

# Sensors for Oxygen Measurement

Chem

Pharm



## SE 706 Oxygen Sensor

**Sensor in robust and hygienic stainless steel design, high accuracy and low detection limit, simple and fast maintenance due to special membrane**

Reliable in-line measurement of dissolved oxygen, even under sterile and hygienic conditions. High signal stability. Simple maintenance due to modular design. Special membrane with steel mesh and PTFE coating. Sterilizable, autoclavable and CIP capable. Also suitable for use in hazardous locations.

### Applications

Biotechnology, pharmaceutical industry, fermentation, various fields of analytical chemistry

### Facts

- high level of process safety
- durable materials
- robust design
- easy to clean thanks to extremely smooth surface
- cost-efficient service due to easy-to-replace membrane module and interior body
- hygienic design
- high resolution of 6 ppb
- operation also in hazardous locations
- VP screw cap

### Specifications

|   |  |
|---|--|
| Range:  | $pO_2 < 1200 \text{ mbar}$                                     |
| Detection limit:                                | 6 ppb  |
| Accuracy:                                       | 1 % + 4 ppb  |
| Response time at 25 °C (air → N <sub>2</sub> ): | 98 % full scale < 90 s   |
| Signal in ambient air:                          | 50 ... 110 nA  |
| Residual signal in O <sub>2</sub> -free medium: | ≤ 0.1 % of signal in ambient air                               |
| Flow dependence:                                | ≤ 5 %  |
| Perm. pressure range (measurement):             | 0.2 ... 6 bar absolute   |
| Mechanical pressure resistance:                 | max. 12 bar absolute   |
| Perm. temp range (measurement):                 | 0 ... 80 °C  |
| Temp range (stability):                         | –5 ... +140 °C (steam sterilizable/autoclavable)               |
| O-ring material (process-wetted):               | silicone (FDA&USP Class VI tested)                             |
| Membrane material:                              | PTFE/silicone/PTFE, FDA compliant (reinforced with steel mesh) |
| Process-wetted sensor parts:                    | 1.4404 stainless steel (material certificate 3.1B)             |
| Surface roughness:                              | N 5 (RA < 0.4 μm)  |
| Temperature detector:                           | NTC 22 kohms   |
| Interior body incl. sensing electrodes:         | replaceable (ZU 0567)  |
| Process adaptation:                             | Pg 13.5  |
| Sensor cap:                                     | VP (VarioPin)  |
| ATEX Certificate:                               | II 1/2 GD Ex ia IIC T6/T5/T4/T3                                |
| Certificates:                                   | 3A, 3.1B (EN 10204)  |

**Product Line**

SE 706 oxygen sensor

Length 120 mm

Length 220 mm

Order No.

SE 706/1

**SE 706/2**

**Cable**

VP6-ST cable

3 m

5 m

10 m

20 m

Order No.

**ZU 0313**

**ZU 0314**

**ZU 0315**

**ZU 0584**

**Accessories**

O<sub>2</sub> membrane module

separate

Order No.

**ZU 0563**

O<sub>2</sub> membrane kit

membrane module (4 x), O-ring set (1 x), 25 ml electrolyte (1 x)

**ZU 0564**

O<sub>2</sub> electrolyte

25 ml

**ZU 0565**

Interior body for SE 706

**ZU 0567**

O-ring set

silicone

**ZU 0679**

**Dimension Drawing**

