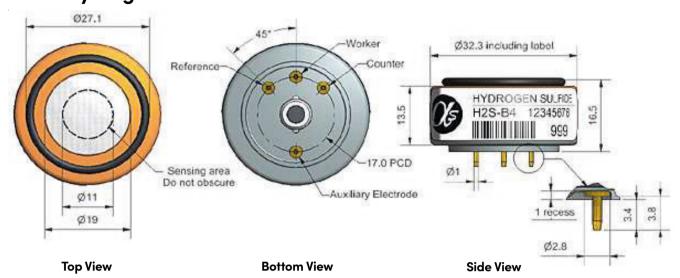
Technical specifications Version 1.0

H2S-B4 Hydrogen Sulfide Sensor – 4-Electrode



Dimensions are in millimetres (± 0.15 mm).

Performance	Sensitivity Response time Zero current Noise* Range Linearity Overgas limit *Tested with Alphasense	nA/ppm at 2ppm H ₂ S t90 (s) from zero to 2ppm H ₂ S nA in zero air at 20°C ±2 standard deviations (ppb equivalent) ppm H ₂ S limit of performance warranty ppb error at full scale, linear at zero and 40ppm H ₂ S maximum ppm for stable response to gas pulse e ISB low noise circuit	1450 to 2600 < 60 -250 to 200 1 100 < ± 4 200
Lifetime	Zero drift Sensitivity drift Operating life	ppm equivalent change/year in lab air % change/year in lab air, monthly test months until 50% original signal (24-month warranted)	< ± 100 < 20 > 24
Environmental	Sensitivity @ -20°C Sensitivity @ 50°C Zero @ -20°C Zero @ 50°C	% (output @ -20° C/output @ 20° C) @ 2ppm H $_2$ S % (output @ 50° C/output @ 20° C) @ 2ppm H $_2$ S nA change from 20° C nA change from 20° C	77 to 90 100 to 110 50 to 60 -120 to -160
Cross Sensitivity	NO_2 sensitivity CI_2 sensitivity NO sensitivity SO_2 sensitivity CO sensitivity	% measured gas @ 5ppm NO2 % measured gas @ 5ppm CI2 % measured gas @ 5ppm NO % measured gas @ 5ppm SO2 % measured gas @ 5ppm CO % measured gas @ 100ppm H2 % measured gas @ 100ppm C2H4 % measured gas @ 20ppm NH3 % measured gas @ 20ppm NH3 % measured gas @ 5% CO2	< -10 < -12 < 12 < 20 < 3 < 0.5 < 0.1 < 0.1
Key Specifications	Temperature range Pressure range Humidity range Storage period Load resistor Weight	°C kPa % rh continuous months @ 3 to 20°C (stored in sealed pot) Ω (ISB circuit is recommended) g	-30 to 50 80 to 120 15 to 90 6 33 to 100 < 13



Figure 1 Sensitivity Temperature Dependence

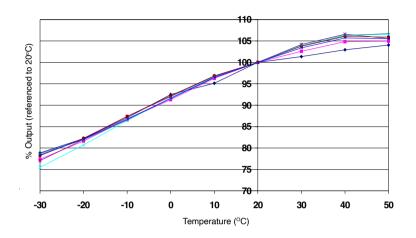


Figure 1 shows the temperature dependence of sensitivity at 2ppm H₂S.

This data is taken from a typical batch of sensors.

Figure 2 Zero Temperature Dependence

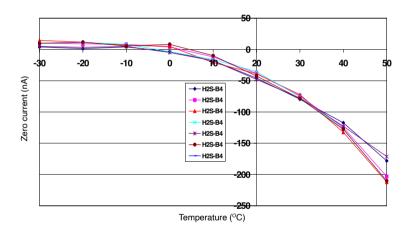


Figure 2 shows the variation in zero output of the working electrode caused by changes in temperature, expressed as nA.

This data is taken from a typical batch of sensors. Contact Alphasense for futher information on zero current correction.

Figure 3 Linearity to 200 ppb H₃S

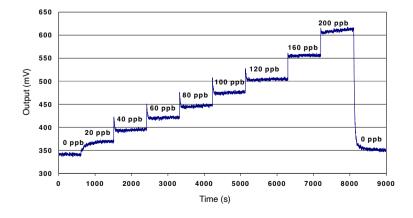


Figure 3 shows response to 200ppb H₂S.

Use of Alphasense ISB circuit reduces noise to 1ppb, with the opportunity of digital smoothing to reduce noise even further.

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. H2S-A4/OCT22