



CO2DT(-R)

CO₂-transmitter for duct mounting

Duct transmitter for measuring carbon dioxide concentration in air. Measuring range 0...2000 ppm and output signal 0...10 V DC or 4...20mA (CO2DT) or relay output (CO2DT-R).

- Infrared technology (NDIR)
- CO₂-level 0...2000 ppm measuring range
- Good long term stability

CO2DT and CO2DT-R are CO₂-transmitters with patented auto-calibration, intended for duct mounting. The sensing element is mounted in the cover-part of the casing and the probe is in the shape of a venturi tube with two air channels.

The air in the ventilation duct is transported to the sensing element through one half of the probe and then back to the duct through the other half.

Mounting

To ensure proper function, make sure that the cover is properly fastened and that the cable gland makes a tight seal around the cable.

The transmitter should be placed in the air flow direction of the ventilation duct according to the marks on the cover.

Applications

The CO₂-level gives a direct indication of the indoor air quality. This information can be used to control ventilation with high precision and improve the air quality. By increasing the supply air only when it is necessary, it is possible to minimise energy costs.

CO2DT(-R) can for example be used to control ventilation in residential and office areas.

- Simple installation and service friendly housing
- Probe only 12 mm diameter
- Auto-calibration

Measuring principle

The CO₂-concentration is measured with infrared light. This technique has several advantages:

- Very high accuracy
- Exact identification of the detected gas
- Low risk of contamination
- Short response time
- Good long term stability

Automatic calibration

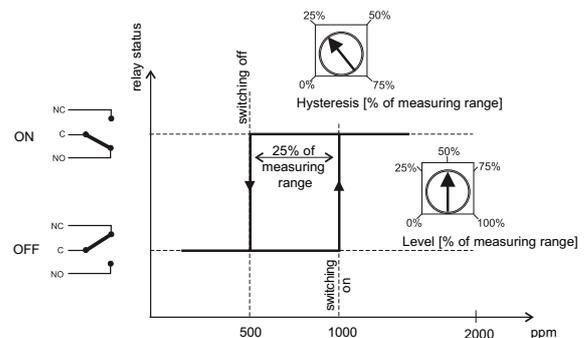
CO2DT(-R) is calibrated automatically, which means that manual recalibration is not required during the lifetime of the sensor.

Supply voltage and output

The supply voltage is 24 V AC/DC or 15...35 V DC and the output signal is 0...10 V DC, 4...20mA (CO2DT) or change-over relay (CO2DT-R).

For 4...20 mA, use the U/I switch located in the transmitter.

Hysteresis and level for CO2DT-R



Models

CO2DT	CO ₂ -transmitter for duct mounting with analogue output
CO2DT-R	CO ₂ -transmitter for duct mounting with relay output

Technical data

Supply voltage	24 V AC +/- 20%, 50...60 Hz or 15...35 V DC
Power consumption	3 W
Ambient temperature	-5...55°C
Ambient humidity	0..90% RH, non condensating
Temperature dependance	Typ. 2 ppm CO ₂ / °C
Storage temperature	-20...60°C
Measuring principle	NDIR (Non-Dispersive Infrared Technology)
Long term stability	Typ. 20 ppm / year
Response time	< 120 s
Warm-up time	< 5 min
Protection class	IP65 with probe downwards, otherwise IP20



EMC emissions & immunity standards: This product conforms to the requirements of the EMC Directive 2004/108/EC through product standards EN 61000-6-1 and EN 61000-6-3.

RoHS: This product conforms with the Directive 2011/65/EU of the European Parliament and of the Council.

Measuring range	0...2000 ppm
Inaccuracy (at 20°)	< ± (50 ppm + 2% of measuring value)

Output signal

CO2DT	0...10 V DC or 4...20 mA referring to 0...2000 ppm
CO2DT-R	Relay output 50 V AC/60 V DC

Wiring

CO2DT

1	Supply voltage 24 V AC/DC or 15...35 V DC
2	System neutral
3	Signal neutral
4	Output 0...10 V DC or 4...20mA, corresponding to 0...2000 ppm CO ₂

CO2DT-R

1	Supply voltage 24 V AC/DC or 15...35 V DC
2	System neutral
3	Common
4	Normally open
5	Normally closed



Dimensions (mm)

