

# **Product** Data Sheet

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**Arsine**

**AsH3 2E 1**

# Product Data Sheet

## AsH3 2E 1

### FEATURES

Amperometric 2 electrode sensor cell  
fixed organic gel electrolyte  
low zero reading  
no cross sensitivity to hydrogen  
Inboard filter improves selectivity

### TYPICAL APPLICATIONS

Portable & fixed point applications  
Semiconductor Industry, General Industry

### PART NUMBER INFORMATION

MINI	0731-021-30009
4 series adaptation	0731-021-30049

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### TECHNICAL SPECIFICATIONS

Measuring Range	0–500 ppb
Sensitivity Range	570 nA/ppm $\pm$ 230 nA/ppm
Zero Current at 20 °C	< $\pm$ 10 nA
Resolution at 20 °C	< 20 ppb
Bias Potential	not required
Linearity	< 10% full scale
Response Time at 20 °C	
t50	< 20 s calculated from 5 min. exposure time
t90	< 60 s calculated from 5 min. exposure time
Long Term Sensitivity Drift	< 5% per 6 months
Operation Conditions	
Temperature Range	-20 °C to +40 °C
Humidity Range	20–90% r.H, non–condensing
Effect of Humidity	an abrupt change of humidity will cause a short term drift in zero reading
Sensor Life Expectancy	> 18 months in air
Warranty	10 months

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### CROSS SENSITIVITIES AT 20 °C

Gas	Concentration	Reading [ppm]
Ammonia	100 ppm	0.5
Carbon Dioxide	5000 ppm	0
Carbon Monoxide	100 ppm	0
Chlorine	1 ppm	0
Diborane	0.25 ppm	0.1
Silane	5 ppm	0
Hydrocarbons	% range	0
Hydrochloric Acid	5 ppm	0 <sup>1)</sup>
Hydrogen	3000 ppm	0
Hydrogen Cyanide	20 ppm	3
Hydrogen Sulfide	1 ppm	0 <sup>1)</sup>
Isopropanol	200 ppm	0
Nitrogen	100%	0
Phosphine	0.1 ppm	0.1

1) with filter; without filter the cell will be poisoned at longer exposure rates

#### Notes:

1. Interference factors may differ from sensor to sensor and with life time. It is not advisable to calibrate with interference gases.
2. This table does not claim to be complete. The sensor might also be sensitive to other gases.

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## 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 jeopardise the safety of people and property.

## Attention

Use of this range of sensors requires complete understanding of the instructions. Before using the sensors please carefully read 'Application Notes'.

For further assistance on sensor selection and use, please contact a member of the Technical Sales team.

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