

# Oxygen Sensor OOA101-1

## Use the advantages:

- PTB-A 18.10 approved
- Meet BAR 97 requirements
- Certified quality management system
- Accurate and reliable response
- Excellent selectivity against CO<sub>2</sub>
- Excellent signal stability
- High product quality
- Short delivery times
- Technical support
- Made in Germany
- 15 months warranty



## „We keep your devices operating at their best.“

EnviteC has been developing and manufacturing highly specialized products for medical applications and innovative products within the gas measurement technology for environmental, industrial and safety applications.

The company trusts in the quality of advanced production methods and processes. The result are oxygen sensors for automotive emission gas analysers, which share the same extraordinary quality, excellent signal stability and reliable response for accurate readings. These sensors for measuring the partial pressure of oxygen are designed to meet the BAR standards and have been approved according to PTB-A 18.10.

EnviteC's research and development activities are consistently aligned to customer and market needs – identification and optimization of sustainable product solutions are the main concerns of the company.

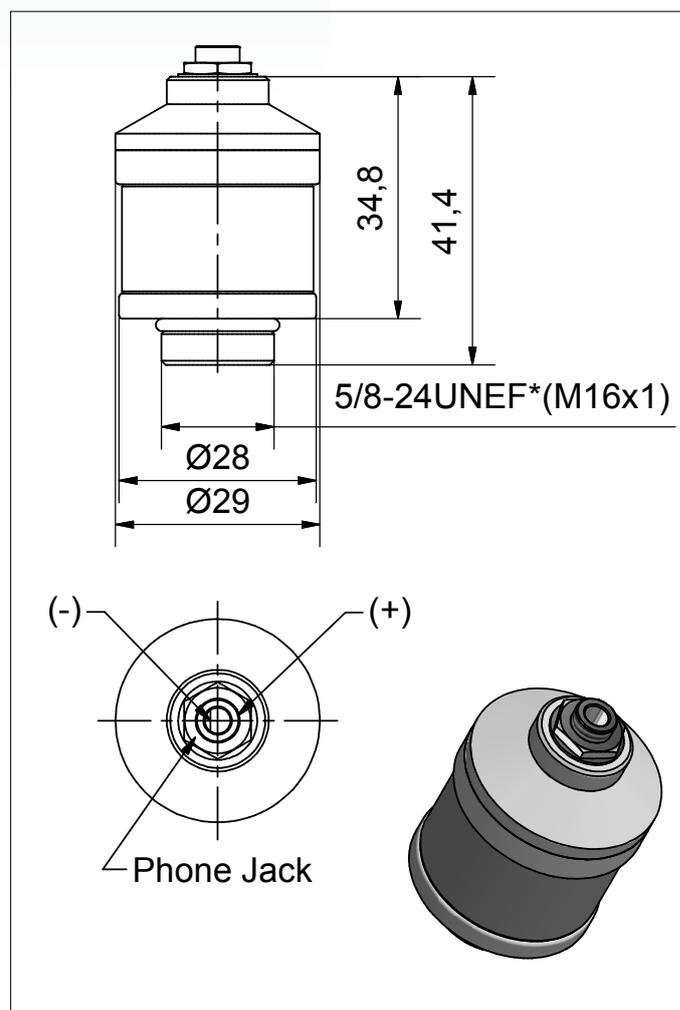
## From standard sensors to customized sensors

Experienced EnviteC engineers analyze customer requirements. This input is used for different standard and OEM applications, and ongoing support is provided right up to the final integrator in the solution. EnviteC designs customized sensors characterized by a maximum possible degree of precision.

## For more information please contact us!

**We look forward to assisting you either on the phone or in a personal talk.**

## Mechanical drawing (All dimensions in mm)



General tolerances ISO 2768-c

\*Intermediate thread: Metric / Unified Extra Fine

**Technical Specifications OOA101-1**

|   |   |
|---|---|
| Measurement range                                 | 0 % ... 100 % oxygen (at atmospheric pressure)  |
| Nominal sensor lifetime                           | ≥ 500 000 % volume oxygen hours   |
| Output in ambient air                             | 7 mV ... 13 mV  |
| Electrical interface                              | 3.5 mm mono phone Jack  |
| Accuracy  | 0 % ... 3.3 % oxygen: ± 0.1 % absolute<br>3.4 % ... 100 % oxygen: ± 3 % relative  |
| Linearity error                                   | < 3 % relative  |
| Response time                                     | < 5 s to 90 % of final value; < 40 s fall time from 20.95 % to 0.1 % oxygen (when 100 % nitrogen applied)   |
| Zero offset voltage                               | < 40 µV in 100 % nitrogen   |
| Cross interference                                | < 0.1 % oxygen response to:<br>15 % CO <sub>2</sub> balance N <sub>2</sub> ; 10 % CO balance N <sub>2</sub> ; 3000 ppm NO balance N <sub>2</sub> ;<br>3000 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> ;<br>1000 ppm benzene balance N <sub>2</sub> |
| Influence of humidity                             | -0.03 % rel. per % RH at 25 °C  |
| Pressure range                                    | 0.6 bar ... 2 bar (ppO <sub>2</sub> 0 ... 1250 mbar O <sub>2</sub> )  |
| Influence of pressure                             | proportional to change in oxygen partial pressure   |
| Influence of mechanical shock                     | < 1 % relative after a fall from 1 m  |
| Operating temperature                             | 0 °C ... +50 °C   |
| Temperature compensation                          | built-in NTC compensation   |
| Effect of temperature compensation (steady state) | between +25 °C and +40 °C: 3 % relative error<br>between 0 °C and +50 °C: 8 % relative error  |
| Operating humidity                                | 0 % ... 99 % RH non-condensing  |
| Long term output drift                            | < 1 % volume oxygen per month<br>typically < -15 % relative over lifetime   |
| Storage temperature                               | -20 °C ... +50 °C   |
| Recommended storage                               | +5 °C ... +15 °C  |
| Recommended load                                  | ≥ 10 kOhm   |
| Warm-up time                                      | < 30 minutes, after replacement of sensor   |
| Weight  | approximately 28 grams  |
| Part number                                       | 01-00-0031  |

All specifications are applicable at standard conditions:  
1013 hPa, 25 °C dry ambient air