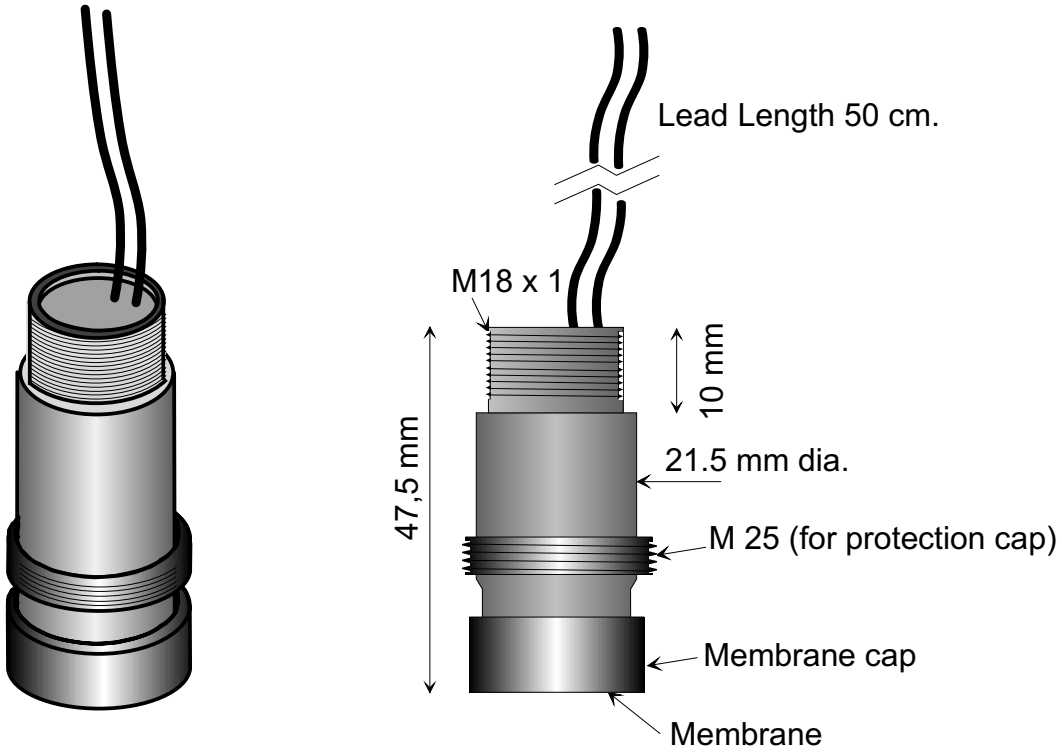
OxyGuard D.O. Profile

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!

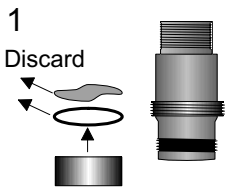
As with all OxyGuard dissolved oxygen probes, the Profile has built-in temperature compensation. It delivers a millivolt output directly proportional to the oxygen pressure that it senses. The electronics needed to process the probe output can therefore be very simple!

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

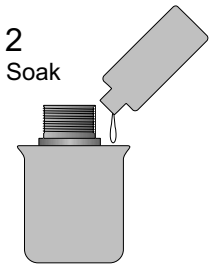
Probe Care

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 wooden 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.



Probe Calibration

The Probe should be calibrated in water-saturated air, or in air-saturated water. We recommend the following procedure:
1) Unscrew the protection cap and remove the sponge.
2) Wipe the membrane - it should be clean and dry.
3) Put a few drops of water into the protection cap and lightly screw it in place.
4) Adjust the electronics connected to give the calibration value corresponding to 100% saturation.



Probe Renovation

1) Clean the outside of the probe. Unscrew the membrane cap, discard the used membrane and O-ring . Clean and dry the cap.

2) Soak the probe end in electrolyte - how long depends on how long ago it was last soaked.

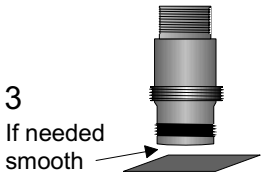
3) Inspect the cathode face. If the wooden insert has lifted above the cathode or edge wet the grade 300 wet-or-dry emery paper delivered with the probe with electrolyte and use it to smooth the insert down until no edges can be felt.

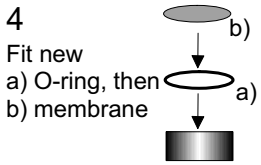
4) Put a new O-ring in place in the bottom of the cap and place a new membrane above it. It is very important that the membrane is placed concentrically in the bottom of the cap above the O-ring.

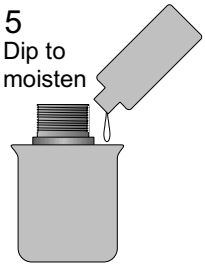
5) Dip the cathode face in electrolyte.

6) Hold the probe with the cathode face up and gently screw the cap with O-ring and membrane onto it. Tighten the cap firmly. The membrane should not wrinkle, if it does discard it and start again with a new membrane.

7) Renovation is complete. Calibrate the probe. Remember to store with the protector fitted. The sponge in the protector must be kept moist at all times.







Specifications

Output Signal:	Approx. 15 mV at 100% sat.
Temperature Compensation:	Built into probe.
Response Time:	Oxygen: 90% within 10 sec. for a 100% step change, same temp.
	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 % sat measurements.
D04XE250: 250 ml electrolyte; D04XM: 25 membranes.

OxyGuard International A/S
Blokken 59, DK-3460 Birkerød, Denmark
Tel. +45 45822094, Fax +45 45821994
E-mail: oxyguard@oxyguard.dk