



Product Specification of:

### Industrial O<sub>2</sub>-Sensor

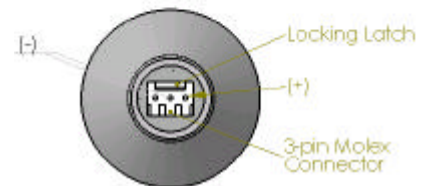
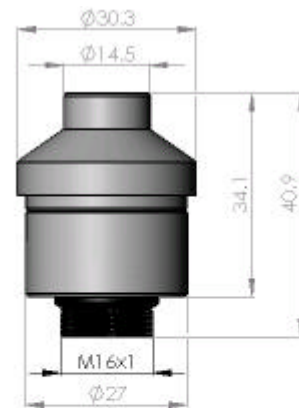
Type: I - 06

Part. No.: 48 00 06

**Key Features:** sensor designed for work in cold ambient conditions

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

Operating Principle:	galvanic fuel cell																
Electrical Connector:	3-pin Molex																
Measurement Range:	0 - 100 % O <sub>2</sub>																
Nominal Sensor Life:	750, 000 Vol.% O <sub>2</sub> h																
Expected Operating Life:	4 years @ ambient air																
Output Signal:	7 - 13 mV @ dry ambient air																
Response Times t <sub>90</sub> :	<table border="0"> <tr> <td>-5 ° C:</td> <td>≤ 12 s</td> </tr> <tr> <td>0 ° C:</td> <td>≤ 10 s</td> </tr> <tr> <td>10 ° C:</td> <td>≤ 8 s</td> </tr> <tr> <td>20 ° C:</td> <td>≤ 4 s</td> </tr> <tr> <td>30 ° C:</td> <td>≤ 2 s</td> </tr> </table>	-5 ° C:	≤ 12 s	0 ° C:	≤ 10 s	10 ° C:	≤ 8 s	20 ° C:	≤ 4 s	30 ° C:	≤ 2 s						
-5 ° C:	≤ 12 s																
0 ° C:	≤ 10 s																
10 ° C:	≤ 8 s																
20 ° C:	≤ 4 s																
30 ° C:	≤ 2 s																
Linearity Errors: (calibrated @ dry air)	<table border="0"> <tr> <td>0 - 2 % oxygen:</td> <td>± 0.05 % absolute</td> </tr> <tr> <td>2.1 - 25 % oxygen:</td> <td>± 0.5 % relative</td> </tr> <tr> <td>25.1 - 100 % oxygen:</td> <td>± 1.5 % relative</td> </tr> </table>	0 - 2 % oxygen:	± 0.05 % absolute	2.1 - 25 % oxygen:	± 0.5 % relative	25.1 - 100 % oxygen:	± 1.5 % relative										
0 - 2 % oxygen:	± 0.05 % absolute																
2.1 - 25 % oxygen:	± 0.5 % relative																
25.1 - 100 % oxygen:	± 1.5 % relative																
Signal Response to N <sub>2</sub> :	< [U <sub>a</sub> /200] in 100 % N <sub>2</sub> within 40s																
Operating Temperatures:	<table border="0"> <tr> <td>0 - 30 ° C</td> <td>(max. error of temp. compensation &lt; 3 %)</td> </tr> <tr> <td>-10 - 50 ° C</td> <td>(max. error of temp. compensation &lt; 10 %)</td> </tr> </table>	0 - 30 ° C	(max. error of temp. compensation < 3 %)	-10 - 50 ° C	(max. error of temp. compensation < 10 %)												
0 - 30 ° C	(max. error of temp. compensation < 3 %)																
-10 - 50 ° C	(max. error of temp. compensation < 10 %)																
Pressure Range:	600 - 1750 hPa																
Influence of Humidity:	-0.03% rel. O <sub>2</sub> reading / % RH																
Recommended Load Resistor:	≥ 10 kOhm																
Temperature Compensation:	NTC																
Interferences	<table border="0"> <tr> <td>&lt; 0.1 % O<sub>2</sub> response to:</td> <td></td> </tr> <tr> <td>15.0 % CO<sub>2</sub> balance N<sub>2</sub></td> <td></td> </tr> <tr> <td>10.0 % CO balance N<sub>2</sub></td> <td></td> </tr> <tr> <td>3,000 ppm NO balance N<sub>2</sub></td> <td></td> </tr> <tr> <td>3,000 ppm C<sub>3</sub>H<sub>8</sub> balance N<sub>2</sub></td> <td></td> </tr> <tr> <td>500 ppm H<sub>2</sub>S balance N<sub>2</sub></td> <td></td> </tr> <tr> <td>500 ppm SO<sub>2</sub> balance N<sub>2</sub></td> <td></td> </tr> <tr> <td>1,000 ppm Benzene balance N<sub>2</sub></td> <td></td> </tr> </table>	< 0.1 % O <sub>2</sub> response to:		15.0 % CO <sub>2</sub> balance N <sub>2</sub>		10.0 % CO balance N <sub>2</sub>		3,000 ppm NO balance N <sub>2</sub>		3,000 ppm C <sub>3</sub> H <sub>8</sub> balance N <sub>2</sub>		500 ppm H <sub>2</sub> S balance N <sub>2</sub>		500 ppm SO <sub>2</sub> balance N <sub>2</sub>		1,000 ppm Benzene balance N <sub>2</sub>	
< 0.1 % O <sub>2</sub> response to:																	
15.0 % CO <sub>2</sub> balance N <sub>2</sub>																	
10.0 % CO balance N <sub>2</sub>																	
3,000 ppm NO balance N <sub>2</sub>																	
3,000 ppm C <sub>3</sub> H <sub>8</sub> balance N <sub>2</sub>																	
500 ppm H <sub>2</sub> S balance N <sub>2</sub>																	
500 ppm SO <sub>2</sub> balance N <sub>2</sub>																	
1,000 ppm Benzene balance N <sub>2</sub>																	



Tolerance: ± 0.15 mm

### Storage Conditions

Temperature Range:	- 25 – 55 °C maximum 0 – 20 °C recommended
Ambient Pressure:	600 - 1750 hPa
Humidity:	up to 100 % RH
Material in Contact with Media:	PA 12, PPS, Stainless Steel, PTFE
Shelf Life:	< 4 months recommended
Weight:	approximately 25 g
Warranty Period:	12 months
Housing Colour:	black

This data sheet is subject to change without prior notice!

[I-06 Rev. 02-05.doc]

page 1 / 1

IT Dr. Gambert GmbH, Hinter dem Chor 21, 23966 Wismar, Germany

Tel.: +49 (0) 3841 22 00 50, Fax: +49 (0) 3841 22 00 522, [sales@it-wismar.de](mailto:sales@it-wismar.de), [www.it-wismar.de](http://www.it-wismar.de)

SUNSTAR自动化 http://www.sensor-ic.com/ TEL: 0755-83376489 FAX:0755-83376182 E-MAIL: szss20@163.com