

NH3-AF Ammonia Sensor



Figure 1 NH3-AF Schematic Diagram



Top View

Bottom View

Side View

PERFORMANCE	Parameter	Specification	Value
PERFORMANCE	Sensitivity	nA/ppm in 50ppm NH ₃	20 to 40
	Response time	t ₉₀ (s) from zero to 50ppm NH ₃ (300 seconds)	< 60
	Zero current	ppm equivalent in zero air	< ± 7
	Resolution	RMS noise (ppm equivalent)	< 0.7
	Range	ppm NH ₃ limit of performance warranty	100
	Linearity	ppm error at full scale, linear at zero and 40ppm NH ₃	+5 to -5
	Overgas limit	maximum ppm for stable response to gas pulse	200

LIFETIME	Parameter	Specification	Value
LIFETIME	Zero drift	ppm equivalent change/year in lab air	< 2
	Sensitivity drift	% change/year in lab air, monthly test	< 3
	Operating life	months until 80% original signal (12 month warranted)	> 24

ENVIRONMENTAL	Parameter	Specification	Value
ENVIRONMENTAL	Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C) @ 50ppm	100 to 110
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 50ppm	100 to 110
	Zero @ -20°C	ppm equivalent change from 20°C	-10 to 0
	Zero @ 50°C	ppm equivalent change from 20°C	5 to 20

CROSS SENSITIVITY	Gas	Sensitivity	Specification	Value
CROSS SENSITIVITY	H ₂ S	sensitivity	% measured gas @ 20ppm	< ± 3
	NO ₂	sensitivity	% measured gas @ 20ppm	< -60
	Cl ₂	sensitivity	% measured gas @ 10ppm	< -300
	NO	sensitivity	% measured gas @ 50ppm	< 20
	SO ₂	sensitivity	% measured gas @ 20ppm	nd
	CO	sensitivity	% measured gas @ 400ppm	< 25
	H ₂	sensitivity	% measured gas @ 400ppm	< 15
	C ₂ H ₄	sensitivity	% measured gas @ 400ppm	< 2
CO ₂	sensitivity	% measured gas @ 5%	0	

KEY SPECIFICATIONS	Parameter	Specification	Value
KEY SPECIFICATIONS	Bias voltage	mV (Working Electrode potential is above ground)	+200
	Temperature range	°C	-30 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 (recommended)	10 to 47
	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 47 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