

## Ammonia

### Sensoric NH3 3E 100

# Product Data Sheet

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### FEATURES

Amperometric 3 electrode sensor cell  
Fixed organic gel electrolyte  
No CO<sub>2</sub> interference  
0 volt bias operation

### TYPICAL APPLICATIONS

TLV-monitoring, leakage detection  
Fixed point applications in cold storages & refrigeration plants only  
For other applications please use NH3 3E SE versions  
No background concentrations of ammonia & alcohols\*

### PART NUMBER INFORMATION

|                         |                |
|-------------------------|----------------|
| MINI                    | 1845-031-30009 |
| SENSORIC CLASSIC        | 1845-031-30069 |
| CTL 4 series adaptation | 1845-031-30049 |
| CTL 7 series adaptation | 1845-031-30079 |

#### Note:

- Background concentrations of ammonia and alcohols might shorten life time of sensor
- Exposure to high concentrations of alcohols can cause a high loss of sensor sensitivity

Sensoric deems the data contained herein as factual, and the opinions expressed are those of qualified experts based on the results of tests conducted. The above data can not be used as a warranty provision or representation for which Sensoric assumes legal responsibility. The data are offered solely for consideration, investigation and verification. Any use of this information is subject to federal, state and local laws and regulations.

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### TECHNICAL SPECIFICATIONS

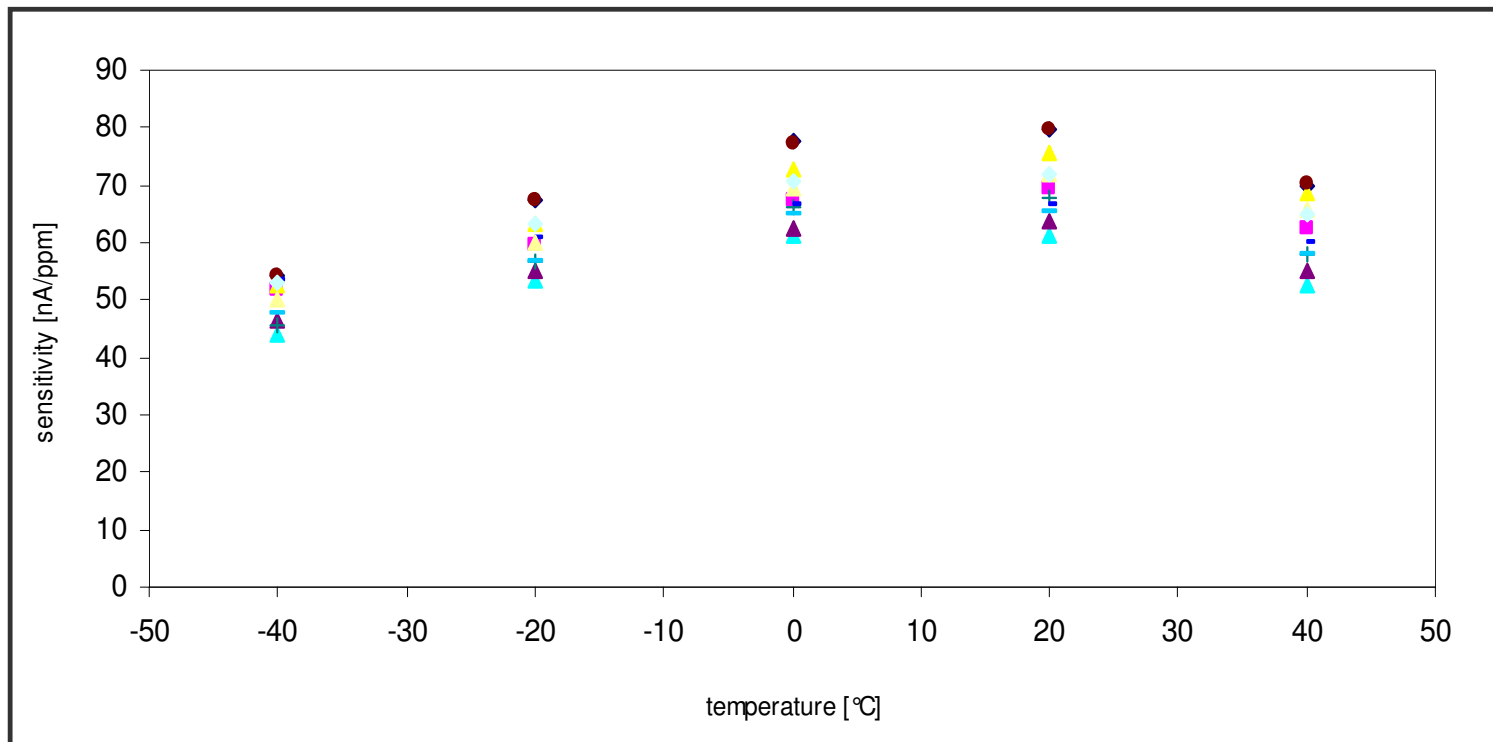
|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| Measuring Range             | 0–100 ppm                                                              |
| Sensitivity Range           | 90 nA/ppm $\pm$ 40 nA/ppm                                              |
| Zero Current at 20 °C       | < $\pm$ 150 nA                                                         |
| Resolution at 20 °C         | <2 ppm                                                                 |
| Bias Potential              | 0 mV                                                                   |
| Linearity                   | <5% full scale                                                         |
| Response Time at 20 °C      |                                                                        |
| t <sub>50</sub>             | <20 s      calculated from 5 min. exposure time                        |
| t <sub>90</sub>             | <120 s      calculated from 5 min. exposure time                       |
| Long Term Sensitivity Drift | <10% per 6 months                                                      |
| Operation Conditions        |                                                                        |
| Temperature Range           | -40 °C to +40 °C                                                       |
| Humidity Range              | 15–90% r.H, non–condensing                                             |
| Effect of Humidity          | an abrupt change of r.H. will cause a short term drift of zero reading |
| Sensor Life Expectancy      | > 18 months in air                                                     |
| Warranty                    | 12 months                                                              |

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### OUTPUT vs. TEMPERATURE:

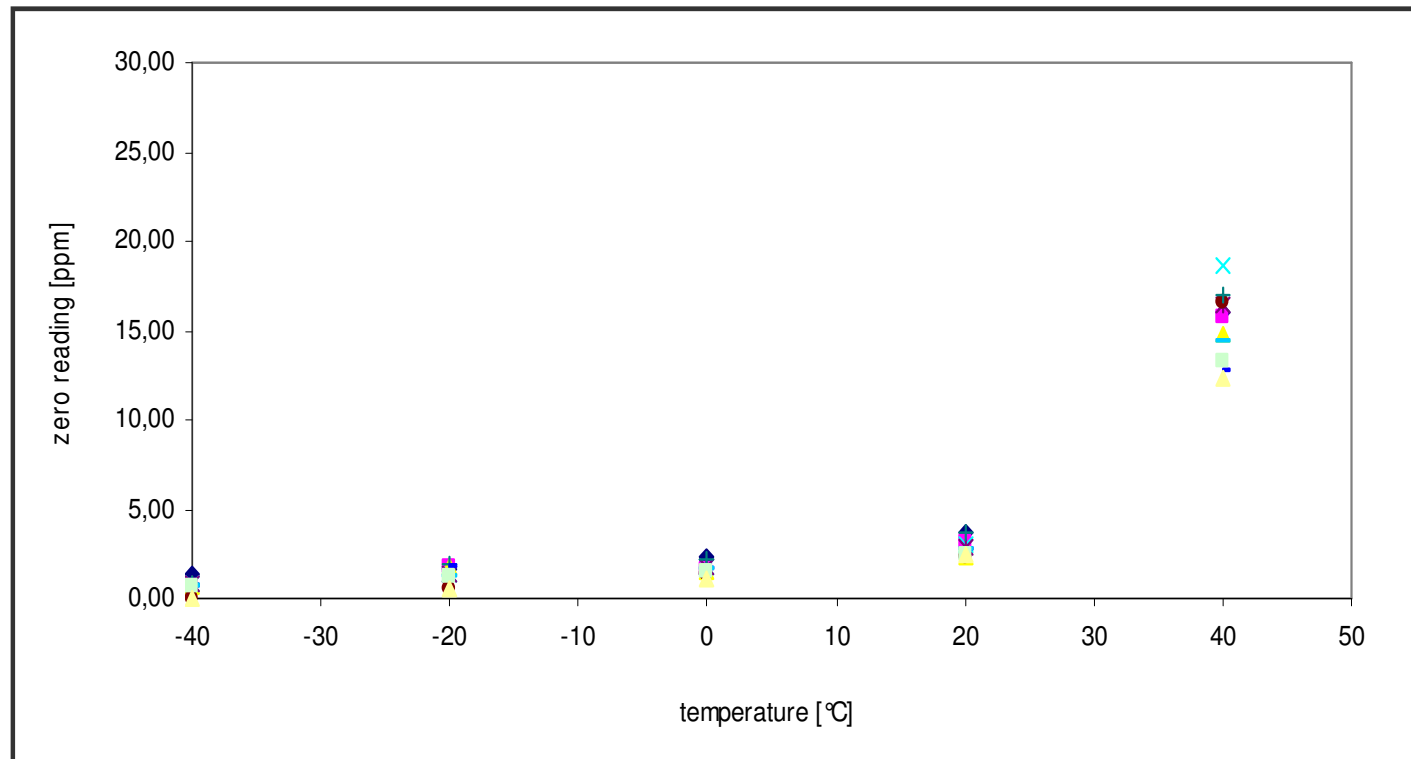


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### ZERO READING vs. TEMPERATURE:



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### CROSS SENSITIVITIES AT 20°C

| Gas              | Concentration | Reading [ppm] |
|------------------|---------------|---------------|
| Alcohols         | 1000 ppm      | yes / n.d.    |
| Carbon Monoxide  | 100 ppm       | 40            |
| Chlorine         | 1 ppm         | -6            |
| Nitrogen Dioxide | 10 ppm        | -15           |
| Sulfur Dioxide   | 20 ppm        | yes / n.d.    |
| Hydrogen         | 10000 ppm     | 1000          |
| Hydrogen Sulfide | 20 ppm        | 25            |

#### Notes:

1. Interference factors may differ from sensor to sensor and with life time. It is not advisable to calibrate with interference gases if not otherwise stated
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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