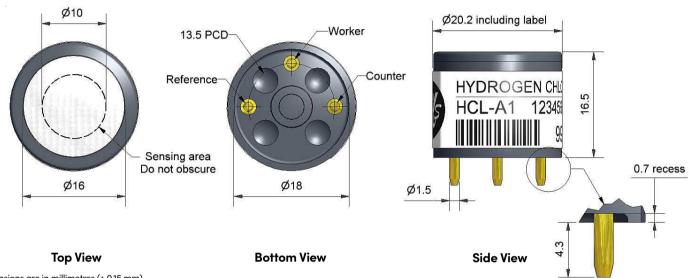
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Technical specifications Version 1.0

AMETEK®

HCL-A1 Hydrogen Chloride Sensor



Dimensions are in millimetres (± 0.15 mm).

Performance	Sensitivity Response time Zero current Resolution Range Linearity Overgas limit	nA/ppm in 25ppm HCl t90 (s) from zero to 25ppm HCl ppm equivalent in zero air RMS noise (ppm equivalent) ppm HCl limit of performance warranty ppm error at full scale, linear at zero, 40ppm HCl maximum ppm for stable response to gas pulse		50 to 140 < 300 < -3 to 10 < 1 100 0 to 6 200
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 (12-month warranted)		nd nd nd
Environmental	Sensitivity @ -20°C Sensitivity @ 50°C Zero @ -20°C Zero @ 50°C	% (output @ -20°C/output @ 20°C) @ 25ppm HCI % (output @ 50°C/output @ 20°C) @ 25ppm HCI ppm equivalent change from 20°C ppm equivalent change from 20°C		65 to 90 102 to 120 < 0 to 4 < +1 to -5
Cross Sensitivity	H ₂ S sensitivity NO ₂ sensitivity Cl ₂ sensitivity NO sensitivity SO ₂ sensitivity CO sensitivity H ₂ sensitivity C ₂ H ₄ sensitivity NH ₃ sensitivity CO ₂ sensitivity	% measured gas @ 20ppm % measured gas @ 50ppm % measured gas @ 10ppm % measured gas @ 50ppm % measured gas @ 20ppm % measured gas @ 400ppm % measured gas @ 400ppm % measured gas @ 400ppm % measured gas @ 20ppm % measured gas @ 20ppm % measured gas @ 20ppm % measured gas @ 5%	H_2S NO_2 CI_2 NO SO_2 CO H_2 C_2H_4 NH_3 CO_2	< 250 < -150 < -20 < 2 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 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 original container) Ω (recommended) mV g		-30 to +50 80 to 120 15 to 90 6 10 to 33 not required < 6

Figure 1 Response to 25ppm HCl

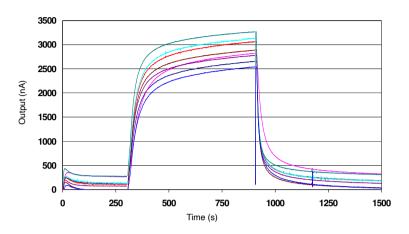


Figure 1 shows the typical response to 25ppm HCl at 20°C.

Figure 2 Sensitivity Temperature Dependence

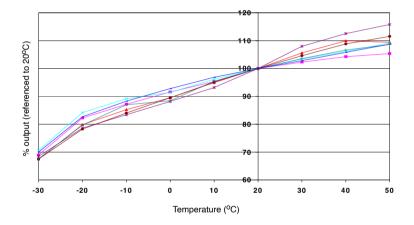


Figure 2 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

Figure 3 Humidity Transient Response

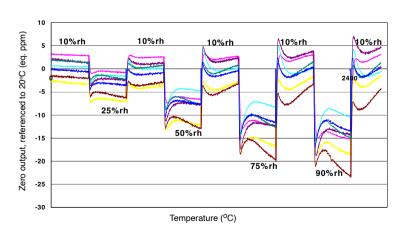


Figure 3 shows transient performance as sensors are subjected to step humidity changes from 10% to 90% rh.

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. HCL-A1/SEP22