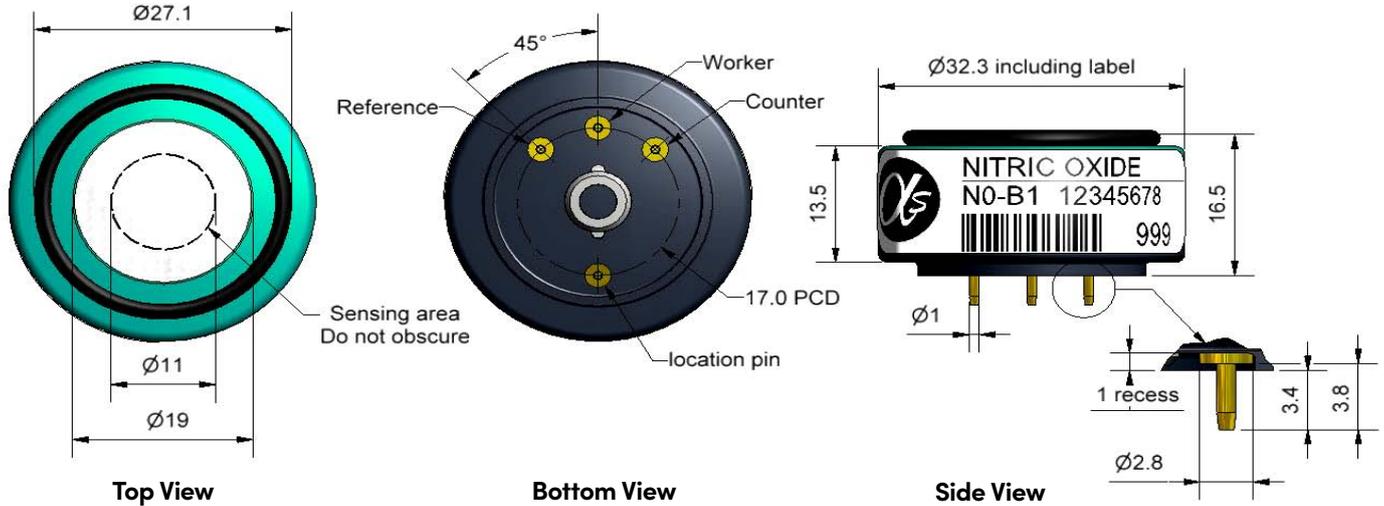




NO-B1 Nitric Oxide Sensor


 Dimensions are in millimetres (± 0.1 mm).

Performance			
Sensitivity	nA/ppm in 50ppm NO		400 to 620
Response time	t90 (s) from zero to 50ppm NO		< 30
Zero current	ppm equivalent in zero air		0 to +4
Resolution	RMS noise (ppm equivalent)		< 0.15
Range	ppm NO limit of performance warranty		250
Linearity	ppm error at full scale, linear at zero and 50ppm NO		-20 to -25
Overgas limit	maximum ppm for stable response to gas pulse		1,200

Lifetime			
Zero drift	ppm equivalent change/year in lab air		< 0.3
Sensitivity drift	% change/year in lab air, monthly test		< 5
Operating life	months until 80% original signal (24-month warranted)		> 24

Environmental			
Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C) @ 50ppm NO		89 to 98
Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 50ppm NO		97 to 104
Zero @ -20°C	ppm equivalent change from 20°C		< 0 to -2
Zero @ 50°C	ppm equivalent change from 20°C		< 6 to 20

Cross Sensitivity				
H ₂ S sensitivity	% measured gas @ 20ppm	H ₂ S		< 60
NO ₂ sensitivity	% measured gas @ 10ppm	NO ₂		< 5
Cl ₂ sensitivity	% measured gas @ 10ppm	Cl ₂		< 5
SO ₂ sensitivity	% measured gas @ 20ppm	SO ₂		< 4
H ₂ sensitivity	% measured gas @ 400ppm	H ₂		< 0.1
CO sensitivity	% measured gas @ 400ppm	CO		< 0.1
NH ₃ sensitivity	% measured gas @ 20ppm	NH ₃		< 0.1
CO ₂ sensitivity	% measured gas @ 5% volume	CO ₂		< 0.1

Key Specifications			
Bias voltage	mV (working electrode potential is above ground)		+300
Temperature range	°C		-30 to 50
Pressure range	kPa		80 to 120
Humidity range	% rh continuous		15 to 90
Storage period	months @ 3 to 20°C (stored in sealed pot)		6
Load resistor	Ω (recommended)		10 to 47
Weight	g		< 13



Figure 1 Sensitivity Temperature Dependence

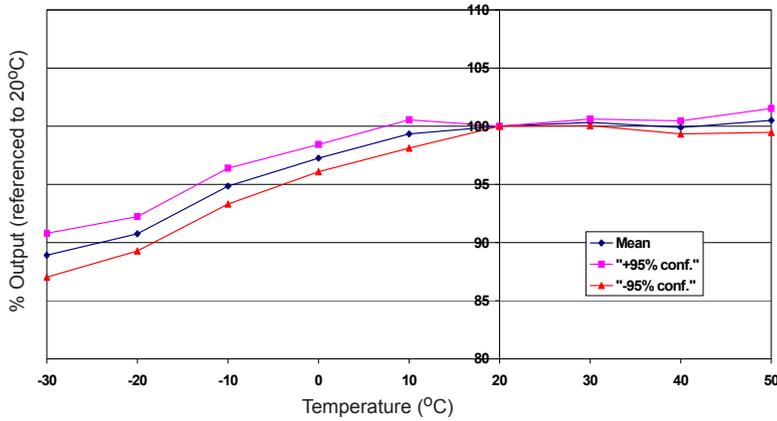


Figure 1 shows the variation in sensitivity caused by changes in temperature.

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

Figure 2 Zero Temperature Dependence

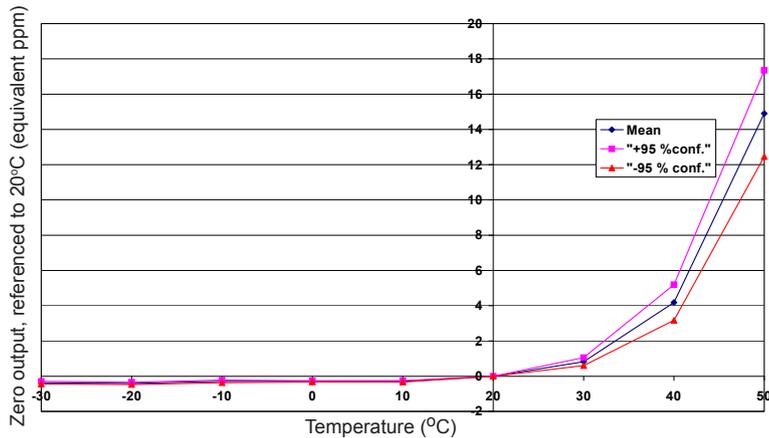
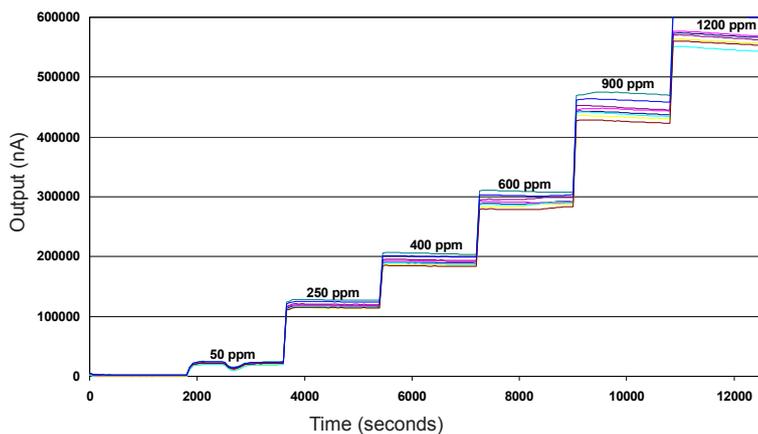


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

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

Figure 3 NO-B1 Response to 1,200ppm NO



The NO-B1 responds rapidly to gas concentrations up to 1,200ppm NO.

This data is taken from a typical batch of sensors.

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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