

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 CO₂ 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 CO₂
- operation also in hazardous locations

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Specifications

Range:	pO ₂ < 1200 mbar
Detection limit:	1 ppb (3 ppb in liquids containing CO ₂)
Accuracy:	1 % + 1 ppb (1 % + 3 ppb in liquids containing CO ₂)
Response time at 25 °C (air → N ₂):	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 ₂ : ≤ 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^{*)}

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^{*)}

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

Accessories

O₂ electrolyte

Quantity

25 ml

Order No.

ZU 0565

O₂ membrane module

separate

ZU 0563

O₂ membrane kit

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

ZU 0564

Interior body for SE 706

ZU 0567

O-ring set

Silicone

ZU 0679

MemoSuite

Management software for
Memosens sensors

Basic version (calibration)

Advanced version (calibration, diagnostics, documentation)

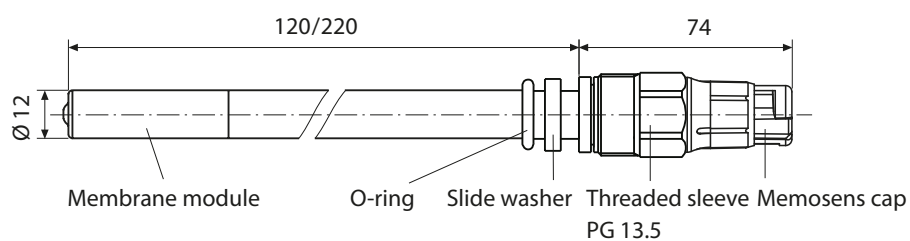
Order No.

SW-MS1400-B
SW-MS1400-A

^{*)} Greater lengths on request

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Dimension Drawing



All dimensions in mm