



Midas® Sensor Cartridge Specifications

Carbon Dioxide (CO₂)

MIDAS-E-CO₂, MIDAS-S-CO₂

Gas Measured	Carbon Dioxide (CO ₂)
Cartridge Part Number	MIDAS-S-CO ₂ 1 year standard warranty MIDAS-E-CO ₂ 2 year extended warranty
Sensor Technology	3 electrode electrochemical cell
Measuring Range	CO ₂ 0 – 2%vol
Minimum Alarm 1 Set Point	0.25%vol
Lower Detection Limit	0.20%vol
Linearity	<± 15% of measured value
Repeatability	<± 0.06%vol
Resolution	0.05%vol
Response Time t_{62.5}	≤ 70 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	< ± 0.053%vol / °C
Sensitivity	< ± 1.9% of measured value / °C
Operating Humidity	10 to 90% RH
Effect of Humidity	
Zero	No effect
Sensitivity	< ± 1% of measured value / % RH
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift	
Zero	< +0.3%vol / year
Sensitivity	< ± 30% of measured value / year
Calibration Gas	Carbon Dioxide (CO ₂)
Bump Test Gas	Carbon Dioxide (CO ₂)
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.

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 (%vol CO ₂)
Carbon Monoxide	CO	500	<0.05
Chlorine	Cl ₂	2	<0.05
Hydrogen	H ₂	1000	<0.05
Hydrogen Sulfide	H ₂ S	75	<0.05
Methane	CH ₄	20000	<0.05
Nitrogen Dioxide	NO ₂	50	<0.05
Sulfur Dioxide	SO ₂	50	<0.05
Methanol	CH ₃ OH	1000	<0.05

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.

Find out more

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