



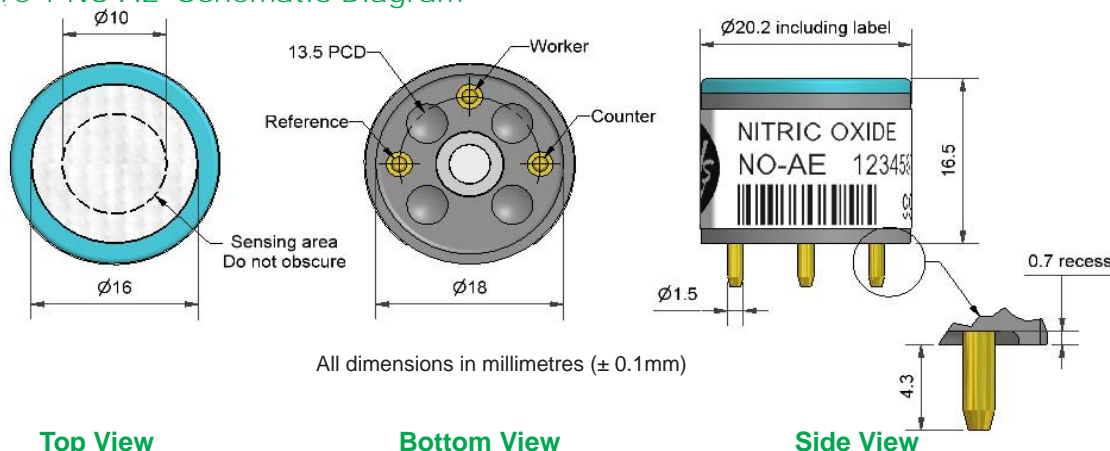
NO-AE Nitric Oxide Sensor

High Concentration



PATENTED

Figure 1 NO-AE Schematic Diagram



Technical Specification

PERFORMANCE	Parameter	Specification	Range
	Sensitivity	nA/ppm in 250ppm NO	40 to 80
	Response time	t_{90} (s) from zero to 250ppm NO	< 75
	Zero current	ppm equivalent in zero air	0 to 15
	Resolution	RMS noise (ppm equivalent)	< 1
	Range	ppm NO limit of performance warranty	5,000
	Linearity	ppm error at full scale, linear at zero and 1000ppm NO	< 250
	Overtask limit	maximum ppm for stable response to gas pulse	10,000

LIFETIME	Parameter	Specification	Value
	Zero drift	ppm equivalent change/year in lab air	nd
	Sensitivity drift	% change/year in lab air, monthly test	nd
	Operating life	months until 80% original signal (24 month warranted)	> 24

ENVIRONMENTAL	Parameter	Specification	Value
	Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C) @ 50ppm	65 to 90
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 50ppm	103 to 112
	Zero @ -20°C	ppm equivalent change from 20°C	< 0 to -3
	Zero @ 50°C	ppm equivalent change from 20°C	< 10 to 40

CROSS SENSITIVITY	Gas	Sensitivity	% measured gas	Gas	Sensitivity
	H ₂ S	sensitivity	@ 20ppm	H ₂ S	< 50
	NO ₂	sensitivity	@ 50ppm	NO ₂	< 20
	Cl ₂	sensitivity	@ 10ppm	Cl ₂	< 25
	SO ₂	sensitivity	@ 20ppm	SO ₂	< 5
	CO	sensitivity	@ 400ppm	CO	< 0.1
	H ₂	sensitivity	@ 400ppm	H ₂	< 0.1
	C ₂ H ₄	sensitivity	@ 400ppm	C ₂ H ₄	< 0.1
	NH ₃	sensitivity	@ 20ppm	NH ₃	< 0.1
CO ₂	sensitivity	@ 5% Vol	CO ₂	< 0.1	

KEY SPECIFICATIONS	Parameter	Specification	Value
	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
	Bias voltage	mV (working electrode potential is above ground)	+300
	Load resistor	Ω (recommended)	10 to 47
	Weight	g	< 6



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.

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NO-AE Performance Data

Technical Specification

Figure 2 Sensitivity Temperature Dependence

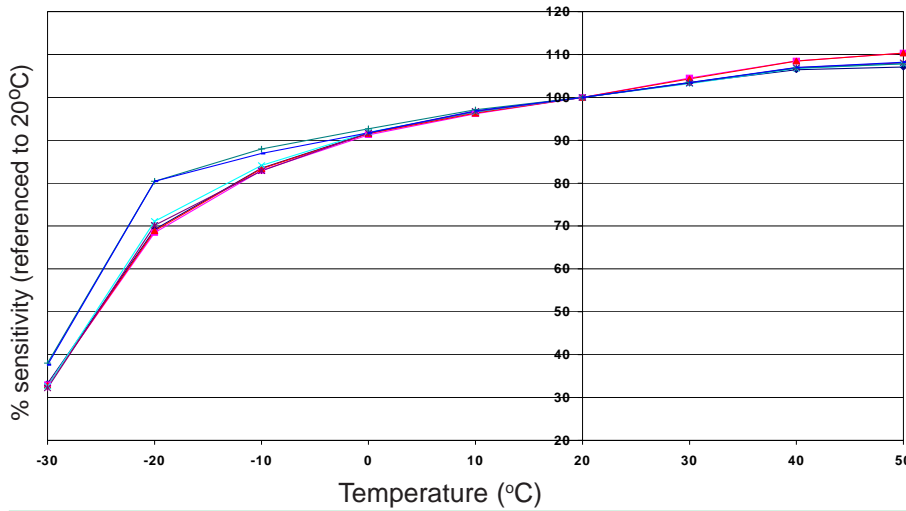


Figure 2 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

Figure 3 Zero Temperature Dependence

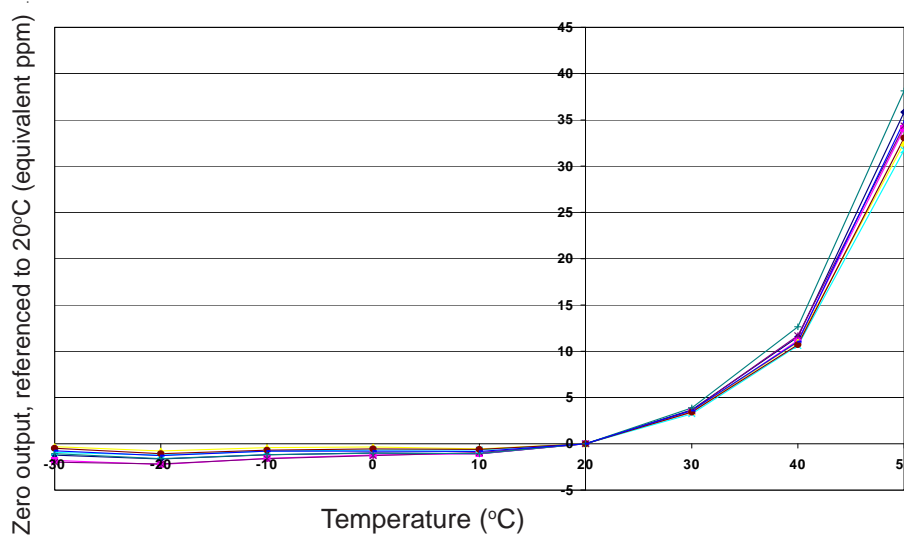
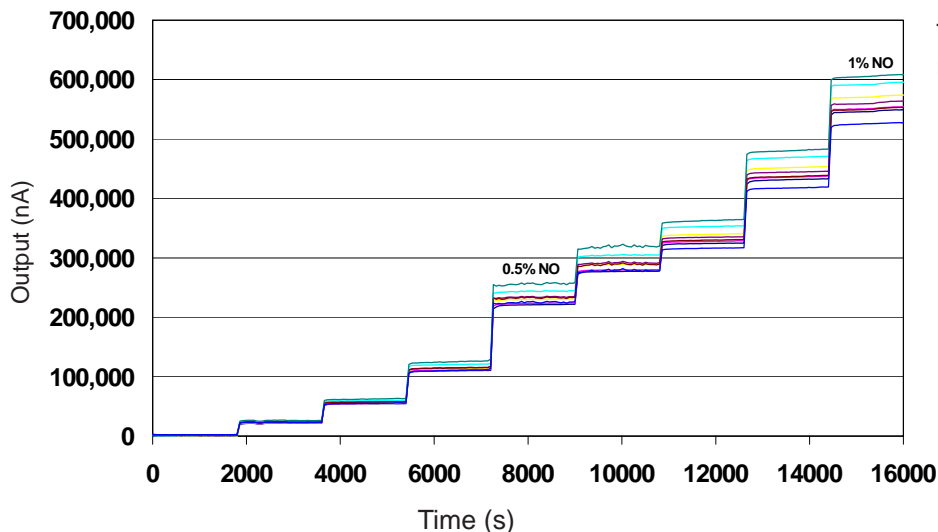


Figure 3 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 4 Response up to 1% NO



The NO-AE shows fast, stable response from 0 to 1% NO.

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