Honeywell

Midas® Sensor Cartridge Specifications

Ozone (O_3)
MIDAS-E-O3X, MIDAS-S-O3X

Gas Measured	Ozone (O_3)
Cartridge Part Number	MIDAS-S-O3X 1 year standard warranty MIDAS-E-O3X 2 year extended warranty
Sensor Technology	3 electrode electrochemical cell
Measuring Range	O_3 0 – 0.4ppm
Minimum Alarm 1 Set Point	0.050ppm
Lower Detection Limit	0.044ppm
Linearity	<± 5% of measured value
Repeatability	<± 5% of measured value
Resolution	0.002ppm
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	<± 0.0018ppm / °C
Sensitivity	<± 0.5% of measured value / °C
Operating Humidity	10 to 90% RH
Effect of Humidity	
Zero	Abrupt changes will cause a short-term drift
Sensitivity	<± 1% of measured value / % RH
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift	
Zero	No drift
Sensitivity	< 5% of measured value / 6 months
Calibration Gas	Ozone (O_3)
Bump Test Gas	Chlorine (Cl_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 (ppm O_3)
Ammonia	NH_3	100	-3
Arsine	AsH_3	0.2	0
Carbon Dioxide	CO_2	5000	0
Carbon Monoxide	CO	100	0
Chlorine	Cl_2	1	1.2
Chlorine Dioxide	ClO_2	1	1.5
Chlorine Trifluoride	ClF_3	1	1(Theoretical)
Fluorine	F_2	0.1	0.1
Hydrazine	N_2H_4	3	-3
Hydrogen	H_2	3000	0
Hydrogen Sulfide	H_2S	20	1.6
Nitrogen Dioxide	NO	100	1
Nitrogen	N_2	100%	0
Nitrogen Dioxide	NO_2	10	6
Sulfur Dioxide	SO_2	20	-0.2

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
www.honeywellanalytics.com
Korea Tel: +82 (0)2 6909 0300
Singapore Tel: +65-65803776
Australia Tel: +61-3-94642770
Japan Tel: +81-3-6730-7320
India Tel: +91-124 4752700

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