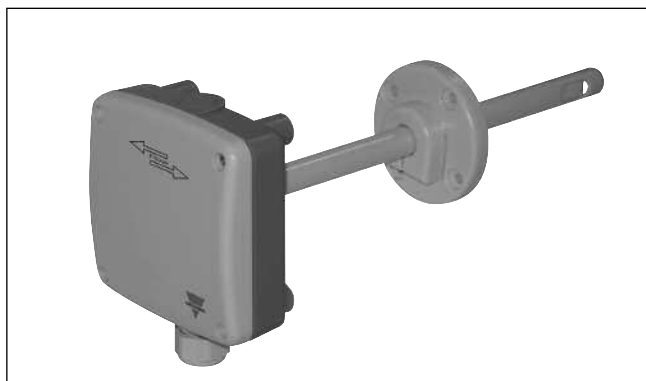


Environmental Sensors CO₂ Transmitters



- Very simple installation
- Compact housing
- Auto-calibration
- Traceable calibration
- Measuring ranges: 0...2000ppm or 0...5000ppm
- Analogue or switching output
- Duct mounting
- CE, RoHS

Product Description

Duct mounted CO₂ transmitters of the CGES series are designed for HVAC applications. The CO₂ sensing element uses the Non-Dispersive Infrared Technology (NDIR). A patented auto-calibration procedure compensates for drift caused

by the aging of the sensing element and guarantees outstanding long term stability. Installed into a duct a small flow of air will be established by convection through the probe into the transmitter housing and back into the duct. Inside the transmitter

housing the air will diffuse through a membrane into the CO₂ sensing element.

The operation in closed loop air stream avoids pollution of the CO₂ sensor.

Measuring ranges of 0...2000ppm and 0...5000ppm correspond to an analogue interface of

0-10V or 4-20mA. Selectively a switching output with adjustable switching point and hysteresis is available. The instruments can be easily positioned in the duct with the standard mounting flange.

Approvals



Ordering Key

CGESCO2D 2 V L

Model _____
 Measuring range _____
 Output _____
 Probe length _____

Type Selection

Model	Measuring Range	Output	Probe Length
CGESCO2D CO ₂ Transmitter	2 0...2000ppm 5 0...5000ppm	V 0-10V A 4-20mA S Switching Output	L 200mm

General Data

Voltage supply SELV	24VAC ±20% 15-35VDC SELV= Safety Extra Low Voltage	Temperature ranges working temperature range storage temperature range	-5...55°C/23...131°F -20...60°C/-4...140°F
Power Requirement	<3W	Electromagnetic compatibility	EN 61000-6-3 ÖVE EN61326-1+A1+A2:05.2002 EN 61000-6-1 FCC Part 15 ICES-003 ClassB
Warm up time	<5min		
Humidity	0...95% (not condensing)		

Measuring Values

CO ₂		Response time τ_{63}	< 120s
Measurement principle	Non-Dispersive Infrared Technology (NDIR)	Temperature dependence	typ. 2ppm CO ₂ /°C
Sensing element	Dual Source Infrared System	Long term stability	typ. 20ppm / year
Measuring range	0...2000ppm / 0...5000ppm	Sample rate	~30s
Accuracy @ 20°C/68°F and 1013mbar	0...2000ppm <±(50ppm +2% of meas. value) 0...5000ppm <±(50ppm +3% of meas. value) Traceable to international standards, administrated by NIST, PTB, BEV...		

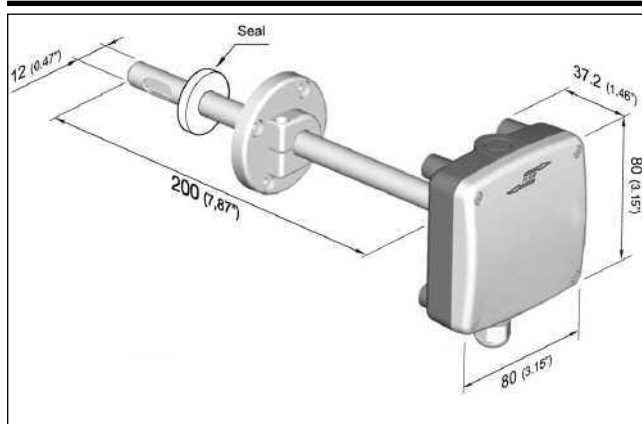
Output Data

Analogue Outputs	
0...2000ppm/0...5000ppm	0-10V 4-20mA
	$-1\text{mA} < I_L < 1\text{mA}$ $R_L < 500\Omega$
Switching Output	
Max. switching voltage	50VAC / 60VDC
Max. switching load	1A @ 50VAC 1A @ 24VDC
Min. switching load	1mA @ 5VDC
Contact material	Ag+Au clad

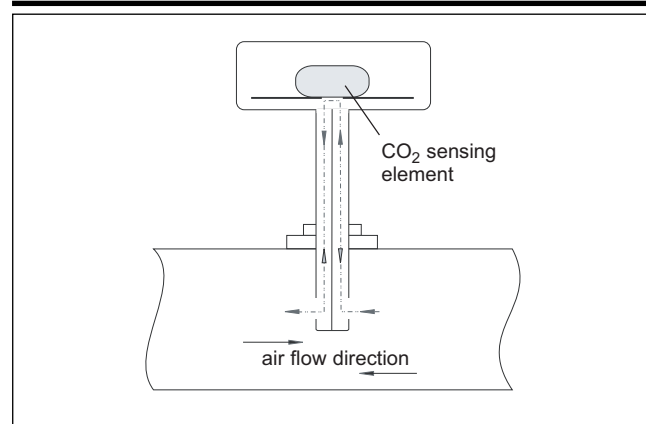
Mechanical Data

Housing	PC Polycarbonate	
Electrical connection	Screw terminals max. 1.5mm ² (AWG 16)	
Protection Degree	Housing Probe	IP65 IP20
Housing colour	Cover Back	RAL 7035 RAL 7037

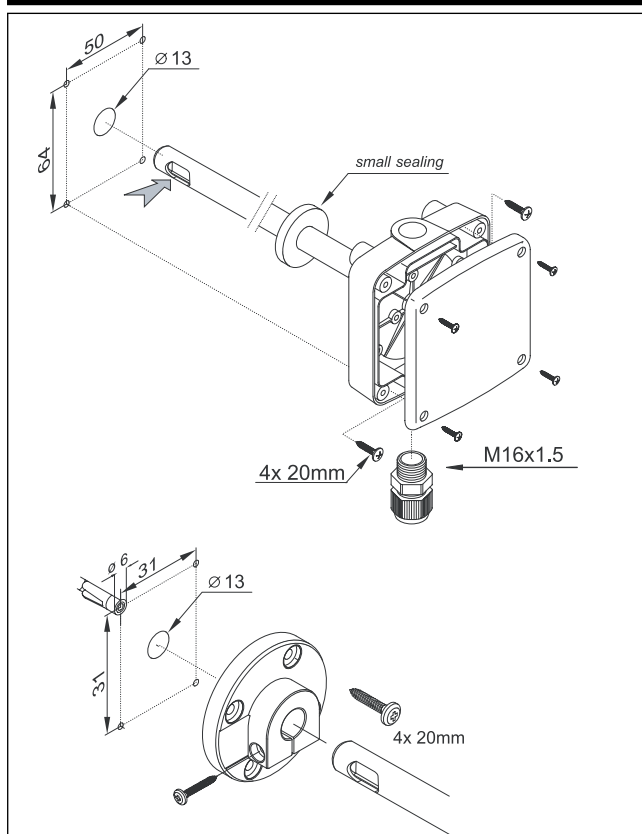
Dimensions



Operating Principle

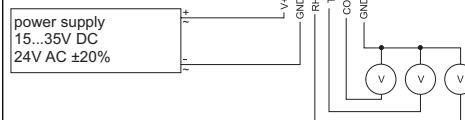


Mounting

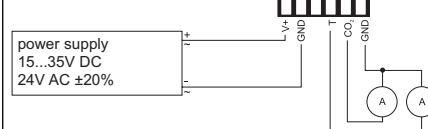


Connection Diagram

Analogue Output model CGESC02DxVx



model CGESC02DxAx



Switching Output model CGESC02DxSx

