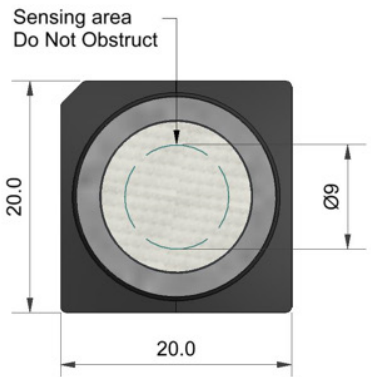
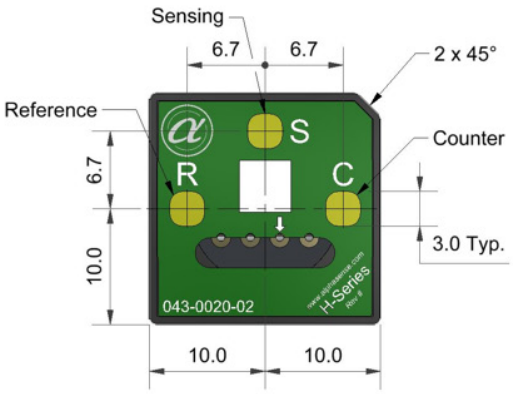
NO-H4 Nitric Oxide Sensor – Miniature Size

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_2S sensitivity	% measured gas @ 20ppm	H_2S	< 5
	NO_2 sensitivity	% measured gas @ 10ppm	NO_2	< 5
	Cl_2 sensitivity	% measured gas @ 10ppm	Cl_2	< 5
	SO_2 sensitivity	% measured gas @ 10ppm	SO_2	< 0.5
	CO sensitivity	% measured gas @ 400ppm	CO	< 0.1
	H_2 sensitivity	% measured gas @ 400ppm	H_2	< 0.1
	C_2H_4 sensitivity	% measured gas @ 1000ppm	C_2H_4	< 0.1
	NH_3 sensitivity	% measured gas @ 20ppm	NH_3	< 0.1
	CO_2 sensitivity	% measured gas @ 5%	CO_2	< 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

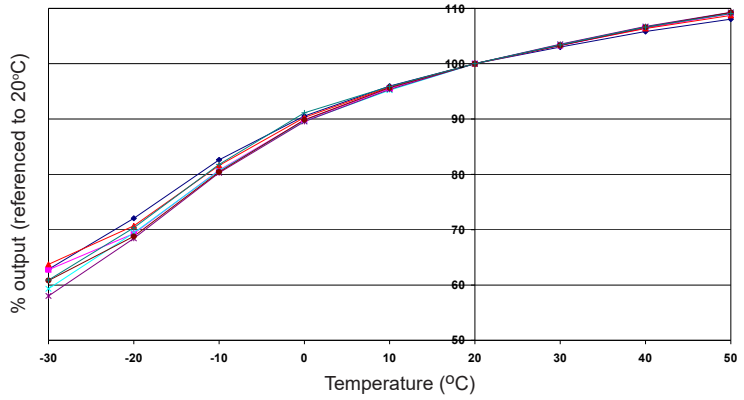


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

Figure 2 Zero Temperature Dependence

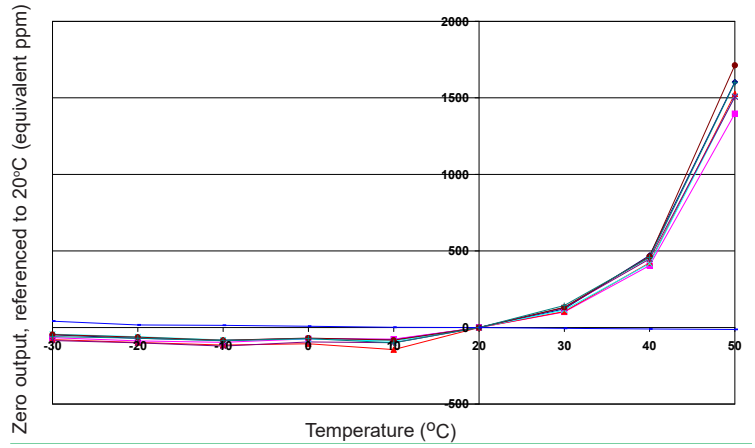
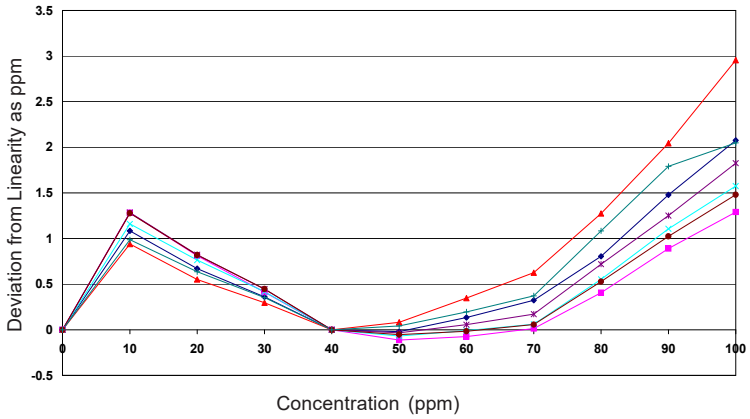


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

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.