



Midas® Sensor Cartridge Specifications

Carbon Monoxide (CO)

MIDAS-E-COX, MIDAS-S-COX

Gas Measured	Carbon Monoxide (CO)
Cartridge Part Number	MIDAS-S-COX 1 year standard warranty MIDAS-E-COX 2 year extended warranty
Sensor Technology	3 electrode electrochemical cell
Measuring Range	CO 0 – 100ppm
Minimum Alarm 1 Set Point	12.5ppm
Lower Detection Limit	11ppm
Linearity	< ± 2% of measured value
Repeatability	< ± 2% of measured value
Resolution	0.5ppm
Response Time $t_{62.5}$	≤ 60 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	
Zero	< ± 0.035ppm / °C
Sensitivity	< ± 0.8% of measured value / °C
Operating Humidity	10 to 90% RH
Effect of Humidity	
Zero	< ± 0.02ppm of measured value / % RH
Sensitivity	No effect
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift	
Zero	< 2ppm / year
Sensitivity	< ± 5% of measured value / year
Calibration Gas	Carbon Monoxide (CO)
Bump Test Gas	Carbon Monoxide (CO)
Warm Up Time	< 20 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.

Find out more

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H_MIDAS-E-COX_v3 06/22

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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 CO)
Acetone	(CH ₃) ₂ CO	1000	0
Acetylene	C ₂ H ₂	40	80
Ammonia	NH ₃	100	0
Carbon Monoxide	CO	100	100
Chlorine	Cl ₂	2	0
Ethanol	C ₂ H ₅ OH	2000	3
Ethylene	C ₂ H ₄	100	110
Hydrogen	H ₂	100	35
Hydrogen Sulfide	H ₂ S	25	0
Iso Propanol	C ₃ H ₇ OH	200	0
Nitric Oxide	NO	50	8
Nitrogen Dioxide	NO ₂	800	20
Sulfur Dioxide	SO ₂	50	0.5

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.