

Product Specification of:

NO - Trace gas sensor / Type I-29D



.: KEY FEATURE .:

Factory programmed amperometric gas sensor designed with no warm-up time, designed to detect NO concentrations in the high ppm range, digital I²C signal.

All characteristics are based on conditions at 25°C, 50% RH and 1013 hPa and gas flow 300 mL/min.

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|---------------------------------|---|
| Operating Principle: | 3-electrode potentiostatic driven cell |
| Measurement Range: | 1 - 1000 ppm |
| Maximum Overload: | 1000 ppm |
| Resolution: | 15 Bit used (16 Bit processor, 1 Bit for algebraic sign) |
| Output signal: | 0 to 32768 |
| Power Consumption (maximum): | 2 mW (1000ppm NO test gas; 5.0V supply voltage) |
| Expected Operating Life: | 24 months, depending on application |
| Warm-Up Time | none |
| Electrical Connector: | 4 -pin Molex® (digital sensor output signal, I ² C interface) |
| Gas Connector: | fits for M16x1 DIN 13 |
| Sensitivity: | 3 - 10 Digits/ppm (depending on flow, flow feeding to the sensor, tubing system and dead spaces in manifold) |
| Baseline: | < ± 30 Digits |
| Response Time t ₉₀ : | < 20s (depending on flow, flow feeding to the sensor, tubing system and dead spaces in manifold) |
| Drift: | < 10% signal/year, depending on application |
| Repeatability: | < 2% (300s test gas - 300s zero gas - 300s test gas; 1ppm NO bal. N ₂ ; constant environmental conditions) |
| Linearity Error: | < 10% (20 to 1000ppm) |
| Temperature Compensation: | NTC on sensor PCB (sensor signal is not temperature compensated [separate temperature read out]; compensation by software necessary) |
| Operating Temperature: | 0 to 40 °C |
| Pressure Range: | 500 to 1250 hPa (complete sensor exposed to under-/overpressure) |
| Humidity Range: | 30 to 80 % RH |
| Interferences: | NO ₂ [5ppm] < 2.5% of NO sensitivity CO [249ppm] < 0.2% of NO sensitivity CO ₂ [5 Vol.%) < 0.1% of NO sensitivity H ₂ [480ppm] < 0.1% of NO sensitivity |
| Weight: | 26 - 28g |
| Material in Contact with Media: | PVDF, PTFE, stainless steel, FKM |



.: STORAGE CONDITIONS IN UNOPENED ORIGINAL PACKAGE .:

| | |
|--------------------|---|
| Temperature Range: | recommended: 5 to 25 °C maximum: -20 to 50 °C (< 72 hours) |
| Ambient Pressure: | 500 to 1250 hPa |
| Humidity: | up to 100% rH, non-condensing |

.: RELATED PRODUCTS .:

| Product | Part-No. | Housing Colour | Remarks |
|---------|----------|----------------|--|
| I-29D | 48 00 34 | - | potentiostat integrated, digital I ² C-signal |

This data sheet is subject to change without prior notice. [I-29D-Rev03-2019_0710.doc]

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