EDT directION
ELECTROCHEMISTRY PRODUCTS

9999ORP

Platinum Redox Sensor For Corrosion/Cathodic Protection Applications

The Model 9999ORP sensor should be used in conjunction with the 9999 Cathodic protection reference electrode and BNC Adapter.

The REDOX potential is measured in mV and is a measure of the Corrosion potential of the water in which metal structures are in contact.

A highly oxidising solution such as Chlorinated water can have REDOX potentials over +700mV where clean river water may have potential close to +200mV.

Measuring the REDOX potential can alert you to changes in the corrosion potential of water and is particularly useful to Boat Owners wishing to protect metal Hulls. REDOX potentials will be lower near Grounding rods in Marinas and can give a good indication of corrosive environments caused by e.g. stray direct current from poorly earthed appliances and shore power.

Monitoring the REDOX potential near any metal structure in water will enable you to identify the sources of corrosion more easlily and take remedial action.

Understanding the reading.

The reading is a millivolt potential. It is basically the ability of the water to extract electrons. Removal of electrons from metals is corrosion or oxidation. A reading of say 200mV is mildly oxidising. Every 60mV (Approx) increase is a ten fold increase in oxidising capability. So: +260mv = 10 Times. +320mV = 100 times, 380mV = 1000 times, and 560 mV is 1 million times more corrosive.!!!

Regular readings should be taken and logged to track the progress of Corrosion.

The 25mm Rugged waterproof body and 5 metre cable makes this sensor ideal for any field work. This electrode is a half cell. A 9999 Cathodic protection Reference electrode should be use in conjunction with this product with a high impedance logging QP451 pH/mV meter.

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SPECIFICATION TABLE

Body Type	Rugged Polymer
Cable Length	5 Metre
Length	120mm
Connector	4mm Banana Plug
Diameter	25mm
Material	Platinum Disc Sensor half cell. Reference required to measure.

Instructions for use.

The 9999ORP Platinum REDOX sensor is a half cell and should be used with a suitable reference electrode. e.g. 9999 Cathodic protection reference.

1. Remove the protective cap from the sensor end
2. Wipe the surface with a lint free cloth to remove any film or contamination. Cleaning with any solvent is acceptable if fat or grease has been transferred to the tip by handling.
3. Connect the Red Banana plug to the positive terminal of the mV meter.
4. Connect the reference electrode to the Negative terminal.
5. Immerse both electrodes into the water. Keep them as close to the surface as possible preferably with the tops above the water line. This is just a security safety concern just in case they become snagged when out of sight.
6. Record the resultant mV reading. Log the data because in Corrosion measurement we are often looking for change and trends.
7. After use, rinse the probe with water. Then dry with a cloth and replace the cap.

For more information on this product visit www.edt.co.uk/9999ORP

Related Products

QP451 portable pH Meter

BNC to 4mm Banana Plug Adapter

Cathodic Protection Reference Electrode

Stay in touch with EDT

Telephone +44 (0)1304 829960
The Old Silo Store, St. Radigund's Abbey, Dover CT15 7DL www.edt.co.uk