

## Oxygen Sensor OOD103 / OOD103-1 / OOD103-1V

**Confidential!****Only for Vandagraph!**

|                                                           |                                                                                                                                                                         |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Measurement Range:</b>                                 | 0-100 % oxygen                                                                                                                                                          |
| <b>Output in ambient air:</b>                             | 9 to 13mV                                                                                                                                                               |
| <b>Electrical Interface:</b>                              | OOD103: 3pin (Molex 22-11-1031)<br>OOD103-1: 3.5mm phone jack (Switchcraft type 41)<br>OOD103-1V: Mini HF (RADIAL R114.426.000)                                         |
| <b>Repeatability:</b>                                     | < 1 % vol. O <sub>2</sub> @ constant temp. and pressure                                                                                                                 |
| <b>Linearity error:</b>                                   | 0.1 to 1.0 bar less than 3 % relative<br>0.1 to 2.5 bar less than 5 % relative                                                                                          |
| <b>Response time:</b>                                     | < 5sec. to 90 % of final value                                                                                                                                          |
| <b>Zero Offset Voltage:</b>                               | < 0.5% oxygen reading in 100 % nitrogen @ 25°C after 36 seconds                                                                                                         |
| <b>Cross Interference:</b>                                | < 0.5 % vol. O <sub>2</sub> response to:<br>5 % CO <sub>2</sub> balance N <sub>2</sub><br>- 0.03% rel. per % RH at 25°C                                                 |
| <b>Influence of Humidity:</b>                             | 600 to 2500 hPa                                                                                                                                                         |
| <b>Pressure Range</b>                                     | < 1% relative after a fall from 1m                                                                                                                                      |
| <b>Influence of Mechanical Shock:</b>                     |                                                                                                                                                                         |
| <b>Operating Temperature:</b>                             | 0 to 50°C                                                                                                                                                               |
| <b>Temperature Compensation:</b>                          | built-in NTC compensation                                                                                                                                               |
| <b>Effect of Temperature Compensation (steady state):</b> | between +25 °C and +40 °C: 3 % relative error<br>between 0 °C and +40 °C: 5 % relative error                                                                            |
| <b>Operating Humidity:</b>                                | 0-99% RH non-condensing                                                                                                                                                 |
| <b>Long Term Output Drift:</b>                            | < 1% vol oxygen per month<br>typically < - 15 % relative over lifetime                                                                                                  |
| <b>Storage Temperature:</b>                               | -20 to +50 °C                                                                                                                                                           |
| <b>Recommended Storage:</b>                               | +5 to +15 °C                                                                                                                                                            |
| <b>Recommended Load:</b>                                  | ≥ 10 kOhms                                                                                                                                                              |
| <b>Warm-Up Time:</b>                                      | < 30 minutes, after replacement of sensor                                                                                                                               |
| <b>Nominal Sensor Lifetime:</b>                           | ≥ 500,000 % vol oxygen hours                                                                                                                                            |
| <b>Weight:</b>                                            | approximately 28 grams                                                                                                                                                  |
| <b>Warranty Period:</b>                                   | 15 months                                                                                                                                                               |
| <b>Part No.:</b>                                          | OOD103: 1001570 (REF 8010000 / VST2200)<br>OOD103: 1001570 (REF 8010001 / APD 5)<br>OOD103-1: 1001580 (REF 8010003 / VR1700)<br>OOD103-1V: 1001581 (REF 8010002 APD 11) |

**Use the advantages:**

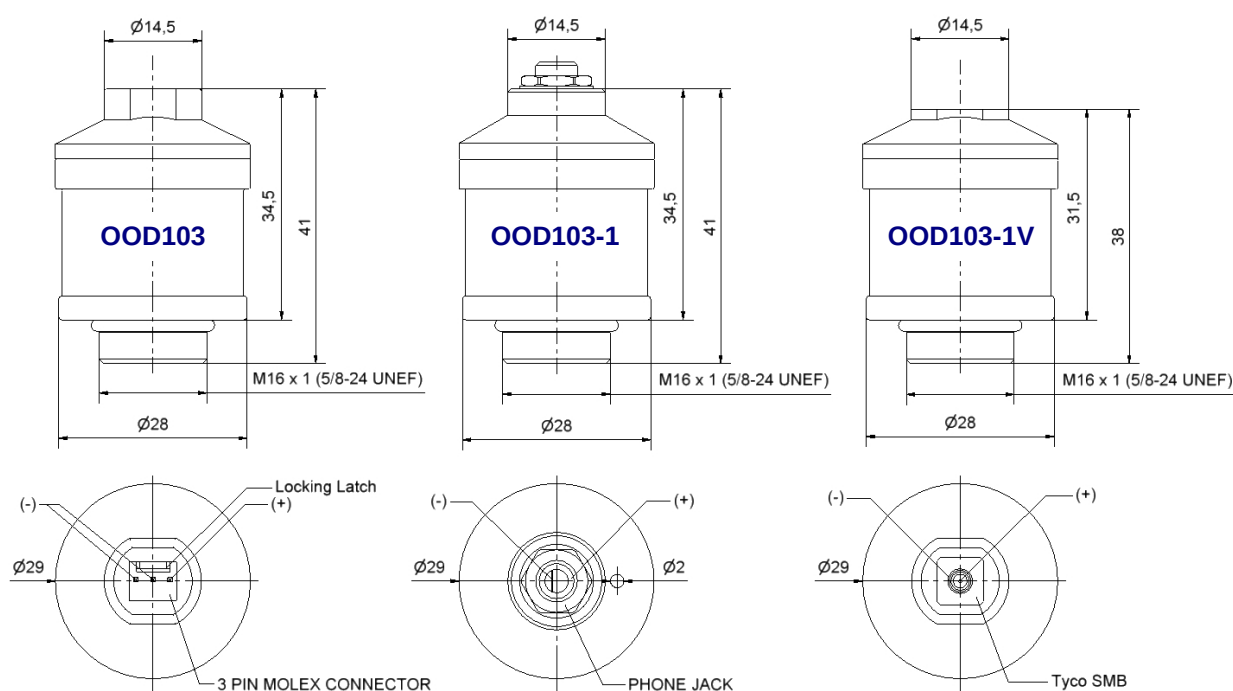
- Designed for scuba diving application
- Developed and manufactured according to EN ISO 9001
- Accurate and reliable response
- Excellent signal stability
- High product quality
- Short lead times
- Technical support

**ENVITEC- WISMAR GMBH**

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<http://www.envitec.com>

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



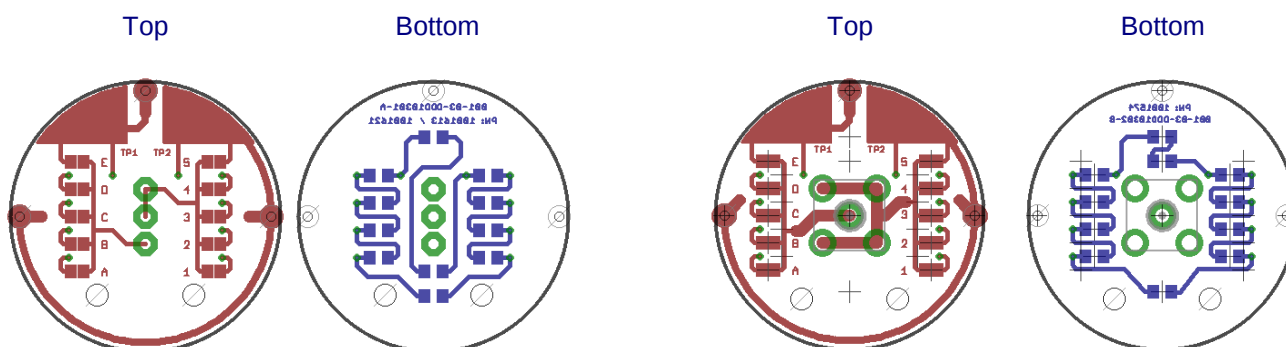
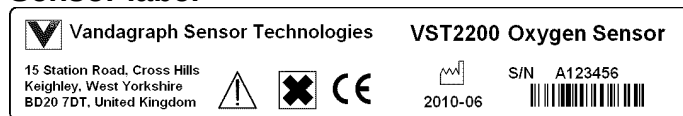
All dimensions in mm

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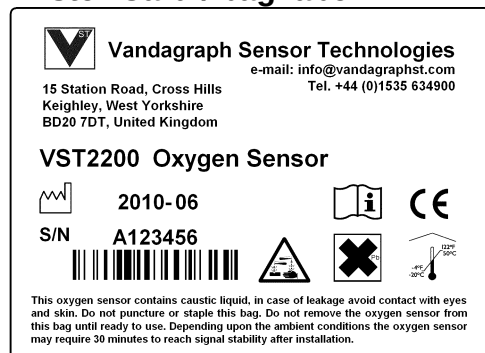
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**Customized Design Specification:**

- Integration of additional Zitex membrane in sensor gas diffusion way
- 2mm hole drilled in sensor cap near to the connector at sensor type OOD103-D
- Conformal coating on the sensor PCB with PLASTIK 70 RED
- 2 x 2mm holes drilled in the sensor PCB
- None information about EnviteC on PCB top side / bottom side only information for ordering process and traceability

**PCB Layout:**
**Type: 8010000 / 8010001 / 8010003**
**8010002**

**Customized Label Specification:**
**Type 8010000 (OOD103)**
**Sensor label**


90x15

**Blister-Card / bag label**


63,5x46,6

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## Type 8010001 (OOD103)

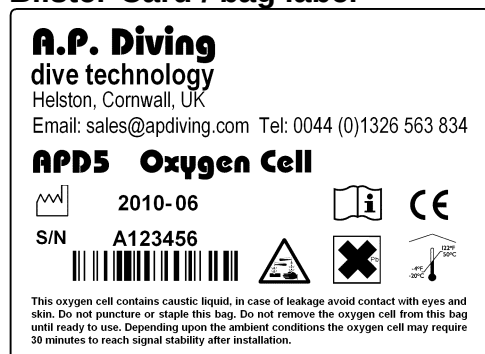
### Sensor label



90x15

color: green Pantone 354 C, script in white on the customer block and symbols; black on the product info, arrays white with black frame, AP logo in black behind customer info to be discussed

### Blister-Card / bag label



63,5x46,6

## Type 8010002 (OOD103-1V)

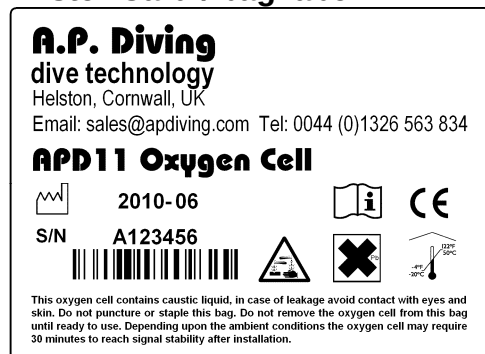
### Sensor label



90x15

color: green Pantone 354 C, script in white on the customer info and symbols; black on the product info, arrays white with black frame, AP logo in black behind customer info to be discussed

### Blister-Card / bag label

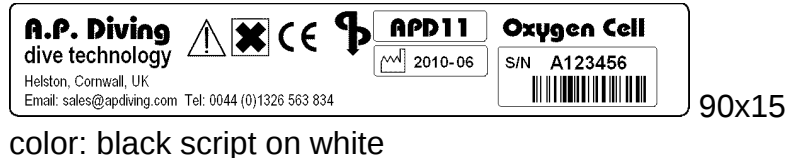


63,5x46,6

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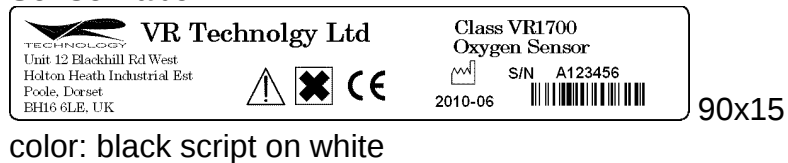
## Type 8010002 [for samples only] (OOD103-1V)

### Sensor label



## Type 8010003 (OOD103-1)

### Sensor label



### Blister-Card / bag label

