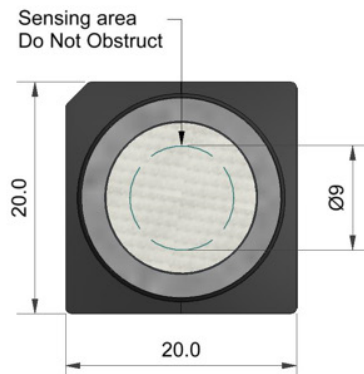


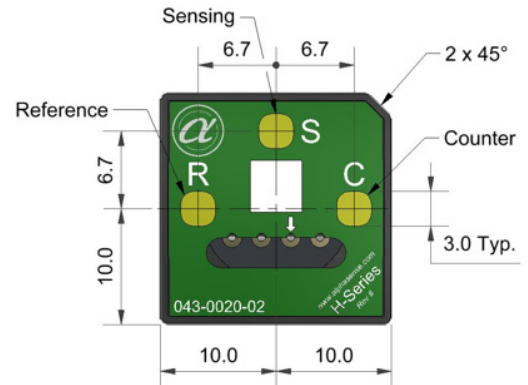
## NO-H4 Nitric Oxide Sensor – Miniature Size



Side View



Top View



Bottom View

Dimensions are in millimetres (± 0.1 mm).

Performance			
Sensitivity	nA/ppm in 40ppm NO		450 to 600
Response time	t90 (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		< ± 1.5
Overgas limit	NO maximum ppm for stable response to gas pulse		400

Lifetime			
Zero drift	ppm equivalent change/year in lab air		< 0.4
Sensitivity drift	% change/year in lab air, monthly test		< 5
Operating life	months until 80% original signal (24-month warranted)		> 18

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 <sub>2</sub> S sensitivity	% measured gas @ 20ppm	H <sub>2</sub> S	< 5
NO <sub>2</sub> sensitivity	% measured gas @ 10ppm	NO <sub>2</sub>	< 5
Cl <sub>2</sub> sensitivity	% measured gas @ 10ppm	Cl <sub>2</sub>	< 5
SO <sub>2</sub> sensitivity	% measured gas @ 10ppm	SO <sub>2</sub>	< 0.5
CO sensitivity	% measured gas @ 400ppm	CO	< 0.1
H <sub>2</sub> sensitivity	% measured gas @ 400ppm	H <sub>2</sub>	< 0.1
C <sub>2</sub> H <sub>4</sub> sensitivity	% measured gas @ 1000ppm	C <sub>2</sub> H <sub>4</sub>	< 0.1
NH <sub>3</sub> sensitivity	% measured gas @ 20ppm	NH <sub>3</sub>	< 0.1
CO <sub>2</sub> sensitivity	% measured gas @ 5%	CO <sub>2</sub>	< 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

**Figure 1 Sensitivity Temperature Dependence**

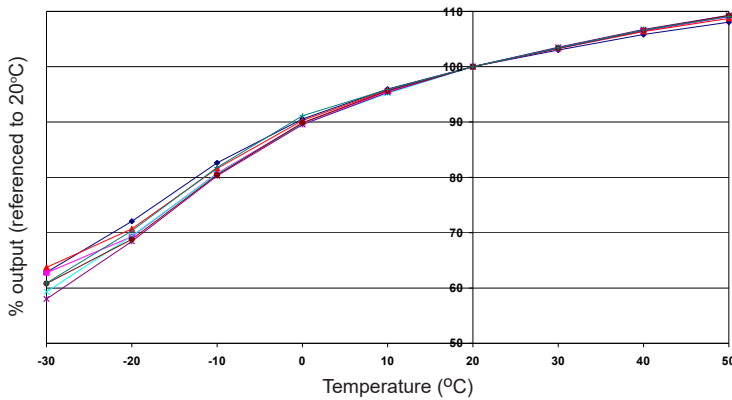


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

**Figure 2 Zero Temperature Dependence**

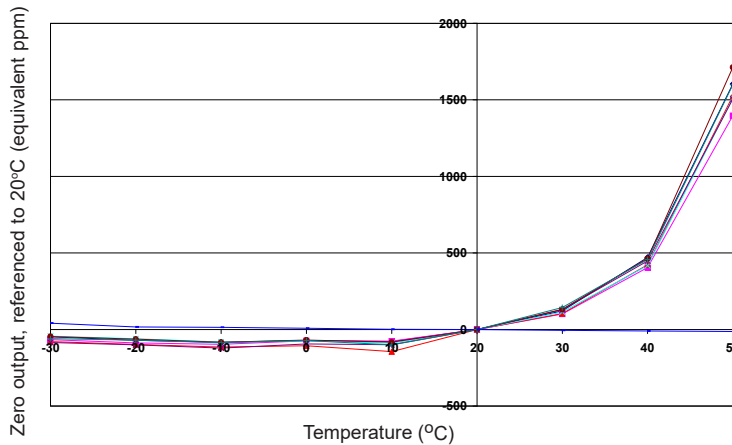
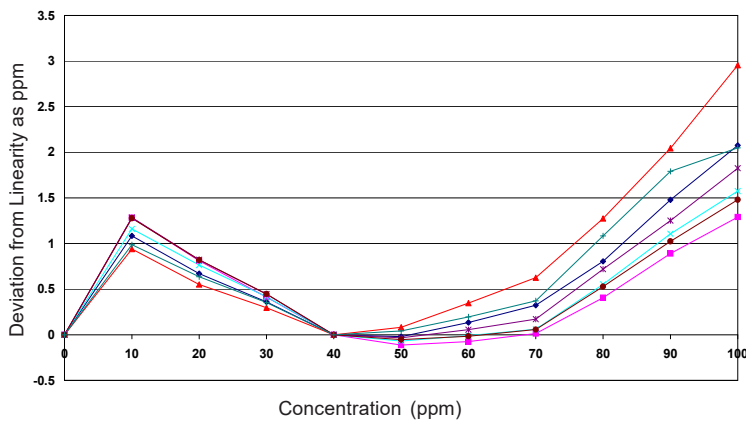


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

**Figure 3 Linearity to 100ppm NO**



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

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.

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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