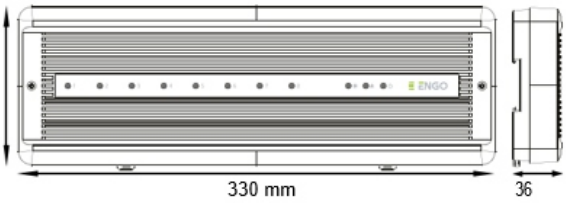
CosyFloor

ECB8HC-230 8 Zone Wired Control Box

ECB8HC-230

Wired Control Box for Underfloor Heating System with Pump & Boiler module and Heat/Cool feature, 8 zones, 230V

- **Heating and Cooling:** Full comfort control all year round with a single control box.
- **Outputs (HEAT/COOL):** Automatically activates heating or cooling.
- **Simple Mode Switching (CO input):** One 230V signal from the heat pump switches the logic of all zones.
- **Safe Cooling:** Dew point sensor input protects the floor from moisture condensation.
- **Anti-Short Cycling:** Adjustable delay (0–15 min) protects the pump and boiler from excessive wear.
- **Power for 48 Actuators:** Supports 8 thermostats and up to 6 actuators per zone.
- **Full Compatibility:** Volt-free contacts fit any boiler or heat pump.
- **Pump Logic Output:** Unified 230V pump control for both heating and cooling modes.
- **Fast LED Diagnostics:** Dual-colour indicators: red (heating), blue (cooling).
- **Two Mounting Options:** Convenient installation on a wall or standard DIN rail.



TECHNICAL DATA

Power supply	230 V AC
Max. Current	10A
Outputs	Pump 230V AC max 5(2) A Boiler NO/COM/NC Cooler NO/COM Actuators 230V AC max 2 A
Inputs	8 zones CO INPUT (Change Over) volt-free DEW INPUT (DEW point) volt-free
Actuator type	NC (normally closed)
Switch-off delay	0 / 3 / 5 / 15 min
Dimensions [mm]	330 x 110 x 36

WIRING DIAGRAM

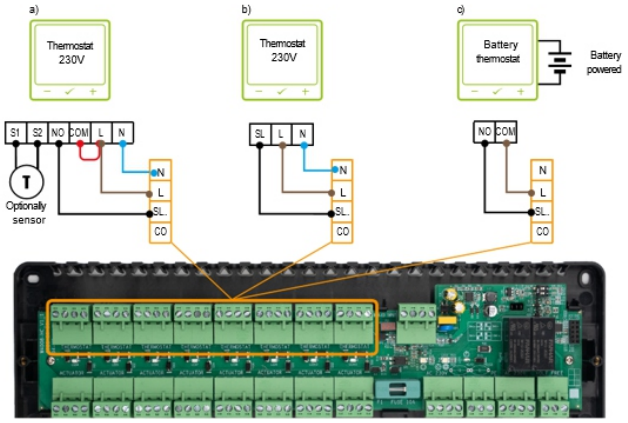
Connection of thermostats

Operating principle:
The SL input in the control box controls the activation of individual zones. The CO terminal of the thermostat (if present) is not used and should not be connected to the control box.

a)230 V thermostats with volt-free contacts:
In the thermostat, install a jumper between terminals L and COM, then connect the signal from the thermostat's NO output to the SL input of the control box.

b)230 V thermostats powered from the control box:
The signal from the thermostat's SL output is connected directly to the SL input of the control box (230 V AC).

c)Battery-powered thermostats:
The thermostat's volt-free NO/COM contacts are connected to the L/SL inputs of the control box.



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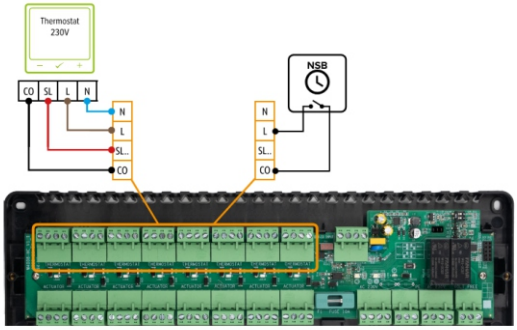
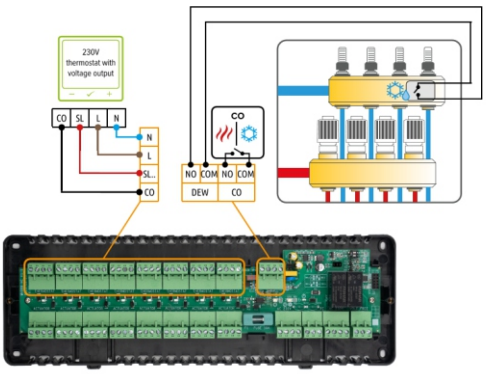
Connection of thermostats with NSB (Night Setback) function

Operating principle:
The SL input in the control box is responsible for activating the zone.
The NSB (Night Setback) function allows automatic reduction of the thermostat's setpoint temperature during nighttime hours or periods of absence.
Applying 230 V to the CO input of the thermostat (configured as NSB) activates the setback mode – the thermostat automatically lowers the setpoint temperature by the programmed NSB value.
Connection principle:
The 230 V thermostat is powered from the control box (L and N terminals).
The signal from the thermostat's SL (230 V) output is connected to the SL input of the control box.
NSB control:
The signal from the control box's CO (230 V) output is connected to the thermostat's CO input (configured as NSB).
NSB activation in the control box:
A time programmer is connected to one of the zones — to terminals L and CO.
When the programmer is switched on, 230 V appears on the CO terminal, which sends the NSB signal (230 V) to all CO terminals in the control box zones.
Upon receiving this signal, the thermostat enters the night setback mode.



Connection of a 230 V thermostat with HEATING / COOLING function

Operating principle:
The control box works with thermostats that support switching between heating and cooling modes. The operating mode of the control box is changed via the CO INPUT (NO-COM) terminal, which functions as a Change Over input. This input is volt-free (NO-COM) – only contact closure or opening is allowed; 230 V must not be applied.
Closing the contacts on the CO INPUT switches the control box to cooling mode. In this mode, 230 V appears on the CO terminals of each zone – the heating source is deactivated, and the cooling source is activated. At the same time, the 230 V signal from the control box CO output is sent to the thermostat's CO input (configured as Heat/Cool), switching the thermostat to cooling mode.
Connection principle:
230 V thermostat with voltage output SL➔ connect to the SL input of the control box.
CO output from the control box➔connect to the CO input of the thermostat (input configured as Heat/Cool).
External volt-free contact (Change Over)➔connect to the CO INPUT (NO-COM) of the control box.
The external Change Over contact switches the control box between heating (HEAT) and cooling (COOL) modes. Closing the contact activates cooling mode, while opening it restores heating mode.
The Change Over signal can come from: an external HEAT/COOL mode switch, or an automatic contact from a master system (e.g. heat/cool source controller, heat pump, or BMS system).
Hygrostat (dew point sensor) input:
The underfloor cooling system should be equipped with a dew point sensor with volt-free NO contacts, connected to the DEW INPUT of the control box.
When condensation is detected, the sensor contacts close, immediately disabling the PUMP and COOLER OUT outputs to prevent damage and protect the installation from moisture. The DEW INPUT is active only in cooling mode.chłodzenia.



ATTENTION:
To use the control box function (heating/cooling mode switching), compatible thermostats such as ENGO E4 must be used.