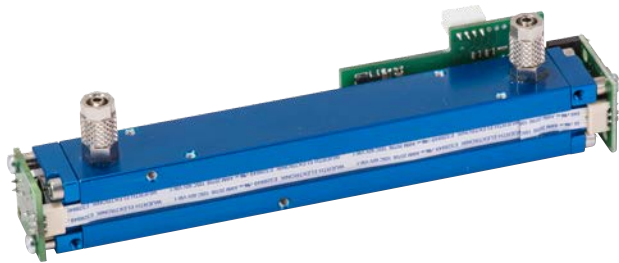


## smartMODUL FLOW<sup>EVO</sup>

# CO<sub>2</sub> // CARBON DIOXIDE // 2000 ppm

Infrared gas sensor CO<sub>2</sub> 2000 ppm // F3-212205-05000



- 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
- Low drift

Non Dispersive Infrared (NDIR) gas sensor for process control and gas analysing using dual wavelength technology. Designed for process control, lab analysing and environmental monitoring in a wide range of gas measurement systems.

The FLOW<sup>EVO</sup> CO<sub>2</sub> sensor can easily be integrated into OEM systems, where long term stability, repeatability and reliable performance are required. Based on robust and precise NDIR technology our CO<sub>2</sub> sensors offer enduring solutions in the area of controlled combustion and process control. Furthermore, they can be used in environmental analysis and various other fields of scientific research where low signal drift and high selectivity are crucial for exact measurements and subsequent processing.

Modbus ASCII or RTU data communication offer a variety of options to connect the FLOW<sup>EVO</sup> sensor to a controller.

### CO<sub>2</sub> // CARBON DIOXIDE SENSOR

GAS ANALYSING

PROCESS CONTROL

ENVIRONMENTAL MONITORING

RESEARCH

# FLOW<sup>EVO</sup> CO<sub>2</sub> // CARBON DIOXIDE // 2000 ppm

Infrared gas sensor CO<sub>2</sub> 2000 ppm // F3-212205-05000

blue performance

<b>General features</b>	
Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength
Measurement range:	0..2000 ppm Full Scale (FS)
Gas supply:	by flow (nearly atmospheric pressure)
Flow rate:	0.1 .. 1.0 l / min
Dimensions:	156 mm x 30 mm x 37 mm (L x W x H)
Warm-up time:	< 2 minutes (start up time) < 30 minutes (full specification)
<b>Measuring response</b>	
related to Pa = 1013 hPa, Ta = 25 °C, flow = 0.7 l / min	
Response time (t <sub>90</sub> ):	Apr. 12 s @ 0.7 l / min
Digital resolution (@ zero):	1 ppm
Detection limit (3 σ):	≤ 8 ppm
Repeatability:	≤ ± 15 ppm
Linearity error (straight line deviation):	≤ ± 20 ppm
Long term stability (span):	≤ ± 40 ppm over 1000 h period
Long term stability (zero):	≤ ± 40 ppm over 1000 h period
<b>Influence of T, P, flow rate, other</b>	
related to Pa = 1013 hPa, Ta = 25 °C, flow = 0.7 l / min	
Temp. dependence (zero):	≤ ± 2 ppm per °C
Temp. dependence (span):	≤ ± 4 ppm per °C
Pressure dependence:	+0.156 % / hPa
flow rate dependence:	≤ ± 3 ppm per 0.1 l / min
cross sensitivity (zero) other gases:	consult factory
<b>Electrical inputs and outputs</b>	
Supply voltage:	3.3V .. 6.0V DC
Supply current (peak):	< 400mA @ 3.3V, < 240mA @ 5.0V
Inrush current:	< 450mA
Average power consumption:	< 800 mW
Digital output signal:	Modbus ASCII / RTU via UART, autobaud, autoframe
Calibration:	zero and span by SW
<b>Climatic conditions</b>	
Operating temperature:	0 .. + 50 °C
Storage temperature:	-20 .. + 60 °C
Air pressure:	800 .. 1150 hPa
Ambient humidity:	0 .. 95 % relative humidity (not condensing)

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Please consult smartGAS Marketing for parts specified with other temperature and measurement ranges.  
At first initiation and depending on application and ambient conditions recalibration is recommended. Recurring cycles of recalibration are recommended.