MEMBRAPOR

Specification Sheet

# Nitric Oxide Gas Sensor NO/C-100

NO Gas Sensor in Compact Housing

## Applications

- Continuous Air Quality Monitoring
- Safety and Environmental Control

## Measurement

| | |
|---|---|
| Operation Principle | 3-Electrode Electrochemical |
| Nominal Range | 0 - 100 ppm |
| Maximum Overload | 200 ppm |
| Inboard Filter | - |
| Output Signal | 550 ± 110 nA/ppm |
| Resolution (Electronics dependent) | < 0.1 ppm |
| T90 Response Time | < 10 s |
| Typical Baseline Range (pure air, 20°C) | 1 ppm to 4 ppm [1)] |
| Maximum Zero Shift (+20°C to +40°C) | see Graph |
| Repeatability | < 2 % of signal |
| Output Linearity | Linear |
| Gain (Only applies to 4-Electrode sensors) | - |

1) Fresh sensors with bias need 24 - 72 h for stabilization of the baseline.



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**Performance data recorded at 20 – 25 °C, 30 - 50% RH, 900 - 1100 mbar**
For further information about usage of Membrapor sensors, see application note MEM1. The data contained in this document is for guidance only. Membrapor AG accepts no liability for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. Customers should test under their own conditions to ensure that the sensors are suitable for their own requirements.

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## Electrical

| | |
|---|---|
| Rec. Load Resistor | 10 - 33 Ω |
| Bias (V_Sens-V_Ref) | +300 mV |
| Conformity to RoHS directive | RoHS Compliance |

## Environmental

| | |
|---|---|
| Relative Humidity Range | 15 % to 90 % RH non-condensing |
| Temperature Range | -40 °C to 50 °C |
| Pressure Range | Atmospheric ± 10% |
| Pressure Coefficient | N.D. |
| Humidity Effect | None |

## Lifetime

| | |
|---|---|
| Expected Operation Life | 3 years in air |
| Expected Long Term Output Drift in air | < 2 % signal loss per month |
| Filter Life | |
| Storage Life | 6 months in container |
| Rec. Storage Temperature | 5°C - 20°C |
| Warranty Period | 12 months from date of dispatch |



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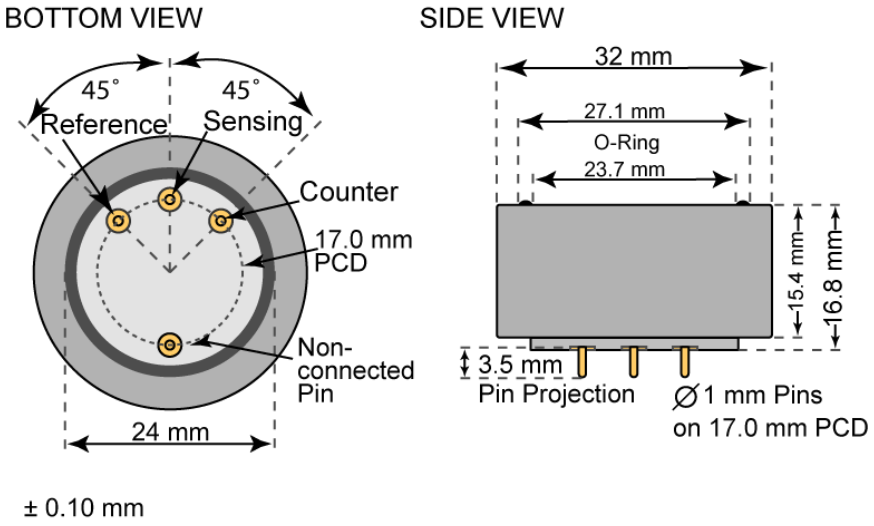
**Compact-Size Outline Dimensions**




± 0.10 mm

## Mechanical

| | |
|---|---|
| Weight | 13 g |
| Orientation | Any |
| Housing material | Polycarbonate |

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## Cross Sensitivity Data

The table below does not claim to be complete. Interfering gases should not be used for calibration. Please contact Membrapor AG for further support regarding cross sensitivities.

| Interfering Gas | Concentration [ppm] | Reading [ppm] |
|---|---|---|
| CO | 300 | 0 |
| $H_2$ | 300 | 0 |
| $H_2S$ | 15 | < 5 |
| $NO_2$ | 20 | < 5 |
| $SO_2$ | | N.D. |

## Important Application Notes

• To remove effect of SO2 use NO sensor with inboard filter.



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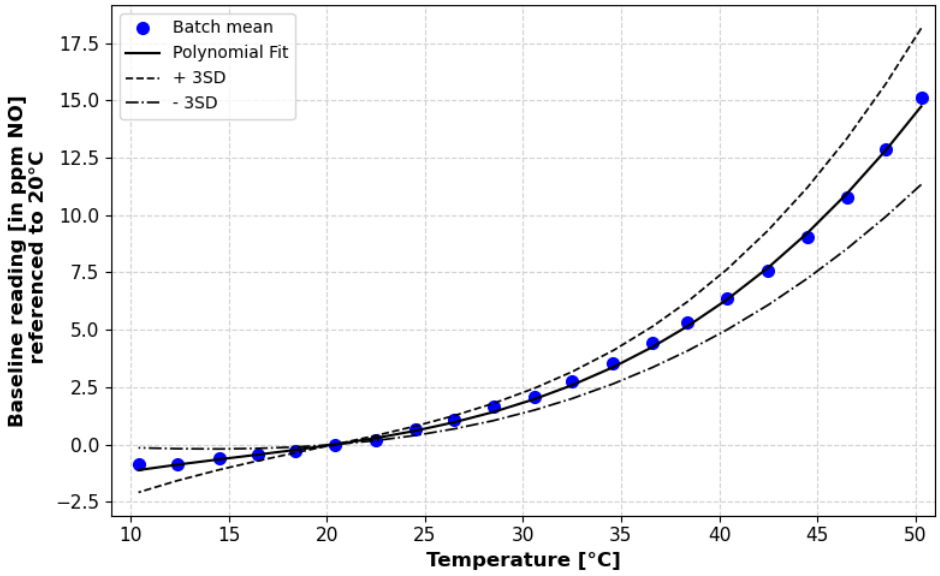
## Temperature dependence

The output of an electrochemical sensor varies with temperature. The graphs below show the temperature-dependent variation of baseline and sensitivity, respectively. The results shown here are raw data (batch average) without any post-processing steps. The sensitivity and baseline are referenced to the signal at 20°C (reference point).
Please note: It is highly recommended to acquire the temperature dependence curves with the whole instrument. The sampling system, the humidity, the electronics and the interaction between the electronics and the sensor have a significant impact on the temperature dependence of the final measurement reading.




Baseline shifted with respect to reference point at 20°C.



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