

FLOW^{EVO}

Infrared gas sensor

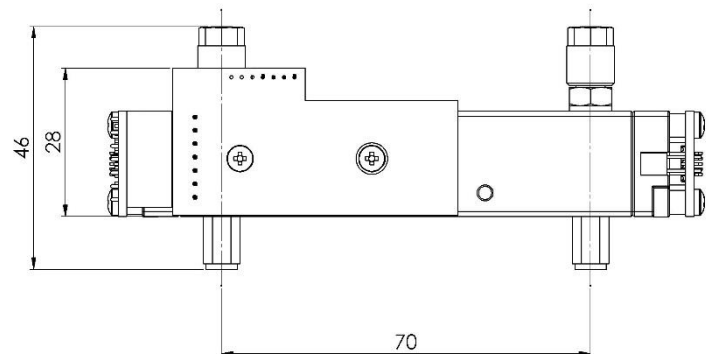
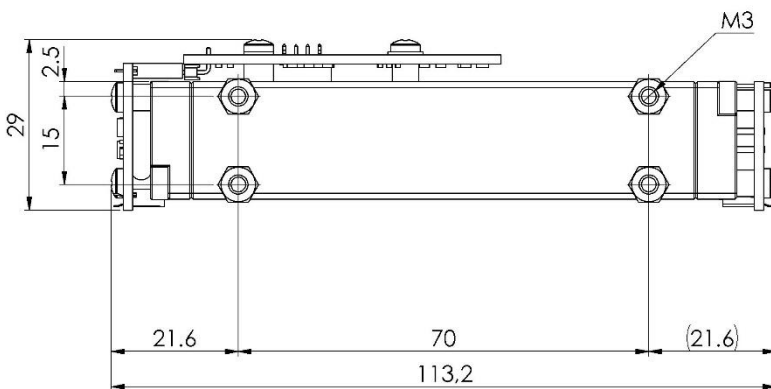
CH₄ // Methane // 15 Vol.-% // (also applicable for CH₃Br // Bromomethane // Appr. 35 Vol.-%)

smartGAS item number: F3-042157-05005

- 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



*Illustration similar (gold coated)



F3-042157-05005

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General features

Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength
Measurement range:	0 ... 15 Vol.-% Full Scale (FS) CH ₄
Gas supply:	by flow (nearly atmospheric pressure)
Flow rate:	0.1 ... 1.0 l / min
Mounting dimensions:	116 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 (@CH₄)*

Digital resolution:	0.001 Vol.-%	
Response time @ 0.7 l / min**:	<i>Standard:</i>	<i>Fast:</i>
t ₉₀ (10 to 90 % FS):	≤ 10.8 s	≤ 0.7 s
t _{on} (0 to 90 % FS):	≤ 16.5 s	≤ 1.9 s
Detection limit (3 σ):	≤ 0.015 Vol.-%	≤ 0.028 Vol.-%
Repeatability:	≤ ± 0.05 Vol.-%	
Linearity error (straight line deviation):	≤ ± 0.1 Vol.-% ***	
Long term stability (zero):	≤ ± 0.1 Vol.-% over 1000 h period	
Long term stability (span):	≤ ± 0.9 Vol.-% over 1000 h period	

Influence of T, P, flow rate, other (@CH₄)*

Temp. dependence (zero):	≤ ± 0.01 Vol.-% per °C
Temp. dependence (span):	≤ ± 0.01 Vol.-% per °C
Pressure dependence:	+ 0.100 % of actual reading / hPa
Flow rate dependence:	≤ ± 0.02 Vol.-% per 0.1 l / min
Cross sensitivity (zero) other gases:	consult manufacturer
Scaling factor (CH ₃ Br/CH ₄):	≈ 2,3695

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, 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. *** Span calibration recommended for use with CH₃Br

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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.