

Product Specification of:

## O<sub>2</sub> - Automotive Sensor / Type A – 02



### .: KEY FEATURE .:

**Galvanic gas sensor designed for use in automotive exhaust gas analyzers, 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%<br>< 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>            | 7.0 to 13.5 mV @ dry ambient air   |
| <b>Response Time t<sub>90</sub>:</b>     | < 5 s  |
| <b>Signal Response to N<sub>2</sub>:</b> | U <sub>a</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:</b>         | NTC  |
| <b>Interferences:</b>                    | < 0.1 % O <sub>2</sub> response to:  |
|  | 15.0 % CO <sub>2</sub> balanced N <sub>2</sub> 3,000 ppm C <sub>3</sub> H <sub>8</sub> 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>  |



### .: STORAGE CONDITIONS .:

|  |  |
|--|--|
| <b>Temperature Range:</b>              | recommended: 5 to 25 °C<br>maximum: -20 to 50 °C |
| <b>Ambient Pressure:</b>               | 600 to 1750 hPa                                  |
| <b>Shelf Life:</b>                     | < 6 months recommended                           |
| <b>Weight:</b>                         | approximately 25 g                               |
| <b>Material in Contact with Media:</b> | PA 12, PPS, PTFE, stainless steel                |

### .: RELATED PRODUCTS .:

| Product                        | Part-No. | Housing Colour | Other Specifics   |
|--------------------------------|----------|----------------|---|
| O <sub>2</sub> - Sensor A-02T  | 47 00 11 | translucent    | O-Ring: 14 x 1.78 mm  |
| O <sub>2</sub> - Sensor A-02BT | 47 00 20 | translucent    | Initial Output Signal: 7.0 to 12.5 mV, O-Ring: 14 x 2.5 mm  |
| O <sub>2</sub> - Sensor A-02ST | 47 00 14 | translucent    | Initial Output Signal: 8.0 to 13.0 mV, O-Ring: 14 x 1.78 mm |

*This data sheet is subject to change without prior notice. [A-02-Rev\_012011.doc]*

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