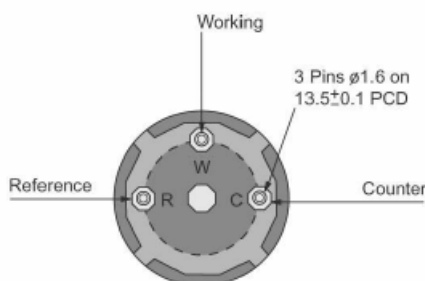
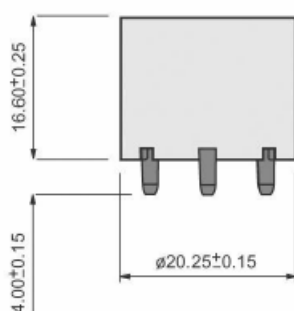
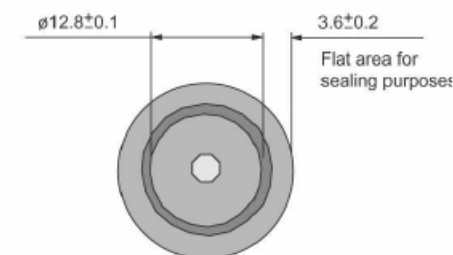


SURECELL CO (M) Carbon Monoxide



OPERATING PERFORMANCE

Operating principle:	3-electrode electrochemical
Gas detected:	Carbon Monoxide (CO)
Measurement range:	0 – 1000ppm
Maximum overload¹:	2000ppm
Expected Lifetime:	2 years in air from date of manufacture
Output signal:	0.07 ± 0.015 µA/ppm
Temperature range²:	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(T₉₀):	< 30 seconds
Baseline offset (clean air):	<+5ppm equivalent
Zero shift (-40°C to +55°C):	<+12ppm equivalent
Long term output drift:	< 5% per annum
Repeatability:	< ±3%
Linearity:	Within ±5%
Recommended load resistor:	5Ω
Bias voltage:	Not required

INTRINSIC SAFETY DATA

Maximum current at 2000ppm CO:	0.2mA
Maximum o/c voltage:	1.3V
Maximum s/c current:	< 1.0A

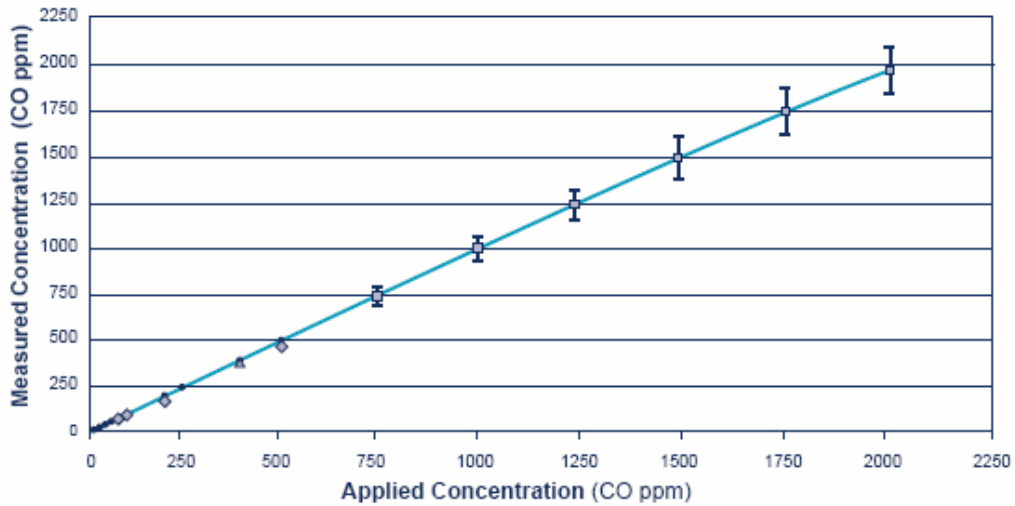
PHYSICAL SPECIFICATION

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:	2112B2003

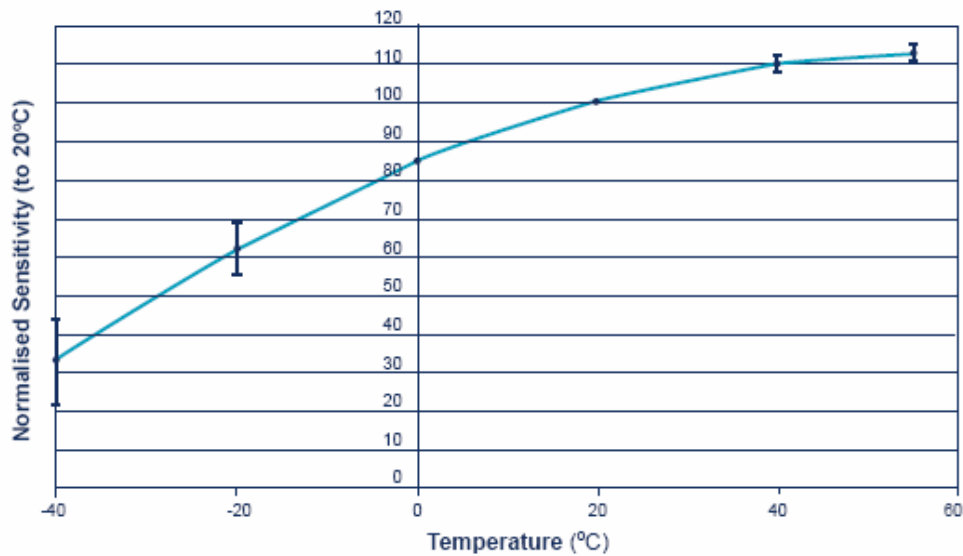
Notes: 1. After exposure to high concentrations of Carbon Monoxide, the cell should be left for an extended period of time to recover fully its original characteristics. 2. The performance characteristics are based on this temperature range. However the cell can be used outside this range but not all 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.

SURECELL CO (M) Carbon Monoxide

Linearity of CO SureCells (0 to 2000 ppm)



Temperature Coefficients of CO SureCells



SURECELL CO (M) Carbon Monoxide

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.

Gas	Concentration Used (ppm)	Reading (ppm CO)
Acetone	1000	0
Acetylene	40	80
Ammonia	50	0
Carbon Dioxide	5000	0
Carbon Monoxide	50	50
Chlorine	0.5	0
Ethanol	2000	3
Ethylene	100	100
Hydrogen	200	~25
Hydrogen Sulphide	20	<5
Iso-Propanol	200	0
Methanol	200	0
Nitric Oxide	50	<25
Nitrogen Dioxide	20	$-5 \leq X \leq 0$
Sulphur Dioxide	20	<5

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.

The data contained in this document is believed to be accurate and correct. The data given is for guidance only. Euro-Gas Management Services Ltd accepts no liability for any consequential losses, injury or damage resulting from the use of this datasheet or the information contained in it. Customers should test the sensors under their own conditions to ensure that the sensors are suitable for their own requirements and in accordance with the plans and circumstances of the specific project and any standards/regulations pertaining to the country in which the sensors will be utilised. This datasheet is not intended to form the basis of a contract and in the interest of product improvement, Euro-Gas reserves the right to alter design features and specifications without notice.

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