

Key Features & Benefits:

- Excellent stability
- Resistant to drying out
- Reliable in continuous flow applications

Technical Specifications

Part Numbers

MEASUREMENT

Operating Principle	3-electrode electrochemical
Measurement Range	0-5 ppm SeH ₂
Maximum Overload	10 ppm
Lower Detection Limit	50 ppb when using recommended electronics
Filter	None
Sensitivity	1100 ± 500 nA/ppm
Response Time (T₉₀)	<30 Seconds
Baseline Offset (clean air)	< ±20 nA
Zero Shift (-40°C to +50°C)	< ±60 ppb
Repeatability	<2% of signal
Linearity	<10% of full scale

SeH2 3E 5 LT	Part Number
4-Series	3035-337-30049

ELECTRICAL

Recommended Load Resistor	1.5 kΩ
Bias Voltage	0 V
Resolution	Dependent on Electronics <35 ppb when using recommended circuitry

Available in:

4 Series



MECHANICAL

Housing Material	PPO Noryl
Weight	4.5 g
Orientation	Any

ENVIRONMENTAL

Typical Applications	Portable & fixed life safety
Operating Temperature Range:	
Continuous	-20°C to +40°C
Intermittent	-40°C to +50°C
Operating Pressure Range	Atmospheric ± 10%
Operating Humidity Range	10% to 95% RH non-condensing

INTRINSIC SAFETY DATA

Maximum at 2000ppm	<0.2 mA at 100 ppm
Maximum o/c Voltage	<500 mV
Maximum s/c Current	<1.0 A

LIFETIME

Long Term Output Drift	<5% per 6 months
Expected Operating Life	2 years in normal use
Storage Life	3 months in sealed container
Standard Warranty	10 months from date of despatch

Product Data Sheet

Poisoning

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

Cross Sensitivity Table

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 SeH₂)
Ammonia, NH ₃	108	<0.1
Arsine, AsH ₃	0.15	0.25
Carbon Dioxide, CO ₂	5000	0
Carbon Monoxide, CO	85	0
Chlorine, Cl ₂	0.85	-0.3
Diborane, B ₂ H ₆	0.2	0.6
Hydrocarbons	18000	0
Hydrogen, H ₂	3100	<0.05
Hydrogen Chloride, HCl	6.8	2.3
Hydrogen Cyanide, HCN	12.6	1
Hydrogen Sulfide, H ₂ S	18.1	22.5
Nitrogen Dioxide, NO ₂	10.1	-4
Phosphine, PH ₃	0.18	0.5
Propan-2-ol, C ₃ H ₅ OH	20000	<0.05
Silane, SiH ₄	4.4	0.8
Sulfur Dioxide, SO ₂	17.8	7

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.

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.

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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.