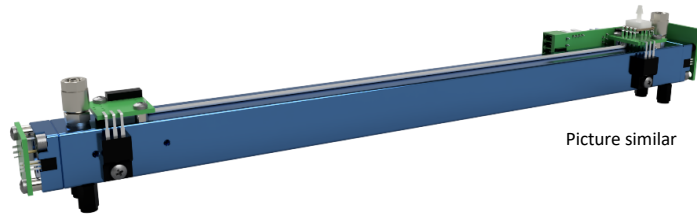


MADE IN GERMANY

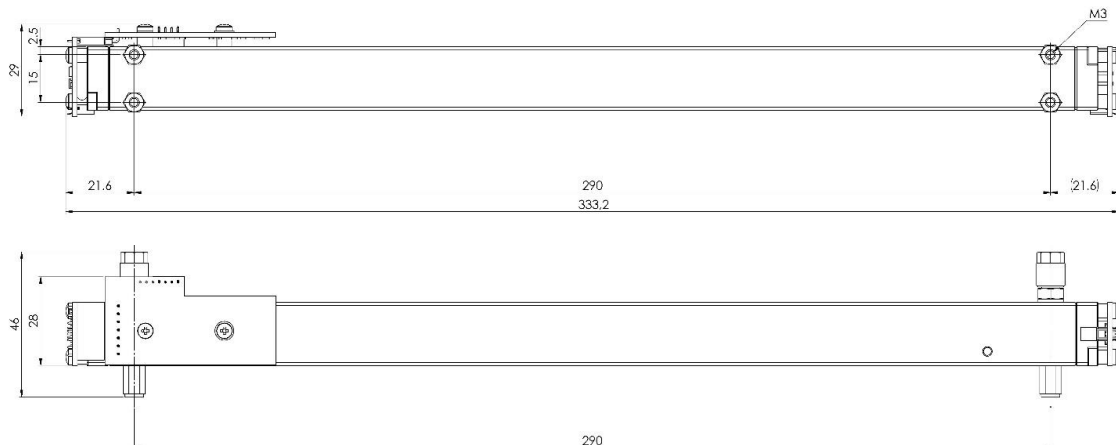
FLOW^{EVO}

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

DS_F3-272504-05000_500ppm
Edition 2_12/2021

FLOW^{EVO} | Nitrous oxide N₂O | F3-272504-05000

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 _{on} (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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At first initiation and depending on application and ambient conditions recalibration is recommended. Recurring cycles of recalibration are recommended.

DS_F3-272504-05000_500ppm
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We are here for you. Addresses and Contacts.

Headquarter Switzerland:

Angst+Pfister Sensors and Power AG
Thurgauerstrasse 66
CH-8050 Zurich
Phone +41 44 877 35 00
sensorsandpower@angst-pfister.com

Office Germany:

Angst+Pfister Sensors and Power Deutschland GmbH
Edisonstraße 16
D-85716 Unterschleißheim
Phone +49 89 374 288 87 00
sensorsandpower.de@angst-pfister.com

Scan here and get an overview of personal contacts!



sensorsandpower.angst-pfister.com
