

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

### Carbon Monoxide (CO) MIDAS-S-COX, MIDAS-E-COX



Gas Measured	Carbon Monoxide (CO)
<b>Cartridge Part Number</b>	MIDAS-S-COX 1 year standard warranty MIDAS-E-COX 2 year extended warranty
<b>Sensor Technology</b>	3 electrode electrochemical cell
<b>Measuring Range (ppm)</b>	CO 0 – 100ppm
<b>Minimum Alarm 1 Set Point</b>	12.5ppm
<b>Repeatability</b>	< ± 2% of measured value
<b>Linearity</b>	< ± 2% of measured value
<b>Response Time <math>t_{92.5}</math></b>	≤ 60 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	< ± 0.035ppm / °C
Sensitivity	< ± 0.8% of measured value / °C
<b>Operating Humidity (continuous)</b>	15 – 90% rH
<b>Effect of Humidity</b>	
Zero	< ± 0.02ppm of measured value / % rH
Sensitivity	No effect
<b>Operating Pressure</b>	70 – 110kPa
<b>Effect of Position</b>	No effect in typical application
<b>Long Term Drift</b>	
Zero	< 2ppm / year
Sensitivity	< ± 5% of measured value / year
<b>Calibration Gas</b>	Carbon Monoxide (CO)
<b>Challenge Gas (Bump Test)</b>	Carbon Monoxide (CO)
<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 CO)
Acetone	(CH <sub>3</sub> ) <sub>2</sub> CO	1000	0
Acetylene	C <sub>2</sub> H <sub>2</sub>	40	80
Ammonia	NH <sub>3</sub>	100	0
Carbon Monoxide	CO	100	100
Chlorine	Cl <sub>2</sub>	2	0
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	2000	3
Ethylene	C <sub>2</sub> H <sub>4</sub>	100	110
Hydrogen	H <sub>2</sub>	100	35
Hydrogen Sulphide	H <sub>2</sub> S	25	0
Iso Propanol	C <sub>3</sub> H <sub>7</sub> OH	200	0
Nitric Oxide	NO	50	8
Nitrogen Dioxide	NO <sub>2</sub>	800	20
Sulphur Dioxide	SO <sub>2</sub>	50	0.5

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