

SAUNALINK

Precision Sauna Environment Controllers

Installation & Operation Manual



Models:

SaunaLife10/CX30-U1-U3
SaunaLife15/CX45-U1-U3



ETL listed conforms to UL STD 875 certified to CAN/CSA STD E60335-2-53-05

NOTE!

These instructions for installation and use are intended for owners of saunas, heaters, and control units, persons in charge of managing saunas, heaters and control units, and for electricians responsible for installing heaters and control units. Once the control unit is installed, these instructions of installation and use are handed over to the owner of the sauna, heater and control unit, or to the person in charge of maintaining them.

SAUNALINK CONTROL UNIT

Control unit's purpose of use: The control unit is meant for controlling the functions of an electric sauna heater. It is not to be used for any other purpose.

TABLE OF CONTENTS

1.	WARNINGS!	. 3
2.	SAUNALINK SAUNA ENVIRONMENT CONTROLLER 2.1. General 2.2. Technical Data 2.3. Troubleshooting INSTRUCTIONS FOR USE 3.1. Using the Heater 3.2. Using Accessories 3.3.1. Lighting 3.3.2. Ventilation 3.3.3. Safety Switch 3.3.4. Remote Switch 3.3. Remote Control 3.4. Control Panel Lock	. 4 . 5 . 6 . 6 . 6 . 6 . 6
4.	INSTRUCTIONS FOR INSTALLATION 4.1. Installing the Control Panel 4.2. Installing the Power Unit	11
5 .	OPTIONAL TIMECLOCK OPERATION 5.1. Setting SaunaLink for 24hr operation 5.5.1. Electrical Connections 5.5.2. Instructions for Installation 5.5.3. Power Unit Breaker Faults 5.5.4. Multidrive 5.2. Installing the Temperature Sensor 5.3. Resetting the Overheat Protector	12 12 13 13 17 18
6.	SPARE PARTS	19
7.	MAINTENANCE INSTRUCTIONS	19
8.	WARNINGS!	20
9.	GUARANTEE	21

WARNINGS!



Do not smoke, use alcohol, or exercise in the sauna!

Do not exceed 30-minutes in the sauna at one time, as excessive exposure can be harmful to health. The sauna should not be used as an endurance test!

Persons with poor health should consult their physicians before using the sauna!

Avoid fire, do not place any combustible material over the sauna heater (towels, bathing suits, wooden bucket or dipper)!

Use only clean water on the stones - do not use pool or spa water, as chlorine gas can be produced and the heating elements can be damaged!

Keep away from the heater when it is hot. The stones and outer surface of the heater may burn your skin.

Do not pour too much water on the stones. The evaporating water is boiling hot.

Do not let young, handicapped or ill people bathe in the saune on their own.

Consult your doctor about health-related limitations of bathing.

Parents should keep their children away from the hot heater.

Consult your child welfare clinic about taking little babies to the sauna.

- Age?
- -Temperature of the sauna?
- -Time spent in the warm sauna?

Be very careful when moving in the sauna, as the platform and floors may be slippery.

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperatures of 98.6°F (37°C). The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness, and fainting.

The effects of hyperthermia include:

- A) Failure to perceive heat
- B) Failure to recognize the need to exit the room
- C) Unawareness of impending hazard
- D) Fetal damage in pregnant women
- E) Physical inability to exit the room
- F) Unconsciousness

Warning - the use of alcohol, drugs or medication is capable of greatly increasing the risk of fatal hyperthermia!

SAUNALINK SAUNA ENVIRONMENT CONTROLLER



GENERAL

The control unit consists of a control panel, a power unit and a sensor. See figure 1.

The control unit regulates the temperature in the sauna room based on information given by the sensor. The temperature sensor and the overheat protector are located in the sensor box. The temperature is sensed by an NTC thermistor, and there is a resettable overheat protector (see section 3.4.).

The control unit can be used to delay the start of the heater (timer delay). See figure 3.

TECHNICAL DATA

Control Panel:

- Temperature adjustment range 104 -194°F (40 - 90°C)
- Pre-setting time adjustment range 0 -12 h
- Lighting control, max. power 100W, 120V, 1Ph
- Fan control, max. power 100W, 120V, 1Ph
- Dimensions: 3.4" x 1" x 4.4"
- 50' control cable length

Power Unit:

- Supply voltage
 SaunaLink 10: 240V 1Ph, 208V 3Ph
 HeatPad 15: 240V 1Ph, 208V 3Ph
- Max. load
 SaunaLink 10: 6kW 240V 1Ph
 10kW 240V 1Ph (with dual circuits)
 10kW 208V 3Ph
- SaunaLink 15: 8kW 240V 1Ph
 15kW 240V 1Ph (with dual circuits)
 15kW 208V 3Ph
- Dimensions: 14.3" x 2.9" x 10.5"

Sensor:

- Temperature Sensor NTC thermistor 22kΩ/T=77°F (25°C)
- Resettable overheat protector
- Dimensions: 2.0" x 2.9" x 1.1"
- 50' sensor cable length

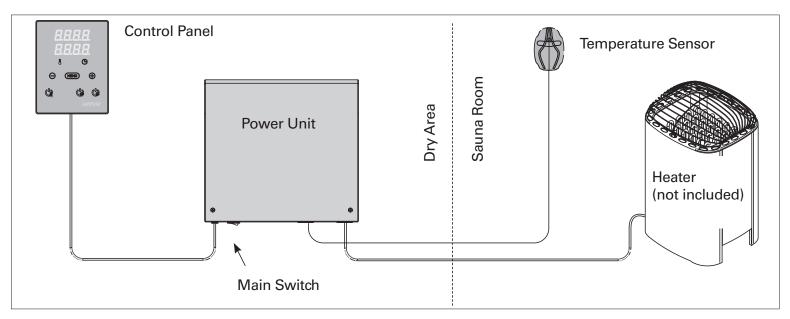


Figure 1. Control Unit Components

TROUBLESHOOTING

If an error occurs, the power to the heater will be cut off and the control panel will show an error message "E (number)", which helps troubleshooting the cause of the error. Table 1.

Note! The overheat protector can be reset by user. All other maintenance must be done by licensed professional maintenance personnel. Control unit should not be opened by unlicensed personnel.

If the heater does not heat properly, check heater grade from settings menu. See figure 3b.

	Description	Remedy / Solution
E1	Temperature sensor's measuring circuit broken.	Check the red and yellow wires to the temperature sensor and their connections (see figure 6) for faults.
E2	Temperature sensor's measuring circuit short-circuited.	Check the red and yellow wires to the temperature sensor and their connections (see figure 6) for faults.
E3	Overheat protector's measuring circuit broken.	Press the overheat protector's reset button (see section 3.4.). Check the blue and white wires to the temperature sensor and their connections (see figure 6) for faults.
E9	Connection failure in the system.	Switch the power off from the main switch (figure 1). Check the data cable, sensor cable/s and their connections. Switch the power on. Multidrive-system (see Section 3.2.4.): Switch the power off from all power units. Check the data cable, sensor cable/s, Multidrive cable and their connections

Table 1. Error messages. Note! The overheat protector can be reset by user. All other maintenance must be done by licensed professional maintenance personnel. No user-serviceable parts inside.

STATUS MESSAGES				
SAFE	Safety switch circuit is open	Remove the object from atop the safety switch.		
rESt	Pause time active	-		
rc on	Remote control activated			

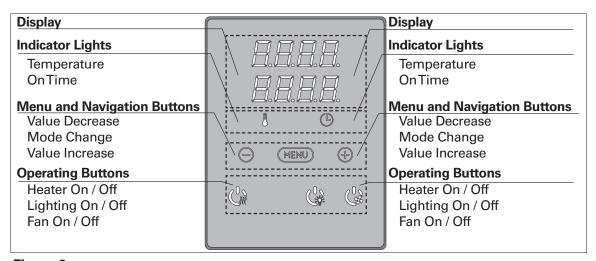


Figure 2. 5



INSTRUCTIONS FOR USE

USING THE HEATER

WARNING! Before switching the heater on always check that there isn't anything on top of the heater or inside the given safety distance.

IMPORTANT! Before switching the heater on for the first time, change the right heater grade from the settings menu (SET 3). See figure 3b. See the right heater grade from the heater's type label, under "control unit grade settings."

The right heater grade must be chosen to pair the control unit and the heater. Right heater grade optimizes heater and ensures the best possible sauna experience.

When the heater starts, the top row of the display will show the set temperature and the bottom row will show the set on time for five seconds.



Start the heater by pressing the I/O button on the control panel.

When the desired temperature has been reached in the sauna room, the heating elements are automatically turned off. To maintain the desired temperature, the control unit will automatically turn the heating elements on and off in periods.

The heater will turn off when the set on time runs out, the I/O button is pressed or an error occurs.

The settings menu structure and changing the settings is shown in figure 3. Changing the temperature unit (Fahrenheit/Celsius) is shown in figure 3.a.

USING ACCESSORIES

Lighting and ventilation can be started and shut down separately from their own operating buttons.

LIGHTING

The lighting in the sauna room can be set up so that it can be controlled from the control panel. (Max 100W.)



Switch the lights on / off by pressing the button on the control panel

VENTILATION

If there is a fan installed in the sauna room, it can be connected to the control unit and be controlled from the control panel.



Start/Stop the fan by pressing the button on the control panel.

SAFETY SWITCH

Safety switch refers to e.g. SFE, a safety device installed above or integrated to the heater, preventing the heater from heating should any object (e.g. towel, piece of clothing) drop or be placed on the top of the heater and can cause a fire hazard.

The switch is connected to the control unit according to their manuals. See also figure 6 in this manual.

REMOTE SWITCH

To remotely control the heater's power input, the control unit can be equipped with an on/off remote switch (e.g. building automation or time clock). For more information, see 2.3.



REMOTE CONTROL

According to the product standard IEC/EN 60335-2-53 regulating electrical sauna heaters, a control unit can be used to remotely control the heater once the heater is equipped with a safety switch.

Using with a safety switch: The heater can be turned on remotely, if the safety switch circuit is closed. If the circuit is open, "SAFE" is displayed and the heater will not start.

Pause time: These features are limited by a pause time that prevents the heater from turning on if it has been less than 6-hours since the heater was last turned off. Trying to remotely turn the heater on during the pause time period (6-hours), text "rESt" is displayed. The heater can be remotely started after the pause time has elapsed and "rc" is displayed.

Memory for power failures: The control unit resumes operation, if the remote switch has remained in ON position.

Preset time: If the control unit is on preset delay time, it cannot be controlled with a remote switch. After the preset delay has passed and the heater is turned on, it can be turned off with a remote switch.

Operation: See page 12.

Wiring Schematic: ProHeat (pages 14). ClubHeat (pages 15).



CONTROL PANEL LOCK

Con Time Con	Press and hold the heater and light buttons for three seconds.
	-CL- is shown on the display. Panel lock can be activated only in standby mode. Panel lock also prevents remote start.
	Basic Mode (heater on) The top row shows the temperature in the sauna room. The bottom row shows the remaining on time. Both indicator lights glow.
MENLL	Press the MENU button to open the settings menu.
	The display shows the sauna room temperature setting. Temperature indicator light blinks.
	• Change the setting to the desired temperature with the - and + buttons. The range is 104 - 194°F (40 - 90°C). The programmed temperature is stored in memory and will also apply when the heater is switched on next time.
MENU	Press the MENU button to access the next setting.
	Remaining on-time Press the - and + buttons to adjust the remaining on-time.
	Example: The heater will be on for 40-minutes.
	 Set the timer delay in remaining on time mode: Press the + button to set the on time to maximu (1:00). Press the + button to enter the timer delay mode. The temperature indicator light switches off. Timer delay symbol blinks on the screen. Select the desired delay time using the - and + buttons. the time changes in
	10-minute steps. Press and hold the button to make the time change faster. The adjustment range is from 10-minutes to 12-hours. Example: The heater will start after 10-minutes.
MENL	Exit by pressing the MENU button.
	Basic Mode (timer delay running, heater off) The bottom row shows the remaining delay time. The decreases of time is shown until zero appears, after which the heater is switched on and will start to heat the sauna room.
· •	



ADDITIONAL SETTINGS

	Control unit standby
─ MENU ←	Open the settings menu by simultaneously pressing the locations of the buttons -, MENU and +. Press for 5-seconds.
1	The buttons do not glow when the control unit is already in stanby mode.
	Settings the remote use and safety switch
	Set the remote use (rc) ON/OFF with - and + buttons.
B.B.B.	Confirm the selection with the MENU button.
5.8.8.8	Set the safety switch (SAFE) ON/OFF with - and + buttons.
	Confirm the selection with the MENU button.
	When remote use is ON the menu will show setting for pause time (rest). Enable or disable the pause time feature with buttons + and Pause time must be enabled, if
	the control unit is remotely started by an automated scheduled (e.g. a weekly timer).
	See sections 2.2.3. and 2.3. for further infromation
5 <i>EE E E E E E E E E E</i>	Press the menu button till SET2 appears in the screen. Change the temperature unit with the - and + buttons. The options are Fahrenheight (FAHR)* and Celsius (CELS).
□ MENU →	Press the MENU button to accept the set. Press the MENU button again and the next set will appear or the control unit switches to standby mode.

Table 3a. Settings menu structure, additional settings

* Factory Setting



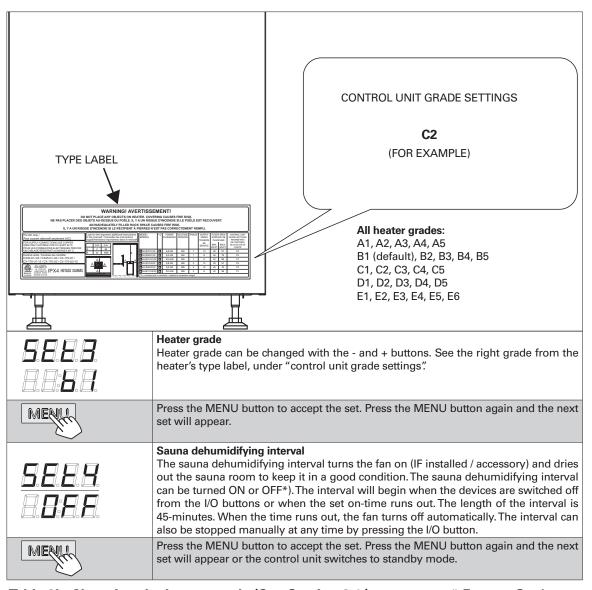


Table 3b. Changing the heater grade (See Section 2.1.)

* Factory Setting

INSTRUCTIONS FOR INSTALLATION

The electrical connections of the control unit may only be made by a licensed professional electrician and in accordance with the current regulations. When the installation of the control unit is complete, the person in charge of the installation must pass on to the user the Instructions for Installation and Use that come with the control unit and must give the user the necessary training for using the heater and the control unit.

INSTALLING THE CONTROL PANEL

The control panel is splashproof and has a low operating voltage. The panel can be installed in the dressing room, or in the living quarters. If the panel is installed in the sauna room, it must be installed at least 1.5' away from the heater and at a maximum height of 3' from the floor. Figure 4.

Conductor tubing (1-3/16") inside the wall structure allows you to thread the data cable hidden within the wall - otherwise the installation will have to be on the wall surface. We recommend you to install the control panel embedded in to the wall and far away from possible splashes.

INSTALLING THE POWER UNIT

Install the power unit to a wall outside the sauna room, in a dry place with an ambient temperature more than 32°F (0°C). See figure 5 for instructions on how to open the power unit cover and how to fix the unit to the wall.

Note! Do not embed the control unit into the wall, since this may cause excessive heating of the internal components of the unit and lead to damage. See figure 5.

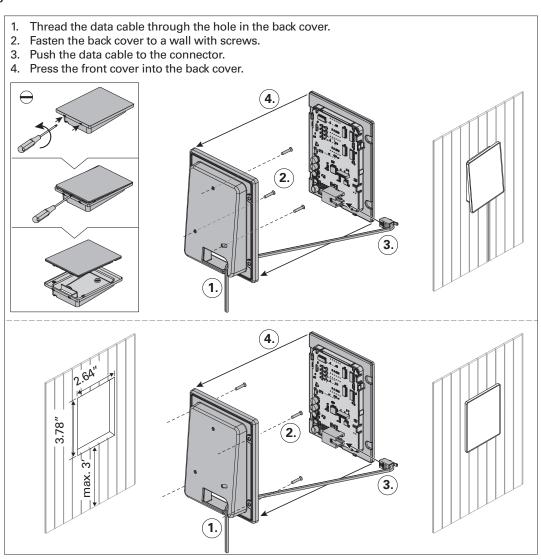


Figure 4. Fastening the control panel

OPTIONAL TIMECLOCK OPERATION

SaunaLink 10 / SaunaLink 15 control units can be installed with an optional time clock for customized on/off operation.

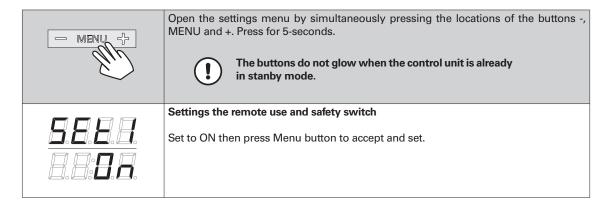
See page 16 for optional time clock electrical connections.

SETTING SaunaLink FOR 24 HOUR OPERATION Step 1

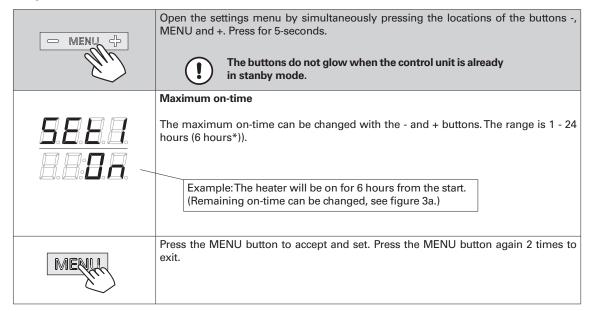
ELECTRICAL CONNECTIONS

The heater and control unit may only be connected to the electrical network in accordance with the current regulations by a licensed professional electrician.

Figure 6 shows the electrical connections of the power unit. For more detailed installation instructions see The Instructions for Installation and Use of the selected heater model.



Step2





INSTRUCTIONS FOR INSTALLATION

The power unit of the SaunaLink10 and SaunaLink15 are controlled by the control panel.

- Control panel is connected to power unit via data cable.
- Only one control panel can be connected to the power unit.

Temperature Sensor:

 PTS-1015 is needed to operate SaunaLink 10 and SaunaLink 15.
 See section 3.3 for correct temperature sensor placement.

Two relay outputs (120V 1Ph):

• For driving a fan (max. 100W) and lighting (max. 100W).

Breakers on the electronics card (if a breaker has blown, see Section 3.2.3.):

- 40 mA breaker for electronic unit.
- Two 2.5 Ah breakers for relay outputs U1, U2, A1, A2.

Technical specifications:

Max. length of data cable: 80' (25m)

POWER UNIT BREAKER FAULTS

Replace a blown breaker by a new one with the same resistance. The replacement of the breakers in the power unit is shown in figure 6.

- If the breaker F2 for the electronic unit has blown, there is likely a fault in the power unit and it might need to be replaced. Service is required.
- If the breaker F3 has blown, there is a problem with lighting or fan. Check the wiring and functioning of lighting and fan.
- If the breaker F1 has blown, there is a problem with the heater's overheat protector circuit. In the heater, check the safety contactor circuit, overheat protector and their wiring.

NOTE! Only a qualified licensed electrician should replace the electronic card or fuse of the control unit, by following the necessary precautions!

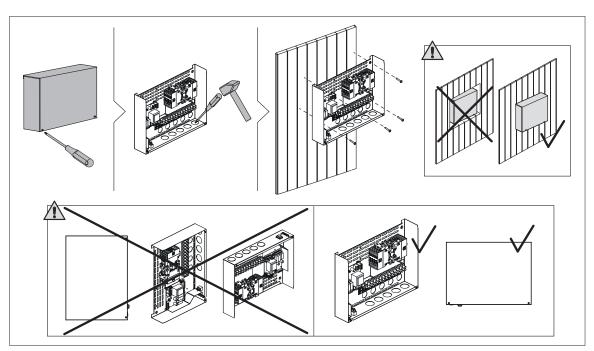


Figure 5. Opening the power unit cover and mounting the unit to a wall

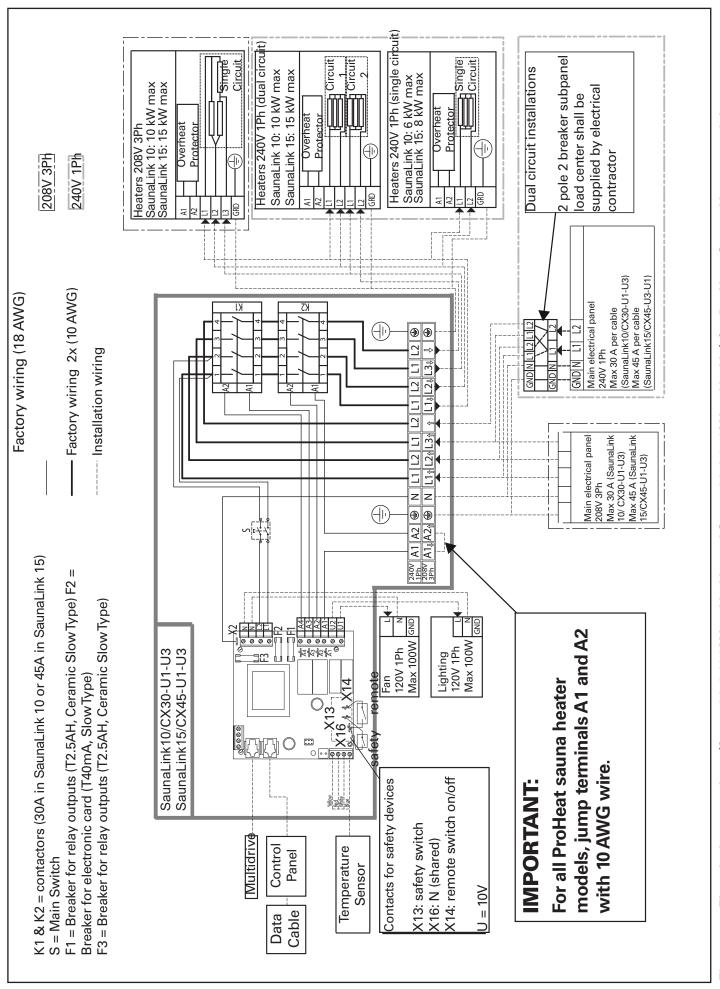


Figure 6.1 Electrical connections (SaunaLink10/CX30-U1-U3 and SaunaLink15/CX45-U1-U3) for ProHeat Sauna Heater models $\stackrel{ riangle}{=}$ (P300/KIP30W1, P450/KIP45W1, P600/KIP60W1, P800/KIP80W1, P600-3/KIP60W3, and P800-3/KIP80W3).

CLUBHEAT SERIES SAUNA HEATERS ONLY

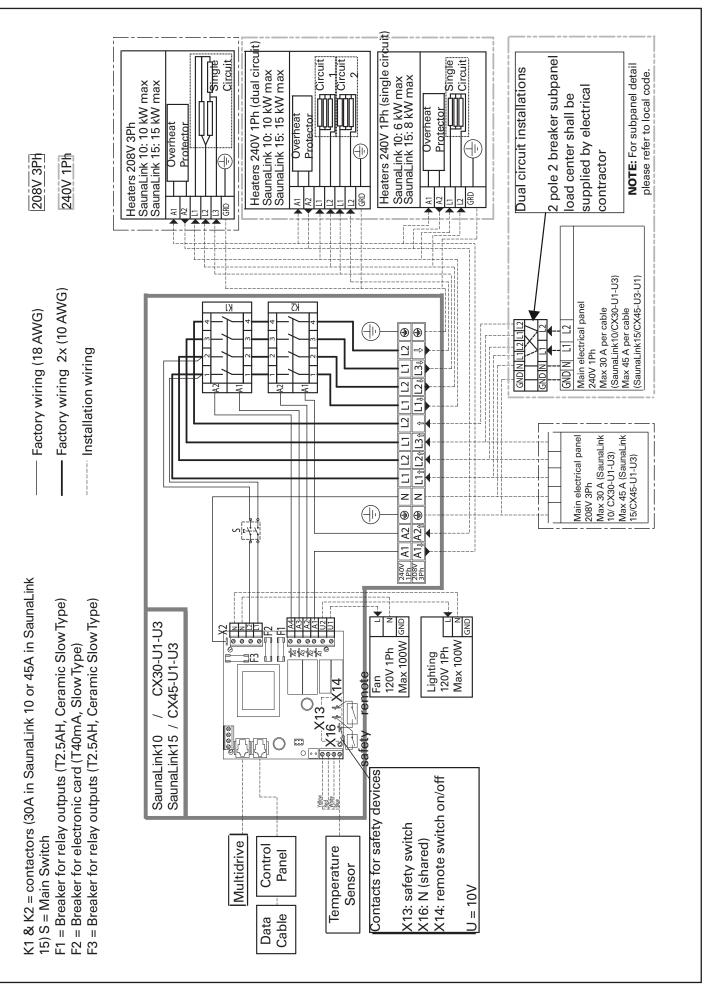


Figure 6.2 Electrical connections (SaunaLink10/CX30-U1-U3 and SaunaLink15/CX45-U1-U3) for ClubHeat Sauna Heater models ज (C1000/K10G-U1, C1250/12.5G-U1, C1500/K15G-U1, C1000-3/K10G-U3, C1250-3/K12.5G-U3, and C1500-3/K15G-U3)

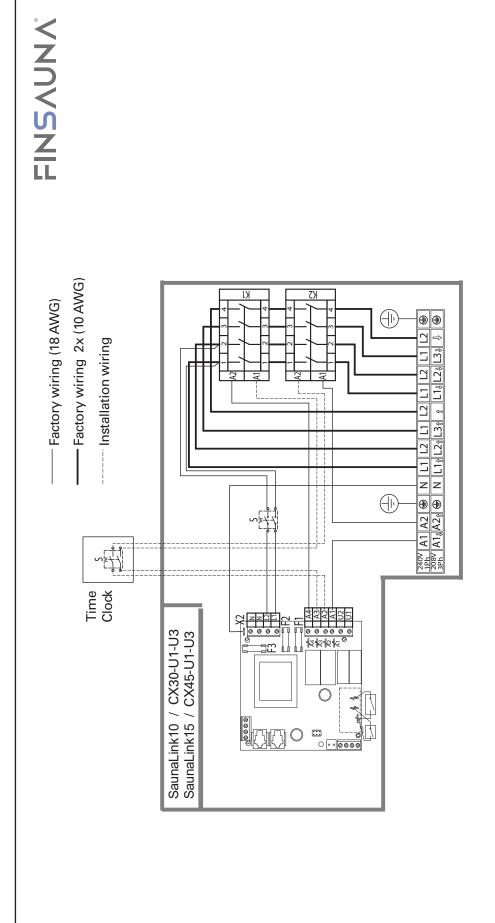


Figure 6.3 Optional Time Clock Electrical Connections (SaunaLink 10/CX30-U1-U3 and SaunaLink 15/CX45-U1-U3) for all ProHeat and ClubHeat sauna heater models.

MULTIDRIVE

Up to 8 power units can be connected in series so that they can share the same control panel. The connection principle is shown in figure 7.

- Connect the control panel to the first or last power unit in the chain.
- Connect the temperature sensor to the first power unit in the chain. ر ز

Install a wire loop to the temperature sensor terminals in other power units. 4.

Install the sensor in the sauna room as described in

section 3.3.

რ

Connect the power units together with Multidrive

cables. <u>ي</u>

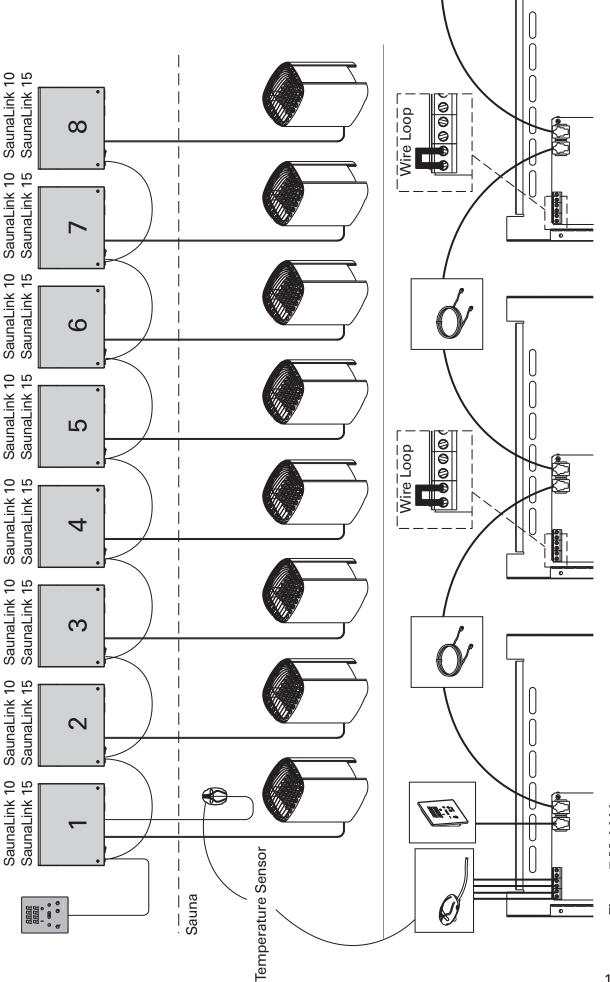


Figure 7. Multidrive



INSTALLING THE TEMPERATURE SENSOR

Floor-mounted heaters (see figure 8)

 The temperature sensor is mounted on the wall above the heater, along the vertical center line running parallel to the sides of the heater, at a distance of 3-15/16" from ceiling.

Wall-mounted heaters (see figure 9)

The temperature sensor is wall-mounted above the heater, along the vertical center line running parallel to the sides of the heater, at a distance of 3-15/16" from the ceiling.

NOTE! The wire of the sensor can be extended with similar type of wire. Not exceeding 80' (25m).

RESETTING THE OVERHEAT PROTECTOR

The sensor box contains a temperature sensor and an overheat protect. An NTC thermistor senses the temperature, and the resettable overheat protector cuts off the heater power in a case of malfunction, after which the protect can be reset. See figure 11.

Note! The reason for the going off must be determined before the button is pressed.

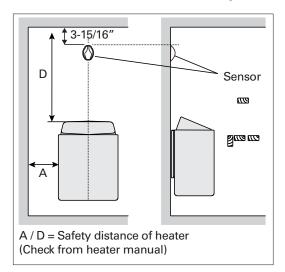


Figure 9. The placement of the temperature sensor of the control unit in connection with wall-mounted heaters

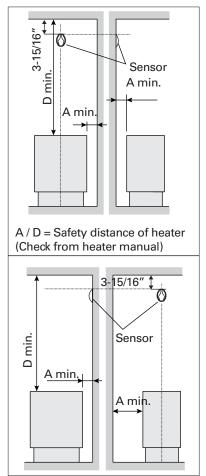


Figure 8. The placement of the temperature sensor of the control unit in connection with floor-mounted heaters.

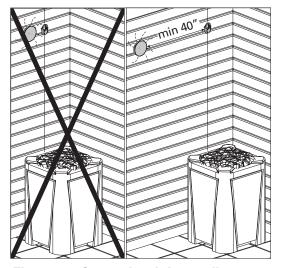


Figure 10. Sensor's minimumdistance from an air vent



Do not install the temperature sensor closer than 3' 3-3/8" to an air vent. This air flow near an air vent cools down the sensor, which gives inaccurate temperature readings to the control unit. As a result, the heater might overheat. See figure 10.

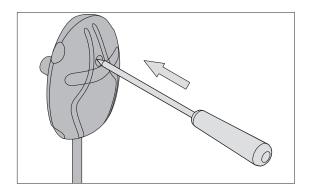
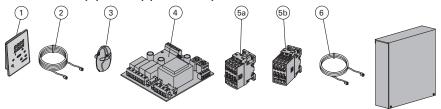


Figure 11. Reset button of the overheat protector

SPARE PARTS

Use only parts approved by the manufacturer!



1	Control panel
2	Data cable 50'
3	Temperature sensor, 50'
4	Circuit board
5a	Contactor 30 A (SaunaLink10/CX30-U1-U3)
5b	Contactor 45 A (SaunaLink15/CX45-U1-U3)
6	Multidrive cable 5' (optional)

MAINTENANCE INSTRUCTIONS

- 1. All service operations must be done by professional licensed maintenance personnel. Control unit should NOT be opened by unlicensed personnel.
- 2. Wipe dust and dirt from the power unit and the control panel with a damp cloth. DO NOT use running water!
- 3. Prevent any water from going inside the power unit at anytime.
- 4. The control panel is splashproof.

WARNINGS!



Do not smoke, use alcohol, or exercise in the sauna!

Do not exceed 30-minutes in the sauna at one time, as excessive exposure can be harmful to health. The sauna should not be used as an endurance test!

Persons with poor health should consult their physicians before using the sauna!

Avoid fire, do not place any combustible material over the sauna heater (towels, bathing suits, wooden bucket or dipper)!

Use only clean water on the stones - do not use pool or spa water, as chlorine gas can be produced and the heating elements can be damaged!

Keep away from the heater when it is hot. The stones and outer surface of the heater may burn your skin.

Do not pour too much water on the stones. The evaporating water is boiling hot.

Do not let young, handicapped or ill people bathe in the saune on their own.

Consult your dodcutor about health-related limitations of bathing.

Parents should keep their children away from the hot heater.

Consult your child welfare clinic about taking little babies to the sauna.

- Age?
- Temperature of the sauna?
- -Time spent in the warm sauna?

Be very careful when moving in the sauna, as the platform and floors may be slippery.

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperatures of 98.6°F (37°C). The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness, and fainting.

The effects of hyperthermia include:

- A) Failure to perceive heat
- B) Failure to recognize the need to exit the room
- C) Unawareness of impending hazard
- D) Fetal damage in pregnant women
- E) Physical inability to exit the room
- F) Unconsciousness

Warning - the use of alcohol, drugs or medication is capable of greatly increasing the risk of fatal hyperthermia!



GUARANTEE

This FINSAUNA heater is guaranteed for one-year from date of purchase, and includes all heater parts such as heating elements, controls, contactors, etc.

This guarantee covers faults in manufacture and material only, and includes the exchange of new parts supplied by the manufacturer or importer, after the faulty part has been returned to same. The replacement of parts under warranty does not extend the warranty period beyond the original one-year.

The guarantee does not cover defects caused by normal wear and tear, defects caused by improper installation, poor maintenance, or failure to follow the manufacturer's instructions for installation, use and care, or alterations made to the sauna product.

This guarantee is void if the control is used improperly.

This guarantee does not cover delivery costs of the faulty part or costs of the person carrying out the repair in the field. If the control unit is returned to the manufacturer or the importer within five-years after date of purchase, the importer will provide free labor for repair, but will charge for parts if date of purchase is past one-year.

This guarantee will be void if installation and wiring is not carried out by a certified electrician or authorized and qualified service representative, who must sign below.

This guarantee will be void if information below is not filled out and returned within 15-days of purchase, and it applies only to original installation of product and to original purchaser.

SAUNA HEATER	
MODEL NUMBER	
DATE OF PURCHASE	
ORIGINAL OWNER	
ADDRESS	
PURCHASED FROM	
ELECTRICIAL CONTRACTOR	
MUST SIGN HERE	
DATE OF ELECTRICAL	
WIRING & HOOKUP	