# Ammonia

# Sensoric NH3 3E 5000 SE

Rev. 11/2011

Sensoric Sensors are designed and manufactured in
Justus-von-Liebig-Str. 22, D- 53121 Bonn, Germany
**Tel**: ++49 (0) 228 52 66 40 **Fax**: ++49 (0) 228 5266439

# Sensoric NH3 3E 5000 SE

## FEATURES

Amperometric 3 electrode sensor cell
Low susceptibility to abrupt changes of humidity
High selectivity
0 voltage biased operation

## TYPICAL APPLICATIONS

Portable & fixed point applications
Monitoring of IDLH levels, General Industry, Chemical Industry, Food & Refrigeration Industry
No background concentrations of ammonia *

## PART NUMBER INFORMATION

| | |
|---|---|
| MINI | 1858-932-30009 |
| SENSORIC CLASSIC | 1858-932-30069 |
| CTL4 series adaptation | 1858-932-30049 |
| CTL 7 series adaptation | 1858-932-30079 |

Note:
* Background concentrations of ammonia might shorten life time of sensor .

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## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Measuring Range | 0–5000 ppm |
| Sensitivity Range | 4 nA/ppm ± 2 nA/ppm |
| Zero Current at 20°C | <± 100 nA, typically 40 nA |
| Resolution at 20°C | <50 ppm, typically 20 ppm |
| Bias Potential | 0 mV |
| Linearity | <10% full scale |
| | |
| Response Time at 20°C | |
| t50 | < 30 s calculated from 5 min. exposure time |
| t90 | < 90 s calculated from 5 min. exposure time |
| | |
| Long Term Sensitivity Drift | <10% per 6 months |
| | |
| Operation Conditions | |
| Temperature Range | -20°C to +40°C |
| Humidity Range | 15–90% r.H, non–condensing |
| | |
| Effect of Humidity | no effect on zero reading during abrupt changes of r.H. |
| | |
| Sensor Life Expectancy | > 24 months in air* |
| Warranty | 12 months |

Note:
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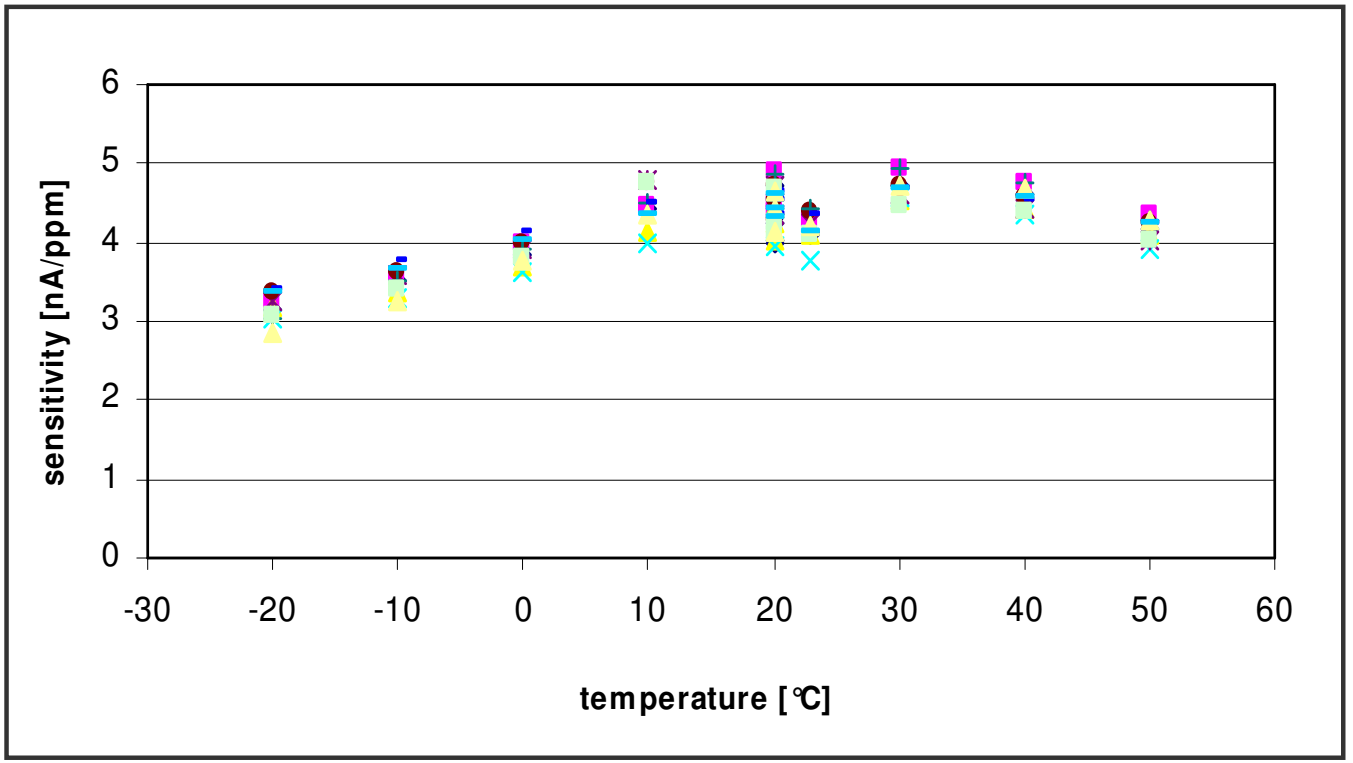
## OUTPUT vs. TEMPERATURE:

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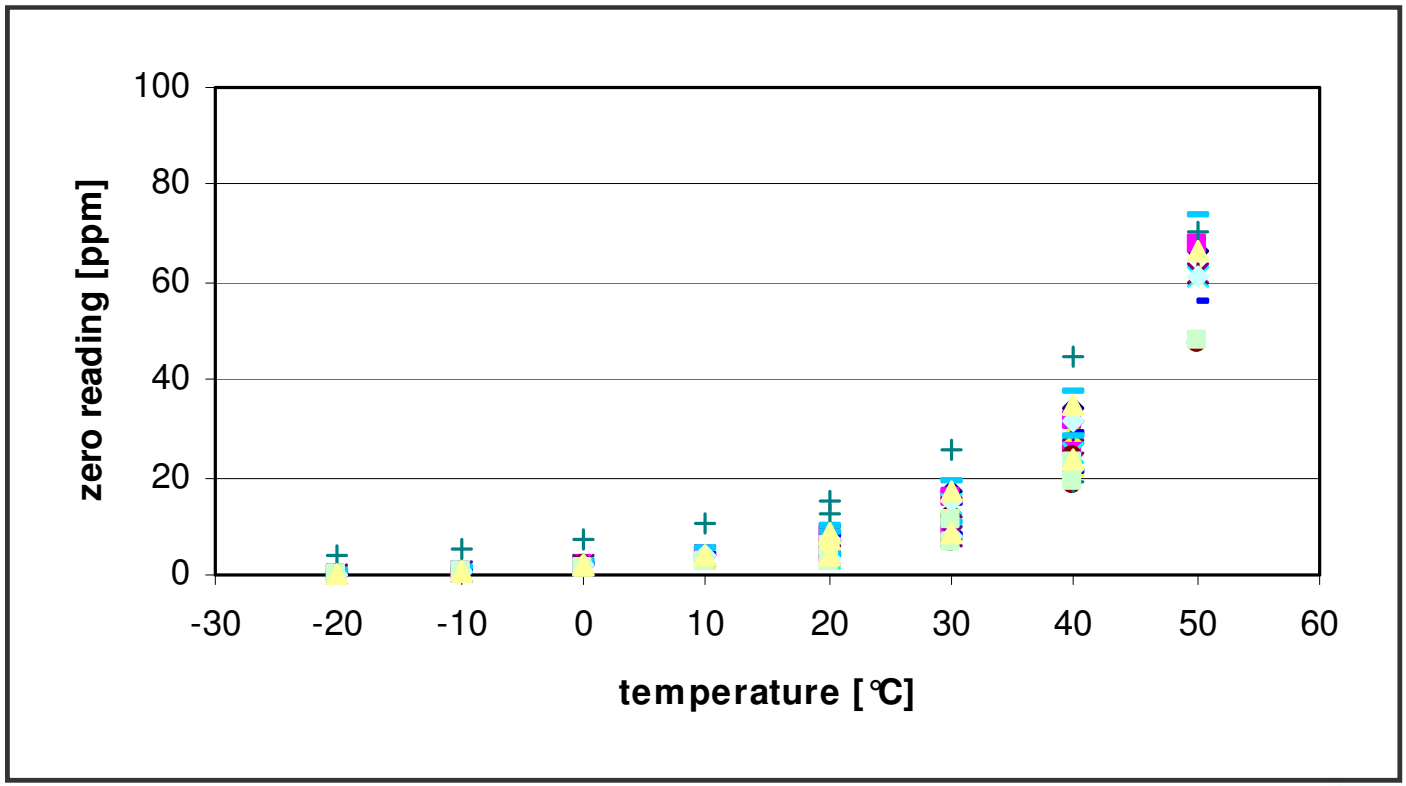
## ZERO READING vs. TEMPERATURE:

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# Sensoric NH3 3E 5000 SE

## CROSS SENSITIVITIES AT 20°C

| Gas | Concentration | Reading [ppm] |
|---|---|---|
| Alcohols | 1000 ppm | 0 |
| Carbon Monoxide | 100 ppm | 0 |
| Chlorine | 5 ppm | 0 |
| Nitrogen Dioxide | 10 ppm | 0 |
| Sulfur Dioxide | 20 ppm | expected / no data |
| Hydrogen | 3000 ppm | 0 |
| Hydrogen Sulfide | 20 ppm | yes / no data |

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.

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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 under the heading '*Support' -> 'Application Notes' -> 'Sensoric'*

Product Safety Data Sheets (PSDS) can be obtained at 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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