AsH3 1 zero H2

Electrochemical Gas Sensor for Arsine

sensors made in germany

3-electrode sensor for industrial safety applications in the presence of H2

Class leading stability | Highly selective | Fast response | Very stable baseline

Performance Characteristics	
Measurement Range	0 – 1 ppm
Sensitivity	600 ± 200 nA/ppm
Response Time (T_{90})	≤ 60 s at 2 min gas exposure
Baseline (in clean air)	< ± 10 nA
Baseline (in clean air)	< ± 0.02 ppm*
Linearity	< 5% of full scale
Repeatability	< 2%

* at midpoint sensitivity

Operating Conditions	
Temperature Range	-40°C to +40°C*
Humidity Range	15% to 90% r.h. non-condensing
Pressure Range	800 – 1200 hPa
Recommended Load Resistor	100 Ohm
Bias Voltage	0 V
Recommended Orientation	sensor front pointing downwards or sidewards

* Temporary exposure up to 50°C is acceptable (a few hours per week or a few days per year). Additional bump testing is recommended in case of extended exposure which will decrease lifetime.

Lifetime	
Long Term Output Drift	< 5% per month
Expected Operating Life	> 18 months in air
Recommended Storage conditions	5 – 20°C in sealed container
Warranty	12 months from date of dispatch

Performance and lifetime data are based on conditions at 20°C, 50% r.h. and ambient pressure.

Available Formats	
Name Part Number Weight	**Drawing**
4S AN232400 ~4.6 g	
7S AN232700 ~6.9 g	
Mini AN232000 ~2.4 g	
Classic 4 pin AN232C00 ~3.1 g	
Classic 8 pin compatible AN232B00 ~3.1 g	
Smart 8p with EPROM AN232800 ~3.1 g	
Other customer specific formats upon request	

IMPORTANT NOTE:

Connection should be made via PCB sockets only. Soldering to pins will render your warranty void.

Intrinsic Safety Data / PSDS	
Maximum o/c Voltage	< 1.3 V
Maximum s/c Current	< 1.0 A
Product Safety Datasheet (PSDS)	Organic Gel Electrolyte

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. In stationary installations this needs to be repeated regularly according to national and local regulations. Failure to carry out such tests may jeopardize the safety of people and property.

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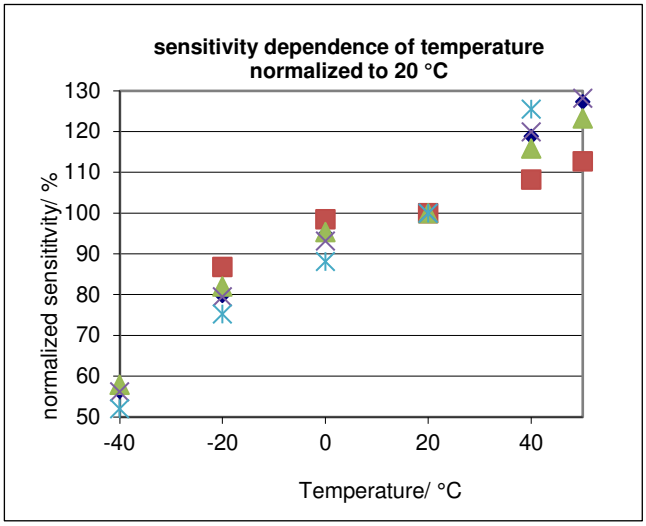
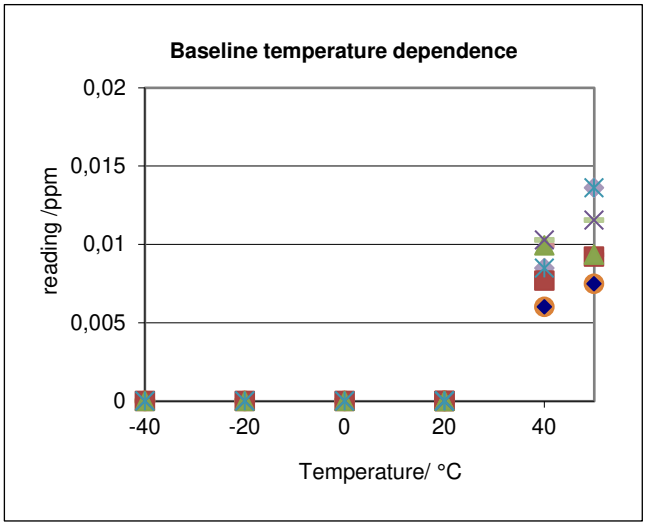
Temperature performance





Temperature Coefficients		
Temperature	Sensitivity	Zero Current
-40 °C	56 %	0.000 ppm
-20 °C	80 %	0.000 ppm
0 °C	94 %	0.000 ppm
20 °C	100 %	0.000 ppm
40 °C	118 %	0.008 ppm
50 °C	126 %	0.010 ppm

Temperature data are taken from a typical batch.

Cross Sensitivity & Filter	
Gas concentration	Reading after 5 min
Carbon Monoxide 100 ppm	0 ppm
Carbon Dioxide 5000 ppm	0 ppm
Hydrogen Sulfide 20 ppm	0 ppm*
Hydrogen 3000 ppm	0 ppm
Hydrogen 50%	0 ppm
Isopropanol 600 ppm	0 ppm
Hydrogen Chloride 5 ppm	0.1 ppm*
Hydrogen Cyanide 5 ppm	1 ppm
Hydrogen Fluoride 5 ppm	0 ppm
Silane 5 ppm	0 ppm
Phosphine 1 ppm	1.2 ppm
Hydrocarbons (saturated) 1%	0 ppm
Chemical Filter	Yes

* Cross sensitivity depends upon filter status and will increase when filter is depleted.

Signals below baseline are stated as 0

Whilst Sensorix 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 above is not exclusive and other gases not included in the table may still cause a sensor to react. 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. Therefore, interfering gases should not be used for calibration.

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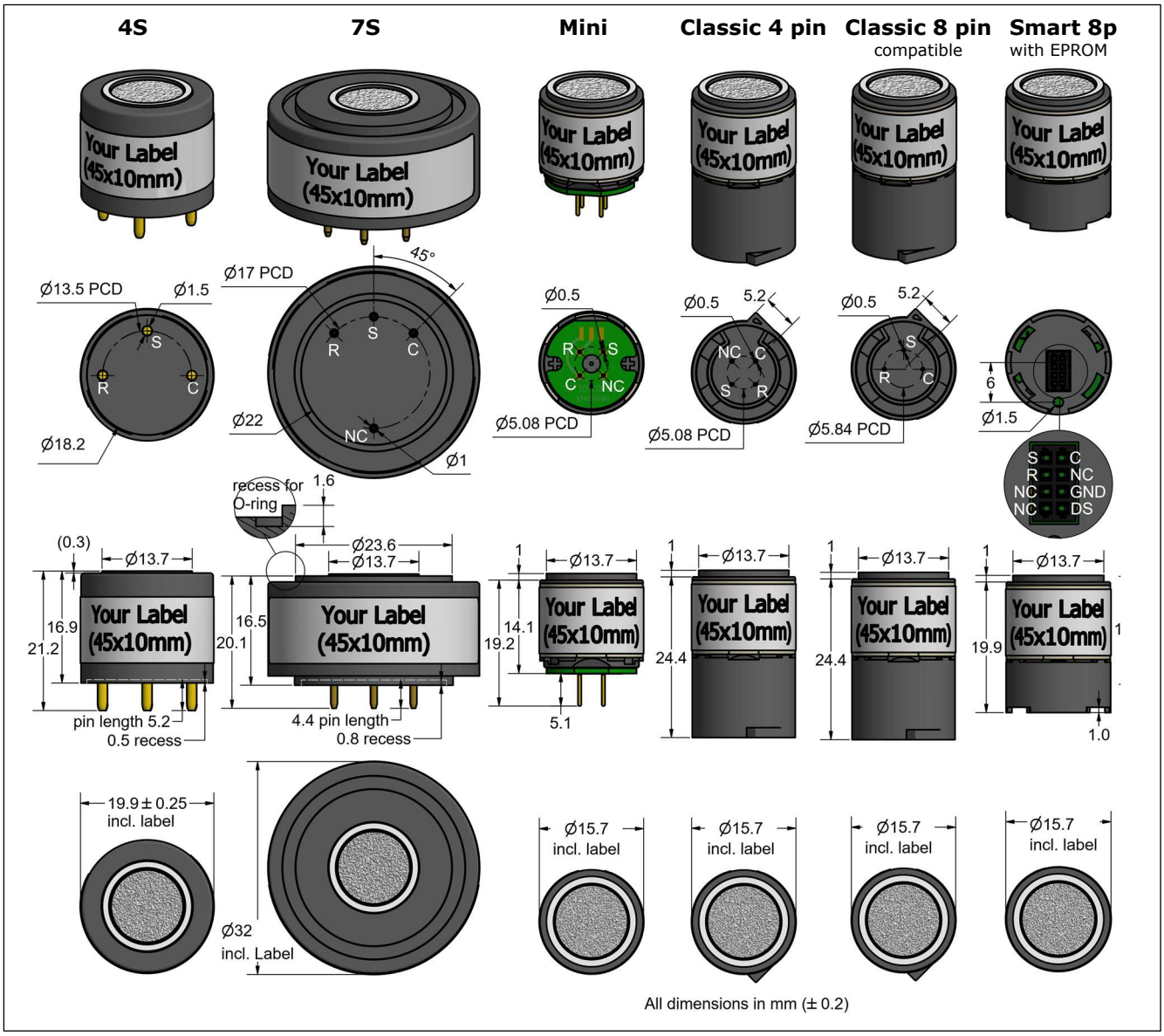
Product dimensions



Poisoning

Sensorix 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 vapors 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.

Recycling

At the end of the product's life, do not dispose of any electronic sensor, component or instrument in the domestic waste, but contact the instrument manufacturer or Sensorix for disposal instructions. Sensorix will take back sensors for professional recycling.

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