

ECB8-230 | Wired Control Box for
Underfloor Heating System, 230V



Quick Guide

Ver. 4.2
Release date: XI 2024
Soft: v1.3



Producer:
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Introduction

ECB08M230 control box is the main element of the underfloor heating control system. It has a built-in modules that controls the heat sources (by volt-free relay) and pump (230V AC). The control box allows to control 8 different zones. It is equipped with 230V AC voltage outputs actuators. Pluggable terminal blocks provide quick and convenient wiring connections. The control box is designed to work with NC (normally-closed) type actuators.

Product compliance

This product complies with the essential requirements and other relevant provisions of the following EU Directives: EMC 2014/30/EU, Low Voltage Directive LVD 2014/35/EU, RoHS directive 2011/65/EU.

Safety information

Use in accordance with national and EU regulations. Device is intended for indoor use only in dry conditions. Product for indoor use only. Installation must be carried out by a qualified person in accordance to national and EU regulations.

Before attempting to setup and install, make sure that ECB08M230 is not connected to any power source. Installation must be carried out by a qualified person. Incorrect installation may cause damage to the wiring centre. The ECB08M230 should not be installed in areas where it may be exposed to water or damp conditions.

PLEASE NOTE:

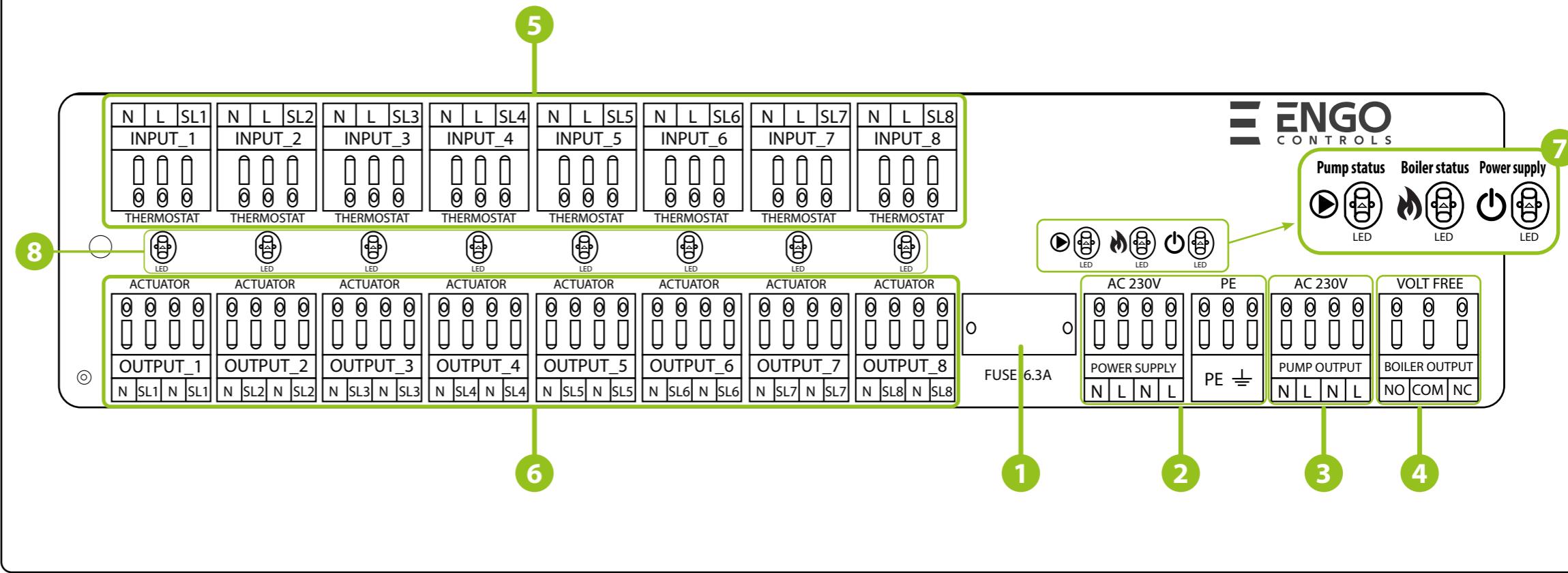
For the entire installation, there may be additional protection requirements, which the installer is responsible for maintaining.

Technical Information

Power Supply	230V AC 50 Hz
Total Load Max	6 (3) A
Pump Load Max	3A
Boiler Load Max	6A
Actuator Load Max	2A
Thermostat Load Max	1A
Outputs	Pump control (230V AC) Boiler control (NO/COM/NC) Terminals for actuators (230V AC)
Dimensions [mm]	327 x 110 x 37

Control Box description

1. Cartridge fuse 5 x 20 mm T6,3A
2. Power supply (AC 230V)
3. Pump control output (AC 230V)
4. Boiler control output (volt free)
5. Thermostats input connections
6. Actuators output connections (AC 230V)
7. LED diodes indicators for the operation status of the pump, boiler and control box power supply connection
8. LEDs 1 to 8 informing about the operation of zones 1-8



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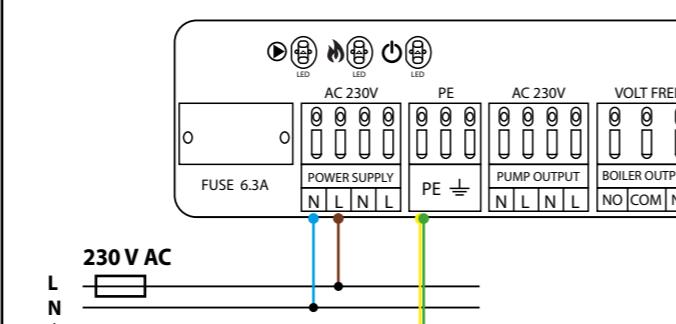
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Fuse

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

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 6,3A. To replace fuse remove the fuse holder with a flat screwdriver and pull out the fuse.

Power supply



Power supply for wiring centre is 230V ~ 50Hz.

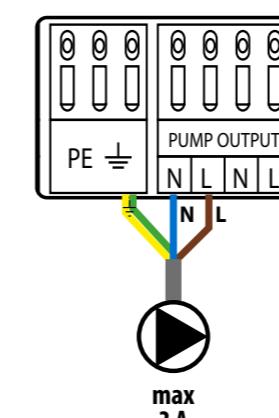
Installation features:

- three-wire,
- made in accordance with applicable regulations.

 The red LED indicates that the wiring centre is connected to the power supply.

Pump control output (AC 230V)

The PUMP OUTPUT is used to power the circulation pump in the heating system. It is a 230V AC voltage output with a maximum load capacity of 3A. The pump is connected directly to the contacts. The output is turned on (the pump starts) always after 3 minutes from the moment of receiving a heating signal from any thermostat connected to the wiring centre. The output is turned off (the pump stops) as soon as the last thermostat stops reporting heat demand.

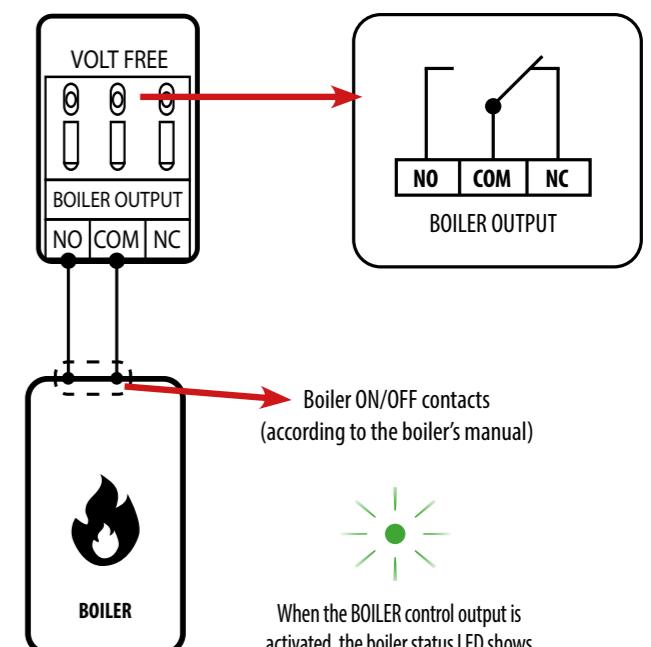


 When the Pump/Valve control output is activated, the pump status LED shows a constant green light.

PLEASE NOTE: Before starting the installation, disconnect the 230V power supply!

Boiler control output (volt free)

The boiler control output is supported by a relay with voltage-free contacts (NO / COM / NC output). The boiler must be connected to the COM-NO or COM-NC contacts. It is a typical two-state relay. In most cases, the NC terminal is not used. If the thermostats connected to the wiring centre send a signal for heating, the BOILER output contacts activate the relay with a 3-minute delay, allowing the boiler to be turned on. The boiler is turned off immediately, when none of the zones sends a signal for heating.

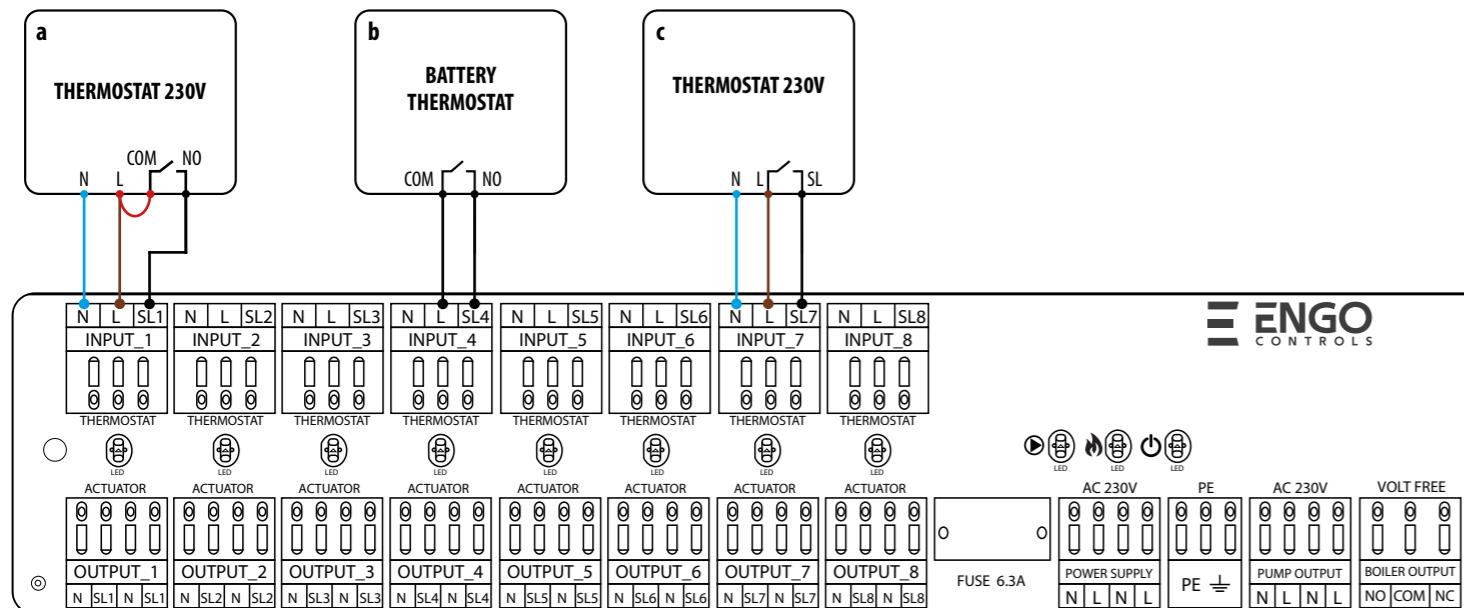


 Boiler ON/OFF contacts (according to the boiler's manual)

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

Thermostats input connections

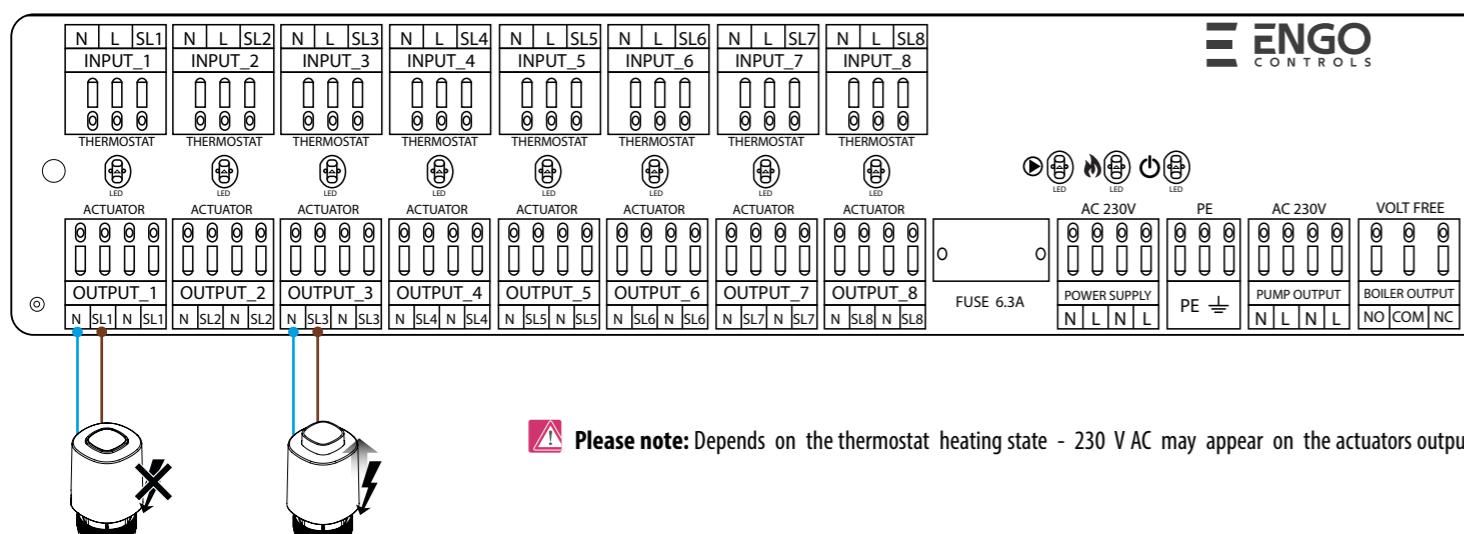
- a - 230V thermostat connection (with COM / NO voltage-free contacts),
- b - Connecting a battery ON / OFF thermostat (with voltage-free COM / NO contacts),
- c - 230V thermostat connection (with SL - 230V voltage output)



L	230 V live terminal
N	Neutral
SL1 ... SL8	230 V control signal
SL	Output thermostat signal 230 V AC

Actuators output connections (AC 230V)

Actuators wires should be plugged into the pluggable terminal blocks of the respective zones. 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.



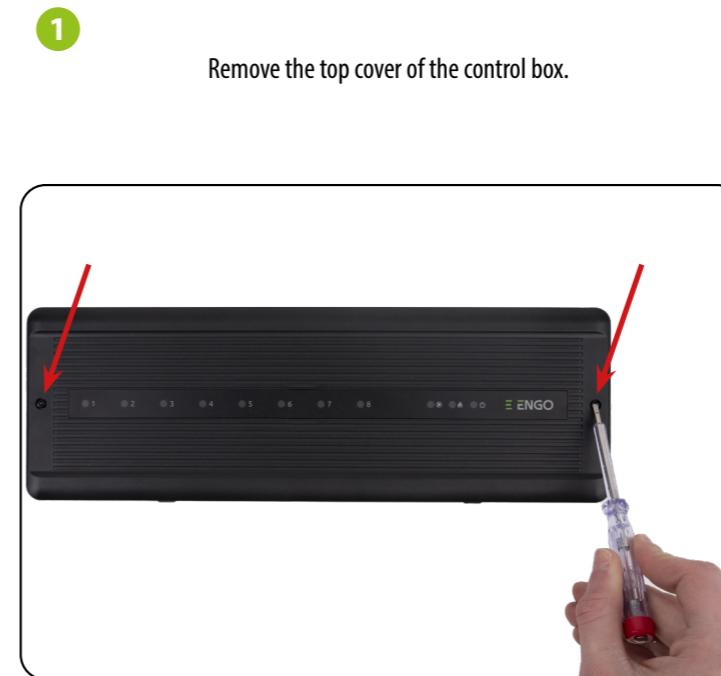
When the actuator has no power, it is closed.
After applying 230V voltage, the actuator will open.

Example based on E30NC230 actuators.

INSTALLATION

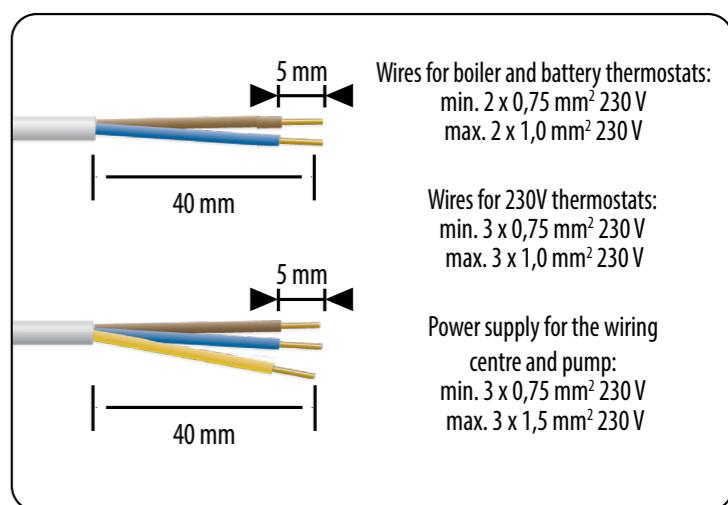
1

Remove the top cover of the control box.



2

Remove the appropriate piece of insulation from the wires.



3

Connect the wires in accordance with the connection description.
Refer to the sticker under the top cover.



4

After making sure all wires are properly connected, mount the top cover and turn the wiring centre to the 230 V power supply - the red "Power" diode will light up.

