

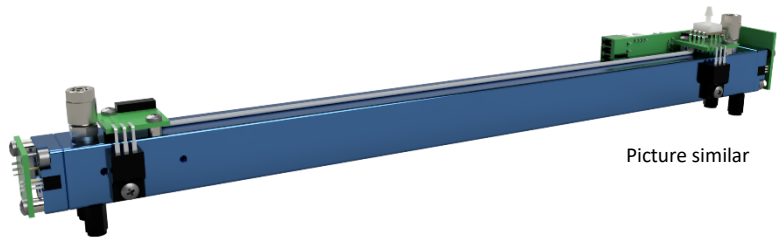
MADE IN GERMANY



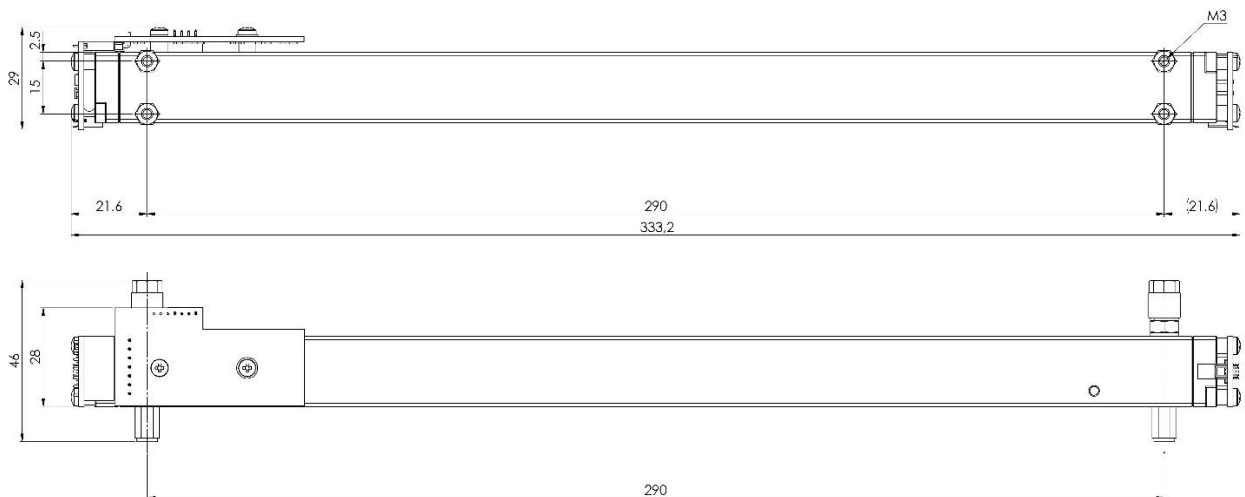
FLOW^{EVO}

Infrared gas Sensor
Nitrous oxide N₂O
500 ppm
smartGAS item number: F3-272504-05000

- Pre calibrated
- Compact Design
- 3/5 mm gas line connector
- 3.3–6 V DC supply voltage
- Modbus ASCII or RTU
- Status indicated by LED
- Low drift



Picture similar



Application examples

Gas analysis
Environmental monitoring
Medical application

Available equipment

Gas cooler
Particle filter
Gas pump
Calibration Software
Mounting equipment

Available design in support

Mechanical Installation
Data communication
Gas pre-treatment

General features

Measurement principle:	Non-Dispersive Infra-Red (NDIR), dual wavelength	
Measurement range:	0 ... 500 ppm Full Scale (FS)	
Gas supply:	by flow (nearly atmospheric pressure)	
Flow rate:	0.1 ... 1.0 l / min	
Mounting dimensions:	336 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:	1 ppm	
Response time @ 0.7 l / min**:	<i>Standard:</i>	<i>Fast:</i>
t ₉₀ (10 to 90 % FS):	≤ 13.2 s	≤ 1.1 s
t _{0n} (0 to 90 % FS):	≤ 17.5 s	≤ 1.7 s
Detection limit (3 σ):	≤ 0.6 ppm	≤ 2 ppm
Repeatability:	≤ ± 2.5 ppm	
Linearity error (straight line deviation):	≤ ± 4.9 ppm	
Long term stability (zero):	≤ ± 16 ppm over 1000 h period	
Long term stability (span):	≤ ± 22 ppm over 1000 h period	

Influence of T, P, flow rate, other*

Temp. dependence (zero):	≤ ± 0.1 ppm per °C
Temp. dependence (span):	≤ ± 0.4 ppm per °C
Pressure dependence:	+ 0.100 % of actual reading / hPa
Flow rate dependence:	≤ ± 0.5 ppm per 0.1 l / min
Cross sensitivity (zero) other gases:	≤ ± 0.1 ppm @ 5 ppm SO ₂ ≤ ± 0.5 ppm @ 5 ppm CO ≤ ± 40 ppm @ 2000 ppm CO ₂ ≤ ± 225 ppm @ 20 Vol.-% CO ₂ ≤ ± 2.5 ppm @ 10.000 ppm H ₂ O
Gas dew point requirement:	< + 5°C dew point (stable), particle free and clean sample gas

Electrical parameters

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.

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