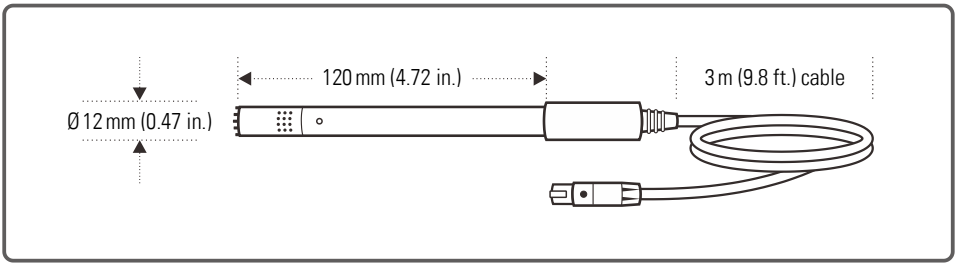
DO100

Dissolved Oxygen Electrode | User Guide

This polarographic dissolved oxygen electrode is designed for laboratory and field use.



Required Equipment and Reagents

- A dissolved oxygen meter
- Sodium sulfite reagent (Na_2SO_3)
- Cobalt (II) chloride hexahydrate ($CoCl_2 \bullet 6H_2O$)
- Electrolyte solution (order code: DO-ES)

Required Solutions

- Air-saturated water:
  To prepare this solution, use an air-pump to blow air into clear water at least 1 hour, while stirring the solution.

- Zero oxygen solution:
  To prepare this solution, dissolve 500 mg of the sodium sulfate reagent and a small amount of cobalt (II) chloride hexahydrate in the 250 ml distilled water, mix the solution until reagent is completely dissolved.

Prior to Use

1. Unscrew the membrane cap from the bottom of the electrode, rinse the inside and outside with distilled water and blot dry.
2. Fill the membrane cap halfway with electrolyte solution.

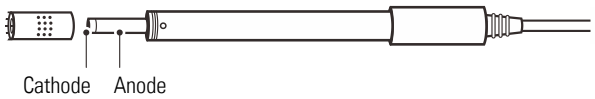
3. Screw membrane cap back onto the electrode. Some electrolyte solution will overflow during this process.
4. Check the electrode, make sure that the cathode of electrode makes contact with membrane cap, no air bubbles are trapped in the electrolyte solution and membrane is not creased or damaged.

Measurement

1. Connecting the electrode and switch on the meter, wait 10 minutes for the electrode to polarize.
2. Calibrate the meter according to the manufacturer's instructions.
3. Place the electrode into the sample and record the stable reading.

Electrode Maintenance

- Rinse the electrode thoroughly with distilled water after use.
- DO NOT touch the membrane and always keep it is clean and wet.
- If the electrode will not use for long periods, screw off the membrane cap, rinse the electrode anode, cathode, membrane cap with distilled water and blot dry. Install the electrode and store dry.



Specifications

Model	DO100
Range	0 to 20 mg/L
Temperature Sensor	NTC 10 KΩ
Response Time	95% of final reading in 30 seconds, 98% in 45 seconds
Minimum Sample Flow	20 cm per second
Operating Temperature	0 to 50°C (32 to 122°F)
Electrode Dimensions	150 (L) × 12 (Ø) mm (5.9 × 0.47 in.)
Cable Length	3 m (9.8 ft.)
Connector	6-pin mini-DIN
Body Type	Epoxy

Optional Accessories

Order Code	Description
DO-MEM	DO membrane cap
DO-ES	Electrolyte solution, 30 ml
DO-ZO	Zero oxygen solution, 100 ml