



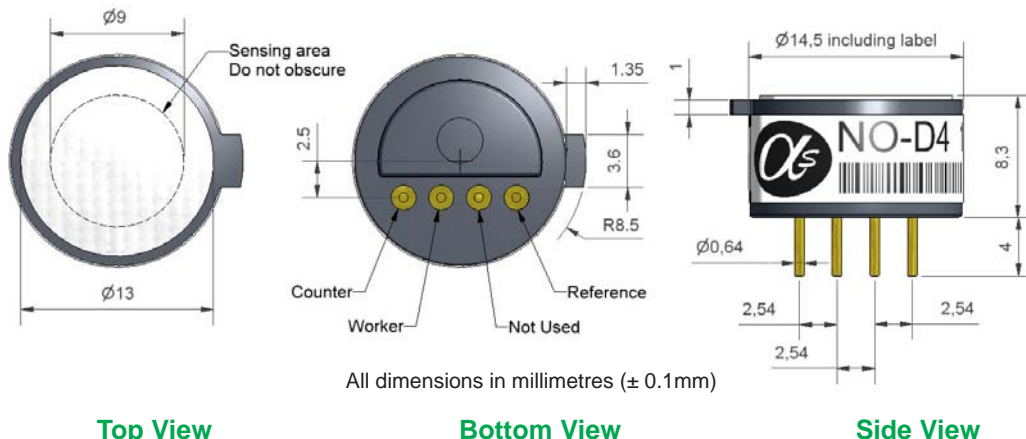
NO-D4 Nitric Oxide Sensor

Miniature Size



Figure 1 NO-D4 Schematic Diagram

PATENTED



Technical Specification

PERFORMANCE	Sensitivity	nA/ppm in 40ppm NO	450 to 600
	Response time	t_{90} (s) from zero to 40ppm NO	< 15
	Zero current	ppm equivalent in zero air	< 0 to 1.5
	Resolution	RMS noise (ppm equivalent)	< 0.1
	Range	ppm limit of performance warranty	100
	Linearity	ppm error at full scale, linear at zero and 40ppm NO	< ± 1.5
	Overgas limit	maximum ppm for stable response to gas pulse	400
LIFETIME	Zero drift	ppm equivalent change/year in lab air	< 0.4
	Sensitivity drift	% change/month 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) 40ppm NO	65 to 80
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) 40ppm NO	102 to 115
	Zero @ -20°C	ppm equivalent change from 20°C	< ± 0.5
	Zero @ 50°C	ppm equivalent change from 20°C	< 1.5 to 6
CROSS SENSITIVITY	H ₂ S sensitivity	% measured gas @ 20ppm	< 5
	NO ₂ sensitivity	% measured gas @ 10ppm	< 5
	Cl ₂ sensitivity	% measured gas @ 10ppm	< 5
	SO ₂ sensitivity	% measured gas @ 10ppm	< 0.5
	CO sensitivity	% measured gas @ 400ppm	< 0.1
	H ₂ sensitivity	% measured gas @ 400ppm	< 0.1
	C ₂ H ₄ sensitivity	% measured gas @ 1000ppm	< 0.1
	NH ₃ sensitivity	% measured gas @ 20ppm	< 0.1
	CO ₂ sensitivity	% measured gas @ 5%	< 0.1
KEY SPECIFICATIONS	Temperature range	°C	-20 to 50
	Pressure range	kPa	80 to 120
	Humidity range	%rh (see note below)	15 to 90
	Storage period	months @ 3 to 20°C (stored in sealed pot)	6
	Bias voltage	mV (working electrode above ground)	300mV
	Load resistor	Ω (for optimum performance)	10 to 47
	Weight	g	< 2



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.

ApolloSense Ltd



NO-D4 Performance Data

Technical Specification

Figure 2 Sensitivity Temperature Dependence

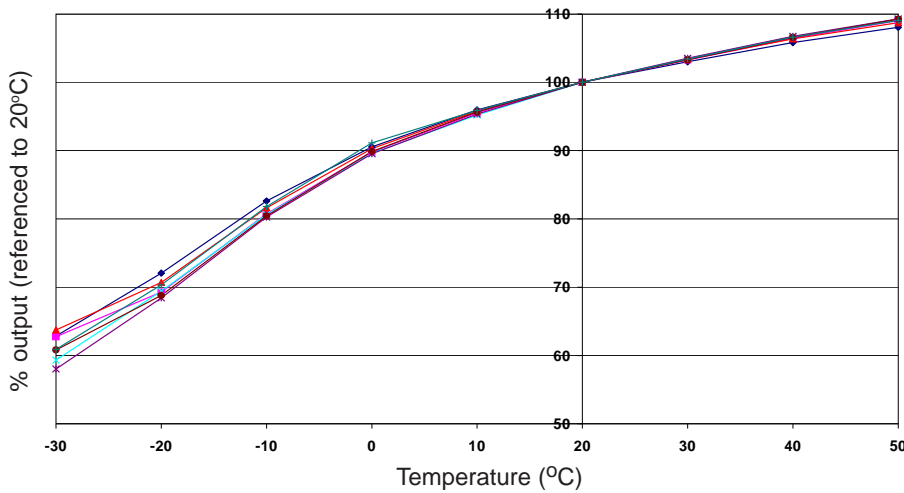


Figure 2 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

Figure 3 Zero Temperature Dependence

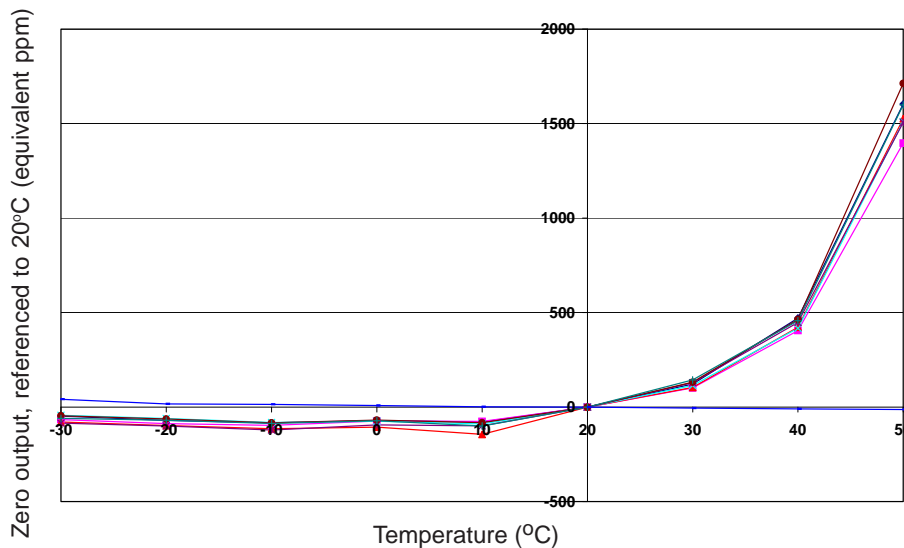
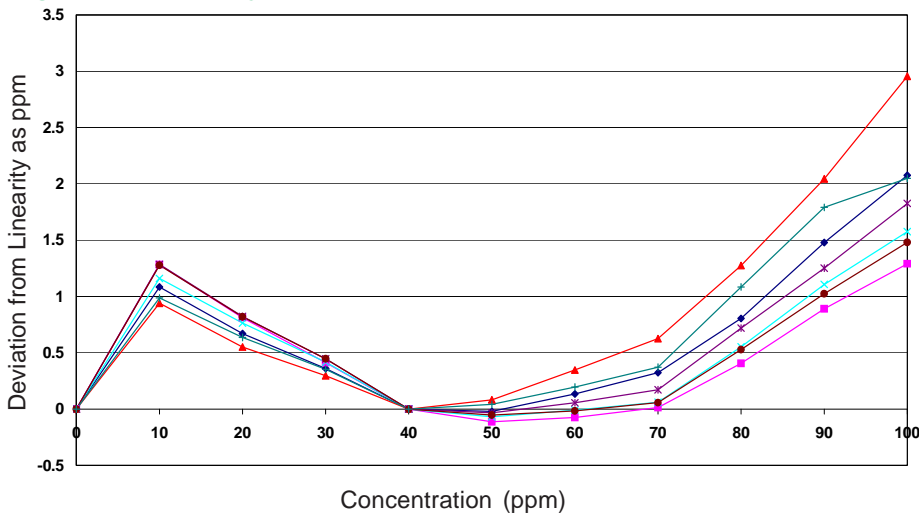


Figure 3 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 4 Linearity to 100ppm NO



Sensors show nearly ideal linearity from 0 to 100ppm NO.