

Product Specification of:

NO - Trace gas sensor / Type I-28D



:: KEY FEATURE ::

Factory programmed amperometric gas sensor with no warm-up time, designed to detect NO concentrations in the high ppb / low 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.

Operating Principle:	3-electrode potentiostatic driven cell	
Measurement Range:	0.3 - 100 ppm	
Maximum Overload:	100 ppm	
Resolution:	15 Bit used (16 Bit processor, 1 Bit for algebraic sign)	
Output signal:	0 to 32768	
Electrical Connector:	4 -pin Molex® (digital sensor output signal, I ² C interface)	
Power Consumption (maximum):	2 mW (100ppm NO test gas; 5.0V supply voltage)	
Expected Operating Life:	24 months, depending on application	
Warm-Up Time:	none	
Gas Connector:	fits for M16x1 DIN 13	
Sensitivity:	60 - 300 Digits/ppm (depending on flow, flow feeding to the sensor, tubing system and dead spaces in manifold)	
Baseline:	< ± 50 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:	< 5% (0.3 - 1ppm test gas) < 10% (1 - 100 ppm test gas)	
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 [1ppm]	< 5% of NO sensitivity
	O ₂ [100 Vol.%O ₂]	< 0.1% of NO sensitivity
	Ozone [39ppm]	< 0.7% 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-28D	47 01 30	-	potentiostat integrated, digital I ² C-signal

This data sheet is subject to change without prior notice. [I-28D-Rev03-2019_0710.doc]