

CO₂ SENSORS

CO₂ sensor
CO2-1



CO₂ sensor
CO2-2



■ **Application**

The sensor is designed for indoor carbon dioxide concentration measurement and respective air flow regulation through the control output signal to the fan. Air flow control based on CO₂ concentration is an efficient energy saving solution.

■ **Design and compatibility**

The sensor has two separate outputs: a normally opened dry relay contact and an analogue output 0...10 V (this output is adjustable for 2...10 V/0...20 mA/4...20 mA).

■ **Modifications**

The sensor is available in two modifications: CO2-1 and CO2-2. The CO2-1 model incorporates LED lights for CO₂ concentration and operation buttons indicating the level of three operation modes.

■ **Mounting and power supply**

The sensor is designed for wall surface mounting. 24 VAC low current power supply. If power supply 24 V is not available, connect the TRF plug that is offered as an accessory.

■ **Accessories**

Power supply unit is applied for connection of the sensor to 220 V (model **TRF-220/24-1,6**) or 120 V (**TRF-120/24-1,6**) AC power mains.



Technical data

Parameters	Value
Power supply/consumption	24 VAC (50/60 Hz ± 10 %), 24 VDC/1.6 W Max
Gas detection analyzer	Non-dispersive infrared detector (NDIR) with self-calibration system
CO ₂ measuring range	0–2,000 ppm (parts per million)
Accuracy at 25 °C, 2,000 ppm	±30 ppm + 3 % of reading
Response time	max. 2 min
Warm up time for each turning-on	2 hours (first time), 2 minutes (operation)
Analogue output	0–10VDC (default), 4–20mA selectable by jumpers
On/Off output	1X2A switch load Four set points selectable by jumpers
6 LED lights for CO ₂ concentration indication (for model CO2-1)	1st green indicator lights when CO ₂ concentration is below 600 ppm; 1st and 2nd green indicators light when CO ₂ concentration is 600–800 ppm; 1st yellow indicator lights when CO ₂ concentration is 800–1200 ppm; 1st and 2nd yellow indicators light when CO ₂ concentration is 1200–1400 ppm; 1st red indicator lights when CO ₂ concentration is 1400–1600 ppm; 1st and 2nd red indicators light when CO ₂ concentration is above 1600 ppm
Operating conditions/storage recommendations	0–50 °C; 0–95 % RH non condensing/0–50 °C
Mass/Dimensions	0.120 kg/100 mm x 80 mm x 30 mm