



Midas® Sensor Cartridge Specifications

Carbonyl Sulfide (COS)

MIDAS-X-COS

Gas Measured	Carbonyl Sulfide (COS)
Cartridge Part Number	MIDAS-X-COS 2 year extended warranty
Sensor Technology	4 electrode electrochemical cell
Measuring Range	COS 0 – 100ppm
Minimum Alarm 1 Set Point	10ppm
Lower Detection Limit	10ppm
Linearity	< ± 30% of full scale
Repeatability	< ± 30% of full scale
Resolution	1ppm
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	< ± 10ppm(10° to 30°C)
Sensitivity	< ± 30% of full scale(10° to 30°C)
Operating Humidity	15 to 90% RH (Sensor Datasheet)
Effect of Humidity	
Zero	< ± 10ppm (at 45% RH)
Sensitivity	< ± 30% of full scale (at 45% RH)
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift	
Zero	< 10ppm
Sensitivity	< 30% of full scale
Calibration Gas	Carbonyl Sulfide (50 ppm COS)
Bump Test Gas	Carbonyl Sulfide (50 ppm COS)
Warm Up Time	≥ 60 minutes
Storage Temperature	+3 °C to +20 °C (+37 °F to +68 °F)(Sensor Datasheet)

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 COS)
Carbon Monoxide	CO	50	≥100
Hydrogen Sulfide	H ₂ S	15	<100
Sulfur Dioxide	SO ₂	5	9
Nitrogen Dioxide	NO ₂	5	-15
Chlorine	Cl ₂	1	-1.5
Hydrogen	H ₂	100	<100
Hydrogen Cyanide	HCN	10	15
Hydrogen Chloride	HCl	5	0
Ethylene	C ₂ H ₄	100	<100
Nitric Oxide	NO	35	30
iso -Propyl Alcohol	C ₃ H ₇ OH	500	0

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.

* IPA filter (1830K0080) is required where a sensor cartridge can be exposed to the concentrated IPA vapor. The filter replacement interval depends on IPA exposure; however, Honeywell recommends the filter replacement every two months