

PO2ES-103PD 0-25% digital oxygen industrial sensor

KEY FEATURES

Lead free sensor, RoHS compliant, long-life expectancy, digital sensor output signal, EEPROM and temperature sensor on PCB, fully CO₂ resistant.

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 25 Vol.%O ₂
Resolution:	15 Bit used (16 Bit processor, 1 Bit for algebraic sign)
Output signal	0 to 32768 Digits (gain amplifier 4)
Initial Output Signal Range:	10184 to 17820 Digits @ dry ambient air (8 to 14 mV)
Electrical connector	4-pin Molex (digital sensor output signal, I ² C 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.%O ₂ h
Expected Operating Life:	< 6 years @ ambient air, depending on application
Response Time t₉₀:	< 10 s
Drift:	< 1% per month, averaged across 12 months
Repeatability:	± 1 Vol.%O ₂ @ 100 Vol.%O ₂ , applied for 5 min
Operating Temperature:	0 to 45 °C
Ambient Pressure Range:	700 to 1250 mbar
Zero Offset:	< 127 Digits @ 100 Vol.%N ₂ applied for 5 min (< 100 μV)
Influence of Humidity:	- 0.03 % rel. O ₂ reading per % RH
Temperature Compensation:	NTC on sensor PCB (read out of sensor signal is already temperature compensated, no separate temperature compensation necessary)
Weight:	approximately 25g
Material in contact with media:	PPS, PTFE, ABS, FPM, stainless steel

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	< 100ppm O ₂ response
	3000 ppm 1-Butanthiole	< 100ppm O ₂ response
	3000 ppm Dimethyl disulfide	< 200ppm 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



STORAGE CONDITIONS IN UNOPENED ORIGINAL PACKAGE

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

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