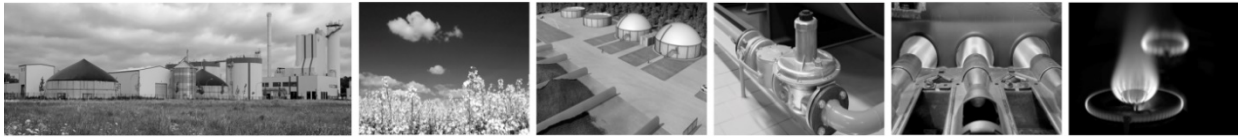


*blue performance*



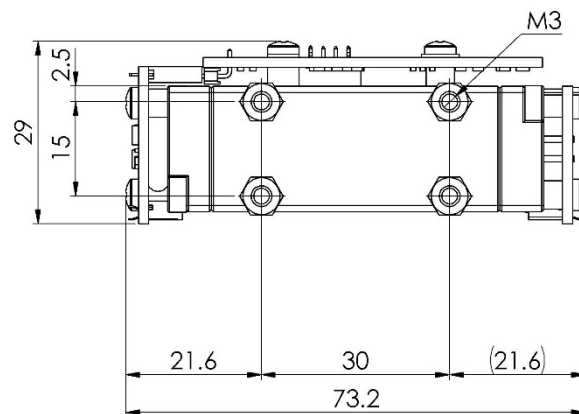
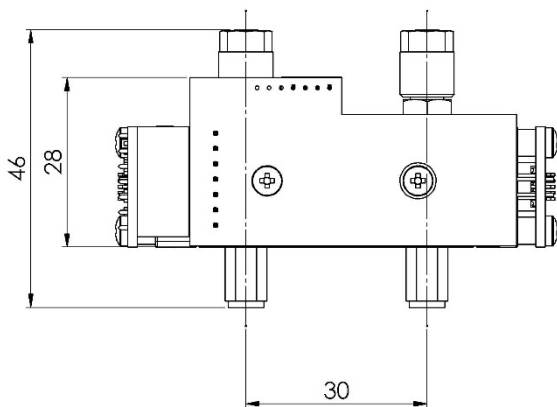
**FLOW<sup>EVO</sup>**

**Infrared gas sensor**

**CO<sub>2</sub> // Carbon dioxide // 5000 ppm**

smartGAS item number: F3-212505-05000

- 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



**APPLICATION EXAMPLES**

**GAS ANALYSING // BIOGAS APPLICATION // ENVIRONMENTAL MONITORING**

<b>F3-212505-05000</b>	<b>CO<sub>2</sub> // Carbon dioxide // 5000 ppm</b>	
<b>General features</b>		
Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength	
Measurement range:	0 ... 5000 ppm Full Scale (FS)	
Gas supply:	by flow (nearly atmospheric pressure)	
Flow rate:	0.1 ... 1.0 l / min	
Mounting dimensions:	76 mm x 30 mm x 50 mm (L x W x H)	
Warm-up time:	< 2 minutes (start up time) < 30 minutes (full specification)	
<b>Measuring response*</b>		
Digital resolution:	1 ppm	
Response time @ 0.7 l / min**:	<i>Standard:</i>	<i>Fast:</i>
t <sub>90</sub> (10 to 90 % FS):	≤ 9.9 s	≤ 0.7 s
t <sub>on</sub> (0 to 90 % FS):	≤ 16.5 s	≤ 1.8 s
Detection limit (3 σ):	≤ 20 ppm	≤ 38 ppm
Repeatability:	≤ ± 35 ppm	
Linearity error (straight line deviation):	≤ ± 50 ppm	
Long term stability (zero):	≤ ± 200 ppm over 1000 h period	
Long term stability (span):	≤ ± 500 ppm over 1000 h period	
<b>Influence of T, P, flow rate, other*</b>		
Temp. dependence (zero):	≤ ± 5 ppm per °C	
Temp. dependence (span):	≤ ± 10 ppm per °C	
Pressure dependence:	+ 0.156 % of actual reading / hPa	
Flow rate dependence:	≤ ± 10 ppm per 0.1 l / min	
Cross sensitivity (zero) other gases:	consult manufacturer	
<b>Electrical inputs and outputs</b>		
Supply voltage:	3.3 V ... 6.0 VDC	
Supply current (peak):	< 400 mA @ 3.3 V, < 240 mA @ 5.0 V	
Inrush current:	< 600 mA	
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)	
* Typical values related to 1013 hPa, Ta = 22 °C, flow = 0.7 l / min for dry (not condensing) and clean sample gas. Stated values exclude calibration gas tolerance.		
** Adjustable only via smartGAS Calibration-Tool SW.		

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For more information, please visit [www.smartgas.eu](http://www.smartgas.eu) or contact us at [sales@smartgas.eu](mailto:sales@smartgas.eu)

Please consult smartGAS sales 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.