



## Midas® Sensor Cartridge Specifications

### Hydrogen Cyanide (HCN)

### MIDAS-E-HCN, MIDAS-S-HCN

Gas Measured	Hydrogen Cyanide (HCN)
<b>Cartridge Part Number</b>	MIDAS-S-HCN 1 year standard warranty, MIDAS-E-HCN 2 year extended warranty
<b>Sensor Technology</b>	3 electrode electrochemical cell
<b>Measuring Range</b>	HCN 0 – 20ppm
<b>Minimum Alarm 1 Set Point</b>	2.5ppm
<b>Lower Detection Limit</b>	2.2ppm
<b>Linearity</b>	< ± 4% of measured value
<b>Repeatability</b>	< ± 2% of measured value
<b>Resolution</b>	0.1ppm
<b>Response Time <math>t_{62.5}</math></b>	≤ 15 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>	
Zero	< ± 0.03ppm / °C
Sensitivity	< ± 2.5% of measured value / °C
<b>Operating Humidity</b>	10 to 90% RH
<b>Effect of Humidity</b>	
Zero	TBA
Sensitivity	< ± 1% of measured value / % RH
<b>Operating Pressure</b>	90 – 110kPa
<b>Effect of Position</b>	No effect in typical application
<b>Long Term Drift</b>	
Zero	No effect
Sensitivity	< ± 2% of measured value / month
<b>Calibration Gas</b>	Hydrogen Cyanide (HCN)
<b>Bump Test Gas</b>	Sulfur Dioxide (SO <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.

#### Find out more

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#### 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 HCN)
Carbon Monoxide	CO	300	< 15
Hydrogen Sulfide	H <sub>2</sub> S	15	90
Ethylene	C <sub>2</sub> H <sub>4</sub>	100	< 25
Nitrogen Dioxide	NO <sub>2</sub>	5	-20 to < -10
Nitric Oxide	NO	35	-17.5 to 0
Sulfur Dioxide	SO <sub>2</sub>	20	40 to 75

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.