



Art. no.: 17700010 (CO₂ room sensor 0–2000 ppm (0–10 V for relay))

1. Designated use

The sensor measures carbon dioxide (CO₂) and temperature in a room. The measured values are each output via a 0–10 V output (e.g. at a fan). 2 relay outputs are switched on depending on the CO₂ concentration. The ON/OFF thresholds are adjustable (see 4). The devices are suitable for use in rooms with normal levels of cleanliness.

2. Safety instructions



WARNING

Danger of death through electric shock or fire!

➤ Installation should only be carried out by a professional electrician!

- Do not use the sensor for safety related gas measurements.
- Operate the sensor with safety extra low voltage only.

3. Installation

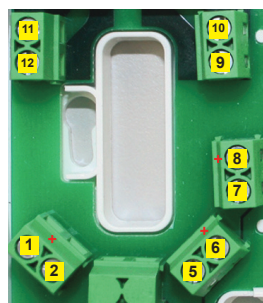
- Install the sensor on an internal wall or on a flush-mounted socket in a communal area.
- Avoid drafts or sources of direct heat emission.

4. Connection and installation

- The relay outputs are floating.
- Switching SELV is only permitted if both relays switch SELV.
- Ensure correct polarity at terminals 1/2 (only for DC) and 5/6, 7/8 (outputs).

Terminal layout

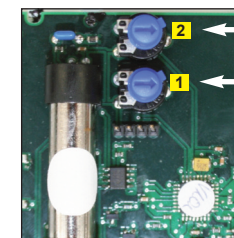
- 1 Operating voltage +24 V DC / 24 V AC (SELV)
- 2 Operating voltage \perp DC / 24 V AC (SELV)
- 5 0–10 V output Temperature (5 °C–40 °C) (GND)
- 6 0–10 V output Temperature (5 °C–40 °C) (+)
- 7 0–10 V output CO₂ (0–2000 ppm) (GND)
- 8 0–10 V output CO₂ (0–2000 ppm) (+)
- 9 Relay Stage 2 5 A/250 V
- 10 Relay Stage 2 5 A/250 V
- 11 Relay Stage 1 5 A/250 V
- 12 Relay Stage 1 5 A/250 V



Relay outputs/ON/OFF thresholds

The ON/OFF thresholds are set via the potentiometer in 100 ppm stages.

Stage 1	>700 ppm	Available range +/-200 ppm	1
Stage 2	>1300 ppm	Available range +/-200 ppm	2



5. Description and functions

The sensor has 3 LEDs (green, yellow, red) which display the current level of CO₂ content.

LED	Range
green	<800 ppm
yellow	800–1200 ppm
red	>1200 ppm

Display operating mode

Pressing the  button switches between Automatic, Manual (stage 1 and stage 2) and OFF.

6. Technical data

Operating voltage:	24 V AC/DC (SELV)
Power consumption:	8–20 mA (dependent on LED display, relay) max. 130 mA, <100 ms (measurement)
Mode of operation:	Type 1 B in accordance with EN 60730-1
Analog outputs:	2 x 0–10 V
Permissible amb. temperature:	5–40 °C
Protection rating:	IP 20 in accordance with EN 60529
Protection class:	II in accordance with EN 60730-1 for designated installation
Pollution degree:	2
Switching capacity:	max. switching current for each relay stage is 5 (1) A/250 V