



Product Specification of:

Industrial O₂-Sensor

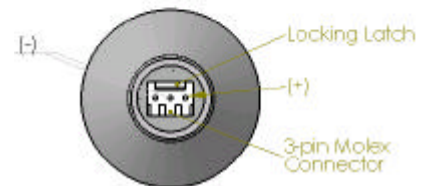
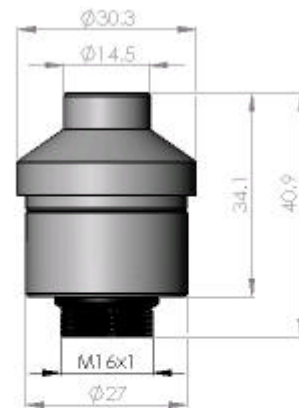
Type: I - 06

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 ₂																
Nominal Sensor Life:	750, 000 Vol.% O ₂ h																
Expected Operating Life:	4 years @ ambient air																
Output Signal:	7 - 13 mV @ dry ambient air																
Response Times t_{90} :	<table> <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						
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Linearity Errors: (calibrated @ dry air)	<table> <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										
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2.1 - 25 % oxygen:	± 0.5 % relative																
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Signal Response to N ₂ :	< [U _a /200] in 100 % N ₂ within 40s																
Operating Temperatures:	<table> <tr> <td>0 - 30 ° C</td> <td>(max. error of temp. compensation < 3 %)</td> </tr> <tr> <td>-10 - 50 ° C</td> <td>(max. error of temp. compensation < 10 %)</td> </tr> </table>	0 - 30 ° C	(max. error of temp. compensation < 3 %)	-10 - 50 ° C	(max. error of temp. compensation < 10 %)												
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-10 - 50 ° C	(max. error of temp. compensation < 10 %)																
Pressure Range:	600 - 1750 hPa																
Influence of Humidity:	-0.03% rel. O ₂ reading / % RH																
Recommended Load Resistor:	≥ 10 kOhm																
Temperature Compensation:	NTC																
Interferences	<table> <tr> <td>< 0.1 % O₂ response to:</td> <td></td> </tr> <tr> <td>15.0 % CO₂ balance N₂</td> <td></td> </tr> <tr> <td>10.0 % CO balance N₂</td> <td></td> </tr> <tr> <td>3,000 ppm NO balance N₂</td> <td></td> </tr> <tr> <td>3,000 ppm C₃H₈ balance N₂</td> <td></td> </tr> <tr> <td>500 ppm H₂S balance N₂</td> <td></td> </tr> <tr> <td>500 ppm SO₂ balance N₂</td> <td></td> </tr> <tr> <td>1,000 ppm Benzene balance N₂</td> <td></td> </tr> </table>	< 0.1 % O ₂ response to:		15.0 % CO ₂ balance N ₂		10.0 % CO balance N ₂		3,000 ppm NO balance N ₂		3,000 ppm C ₃ H ₈ balance N ₂		500 ppm H ₂ S balance N ₂		500 ppm SO ₂ balance N ₂		1,000 ppm Benzene balance N ₂	
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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!

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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, www.it-wismar.de

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