

Sensors for Oxygen Measurement

MEMO SENS



SE 706 Memosens Oxygen Sensor

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

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

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

Specifications

Range:	$pO_2 < 1200 \text{ mbar}$
Detection limit:	6 ppb
Accuracy:	1 % + 4 ppb
Response time at 25 °C (air \rightarrow N ₂):	98 % full scale < 90 s
Signal in ambient air:	50 ... 110 nA
Residual signal in O ₂ -free medium:	$\leq 0.1 \%$ of signal in ambient air
Flow dependence:	$\leq 5 \%$
Permissible pressure range (measurement):	2.9 ... 87 psi (0.2 ... 6 bar) absolute
Mechanical pressure resistance:	max. 174 psi (12 bar) absolute
Permissible temperature range (measurement):	32 ... 176 °F (0 ... 80 °C)
Temperature range (stability):	23 ... 275 °F (-5 ... +135 °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 0567)
Sensor cap:	Memosens
ATEX Certificate:	II 1/2 GD Ex ia IIC T6/T5/T4/T3
FM Approvals (US & C)	Cl. 1 Div. 1, GP ABCD T3/T4/T6
Certificates:	3A, 3.1 (EN 10204)

Product Line

SE 706 X oxygen sensor

Length 120 mm

Length 220 mm

Order No.

SE 706X/1-NMSN

SE 706X/2-NMSN

Cable

Memosens cable

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 membrane module

separate

Order No.

ZU 0563

O₂ membrane kit

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

ZU 0564

O₂ electrolyte

25 ml

ZU 0565

Interior body for SE 706

ZU 0567

O-ring set

silicone

ZU 0679

^{*)} Greater lengths on request

Dimension Drawing

