Product Specification of:

O_2 - Industrial Sensor / Type I-103

.: KEY FEATURES :.

Lead free sensor, RoHS conform, long life-expectancy, fully CO_2 resistant.

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

Measurement Range:	0 to 100 Vol.%	
Expected Operating Life:	~ 1,200,000 Vol.% h	
Sensor Lifetime:	< 6 years @ ambient air, depending on application	
Electrical Connector:	3-pin Molex®	
Initial Output Signal:	9.0 to 14.0 mV @ dry ambient air	
Output Signal Range:	5.0 to 15.0 mV @ dry ambient air	
Response Time t_{90}:	< 10 s	
Drift:	< 1 % per month, averaged across 12 months	
Linearity Error:	0 to 35 Vol.%O_2: ± 0.1 Vol.%O_2 (absolute) or ± 0.5% (relative), whichever is greater	
Repeatability:	± 1 % Vol. O_2 @ 100 Vol.% O_2 applied for 5 min	
Zero Offset Voltage:	< 200 µV in 100 % 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	
Recommended Load Resistor:	> 1 MOhm	
Interferences:	100 Vol.% CO	*< 20 ppm O_2 response*
	100 Vol.% CO_2	*< 20 ppm O_2 response*
	100 Vol.% C_3H_8	*< 20 ppm O_2 response*
	100 Vol.% H_2	*< 400 ppm O_2 response*
	3000 ppm NO bal. N_2	*< 20 ppm O_2 response*
	3000 ppm Ethanol	*< 100ppm O_2 response*
	3000 ppm 1-Butanthiole	*< 100ppm O_2 response*
	3000 ppm Dimethyl disulfide	*< 200ppm O_2 response*
	2000 ppm H_2S bal. N_2	*< 500 ppm O_2 response*
	1000 ppm Benzene bal. N_2	*< 20 ppm O_2 response*
	500 ppm SO_2 bal. N_2	*< 20 ppm O_2 response*
Weight:	approximately 25 g	
Material in Contact with Media:	PVC, PPS, PTFE, ABS, NBR, stainless steel	

.: STORAGE CONDITIONS IN UNOPENED ORIGINAL PACKAGE :.

Temperature Range:	recommended:	15 to 30 °C
	maximum (≤ 10h):	- 20 to 50 °C
Humidity:	recommended:	50 to 100 %rH, non-condensing
	maximum one week:	0 to 30 %rH
Ambient Pressure:	600 to 1250 hPa	

.: RELATED PRODUCTS :.

Product	Part-No.	Housing Colour
O_2 - Sensor I-103	48 03 14	white

This data sheet is subject to change without prior notice. [I-103-Rev07-2021_0623.doc]

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