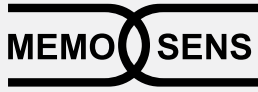


# Sensors for Oxygen Measurement



## 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

### 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):	2.9 ... 87 psi (0.2 ... 6 bar) absolute
Mechanical pressure resistance:	max. 174 psi (12 bar) absolute
Perm. temp range (measurement):	32 ... 176 °F (0 ... 80 °C)
Temp range (stability):	23 ... 249 °F (-5 ... +121 °C) steam sterilizable/autoclavable
O-ring material:	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 G Ex ia IIC T3/T4/T6
Certificates:	3A, 3.1 (EN 10204)

**New England - ETA Process Instrumentation**  
 119 Foster Street, Bldg #6  
 Peabody, MA 01960  
 Tel: (978) 532-1330  
 www.etapii.com  
 sales@etapii.com

**Upstate NY - Martech Controls**  
 2000 Teall Avenue  
 Syracuse, NY 13026  
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**Product Line**

Product Line	Length	Order No.
SE 707 X oxygen sensor	Length 120 mm	<b>SE 707X/1-NMSN</b>
	Length 220 mm	<b>SE 707X/2-NMSN</b>

**Cable**

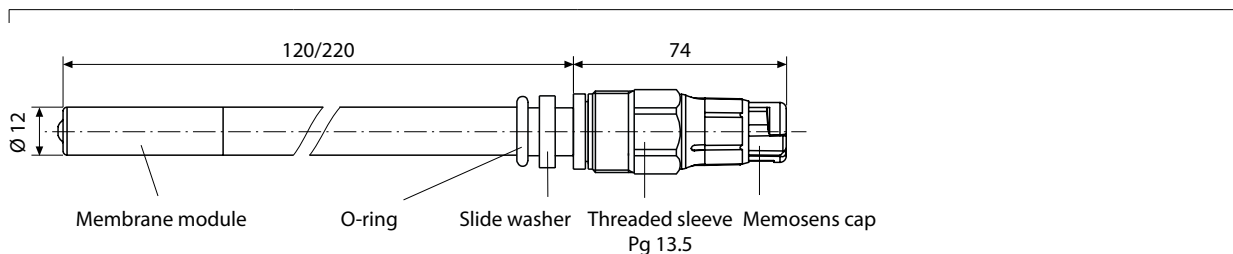
Cable	Length	Order No.
Memosens cable	3 m	<b>CA/MS-003NAA</b>
	5 m	<b>CA/MS-005NAA</b>
	10 m	<b>CA/MS-010NAA</b>
	20 m <sup>*)</sup>	<b>CA/MS-020NAA</b>
Memosens cable, Ex	3 m	<b>CA/MS-003XAA</b>
	5 m	<b>CA/MS-005XAA</b>
	10 m	<b>CA/MS-010XAA</b>
	20 m <sup>*)</sup>	<b>CA/MS-020XAA</b>

**Accessories**

Accessories	Description	Order No.
O <sub>2</sub> membrane module	separate	<b>ZU 0563</b>
O <sub>2</sub> membrane kit	membrane module (4 x), O-ring set (1 x), 25 ml electrolyte (1 x)	<b>ZU 0564</b>
O <sub>2</sub> electrolyte	25 ml	<b>ZU 0565</b>
Interior body for SE 707		<b>ZU 0567</b>
O-ring set	silicone	<b>ZU 0679</b>

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

**Dimension Drawing**



All dimensions in mm