

EC4-10-ETO

Industrial Ethylene Oxide Sensor

(Application : Portable Gas Detectors)

PERFORMANCE

Range	0 – 10 ppm
Sensitivity	$1.9 \pm 0.8 \mu\text{A/ppm}$
Zero in Air at 20°C	-0.2 to 2.5 μA
Baseline Drift	0 to 2 ppm equivalent
Resolution	0.1 ppm
Linearity	Linear Across Range
Response time (T_{90})	< 120 seconds
Long-term Output Drift	< 2% signal/month
Warranty	2 years
Bias	+ 300mV

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 (0 – 25°C)
Expected Operating Life	3 years

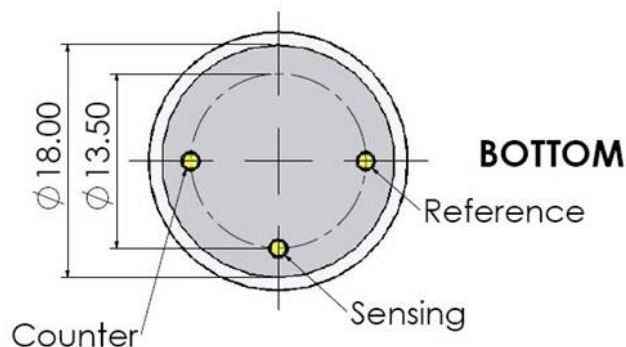
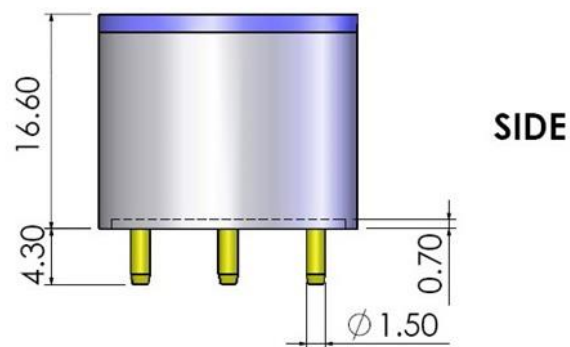
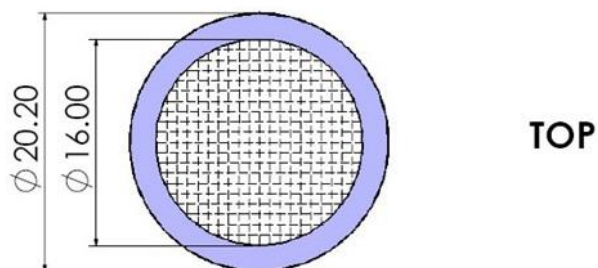
PHYSICAL CHARACTERISTICS

Weight	5 g
Orientation Sensitivity	None
Dimensions	See Outline

OUTLINE

All Dimensions are in mm

All tolerances are $\pm 0.2\text{mm}$



CROSS-SENSITIVITY DATA

GAS	RANGE (ppm)	CORRECTION FACTOR TO ETO *
Ethylene Oxide	10	1.0
Carbon Monoxide	100	2.5
Ethanol	30	0.8
Methanol	10	0.3
Isopropanol	50	1.3
Formaldehyde	10	0.4
i-Butylene	30	0.9
Butadiene	10	0.3
Ethylene	30	0.7
Propene	30	0.8
Vinyl Chloride	30	1.3
Vinyl Acetate	30	0.5
Formic Acid	50	1.4
Acrylonitrile	100	2.5

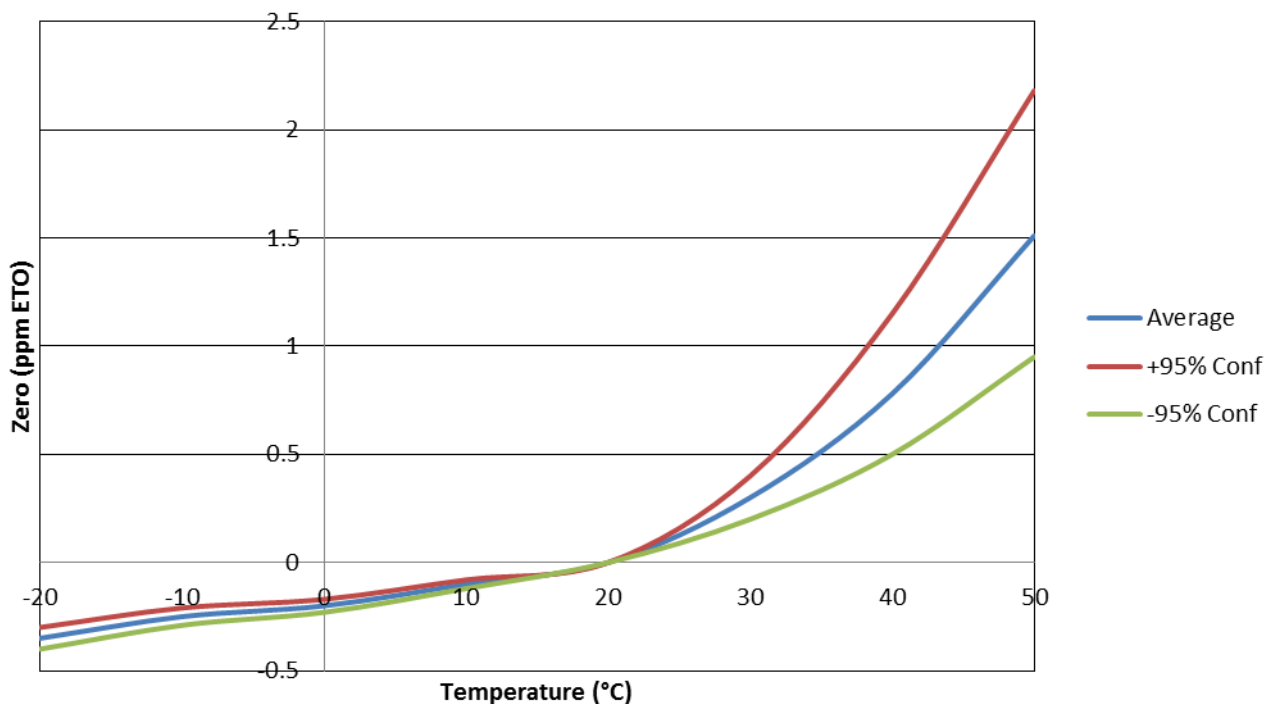
* See Important Notes

IMPORTANT NOTES

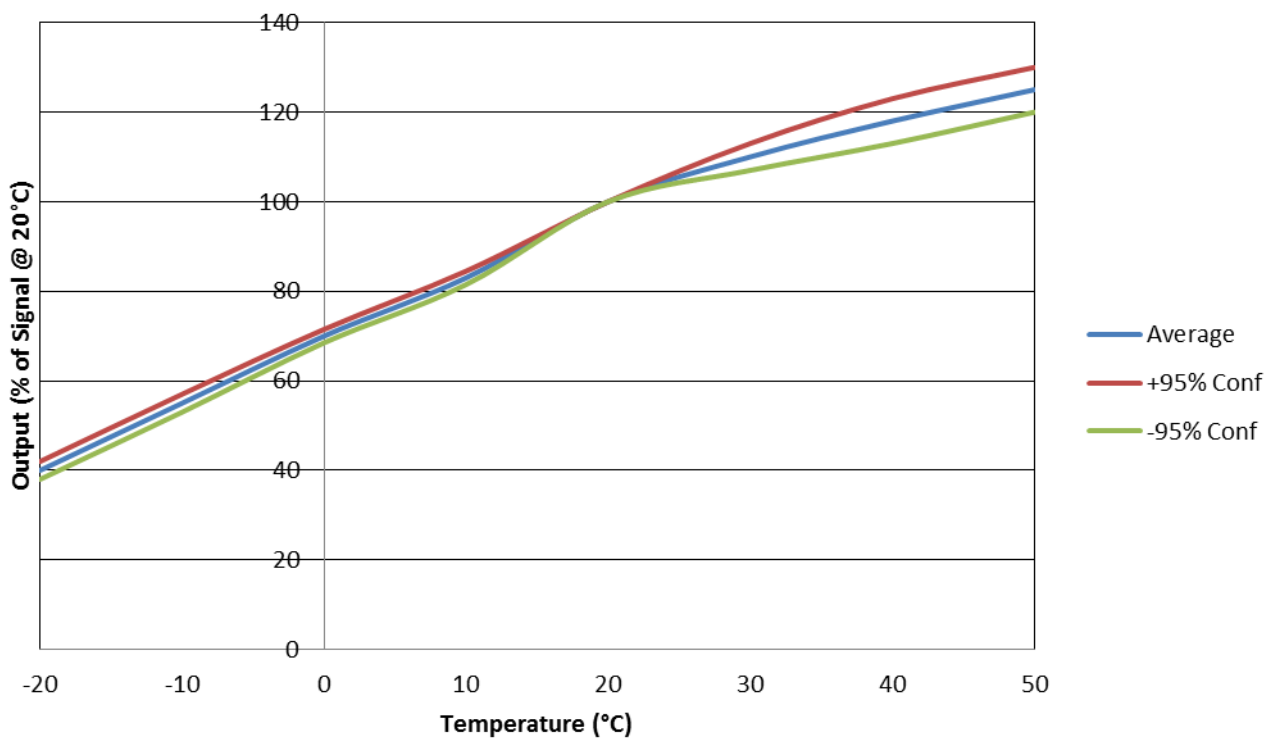
- 1.) Do not solder to the connector pins as this may damage the sensor and thereby invalidate the warranty.
- 2.) Details on recommended connector pins can be found in the Frequently Asked Questions within the Gas Sensor section of the SGX website.
- 3.) All performance specifications are based upon 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.) Correction Factor of ETO = Sensitivity of ETO / Sensitivity of test gas.
- 6.) The cross sensitivities are including but not limited to the gases stated in the table. It may respond to other gases.
- 7.) The cross sensitivities may fluctuate between $\pm 30\%$ and may differ from batch to batch or across sensor's life time.
- 8.) The device is designed to be RoHS compliant.

TEMPERATURE PERFORMANCE

Zero V's Temperature



Output V's Temperature



Mouser Electronics

Authorized Distributor

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[EC4-10-ETO](#)