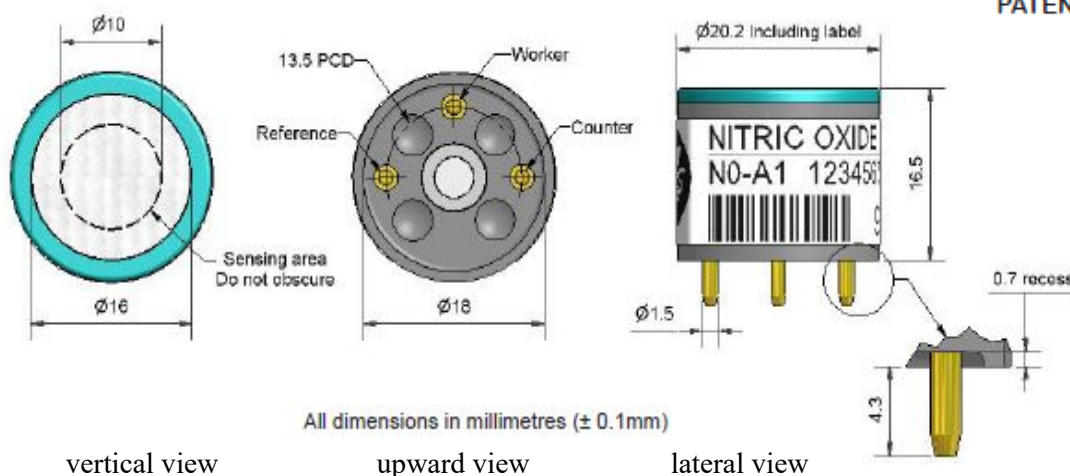


NO-A1 Nitric Oxide Sensor



PATENTED

Figure 1 NO-A1 Schematic Diagram



function	sensitivity	Sensitivity in 50ppmNO (nA/ppm)	320~480
	reaction time	Time from zero to 50ppmNO (s)	< 45
	zero current	Equivalent ppm value of zero air	0~+2
	resolution ratio	RMS noise (equivalent ppm value)	< 0.2
	range	Measuring limits (ppm) that guarantee product performance	250
	degree of linearity	The ppm value of the full scale error is linear from 0 to 50ppm	+15~+25
	overload	Maximum ppm value of gas pulse stabilized reaction	800
life span	zero drift	Equivalent ppm values that change in the laboratory air from year to year	< 0.3
	sensitivity drift	Percentage change in laboratory air over the year, measured monthly	< 5
	working life	Number of months to which the output is reduced to 80% of the original signal (24 months guaranteed)	> 24
environment	-20°C sensitivity	50ppmNO when, (output at -20°C/ output at 20°C)%	78~90
	Sensitivity at 50°C	50ppmNO when, (50°C output/20°C output)%	98~104
	-20°C when zero point	Change in equivalent ppm values with reference to 0°C 20	< 0~-1
	50°C at zero point	Change in equivalent ppm values with reference to 20°C zero	< 3~16
cross sensitivity	H ₂ S	Gas sensitivity percentage at 20ppmH ₂ S	< 10
	NO ₂	Gas sensitivity percentage ₂ at 50ppmNO	< 2
	Cl ₂	Sensitivity percentage of gas measured ₂ at 10ppmCl	< 1
	SO ₂	Gas sensitivity percentage ₂ at 20ppmSO	< 3
	H ₂	Gas sensitivity percentage measured at 400ppmH ₂	< 0.1
	CO	Gas sensitivity percentage measured at 400ppmCO	< 0.1
	NH ₃	Percentage sensitivity of gas ₃ at 20ppmNH	< 0.1
CO ₂	Sensitivity percentage of gas measured ₂ at 5%Vol CO	< 0.1	
key parameter	bias voltage	mV (working electrode potential greater than zero)	+300
	temperature range	°C	-30~50
	pressure limit	kPa	80~120
	Humidity range	Percentage of continuous relative humidity	15~90
	Storage period	Number of months for preservation from 3 to 20°C (to be kept in a sealed tank)	6
	load resistance	Ω (recommend)	10~47
	weight	g	< 6

Figure 2 Sensitivity Temperature Characteristics

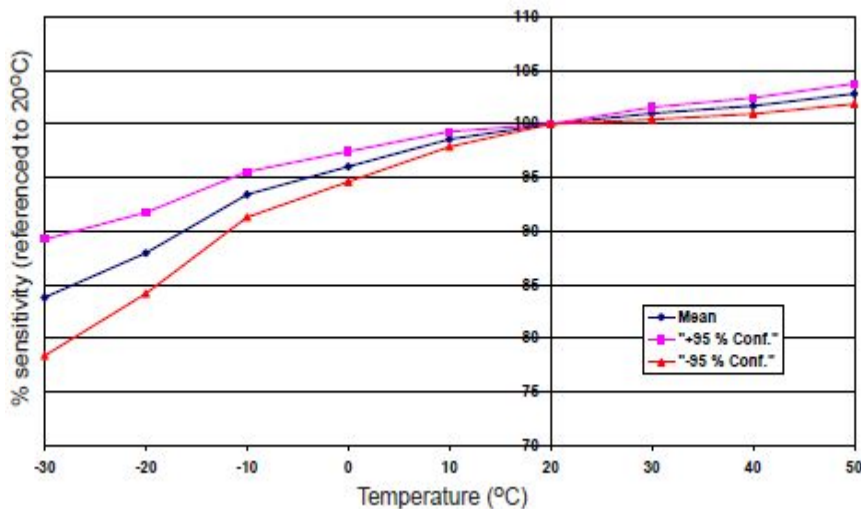


Figure 2 shows the change in sensor sensitivity caused by temperature changes.

The data were collected from a typical batch of sensors. Figure 2 shows the percentage sensitivity (reference 20°C) mean and $\pm 95\%$ confidence interval.

Figure 3 Zero Temperature Characteristics

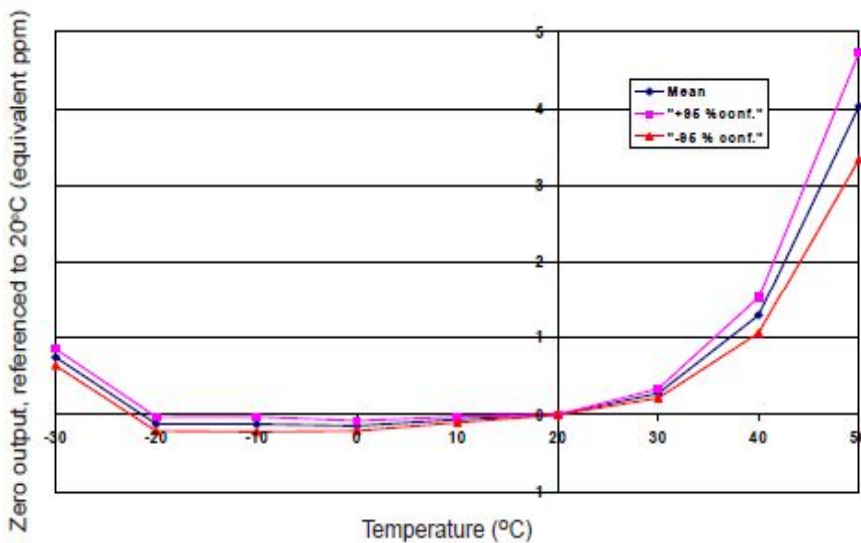
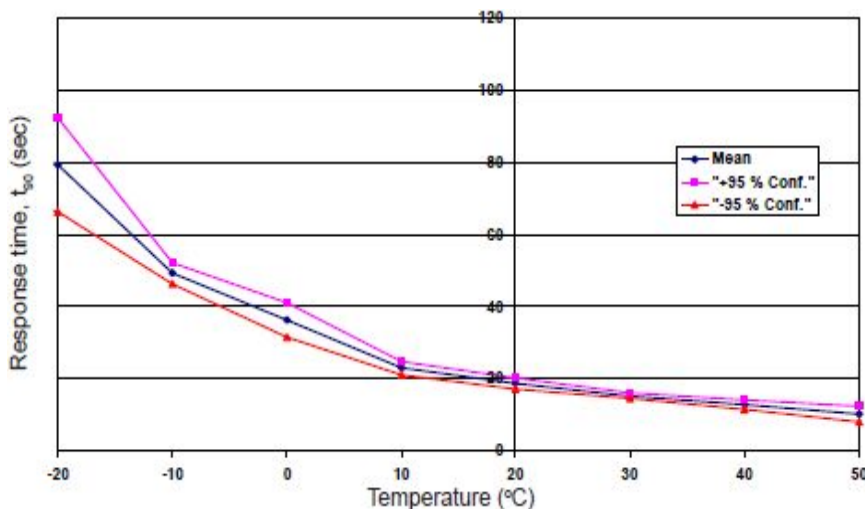


Figure 3 shows the change in zero point output caused by temperature changes, expressed as equivalent ppm values, with reference to the zero point at 20°C.

The data is taken from a typical batch of sensors. Figure 2 shows the percentage of zero output (reference 20°C), mean and $\pm 95\%$ confidence interval.

Figure 4 Response Time (t_{90}) Temperature Characteristics



The sensor's response time increases as the ambient temperature decreases. Alphasense measures the t_{90} response time at 20°C as the measurement result.

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