Product Data Sheet

ELECTROCHEMICAL H_2S-50 SENSOR (7 SERIES) (P/N:052-0300-000)

• Description

The sensor is designed for the measurement of H_2S concentration in gas phase. It can be used as the pin to pin replacement of the standard 7 series electrochemical H_2S sensor.

• Performance Characteristics

- Nominal Range: 0~50 ppm
- Maximum Overload: 500 ppm
- Sensitivity(20 ℃) : 1.70 ± 0.30 μA/ppm
- Response Time (T90): ≤ 30 s
- Zero Signal(20 ℃) : < ±0.4 μA
- Baseline Shift (- 40 ℃ ~ 50 ℃) : <0.1 ppm
- Resolution: 0.1 ppm
- Linearity: Linear up to 50 ppm
- Bias Voltage: 0 mV

• Environmental

- Temperature Range: -40 ℃ ~ 50 ℃
- Pressure Range: 1 atm ± 10 %
- Humidity Range: 15 % ~ 95 %RH non-condensing

• Life Time

- Long Time Output Drift: < 2 % signal/month
- Recommended Storage Temp: 10 ℃ ~ 30 ℃
- Expected Operating Life: 2 years in clean air
- Storage Life: 6 months in original packaging
- Warranty: 24 months

• Intrinsic Safety Data

- Maximum Current at 500 ppm H_2S: < 1 mA
- Maximum O/C Voltage: 1.3 V
- Maximum S/C Current: <1.0 A

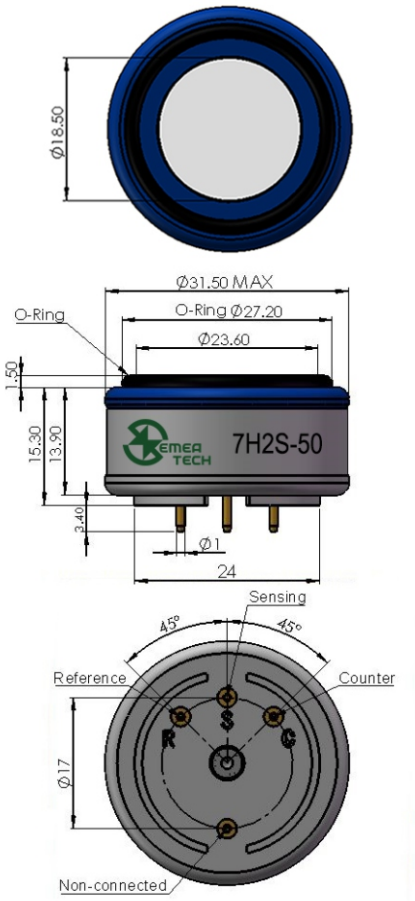
• Physical Characteristics

- Housing Material: ABS
- Weight (Nominal): 8 g
- Orientation: None

• Installation

Output signals from the sensor pins are different. Inappropriate use of the pins in product design will affect the sensor functionality. Exposure to high concentrations of solvent vapors should be avoided under any condition. Mechanical overstress may cause deformation or cracks of the plastic enclosure of the sensor. If the sensor is used in extreme environmental conditions, please contact us if you need more details.

Product Dimensions



All dimensions in mm
All tolerances ±0.10 mm unless otherwise stated

Note

The performance data in this document is conducted by using SemeaTech recommended test circuitry and test environment at 20℃, 50 %RH and 1 atm.

Sensor performance varies under different environmental conditions, please contact us if you need more details.

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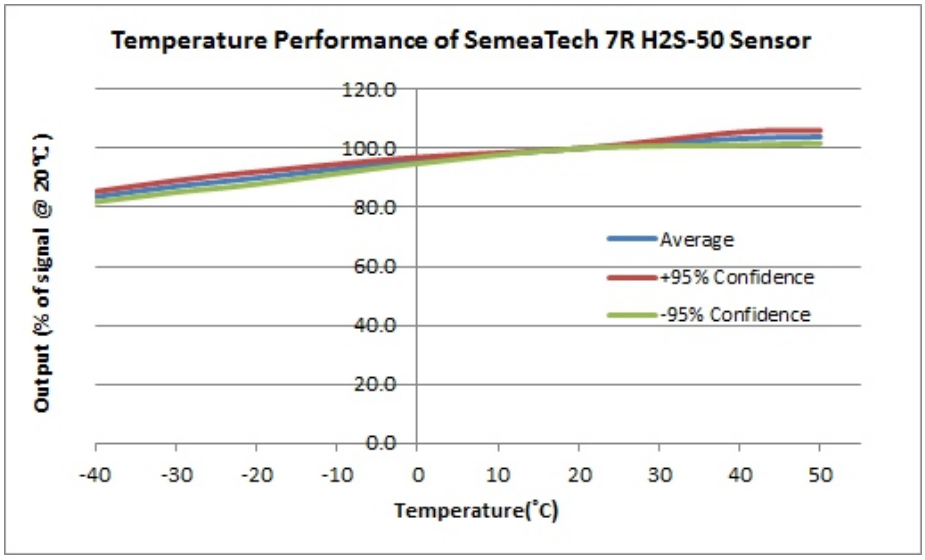
• Cross-Sensitivity Data

Gas	Concentration (ppm)	Output signal (ppm H_2S equivalent)
Carbon Monoxide	100	<3
Sulfur Dioxide	10	<1
Nitric Oxide	50	~-1
Nitrogen Dioxide	10	<1
Hydrogen	10000	<12
Ethylene	100	0

Note: The cross sensitivity are including but not limited to the above gases. It may also respond to other gases.The data in the table above may vary from different batches of sensors and the changes of test environment. Calibration with cross sensitivity gas is not recommended.

• Temperature Data



• Safety Note

The sensor is designed to be used in certain instruments for life critical applications. To ensure the sensor functioning per its specifications inside the instrument, it is required to read the instrument user's guide carefully and comply with the calibration procedures by using certified target calibration gas before each use. Failure to do so may cause serious injury and fatality. Please do not open the housing because the electrolyte stored inside is harmful.

It is highly recommended for customers to validate the sensor performance using this document as a reference for their product designs or applications.