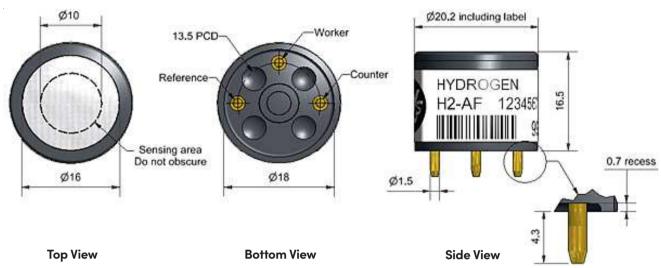


Technical specifications Version 1.0

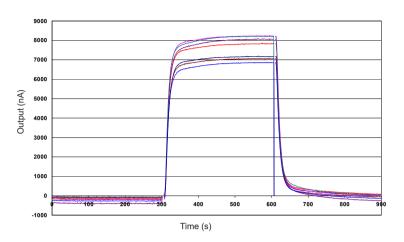
H2-AF Hydrogen Sensor



Dimensions are in millimetres (± 0.1 mm) unless otherwise stated.

Performance	Sensitivity Response time Zero current Resolution Range Linearity Overgas limit	nA/ppm in 400ppm H ₂ at 23°C t90 (s) from zero to 400ppm H ₂ ppm equivalent in zero air RMS noise (ppm equivalent) ppm H ₂ limit of performance warranty ppm error at full scale, linear at zero and 400ppm H ₂ maximum ppm for stable response to gas pulse		10 to 40 < 35 -25 to 15 < 0.7 2,000 -200 to -500 5,000
Lifetime	Zero drift Sensitivity drift Operating life	ppm equivalent change/year in lab air % change/year in lab air, monthly test months until 80% original signal (24-month warranted)		< 20 nd > 24
Environmental	Sensitivity @ -20°C Sensitivity @ 50°C Zero @ -20°C Zero @ 50°C	% (output @ -20°C/output @ 20°C) @ 500ppm H2 % (output @ 50°C/output @ 20°C) @ 500ppm H2 ppm equivalent change from 20°C ppm equivalent change from 20°C		10 to 25 220 to 275 ± 2 0 to -4
Cross Sensitivity	Filter capacity CO sensitivity NO ₂ sensitivity CI ₂ sensitivity NO sensitivity SO ₂ sensitivity H ₂ S sensitivity C ₂ H ₄ sensitivity NH ₃ sensitivity CO ₂ sensitivity	ppm hrs % measured gas @ 400ppm % measured gas @ 10ppm % measured gas @ 10ppm % measured gas @ 50ppm % measured gas @ 20ppm % measured gas @ 20ppm % measured gas @ 400ppm % measured gas @ 20ppm % measured gas @ 5%	H_2S CO NO_2 CI_2 NO SO_2 H_2S C_2H_4 NH_3 CO_2	nd < 2 < 1 < 1 < 40 < 4 < 2 < 25 < 1 < 1
Key Specifications	Temperature range Pressure range Humidity range Storage period Load resistor Weight	°C kPa % rh months @ 3 to 20°C (stored in sec Ω (recommended) g	aled pot)	-30 to 50 80 to 120 15 to 90 6 10 to 47 < 6

Figure 1 Response to 400ppm H,



This hydrogen sensor shows a strong, repeatable response to hydrogen, combined with low sensitivity to CO.

Figure 2 Sensitivity Temperature Dependence

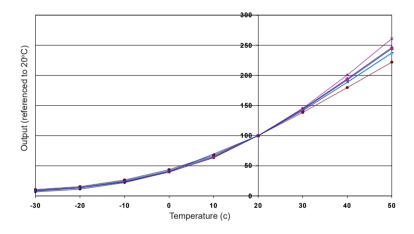


Figure 2 shows typical temperature dependence, measured at 1,000 ppm $\rm H_{2}$.

This strong temperature dependence is very repeatable, so accurate temperature measurement (±0.5°C) is needed.

Figure 3 Zero Current Temperature Dependence

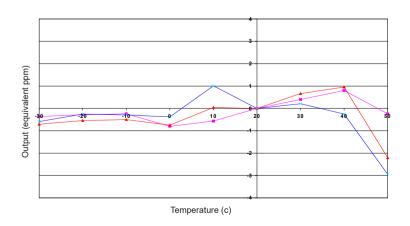


Figure 3 shows typical zero current from -30°C to +50°C, expressed as equivalent ppm deviation from the zero current at 20°C.

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. H2-AF/FEB23