

# Sensoric H2S 3E 2000 S Transmitter

Hydrogen Sulfide (H<sub>2</sub>S) Gas Sensor with 4-20 mA Transmitter Product Code: 75-0155-134-30659

**Product** Information Pack

## **Product Datasheet**

H2S 3E 2000 S Hydrogen Sulfide Gas Sensor with 4-20 mA Transmitter

## **Document Purpose**

The purpose of this document is to present the performance specification of the H2S 3E 2000 S hydrogen sulfide transmitter.

This document should be used in conjunction with Operating Principles (OP21).

The data provided in this document are valid at 20°C, 50% RH and 1013 mBar for 3 months from the date of sensor manufacture.

Output signal can drift below the lower limit over time. For guidance on the safe use of the sensor, please refer to the Operating Principles OP21.

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# **Product** Data Sheet

## Key Features & Benefits:

- High range H<sub>2</sub>S sensor
- Highly selective
- Industry standard 4-20 mA output
- 40-200 mV option

## **Technical Specifications**

#### MEASUREMENT

	Target Gas ng Principle nent Range	Hydrogen Sulfide ( $H_2S$ ) 3-electrode electrochemical 0-2000 ppm $H_2S$
	Filter	None
	Output	4-20 mA, 2 wire loop powered
		40-200 mV
Response	Time (T90)*	<60 s <sup>Calculated from 2 minute exposure time</sup>
	Resolution	0.01 mA

**ELECTRICAL** 

Power Supply Required | 10 - 30 VDC single-ended Maximum Loop Resistance 700 Ω Calibration Via PCB mounted button and potentiometer

#### MECHANICAL

Mounting Weight Sensor Housing Material **Recommended Orientation** 

Via 3mm PCB mounting holes <13 q ABS Membrane pointing downwards or horizontal direction

#### **ENVIRONMENTAL**

Typical Applications **Operating Temperature Range Operating Pressure Range** Operating Humidity Range

Biogas, Landfill -20°C to +50°C Atmospheric ± 10% 15% to 95% rH non-condensing

#### LIFETIME

Long Term Output Drift | <15% in 6 months Expected Operating Life

>15 months in air **Storage Life** 8 weeks in sealed container

### **Product Dimensions**



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



Specifications are valid at 20°C, 50% RH and 1013 mBar.

\* Specifications are valid at 20°C, 50% RH and 1013 mBar, using recommended circuitry. Performance characteristics outline the performance of sensors supplied within the first 3 months. Output signal can drift below the lower limit over time.

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#### Poisoning

Sensoric 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 modules with printed circuit boards (PCBs), degreasing agents should be used before the module is fitted. Do not glue directly on or near the modules as the solvent may cause crazing of the plastic.

#### **Cross Sensitivity Table**

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

IMPORTANT NOTE : The cross sensitivity data shown below does not form part of the product specification and is supplied for guidance only. Values quoted are based on tests conducted on a small number of sensors and any batch may show significant variation. For the most accurate measurements, the module should be calibrated using the gas under investigation.

Gas	<b>Concentration Used</b>	Reading (ppm H <sub>2</sub> S)
Ammonia, NH <sub>3</sub>	1000 ppm	0.0
Carbon Dioxide, $CO_2$	50%	0.0
Hydrogen, H <sub>2</sub>	2%	<110
Iso Propyl Alcohol, C <sub>3</sub> H <sub>7</sub> OH	8900 ppm	0.0
Methane, CH <sub>4</sub>	60%	0.0

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.

Every effort has been made to ensure the accuracy of this document at the time of printing. In accordance with the company's policy of continued product improvement City Technology Limited reserves the right to make product changes without notice. The products are always subject to a programme of improvement and testing which may result in some changes in the characteristics quoted. As the products may be used by the client in circumstances beyond the knowledge and control of City Technology Limited, we cannot give any warranty as to the relevance of these particulars to an application. It is the clients' responsibility to carry out the necessary tests to determine the usefulness of the products and to ensure their safety of operation in a particular application.

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