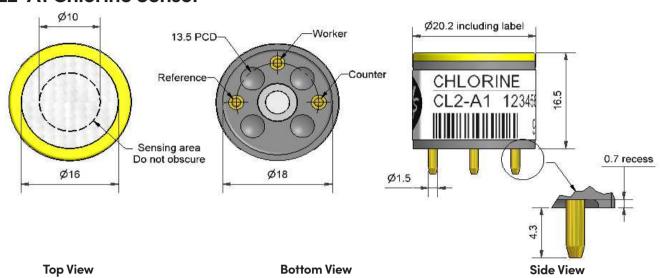


Technical specifications Version 1.0

CL2-A1 Chlorine Sensor



Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity Response time Zero current Resolution Range Linearity Overgas limit	nA/ppm in 10ppm Cl_2 '90 (s) from zero to 10ppm Cl_2 (33 Ω load resistor) ppm equivalent in zero air RMS noise (ppm equivalent, 33 Ω load resistor) ppm limit of performance warranty ppm error at full scale, linear at zero and 5ppm Cl_2 maximum ppm for stable response to gas pulse	-350 to -750 < 60 ± 0.4 < 0.02 20 ± 1.5
Lifetime	Zero drift Sensitivity drift Operating life	ppm equivalent change/year in lab air, monthly test % change/year in lab air, monthly test months until 80% original signal (24-month warranted	< 0.05 < 10) > 24
Environmental	Sensitivity @ -20°C Sensitivity @ 50°C Zero @ -20°C Zero @ 50°C	% (output @ -20°C/output @ 20°C) @ 10ppm Cl ₂ % (output @ 50°C/output @ 20°C) @ 10ppm Cl ₂ ppm equivalent change from 20°C ppm equivalent change from 20°C	65 to 85 105 to 125 <± 0.2 < 0 to -0.8
Cross Sensitivity	H_2S sensitivity NO_2 sensitivity NO sensitivity SO_2 sensitivity CO sensitivity H_2 sensitivity C_2H_4 sensitivity	% measured gas @ 20ppm	< -300 100 < 3 < -8 < 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 (for optimum performance) g	-20 to 50 80 to 120 15 to 90 6 33 < 6

Figure 1 Sensitivity Temperature Dependence

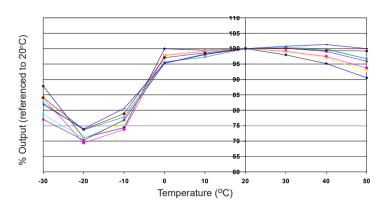


Figure 1 shows the variation in sensitivity caused by changes in temperature.

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

Chlorine gas tests are difficult, especially at higher temperatures.

Figure 2 Zero Temperature Dependence

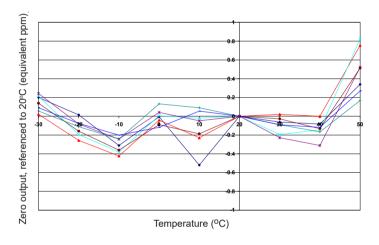


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Response to 10ppm Cl₂ changes with temperature

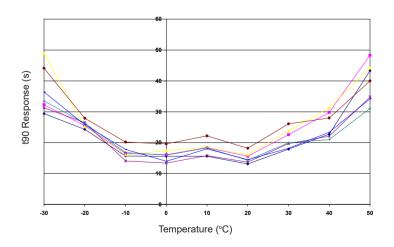


Figure 3 shows the response time temperature dependence for a typical batch of sensors.

Normally the response time increases as the temperature decreases, but for chlorine it also increases at higher temperatures, reflecting the complex chemistry.

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.

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