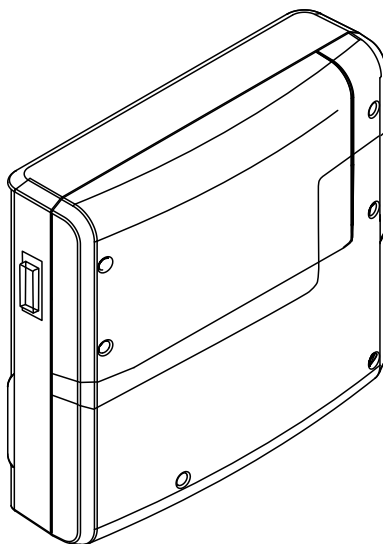


SBM-IR Modul

Module for Infrared and Sauna Cabins



Installation Instructions for Retailers

Made in Germany

Documentation

Manufacturer

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Original installation instructions EN







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Characters, symbols and illustrations

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

Revision history

Date	Version	Description
1 Feb. 2019	01.00	First version

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1 General safety instructions

1.1 Safety levels

Safety instructions and important operating instructions are classified according to ANSI Z535.6. Please familiarise yourself with the following terms and symbols:

DANGER

Danger

Indicates a hazardous situation which, if not avoided, will result in death.

WARNING

Warning

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

CAUTION

Caution

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

NOTICE

Notice

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

1.2 Assembly and installation



These operating instructions are intended for qualified personnel familiar with the laws and regulations applicable to electrical installations at the installation site. Observe the following general safety instructions during set-up and commissioning.

Risk to life and limb and risk of fire

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

- ▶ The electrical installation of the relay box and other electrical systems or equipment with a fixed mains connection must only be performed by a trained electrician from an authorised electrical company.
- ▶ Observe the stipulations in VDE 0100 part 701.
- ▶ The system must be disconnected and removed entirely from the mains supply before commencing installation and repair work.
- ▶ The housing cover must only be removed by a specialist.
- ▶ Do not install control units, relay boxes and modules in enclosed cabinets or wood panelling.

Fire hazard from overheating

Infrared emitters and heating foils without overheat protection can lead to overheating of the cabin and fire. Flammable parts must not exceed a temperature of 140°C when the unit is operated as intended or in the event of a malfunction.

- ▶ Install only infrared emitters or heating foils that are designed and installed in such a way that they do not pose a fire hazard when the unit is operated as intended. Alternately, infrared emitters or heating foils with overheat protection as per EN 60335-2-53 may be used.
- ▶ Install a safety temperature limiter if needed.
- ▶ Observe the manufacturer's safety and installation instructions for infrared emitters and heating foils.
- ▶ Observe the cabin manufacturer's safety and installation instructions.

1.3 Operator instructions

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

Risk of electric shock

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

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

Risk of burns and chemical burns

Touching hot parts may lead to skin burns and chemical burns of the skin.

- ▶ The operator must be familiar with the unit's hot parts and be able to identify them.
- ▶ The operator must be familiar with the settings for the heating period and understand how it is controlled.

Health risks

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

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

Equipment damage due to overuse

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

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

Operation by children or persons with reduced mental capacity

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

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

1.4 Standards and regulations

The following standards, in their currently applicable versions, were observed during design and construction.

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

Standard	Title
DIN EN 60335-1	Household and similar electrical appliances - Part 1: General requirements
DIN EN 60335-2-30	Household and similar electrical appliances – safety - Part 2-30: Particular requirements for room heaters
DIN EN 60335-2-53	Household and similar electrical appliances – safety – Part 2-53: Particular requirements for sauna heating appliances and infrared cabins
DIN EN 60335-2-96	Household and similar electrical appliances – safety - Part 2-96: Particular requirements for heating equipment
DIN EN 55014-1	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission
DIN EN 55014-2	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 2: Immunity

2 Identification

The SBM-IR Modul can be used for the following installations:

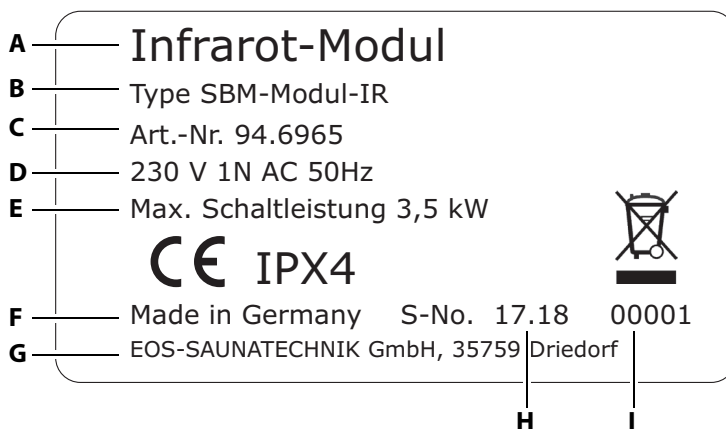
- As an add-on module for an infrared cabin.
- As an add-on module for a sauna cabin.


2.1 Unit information

2.1.1 SBM-IR Modul

Nameplate

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



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

Requirements for operation and storage

The SBM-IR Modul is only intended for installation outside the infrared cabin. The installation location must fulfil the following climate conditions:


- Ambient temperature during operation -10°C to 40°C
- Storage temperature -20°C to 60°C

2.1.2 Control units

The SBM-IR Modul can be operated with one of the following control units:

- EmoTec, EmoTec IR (software release R. 3.45 or higher)
- EmoStyle, InfraStyle (software release R. 3.45 or higher)
- EmoStyle i, InfraStyle i (software release R. 3.45 or higher)
- EmoTouch 3 (also SteamRock Premium) (software release R. 2.06 or higher)

Check your control unit's software version. Update your software if it does not match the specifications above.

Control units are not included in the SBM-IR Modul's scope of delivery. For more information about the control unit, see the relevant operating instructions and chapter 7 Commissioning,  54.

2.2 Intended use

The SBM-IR Modul is designed to operate infrared emitters and heating foils in infrared and/or sauna cabins. It must only be mounted on a wall. It can be connected to SBM-LSG-IR or a sauna relay box.

The SBM-IR Modul is suitable for cabins used in private and commercial settings.

Foreseeable misuse

The following are considered instances of foreseeable misuse:

- The infrared heating foils do not have an integrated temperature sensor with overheat protection.
- The control and sensor cable plugs are plugged in incorrectly.
- The cabin addresses are programmed incorrectly.
- The unit is operated without knowledge of or compliance with the safety instructions.
- Operating, service and maintenance requirements are not observed.
- The unit is operated after technical or other modifications are made to the module.
- The unit is operated by children or persons with reduced mental capacity or by persons who have not been thoroughly instructed in its use.

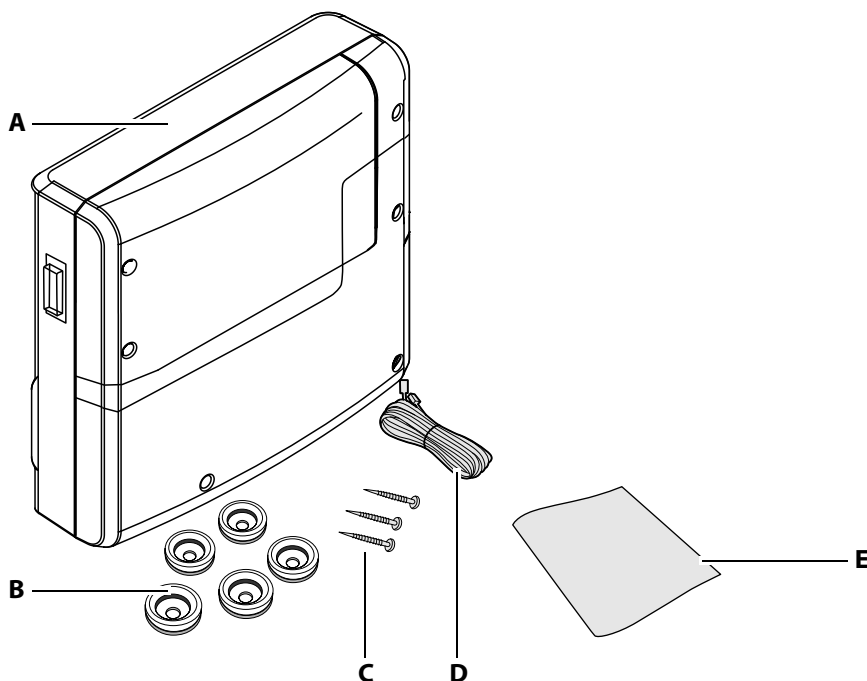
 1 General safety instructions,  5

3 Description of the unit

3.1 Scope of delivery

The circuit board is enclosed in a plastic housing. The housing completely encloses the circuit board and the electronics.

The following components are included in the scope of delivery:




A Module with 2-piece front cover

B 5 bushings

C 3 wood screws 5 x 25 mm

D 10 m sauna bus connecting cable with RJ12/RJ12 modular plugs

E Installation and operating Instructions

 SBM-IR Modul scope of delivery

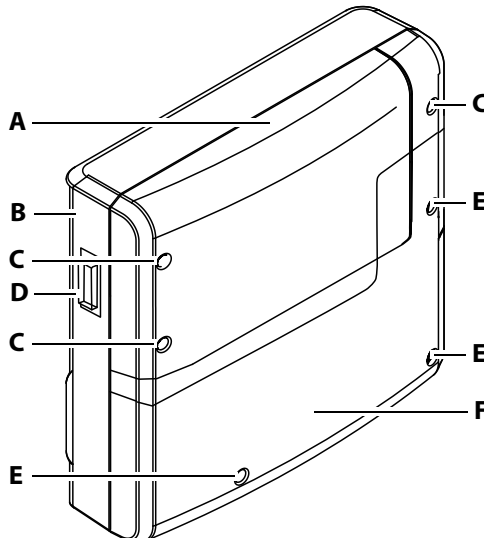
Check the scope of delivery for completeness prior to installation.

Accessories (optional)

Accessories	Item no.
20 m connecting cable for temperature sensor	94.6281
50 m connecting cable for temperature sensor	94.6282
25 m connecting cable for control unit (RJ10/RJ14)	94.6285
10 m connecting cable for sauna bus (RJ12/RJ12)	94.5861
25 m connecting cable for sauna bus (RJ12/RJ12)	94.4647
50 m connecting cable for sauna bus (RJ12/RJ12)	94.4648
Power supply for extending the control unit's connecting cable to 50 m; only for EmoTouch 3 control unit	94.6671
IR plug-in module with adapter cable	94.2046
IR plug-in module without adapter cable	94.4960
2.5 m connecting cable for IR plug-in module	94.4396

3.2 Module overview

Housing



- | | |
|---|--|
| A Housing cover – top piece | D Unit switch |
| B Housing | E Retaining screws for bottom piece |
| C Retaining screws for top piece | F Housing cover – bottom piece |

 IR module

Unit switch

The module is equipped with an on/off switch on the left side.



Position I:
Module is switched on.
The module is ready for operation in standby mode.

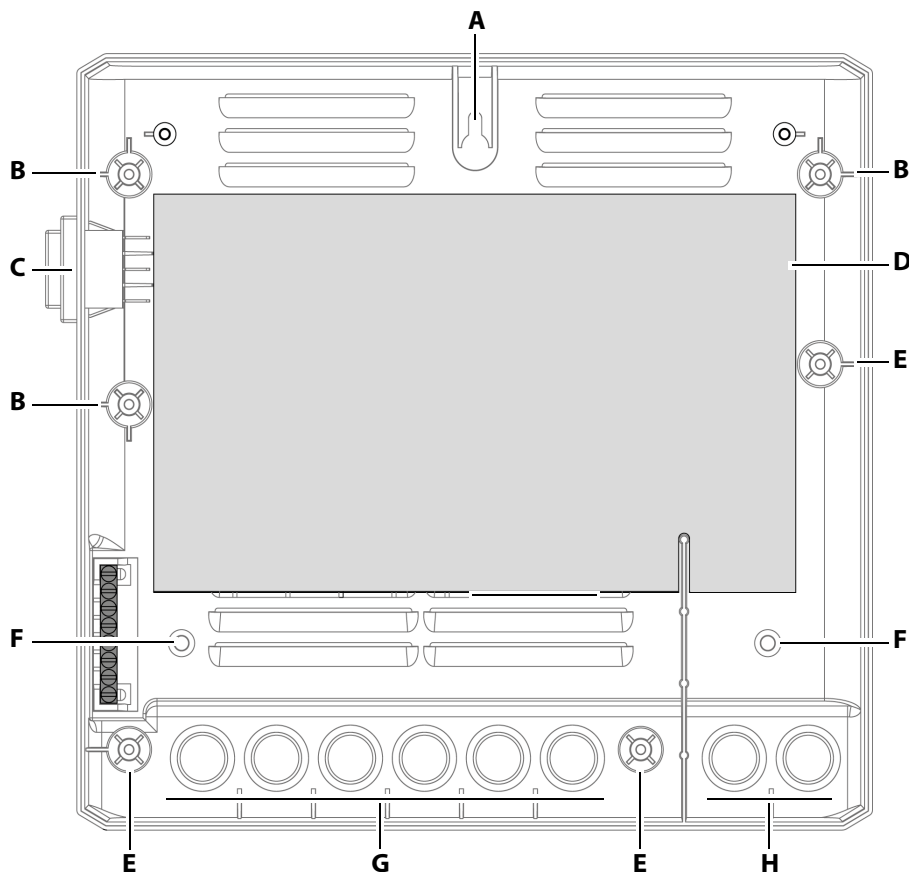


Position 0:
Module is completely switched off.
Parts of the circuit board are still energized.



Position II:
Cabin light is switched on, module is switched off.
Position for maintenance and cleaning.


3.3 Internal view of module



- | | |
|---|--|
| A Top mounting hole | E Housing cover fixtures – bottom piece |
| B Housing cover fixtures – top piece | F Lower mounting holes |
| C Unit switch | G Feed-throughs for cables with mains voltage |
| D Circuit board | H Feed-throughs for cables with low voltage |

 Housing base

The cables for mains supply and low voltage can be routed through the existing holes on the back side or base of the housing.

For more information on the circuit board, see
5.2 Circuit board assignment,  32

3.4 Technical data

Ambient temperature	-10°C to +40°C
Storage temperature	-20°C to +60°C
Housing	Plastic
Dimensions (H x W x D)	240 x 230 x 70 mm
Weight	Approx. 1.5 kg
Compatible control units	EmoTec, EmoStyle, EmoStyle i, EmoTouch 3 (not included in scope of delivery)
Outputs/inputs	3 x RJ10 jack for sensor connection 2 x RJ12 jack for control unit and add-on modules Input for power supply plug
Power supply	230 V 1N AC 50 Hz
Switching output	Max. 3.5 kW
Circuits	3 separate circuits with total output of 3.5 kW, can be freely defined - 2 of which individually dimmable - 1 of which non-dimmable switching output
Temperature control	Based on ambient temperature: 30-70°C
	Based on personal preference using dimmable channels (zones)
Control characteristics	Digital output control on circuits 1 and 2
Sensor system	Digital sensor as accessory (bench sensor)
Heating period limiter	Up to 6 hrs/12 hrs/infinite

4 Installation

This chapter describes how to install the SBM-IR Modul.

All data and power supply lines must be routed prior to installation.

NOTICE

Equipment damage

Corrosive environments or environments with high levels of saline in the air could damage lines and circuit boards.

- ▶ Use the power unit only in non-corrosive environments.
- ▶ Salt aerosols should only be used inside the cabin.

4.1 Power supply and data lines

All electrical installations and all connecting lines routed inside the cabin must be suitable for an ambient temperature of at least 70°C in infrared-only cabins. If you use the add-on module for a sauna cabin, the lines must be suitable for temperatures up to 140°C.

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

NOTICE



Electronics malfunctions

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

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

Line routing

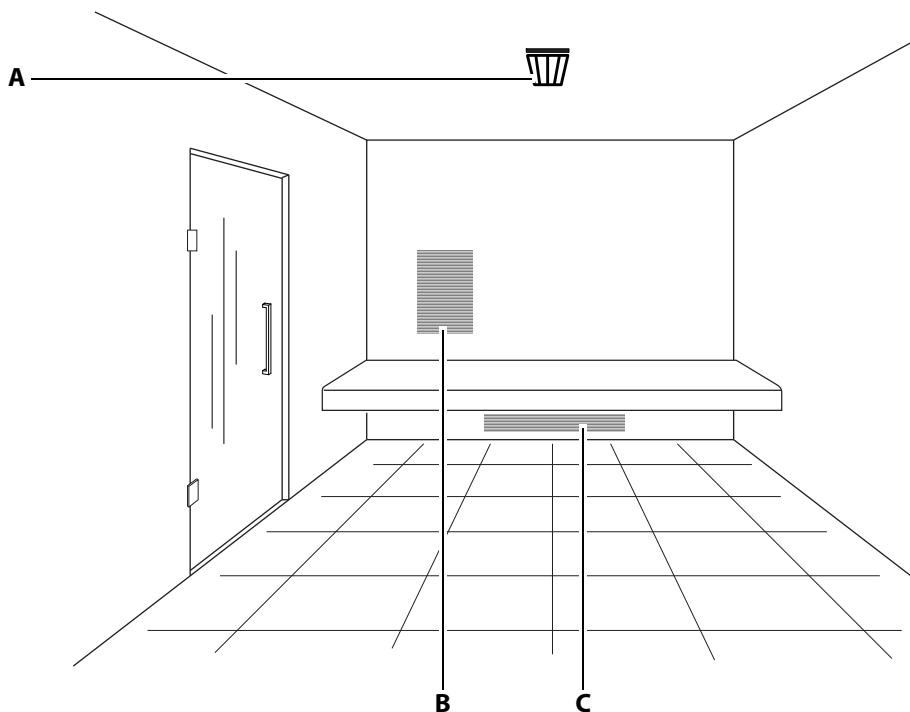
The lines from the individual components to the module may not exceed 5.5 m in length.

If you connect more than one emitter per heating circuit, you must terminate the corresponding lines in the on-site plug-in modules outside the module. See  Example – plug-in modules (optional),  42

The control line must only be routed between the insulation and the outer wall of the cabin. Cabin insulation must be installed in such a way that the temperature in the area in which cables are routed cannot exceed 75°C.

4.2 Installation work inside the cabin

At minimum, the cabin lighting and a temperature sensor must be installed inside the cabin. Additional connections are possible, depending on the amenities, e.g. coloured lights and audio systems as optional add-on modules.



A Temperature sensor

B IR foil (installed inside the wall)

C IR emitter

 Example – cabin

The position and number of IR emitters and foils (IR emitters) can vary depending on the design of the cabin.

The temperature sensor must be installed where expected temperatures are the highest. In an infrared cabin, this is typically at the centre of the cabin ceiling.

NOTICE

Equipment damage due to improper installation

Additional modules with a safety temperature limiter can be mounted in a cabin.

- ▶ Connect the safety temperature limiter only to the relevant module.
- ▶ Never connect more than one safety temperature limiter to a module.
- ▶ Always connect the safety temperature limiter as an isolated contact.

4.2.1 Installing an infrared emitter

WARNING

Fire hazard from overheating

Infrared emitters and heating foils without overheat protection can lead to overheating of the cabin and fire. Flammable parts must not exceed a temperature of 140°C when the unit is operated as intended or in the event of a malfunction.


- ▶ Install only infrared emitters or heating foils that are designed and installed in such a way that they do not pose a fire hazard when the unit is operated as intended. Alternately, infrared emitters or heating foils with overheat protection as per EN 60335-2-53 may be used.
- ▶ Install a safety temperature limiter if needed.
- ▶ Observe the manufacturer's safety and installation instructions for infrared emitters and heating foils.
- ▶ Observe the cabin manufacturer's safety and installation instructions.

You can connect foils and/or emitters. Observe the manufacturer's separate installation instructions for IR emitters.



You can connect multiple IR emitters to terminals IR-1, IR-2 and IR-3. Ensure that the cross-section of the lines is sufficient.

The total output may not exceed 3.5 kW.

Connection	Control	Max. load	Total output
IR-1	Dimmable	1.5 kW	Max. 3.5 kW
IR-2	Dimmable	1.5 kW	
IR-3	Switchable	0.5 kW	

If terminals IR-1 and IR-2 together have a load of less than 2.3 kW, IR-3 can accept a maximum switching load of up to 1.2 kW. In this case, the fuse at F2 (T4A H 250V) must be replaced by a T6.3 A H 250 V fuse. See 5.2 Circuit board assignment,  32.

Use a plug-in module if you want to connect multiple IR emitters to one IR terminal.

See  Example – plug-in modules (optional),  42.

4.3 SBM-IR Modul

The SBM-IR Modul may be mounted only outside of the cabin. Observe the following guidelines.

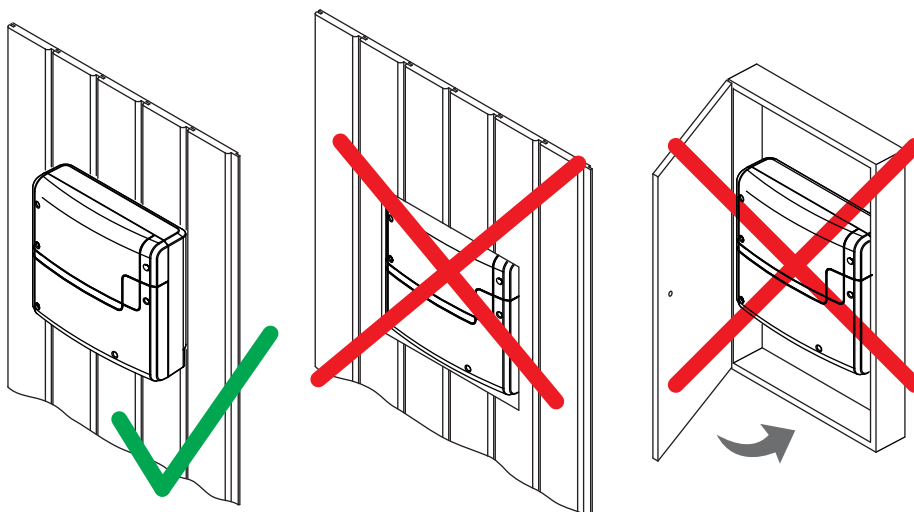
4.3.1 Guidelines

DANGER

Risk to life and limb and risk of fire

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

- Do not install modules in enclosed cabinets or wood panelling.



☒ Proper and improper module installation

Recommended installation sites are:

- Outer wall of the cabin
- Utility room

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

All lines should be routed before installing the module. Connections can be established later. The cables must be routed and connected in such a way that they are not openly accessible.

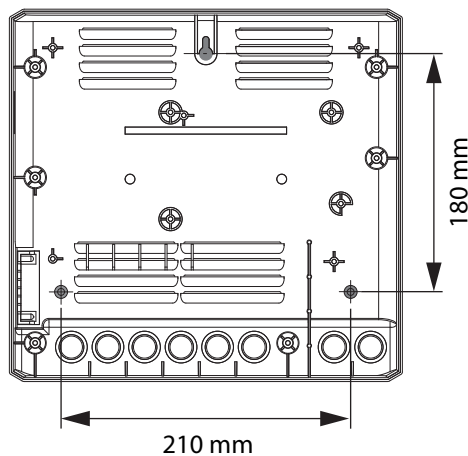
NOTICE


Electronics malfunctions

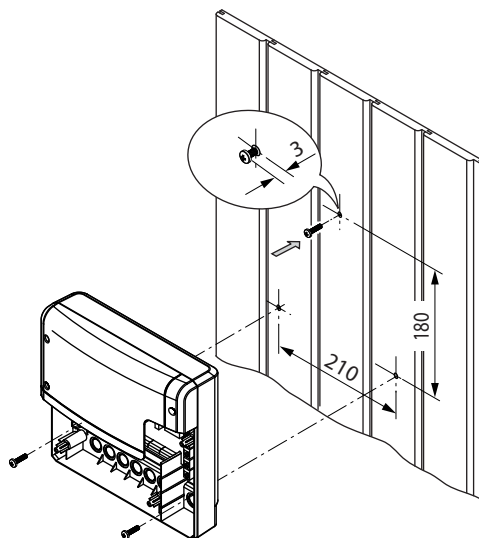
Routing data and power supply lines together can lead to electronics malfunctions because, e.g. because the sensor will not be detected.


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

Measurements for installation

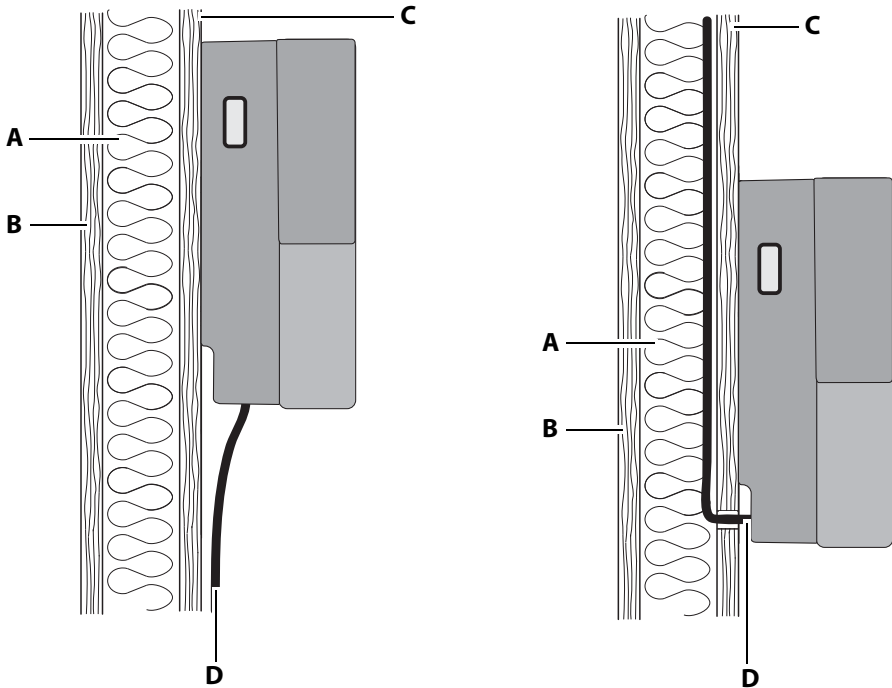


 Back of the module



 Installation diagram

Line routing




A Insulation

B Inner wall of the cabin

C Outer wall of the cabin

D Connecting lines

 Guide for data and control line(s)

The power supply, S bus and sensor lines can be routed to the module as follows:

- The lines can be routed along the outer wall of the cabin. They are then passed into the housing from below. If they are not routed through a cable conduit or a duct, they must be secured so they cannot be pulled out.
- The lines can be routed between the insulation and the outer wall of the cabin. They are then passed into the housing from the rear.

In both cases, the cabin insulation must be installed in such a way that the temperature in the area in which cables are routed cannot exceed 75°C.

4.3.2 Installing the module

Necessary steps:

- ▶ Preparing for installation, [p. 26](#)
- ▶ Removing the housing cover, [p. 26](#)
- ▶ Installing the module, [p. 27](#)

Tools + hardware

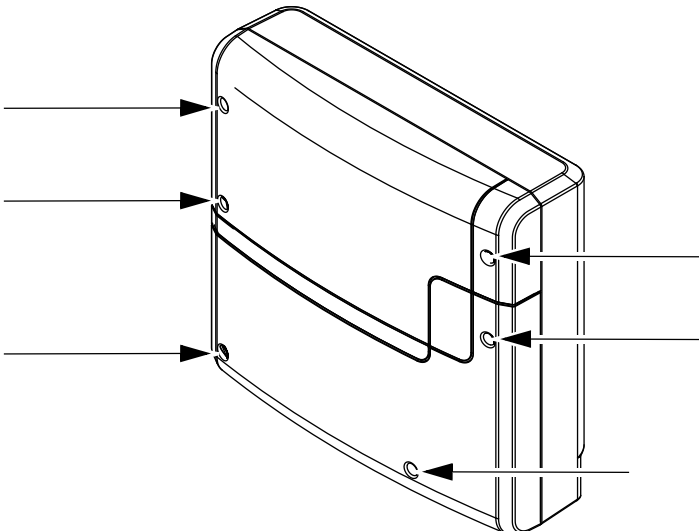
- Drill
- Wood screws 4 x 25 mm
- Mounting on a fixed wall: Screws 4 x 25 mm and corresponding anchors

▶ Preparing for installation

- 1 Identify the installation site.
- 2 Route the lines.

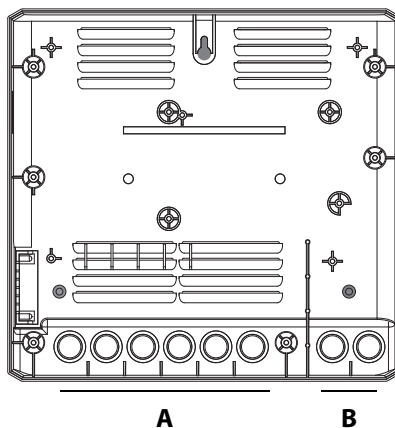
▶ Removing the housing cover

- 1 Unscrew the 6 screws for both parts of the housing.



- 2 Remove both halves of the cover.
 - ① If you have already routed all data lines, you can set the DIP switches on the circuit board after you install the module.

3 Open the module conduits for the lines.



A Lines with mains voltage, e.g. mains supply line, heat

B Lines with low voltage, e.g. sensor line, S bus (sauna bus)

ⓘ Either from below or from the rear.

4 Insert supplied rubber grommets into the openings of the lower part of the housing.

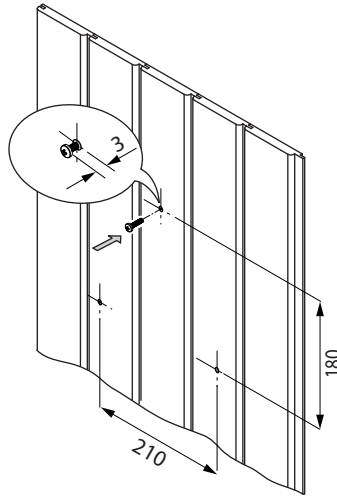
► Installing the module

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

Horizontal distance between drill holes: 210 mm

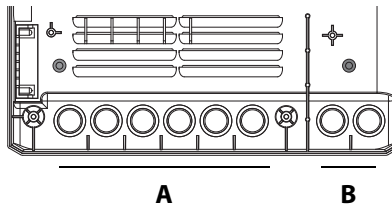
Vertical distance between drill holes: 180 mm

- 2 Insert the anchors as needed and screw in the top screw.



- ① Allow the screw to protrude approx. 3 mm so you can hook in the module.

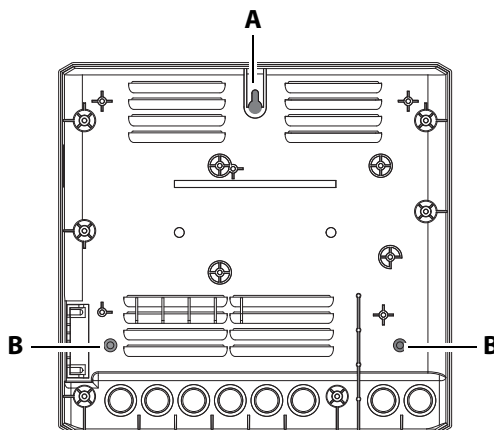
- 3 Route the connection cables through the openings.



- A** Lines with mains voltage, e.g. mains supply line, heat **B** Lines with low voltage, e.g. sensor line, S bus (sauna bus)

- ① Either from below or from the rear.

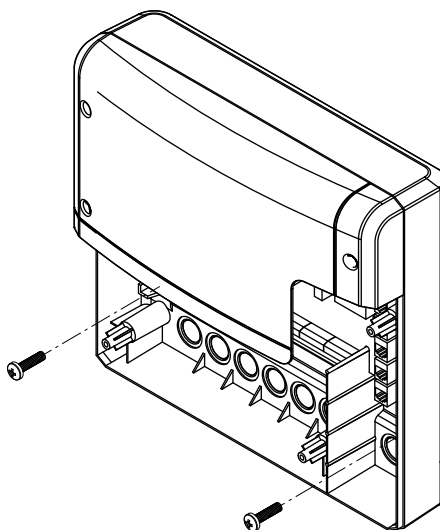
- 4 Hook the module into the upper screw using the upper mounting hole.



A Top mounting hole


B Lower mounting holes

- 5 Securely tighten the module using the two lower mounting holes.



- ① Once you have completed all installation work you can connect the consumers and plug in the lines.
- ① 5.4 Connecting data lines, [p 39](#)
5.5 Connecting and configuring consumers, [p 41](#)
5.6 Setting the switch, [p 43](#)

5 Installation

This chapter describes how to connect the module's circuit board lines. For information on configuration of the control unit's panel, see chapter 7 Commissioning,  54.

You can connect both infrared radiators and infrared foils. Both versions are referred to as IR emitters in the following section. However, in instances where different settings must be made, they will be referred to specifically by name.

Recommended installation sequence

Before commencing installation, ensure that the relay box and the control unit are mounted. Furthermore, all cabin work must be complete: IR emitter, temperature sensor, lighting, etc.

Complete installation in the following sequence:

- Plug the S bus and sensor lines into the module.
- Guide the S bus line from the module to the relay box and plug it in.
- Connect the consumer lines to the module.
- Set the DIP switch for the unit address.
- Set the jumper for the IR emitter to IR-1 and IR-2.
- Set the DIP switch for the channels.
- Establish connection to the power supply.
- Switch on the module, relay box, and control unit.
- Configure the control unit's channels.
- Configure additional settings at the control unit, e.g. target temperature for emitters.

5.1 Sample installation

SBM-IR Moduls can be connected to one sauna relay box and one infrared relay box:

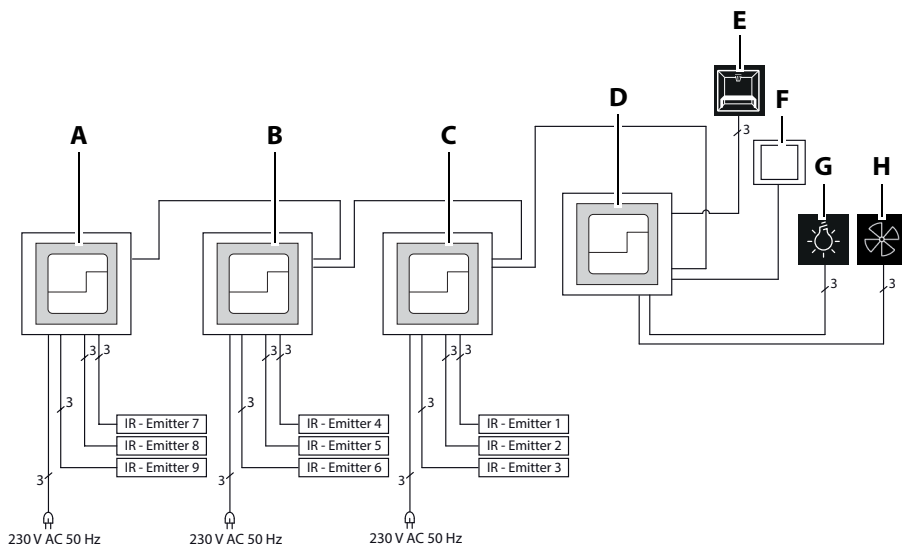
- Sauna relay box: max. 3 infrared modules
- Infrared relay box: max. 2 infrared modules

All connected modules are controlled by the control unit.

You must use a plug-in module if you connect multiple IR emitters to a terminal.

Sauna cabin with IR emitters

A maximum of 3 IR modules may be connected in a sauna cabin. The control unit, lighting and temperature sensors (room sensors) are connected to the sauna relay box. Additional sensor lines can be connected to the IR modules, e.g. a bench sensor.



- | | | |
|-------------------------|-----------------------------|-------------------------|
| A SBM-IR Modul 1 | D Sauna relay box | G Cabin lighting |
| B SBM-IR Modul 2 | E Temperature sensor | H Fan |
| C SBM-IR Modul 3 | F Control unit | |

 Sauna relay box and IR module

For control purposes, the relay box and module are identified by unit addresses.

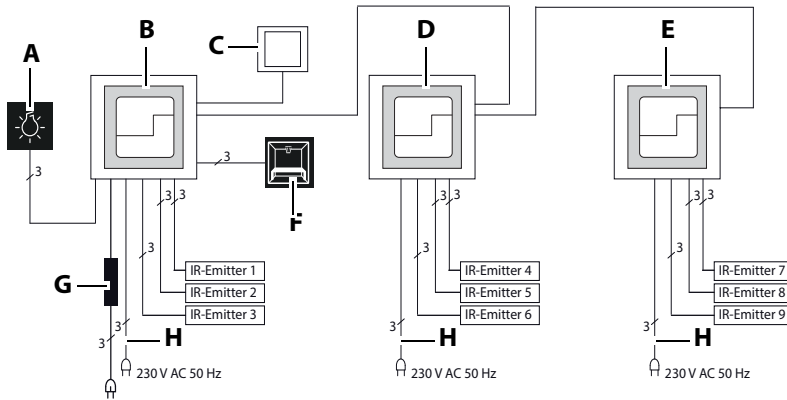
Bus communication can be adversely affected if the cabin is equipped with too many add-on modules. If this is the case, the control panel will display the following error message: No bus communication.

To rectify the problem, ensure the modules have their own power supplies.

IR cabin with add-ons

A maximum of 2 modules may be connected as add-ons to the SBM-LSG-IR in an IR-only cabin. This means that the 3 available addresses for infrared installation are all in use.

The control unit, lighting and temperature sensors (room sensors) are connected to the relay box. Additional sensor lines can be connected to the modules, e.g. a bench sensor.

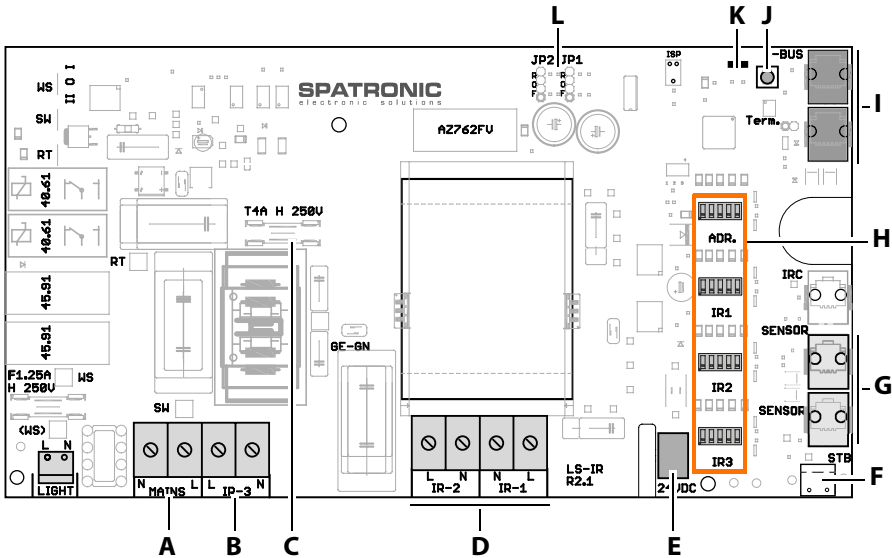


- | | | |
|---------------------------------|-----------------------------|-----------------------|
| A Cabin lighting | D SBM-IR Modul 1 | G Power supply |
| B SBM-LSG-IR (relay box) | E SBM-IR Modul 2 | H Power supply |
| C Control unit | F Temperature sensor | |

 IR relay box with connected IR modules

5.2 Circuit board assignment

The S bus and sensor bus plugs are connected to the IR module circuit board. The IR emitters must be connected to the terminals.



- | | |
|---|---|
| A Main power supply connection | G Sensor bus (optional sensors) |
| B Connection for switched IR emitters | H DIP switch – unit address, channels |
| C Fuse F2 (T4A H 250 V) | I S bus (sauna bus) |
| D Connections for dimmable IR emitters | J Programming button for cabin address |
| E Power supply connection | K Status LED, green and red |
| F Safety temperature limiter/jumper | L Jumper – setting for foil/emitter |
- IR module circuit board

5.2.1 Terminals

Multiple IR emitters can be connected to terminals IR-1, IR-2 and IR-3. The IR emitter lines must all have the same cross-section.

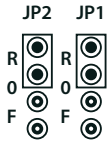
Use a plug-in module if you connect multiple emitters to one terminal.

See 5.5 Connecting and configuring consumers, 41

5.2.2 Emitter type – jumper JP1 and JP2

JP1 and JP2 are used to configure the emitter type for connections IR-1 and IR-2.

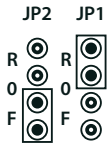
- R: IR emitter (R).
- F: IR foil (F).



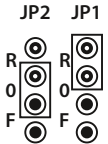
Emitters (R) are connected to IR-1 and IR-2.



Foils (F) are connected to IR-1 and IR-2.



Emitters (R) are connected to IR-1; foils (F) are connected to IR-2.



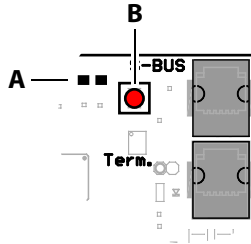
Emitters (R) are connected to IR-1.
IR-2 is switched off.

Connection IR-3 is configured for emitters at the factory.

Connections IR-1 and IR-2 are switched off if no jumper is set. IR-3 remains switched on.


5.2.3 Cabin address – programming button


The SBM-IR Modul is programmed with cabin address 1 as delivered. If multiple cabins are installed, the cabin address must be programmed accordingly in the respective relay boxes.



A LED

B Programming button

 Programming button – IR relay box

For more information about installing multiple cabins, see chapter 6 Installing multiple cabins,  47.

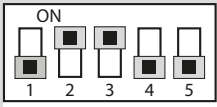
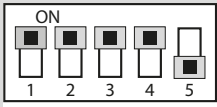
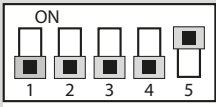
5.2.4 Unit address – ADR DIP switch

Each connected IR module is assigned a unique unit address. Each unit address must only be assigned once so that the unit can be uniquely identified.

Unit control loops are controlled simultaneously.

- 3 IR modules can be assigned an address in the sauna cabin.
- In the IR-only cabin, one IR relay box and 2 IR modules can be assigned an address.

IR modules are typically programmed with unit address 1 as delivered. Addresses 2 and 3 must be set for additional modules.

Address 1 (unit 1)	Address 2 (unit 2)	Address 3 (unit 3)
 <p>ADR</p>	 <p>ADR</p>	 <p>ADR</p>
DIP switch 2-3 = ON	DIP switch 1-4 = ON	DIP switch 5 = ON

5.2.5 Channels – DIP switches IR1 to IR3

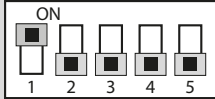
IR emitters can be grouped into channel groups and controlled simultaneously. A group can comprise various IR emitters. Channels A-E are available for these groups.

The assignment of the IR connections to a channel can be set globally, e.g.:

Unit/module	Channel IR1	Channel IR2	Channel IR3
Module 1	A	A	C
Module 2	B	A	C
Module 3	D	D	E

Standard channel group configuration

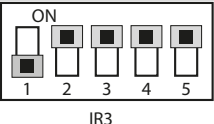
If emitters are connected to output IR-3 and emitters or foils are connected to outputs IR-1 and IR-2, the DIP switches for the channel groups are set as follows.

Example	Channel IR1 to IR3	1	2	3	4	5
 Example – channel A	A	ON				
	B		ON			
	C			ON		
	D				ON	
	E					ON

Do NOT combine dimmable and switchable IR emitters in one channel group.

Foils at IR-3

If foils are connected to output IR-3, the channels at IR3 must be set as follows:

Foils at IR-3	Channel	1	2	3	4	5
 <p>Example – channel A</p>	A		ON	ON	ON	ON
	B	ON		ON	ON	ON
	C	ON	ON		ON	ON
	D	ON	ON	ON		ON
	E	ON	ON	ON	ON	

IR emitter at IR-3 starts when cabin is switched on

If you would like the IR emitter assigned to the IR-3 output to switch on when the cabin is switched on, the DIP switches in IR3 must all be set to OFF.

IR-3 starts with cabin

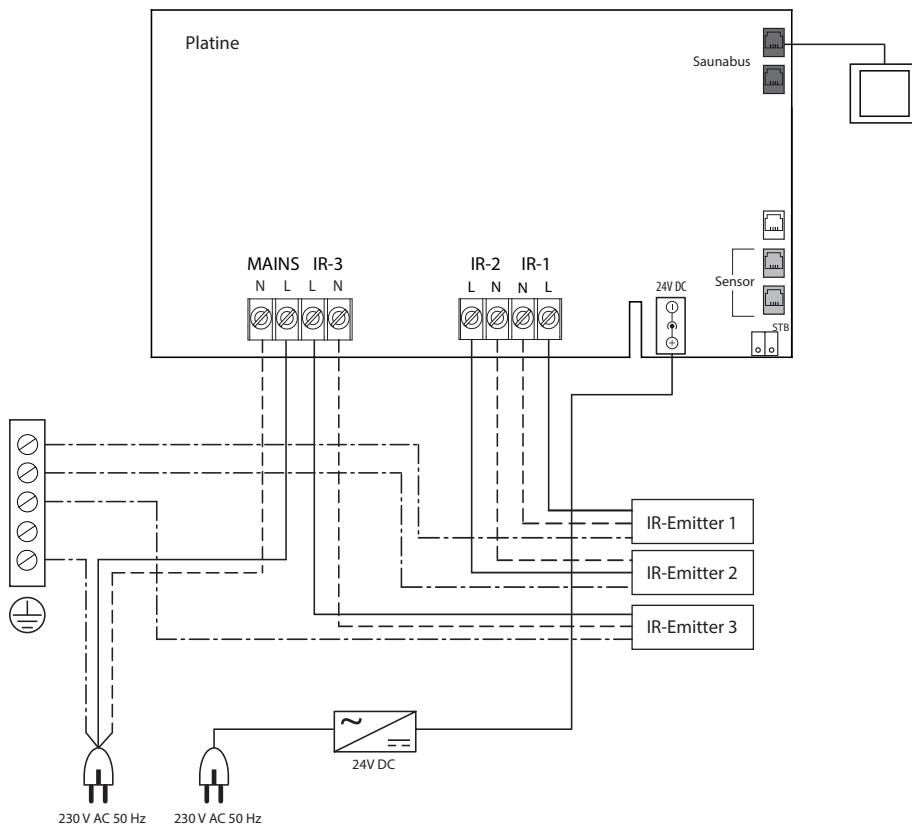


5.3 Connection diagram

The IR module is connected with a mains lead to the 230-V supply and fused separately with 16 A. At minimum, a 16-A cut-out with c characteristic must be used for fuse protection.

Bus communication can be adversely affected if the cabin is equipped with too many add-on modules. If this is the case, the control panel will display the following error message: No bus communication.

In this case, the IR module must be connected to its own power supply.



 Connection example

To prevent overheating, install only infrared emitters or heating foils that are designed and installed in such a way that they do not pose a fire hazard when the unit is operated as intended. Alternately, infrared emitters or heating foils with overheat protection as per EN 60335-2-53 may be used.

5.4 Connecting data lines


NOTICE

Equipment damage due to improper installation

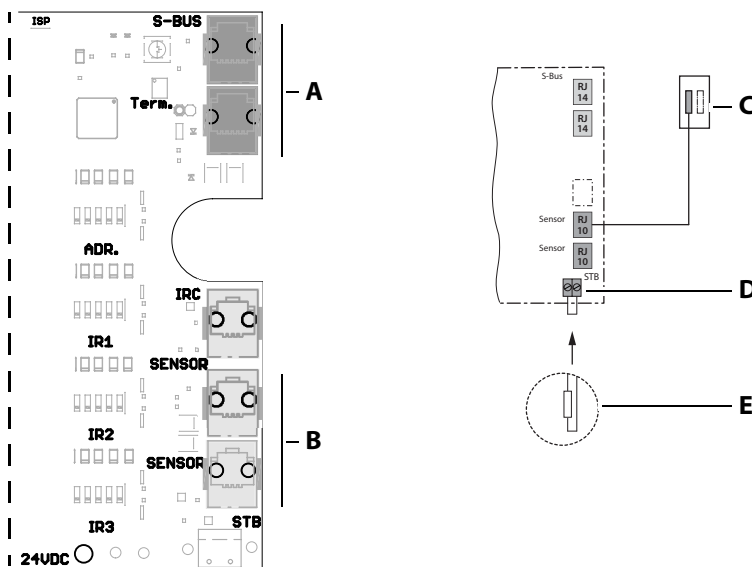
Additional modules with a safety temperature limiter can be mounted in a cabin.

- ▶ Connect the safety temperature limiter only to the relevant module.
- ▶ Never connect more than one safety temperature limiter to a module.
- ▶ Always connect the safety temperature limiter as an isolated contact.

▶ Connecting data lines

- 1 DANGER! Ensure that the IR module is current-free.
Open the housing as needed.
 - ① ▶ Removing the housing cover,  26

- 2 Route the line through the openings at the base or on the back of the housing.



- | | |
|--|---|
| <p>A RJ14 plug from relay box and from module 2</p> <p>B RJ10 plug for sensor line</p> | <p>C Temperature sensor</p> <p>D Safety temperature limiter</p> <p>E Jumper at safety temperature limiter terminal</p> |
|--|---|
- 3 Plug the S bus line RJ10/RJ14 from the relax box into the free jack RJ14 (S-BUS).
 - 4 Plug the S bus line from IR module 2 into the free jack RJ14 (S-BUS) as needed.
 - 5 Plug additional sensor lines into the sensor jacks as needed.
 - 6 Check if there is a jumper at the safety temperature limiter terminals.
 - ① By default, the safety temperature limiter terminal is jumpered at the module circuit board. If you want to connect an additional temperature sensor with safety temperature limiter terminal to an emitter in a sauna cabin with IR modules, you must remove the jumper at the safety temperature limiter terminal on the respective IR module.
 - ① If the safety temperature limiter is triggered, all sauna heaters and all IR emitters in the corresponding cabin are switched off.

5.5 Connecting and configuring consumers

DANGER



Risk of electric shock

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

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

Recommended sequence:

- Connect IR emitter
- Set jumper

The lines from the individual components to the module may not exceed 5.5 m in length. The lines must be connected as shown in the circuit diagram.

You can connect multiple IR emitters to each of the terminals IR-1, IR-2 and IR-3. The IR emitter lines must all have the same cross-section.

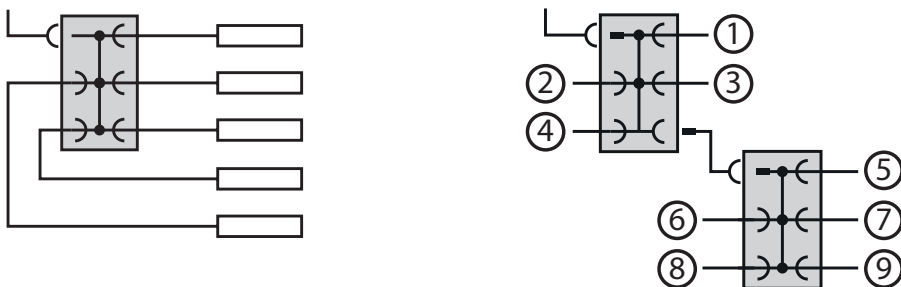
The total output of IR-1, IR-2 and IR-3 together may not exceed 3.5 kW.

Recommendation:

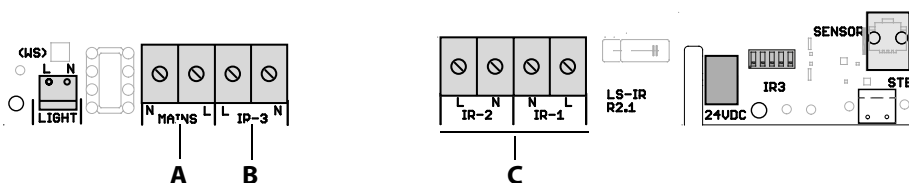
Connection	Control	Total output
IR-1	Dimmable	Max. 1.5 kW
IR-2	Dimmable	Max. 1.5 kW
IR-3	Relay output	Max. 0.5 kW

If terminals IR-1 and IR-2 together have a load of less than 2.3 kW, IR-3 can accept a maximum switching load of up to 1.2 kW. In this case, the fuse at F2 (T4A H 250V) must be replaced by a T6.3 A H 250 V fuse.

If you connect more than one emitter per heating circuit, you must connect all lines to a plug-in module outside the module.



Example – plug-in modules (optional)



A Main power supply connection

B Connection IR emitter IR-3

C Connection IR emitters IR-1 and IR-2

► Connecting consumers

- 1 **DANGER!** Ensure that the IR module is current-free.
Open the housing as needed.
 ① ► Removing the housing cover, 26
- 2 Route the lines through the openings at the base or on the back of the housing.
- 3 Connect IR emitters to IR-1, IR-2 and IR-3 (B).
Use a plug-in module if you connect multiple IR emitters to one terminal.
See Example – plug-in modules (optional), 42
 ① The IR emitter lines must all have the same cross-section.
 ① Observe the total output::
 IR-1 max. 1.5 kW, IR-2 max. 1.5 kW, IR-3 max. 0.5 kW.
- 4 Connect the main power supply to the mains (A) terminal.

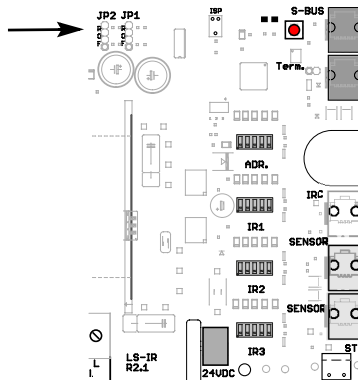
5.6 Setting the switch

Once the IR emitters are installed and connected, the jumpers for the type of emitters and channel groups must be set. As a rule, the unit address for the module must be changed.

- ▶ Setting the jumper for the type of IR emitters, [p 43](#)
- ▶ Setting the unit address, [p 44](#)
- ▶ Setting channel groups for IR emitters, [p 45](#)

▶ Setting the jumper for the type of IR emitters

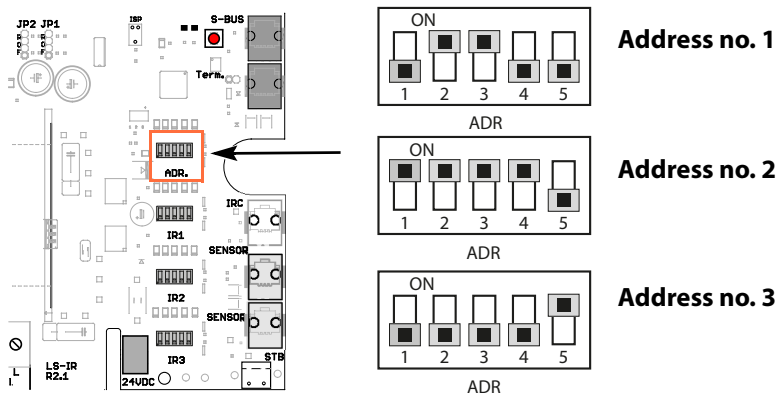
- 1 **DANGER!** Ensure that the IR module is current-free.
Open the housing as needed.
 - ❶ ▶ Removing the housing cover, [p 26](#)



- 2 Set jumpers JP1 and JP2 to foil (F) or emitter (R) depending on the connected emitters.
See 5.2.2 Emitter type – jumper JP1 and JP2, [p 33](#)

► Setting the unit address

- 1 Set the unit address as needed.

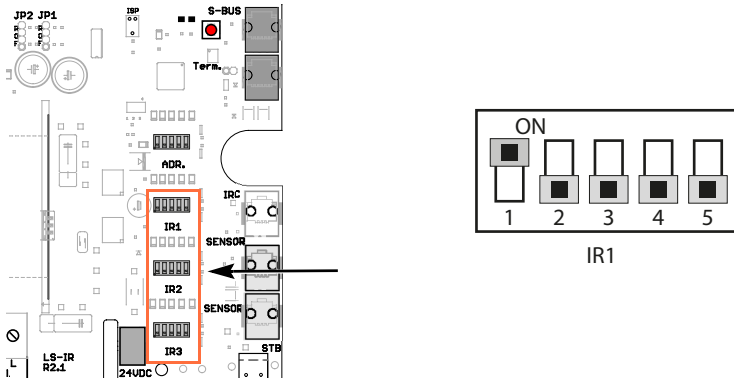


- ⓘ The module is set to address no. 1 by default. This setting must be changed depending on the cabin type:

- 2 Set the DIP switch to the required address.

► Setting channel groups for IR emitters

- 1 Assign the IR connection with DIP switch to a channel group.
 - ① See Installation example, 56.



See 5.2.5 Channels – DIP switches IR1 to IR3, 36

- ① Only 1 DIP switch may be set to ON at one time.

Examples:

Switch 1 = ON: Channel group A

Switch 2 = ON: Channel group B

Switch 3 = ON: Channel group C

You can assign the IR outputs to the same channel group, e.g. IR-1 and IR-2 to channel group A, IR-3 to channel group B.

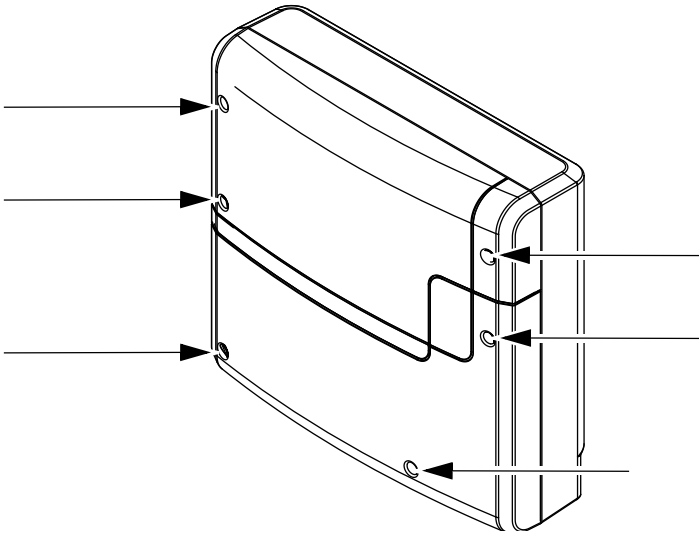
5.7 Closing the module housing

The following work must be completed before you close the housing:

- 5.4 Connecting data lines, [p 39](#)
- 5.5 Connecting and configuring consumers, [p 41](#)
- 5.6 Setting the switch, [p 43](#)

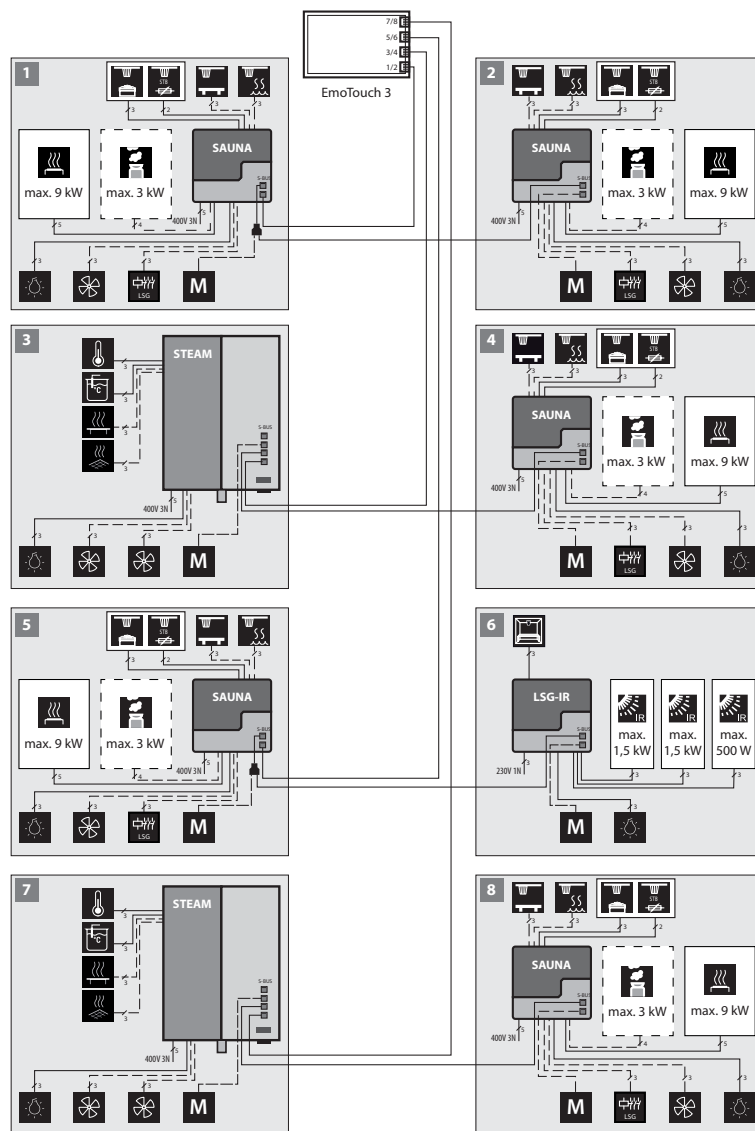
► Replacing the housing cover

- 1 Put the upper and lower cover halves in place.
- 2 Insert the 6 screws and tighten them.



6 Installing multiple cabins

The EmoTouch 3 control unit can be used to set and control multiple cabins. Any combination of up to 8 sauna, infrared and/or steam cabins can be connected, e.g.:



Sauna heater

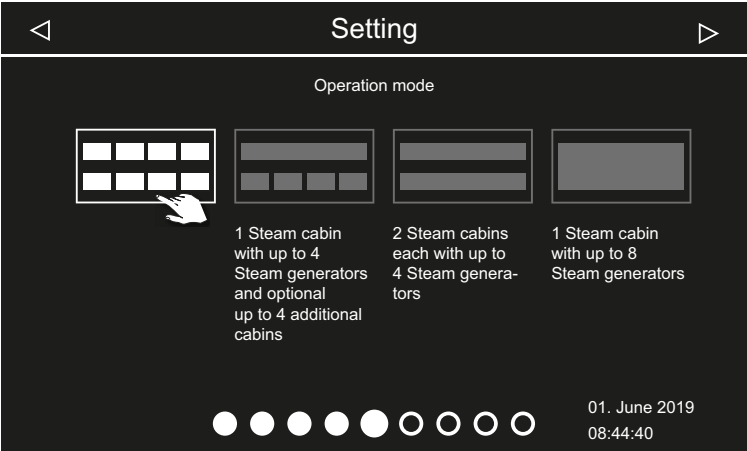



Vaporiser tank




Modules

6.1 **Configuring 1-8 cabins**




 Operating mode – standard

 In this operating mode, one steam generator or one sauna heater is operated per cabin.

The lines are connected as follows:

Cabin no.	Relay box connection – control unit	Cabin address
1	The relay box is connected to the jack #1 of the control panel using the sauna bus cable.	
2	The relay box is connected to a free sauna bus jack in the relay box of cabin #1.	Relay box is set to address 2.
3	The relay box is connected to jack #2 of the control panel using the sauna bus cable.	Relay box is set to address 3.
4	The relay box is connected to a free sauna bus jack in the relay box of cabin #3.	Relay box is set to address 4.
5	The relay box is connected to jack #3 of the control panel using the sauna bus cable.	Relay box is set to address 5.

 Configuration 1 – connection diagram

Cabin no.	Relay box connection – control unit	Cabin address
6	The relay box is connected to a free sauna bus jack in the relay box of cabin #5.	Relay box is set to address 6.
7	The relay box is connected to jack #4 of the control panel using the sauna bus cable.	Relay box is set to address 7.
8	The relay box is connected to a free sauna bus jack in the relay box of cabin #7.	Relay box is set to address 8.

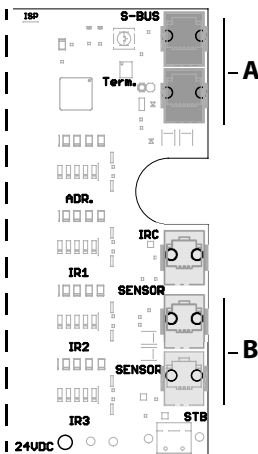
□ Configuration 1 – connection diagram

See also the following figures:

- □ Jacks – SBM IR-Modul, □ 49
- □ Jacks – EmoTouch 3 circuit board, □ 50

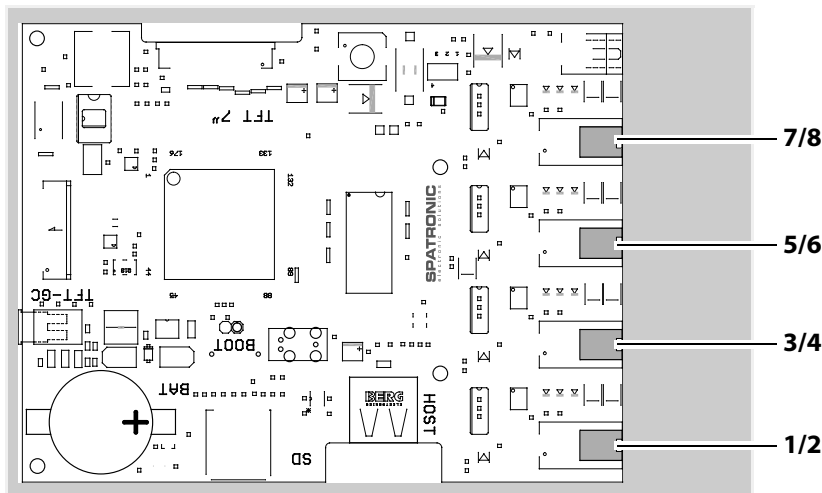
6.2 Control lines and cabin addresses

Control lines must only be plugged into the corresponding jacks on the circuit boards of the control units and relay boxes.



A RJ14 plug from control unit **B** RJ10 plug for sensor line

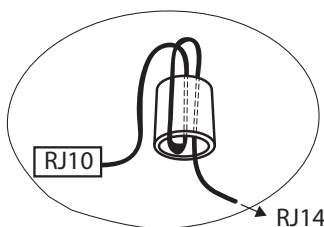
□ Jacks – SBM-IR Modul



 Jacks – EmoTouch 3 circuit board

Ferrite ring per jack

One jack per connection must be fitted with 1 ferrite ring.



The ferrite ring for jack #1 is included in the scope of delivery for each control unit and add-on module.

Once the cabins with their custom cabin address (IDs) are connected, the icon of the connected cabin appears in the footer.





The number corresponds to the cabin currently selected (not the number of connected cabins).

6.3 Programming the cabin address

The relay box is programmed with cabin address 1 as delivered. To ensure that EmoTouch 3 detects multiple cabins, the cabin address must be changed to a different cabin address starting with cabin 2.





To program the cabin addresses, you must open the housings of the relay boxes and the EmoTouch 3 control unit housing and plug in the S bus lines. Ensure that you observe the connection sequence.

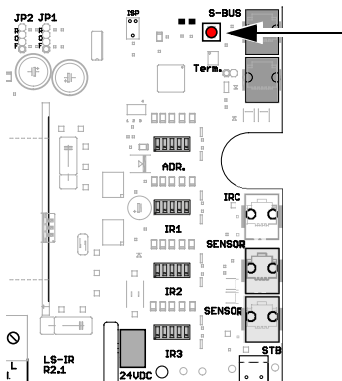
The connection sequence must start with jack #1 on the EmoTouch 3 circuit board. See  Jacks – EmoTouch 3 circuit board,  50

Cabins with incorrect connections will not be detected or displayed on the control panel.

In installations with EmoTec and EmoStyle control units, relay boxes are always assigned cabin address 1.

► Programming the address


- 1 Open the relay box's housing as needed.
 ► Removing the housing cover,  26
- 2 Open the control unit.
- 3 Connect the S bus line from the relay box to the EmoTouch 3 control unit.
 ► Connecting data lines,  39
- 4 **NOTICE** You must follow the correct connection sequence. If the cabin address does not match the connection, the cabin is not detected. Press and hold the programming button on the circuit board of the relay box for approx. 4 seconds until the red LED starts flashing.



- ① Programming mode is active. The green LED light goes off.
- 5 Quickly and firmly press the programming button once for each new address. As delivered (address 1), this means:
- Press once for cabin 2. The LED flashes twice.
 - Press twice for cabin 3. The LED flashes three times.
 - Press three times for cabin 4. The LED flashes four times.
 - Press four times for cabin 5. The LED flashes five times.
 - Press five times for cabin 6. The LED flashes six times.
 - Press six times for cabin 7. The LED flashes seven times.
 - Press seven times for cabin 8. The LED flashes eight times.
- ① Note that each time you press the programming button, the cabin address increases by one. Once address 8 is reached, the count start over with address 1.
- ① The green LED flashes 1 to 8 times, depending on the new cabin address.
- ☒ If the button is not pressed for approx. 10 seconds, programming mode ends. The red LED goes off and the green LED starts flashing. The new address is saved.
- ① If power is lost, the most recent cabin address setting is automatically saved.
- 6 Check the control panel to verify if the cabin is displayed on the screen.



 Example – display for cabin 3

- 7** Repeat programming if the cabin is not displayed.
 - ❶ Please note that the address increases by one each time you press the programming button, e.g. from 4 to 5.
- 8** Close the housing of the relay box and control unit.
 - ❶ ► Replacing the housing cover,  46

7 Commissioning

The term IR emitter refers to infrared emitters and heating foils in the following documentation.

In order to commission the cabin with the installed IR emitters, the cabin must be switched on at the control unit. If the display is blank, the relay box might be switched off.

An on/off switch is located on the left side of the relay box and the module. Both switches must be switched on to configure the control system.



Position I:
Relay box is switched on.
The relay box is ready for operation in standby mode.



Position 0:
Relay box is completely switched off.
Parts of the circuit board are still energized.



Position II:
Cabin light is switched on, relay box is switched off.
Position for maintenance and cleaning.

Also check if the IR module switch is set to position I.

7.1 Configuring the IR control system

The control system cannot be configured until the IR emitters are installed and connected. The following describes only how to configure the IR emitters. Complete configuration and operation are described in the operating instructions for the control units.

You should be familiar with the basic operating steps, e.g. navigating the menus and sub-menus and entering and saving settings.

Icons

The following icons are used to assign the IR emitters.



Front middle



Front right



Front left



Back middle



Back left



Back right



Leg



Ceiling



Floor



Side right



Side left



IR group 1



IR group 2



IR group 3



IR group 4

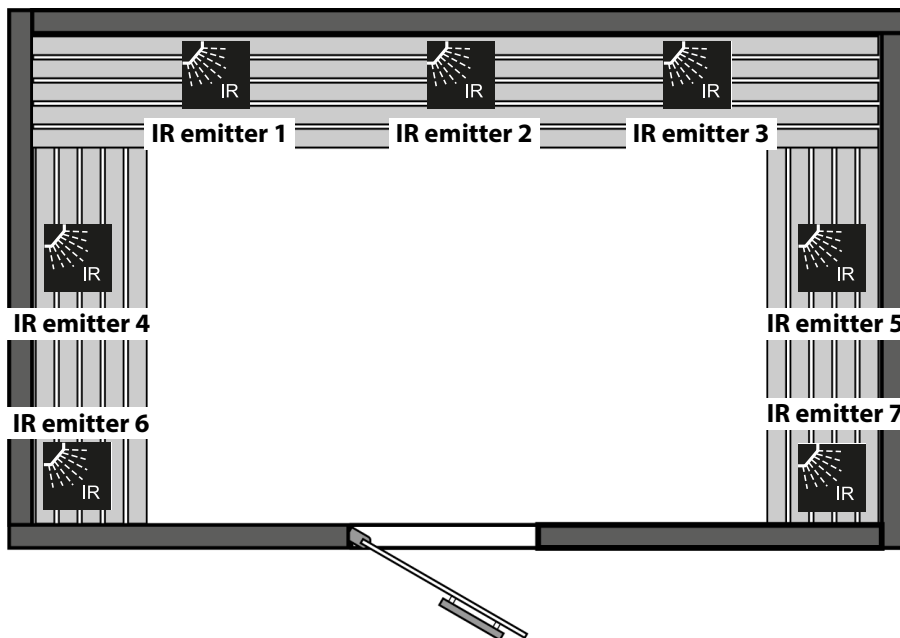


IR group 5

Each icon may be assigned only once.

Installation example

To make configuration easy to understand, the following example shows which switches must be set.



 Example – cabin

The IR emitters in this example have different tasks and should be controlled together in so-called channel groups.

- IR emitters 1, 2 and 3 are emitters for the back. Together their output is 1.5 kW.
- IR emitters 4 and 5 are foils for the heating the back with an output of 0.3 kW each. They should heat to an intensity of 66%.
- IR emitters 6 and 7 are corner emitters. Together their output is 0.5 kW. They should switch off once the cabin temperature reaches 65°C.

Emitter	Connection	Jumper	Channel
1, 2, 3	IR-1	Emitter (R)	A
4, 5	IR-2	Foil (F)	B
6, 7	IR-3		C

7.2 EmoTouch 3

The graphic user interface displays icons depending on the selection. Their use is described below:



Tap briefly on the cabin image: The function is switched on or off.

Tap briefly on the sub-menu: The icon is selected.

Tap again: The selection is confirmed.

Press and hold: A sub-menu opens.

Tap anywhere on the cabin image: The sub-menu for settings closes.



Cabin on/off



Settings



Next



Back to previous selection or start



Confirm selection



Clear selection



Increase the value by 1



Decrease the value by 1

The home screen (standby) appears after the display has not been touched for 10 seconds.

- Settings that have not been saved are lost.
- Date and time are saved if the built-in battery is in working order. All other settings are saved permanently.

Add-on modules or accessories are detected once the unit is switched on again and their corresponding icons appear on the cabin image or in the sub-menus. Unit operation and unit settings are available on different levels:

Operation level	Private operation	
	Commercial operation	Basic settings
		Advanced settings (with PIN code)
Service level	Settings for service technician (with PIN code)	

7.2.1 Configuring during commissioning or after a reset

The basic settings must be defined to commission the unit. The program guides you through the required steps.


The home screen automatically appears after the control panel has not been touched for 10 seconds. Settings that have not been saved are lost.

► Defining the basic settings

- 1 Select a language and confirm.
- 2 Set the time and confirm.
- 3 Set the date and confirm.
- 4 Specify the type of use and confirm:

a)  Private use


b)  Commercial use

① Specific safety regulations apply to this setting. See 1.3 Operator instructions,  8


If you use the EmoTouch 3 to operate sauna cabins and steam rooms in addition to the IR cabin, initial configuration involves additional steps, e.g. heater selection, cabin views, etc. These steps are described in the installation and operating instructions for the sauna and steam room relay boxes. You must select and configure the IR intensity and/or IR temperature operating modes once the channel groups are configured.

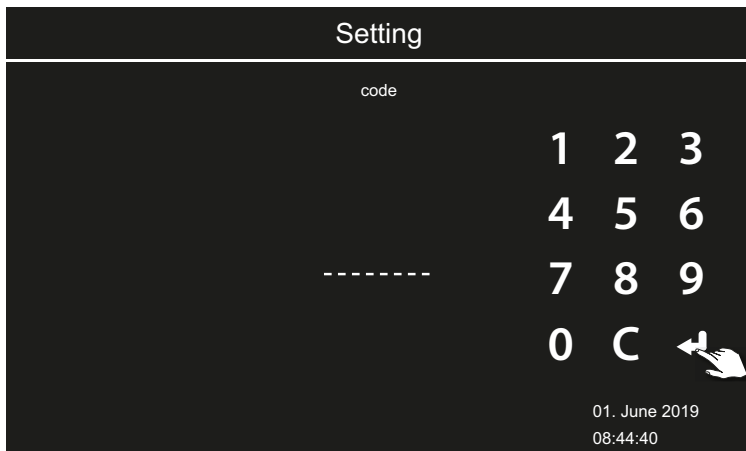
See 7.2.2 Configuring the channel groups,  58

7.2.2 Configuring the channel groups

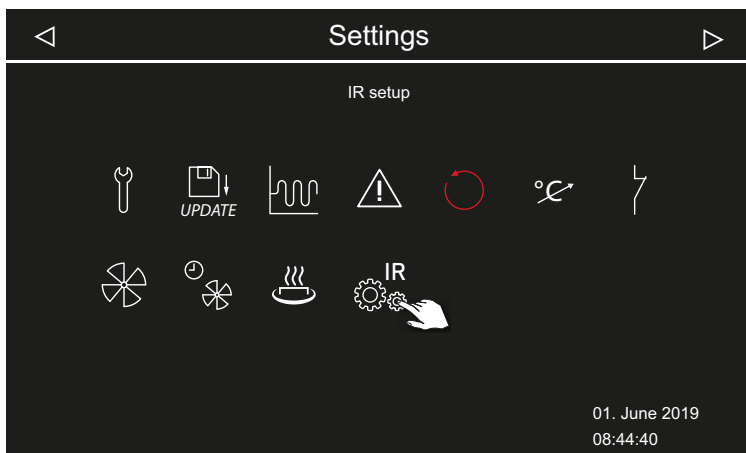
The settings are configured as shown in the example above. See Installation example,  56

► Configuring the IR channel groups

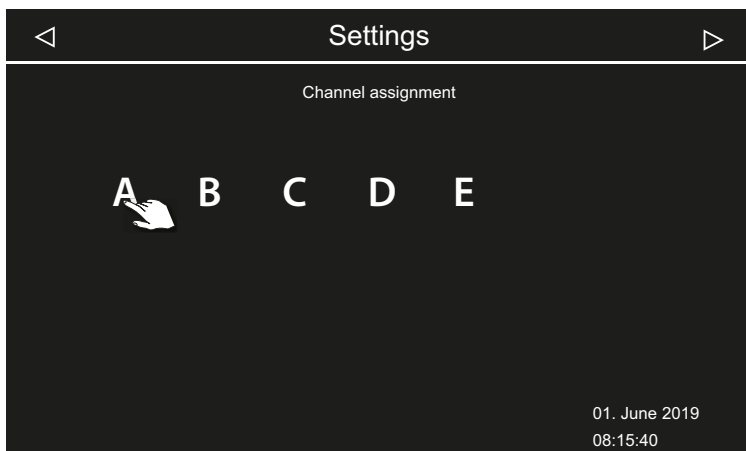
- 1 Select the cabin.
- 2 Tap and hold  for 3 seconds.
- 3 Enter code **5349** and confirm.



- 4 Tap  and confirm the selection.

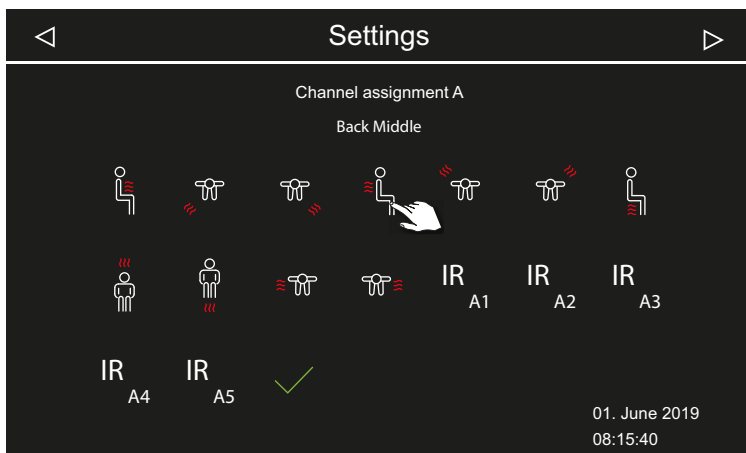


- 5 Select a channel and confirm the selection.



① Ensure that the selected channel is configured at the circuit board.

- 6 Select the IR emitter icon and confirm.



① You may assign each icon only once.

- 7 Follow the same steps to configure the next channel group.

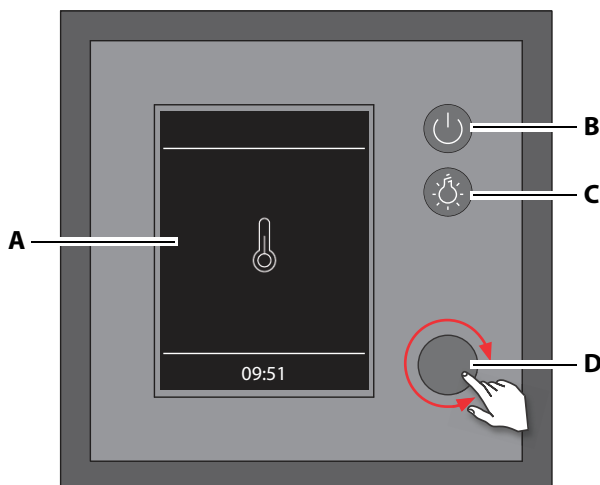
7.3 EmoTec IR, InfraStyle, InfraStyle i

All functions must be configured to commission the system. However, this chapter describes only the settings for the IR emitters.

Add-on modules or accessories are detected after the unit is switched on again and their corresponding icons appear in the sub-menus.


A complete description of the control panels can be found in separate operating instructions.

EmoTec IR operation



A Display

B Switch on/off

 EmoTec control panel

C Switch cabin light on/off

D Jog dial

The following icons represent operational functions:



On/off



Jog dial:

Rotate = select functions.



Light on/off



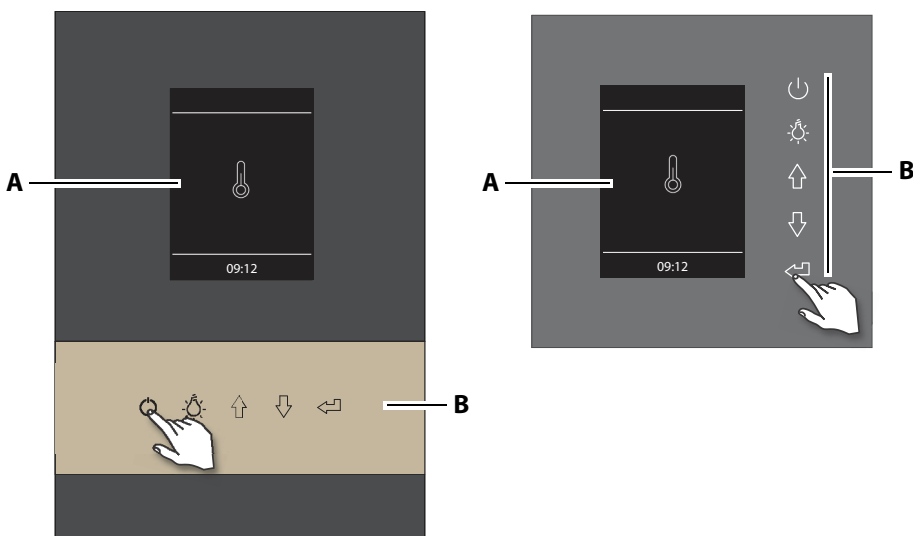
Jog dial:

Press = confirm functions and settings.

The home screen (standby) appears after the jog dial has not been touched for 15 seconds.

- Settings that have not been saved are lost.
- Date and time are saved if the built-in battery is in working order. All other settings are saved permanently.

InfraStyle and InfraStyle i operation



InfraStyle i

A Display

 InfraStyle i control panels - D/H

InfraStyle

B Function buttons

The following icons represent operational functions:



Tap the icon buttons to select and confirm functions.



Scroll back through functions.



On/off
Close sub-menu (only if heating is switched off)



Scroll forward through functions.



Light on/off



Open selected function.
Confirm settings.

The home screen (standby) appears after the display has not been touched for 15 seconds.

- Settings that have not been saved are lost.
- Date and time are saved if the built-in battery is in working order. All other settings are saved permanently.

7.3.1 Configuring during commissioning or after a reset

The basic settings must be defined to commission the unit. The program guides you through the required steps.


The home screen automatically appears after not using the control panel for 15 seconds. Settings that have not been saved are lost.

► Defining the basic settings

- 1 Select a language and confirm.
- 2 Set the time and confirm.
- 3 Set the date and confirm.
- 4 Select the type of use and confirm:

a)  Private use

b)  Commercial use


- ① Specific safety regulations apply to this setting. See 1.3 Operator instructions,  8

In the sauna cabin, initial configuration involves additional steps, e.g. heater selection, etc. These steps are described in the installation and operating instructions for the corresponding sauna relay box.


You must select and configure the IR intensity and/or IR temperature operating modes once the channel groups are configured.

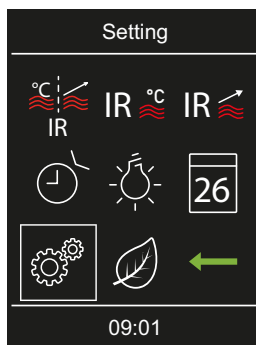
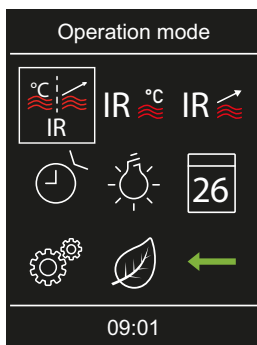
See 7.3.2 Configuring the channel groups,  64

7.3.2 Configuring the channel groups

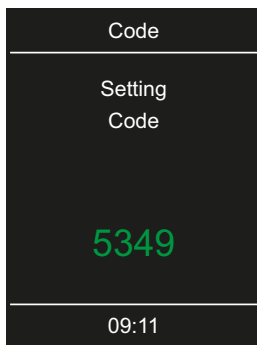
The settings are configured as shown in the example above. See Installation example,  56

► Configuring the IR channel groups

- 1 : Select and confirm by pressing and holding until the code entry is displayed.
 - a) EmoTec: Press and hold the jog dial.
 - b) EmoStyle: Press and hold the Enter icon.

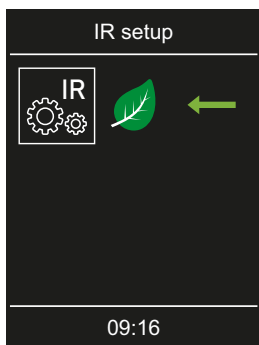


- 2 Enter code **5349** and confirm.

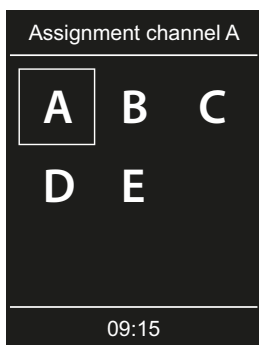


- ① Increase or decrease the numbers and confirm by pressing Enter. Confirmed numbers appear green.

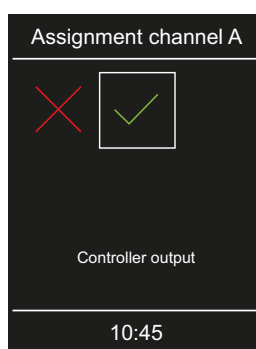
- 3  : Select and confirm.



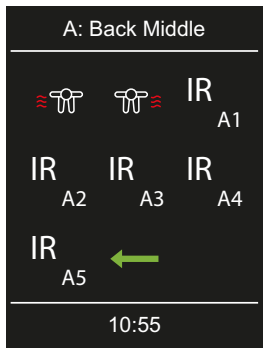
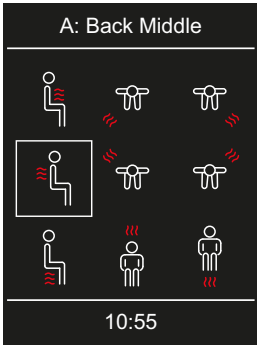
- 4 Select the channel and confirm.



- 5 Select the channel assignment and confirm.



6 Select the IR emitter icon and confirm.





① You may assign each icon only once.

7 Follow the same steps to configure the next channel group.

7.4 Adjusting the IR emitters

The IR emitters have two operating modes.
These operating modes let you determine how the IR emitters can be used:
via intensity and/or temperature.

Operating mode	Temperature	Intensity
	Ambient temperature can be set via temperature sensors Emitters heat until the temperature has been reached	All channel groups at 100%
	Ambient temperature increases slowly via channel group intensity	Can be set for each channel group

IR intensity operating mode

The following settings are available in IR intensity operating mode for outputs IR-1 to IR-3:

Foils at IR-3	Emitter at IR-3	Foil at IR-1, IR-2	Emitter at IR-1, IR-2	Intensity setting
x	x			0% or 100%
		x		20% to 100%, in increments of 2%
			x	15, 25, 33, 50, 66, 75, 100%

IR temperature operating mode

The following settings are available in IR temperature operating mode for outputs IR-1 to IR-3:

Foil at IR-1, IR-2, IR-3	Emitter at IR-1, IR-2, IR-3	Control mode for relay output
x	only IR-1 and IR-2	Control via T (target)
	x	Switch-off > 70°C

The connection for switching output IR-3 is not controlled via the temperature of the IR emitter, but rather switched off when the ambient temperature reaches 70°C. In Foil operating mode, it is controlled via the ambient temperature sensor.

Note that the intensity and temperature settings impact the duration of the heat-up phase.

7.5 IR control for EmoTouch 3

After installation, you can set the operating mode, temperature and/or intensity for each IR cabin. You can also define the switching hysteresis for the IR emitters.

7.5.1 Setting the IR operating mode

The following icons are displayed for selection.



IR temperature operating mode:

You can set the temperature of the IR emitters and the intensity per channel.

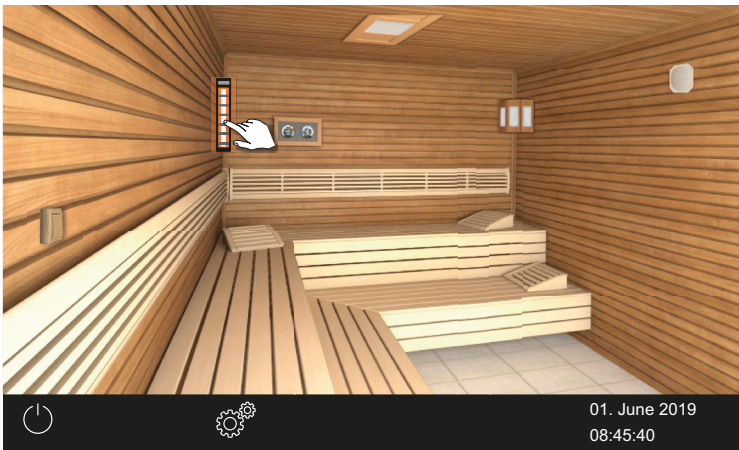


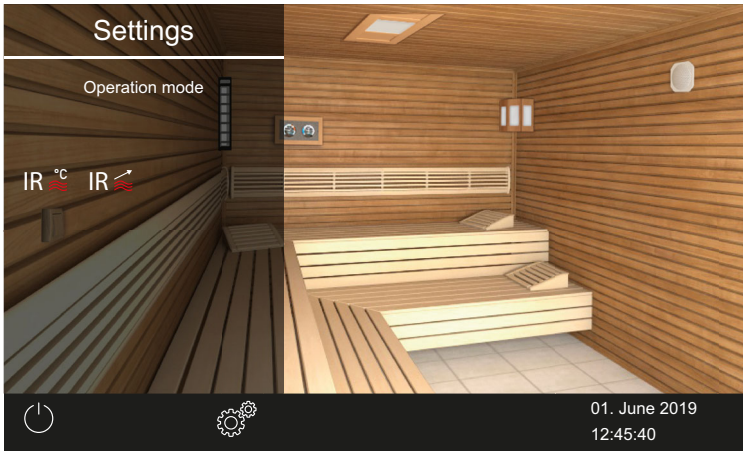
IR intensity operating mode:

You can set the intensity of the IR emitters per channel.


► Setting the operating mode


- 1 Press and hold the emitter icon for 5 seconds.






2 Select the operating mode and confirm.

a)  IR intensity.

b)  IR temperature.

7.5.2 Setting the IR temperature

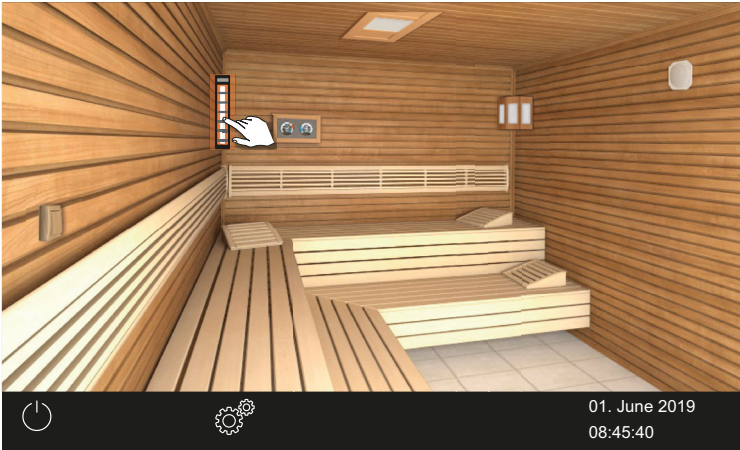
You can set the temperature only after you have selected the IR temperature operating mode. ► Setting the operating mode,  68

You can also set the temperature while the system is in operation. The temperature applies to all IR emitters.

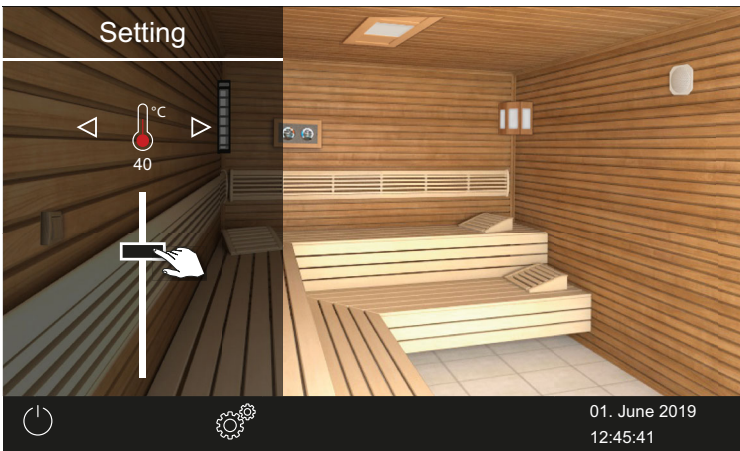
The ambient temperature in the IR-only cabin cannot exceed 70°C. This maximum temperature cannot be exceeded even if all IR emitters are operating at full intensity.

► Setting the IR temperature

- 1 Select the cabin.
- 2 Tap the IR emitter icon.




- 3 Move the slider to the desired temperature.



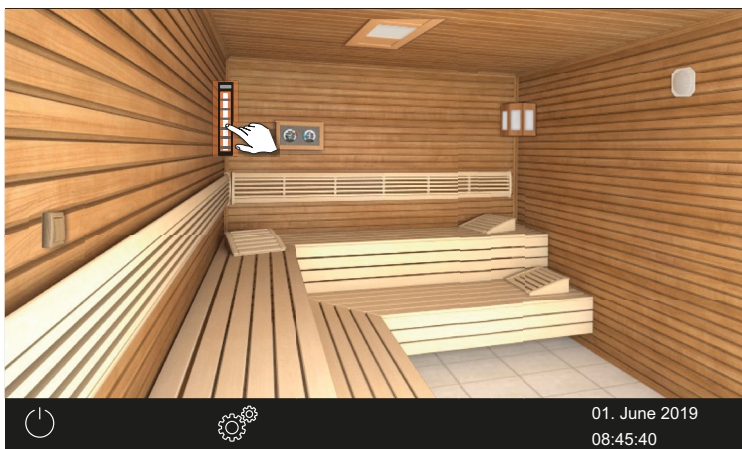
- ☒ The emitter is immediately set to the new temperature.


7.5.3 Setting the IR intensity

You can set the intensity once you have selected either the IR temperature or IR intensity operating mode. ► Setting the operating mode,  68
You can set the intensity of the IR emitters while the system is in operation. It generally applies to one channel group.

► Setting the IR emitter intensity

- 1 Select the cabin.
- 2 Tap the IR emitter icon.

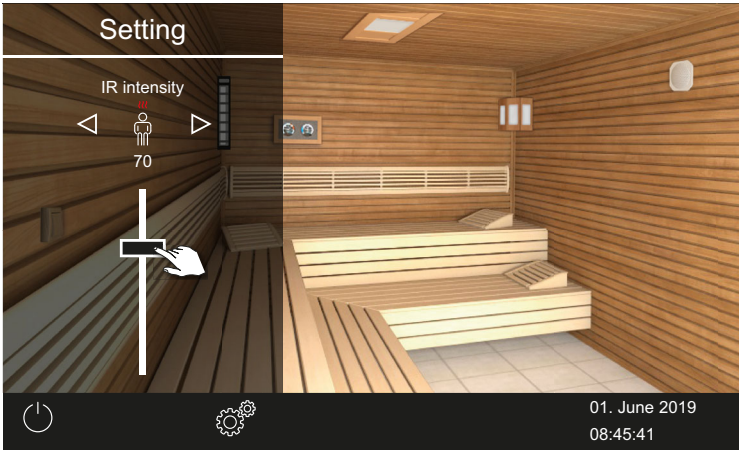


- 3 Tap  to switch to the intensity settings as needed.



① The first channel group is displayed first.

4 Move the slider to the desired intensity.

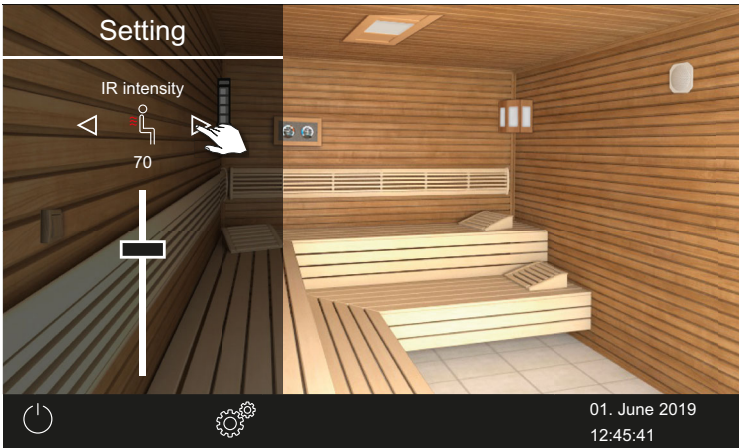


① The selected channel group's icon appears above the slider.

① Only 0% or 100% may be selected for emitters at the IR-3 connection; 20%-100% for foils.

☒ The channel group emitters are immediately set to the new intensity. This means they are not set to the target temperature.

5 Tap to switch to the next channel group as needed.







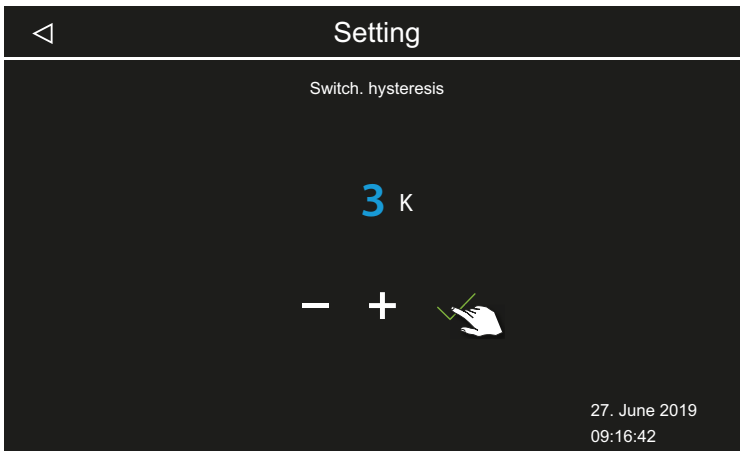
7.5.4 Switching hysteresis for the IR temperature

In the service settings, you can also set a temperature range within which the IR emitters are switched on and off. It applies to all connected IR emitters.

Example — 46°C target temperature and hysteresis 4 K: The IR emitter is switched off at 48°C and switched on at 44°C.

► Adjusting the hysteresis

- 1 Tap and hold  for 3 seconds.
- 2 Enter code **5349** and confirm.
- 3 Tap  and confirm the selection.
- 4 Set the value with  and , and then confirm.



- ① The value can be set to any number between 1 and 5.



7.6 IR control for EmoTec, InfraStyle and InfraStyle i

After installation, you can set the operating mode, temperature and/or intensity. You can also define the switching hysteresis for the IR emitters.


7.6.1 IR operating mode

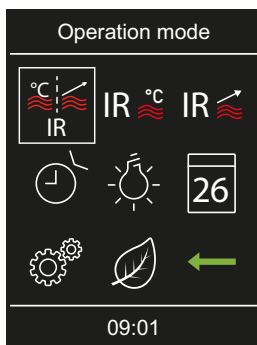
The IR emitters have two operating modes.

These operating modes let you determine how the IR emitters can be used: via intensity and/or temperature.



Operating mode	Temperature	Intensity
	Ambient temperature can be set via temperature sensors Emitters heat until the temperature has been reached	All channel groups at 100%
	Ambient temperature increases slowly via channel group intensity	Can be set for each channel group

► Setting the operating mode

- 1  : Select and confirm.



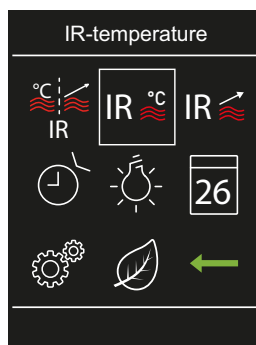
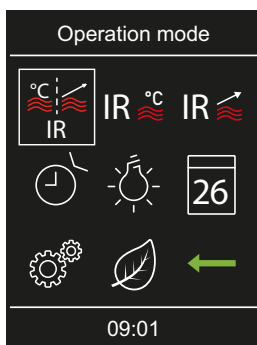
2 Select the IR operating mode and confirm.

-  IR intensity. In this operating mode, only the intensity of the IR emitters can be set.
 -  IR temperature. In this operating mode, both the IR temperature and the intensity of the IR emitters can be set.
- ① Depending on the IR operating mode you select, you can now set the temperature and/or intensity.

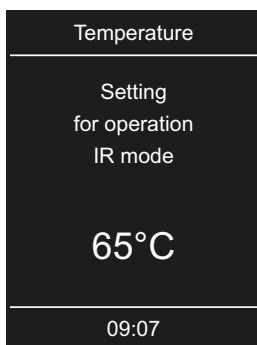
7.6.2 Setting the IR temperature

► Setting the temperature

- : Select and confirm.



- Set the temperature and confirm.



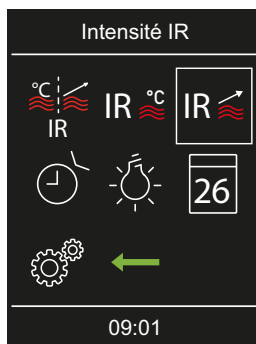
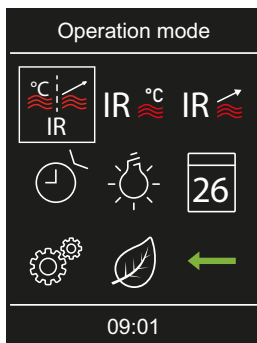
3 Confirm the set value.

- ☒ The value is saved and the display returns to the screen for operating mode selection.

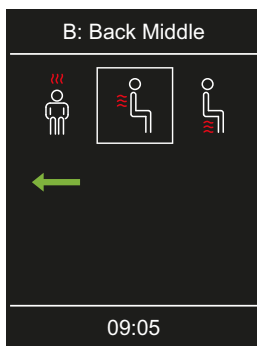
7.6.3 Setting the IR intensity

► Setting the IR emitter intensity

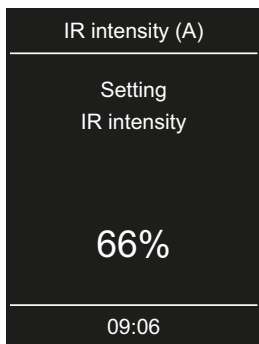
- 1 : Select and confirm.



- 2 Select the channel and confirm.



- ⓘ Only 0% or 100% may be selected for emitters at the IR-3 connection; 20%-100% for foils.

3 Set the IR emitter intensity.

- ① The value can be set in 2% intervals from 20% to 100%.
- ① Only 0% or 100% may be selected for emitters at the IR-3 connection; 20%-100% for foils.

4 Confirm the set value.

- ☒ The value is saved and the display returns to the screen for operating mode selection.
- ☒ The channel group emitters are immediately set to the new intensity. This means they are not set to the target temperature.


5 Repeat steps **1** to **4** for the next channel.

7.6.4 Switching hysteresis for the IR temperature

In the service settings, you can also set a temperature range within which the IR emitters are switched on and off. It applies to all connected IR emitters.

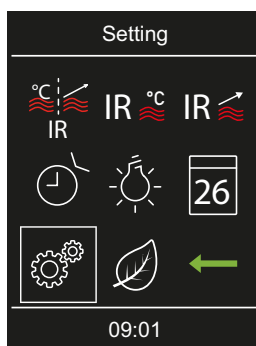
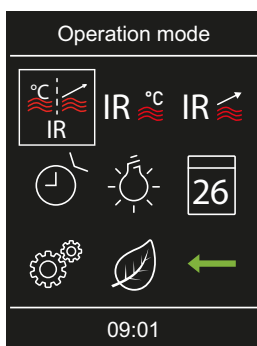
Example — 46°C target temperature and hysteresis 4 K: The IR emitter is switched off at 48°C and switched on at 44°C.

► Adjusting the hysteresis

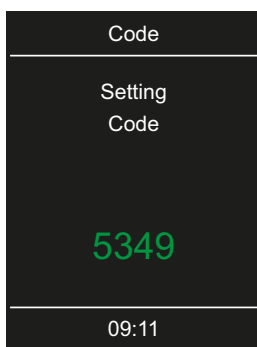
- 1 : Select and confirm by pressing and holding until the code entry is displayed.

a) EmoTec: Press and hold the jog dial.

b) EmoStyle: Press and hold the Enter icon.



- 2 Enter code **5349** and confirm.

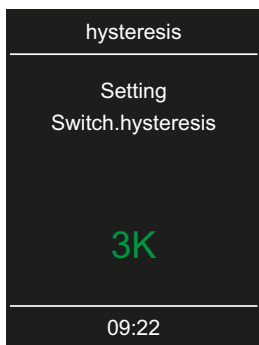


- ① Increase or decrease the numbers and confirm by pressing Enter. Confirmed numbers appear green.

- 3 : Select and confirm.



- 4 Set the desired value and confirm.



- ☒ The value is saved and the display returns to the selection screen for advanced settings.

7.7 Setting the heating period limiter

For private use, the heating period is limited to 6 h.

For commercial use, the heating period can be set to 6 h, 12 h or infinite.


Heating period	Code
6 hours	8206
12 hours	8212
Unlimited 24 hours/7 days a week	8224

The codes for the heating period limiter are exclusive to infrared-only installations.

In mixed operation, IR emitters are installed in a sauna cabin. For this installation, the heating period limiter is set with jumper 5 on the sauna relay box,. This overrides the codes listed above.

► Setting the heating period

1 Open Service

a) EmoTouch 3: Tap and hold  for 3 seconds.

b) EmoTec, EmoStyle, EmoStyle i:  : Select and confirm by pressing and holding until the code entry is displayed.

2 Enter the code and confirm.

① Code **8206**: 6 hours.

① Code **8212**: 12 hours.

① Code **8224**: 24 hours/7 days a week.

7.8 Troubleshooting

Error message and icons on the control panel indicate SBM-IR Modul operating statuses and fault conditions.

Fault	Reason	Solution
Control panel display is blank	No power supply.	Switch on the relay box.
		Check the relay box's mains connection.
		Check fuses.
		Check the power supply
IR temperature cannot be set	Channels are not set.	Define channel groups.
Communication error	Sauna bus not plugged in.	Check data line and connections.
	Jumpers not set.	Set JP1 and JP2 for connections IR-1 and IR-2.
	IR module is disconnected.	Set the heater operating mode.
	Channel groups not defined.	Define channel groups.
IR emitters do not heat.	Unit not detected.	Set unit address for the module.
Cabin is not displayed.	Cabin is not detected.	Check and set cabin address. Check the sequence of connections.
Thermo-fuse tripped.	Temperature too high.	Check cause of excess temperature. Replace fuse.
Unknown error.		Restart unit. Contact technical support.
No bus communication	Too many add-on modules connected.	Connect IR module with separate power supply.
	Bus connection plug not plugged in.	Plug in plug.
	Bus cable damaged.	Replace bus cable.

8 General terms and conditions of service

(T&C, Dated 008-2018)

I. Scope

Unless otherwise agreed in writing for specific instances, these terms and conditions of service shall apply to service operations, including reviewing and remedying complaints. All our existing or future legal relationships shall be governed solely by the following terms and conditions of service. We do not recognise any of the customer's conflicting terms and conditions unless we have given our express written consent to their applicability.

We hereby expressly object to any of the customer's terms and conditions included in the customer's General Terms and Conditions of Business or order confirmation. Unconditional acceptance of order acknowledgments or deliveries shall not be construed as any form of acknowledgment of such terms and conditions. Ancillary agreements or amendments must be confirmed in writing.

II. Costs

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

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

There shall be no third-party billing.

III. Performance and cooperation obligations

The customer shall provide assistance free of charge to the manufacturer in rendering services.

In the case of a warranty claim, the manufacturer shall provide replacement parts necessary for servicing free of charge.

IV. Service visit by the manufacturer

Services rendered on site by an employee of the manufacturer must be agreed in advance.

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

V. Liability

The manufacturer shall assume liability in accordance with the currently applicable statutory regulations. All our products are packaged in such a way that the individually packed goods (pallets) can be shipped.

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

VI. Manufacturer's warranty

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

- The warranty period shall commence from the date on which proof of purchase is provided and shall be limited, in all cases, to 24 months.
- Warranty services shall be performed only if proof of purchase of the equipment can be presented.
- Any and all warranty claims shall become void if modifications are made to the equipment without the manufacturer's express consent.
- Any warranty claim shall likewise become void in the case of defects that arise due to repairs or interventions made by unauthorised persons or due to improper use.
- In the case of warranty claims, the serial and article numbers must be provided, together with the unit designation and a meaningful description of the fault.
- This warranty shall cover defective equipment parts, with the exception of normal wear parts. Wear parts shall include, for example, light sources, glass elements, tubular heating elements and sauna heater stones.
- Only original replacement parts may be used within the warranty period.

- Service visits made by third parties shall require a written order issued by our service department.
- The equipment in question shall be sent to our service department by the customer at the customer's own expense.
- Electrical assembly and installation work, including service visits and parts replacements, shall be carried out at the customer's expense; costs shall not be borne by the manufacturer.

Complaints in respect of our products shall be reported to the responsible distributor and shall be handled exclusively by said distributor.

The manufacturer's General Terms and Conditions of Business, in the version available at www.eos-sauna.com/agb, shall apply in addition to the foregoing terms and conditions of service.

9 Disposal



Electrical devices that are no longer needed must be recycled at a recycling station as per EU guideline 2012/19/EU or as per the Electrical and Electronic Equipment Act (ElektroG).

Observe local provisions, laws, regulations, standards and directives when disposing of the steam generator.



Do not dispose of the unit with household waste.



Packaging

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

- Used paper, cardboard
- Plastic foil
- Foam material

Electronic waste

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



Service address

EOS Saunatechnik GmbH

Schneiderstriesch 1

35759 Driedorf, Germany

Tel. +49 2775 82-0

Fax +49 2775 82-431

Web www.eos-sauna.com

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

Date of sale

Stamp/retailer signature: