

Midas® Sensor Cartridge Specifications

Nitrous Oxide (N₂O) MIDAS-I-N2O



Gas Measured	Nitrous Oxide (N ₂ O)
Cartridge Part Number	MIDAS-I-N2O
Sensor Technology	Nondispersive Infrared (NDIR) sensor
Measuring Range	N ₂ O 0 – 1000ppm
Minimum Alarm 1 Set Point	125ppm
Lower Detection Limit	90ppm
Linearity	<± 10% of full scale
Repeatability	<± 40ppm @20°C (68°F) ambient
Resolution	10ppm
Response Time t_{62.5}	≤ 30 seconds
Sensor Cartridge Life Expectancy	5 years
Operating Temperature	0°C to +40°C (32°F to 104°F)
Operating Humidity	0 to 95% RH non-condensing
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Calibration Gas	Nitrous Oxide (N ₂ O)
Bump Test Gas	Nitrous Oxide (N ₂ O)
Warm Up Time	To final zero: < 10 minutes
Storage Temperature	-20 °C to +50 °C (-4 °F to +122 °F)

Cross Sensitivities

Each Midas® 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 Measured	Chemical Formula	Concentration Applied(ppm)	Reading (ppm N ₂ O)
Carbon Dioxide	CO ₂	5000	150
Silane	SiH ₄	100	0 (Under LDL 100ppm)
Dichlorosilane	DCS	50	0 (Under LDL 100ppm)
TetraMethySilane	4MS	200	0 (Under LDL 100ppm)
Germane	GeH ₄	50	0 (Under LDL 100ppm)
TriMethylSilane	3MS	100	0 (Under LDL 100ppm)
Arsine	AsH ₃	100	0 (Under LDL 100ppm)

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.

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.

Find out more

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