

## Ozone

### Sensoric O3 3E 1 F



# Product Data Sheet

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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 |
| SENSORIC CLASSIC        | 1531-231-30069 |
| CTL 4 series adaptation | 1531-231-30049 |
| CTL 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      |   |
| t <sub>50</sub>             | < 15 s calculated from 3 min. exposure time <sup>1)</sup> |
| t <sub>90</sub>             | < 60 s calculated from 3 min. exposure time <sup>1)</sup> |
| Long Term Sensitivity Drift | < 5% per month <sup>2)</sup>                              |
| 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<sub>90</sub> : 30 to 60 sec.; depend on air velocity; minimum gas flow 5 l/h)

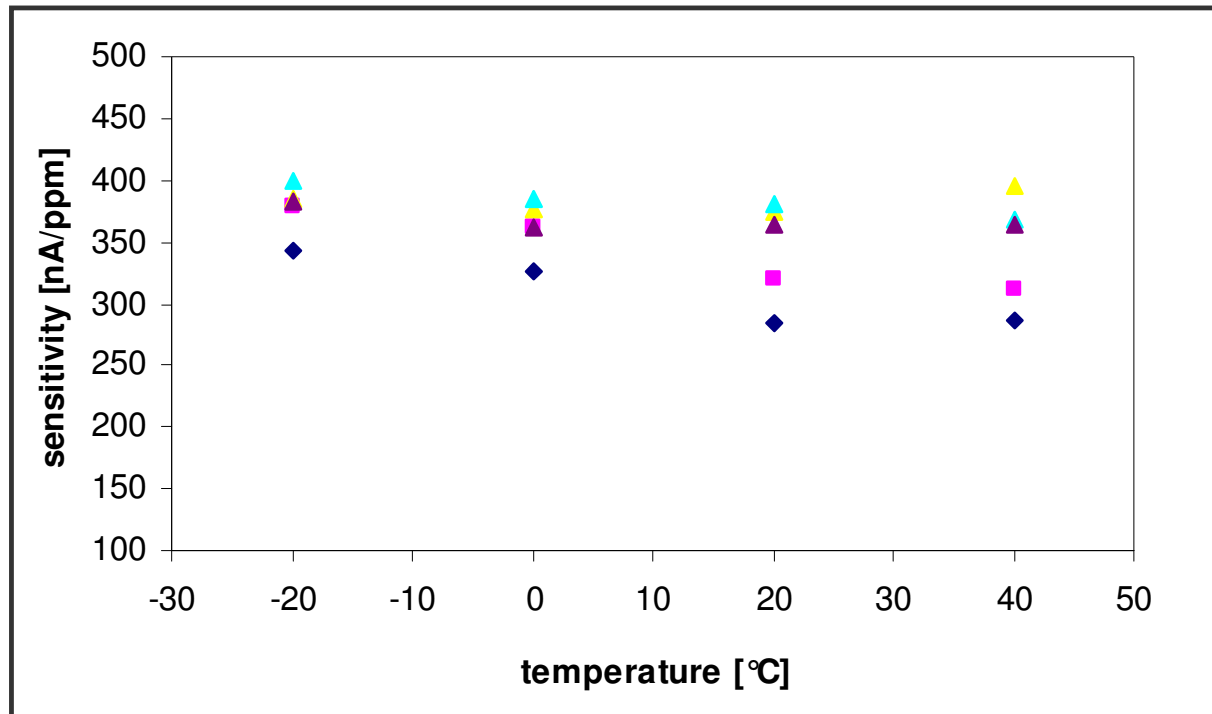
2) At 20 °C and 30-50% r.H.; Sensitivity might increase over life time depending on application; high air flow conditions might effect life time

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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 <sup>1)</sup> |
| 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 advisable to calibrate with interference gases.
2. This table does not claim to be complete. The sensor might also be sensitive to other gases.

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## 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 jeopardize the safety of people and property.

## Attention

Use of the Sensoric range sensors requires complete understanding of the instructions. Before using Sensoric range sensors please carefully read 'Application Notes' which can be found at [www.citytech.com](http://www.citytech.com) under the heading 'Support' -> 'Application Notes' -> 'Sensoric'

Product Safety Data Sheets (PSDS) can be obtained at [www.citytech.com](http://www.citytech.com) under the heading 'Support' -> 'Product Safety Datasheets'

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

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