

Model *Lotos 105*

Environmental conditions:

Storage temperature	- 25°C to +70°C
Operating temperature	-10°C to 40°C
Air humidity	Max. 90%

Minimal temperature stability of the connecting lines:

Heater wiring, lighting circuits, heater sensor lines must be heat-resistant to at least 150°C.

Maximal lengths of lines:

Heater sensor FI	4,5 m
------------------	-------

Control:

Switching voltage	400V, 3N 50Hz/60Hz
Switching capacity	3 x 3,5kW (tot. 10,5 kW)
Switched current each phase/heater AC1	16A
AC1 switched power, light	100 W
Switched current, light	1A
Nominal supply voltage	230V
Min./max. pick-up capacity	7/12VA
Degree of protection (splash-proof)	IPX4

Connection to the main circuit as non-detachable (permanent) wiring.

Range of adjustment:

Sauna operation	40 °C – 120°C
Temperature adjustment step	/above the heater/ 1°C

Thermal safety

Heater sensor with overtemperature protector, shutdown temperature 139°C. Automatic shutdown is at maximum of 6 hours.

*** If used in hotels, spa, recreational centers etc. the automatic shutdown timeframe can be extended up to 12 hours.



Sauna device *Lotos 105*

Installation manual
User manual

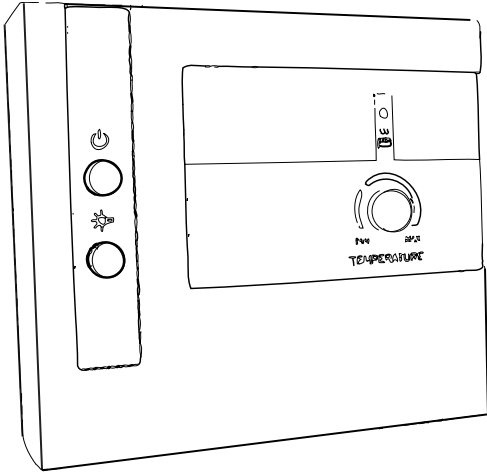


Table Of Contents:

1	Device installation	3
2	Installing heater sensor FI with overtemperature protector /fig. 2/	4
3	Testing.....	4
4	Operation modes	6
5	Indications – fig. 3	6
6	Device and light switch On/Off /fig. 3/	6
7	Start of Sauna mode /fig. 3/	6
8	Cleaning.....	6
9	In case of a long non-operation period of time.....	6
10	Errors and troubleshooting.....	6
11	Maintenance	7

Attention!

- Installation must be performed by an electrician or other qualified staff only.
- Make sure the control is disconnected from the main power supply before assembling starts.
- Read the installation instructions carefully. In doing so you will utilize all the benefits of the device and perform a safe installation.
- For additional self-protection turn to your supplier about any particular problems, which are not described or dealt with in this manual.
- Unauthorized changes or modifications of the control are not permitted due to safety reasons.
- The manufacturer reserves all rights applying technical changes.

Symbols used:

WARNING: If not closely observed may cause severe and/or lethal injuries.



CUATION: If not closely observed may cause light injuries or damage of materials.



NOTE: Gives advice concerning applications and useful information.

For quick and easy reference of important safety and operational information in the course of exploitation keep this manual!

General safety information

- On installation: three-phased automatic safety breaker with a 3mm contact opening needs to be provided in the main electric panel.
- A circuit breaker is recommended, if there is none in the main electric system of the building.

Directions of use:

- Prior to turning on the sauna control, make sure the heater is clear of flammable objects.
- *Lotos 105* control is used for the described in the technical data functions.

Lotos 105 controls 3 heating circuits 3,5kW each (tot. 10,5 kW).

Please, dispose of the packaging in appropriate places in accordance with the current administrative disposal regulations.

Cabin light does not work

- Turn off device via button switch On/Off position 4.
- Turn off lights in the cabin via button position 3.
- Turn off the fuses of the device.
- Change the light bulbs.
- Turn on fuses and push button position 3.
- Call an electrician, if the light in the cabin is still not working.

11. Maintenance

- Device is not an object of repair by unauthorized staff.
- Device is tested in accordance with accidents prevention rules procedures during commercial use.

4. Operation modes

You have available operating mode “Sauna”: dry sauna with user-defined temperature.

5. Indications – fig. 3

Indicator position 1 lights up when device is turned on.
Indicator blinks if electrical damage occurs in the system.

In case of device malfunction:

1. Turn off the main fuses.
2. Call an authorized electrician.
3. Mark the device as “inoperative”.

6. Device and light switch On/Off /fig. 3/



Attention: Fire hazard:

Prior to turning the device on make sure there are no flammable objects on top of the heater.

Button position 4 switches on/off the device.

LED indicator lights if the control is on. In this case the device is ready. The LED indicator is off when the control is off.

Position 3 button turns on/off the light in sauna cabin

7. Start of Sauna mode /fig. 3/

1. Turn device on as described in chapter 3.
2. Adjust the desired temperature via knob position 2.

In case of measured lower temperature the heater is engaged.

In case of measured higher temperature the heater is switched off.

3. Turn device off as described in chapter 3.

8. Cleaning



CAUTION: Damage of Device: Do not water the device or do not clean it with wet cloth.
For cleaning use a cleaning cloth slightly dampened in a soap solution.

9. In case of a long non-operation period of time

Turn off the main device fuses if the control is not going to be used long period of time.

10. Errors and troubleshooting

Time limitations

- Device automatically turns the heater off if the heater operates continuously over 6 hours.
- To continue the operating mode turn the device off (with button On/Off) position 4 for about 10sec then turn on again.

1. Device installation

Install the device on the cabin door at a height of 1.7 m or in accordance with the recommendations of the cabin's manufacturer.

Power is supplied via permanent connection. Quality of the power supply cable is at least H07RN-F.



CAUTION: Damages of device:

The device is splash-proof (degree of protection IPX4). Do NOT allow direct water contact! Install the device at a dry place! Environmental conditions (not to be exceeded): [-10°C ÷ +40°C], maximal air humidity 90%.

1. Carefully push the clip /fig.1, position 8/ and remove the lid.
2. Screw-in a screw at a height of 1.8 meters on the wall; max distance from cabin wall 7mm (details on fig. 1).
3. Hook the device box in position 2, fig.1 on the mounted screw.



CAUTION: Possible damages of the device:

Lotus 105 could be used for control of up to 3 circuits with max. power 3,5kW each.

4. Heater sensor lines should be guided through mounting holes - fig.1, position 5 (low voltage area fig.1, position 4) on the bottom of the box and in accordance with diagram (fig.4), connect them to terminal position 3 (fig.1).
5. Light lines should be guided through mounting holes - position 10 (fig.1) (voltage area 230V/400V fig. 1, position 11) on the bottom of the box and in accordance with diagram (fig. 4), connect them to terminal position 12.
6. Power supply and heaters wiring should be guided through mounting holes position 10 (fig.1) (voltage area 230V/400V- position 11, fig.1) on the bottom of the box and in accordance with diagram (fig.4), connect them to terminal position 12 (fig.1).
7. Connect the grounding lines to terminal - position 7 (fig. 1).
8. Screw both slot headed screws into the mounting holes - position 6, position 9 (fig. 1).
9. Place the lid back in its place – top first and push until it clicks.

2. Installing heater sensor FI with overtemperature protector /fig. 2/

Install the sensor with overtemperature protection in the sauna cabin about 15 cm. below the ceiling and above the heating system or in accordance with requirements of the manufacturer.

Install only the sensor 150°C temperature-resistant connection line applied in the device set. Cable extension is permitted outside the sauna cabin.



CAUTION: Double insulation is required:

The wiring of the heater sensor must be separated from high voltage cable. Cover lines with insulation.

1. Connect the sensor lines position 1 (fig.2), according to position 3 (fig.2).
2. Connect to sauna control position 3 (fig.1).
3. Perform tests according to chapter „Testing“.
4. Fix the sensor to the wall position 2 (fig.2) – over the heater, 15 cm below the ceiling or in accordance with manufacturer's requirements.

3. Testing

Tests must be conducted by authorized electrician only.



WARNING: Electric shock hazard:

Tests are conducted with main supply power on.

1. Test contact to terminal position 7 (fig.1).
2. Test connections and contact between phases L1, L2, L3 and U, V, W.
3. Test if short circuit or interruption in sensor's signal lines are recognized and indicated as errors. In such a case the heater does not turn on or (if is already operating) turns off automatically:
 - a. In case of disconnected sensor's white or red wire or short circuited white wire the heater must turn off automatically.
 - b. If any of the described in a) cases the red LED indicator position 1(fig.3) is blinking.

Dear User,

- Read the installation instructions carefully. In doing so you will utilize all the benefits of the device and perform a safe assembly.
- For additional self-protection turn to your supplier about any particular problems, which are not described or dealt with in this manual.
- Unauthorized changes or modifications of the control are not permitted due to safety reasons.
- The manufacturer reserves all rights applying technical changes.

Symbols used:



WARNING: If not closely observed may cause severe and/or lethal injuries.



CAUTION: If not closely observed may cause light injuries or damage of materials.



NOTE: Gives advice concerning applications and useful information.

For quick and easy reference of important safety and operational information in the course of exploitation keep this manual!

General safety information

- On installation: three-phased automatic safety breaker with 3mm contact opening needs to be provided in the main electric panel.
- A circuit breaker is recommended, if there is none in the main electric system of the building.

Directions of use:

- Prior to turning on the sauna control, make sure the heater is clear of flammable objects.
- *Lotos 105* control is used for the described in the technical data functions.

Lotos 105 controls 3 heating circuits 3,5kW each (tot. 10,5 kW).

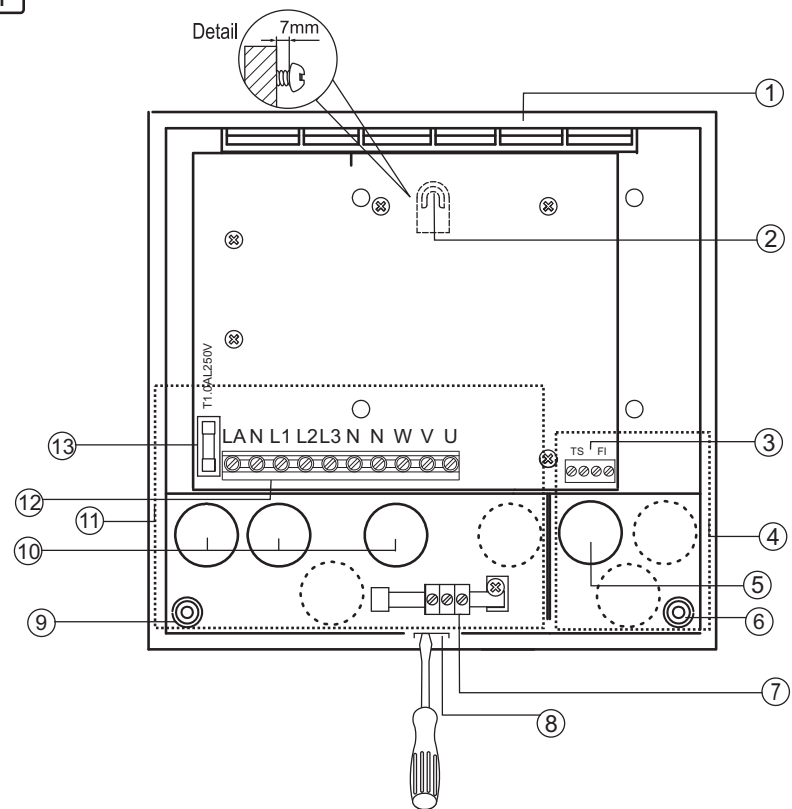
Disposal:

- Old used devices contain recyclable materials. Do not dispose of them anywhere but inquire at the administration of your district about the possibility of recycling.

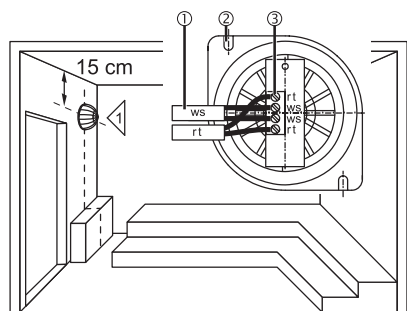
In case of a long non-operation period of time

- Turn off the main device fuses if the control is not going to be used long period of time.

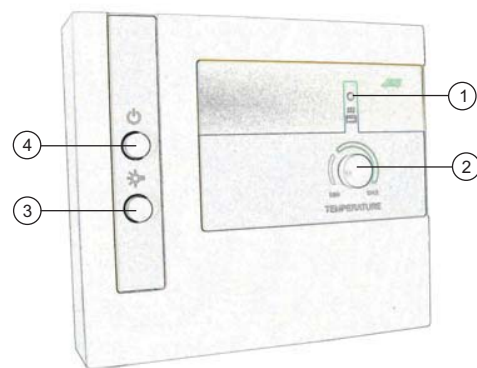
1



2



3



4

