Electro Optical Components, Inc.
5464 Skylane Boulevard, Suite D, Santa Rosa, CA 95403
Toll Free: 855-EOC-6300
www.eoc-inc.com | info@eoc-inc.com

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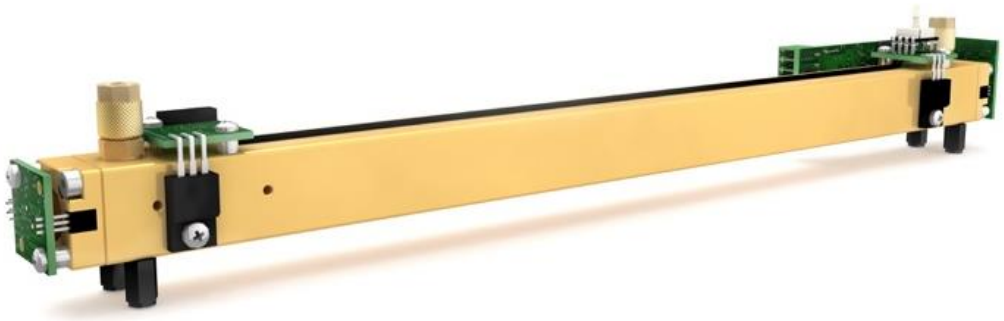
smartGAS.

MADE IN GERMANY

SILAREX

NDIR Multi-Gas Sensor
CO_2 20 Vol.-% // CO 10000 ppm
smartGAS item number: SX-200004-00000

- **2 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

smartGAS.

SILAREX I CO_2 // CO I SX-200004-00000

General featurs		Channel 1:	Channel 2:
Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength		
Target gas:		CO_2	CO
Measurement range:	0 … Full Scale (FS)	FS = 20 Vol.-%	FS = 10000 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
Detection limit (3 σ) max.:	in fast / medium / slow mode:	0.03 Vol.-% / 0.02 Vol.-% / 0.01 Vol.-%	6 ppm / 4 ppm / 2 ppm
Repeatability:		≤ ± 0.06 Vol.-%	≤ ± 6 ppm
Linearity error (straight line deviation):		≤ ± 0.1 Vol.-%	≤ ± 10 ppm
Long term stability (zero):	after 1000 h operating time	≤ ± 0.01 Vol.-%	≤ ± 5 ppm
Long term stability (span):	after 1000 h operating time	≤ ± 0.02 Vol.-%	≤ ± 8 ppm

Influence of T, P, flow rate, other*			
Temp. dependence (zero):	with thermal isolation, heater on	≤ ± 0.005 Vol.-% per °C	≤ ± 0.1 ppm per °C
Temp. dependence (span):	with thermal isolation, heater on	≤ ± 0.01 Vol.-% per °C	≤ ± 0.2 ppm per °C
Pressure dependence:	pressure compensated, residual error in % of actual reading / hPa	≤ ± 0.02	≤ ± 0.02
Flow rate dependence per 0.1 l / min:		≤ ± 0.02 Vol.-%	≤ ± 2 ppm
Cross sensitivity (zero) other gases:	@ 20 Vol.-% CO_2 (compensated for 42 °C): @ 10000 ppm CO (compensated for 42 °C):	- ≤ ± 0.30 Vol.-%	< ± 120 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.