

DrägerSensor® XXS NH₃

Order no. 68 10 888

| Used in | Plug & Play | Replaceable | Guaranty | Expected sensor life | Selective filter |
|------------------|-------------|-------------|----------|----------------------|------------------|
| Dräger Pac 8000 | no | yes | 1 year | > 2 years | no |
| Dräger X-am 5000 | no | yes | 1 year | > 2 years | no |
| Dräger X-am 5600 | no | yes | 1 year | > 2 years | no |
| Dräger X-am 8000 | no | yes | 1 year | > 2 years | no |

MARKET SEGMENTS

Food and beverage, poultry farming, power generation, inorganic chemicals, fertilizer production, hazmat, fumigation, metal processing, petrochemical, pulp and paper.

TECHNICAL SPECIFICATIONS

| | |
|--|--------------------------------------|
| Detection limit: | 4 ppm |
| Resolution: | 1 ppm |
| Measurement range: | 0–300 ppm NH ₃ (ammonia) |
| Response time: | ≤ 10 seconds (t ₅₀) |
| Precision | |
| Sensitivity: | ≤ ± 3% of measured value |
| Long-term drift, at 20°C (68°F) | |
| Zero point: | ≤ ± 5 ppm/year |
| Sensitivity: | ≤ ± 2% of measured value/month |
| Warm-up time: | ≤ 12 hours |
| Ambient conditions | |
| Temperature*: | (–40 to 50)°C (–40 to 122)°F |
| Humidity*: | (10 to 90)% RH |
| Pressure: | (700 to 1,300) hPa |
| Influence of temperature | |
| Zero point: | ≤ ± 5 ppm |
| Sensitivity: | ≤ ± 5% of measured value |
| Influence of humidity | |
| Zero point: | ≤ ± 0.1 ppm/% RH |
| Sensitivity: | ≤ ± 0.2% of measured value/% RH |
| Test gas: | approx. 10 to 75 ppm NH ₃ |

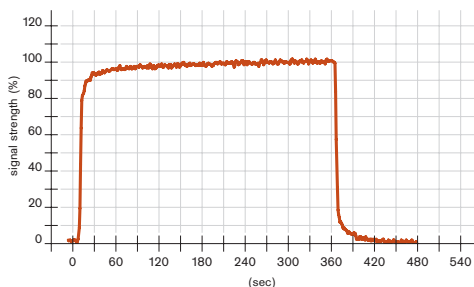
The sensor is not suitable for monitoring a permanent NH₃ concentration.

*Sudden temperature or humidity changes lead to dynamic effects (fluctuations).
These dynamic effects decrease within 2 to 3 minutes.

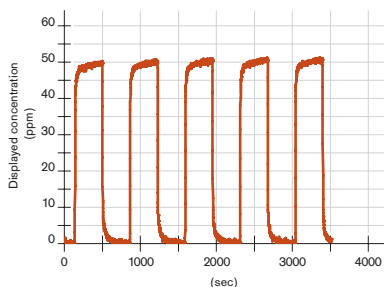
SPECIAL CHARACTERISTICS

A fast response time and excellent repeatability are just two examples of this sensor's special characteristics.

Sensor reaction to NH₃ at 20 °C/68 °F
Flow = 0.5 l/min, 50 ppm NH₃



Repeatability of NH₃ Sensor with 50 ppm NH₃,
average from five sensors



The values shown in the following table are standard and apply to new sensors. The values may fluctuate by $\pm 30\%$. The sensor may also be sensitive to additional gases (for more information, please contact Dräger). Gas mixtures may be displayed as the sum of all components. Gases with a negative cross sensitivity may displace an existing concentration of NH₃. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES

| Gas/vapor | Chem. symbol | Concentration | Display in ppm NH ₃ |
|---------------------|--|---------------|--------------------------------|
| Acetylene | C ₂ H ₂ | 100 ppm | No effect |
| Carbon dioxide | CO ₂ | 10 Vol.-% | No effect |
| Carbon monoxide | CO | 1,000 ppm | No effect |
| Chlorine | Cl ₂ | 10 ppm | ≤ 30 (-) |
| Diethanolamine | C ₄ H ₁₁ NO ₂ | 10 ppm | 5 ppm |
| Ethanol | C ₂ H ₅ OH | 250 ppm | ≤ 40 |
| Ethylidimethylamine | C ₄ H ₁₁ N | 50 ppm | 30 ppm |
| Hydrogen | H ₂ | 1,000 ppm | ≤ 4 |
| Hydrogen chloride | HCl | 20 ppm | ≤ 15 (-) |
| Hydrogen sulfide | H ₂ S | 20 ppm | ≤ 70 |
| Isobutylene | (CH ₃) ₂ CCH ₂ | 100 ppm | No effect |
| Methane | CH ₄ | 0.9 Vol.-% | No effect |
| Nitrogen dioxide | NO ₂ | 20 ppm | ≤ 10 (-) |
| Nitrogen monoxide | NO | 20 ppm | ≤ 10 |
| Ozone | O ₃ | 0.5 ppm | No effect |
| Phosphine | PH ₃ | 1 ppm | ≤ 2 |
| Sulfur dioxide | SO ₂ | 20 ppm | No effect |

(-) Indicates negative deviation