

## EC4-10-ETO Datasheet

### Industrial Ethylene Oxide Electrochemical Sensor

Application : Portable Gas Detectors

#### PERFORMANCE

Range..... 0 – 10 ppm  
Sensitivity ..... 1.9 ± 0.8 µA/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 ..... ≤ 120 seconds  
Long-term Output Drift ..... < 2% signal/month  
Warranty ..... 2 Years

#### OPERATING CONDITIONS

Temperature Range ..... -20°C to +50°C  
Operating Humidity ..... 15 - 90% RH (non-condensing)  
Pressure Range ..... 90 to 110 kPa  
Bias Potential ..... + 300 mV  
Storage Life ..... 6 months in original packaging  
Storage Temperature ..... 0°C to 20°C  
Expected Operating Life ..... 3 years  
Operating Circuit ..... see Electrochemical Toxic  
Sensor Application Note

#### PHYSICAL CHARACTERISTICS

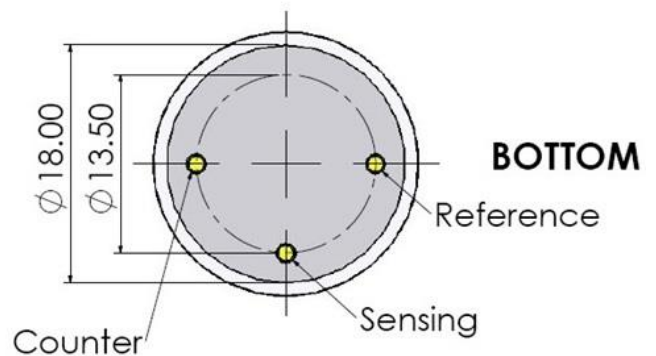
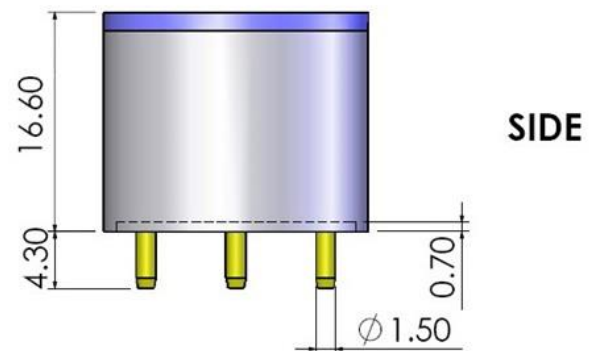
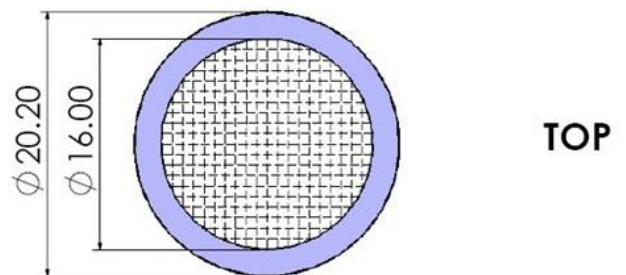
Weight ..... 5 g  
Orientation Sensitivity ..... None  
Dimensions ..... See outline

#### 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 Notes

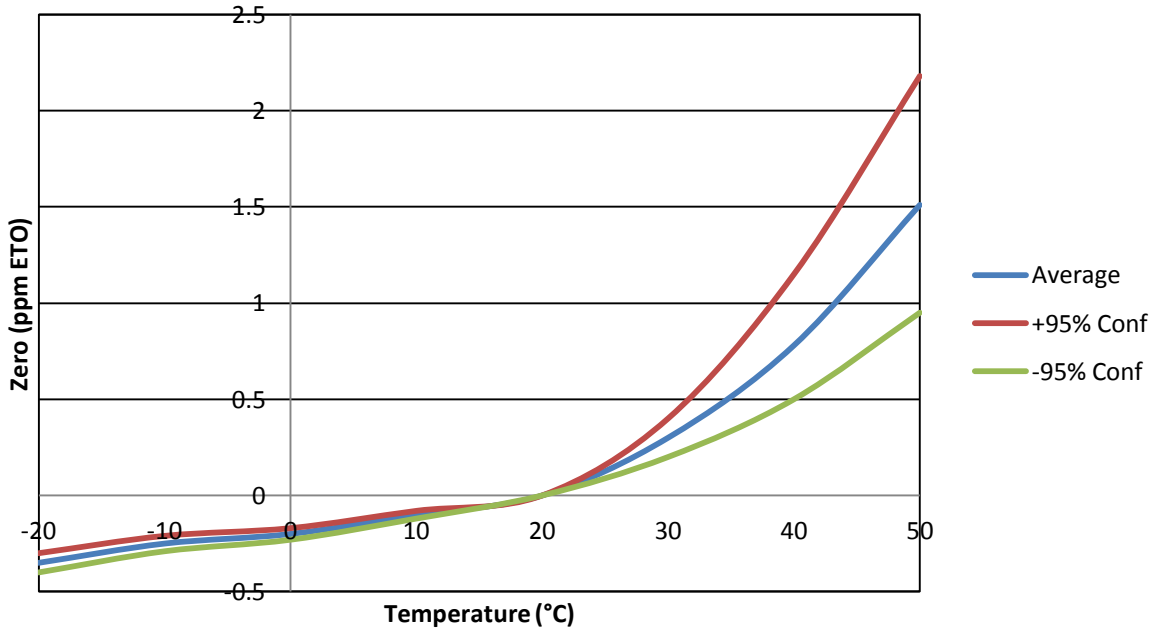
#### OUTLINE



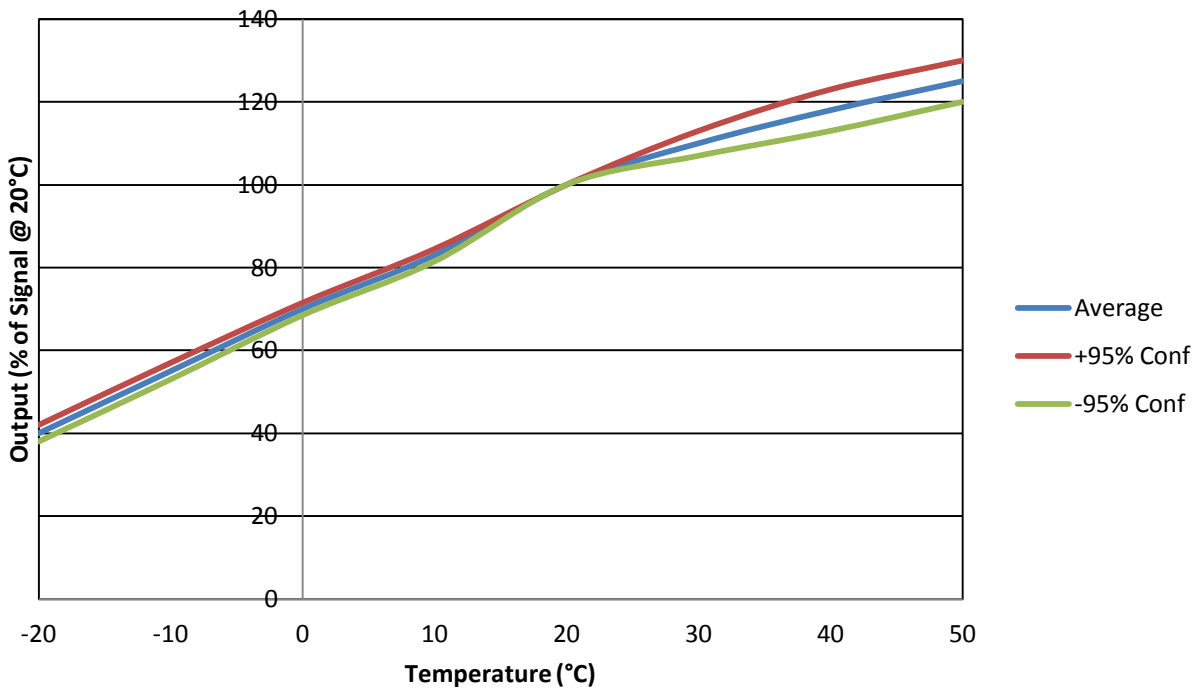
All dimensions are in millimeters.  
All tolerances are ±0.2mm.

## TEMPERATURE PERFORMANCE

### Zero V's Temperature



### Output V's Temperature



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In case of modification of the product, SGX disclaims all liability.

## 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.