



LIFE-SAVING SOLUTIONS

The Sixth Sense Eco-Sure® is a high quality, cost effective 2-electrode electrochemical cell designed for the detection of carbon monoxide in a range of applications but particularly for domestic carbon monoxide detection and industrial fire detection applications. The Sixth Sense Eco-Sure is a recognised component under UL2075.

Operating Performance

Operating Principle	2-electrode electrochemical
Gas Detected	Carbon Monoxide
Measurement Range	0-500 ppm
Maximum Overload	1000 ppm
Expected Operating Life*	>6 years in normal use from date of manufacture
Output Signal	0.045 + 0.015µA per ppm
Temperature Range*	Continuous: -10°C to +50°C Intermittent: -20°C to +50°C
Pressure Range*	1 atm +10%
Humidity Range* (non-condensing)	Continuous: 15 - 90%
Response Time (T ₉₀)	Intermittent: 0 - 99% <50 seconds over complete temperature range
Baseline Offset (clean air)	<-2 to 4 ppm equivalent
Zero Shift* (-10°C to +50°C)	<+10 ppm
Long Term Output Drift	<5% per annum
Repeatability	<+5%
Linearity	Linearity <+5%
Recommended Load Resistor	5
Bias Voltage	Not required

Intrinsic Safety Data*

Maximum at 1000ppm	0.1mA
Maximum o/c Voltage	1.3V
Maximum s/c Current	<1.0A

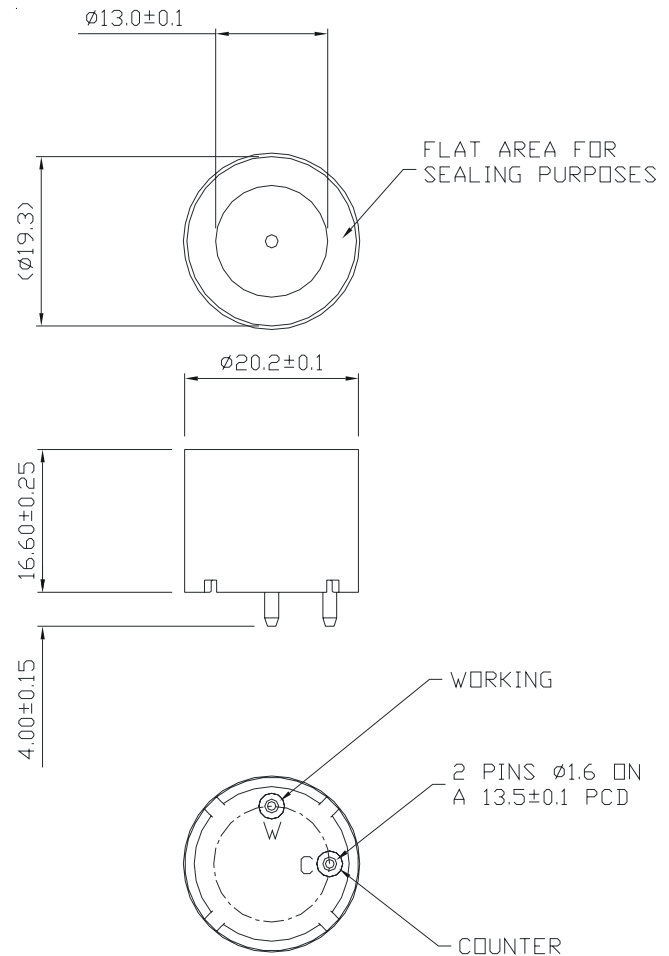
Physical Specification*

Weight	5g (approx)
Housing Material	Noryl 110
Storage Life	6 months in sealed container
Storage Conditions	+10°C to +30°C
Orientation	Any
Warranty Period	Up to 60 months

All measurements were taken at 20°C and 50% rH at 1 atmosphere pressure unless otherwise indicated. The performance data detailed in this document refer to new sensors.

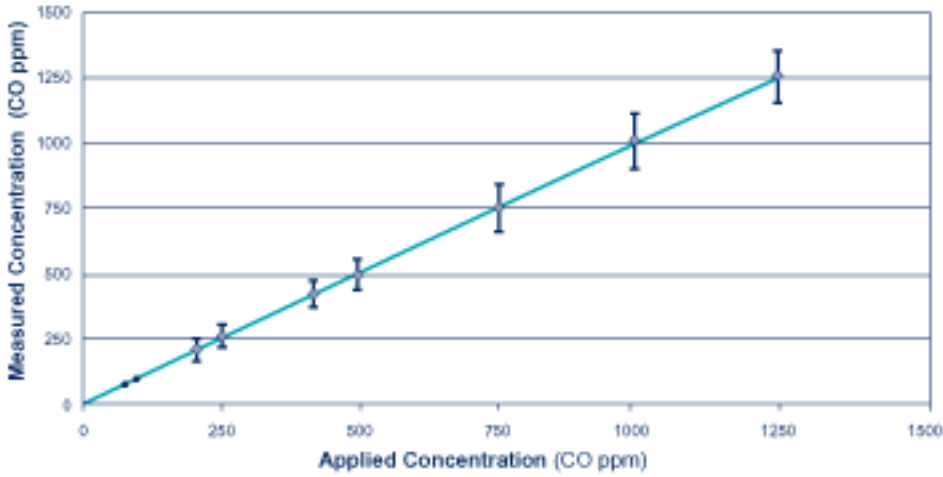
With the exception of items marked * the stated parameters have been verified under the UL component recognition programme.

Outline Dimensions



All dimensions in mm
All tolerances ± 0.15 mm unless otherwise stated

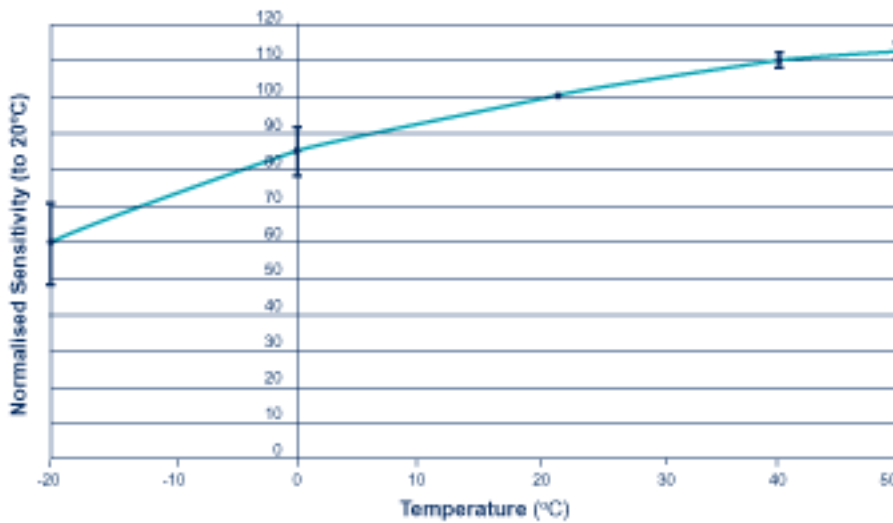
Linearity of ECO-Sure Cells (0 to 1250 ppm CO)



Note: Temperature coefficients and cross sensitivity are not verified under the UL component recognition programme.



Temperature Coefficients of ECO-Sure Cells



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Cross Sensitivity Table

Gas	Concentration Used (ppm)	Exposure Time (mins)	Reading (ppm CO)
Carbon Monoxide	100	5	100
Hydrogen Sulphide	25	5	0
Sulfur Dioxide	50	600	<0.5
Nitrogen Dioxide	50	900	-1.0
Nitric Oxide	50	5	8
Chlorine	2	5	0
Hydrogen	100	5	20
Carbon Dioxide	5000	5	0
Ammonia	100	5	0
Ethanol	2000	30	5
Iso-Propanol	200	120	0
Acetone	1000	5	0
Acetylene	40	5	80

The data contained in this document is intended for guidance only and it is the Clients' responsibility to perform any necessary tests to ensure correct performance of this product in specific application for which it is intended. In the interest of product improvement, Sixth Sense reserve the right to alter and amend the product and its performance without notice. As this product may be used by the Client in circumstances outside the control of Sixth Sense, we cannot give any warranty as to the accuracy of these details in any specific application.

