




**ECB8-24 Wired
Control Box for
Underfloor Heating
System**



ENGO CONTROLS ECB8-24 Wired Control Box for Underfloor Heating System User Guide

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ENGO CONTROLS ECB8-24 Wired Control Box for Underfloor Heating System



Specifications

- Product Name: ECB8-24 Wired Control Box for Underfloor Heating System
- Power Supply: 24V AC, 50 Hz
- Fuse: 5 x 20 mm T10A
- Pump Load Max: 6A
- Boiler Load Max: 6A
- Outputs: Pump control (volt free), Boiler control (volt free), Actuators (24V AC)
- Dimensions: 327 x 110 x 36 mm

Product Description

The ECB8-24 control box is the main element of the underfloor heating control system. It controls heat sources and pumps using a volt-free relay. The control box allows for the control of 8 different zones and is equipped with 24V AC voltage outputs for actuators.

Product Compliance

This product complies with EU Directives: EMC 2014/30/EU, Low Voltage Directive LVD 2014/35/EU, RoHS directive 2011/65/EU.

Safety Information

The control box is designed to work with NC (normally closed) type actuators. Ensure proper installation and wiring to prevent any electrical hazards.

Power Supply Information

The power supply for the control box is 24V AC, 50Hz. Use a recommended transformer power of 30VA with transformer T24-30W for 12 actuators. The main fuse, located under the housing cover, secures the control box and connected devices.

Fuse Replacement

Replace the fuse only when the control box is disconnected from the power supply. Use ceramic tube slow blow fuses (5x20 mm) with a nominal max current of 10A. To replace the fuse, remove the fuse holder with a flat screwdriver and pull out the fuse.

Pump Output Control

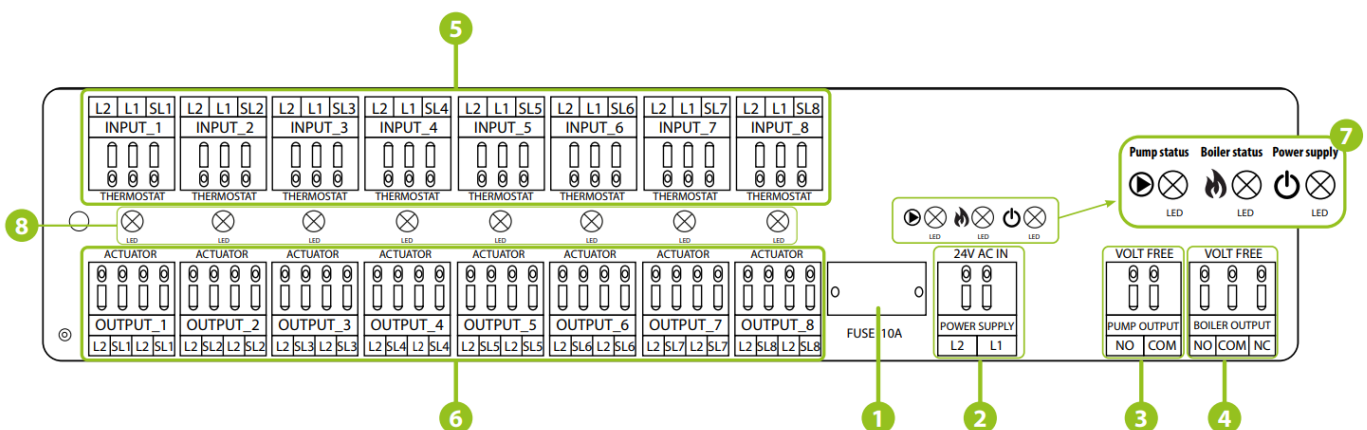
The PUMP OUTPUT is a potential-free output (COM/NO) that controls a circulating pump in the heating system with a maximum load of 6A. The pump starts after receiving a heating signal from any connected controller and stops when no heating signal is received.

FAQ

- **Q: How many zones can be controlled using this control box?**
 - A: The ECB8-24 control box allows for the control of up to 8 different zones.
- **Q: What type of actuators does the control box work with?**
 - A: The control box is designed to work with NC (normally-closed) type actuators.
- **Q: What are the compliance standards for this product?**
 - A: This product complies with EU Directives: EMC 2014/30/EU, Low Voltage Directive LVD 2014/35/EU, RoHS directive 2011/65/EU.

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. Actuator 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.

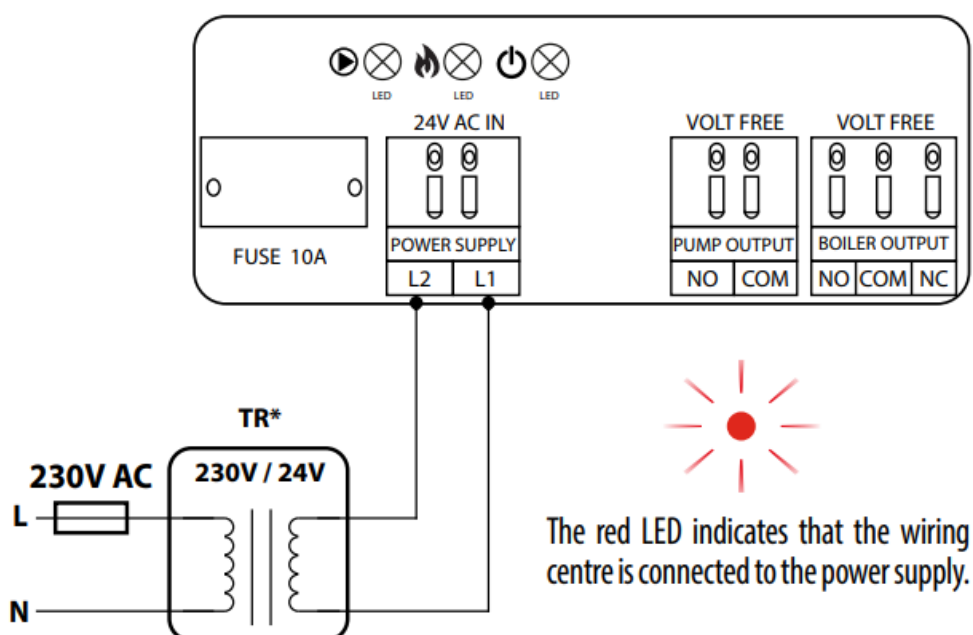
PLEASE NOTE

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 24 V~, 50Hz.

- TR*- Power transformer 230/24V AC

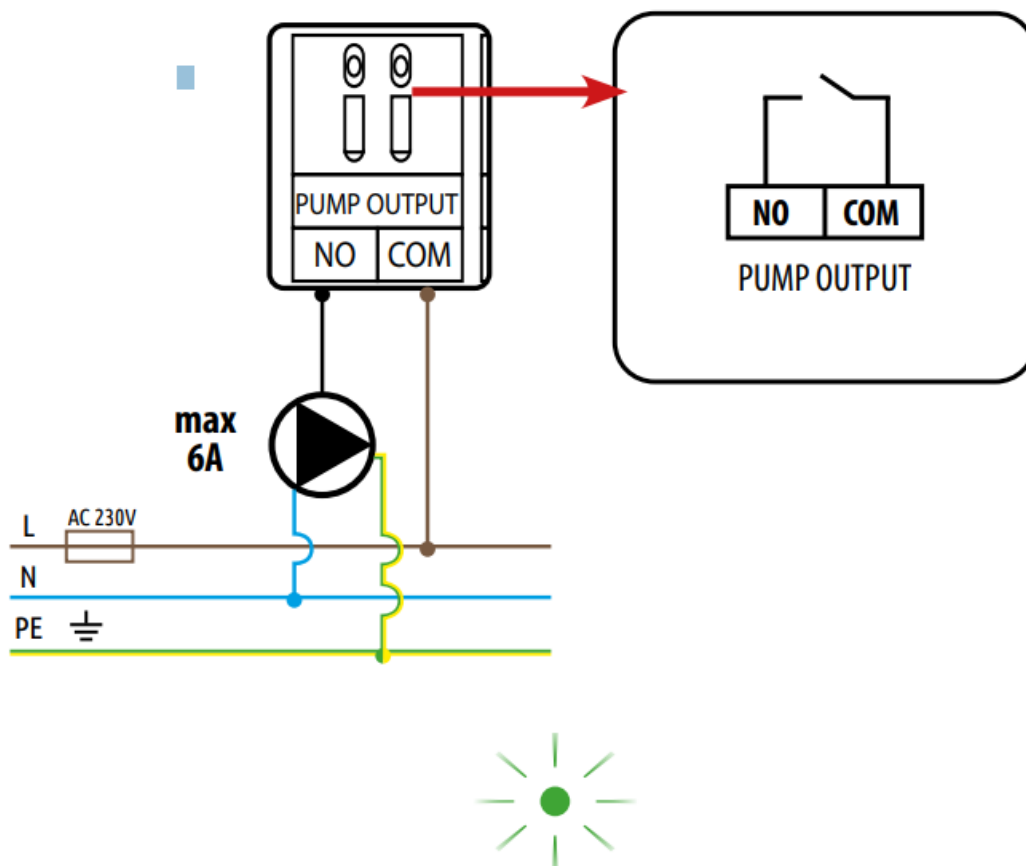
Please note: Recommended transformer power for 12 actuators is 30VA. The recommended transformer is T24-30W.

Fuse

Please note: Replacement of the fuse to be carried out only when the control box is disconnected from power supply (24 V ~). 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 (5×20 mm) with nominal max current 10A. To replace fuse remove the fuse holder with a flat screwdriver and pull out the fuse.

Pump output (voltage free)

The PUMP OUTPUT is a potential-free output (COM/NO) controlling a circulating pump in the pump heating system, with a maximum load of 6A. The output is short-circuited (the pump starts) 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.

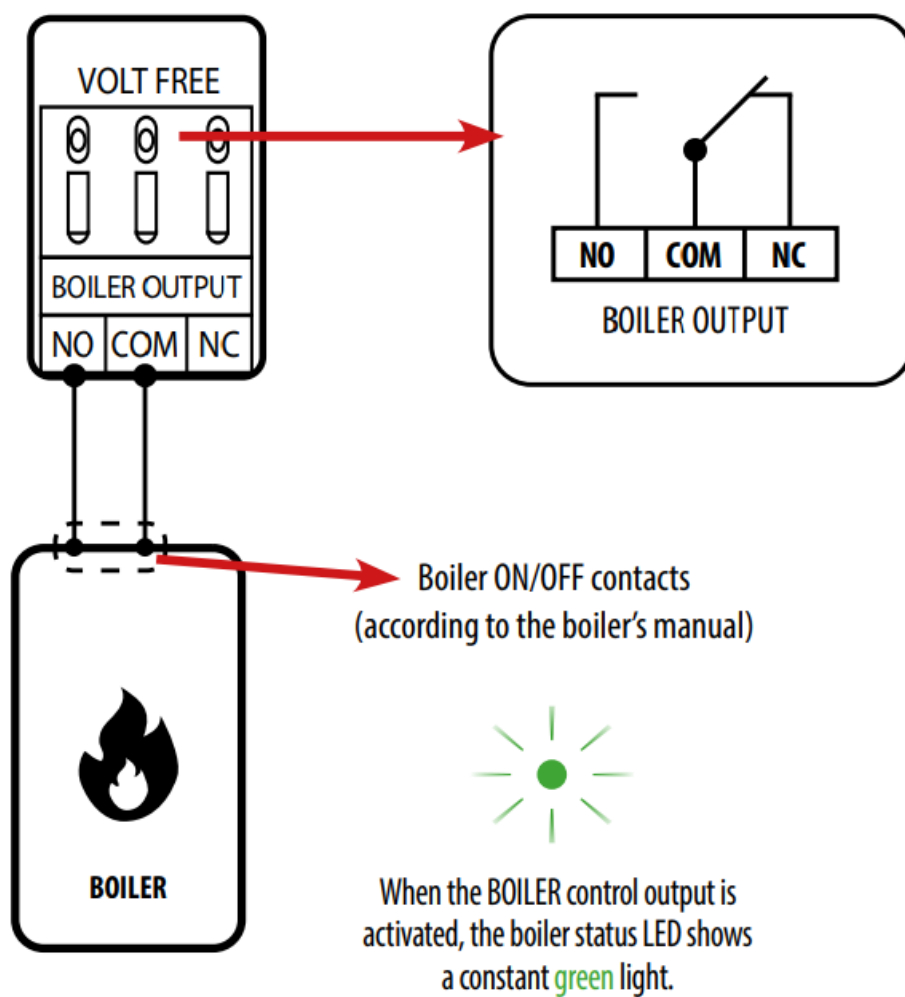


When the Pump/Valve control output is activated, the pump status LED shows a constant green light.

Boiler control output (voltage free)

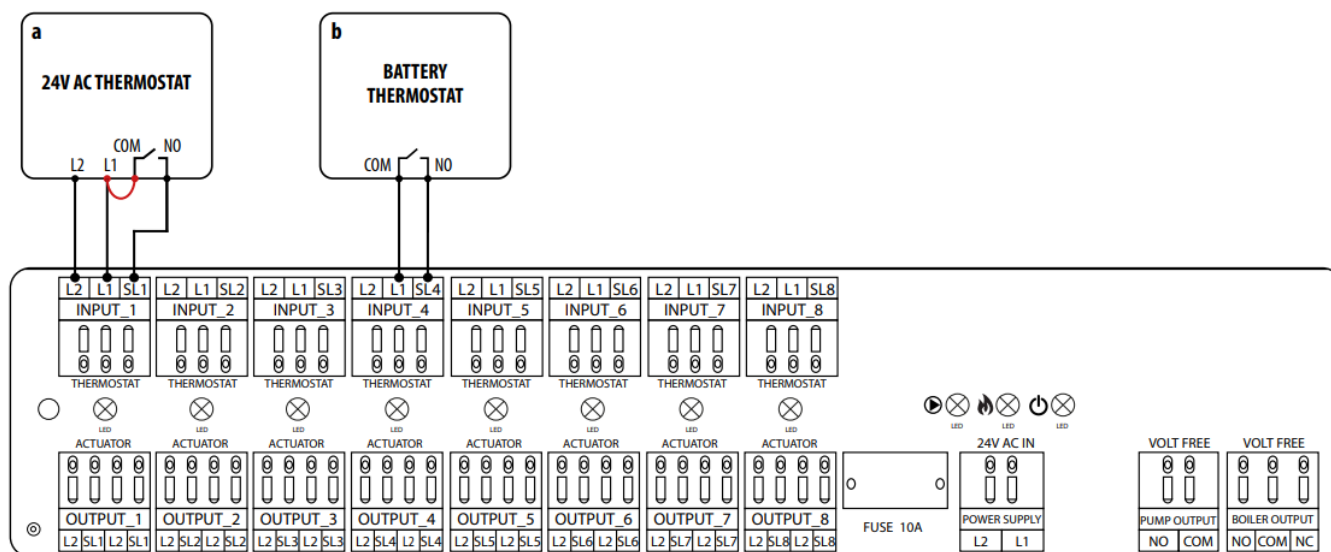
The boiler control output is supported by a relay with voltage-free contacts (NO / COM / NC output). The boiler must be connected to the COM-NO or COM-NC contacts. It is a typical two-state relay. In most cases, the NC terminal is not used. If the thermostats connected to the wiring centre send a signal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

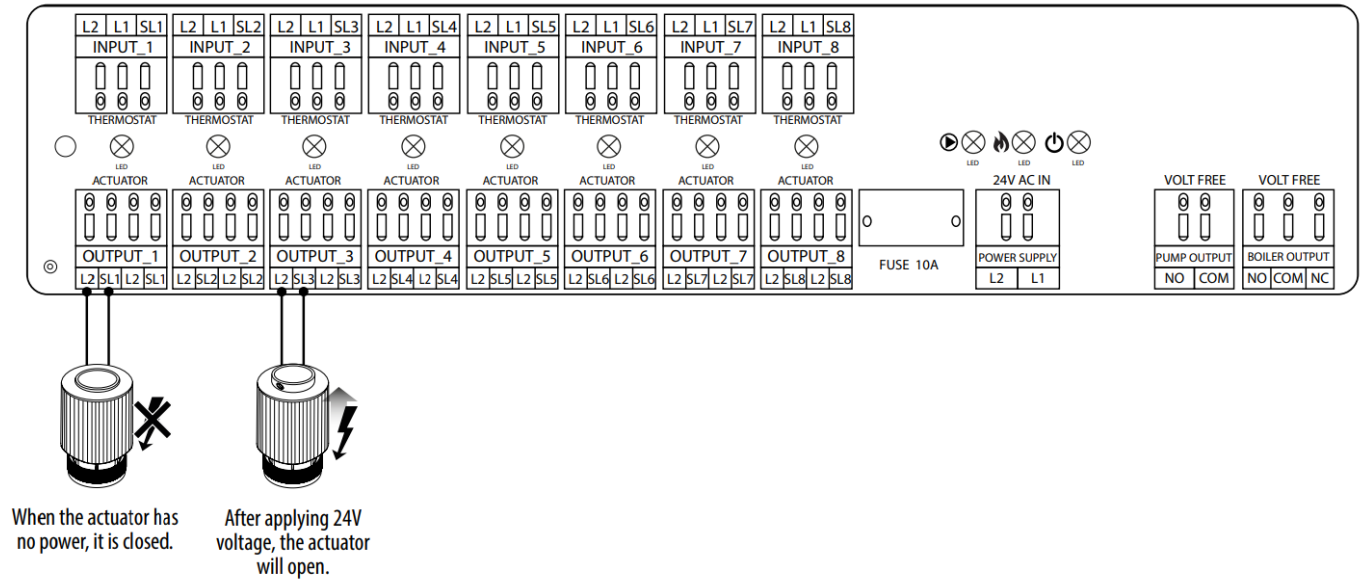
- a – 24V thermostat connection (with COM / NO voltage-free contacts)
- b – Connecting a battery ON / OFF thermostat (with COM / NO voltage-free contacts)



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

Actuators output connections (AC 24V)

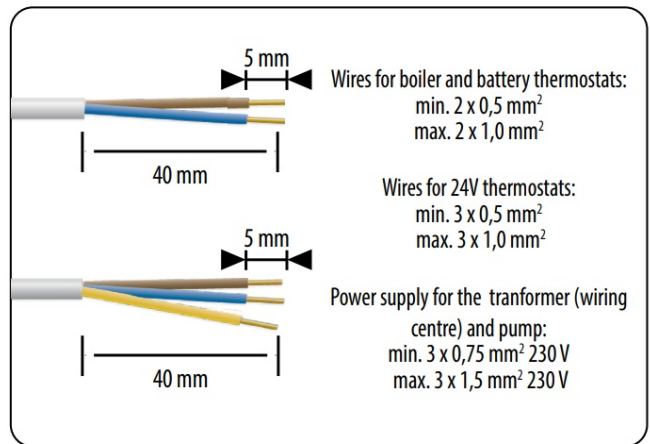
Actuators wires should be plugged into the pluggable terminal blocks of the respective zones. Maximum current load for each zone is designed to handle up to 6 actuators with a power of 2W each. With more actuators in one zone, an additional relay should be used to make sure that actuators output will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



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.



Contact

- Producer:
- Engo Controls sp z o.o. sp. k.
- Rolna 4 St.
- 43-262 Kobielice
- Polska
- www.engocontrols.com

Documents / Resources

	<p>ENGO CONTROLS ECB8-24 Wired Control Box for Underfloor Heating System [pdf] User Guide</p> <p>ECB8-24 Wired Control Box for Underfloor Heating System, ECB8-24, Wired Control Box for Underfloor Heating System, Underfloor Heating System, Heating System</p>
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References

- [ENGO Controls - Sterowanie ogrzewaniem](#)
- [User Manual](#)

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