



## SE 707 Memosens Oxygen Sensor

**Reliable measurement of oxygen traces, also under sterile and hygienic conditions; signal-stable and robust, digital, with Memosens technology.**

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

- perfect galvanic isolation thanks to Memosens technology
- precalibration in the lab
- no influence of humidity in the connector
- digital data transfer
- integrated sensor diagnostics
- 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

# SE 707 Memosens Oxygen Sensor

## 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 oxygen-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
Perm. temp range (measurement):	0 ... 80 °C
Temp range (stability):	-5 ... +121 °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. electrodes:	replaceable (ZU 0568)
Sensor cap:	Memosens
ATEX Certificate:	II 1/2 GD Ex ia IIC T6/T5/T4/T3
FM Certificate:	IS for Class I, Division 1, Groups A, B, C, D; Class I, Zone 0, AEx/Ex ia IIC T6 ... T4 NIFW for Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, IIC T6 ... T4

**Product Line**

**Sensor**

SE 707 X oxygen sensor

**Length**

120 mm  
220 mm

**Order No.**

SE 707X/1-NMSN  
SE 707X/2-NMSN

**Cables**

Memosens cable

**Length**

3 m  
5 m  
10 m  
20 m<sup>\*)</sup>

**Order No.**

CA/MS-003NAA  
CA/MS-005NAA  
CA/MS-010NAA  
CA/MS-020NAA

Memosens-cable, Ex

3 m  
5 m  
10 m  
20 m<sup>\*)</sup>

CA/MS-003XAA  
CA/MS-005XAA  
CA/MS-010XAA  
CA/MS-020XAA

**Accessories**

O<sub>2</sub> electrolyte

**Quantity**

25 ml

**Order No.**

ZU 0565

O<sub>2</sub> membrane module

separate

ZU 0563

O<sub>2</sub> membrane kit

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

ZU 0564

Interior body for SE 707

ZU 0568

O-ring set

Silicone

ZU 0679

**MemoSuite**

Management software for Memosens sensors

Basic version (calibration)

Advanced version (calibration, diagnostics, documentation)

**Order No.**

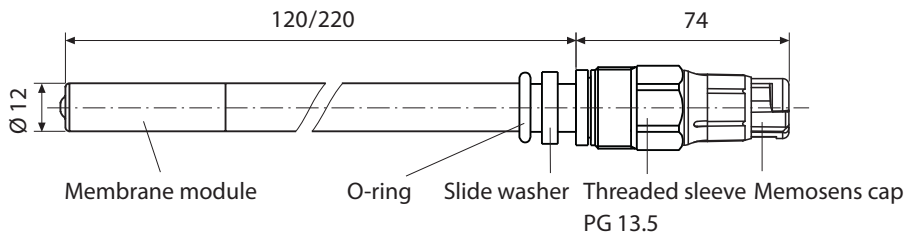
SW-MS1400-B  
SW-MS1400-A

<sup>\*)</sup> Greater lengths on request

# SE 707 Memosens Oxygen Sensor

## Dimension Drawing

---



All dimensions in mm