SGX-4DT
Industrial Dual Toxic Sensor (CO and H_2S)

Application : Portable Multi-Gas Safety Instrument

PERFORMANCE

Range ..... 0 - 500 ppm CO
..... 0 - 200 ppm H_2S
Output Signal ..... 80 ± 30 nA / ppm CO
..... 775 ± 275 nA/ ppm H_2S
Linearity ..... Linear
Repeatability ..... < ± 3% CO equivalent
..... < ± 2% H2S equivalent
Response time, t90 ..... <30 s
Maximum Overload ..... 2000 ppm CO
..... 500 ppm H_2S
Long-term output drift ..... <5% per annum
Recommended Load Resistor ..... 20 ohms
Warranty ..... 2 years

OPERATING CONDITIONS

Temperature Range .... -30 to +50°C
Operating Humidity .. 15 – 90% RH (non-condensing)
Pressure Range ..... 800 mbar to 1200 mbar
Recommended Storage Temperature .... 0°C to 20°C
Storage life...6 months in Original Packing (0 – 25 °C)

INTRINSIC SAFETY DATA

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

CROSS-SENSITIVITY DATA

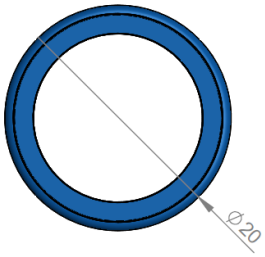
GAS	CONC.	CO	H_2S
Hydrogen Sulfide	25 ppm	< 5 ppm	25 ppm
Sulfur Dioxide	5 ppm	0 ppm	< 1 ppm
Hydrogen	100 ppm	< 30 ppm	< 0.05 ppm
Nitric Oxide	35 ppm	< 0.1 ppm	< 1 ppm
Carbon Monoxide	300 ppm	300 ppm	< 5 ppm
Nitrogen Dioxide	5 ppm	< 0.1 ppm	0 ppm
Chlorine	15 ppm	0 ppm	0 ppm

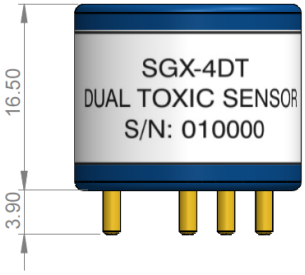
Note: This table is for reference only. Calibration should be carried out with the actual gas at a known concentration.

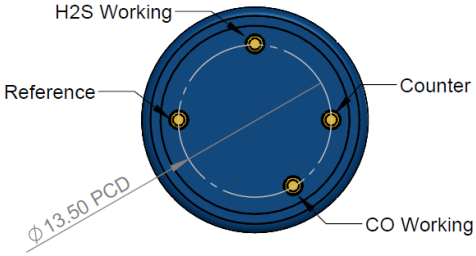
This device is designed to be RoHS compliant.

PRODUCT DIMENSIONS

All dimensions in mm
All tolerances ±0.15 mm







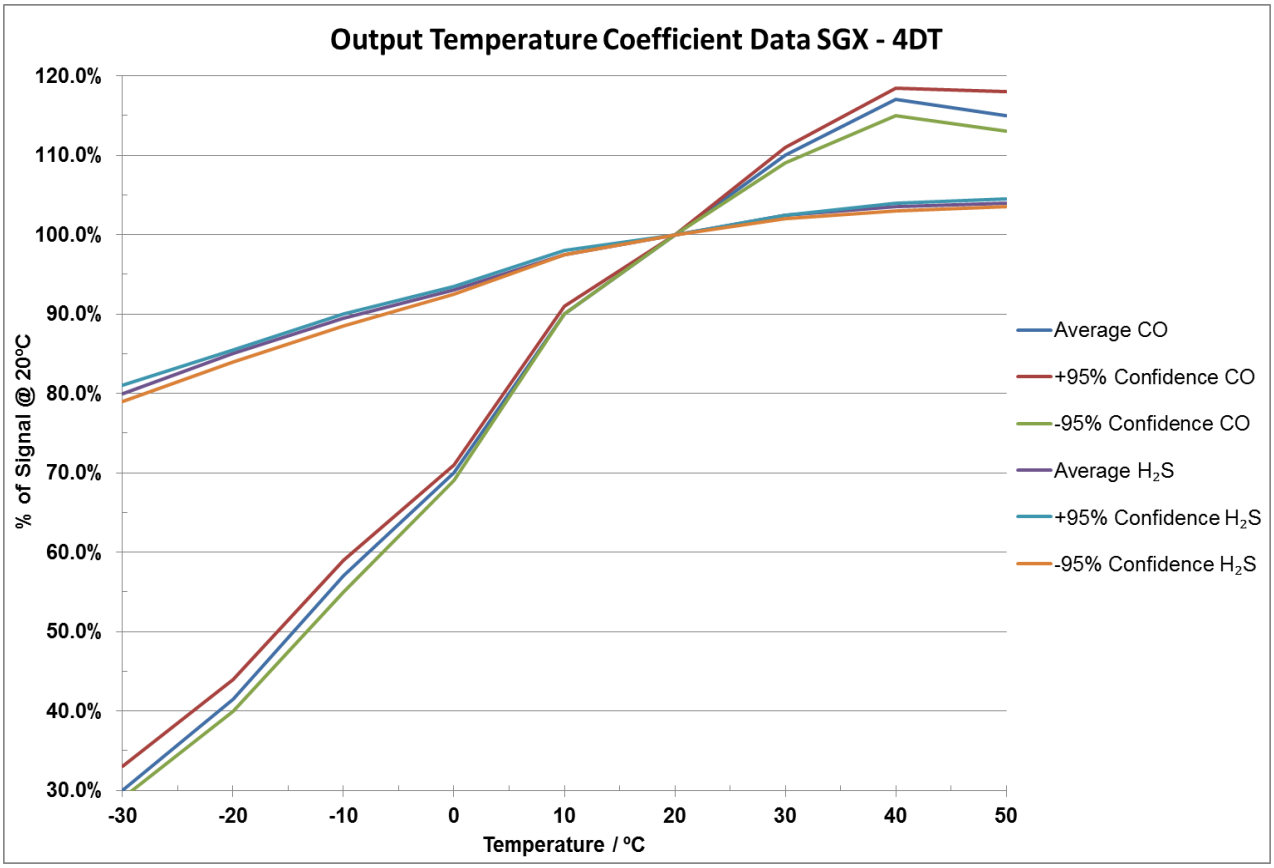
IMPORTANT NOTES

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.



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 during storage, fitting into instruments and operation. When using sensors on printed circuit boards (PCBs), degreasing agents should be used prior to the sensor being fitted.

RECOMMENDED CIRCUIT FOR SGX-4DT

Amplifier should be Instrumentation Quality.
Low noise and capacitive drive capable.
Input Offset < 500 uV.
Recommended load resistor 20 ohm.
Best practice is to use a low gain in this circuit and utilise a PGA in the microcontroller.

Op amp suggestions:
TLC2252, TLC2254