



**Quick Guide**

Ver. 1.0  
Release date: VII 2024  
Soft: v1.3

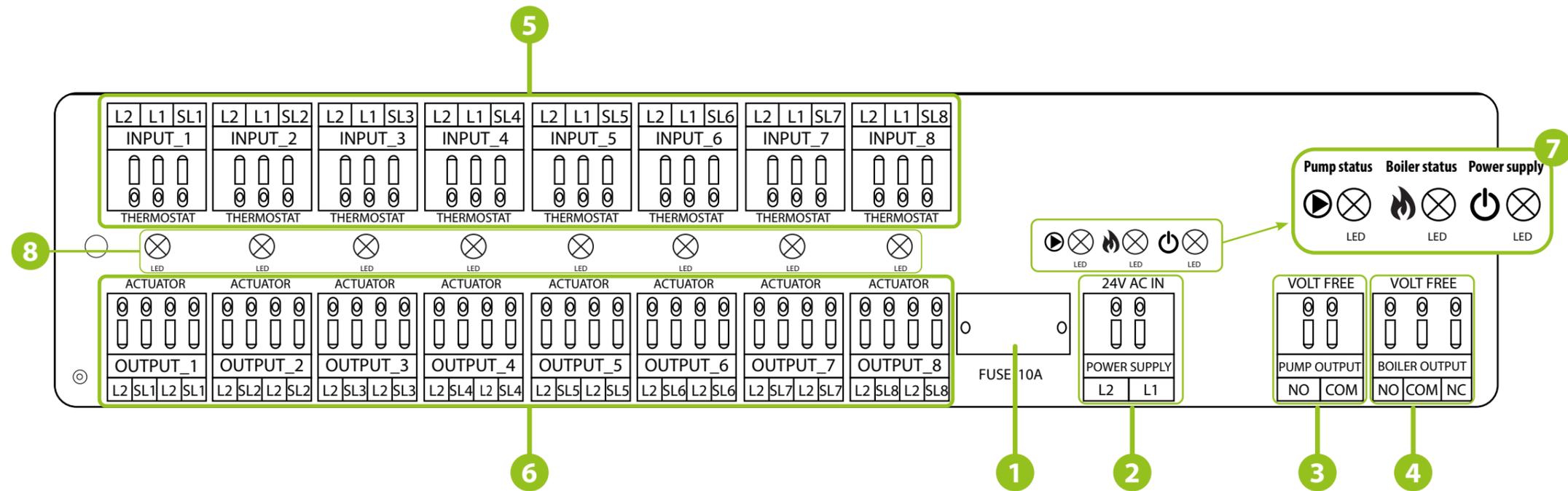


**Producer:**  
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**Control Box description**

1. Cartridge fuse 5 x 20 mm T10A
2. Power supply (AC 24V)
3. Pump control output (volt free)
4. Boiler control output (volt free)
5. Thermostats input connections
6. Actuators output connections (AC 24V)
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



**Introduction**

ECB8-24 control box is the main element of the underfloor heating control system. It has a built-in modules that controls the heat sources and pump (by volt-free relay). The control box allows to control 8 different zones. It is equipped with 24V 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 control box 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 control box should not be installed in areas where it may be exposed to water or damp conditions.

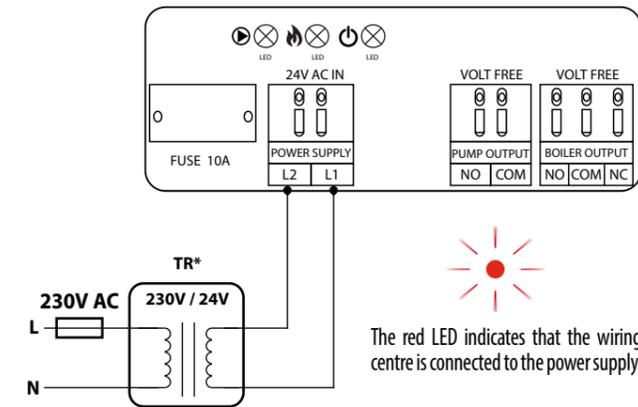
**PLEASE NOTE:**

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

**Technical Information**

Power Supply	24 V AC 50 Hz
Fuse (Total Load Max)	10 A
Pump Load Max	6A
Boiler Load Max	6A
Outputs	Boiler control (NO/COM/NC) Pump control (NO/COM) Terminals for actuators (24V AC)
Dimensions [mm]	327 x 110 x 36

**Power supply**



Power supply for wiring centre is 24V~, 50Hz.

TR\* - Power transformer 230/24V AC

**Please note:** Recommended transformer power for 12 actuators is 30VA. Recommended transformer is T24-30W.

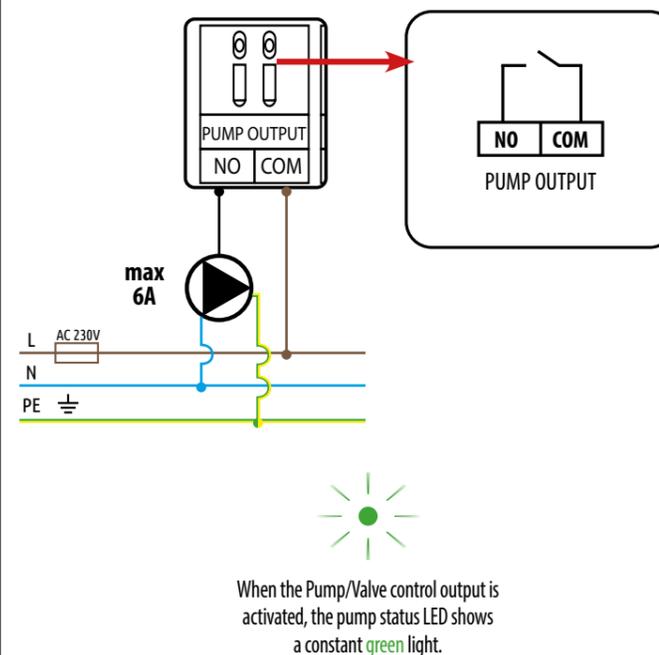
**Fuse**

**Please note:** Replacement of the fuse to be carried out only when the control box is disconnected from power supply (24V ~).

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 250V 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.

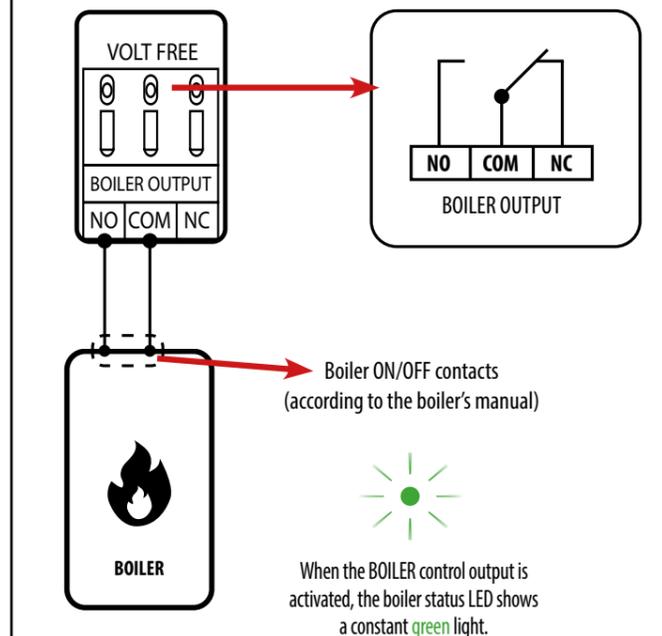
**Pump output (volt free)**

The PUMP OUTPUT is a potential-free output (COM/NO) controlling a circulating pump in the heating system, with a maximum load of 6A. The output is short-circuited (the pump starts) always after 3 minutes from the receipt of the heating signal from any controller connected to this control box. The output is switched off (the pump stops) when none of the controllers sends the heating signal.



**Boiler control output (volt free)**

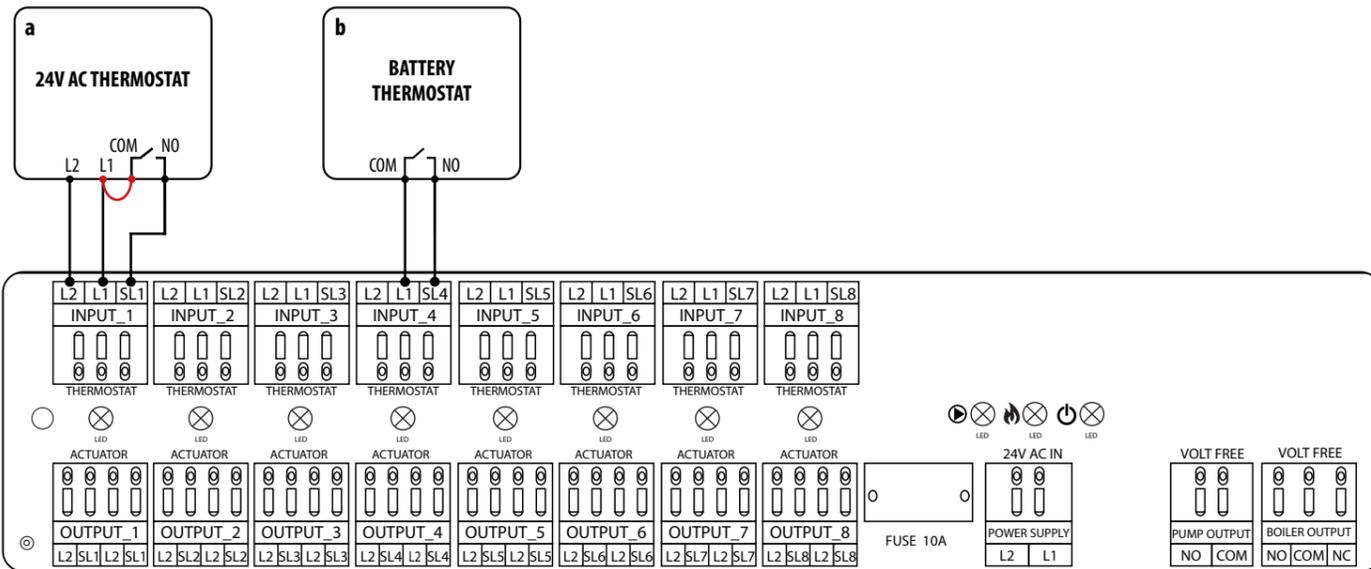
The boiler control output is supported by a relay with voltage-free contacts (NO / COM / NC output). The boiler must be connected to the COM-NO or COM-NC contacts. It is a typical two-state relay. In most cases, the NC terminal is not used. If the thermostats connected to the wiring centre send a signal 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.



## Thermostats input connections

a - 24V thermostat connection (with COM / NO voltage-free contacts)

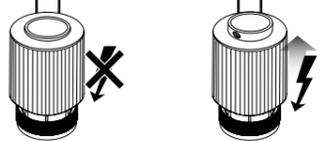
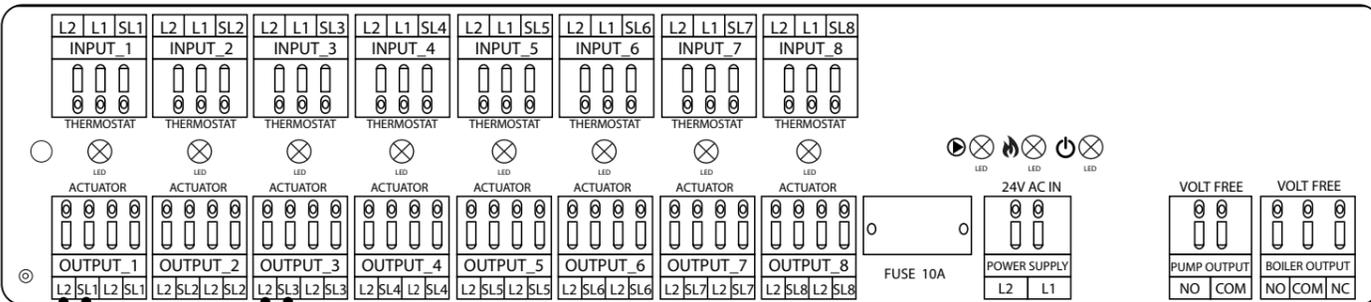
b - Connecting a battery ON / OFF thermostat (with COM / NO voltage-free contacts)



L1, L2	24 V AC Power supply
SL1 ... SL8	24V AC Control signal

## Actuators output connections (AC 24V)

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 24V voltage, the actuator will open.

Example based on E30NC-24 E30NC-24.

## INSTALLATION

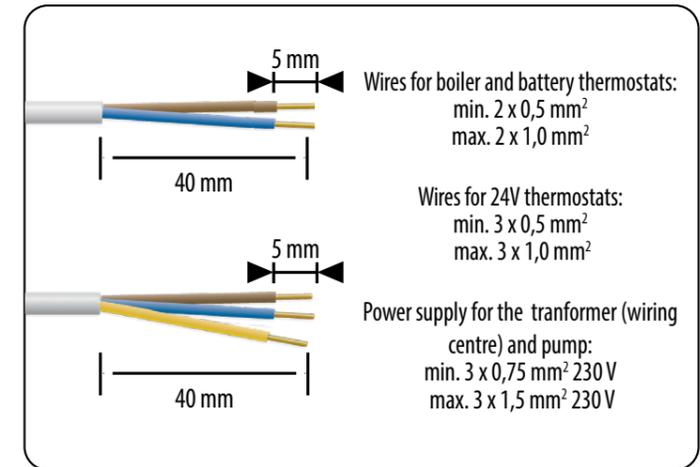
1

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 24 V power supply - the red "Power" diode will light up.

