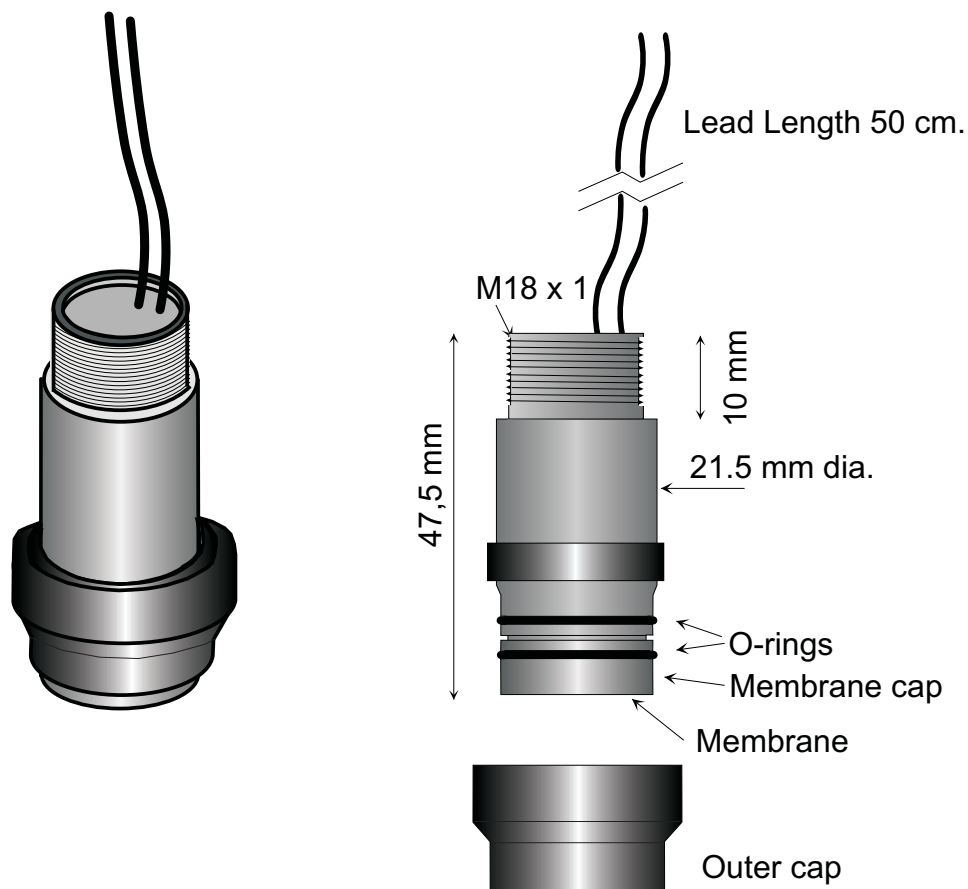


OxyGuard D.O. Profile

Dissolved Oxygen probe for Profiling Measurements in the Environment



General Information

The OxyGuard Profile is a small dissolved oxygen probe with a very fast response time and a short temperature equilibrium time. It is designed specially for profiling measurements in ponds, lakes and the sea. It is (unlike other types of dissolved oxygen probe) NOT sensitive to hydrogen sulphide!

The measurement process in standard dissolved oxygen probes is such that the whole probe must attain temperature equilibrium with the surroundings before correct measurements are obtained. The OxyGuard Profile overcomes this problem - it measures correctly immediately thanks to its innovative and technologically advanced design!

As with all OxyGuard dissolved oxygen probes, the Profile has built-in temperature compensation. It delivers a millivolt output directly proportional to the oxygen pressure that it senses. The electronics needed to process the probe output can therefore be very simple!

The OxyGuard Profile is delivered with a M18 x 1 mm thread mount and 50 cm leads as illustrated, but can be delivered in other configurations on request.

Technical Information

Technical Advantages

- * Very fast response time to changes in temperature.
- * Very fast response time to changes in oxygen concentration.
- * Not cross-sensitive to hydrogen sulphide.
- * Galvanic type - the OxyGuard probe makes its own electricity.
 - Uses a chemical principle superior to that of traditional DO probes.
 - negligible zero error - no zero adjustment needed.
 - No warm-up time - always ready to measure.
 - No external excitation voltage to calibrate.
- * Built-in temperature compensation.
- * Low output impedance - easy signal conditioning.
- * Extremely easy - and inexpensive - to maintain.

Installation and Use

The OxyGuard Profile Probe is designed to be fitted to an exploratory device. This can be a sonde that is lowered through a body of water or a device that is towed through the water. Its low output impedance makes it easy to obtain undisturbed measurements. If used in a sonde, e.g. a multi-parameter sonde, where other equipment can have electrical connection to the water, the Profile must be connected to a circuit with effective galvanic isolation.

Probe Care

The OxyGuard profile will give you many years of trouble-free service if you treat it with a little care. The membrane should be kept clean, and the porous insert must not be allowed to dry out. Check that the sponge in the protection cap is wet every time you use the probe, and if you store it for any length of time check that the sponge is wet at regular intervals.

Calibrate the probe as needed - once a day should be more than enough. Renovate the probe if you cannot calibrate to the correct value. The probe measures the oxygen partial pressure at the membrane and will therefore react to changes in atmospheric pressure.

Specifications

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|----------------------------------|---|
| Output Signal: | Typically between 10 and 40 mV in air. |
| Operating Temperature: | 0 to 40 °C. |
| Operating Pressure: | Max 15 bar (150m depth in water). |
| Temperature Compensation: | Built into probe. |
| Response Time:Oxygen: | 90% of final value within 10 sec, unchanged temperature. |
| Temperature compensation: | approx. 10 sec. per 10°C. |
| Connections: | Delivered with 2 x 50 cm 0.25 mm ² wires or as ordered |
| Accuracy (oxygen): | +/- 1% of measured value. |
| Accuracy (temp. comp.): | +/- 2% of measured value between 5 and 25°C. |
| Suitable Amplifier Requirements: | |
| Input Impedance: | Minimum 2 megohm. |
| Galvanic Isolation: | Recommended. |

Ordering Information

D041M18: OxyGuard DO Profile probe, M18 mount, with accessories, for % saturation measurements.
D04XE250: 250 ml electrolyte;
D04XM: Set of membranes and O-rings.

D04 DO Profile brochure gb 1104
Data subject to change without notice