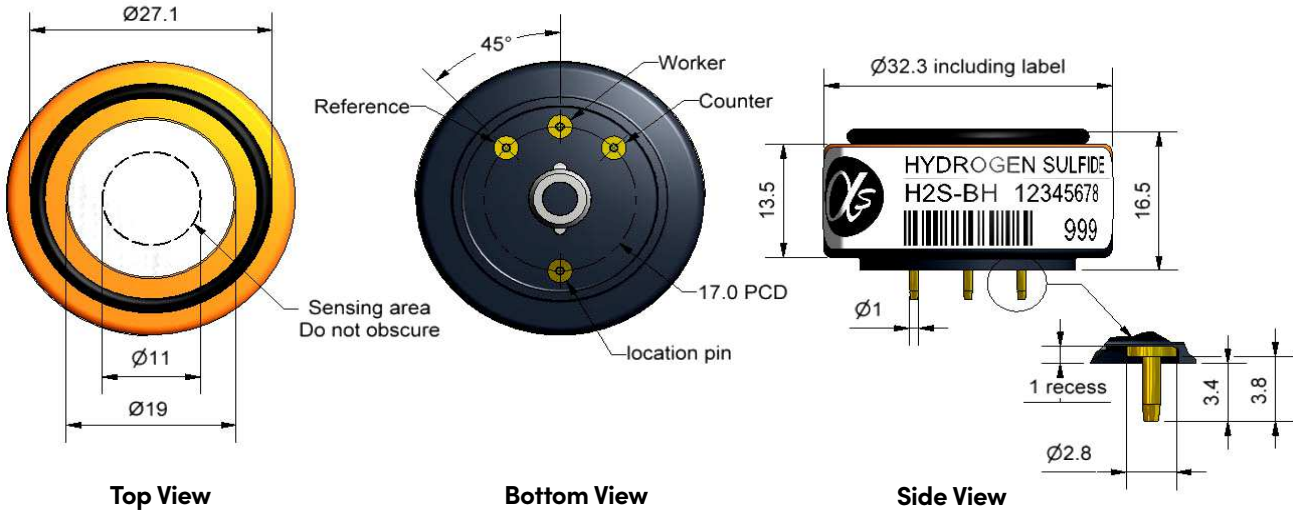


Technical specifications Version 1.0

H2S-BH Hydrogen Sulfide Sensor – High Sensitivity



Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity	nA/ppm in 20ppm H ₂ S1	1400 to 2200	
	Response time	t90 (s) from zero to 20ppm H ₂ S	< 55	
	Zero current	ppm equivalent in zero air	< ± 0.15	
	Resolution	RMS noise (ppm equivalent)	< 0.02	
	Range	ppm H ₂ S limit of performance warranty	50	
	Linearity	ppm error at full scale, linear at zero and 20ppm	-1 to -2	
	Overgas limit	H ₂ S maximum ppm for stable response to gas pulse	200	
Lifetime	Zero drift	ppm equivalent change/year in lab air	< 0.03	
	Sensitivity drift	% change/year in lab air, monthly test	< 1	
	Operating life	months until 80% original signal (24-month warranted)	> 24	
Environmental	Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C) @ 20ppm	80 to 93	
	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	< -20
	Cl ₂ sensitivity	% measured gas @ 10ppm	Cl ₂	< -25
	NO sensitivity	% measured gas @ 50ppm	NO	< 3
	SO ₂ sensitivity	% measured gas @ 20ppm	SO ₂	< 15
	CO sensitivity	% measured gas @ 400ppm	CO	< 1
	H ₂ sensitivity	% measured gas @ 400ppm	H ₂	< 0.25
	C ₂ H ₄ sensitivity	% measured gas @ 400ppm	C ₂ H ₄	< 0.15
	NH ₃ sensitivity	% measured gas @ 20ppm	NH ₃	< 0.1
Key Specifications	Temperature range	°C	-40 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	< 13	

Figure 1 Sensitivity Temperature Dependence

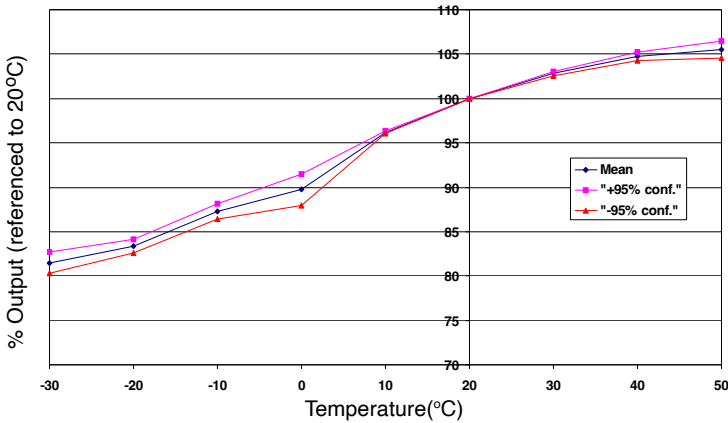


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

The mean and ±95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

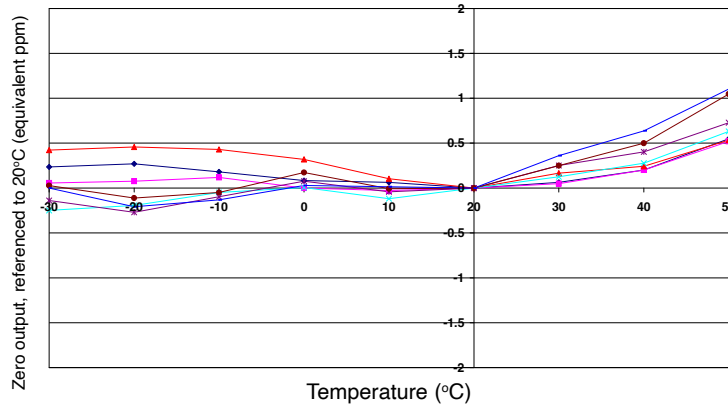


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Zero Long-term Stability

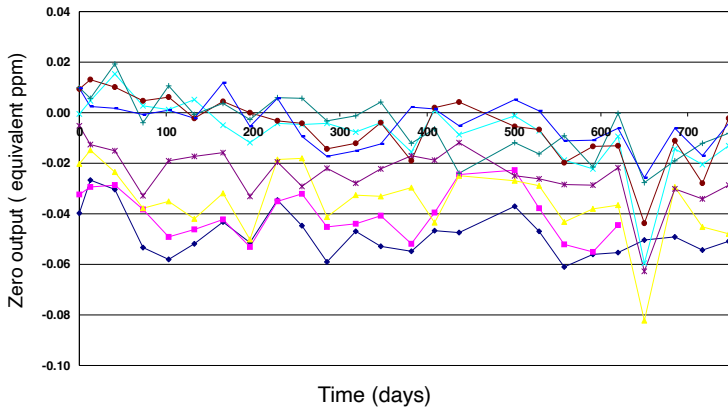


Figure 3 shows the excellent zero stability for the H₂S-BH over 2 years, ensuring that low-level alarms will remain stable.