

PERFORMANCE

Range 0 - 500 ppm CO
 0 - 200 ppm H₂S
 Output Signal 80 ± 30 nA / ppm CO
 775 ± 275 nA/ ppm H₂S
 Linearity Linear
 Repeatability < ± 3% CO equivalent
 < ± 2% H₂S equivalent
 Response time, t₉₀ <30 s
 Maximum Overload 2000 ppm CO
 500 ppm H₂S
 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

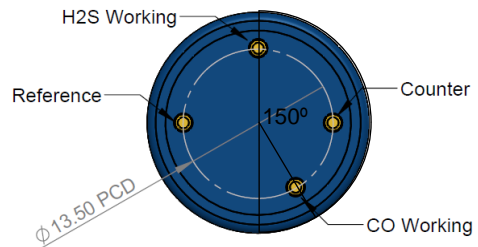
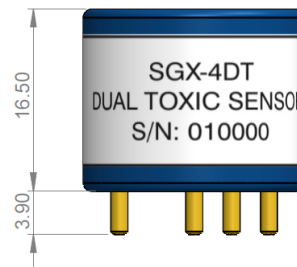
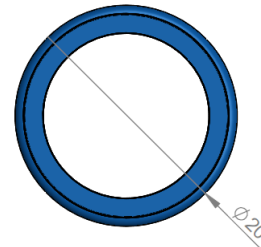
| GAS | CONC. | CO | H ₂ S |
|------------------|---------|-----------|------------------|
| Hydrogen Sulfide | 25 ppm | < 5 ppm | 25 ppm |
| Sulfur Dioxide | 5 ppm | 0 ppm | < 1 ppm |
| Hydrogen | 100 ppm | < 30 ppm | < 0.05 ppm |
| Nitric Oxide | 35 ppm | < 0.1 ppm | < 1 ppm |
| Carbon Monoxide | 300 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. 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



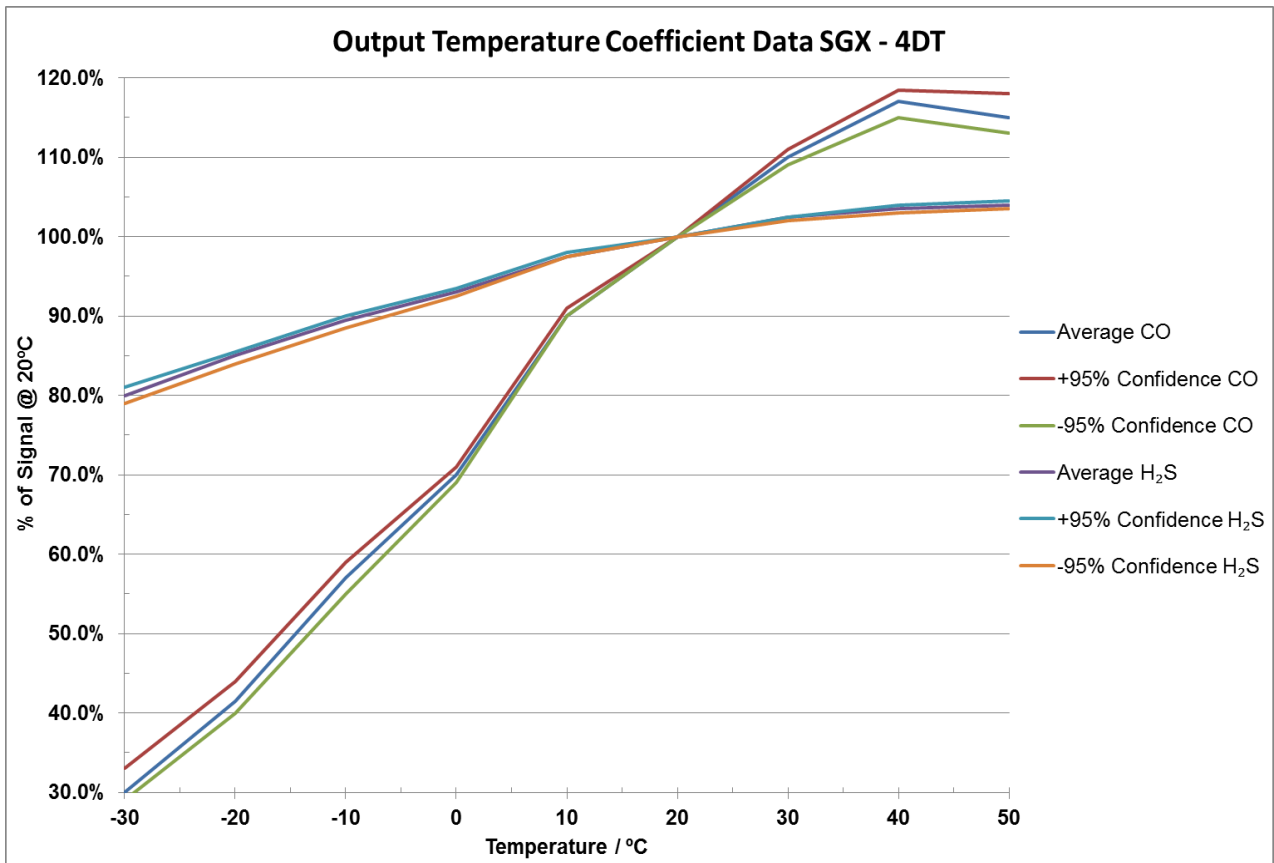
IMPORTANT NOTES

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 μ V.
 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

