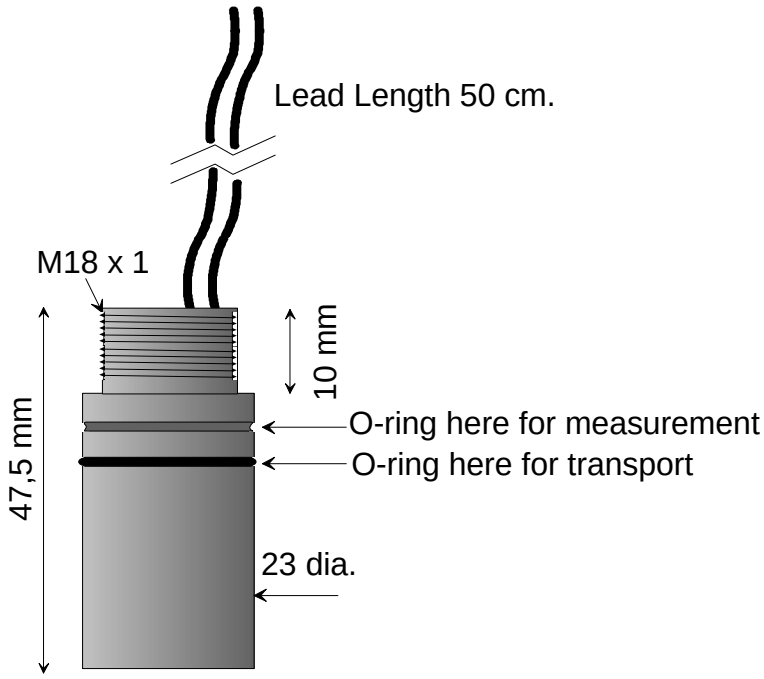
OxyGuard Ocean D.O. Probe

Small-Size D.O. Probe for Stationary Measurements in Ponds, Lakes and Oceans



General Information

This small-size version of the standard OxyGuard dissolved oxygen probe is a membrane-covered galvanic cell that generates its own voltage. Designed for long-term measurements in ponds, lakes and oceans the Ocean D.O. Probe is available in two versions, one for depths up to 100 m, the other for depths up to 2000 m.

Due to an ingenious pressure compensation system the probe is insensitive to pressure changes, and, as with all OxyGuard dissolved oxygen probes, it has built-in temperature compensation. It is, unlike some other types of dissolved oxygen probe, NOT sensitive to hydrogen sulphite.

The Ocean D.O. Probe thus delivers a millivolt output directly proportional to the oxygen pressure that it senses. The connected electronics can therefore be quite straightforward.

Technical Information

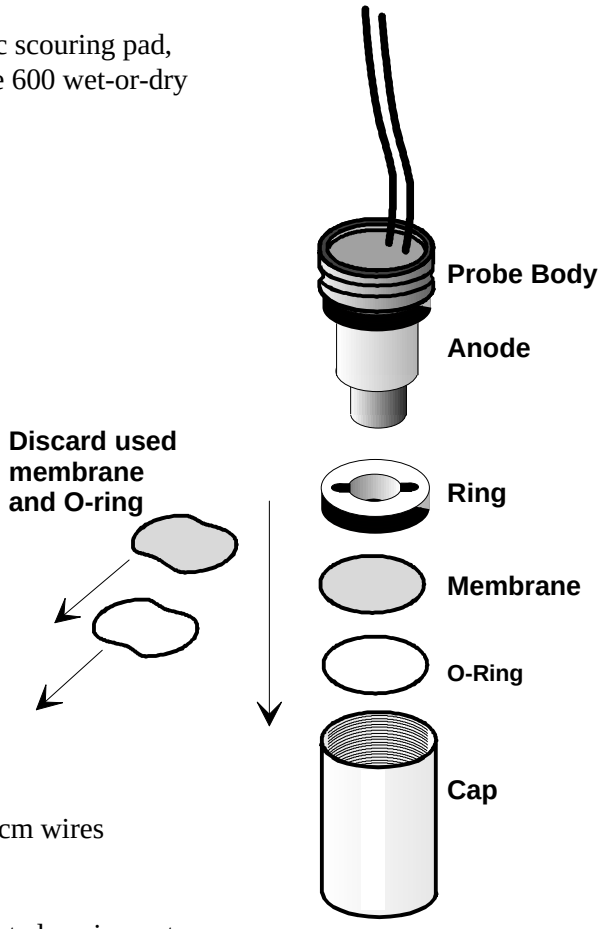
Probe Calibration

The Probe should be calibrated in water-saturated air, or in air-saturated water.
We recommend the following procedure:
1) Wipe the membrane - it should be clean and dry.
2) Place the probe in water-saturated air, i.e. just above the water surface, out of direct sunlight.
3) When the output is stable, indicating that temperature equalizing has taken place, adjust the electronics connected to give the correct calibration value.

Probe Renovation

It is important to note that the probe does NOT need regular maintenance - just keep the membrane clean. If the membrane should be damaged, or if, after long periods of use it is no longer possible to calibrate to the correct value, the probe needs renovation.
Unscrew the cap rinse with water and clean the anode - use a plastic scouring pad, NEVER metal. The cathode, if tarnished, can be cleaned with grade 600 wet-or-dry paper - do NOT polish it.
A new membrane must then be fitted to the cap:
-Use the tool to unscrew the ring.
-Remove the used membrane and O-ring.
-Rinse the cap and ring and dry them thoroughly.
-Put a new O-ring in the bottom of the cap.
-Put a new membrane on top of the O-ring.
-Replace the ring and tighten it firmly.
It is important that all parts are clean and dry. The membrane must not wrinkle - if it does start again with a new one.

Fill the cap to the brim with electrolyte. Hold the probe upright and slowly screw the cap up onto it. Excess electrolyte should dribble from the thread. The membrane should NOT be wrinkled - if it is start again with a cap with new membrane.
The probe can now be calibrated - re-calibration should be carried out after about 24 hours.



Specifications

Output Signal:	30 to 40 mV in air.
Temperature Compensation:	Built into probe.
Connections:	Delivered with 2 x 0.25 mm^2 x 50 cm wires
Suitable Amplifier Characteristics:	
Input Impedance:	Minimum 2 megohm
Galvanic Isolation:	Necessary, but only if other connected equipment has connection to the fluid being measured.

Ordering Information

D0511M18: Ocean Probe, to 100 m, high stability membrane, M18 mount.
D0512M18: Ocean Probe, to 100 m, fast response membrane, M18 mount.
D0521M18: Ocean Probe, to 2000 m, high stability membrane, M18 mount.
D0522M18: Ocean Probe, to 2000 m, fast response membrane, M18 mount.
Please contact OxyGuard for other versions.
Spares:
D05XE250: 250 ml electrolyte
D05XMS: 25 high stability membranes
D05XPP: Membrane protector for Ocean probe.
D05XMF: 25 fast response membranes.

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