

**:: KEY FEATURES ::**

**Lead free sensor, RoHS conform, long life-expectancy, fully CO<sub>2</sub> 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. All digital values are based on a gain factor of 1 (AD-Converter).*

<b>Measurement Range:</b>	0.01 to 100 Vol.%	
<b>Resolution:</b>	15 Bit used (16 Bit processor, 1 Bit for algebraic sign)	
<b>Output signal</b>	0 to 32768 Digits	
<b>Initial Output Signal Range:</b>	2546 to 4455 Digits @ dry ambient air (gain factor AD-Converter 1)	
<b>Electrical Connector:</b>	4-pin Molex (digital sensor output signal, I <sup>2</sup> C interface)	
<b>Power Consumption:</b>	< 15 mW @ dry ambient air	
<b>Supply Voltage:</b>	+3.3 V (verified), +5.0 V (possible), > 5.5 V (PCB damage)	
<b>Mechanical Mating Connector:</b>	fits for M16x1 DIN 13 or 5/8-24 UNEF	
<b>Nominal Sensor Life:</b>	~ 1,200,000 Vol.% h	
<b>Expected Operating Life:</b>	< 6 years @ ambient air, depending on application	
<b>Response Time t<sub>90</sub>:</b>	< 10 s	
<b>Drift:</b>	< 1 % per month, averaged across 12 months	
<b>Linearity Error:</b>	0 to 35 Vol.%O <sub>2</sub> : ± 0.1 Vol.%O <sub>2</sub> (absolute) or ± 0.5% (relative), whichever is greater	
<b>Repeatability:</b>	± 1 % Vol. O <sub>2</sub> @ 100 Vol.% O <sub>2</sub> applied for 5 min	
<b>Zero Offset Equivalents:</b>	< 0.3 Vol.%O <sub>2</sub> @ 100 Vol.%N <sub>2</sub> applied for 5 min	
<b>Operating Temperature:</b>	0 to 45 °C	
<b>Pressure Range:</b>	700 to 1250 hPa	
<b>Influence of Humidity:</b>	- 0.03 % rel. O <sub>2</sub> reading per % RH	
<b>Temperature Compensation:</b>	NTC on sensor PCB	
<b>Interferences:</b>	100 Vol.% CO	< 20 ppm O <sub>2</sub> response
	100 Vol.% CO <sub>2</sub>	< 20 ppm O <sub>2</sub> response
	100 Vol.% C <sub>3</sub> H <sub>8</sub>	< 20 ppm O <sub>2</sub> response
	100 Vol.% H <sub>2</sub>	< 400 ppm O <sub>2</sub> response
	3000 ppm NO bal. N <sub>2</sub>	< 20 ppm O <sub>2</sub> response
	3000 ppm Ethanol	< 100ppm O <sub>2</sub> response
	3000 ppm 1-Butanthiole	< 100ppm O <sub>2</sub> response
	3000 ppm Dimethyl disulfide	< 200ppm O <sub>2</sub> response
	2000 ppm H <sub>2</sub> S bal. N <sub>2</sub>	< 500 ppm O <sub>2</sub> response
	1000 ppm Benzene bal. N <sub>2</sub>	< 20 ppm O <sub>2</sub> response
	500 ppm SO <sub>2</sub> bal. N <sub>2</sub>	< 20 ppm O <sub>2</sub> response
<b>Weight:</b>	approximately 25 g	
<b>Material in Contact with Media:</b>	ABS, PVC, PPS, PTFE, stainless steel	



**:: STORAGE CONDITIONS IN UNOPENED ORIGINAL PACKAGE ::**

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

**:: RELATED PRODUCTS ::**

<b>Product</b>	<b>Part-No.</b>	<b>Housing Colour</b>	<b>Other Specifics</b>
O <sub>2</sub> Sensor I-103D	48 15 14	white	RoHS compliant, lead free, digital sensor output signal I <sup>2</sup> C-Address 8-bit (write/read): ADC (D0/D1)
O <sub>2</sub> Sensor I-103D 80	48 80 14	white	RoHS compliant, lead free, digital sensor output signal I <sup>2</sup> C-Address 8-bit (write/read): ADC (D4/D5)
O <sub>2</sub> Sensor I-103	48 03 14	white	RoHS compliant, lead free, analog sensor output signal

*This data sheet is subject to change without prior notice. [I-103D-Rev08-2022\_0308]*