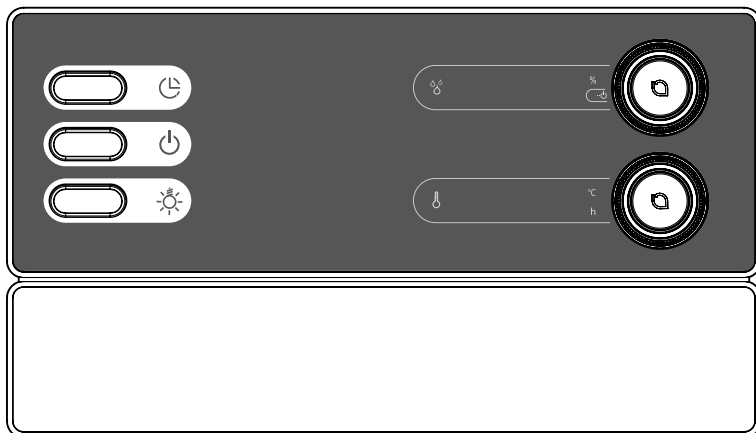# Sauna control unit

Pro B3
PRO-B3

INSTRUCTIONS FOR INSTALLATION AND USE
English

Table of Contents

EN

1. About this instruction manual

Read these instructions for installation and use carefully and keep them within reach of the sauna control unit. This ensures that you can refer to information regarding your safety and regarding operation at any time.

These installation and operating instructions can also be found in the downloads section of our website: www.sentiotec.com/downloads.

Symbols used for warning notices

In these instructions for installation and use, a warning notice located next to an activity indicates that this activity poses a risk. Always observe the warning notices. This prevents damage to property and injuries, which in the worst case may be fatal.

The warning notices contain keywords, which have the following meanings:

DANGER!
Serious or fatal injury will occur if this warning notice is not observed.

WARNING!
Serious or fatal injury can occur if this warning notice is not observed.

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CAUTION!
Minor injuries can occur if this warning notice is not observed.

ATTENTION!
This keyword is a warning that damage to property can occur.

Other symbols

This symbol indicates tips and useful information.

2. Important information for your safety

The sauna control unit Pro B3 has been produced in accordance with the applicable safety regulations for technical units. However, hazards may occur during use. Therefore adhere to the following safety information and the specific warning notices in the individual chapters. Also observe the safety information for the devices connected.

2.1. Intended use

The sauna control unit Pro B3 is used exclusively for operating and controlling the sauna functions in accordance with the technical data.

The sauna control unit Pro B3 may only be used for operating and controlling a sauna heater which has been certified as satisfying the combustion test described in paragraph 19.101 of EN 60335-2-53. If the heater does not meet this requirement, an appropriate safety precaution must be taken (for example: safety shut-off, see **5.8** on page **19**).

The sauna control unit Pro B3 may only be used for operating and controlling 3 heating circuits with a maximum heating capacity of 3.5 kW per heating circuit. The maximum evaporator capacity totals 3.5 kW.

Any use exceeding this scope is considered improper use. Improper use can result in damage to the product, in severe injuries or death.

2.2. Safety information for the installer

● Installation may only be performed by a qualified electrician or similarly qualified person.

● Work on the sauna control unit may only be performed when the power has been disconnected.

● An all-pole disconnecting device with full cut-off compliant with overvoltage category III must be fitted on-site.

● The sauna control unit must be installed outside the sauna room at a height of approx. 1.70 m or in accordance with the recommendation issued by the sauna manufacturer. The ambient temperature must be within a range spanning -10 °C to +40 °C.

● The heater sensor must be attached in a way that it is not affected by a flow of air.

● The heater supply cable must have a minimum cross-section of 2.5 mm^2 and be temperature resistant up to 150 °C.

● Also comply with the regulations applicable at the installation location.

● For your own safety, consult your supplier in the event of problems that are not explained in sufficient detail in the installation instructions.

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2.3. Safety information for the user

● The sauna control unit must not be used by children under 8 years old.
● The sauna control unit may only be used by children above 8 years old, by persons with limited psychological, sensory or mental capabilities or by persons with lack of experience/knowledge:
  – When they are supervised.
  – When they have been shown how to use the device safely and are aware of the hazards that could occur.
● Children must not play with the sauna control unit.
● Children under 14 years of age may only clean the sauna control unit if they are supervised.
● For health reasons, do not use the sauna when under the influence of alcohol, medication or drugs.
● Make sure that no flammable objects have been placed on the sauna heater before the sauna control unit is switched on.
● Make sure that no flammable objects have been placed on the heater before activating the preset time function or the stand-by mode for the remote start.
● For your own safety, consult your supplier in the event of problems that are not described in sufficient detail in the operating instructions.

3. Product description

3.1. Scope of delivery

- Sauna control unit
- Heater sensor with integrated excess temperature fuse
- Installation material
- Wire jumper for bridging terminals **V1** and **Wm** for combi heaters without low-water shut-off

3.2. Optional accessories

- Bench sensor (item number: O-F2)
- Humidity temperature sensor (item number: O-FTS2)
- Power booster (item number: O-S2-18 / O-S2-30)
- Safety shut-off (item number: HT-SWL)
- pronet web server (item number: PRO-NET)

3.3. Product functions

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The sauna control unit Pro B3 features the following functions:

- Regulation of combi heaters with a heating output of up to 10.5 kW and evaporator output of up to 3.5 kW in the temperature range spanning 30 °C to 110 °C and a humidity range spanning 5 % to 100 %.
- A power booster allows the maximum contact rating to be increased from 10.5 kW to 18 kW or 30 kW.
- Remote start function
- Preset time function (up to 24 hours)
- Automatic heating period limiter
  The sauna control unit shuts down automatically after the maximum heating period for safety reasons. The maximum heating period can be set to 6 h, 12 h, 18 h or 24 h.
- Post-drying programme
  Once combi-mode has finished, the post-drying programme starts automatically to prevent mould or rot from forming in the sauna room. This involves heating the sauna room to 80 °C with the fan running for 30 minutes.

● Excess temperature fuse
The excess temperature fuse is installed in the housing for the heater sensor. Should the sauna heater continue heating after reaching the preferred temperature due to a defect, the excess temperature fuse switches the sauna heater off at a temperature of approx. 139 °C.

3.4. Sauna operating modes

The sauna control unit Pro B3 provides two operating modes, sauna mode and combi mode.

Sauna mode

Dry heat is provided in sauna mode. The temperature in the room is high (80 to 100 °C) The humidity level of maximum 10 % is low.

Combi mode

The evaporator operates along with the sauna heater in combi mode. The temperature in the sauna room is lower (approx. 40 to 65 °C) than in sauna mode, with the relative humidity being considerably higher, spanning 35 % to approximately 70 %. The maximum humidity level which can be set depends on the temperature of the sauna. The higher the sauna temperature, the lower the maximum humidity level which can be set.

3.5. Sensor operating modes

The sauna control unit can be operated with one or two sensors. A temperature sensor (bench sensor, F2) or a humidity sensor (FTS2) can be used as the second sensor.

Single-sensor mode (F1)

Single-sensor mode must be activated when starting up the sauna for the first time (see **8.3. Activating/deactivating the single-sensor mode** on page **25**).

In single-sensor mode, the sauna control unit is operated with the heater sensor with excess temperature fuse (F1) only. This is included in the scope of delivery.

In single-sensor mode, the sauna control unit only displays the set temperature as standard. The actual temperature is not displayed. Should the sauna control unit display the temperature above the heater (F1) as an actual temperature in single-sensor mode, it must be activated when starting up for the first time (see **8.5. Displaying the heater temperature in single-sensor mode** on page **26**)

The maximum humidity level which can be set is based on the temperature above the heater, and the humidity is timed. Only the set value for the humidity level (in % of relative humidity) is displayed by the sauna control unit. The actual humidity level in the sauna room when humidity is timed depends on the size of the room and the evaporator capacity, and may deviate from the set value.

Two-sensor mode with bench sensor (F2)

In two-sensor mode with bench sensor, a second temperature sensor (bench sensor) is installed above the rear sauna bench. The sauna control unit displays the temperature measured by the bench sensor as the actual temperature.

In two-sensor mode with bench sensor, the humidity is timed. Only the set value for the humidity level (in % of relative humidity) is displayed by the sauna control unit. The actual humidity level in the sauna room when humidity is timed depends on the size of the room and the evaporator capacity, and may deviate from the set value.

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Two-sensor mode with humidity temperature sensor (FTS2)

When a humidity temperature sensor is used in two-sensor mode, the sauna control unit displays the temperature which is measured by the humidity temperature sensor as the actual temperature.

In two-sensor mode with humidity temperature sensor, the evaporator is regulated in accordance with the humidity level measured in the sauna room. The actual value for the humidity level (in % of relative humidity) is displayed by the sauna control unit.

4. Installation

4.1. Installing the sauna control unit

ATTENTION!
Damage to the unit
The sauna control unit is protected against jets of water, however direct contact with water could still damage the unit.
● Install the sauna control unit in a dry place at which a maximum humidity of 95 % is not exceeded.

ATTENTION!
Sources of interference can have a negative effect on signal transmission
● Lay all sensor wires separately from other mains wires and control wires.
● Protect wires with only one layer of insulation by using a pipe (double insulation).

Observe the following points when installing the sauna control unit:

● The sauna control unit must be installed outside the sauna room or in accordance with the recommendation issued by the sauna manufacturer.
● The ambient temperature must be within a range spanning -10 °C to +40 °C.
● The sensors may only be connected using the sensor wires provided with the unit, which are heat-resistant up to 150 °C.

The sensor wires may be extended under the following conditions:
● When a silicon wire resistant to temperatures up to 150 °C is used.
● The minimum cross-section of the wire is 0.5 mm^2.
● The length of the heater sensor wires may NOT exceed 10 m.

To install the sauna control unit, perform the following steps:

1. Screw two Phillips-head screws (16 mm) into the wall of the sauna at a height of approx. 1.70 m to a distance of up to 7 mm. The two screws must be placed at a distance of 145 mm from each other (see **Fig. 1**).
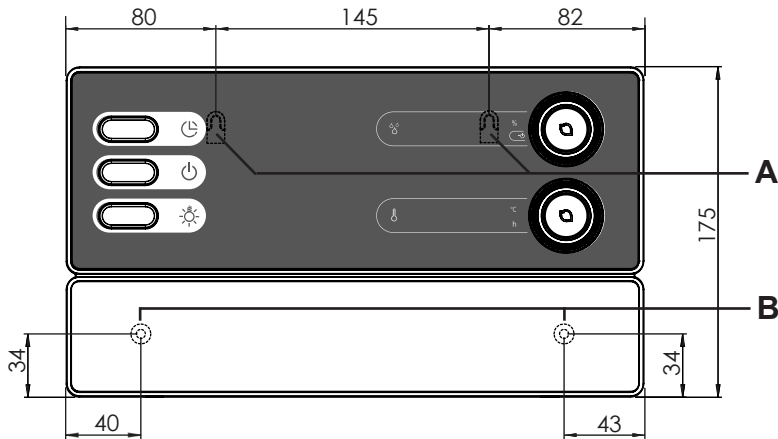
Fig. 1   Position of the attachment device and the installation holes (dimensions in mm)

EN

2. Press the clip locks **C** in lightly using a screwdriver and remove the cover from the housing (see **Fig. 2**).
3. Fasten the sauna control unit onto the Phillips-head screws using the attachment device **A** as an aid (see **Fig. 1**).
4. Screw two Phillips-head screws (16 mm) into the lower fastening holes **B** (see **Fig. 1**).
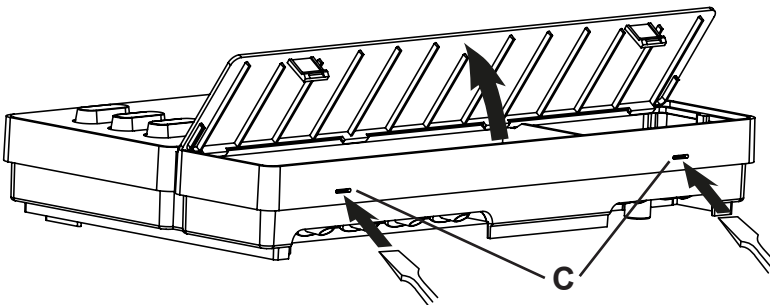
Fig. 2   Removing the cover from the housing

4.2. Installing the heater sensor F1 with excess temperature fuse

Observe the following points when installing the heater sensor:

- The heater sensor must be installed on the rear of the heater, above the middle of the sauna heater. An interval of approx. 15 cm to the roof of the sauna room must be maintained.
- The heater sensor must be attached in a way that it is not affected by a flow of air.

To install the heater sensor, perform the following steps (see **Fig. 3**):

1. Lay the two 2-pin heater sensor wires in the wall of the sauna room, leading them to the heater sensor installation location and affix the heater sensor wires using wire clips.
2. Pull the two half-shells [1] of the heater sensor apart.
3. Connect the four connectors for the heater sensor wire [5] in accordance with the **Fig. 3**.
4. Place the connection panel [2] crossways (as shown in **Fig. 3**) in the heater sensor half-shells.
5. Place the two half-shells together, screw them together using the two Phillips-head screws [3] (9 mm) and check whether the heater sensor has been securely closed.
6. Install the heater sensor on the rear of the heater using the two wood screws enclosed [6] (16 mm).

[1] Heater sensor half-shells

[2] Connection panel

[3] Phillips-head screws (9 mm)

[4] Heater sensor

[5] Heater sensor wires

[6] Wood screws (16 mm)
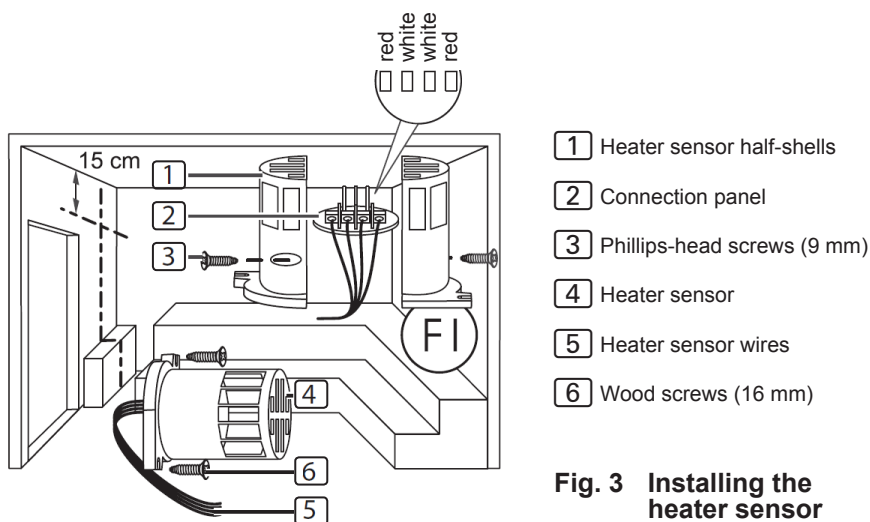
Fig. 3   Installing the heater sensor

4.3. Installing bench sensor F2 (optional)

The bench sensor must be installed on the wall of the sauna room, above the rear bench seat. An interval of approx. 15 cm to the roof of the sauna room must be maintained.

To install the bench sensor, perform the following steps:

1. Lay the two 2-pin bench sensor wires in the wall of the sauna room, leading them to the bench sensor installation location and affix the bench sensor wires using wire clips.
2. Pull the two half-shells of the bench sensor apart.
3. Connect the two connectors for the bench sensor wire to the two middle terminals on the connection panel.
4. Place the connection panel crossways in the bench sensor half-shells.
5. Place the two half-shells together and screw them together using the two Phillips-head screws (9 mm).
6. Check whether the bench sensor has been securely closed.
7. Install the bench sensor on the wall of the sauna room using the two wood screws enclosed (16 mm). Maintain an interval of 15 cm to the roof of the sauna room.

EN

4.4. Installing the humidity temperature sensor FTS2 (optional)

The humidity temperature sensor must be installed on the wall of the sauna room above the rear bench seat. An interval of approx. 15 cm to the roof of the sauna must be maintained.

To install the humidity temperature sensor, perform the following steps:

1. Lay the two 5-pin bench sensor wires in the wall of the sauna room, leading them to the humidity temperature sensor installation location and affix the sensor wires using wire clips.
2. Install the humidity temperature sensor to the wall of the sauna room using the two wood screws enclosed (16 mm). Maintain an interval of 15 cm to the roof of the sauna room.

5. Electrical connection

ATTENTION!
Damage to the unit
● The sauna control unit may only be used for operating and controlling 3 heating circuits with a maximum heating capacity of 3.5 kW per heating circuit. The maximum evaporator capacity totals 3.5 kW.
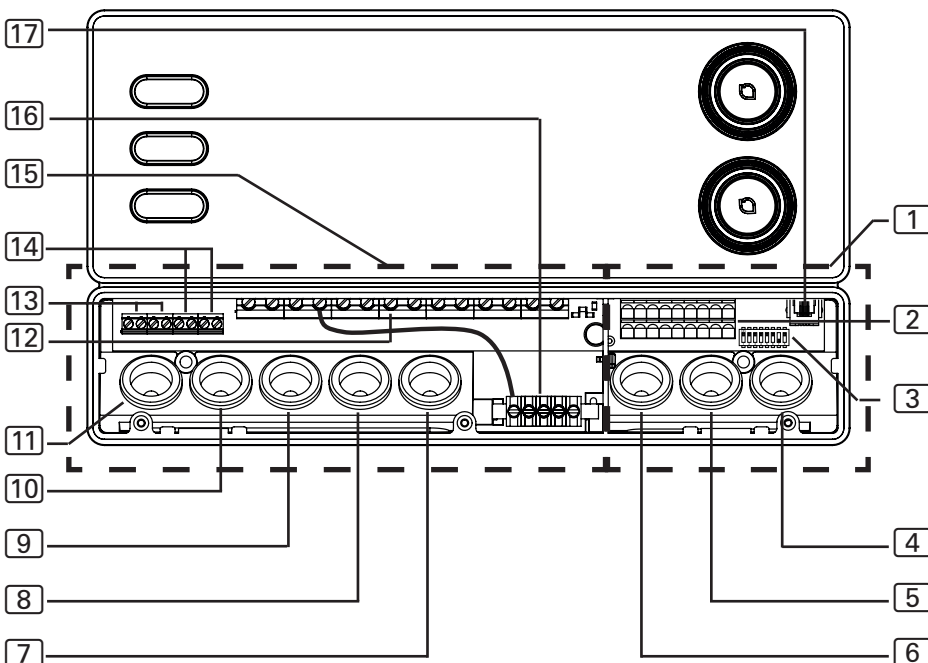
1 Low-voltage connection area	9 Cable bushing for power supply cable
2 Terminal strips for safety shut-off device, remote start and sensor wires	10 Cable bushing for power booster
3 Function selection switch	11 Cable bushing for lights and fan
4 Cable bushing for F2 and FTS2 sensors	12 Terminal strip for heater and evaporator and power supply cable
5 Cable bushing for F1 sensor	13 Terminal strip for lights and fan
6 Cable bushing for safety shut-off device and remote start	14 Terminal strip for power booster
7 Cable bushing for evaporator cable	15 Connection area for 230 V / 400 V
8 Cable bushing for heater wire	16 Earth rail
	17 RJ45 socket for RS-485 and pronet

Observe the following points when connecting the power to the sauna control unit:

● Installation may only be performed by a qualified electrician or similarly quali-
  fied person.

☞ Please observe that in the event of a guarantee claim, a copy of the bill
  from the electrician performing the work must be presented.

● Work on the sauna control unit may only be performed when the power has
  been disconnected.
● There must be a fixed connection for the electrical power supply.
● An all-pole disconnecting device with full cut-off compliant with overvoltage
  category III must be fitted on-site.
● Observe the connection diagram (**Fig. 4**) on page **23**.

5.1. Connecting the power supply cable, heater and evaporator

1. Guide the power supply, heater and evaporator cable through the cable
   bushings ⑨, ⑧, ⑦ into the connection area for 230 V/400 V ⑮.
2. Connect the power supply cables to the terminal strip ⑫ in accordance
   with the connection diagram. Observe the operating instructions for the
   respective devices.
3. If the evaporator does not feature an automatic low-water shut-off function,
   then perform the following step as well:
     ● Use the wire jumper enclosed to connect terminal "**V1**" to terminal "**Wm**".

EN

5.2. Connecting the light

1. Guide the light cable through the cable bushing ⑪ into the connection area
   for 230 V/400 V ⑮.
2. Connect the light cable to the terminal strip ⑬ in accordance with the con-
   nection diagram. Observe the operating instructions for the respective device.

5.3. Connecting the fan (optional)

1. Guide the light cable through the cable bushing 11 into the connection area for 230 V/400 V 15.
2. Connect the fan cable to the terminal strip 13 in accordance with the connection diagram. Observe the operating instructions for the respective device.

5.4. Connecting the power booster (optional)

1. Guide the cable for the power booster through the cable bushing 10 into the connection area for 230 V/400 V 16.
2. Connect the cable for the power booster to the terminal strip 14 in accordance with the connection diagram. To do so, use terminal "**ST1**" for the safety circuit, and terminal "**ST2**" for the control circuit. Observe the operating instructions for the respective device.

5.5. Connecting heater sensor F1

1. Guide the wires for the heater sensor through the cable bushing 5 into the low-voltage connection area 1.
2. Connect the red wires for the heater sensor to the terminals labelled "**STB**" in terminal strip 2.
3. Connect the white wires for the heater sensor to the terminals labelled "**F1**" in terminal strip 2.

5.6. Installing bench sensor F2 (optional)

1. Guide the wires for the bench sensor through the cable bushing 4 into the low-voltage connection area 1.
2. Connect the wires for the bench sensor to the terminals labelled "**F2**" in terminal strip 2.

5.7. Installing humidity temperature sensor FTS2 (optional)

1. Guide the wires for the sensor through the cable bushing $\boxed{4}$ into the low-voltage connection area $\boxed{1}$.
2. Connect the wires for the temperature sensor to the terminals labelled "**F2**" in terminal strip $\boxed{2}$.

    a.   Connect the black wire to the right terminal.
    b.   Connect the brown wire to the left terminal.

3. Connect the wires for the humidity sensor to the terminals labelled "**+ S -**" in terminal strip $\boxed{2}$.

    c.   Connect the green wire to terminal "**+**".
    d.   Connect the orange wire to terminal "**S**".
    e.   Connect the red wire to terminal "**-**".

5.8. Connecting the safety shut-off

EN 60335-2-53 states that sauna control units with remote control may only be used for operating and regulating a sauna heater which has satisfied the combustion test described in paragraph 19.101. Alternatively, a suitable safety shut-off device can be installed in or above the heater. This shuts the sauna heater off when objects, e.g. a towel, are placed on the sauna heater.

EN

To install the safety shut-off device, perform the following steps:

1. Install the safety shut-off device in accordance with the operating instructions for the device.
2. Guide the wires for the safety shut-off device through the cable bushing $\boxed{6}$ into the low-voltage connection area $\boxed{1}$.
3. Connect the wires to the terminals labelled "**OSG**" in terminal strip $\boxed{2}$.

☞ If a safety shut-off is not installed, a jumper must be fitted at the terminals labelled "**OSG**".

5.9. Remote start

The remote start device is connected using terminals "**S**", "**B**" and "**C**". "**S**" stands for sauna mode and "**C**" for evaporator mode. "**B**" is a +24 V DC output. The preferred operating mode must be activated using a switch or actuator on the terminal.

5.10. Finishing installation

1. Connect the earth conductor for the power supply cable and all devices to the earth rail 16 .
2. Place the cover of the housing on the upper edge of the junction box.
3. Push the clip locks inwards lightly, and turn the cover of the housing downwards until it engages audibly.

6. Performing tests

The following tests must be performed by a certified electrical fitter.

⚠️ **WARNING!**
The following tests must be performed with the power supply switched on. There is a danger of electric shock.
● NEVER touch live parts.

---

1. Check the contact of the earth conductors on the earth conductor terminal.
2. Check the excess temperature fuse on the heater sensor F1.
   a. Switch on the sauna control unit.
   b. Open the heater sensor and disconnect one of the two red wires for the heater sensor.
      ► "Err" shows in the top display, "02" shows in the bottom display and the control unit switches off the heater.
   c. Switch off the sauna control unit.
   d. Reconnect the red wire for the heater sensor.
   e. Now disconnect one of the white wires for the heater sensor.
   f. Switch on the sauna control unit.
      ► "Err" shows in the top display, "04F1" shows in the bottom display and the control unit switches off the heater.
   g. Switch off the sauna control unit.
   h. Reconnect the white wire for the heater sensor.
3. Check the phase circuit for sauna mode L1, L2, L3 is connected to U, V, W.
4. Check the phase circuit for evaporator mode L1, L2, L3 is connected to U, V1, W.

EN

5. Check the maximum permissible heating output of 3.5 kW per phase on the sauna control unit.

6. When there is an optional power booster:

   a. Check the control wires ST1, ST2 and ST3.

   b. Check the maximum permissible heating output of 3 kW per phase on the power booster S2-18.

   c. Check the maximum permissible heating output of 7 kW per phase on the power booster S2-18.

7. Connection diagram

Fig. 4 Connection diagram

1 Humidity sensor (FTS2)
2 Remote start
3 Evaporator (max. 3.5 kW)
4 Heating system (max. 10.5 kW)
5 Control device power supply
6 Power booster
7 Fan
8 Light
9 Earth rail
10 Heater sensor with excess temperature fuse (F1)
11 Bench sensor (F2)

Black
Brown
Red
Orange
Green

139 °C

400V 3N 50Hz~

L1
L2
L3
N
PE

L3 L2 L1 PE N N N U V V1 Wm W W1

F1 F2 STB OSG
S B C

S2-18/30

N Li N Lü S2 St1 N N

EN

8.   Starting-up

The function selection switch in the low-voltage connection area allows a variety of product functions to be activated. The figure at the right shows the standard setting for the function selection switch.

Note that the control unit needs to be switched off for 10 seconds after making changes so that the settings are saved.
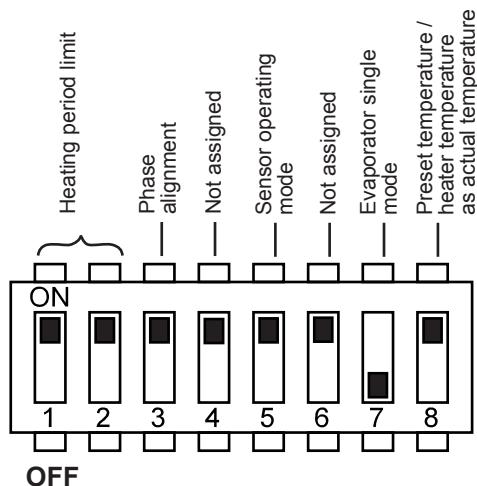
Fig. 5   Function selection switch – Standard setting

8.1. Setting the heating period limit

The maximum heating period is set to 6 hours as standard. The sauna control unit shuts down automatically after the maximum heating period for safety reasons.

The function selection switch in the low-voltage connection area allows the maximum heating period to be set to 12 hours, 18 hours or 24 hours. The required positions of the function selection switch can be found in the table on the right.

Function selection switch	*1*	*2*
6 hours	ON	ON
12 hours	OFF	ON
18 hours	ON	OFF
24 hours	OFF	OFF

> The EN 60335-2-53 specifies a maximum heating period limit of 6 hours for private saunas. For saunas in hotels, apartment blocks and similar locations, a maximum heating period limit of 12 hours is permissible. Extending the heating period limit to 18 hours or 24 hours is only permitted in public saunas.

8.2. Activating/deactivating phase alignment

Phase alignment is activated or deactivated using the function selection switch **3**.

● The function selection switch **3** is set to the ON position as standard. Phase alignment is therefore activated.

● If you wish to deactivate phase alignment, place the function selection switch **3** in the OFF position.

8.3. Activating/deactivating the single-sensor mode

In single-sensor mode, the sauna control unit is operated with the heater sensor with an excess temperature fuse (F1) only. The single-sensor mode must be activated above the function selection switch **5**.

● The function selection switch **5** is set to the ON position as standard. Two-sensor mode is therefore activated.

● If you wish to deactivate single-sensor mode, place the function selection switch **5** in the OFF position.

8.4. Activating evaporator single mode

With the factory setting, the evaporator can only be operated together with the heating system. To operate the evaporator on its own without the heating system, evaporator single mode must be activated using the function selection switch **7**.

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● The function selection switch **7** is set to the OFF position as standard. This means evaporator single mode is deactivated.

● If you wish to activate evaporator single mode, place the function selection switch 7 in the ON position.

8.5. Displaying the heater temperature in single-sensor mode

In single-sensor mode, the sauna control unit only displays the set temperature as standard. The actual temperature is not displayed. Should the sauna control unit display the temperature above the heater (F1) as an actual temperature in single-sensor mode, it must be activated with the function selection switch **8**.

● The function selection switch **8** is set to the ON position as standard. Therefore only the set temperature is displayed.

● Should the temperature above the heater be displayed as an actual temperature, place the function selection switch **8** in the OFF position.

Ensure that the temperature above the heater is always higher than the temperature in the area of the bench seat. With the heater temperature as the actual temperature, the temperature displayed by the sauna control unit is higher than the temperature measured by your sauna room thermometer.

9. Operation

9.1. Operating elements
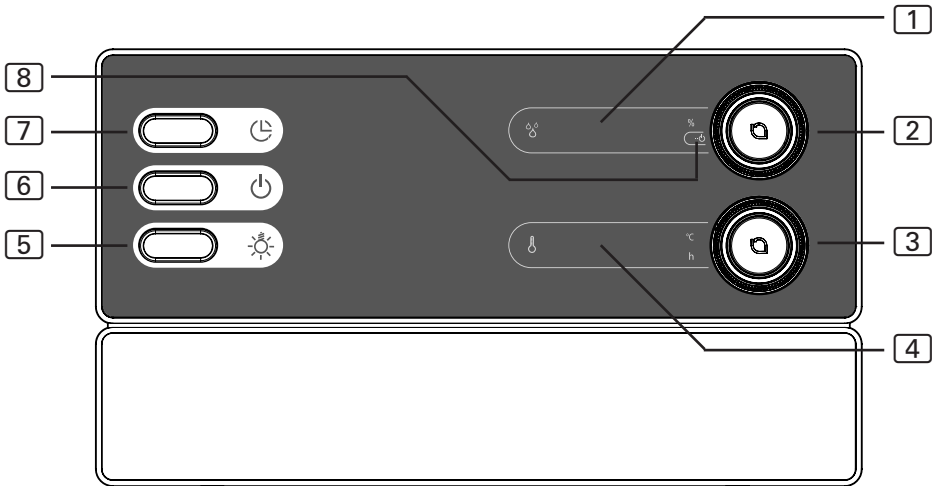
1	humidity display	5	Light switch
2	humidity selector	6	ON/OFF switch
3	Temperature selector	7	Preset time button
4	Temperature display	8	Remote start indicator

EN

9.2. Switching on the light

The light in the sauna room can be switched on and off independently of the ON/OFF switch 6 .

● To switch the light on or off on the power unit, press the light switch 5 .

9.3. Switching on the sauna control unit

⚠️ **WARNING!**
Risk of fire
Flammable objects that are placed on the sauna heater could ignite and cause fires.
- NEVER place flammable objects on the sauna heater.
- Make sure that NO flammable objects have been placed on the sauna heater before the sauna control unit is switched on.

- Press the ON/OFF switch ⑥ , to switch on the sauna control unit.
  - ► In the humidity display ① , "0" appears for a few seconds. Then the current humidity in the sauna room is displayed. If a humidity temperature sensor is not installed, the last preset humidity is displayed.
  - ► In the temperature display ④ , "0" appears for a few seconds. Then the current temperature in the sauna room is displayed. In single-sensor mode, the previously set preset temperature is displayed.

9.4. Starting sauna mode

1. Use the temperature selector ③ to set the preferred temperature.
   - ► The temperature selector ③ flashes and the preset temperature is shown in the temperature display ④ .
2. Press the temperature selector ③ .
   - ► The sauna heater is switched on and begins to heat up.
   - ► Then the current temperature in the sauna room is displayed in the temperature display ④ . In single-sensor mode, the preset temperature is displayed.

9.5. Starting combi mode

1. Use the temperature selector ③ to set the preferred temperature.
   - ► The temperature selector ③ flashes and the preset temperature is shown in the temperature display ④.
2. Press the temperature selector ③.
   - ► The sauna heater is switched on and begins to heat up.
   - ► Then the current temperature in the sauna room is displayed in the temperature display ④. In single-sensor mode, the preset temperature is displayed.
3. Use the humidity selector ② to set the preferred humidity.
   - ► The humidity selector ② flashes and the preset temperature is shown in the humidity display ①.
4. Press the humidity selector ②.
   - ► The evaporator switches on.
   - ► Then the current temperature in the sauna room is displayed in the humidity display ①. If a humidity temperature sensor is not installed, the preset humidity is displayed.

☞ If the sauna control unit is used without a humidity temperature sensor (FTS2), cycle mode is activated. If the sauna room temperature is less than 30 °C, the evaporator is activated continuously for 10 minutes. This ensures that the water in the tank reaches a basic temperature level. Cycle mode then starts.

EN

☞ The evaporator can only be started when the sauna heater is switched on. The maximum humidity level which can be set depends on the temperature of the sauna. The higher the sauna temperature, the lower the maximum humidity level which can be set.

Exception: Evaporator single mode is activated (see **8.4. Activating evaporator single mode on page 25**). The evaporator can also be operated here without the sauna heater, with the maximum humidity depending on the current sauna room temperature.

9.6. Changing the preset temperature

You can change the preset temperature during operation any time.

● Turn the temperature selector ③ to the right to increase the temperature.
  Turn the temperature selector ③ to the left to decrease the temperature.

  ▶ The temperature selector ③ flashes and the preset temperature is shown in the temperature display ④.

  ▶ Then the current temperature in the sauna room is displayed again in the temperature display ④. In single-sensor mode, the preset temperature is displayed.

9.7. Changing the preset humidity

You can change the preset humidity during operation any time.

● Turn the humidity selector ② to the right to increase the humidity.
  Turn the humidity selector ② to the left to decrease the humidity.

  ▶ The humidity selector ② flashes and the preset humidity is shown in the humidity display ①.

  ▶ Then the current humidity in the sauna room is displayed again in the humidity display ①. If a humidity temperature sensor is not installed, the preset humidity is displayed.

9.8. Activating standby for remote operation

EN 60335-2-53 specifies that sauna control units with a remote start function must be set manually to "Standby for remote operation" mode. This activation must take place again after each remote start and stop procedure. To do so, perform the following steps:

1. Press the temperature selector ⎡3⎤ for one second.
    ► The remote start indicator ⎡8⎤ starts flashing.
    ► The sauna control unit is then ready to be started and stopped using a remote start signal.
    ► After a remote start and stop, the remote start indicator goes out and the mode has to be activated again.

EN

9.9. Setting the preset time

⚠ **WARNING!**
Risk of fire
Flammable objects that are placed on the heater will ignite and cause fires.
● NEVER place flammable objects on the sauna heater.
● Make sure that NO flammable objects have been placed on the sauna heater before you activate the preset timer function.

You can set the preset time in 15 minute intervals. The maximum preset time totals 24 hours. The preset time is shown in hours and minutes, e.g. 8 hours and 15 minutes is shown as 8.15.

1. Start the sauna mode or the combi mode (see point **9.4** and **9.5**.)
2. Press the preset time button ⎡7⎤.
   ► The temperature selector ⎡3⎤ flashes and the previously set preset time is shown in the temperature display ⎡4⎤.
3. Press the preset time button ⎡7⎤, to increase the preset time in 15 minute intervals.
4. Once you have reached the required preset time, wait a few seconds.
   ► The sauna control unit changes to standby mode and the timer starts running.
   ► The temperature display ⎡4⎤ shows the remaining preset time and the temperature selector ⎡3⎤ flashes.
   ► Once the preset time has elapsed, the selected mode is started.

☞ The most recently selected preset time is saved, which means the last value can be recalled at the touch of a button. To reset the preset time to 00:00, press the preset time button for one second.

9.10. Cancelling the preset time function

- Press and hold down the preset time button $\boxed{7}$ for a second to cancel the preset time function.
    - ► The preset time countdown is cancelled.
    - ► Then the current temperature in the sauna room is displayed in the temperature display $\boxed{4}$. In single-sensor mode, the preset temperature is displayed.

9.11. Cancelling the post-drying programme

after the combi-mode, the post-drying programme is started automatically. This involves heating the sauna room to 80 °C with the fan running for 30 minutes. The text "dry" appears in the temperature display $\boxed{4}$.

- Press and hold down the temperature selector $\boxed{3}$ for a second to cancel the post-drying programme.

☞ To prevent mound and rot from forming, the post-drying programme should NOT be cancelled.

EN

9.12. Switching off the sauna control unit

- Press the ON/OFF switch $\boxed{6}$, to switch off the sauna control unit.
    - ► The humidity display $\boxed{1}$ and the temperature display $\boxed{4}$ go out.
    - ► The sauna control unit is switched off.

10. Cleaning and maintenance

10.1. Cleaning

ATTENTION!
Damage to the unit
The sauna control unit is protected against jets of water, however direct contact with water could still damage the unit.
● Never immerse the device in water.
● Never pour water over the device.
● Never clean the device with a cloth which is too wet.

1. Immerse a cleaning cloth in a mild, soapy solution.
2. Wring the cleaning cloth out well.
3. Wipe the sauna control unit housing carefully.

10.2. Maintenance

The sauna control unit is maintenance-free.

11. Disposal

● Please dispose of packaging materials in accordance with the applicable disposal regulations.
● Used devices contain reusable materials and hazardous substances. Therefore, do not dispose of your used device with household waste, but do so in accordance with the locally applicable regulations.

12. Troubleshooting

12.1. Error messages

The sauna control unit is equipped with diagnostic software which monitors system statuses when it switches on and during operation. As soon as the diagnostic software identifies an error, the sauna control unit switches the sauna heater off.

Errors are indicated by a recurring warning tone and by flashing on the humidity selector ⎣2⎦ and the temperature selector ⎣3⎦. Furthermore, "Err" appears in the humidity display ⎣1⎦. The error number appears in the temperature display ⎣4⎦.

Switch the sauna control unit off using the ON/OFF switch ⎣6⎦ and rectify the error before switching the sauna control unit on again.

The following table describes the possible errors and their causes. If necessary, tell the error number to your customer service specialist.

EN

Error	*Description*	*Cause / rectification*
01	Safety shut-off	An object has been placed on the sauna heater. Remove any objects before starting up the sauna heater again.
		If no safety shut-off is fitted, note 5.8. Connecting the safety shut-off on page 19.
02	Safety temperature limiter	The maximum temperature of 139 °C has been exceeded above the heater.
04F1	Heater sensor error	Defective heater sensor, poor contact, or short circuit.
06F2	Bench sensor error	Defective bench sensor, poor contact, or short circuit.
07	Humidity sensor error	Defective humidity sensor, poor contact, or short circuit

12.2. Low-water display

The sauna control unit features an automatic low-water shut-off feature which is active in combi mode, as long as your combi heater supports it.

If the water tank in the evaporator is empty, this is indicated by a recurring warning tone and the text "**FILL**" appears in the humidity display $\boxed{1}$. The evaporator switches on at the same time.

● Pour water into the water tank in the evaporator.
  ► After a short period, the text "FILL" goes out and the evaporator starts heating up again.

12.3. Fuses

Fuses for light, fan/power expansion and electronics as well as a spare fuse are located in the sauna control unit's connection area.

These are 1A time delay micro fuses.
They can be ordered using the item number PRO-FUSE.

Light   Electronics   Fan/power expansion   Spare fuse
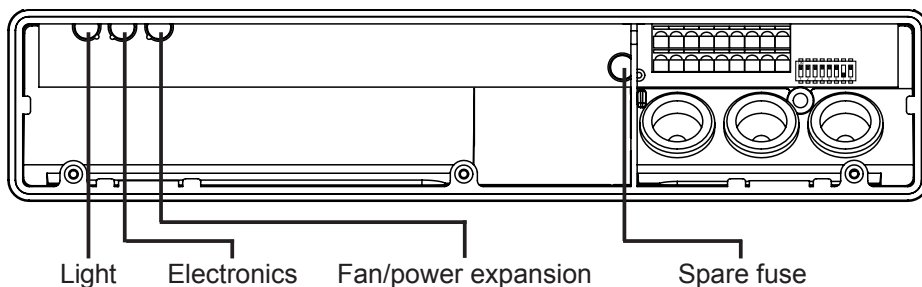
In order to replace the fuse, pull the fuse link straight out and insert the new fuse.

13. Technical data

Ambient conditions

Storage temperature:	-25 °C to +70 °C
Ambient temperature:	-10 °C to +40 °C
Relative humidity:	max. 95 %

Sauna control unit

Dimensions:	307 x 175 x 57 mm
Switched voltage / three-phase 3N:	400 V AC
Frequency:	50 Hz
Contact rating/heater:	3 x 3.5 kW
Switched current per phase/heater:	16 A
Contact rating/evaporator:	3.5 kW
Switched current/evaporator:	16 A
Rated voltage:	230 V
Protection type (protected against jets of water):	IPX4

Connection to the mains supply as fixed wiring (fixed connection)

Light

Contact rating:	100 W
Fuse:	1A T

EN

Fan

Contact rating:	100 W
Fuse:	1A T

Setting ranges

Temperature:	30 °C to 110 °C
Humidity:	0 % to 100 %

The maximum humidity level which can be set depends on the temperature of the sauna. The higher the sauna temperature, the lower the maximum humidity level which can be set.

CE

Thermal safety

Heater sensor with excess temperature fuse (139 °C shut-off temperature)

Adjustable automatic heating period (6 h, 12 h, 18 h, 24 h)*

Optional single-sensor mode or two-sensor mode

Connection cables

Power supply cable:	min. 5 x 2.5 mm²
Heater supply cable (temperature-resistant up to 150 °C):	min 2.5 mm²
Sensor wires (temperature-resistant up to 150 °C):	min 0.5 mm²
Light wire:	min. 1.5 mm²
Fan wire:	min. 1.5 mm²

* EN 60335-2-53 specifies a heating time limitation of 6 h for saunas for private use. For saunas in hotels, apartment blocks and similar locations, a maximum heating period limit of 12 hours is permissible. Extending the heating period limit to 18 hours or 24 hours is only permitted in public saunas.