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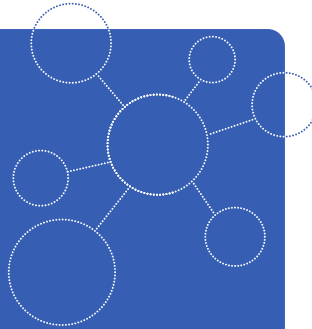
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smartGAS.

MADE IN GERMANY



SILAREX

NDIR Multi-Gas Sensor

CO₂ 20 Vol.-% // NO 2000 ppm // SO₂ 1000 ppm

smartGAS item number: SX-300003-00000

- 3 active measurement channels
- Ready to use calibrated
- On board cross compensation
- On board pressure compensation
- Modbus ASCII/RTU, autobaud, autoframe
- Status indicated by LED



Application Examples

Emission monitoring CEMS
 Biogas
 Process measurement
 Fruit ripening
 High voltage

Available as

2-Channel
 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 CO₂ // NO // SO₂ I SX-300003-00000

General features		Channel 1:	Channel 2:	Channel 3:
Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength			
Target gas:		CO ₂	NO	SO ₂
Measurement range:	0 ... Full Scale (FS)	FS = 20 Vol.-%	FS = 2000 ppm	FS = 1000 ppm
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*

Response time (t ₉₀) @ 0.7 l / min:	< 4 s (fast), < 8 s (medium), < 60 s (slow)			
Digital resolution:		0.01 Vol.-%	1 ppm	1 ppm
Detection limit (3 σ) max.:	in fast / medium / slow mode:	0.03 Vol.-% / 0.02 Vol.-% / 0.01 Vol.-%	17 ppm / 11 ppm / 6 ppm	3 ppm / 2 ppm / 1 ppm
Repeatability:		≤ ± 0.06 Vol.-%	≤ ± 10 ppm	≤ ± 4 ppm
Linearity error (straight line deviation):		≤ ± 0.1 Vol.-%	≤ ± 13 ppm	≤ ± 9 ppm
Long term stability (zero):	after 1000 h operating time	≤ ± 0.01 Vol.-%	≤ ± 35 ppm	≤ ± 15 ppm
Long term stability (span):	after 1000 h operating time	≤ ± 0.02 Vol.-%	≤ ± 50 ppm	≤ ± 20 ppm

Influence of T, P, flow rate, other*

Temp. dependence (zero):	with thermal isolation, heater on	≤ ± 0.005 Vol.-% per °C	≤ ± 75 ppm per °C	≤ ± 3 ppm per °C
Temp. dependence (span):	with thermal isolation, heater on	≤ ± 0.01 Vol.-% per °C	≤ ± 150 ppm per °C	≤ ± 6 ppm per °C
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:		≤ ± 0.02 Vol.-%	≤ ± 2 ppm	≤ ± 1 ppm
Cross sensitivity (zero) other gases:	@ 20 Vol.-% CO ₂ (at 42 °C stable):	-	< ± 15 ppm	< ± 1 ppm
	@ 2000 ppm NO (at 42 °C stable):	≤ ± 0.01 Vol.-%	-	< ± 2 ppm
	@ 1000 ppm SO ₂ (at 42 °C stable):	≤ ± 0.01 Vol.-%	< ± 2 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, T_a = 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.