# Product Data Sheet

SureCell<sup>®</sup>  $H_2S(M)$ 

# **Operating Performance**

Operating Principle Gas Detected Measurement Range Maximum Overload Expected Operating Life Output Signal Temperature Range

Pressure Range Humidity Range (non-condensing) Response Time (T<sup>5</sup> 90) Baseline Offset (clean air) Zero Shift (-40°C to +50°C) Long Term Output Drift Repeatability Linearity Recommended Load Resistor Bias Voltage

3-electrode electrochemical Hydrogen Sulfide 0-100 ppm 150 ppm 2 years in air 0.7 ± 0.2 µA per ppm Continuous: -20°C to +40°C Intermittent: -40°C to +55°C 1 atm ±10% Continuous: 15 - 90% RH Intermittent: 0 - 99% RH <20 seconds <±0.5ppm equivalent <±0.4ppm equivalent <2% per month <±5% Linear <±5%  $5\Omega$ Not required

#### Intrinsic Safety Data

Maximum at 150 ppm Maximum o/c Voltage Maximum s/c Current 0.15 mA 0.8 V <1.0 A

#### **Physical Specification**

Weight Housing Material Storage Life Storage Conditions Orientation Warranty Period 5 g (approx) Noryl 110 6 months in sealed container +10°C to +30°C Any 18 months from date of despatch

## **Outline Dimensions**







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

#### **IMPORTANT NOTE:**

Connection should be made via recommended mating parts only. Soldering to the sensor will result in damage and invalidate the warranty.

All performance data is based on conditions at 20°C, 50% RH and 1013 mBar.



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H2S (M) Surecell Linearity: 0 to 500ppm H2S (–1stdev)

Temperature performance of H2S (M) Surecells





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Gas	Concentration used (ppm)	Reading (ppm H <sub>2</sub> S)	Gas	Concentration used (ppm)	Reading (ppm H <sub>2</sub> S)
Carbon Monoxide	50	0	Ethanol		TBA
Hydrogen Sulfide	10	10	Propanol		TBA
Sulphur Dioxide	2	0	Acetone		TBA
Nitrogen Dioxide	3	0	Ozone		TBA
Nitric Oxide	25	0	Arsine		TBA
Chlorine	0.5	0	Diborane		TBA
Ethylene	100	0	Phoshine		TBA
Carbon Dioxide	5000	0	Silane		TBA
Ammonia	50	0	Germane		TBA
Methane		TBA	Hydrogen Chloride		TBA

### **Cross Sensitivity Table**

**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.

SAFETY NOTE

This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardize the safety of people and property.

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, City Technology 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 City Technology, we cannot give any warranty as to the accuracy of these details in any specific application.



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