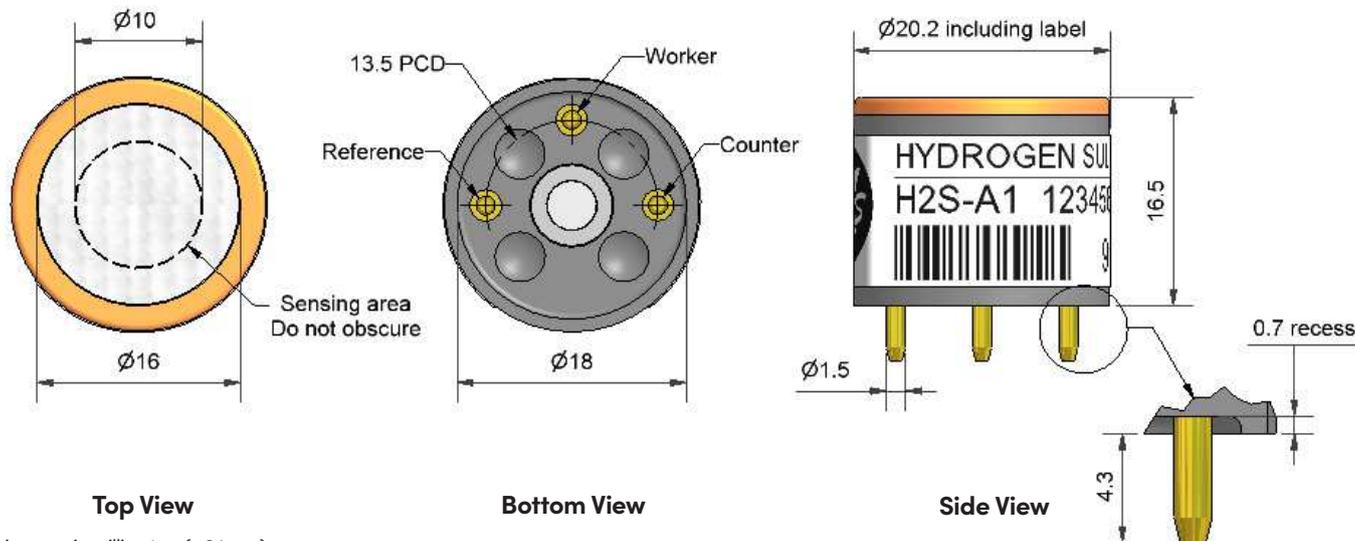




Technical specifications Version 1.0

H2S-A1 Hydrogen Sulfide Sensor


 Dimensions are in millimetres (± 0.1 mm).

Performance			
Sensitivity	nA/ppm in 20ppm H ₂ S		550 to 900
Response time	t ₉₀ (s) from zero to 20ppm H ₂ S		< 35
Zero current	ppm equivalent in zero air		< ± 0.4
Resolution	RMS noise (ppm equivalent)		< 0.05
Range	ppm H ₂ S limit of performance warranty		100
Linearity	ppm error at full scale, linear at zero and 20ppm H ₂ S		0 to -4
Overgas limit	maximum ppm for stable response to gas pulse		500

Lifetime			
Zero drift	ppm equivalent change/year in lab air		< 0.1
Sensitivity drift	% change/year in lab air, monthly test		< 3
Operating life	months until 80% original signal (24-month warranted)		> 24

Environmental			
Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C) @ 20ppm		80 to 92
Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 20ppm		100 to 110
Zero @ -20°C	ppm equivalent change from 20°C		< ± 0.5
Zero @ 50°C	ppm equivalent change from 20°C		< ± 0.7

Cross Sensitivity				
NO ₂ sensitivity	% measured gas @ 10ppm	NO ₂		< -20
Cl ₂ sensitivity	% measured gas @ 10ppm	Cl ₂		< -25
NO sensitivity	% measured gas @ 50ppm	NO		< 4
SO ₂ sensitivity	% measured gas @ 20ppm	SO ₂		< 10
CO sensitivity	% measured gas @ 400ppm	CO		< 6
H ₂ sensitivity	% measured gas @ 400ppm	H ₂		< 0.2
C ₂ H ₄ sensitivity	% measured gas @ 400ppm	C ₂ H ₄		< 0.5
NH ₃ sensitivity	% measured gas @ 20ppm	NH ₃		< 0.1

Key Specifications			
Temperature range	°C		-30 to 50
Pressure range	kPa		80 to 120
Humidity range	% rh continuous		15 to 90
Storage period	months @ 3 to 20°C (stored in sealed pot)		6
Load resistor	Ω (recommended)		10 to 47
Weight	g		< 6



Figure 1 Sensitivity Temperature Dependence

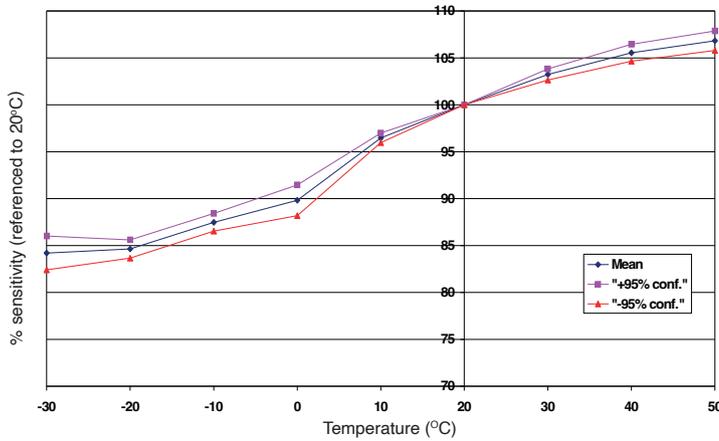


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

The mean and \pm 95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

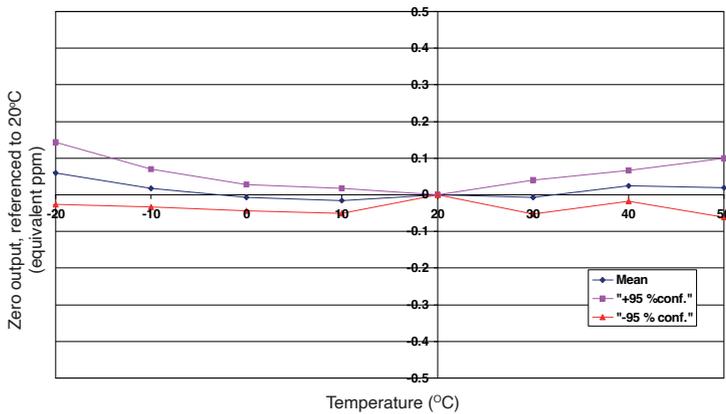


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent.

This data is taken from a typical batch of sensors.

The mean and \pm 95% confidence intervals are shown.

Figure 3 Sensitivity Long-term Stability

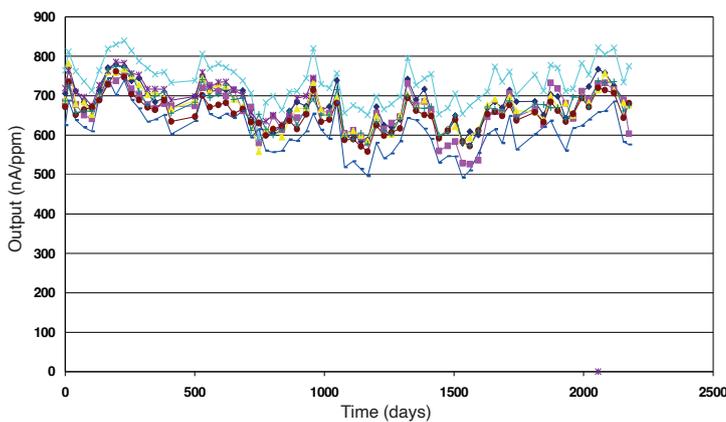


Figure 3 shows the excellent long-term stability of the H2S-A1, which results from the combination of a patented design, superior electrochemistry and good process control.

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, Alphasense or its distributor for disposal instructions. NOTE: all sensors are tested at ambient environmental conditions unless otherwise stated. As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.

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