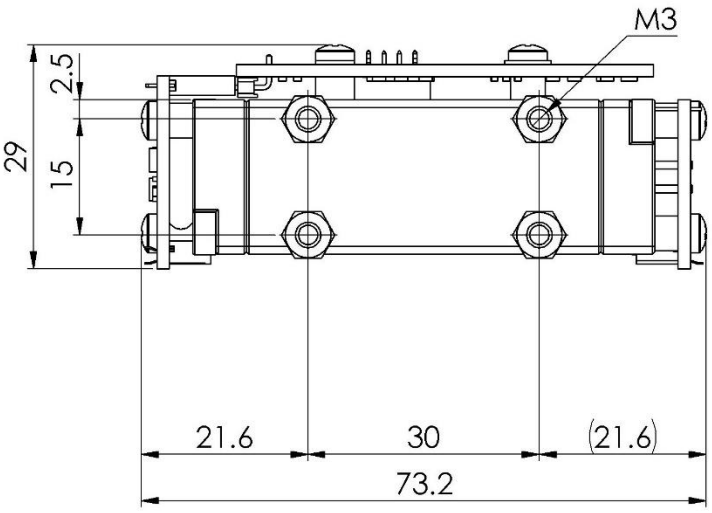
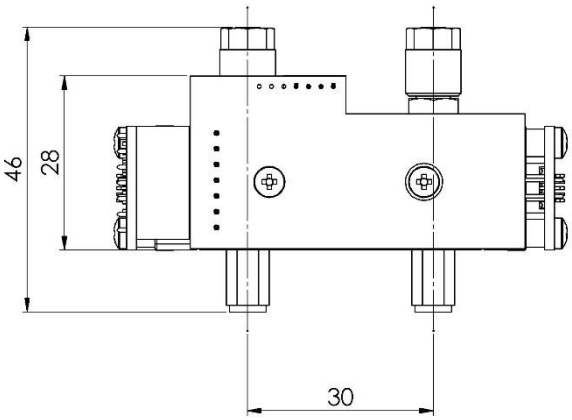
blue performance

FLOW^{EVO} for Biogas application

Infrared gas sensor CH4 // Methane // 100 Vol.-%
smartGAS item number: F3-043108-05000

- **Pre calibrated**
- **Compact design**
- **3/5 mm gas line connectors**
- **3.3 – 6.0 V DC supply voltage**
- **Modbus ASCII or RTU**
- **Status indication by LED**
- **Low drift**





APPLICATION EXAMPLE
BIOGAS APPLICATION // GAS ANALYSING // PROCESS CONTROL

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F3-043108-05000	CH4 // Methane // 100 Vol.-% // for Biogas application	
General features		
Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength	
Measurement range:	0 ... 100 Vol.-% Full Scale (FS)	
Gas supply:	by flow (nearly atmospheric pressure)	
Flow rate:	0.1 ... 1.0 l / min	
Dimensions (with stands):	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)	
Measuring response*		
Digital resolution:	0.01 Vol.-%	
Response time @ 0.7 l / min**:	*Standard:*	*Fast:*
t_{90} (10 to 90 % FS):	≤ 9.9 s	≤ 0.7 s
t_{on} (0 to 90 % FS):	≤ 16.5 s	≤ 1.8 s
Detection limit (3 σ):	≤ 0.2 Vol.-%	≤ 0.38 Vol.-%
Repeatability:	≤ ± 0.6 Vol.-%	
Linearity error (straight line deviation):	≤ ± 0.9 Vol.-%	
Long term stability (zero):	≤ ± 1.0 Vol.-% over 1000 h period	
Long term stability (span):	≤ ± 2.0 Vol.-% over 1000 h period	
Influence of T, P, flow rate, other*		
Temp. dependence (zero):	≤ ± 0.1 Vol.-% per °C	
Temp. dependence (span):	≤ ± 0.2 Vol.-% per °C	
Pressure dependence:	+ 0.100 % of actual reading / hPa	
Flow rate dependence:	≤ ± 0.1 Vol.-% per 0.1 l / min	
Cross sensitivity (zero) other gases:	consult manufacturer	
Electrical inputs and outputs		
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	
Climatic conditions		
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.

For more information, please visit www.smartgas.eu or contact us at 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.

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