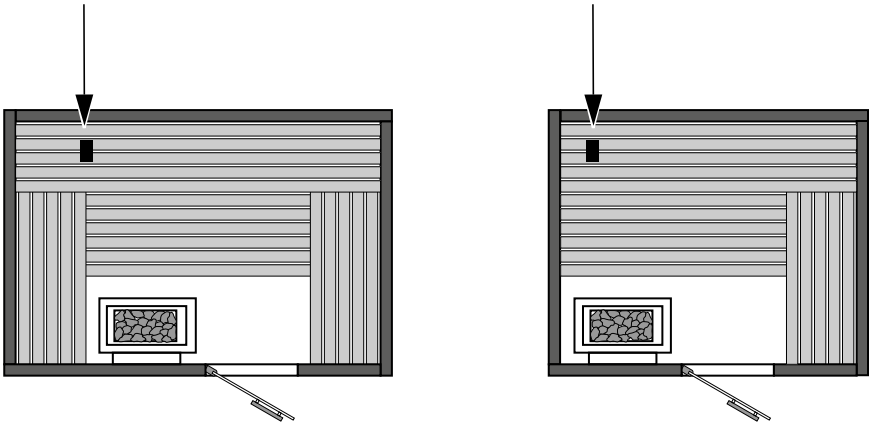
A White (sensor bus)
B Green (sensor bus)
C Brown (sensor bus)

5 Screw the sensor plate to the cabin wall and close the housing.

4.3 Connecting the sensor cables, EN-43

3.6 Mounting the bench sensor (optional)

The bench sensor is mounted on the ceiling above the back sauna bench across from the sauna heater.



Installation configuration – bench sensor

To mount the bench sensor, see the handbook for the heater sensor:
▶ Mounting the heater sensor in the cabin, EN-31

3.7 Mounting the cabin lighting

Lighting can be installed anywhere, however not near rising hot air. The light output in the relay box is set to inductive load by default, but light bulbs, halogen HV bulbs and other resistive loads may also be connected to it. If required, the light output can also be manually set to capacitive loads.
Cabin lighting is not included in the scope of delivery. Observe the separate installation instructions for lighting.

Light source requirements:

- Minimal output 5 W
- Resistive loads max. 100 W
- Dimmable energy-saving bulbs max. 35 W
- Light sources with conventional transformers max. 60 VA
- Dimmable LED bulbs max. 60 W

NOTICE

Material damage

Lighting and the control panel could become damaged if non-dimmable light sources are installed. In this case, the warranty becomes void.

- ▶ Do not install the lighting in areas with rising hot air.
- ▶ The lighting must conform to protection class IPX4 (splash-proof) and be resistant to ambient temperatures.
- ▶ Connect only dimmable light sources.

3.8 Mounting the fan

An exhaust fan can be mounted in the cabin and set via the control unit. The fan can be installed anywhere, however never near hot air that rises from the heater.
The fan is not included in the scope of delivery. Observe the separate installation instructions for the fan.

Fan requirements

- Minimal output 5 W
- Maximum output 100 W
- Voltage 230 V 1N AC
- Suitable for use in sauna cabins

4 Connecting the lines

General instructions for electrical installation

Ensure that electrical installation is performed in compliance with the standards and legal norms valid in your country.
If a residual current device (RCD) is installed, ensure that there are no other electrical consumers not belonging to the sauna system which are fused via this RCD.
If the sauna heater has not been used for an extended period of time, the heater may draw moisture from the ambient air, which, in rare cases, could lead to the RCD to be tripped. This is a physical process and not a fault on the part of the manufacturer.
In this case, the heater must be heated by a technician under supervision which will bypass the RCD function. Once the moisture has escaped from the heating elements after approx. 10 minutes, the RCD can be integrated again in the electric circuit.
If the sauna heater will not be used for an extended period of time, we recommend that you switch on the heater every 6 weeks so that the heating elements do not accumulate moisture. If, during commissioning, the RCD is triggered, the electrical installation must be checked again.
The electrician is responsible for properly connecting the heaters; thus, the manufacturer does not assume liability.

⚠WARNING

Risk of electric shock

A faulty electrical connection poses the risk of an electric shock.
This risk also applies following 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.

This chapter describes how to connect lines to the control unit's circuit board.
Depending on the model, sauna heaters with various operation modes can be connected to the control unit:

- EOS Compact DC: Finnish sauna heater
- EOS Compact HC: Finnish sauna heater or Bi-O sauna heater

Both types of sauna heaters are referred to as sauna heaters in the following section. However, in instances where different settings must be made, they will be referred to specifically by name.

Recommended installation sequence

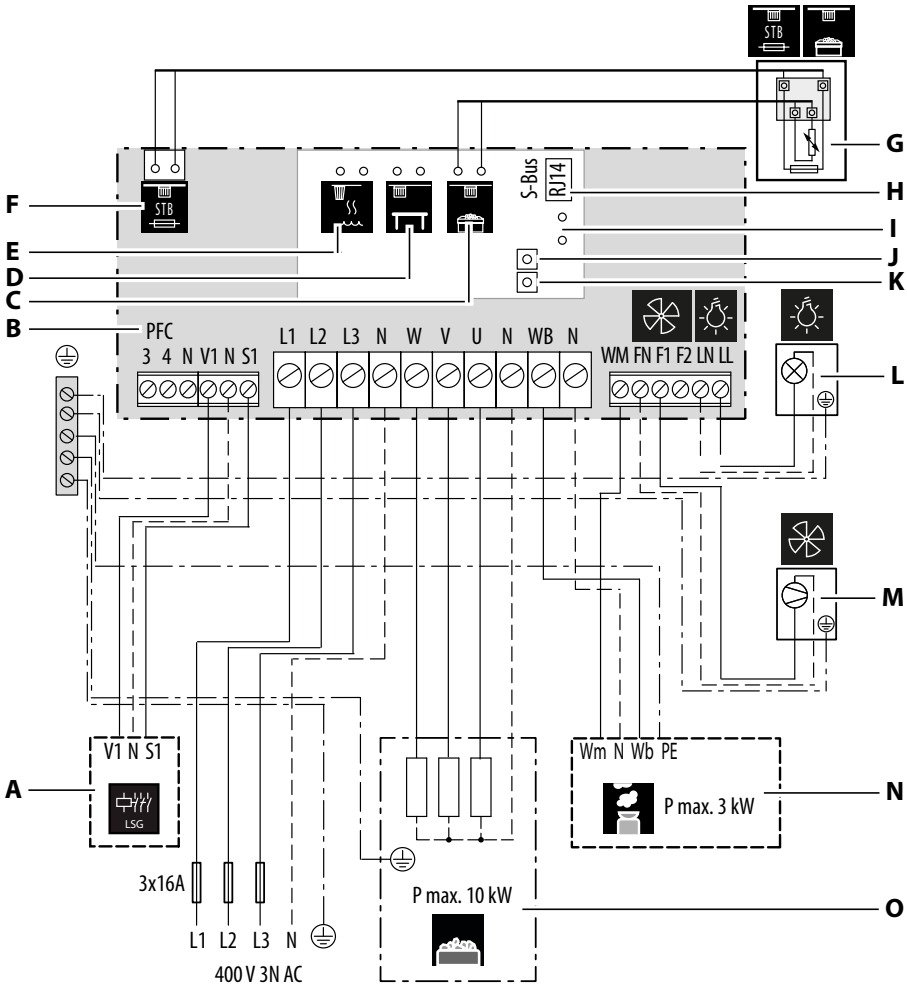
Before commencing installation, the control unit must be mounted. Furthermore, all cabin work must be complete: sauna heater, sensor, light, etc.

Complete installation in the following sequence:

- Connect sensor lines and plug in S-bus plug for the additional module, if needed.
- Connect the consumer lines for sauna heater, light, fan, etc.
- Set the heating period limitation and set via the jog dial, see ▶ Setting the heating time limitation, 🗋 EN-51
- Check the setting for the safety system and adjust, see ▶ Setting the safety system, 🗋 EN-50
- Establish connection to the power supply.
- Switch on the control unit.
- Configure additional settings, e.g. target temperature.

The settings for the heating period limitation and for the safety system must be set and checked prior to connection to the mains supply and before the control unit is switched on for the first time.
Subsequent modifications are possible only after the device has been disconnected from the mains supply and after the modifications has been reconnected to the mains supply.

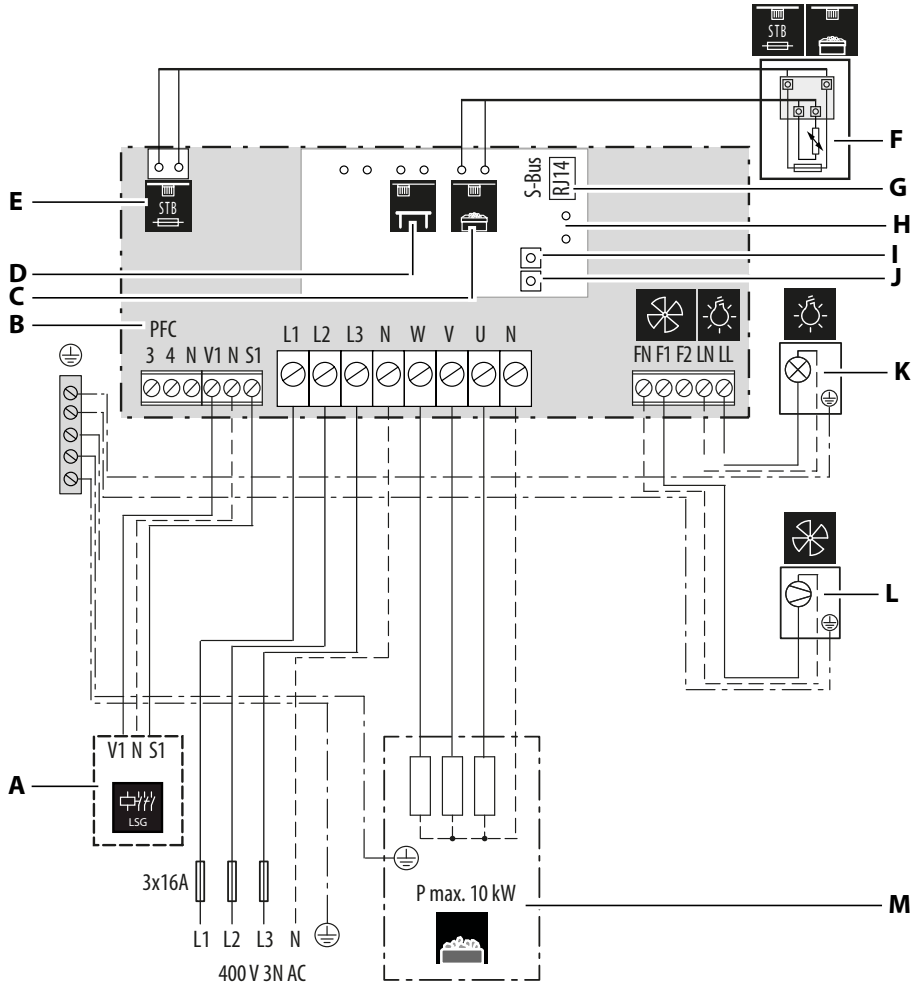
4.1 Circuit board assignment for EOS Compact HC



A Output controller
B Potential-free contact
C Heater sensor connection
D Bench sensor connection (optional)
E Multisensor connection (optional)
F Safety temperature limiter connection
G Heater sensor with safety temperature limiter
H Sauna bus
I Control output
J Safety system jog dial
K Heating period limitation jog dial
L Cabin lighting
M Fan
N Vaporiser
O Sauna heater

Schematic view of connections for EOS Compact HC

4.2 Circuit board assignment for EOS Compact DC



A Output controller
B Potential-free contact
C Heater sensor connection
D Bench sensor connection (optional)
E Safety temperature limiter connection
F Heater sensor with safety temperature limiter
G Sauna bus
H Control output
I Safety system jog dial
J Heating period limitation jog dial
K Cabin lighting
L Fan
M Sauna heater

Schematic view of connections for EOS Compact DC

4.3 Connecting the sensor cables

⚠WARNING

Risk of electric shock

There is a risk of electric shock when connecting the cables if the control unit is connected to the power supply.

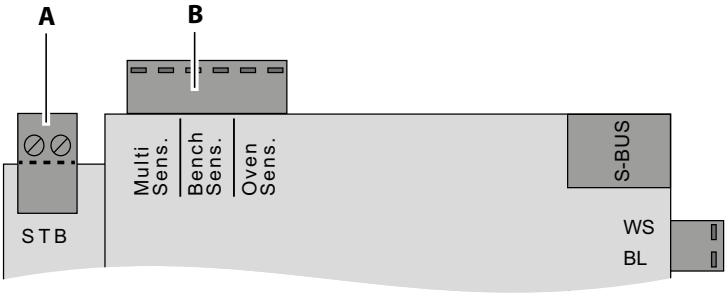
▶ Ensure that the control unit has no power.

Required tools:

- Flathead screwdriver

The front cover must be removed for the following steps. See: ▶ Removing the front cover, 🗋 EN-23.

The cables are connected respectively to plugs that can be removed from the circuit board. These plugs should be removed so that the cables can be connected easily and safely. When the cables are connected, the plugs are plugged in again to the respective terminals on the circuit board.

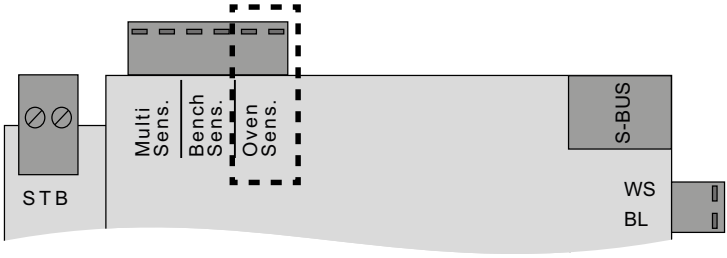


A Terminal plug for safety temperature limiter

B Sensor for safety temperature limiter

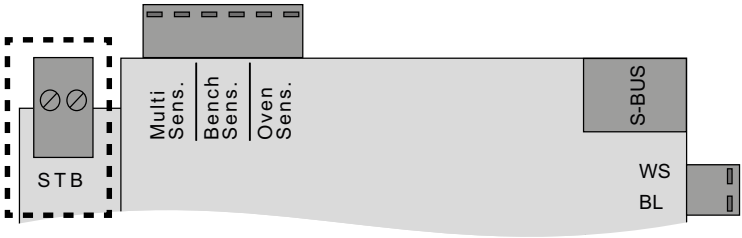
▶ Connecting the sensor cables

1 Connect the heater sensor:

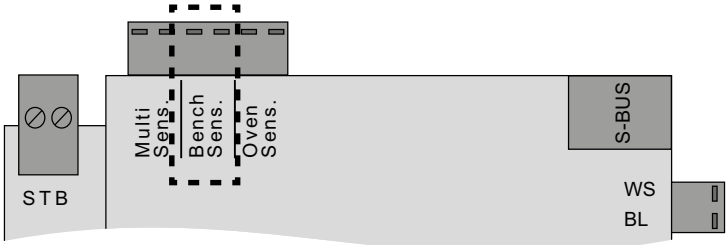


a) Connect the cable for the temperature sensor from the heater sensor to the two **Oven Sens.** terminals.

b) Connect the cable for the safety temperature limiter from the heater sensor to the two **STB** terminals on the lower main circuit board.



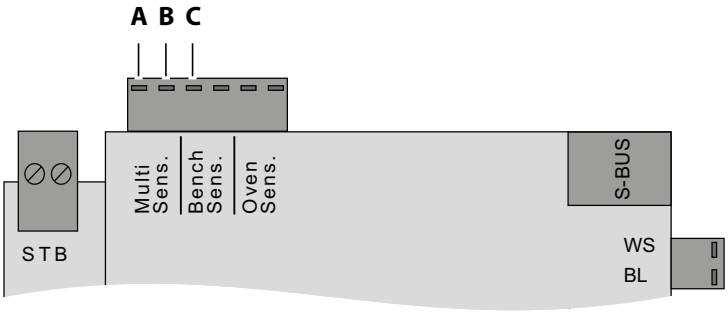
2 Connect the bench sensor (optional):
Connect the cable for the bench sensor to the two Oven Sens. terminals.
ⓘ This step is omitted if a multisensor is connected.



3 Connect the multisensor (optional):

a) Plug the white cable (**A**) into **Multi Sens.**.

b) Plug the green cable (**B**) into **Multi Sens.**.



4 Plug the terminal plug into the circuit board again as assigned.

4.4 Connecting optional modules

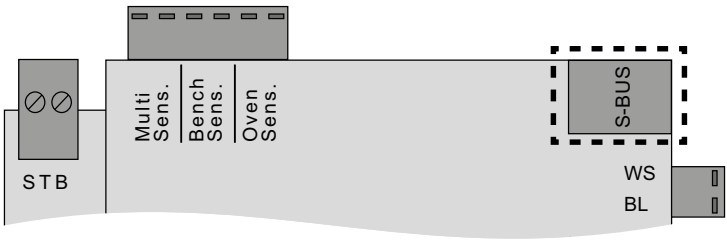
The EOS Compact control unit has a jack for sauna bus cables, which can be connected via the optional modules.

Add-on modules	
SBM remote start	With the SMB remote start module, the sauna cabin can be switched on and off remotely with a button.
SBM-HOT	With the SMB-HOT module, an intense heat-up phase of the sauna heater can be triggered. The heat-up phase can be triggered manually by pressing the button.
SBM-ECO	With the SBM-ECO module, the temperature of the sauna cabin can be lowered to a preset minimum heat level. This makes it possible to keep the sauna cabin warm at a low, energy-saving temperature when it is not in use.
SBM-KNX SBM-Mod	The KNX module and Modbus module are intended to be connected to a building management system. They facilitate the remote control of various functions for sauna heaters with or without a vaporiser.

For the item number, see Add-on modules, 🗋 EN-16.
The front cover must be removed for the following steps. See: ▶ Removing the front cover, 🗋 EN-23.

▶ Connect the module (optional)

1 WARNING! Ensure that the control unit has no power.
Insert the cable with the RJ14 plug from the module into the top S-BUS jack.



ⓘ Connect a module distributor if you want to connect more than one module. See 2.5 Accessories, 🗋 EN-16.

4.5 Connecting the consumer lines

⚠WARNING

Risk of electric shock

There is a risk of electric shock when connecting the cables if the control unit is connected to the power supply.

▶ Ensure that the control unit has no power.

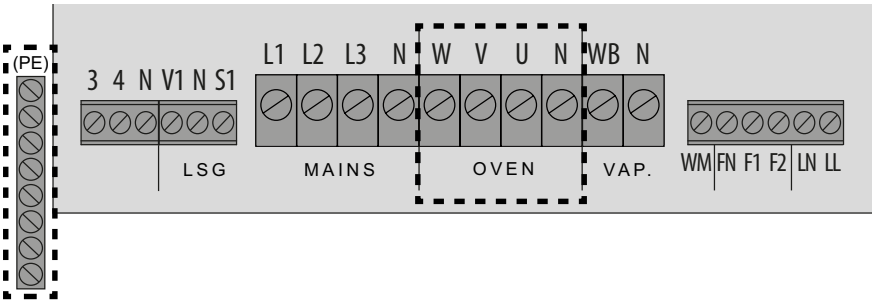
Required tools:

- Flathead screwdriver

The front cover must be removed for the following steps. See: ▶ Removing the front cover, 🗋 EN-23.

▶ Connecting the heater

1 Connect the cable from the sauna heater to the four terminals (heater) W, V, U, N and **PE**.

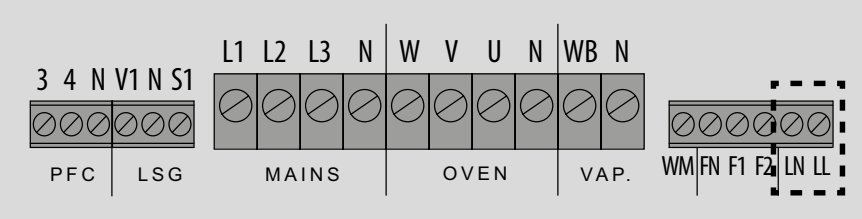


ⓘ Always connect the neutral conductor N of the sauna heater as well, because in humidity mode, one phase is rerouted from the sauna heater to the vaporiser. This results in an asymmetrical heating load and power flows through the neutral conductor.

ⓘ The switching output of the control unit for the sauna heater has a max. of 10 kW resistive load. It can be expanded as needed by an optional output controller (LSG) so that it is possible to connect sauna heaters with an output greater than 10 kW.

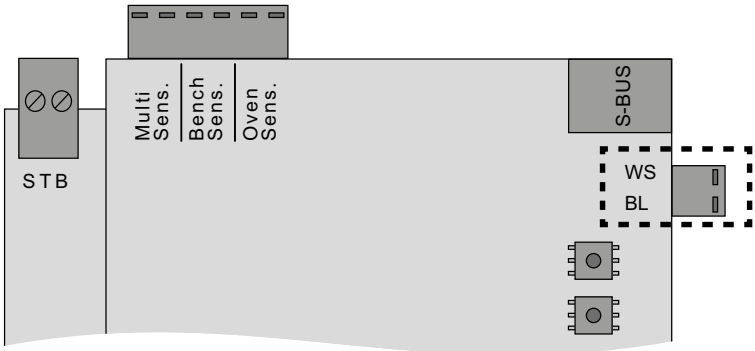
▶ Connecting the cabin light

1 Connect the cable of the sauna lighting to the two terminals LN and LL.



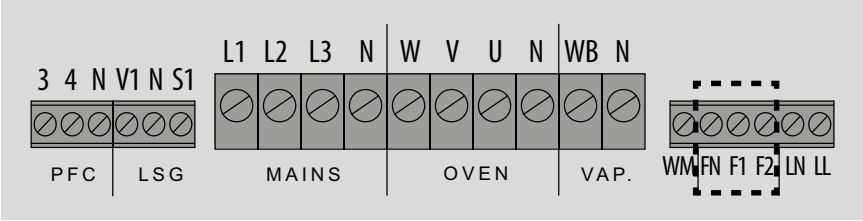
2 Connect the ballast (optional) cable DIM+ and DIM- to the control output WS and BL.

ⓘ Ballast: Mean Well PWM-60-24 for LEDs 24 V 60 W. The ballast must be supplied separately with power.



▶ Connecting the fan

1 Connect the fan to the two terminals FN and F1.

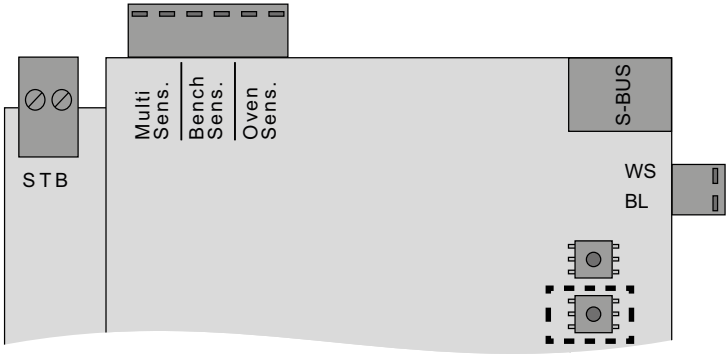


ⓘ If the fan is a double-phase fan, connect the higher fan phase to F1 (full power) and the lower fan phase to F2 (lower power).

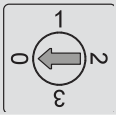
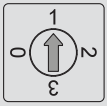
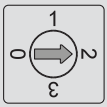
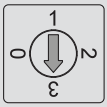
ⓘ If a single-phase fan is connected or fan phase 1 is set, only output F1 is supplied with power. See
5.1 Setup, 🗋 EN-56.
5.4 Fan function, 🗋 EN-60.

▶ Setting the safety system

1 Set the lower jog dial:

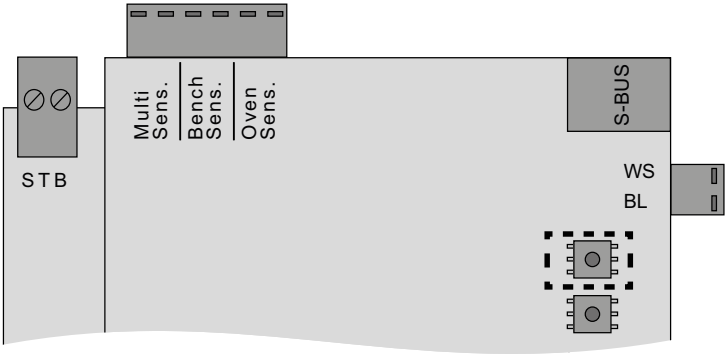


ⓘ Set the jog dial with the screwdriver as supplied in the scope of delivery.

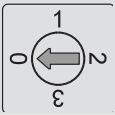
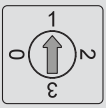
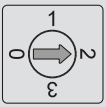
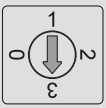
Position	Safety system settings
	Private sauna operation without safety system The heating period is restricted to 6 hours, irrespective of the set jog dial position for heating period limitation.
	Private sauna operation with safety system The heating period is restricted to 6 hours, irrespective of the set jog dial position for heating period limitation.
	Commercial sauna operation without safety system
	Commercial sauna operation with safety system

▶ Setting the heating time limitation

1 Set the upper jog dial:



ⓘ Set the jog dial with the screwdriver as supplied in the scope of delivery.

Position	Heating time limitation settings
	Max. 6 hrs runtime: private or commercial operation
	Max. 12 hrs runtime: commercial operation, e.g. in blocks of flats and hotels
	Max. 18 hrs runtime: commercial operation and if the cabin is continuously supervised, e.g. in public saunas In Bi-O mode, a max. of 17:30 hrs can be set, since 0:30 hrs are included for the drying program.
	Infinite runtime (24 hrs/7 days): commercial operation and if the cabin is continuously supervised, e.g. in public saunas

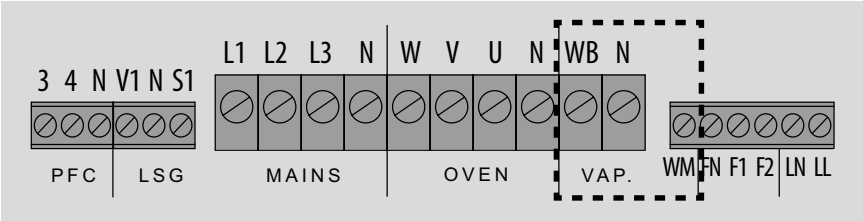
▶ Connecting the vaporiser – with water shortage detection

1 CAUTION! Fire hazard from overheating.
If the connections for the water bath WB and water shortage WM are swapped, the thermostat in the sauna heater is jumpered. The water shortage cannot be detected. The vaporiser overheats.
Do not swap the connections for the water bath WB and water shortage WM. Check for proper functioning after installation.
Connect the cable from the vaporiser to the three terminals (VAP.):

a) Connect the brown cable to terminal **WM**.

b) Connect the neutral conductor (blue cable) to terminal **N**.

c) Connect the black cable to terminal **WB**.



ⓘ The switching output of the control unit for the vaporiser has a max. of 3 kW resistive load. It can be expanded, as needed, by an optional output controller (LSG).

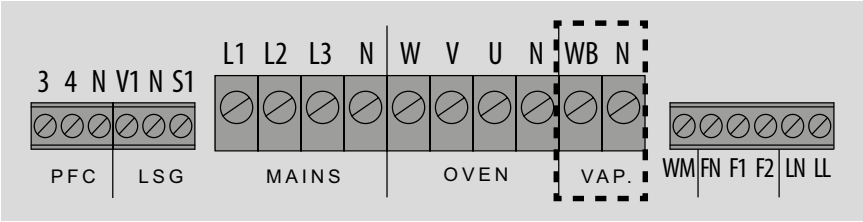
ⓘ You can connect more than one vaporiser. If correctly connected, each vaporiser can report a water shortage separately. For the connection diagram, please contact EOS Service (Service address, 🗋 EN-92). Two vaporisers can be operated only in combination with LSG18H or LSG36H.

▶ Connecting the vaporiser – without water shortage detection

1 CAUTION! Fire hazard from overheating.
If a vaporiser without water shortage detection is connected, the system displays no error message if there is insufficient water.
Connect the cable from the vaporiser to the two terminals (VAP.):

a) Connect the neutral conductor (blue cable) to terminal **N**.

b) Connect the black cable to terminal **WB**.

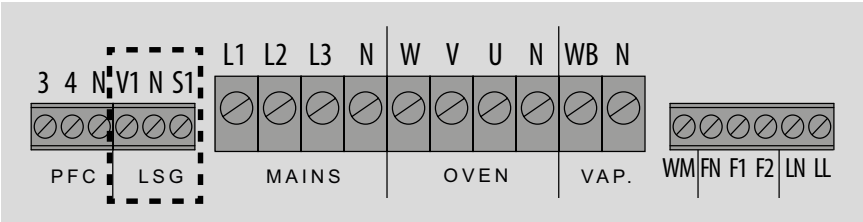


ⓘ The switching output of the control unit for the vaporiser has a max. of 3 kW resistive load. It can be expanded, as needed, by an optional output controller (LSG).

ⓘ You can connect more than one vaporiser.

▶ Connecting the output controller (LSG)

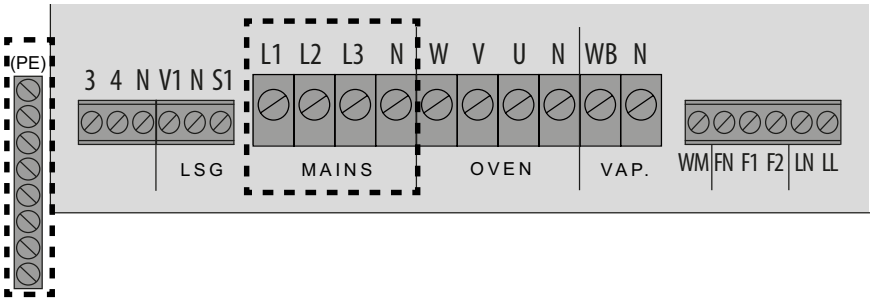
1 Connect the LSG cable to the three terminals (LSG) **V1**, **N** and **S1**.



ⓘ See the installation instructions for the corresponding LSG for information about how to connect the other cables for the optional LSG.

▶ Connecting the mains lead

1 Connect the cable for the mains connection to the four terminals (MAINS) **L1**, **L2**, **L3**, **N** and **PE**.

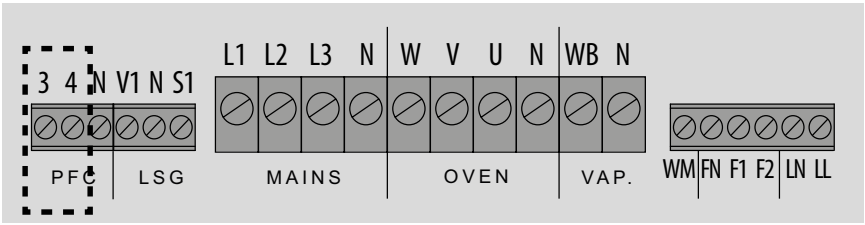


ⓘ The control unit is connected with a live current of 400 V 3 N AC 50 Hz and fused separately with 3 x 16 A.
A 16 A cut-out with at least K characteristic must be used for fuse protection.

ⓘ 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).

4.6 Potential-free contact

A potential-free contact is available on the circuit board. You can include this NO contact in any electric circuit to switch an external load or transmit a signal.



Connection for potential-free contact

NOTICE

Property damage due to short circuiting

The supply line can short circuit if you use the mains connections L1, L2 or L3 to supply the electric circuit connected to the potential-free contact.

- ▶ Use the control unit mains connections only for the sauna heater.
- ▶ Do not connect additional devices to the mains connections of the control unit.
- ▶ Connect the device connected to the potential-free contact and ensure that it is protected from short circuiting.
- ▶ Observe the maximum load of the potential-free contact.

Resistive load/alternating current	Max. 250 V AC/10 A
Inductive load/alternating current	500 VA
Direct current	Up to 30 V DC max. 10 A (300 W)
	Up to 110 V DC max. 0.3 A (33 W)
	Up to 220 V DC max. 0.12 A (26.4 W)

4.7 Checking for proper installation of the vaporiser

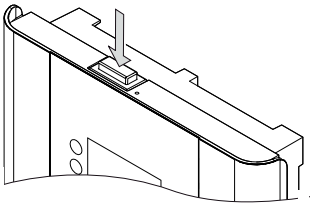
If installed properly, the vaporiser will switch on and off according to the humidity setting.

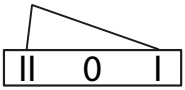
- If the *Wb* and *Wm* connections on the vaporiser are swapped, the vaporiser will not switch off and continue to run uninterrupted.

5 Commissioning

5.1 Setup

The control unit switches automatically in standby mode if it is connected to the mains supply. The settings must be reset after a system reset. The program guides you through the required steps.
Ensure that the rocker switch is set to Position I.





Menu navigation	
Setting set-point values	▲ ▼
Reset value	
Next step	
Previous step	

▶ **Setup**

1 Set the time with ▲ ▼.
ⓘ Hours are changed by setting the minutes.

	00:00 ... 23:59

2 Indicate if a vaporiser is connected with ▲ ▼.

		Without vaporiser
		With vaporiser

3 Select fan stage with ▲ ▼.

	1	Single-stage fan
	2	Double-stage fan

ⓘ The fan function can be set for Bi-O mode (humidity mode), see ▶ Setting the fan function, 🗋 EN-61.

4 Configure the remote control with ▲ ▼.

ⓘ Adjustable only if a building management system is connected.

ⓘ Applicable settings for the Modbus protocol can be found in the documentation for the application in use.

	KNX	1	---
		2	KNX
	Modbus	1	---
		2	MODBUS addresses 2–99

5 Set MODBUS baud rate with ▲ ▼.

ⓘ Adjustable only if Modbus is selected.

	1	1200 Bd
	2	2400 Bd
	3	4800 Bd
	4	9600 Bd
	5	19200 Bd
	6	38400 Bd
	7	57400 Bd
	8	115200 Bd

6 Set MODBUS parity with ▲ ▼.
ⓘ Adjustable only if Modbus is selected.

MODBUS Parity	1	1 stop bit, no parity
	2	2 stop bit, no parity
	3	1 stop bit, odd parity
	4	2 stop bits, odd parity
	5	1 stop bit, even parity
	6	2 stop bits, even parity

7 Confirm all setup settings and exit setup.

5.2 Defining the light source

The control unit is set for a non-dimmable light source by the factory. If a different light source is connected, it must be set in the menu.

▶ **Setting the light source**

1 Open the Lighting menu.

a)  b)  c) 

2 Make settings to indicate which light source is connected with ▲ ▼.

	1	Non-dimmable light source, no dimming at the light output, light setting 0% or 100%.
	2	Non-dimmable light source at the light output, dimming at the control output for the ballast Mean Well PWM-60-24 for LEDs 24 V 60 W
	3	Phase control fixer, LED ballasts

5.3 PFC function

The potential-free contact (PFC) is switched off at the control unit by the factory.

▶ Setting the PFC

1 Open the PFC menu.

a)  b)  c)  d) 

2 Set the PFC function with ▲ ▼.

	0	PFC switched off
	1	PFC can be switched on and off manually via the menu or with the remote control.
	2	PFC switches on: with sauna
		PFC switches off: with sauna, if malfunction is present
		No manual operation possible
	3	PFC switches on: with sauna
		PFC switches off: 5-min. delay with sauna
		Manual operation possible for coloured light, sound
	4	PFC switches on: with cabin light
		PFC switches off: with cabin light
	5	PFC switches on: if target temperature is reached
		PFC switches off: with sauna
	6	PFC switches on: during heat-up phase (use of IR foil possible)
		PFC switches off: with sauna or if target temperature is reached
	7	PFC switches on: if malfunction present
		PFC switches off: no malfunction
	8	PFC switches on: if malfunction or warning present
		PFC switches off: no malfunction or warning
	9	PFC switches on: after HOT end
		PFC switches off: 3 seconds after HOT end
	10	PFC switches on: if steam is requested, if vaporiser without water shortage detection is connected
		PFC switches off: no steam request

5.4 Fan function

The fan is switched on and off in different ways depending on the sauna mode in use:

- In Finnish sauna mode, the fan can only be switched on or off manually. If the fan is switched on during the heating process, it is switched off automatically when the heating process ends.
  If the fan is switched on when the sauna cabin is in standby mode, it is switched off automatically after 30 min.
- You can set the fan function for Bi-O mode (humidity mode). The function is set by the factory so that the fan can be switched on or off manually via the menu.
  If a fan function is set, it is interrupted when the fan is manually switched on or off.
  The fan is always switched on automatically for 30 min. for post-heating.

▶ Setting the fan function

1 Open the Fan Function menu.

a)  b)  c)  d) 

2 Set the fan function with ▲ ▼.

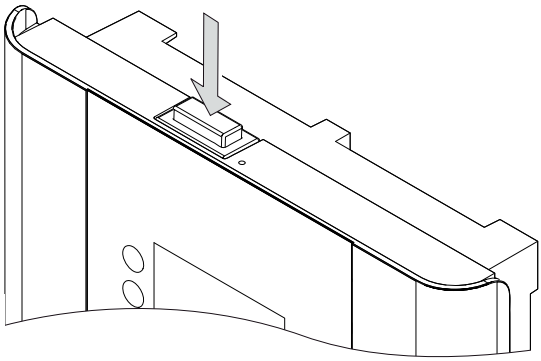
ⓘ The fan functions are available only for the Bi-O mode (humidity mode).

Sauna heater – fan functions		
	0	Fan can be switched on and off manually via the menu.
	1	Fan switched on to Stage 1 in heater intermission
	2	Fan switched on to Stage 1 in heater heat-up phase
	3	Fan switched on to Stage 1 in heater intermission and heater heat-up phase
	4	Fan switched on to Stage 1 in vaporiser intermission
	5	Fan switched on to Stage 1 in vaporiser heat-up phase
	6	Fan switched off in heater intermission and heater heat-up phase
		Fan cannot be switched on or off manually via the menu (menu icon for fan is greyed out)
	Selectable if double-stage fan:	
	7	Fan switched on to Stage 2 in heater intermission
	8	Fan switched on to Stage 2 in heater heat-up phase
	9	Fan switched on to Stage 2 in heater intermission and heater heat-up phase

6 Operation

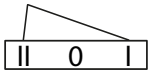
6.1 Controls

6.1.1 Rocker switch (on, off, light only)



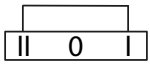
Rocker switch on control unit

Switch on control unit



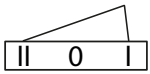
Control unit is switched on (factory setting).

Switch off control unit



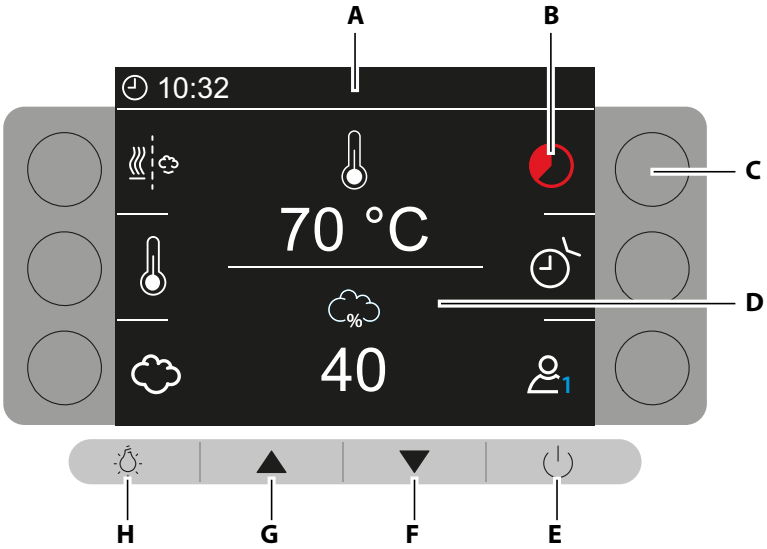
Control unit is switched off.
Parts of the circuit board are still energised.

Switch on light only



Cabin light is switched on, control unit, and sauna heater are switched off. Setting for cleaning and maintenance.

6.1.2 Buttons and screen



A Status bar
B Function/menu item
C Soft key: activate function/open menu item
D Settings display
E Switch sauna cabin on/off
F Down
G Up
H Switch cabin lighting on/off

Buttons and screen

6.1.3 Screen saver and sleep mode

If the sauna cabin is switched off and no button is pushed:

After 1 hr	Screen saver is activated
After 2 hrs	Sleep mode is activated (screen is off)

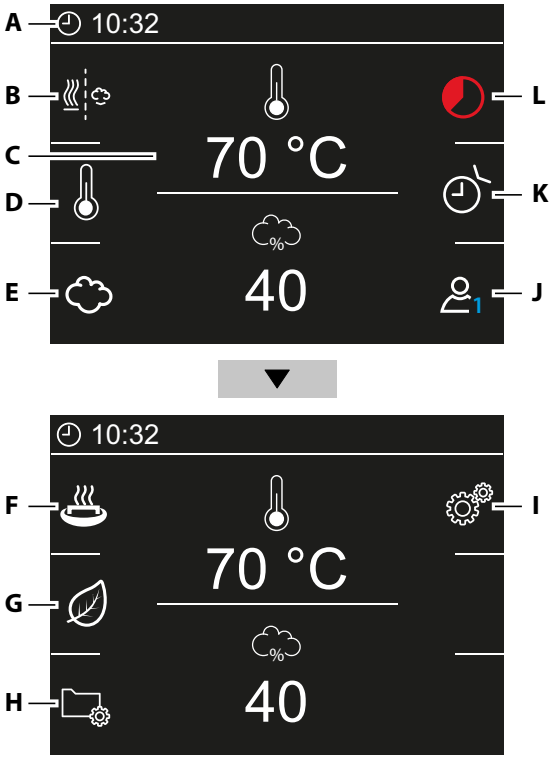
Screen saver and sleep mode are ended by pressing any button.

6.1.4 Instructions for operation

Change number values	After opening a function or a menu item, number values that can be changed appear in blue.
Save settings	Set values are saved automatically.
Change to main menu	If 5 seconds pass and no button is pressed, the display returns automatically to the main menu.
	Press the function soft key or the menu item again.
	Navigate back with the arrow keys:  .

6.2 Main menu

The main menu has two screens. Switch between screens with ▲ ▼.



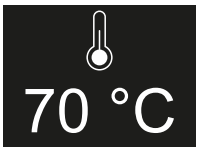
A Time, status display
B Bi-O or Finnish operating mode
C Target temperature/humidity display
D Target temperature
E Target humidity
F HOT mode
G ECO mode
H Operating data
I Settings
J Profiles
K Timer
L Autostop for heating period

Example of overview of functions/menu items on main menu

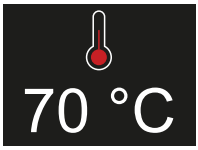
The displayed functions or menu items can vary, depending on the control unit model and its configuration.

Main menu display

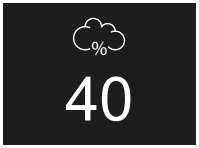
Sauna cabin off

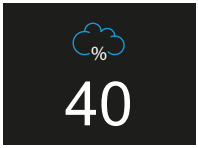


Sauna cabin on



Target temperature
The temperature icon flashes during the heat-up phase.





Target humidity
Displayed in Bi-O mode only.

6.3 Status bar

Time or time remaining

Time

Time remaining in heating period until autostop

Time remaining for HOT mode

Time remaining for ECO mode

Function, mode active

Cabin light is on

Keypad lock is active

Remote control: sauna cabin can be activated remotely

Holiday cottage mode is active

Timer: one-time heating period is set. Timer flashes: recurring heating period is set.

Holiday resort mode is active

HOT mode is active

Remote mode is active

ECO mode is active

6.4 Keypad lock

▶ **Lock/unlock keypad**

1 Press up and down simultaneously for 2 seconds.

ⓘ Status bar display during active keypad lock:  .

6.5 Display settings

6.5.1 Time

▶ **Setting the time**

1 Open the Time menu.

a) 

b) 

c) 

2 Set the time with  .

ⓘ Hours are changed by setting the minutes.

00:00 ... 23:59

6.5.2 Display brightness

▶ **Setting the display brightness**

1 Open the Display Brightness menu.

a) 

b) 

c) 

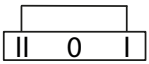
2 Set the brightness with ▲ ▼.

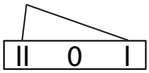
	25%, 50%, 75%, or 100%

6.6 Setup/reset

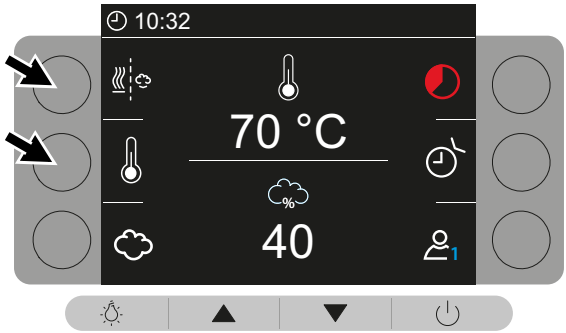
▶ **Opening the Setup/Reset menu**

1 Restart the control unit: switch off and switch on again.

a) 

b) 

2 Press the following 2 soft keys simultaneously when the logo is displayed.



☑ The Setup menu opens. For information on settings in the Setup/Reset menu, see: 5.1 Setup, 🗋 EN-56.

6.7 Sauna controls

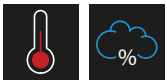
6.7.1 Switching the sauna heater on/off

▶ Switching on the sauna heater

1 Press the On/Off button for 4 seconds.

ⓘ A countdown is displayed:

☑ The sauna heater is switched on. The icons for temperature and humidity (in Bi-O mode only) in the main menu are displayed in colour.



▶ Switching off the sauna heater

1 Briefly press the On/Off button.

☑ The sauna heater is switched off. The icons for temperature and humidity (in Bi-O mode only) in the main menu are displayed in white.

ⓘ If the cabin is operated in Bi-O mode, the drying program starts once humidity mode is switched off. This program continues to run the sauna heater for up to 30 minutes.


: press again to cancel the drying program.

6.7.2 Dimming or switching the light on/off

The light can be dimmed only if it has been configured as dimmable. See 5.2 Defining the light source, 🗋 EN-58.

▶ **Switching the light on/off**

1 Briefly press the light button.

ⓘ Status bar display if the light is switched on:  .

▶ **Dimming the light**

1 Press the light button for 2 seconds.

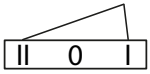
☑ The Dim Light menu is displayed.

2 Set the dimming level with ▲ ▼.

	0–100%

▶ **Switching on light only (during cleaning/maintenance)**

1 Set rocker switch to Position II.



ⓘ The rocker switch is located on the top of the control unit (6.1.1 Rocker switch (on, off, light only), 🗋 EN-62).
ⓘ Sauna heater and control unit remain switched off.

6.7.3 Selecting Finnish/Bi-O mode

▶ **Switching modes**

1 Choose the Mode function.

ⓘ The system switches between Finnish and Bi-O mode.
ⓘ In Bi-O mode, the humidity function in the main menu is activated:  .

6.7.4 Temperature

When setting the temperature in Bi-O mode, the humidity is automatically adjusted. See: 6.7.5 Setting the humidity for Bi-O mode, EN-71.

▶ **Setting the temperature**

1 Choose the Temperature function.

2 Set the temperature with ▲ ▼.

	30–115°C in Finnish mode
	30–70°C in Bi-O mode

ⓘ During the heat-up phase, the  temperature icon flashes in the main menu display.

6.7.5 Setting the humidity for Bi-O mode

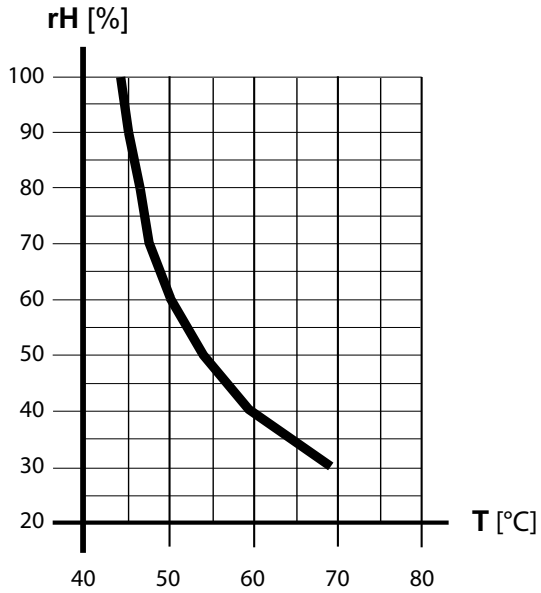
An (optional) humidity sensor regulates the relative air humidity in %. At the same time, the control unit attempts to keep the set humidity as precisely as possible.
Air humidity can be regulated depending on the installation:

- If a humidity sensor is connected, the relative air humidity can be set in %.
- If no humidity sensor is connected, an interval can be set as a cycle. This interval defines how long humidity mode is active in relation to the entire operating time.

Icon that indicates when a humidity sensor is set

Icon for cycle

The humidity sensor regulates the humidity according to the following indicated characteristic curve:



Characteristics curve for temperature/humidity

All values that lie below or on the characteristic curve can be set and used. When setting a parameter, e.g. temperature, the setting for the other parameter (humidity) is automatically adjusted.
Values that lie above the characteristic curve cannot be set.
If no humidity sensors are used, the humidity is regulated in proportion to time.
For example, the humidity setting = 40 means the vaporiser is on approx. 40 % of the total operating time.
This setting does not take into consideration the actual humidity in the sauna cabin and makes it possible to consistently produce a specific volume of steam.

▶ Setting the humidity

1 Choose the Humidity function.

2 Set the humidity with ▲ ▼.

		0–100

6.7.6 Heating period – auto stop

You can set a heating period for the sauna heater.
After switching on the system, the countdown for the heating period appears in the status bar: 04:47:13.
The heating period can also be set in operation mode. The heating period in progress is not altered by this. The new heating period starts only after heating is switched on again.
The heating period cannot be set in the holiday resort or remote modes.
See: 6.8.3 Modes – holiday cottage, holiday resort, remote, 🗋 EN-79.

▶ Setting the heating period

1 Choose the Heating Period function.

2 Set the heating period with ▲ ▼.

Private use in the sauna cabin	
	00:30 – 06:00 hr

ⓘ In commercial operation, the adjustable heating period depends on which heating time limitation is set.
See: ▶ Setting the heating time limitation, 🗋 EN-51.

Commercial use in the sauna cabin		
	Heating period limitation	Adjustable heating period
	06:00	00:30 – 06:00 hr
	12:00	00:30 – 12:00 hr
	18:00	00:30 – 18:00 hr
	24/7	00:30 – 23:59 hr
		--:-- (no heating period limitation)

6.7.7 Timer

The timer allows you to set the automatic start time up to 24 hours in advance.

▶ Setting the timer, 🗋 EN-74
▶ Switching off the timer, 🗋 EN-75
▶ Deactivating the timer, 🗋 EN-75

It is possible to set an automatic start time only if the sauna is equipped with a safety system that conforms to standards. This system must be confirmed during setup. See: 5.1 Setup, 🗋 EN-56.

The timer cannot be set in the holiday resort or remote modes. See: 6.8.3 Modes – holiday cottage, holiday resort, remote, 🗋 EN-79.

▶ Setting the timer

1 Choose the Timer function.

2 Set the automatic start time with ▲ ▼.

	00:00 – 23:59 hr
	--:-- (timer is deactivated)

3 Start the timer.

	Press the button for 2 seconds.  : Timer icon is displayed in the status bar.

▶ Switching off the timer

1 Press the On/Off button for 2 seconds.

ⓘ Pressing  to start the system again reactivates the timer.

▶ Deactivating the timer

1 Choose the Timer function.

2 Set the following values with  .

	--:-- (timer is deactivated)

6.7.8 Profiles

Values and modes are pre-set in profiles, e.g. temperature, Finnish or Bi-O mode, and humidity. You can set four different profiles. The settings you change in a profile are saved for this particular profile. Profiles cannot be set in the holiday resort or remote modes. See 6.8.3 Modes – holiday cottage, holiday resort, remote, 🗋 EN-79.

▶ Selecting a profile

1 Press the profile soft key until the desired profile (1–4) is displayed.

6.7.9 HOT mode (intense heating)

This setting is available only in Finnish mode. It allows you to start operation at a higher temperature in order to heat the sauna to the maximum temperature before and/or during an infusion phase, thereby keeping the sauna stones hot to achieve an optimal water splash effect. The runtime for HOT mode is set to 10 min. by the factory. It can be set, see: 6.8.2 Runtime for HOT mode, 🗋 EN-79.

This function is not possible if the temperature is set to the maximum. Note that this function generates an ambient temperature that is higher than normal for a specific period of time.

HOT mode can also be switched on (recommended) via a button that is available as an option (HOT module), see: 2.5 Accessories, 🗋 EN-16.

▶ **Switching HOT mode on/off**

1 Choose the HOT mode function.

☑ After switching on the system, the time remaining for HOT mode is displayed in the status bar: 

.

6.7.10 ECO mode (temperature decrease)

ECO mode can be activated during intermissions in operation to lower the temperature without allowing the cabin to cool down completely. The heating must be switched on to activate ECO mode.

It is not possible to activate ECO mode if HOT mode is on. The factory sets the runtime for ECO mode so that it is ended manually or when the sauna heater is switched off. The runtime can be set, see: 6.8.1 Runtime for ECO mode, 🗋 EN-78.

ECO mode can also be switched on (recommended) via a button that is available as an option (ECO module), see: 2.5 Accessories, 🗋 EN-16.

▶ **Switching ECO mode on/off**

1 Choose the ECO mode function.

☑ After switching on the system, the time remaining for ECO mode is displayed in the status bar:  .

6.7.11 Retrieving temperature/humidity values

You can retrieve the current actual temperature at all times. This also applies to the humidity if humidity mode is on.
The displayed values correspond to the values measured directly by the sensors. Due to the fact that, in a sauna, temperature zones vary greatly, the values can differ significantly from what is shown on the thermometer/hygrometer display on the wall.
We therefore recommend that you make adjustments to find the temperature/humidity values
that work best for you.

▶ **Displaying the temperature values**

1 Press the Up button for 2 seconds.

☑ The actual values from the connected sensors are displayed for approx. 4 seconds.
ⓘ The actual value for humidity is displayed only if a humidity sensor is connected.

6.7.12 Switching the PFC on/off manually

The icon for the potential-free contact (PFC) is displayed in the main menu only if the PFC function in the service menu is set to manual (setting 2).
See: 5.3 PFC function, 🗋 EN-58.
The PFC cannot be switched on/off manually in the holiday resort or remote modes. See: 6.8.3 Modes – holiday cottage, holiday resort, remote, 🗋 EN-79.

▶ **Switching the PFC on/off**

1 Choose the PFC soft key.

6.7.13 Switching the fan on/off manually

You can switch the fan on and off manually.

- If you switch on the fan during the heating process, it is switched off automatically when the heating process ends.
- If you switch on the fan when the sauna cabin is in standby mode, it is switched off automatically after 30 min.

You can set one function for the fan for Bi-O mode (humidity mode). It can be overridden through manual intervention.
See: 5.4 Fan function, 🗋 EN-60.

The fan cannot be switched on/off manually in the holiday resort or remote modes. See: 6.8.3 Modes – holiday cottage, holiday resort, remote, 🗋 EN-79.

▶ **Switching the fan on/off**

1 Choose the fan soft key.

6.8 Advanced settings

6.8.1 Runtime for ECO mode

The factory sets the runtime for ECO mode so that it is ended manually or when the sauna heater is switched off.

▶ **Setting the ECO mode runtime**

1 Open the menu for ECO mode runtime.

a)  b)  c)  d) 

2 Set the ECO mode runtime with ▲ ▼.

	∞	ECO is active until the function is manually ended or the sauna heater is switched off.
	30	30 min.
	60	60 min.
	90	90 min.
	120	120 min.
	150	150 min.
	180	180 min.
	210	210 min.
	240	240 min.

6.8.2 Runtime for HOT mode

The runtime for HOT mode is set to 10 min. by the factory.

▶ **Setting the HOT mode runtime**

1 Open the HOT Mode Runtime menu.

a)  b)  c)  d) 

2 Set the HOT mode runtime with ▲ ▼.

	5	5 min.
	10	10 min.
	15	15 min.
	20	20 min.

6.8.3 Modes – holiday cottage, holiday resort, remote

In some modes, certain settings are locked and the corresponding icons are hidden.

Available setting	Holiday cottage	Holiday resort	Remote
Switch on the sauna at the control unit.	✓	✓	—
Switch on sauna with timer or remote control	✓	✓	✓
Switch off sauna	✓	✓	✓
Light on/off, dim light	✓	✓	Switch on only
If the sauna heater is switched off, the light switches off automatically after 30 min.	✓	✓	✓
Temperature setting	✓	—	—
Finnish or Bi-O operating mode	✓	—	—
Humidity setting	✓	—	—
Retrieve temperature/humidity values	✓	✓	—
Heating duration 0:30 hr to 6:00 hr	✓	✓	—

▶ Activating/deactivating the holiday cottage mode

1 Restart the control unit: switch off and switch on again.

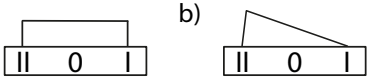
a) II 0 I b) II 0 I

2 Press the following 2 buttons simultaneously when the logo is displayed.

▶ **Activating/deactivating the holiday resort mode**

1 Restart the control unit: switch off and switch on again.

a) b)

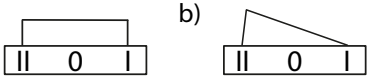


2 Press the following 2 buttons simultaneously when the logo is displayed.

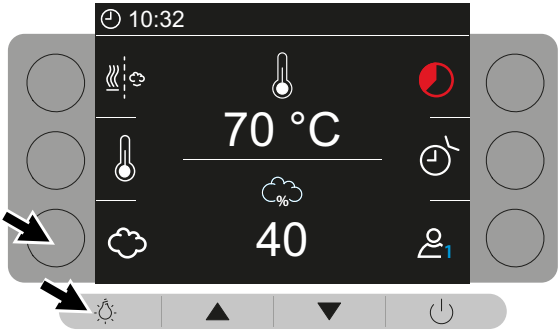
▶ **Activating/deactivating the remote mode**

1 Restart the control unit: switch off and switch on again.

a) b)



2 Press the following 2 buttons simultaneously when the logo is displayed.



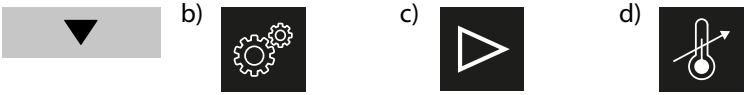
6.8.4 Temperature control

The temperature control is set to 0 by the factory.

▶ **Setting the temperature control**

1 Open the Temperature Control menu.

a) b) c) d)



2 Setting the temperature control ▲ ▼.

1	-5 K
2	-4 K
3	-3 K
4	-2 K
5	-1 K
6	0 K
7	+1 K
8	+2 K
9	+3 K
10	+4 K
11	+5 K

6.8.5 Remote control

If a remote control is connected, the safety system must be set accordingly when the control unit is installed. See: ▶ Setting the safety system, 🗋 EN-50. If a remote control module or a different unit for controlling the system remotely is installed, the Wi-Fi icon is displayed in the status bar: .

7 Maintenance

7.1 Cleaning

Clean the screen and the front of the housing with a damp microfibre cloth. You should ensure that water does not seep into the housing. Do not use cleaning solutions that contain alcohol or acid. They can damage these surfaces.

7.2 Maintenance

If the date for the next servicing has passed, a message appears on the screen. The maintenance interval is set by default to 500 hours. You can change the maintenance interval.

▶ **Setting the maintenance interval**

1 Open the Maintenance Interval menu item.

a)  b)  c)  2x d) 

2 Set the maintenance interval with  .

	1	No information – the maintenance message if not displayed
	2	250 hours until the next servicing
	3	500 hours until the next servicing
	4	1000 hours until the next servicing
	5	2000 hours until the next servicing
	6	4000 hours until the next servicing
	7	5000 hours until the next servicing
	8	6000 hours until the next servicing
	9	8000 hours until the next servicing
	10	10000 hours until the next servicing

7.3 Display of software and serial number

▶ **Displaying the software and serial number**

1 Open the Software menu item.

a)  b)  c)  2x d) 

☑ The software version and serial number of the control unit are displayed.

7.4 Display of connected modules

▶ **Displaying the modules**

1 Open the Software menu item.

a)  b)  c)  2x d) 

2 Press the arrow keys to switch between the connected module displays:

☑ The module name and serial numbers are displayed. See also 4.4 Connecting optional modules, 🗋 EN-46.

7.5 Display of contact information

▶ **Displaying contact information**

1 Open the Contact menu item.

a)  b)  c)  2x d) 

☑ The contact information of the contact person for service inquiries is displayed.

8 Troubleshooting

8.1 Error messages

If an error occurs, the active heating is interrupted. Error messages are shown on the display as an error code, e.g. E0001. The icons indicate the currently applicable error category. For errors that are not listed here, please contact EOS Service and provide the error code. See Service address, 🗋 EN-92.

Water shortage warning		
	Reason	Solution
	Not enough water in the vaporiser.	Refill water. Install automatic filling (FWA), if necessary.
	Malfunction when automatically filling water.	Check water supply. Clean the filter at the water supply connector if necessary.
	No water supply, water inlet valve clogged, blocked, or defective.	Clean the water inlet valve and check that it functions properly. Replace the water inlet valve if necessary.
	The error message is deactivated if water is filled within the 3-minute refill period.	

System switched off due to water shortage		
	Reason	Solution
	Insufficient water in the vaporiser and the 3-minute refill period has expired.	Refill water. Install automatic filling (FWA), if necessary.
	Malfunction when automatically filling water.	Check water supply. Clean the filter at the water supply connector if necessary.
	No water supply, water inlet valve clogged, blocked, or defective.	Clean the water inlet valve and check that it functions properly. Replace the water inlet valve if necessary.
	This error message must be confirmed once the error is rectified: - Briefly press the On/Off button once. - Press the On/Off button for 3 seconds to restart.	

Safety circuit for safety temperature limiter interrupted		
	Reason	Solution
	Safety temperature limiter is triggered.	Rectify the reason for overheating. Replace the safety temperature limiter.

Error during bus configuration		
	Reason	Solution
	The same module address is assigned to multiple bus modules on the control unit.	Check the module address.

Hardware error		
	Reason	Solution
	E.g. over/under voltage	Contact EOS Service. See Service address, 🗋 EN-92

Short circuit/interruption in temperature sensor		
	Reason	Solution
	Sensor is incorrectly connected.	Check the connection. See 4.3 Connecting the sensor cables, 🗋 EN-43 or Connection for lines to the receiving disk, 🗋 EN-33
	Cable is loose or short-circuited through mechanical force.	
	Cable is defective or not connected.	
	Sensor is defective.	

8.2 Malfunction

Error	Reason	Solution
Display is blank	No power.	Check fuses.
	Control unit with rocker switch is switched off.	Press switch into the correct position. See 6.1.1 Rocker switch (on, off, light only), 🗋 EN-62
No heat.	No connection.	Check the cable and connections (broken cable, loose connection, etc.).
Other errors	Software error.	Restart the control unit. ContactEOS Service. See Service address, 🗋 EN-92.

9 General terms and conditions of service

(T&C, Dated 08-2018)

I. Scope

Unless otherwise agreed in writing for specific instances, these terms and conditions of service shall apply to service operations, including reviewing and remedying complaints. All our existing or future legal relationships shall be governed solely by the following terms and conditions of service. We do not recognise any of the customer's conflicting terms and conditions unless we have given our express written consent to their applicability.
We hereby expressly object to any of the customer's terms and conditions included in the customer's General Terms and Conditions of Business or order confirmation. Unconditional acceptance of order acknowledgments or deliveries shall not be construed as any form of acknowledgment of such terms and conditions. Ancillary agreements or amendments must be confirmed in writing.

II. Costs

The customer shall bear the following costs in connection with services rendered:

- Mounting/dismantling and electrical (de-)installation
- Transportation, postage and packaging
- Function testing and troubleshooting, including inspection and repair costs

There shall be no third-party billing.

III. Performance and cooperation obligations

The customer shall provide assistance free of charge to the manufacturer in rendering services.
In the case of a warranty claim, the manufacturer shall provide spare parts necessary for servicing free of charge.

IV. Service visit by the manufacturer

Services rendered on site by an employee of the manufacturer must be agreed in advance.
If the main reason for the service visit is not the fault of the manufacturer, any costs incurred shall be charged to the customer after the service visit and must be paid by the customer in full within the agreed payment term.

V. Liability

The manufacturer shall assume liability in accordance with the currently applicable statutory regulations. All our products are packaged in such a way that the individually packed goods (pallets) can be shipped.
We wish to point out that our packaging is not suitable for individual shipments via parcel post. The manufacturer shall accept no liability for damages incurred as a result of improper packaging in an individual shipment.

VI. Manufacturer's warranty

The manufacturer's warranty shall apply only if installation, operation and maintenance have been carried out in full accordance with the manufacturer's specifications in the installation and operating instructions.

- The warranty period shall commence from the date on which proof of purchase is provided and shall be limited, in all cases, to 24 months.
- Warranty services shall be performed only if proof of purchase of the equipment can be presented.
- Any and all warranty claims shall become void if modifications are made to the equipment without the manufacturer's express consent.
- Any warranty claim shall likewise become void in the case of defects that arise due to repairs or interventions made by unauthorised persons or due to improper use.
- In the case of warranty claims, the serial and article numbers must be provided, together with the unit designation and a meaningful description of the error.
- This warranty shall cover defective equipment parts, with the exception of normal wear parts. Wear parts shall include, for example, light sources, glass elements, tubular heating elements and sauna heater stones.
- Only original spare parts may be used within the warranty period.
- Service visits made by third parties shall require a written order issued by our service department.
- The equipment in question shall be sent to our service department by the customer at the customer's own expense.
- Electrical assembly and installation work, including service visits and parts replacements, shall be carried out at the customer‘s expense; costs shall not be borne by the manufacturer.

Complaints in respect of our products shall be reported to the responsible distributor and shall be handled exclusively by said distributor.
The manufacturer's General Terms and Conditions of Business, in the version available at www.eos-sauna.com/agb, shall apply in addition to the foregoing terms and conditions of service.

10 Disposal

Electrical devices that are no longer needed must be recycled at a recycling station as per EU guideline 2012/19/EU or as per the Electrical and Electronic Equipment Act (ElektroG).
Observe local provisions, laws, regulations, standards and directives when disposing of the unit.

Do not dispose of the unit with household waste.

Packaging

The packaging can be completely separated for disposal and recycled. The following materials are used in the packaging:

- Used paper, cardboard
- Plastic foil
- Foam material

Electronic waste

Electronic waste must be disposed of at the designated local collection point for electronic waste.

EOS
INNOVATIVE SAUNA TECHNOLOGY

Service address

EOS Saunatechnik GmbH
Schneiderstriesch 1
35759 Driedorf, Germany
Tel. +49 2775 82-514
Fax +49 2775 82-431
Email servicecenter@eos-sauna.com
Web www.eos-sauna.com

Store this address with the Installation and Operating Instructions in a safe place.
Please always provide us with nameplate data, such as model, item number and serial number so we can provide fast and efficient support.

Date of sale

Stamp/retailer signature: