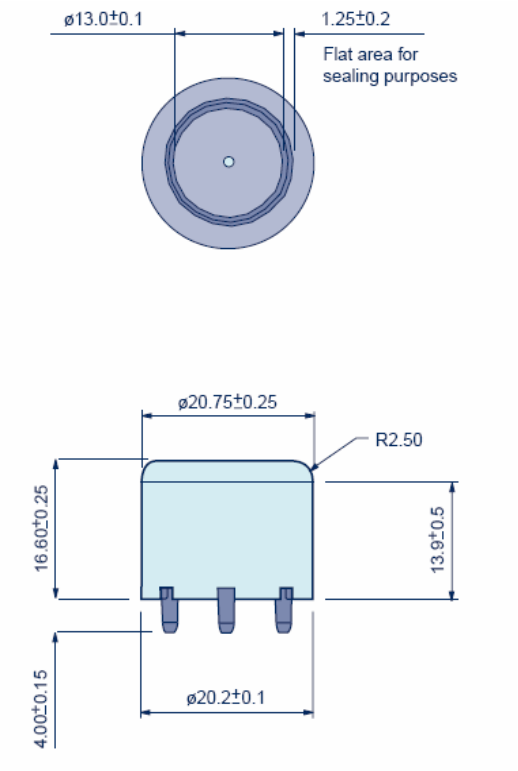
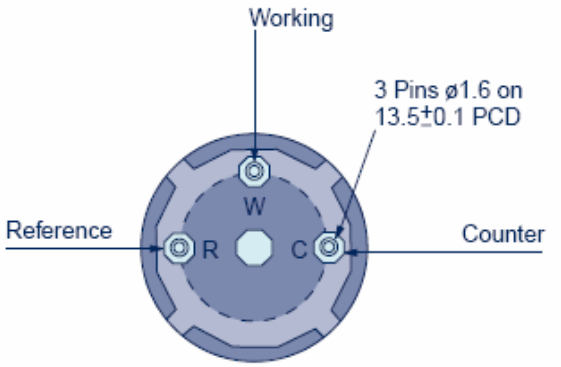
SURECELL CO (H) Carbon Monoxide



OPERATING PERFORMANCE

Operating principle:	3-electrode electrochemical
Gas detected:	Carbon Monoxide (CO)
Measurement range:	0 – 500ppm
Maximum overload[1]:	1000ppm
Expected Lifetime:	2 years in air from date of manufacture
Output signal:	0.11 ± 0.02 µA/ppm
Temperature range[2]:	Continuous: -20°C to +40 °C Intermittent: -40°C to +55 °C
Pressure range:	1 atm ± 10%
Humidity range (non condensing):	Continuous: 15 – 90% Intermittent: 0 – 99%
Response time(T^5_{90}):	< 30 seconds
Baseline offset (clean air):	<±3ppm equivalent
Zero shift (-40°C to + 55°C):	<±2ppm equivalent
Long term output drift:	< 5% per annum
Repeatability:	< ±5%
Linearity:	Linear < ±5%
Recommended load resistor:	5Ω
Bias voltage:	Not required



INTRINSIC SAFETY DATA

Maximum current at 1000ppm:	0.2mA
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 original sealed container
Storage conditions:	+10°C to +30°C
Orientation:	Any
Warranty period:	18 months from date of despatch
Part number:	2112B2004

Notes: 1. After exposure to high concentrations of Carbon Monoxide, the cell should be left for an extended period of time to recover fully its original characteristics. 2. 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. 3. All product specifications are quoted at standard temperature and pressure. 4. Poisoning: The CO (H) sensor is 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.

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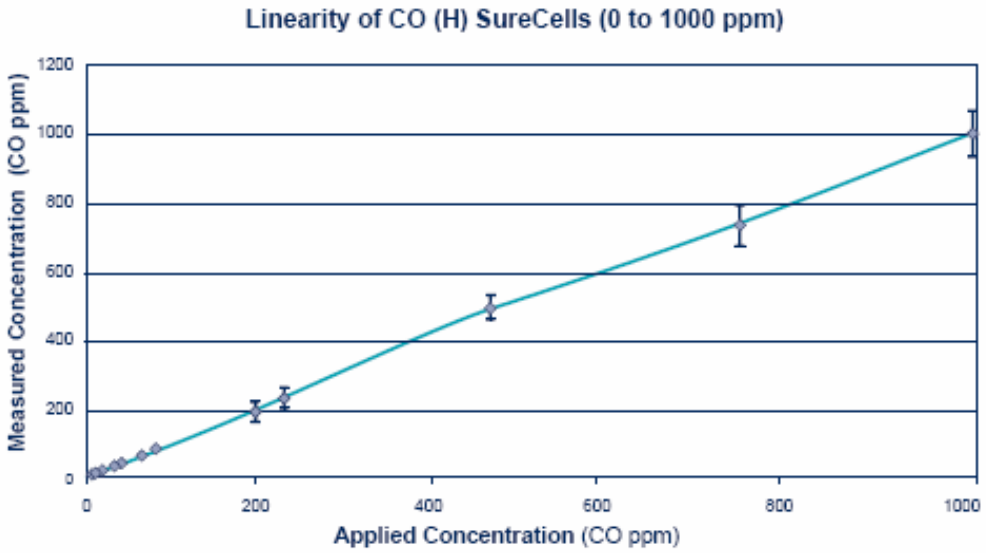

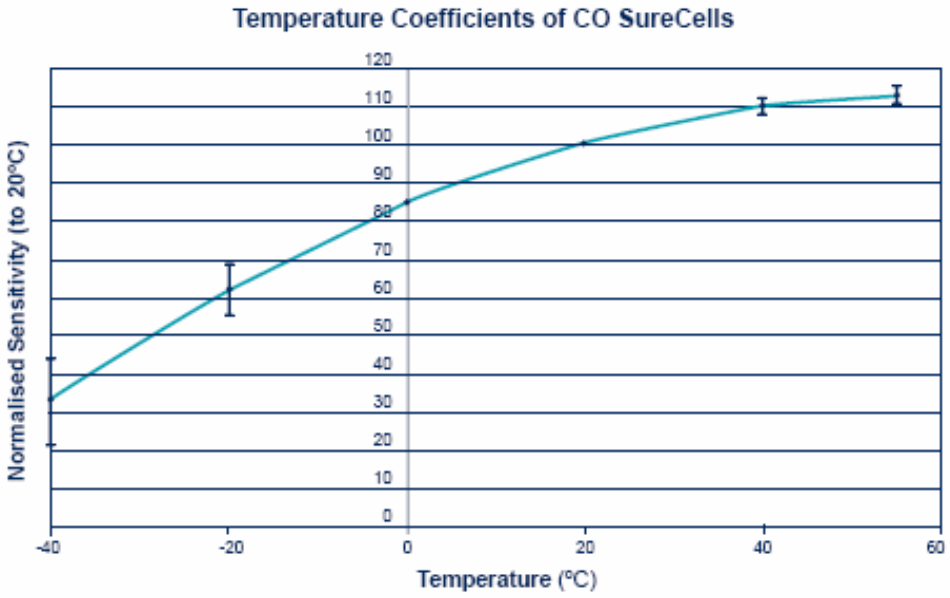

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CROSS-SENSITIVITY

Whilst sensors are designed to be highly specific to the gas they are intended to measure, they will still respond to some degree to various gases. The table below is not exclusive and other gases not included in the table may still cause a sensor to react.

Cross Sensitivity Table					
Gas	Concentration Used (ppm)	Reading (ppm CO)	Gas	Concentration Used (ppm)	Reading (ppm CO)
Carbon Monoxide	50	50	Ethylene	100	85
Hydrogen Sulphide	10	38	Carbon Dioxide	5000	0
Sulfur Dioxide	2	1	Ammonia	50	0
Nitrogen Dioxide	3	-1	Methane	5000	0
Chlorine	2	<±2	Ethanol	40	12
Hydrogen	100	10			

Note: The figures in this table are typical values and should not be used as a basis for cross calibration. Cross sensitivities may not be linear and should not be scaled. All data based on a 5 minute gassing. For some cross interferents, break through will occur if gas is applied for a longer time period.

The cross-sensitivity values quoted are based on tests conducted on a small number of sensors. They are intended to indicate sensor response to gases other than the target gas. Sensors may behave differently with changes in ambient conditions and any batch may show significant variation from the values quoted.

WARNING: By the nature of the technology used, any electrochemical sensor can potentially fail to meet specification without warning. Although Euro-Gas makes every effort to ensure reliability, where life safety is a performance requirement of the products, we recommend that all sensors and instruments are checked for response to gas before use.

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