SentrOxy semiPROC series

Optical oxygen sensors for semi process application



Smart sensor design

- 12mm sensor shaft compatible with conventional electrochemical probes and fixtures
- Integrated temperature measurement and large internal data logger
- Inert POM housing with NS14 conical connection – IP68 / NEMA 6
- Surprising affordable price

Highly reliable

- Patented modern optical technology with two separate measurement channels for real-time referencing (SIL conformance)
- Monitoring of the health status and the status of the sensing element
- For inline- / online measurements usable



Simple operation and very low maintenance

- Pre-calibrated sensing element placed in robust cap for easy replacement
- Easy adjustment by connecting the trigger input to the ground for 4(0)-20mA installation
- No fragile oxygen membrane and no electrolyte-related problems
- No consumption of oxygen, no polarisation time
- Usable for measuring dissolved oxygen or oxygen in gas

Future-proof by versatile connection

- Fieldbus RS485 with Modbus RTU protocol and 2x configurable 4(0)-20mA protect your investment
- Configurable trigger / alarm channels
- SentroCon USB converter, battery powered wireless communication device SentroCon PPA and software package available optionally

SentrOxy semiPROC L3208



SentrOxy semiPROC L3207

Made in Germany

SentrOxy semiPROC series

These smart optical dissolved oxygen sensors are designed for semi process applications in R&D, production and quality control.

Based on the modern principle of optical oxygen measurement, SentrOxy semiPROC sensors combine high measurement performance with low maintenance.

The 12mm sensor shaft is compatible with conventional electrochemical probes. The shaft and the sensor housing are made of POM and therefore resistant to corrosion.

For a faster response to changes in temperature, the integrated temperature sensor of the Sentroxy semiPROC L3208 is placed in a small metal ring on the outside of the shaft tip.

The use of precise fibre optics with two separate measurement channels permits signal referencing and self-diagnosis of the sensor status in real time.

The pre-calibrated measuring cap with the solid sensing element is easy to replace and ready to use without additional maintenance.

The sensors can be connected directly to various control systems by using the two 4(0)-20mA analogue output signal and/or the digital RS485 interface with Modbus protocol. A fact that protects your investments. Optionally, Sentronic can provide a USB adapter or a battery powered wireless communication device with software package.

CONNECTION OPTIONS

4(0)-20mA Transmitter



- 1st 4(0)-20mA – oxygen signal
- 2nd 4(0)-20mA – temperature signal
- RS485 - A
- RS485 - B
- GND
- Power
- 1st Alarm / Trigger
- 2nd Alarm / Trigger

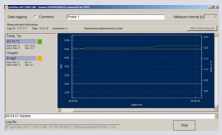
PCS / RS485-Modbus RTU



- 1st 4(0)-20mA – oxygen signal
- 2nd 4(0)-20mA – temperature signal
- RS485 - A
- RS485 - B
- GND
- Power
- 1st Alarm / Trigger
- 2nd Alarm / Trigger

SentroCON serie / LabSoft





- Sensor configuration
- Adjustment
- Data visualization and recording
- Read data logger

Technical specifications	
Technology	Optical oxygen sensor based on fluorescence quenching
Electronics	Microprocessor controlled opto-electronics
Power supply	7-40VDC
Interface	2x 4(0)-20mA RS485 with Modbus protocol Optional: USB converter, wireless communication device
Memory	EAN, S/N Calibration data Adjustment history Cap ID User ID
Trigger / Alarm function	Watchdog: >21mA on analogue output; 2x configurable digital trigger in / alarm out
Data logging	Internal data logger
Design characteristics	
Probe diameter	12mm
Probe length	120mm
Probe connection	Direct on 12mm shaft or conical connection for glass grinding NS14
Materials with media contact	POM, PET, PC
Optics	Two-channel fibre optics
Temperature measurement	Integrated in probe tip (L3207 WA) or metal ring on the outside (L3208 WA)
Operating temperature (probe tip)	-5 – 50°C
Specification of measuring cap SentrOxy DIS L5006 WA	
Analyte	Dissolved oxygen
Measurement range (standard membrane)	0.01 mg/l – 20mg/l 00.1% – 200% air sat. 1 – 400mbar
Resolution	0.01mg/l 0.1% air sat.
Detection limit	0.01mg/l 0.1% air sat.
Accuracy at 25°C	± 0.5% upper range value (<100% air sat.) ± 1% upper range value (<100% air sat.)
Response time 25°C, air to N_2	t_{90}< 60s
Interferences	Insensitive to CO_2, H_2S, $S0_2$ etc.

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