



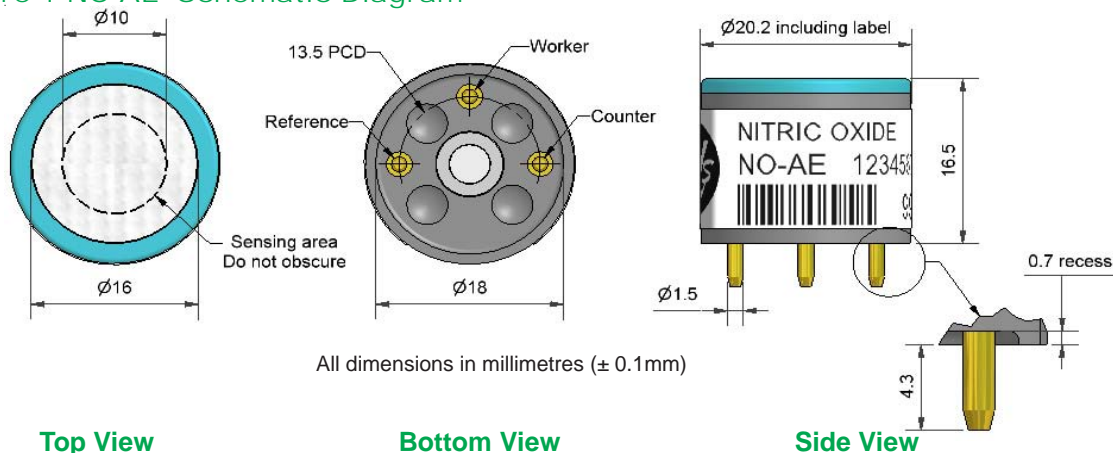
NO-AE Nitric Oxide Sensor

High Concentration



PATENTED

Figure 1 NO-AE Schematic Diagram



Top View

Bottom View

Side View

PERFORMANCE	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
	Overtgas limit	maximum ppm for stable response to gas pulse	10,000
LIFETIME	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	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	H ₂ S sensitivity	% measured gas @ 20ppm	H ₂ S < 50
	NO ₂ sensitivity	% measured gas @ 50ppm	NO ₂ < 20
	Cl ₂ sensitivity	% measured gas @ 10ppm	Cl ₂ < 25
	SO ₂ sensitivity	% measured gas @ 20ppm	SO ₂ < 5
	CO sensitivity	% measured gas @ 400ppm	CO < 0.1
	H ₂ sensitivity	% measured gas @ 400ppm	H ₂ < 0.1
	C ₂ H ₄ sensitivity	% measured gas @ 400ppm	C ₂ H ₄ < 0.1
	NH ₃ sensitivity	% measured gas @ 20ppm	NH ₃ < 0.1
CO ₂ sensitivity	% measured gas @ 5% Vol	CO ₂ < 0.1	

KEY SPECIFICATIONS

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.

NOTE: all sensors are tested at ambient environmental conditions, with 10 ohm load resistor, 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.



NO-AE Performance Data

Technical Specification

Figure 2 Sensitivity Temperature Dependence

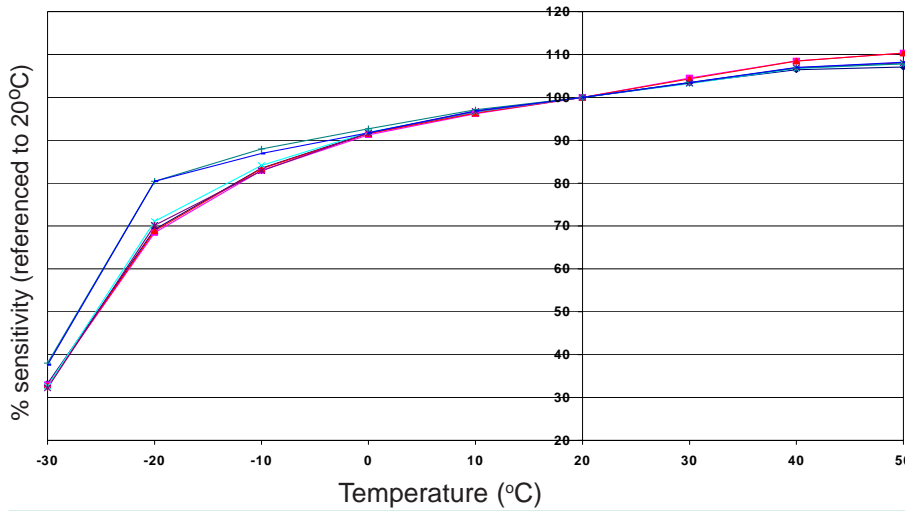


Figure 2 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

Figure 3 Zero Temperature Dependence

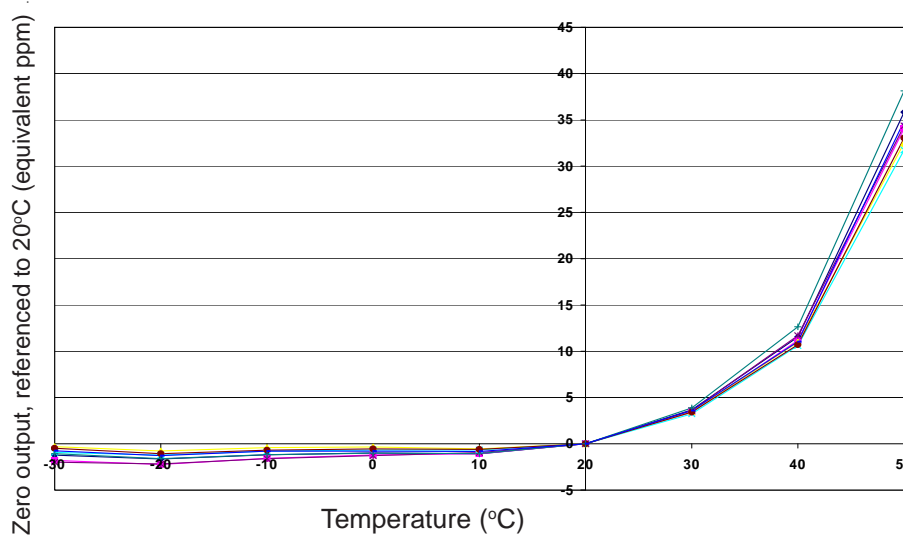
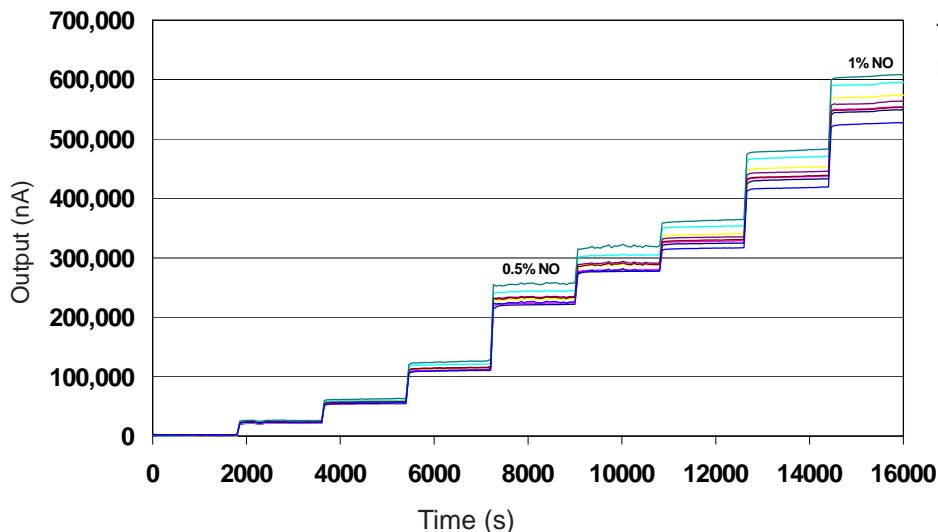


Figure 3 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

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.

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. For Application Notes visit "www.alphasense.com".

In the interest of continued product improvement, we reserve the right to change design features and specifications without prior notification. The data contained in this document is for guidance only. Alphasense Ltd accepts no liability for any consequential losses, injury or damage resulting from the use of this document or the information contained within. (©ALPHASENSE LTD) Doc. Ref. NOAE/JAN12