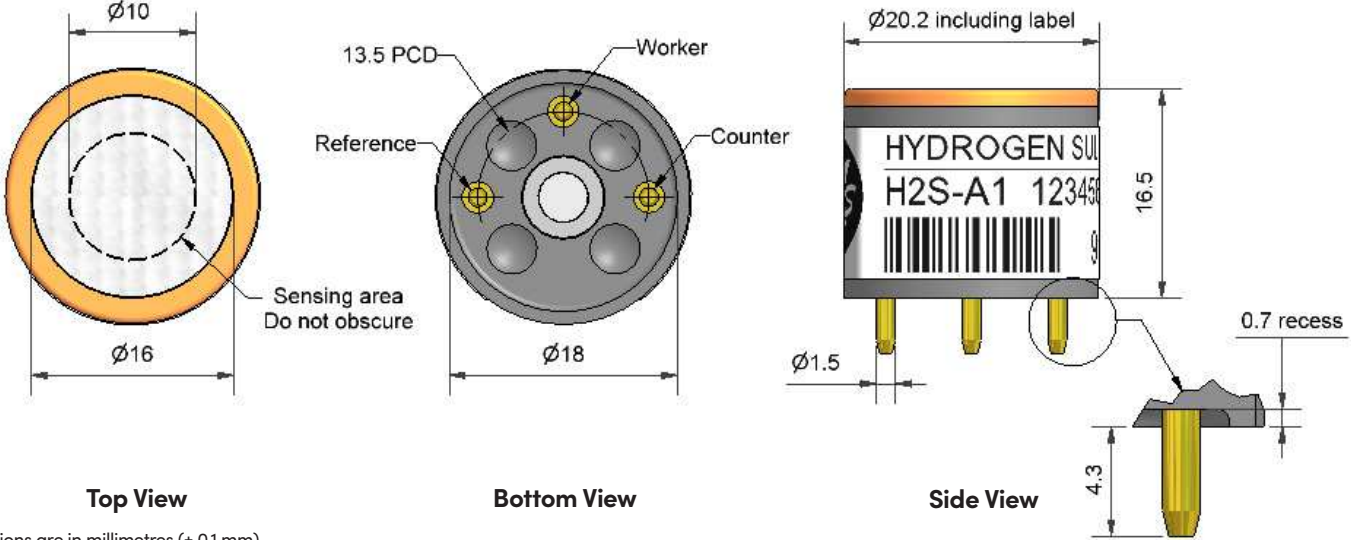


H2S-A1 Hydrogen Sulfide Sensor



Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity	nA/ppm in 20ppm H <sub>2</sub> S		550 to 900
	Response time	t90 (s) from zero to 20ppm H <sub>2</sub> S		< 35
	Zero current	ppm equivalent in zero air		< ± 0.4
	Resolution	RMS noise (ppm equivalent)		< 0.05
	Range	ppm H <sub>2</sub> S limit of performance warranty		100
	Linearity	ppm error at full scale, linear at zero and 20ppm H <sub>2</sub> S		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 <sub>2</sub> sensitivity	% measured gas @ 10ppm	NO <sub>2</sub>	< -20
	Cl <sub>2</sub> sensitivity	% measured gas @ 10ppm	Cl <sub>2</sub>	< -25
	NO sensitivity	% measured gas @ 50ppm	NO	< 4
	SO <sub>2</sub> sensitivity	% measured gas @ 20ppm	SO <sub>2</sub>	< 10
	CO sensitivity	% measured gas @ 400ppm	CO	< 6
	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>	< 0.5
	NH <sub>3</sub> sensitivity	% measured gas @ 20ppm	NH <sub>3</sub>	< 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	

Figure 1 Sensitivity Temperature Dependence

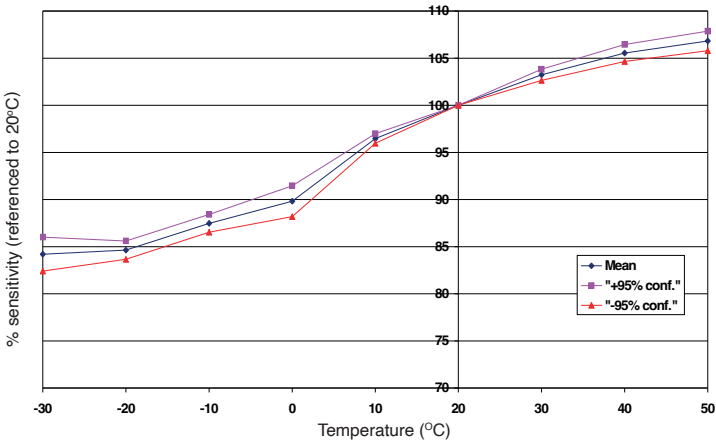


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

The mean and  $\pm$  95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

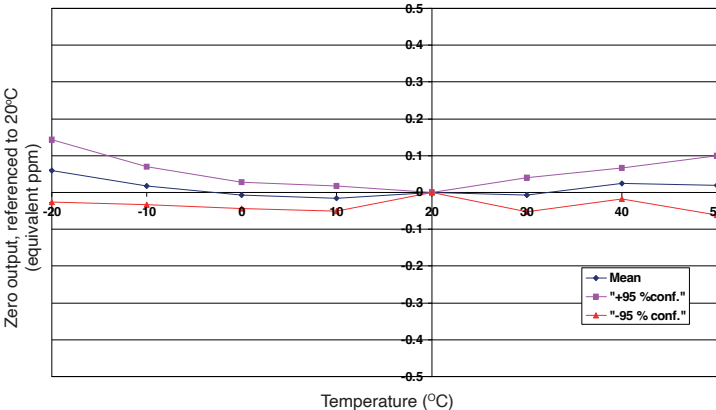


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent.

This data is taken from a typical batch of sensors.

The mean and  $\pm$  95% confidence intervals are shown.

Figure 3 Sensitivity Long-term Stability

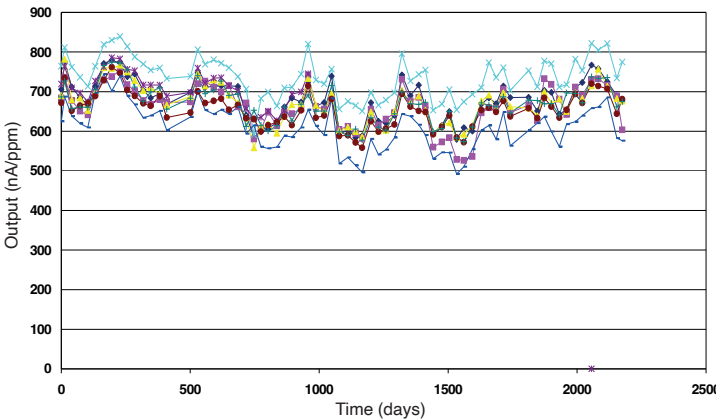


Figure 3 shows the excellent long-term stability of the H2S-A1, which results from the combination of a patented design, superior electrochemistry and good process control.