

Product Specification of:

O₂ - Industrial Sensor / Type I-103



:: KEY FEATURES ::

Lead free sensor, RoHS conform, long life-expectancy, fully CO₂ 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 ₃ H 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 < 100 ppm O ₂ response 3000 ppm 1-Butanthiole < 100 ppm O ₂ response 3000 ppm Dimethyl disulfide < 200 ppm O ₂ response 2000 ppm H ₂ S 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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