



# CO2DT-R

## CO<sub>2</sub>-transmitter for duct mounting

Transmitter for measuring carbon dioxide concentration in air. Measuring range 0...2000 ppm and relay output.

CO2DT-R is a CO<sub>2</sub>-transmitter 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 CO<sub>2</sub>-level gives a direct indication of the indoor air quality. This information can be used to control ventilation 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 when controlling ventilation in residential and office areas.

### Measuring principle

The CO<sub>2</sub>-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

### Short facts about CO2DT-R

- Infrared technology (NDIR)
- CO<sub>2</sub> concentration 0...2000 ppm measuring range
- Excellent long-term stability
- Easy installation and service-friendly housing
- Probe only 12 mm
- Automatic CO<sub>2</sub> calibration

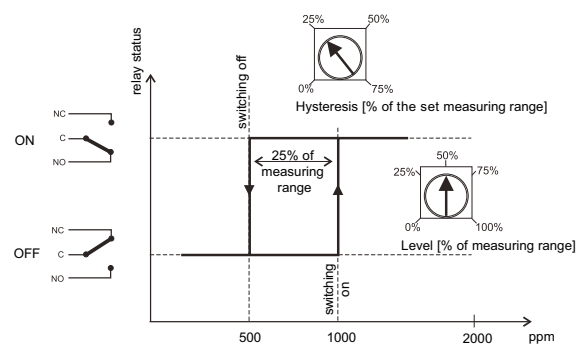
### Automatic calibration

CO2DT-R has automatic calibration, which means that manual recalibration is not required during the lifetime of the sensor.

### Supply voltage and output

The transmitter has supply voltage 24 V AC/DC or 15...35 V DC and change-over relay.

### Hysteresis and level



## Technical data

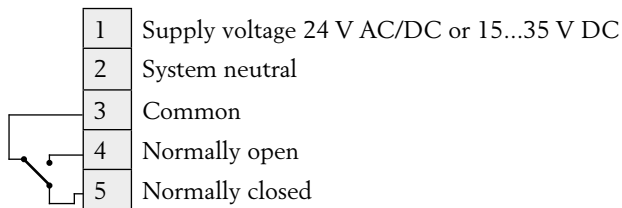
Supply voltage	24 V AC $\pm$ 20 %, 50...60 Hz or 15...35 V DC
Power consumption	3 W
Ambient temperature	-5...55°C
Ambient humidity	0...90 % RH, non-condensing
Temperature dependence	Typ. 2 ppm CO <sub>2</sub> /°C
Storage temperature	-20...60°C
Measuring principle	NDIR (Non-Dispersive Infrared Technology)
Long-term stability	Typ. 20 ppm / year
Response time	< 120 s
Warm-up time	< 5 min
Protection class	IP65 with probe downwards, otherwise IP20
Measuring range	0...2000 ppm
Accuracy (at 20°)	< $\pm$ (50 ppm + 2 % of measuring value)
Output signal	Relay output 50 V AC/60 V DC



**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.

## Wiring



## Dimensions (mm)

