

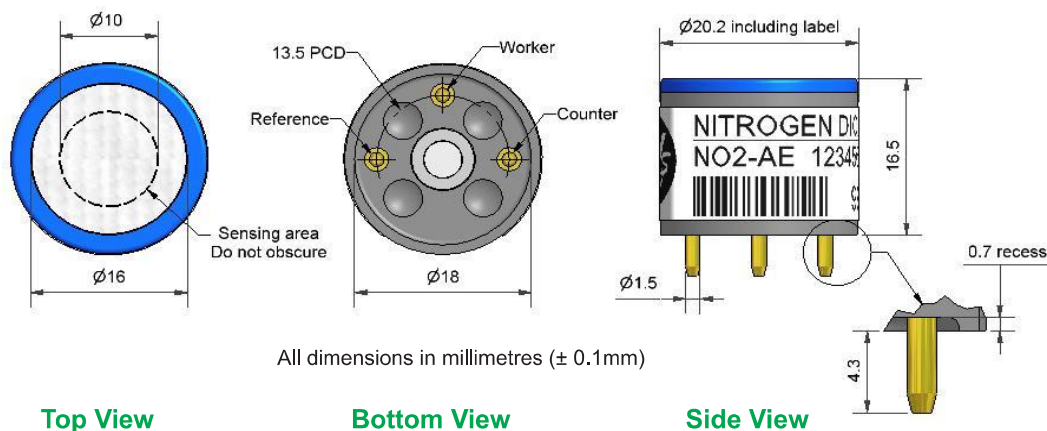


NO₂-AE Nitrogen Dioxide Sensor High Concentration



Figure 1 NO₂-AE Schematic Diagram

PATENT PENDING



PERFORMANCE	Sensitivity	nA/ppm @ 20°C in 10ppm NO ₂ (33 Ω Load Resistor)	-100 to -170
	Response time	t ₉₀ (s) from zero to 10ppm NO ₂ (33 Ω Load Resistor)	< 40
	Zero current	ppm equivalent in zero air	< ± 1.5
	Resolution	RMS noise (ppm equivalent) (33 Ω)	< 0.1
	Range	ppm limit of performance warranty	200
	Linearity	ppm error at 200ppm, linear at 30 and 100ppm NO ₂	< 2 to 11
	Overgas limit	maximum ppm for stable response to 10 minute gas pulse	> 1,000

LIFETIME	Zero drift	ppm equivalent change/year in lab air	nd
	Sensitivity drift	% change/month in lab air, twice monthly gassing	< 2
	Operating life	months until 80% original signal (24 month warranted)	> 24

ENVIRONMENTAL	Sensitivity @ -20°C % (output @ -20°C/output @ 20°C) @ 10ppm NO ₂	75 to 95
	Sensitivity @ 50°C % (output @ 40°C/output @ 20°C) @ 10ppm NO ₂	98 to 110
	Zero @ -20°C	ppm equivalent
	Zero @ 50°C	ppm equivalent

CROSS SENSITIVITY	CO sensitivity	% measured gas @ 400ppm	CO	< 3.5
	NO sensitivity	% measured gas @ 50ppm	NO	< 1
	SO ₂ sensitivity	% measured gas @ 20ppm	SO ₂	< -10
	Cl ₂ sensitivity	% measured gas @ 5ppm	Cl ₂	< 90
	H ₂ sensitivity	% measured gas @ 400ppm	H ₂	< -0.8
	H ₂ S sensitivity	% measured gas @ 200ppm	H ₂ S	< -220
	C ₂ H ₄ sensitivity	% measured gas @ 400ppm	C ₂ H ₄	< 0.1
	NH ₃ sensitivity	% measured gas @ 20ppm	NH ₃	< -1
	CO ₂ sensitivity	% measured gas @ 5% volume	CO ₂	0
	O ₃ sensitivity	% measured gas @ 100ppb	O ₃	< 60

KEY SPECIFICATIONS	Temperature range	°C	-20 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
	Load resistor	Ω (for optimum performance)	33
	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.

Technical Specification