Ozone

O3 3E 1 F

Rev. 11/2011

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FEATURES

Amperometric 3 electrode sensor cell
Long life time
High reliability
Fast response
Fixed organic gel electrolyte

TYPICAL APPLICATIONS

Environmental monitoring
Indoor Air Quality, water treatment plants

PART NUMBER INFORMATION

MINI	1531-231-30009
4 series adaptation	1531-231-30049
7 series adaptation	1531-231-30079

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TECHNICAL SPECIFICATIONS

Measuring Range	0–1 ppm
Sensitivity Range	450 +/- 150 nA/ppm (negative signal)
Zero Current at 20 °C	< ± 10 nA
Resolution at 20 °C	< 0.03 ppm
Bias Potential	0 mV
Linearity	< 10% full scale
Response Time at 20 °C	
t50	< 15 s calculated from 3 min. exposure time[1)]
t90	< 60 s calculated from 3 min. exposure time[1)]
Long Term Sensitivity Drift	< 5% per month [2)]
Operation Conditions	
Temperature Range	-20 °C to +40 °C
Humidity Range	15–90% r.H., non–condensing
Effect of Humidity	abrupt changes will cause a short term drift
Sensor Life Expectancy	> 18 months
Warranty	12 months

1) At approx. 200 ccm/ min. (tolerance range to t_{90} : 30 to 60 sec.; depend on air velocity; minimum gas flow 5 l/h)

2) At 20 °C and 30-50% r.H.; Sensitivity might increase over life time depending on application; high air flow conditions might effect life time

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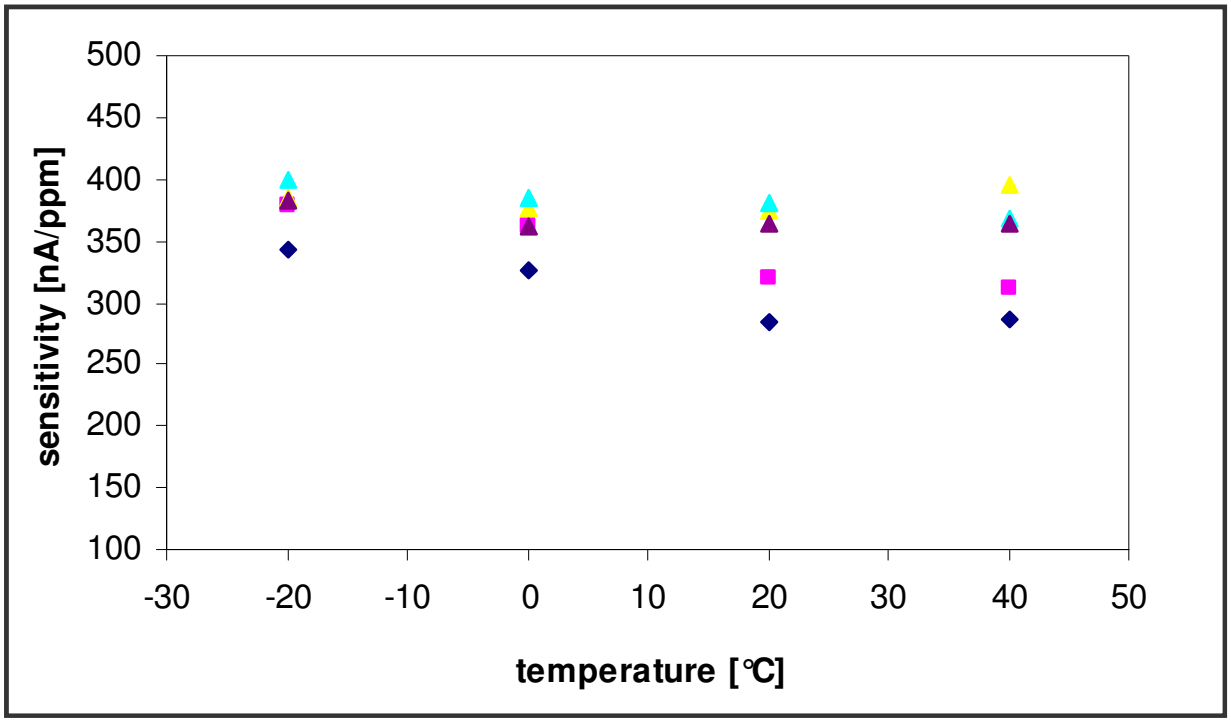
OUTPUT vs. TEMPERATURE:



ZERO READING vs. TEMPERATURE: no effect

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CROSS SENSITIVITIES AT 20 °C

Gas	Concentration	Reading [ppm]
Bromine, Iodine		yes; n/d
Carbon Dioxide	5000 ppm	0
Carbon Monoxide	100 ppm	0
Chlorine	1 ppm	1.2
Chlorine Dioxide	1 ppm	1.5
Hydrazine	3 ppm	-3
Hydrogen	3000 ppm	0
Hydrogen Sulfide	20 ppm	-1.6 [1)]
Nitrogen	100 %	0
Nitrogen Dioxide	10 ppm	6

1) Continuous exposure at ppm level over more than 30 min. might blind the sensor.

Notes:
1. Interference factors may differ from sensor to sensor and with life time. It is not adviseable to calibrate with interference gases.
2. This table does not claim to be complete. The sensor might also be sensitive to other gases.

Safety Note

This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardise the safety of people and property.

Attention

Use of this range of sensors requires complete understanding of the instructions.
Before using the sensors, please carefully read ‘Application Notes’.

For further assistance on sensor selection and use, please contact a member of the Technical Sales team.