

# NO<sub>x</sub> Sensor

P/N 56.03.003

## Dimensions

- Length of probe: 24 mm (0.95")
- Length of sensing element: 83.3 mm (3.28")
- Evaluation unit (length x width x height): 104.4 mm x 72.8 mm x 24.3 mm (4.11" x 2.87" x 0.96")
- Length of connection cable: 980 mm (38.58")

## Measuring Ranges

- Nitrogen oxide (NO<sub>x</sub>): 0 ppm to 3,012 ppm
- Measuring accuracy nitric oxide (NO)

Measurement	Accuracy new at O <sub>2</sub> ≥ 1 vol%	Accuracy aged at O <sub>2</sub> ≥ 1 vol%
0 ppm	± 8 ppm abs	± 10 ppm abs
90 ppm	± 10 ppm abs	± 12 ppm abs
1,500 ppm	± 8 % rel	± 10 % rel

- Cross sensitivity NO<sub>x</sub> measurement: Ammonia (NH<sub>3</sub>) typ. 110 %
- Sensitivity NO<sub>x</sub> measurement: Nitrogen dioxide (NO<sub>2</sub>) typ. 85 %
- Oxygen (O<sub>2</sub>): 0 % to 20.95 %
- Measuring accuracy oxygen (O<sub>2</sub>)

Measurement	Composition	Accuracy new	Accuracy aged
0 %	N <sub>2</sub> with 1 % H <sub>2</sub> O	± 0.2 % abs	± 0.3 % abs
8.29 %	N <sub>2</sub> with 0 % H <sub>2</sub> O	± 6 % rel	± 8 % rel
12 %	N <sub>2</sub> with 0 % H <sub>2</sub> O	± 6 % rel	± 8 % rel
20.95 %	N <sub>2</sub> with 0 % H <sub>2</sub> O	± 6 % rel	± 8 % rel

- Exhaust gas measurement temperature range: -40 °C to +850 °C (-40 °F to +1,562 °F)
- Exhaust gas velocity: 10 m/s to 100 m/s
- NO<sub>2</sub> correction factor (K<sub>NO2</sub>): 0.85 (set ex works)

## Mechanical Data

- IP protection rating as per ISO 20653:2013: IP 6K9K with mating plug of same protection rating connected to evaluation unit and sensing element mounted in suitable welding boss from MOTORTECH
- Service life: 8,000 operating hours with ambient temperature max. +90 °C (+194 °F) at evaluation unit

## Climatic Environmental Conditions

- Operating temperature evaluation unit: -40 °C to +90 °C (-40 °F to +194 °F)
- Operating pressure range: 600 mbar abs to 1,500 mbar abs



**Electrical Data**

- Power supply 24 V DC (16 V DC to 32 V DC)
- Maximum power consumption 75 W
- Required current in measuring operation Max. 1.7 A<sub>rms</sub>, 6.3 A<sub>peak</sub>
- Connector evaluation unit 5-pole, connector, Hirschmann, MLK, variant 1, code A

**Communication**

- Interface CAN 2.0B
- Network protocol CAN SAE J1939
- Data rate CAN bus 250 kbit/s

**Overview Drawings**
