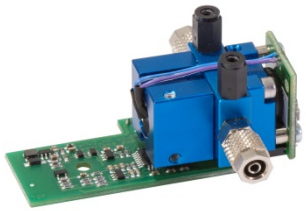
smartGAS
MIKROSENSORIK

blue performance

FLOW EVO

Infrared gas sensor SO_2F_2 // Sulfuryl Flouride // 6 Vol.-%
smartGAS item number: F3-412606-05000



- **Pre calibrated**
- **Compact design**
- **3/5 mm gas line connectors**
- **3.3 - 6 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 different applications such as emission monitoring or process control in a wide range of gas measurement systems.

The FLOW^{EVO} sensor can easily be integrated into OEM systems, where long term stability, repeatability and reliable performance are required. It can be used in the food industry, for stack gas monitoring in incineration plants and fumigation but also in the field of environmental analysis. High-precision NDIR technology requires little maintenance compared to conventional chemical sensors and its small detection thresholds and long life expectancy qualify our NDIR sensors for numerous tasks in countless areas of scientific research.

Modbus ASCII or RTU data communication offer a variety of options to connect the FLOW^{EVO} sensor to a controller.

APPLICATION EXAMPLES

FUMIGATION MONITORING
LEAK DETECTION
OCCUPATIONAL HEALTH AND SAFETY MONITORING

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General features	
Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength
Measurement range:	0 .. 6 Vol.-% Full Scale (FS)
Gas supply:	by flow (nearly atmospheric pressure)
Flow rate:	0.02 .. 0.2 l / min
Dimensions:	70 mm x 60 mm x 36 mm (L x W x H)
Warm-up time:	< 2 minutes (start up time)
	< 30 minutes (full specification)
Measuring response*	
Response time (t_{90}):	Appr. 18 s @ 0.1 l / min
Digital resolution (@ zero):	0.001 Vol.-%
Detection limit (3 σ):	≤ 0.02 Vol.-%
Repeatability:	≤ ± 0.03 Vol.-%
Linearity error (straight line deviation):	≤ ± 0.08 Vol.-%
Long term stability (span):	≤ ± 0.12 Vol.-% over 1000 h period
Long term stability (zero):	≤ ± 0.12 Vol.-% over 1000 h period
Influence of T, P, flow rate, other*	
Temp. dependence (zero):	≤ ± 0.01 Vol.-% per °C
Temp. dependence (span):	≤ ± 0.015 Vol.-% per °C
Pressure dependence:	+ 0.1 % of measurement value / hPa
Flow rate dependence:	≤ ± 0.01 per 0.1 l / min
Cross sensitivity (zero) other gases:	consult factory
Electrical inputs and outputs	
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
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 = 0.1 l / min for dry (non-condensing) and clean sample gas. Stated values exclude calibration gas tolerance.

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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