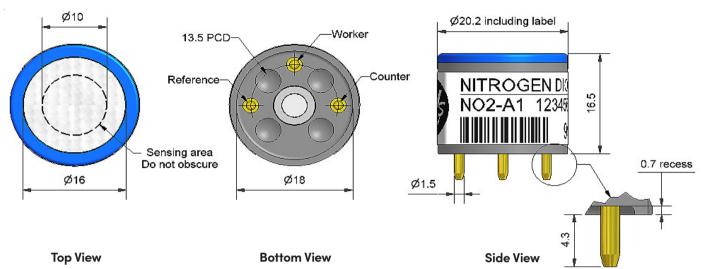
Technical specifications Version 1.0

NO2-A1 Nitrogen Dioxide Sensor



Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity Response time Zero current Resolution Range Linearity Overgas limit	nA/ppm in 10ppm NO_2 t90 (s) from zero to 10ppm NO_2 (33 Ω Load Resistor) ppm equivalent in zero air RMS noise (ppm equivalent) (33 Ω Load Resistor) ppm NO_2 limit of performance warranty ppm error at full scale, linear at zero and 10ppm NO_2 maximum ppm for stable response to gas pulse		-250 to -650 < 50 < ± 0.4 < 0.02 20 < 1.5
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)		< 0.05 < -20 to -40 > 24
Environmental	Sensitivity @ -20°C Sensitivity @ 50°C Zero @ -20°C Zero @ 50°C	% (output @ -20°C/output @ 20°C) @ 5ppm NO ₂ % (output @ 50°C/output @ 20°C) @ 5ppm NO ₂ ppm equivalent change from 20°C ppm equivalent change from 20°C		73 to 94 105 to 125 < ± 0.2 < 0 to -0.5
Cross-sensitivity	H_2S sensitivity CI_2 sensitivity NO sensitivity SO_2 sensitivity CO sensitivity CO sensitivity C_2H_4 sensitivity CO_2H_4 sensitivity CO_2 sensitivity CO_2 sensitivity CO_3 sensitivity	% measured gas @ 20ppm % measured gas @ 10ppm % measured gas @ 50ppm % measured gas @ 20ppm % measured gas @ 400ppm % measured gas @ 400ppm % measured gas @ 50ppm % measured gas @ 50ppm % measured gas @ 20ppm % measured gas @ 5% volume % measured gas @ 200ppb	H_2S CI_2 NO SO_2 CO H_2 C_2H_4 NH_3 CO_2 O_3	< -35 < 80 < 5 < -15 < 0.1 < 0.1 < 0.1 < 0.1 < 120
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

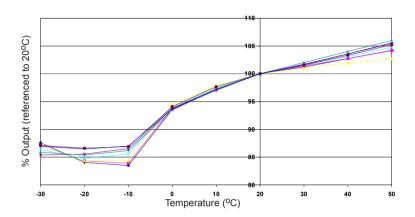


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

Figure 2 Zero Temperature Dependence

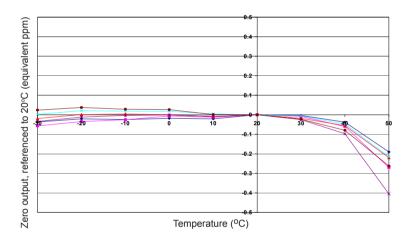


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Humidity plus Temperature Transient Response

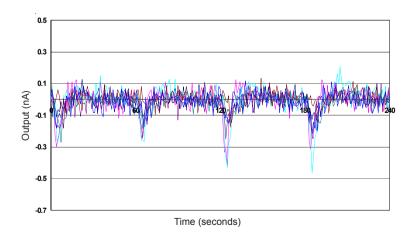


Figure 3 shows typical sensor outputs for a group of sensors exposed to exhaled breath for 4 cycles over 240 seconds.

This is an extreme test for such sensors and the shift in the base line of no more than 0.5 ppm shows a very strong resistance to this test.

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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