

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

## Type A-02



### KEY FEATURES

Galvanic gas sensor designed for use in automotive exhaust gas analysers, released according to PTB 18.10, meets all OIML standards and BAR '02 requirements.

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

<b>Electrical Connector:</b>	3.5 mm mono jack									
<b>Measurement Range:</b>	0 to 25 Vol.%									
<b>Accuracy:</b>	< 2 Vol.% ± 0.1 % < 25 Vol.% ± 0.5 %									
<b>Sensor Lifetime:</b>	< 3 years @ ambient air									
<b>Expected Operating Life:</b>	~ 500,000 Vol.% h									
<b>Initial Output Signal:</b>	9.0 to 13.0 mV @ dry ambient air									
<b>Response Time t90:</b>	< 5 s									
<b>Signal Response to N<sub>2</sub>:</b>	U <sub>0</sub> /200 @ 100% N <sub>2</sub> in < 40 s									
<b>Drift:</b>	10 % / year									
<b>Operating Temperature:</b>	0 to 50 °C									
<b>Pressure Range:</b>	700 to 1750 hPa									
<b>Influence of Humidity:</b>	- 0.03 % rel. O <sub>2</sub> reading per % RH									
<b>Recommended Load Resistor:</b>	≥ 10 kOhm									
<b>Temperature Compensation: NTC</b>	NTC									
<b>Interferences:</b>	<p>&lt; 0.1 % O<sub>2</sub> response to:</p> <table border="0"> <tr> <td>15.0 % CO<sub>2</sub> balanced N<sub>2</sub></td> <td>3,000 ppm C3H8 balanced N<sub>2</sub></td> </tr> <tr> <td>10.0 % CO balanced N<sub>2</sub></td> <td>500 ppm H<sub>2</sub>S balanced N<sub>2</sub></td> </tr> <tr> <td>3,000 ppm NO balanced N<sub>2</sub></td> <td>500 ppm SO<sub>2</sub> balanced N<sub>2</sub></td> </tr> <tr> <td></td> <td>1,000 ppm Benzene balanced N<sub>2</sub></td> </tr> </table>		15.0 % CO <sub>2</sub> balanced N <sub>2</sub>	3,000 ppm C3H8 balanced N <sub>2</sub>	10.0 % CO balanced N <sub>2</sub>	500 ppm H <sub>2</sub> S balanced N <sub>2</sub>	3,000 ppm NO balanced N <sub>2</sub>	500 ppm SO <sub>2</sub> balanced N <sub>2</sub>		1,000 ppm Benzene balanced N <sub>2</sub>
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<b>Weight:</b>	approximately 25 g									
<b>Material in Contact with Media:</b>	PA 12, PPS, PTFE, stainless steel									

### STORAGE CONDITIONS

<b>Temperature Range:</b>	recommended : 5 °C to 30 °C maximum: - 20 °C to 50 °C
<b>Ambient Pressure:</b>	600 to 1750 hPa
<b>Shelf Life:</b>	< 6 months recommended

### RELATED PRODUCTS

Product	Part-No.	Housing Colour	Other Specifics
O <sub>2</sub> - Sensor A-02T	47 00 11	translucent	Initial Output Signal: 9.0 to 12.5 mV, O-Ring: 14 x 1.78 mm
O <sub>2</sub> - Sensor A-02BT	47 00 20	translucent	Initial Output Signal: 10.0 to 12.0 mV, O-Ring: 14 x 2.5 mm
O <sub>2</sub> - Sensor A-02ST	47 00 14	translucent	Initial Output Signal: 10.0 to 13.0 mV, O-Ring: 14 x 1.78 mm

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