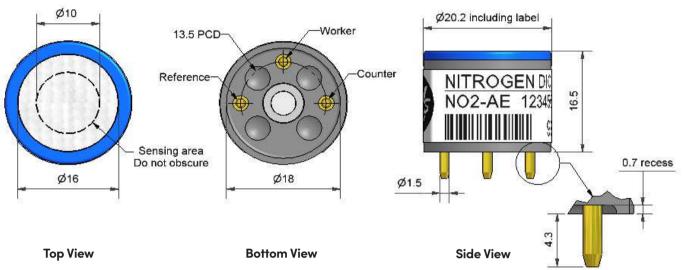
NO2-AE Nitrogen Dioxide Sensor



Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity Response time Zero current Resolution Range Linearity Overgas limit	nA/ppm @ 20°C in 10ppm NO $_2$ (33 Ω Load Resistor) t90 (s) from zero to 10ppm NO $_2$ (33 Ω Load Resistor) ppm equivalent in zero air RMS noise (ppm equivalent) (33 Ω) ppm limit of performance warranty ppm error at 200ppm, linear at 30 and 100ppm NO $_2$ maximum ppm for stable response to 10 minute gas pulse		-70 to -170 < 40 < ± 1.5 < 0.1 200 < 2 to 11 > 1,000
Lifetime	Zero drift Sensitivity drift Operating life	ppm equivalent change/year in lab air % change/month in lab air, twice monthly gassing months until 80% original signal (24 month warranted)		nd < 2 > 24
Environmental	Sensitivity @ -20°C Sensitivity @ 50°C Zero @ -20°C Zero @ 50°C	% (output @ -20°C/output @ 20°C) @ 10ppm NO ₂ % (output @ 50°C/output @ 20°C) @ 10ppm NO ₂ ppm equivalent ppm equivalent		75 to 95 98 to 110 < ± 0.5 < 0 to -5
Cross-sensitivity	CO sensitivity NO sensitivity SO ₂ sensitivity Cl ₂ sensitivity H ₂ sensitivity H ₂ S sensitivity C ₂ H ₄ sensitivity NH ₃ sensitivity CO ₂ sensitivity O ₃ sensitivity	% measured gas @ 400ppm % measured gas @ 50ppm % measured gas @ 20ppm % measured gas @ 400ppm % measured gas @ 200ppm % measured gas @ 400ppm % measured gas @ 400ppm % measured gas @ 20ppm % measured gas @ 20ppm % measured gas @ 100ppb	CO NO SO ₂ CI ₂ H ₂ H ₂ S C ₂ H ₄ NH ₃ CO ₂	< 3.5 < 2 < -30 < 90 < -0.8 < -220 < 0.1 < -1 < 0 < 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

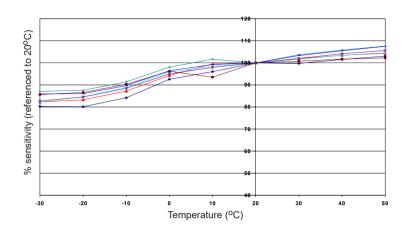


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

Figure 2 Zero Temperature Dependence

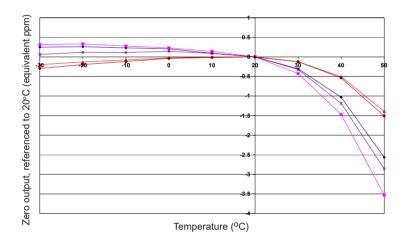


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Linearity to 200ppm NO,

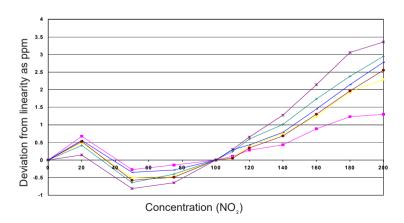


Figure 3 shows excellent and repeatable linearity to 200ppm ${\rm NO_2}$ which allows this sensor to be used at high concentrations.

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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