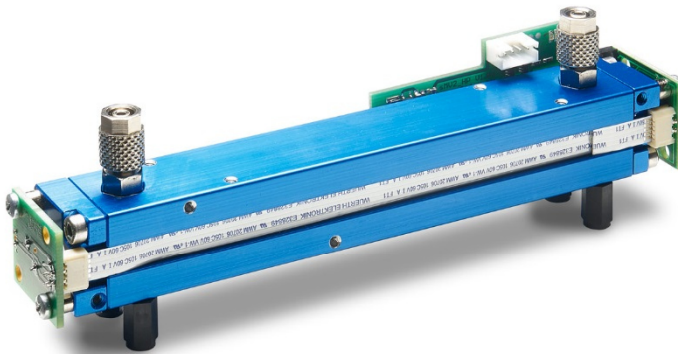
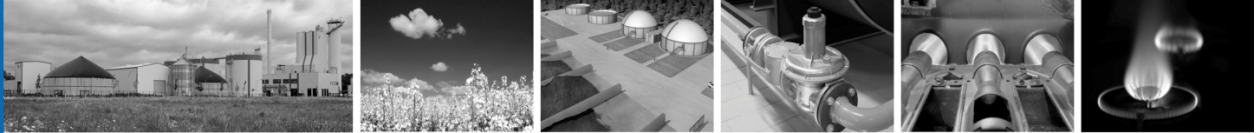


## FLOW<sup>EVO</sup>

Infrared gas sensor CH<sub>4</sub> // Methane // 15 Vol.-% // (also applicable for CH<sub>3</sub>Br // Bromomethane // Appr. 35 Vol.-%)  
smartGAS item number: F3-042157-05005



\*Illustration similar (gold coated)

- 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

Non Dispersive Infrared (NDIR) gas sensor for gas analysis using dual wavelength technology.

Designed for process control of CH<sub>4</sub> or (using a correction factor of ~ 2.3) also applicable for fumigation control (CH<sub>3</sub>Br). The special gold coated sample cell protects the sensor against corrosion or wearing of the optical surfaces.

The FLOW<sup>EVO</sup> sensor can easily be integrated into OEM systems, where long term stability, repeatability and reliable performance are required. It can be used for stack gas monitoring, in incineration plants but also for fumigation processes and container transport.

High-precision NDIR technology requires little maintenance compared to conventional chemical sensors and its small detection limits and long life expectancy qualify our NDIR sensors for numerous tasks in countless areas of scientific research.

### APPLICATION EXAMPLES

FUMIGATION MONITORING of CH<sub>3</sub>Br  
PROCESS CONTROL of CH<sub>4</sub>



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**FLOW** EVO

Infrared gas sensor CH<sub>4</sub> // Methane // 15 Vol.-% // (CH<sub>3</sub>Br // Bromomethane // Appr. 35 Vol.-%)  
smartGAS item number: F3-042157-05005

<b>General features</b>	
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
Dimensions:	113 mm x 30 mm x 36 mm (L x W x H)
Warm-up time:	< 2 minutes (start up time) < 30 minutes (full specification)
<b>Measuring response*</b>	
Response time (t <sub>90</sub> ):	Appr. 12 s @ 0.7 l / min
Digital resolution (@ zero):	0.001 Vol.-%
Detection limit (3 σ):	≤ 0.07 Vol.-%
Repeatability:	≤ ± 0.2 Vol.-%
Linearity error (straight line deviation):	≤ ± 0.2 Vol.-%
Long term stability (span):	≤ ± 0.4 Vol.-% over 1000 h period
Long term stability (zero):	≤ ± 0.2 Vol.-% over 1000 h period
<b>Influence of T, P, flow rate, other*</b>	
Temp. dependence (zero):	≤ ± 0.02 Vol.-% per °C
Temp. dependence (span):	≤ ± 0.02 Vol.-% per °C
Pressure dependence:	+ 0.1 % of measured value / hPa
Flow rate dependence:	≤ ± 0.02 Vol.-% per 0.1 l / min
Cross sensitivity (zero) other gases:	Appr. 15 Vol.-% @ 35 Vol.-% CH <sub>3</sub> Br in dry air
<b>Electrical inputs and outputs</b>	
Supply voltage:	3.3 V .. 6.0 V DC
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.	

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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.