

## **SentrOxy WQM-Series**

for water quality management

- **The first patented and only system with two separate measurement channels for real-time referencing for more measurement safety**
- **Reports real-time values of oxygen and temperature conditions**
- **Monitoring of the sensor health status and the status of the sensitive element inclusive the expiration clock**
- **Pre-calibrated sensitive element placed in robust cap for easy replacement**
- **Eliminates replacement of fragile oxygen membranes and electrolyte solutions for minimum maintenance effort and cost of ownership**
- **Long term stability reduced calibration task and reduced the labor costs**
- **No corrosion of sensor in high saline environments by using inert POM**
- **Insensitive to common interference that degrade classical membrane-based sensors**
- **No oxygen consumption, no cross sensitivity to chloride, ammonium, hydrogen sulphide, carbon dioxide, and other**
- **Versatile connection via RS485 and Modbus RTU or Sentronic protocol and 4-20mA**
- **Additional transmitter are not required and this save the budget**
- **Separate trigger and alarm channels for a simplified integration**
- **Pre-loaded calibration coefficients**
- **Calibration data and sensor ID stored in the smart sensor probe**



**SentrOxy WQM**

### SentrOxy WQM

The new solution of optical dissolved oxygen measurement is designed for harsh and demanding environmental.

Based on the optical principle of fluorescence quenching SentrOxy WQM dissolved oxygen sensors combine high measurement performance with low maintenance and cost of ownership.

With focus on aquaculture management SentrOxy WQM is ready for application in water treatment plants, inland- and seawater pond production, open pen production, recirculation systems, hatchery operations, etc.

The sensors can be connected directly to a process control system by using the 4-20mA analog output inclusive off the watchdog function or the digital RS485 interface with Modbus RTU or Sentronic protocol. An additional transmitter is not necessary. For calibration or qualification in your laboratory Sentronic offers optionally an USB adapter and a Software package.

### SentrOxy WQM probe

The precise sensor optic allows building up two separate optical measurement channels which measure in independent areas of the same membrane. That innovative and patented principle allows real-time referencing. This makes your measurement much more secure and informs you about mechanical defects of the membrane or measurement effects caused by air bubbles.

Due to the robust and inert design the probe withstands harsh conditions and will not corrode in high salinity environments.

### Sensor Cap

The solid sensing element is free of fragile membranes, electrolyte and placed in a robust replaceable cap. The need to replace just a single part minimizes service time and cost. Each sensor has pre-loaded calibration coefficients.

Two calibration procedures are possible. Selectable are the one-point-calibration to adjust the sensor cap or the well known two-point calibration. The calibration data are stored in a history table in the sensor memory.

As the optical sensing principle does not consume any oxygen the measurement is flow independent. Furthermore it is not influenced by e.g. chloride, ammonium, hydrogen sulphide, carbon dioxide.

### Sensor accessories

Different accessories facilitate the use of the sensor. The SentrOxy WQM sensors have threads on each end for mounting the accessories. Available is a fixture with mounting holes for strain relief cable and additional weights for fixtures. This accessory is combined with an air tube adapter to use as a cleaning head. In addition Sentronic offers an adapter to mount the sensor to a 1,5" NPT male threaded pipe as well, and a protection cap to protect the membrane against fish bites.

Technical Parameters	
Technology	Optical oxygen sensor based on fluorescence quenching
Electronic	Microprocessor controlled opto-electronic
Power supply	6-12VDC
Interface	4-20mA RS485 with Modbus protocol Optional: USB Converter
Memory	EAN, S/N Calibration data Calibration history Cap ID Alarm history
Alarm function	Watchdog: >21mA at analog output trigger and alarm channel
Measurement range	0,01 – 20mg/l 0,1 – 200%air saturation
Accuracy at 25°C	0 – 100%sat.: ± 0,5% measuring range end 100 – 200%sat.: ± 1% measuring range end
Response time 25°C, air to N <sub>2</sub>	T <sub>90</sub> < 60s

Order Information		
SentrOxy WQM L5201	20m cable	2520801400116
SentrOxy WQM L5202	10m cable	2520801200129
SentrOxy WQM L5203	5m cable	2520801300126
SentrOxy DIS L1102 WQM	Measuring cap, POM	2520801600110
SentrOxy DIS L1101 WQM	Measuring cap, POM and copper	2520801700117