SALUS CONTROLS

Control box (5 zones) 230 V

Model: CB500CO



MULTI-LANGUAGE

▪ MANUAL ▪

Quick Guide

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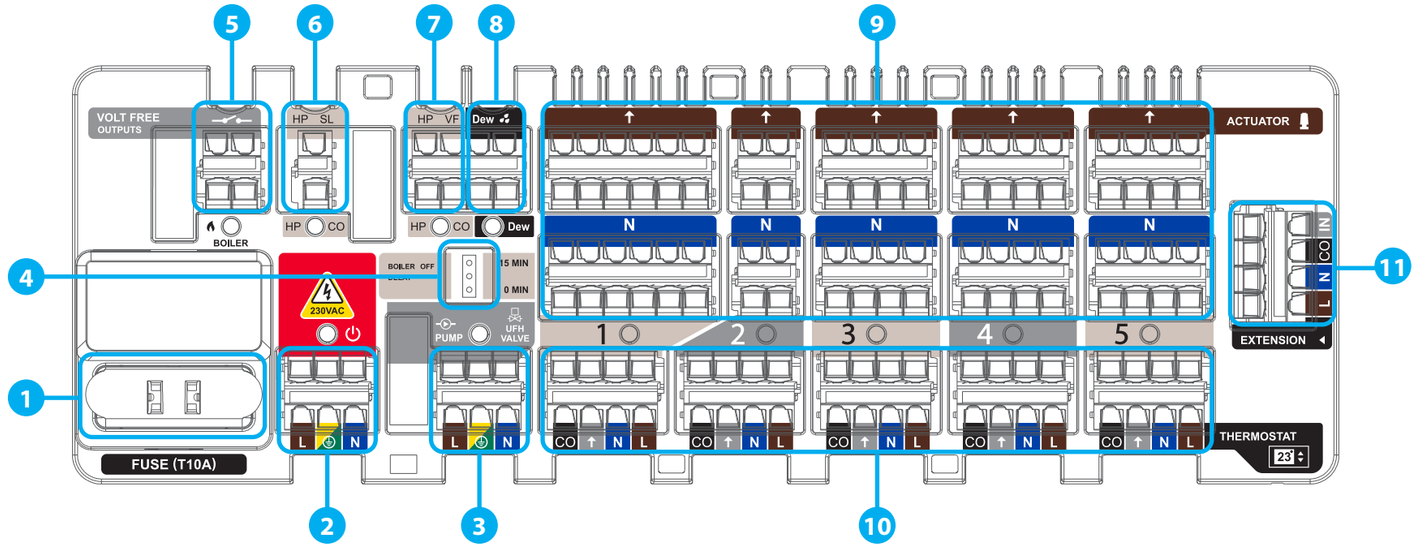
www.saluscontrols.com

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10/2026

CONTROL BOX DESCRIPTION

1. Cartridge fuse - 5 x 20 mm T10A (replaceable)
2. Power supply - 230V
3. Pump/Valve supply - 230V
4. Boiler delay - jumper settings
5. Boiler control output - volt-free
6. Heating / Cooling - 230V input for Heat/Cool Changeover
7. Heating / Cooling - volt-free contact for Heat/Cool Changeover
8. Dew point sensor connection - volt-free
9. NC Actuators output connections - 230V
10. Thermostats connections
11. CB500X extension connection



INTRODUCTION

The new CB500CO control box is the main element of the underfloor heating/cooling control system. It has a built-in module that controls the heat and cool sources. The control box allows you to control 5 different zones. The number of controlled zones can be increased up to 20 zones by using additional CB500X extension modules (CB500CO main control box + three CB500X extension modules). Each individual zone can be operated by one thermostat. The thermostat which requires a 230V power supply has to be powered directly from the control box. The CB500CO has volt-free contacts designed to control a boiler. The CO-Contact from the heat pump allows you to switch from Heating to Cooling. The CO Contact can be volt-free or 0 respective 230V. It is equipped with 230V voltage outputs for a pump and actuators. The spring clamps provide quick and convenient wiring connections. The control box is designed to work with NC (normally closed) type actuators. It is recommended to mount it on a surface or on a DIN rail.

PRODUCT COMPLIANCE

This product complies with the essential requirements and other relevant provisions of the GPSR Directive 2023/988/EU, EMC 2014/30/EU, LVD 2014/35/EU, REACH SVHC 253, and the RoHS Directives 2015/863/EU ammendment 2017/2102. The full text of the EU Declaration of Conformity is available at the following web address: www.saluslegal.com.

SAFETY INFORMATION

Use in accordance with current national and EU regulations. The product is intended for indoor use only in dry conditions. The CB500CO should not be installed in areas where it may be exposed to water or damp conditions. Installation must be carried out by a qualified person in accordance to current national and EU regulations. Before attempting to setup and install, make sure that CB500CO is not connected to any power source. Incorrect installation may cause damage to the control box.

TECHNICAL INFORMATION

Power Supply		230 V AC 50 Hz
Total Load Max		7 (2) A
Pump / Boiler / Heat Pump Relay Load Max		5 (2) A
Inputs	Heat/Cool changeover	230 V AC
	Heat/Cool changeover	Volt-free
	Dew point sensor	Volt-free
Outputs	Boiler control	Volt-free
	Pump/Valve control	230 V AC
	Actuators	230 V AC
Thermostat connections	(L, N) Power Supply	230 V AC
	(CO) Output Heat/Cool changeover	0 - 230 V AC
	(↑) Input Actuators	0 - 230 V AC
Dimensions [mm]		270 x 110 x 55

1. FUSE

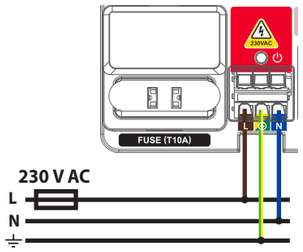
Main fuse is located under the housing cover next to power supply terminals and secures the control box and the devices connected to it. Use ceramic tube slow blow 250 V ROHS fuses (5x20 mm) with nominal max current 10A. To replace fuse remove the fuse holder with a flat screwdriver and pull out the fuse.

NOTE: Replacement of the fuse to be carried out only when the control box is disconnected from power supply (230 V ~).

2. POWER SUPPLY

Power supply for control box is 230 V ~ 50Hz.
Three wire installation should be made in accordance with the current applicable regulations.

The red LED will illuminate inidicating that the control box is connected to the power supply.



3. PUMP/VALVE CONTROL OUTPUT

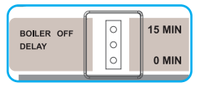


PUMP/VALVE output - this is a 230 V AC output that controls the pump and valve of the heating and cooling systems. If any of thermostats connected to the CB500CO send heating / cooling signal - PUMP/VALVE output will be activated after 3 minutes. If all of the thermostats connected to the CB500CO stop sending heating / cooling signal - PUMP/VALVE output will be deactivated after 3 minutes.

When the Pump/Valve control output is activated, the LED shows a constant green light

WARNING!
Before starting the installation, disconnect the 230V power supply!

4. BOILER DELAY - JUMPER SETTINGS



This jumper sets the turn off delay time of the BOILER control outputs.

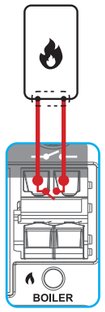
When the jumper is set to **"0 MIN"** position (default setting) then the BOILER output (volt-free relays) are deactivated immediately when thermostats stop heating.

When the jumper is set to **"15 MIN"** position then the BOILER outputs (volt-free relays) are deactivated 15 minutes after thermostats stop heating.

NOTE: When the jumper is set to 15 minutes delay time you must ensure hydraulic flow in the system when all actuators are closed. Use a bypass or differential pressure valve.

5. BOILER CONTROL OUTPUT

Boiler ON/OFF contacts (according to the boiler's manual)



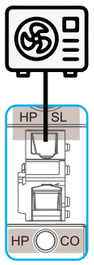
Boiler output - this is a volt-free output (COM / NO) which controls heating system boiler. If any of thermostats connected to the control box sends signal for heating, BOILER output is activated after 3 minutes delay, giving permission for boiler to turn ON. If all thermostats connected to the control box stop sending signal for heating, then BOILER output is deactivated - this is the signal for boiler to turn OFF (BOILER output can work with 0min or 15min delay - please refer to chapter 4).

WARNING!
DO NOT use 230V AC!

When the BOILER output is activated, the LED shows a constant green light.

6. HEATING / COOLING - 230V INPUT FOR HEAT/COOL CHANGEOVER

Heat Pump 230V output (according to the Heat Pump's manual)



HP SL contact - Switched Live (SL) contact from Heat Pump (HP)

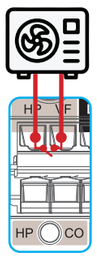
When the Heat Pump changes into cooling mode will switch the CB500CO into cooling mode and send 230V on this contact enabling 230V on all CO contacts

WARNING!
DO NOT use together with volt-free Heat/Cool Changeover!

When the Heat Pump input send 230V, the LED shows a constant blue light (cooling mode).

7. HEATING/COOLING - VOLT-FREE CONTACT FOR HEAT/COOL CHANGEOVER

Heat Pump volt-free contact (according to the Heat Pump's manual)



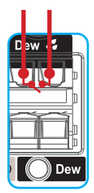
HP VF contact - volt-free relays for Heat/Cool Changeover

When the Heat Pump changes into cooling mode will close the contact and switch the CB500CO into cooling mode enabling 230V on all CO contacts.

WARNING!
DO NOT use together with 230V SL Heat/Cool Changeover!

When the Heat/Cool Changeover volt-free contact is closed, the LED shows a constant blue light (cooling mode).

8. DEW POINT SENSOR CONNECTION



If the installation is equipped with a dew point sensor, it should be connected to the DEW POINT contacts. When condensation is detected (DEW POINT contacts closed), PUMP and HP/CHILLER contacts are switched off immediately to prevent floor damage. DEW POINT contact is only active in cooling mode.

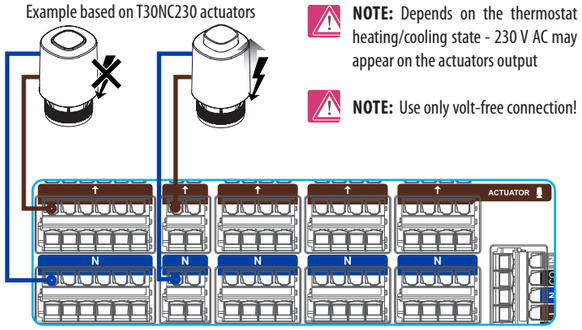
When the Dew point sensor contact is closed, the LED shows a constant red light.

NOTE: When contact senses humidity above 95% will stop cool mode and change immediately to Heat mode (careful that thermostats are not set higher than room temperature, will keep the actuator open)

9. ACTUATORS CONNECTION

Actuators wires should be plugged into the spring clamps of the respective zones. The maximum current load for each zone is designed to handle up to 6 actuators with a power of 2W each. With more actuators in one zone, an additional relay should be used to make sure that actuators output will be not overloaded.

Example based on T30NC230 actuators



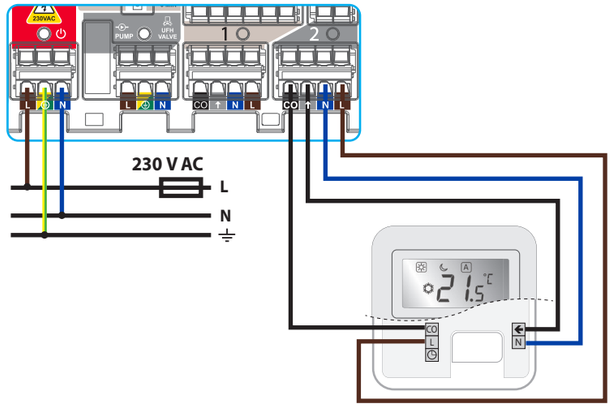
NOTE: Depends on the thermostat heating/cooling state - 230 V AC may appear on the actuators output

NOTE: Use only volt-free connection!

10. THERMOSTAT CONNECTION

CB500CO only supports switching the thermostats between heating and cooling modes if their thermostats support that feature (like our HTRP230V, HTRS230V, HTR230V, BTRP230V, and BTR230V). If there will be live 230V on the CO terminal, the thermostat knows it has to switch to the cooling mode.

NOTE: Only thermostat which have a CO contact can be used for cooling which require 230V Input signal to changeover



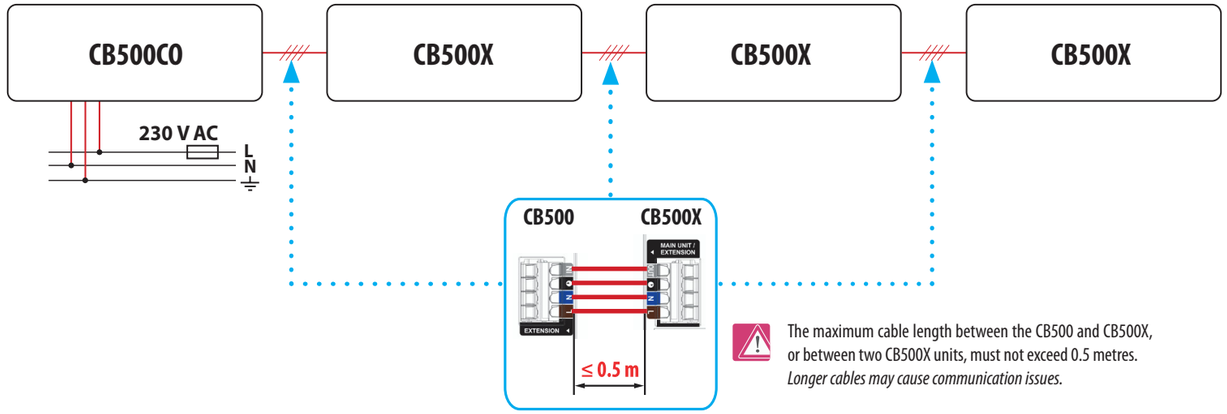
Example based on HTRS thermostat

NOTE:
- Minimum 3 contacts, L, N and ↑"switch live" to work;
- When used also for cooling, CO needs to be connected;
- 0V on CO = Heatmode | 230V on CO = Coolmode

11. CONNECTION BETWEEN CB500CO AND CB500X

If there is a need to increase the number of zones of the CB500CO control box, it is possible to connect the CB500CO and CB500X units using the EXTENSION connector. A maximum of three CB500X extension modules can be connected to the CB500CO control box to have 20 zones. The connection between CB500CO and CB500X can be made in series as explained below.

230V AC power is supplied only to the main CB500CO control box. Please pay attention to the terminal markings. All thermostats connected to the CB500CO or CB500X have an impact on the system module which controls the heat / cool sources in the main CB500CO control box.

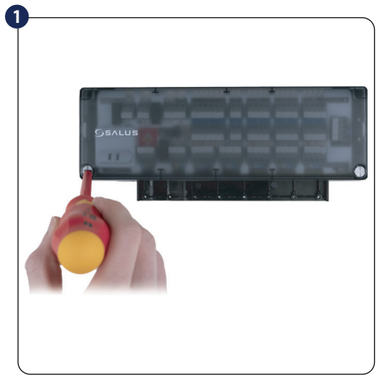


The maximum cable length between the CB500 and CB500X, or between two CB500X units, must not exceed 0.5 metres.
Longer cables may cause communication issues.

WARNING! DO NOT connect a power supply to the CB500X power input when it is connected to the CB500CO. The CB500X power input must only be used when the control box extension is operating as a standalone device.

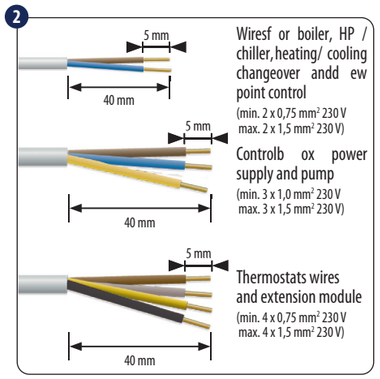
INSTALLATION

1



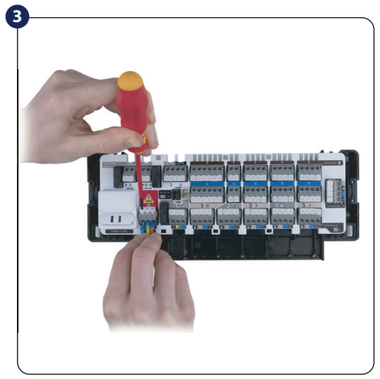
Remove the top cover of the control box.

2



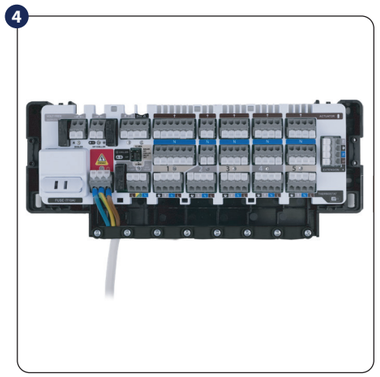
Remove the appropriate piece of insulation from the wires.

3

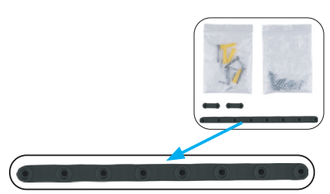


Connect the wirest o the spring clamps according to the wiring diagrams.Y ou canr un the wiresi n the tunnel under control box housing.

4



Fors afety use fastening strapt op revent power supply / thermostats wires from falling out.



5



Make sure that all the wiresa re properly connected,m ount topc over and poweru p the controlb ox- the red power indicator LED will be illuminated.