

Midas[®] SENSOR CARTRIDGE SPECIFICATIONS

Hydrogen ppm (H₂) MIDAS-S-H2X, MIDAS-E-H2X



Gas Measured	Hydrogen (H ₂)
Cartridge Part Number	MIDAS-S-H2X 1 year standard warranty MIDAS-E-H2X 2 year extended warranty
Sensor Technology	3 electrode electrochemical cell
Measuring Range (ppm)	H ₂ 0 – 1000ppm
Minimum Alarm 1 Set Point	120ppm
Lower Detectable Limit (LDL)	90ppm
Repeatability	< ± 5% of measured value
Linearity	< ± 5% of measured value
Response Time t_{92.5}	< 50 seconds
Sensor Cartridge Life Expectancy	≥ 24 months under typical application conditions
Operating Temperature	0°C to +40°C (32°F to 104°F)
Effect of Temperature	< ± 0.17ppm / °C (0°C to 20°C) < ± 0.07ppm / °C (20°C to 40°C)
Zero Sensitivity	< ± 3% of measured value / °C
Operating Humidity (continuous)	10 – 90% rH
Effect of Humidity	No effect
Zero Sensitivity	No effect
Operating Pressure	90 – 110 kPa
Effect of Position	No effect in typical application
Long Term Drift	No drift
Zero Sensitivity	< ± 10% of measured value / 6 month
Calibration Gas	Hydrogen (H ₂)
Challenge Gas (Bump Test)	Hydrogen (H ₂)
Warm Up Time	< 10 minutes
Storage Temperature	+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

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 / Vapor	Chemical Formula	Concentration Applied (ppm)	Reading (ppm H ₂)
Ammonia	NH ₃	100	0
Arsine	AsH ₃	0.2	0
Carbon Dioxide	CO ₂	1000	0
Carbon Monoxide	CO	100	150
Chlorine	Cl ₂	1	0
Chlorine Dioxide	ClO ₂	1	0
Hydrogen Cyanide	HCN	20	0
Hydrogen Sulphide	H ₂ S	20	4
Iso Propanol	C ₃ H ₇ OH	1100	Yes
Methane	CH ₄	1%	0
Nitrogen Dioxide	NO ₂	10	-40
Ozone	O ₃	0.25	0
Sulphur Dioxide	SO ₂	5	0

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