

## Midas<sup>®</sup> SENSOR CARTRIDGE SPECIFICATIONS

### Ammonia (NH<sub>3</sub>) MIDAS-S-NH3, MIDAS-E-NH3



Gas Measured	Ammonia (NH <sub>3</sub> )
<b>Cartridge Part Number</b>	MIDAS-S-NH3 1 year standard warranty MIDAS-E-NH3 2 year extended warranty
<b>Sensor Technology</b>	3 electrode electrochemical cell
<b>Measuring Range (ppm)</b>	NH <sub>3</sub> 0 – 100ppm
<b>Minimum Alarm 1 Set Point</b>	12.5ppm
<b>Repeatability</b>	< ± 5% of measured value
<b>Linearity</b>	< ± 2% of measured value
<b>Response Time t<sub>92.5</sub></b>	< 10 seconds
<b>Sensor Cartridge Life Expectancy</b>	≥ 24 months under typical application conditions
<b>Operating Temperature</b>	0°C to +40°C (32°F to 104°F)
<b>Effect of Temperature</b>	< ± 0.1ppm / °C
Zero	< ± 1% of measured value / °C (0°C to 25°C)
Sensitivity	< ± 0.2% of measured value / °C (25°C to 40°C)
<b>Operating Humidity (continuous)</b>	15 – 90% rH
<b>Effect of Humidity</b>	
Zero	TBA
Sensitivity	TBA
<b>Operating Pressure</b>	90 – 110kPa
<b>Effect of Position</b>	No effect in typical application
<b>Long Term Drift</b>	
Zero	TBA
Sensitivity	< ± 3% of measured value / 6 months
<b>Calibration Gas</b>	Ammonia (NH <sub>3</sub> )
<b>Challenge Gas (Bump Test)</b>	Ammonia (NH <sub>3</sub> )
<b>Warm Up Time</b>	< 10 minutes
<b>Storage Temperature</b>	+5°C to +25°C (+41°F to +77°F)

The sensor data listed is based on ideal test environment; observed performance may vary based on the actual monitoring system and the sampling conditions employed.

Note: Extended exposure to background concentrations of ammonia may shorten life time of sensor.

#### Cross Sensitivities

Each Midas<sup>®</sup> sensor is potentially cross sensitive to other gases and this may cause a gas reading when exposed to other gases than those originally designated. The table below presents typical readings that will be observed when a new sensor cartridge is exposed to the cross sensitive gas (or a mixture of gases containing the cross sensitive species).

Gas / Vapor	Chemical Formula	Concentration applied (ppm)	Reading (ppm NH <sub>3</sub> )
Arsine	AsH <sub>3</sub>	0.2	0.07
Carbon Dioxide	CO <sub>2</sub>	5000	0
Carbon Monoxide	CO	100	0
Chlorine	Cl <sub>2</sub>	1	0
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	1000	0
Hydrogen	H <sub>2</sub>	10000	0
Hydrogen Chloride	HCl	10	-4
Hydrogen Sulphide	H <sub>2</sub> S	20	2
Iso Propanol	C <sub>3</sub> H <sub>7</sub> OH	1000	0
Methanol	CH <sub>3</sub> OH	1000	0
Nitrogen Dioxide	NO <sub>2</sub>	10	-0.5
Phosphine	PH <sub>3</sub>	300	0
Sulphur Dioxide	SO <sub>2</sub>	20	-40

Interference differs from cartridge to cartridge and over cell life. It is not recommended to calibrate with cross sensitivity factors. The target gas should be used for calibration.

#### Find out more

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