



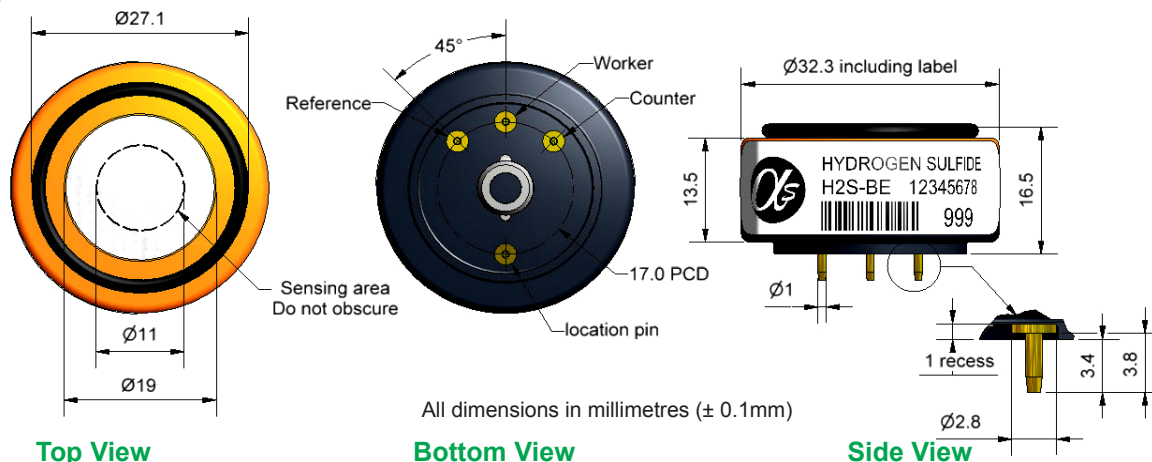
# H2S-BE Hydrogen Sulfide Sensor

## High Concentration



**Figure 1 H2S-BE Schematic Diagram**

**PATENTED**



**Technical Specification**

PERFORMANCE	Sensitivity		
	Sensitivity	nA/ppm in 200ppm H <sub>2</sub> S	80 to 115
Response time	t <sub>90</sub> (s) from zero to 200ppm H <sub>2</sub> S	< 50	
Zero current	ppm equivalent in zero air	< $\pm 3$	
Resolution	RMS noise (ppm equivalent)	< 0.5	
Range	ppm H <sub>2</sub> S limit of performance warranty	2,000	
Linearity	ppm error at 2000ppm, linear at zero and 400ppm H <sub>2</sub> S	< 30	
Overgas limit	maximum ppm for stable response to gas pulse	10,000	

LIFETIME	Zero drift		
	Zero drift	ppm equivalent change/year in lab air	< 0.25
	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) @ 200ppm	83 to 92	
Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 200ppm	102 to 112	
Zero @ -20°C	ppm equivalent change from 20°C	< $\pm 4$	
Zero @ 50°C	ppm equivalent change from 20°C	< $\pm 4$	

CROSS SENSITIVITY	NO <sub>2</sub> sensitivity		% measured gas @ 10ppm	NO <sub>2</sub>	< -25
	Cl <sub>2</sub> sensitivity		% measured gas @ 10ppm	Cl <sub>2</sub>	< -12
	NO sensitivity		% measured gas @ 50ppm	NO	< 10
	SO <sub>2</sub> sensitivity		% measured gas @ 20ppm	SO <sub>2</sub>	< 20
	CO sensitivity		% measured gas @ 400ppm	CO	< 4
	H <sub>2</sub> sensitivity		% measured gas @ 400ppm	H <sub>2</sub>	< 0.2
	C <sub>2</sub> H <sub>4</sub> sensitivity		% measured gas @ 400ppm	C <sub>2</sub> H <sub>4</sub>	< 0.25
	NH <sub>3</sub> sensitivity		% measured gas @ 20ppm	NH <sub>3</sub>	< 0.1

KEY SPECIFICATIONS	Temperature range °C		
	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	$\Omega$ (recommended)	10 to 47
Weight	g	< 13	



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.

**ApolloSense Ltd**



# H2S-BE Performance Data

Technical Specification

**Figure 2 Sensitivity Temperature Dependence**

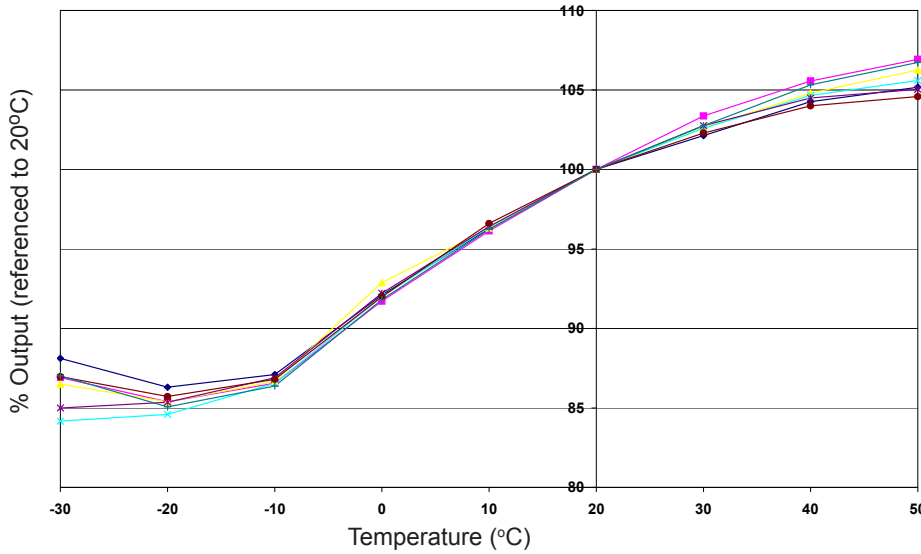


Figure 2 shows the variation in sensitivity caused by changes in temperature. This data is taken from a typical batch of sensors.

**Figure 3 Zero Temperature Dependence**

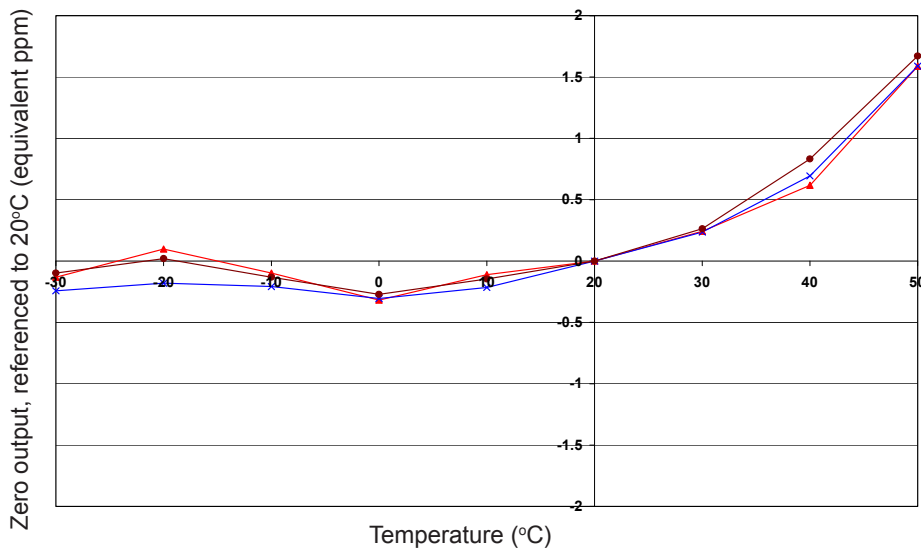
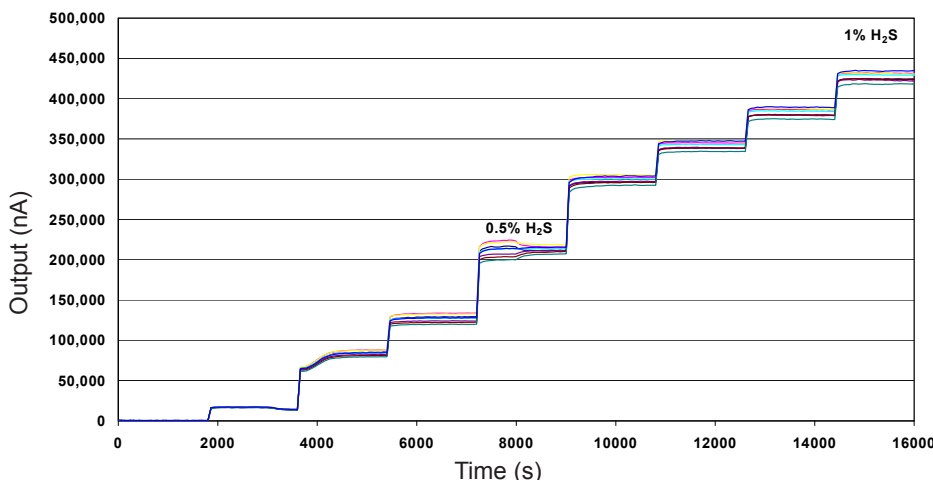


Figure 3 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C. This data is taken from a typical batch of sensors.

**Figure 4 Response to high concentrations**



This sensor is built to withstand periodic high concentrations of H<sub>2</sub>S and recover without changing performance.

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