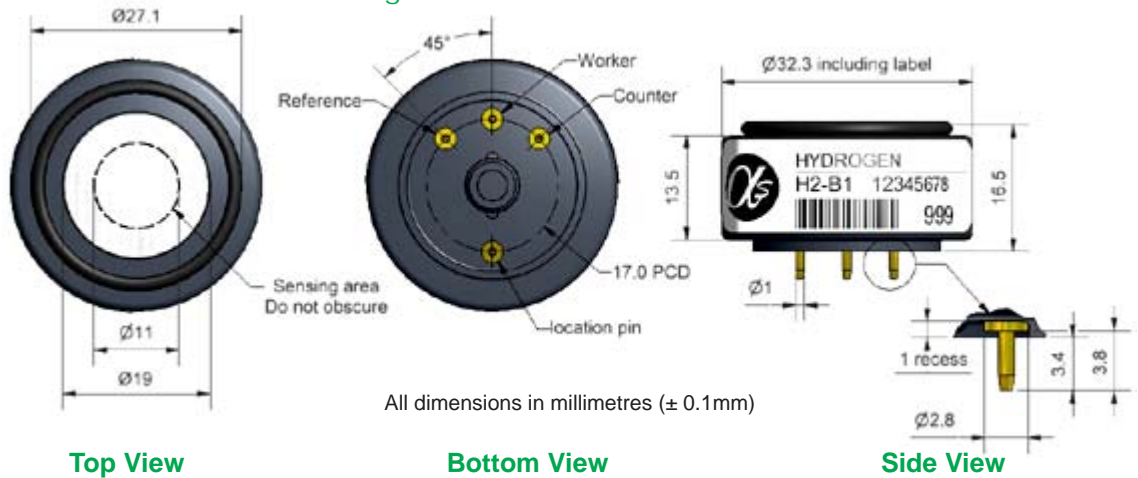


H2-B1 Hydrogen Sensor



Figure 1 H2-B1 Schematic Diagram

PATENTED



Technical Specification

PERFORMANCE	Sensitivity		nA/ppm in 1000ppm H ₂	4 to 10 nA/ppm
	Response time	t ₉₀ (s) from zero to 1000ppm H ₂		
Zero current	ppm equivalent in zero air			< ± 30
Resolution	RMS noise (ppm equivalent)			< 0.5
Range	ppm H ₂ limit of performance warranty			5000
Linearity	ppm error at full scale, linear at zero and 3500ppm H ₂			-200 to -500
Overgas limit	maximum ppm for stable response to gas pulse			20,000

LIFETIME	Zero drift	ppm equivalent change/year in lab air	<10
	Sensitivity drift	% change/year in lab air, monthly test	ND
	Operating life	months until 80% original signal (24 month warranted)	> 24

ENVIRONMENTAL	Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C) @ 10000 ppm H ₂	10 to 40
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 10000 ppm H ₂	110 to 160
	Zero @ -20°C	ppm equivalent change from 20°C	ND
	Zero @ 50°C	ppm equivalent change from 20°C	ND

CROSS SENSITIVITY	NO ₂ sensitivity	% measured gas @ 10ppm	NO ₂	ND
	Cl ₂ sensitivity	% measured gas @ 10ppm	Cl ₂	ND
	NO sensitivity	% measured gas @ 50ppm	NO	ND
	SO ₂ sensitivity	% measured gas @ 20ppm	SO ₂	ND
	CO sensitivity	% measured gas @ 1000ppm	CO	< 25
	H ₂ S sensitivity	% measured gas @ 400ppm	H ₂ S	ND
	C ₂ H ₄ sensitivity	% measured gas @ 400ppm	C ₂ H ₄	ND
	NH ₃ sensitivity	% measured gas @ 400ppm	NH ₃	ND
	CO ₂ sensitivity	% measured gas @ 5%	CO ₂	ND

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



NOTE: all sensors are tested at ambient environmental conditions, with 10 ohm load resistor, 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.

H2-B1 Performance Data

Technical Specification

Figure 2 Response to gas

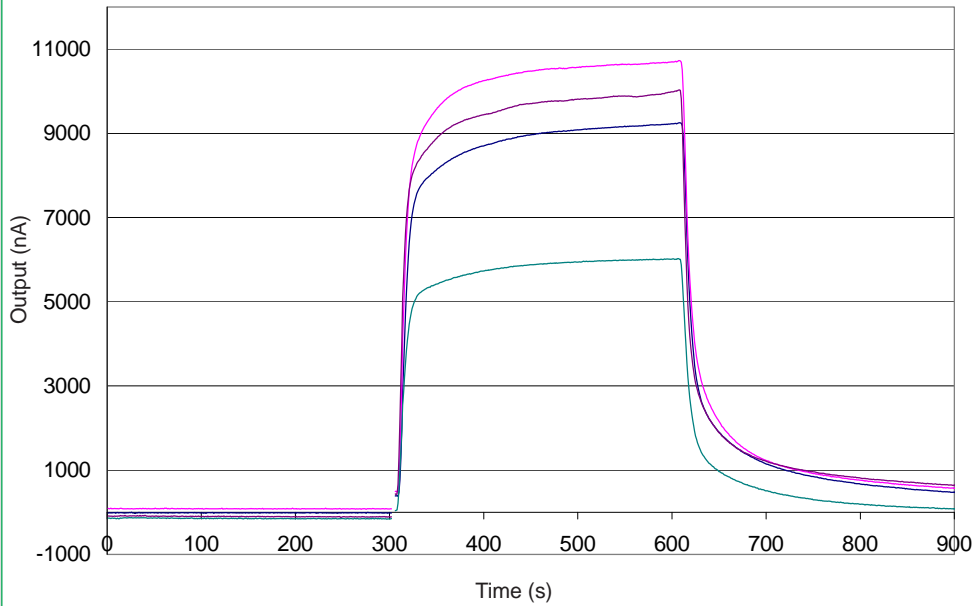


Figure 2 shows the typical response to 1000ppm H₂ at 20°C.

Figure 3 Linearity

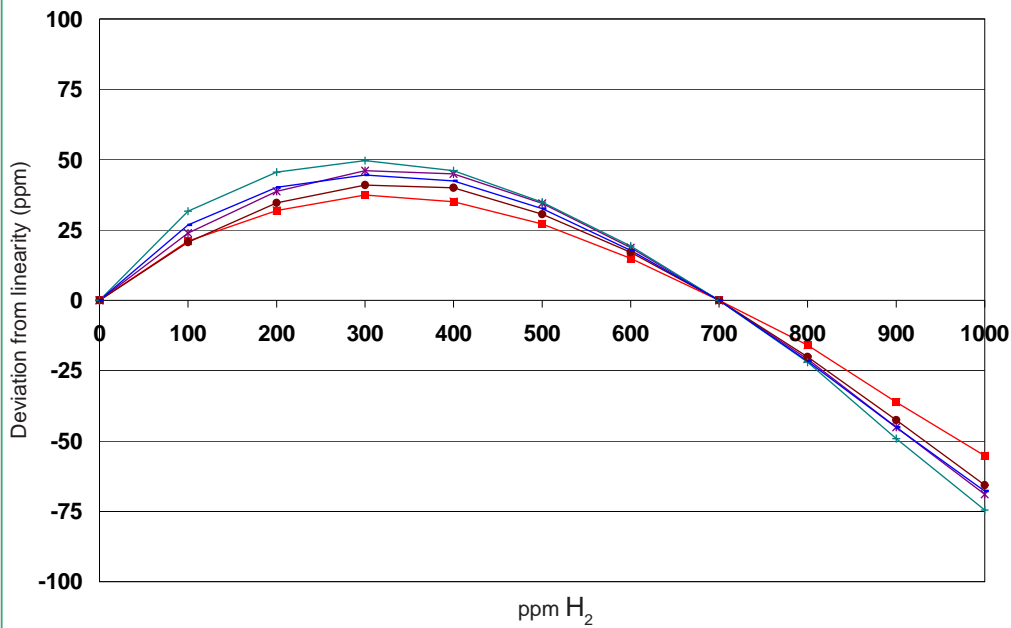


Figure 3 shows typical linearity for 0 to 1000ppm H₂, correct at 0 and 700ppm H₂.