



## SGX-4DT

### Industrial Dual Toxic Sensor (CO and H<sub>2</sub>S)

(Application : Portable Multi-Gas Detectors)

#### PERFORMANCE

Range	0 – 500 ppm CO 0 – 200 ppm H <sub>2</sub> S
Output Signal	80 ± 30 nA/ppm CO 775 ± 275 nA/ppm H <sub>2</sub> S
Typical Baseline Range (pure air)	±2 ppm CO equivalent ±0.5 ppm H <sub>2</sub> S equivalent
Filter Capacity	> 20000 ppm hours CO
Linearity	Linear
Response time (T <sub>90</sub> )	<30 s
Maximum Overload	2000 ppm CO 500 ppm H <sub>2</sub> S
Long-Term Output Drift	<10% per annum
Recommended Load Resistor	10 ohms (CO) 10 ohms (H <sub>2</sub> S)
Repeatability	<±3% CO equivalent <±2% H <sub>2</sub> S equivalent
Resolution	±1 ppm CO typical ±0.5 ppm H <sub>2</sub> S typical
Warranty	2 years
Bias	No Bias

#### OPERATING CONDITIONS

Temperature Range	-30°C to +50°C
Operating Humidity	15 – 90% RH (non-Condensing)
Pressure range	800 to 1200 mbar
Operating Circuit	See Application Note 2
Recommended Storage Temperature	0°C to 20°C
Storage Life	6 months in original Packaging (0 to 20°C)
Expected Operating Life	> 24 months in air

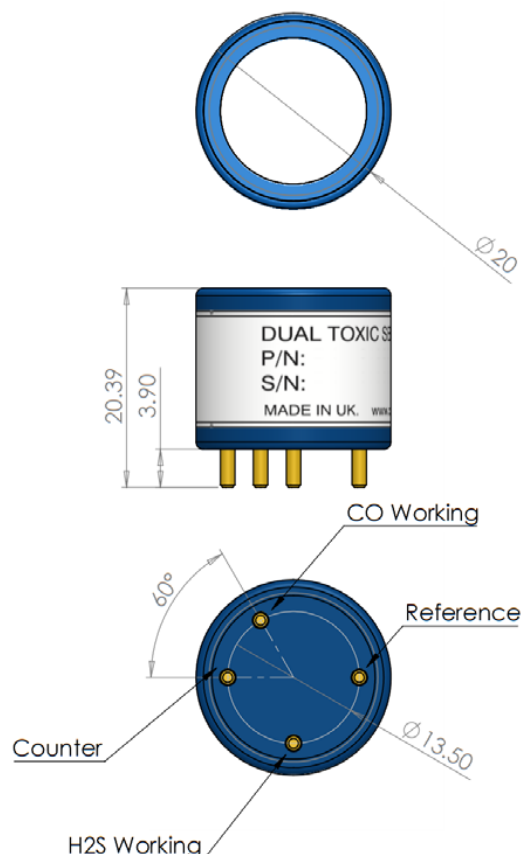
#### INTRINSIC SAFETY DATA

Maximum at 2000 ppm	0.3 mA
Maximum o/c Voltage	1.3 V
Maximum s/c Current	<1.0 A

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

#### PRODUCT DIMENSIONS

All dimensions in mm  
All tolerances ±0.15 mm



#### IMPORTANT NOTES

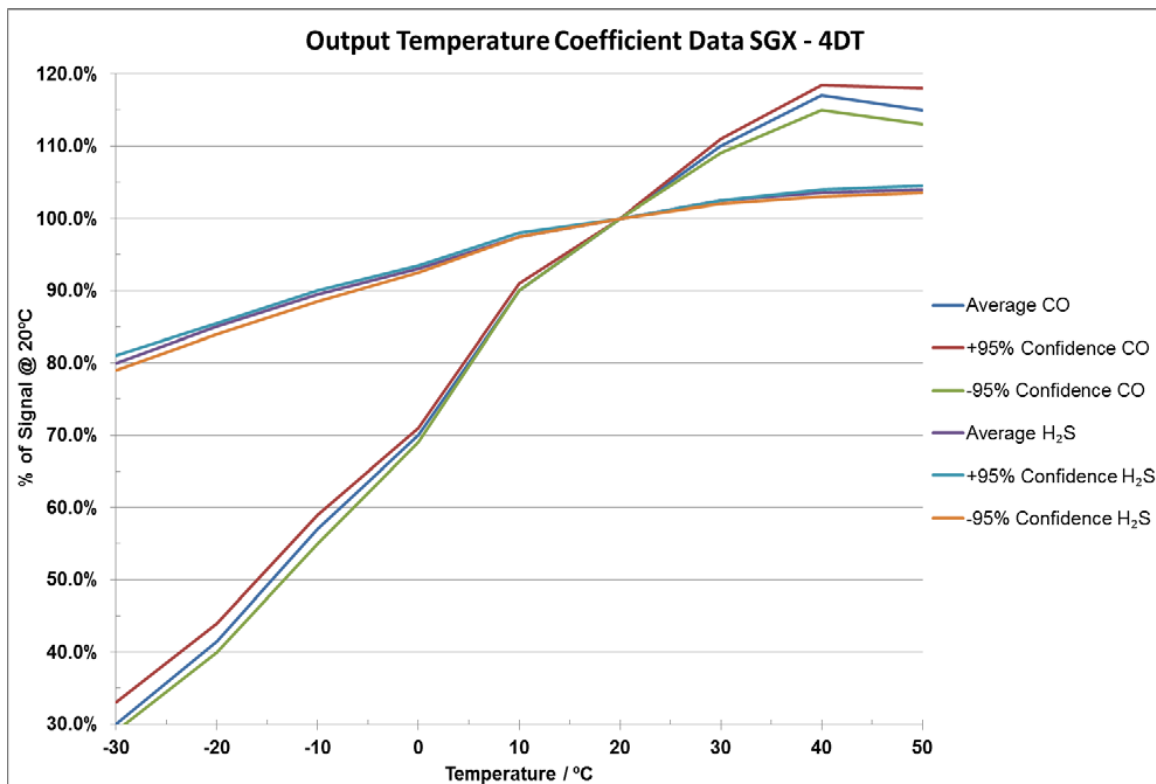
- All performance is based on conditions at 20°C, 50% RH and 1 atm, using SGX recommended circuitry.
- Sensor performance is temperature dependant; please contact SGX for temperature performance other than 20°C.
- Do not solder to the connector pins as this may damage the sensor and thereby invalidate the warranty.
- Details on recommended connector pins can be found in the Frequently Asked Questions within the Gas Sensor section of the SGX website.
- This device is designed to be RoHS compliant.

## CROSS-SENSITIVITY DATA

GAS	CONCENTRATION	CO	H <sub>2</sub> S
Hydrogen Sulfide	25 ppm	< 5 ppm	25 ppm
Sulfur Dioxide	5 ppm	0 ppm	< 1 ppm
Hydrogen	100 ppm	< 30 ppm	< 0.05 ppm
Nitric Oxide	35 ppm	< 0.1 ppm	< 1 ppm
Carbon Monoxide	300 ppm	300 ppm	< 5 ppm
Nitrogen Dioxide	5 ppm	< 0.1 ppm	0 ppm
Chlorine	15 ppm	0 ppm	0 ppm

*Note: This table is for reference only and are typical values. Cross Sensitivities may not be linear and should not be scaled. Calibration should be carried out with the actual gas at a known concentration.*

## TEMPERATURE



## POISONING

SGX sensors are designed to operate in a wide range of harsh environments and conditions. However it is important that exposure to high concentrations of solvent vapours is avoided, both during storage, fitting into instrument and operation. When using sensors on printed circuit boards (PCBs), degreasing agents should be used prior to the sensor being fitted.

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