

KNX CO₂-, Humidity and Temperature sensor (surface mounted)

Operating Instructions



Art. no. MEG6005-0001

Designated Use

- The sensor serves to detect carbon dioxide (CO₂), relative humidity and temperature in a variety of rooms (offices, schools, meetingrooms etc).
- The CO₂ content of the air is a verifiable indicator of the air quality in the living area. The higher the CO₂ content, the poorer the air.
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For your safety

⚡ DANGER
Risk of fatal injury due to electrical current
 All work on the device should only be carried out by trained and skilled electricians. Observe the county-specific regulations.

- Do not use the sensor for safety related gas measurements!
- Only operate the sensor with extra-low voltage!
- Do not drop the sensor. Strong vibrations interfere with the accurate measurement of CO₂.

Characteristics

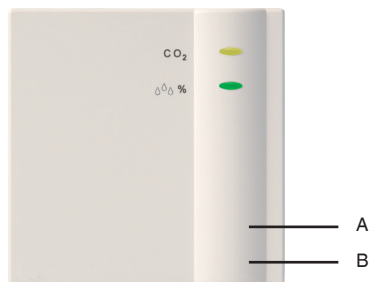
- The CO₂ gas makes up only approx. 0.034 % of our fresh air and acts as an indicator for assessing the air quality in a room.
- The concentration of 0.1 % (1000 ppm) is the limit value for indoor rooms.
- The maximum concentration in a workplace is 5000 ppm.
- Temperature detection range: 0–40 °C
- Setting range thresholds: 500–2550 ppm
- "Physical value" object: 0–9999 ppm
- "Relative humidity" detection range: 1 %–100 %
- There are 3 independent thresholds of the readings for CO₂ and relative humidity as well as a threshold for the temperature reading.
- Exceeding or under-running the thresholds triggers a response: Send priority. Switching, value.
- Every threshold has a disable object.

Installation

- Locate the sensor (for temperature measurement) on an internal wall, at about eye level.
- Avoid drafts or heat emission.
- Do not mount the sensor on a soft surface as this will inhibit air exchange.

Description and function

The sensor has 2 LEDs that indicate the current CO₂ content of the measured ambient air and the humidity.



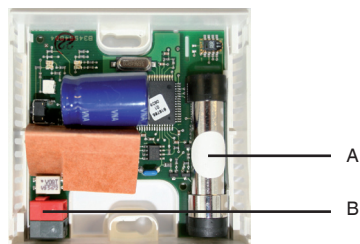
- A LED for indicating CO₂ content (from green → red)
- B LED for indicating relative humidity (from yellow → blue)

Thresholds of different readings

| Reading | LED CO ₂ | CO ₂ -concentration | LED relative humidity | Humidity status |
|---------------------------|---------------------|--------------------------------|-----------------------|--------------------|
| below threshold 1 | green | low | yellow | humidify |
| between threshold 1 and 2 | yellow | average | green | humidity OK |
| between threshold 2 and 3 | orange | high | red | dehumidify |
| above threshold 3 | red | very high | blue | condensation alarm |

Bus connection

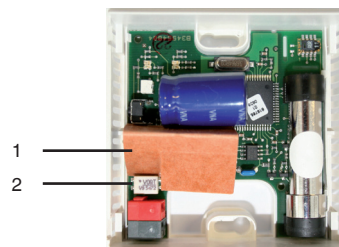
- Open the housing cover with a screwdriver at the 4 side lugs and feed the bus line from below through the opening.
- Plug bus line into bus terminals. Ensure correct polarity.
- Close housing cover.



- A Don't touch the membrane by mounting the surface
- B Bus terminal and bus line

Programming physical address

- Press the program button (2) with a screwdriver through the openings at the bottom of the device.
- Programming LED (1) lights up. The sensor is in programming mode.



- Start-up, diagnostics and configuration are handled by ETS (KNX Tool Software).

Start-up

Please refer to the Product Handbook for detailed functional descriptions (also at www.merten.de).

Technical Data

| | |
|----------------------------------|-----------------------------------|
| Operating voltage: | Bus voltage |
| Current consumption KNX: | ≤ 10 mA |
| Bus interface module (BCU): | integrated |
| Permissible ambient temperature: | -5 °C to +45 °C |
| Protection class: | III |
| Protection rating: | IP 20 in accordance with EN 60529 |
| Equipment standard: | in accordance with EN 60730-1 |
| Housing: | 74 x 74 x 30,8 mm |

Observe deviating technical data on the rating plate! Technical changes reserved. The devices comply with European Directives 2006/95/EEC (low-voltage directives) and 2004/108/EEC (EMC Directives).

If the devices are combined with others for use within a system, ensure that the system as a whole does not cause radio interference.

The ETS database can be found under www.merten.de
Please refer to the Handbook for detailed functional descriptions.

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*fee required