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Specification Datasheet - 0110753

itg

I-103D Lead-free Oxygen Sensor

.: KEY FEATURES :.

Lead free sensor, RoHS conform, long life-expectancy, fully CO2 resistant, digital sensor output signal.

All characteristics are based on conditions at 25°C, 50% RH and 1013 hPa and gas flow > 2.5 L/min.

Measurement Range:	0.01 to 100 Vol.%
Resolution:	15 Bit used (16 Bit processor, 1 Bit for algebraic sign)
Output signal	0 to 32768
Initial Output Signal:	2864 to 4455 @ dry ambient air
Output Signal Range:	1591 to 4773 @ dry ambient air
Electrical Connector:	4-pin Molex (digital sensor output signal, I^2C interface)
Power Consumption:	< 15 mW @ dry ambient air
Mechanical Mating Connector:	fits for M16x1 DIN 13 or 5/8-24 UNEF
Nominal Sensor Life:	~ 1,200,000 Vol.% h
Expected Operating Life:	< 6 years @ ambient air, depending on application
Response Time t_{90}:	< 10 s
Drift:	< 1 % per month, averaged across 12 months
Linearity Error:	0 to 2 Vol.% O_2: ± 0.1 absolute
	2.1 to 100 Vol.% O_2: ± 0.5 relative
Repeatability:	± 1 % Vol. O_2 @ 100 Vol.% O_2 applied for 5 min
Zero Offset Equivalents:	< 0.3 Vol.%O_2 @ 100 Vol.%N_2 applied for 5 min
Operating Temperature:	0 to 45 °C
Pressure Range:	700 to 1250 hPa
Influence of Humidity:	- 0.03 % rel. O_2 reading per % RH
Temperature Compensation:	NTC on sensor PCB
Interferences:	*< 20 ppm O_2 response to:*
	100 Vol.% CO — 3,000 ppm NO, balance to N_2
	100 Vol.% CO_2 — 1,000 ppm H_2, balance to N_2
	100 Vol.% C_3H_8 — 2,000 ppm H_2S, balance N_2
	1,000 ppm Benzene, balance N_2 — 500 ppm SO_2, balance N_2
Weight:	approximately 25 g
Material in Contact with Media:	ABS, PVC, PPS, PTFE, stainless steel

.: STORAGE CONDITIONS :.

Temperature Range:	recommended:	5 to 30 °C
	maximum (≤ 10h):	-20 to 50 °C
Humidity:	up to 100 % RH, non-condensing	
Ambient Pressure:	600 to 1250 hPa	
Shelf Life:	< 6 months recommended	