

## Arsine

### SensoriC AsH3 3E 1



Rev. 09/2006

SensoriC Sensors are designed and manufactured in  
Justus-von-Liebig-Str. 22, D- 53121 Bonn, Germany

## SensoriC AsH3 3E 1

### FEATURES

Amperometric 3 electrode sensor cell  
High resolution  
0 voltage biased operation  
fixed organic gel electrolyte  
detection of all hydrides

### TYPICAL APPLICATIONS

Portable & fixed point applications  
Semiconductor Industry, General Industry

### PART NUMBER INFORMATION

MINI	0731-031-30009
SENSORIC CLASSIC	0731-031-30069
CTL 4 series adaptation	0731-031-30049
CTL 7 series adaptation	0731-031-30079

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### TECHNICAL SPECIFICATIONS

Measuring Range	0–1 ppm
Sensitivity Range	1400 nA/ppm $\pm$ 450 nA/ppm
Zero Current at 20°C	< $\pm$ 20 nA
Resolution at 20°C	< 15 ppb
Bias Potential	0 mV
Linearity	< 10% full scale
Response Time at 20°C	
t50	< 10 s calculated from 2 min. exposure time
t90	< 30 s calculated from 2 min. exposure time
Long Term Sensitivity Drift	<5% per 6 months
Operation Conditions	
Temperature Range	-20°C to +40°C
Humidity Range	20–95% r.H., non–condensing
Effect of Humidity	an abrupt change of rel. Humidity will cause a short term drift in zero reading
Sensor Life Expectancy	> 18 months
Warranty	10 months

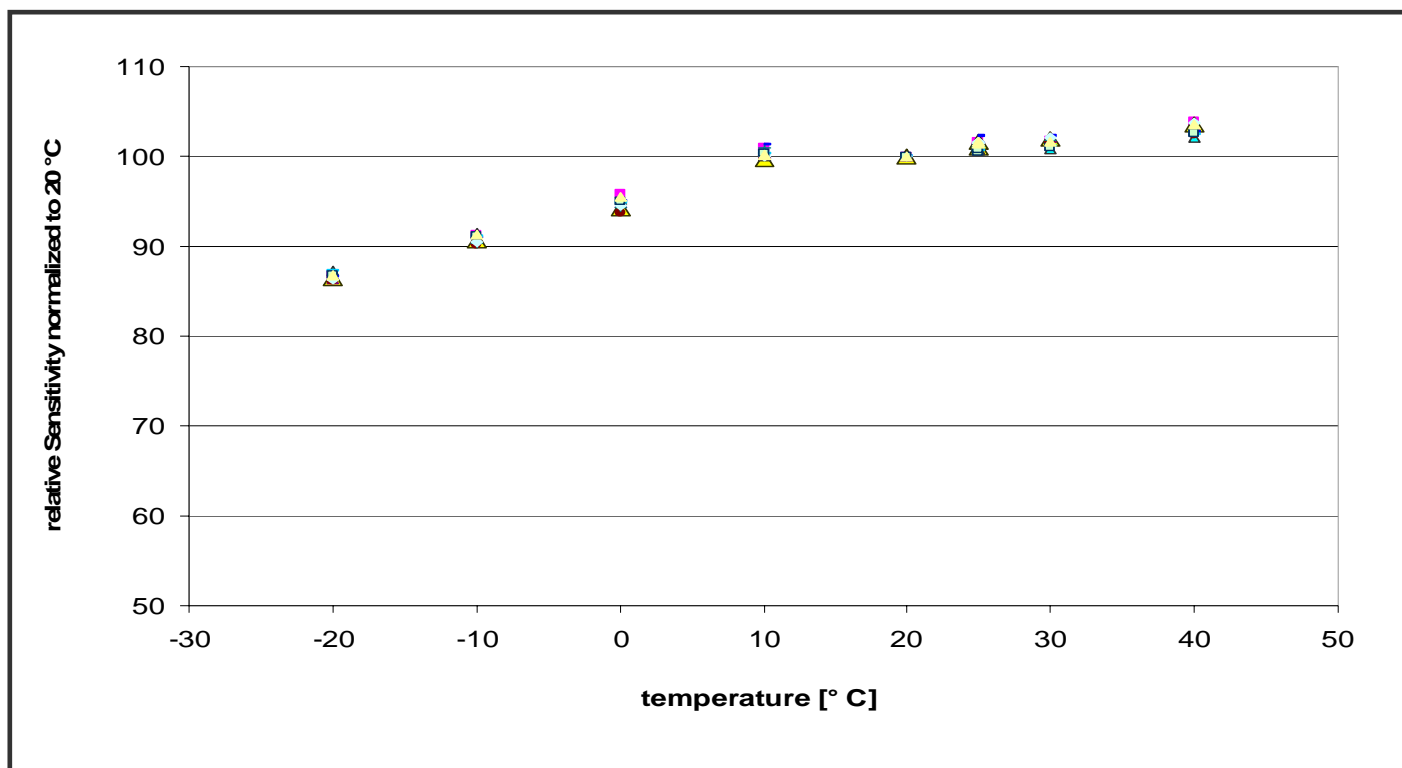
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### OUTPUT vs. TEMPERATURE:



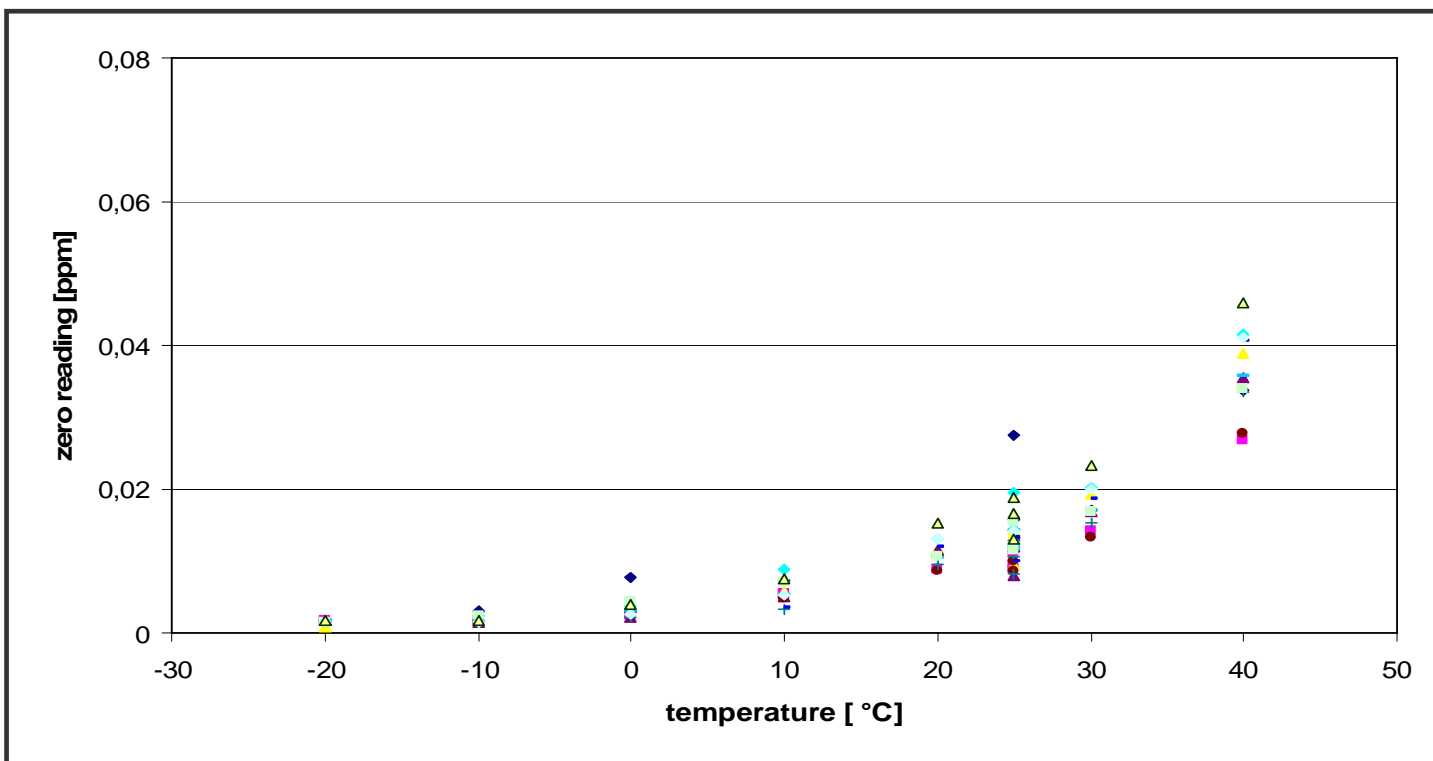
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### ZERO READING vs. TEMPERATURE:



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### CROSS SENSITIVITIES AT 20°C

Gas	Concentration	Reading [ppm]
Ammonia	100 ppm	0.1
Carbon Dioxide	5000 ppm	0
Carbon Monoxide	100 ppm	0
Chlorine	1 ppm	-0.07
Diborane	0.25 ppm	0.18
Silane	5 ppm	3.8
Hydrocarbons	% range	0
Hydrochloric Acid	5 ppm	0 <sup>1</sup>
Hydrogen	3000 ppm	0 <sup>2</sup>
Hydrogen Cyanide	20 ppm	0.5
Hydrogen Sulfide	20 ppm	5
Isopropanol	200 ppm	0
Nitrogen	100 %	0
Phosphine	0.1 ppm	0.13
Sulfur Dioxide	20 ppm	2
Nitrogen Dioxide	10 ppm	-2

- 1) At short gas exposure in minute range (dose ~100ppm min.)  
 2) Interference expected at >4% H2

Notes:

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

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