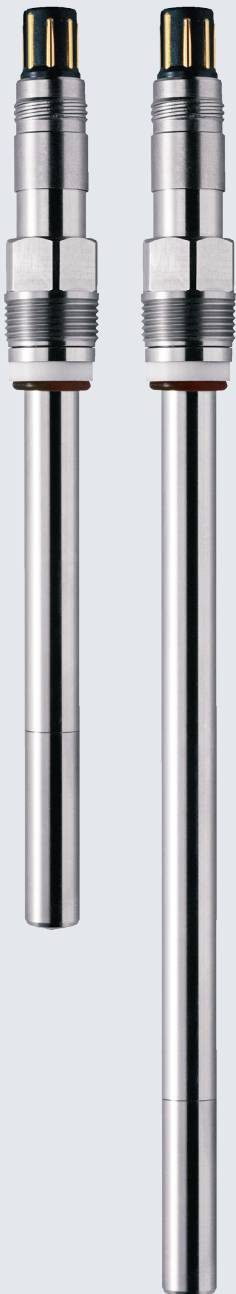


# Sensors for Oxygen Measurement

Chem

Energy

Food



## SE 707 Oxygen Sensor

**Reliable measurement of oxygen traces, also under sterile and hygienic conditions; signal-stable and robust**

High resolution of low oxygen concentrations, simple and cost-efficient sensor calibration in ambient air. No calibration gases. High signal stability, also in the presence of high CO<sub>2</sub> partial pressures. FDA-conforming material with extremely smooth polished surface. Simple maintenance due to modular design. Sterilizable, autoclavable, and CIP capable. Also suitable for hazardous locations.

### Applications

Beverage filling (e.g. milk, beer), measurement in boiler feed water (detection limit 1 ppb)

### Facts

- high level of process safety
- durable materials
- robust design
- easy to clean thanks to extremely smooth surface
- very simple calibration in air without calibration gases
- cost-efficient service due to easy-to-replace membrane module and interior body
- hygienic design
- very high resolution of 1 ppb in the trace range
- low cross-sensitivity to CO<sub>2</sub>
- operation also in hazardous locations
- VP screw cap

### Specifications

Range:	pO <sub>2</sub> < 1200 mbar
Detection limit:	1 ppb (3 ppb in liquids containing CO <sub>2</sub> )
Accuracy:	1 % + 1 ppb (1 % + 3 ppb in liquids containing CO <sub>2</sub> )
Response time at 25 °C (air → N <sub>2</sub> ):	98 % full scale < 90 s
Signal in ambient air:	290 ... 500 nA
Residual signal:	in O <sub>2</sub> -free medium: ≤ 0.01 % of signal in ambient air in CO <sub>2</sub> : ≤ 0.03 % of signal in ambient air
Flow dependence:	≤ 5 %
Permissible pressure range (measurement):	0.2 ... 6 bar absolute
Mechanical pressure resistance:	max. 12 bar absolute
Permissible temperature range (measurement):	0 ... 80 °C
Temperature range (stability):	–5 ... +121 °C (steam sterilizable/autoclavable)
O-ring material:	silicone (FDA&USP Class VI tested)
Membrane material:	PTFE/silicone/PTFE, FDA comp. (reinforced w. 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. electrodes:	replaceable (ZU 0568)
Sensor cap:	VP (VarioPin)
ATEX Certificate:	II 1/2 GD Ex ia IIC T6/T5/T4/T3
Certificates:	3A, 3.1B (EN 10204/3.1.B)

**Product Line**

SE 707 oxygen sensor

Length 120 mm

Length 220 mm

Order No.

**SE 707/1**

**SE 707/2**

**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 707

**ZU 0568**

O-ring set

silicone FDA

**ZU 0679**

**Dimension Drawing**

