theben

KNX

309 289

AMUN 716

CO_2 sensor

716 9 200

1. Designated use

The sensor serves to detect carbon dioxide (CO_2), relative humidity and temperature in a variety of rooms (offices, schools, meeting rooms etc). The CO_2 content of the air is a verifiable indicator of the air quality in the living area. The higher the CO_2 content, the poorer the air. The devices are suitable for use in a normal environment.

2. Safety

⚠ WARNING

Danger of death through electric shock or fire!

➢ Installation should only be carried out by professional electrician!

The regulations and instructions in the ZVEI/ ZVEH Handbook must be observed to ensure that the bus lines are installed and the units are commissioned in a professional manner.
Tampering with or making modifications to the device will invalidate the warranty.

- 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 CO_2.

3. Characteristics

- The CO_2 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.

Composition of fresh air

Gas		Percentage volume
Nitrogen	N_2	78,08 %
Oxygen	O_2	20,95 %
Argon	Ar	0,93 %
Carbon dioxide	CO_2	340 ppm

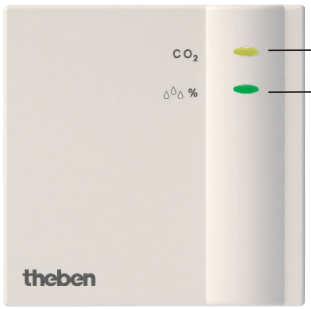
- Temperature detection range: 0–40 °C
- Setting range thresholds: 500-2550 ppm
- "Physical value" object: 0–9999 ppm
- "Relative humidity" detection range: 1 %–100 %
- There are 3 independent thresholds of the readings for CO_2 and relative humidity as well as a threshold for the temperature reading.
- Exceeding or under-running the thresholds triggers a response: Send priority. Switching, value.
- Every threshold has a disable object.

4. Installation

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

5. Description and function

The sensor has 2 LEDs that indicate the current CO_2 content of the measured ambient air and the temperature.



LED for indicating CO_2content (from green → red)

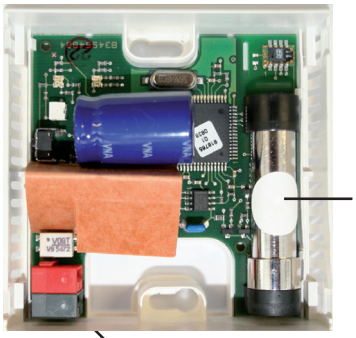
LED for indicating relative humidity (from yellow → blue)

Thresholds of different readings

Reading	LED CO_2	CO_2concentration	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

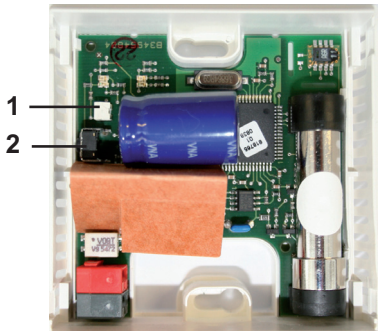
6. Bus connection

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



7. Programming physical address

1. Press the program button (2) with a screwdriver through the openings at the bottom of the device.
   → Programming LED (1) lights up.
   → **AMUN 716** is in programming mode.



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

8. Start-up

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

9. Technical data

Operating voltage:	Bus voltage
Current consumption KNX:	max. 12 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 28 mm

Observe deviating technical data on the rating plate! Technical changes reserved. The devices comply with European Directives 73/23/EEC (low-voltage directives) and 89/336/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.theben.de**
Please refer to the Handbook for detailed functional descriptions.

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