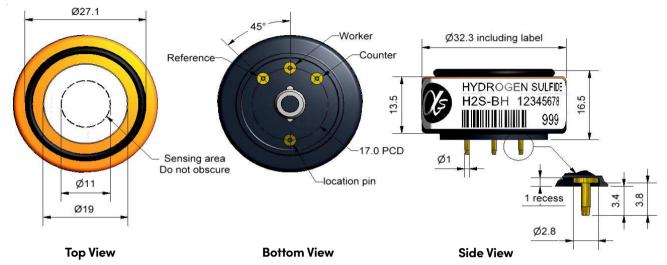




Clphasense

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 <sub>2</sub> S1	1400 to 2200
	Response time	t90 (s) from zero to 20ppm H <sub>2</sub> S	< 55
	Zero current	ppm equivalent in zero air	< ± 0.15
	Resolution	RMS noise (ppm equivalent)	< 0.02
	Range	ppm H <sub>2</sub> S limit of performance warranty	50
	Linearity	ppm error at full scale, linear at zero and 20ppm	-1 to -2
	Overgas limit	H <sub>2</sub> 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	NO2sensitivityCl2sensitivityNOsensitivitySO2sensitivityCOsensitivityH2sensitivityC2H4sensitivityNH3sensitivity	% measured gas (a) 10ppmNO2% measured gas (a) 10ppmCl2% measured gas (a) 50ppmNO% measured gas (a) 20ppmSO2% measured gas (a) 400ppmCO% measured gas (a) 400ppmH2% measured gas (a) 400ppmC2H4% measured gas (a) 20ppmNH3	< -20 < -25 < 3 < 15 < 1 < 0.25 < 0.15 < 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

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".





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## Figure 1 Sensitivity Temperature Dependence

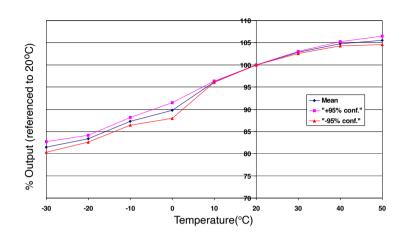


Figure 1 shows the variation in sensitivity caused by changes in temperature.

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



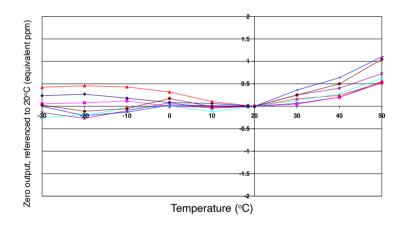


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

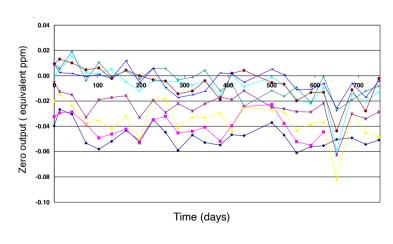


Figure 3 Zero Long-term Stability

Figure 3 shows the excellent zero stability for the  $H_2S$ -BH over 2 years, ensuring that low-level alarms will remain stable.

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.

In the interest of continued product improvement, we reserve the right to change design features and specifications without prior notification. The data contained in this document is for guidance only. Alphasense Ltd accepts no liability for any consequential losses, injury or damage resulting from the use of this document or the information contained within.(©ALPHASENSE LTD) Doc. Ref. H2S-BH/JUN22