

## EC4-20-SO2

### Industrial Sulfur Dioxide Sensor

(Application : Portable Gas Detectors)

#### PERFORMANCE

Range	0 – 20 ppm
Maximum Overload	150 ppm
Sensitivity	400 to 600 nA/ppm SO <sub>2</sub>
Zero in Air at 20°C	< ±0.4 µA
Baseline Drift (-20°C to +40°C)	0 to 0.05 ppm SO <sub>2</sub> equivalent
Resolution	0.1 ppm SO <sub>2</sub>
Linearity	Linear Across Range
Response time (T <sub>90</sub> )	< 45 seconds
Long-term Output Drift	< 2% signal/month
Warranty	1 year
Bias	No Bias

#### OPERATING CONDITIONS

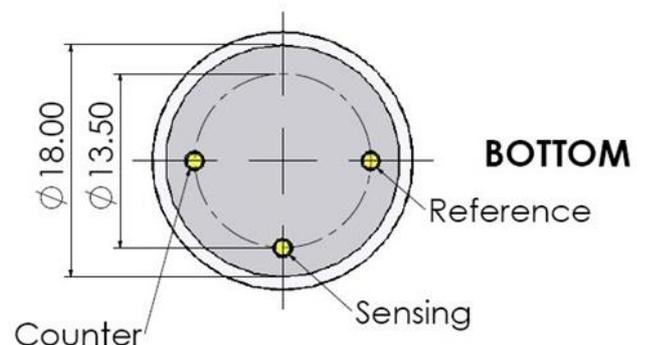
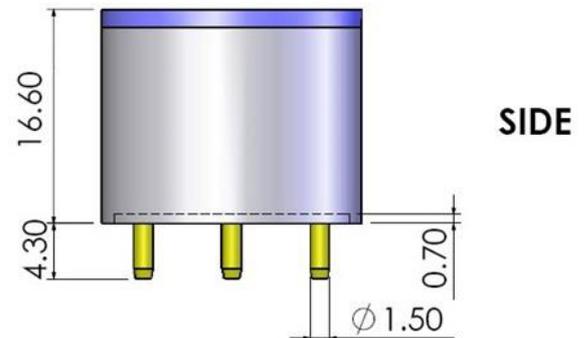
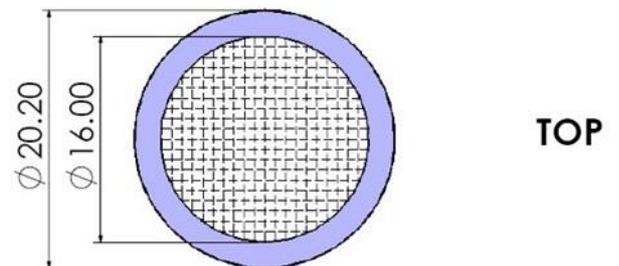
Temperature Range	-20°C to +40°C
Operating Humidity	15 – 90% RH (non-condensing)
Pressure range	90 to 110 kPa
Operating Circuit	See Application Note 2
Storage life	6 months in original packing
Storage Temperature	0°C to 20°C
Expected Operating Life	2 years in air

#### PHYSICAL CHARACTERISTICS

Weight	5 g
Orientation Sensitivity	None
Dimensions	See Outline

#### OUTLINE

All Dimensions are in mm  
 All tolerances are ±0.2mm



## CROSS-SENSITIVITY DATA

GAS	CONCENTRATION (ppm)	OUTPUT SIGNAL (ppm SO <sub>2</sub> equivalent)
Carbon Monoxide	300	<3
Hydrogen Sulfide	15	0
Nitric Oxide	35	0
Nitrogen Dioxide	5	<-5

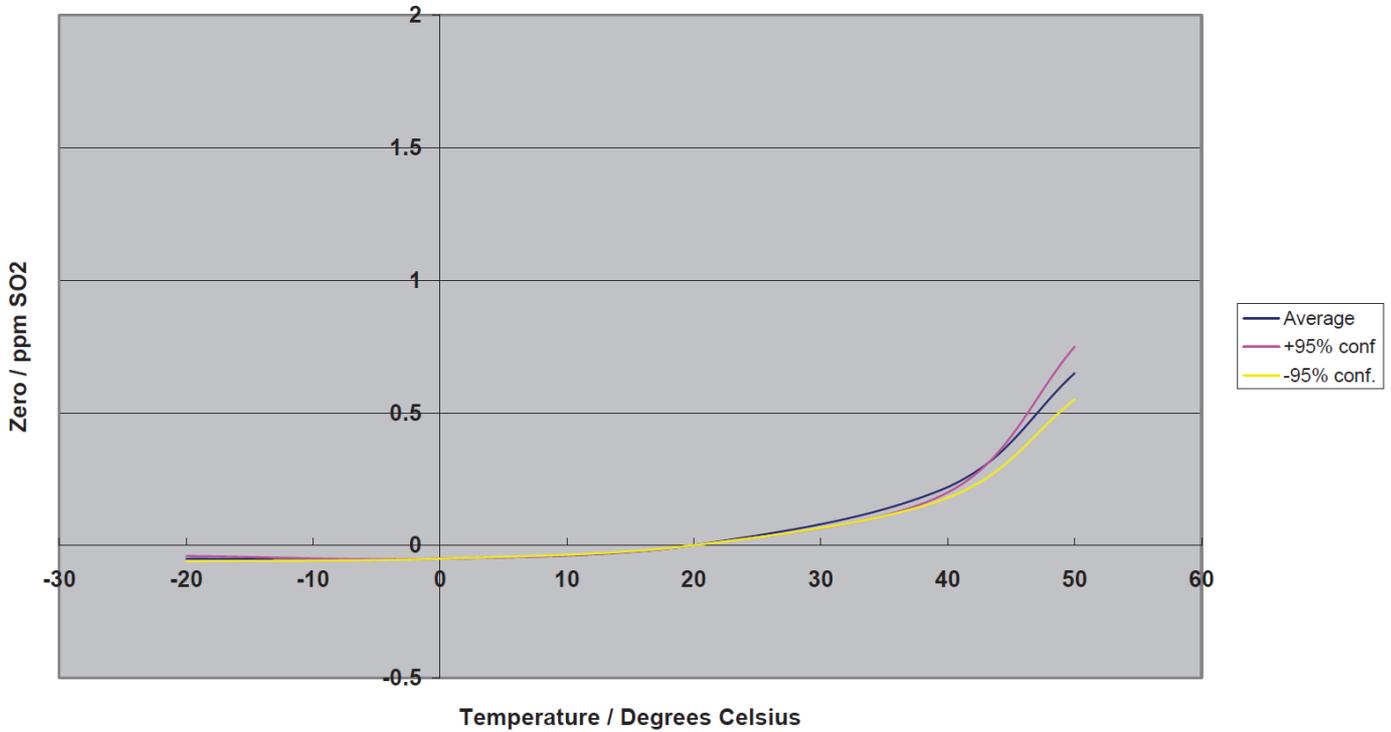
\* See Important Notes

## 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.) 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

EC4-20-SO2 Graph of Zero vs Temperature



EC4-20-SO2 Graph of Sensitivity vs Temperature

