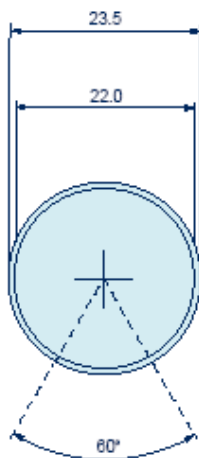
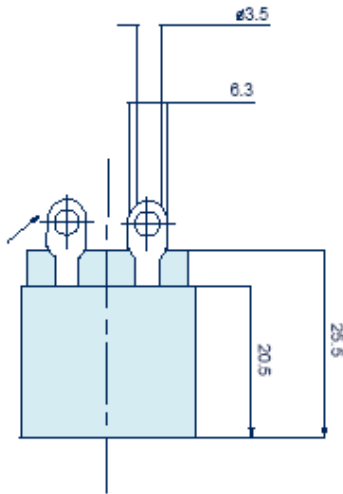


O₂ SL OXYGEN SENSOR



SL Oxygen sensors overcome the problems associated with standard metal can sensors. They are designed to be directly interchangeable with current sensors incorporated into fixed and portable gas detectors.

Typical applications include the measurement of Oxygen deficiency in confined spaces such as tunnels, mines or chemical plant or for the analysis of combustion gases in flues and chimney stacks.

The SL's shock resistant, leak free design ensures lifetime reliability. High sensor to sensor repeatability and high tolerance to temperature and pressure transients also contribute to highly reliable performance. All SL oxygen sensors have lifetimes of 18 months.

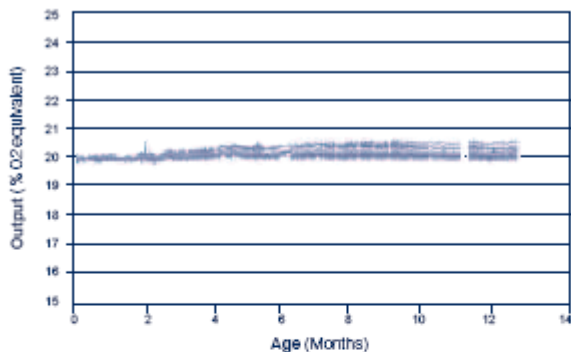
SPECIFICATION

Operating Principle:	2-electrode cell
Gas Detected:	Oxygen
Measurement Range:	0 – 25% v/v
Maximum Overload:	30% v/v
Expected Operating Life:	18 months in air
Output Signal:	0.42 ± 0.06mA in air
Temperature Range:	-20°C to +50°C
Pressure Range:	1atm ± 10%
Humidity Range (non-condensing):	Continuous: 15-90% RH Intermittent: 0-99% RH
Response Time (T⁵ 90):	<10 seconds
Pressure Co-Efficient:	<±0.003% of signal per mBar
Temperature Co-Efficient:	<±0.2% of signal per °C
Long Term Output Drift:	<±2% of signal per month
Repeatability:	<±1% of signal
Linearity:	Non-Linear $1.7818 * (\ln(1/(1-(\%O_2/100))))$
Recommended Load Resistor:	47Ω
Bias Voltage:	Not required

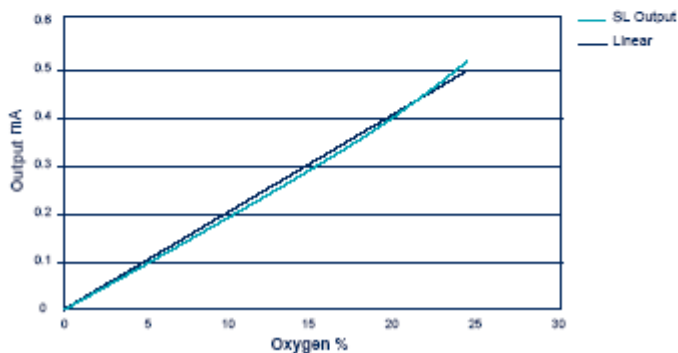


O₂ SL OXYGEN SENSOR

Oxygen SL Lifetest (temperature corrected)



Oxygen SL Linearity



Intrinsic Safety Data

Maximum at 100% v/v Oxygen: 6.4mA

Maximum o/c Voltage: 0.9V

Maximum s/c Current: 500mA

Physical Specification

Weight: 32g

Orientation: Any

Storage Life:

6 months in sealed container

Storage Conditions:

10-20 °C, 45-75% RH in clean air

Warranty Period:

12 months from date of despatch

Part Number: 2112B4530

Cross Sensitivity Data

Gas	Concentration	Typical O ₂ Equivalent
Hydrogen	100%	-9%
Methane	100%	0
Nitrogen Dioxide	25ppm	0

Note: High concentrations of acid gases (eg. CO₂, SO₂, NO₂) will enhance sensitivity to oxygen.

Signal will increase by approximately 0.3% per 1.0% acid gas present.



O₂ SL SENSOR + 4-20 mA PCB



Fig 1. Oxygen transmitter with top ring for pcb and lower installation ring

SPECIFICATION

Operating Principle:	2-electrode cell
Measuring Range:	0-25% v/v
Output Signal:	4-20 mA
Response Time t90:	< 10 sec
Repeatability:	<± 1% of measuring signal
Long Term Output Drift:	<± 2% of signal per month
Temperature Range:	-20 °C to +50°C
Temperature Co-efficient:	<± 2% of signal per °C
Humidity Range:	15-90% relative humidity, non-condensing
Pressure Range:	1 atm ± 10%
Pressure Co-Efficient:	<± 0.003% of signal per mBar
Expected Operating Time:	18 months in air
Power Supply:	24 V d.c. ± 15%



Fig 2. O₂ transmitter with blue installation ring



Fig 3. O₂ transmitter with sinter metal disc and blue installation ring

