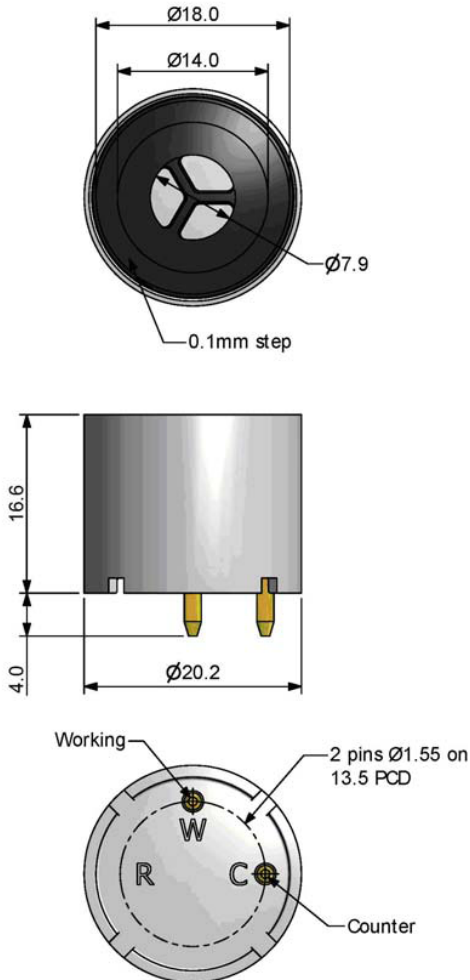


# ECO-Sure LXH Carbon Monoxide Sensor



The ECO-Sure LXH is a high quality, cost effective 2-electrode electrochemical cell designed for the detection of Carbon Monoxide in air and where there may be Hydrogen present as a cross-interferent. The primary application for this cell is for the measurement of Carbon Monoxide in breath.

## SPECIFICATION

<b>Operating principle:</b>	2-electrode electrochemical
<b>Gas detected:</b>	Carbon Monoxide (CO)
<b>Measurement range<sup>1</sup>:</b>	0 – 200ppm
<b>Maximum overload<sup>2</sup>:</b>	300ppm
<b>Hydrogen cross-sensitivity:</b>	< 12% measured at 20°C and 30 seconds after introduction of Hydrogen (batch average)
<b>Expected Lifetime:</b>	2 years from date of manufacture
<b>Output signal:</b>	200 nA/ppm ± 33%
<b>Temperature range<sup>3</sup>:</b>	10 – 30°C
<b>Pressure range:</b>	1 atm ± 10%
<b>Humidity range:</b>	25 - 90% continuous RH non-condensing 15 – 90% intermittent RH non-condensing
<b>Response time:</b>	T <sub>90</sub> < 30 seconds at 20°C
<b>Baseline offset (clean air):</b>	-1 to +1ppm equivalent
<b>Zero shift (-40 – 50°C):</b>	< 2ppm equivalent
<b>Long term output drift:</b>	< 5% pa
<b>Linearity:</b>	< ±5%
<b>Recommended load resistor:</b>	5Ω
<b>Bias voltage:</b>	0V (not required)
<b>Warranty period:</b>	18 months from date of despatch

## INTRINSIC SAFETY DATA

<b>Maximum current at 2000ppm:</b>	0.1mA
<b>Maximum O.C. voltage:</b>	1.3V
<b>Maximum S.C current:</b>	< 1.0A

Important Notes: All specifications are measured on new cells at 20°C, 50% RH and atmospheric pressure unless otherwise indicated. 1. Linear range. 2. After exposure to high concentrations of Carbon Monoxide, the cell should be left for an extended period of time to recovery fully its original characteristics. 3. The performance characteristics are based on this temperature range. However the cell can be used outside this range but not all performance specifications will then be valid. If the cell is to be used outside this range, then the user should characterise the cell for their application.

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## PHYSICAL SPECIFICATION

<b>Weight:</b>	5g (approx)
<b>Housing material:</b>	Noryl 110
<b>Storage conditions:</b>	10 – 30°C
<b>Size:</b>	20.25mm diameter, 20.6mm tall (inc pins)
<b>Orientation:</b>	Any
<b>Part number:</b>	2112B3008

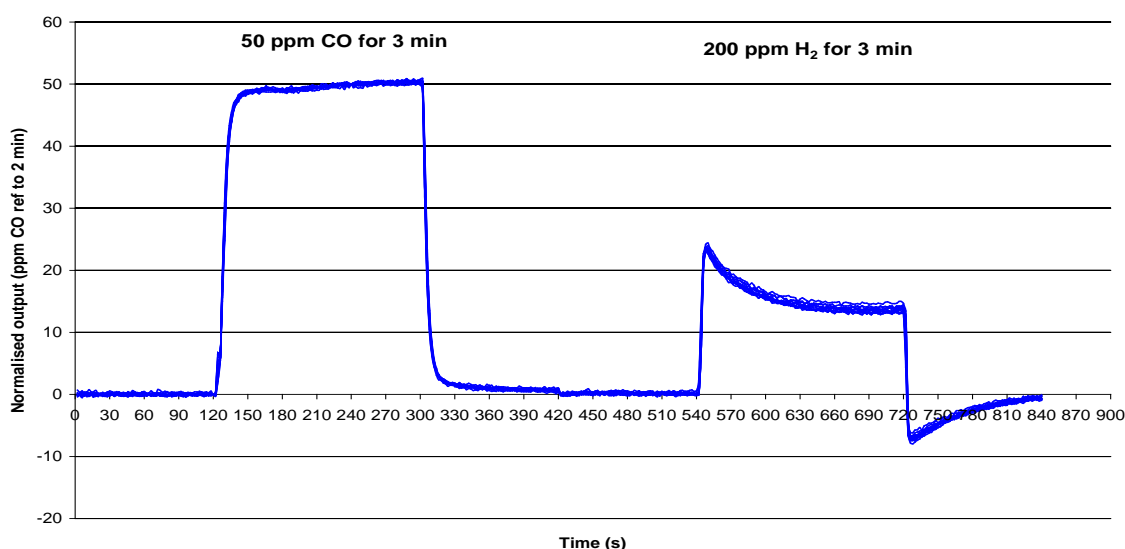
## POISONING

Sixth Sense Cells are designed for operation in a wide range of environments and harsh conditions. However it is important that exposure to high concentrations of solvent vapours is avoided, both during storage, fitting into instruments and operation. When using sensors with printed circuit boards (PCBs), degreasing agents should be used before the sensor is fitted. Do not glue directly on or near the Cell, as the solvent may cause crazing of the plastic.

## HYDROGEN CROSS – SENSITIVITY

Typical Hydrogen cross-sensitivity of the ECO-Sure LXH is shown below. The cross-sensitivity is tested on a batch basis and the average cross-sensitivity to Hydrogen at 20°C shall be less than 10% of the Carbon Monoxide sensitivity 30 seconds after the introduction of Hydrogen.

LXH.CO on exposure to 50 ppm CO for 3 min and then to 200 ppm hydrogen for 3 min. Normalised ref to 2 min CO at 20 degrees Centigrade.



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## TEMPERATURE CO-EFFICIENT

Temperature coefficient data for LXH-CO on exposure to 50 ppm CO in air;  
Normalised to CO reading at 20°C

