

FLOW^{EVO}

Infrared gas sensor SF6 // Sulfur hexafluoride // 1000 ppm
smartGAS item number: F3-602105-05000



- 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 process control and gas analysing using dual wavelength technology. Especially designed for leakage detection in gas insulated switchgears (GIS) and SF6 based tracer gas monitoring in portable sniffer devices and fix analysing systems.

The FLOW^{EVO} SF6 sensor can easily be integrated into OEM systems, where long term stability, repeatability and reliable performance are required. It can be used as portable SF6 gas detectors but also suits for wall mount SF6 detection systems. It perfectly fits the demands for reliable SF6 leak detection in GIS where continuous gas monitoring is crucial for safety issues. It is also feasible for various scientific applications and different fields of research.

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

APPLICATION EXAMPLE

FIX AND PORTABLE SF6 LEAKAGE DETECTION
TRACER GAS MEASUREMENT
SF6 ANALYSING
RESEARCH
HIGH VOLTAGE CABLES
HIGH VOLTAGE TRANSFORMERS

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General features	
Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength
Measurement range:	0.. 1000 ppm Full Scale (FS)
Gas supply:	by flow (nearly atmospheric pressure)
Flow rate:	0.1 .. 2.0 l / min
Dimensions:	73 mm x 30 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. 12 s @ 0.7 l / min
Digital resolution (@ zero):	0.1 ppm
Detection limit (3 σ):	≤ 8 ppm
Repeatability:	≤ ± 10 ppm
Linearity error (straight line deviation):	≤ ± 15 ppm
Long term stability (span):	≤ ± 20 ppm over 1000 h period
Long term stability (zero):	≤ ± 20 ppm over 1000 h period
Influence of T, P, flow rate, other*	
Temp. dependence (zero):	≤ ± 1.0 ppm per °C
Temp. dependence (span):	≤ ± 2.0 ppm per °C
Pressure dependence:	+ 0.1 % of measurement value / hPa
Flow rate dependence:	≤ ± 2.0 ppm per 0.1 l / min
Cross sensitivity (zero) other gases:	≤ ± 7.0 ppm @ 10% CO ₂ in dry air
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 = 0.7 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 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.