



EC4-1-CL02

Industrial Chlorine Dioxide Sensor

(Application : Portable Gas Detectors)

PERFORMANCE

Range	0 – 1 ppm
Sensitivity	$0.65 \pm 0.30 \mu\text{A} / \text{ppm}$
Zero in Air at 20°C	$< \pm 0.02 \mu\text{A}$
Zero Drift (-20°C to 40°C)	-0.06 to 0.03ppm Equivalent
Resolution	0.03 ppm
Linearity	Linear Across Range
Response time (T_{90})	< 60 seconds
Long-term Output Drift	< 2% signal/month
Warranty	1 year
Bias	0mV

OPERATING CONDITIONS

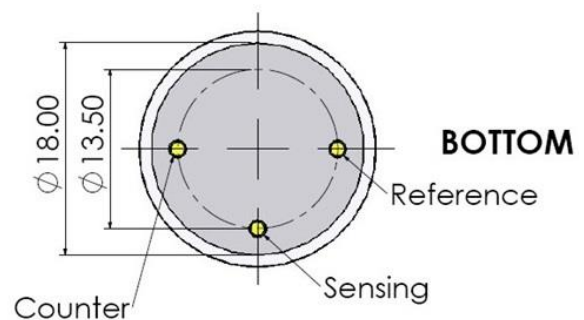
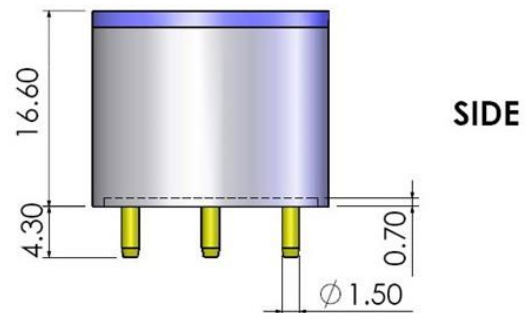
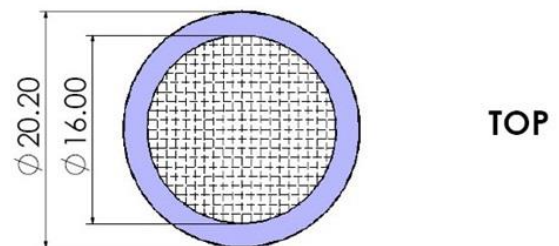
Temperature Range	-20°C to +50°C
Operating Humidity	15 – 90% RH (non-condensing)
Pressure range	90 to 110 kPa
Operating Circuit	See Application Note 2
Recommended Storage Temperature	0°C to 20°C
Storage life	6 months in original packing
Expected Operating Life	2 years

PHYSICAL CHARACTERISTICS

Weight	5 g
Orientation Sensitivity	None
Dimensions	See Outline

OUTLINE

All Dimensions are in mm
All tolerances are $\pm 0.15\text{mm}$



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CROSS-SENSITIVITY DATA

GAS	CONCENTRATION (ppm)	Sensor Response (as ppm ClO ₂)
Carbon Dioxide	5000	0
Carbon Monoxide	100	0
Chlorine	1	0.35
Hydrogen	3000	0
Hydrogen Sulfide	20	-12
Nitrogen Dioxide	10	6

* See Important Notes

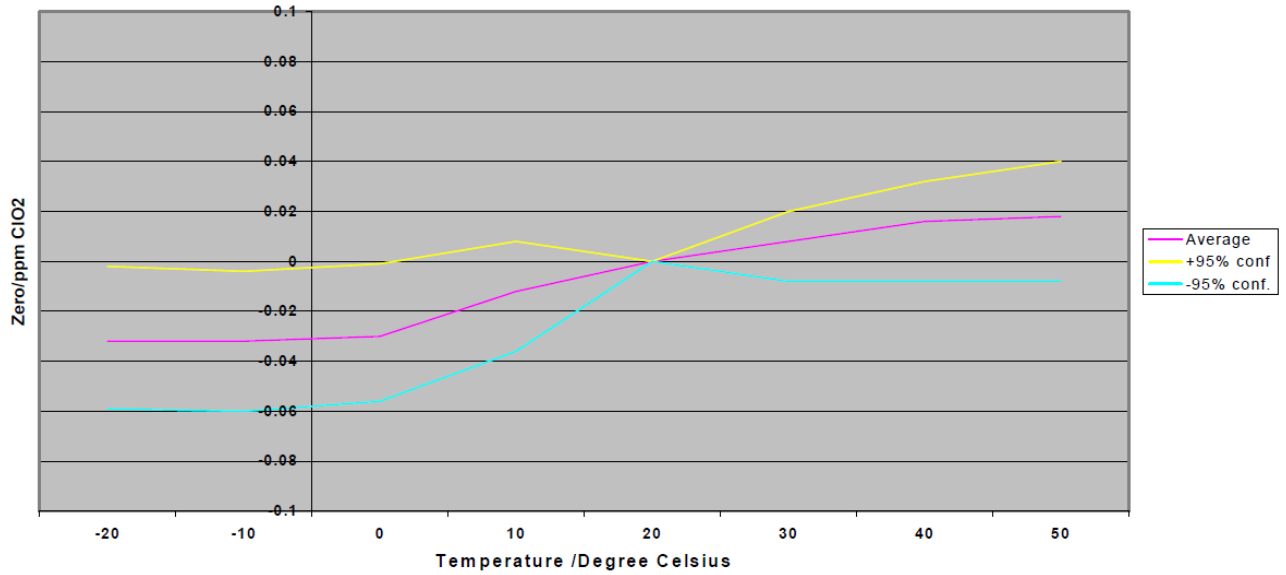
IMPORTANT NOTES

- 1.) Do not solder to the connector pins as this may damage the sensor and thereby invalidate the warranty.
- 2.) Details on recommended connector pins can be found in the Frequently Asked Questions within the Gas Sensor section of the SGX website.
- 3.) All performance specifications are based upon the following environmental conditions: 20°C, 50% relative humidity, 101kPa.
- 4.) Cross Sensitivity Data is for information only. Calibration is recommended with target gas as the accuracy of calibration and measurement cannot be ensured.
- 5.) The cross sensitivities are including but not limited to the gases stated in the table. It may respond to other gases.
- 6.) The cross sensitivities may fluctuate between $\pm 30\%$ and may differ from batch to batch or across sensor's life time.
- 7.) The device is designed to be RoHS compliant.

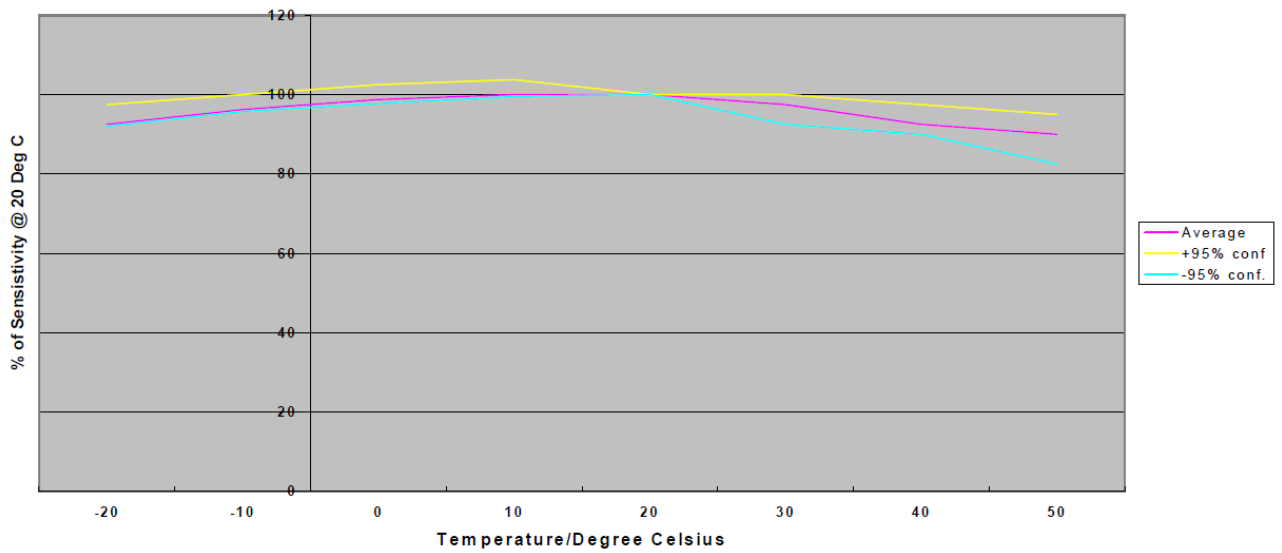


TEMPERATURE

EC4-1-CIO2 Graph of Zero vs Temperature



EC4-1-CIO2 Sensitivity Graph of Sensitivity vs Temperature



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