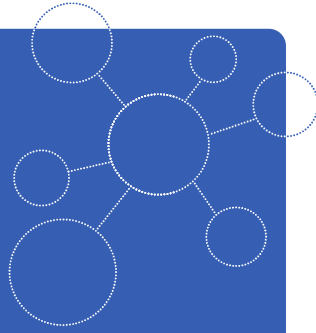
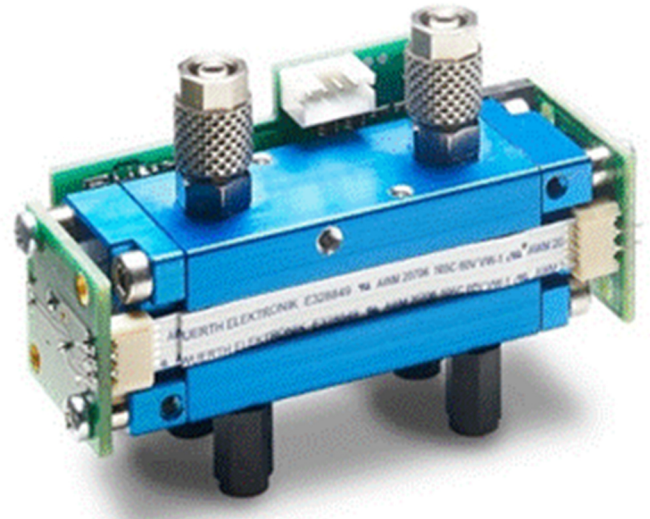


MADE IN GERMANY

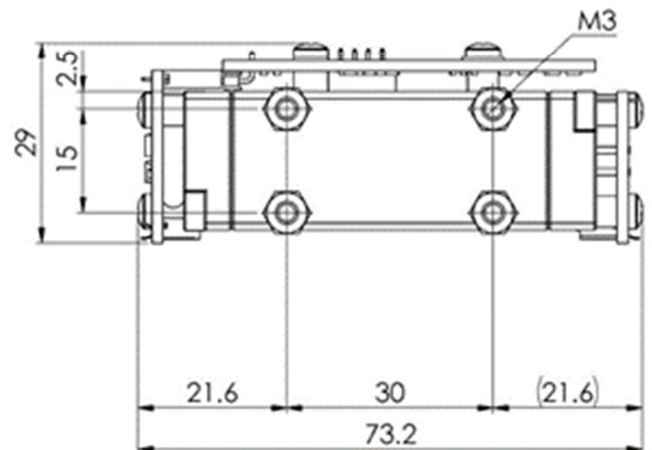
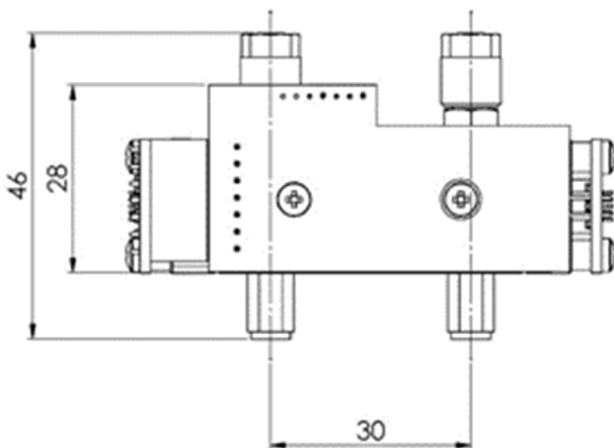


FLOW^{EVO}

Infrared gas Sensor
Carbon monoxide CO
15 Vol.-%
smartGAS item number: F3-222157-05000



- Pre calibrated
- Compact Design
- 3/5 mm gas line connector
- 3.3–6 V DC supply voltage
- Modbus ASCII or RTU
- Status indicated by LED
- Low drift



Application examples

Gas analysis
Biogas application
Environmental monitoring
Process control
Emission monitoring

Available equipment

Gas cooler
Particle filter
Gas pump
Calibration Software
Mounting equipment

Available design in support

Mechanical Installation
Data communication
Gas pre-treatment

General features

Measurement principle:	Non-Dispersive Infra-Red (NDIR), dual wavelength	
Measurement range:	0 ... 15 Vol.-% 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)	

Measuring response*

Digital resolution:	0.01 Vol.-%	
Response time @ 0.7 l / min**:	<i>Standard:</i>	<i>Fast:</i>
t ₉₀ (10 to 90 % FS):	≤ 9.9 s	≤ 0.7 s
t _{0n} (0 to 90 % FS):	≤ 16.5 s	≤ 1.8 s
Detection limit (3 σ):	≤ 0.06 Vol.-%	≤ 0.12 Vol.-%
Repeatability:	≤ ± 0.1 Vol.-%	
Linearity error (straight line deviation):	≤ ± 0.3 Vol.-%	
Long term stability (zero):	≤ ± 0.3 Vol.-% over 1000 h period	
Long term stability (span):	≤ ± 1.55 Vol.-% over 1000 h period	

Influence of T, P, flow rate, other*

Temp. dependence (zero):	≤ ± 0.03 Vol.-% per °C
Temp. dependence (span):	≤ ± 0.08 Vol.-% per °C
Pressure dependence:	+ 0.134 % of actual reading / hPa
Flow rate dependence:	≤ ± 0.05 Vol.-% per 0.1 l / min
Cross sensitivity (zero) other gases:	consult factory
Gas dew point requirement:	< + 5°C dew point (stable), particle free and clean sample gas

Electrical parameters

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, T_a = 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.

All rights reserved. Any logos and/or product names are trademarks of smartGAS. The reproduction, transfer, distribution or storage of information contained in this brochure in any form without the prior written consent of smartGAS is strictly prohibited. All specifications – technical included – are subject to change without notice. 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 of this document or from any omissions or errors herein. The data is given for guidance only. It does not constitute a specification or an offer for sale.

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.