

# Operating instructions

## KLAFS SAUNA with controller model 21028, 21028 T



— 90 °C

— 60 °C

— 40 °C



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— 40 °C

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— 90 °C

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## 1. QUICK REFERENCE GUIDE - SAUNA CONTROLLER

The KLAFS SAUNA controller enables you to operate your sauna quickly and easily. The temperature can be changed within the allowed adjustment range before and during the bathing session.



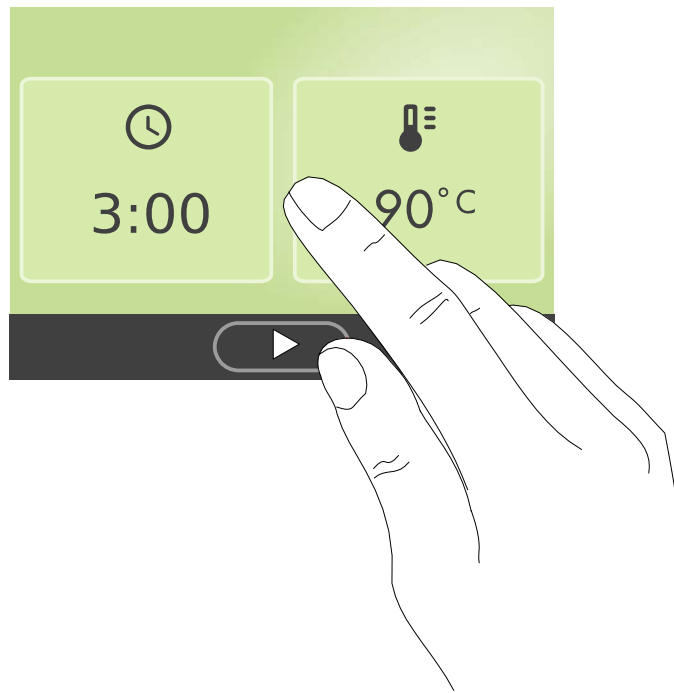
Only operate the touchscreen with your fingers. Operating the touchscreen with hard objects will leave scratches on the screen's surface or damage the screen.



Entering and changing settings will be quicker if a short pause of around 0.5 seconds is left between presses.



The backlighting will be switched off after five minutes of non-use. If you touch the display while it is dimmed or switched off, the backlighting will switch on first. You will then be able to operate the controller via the display.



## 2. BATHING MODE

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All bathing modes in your KLAFS sauna have been designed to improve your general health and well-being. However, you should still take into account any pre-existing health conditions when choosing your bathing program.



This includes:

- Bathing time
- Temperature.

Choose your bathing program according to its length and your condition. You should end the session and leave the cabin if you start to feel unwell.

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### 2.1. SAUNA

#### **Sauna**

with temperatures of 85 - 100 °C and a low relative humidity.

#### **Warm air bath**

with a particularly mild climate, temperatures of 45-60 °C and a relative humidity of up to approx. 20%.

### 3. TECHNICAL DATA

Controller model 21028, 21028 T: 3/N/PE 400 V - 50/60 Hz, max. 9 kW.  
Room conditions: Temperature 0 °C to 40 °C, max. 80% relative humidity.

### 4. INTENDED USE

The controller is intended for use with the heaters tested and approved by the German VDE (Association for Electrical, Electronic and Information Technologies) or TÜV (Technical Inspection Authority):

- Sauna heater

The controller is only to be used as intended. Intended use also assumes adherence to the manufacturer's operating, installation and servicing instructions. The manufacturer is not responsible for any damage resulting from unintended use or unapproved changes to the controller. The user does these things at their own risk.

The controller may only be operated, maintained and repaired by persons who are familiar with it and aware of the risks involved. Always observe the relevant German VDE regulations and other generally recognised safety precautions.

### 5. GENERAL SAFETY PRECAUTIONS

Read and observe the operating instructions and safety precautions before commissioning.

- Disconnect the controller from the mains before opening the controller housing.
- The controller may only be connected to the mains by a locally authorised electrician.
- Only connect sauna units to the mains via a fixed connection in accordance with VDE regulations. In the connecting feed line, use a residual-current circuit breaker  $I_{\Delta N} \leq 0.03 \text{ A}$  with a contact gap of at least 3 mm.
- Please contact KLAFS customer service in case of a fault.
- Only use original KLAFS spare parts.
- Unapproved changes to the controller are not permitted.
- Install the controller in accordance with the installation instructions.
- Electrical wiring inside the cabin and the cabin walls must have silicone insulation.
- Before commissioning the controller, always ensure that there are no flammable objects near the sauna heater in the cabin. RISK OF FIRE!
- Do not use the sauna to dry your washing.

- Never use undiluted essential oils. Only use the indicated concentration (approx. 20 - 30 drops of oil in one litre of water).
- Only use KLAFS essential oil extracts.
- Never store the bottle containing the essential oil inside the sauna cabin.
- Regularly check the sauna heater for damage.
- Check the heater for flammable objects before restarting the timer.
- The unit can be used by people with reduced physical, sensory or mental capabilities and by people who lack experience/knowledge in using it provided that they are supervised while doing so and/or have been shown how to use the unit safely and understand the potential risks involved. Children must only use the unit under supervision. Children should not clean the unit or carry out basic maintenance on it without supervision.

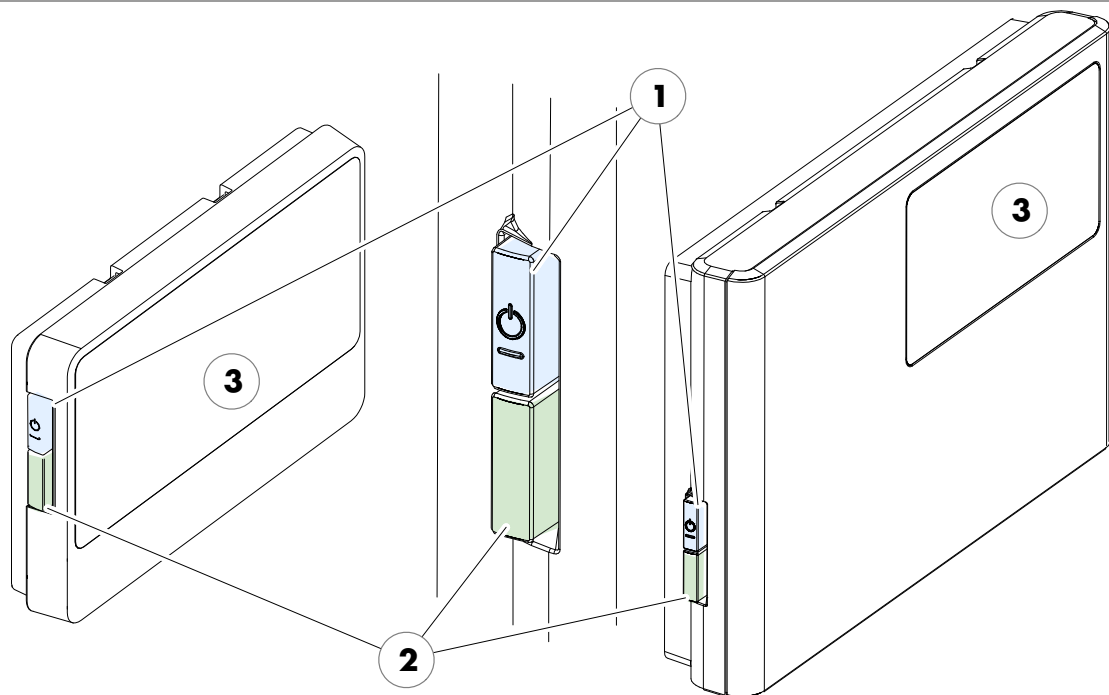
— 90 °C

— 60 °C

— 40 °C

## 6. CONTROLLER

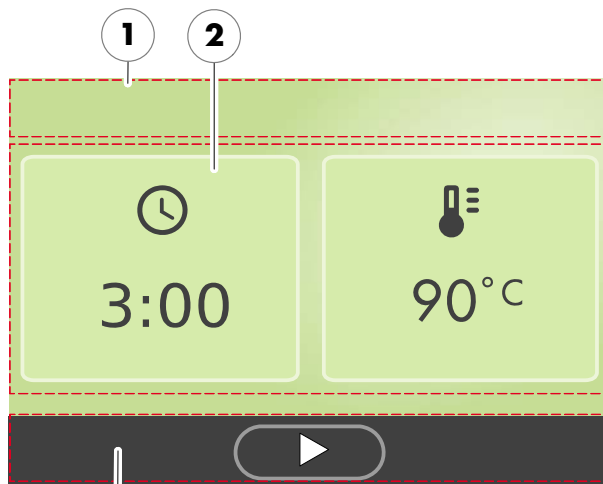
### 6.1. Operating and display elements



Item	Description
1.	Controller/Controller T main switch. <ul style="list-style-type: none"> <li>• The main switch switches off the mains power to the controller.</li> </ul>
2.	Cabin light switch. <ul style="list-style-type: none"> <li>• When the controller is connected to the mains, the cabin light may be switched on independently of the main switch.</li> </ul>
3.	Touchscreen. <ul style="list-style-type: none"> <li>• See page 9.</li> </ul>

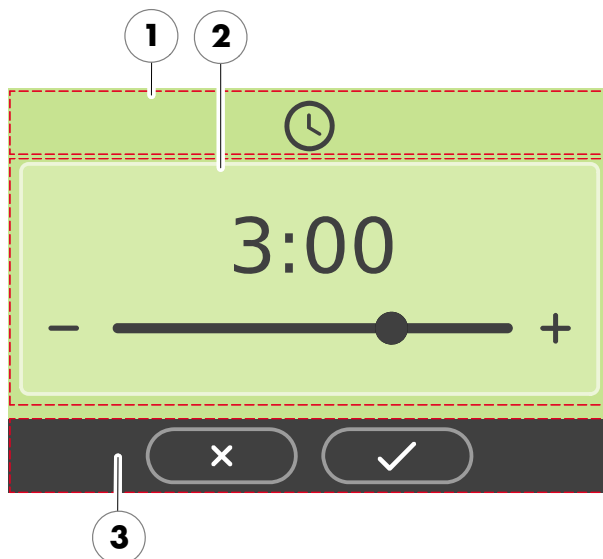


## 6.2. Touchscreen









### Section

1. Title line.
  - Navigation, menu display.
  - See page 11.
2. Bathing parameters.
  - Display of the active bathing parameters.
  - To set the bathing parameters, see page 11.
3. Footer.
  - Start and stop the bathing mode.
  - Confirm entries.
  - See page 11.



### 6.3. Touchscreen - Basic operation and display symbols

Example	
Symbol:	Display/function:
	The control panel must be switched on at the main switch. <ul style="list-style-type: none"> <li>• See page 13.</li> </ul>
	Operate the control panel by pressing on the touchscreen with your finger. The touchscreen is divided into display sections and function symbols. Functions are activated by pressing the symbols displayed. Entering and changing settings will be quicker if a short pause of around 0.5 seconds is left between presses.
	The backlighting will be switched off after five minutes of non-use. If you touch the display while it is switched off, the backlighting will switch on first. You will then be able to operate the controller via the display.
	Screen background. Green: Standby, ready for operation, settings.
	Blue: Heating up.
	Orange: In operation.

— 90 °C

— 60 °C

— 40 °C

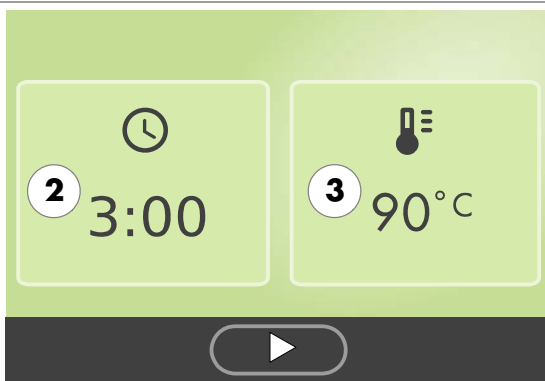
6.4. Touchscreen - Section 1: Title line



**Operating symbol, display**

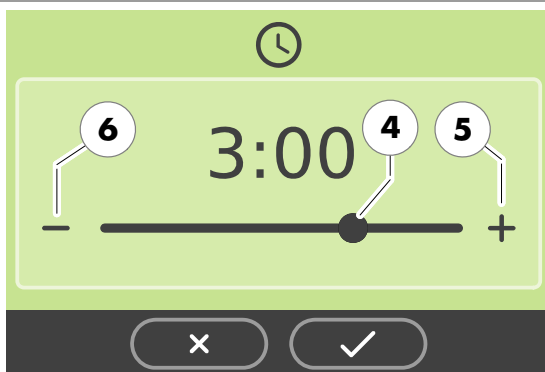
1. Symbol (1) for the setting dialogue currently selected.

6.5. Touchscreen - Section 2: Bathing mode, bathing parameter



**Bathing parameter SAUNA**

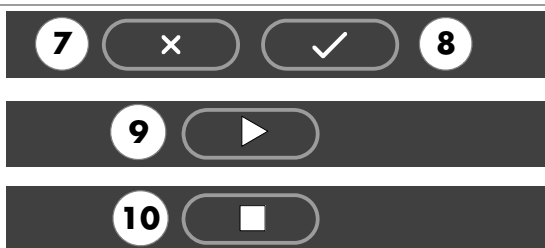
2. Bathing time (2)
  - To set the bathing time, see page 16.
3. Bathing temperature (3)
  - To set the bathing temperature, see page 17.



**Slider**

4. The slider (4) is used to set, e.g. the bathing time or temperature.
5. The value can be adjusted by pressing the +/- symbols (5 and 6).



6.6. Touchscreen - Section 3: Footer



**Operating symbols**

6. Cancel (7) or confirm (8) the entry.
7. Start (9) the bathing program.
8. End (10) the bathing program.

## 6.7. Touchscreen - Bathing parameter symbols

Symbol:	Display/function:
	Setting the bathing time. <ul style="list-style-type: none"> <li>• See page 16.</li> </ul>
	Setting the bathing temperature. <ul style="list-style-type: none"> <li>• See page 17.</li> </ul>

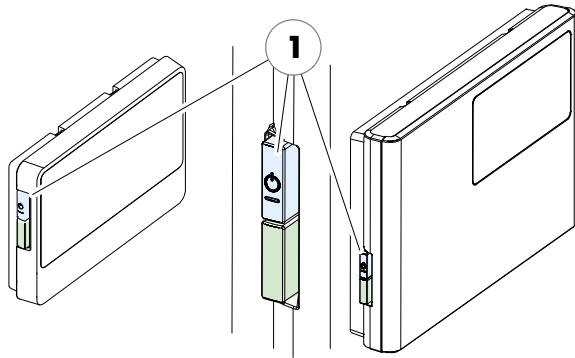
— 90 °C

— 60 °C

— 40 °C

## 7. BASIC FUNCTIONS AND SETTINGS

### 7.1. Switching the power supply on/off at the main switch



#### Switching the power supply on

1. Press the touch key (1).

The controller goes into standby mode and shows the bathing program symbols.

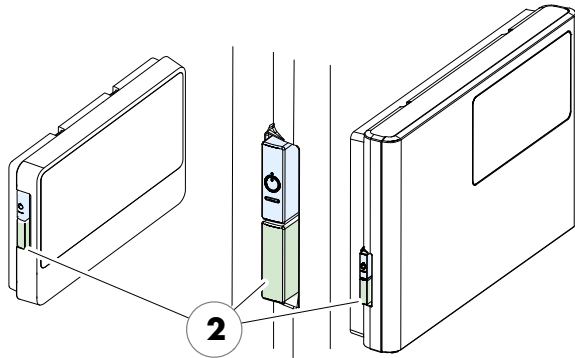
- For standby, see page 14.

#### Switching the power supply off

1. Press the touch key (1).

The touchscreen is blank when the controller is switched off.

### 7.2. Switching the cabin light on/off

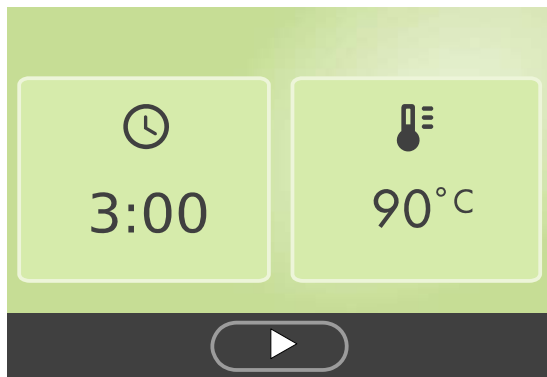


1. Press the touch key (2).

The cabin light switches on or off.

- The cabin light can be switched on even when the controller is switched off.

### 7.3. Standby mode



The touchscreen displays the start screen in standby mode:

The backlighting switches off automatically after five minutes of non-use.

- The controller can be operated via the touchscreen at any time whilst in standby mode.

— 90 °C

— 60 °C

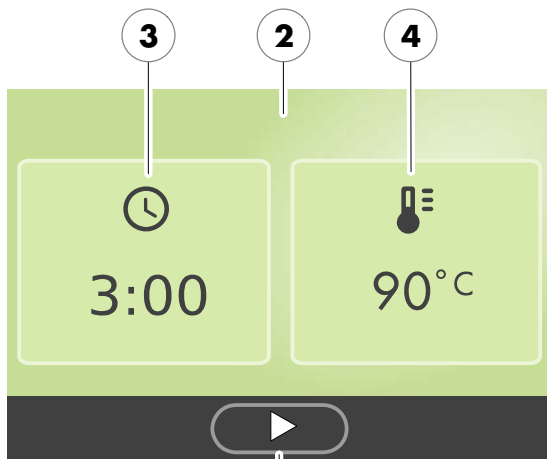
— 40 °C

## 7.4. Bathing mode SAUNA



### Risk of fire

Before commissioning the controller, always check that there are no flammable objects near the sauna heater in the cabin.



### Starting SAUNA bathing mode

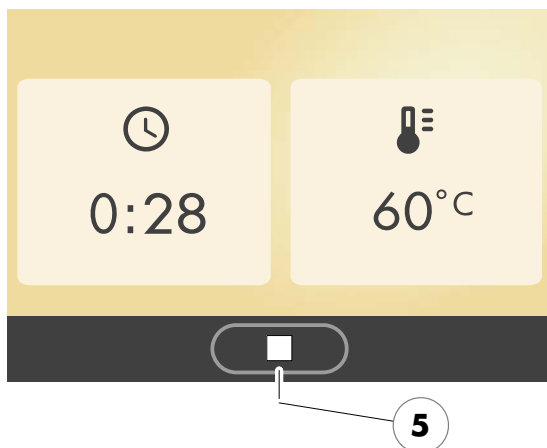
1. Press the key ► (1).

The background colour (2) changes to blue during the heat-up phase. The sauna starts with the bathing parameters last used. The sauna heater switches on and the cabin heats up.

As soon as the cabin is ready to use, the background colour (2) changes to orange.

Changing the bathing parameters:

- To change the bathing time (3), see page 16.
- To change the temperature (4), see page 17.



### Stopping SAUNA bathing mode

1. Press the symbol ■ (5).

The sauna heater switches off. The controller then goes into standby mode.

- Ventilate the cabin after SAUNA bathing mode has ended by opening the cabin door.

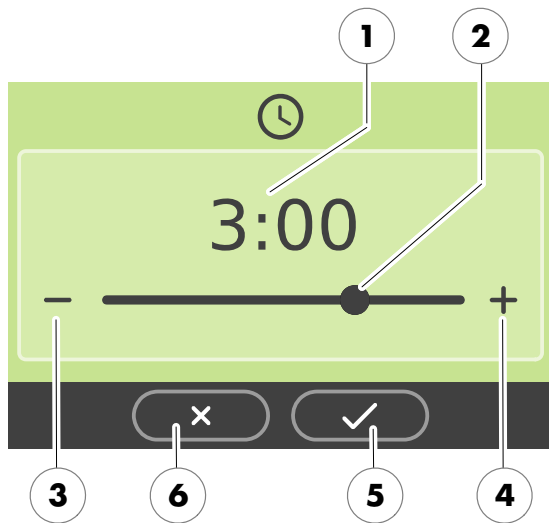
## 7.5. Setting the bathing time



### Risk of fire

Before commissioning the controller, always check that there are no flammable objects on or near the sauna heater.

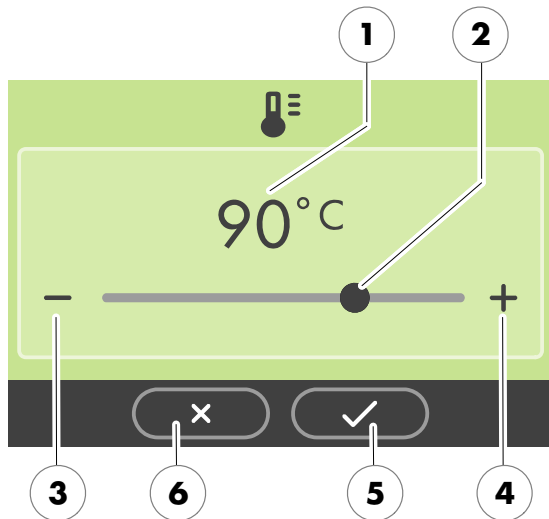
### Changing the bathing time



1. Set the bathing time (1) using the slider (2).
  - Bathing time setting HOUR:MINUTE.
2. The bathing time can also be adjusted by pressing the +/- symbols (3 and 4).
  - Slider at the far right = maximum operating time; slider at the far left = operating time of five minutes.
3. Confirm the entries by pressing the OK key (5).
  - Cancel the entry using the key (6).



## 7.6. Setting the temperature



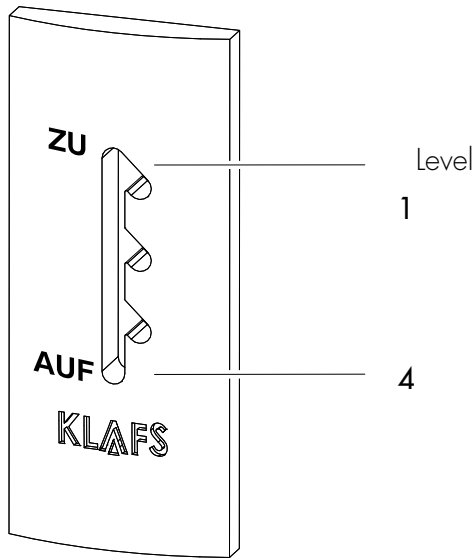
### Changing the temperature

1. Set the temperature (1) using the slider (2).
  - SAUNA: Temperature 10 °C-100 °C.
2. The temperature can also be adjusted using the +/- keys (3 and 4).
  - Slider at the far right = maximum temperature; slider at the far left = minimum temperature.
3. Confirm the entries by pressing the ✓ key (5).
  - Cancel the entry using the x key (6).

### 7.7. Vent flap for airing and ventilating the cabin (optional)

Correct airing and ventilation ensure an optimum climate.

The KLAFS vent wall with adjustable vent flap (optional) allows you to regulate the air flow rate.



#### Ventilation: Heating mode

Vent flap, level 1

There is only a low air flow at this setting.

#### Ventilation: SAUNA bathing mode

Vent flap, level 4

Bathing session with maximum number of SAUNA users.

There is maximum air flow at this setting.

The higher the air flow rate, the better the sauna climate. Intermediate levels can be selected depending on the number of users.



Set the vent flap to level 4 during final drying.

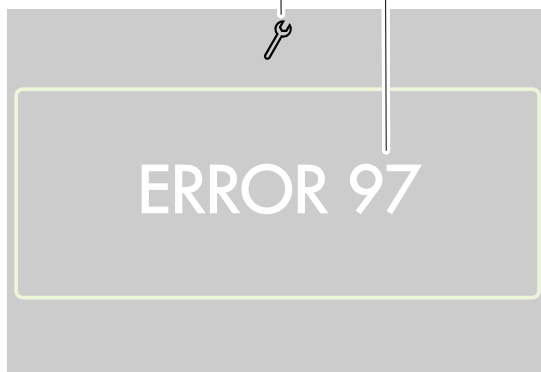
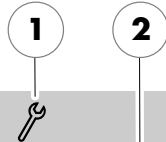
## 8. IF SOMETHING DOES NOT WORK

### 8.1. Error messages on the display




#### Risk of injury and damage to property

Repairs and maintenance must only be carried out by KLAFS service engineers or by technicians expressly authorised by KLAFS. [customerservice@klafs.de](mailto:customerservice@klafs.de). KLAFS can only provide repairs and servicing work under warranty if this work is carried out by KLAFS service engineers.



#### Error messages

The Service symbol (1) appears together with the error message number (2) (e.g. 97).

No.	Fault	Remedial measures
91	No SCS bridge present.	Check whether the SCS bridge is fitted correctly. If necessary, fit the SCS bridge.
95	Line break in the actual temperature sensor.	 Switch the controller off at the mains. Do not use the sauna cabin. <ul style="list-style-type: none"> <li>• Contact KLAFS service engineers.</li> <li>• <a href="mailto:customerservice@klafs.de">customerservice@klafs.de</a></li> </ul>
96	Line break in the heater temperature sensor.	
97	The safety temperature limiter (STL) is interrupted.	
98	Short circuit in the actual temperature sensor.	
99	Short circuit in the heater temperature sensor.	

## 8.2. Other possible errors

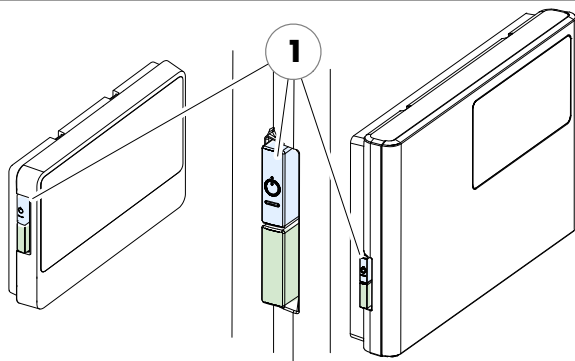
Fault	Cause	Remedy
The controller cannot be switched on.	No mains power available.	Check the residual-current circuit breaker and the fuse in the power supply.
	Fuse F2 has blown.	Replace fuse F2 (3.15 AT) or contact KLAFS service engineers. <ul style="list-style-type: none"> <li>customerservice@klafs.de</li> </ul>
The cabin light does not light up after having been switched on.	The bulb is defective.	Change the bulb. <ol style="list-style-type: none"> <li>Disconnect the controller from the mains.</li> <li>Replace with a bulb of the same wattage.</li> </ol>
	No mains power.	Check the residual-current circuit breaker and the fuse in the power supply.
	light fuse F3 has blown.	Replace light fuse F3 (1.6 AT) or contact KLAFS service engineers. <ul style="list-style-type: none"> <li>customerservice@klafs.de</li> </ul>
No power at output AG.	Fuse AG F1 has blown.	Replace fuse AG F1 (1.6 AT) or contact KLAFS service engineers. <ul style="list-style-type: none"> <li>customerservice@klafs.de</li> </ul>
	No mains power available.	Check the residual-current circuit breaker and the fuse in the power supply.
	The controller is in standby mode.	Start a bathing mode.

### 8.3. Rectifying faults, resetting error messages



**Notice:**

Only allow work on electrical components/assemblies to be carried out by qualified electricians who work in accordance with electrical rules and regulations. Switch the controller off, disconnect it from the mains and make sure that it cannot be switched on again.



1. Switch the controller off at the main switch (1).
2. Disconnect the controller from the mains and make sure that it cannot be switched on again.
3. Rectify the fault.
4. Reconnect the controller to the mains.
5. Switch the controller on at the main switch (1).

## 9. CLEANING AND MAINTENANCE

### 9.1. Cleaning the sauna cabin

The high humidity in SOFTCLIMA bathing mode does not damage your cabin's wood. A prerequisite is that the cabin is well ventilated after use and the drying phase is completed.



Never use a hose or pressure washer on the inner cabin walls, benches or seats.

#### Dirty loungers

Wipe the wooden surfaces with a damp cloth.

Sand any rough surfaces on the loungers with fine sandpaper if necessary.

The benches can also be rinsed with a 3% hydrogen peroxide solution (available from specialist dealers).



#### Disinfectants are highly corrosive.

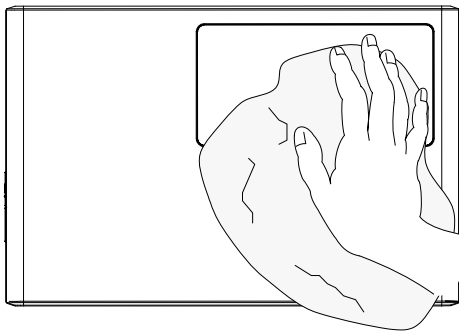
It is therefore important to observe to the relevant safety precautions. Always wear rubber gloves.



#### The outer cabin walls have been varnished or waterproofed.

Do not varnish, paint or waterproof the inner panelling or the inner cabin walls and units (loungers, etc.).

### 9.2. Cleaning the touchscreen



Switch the controller off at the main switch before cleaning.

The touchscreen's surface should only be cleaned using a soft cloth.

Moisten the soft cloth with water.

For more stubborn marks, soak the soft cloth in an organic solvent such as light petroleum.



Do not use corrosive solvents such as isopropyl alcohol (IPA).

## NOTES

— 90 °C

— 60 °C

— 40 °C



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