

EmoTouch 3

control unit for sauna and steam room



EN

Installation and operation manual

Made in Germany

CE EAC

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English

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Preface

Dear customer,
you have purchased a high-quality electronic device with which you will enjoy your sauna & steam bath for many years to come. This device was designed and inspected according to the current European safety standards and manufactured at the factory in accordance with the quality management standard DIN EN ISO 9001:2015.

This detailed installation and operation manual has been prepared for your information. Pay particular attention to the **important notes** and the information on electrical connection.

We wish you a restorative and eventful wellness experience.

General information about sauna bathing

Please note that an optimal interaction between sauna cabin, sauna heater and sauna control unit is mandatory for a pleasant sauna climate in your cabin. With this high-quality sauna control unit you can “operate” your sauna system, and thanks to the many individual programming options, surely you will quickly find the setting which suits you best.

Perception in the sauna is very subjective, therefore, it really requires your own perception or that of your family to find the most suitable settings.

The control units are supplied with the preset typical climate values for a classic Finnish sauna or for models with humidity control, as well as for a sauna with humidity operation.

The following operating instructions describe how to pre-select “your” climate in the cabin. Read these instructions carefully, so that you

quickly and easily find your way through the programming process. Please note the variation in temperatures in the cabin while sauna bathing. The hottest area is directly below the cabin ceiling, whereas there is a steady temperature gradient towards the floor of the cabin. Inversely, the relative humidity is lowest directly below the cabin ceiling and the highest by the cabin floor.

For safety reasons the temperature sensor with the overheat safety shutdown is located on the cabin ceiling above the heater, as this is usually the hottest area in the cabin.

Thus, there will always be temperature variations between the temperature sensor of the control unit and the thermometer in the cabin.




For example, when pre-setting the cabin temperature to 100 °C, the thermometer inside the cabin may show 85 °C - 90 °C. This is in accordance with the typical climate inside the cabin.

Only use sauna-suitable (up to 140 °C temperature-resistant) cabin lights. Always pay attention to hygiene. Always use hand- or bathing towels to avoid getting perspiration on the wood.


For control units with vaporizer connection (optional), we recommend to reheat or dry the cabin after each humid operation, in order to protect your cabin from possible damage due to the humidity mode. In addition, in poorly ventilated rooms, a ventilation fan can be used to remove the used moist air.


To avoid drafts, you should avoid using any ventilation system while sauna bathing. It should only be used if recommended by the cabin manufacturer.

General safety precautions

- This device may be used by children (age 8 and above) and by persons with reduced physical, sensory, or mental disabilities, or inadequate experience and knowledge, if they are supervised or if they have received adequate instructions in how to use the device safely and understand the associated risks.
- Children must be supervised to ensure they do not play with the unit.
- Children and persons who have not received proper instruction must not clean or service the system.
-  **ATTENTION:** It is forbidden to install the control box in a closed switch cabinet or behind a wooden panelling!
- The electrical installation may only be done by a qualified electrical technician.
- You must comply with the regulations of your power supply company and applicable VDE regulations (DIN VDE 0100).
-  **WARNING:** Never attempt repairs or installations yourself, as this could result in serious injury or death. Only a qualified technician may remove the housing cover.
- Please note the dimensions in the installation instructions, especially when installing the temperature sensor. The temperature above the heater is critical for the temperature setting. The temperature can be held within operating parameters and a minimal deviation at the bench level of the sauna cabin can be achieved only if the device is installed correctly.
- The device may only be used as intended as a control unit for sauna heaters up to 9 kW (up to 36 kW when combined with a power extension unit).
- Completely disconnect the control unit from the electrical circuit, i.e. flip all circuit breakers or the main circuit breaker during each installation or repair.
- Please note the safety and installation information from the sauna heater manufacturer.
- Make sure to observe the specifications and instructions of the sauna cabin manufacturer.
-  **ATTENTION:** For control units with remote control functions*, a protection against switching on if the heater is covered is required. (use the suitable cover protection rail or another safety device).

**Remote control = setting up, controlling or adjusting a unit by a command that can be given out of view of the unit by means of transfer media such as telecommunication, audio technology or bus systems, this also includes weekly timers. (from EN 60335-1)*

 When designing the sauna cabin, ensure that the external exposed glass surfaces may only reach a maximum temperature of 76 °C. If necessary, protective features need to be fitted.

 Inspect the sauna cabin before each use! In particular, ensure that no objects have been stored on the sauna heater or the IR-radiator, if applicable. **Risk of fire!**

 **Attention!**

Dear customer,
according to the valid regulations, the electrical connection of the sauna heater and the control box has to be carried out through the specialist of an authorized electric shop

We would like to draw your attention that in case of a warranty claim, you are kindly requested to present a copy of the invoice of the executive electric shop.

 **Attention!**

Only the original spare parts may be used.
Any modification of the cables included in the delivery can lead to malfunctions and is not permitted.

Any unauthorized technical alteration makes the product warranty void.

Scope of delivery

(changes are reserved)

1. Main electronic unit (with two-part front cover)
2. Control panel with touchscreen display
3. Housing base for flush-mounted installation of the control panel, with mounting brackets
4. De-installation tool (for display panel)
5. Temperature sensor: a) housing, b) sensor board, c) overheat protection fuse, d) 2 mounting screws 4 x 40 mm, e) connection cable 5 m with RJ10 plug, f) 2-core white cable for overheating protection fuse 5 m
6. Connection cable 5 m (main unit - touch screen display) with RJ14 / RJ10 plugs
a) ferrite ring (pre-mounted on the board)
7. Plastic bag with 3 mounting screws 4 x 25 mm (for main electronic unit)
8. 1 spare overheating protection fuse
9. 8 rubber cable glands
10. 1 installation and operation manual, 1 operation manual (for end users)




Accessories (optionally connectable):

2nd sensor	Item no. 94.5725
Humidity sensor	Item no. 94.5726
Coloured light control module	Item no. 94.5996 / 94.6007
Sound module	Item no. 94.5920 / 94.5921
Remote start module	Item no. 94.5782
WCI-01 web app module	Item no. 94.5987
KNX-/Modbus-module	Item no. 94.7078 / 94.7077
SBM-HOT	Item no. 94.6800
SBM-ECO	Item no. 94.6980

Accessories (optional):

Connection cable for temperature sensor 20 m	Item no. 94.6281
Connection cable for temperature sensor 50 m	Item no. 94.6282
Connection cable for main unit 25 m (RJ10/RJ14)	Item no. 94.6285
Connection cable Sauna Bus 10 m (RJ12/RJ12)	Item no. 94.5861
Connection cable Sauna Bus 25 m (RJ12/RJ12)	Item no. 94.4647
Connection cable Sauna Bus 50 m (RJ12/RJ12)	Item no. 94.4648
Power adapter for Bus-cable EmoTouch 3	Item no. 94.6671

Technical data

Voltage (power supply):	400 V 3 N AC 50 Hz
Switching capacity:	max. 9 kW resistive load, may be extended with a power extension unit (LSG).
Fuse	3 x 16 A
Heating time limit:	6 h / 12 h / unlimited
Housing:	plastic, shatter-resistant
Display:	7" capacitive colour touch screen display, 16:9 aspect
Operation:	via touch screen display
Temperature control range:	30 ° - 115 °C (dry sauna mode) 30 ° - 70 °C (humid sauna mode)
Humidity control:	proportional to time or optionally as per rel. air humidity (%) with an optional humidity sensor.
Sensor system:	Digital sensor with overheating protection fuse (STB) 139 °C
Control characteristic:	Digital two-point control
Connection for fan:	min. 5 W, max.150 W (only fans without starting capacitor) Only use fans suitable for phase control!
Connection for light:	<ul style="list-style-type: none">• min. 5 W (20 mA)• resistive loads - max. 100 W,• dimmable energy saving lamps - max. 35 W• Lamps at conventional transformers - max. 60 VA. Notice: only dimmable lamps may be used!
	 Fan and light connection are protected by a common 2AF fuse.
Volt-free output:	contact's resistive load carrying capacity: maximum current: 16 A maximum voltage: 30 V DC / 250VAC
Start time pre-selection:	up to 24 h in advance
Switching automation:	Week timer with 4 switching programs per day
Error display:	Clear text error indication on the display
Outputs:	3 x RJ10 jacks for sensor connections 2 x RJ14 jacks for control panel and extension modules 1 x potential free contact (2 terminals) Output S1 - max. load 50W/50VA, no capacitive loads allowed.
Terminal block area for power supply and heater connection:	0.5 – 2.5 mm ² rigid or flexible crimped wire, two cores with the same cross section per terminal may be connected

Terminal block WM, 3, 4, light, fan:	0,34-2,5mm ² rigid or flexible crimped wire. Please observe the minimal cross section as per fuse protection of the line!
Card reader:	Micro-SD card reader in control panel
Ambient temperatures:	-10 °C bis +35 °C
Storage temperatures:	-20 °C bis +60 °C
Place of installation requirement:	Intended for indoor installation only. Sensors - may not be installed in corrosive or highly salty environment. Device - may not be installed in corrosive environment or in an environment which may cause water condensation.
Dimensions main block:	270 x 300 x 100 mm
Dimensions control panel:	142 x 202 x 42 mm

Important note!



The control unit is not suitable for outdoor use!

It may only be used inside buildings and may not be exposed to environmental conditions such as extreme humidity or moisture with possible condensate formation or corrosive substances in the ambient air and other weathering. Excessive exposure to cold and intense solar radiation should be avoided as well. If there is an increased risk of mechanical damage, the control unit must be protected accordingly.

Intended use

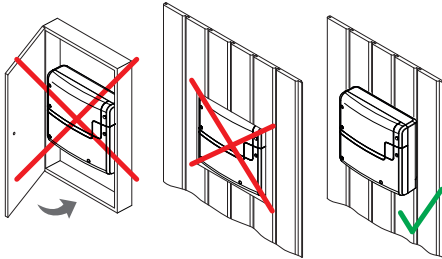
This sauna control unit is exclusively intended for the control of the sauna heater in a sauna cabin. Any other use over and above the intended purpose is not considered as appropriate use! Compliance of the standard operation, maintenance and repair conditions is also an element of appropriate use.


The manufacturer cannot be held liable for

deviating, unauthorized alterations and any resulting damages: the initiator of these changes bears the full risk.

Installation of the main electronic unit

The main electronic unit (relay box) may be installed only outside the sauna cabin. The recommended places of installation are the outer sauna wall or the engineering room (plant room). If empty ducts for connection cables are already available, then they usually predetermine the installation position. The installation shall be carried out as follows:



 **Attention:** The relay box may not be installed in a closed switch cabinet or behind a wooden panelling!
Risk of overheating! Fire hazard!

1. Remove the lower cover from the relay box. Unscrew the 3 fixation screws, then slightly pull the lower housing cover down and take it off. See Fig. 1 for details.

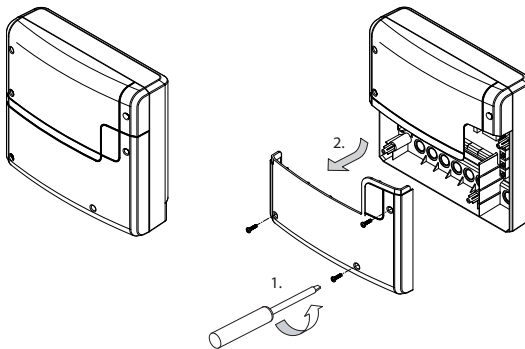


Fig. 1

The holes for the provided 4 x 25 mm screws are to be installed according to the dimensions shown in Fig. 2.

2. Use the upper central screw to hang the relay box. Make sure that this screw stands out approx. 3 mm (detail in Fig. 2).

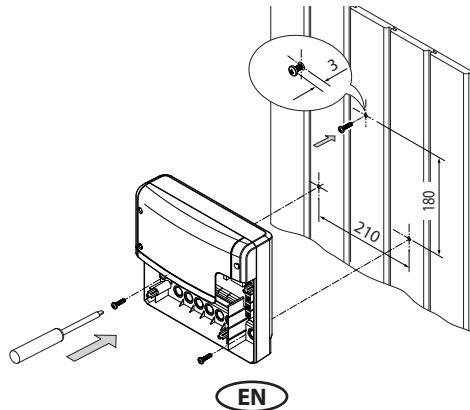


Fig. 2

3. Hang the housing on the upper central screw in the upper central mounting hole.
Insert the supplied rubber cable glands into the openings of the bottom of the housing (from below or from behind, as desired) and then guide the connection cables through these openings.
Screw the lower part of the housing firmly to the cabin wall in the two lower mounting holes (Fig. 3).

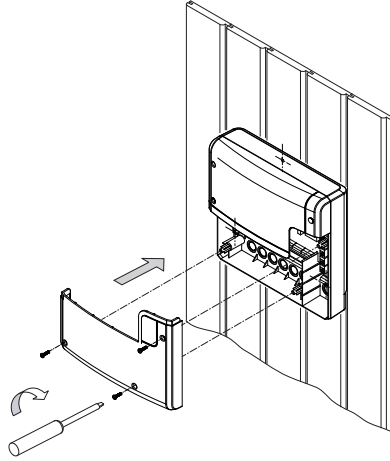


Fig. 3

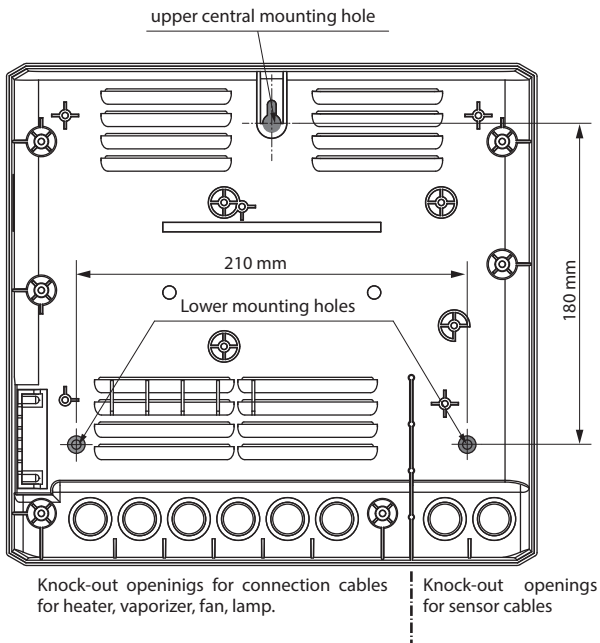


Fig. 4

6. Display panel

The display panel may only be mounted outside the cabin.

When opening the door, make sure that the steam does not reach the control unit. This may cause water condensation on the display panel and damage the entire system.

If ductwork is already provided for electrical installations, then the position of the control unit is predetermined by that. The display panel is designed for flush-mounted installation into the cabin wall or a similar adjacent wall.

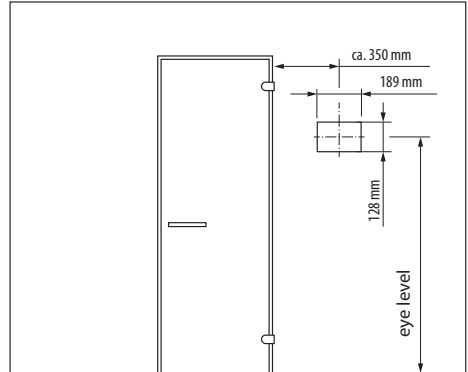


Fig. 5

Mount the display panel as described below:

1. Determine the location.
2. Make an installation cut-out in the wall with dimensions 128 mm height x 189 mm width (fig. 5 and 7).
3. Installation depth - min. 35 mm required.
4. Lay the connection cable from the relay box to the display panel.
5. Make sure that the cable with the smaller plug RJ10 is routed to the display panel.
6. The connection cable may be laid only between the outer sauna wall and insulation (fig. 10).
7. The insulation should ensure that the temperature at the outer sauna wall may not exceed 75 °C.
8. Use the supplied 5 m connection cable with RJ10 plug (display panel side) and RJ14 plug (relay box side).
9. If necessary, this connection cable may be extended to approx. 50 m length. The extension should occur on the relay box side. For this purpose, a coupling (RJ12 / RJ12) and an extension cable with RJ12 connector are required (optional accessory).

10. If you require a connection cable over 25 m, you will need an additional power adaptor next to the display panel and connect it with it. The power adaptor requires a power supply of 230 V. See optional accessories.

Notice: Maximum connection cable length for the display panel is 50 m. If the cable length is over 25 m, an EmoTouch 3 power adaptor is required.

The smaller RJ10 plug of the connection cable must be routed to the display panel.

Be careful, do not drop the display panel. Fragile! Remove the protective film only after completing the installation.

ATTENTION! When laying the connection cable(s) DO NOT pull the cable by the plug! This will damage the cable.

Display panel rear side - Overview

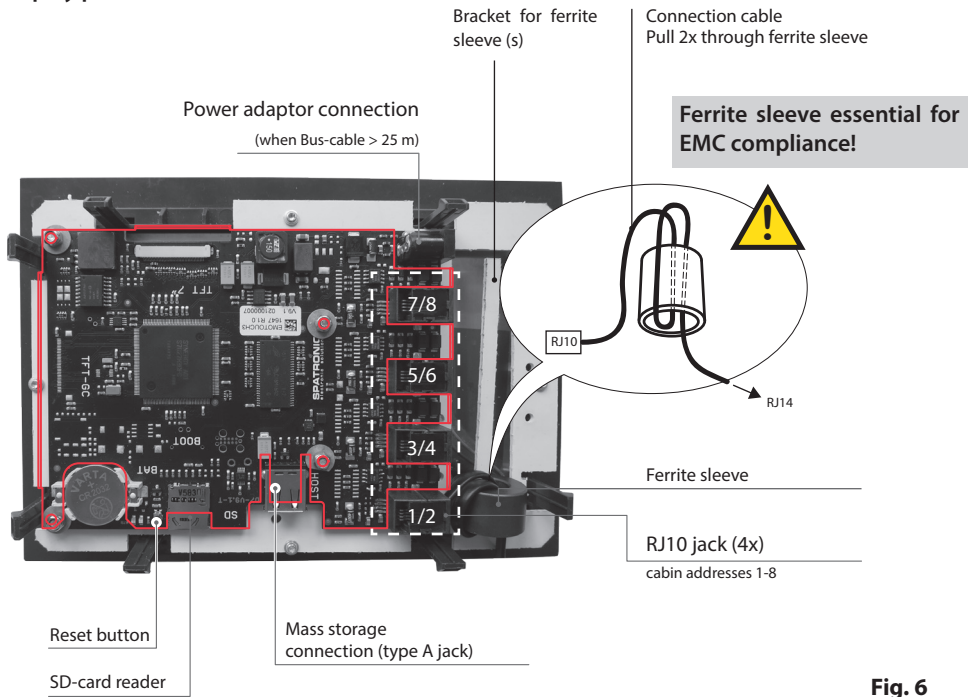


Fig. 6

Display panel connection

Always connect the connection cable to the display panel, starting with the jack no. 1/2 (Fig. 6).

Take the ferrite sleeve upwards and, as described, wrap the connecting cable twice around this sleeve.

Now push the sleeve back on and connect the connecting cable into the corresponding jack.

When connecting several cabins, please observe the notes in chapter "Multi-cabin connection" for additional details.

Do not operate the display panel without the properly mounted ferrite sleeve(s).

IMPORTANT NOTES

Maximum connection line length for the display panel is 50 m.

For cable lengths over 25 m, an EmoTouch 3 power adaptor (optional accessory, Item no. 94.6671) is required.

The smaller RJ10 plug of the connection cable must be routed to the display panel.

Display panel installation

Place the display panel directly in front of the housing base and pay attention to the correct orientation. The display panel should be connected to the relay box as described in the overview. Pay attention to the correct routing of the connection cable(s).

Now carefully press the display panel into the housing base until you hear a clicking sound (hooks of the upper part should snap into the holders in the base). Make sure the display panel sits tightly.

Notice: Do not lay the connecting cable(s) too tightly so that you can remove the display panel again later at a disassembly.

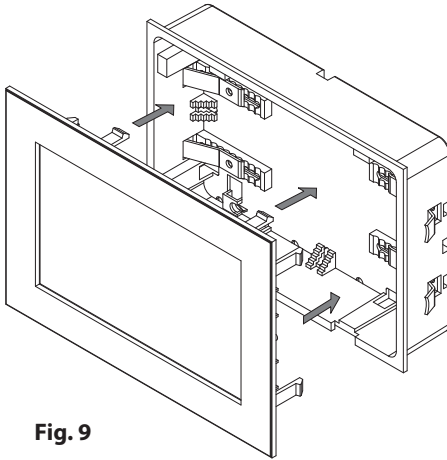


Fig. 9

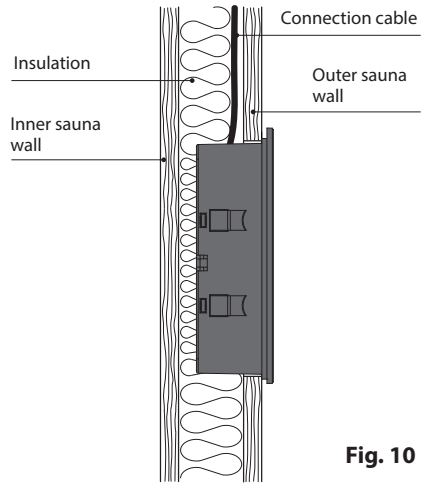


Fig. 10

How to remove the display panel

In order to remove the display panel, use the included de-installation tool or a similar suitable tool like a flat headed screwdriver.

Insert the two tools into the grooves on the bottom side of the display panel (between upper and lower part) and pull it away from the wall surface until the display panel is released from the base. Then pull the display panel completely out of the base.

Remove the connection cable from the display panel. For this purpose, carefully press on the small securing tab of the plug and pull it out of the jack.



Important note:

Make sure that the de-installation tools are not directly applied to glass. They should be pulled together with uniform pulling force. Otherwise the glass can be damaged. Do not pull out the display panel by the glass!

Connection of sensor cables

Do not lay sensor and power supply lines together, or lead them through the same duct. This can lead to interferences in the electronics, such as “fluttering” in the relays. Connect the cable shielding (if present) to ground in the control unit.

Please observe that the following dimensions relate to the values stipulated during the unit inspection acc. EN 60335-2-53. The heater sensor must always be installed at the point where the highest temperatures are to be expected. Fig. 12-14 provide you an overview of the mounting point of the sensor.



Installation of the temperature sensor

Make sure that there is no deviating mounting position of the sensor, specific to the sauna heater (check the installation guide of the sauna heater).

1. Mount the heater sensor in cabins up to 2 x 2 m according to fig. 13, in larger cabins according to fig. 14.
2. Drill a hole to lead the cable through, preferably through the middle of one of the wooden planks.

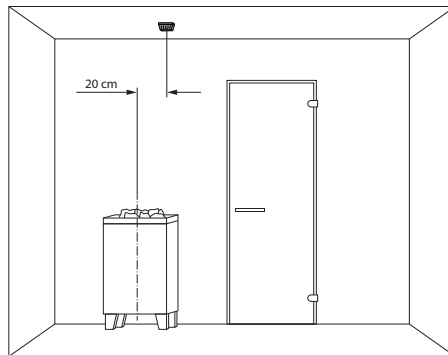


Fig. 12

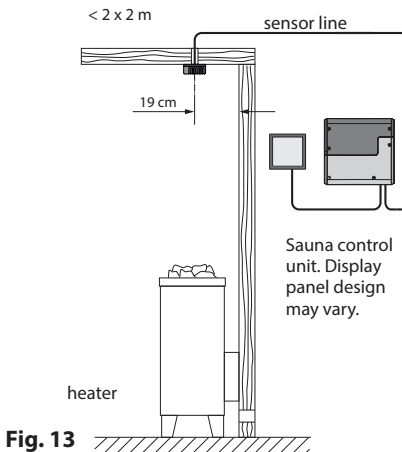


Fig. 13

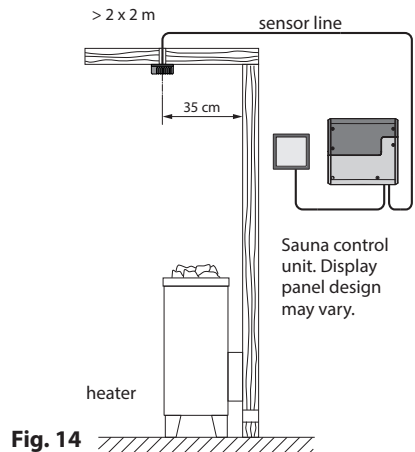
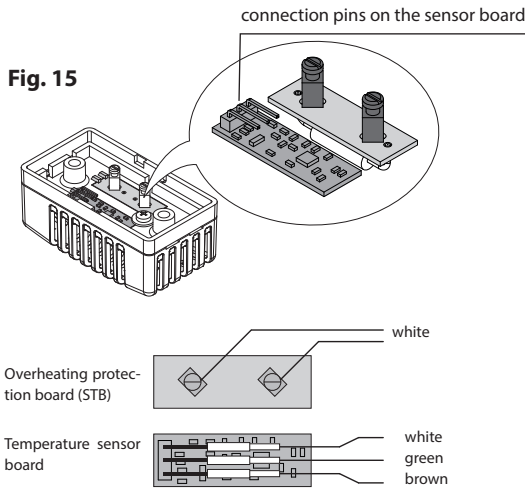


Fig. 14

- Lead the sensor cable (red) and the limiter cable (white) through the drilled hole and connect both cables to the main relay box.
- Connect the sensor cable to the sensor board according to fig.15. Make sure the connections are correct. Connect the limiter cable (2-core white cable) to the limiter board (STB).
- Mount the sensor to the ceiling plank using two supplied screws and attach the housing cover.
- After completed installation and correct commissioning of the control unit, the sensor line for overheating protection must be tested for proper functioning. Disconnect one of the wires of the white cable at the STB board in the sensor housing - the respective error message shall appear on the display. Re-connect the wire to make the error message disappear.

Temperature sensor - connections:



⚠ Attention:

Please pay attention that during the installation of cable lines for sensors and the display panel, it is not permitted to pull the cable by the modular plug. If you draw the cable through the ducts, it must not be attached to the plug, but to the cable only!

Pulling the cable by the plug may damage it and cause loose contacts resulting in malfunction of the control unit. In such case the warranty will be void and the cable should be replaced.

Make sure to observe the correct wire connection order on the temperature sensor board as shown on fig. 15.

Temperature sensor - installation overview:

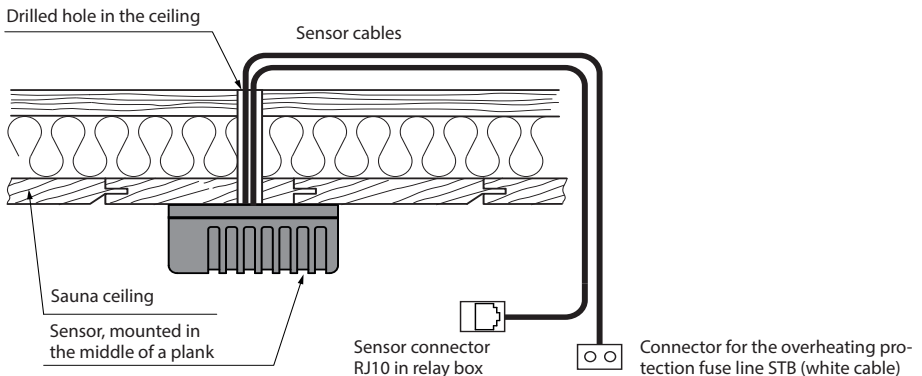


Fig. 16

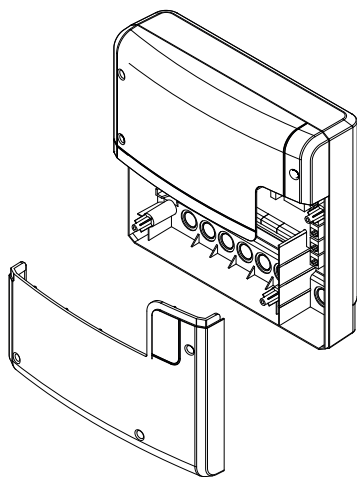
Electrical connection

The electrical connections may only be carried out by a certified electrician in compliance with the guidelines of the local power supply company and applicable legal regulations (e.g. VDE norms for Germany).

In general, there may be only one permanent connection line to the network. Furthermore, equipment should be provided that makes it possible to disconnect the system on all phases from the power supply with a contact gap of minimum 3 mm.

All electrical installations and all connection lines that are installed inside the sauna cabin must be suitable for an ambient temperature of at least 170 °C.

The power supply line shall be laid to the control unit and connected to the power input terminals.



Relay box, lower front cover opened

Fig. 15

The power supply cable shall be laid to the main relay box and connected to the power input terminal as per connection diagram (see wiring diagrams).



Sauna heater connection

Install the sauna heater and the vaporizer (if available) inside the sauna cabin in front of the air intake according to the manufacturer's installation instructions.

Draw the silicone cable through the ductwork to the relay box and connect it to the appropriate terminals as directed in the wiring diagram.

Make sure to observe the wiring diagrams with the corresponding terminal connection scheme.

Notice: In case there is no ductwork available drill a hole next to the air intake opening and run the heater line through this hole to the outside and to the appropriate terminals in the control unit. The silicone line must be covered to protect it from outside influences. Therefore, use a suitable cable-duct or a PVC-pipe through which you can run the line up to the power unit.

Special advice for the connection of Bi-O sauna heaters to EmoTouch



Attention!

When the vaporizer is connected, the output "U" is switched from the heater to the terminal "Wb" to the vaporizer.

The sauna heater section will then operate with 2/3 of the total power.



Connection of the power extension unit

The switching capacity may be extended with an external power extension unit (LSG), in order to connect and operate the sauna heaters above 9 kW power.

For connection details please refer to the installation and operation manual for the respective LSG model.



Sauna lamp connection



The sauna lamp must have the protection class of at least IPx4 and should be resistant to the ambient sauna temperatures. The sauna lamp may be installed at any location, but never close to the rising hot air of the heater.

Only dimmable lamps may be used. Observe max. power! The control unit is factory set to resistive and inductive light load. It is possible to define the light output. Refer to the chapter "Manual setting of the lamp" for further details.



Attention! Only connect dimmable lamps!

When connecting non-dimmable lamps, there is a risk of damage to the lamps– or the control unit. In this case, the warranty expires.

Requirements for lamps:

- Min. power 5 W
- Ohmic loads max. 100 W
- Dimmable energy-saving lamps max. 35 W
- Lamps on conventional transformers max. 60 VA



Fan

Only use fans whose speed can be controlled via phase control. The fan must have the splash-water protection class (IPx4) and must be resistant to the ambient temperature. The fan can be mounted anywhere, however never close to the rising flow of hot air from the heater and must be positioned as far away as possible from the installation location of the IR-radiator (must not be directly illuminated).



Heating time limitation

The max. heating time may be limited with the jumper #5 on the main board of the relay box. The limitation may be set to 6 hours, 12 hours or to unlimited.

With the setting "unlimited", the device must be switched off manually. This feature is only allowed in monitored commercial sauna facilities.

In addition, if the control unit is set to "private", the heating time is automatically limited to 6 hours.

The type of use has priority.

All control units are delivered (factory set) with the limitation "6 hours".



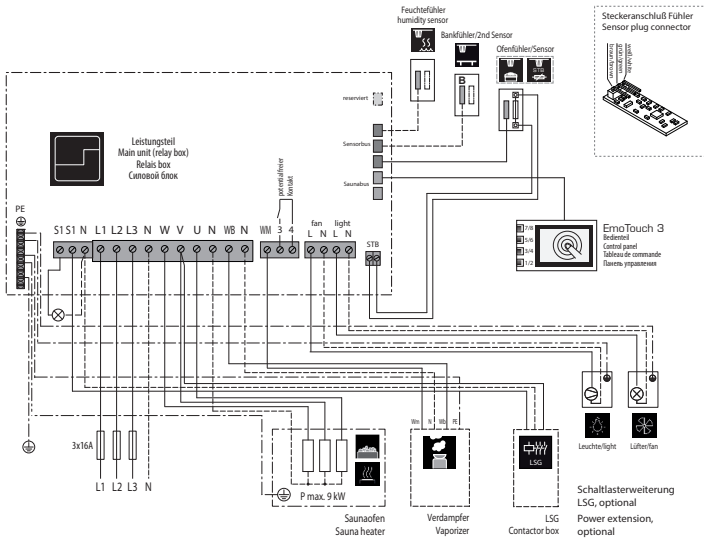
Potential-free contact

The terminals "3" and "4" on the main board of the relay box are the terminals of the normally open (NO) contact of a relay. Both terminals have no further connection and are therefore potential-free (voltage free). You can integrate this NO contact into any circuit, in order to switch an external power load or to relay a switching signal. The max. load on the potential free contact, depending on whether AC or DC shall be switched, is given in the specifications on the page 5.



Attention! If you use the terminals L1, L2 or L3 to power the circuit connected to the potential free contact, then the connection line should not be overloaded. If necessary, the load (consumer) connected to the potential free contact should be additionally protected and provided with a separate power supply.

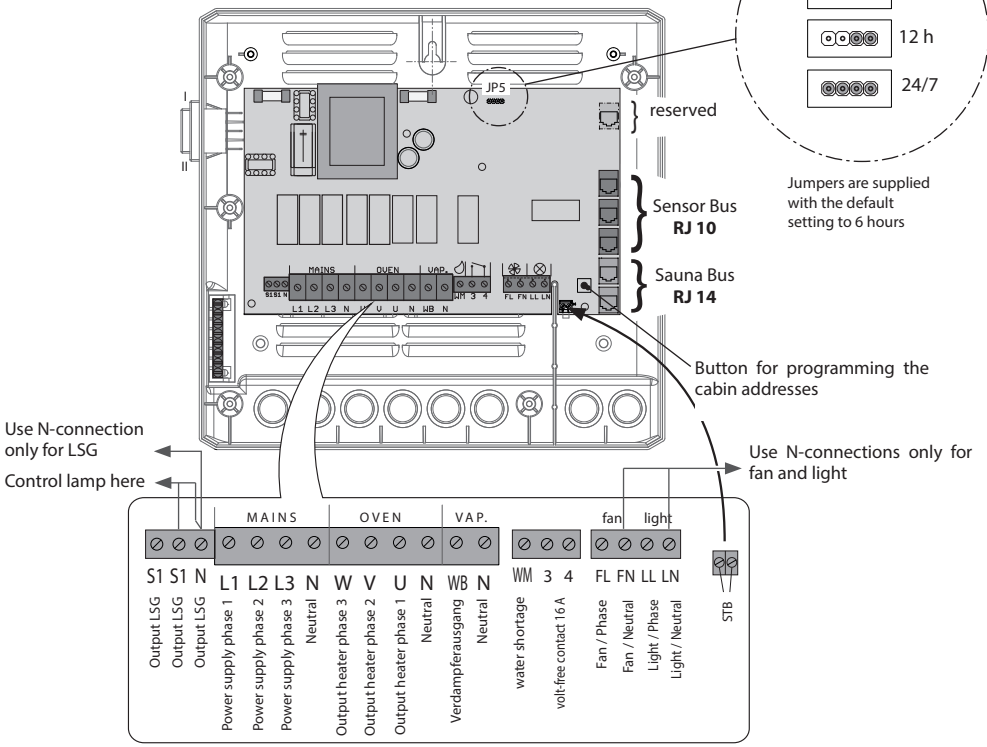
Overview of connections



Attention: Always connect the neutral conductor (N) of the heater. In humid mode, one phase of the heater is turned off, i. e. the heating load is not symmetrical. The consequence is that the neutral conductor is then no longer currentless.

Terminal layout on the main board

(Relay box)



Use N-connection only for LSG
Control lamp here

Use N-connections only for fan and light



Temperature sensor

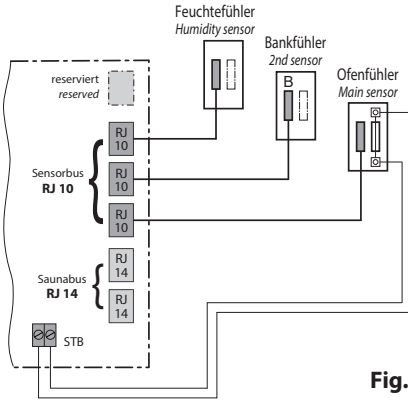


Fig. 16



ATTENTION!

Connecting a sensor to the sauna bus (RJ12 jack) may damage the sensor and the main board of the control unit!!

The sensors are connected via RJ10 modular plugs to one of the corresponding sensor bus RJ10 jacks on the main board of the relay box, as shown on the left. The connection order may be chosen freely. The sensor bus supports hot-plugging, sensors may be re-connected while the control unit is switched on and will be detected and configured within 2-3 seconds.

The white cable from the overheat protection fuse in the sensor should be connected to the 2-pin STB connector on the main board.

Do not try to plug the sensors into the sauna bus connectors (two lower RJ12 jacks), this will damage the sensor and the main board.

Humidity sensor (optional)

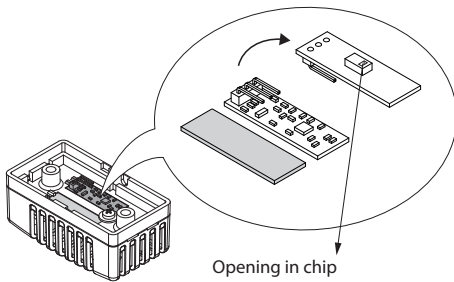


Fig. 17

For more details please see next page.

Bench sensor (optional)

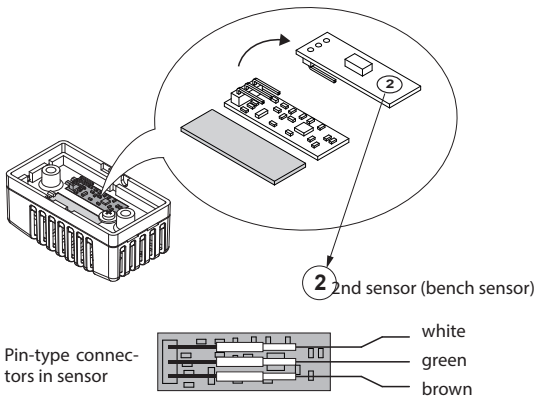
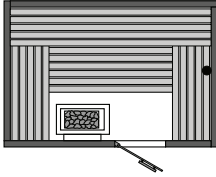


Fig. 18

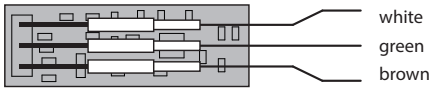


Humidity sensor installation

1. The humidity sensor shall be mounted in the middle of the wall opposite to the heater at approx. 150 cm height.



2. Connect the sensor using the included cable (5 m standard, longer line optionally available). Draw the cable with the RJ10 plug towards the control unit.
3. Connect the sensor cable to the sensor board, as shown in the diagram:

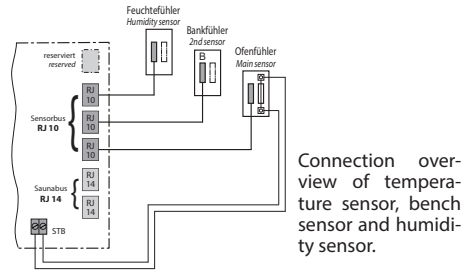


4. Make sure to connect the cable pins to the sensor correctly. Incorrect connection may damage the sensor!
5. Then connect the sensor cable via RJ10 plug to the free sensor bus jack in the relay box.
6. The successful connection of the humidity sensor the humidity symbol will change from



(humid operation mode) to indicate humidity control as per relative air humidity. The humidity sensor will be normally detected within 2-3 sec. These symbols will appear on active humidity mode either directly on the start screen (Emotec, Emo-Style models) or in a submenu for settings (EmoTouch series).

Notice: During installation of the cable DO NOT pull it by the plug - this may damage the plug connection!

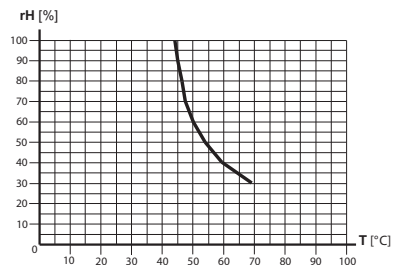


Connection overview of temperature sensor, bench sensor and humidity sensor.

Humidity control with connected humidity sensor

1. The humidity control with connected humidity sensor effects basing on the temperature-humidity curve which serves as a limit to possible values. You may set any value to the left and below the curve as shown below.
2. Values above the curve may not be set for safety reasons. If you change one parameter, the other will be automatically adjusted to keep the climate within safe limits.
3. Without humidity sensor, the humidity control is time-proportional. The humidity setting e. g. "40" means that the vaporizer will be on for 40 % of the total operating time. This method does not consider the real humidity in the sauna, but allows to produce constant amount of steam per given time.
4. With the connected humidity sensor, the humidity will be controlled as per relative air humidity in %. The control unit will try to reach and keep the pre-set humidity value.

Temperature/humidity curve as per norm EN 60335-2-53:2003





Installation of the optional bench sensor

Place of installation: The 2nd sensor (bench sensor) shall be mounted to the ceiling, over the rear bench opposite to the sauna heater (as shown on fig. 22).

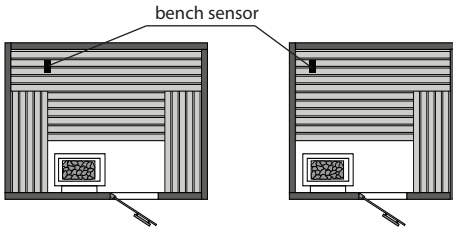


Fig. 22

The bench sensor is connected with a 3-core wire silicone cable with RJ10 plug to one of the free sensor bus jacks in the relay box, as shown on the fig. 23. Cable connection to the board inside sensor are shown on fig. 24.

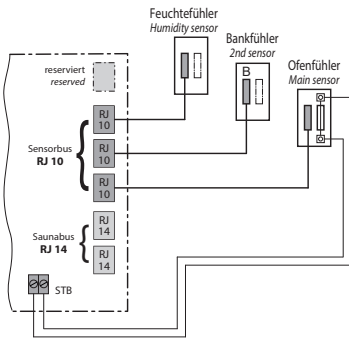


Fig. 23

With correct connection, the sensor will be automatically detected and configured. The display will show the following symbol during start-up.



Display symbol:

The sensor symbol will be displayed either on the start screen (Emotec, EmoStyle models) or in the temperature query submenu (EmoTouch models).

If the bench sensor is faulty, the temperature will be controlled via the main sensor over the heater.

After the fault is rectified, the 2nd sensor will be automatically detected and configured upon the new start of the control unit.

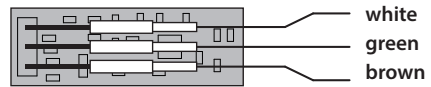
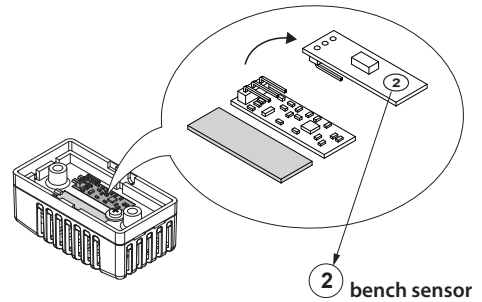


Fig. 24

The bench sensor is delivered, including a 5 m 3-core wire silicone cable with RJ10 plug. This cable shall be connected to the sensor board as shown on the fig. 24. For installation purposes the connection may be easily disconnected (pin-type connectors).

If the bench sensor is connected, it will be used to control the temperature in the sauna. The main sensor will function only as the overheating protection (139 °C limitation).

This allows to improve the air circulation in certain situations, for instance in very large saunas or by complex cabin layouts, and to achieve faster heat distribution to remote parts of the sauna.

Longer connection cables are optionally available.



Vaporizer connection

Only for "H" series sauna control units.



ATTENTION: pay particular attention to the correct connection of the WB and WM terminals. In case of swapped connection, the detection of water shortage in the vaporizer will be disabled and the protective thermo-fuse will be bypassed. The vaporizer may overheat!

Risk of fire!

Connect the vaporizer as shown on the connection diagram given below.

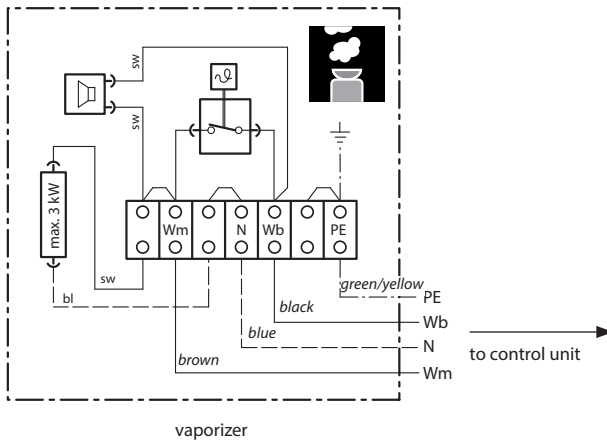
Make sure to use the appropriate heat-resistant silicone cable with min. 1,5 mm² cross section for vaporizer connection.

The control unit will detect water shortage if there is zero potential at the Wm terminal of the control unit.

Pay attention to the maximum switching power of the control unit vaporizer output. If the total power of the vaporizer(s) exceeds the switching power of the control unit, you will need an external power switching relay box or contactor box, e.g. LSG18H.



Attention: Always connect the neutral (N) terminal at the sauna heater. In humid mode one phase will be switched off, the power load distribution will not be proportional. As a result the N line will not be currentless.



Setup (commissioning / first switching)

Using the control unit for the first time or after a reset

The EmoTouch 3 control unit offers a fast and intuitive setup upon the first switching or after a full system reset.

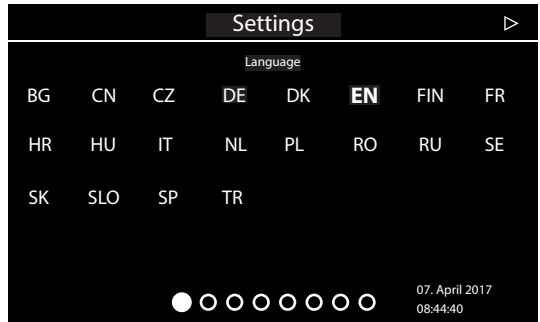
Select language

Select the required language for the menu navigation by touching the language symbol and confirm by touching it shortly again.

You can choose from 20 languages: BG, CN, CZ, DE, DK, EN, FIN, FR, HR, HU, IT, NL, PL, RO, RU, SE, SK, SLO, SP, TR.


Upon confirmation the display shows the next step.

Use the white arrows at the top to navigate between the setup steps, e. g. go back to the previous step.



Time

Set the current time. At first set the hour with "+" or "-" and confirm the selection by briefly press-

ing the  symbol, then set the minutes in the same way.

Date

Set the date, month and year in the same manner with "+" / "-". The value which you are currently changing will be shown slightly larger.

Location, Type of Use, Design

This step configures the essential setup for use. The display panel will ask several questions and will set the scope of appropriate features according to the selected options.

1. **Is the sauna installed in the EU / CENELEC?**
Select the applicable option and press to confirm:



- yes, in the EU, or



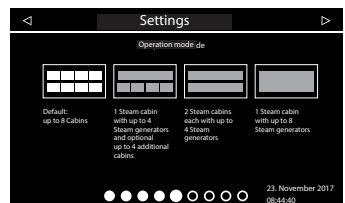
- no, outside EU.

2. **Operation type**

Here you define how many devices or cabins you intend to operate with one display panel.

For saunas - always select the 1st type (up to 8 cabins, 1 device per cabin).

For steam rooms - additionally the choice 2 - 4 is available, if you need several steam generators per steam room.



3. Select between private or commercial use

Select the applicable option and touch it again to confirm:



for private use, or



for commercial use

4. Safety system for saunas as per norm EU 60335 available?

Select the applicable option and touch it again to confirm:





- yes or



- no.

5. Select the heater type

without vaporizer  with vaporizer  (only with H-relay box)

Select the applicable option and press  to confirm:

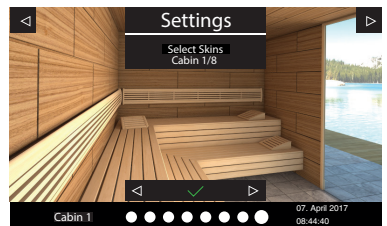
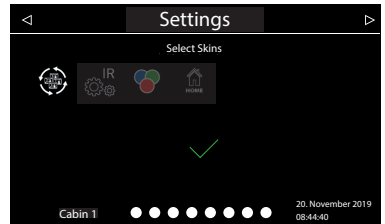
6. Select individual skins

For the skins selection  press  to confirm

Here you can select a suitable cabin design, in order to adjust the cabin shown on the display to the design of your existing sauna cabin. There are several design variants available.

The selection also displays icons for connected and detected modules. Further information about setup, commissioning and operation can be found in the separate instructions for these modules.

Each design is displayed individually on the screen. Use the top arrows to go through the available designs. Confirm your selection with the green check mark.



7. Select sauna heater picture

Here you can select the displayed picture of the sauna heater from several most common models in order to better suit your individual situation and preferences.

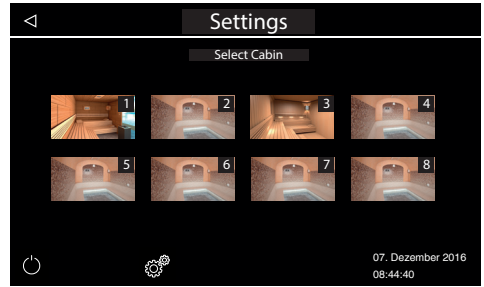
Thus, the setup is complete and the control unit switches to the stand-by mode.





Example

Display in stand-by mode with only one cabin (sauna design may differ).



Example

Display in stand-by mode with several connected cabins (cabin design may differ for each cabin).

Control of several cabins from one display panel

In order to control several cabins from one display panels, these cabins should be connected and properly configured.

Please refer to the chapter “Multi-cabin connection” for more details.

After you have assigned the correct cabin address (ID) to each cabin, the symbol of multi-cabin operation, as shown below, will appear in the bottom line of the display:



The number in this symbol is the number of the currently selected cabins (not the number of cabins connected).

Touch this symbol to open the overview of all connected cabins - they will be show as small images with the corresponding cabin number (see example on the previous page).

By touching the small cabin image you will jump to the corresponding cabin interface to control this cabin.

Alternatively you can also go between the connected cabins through the wiping motion gesture (from left to right or right to left).

When you are in the cabin overview interface, you can start and stop all cabins at once (using the on/off button).

Multi-cabin connection

The EmoTouch 3 gives you the opportunity to operate several cabins with just one control panel. Free combination of up to 8 saunas and steam cabins can be connected. The connection is made via the 4 saunabus jacks on the rear side of the display panel.

Please note that you will need a ferrite sleeve per connection to a jack. Information on mounting the sleeve can be found in the chapter “Display panel”.

If you connect additional cabins, you will receive a further ferrite sleeve for installation in addition to the connecting cable in the scope of delivery of the new power unit.

Connection for multi-cabin control

Regardless of whether you use the EmoTouch 3 as a control unit for sauna, steam bath or for several cabins, the connection always follows the following principle:

1. Cabin

The relay box of the 1st cabin connects with the **sauna bus cable** to the **1st port** of the display panel.

2. Cabin

The relay box of the 2nd cabin connects to the free sauna bus connector in the relay box of the 1st cabin. The relay box of the cabin #2 must be programmed to the ID “2” after connection.

3. Cabin

The relay box of the 3rd cabin connects to the **2nd port** of the display panel. The relay box of the cabin #3 must be programmed to the ID “3” after connection.

4. Cabin

The relay box of the 4th cabin connects to the free sauna bus connector in the relay box of the 3rd cabin. The relay box of the cabin #4 must be programmed to the ID “4” after connection.

5. Cabin

The relay box of the 5th cabin connects to the **3rd port** of the display panel. The relay box of the cabin #5 must be programmed to the ID “5” after connection.

6. Cabin

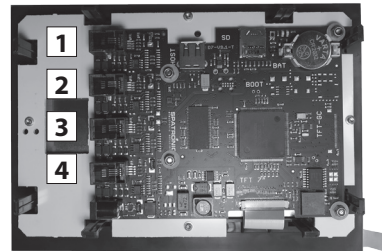
The relay box of the 6th cabin connects to the free sauna bus connector in the relay box of the 5th cabin. The relay box of the cabin #6 must be programmed to the ID “6” after connection.

7. Cabin

The relay box of the 7th cabin connects to the **4th port** of the display panel. The relay box of the cabin #7 must be programmed to the ID “7” after connection.

8. Cabin

The relay box of the 8th cabin connects to the free sauna bus connector in the relay box of the 7th cabin. The relay box of the cabin #8 must be programmed to the ID “8” after connection.



Rear side of the display panel with 4 connection ports for multi-cabin connection.

Below you will find the connection overview with the example of connections for 8 cabins (6 saunas and 2 steam rooms).

Reprogramming of the cabin addresses

The relay box of the sauna control or the SteamRock Premium steam generator is delivered (factory set) with the default cabin address "1". In order to operate multiple cabins, the cabin address must be changed to a different cabin address (from 2 to 8), depending on the number of cabins. Assignment of the cabin addresses to the sauna bus jacks:

1st jack

1st cabin - address 1

2nd cabin - address 2

2nd jack

3rd cabin - address 3

4th cabin - address 4

3rd jack

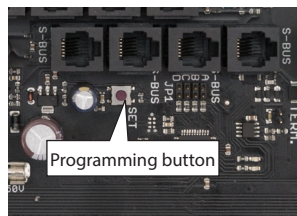
5th cabin - address 5

6th cabin - address 6

4th jack

7th cabin - address 7

8th cabin - address 8



Programming button in EmoTouch 3 Version SteamRock Premium

Important note: Make sure that the connection order is strictly adhered to. The connection must necessarily start with the 1st jack. A cabin with the address e.g. "4" must not be connected to a jack other than No. 2, otherwise it will not be recognized.

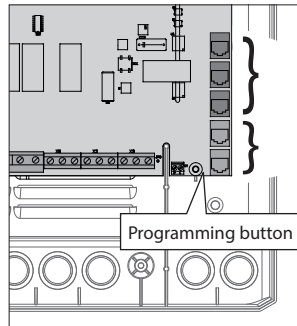
Programming:

1. Press the programming button for approx. 5-6 seconds until the green flashing status LED on the top right of the board turns off and a second LED lights up red (programming mode active).

2. Now briefly press the programming button. The cabin address will move one number higher. The green LED will flash the number of times as the new cabin address (from 1 to 8).
Example: old address = 1 > press the button > LED flashes twice > new address = 2.

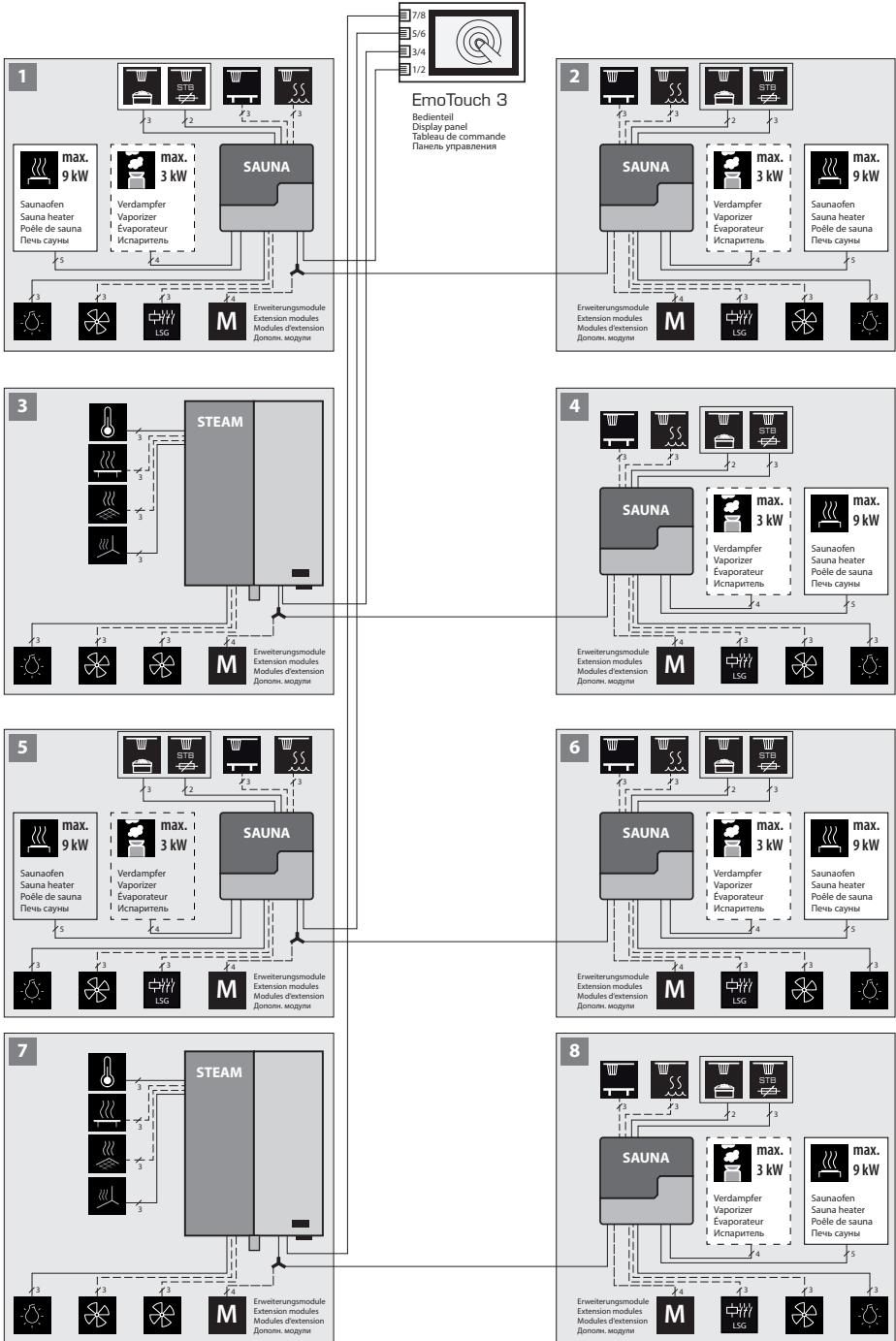
3. Press on the programming button again until you reach the required cabin address. With every pressing on the button, the cabin address count progresses +1. If you have reached the required address wait for approx. 15 sec - the program mode will exit (red LED goes out, green LED starts flashing again). New address will be saved.

Once the new cabin address has been assigned and if the cabin has been correctly connected, it will be automatically detected and the multi-cabin control symbol will appear on the display.



Programming button in EmoTouch 3 Version "sauna" and "hammam"

Example - connection of 8 cabins to the EmoTouch 3 display panel



Display with several cabins

As soon as you have connected more than one cabin with the corresponding cabin address (ID) to the display panel, the multi-cabin control symbol appears in the lower bar on the display.



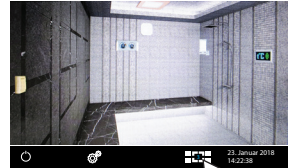
The number inside this symbol indicates the number of the currently selected cabin.



Example: Sauna cabin



Example: Steam cabin




Example: Hammam / Roman bath

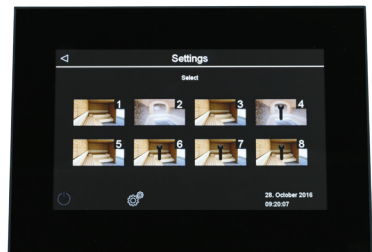
How to select a cabin, navigation between cabins, setup and operation

Before you can start using a new cabin, you have to complete the basic setup, as described in the chapter "Setup (commissioning / first switching)".

A cabin with unfinished configuration appears in the overview with a "key" symbol. Touch this cabin, in order to launch the setup and configuration.

Switch between individual cabins:

- Swipe to the left or right from one display page to the other.
- In the cabin overview touch the desired cabins to select them directly.
- To open the cabin overview, briefly touch the symbol 



Operation of a single cabin


Select the cabin, as described above, and operate as usual. The settings you make apply to this single cabin.

Operation of all cabins at once

If you are in the cabin overview, you can start or stop all cabins at the same time. Touch the on / off button for 3 seconds. The activation for each cabin takes place with a small time delay, to avoid a network overload.

Notice: When switched off, all cabins each turn off completely with a small time delay as well.

Error messages

If a fault occurs in one of the connected cabins, a red triangle  appears in the lower bar. Go to the cabin overview - the cabin with the present fault is displayed with a red triangle. Touch the symbol of this cabin in the display, in order to select it and display details of the fault. In the event of a fault in one cabin, the operation of the other cabins will not be interrupted.

Operation

Display panel - Overview of graphic user interface (GUI)

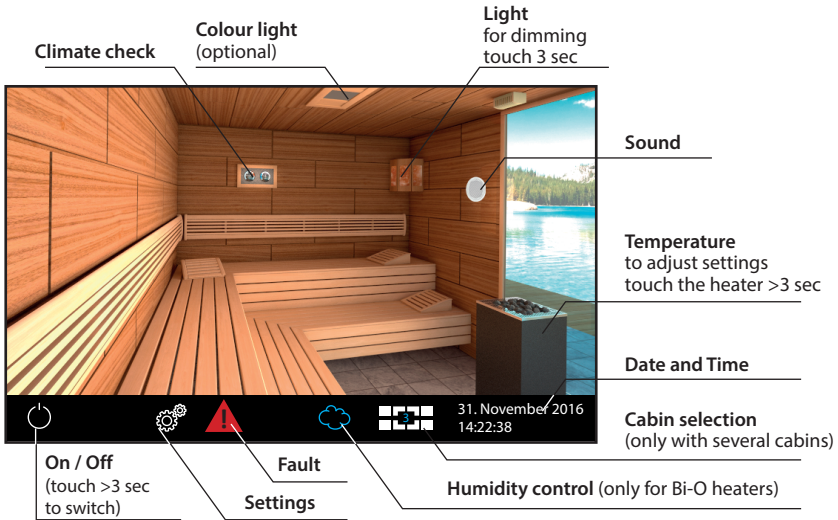



Fig. 1

Heating On / Off

In order to switch the sauna heater on, touch the  symbol for 3 sec. The sauna will switch on with the pre-set parameters (e.g. temperature, etc.). To switch off, touch the symbol again shortly.

Light On / Off



Touch the lamp on the display, in order to switch the light on or off.

Settings (submenu)

Private use:

For extended settings shortly touch the symbol , in order to open the submenu. A window, as shown on fig. 2, will open.

Commercial use:

For commercial use touch the symbol  for 3 sec. and enter the access code **5645**. Extended settings will be opened in a new window. A short touch on the symbol  will open a submenu for navigation language selection only. The full set of extended settings is only accessible with the code given above.

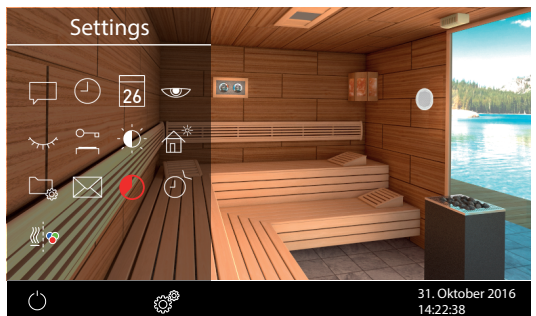


Fig. 2

Operating principle of the graphic user interface

Briefly touch to select or enable any of the functions available on the graphical user interface (cab-in icon). Keep touching a function (>3 sec) to access the associated settings screen. For safety reasons, you should always press certain symbols / icons for more than 3 sec (e. g. heating on).



Operate by touching the display either briefly or for longer.

A touch is indicated by a small yellow rectangle lighting up in the bottom right corner.



Back

In all submenus - return to the main screen, the previous menu or the previous selection.

Symbol description (main screen)



Sauna heater (heating) On/Off

Press for more than 3 sec. to turn the sauna heater on, briefly touch to turn it off



Settings

Submenu for further settings such as language, time, date, screen saver, special parameters, child lock, etc.



Auto-Start

Setting the preset time for later automatic switch-on of the sauna or setting the timer / weekly timer.



Multi-cabin control

This symbol will appear if more than 1 cabin is connected to the control panel. The number inside this symbol means the currently selected cabin.

By touching this symbol you can launch the overview of all connected cabins.

Hint:

The displayed window with settings (like fig. 2) can be closed at any time by briefly tapping on any other place on the screen.

The device automatically returns to the main screen, if you do not touch the display for about 10 sec. Unconfirmed settings will be lost.

Thanks to the integrated battery, personal settings will be kept in memory for years even if the power is off.

The control unit automatically recognises connected extension modules or additional devices and displays the corresponding icons on the main screen or submenus.

Symbol description - extended settings

The submenu "extended settings" provides a range of additional functions, which normally need to be set only once or quite seldom.

Briefly touch the symbol  in the bottom of the start screen.



Language

Here you can set the language for the menu navigation.



Time

Here you can set the time of day.



Date

Here you can set the date, month and year.



Screen saver

Here you can set the time interval after activating the screen saver.



Standby

Time interval setting after the device switches to sleep mode to save power. Touching the display puts the device into active mode.



Child lock / operation lock

Here you can block the access with your own PIN-code. Only switching off the heater and switching on the light remain possible. Important information can be found below.



Display brightness

Here you can change the display brightness.



Holiday home mode

Here you can restrict the user's access to basic functions only with an own PIN-code.



Operation data

Here you can check the firmware version, the remaining time until the next service, as well as the contacts for service issues.



Contacts

Displays the contact details of the manufacturer, so you e.g. can request assistance if an error occurs.



Auto-Stop (Heating time)

Here you can set the desired heating time. For private use - up to 6 hours, for commercial use - up to 12 hours or 99 hours.



Timer

Here you can set the timer for delayed switching, single event or recurring switching timer.




Coloured light sync

Here the activation of an optional color light system can be coupled to the heating (automatic switching) or decoupled (manual switching).



Important note for child lock / operation lock

You can completely lock the device via  symbol with an individual PIN-code. If the lock is active, you can only switch off the heating or switch on the light. For all other operating attempts, the PIN-code input is requested.

ATTENTION

Make sure that the applied PIN-code is not lost or forgotten. Otherwise you can no longer use the locked device! If the entered code is no longer available, please contact your dealer or the EOS Service.

Graphic user interface (GUI) and climate conditions check

Thanks to the modern GUI, you can quickly make all settings on the display, as well as query the current climate conditions while the sauna is running.

The symbols on the start screen are displayed in different colours, to indicate the current operation status - e. g. red high-lighted heater during active heating.

The explanations for each icon are displayed in one of the 20 languages. Set language - see chapter "Setup (commissioning / first switching)".



Standby mode

The picture to the left shows the display in standby mode (light off). If you have a Finnish sauna heater, the heater symbol on the display is shown without vaporizer.

The picture shows optional accessories.



Active heating


When the sauna is switched on, the sauna stones light up red. If humidity mode is selected, the blue steam cloud is displayed.

The remaining time until the automatic switch-off is shown at the bottom left. To interrupt the heating prematurely, briefly press the "Off" symbol.

After humid operation, the sauna-dry program will automatically switch on, unless it has been deactivated in the set-up.



Climate conditions check

You can quickly check the target and the current climate and humidity (if selected) - briefly touch the  symbol.

A submenu window will display for approx. 50 sec the pre-set and current values.

If there is no bench sensor, the temperature above the heater will be shown as well.

If there is no humidity sensor, only the target setting of humidity will be shown and the sym-


bol in the cloud will be . The "%" sign in the cloud signals that the humidity sensor is connected.


Notice: The displayed values correspond to the measured values directly at the sensors. Due to the very different temperature zones in a sauna, the values may vary significantly from the display of an attached thermo- / hygrometer to the wall.

We therefore recommend that you determine your personal ideal climate values by trial and error.

Operation and program settings

Switching the heating On / Off

Press the  symbol for approx. 3 seconds. The heating will switch on and the display will show the active heating mode. The light will be also switched on.

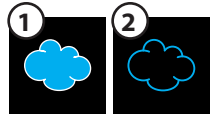
To switch the sauna off, shortly touch the  symbol again. During humid operation the sauna-dry program will switch on (if not disabled in setup) for the preset time (max. 30 min). After that the sauna will switch off (standby mode).

You can interrupt the sauna-dry program - shortly touch the  symbol.



Dry sauna or humid operation mode (Bi-O)

To enable the humid mode, shortly touch the cloud - the cloud will be filled in blue (see picture 1 right). To disable the humid mode, touch the cloud again - the blue filling will disappear and the control unit will return to the dry sauna operation mode (see picture 2 right).



Temperature


Touch the heater image for >3 sec. A submenu window will open and display the last set (or default) temperature. By pulling the slide bar up or down, you can adjust the temperature. This setting can be made also during active heating. The new setting applies immediately.



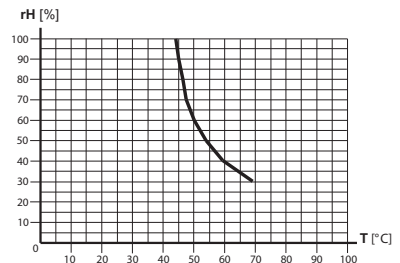
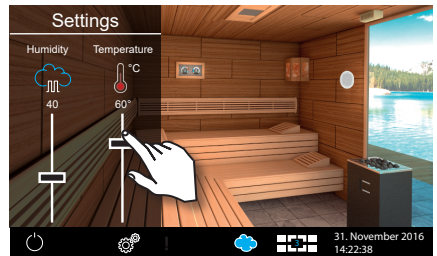
Humidity

At first please enable the humid operation mode as described above.

Touch the sauna heater image for >3 sec. The submenu window will display the last set (or default) humidity value. You can now adjust humidity and temperature by pulling the slide bars up/down. The temperature may be automatically reduced for safety reasons if humidity is set too high. This setting can be made also during active heating.

When the humidity sensor is connected, the relative humidity is set in %. Without humidity sensor, the timing (proportional time of active vaporizer operation in relation to the total operating time) is set. In the climate query, the  symbol without % is displayed.

Please observe that with a humidity sensor control, the maximum humidity setting depends on the temperature. You can only set the values to the left



and below the characteristic curve (see table above). For example, at 60 °C you can set up to 40 % rel. humidity.



Light On / Off

Shortly touch the lamp on the display to switch the light on or off.



- light off,



- light on.



How to dim the cabin light




You can quickly dim the cabin light (0-100%).

Touch the lamp symbol on the display for >3 sec. The cabin light will switch on (if switched off) and a submenu window for light brightness will open. By pulling the slide bar up or down you can adjust the light intensity. The dimming stage will be shown in %. The new value is immediately valid.



Attention! Only dimmable lamps may be used! Otherwise the control unit or the lamp may be damaged! In this case, the warranty expires.





Attention! The following functions    are only allowed if your sauna system is equipped with a certified safety system that prevents the heater from being switched on in an unsafe state (e. g. a towel is forgotten on the heater). Even if your sauna is equipped with such a system, make sure that there are no objects on the heater. Especially when the weekly timer is active, regularly check your sauna for safer conditions.

Risk of fire!




Timer

With this function, you can set the automatic start time up to 24 hours in advance or specify a single start date or recurring dates. On the start screen, touch the settings symbol  > 3 sec. Tap twice on the timer symbol  to open the timer submenu with three options: 24 h time pre-selection, single event timer, serial event timer (week timer).

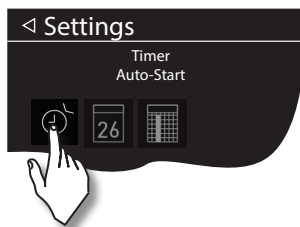


24 h time pre-selection

This functions means start time pre-selection for a single switching within 24 h.

- Select the symbol  and touch it briefly again to launch the submenu.

- Set the desired start time using the “+” and “-” buttons.
- Confirm your setting with the green check symbol.
- The programmed start time will appear flashing in the bottom line on the screen.



The set time corresponds to the real time, not the time delay from the moment of setting. To disable a set auto-start time, set the value to “--:--” and confirm the setting.

Timer

The timer function allows you to have your sauna switched on automatically with the desired climate condition at some time in the future. You have two possible options:



- single event (single time switching on any day)



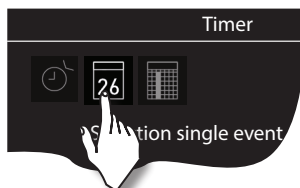
- week timer (recurring switching on certain days of the week)



Single event timer (single switching on any day)

For the single event timer touch the symbol  twice to launch the submenu for programming.


- Set the day, month and year by using the “+” and “-” buttons.
- Next set the desired **start time** (hours and minutes).
- Then set the desired temperature (and humidity).
- After the final step briefly touch the “back” symbol. On the start screen in the bottom line you will now see the programmed date and time (e.g. 15.01. and 18:30).



Notice: the heating time duration depends on the “Auto-Stop” setting.



Week timer (recurring switching on certain days of the week)

For the week timer touch the symbol  twice. A submenu opens with the overview of the days of the week (from 1 to 7, 1 = Monday, 2 = Tuesday...).

Notice: White symbols = no program available. Blue symbols = program available.

Briefly touch the day you wish to set a timer for (e.g. “1” for Monday). A submenu opens with programs for that day.

Notice: For each day you can program up to 4 switching times. The maximum duration of a switching time depends on the setting of the heating time limit (jumper 5 on the main board). If this is set to 12 hours, a 6-hour rest period is necessary according to legal regulations. In this case the next switching time can only start after 6 hours.

Furthermore, you can set an individual temperature (and humidity) at any time and thus largely automate the operation of your sauna system.

Briefly touch a switching time (program), start with 1.

- Set the desired **start time** (hours and minutes) - e.g. 9:30.

- Set the desired **stop time** (hours and minutes) - e. g. 19:30.
- Set the desired temperature (with humid operation - humidity as well).

After the last step, tap on overview of the weekday. The day on which you have set a program is displayed in blue. Repeat these steps for each additional required switching time. On the start screen, the next switching time is displayed at the bottom right (e. g. Monday, 9:30).

Clear / change week timer

To clear or change a switching time, go via the start screen to the week time.

- Select the appropriate weekday.
- Select the start time you wish to change.
- Change the settings (start time, stop time, temperature) or ...
- Clear the setting by changing the associated hour to "--" and confirm it.
- The display returns to the weekday overview.

Notice: If the timer is active, the next activation time is displayed as a flashing value on the bottom right. Even if you have programmed several activation times or a combination of individual times and a weekly timer.

BLUE flashing time - programmed start time is acceptable, the timer will start as planned.

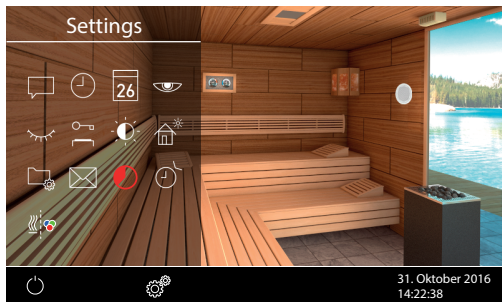
RED flashing time - programmed start time is not acceptable, the timer will not start. Check for possible programming errors - overlapping time, incorrect pause times, etc.

The cabin may be switched on manually between the automatic timer switchings.

IMPORTANT - if you start the cabin manually within the still valid timer operation time window, e.g. after an unexpected stop, the stop time will be automatically adjusted to the programmed stop time of the current timer operation time window. This allows you for instance to quickly pick up the interrupted timer operation after an unplanned stop.



Extended settings



For private use briefly touch the  symbol to display the Extended Settings menu.

For commercial use press >3 sec on this symbol and enter the access code **5645** to open the Extended Settings menu.

In the submenu "Extended Settings" you can make additional settings which are normally required only once or very seldom.



Language

Here you can set the language for the menu navigation. In the submenu select the required language - e. g. "EN" for English (the selected item turns white) and briefly touch the chosen language again. The device returns to the previous menu, all texts appear in the language you selected.



Time

Here you can set the current time of day. Use "+" and "-" to set the hours / minutes and confirm your selection.



Date

Here you can set the date (day / month / year). Use "+" and "-" to set the day, month, year and confirm each selection. After the last confirmation (year), the device returns to the previous menu.



Screen saver

This setting defines the period of time after which the display panel will enter the screen saver mode if no button has been operated. In this mode the display brightness will be reduced to the minimum and the display will show the current time. Briefly touch the display to wake up the device from the screen saver mode.




Sleep mode

This setting determines the time after which the device enters sleep mode. In sleep mode, the display turns completely black. Briefly touch the display to wake up the device from sleep mode. This function is only possible when the sauna heater is switched off.



Child lock / operation lock

You have the possibility to protect the device against unauthorized access and to block it completely. The lock is protected with an individual 4-digit PIN-code.

To lock the device, select the  symbol and briefly touch it again. It opens a new window with “----” and a numeric keypad. Fill the four blank digits with your own PIN-code. Confirm the entry.

The main screen is displayed and the device is locked. Settings cannot be changed.

For safety reasons, you can still turn off the heating and turn on the cabin light although the display is locked.

You will be requested to enter the PIN-code if you try to do something else.

To unlock the device, touch any symbol (e. g. On / Off) to launch the PIN-code request dialog. Enter the correct PIN-code. The device will unlock.



Important note for child lock / operation lock

If the lock is active, you can only switch off the heating or switch on the light. For all other operating attempts, the PIN-code input is requested.



ATTENTION


Make sure that the applied PIN-code is not lost or forgotten. Otherwise you can no longer use the locked device! If the entered code is no longer available, please contact your dealer or the EOS Service.



Heating time (Auto-Stop)

Here you can set the required heating time duration for your sauna heater.

For private use the max. heating time is limited to 6 hours. For commercial use the max. heating time may be limited to 6 hours, 12 hours or set to unlimited. The duration is generally limited during installation by an appropriate adaptation in hardware (jumper 5), this setting takes precedence).

Touch the  symbol twice and set the heating time (hours and minutes) in the submenu. Upon confirming your entry, the display returns to the previous menu.

When you turn on the heating, the remaining runtime shows as a countdown timer in the bottom section. Thus, you can immediately see how long the sauna heater is still switched on.

Please observe that after the humid mode operation, the “sauna dry” mode is still switched on and the sauna heater will run for up to 30 minutes. The duration of the drying program can be changed in the setup menu. Please contact your dealer or installer for further details.

The runtime is set in +/- 1 min. steps and is possible from 00:01 (1 minute).



Operation data

Here you can check the important operating data and information about your control unit.



Firmware - displays the current firmware version of the display panel, relay box and extension modules. Press “+” or “-” to switch between the two values. “Panel Vx.xx” - display panel firmware, “Mod-LS Vx.xx” - relay box firmware (x is any number). Use the up arrow to return to the previous menu.



Service intervals - display the hours left until the next regular maintenance (service) is due. Your dealer or installer sets the intervals during installation and setup.



Contact details - displays the manufacturer’s contact details. These details are also displayed if a fault occurs.



Display brightness

Here you can continuously adjust the brightness of the display.




Holiday Home Mode


With this function you can restrict the access with your own PIN-code down to the bare minimum of functions. All other functions will be disabled and their symbols will not be displayed.

Following settings are possible when the holiday home mode is active:

- Sauna On / Off
- Light On / Off
- Selection of the operating mode - dry or humid
- Temperature setting
- Humidity setting

Touch the  symbol to enable this function. Enter your personal PIN-code by using the numeric keypad to enter a 4-digit number and confirm your entry. The device will be locked.

Hint: To cancel the entry, briefly press the “Home” button on the top right.

To unlock the device, go to the settings menu again. Touch the  symbol twice. A submenu with PIN-code entry opens. Now enter your PIN-code to enable the device. After switching off the sauna, the language selection appears.




ATTENTION

Make sure that the applied PIN-code is not lost or forgotten. Otherwise you can no longer use the locked device! If the entered code is no longer available, please contact your dealer or the EOS Service.

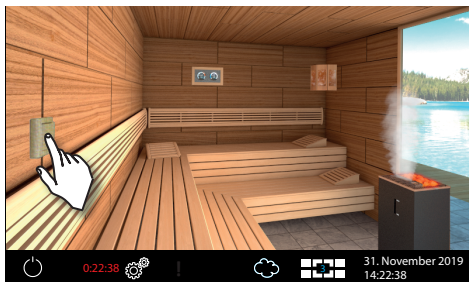


Potential-free contact

With the function “potential-free contact” you can use the corresponding symbol on the start screen to switch an external device or a function (e. g. additional light, etc.).



Touch the potential-free contact symbol  to make the desired switching (on or off).


If the potential-free contact symbol does not appear, contact your dealer or installer to enable and set up this function.

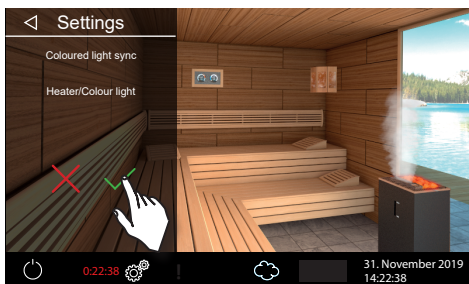


Coloured light sync

With this function, you can couple the activation of the optional colour light system (via colour light module SBM-FL75 / 150) to the heating circuit.

Tap twice on the  symbol, to open the corresponding submenu. Then tap twice on the green check symbol  to activate the synchronization. The coloured light is then switched on or off synchronously with the heater.

To cancel this setting, tap twice on the  symbol.




Manual setting of the lamp


The control unit is factory set to inductive lighting load. Hence, resistive loads can also be controlled.

If required, the light output can also be switched manually to capacitive loads.

When using incandescent lamps, the lighting load must remain set to inductive load.

The current setting is shown on the display.

Code **8001**  Inductive / resistive load when using incandescent lamps
factory setting



Code **8002**  Capacitive load
electronic ballasts for reverse phase control



Improper settings can damage the device. In this case, the warranty expires.

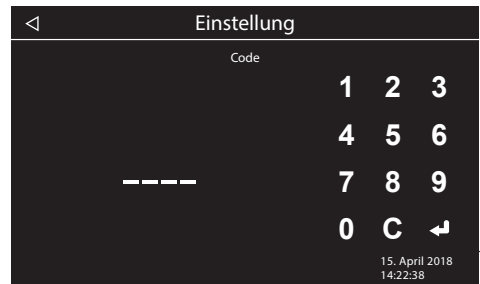
The work may only be carried out by a trained specialist from an authorised electrical company.

Set lighting load to resistive load

- If applicable, open the housing of the power unit.
- Check whether the power unit is disconnected from the power supply.
- Disconnect the light on the mainboard.
- Switch on power unit and display panel.
- Press   5 sec.
- Enter code and confirm.

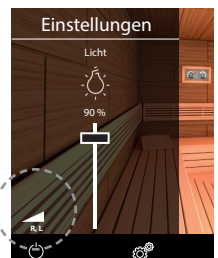
Code **8001**: Inductive / resistive load, when using incandescent lamps

Code **8002**: Capacitive load, electronic ballasts for reverse phase control




- Disconnect the power unit from the mains and reconnect the lamp.
- Close the housing.
- Restore the power supply and switch the power unit back on.

here: display of light output



Service and Setup

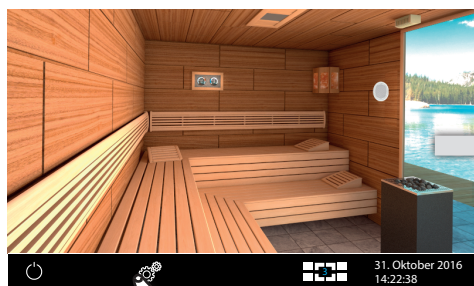
The EmoTouch 3 provides an extensive scope of functions for setup and fine-tuning of the sauna equipment, in order to optimize sauna operation. **This setup menu is protected with a PIN-code and should not be accessible to the end users.**

Touch the  symbol for about 3 seconds until the PIN-code prompt window appears.

The PIN code is: **5349**



Important note: The settings on the service level may only be carried out by a qualified specialist!



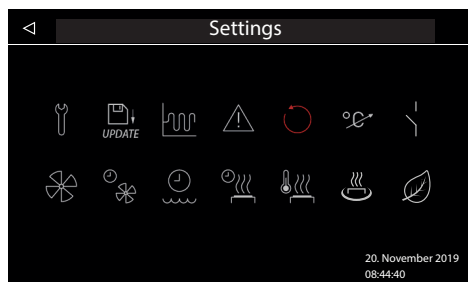
Touch for approx. 3 sec.



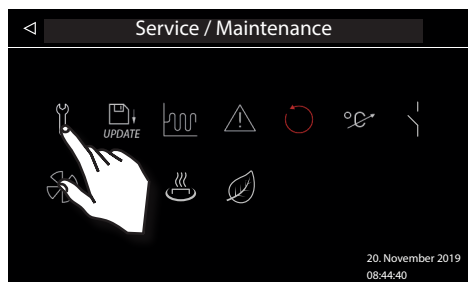
Enter the PIN-code for the service level. Correction with "C". Input with arrow symbol.

User interface of the service area

All functions of the service area are displayed as symbols. Briefly touch a symbol to select it - the symbol will be highlighted in white and a plain text description of its function appears at the top. Touch the selected symbol again to access the submenu and change the settings.



Display of "Bi-O" mode (humid operation)



Display of dry (Finnish) mode (dry operation)

Service area interface - the picture on the left shows the selection of symbols in Bi-O mode (humid operation).

The picture on the right shows the symbols displayed in dry (Finnish) mode (dry operation).

The selected symbol (i.e. the first symbol on the screen above) turns white. The remaining symbols are displayed in gray.

The description of the selected symbol appears at the top.

Symbol overview of the service area



Service / maintenance intervals

Setting the intervals for service / maintenance.



Afterheating time

Setting for humid operation in minutes.
Only for Bi-O mode.



Firmware Update

Firmware update possibility for display panel, relay box or colour light module.



Afterheating temperature

Setting for humid operation in °C.
Only for Bi-O mode..



Hysteresis

Adjustment of the switching hysteresis.



HOT function

Settings and runtime in minutes (5-20 min.)
Only for dry sauna (Finnish) mode.



Usage

Selection between private or commercial use.



ECO function

Settings and runtime in minutes (0-240 min.)



Reset

Reset to the factory default settings, all individual settings will be deleted.



Temperature adaptation

Adjustment of the measuring shift of the temperature +10 / -10 K.



Potential-free contact

Settings for switching via the potential-free contact.



Fan

Setting of the ventilation fan speed (0-100%).



Fan operation time

Setting for the fan operation time in minutes (0-60 minutes).



Refilling time

Cut-off delay time setting by water shortage.
Only for Bi-O mode.

In this menu also the optional connected / recognized modules will be displayed.

Settings



Service- / maintenance intervals

Allows to set the intervals for servicing and maintenance. Upon expiry the display panel will remind the user for a short time upon every switching about the pending servicing. The end user can check the remaining time to the next servicing in the extended settings menu. This function allows as well to keep track of the total operation time of the sauna.

Default setting for private use - 500 hours.

Default setting for commercial use - 2500 hours.




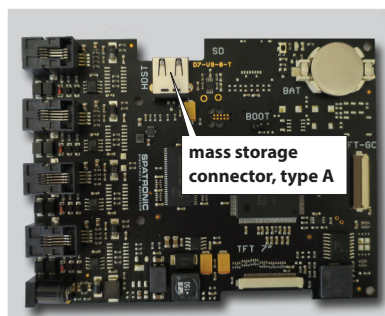
Firmware update

Here you can update the firmware of the device. The update requires a mass storage device (empty, preformatted).

- Download the firmware from www.eos-sauna.de/service-support/software and unzip the ZIP file to your mass storage device.
- Plug in the mass storage device to the connector on the rear side of the display panel (display panel has to be removed from the bottom housing).
- Open the service level settings and touch the "Update" symbol twice:
- You will see three possible options for the update:
 - Display panel
 - Relay box only (currently selected cabin)
 - Coloured light module (if connected, currently selected cabin only)
 - Sound module (if connected, currently selected cabin only)
- Select the required option and touch it briefly again, to launch the update.
- The update process starts and the progress is shown on the display. The update may take several minutes. Afterwards, the device will restart.
- If the required data for the update is not found, a corresponding error message will be displayed. In this case, check the data in the mass storage device and repeat the process.
- You can remove the mass storage device after the update has finished.

HINT: You can also launch the update window directly without going through the service menu.

Touch the settings symbol  for 5-6 sec. until the PIN-code prompt appears and enter the access code **543210**. The update menu will be launched directly.



Notice: Make sure that the power supply is not interrupted during the update process! Otherwise the device may become unusable. In this case, contact EOS Technical Support.

Notice: Do not try to update the firmware without appropriate qualification!

In the case of power supply loss, the device will attempt to resume the update process. If resuming the update fails or the display shows an error message, press the "Reset" button on the board next to the cell battery. The device will reset, start up and will display a dialog box with options for the update so that you can repeat the update.

Hysteresis

Allows to adjust the hysteresis within a 1-10 K range. This adjusts the tolerance level around the temperature set-point and influences how often the heater will be switched on or off by temperature changes. For instance at 90 °C target temperature and hysteresis set to 5 K the control unit will switch the heater on at 85 °C and off at 95 °C respectively. This allows you to better adjust the sauna heater to the specific sauna cabin size and layout.

Notice: The smaller hysteresis value will lead to considerably increased number of relay switchings, which reduces the service life expectation of the control unit! The factory default setting is 5K.

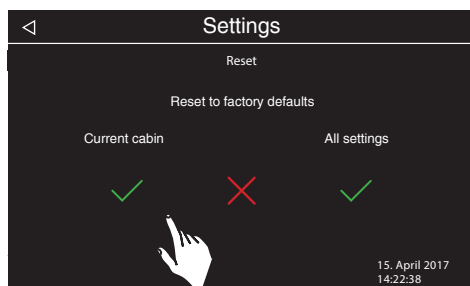
Usage

Here you can redefine the operating mode for private or commercial use. This selection affects the limitation of the max. heating time and some special functions (e.g. weekly timer is only possible for "commercial" use).

Reset

Allows you to reset the unit back to the factory default settings. All individual settings will be lost. The control unit will restart and will prompt to perform the basic setup steps as by the first switching. When selecting you will be prompted to explicitly confirm the reset again.

You can perform the reset for the current cabin or for all settings (all cabins).



Temperature adaptation (offset)

With this function, the target temperature of the control unit can be adjusted.

For instance, if the value measured on a thermometer is 5K lower than the set target value, this can be compensated by adjusting the temperature by + 5K.

Notice: Since this function bears certain risks, it may only be used by experienced and trained specialists and should be properly tested.

Possible adjustment range is from -10K to +10K.



Potential-free contact

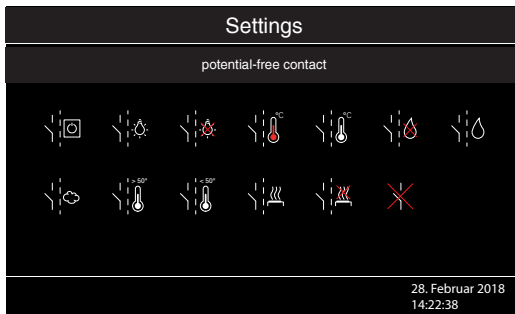
The terminals 3 and 4 on the main board of the relay box are a “NO / normally open” potential-free contact of a relay on this board. This output is not linked to any other connection and is therefore potential-free. You can integrate this output in an external circuit, in order to get some external power load switched or transmit a signal.

Maximum load allowed for this output:


- resistive load / alternating current: max. 250V AC / 10A
- inductive load / alternating current 500VA
- direct current:
 - Up to 30 V DC max. 16A (480 W)
 - Up to 110 V DC max. 0,3A (33 W)
 - Up to 220 V DC max. 0,12A (26,4 W)



Attention! If you use the mains connections for terminals L1, L2 or L3 to power the circuit connected to the AUX output, please ensure that the cable lines do not get overloaded! You may need to install an additional fuse protection or install a separate power supply line.



Settings for potential-free contact

Tap twice on the  symbol to open potential-free contact settings. A new window opens with different symbols. By selecting a symbol, you can assign the potential-free contact to a specific function and thus configure the operation as you wish.

Function overview - following options are available:



On/Off via display panel - manual switching through the symbol



Switching “on” if light is switched on.



Switching “off” if light is switched on.



Switching “on” if the set-point temperature is reached.



Switching “off” if the set-point temperature is reached.



Switching “on” if there is water shortage in the vaporizer (only for Bi-O heaters)



Switching "off" if there is water shortage in the vaporizer (only for Bi-O heaters)



Switching for an additional vaporizer (synchronisation of switching with the output WB, only for Bi-O heaters)



Switching "on" if the current temperature reaches 50 °C.



Switching "off" if the current temperature reaches 50 °C.



Switching "on" if the cabin is on.



Switching "off" if the cabin is on.



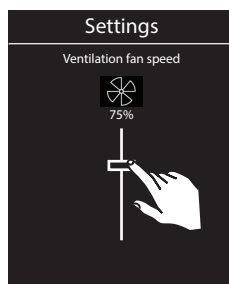
Disable potential-free contact (the symbol will disappear on the screen, output not active).



Fan

Allows to adjust the rotation speed (ventilation capacity) of the fan from 0 to 100% or to switch off the fan completely. If enabled, the fan will switch on automatically with the pre-set speed when the heating is on. For the sauna-dry mode the fan will always switch on with 100% output.



Tap twice on the fan symbol to open the settings menu. In the sub-menu, you can use the slider to set the desired level (slide the slider downwards or upwards).

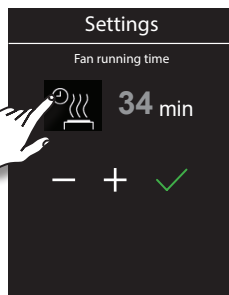


Fan running time

Here you can set how long the fan should operate after the humid mode. We recommend to use this function in combination with the after-heating to dry the sauna cabin faster.

The fan running time in this mode is by default linked to the after-heating time. The time is therefore shown in grey and cannot be changed. We recommend to keep this method and if necessary to change the time in the "after-heating time" function setting.

If you however wish to set a different individual operation time of the fan in this mode, briefly tap on the  symbol - the symbol will turn grey and the number (minutes) will turn white. You can now set your own time with "+" / "-" buttons (confirm with ).





Refilling time


Here you can set the grace time which the end user has to refill the vaporizer after the water shortage alarm. If the vaporizer has not been refilled within this time, it will be switched off (overheating protection). This function is especially important for Bi-O heaters with manual refilling. Adjustment range - from 0 to 5 minutes.



After-heating time

Here you can set the time for the "sauna dry" program after the humid operation. Factory default setting is 30 minutes. After every humid operation the sauna will then switch on in dry Finnish mode, in order to dry the cabin. We recommend to use this function in combination with the exhaust fan, in order to remove the humidity and dry the sauna cabin.


Tap on this symbol twice to open the settings submenu.

You can now set your own time with "+" / "-" buttons (confirm with ).



After-heating temperature

This functions allows to set the temperature for the "sauna dry" program. Factory default setting is 95 °C.

You can now set your own temperature with "+" / "-" buttons (confirm with ).



HOT

HOT is a special function, which runs the sauna heater at full power for the pre-set time 5-25 minutes. The air temperature will be limited for safety reasons to 115°C.

The HOT function is only available in the dry (Finnish) sauna mode. HOT function can be launched from the display panel or with the optional HOT push button (Item no. 94.6800).

The time setting is possible between 5 to 20 minutes. Tap twice on the HOT symbol to open the submenu for settings. Here you can set the HOT runtime or program the automatic start (timer).

The HOT function can be useful in a commercial sauna, for example, to increase the temperature of the sauna stones and to better re-heat them before or during water splash ceremonies. For safety reasons the HOT function will be interrupted if the air temperature reaches 115 °C.

To launch the HOT function:

• From display panel: tap briefly on sauna heater and tap on HOT in the sliding submenu.

• With external push button: press the push button. The button will illuminate red.



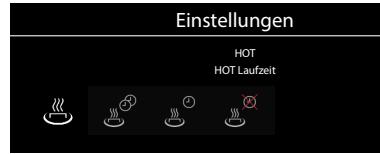
The HOT symbol will appear flashing in the bottom line to indicate the function is active. Once activated the HOT function cannot be stopped.



HOT-submenu settings

HOT-runtime

- In this menu the duration is set for which the heater heats up to 115° C
- Setting range: 5 to 20 minutes
- The factory default setting is 10 minutes



HOT-automatic interval time

- In this menu the interval time for the HOT-automatic can be set
- Setting range: 30 to 480 minutes
- Increment: 30 minutes
- Factory default setting: 60 minutes

HOT-automatic start time

- In this menu, the start time for the HOT-automatic can be set
- Setting range: 0:00 Uhr to 23:59 Uhr, --:-- corresponds to HOT-automatic deactivated
- Factory default setting: --:--

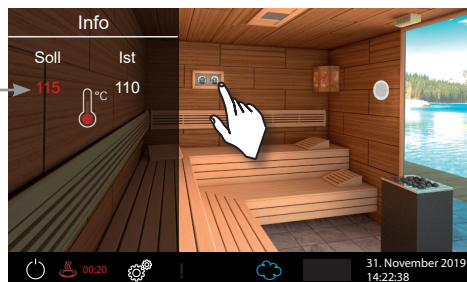
HOT-automatic end time

- In this menu, the end time for the HOT-automatic can be set
- Setting range: 0:00 Uhr to 23:59 Uhr, --:-- corresponds to HOT-automatic switches off with sauna
- Factory default setting: --:--

Example: HOT-start time 10:00, end time 21:00, intervals 60 minutes, runtime 15 minutes

With this setting, between 10:00 and 21:00 the HOT function will start 15 minutes before every full hour and ends on the full hour, so that the water splash can take place every full hour (intervals 60 minutes).

HOT increases the set-point temperature to 115°
(only possible during Finnish operation)





ECO is an energy-saving function, which reduces the sauna temperature to a lower level which allows to reduce the energy consumption while still keeping sauna warm, so that it can return to normal temperature level in a short time.

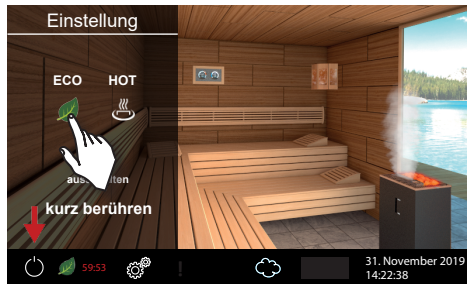
ECO function is available for dry (Finnish) and humid (Bi-O) sauna mode. ECO function can be launched from the display panel or with the optional ECO push button (Item no. 94.6980).

If activated ECO will reduce the temperature to a certain low level for the pre-set period of time.

Possible time setting: 0 to 240 minutes. Setting "0" means the manual mode, no automatic return to the full temperature. Tap twice on the ECO symbol to open the submenu for settings. Set the desired ECO duration.

To launch the ECO function:

- From display panel: tap briefly on sauna heater and tap on ECO in the sliding submenu.
- With external push button: press the push button. The button will illuminate green.



The ECO symbol will appear flashing in the bottom line to indicate the function is active.

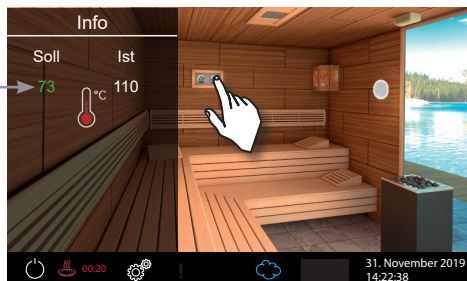
To stop ECO proceed as described above - the ECO symbol shall disappear.

If you have programmed the specific duration for the ECO function, sauna will return automatically to normal temperature once this time expires.


Note: by active ECO function the sauna fan (if connected via the control unit) will be disabled).



ECO reduces the set-point temperature



Troubleshooting (error messages)

EmoTouch 3 is able to detect various disruptions and errors and displays them as symbols or text messages. With only one connected cabin, the error message will be shown directly on the display. With multi-cabin control, the error messages will be shown in the lower bar with the  symbol. In this case, go to the cabin overview - then you can locate and select the cabins with errors for further details.



Errors / Error messages

Reason / Troubleshooting

Display remains dark

- No power supply - check fuses, check cables
- Switch-Off switch in off position - check the device's main switch for correct position.
- Faulty connection to display panel - check the link cable (relay box - display panel) for reliable connection.
- Display panel in sleep mode - touch the screen.

Sensor fault

- Faulty connection to the main sensor - check the sensor and cables for reliable connection.
- Faulty sensor - get the sensor replaced by the dealer.

Thermofuse blown

- Faulty connection - check the cables (loose wire, faulty contact, etc.)
- Thermofuse blown because of overheating - check the possible reason for overheating, replaced the fuse (one spare fuse is included with every control unit).

Water shortage

- Too little water in vaporizer - refill water. Observe the pre-set grace time for refilling, otherwise the vaporizer will be shut-down!
- During automatic refilling - check the water supply line, check the FWA water level control device.

No Bus communication

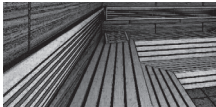
- Check the cable connection between the relay box and the display panel.
- Restart the control unit; if the fault persists, contact the dealer or EOS service.

Unknown error

- Check cable connections and restart the control unit; if the fault persists, contact the dealer or EOS service

False Bus configuration

- No relay box has been detected, check connection and the address setting.
- Multiple relay boxes with the same address have been detected, check assigned addresses.

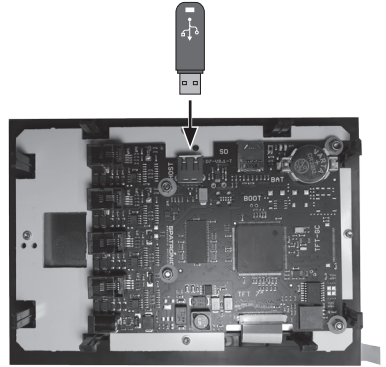


Interface will be shown grey without any equipment

Export operating data

The operating data - if a mass storage device is available - is automatically written to the mass storage device with every error message.

1. Disconnect the device from the mains
2. Remove the display panel (see "how to remove the display panel")
3. Insert the mass storage device
4. Switch on the device and wait at least 30 seconds
5. Operating data is automatically written to the mass storage device
6. Switch off the device
7. Remove the mass storage device
8. Install the display panel (see "display panel installation")



IMPORTANT: Pay attention to the maximum storage capacity (32 GB) and formatting (FAT32)

The operating data is written into the „LOG“ folder with the file name „T3_XXXXXXXXX_Dat.json“
XXXXXXXXXX: serial number.

Send this file to the service address!

The “switch-off” rocker switch

The control unit is equipped with a “switch-off” rocker switch.

You will find this switch on the left side of the main relay box.

This switch allows to switch the control unit to standby mode (notice the heating will not start), to switch the control unit completely off (disconnect from power) or to switch the control unit off, but to leave the light switched on.



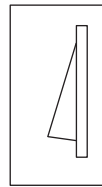
rocker switch



Attention! Parts of the printed circuit board will still remain energized in the switched off condition! Risk of electric shock!

Notice!

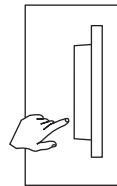
When switching the “switch-off” rocker switch from Pos. I to Pos. II, you will be at the intermediate position 0 for approx. 1s.



Default Position

Switch setting 0

Press the switch on the lower side of the rocker to the first latch (**switch setting 0**). The switch will be in the middle position. The unit is now completely switched off (disconnected).



Device switched off (completely);
Position 0.

Switch setting II

To turn the light on in the cabin while the unit is still disconnected (for maintenance and cleaning work) push the left side of the rocker to the second latch (**switch setting II**).



Light enabled;
Device switched off.
Position II.

Switch setting I

To make the unit ready for operation, switch back to the initial position (**switch setting I**). The unit will return to standby mode.



Device switched on.
Position I.



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.



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 employ 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