

## FLOW<sup>EVO</sup> // technical Data

Infrared gas sensor for flow with digital interface



- Pre calibrated
- Compact design
- 3/5 mm gas line connectors
- 3.3 - 6 V DC supply voltage
- Modbus ASCII or RTU
- Status indication by LED

Infrared gas sensor for process control and gas analysing using dual wavelength technology. Designed for different applications in a wide range of gas measurement systems. The FLOW EVO sensor is easy to be integrated into OEM systems, where long term stability, repeatability and reliable performance are required.

Modbus ASCII or RTU data communication offer a variety of options to connect the PREMIUM4 EVO sensor to a controller.

Atmospheric pressure compensation, on board status LED, temperature compensation, low drift, ready to use calibration, a wide range of different gases and measurement ranges - all that makes the smartGAS FLOW EVO sensor the best choice also for your application and helps to save time and costs with design in.

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F3-212205-00000

carbon dioxide CO<sub>2</sub>

2.000 ppm

General features	
Model type:	F3-212205-00000
Measurement principle:	Non Dispersive InfraRed (NDIR)
Gas:	carbon dioxide, CO <sub>2</sub>
Measurement range:	0 - 2.000 ppm
Gas supply:	Flow, with pump
Gas line connector:	3 mm internal, 5 mm outer diameter
Flow Rate:	0.2 to 0.8 l / min (const)
Dimensions Sensor:	153 mm x 30 mm x 43 mm (L x H X W)
Warm-up time Start up:	≤ 2 minutes
Warm-up time full spec:	≤ 30 minutes
measuring response <sup>(1)</sup>	
Response time (t <sub>90</sub> ): <sup>(1)</sup>	appr. 20 s (@ 0.5 l/min)
Digital resolution:	1 ppm
Detection limit (3 σ):	≤ 5 ppm (typically)
Repeatability:	≤ ± 10 ppm
Linearity error: <sup>(2)</sup>	≤ ± 20 ppm
Influencing Variable <sup>(4)</sup>	
Temp. Dependence (zero):	≤ ± 0.1 % Full scale per °C
Temp. Dependence (span):	≤ ± 0.2 % Full scale per °C
Pressure Dependence (zero):	---
Pressure Dependence (span):	0.16 % value per hPa
Electrical data	
Supply Voltage:	3,3 - 6 V DC
Power Consumption:	< 1 Watt
Digital output:	UART Modbus ASCII / RTU
Unit intervall:	2 400 - 38 400 Baud
Analogue output:	---
Calibration:	zero and span by software
optical display:	Status- and function with LED
Climatic conditions	
Operating temperature:	-10 °C ... + 40 °C
Storage Temperature:	-20 °C ... + 60 °C
Air pressure:	800 to 1 200 hPa
Humidity:	0 % to 95 % rel. Humidity (not condensing)
Optional Accessories:	
	Micropump
	Filter

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At first initiation and depending on application and ambient conditions recalibration is recommended.

Please consult smartGAS Sales for parts specified with other temperature and measurement ranges

- 1) Relating to sample gas pressure 1013 hPa absolute, 0.5 l/min gas flow and 25°C ambient and gas temperature
- 2) Stated linearity error excludes calibration gas tolerance of 2%
- 3) For dry and clean test gas at 25°C and 1013 hPa absolute - depending on the operation and ambient conditions values may differ
- 4) Relating to calibration conditions (see final check)

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Depending on the

application, the target gas and the measurement range the technical data may differ. No liability is accepted for any consequential losses, injury or damage resulting from the use

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