Midas[®] sensor cartridge specifications

Oxygen (O₂) MIDAS-S-O2X

Gas Measured	Oxygen (O ₂)		
Cartridge Part Number	MIDAS-S-02X 1 year standard warranty MIDAS-E-02X 2 year extended warranty		
Sensor Technology	3 electrode electrochemical cell		
Measuring Range (ppm)	0 ₂ 0 – 25% v/v		
Minimum Alarm 1 Set Point	5% v/v		
Lower Detectable Limit (LDL)	5% v/v		
Repeatability	$< \pm 0.04\%$ v/v		
Linearity	$<\pm$ 0.2% v/v		
Response Time t _{62.5}	< 10 seconds		
Sensor Cartridge Life Expectancy	≥ 24 months under typical application conditions		
Operating Temperature Effect of Temperature Zero Sensitivity	0°C to +40°C (32°F to 104°F) $< \pm 0.3\%$ of measured value / °C		
Operating Humidity (continuous) Effect of Humidity Zero Sensitivity	15 – 90% rH Follows actual concentration of 0, present (eg. 20.9% v/v @ 30% rH, 20.04% v/v @ 99% rH / 40°C)		
Operating Pressure	70 – 110kPa		
Effect of Position	No effect in typical application		
Long Term Drift Zero Sensitivity	No drift $< \pm 2.5\%$ of measured value / year		
Calibration Gas	Oxygen (0 ₂)		
Challenge Gas (Bump Test)	Air mixture		
Warm Up Time	< 30 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

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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 / Vapor	Chemical Formula	Concentration applied (ppm)	Reading (% 0 ₂)
Carbon Dioxide	CO ⁵		Enhance O_2 reading by 0.3% / % CO_2
Hydrogen	H_2	100% v/v	-9
Methane	CH_4	100% v/v	No response
Nitrogen Dioxide	NO ₂	25ppm in air	No response

*Oxygen detection products must only be used to detect oxygen depletion in air