

DrägerSensor® XS EC Amine

Order no. 68 09 545

| Used in | Plug & Play | Replaceable | Guaranty | Expected sensor life | Selective filter |
|------------------|-------------|-------------|----------|----------------------|------------------|
| Dräger X-am 7000 | yes | yes | 1 year | > 1.5 years | – |

MARKET SEGMENTS

Foundries, refineries, power plants

TECHNICAL SPECIFICATIONS

| | | |
|--|--|------|
| Detection limit: | 2 ppm | |
| Resolution: | 1 ppm | |
| Measurement range/ | 0 to 100 ppm CH ₃ NH ₂ (methylamine) | 0.70 |
| Relative sensitivity | 0 to 100 ppm (CH ₃) ₂ NH (dimethylamine) | 0.50 |
| | 0 to 100 ppm (CH ₃) ₃ N (trimethylamine) | 0.50 |
| | 0 to 100 ppm C ₂ H ₅ NH ₂ (ethylamine) | 0.70 |
| | 0 to 100 ppm (C ₂ H ₅) ₂ NH (diethylamine) | 0.50 |
| | 0 to 100 ppm (C ₂ H ₅) ₃ N (triethylamine) | 0.50 |
| | 0 to 100 ppm NH ₃ (ammonia)* | 1.00 |
| Response time: | ≤ 30 seconds (T ₅₀) | |
| Measurement accuracy | | |
| Sensitivity: | ≤ ± 3% of measured value | |
| Long-term drift, at 20°C (68°F) | | |
| Zero point: | ≤ ± 2 ppm/month | |
| Sensitivity: | ≤ ± 3% 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. 5 to 100 ppm NH ₃ , CH ₃ NH ₂ , (CH ₃) ₂ NH, (CH ₃) ₃ N, C ₂ H ₅ NH ₂ , (C ₂ H ₅) ₂ NH, (C ₂ H ₅) ₃ N | |

* lead compound

SPECIAL CHARACTERISTICS

Six different amines can be detected using this sensor. It is sufficient to calibrate it using an ammonia test gas. By doing so, all of the other amines are then automatically calibrated.

The values shown in the following table are standard and apply to new sensors. The values maybe 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 amine. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES

| Gas/vapor | Chem. symbol | Concentration | Display in ppm NH ₃ |
|---------------------|-----------------------------------|---------------|--------------------------------|
| Acetone | CH ₃ COCH ₃ | 1,000 ppm | No effect |
| Carbon dioxide | CO ₂ | 1.5 Vol. % | ≤ 5 ⁽⁻⁾ |
| Carbon monoxide | CO | 200 ppm | No effect |
| Chlorine | Cl ₂ | 10 ppm | ≤ 20 ⁽⁻⁾ |
| Ethene | C ₂ H ₄ | 1,000 ppm | ≤ 3 |
| Ethine | C ₂ H ₂ | 200 ppm | No effect |
| Hydrogen | H ₂ | 1,000 ppm | ≤ 3 |
| Hydrogen cyanide | HCN | 25 ppm | ≤ 3 |
| Hydrogen sulfide | H ₂ S | 20 ppm | ≤ 50 |
| Methane | CH ₄ | 10 Vol. % | No effect |
| Methanol | CH ₃ OH | 200 ppm | ≤ 3 |
| Nitrogen dioxide | NO ₂ | 20 ppm | ≤ 10 ⁽⁻⁾ |
| Nitrogen monoxide | NO | 20 ppm | ≤ 10 |
| Phosphine | PH ₃ | 5 ppm | ≤ 8 |
| Sulfur dioxide | SO ₂ | 20 ppm | No effect |
| Tetrahydrothiophene | C ₄ H ₈ S | 10 ppm | ≤ 10 |

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