



SGX-70X

Industrial Oxygen Sensor

(Application : Fixed Gas Detectors)

PERFORMANCE

Range	0 – 25% Oxygen
Output Signal	170 to 230 μ A
Zero Current (offset)	< 0.6 %Vol Oxygen
Linearity	Linear
Response time (T_{90})	<15 s
Maximum Overload	30% Oxygen
Long-Term Output Drift	<5% per annum
Recommended Load Resistor	100 ohms
Warranty	2 year
Bias	No Bias

OPERATING CONDITIONS

Temperature Range	-30°C to +50°C
Operating Humidity	5 – 95% RH (non-condensing)
Pressure range	800 to 1200 mbar
Operating Circuit	See Application Note 2
Recommended Storage Temperature	0°C to 20°C
Expected Operating Life	> 24 Months in Air

INTRINSIC SAFETY DATA

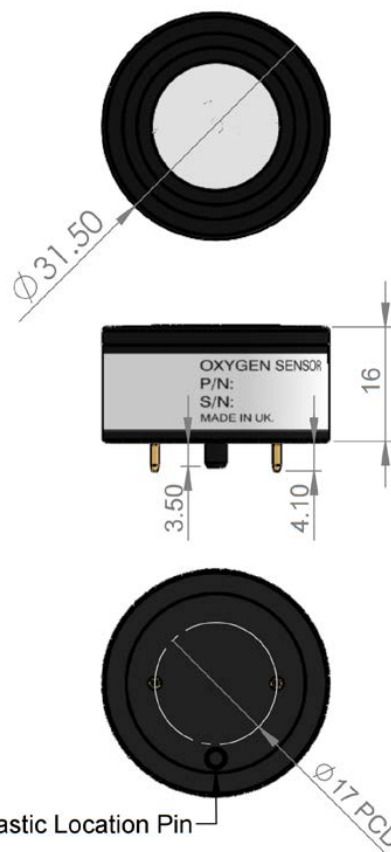
Maximum Current in Normal Operation (Pure air)	0.01 A
Maximum o/c Voltage (10 to 100% O ₂)	0.9 V
Maximum s/c Current (10 to 100% O ₂)	0.5 A

SENSOR OUTPUT

The output signal (in mA) is derived by measuring the voltage drop across a resistor placed across the sensor output pins. A value of 100 Ohms is the suggested value.

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.

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ACID GASES

Acid gases such as CO₂ and SO₂ will be absorbed by the electrolyte and tends to increase the flux of oxygen to the electrode. This gives an enhanced oxygen signal of approximately 0.3% of signal per 1% CO₂. The SGX-70X sensors are not suitable for continuous operation in concentrations of CO₂ above 25%.

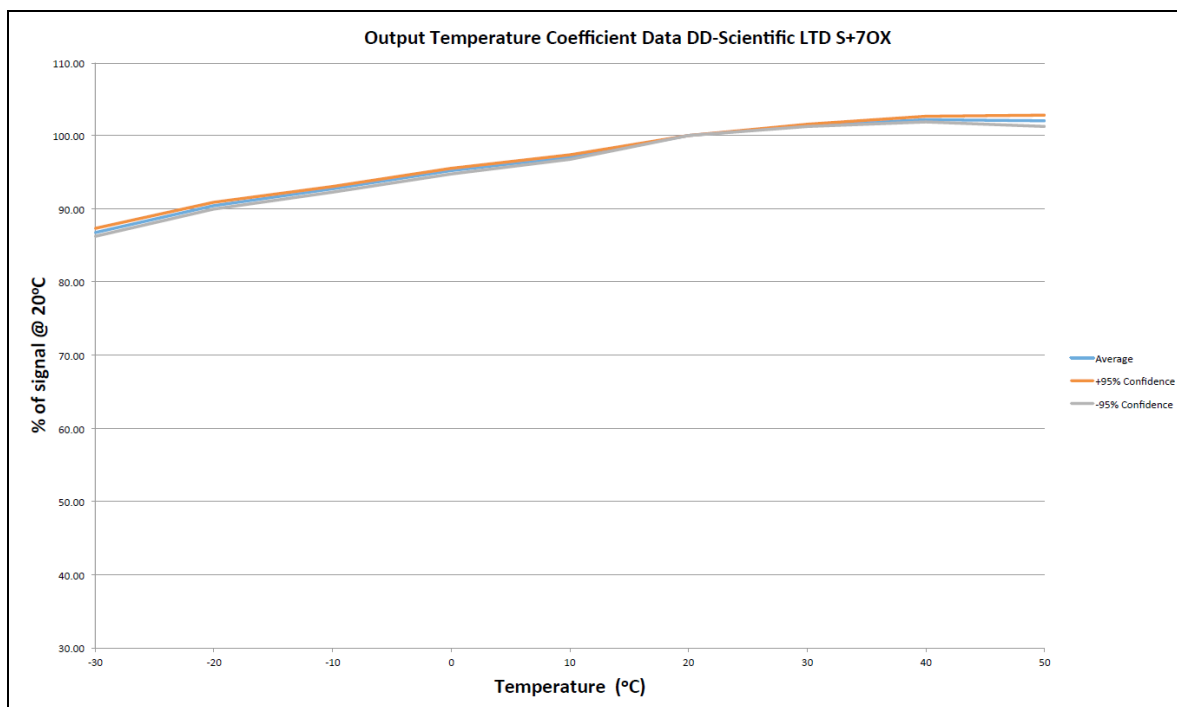
CROSS SENSITIVITY DATA

Toxic gases at TLV levels will have no cross-sensitivity effect on SGX oxygen sensors. At very high levels (i.e. percent levels), highly oxidising gases (e.g. ozone, chlorine) will interfere to the extent of their Oxygen equivalent, but most other commonly occurring gases will have no effect.

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.

TEMPERATURE



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