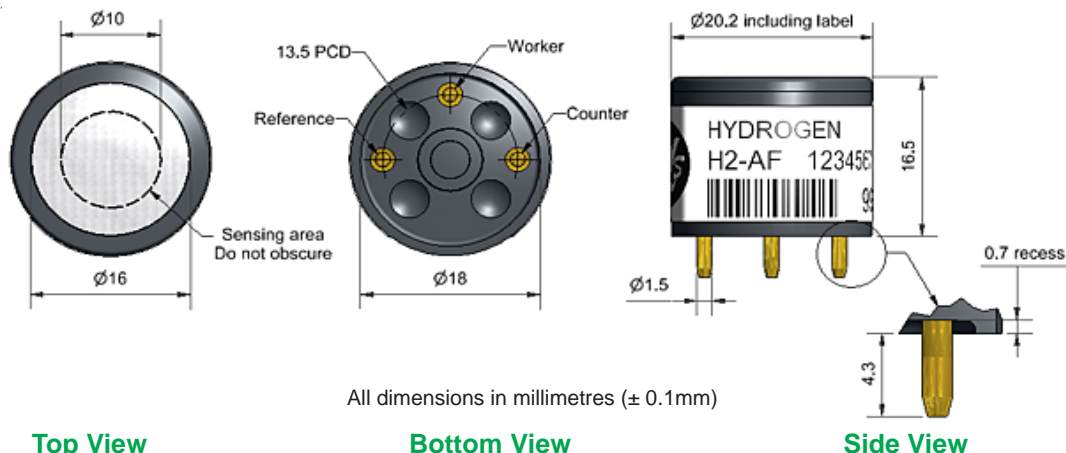




# H2-AF Hydrogen Sensor

Figure 1 H2-AF Schematic Diagram

PATENTED



Technical Specification

<b>PERFORMANCE</b>	Sensitivity	nA/ppm in 1000ppm H <sub>2</sub>	12 to 18
	Response time	t <sub>90</sub> (s) from zero to 1000ppm H <sub>2</sub>	<100
	Zero current	ppm equivalent in zero air	+10 to -50
	Resolution	RMS noise (ppm equivalent)	< 1
	Range	ppm H <sub>2</sub> limit of performance warranty	2,000
	Linearity	ppm error at full scale, linear at zero and 500ppm H <sub>2</sub>	-200 to -500
	Overgas limit	maximum ppm for stable response to gas pulse	5,000
<b>LIFETIME</b>	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
<b>ENVIRONMENTAL</b>	Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C) @ 10000 ppm H <sub>2</sub>	15 to 20
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 10000 ppm H <sub>2</sub>	190 to 220
	Zero @ -20°C	ppm equivalent change from 20°C	± 2
	Zero @ 50°C	ppm equivalent change from 20°C	0 to -4
<b>CROSS SENSITIVITY</b>	NO <sub>2</sub> sensitivity	% measured gas @ 10ppm	NO <sub>2</sub> ND
	Cl <sub>2</sub> sensitivity	% measured gas @ 10ppm	Cl <sub>2</sub> ND
	NO sensitivity	% measured gas @ 50ppm	NO ND
	SO <sub>2</sub> sensitivity	% measured gas @ 20ppm	SO <sub>2</sub> ND
	CO sensitivity	% measured gas @ 1000ppm	CO < 3
	H <sub>2</sub> S sensitivity	% measured gas @ 400ppm	H <sub>2</sub> S ND
	C <sub>2</sub> H <sub>4</sub> sensitivity	% measured gas @ 400ppm	C <sub>2</sub> H <sub>4</sub> < 25
	NH <sub>3</sub> sensitivity	% measured gas @ 400ppm	NH <sub>3</sub> ND
CO <sub>2</sub> sensitivity	% measured gas @ 5%	CO <sub>2</sub> ND	
<b>KEY SPECIFICATIONS</b>	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-AF Performance Data

Technical Specification

Figure 2 Sensitivity temperature dependence

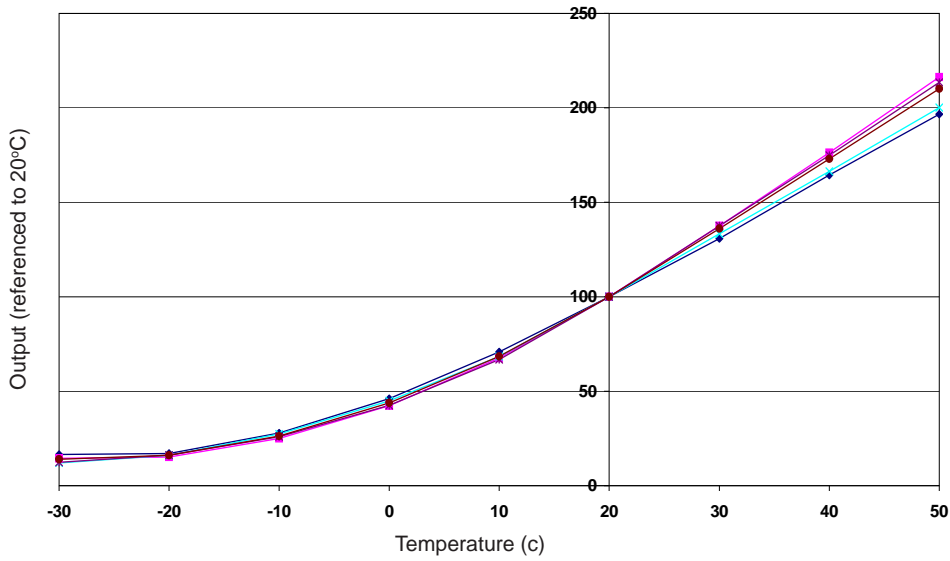


Figure 2 shows typical temperature dependence, measured at 1,000ppm H<sub>2</sub>.

Figure 3 Zero Current Temperature Dependence

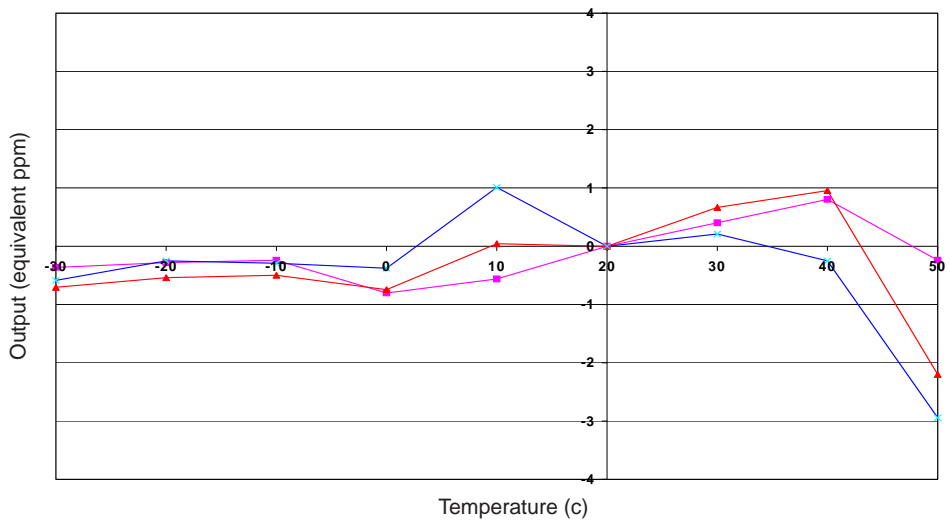


Figure 3 shows typical zero current from -30°C to +50°C, expressed as equivalent ppm deviation from the zero current at 20°C.

Figure 4

