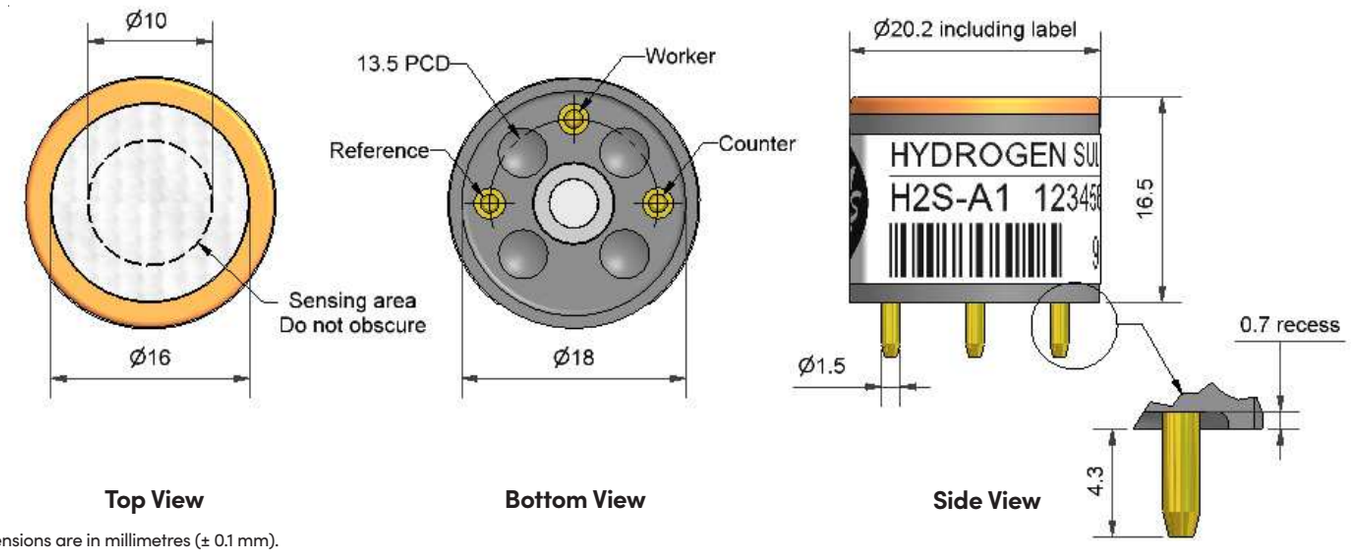
alphasense
AMETEK

H2S-A1 Hydrogen Sulfide Sensor



Top View **Bottom View** **Side View**

Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity	nA/ppm in 20ppm H_2S	550 to 900
	Response time	t90 (s) from zero to 20ppm H_2S	< 35
	Zero current	ppm equivalent in zero air	< ± 0.4
	Resolution	RMS noise (ppm equivalent)	< 0.05
	Range	ppm H_2S limit of performance warranty	100
	Linearity	ppm error at full scale, linear at zero and 20ppm H_2S	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_2H_4 sensitivity	% measured gas @ 400ppm	C_2H_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

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For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. or visit our website at "www.alphasense.com".

Figure 1 Sensitivity Temperature Dependence

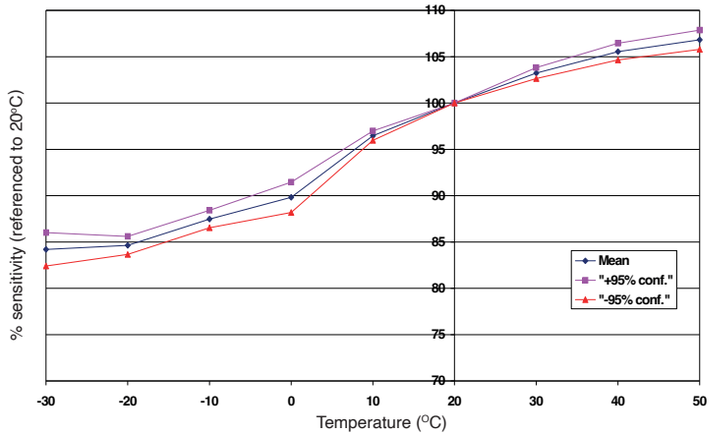

Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors. The mean and ± 95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

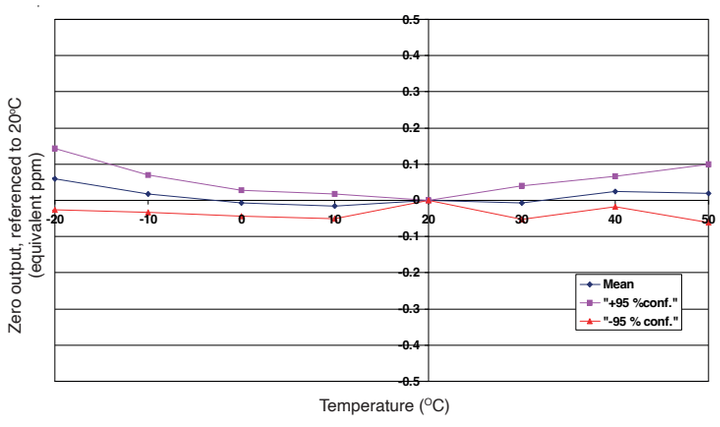

Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent.

This data is taken from a typical batch of sensors. The mean and ± 95% confidence intervals are shown.

Figure 3 Sensitivity Long-term Stability

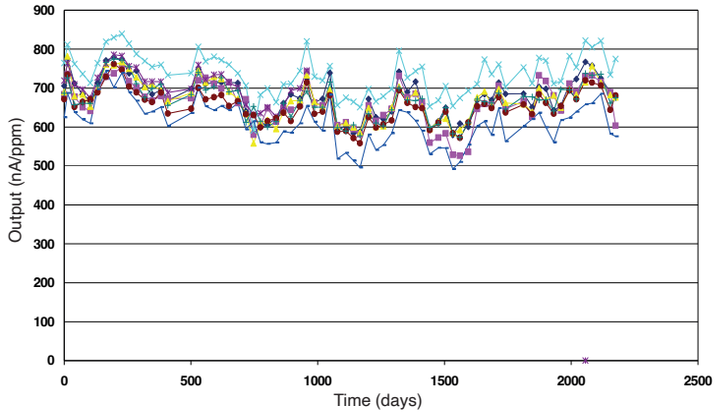

Figure 3 shows the excellent long-term stability of the H2S-A1, which results from the combination of a patented design, superior electrochemistry and good process control.