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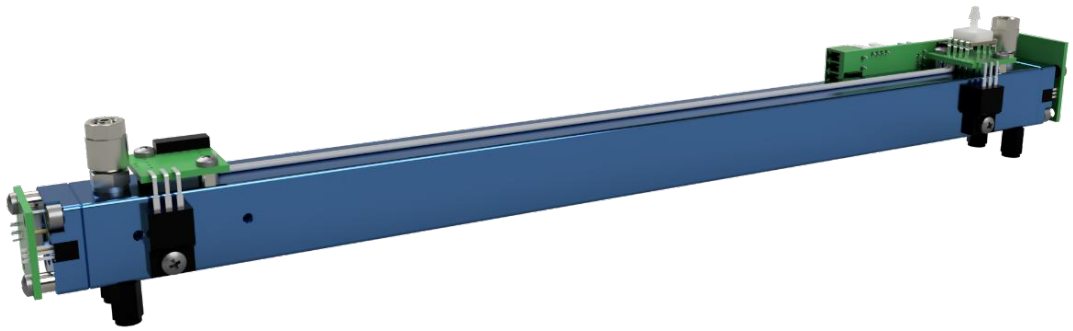
smartGAS.

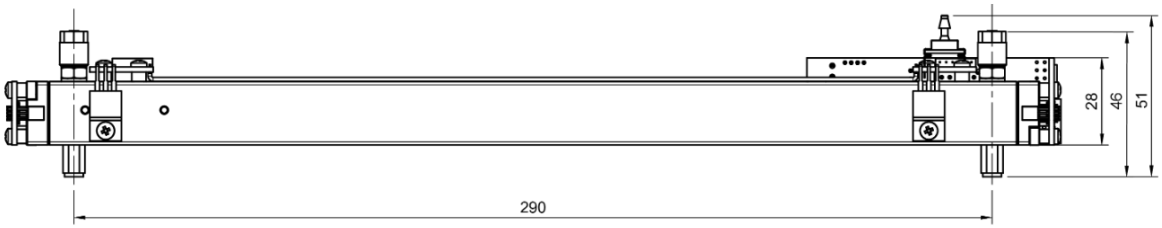
MADE IN GERMANY

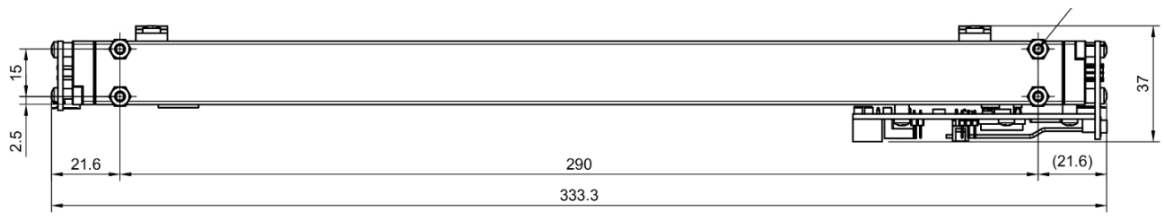
SILAREX

NDIR Multi-Gas Sensor for TOC measurement
CO_2 100 ppm // CO_2 1000 ppm // CO_2 10000 ppm
smartGAS item number: SX-300011-00000

- 3 active measurement channels
- Ready to use calibrated
- Perfect solution for TOC (total organic carbon)
- On board pressure compensation
- Modbus ASCII/RTU, autobaud, autoframe
- Status indicated by LED







Application Examples
TOC analysing
Process measurement

Available as
3-Channel

Accessories
Insulation housing
Gas cooler
Particle filter
Gas pump
Mounting equipment

Available design in support
Mechanical Installation
Data communication
Gas pre-treatment

SILAREX I CO_2 // 3-channel I SX-300011-00000

General features		Channel 1:	Channel 2:	Channel 3:
Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength			
Target gas:		CO_2	CO_2	CO_2
Measurement range:	0 … Full Scale (FS)	FS = 100 ppm	FS = 1000 ppm	FS = 10000 ppm
Gas supply:	by flow (nearly atmospheric pressure)			
Flow rate:	0.1 … 1.0 l / min			
Mounting dimensions:	336 mm x 40 mm x 55 mm (L x W x H)			
Warm-up time:	< 2 minutes (start up time) < 30 minutes (full specification)			

Measuring response*				
Response time (t_{90}) @ 0.7 l / min:	< 4 s (fast), < 8 s (medium), < 60 s (slow)			
Digital resolution:		0.01 ppm	0.1 ppm	1 ppm
Detection limit (3 σ) max.:	in fast / medium / slow mode:	0.60 ppm/ 0.30 ppm / 0.15 ppm	1.60 ppm / 0.80 ppm / 0.40 ppm	30 ppm / 15 ppm / 8.0 ppm
Repeatability:		≤ ± 0.4 ppm	≤ ± 3.5 ppm	≤ ± 35 ppm
Linearity error (straight line deviation):		≤ ± 2.0 ppm	≤ ± 20 ppm	≤ ± 100 ppm
Long term stability (zero):	after 1000 h operating time	≤ ± 1.85 ppm	≤ ± 6.0 ppm	≤ ± 113 ppm
Long term stability (span):	after 1000 h operating time	≤ ± 2.40 ppm	≤ ± 16 ppm	≤ ± 461 ppm

Influence of T, P, flow rate, other*				
Temp. dependence (zero):	with thermal isolation, heater on	n.a.	n.a.	n.a.
Temp. dependence (span):	with thermal isolation, heater on	n.a.	n.a.	n.a.
Pressure dependence:	pressure compensated, residual error in % of actual reading / hPa	≤ ± 0.02	≤ ± 0.02	≤ ± 0.02
Flow rate dependence per 0.1 l / min:		≤ ± 0.07 ppm	≤ ± 0.7 ppm	≤ ± 7 ppm

Electrical inputs and outputs	
Supply voltage:	24 V DC ± 10 %
Average power consumption	< 6 W (while heater on) // < 1 W (at stabilized temperature)
Inrush current:	< 400 mA
Digital output signal	Modbus ASCII / RTU via RS485, autobaud, autoframe
Calibration	Zero and Span via Modbus ASCII / RTU

Climatic conditions	
Sensor heating temperature	42 °C
Operating ambient temperature:	appr. + 10 … + 40 °C (thermal isolation required)
Storage temperature:	-20 °C … + 60 °C
Air pressure:	800 … 1150 hPa
Ambient humidity:	0 … 95 % rel. H. (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.

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.