

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

### Hydrogen ppm (H<sub>2</sub>) MIDAS-S-H2X, MIDAS-E-H2X



Gas Measured	Hydrogen (H <sub>2</sub> )
<b>Cartridge Part Number</b>	MIDAS-S-H2X 1 year standard warranty MIDAS-E-H2X 2 year extended warranty
<b>Sensor Technology</b>	3 electrode electrochemical cell
<b>Measuring Range (ppm)</b>	H <sub>2</sub> 0 – 1000ppm
<b>Minimum Alarm 1 Set Point</b>	120ppm
<b>Repeatability</b>	< ± 5% of measured value
<b>Linearity</b>	< ± 5% of measured value
<b>Response Time t<sub>92.5</sub></b>	< 50 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>	< ± 0.17ppm / °C (0°C to 20°C) < ± 0.07ppm / °C (20°C to 40°C) Zero Sensitivity < ± 3% of measured value / °C
<b>Operating Humidity (continuous)</b>	10 – 90% rH
<b>Effect of Humidity</b>	Zero No effect Sensitivity No effect
<b>Operating Pressure</b>	90 – 110 kPa
<b>Effect of Position</b>	No effect in typical application
<b>Long Term Drift</b>	Zero No drift Sensitivity < ± 10% of measured value / 6 month
<b>Calibration Gas</b>	Hydrogen (H <sub>2</sub> )
<b>Challenge Gas (Bump Test)</b>	Hydrogen (H <sub>2</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

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

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