

## DrägerSensor® XXS NO<sub>2</sub> LC

Order no. 68 12 600

| 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

Mining and tunnelling (emissions from diesel-engined vehicles), inorganic chemistry, metal processing, oil & gas, petrochemical industry, shipping, rocket technology

### TECHNICAL SPECIFICATIONS

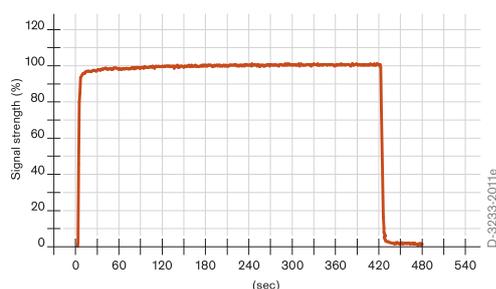
|  |  |
|--|--|
| <b>Detection limit:</b>                | 0.04 ppm                                       |
| <b>Resolution:</b>                     | 0.02 ppm                                       |
| <b>Measurement range:</b>              | 0 to 50 ppm NO <sub>2</sub> (nitrogen dioxide) |
| <b>Response time:</b>                  | ≤ 15 seconds (t <sub>50</sub> )                |
| <b>Precision</b>                       |  |
| Sensitivity:                           | ≤ ± 3% of measured value                       |
| <b>Long-term drift, at 20°C (68°F)</b> |  |
| Zero point:                            | ≤ ± 0.04 ppm/year                              |
| Sensitivity:                           | ≤ ± 2% of measured value/month                 |
| <b>Warm-up time:</b>                   | ≤ 120 minutes                                  |
| <b>Ambient conditions</b>              |  |
| Temperature:                           | (-30 to 50)°C (-22 to 122)°F                   |
| Humidity:*                             | (15 to 80)% RH                                 |
| Pressure:                              | (700 to 1,300) hPa                             |
| <b>Influence of temperature</b>        |  |
| Zero point:                            | No effect                                      |
| Sensitivity:                           | ≤ ± 0.5% of measured value                     |
| <b>Influence of humidity</b>           |  |
| Zero point:                            | No effect                                      |
| Sensitivity:                           | ≤ ± 0.1% of measured value/% RH                |
| <b>Test gas:</b>                       | approx. 0.5 to 45 ppm NO <sub>2</sub>          |

\*A use or storage over a longer period below the specified relative humidity may cause a change of sensor sensitivity due to dehydration. This effect is reversible once the relative humidity increases. Please consider the storage conditions stated on the packaging or in the instruction for use.

## SPECIAL CHARACTERISTICS

Low cross sensitivities (e.g against SO<sub>2</sub>, H<sub>2</sub>S, NO and CO), which allows a selective measurement of NO<sub>2</sub>. With a detection limit of 0.04 ppm and a quick response time this sensor is excellent to measure around the limit values.

Typical gas response of XXS NO<sub>2</sub> LC at 20 °C  
Flow = 0.5 l/min, 1 ppm NO<sub>2</sub>



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 NO<sub>2</sub>. To be sure, please check if gas mixtures are present.

## RELEVANT CROSS-SENSITIVITIES

| Gas/vapor         | Chem. symbol                                     | Concentration | Display in ppm NO <sub>2</sub> LC |
|-------------------|--|---------------|-----------------------------------|
| Acetylene         | C <sub>2</sub> H <sub>2</sub>                    | 100 ppm       | No effect                         |
| Ammonia           | NH <sub>3</sub>                                  | 30 ppm        | No effect                         |
| Arsine            | AsH <sub>3</sub>                                 | 0.5 ppm       | No effect                         |
| Carbon dioxide    | CO <sub>2</sub>                                  | 5 Vol.-%      | No effect                         |
| Carbon monoxide   | CO   | 2,000 ppm     | No effect                         |
| Chlorine          | Cl <sub>2</sub>                                  | 1 ppm         | ≤ 1.5                             |
| Chlorine dioxide  | ClO <sub>2</sub>                                 | 1 ppm         | ≤ 1.5                             |
| Ethane            | C <sub>2</sub> H <sub>6</sub>                    | 0,1 Vol.-%    | No effect                         |
| Ethanol           | C <sub>2</sub> H <sub>5</sub> OH                 | 250 ppm       | No effect                         |
| Hydrazine         | N <sub>2</sub> H <sub>4</sub>                    | 1 ppm         | No effect                         |
| Hydrogen          | H <sub>2</sub>                                   | 0,1 Vol.-%    | No effect                         |
| Hydrogen chloride | HCl  | 40 ppm        | No effect                         |
| Hydrogen cyanide  | HCN  | 50 ppm        | No effect                         |
| Hydrogen sulfide  | H <sub>2</sub> S                                 | 1 ppm         | ≤ 0.03 <sup>(-)</sup>             |
| Isobutylene       | (CH <sub>3</sub> ) <sub>2</sub> CCH <sub>2</sub> | 100 ppm       | No effect                         |
| Methane           | CH <sub>4</sub>                                  | 5 Vol.-%      | No effect                         |
| Nitrogen monoxide | NO   | 30 ppm        | No effect                         |
| Ozone             | O <sub>3</sub>                                   | 0,5 ppm       | ≤ 1                               |
| Phosphine         | PH <sub>3</sub>                                  | 0,5 ppm       | No effect                         |
| Propane           | C <sub>3</sub> H <sub>8</sub>                    | 1 Vol.-%      | No effect                         |
| Sulfur dioxide    | SO <sub>2</sub>                                  | 1 ppm         | ≤ 0,12 <sup>(-)</sup>             |

(-) Indicates negative deviation