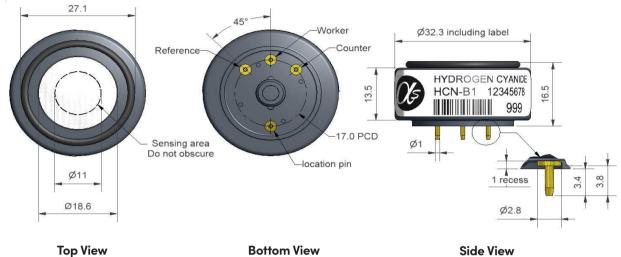






Technical specifications Version 1.0

HCN-B1 Hydrogen Cyanide Sensor



Top View

Dimensions are in m	illimetres (± 0.1 mm).
---------------------	------------------------

Performance	Sensitivity	nA/ppm in 30ppm HCN		65 to 140
	Response time	t90 (s) from zero to 30ppm HCN		< 120
	Zero current	ppm equivalent in zero air		< -2.5 to 10
	Resolution	RMS noise (ppm equivalent)		< 0.05
	Range	ppm HCN limit of performance warranty		100
	Linearity	ppm error at full scale, linear at zero, 40ppm HCN		0 to 4
	Overgas limit	maximum ppm for stable response to gas pulse		200
Lifetime	Zero drift	ppm equivalent change/year in lab air		nd
	Sensitivity drift	% change/year in lab air, monthly test		nd
	Operating life	months until 80% original signal (12-month warranted)		> 12
Environmental	Sensitivity @ -10°C	% (output @ -10°C/output @ 20°C) @ 30ppm HCN		75 to 95
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 30ppm HCN		100 to 115
	Zero @ -20°C	ppm equivalent change from 20°C		< 0 to -2
	Zero @ 50°C	ppm equivalent change from 20°C		< 0 to 2
Cross-sensitivity	$\begin{array}{llllllllllllllllllllllllllllllllllll$	% measured gas @ 20ppm % measured gas @ 10ppm % measured gas @ 10ppm % measured gas @ 50ppm % measured gas @ 20ppm % measured gas @ 400ppm % measured gas @ 400ppm % measured gas @ 80ppm % measured gas @ 20ppm % measured gas @ 5% volume	H_2S NO_2 CI_2 NO SO_2 CO H_2 C_2H_4 NH_3 CO_2	< 400 < -120 < 25 < 1 < 3 (transient) < 0.1 < 0.1 < 0.1 < 2 < 0.1
Key Specifications	Temperature range Pressure range Humidity range Storage period Load resistor Bias voltage Weight	°C kPa % rh continuous months @ 3 to 20°C (stored in origi Ω (recommended) mV g	nal container)	-30 to 50 80 to 120 15 to 90 6 10 to 33 not required < 6

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. or visit our website at "www.alphasense.com".







Technical specifications Version 1.0

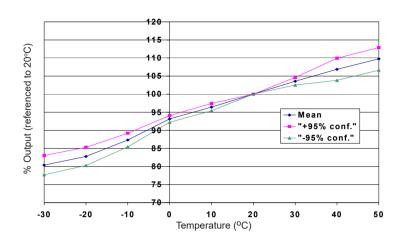


Figure 1 Sensitivity Temperature Dependence

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 ±95% confidence intervals are shown.



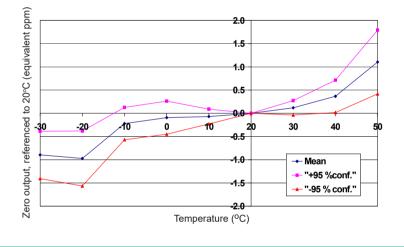
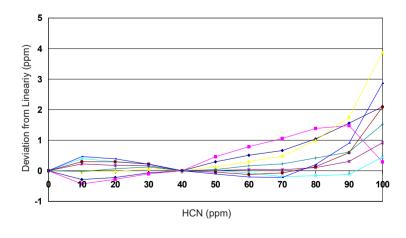


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors. The mean and $\pm 95\%$ confidence intervals are shown.





The HCN-B1 shows linear performance to 100ppm HCN.

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. HCN-B1/SEP22

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. or visit our website at "www.alphasense.com".