

Product Specification of:

## O<sub>2</sub> - Industrial Sensor / Type I-01



### :: KEY FEATURE ::

**Sensor contains acid electrolyte to withstand high CO<sub>2</sub> concentrations, shows high resistivity to acid gases, a short response time and long lifetime.**

*All characteristics are based on conditions at 25°C, 50% RH and 1013 hPa.*

<b>Measurement Range:</b>	0.5 to 35 Vol.%												
<b>Expected Operating Life:</b>	~ 1,200,000 Vol.% h												
<b>Sensor Lifetime:</b>	< 6 years @ ambient air												
<b>Electrical Connector:</b>	3-pin Molex®												
<b>Intitial Output Signal:</b>	9.0 to 13.0 mV @ dry ambient air												
<b>Output Signal Range:</b>	5.0 to 20.0 mV @ dry ambient air												
<b>Response Time t<sub>90</sub>:</b>	< 5 s												
<b>Drift:</b>	< 3 % per month, averaged across 12 months												
<b>Linearity Error:</b>	0 to 2 Vol.% O <sub>2</sub> : ± 0.1 absolute 2.1 to 35 Vol.% O <sub>2</sub> : ± 0.5 relative												
<b>Repeatability:</b>	± 1 % Vol. O <sub>2</sub> @ 100 Vol.% O <sub>2</sub> applied for 5 min												
<b>Zero Offset Voltage:</b>	< 200 µV in 100 % N <sub>2</sub> applied for 5 min												
<b>Operating Temperature:</b>	0 to 50 °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>Recommended Load Resistor:</b>	> 1 MOhm												
<b>Temperature Compensation:</b>	NTC												
<b>Interferences:</b>	<table><tr><td>&lt; 20 ppm O<sub>2</sub> response to:</td><td>&lt; 20.000 ppm O<sub>2</sub> response to:</td></tr><tr><td>100 Vol.% CO</td><td>3,000 ppm NO, balance to N<sub>2</sub></td></tr><tr><td>100 Vol.% CO<sub>2</sub></td><td>1,000 ppm H<sub>2</sub>, balance to N<sub>2</sub></td></tr><tr><td>100 Vol.% C<sub>3</sub>H<sub>8</sub></td><td>500 ppm SO<sub>2</sub>, balance N<sub>2</sub></td></tr><tr><td>1,000 ppm Benzene, balance N<sub>2</sub></td><td></td></tr><tr><td>2,000 ppm H<sub>2</sub>S, balance N<sub>2</sub></td><td></td></tr></table>	< 20 ppm O <sub>2</sub> response to:	< 20.000 ppm O <sub>2</sub> response to:	100 Vol.% CO	3,000 ppm NO, balance to N <sub>2</sub>	100 Vol.% CO <sub>2</sub>	1,000 ppm H <sub>2</sub> , balance to N <sub>2</sub>	100 Vol.% C <sub>3</sub> H <sub>8</sub>	500 ppm SO <sub>2</sub> , balance N <sub>2</sub>	1,000 ppm Benzene, balance N <sub>2</sub>		2,000 ppm H <sub>2</sub> S, balance N <sub>2</sub>	
< 20 ppm O <sub>2</sub> response to:	< 20.000 ppm O <sub>2</sub> response to:												
100 Vol.% CO	3,000 ppm NO, balance to N <sub>2</sub>												
100 Vol.% CO <sub>2</sub>	1,000 ppm H <sub>2</sub> , balance to N <sub>2</sub>												
100 Vol.% C <sub>3</sub> H <sub>8</sub>	500 ppm SO <sub>2</sub> , balance N <sub>2</sub>												
1,000 ppm Benzene, balance N <sub>2</sub>													
2,000 ppm H <sub>2</sub> S, balance N <sub>2</sub>													
<b>Weight:</b>	approximately 25 g												
<b>Material in Contact with Media:</b>	ABS, PVC, PPS, PTFE, stainless steel												



### :: STORAGE CONDITIONS ::

<b>Temperature Range:</b>	recommended: 5 to 30 °C maximum: - 20 to 50 °C
<b>Humidity:</b>	up to 100 % RH
<b>Ambient Pressure:</b>	600 to 1250 hPa
<b>Shelf Life:</b>	< 6 months recommended

### :: RELATED PRODUCTS ::

Product	Part-No.	Housing Colour
O <sub>2</sub> - Sensor I-01	48 00 14	white

*This data sheet is subject to change without prior notice. [I-01-Rev\_022012.doc]*

page 1 of 1