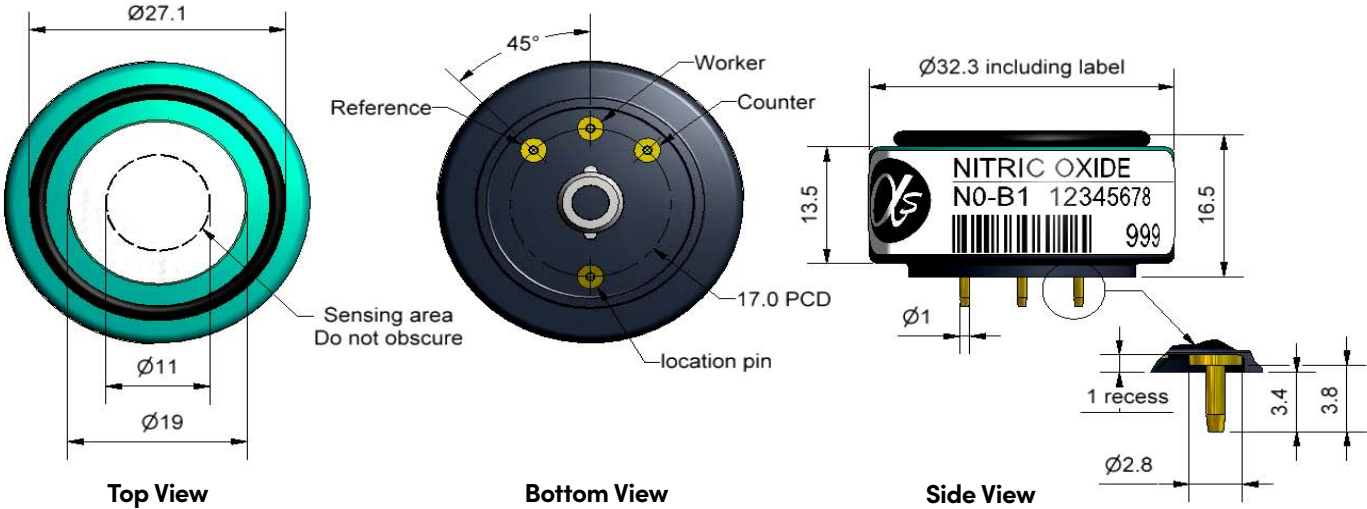


Technical specifications Version 1.0

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

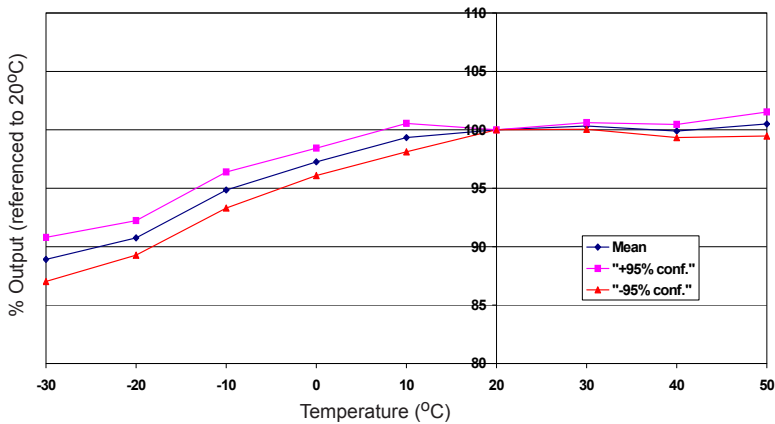


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

The mean and $\pm 95\%$ confidence intervals are shown.

Figure 2 Zero Temperature Dependence

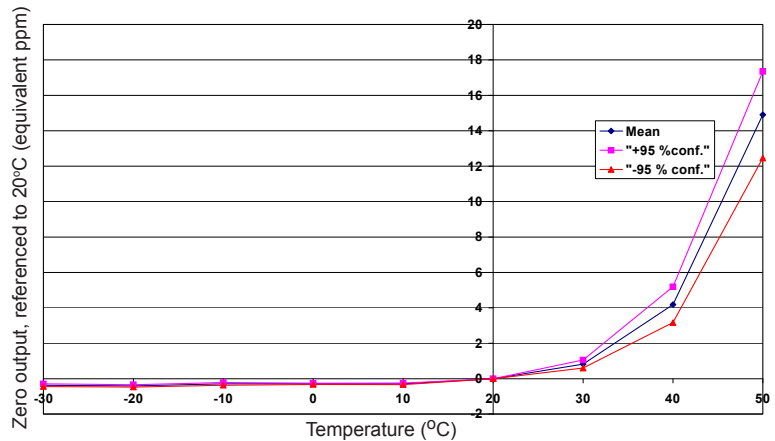
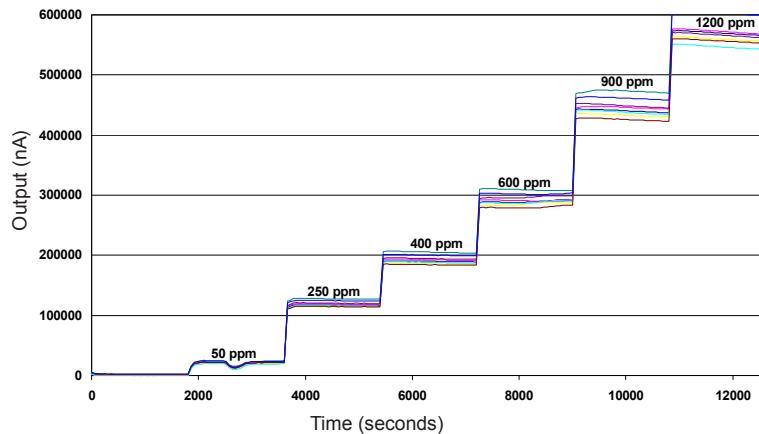


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

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.