

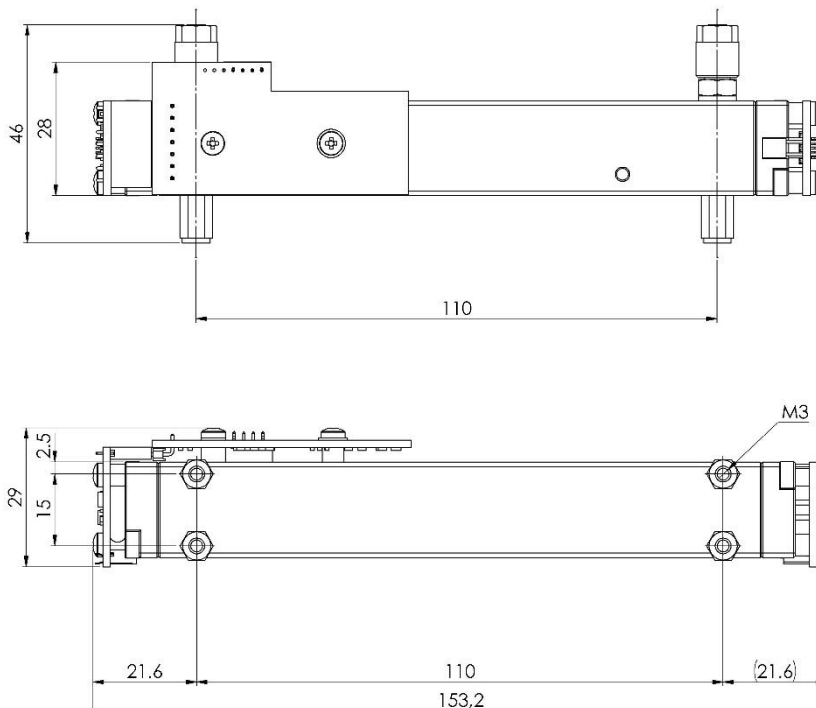
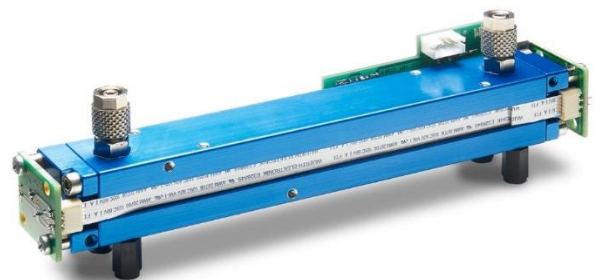
## FLOW<sup>EVO</sup>

Infrared gas sensor

CH<sub>4</sub> // Methane // 4.4 Vol-%

smartGAS item number: F3-042446-05000

- 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 EXAMPLES

GAS ANALYSING // BIOGAS APPLICATION // ENVIRONMENTAL MONITORING

**F3-042446-05000**

**CH<sub>4</sub> // Methane // 4.4 Vol.-%**

**General features**

Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength
Measurement range:	0 ... 4.4 Vol.-% Full Scale (FS)
Gas supply:	by flow (nearly atmospheric pressure)
Flow rate:	0.1 ... 1.0 l / min
Dimensions (with stands):	156 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:	0.001 Vol.-%	
Response time @ 0.7 l / min**:	<i>Standard:</i>	<i>Fast:</i>
t <sub>90</sub> (10 to 90 % FS):	≤ 11.6 s	≤ 0.9 s
t <sub>0n</sub> (0 to 90 % FS):	≤ 15.9 s	≤ 1.6 s
Detection limit (3 σ):	≤ 0.03 Vol.-%	≤ 0.07 Vol.-%
Repeatability:	≤ ± 0.05 Vol.-%	
Linearity error (straight line deviation):	≤ ± 0.05 Vol.-%	
Long term stability (zero):	≤ ± 0.044 Vol.-% over 1000 h period	
Long term stability (span):	≤ ± 0.335 Vol.-% over 1000 h period	

**Influence of T, P, flow rate, other\***

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

**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<sub>a</sub> = 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.