

## KCO2-SD-TYR2 Duct CO<sub>2</sub> sensor



**Summary** The KCO2-SD-TYR2 sensor measures concentration of CO<sub>2</sub> in the duct air in the range of 0...2000 ppm or 0...5000 ppm. Output is an analogue signal 0...10 V DC.

**Application**

- Indication of air pollution in HVAC units.
- For demand controlled ventilation in rooms with variable load (cinemas, meeting rooms etc.).

**Function** The CO<sub>2</sub> contents in the air is measured by a NDIR sensor. The sensor is auto-calibrated every 7 days. To ensure correct execution of the calibration process, the sensor must be exposed to fresh air (300...400 ppm CO<sub>2</sub>) at least once a week.

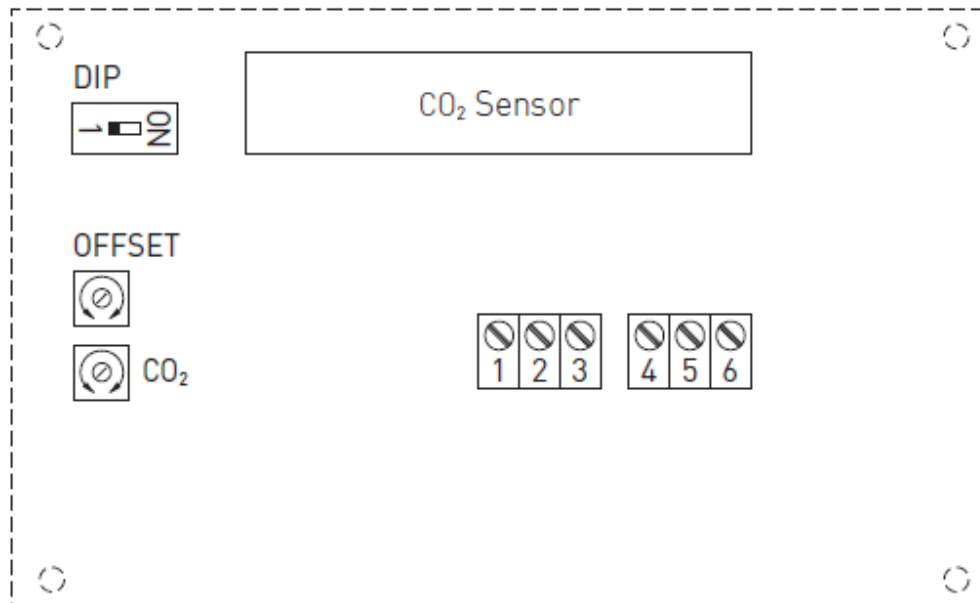
The sensor must not be used as safety or protective device!

It is absolutely necessary to choose the device mounting position so that the air stream "presses" into the duct tube. After switching on the device, a self-test and tempering period follows. This procedure takes 3 to 5 minutes, depending on ambient conditions. During this time, the output analogue voltage differs from the actual measured value.

## Technical data

Power supply	24 V AC/DC
Sensor	optical (NDIR) – non-dispersive infrared technology with dual beam system
Measuring range	0...2000 ppm or 0...5000 ppm CO <sub>2</sub>
Output signal	0...10V DC
Measuring accuracy	up to 2000 ppm +/- 70 ppm, max. 5 % of measured value up to 5000 ppm +/- 70 ppm, max. 10 % of measured value
Pressure dependence	+/- 1.5 % / kPa (related to normal pressure)
Long-term stability	+/- 1% per year
Gas exchange	diffusive
Ambient temperature	0...50 °C
Terminals	screw terminals for wires 0,14 – 1,5 mm <sup>2</sup>
Dimensions	see below
Housing	polyamide, 30% fiber glass reinforced, white (similar to RAL9010)
Protection sheath	PLEUFORM™, polyamide (PA6), Ø 20 mm, NL= 202.5 mm
Installation	with attached plastic flange
Protection class	III (according to EN 60730)
Protection degree	IP65 (according to EN 60529; enclosure only!)

## Terminals

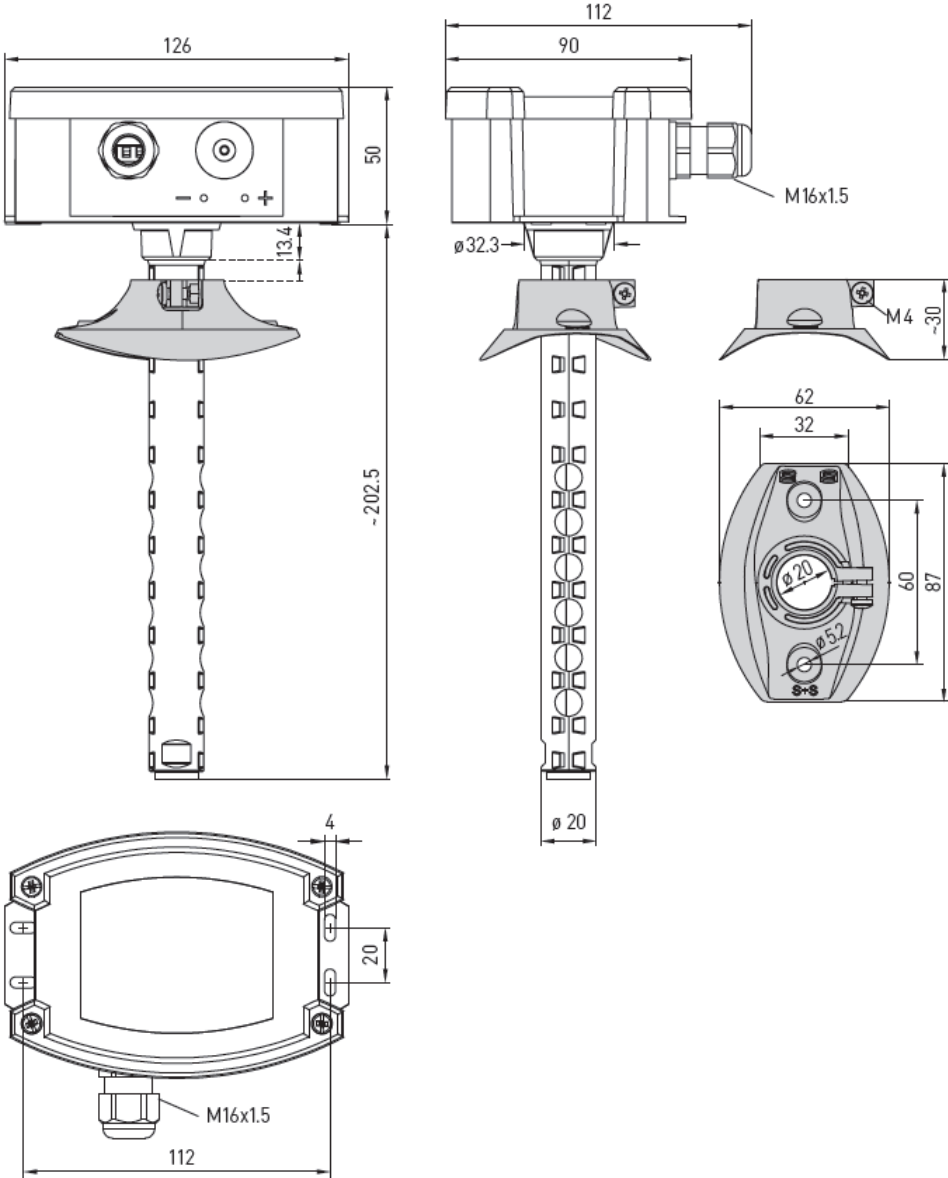


**DIP 1**  
ON = 5000 ppm  
OFF = 2000 ppm

### KCO2-SD-TYR2

- 1 -UB-GND
- 2 +UB 24V AC/DC
- 3 Output CO<sub>2</sub> in ppm 0...10V
- 4 Not used
- 5 Not used
- 6 Not used

**Dimensions**



Dimensions are in *mm*.

**Accessories****MFT-20-K (included)****Correction CO<sub>2</sub> Manual correction**

Due to the dual-beam measuring system used, automatic calibration is not used. Instead, the output value can be corrected by up to  $\pm 500$  ppm by means of the corresponding calibration potentiometer if required.

**Changes in  
versions**

05/2016 — The first catalogue version.