

INNOVA

DISTRIBUTOR'S MANUAL



Touch Screen
- Separate



Classic
- Separate



Touch Screen
- Built-in



Classic
- Built-in



Power Controller /
Contactor Unit

Built-in Interface

Classic Built-in



Touch Built-in



Separate Interface

Classic Separate



Touch Separate



Optional Interface Holders for Separate Interface

Rectangular Innova Interface Holder



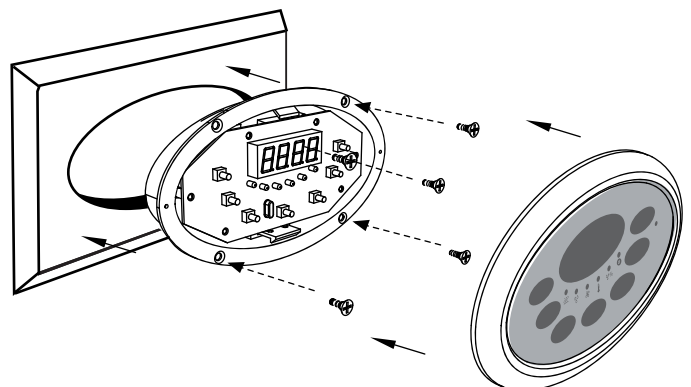
Oval Innova Interface Holder



The optional interface holder is very convenient, you don't have to drill big holes onto your sauna room wall when using one.

It is available in pine, aspen or heat-treated wood.

Mounting the Innova interface to the holder.



Sensors

Sensor Casing



Temperature Fuse & Thermistor Sensor

Included in the Power Controller



This temperature sensor and over-heat protection fuse with holder and 4m silicon connection cable comes with every purchase of Innova control units.

Optional Bench Sensors

These separate sensors give more accurate room temperature measures and display, warming the sauna room up faster and keeping the set temperature more precisely, therefore saving energy.

Temperature Sensor



This additional sensor with wires comes with every purchase of Innova combi control units. If the user has a Combi heater they can set the time (in percentages), when the steamer is on. For example, if the session time is 1 hour and the steamer setting is set to 50%, the steamer is on half of time.

Combined Temperature Humidity Sensor

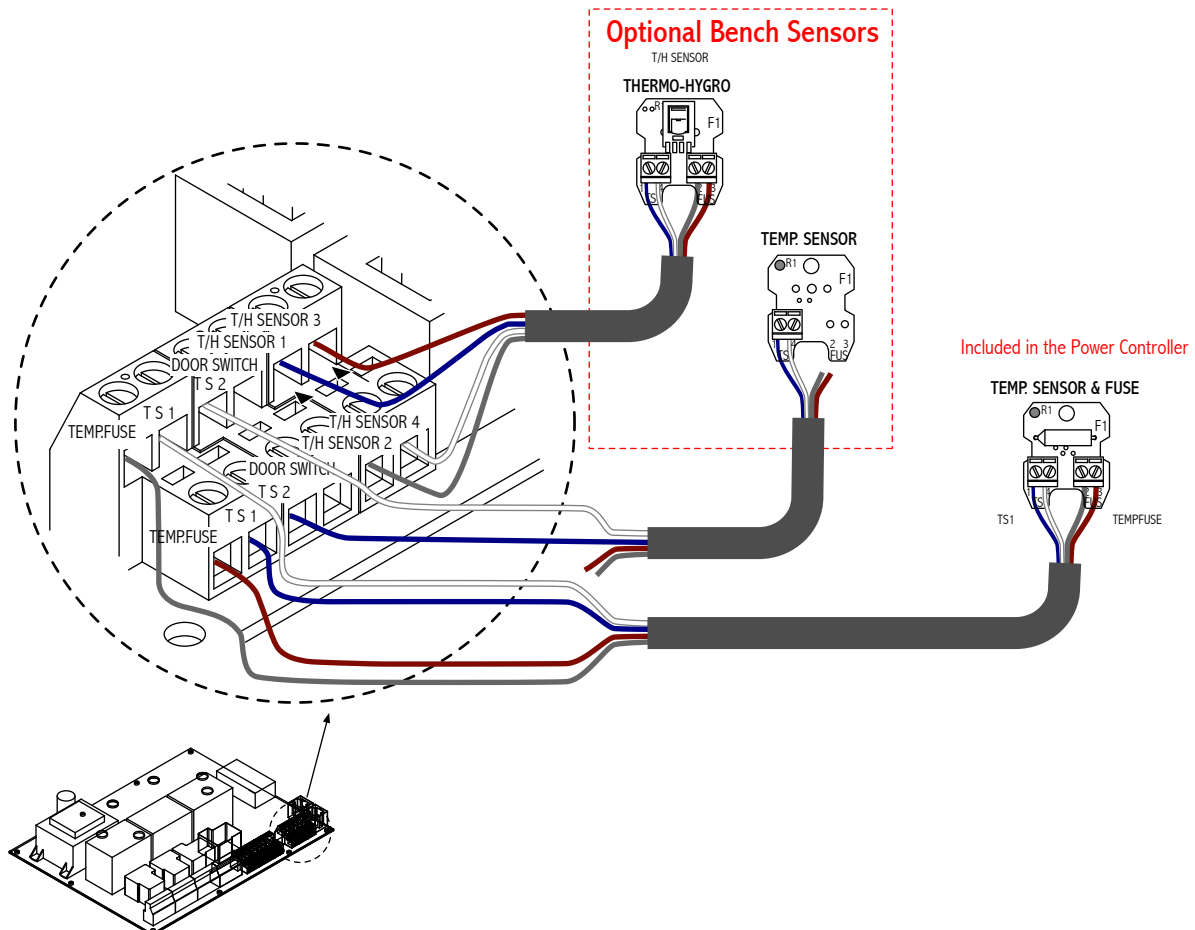


With this sensor, the humidity in the sauna room is displayed and user can set the ideal humidity. This sensor is recommended with the Combi models.

***As optional order, the wire is not included**



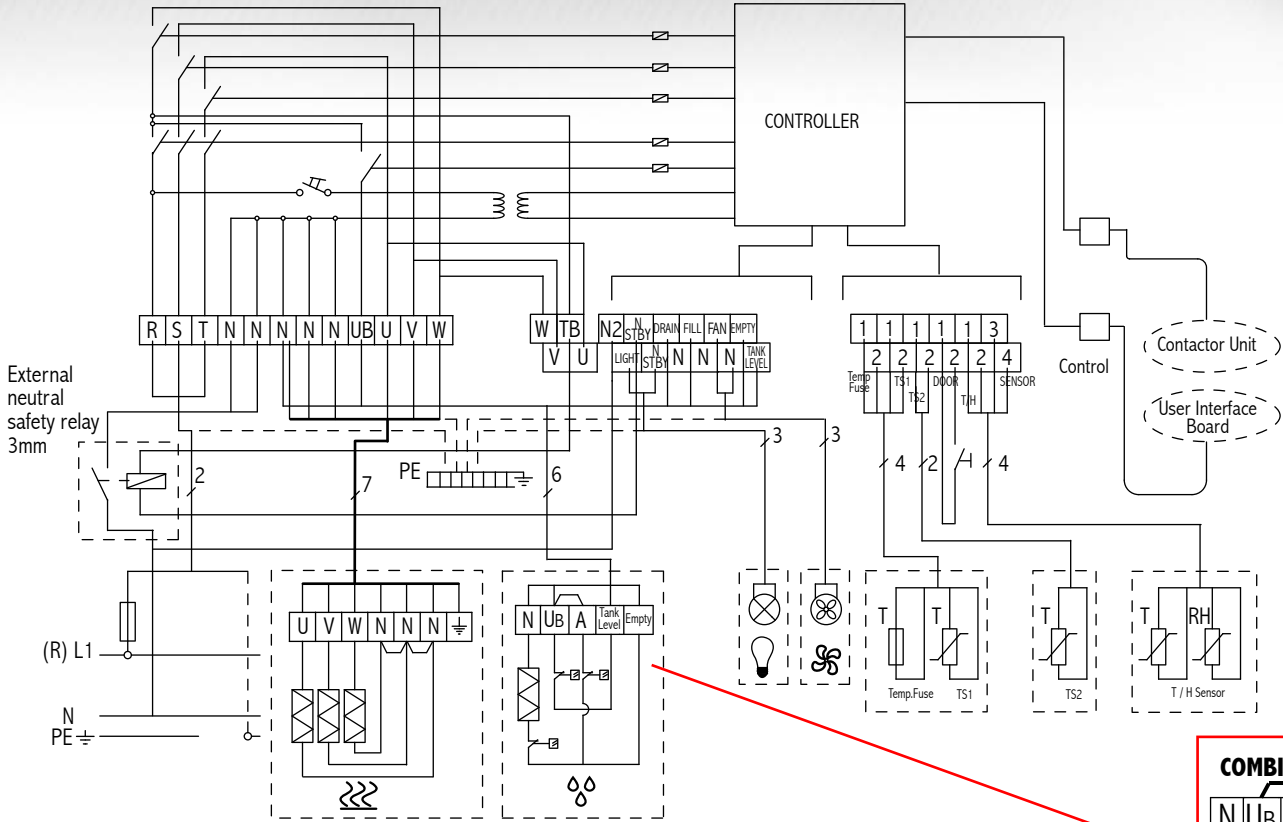
As a standard, all Combi controllers come with Temperature Fuse & Thermistor Sensor and additional Temperature sensor (with wires) for bench area.



Technical Diagram

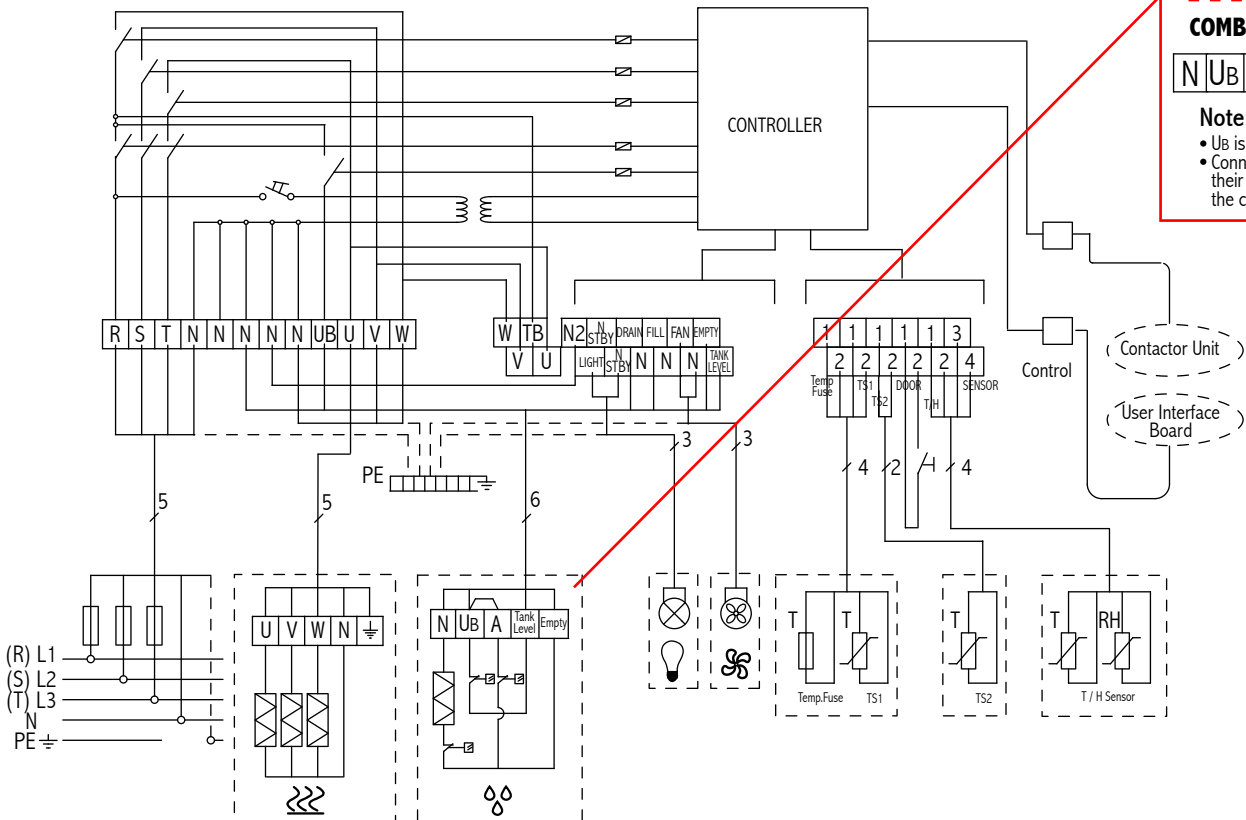
1 Phase Connection

Max. 9.0 kW
230V 1N~
50-60HZ

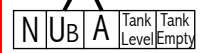


3 Phase Connection

Max. 15.0 kW
400V 3N~
50-60HZ



COMBI - Manual Refill



Note:

- Ub is phase going to steamer
- Ub must be connected to A
- Connect the terminals to their corresponding labels in the control unit

COMBI - Auto Refill



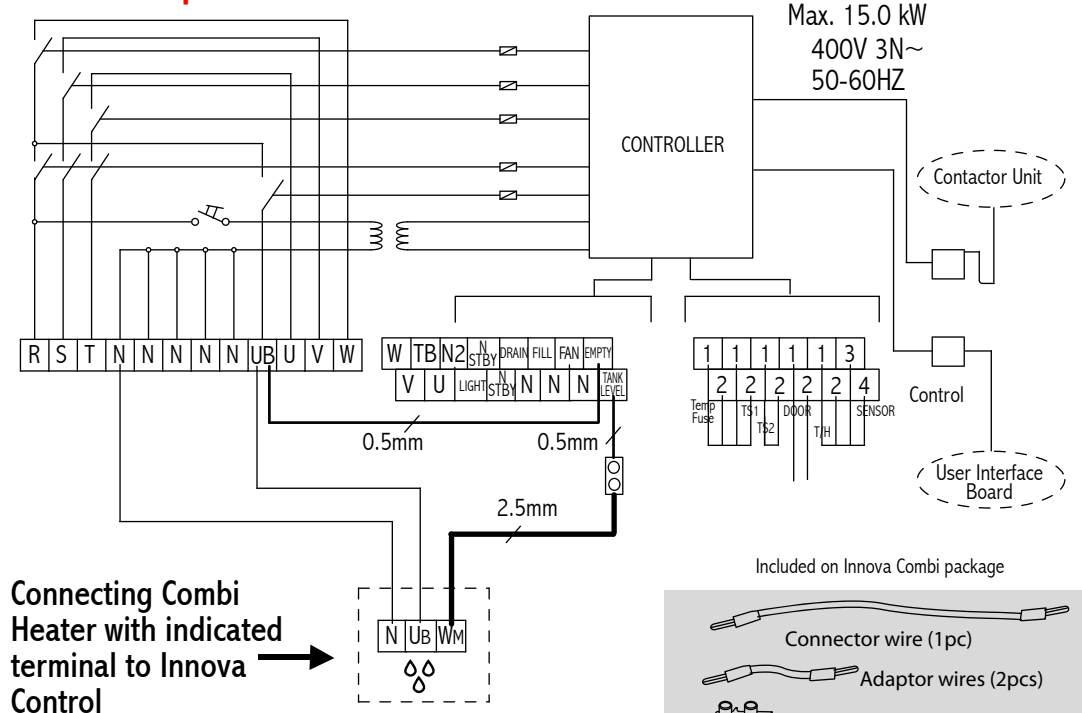
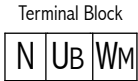
Note:

- Ub is phase going to steamer
- Connect the terminals to their corresponding labels in the control unit

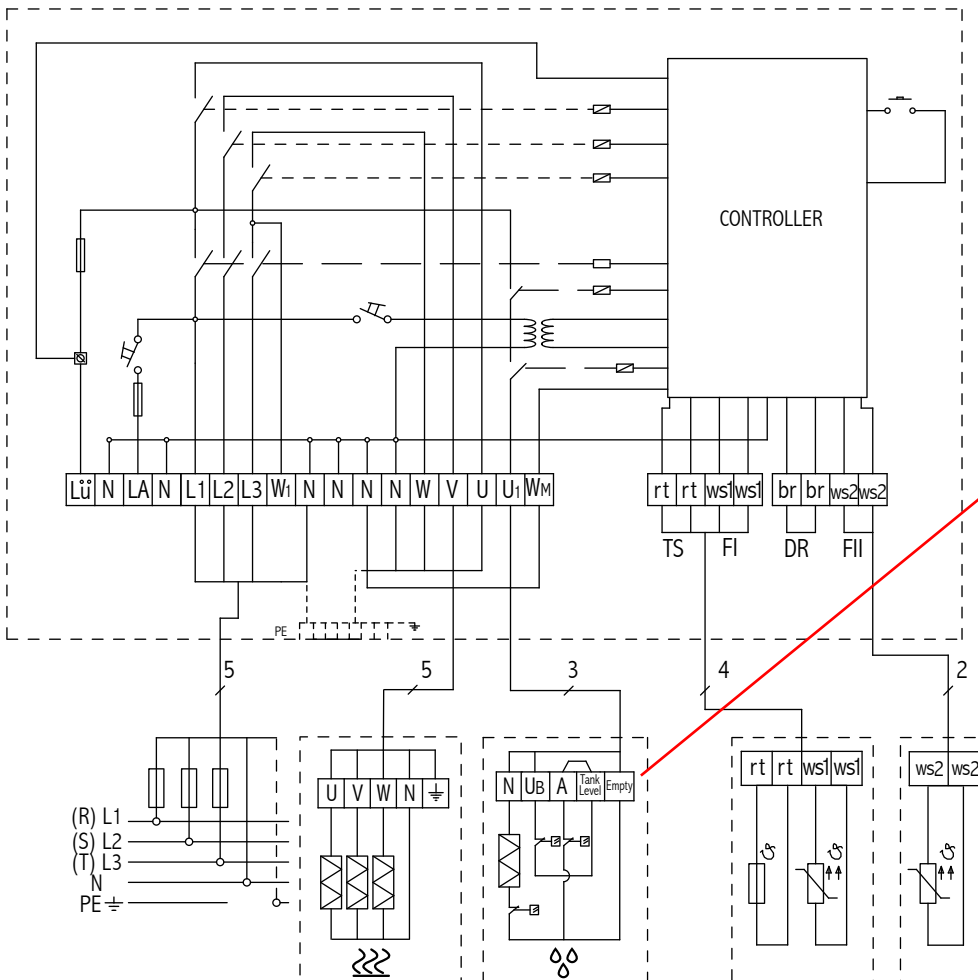
Technical Diagram

Connecting Innova Control to previous SAWO combi heaters

Use this connection when you have this terminal labels on your SAWO combi heaters.



Connecting new SAWO combi heater to different controls



COMBI - Manual Refill

N	UB	A	Tank Level	Tank Empty
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Note:

- Ub is phase going to steamer
- Tank empty must be connected to Wm
- A must be connected to Tank Level

COMBI - Auto Refill

N	UB	A	Tank Level	Tank Empty	Fill	Drain
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Note:

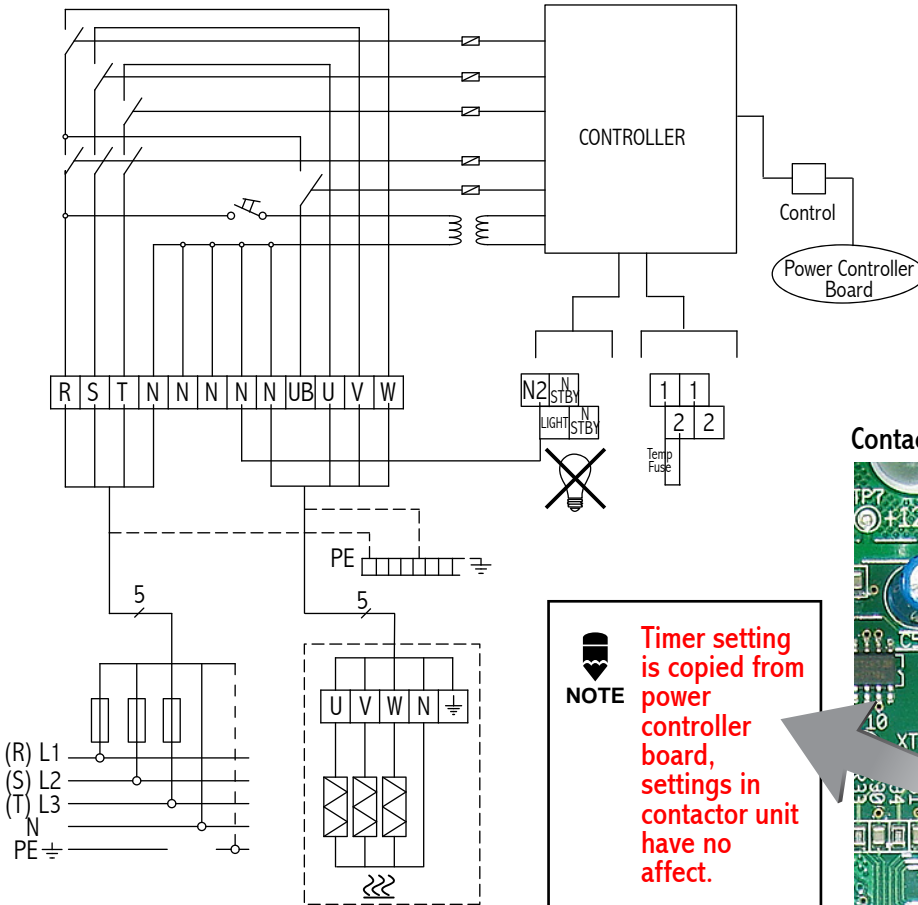
- Ub is phase going to steamer
- Tank empty must be connected to Wm
- Ub must be connected to A

Technical Diagram

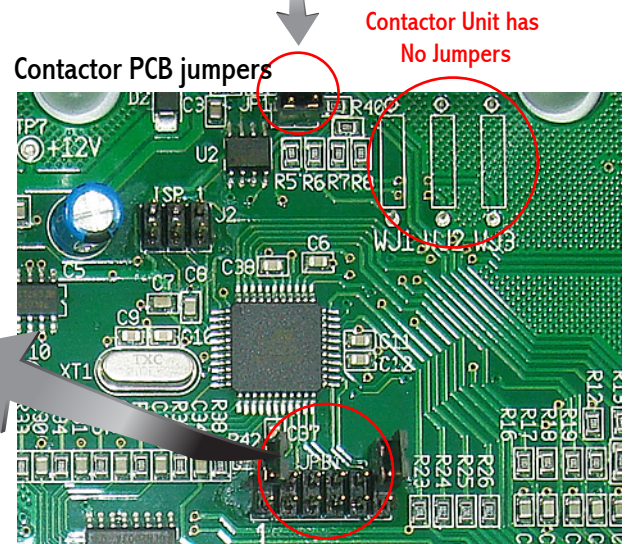
Connecting with Innova Power Contactor

Max. 15.0 kW
400V 3N~
50-60HZ

INNOVA POWER CONTACTOR



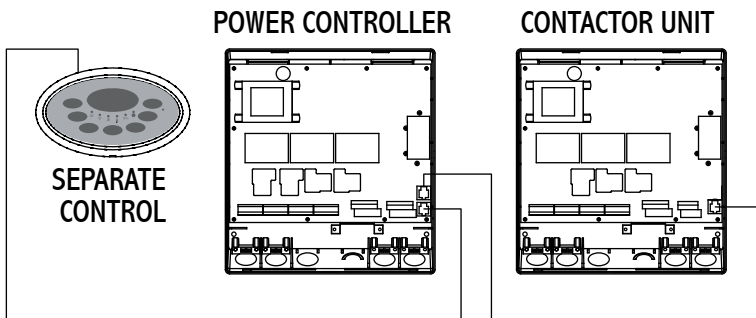
NOTE
Make sure that the highlighted jumper is always in the last PCB of the chain. If there is only one board, leave the jumper on that board. If more than one board is used, take the jumpers out of all the boards, except the last one in the chain.



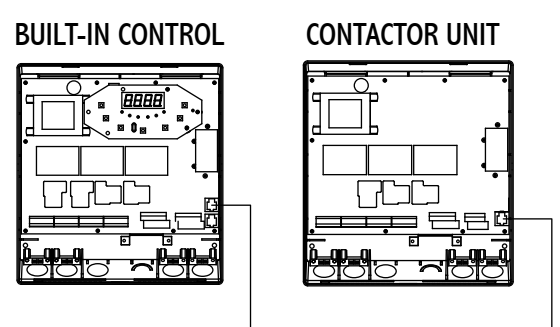
NOTE
Timer setting is copied from power controller board, settings in contactor unit have no affect.

Installation for Separate Interface with Contactor Unit

Installation for Separate Interface with Contactor Unit



Installation for Built-in Interface with Contactor Unit



Power Controller Board

Changing Preset Time

The maximum sauna session time depends on the purpose of the sauna. For domestic use, the total on-time of the sauna is limited to 6 hours. It includes pre-run time and the session time. The factory setting for the control unit is 6 hours.

For blocks of flats, hotels and similar locations, the operating period of the sauna heater is limited to 12 hours, including the pre-run time and the session time.

For public sauna, the operating period of the sauna heater can be either 18 or 24 hours. Please note, if the public sauna is set to 24 hours, it will be on constantly. It needs to be continuously attended.

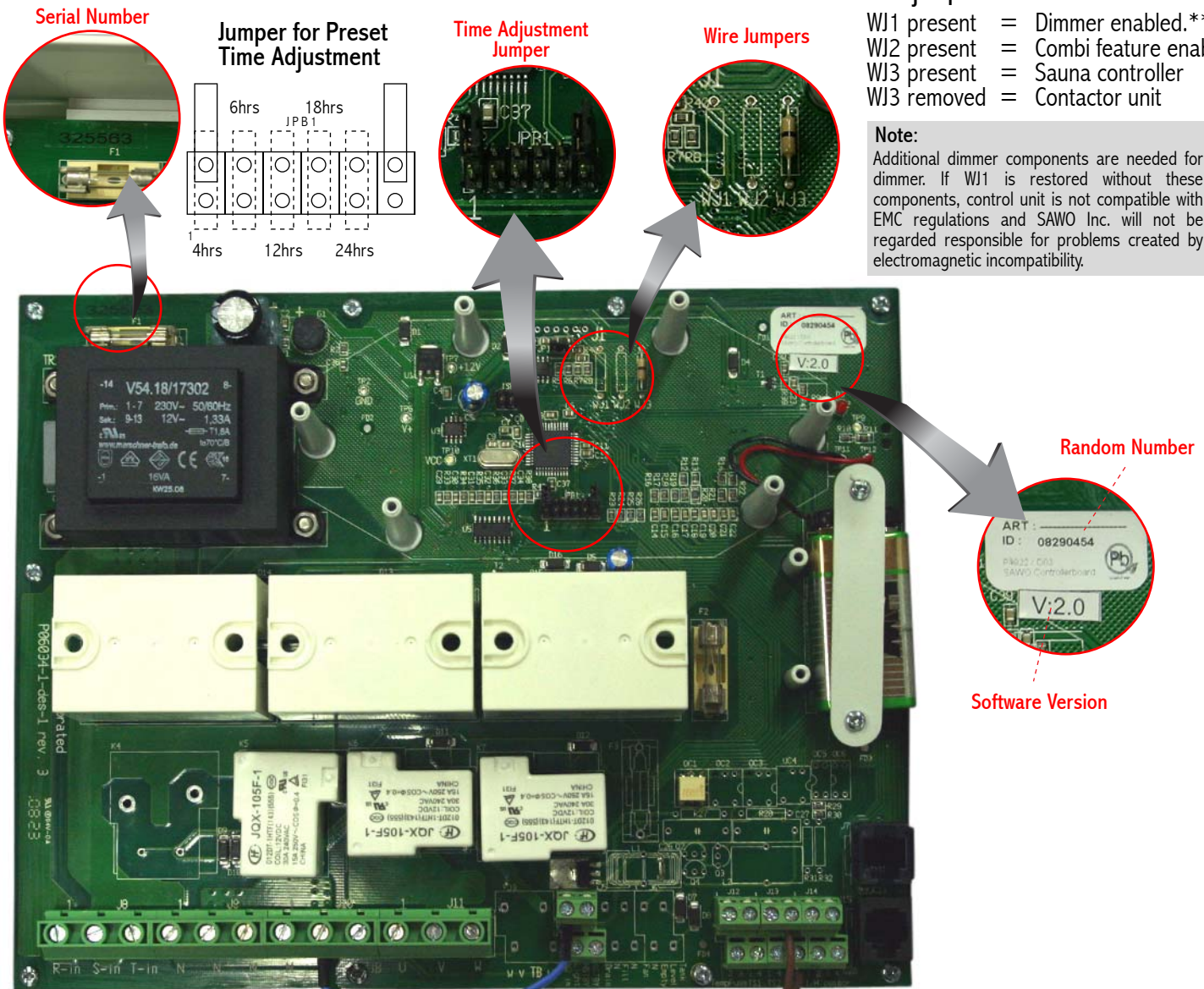
To set the sauna session time, placed the jumpers as illustrated below.

Wire jumpers

- WJ1 present = Dimmer enabled.**
- WJ2 present = Combi feature enabled
- WJ3 present = Sauna controller
- WJ3 removed = Contactor unit

Note:

Additional dimmer components are needed for dimmer. If WJ1 is restored without these components, control unit is not compatible with EMC regulations and SAWO Inc. will not be regarded responsible for problems created by electromagnetic incompatibility.



PCB Version, Serial Number and Random Number Location

Classic

When you switch the power "ON", the software versions will be displayed first. Two software versions are displayed, first one is for the control board and the second one for the user interface.

Touch

Press the configuration icon to go to configuration mode. Then press Info button for information. It will display the software version and the text "Steamer" (only if the steamer is present and activated). Two software versions are displayed, first one is for the user interface and the second one for the control board.

Software versions are also printed on a stickers on PCB. There is no need to turn the unit "ON" if supply connection is not available.

PCB serial and Random numbers

Serial and random numbers are printed on stickers on PCBs. Serial number is also attached to carton box. See picture above and pictures on the following pages.

Info **Software Version Info (Touch)**

UIB
Software version
2.1
Steamer

LCD

After 2 seconds

SCB
Software version
1.8

LCD

User Interface Board
Sauna Controller Board

PCB Version, Serial Number and Random Number Location
Power Controller

Box



Software Version



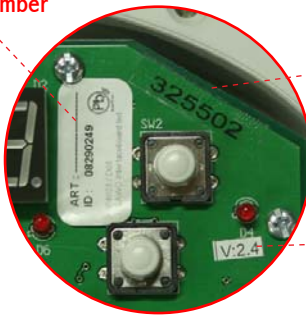
Serial Number

Innova Classic Separate Control

Inside the interface



Random Number



Serial Number

Software Version

Box



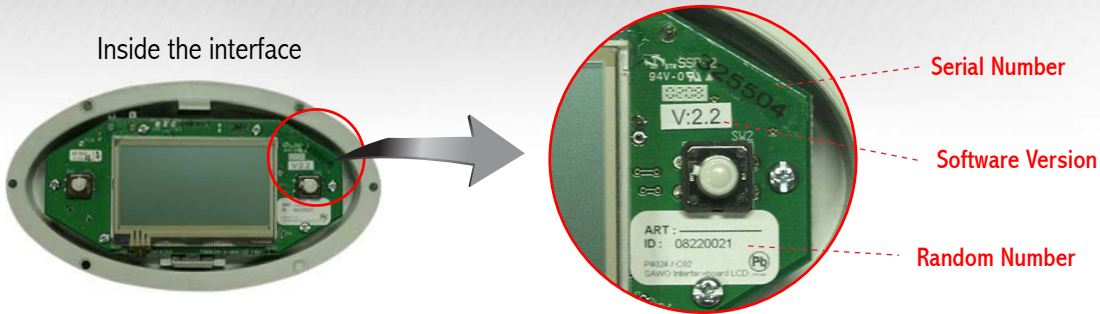
Software Version



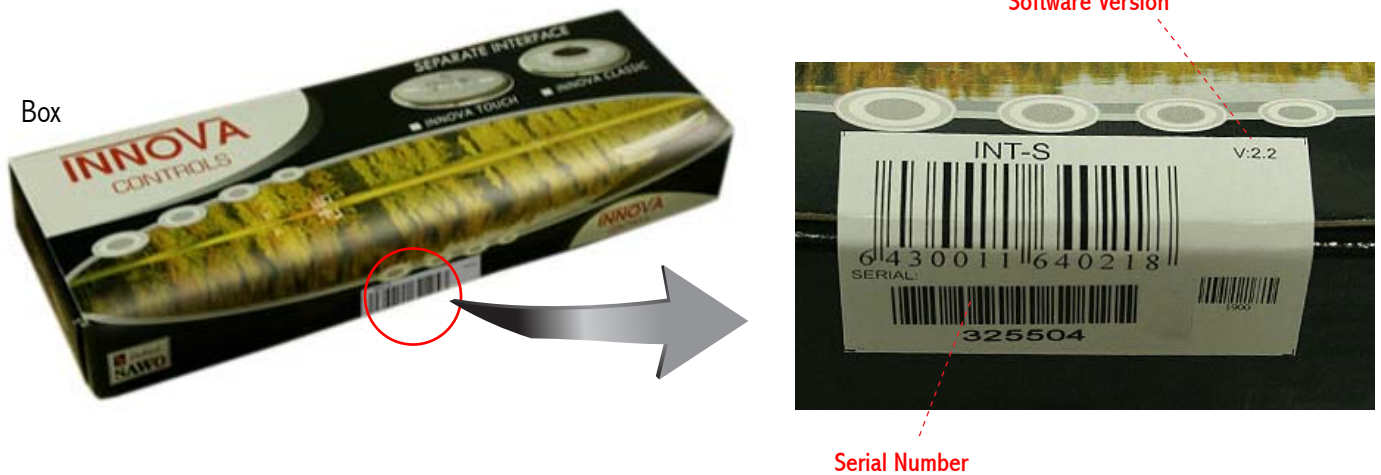
Serial Number

PCB Version, Serial Number and Random Number Location Innova Touch

Inside the interface



Box



Recommended Sauna Room Fan

A12B23STS from Costech / Axair



Max: 100W
Motor:

- 230 - 240 VAC
Shaded pole or capacitor run (speed controlled by using Phase control. If unclear, ask from the manufacturer if fan is compatible.)
- Starting capacitor must be within the fan.
- Fan can be exhaust or bringing fresh air to sauna room. In case of exhaust consider IP class requirements for fan motor.

Model	Dimensions (mm)	Drawing	Rated voltage	Frequency	Rated power	Max air flow	Noise
A12B23STSW00	119 X 119 X 38	4	230	50/60	22/21	165/183	42.0/46.0

Troubleshooting

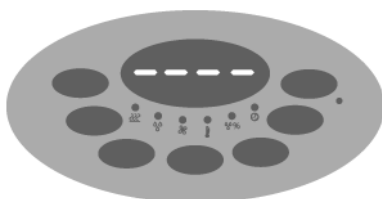
Classic



	Problem	Solution
E1	Temperature sensor 1 is not connected.	Check the wire between the sensor and the control unit. If there is no problem with the wires and they are correctly installed, check the sensor. If no problem can be found, contact the retailer.
E2	Temperature sensor 1 is short circuit.	
E3	Temperature fuse is defective.	Check the wire between the sensor and the control unit. It has probably overheated. The reason for it needs to be discovered before using the sauna again. A new sensor is needed. If no problem can be found, contact the retailer.
E4	Temperature sensor 2 is not connected.	Check the wire between the bench sensor and the control unit. If there is no problem with the wires and they are correctly installed, check the sensor. The heater can still be used with the sensor 1 only, but 2 sensors are needed for the steamer. If a new sensor is needed or no problem can be found, contact the retailer.
E5	Temperature sensor 2 is short circuit.	
E6	Combined Temperature / Humidity sensor is defective.	
E7	Communication failure.	Check the RJ12 cable, if Innova Separate model is used. If the area where the cable is located has many other cables, it can cause EMC problems. If built-in model is used, remove the user interface board. Wipe the pin header contact to remove any dirt. Assemble back the user interface board in correct position and make sure the six pin header connectors are properly inserted to the socket. If no problem can be found, contact the retailer.
E8	Temperature is greater than the maximum temperature.	This should never occur under normal conditions. However, if this happens contact qualified electrician or maintenance personnel before using the sauna again.

Other possible problems are:

- The control unit is working fine, but the heater does not turn on. Check the electricity supply to the heater. Check that the wires for the sensors are placed into the correct terminals in the control unit.
- The control unit cannot display the relative humidity* (only when the combined sensor is installed). The combined sensor cannot be recognised. The wires for the sensor are placed in the wrong terminals.
- Control unit does not turn on and clicking sound can be heard. Check that the N2in jumper is connected with the N.
- User presses a button and "----" is shown in the display. This indicates that the key pad is locked. Unlock the buttons by pressing up and down arrow keys at the same time for more than 5 seconds. A high beep will confirm the activation and the deactivation.
- If error E4 or E6 is displayed, there is a problem with the bench sensor. If only one sensor is installed, the steamer cannot be used. The user can confirm the error by pressing the on/off button, after which the heater will function normally, but the steamer cannot be used.
- The user switches the steamer on and "dry" is displayed immediately. Check that the "empty" and "tank level" terminals from the heater are connected with the "empty" and the "tank level" on the controller.
- The steamer is on and "dry" is displayed, even though there is plenty of water in the tank. Make sure that terminals "empty" and "tank level" are correctly connected to the right terminals on the controller.
- The steamer is switched on and "dry" is displayed immediately. Make sure that the "WB" terminal from the heater is connected with the "tank level" on the controller. Check that the "UB" terminal from the controller is connected with the "empty" terminal on the controller.
- When the user turns the steamer on and "Fill" is displayed continuously, the wiring needs to be checked. Make sure that the "UB" terminal from the controller is connected with the "empty" terminal on the controller. In addition, the "WB" terminal from the heater needs to be connected with the "tank level" on the controller.
- The control unit is attempted to be switched on with the power button and nothing happens or the software version/logo is displayed shortly. The problem may be low battery that does not have enough power to display "LbAt". Change the battery inside the controller.



Troubleshooting

Touch



Code	Problem	Solution
E1	Temperature sensor 1 is not connected.	Check the wire between the sensor and the control unit. If there is no problem with the wires and they are correctly installed, check the sensor. If no problem can be found, contact the retailer.
E2	Temperature sensor 1 is short circuit.	
E3	Temperature fuse is defective.	Check the wire between the sensor and the control unit. It has probably overheated. The reason for it needs to be discovered before using the sauna again. A new sensor is needed. If no problem can be found, contact the retailer.
E4	Temperature sensor 2 is not connected.	Check the wire between the sensor and the control unit. If there is no problem with the wires and they are correctly installed, check the sensor. The heater can still be used with the sensor 1 only, but 2 sensors are needed for the steamer. If no problem can be found, contact the retailer.
E5	Temperature sensor 2 is short circuit.	
E6	Combined Temperature / Humidity sensor is defective.	
E7	Communication failure.	Check the RJ12 cable. If the area where the cable is located has many other cables, it can cause EMC problems. If no problem can be found, contact the retailer.
E8	Temperature is greater than the maximum temperature.	This should never occur under normal conditions. However, if this happens contact qualified electrician or maintenance personnel before using the sauna again.

Other possible problems are:

- The control unit is working fine, but the heater does not turn on. Check the electricity supply to the heater. Check that the wires for the sensors are placed into the correct terminals in the control unit.
- The control unit cannot display the relative humidity* (only when the combined sensor is installed). The combined sensor cannot be recognised. The wires for the sensor are placed in the wrong terminals.
- Control unit does not turn on and clicking sound can be heard. Check that the N2 in jumper is connected with the N (refer to Technical Diagram).
- If error E4 or E6 is displayed, there is a problem with the bench sensor. If only one sensor is installed, the steamer cannot be used. The user can confirm the error by pressing the on/off button, after which the heater will function normally, but the steamer cannot be used.
- The user switches the steamer on and “dry” is displayed immediately. Check that the “empty” and “tank level” terminals from the heater are connected with the “empty” and the “tank level” on the controller.
- The steamer is on and “dry” is displayed, even though there is plenty of water in the tank. Make sure that terminals “empty” and “tank level” are correctly connected to the right terminals on the controller.
- The steamer is switched on and “dry” is displayed immediately. Make sure that the “WB” terminal from the heater is connected with the “tank level” on the controller. Check that the “UB” terminal from the controller is connected with the “empty” terminal on the controller.
- When the user turns the steamer on and “Fill” is displayed continuously, the wiring needs to be checked. Make sure that the “UB” terminal from the controller is connected with the “empty” terminal on the controller. In addition, the “WB” terminal from the heater needs to be connected with the “tank level” on the controller.
- The control unit is attempted to be switched on with the power button and nothing happens or the software version/logo is displayed shortly. The problem may be low battery that does not enough power to display “Low battery”. Change the battery inside the controller.