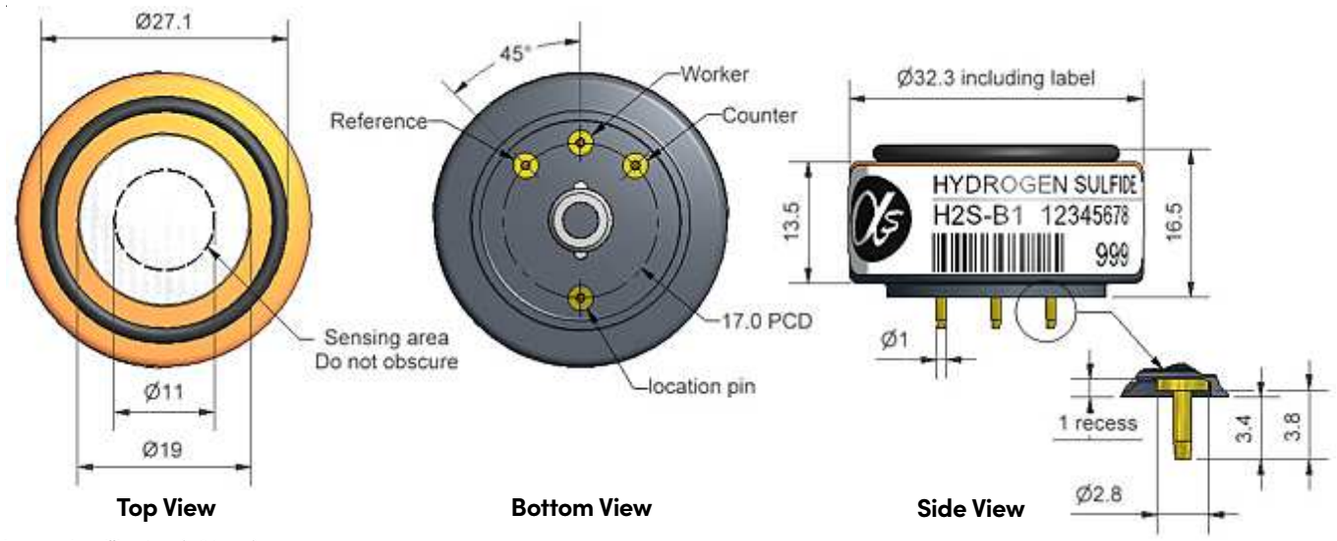
alphasense
AMETEK

Technical specifications Version 1.0

H2S-B1 Hydrogen Sulfide Sensor



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

Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity	nA/ppm in 20ppm H_2S		300 to 525
	Response time	t90 (s) from zero to 20ppm H_2S		< 55
	Zero current	ppm equivalent in zero air		± 0.8
	Resolution	RMS noise (ppm equivalent)		< 0.05
	Range	ppm H_2S limit of performance warranty		200
	Linearity	ppm error at full scale, linear at zero and 20ppm H_2S		1 to -5
	Overgas limit	maximum ppm for stable response to gas pulse		500
Lifetime	Zero drift	ppm equivalent change/year in lab air		< 0.05
	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 to 1.5
Cross Sensitivity	NO_2 sensitivity	% measured gas @ 10ppm	NO_2	< -30
	Cl_2 sensitivity	% measured gas @ 10ppm	Cl_2	< -25
	NO sensitivity	% measured gas @ 50ppm	NO	< 35
	SO_2 sensitivity	% measured gas @ 20ppm	SO_2	< 18
	CO sensitivity	% measured gas @ 400ppm	CO	< 3
	H_2 sensitivity	% measured gas @ 400ppm	H_2	< 0.5
	C_2H_4 sensitivity	% measured gas @ 400ppm	C_2H_4	< 0.5
	NH_3 sensitivity	% measured gas @ 400ppm	NH_3	< 0.1
	CO_2 sensitivity	% measured gas @ 5%	CO_2	< 0.1
Key Specifications	Temperature range	°C		-30 to 50
	Pressure range	kPa		80 to 120
	Humidity range	% rh		15 to 90
	Storage period	months @ 3 to 20°C (stored in sealed pot)		6
	Load resistor	Ω (recommended)		10 to 47
	Weight	g		< 13

T: +44 (0)1376 556700 **E:** sensors@alphasense.com **W:** www.alphasense.com

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

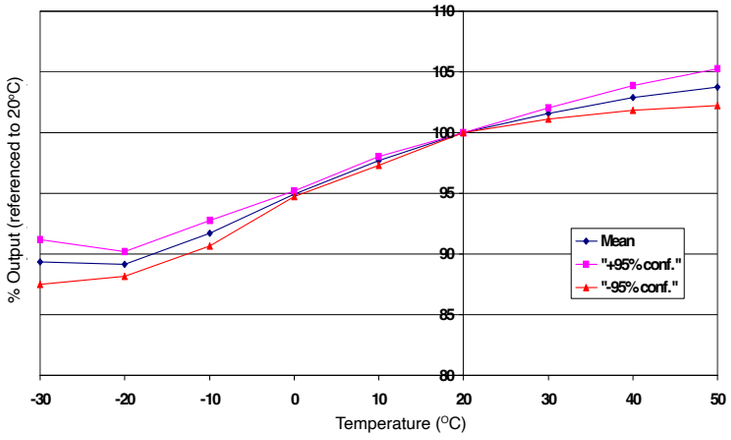


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

Figure 2 Zero Temperature Dependence

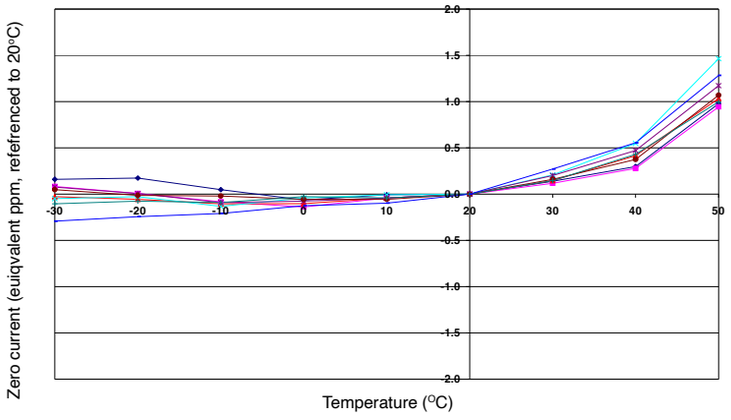
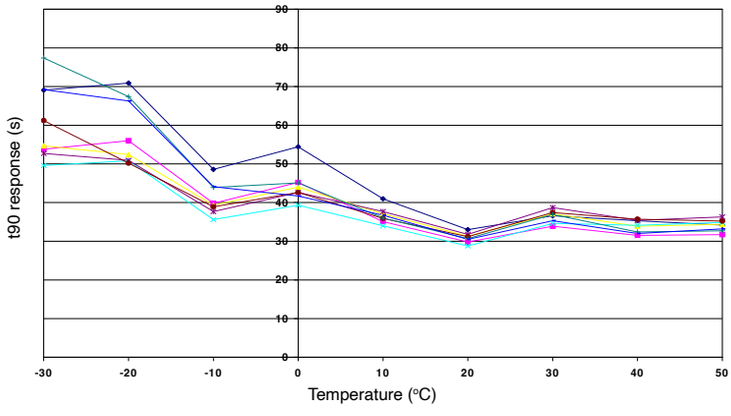


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Response Time Temperature Dependence



Electrochemical gas cells respond slower at lower temperatures.

Results are from a standard batch of sensors.