

Midas[®] SENSOR CARTRIDGE SPECIFICATIONS

Carbonyl Sulfide (COS) MIDAS-X-COS



Gas Measure	Carbonyl Sulfide (COS)
Cartridge Part Number	MIDAS-X-COS 2 year extended warranty
Sensor Technology	4 electrode electrochemical cell
Measuring range (ppm)	COS 0-100 ppm
Minimum Alarm 1 Set Point	10 ppm
Repeatability	< ± 30 % of full scale
Linearity	< ± 30 % of full scale
Response time t62.5	≤ 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	< ± 10 ppm (at 10 °C to 30 °C)
Sensitivity	< ± 30 % of full scale (at 10 °C to 30 °C)
Operating humidity	15-90 %RH (Sensor Datasheet)
Effect of Humidity	
Zero	< ± 10 ppm (at 45 %RH)
Sensitivity	< ± 30 % of full scale (at 45 %RH)
Operating Pressure	90 – 110kPa (Sensor Datasheet)
Effect of Position	No effect in typical application
Long Term Drift	
Zero	< ± 10 ppm
Sensitivity	< ± 30 % of full scale
Calibration Gas	Carbonyl Sulfide (50 ppm COS)
Challenge Gas (Bump Test)	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.

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 / Vapor	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 (IPA)*	C ₃ H ₇ OH	500	0

* 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.

Find out more

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