301Pt-C ORP Electrode

User Manual

Brief Introduction

Apera Instruments 301Pt-C ORP Electrode is featured with a proprietary platinum ring ORP sensor for fast and stable readings. The gel inner reference solution does not need to be refilled. This electrode is designed for testing in general water solutions both in-lab or in-field.

Technical Specifications

Range	-1999 to 1999 mV
Sensor	Φ6×2.5 platinum ring
Housing	Polycarbonate
Junction	Single ceramic
Reference Electrode	Ag/AgCl
Connector	BNC
Cable length	3 Ft
Dimension	ø12*160 mm
Standard value	222 mV +/- 15 mV (at 25°C)
Operating temperature	32 to 176°F (0 - 80°C)

How to Install the Electrode

1. Find the BNC socket (where it shows pH ORP) on the pH meter; Open the rubber cap; Insert the blue BNC connector of the electrode to the BNC socket while twisting clockwise until it's locked.
2. There is no calibration needed for ORP electrodes. If you want to double-check the condition of the electrode, simply test the electrode in the standard ORP solution such as 222 mV. If the reading is within the error range (+/- 15 mV), then it is good to go.

How to Use the Electrode

1. There is a proper amount of storage solution in the cap on top of the electrode. The ORP sensor tip is soaked in it to keep its sensitivity.

2. Before measuring, loosen the bottle cap, then pull out the electrode while twisting counterclockwise. Place the storage bottle at a safe position.
3. Rinse the electrode with purified water and shake off excess water or blot-dry it with clean tissue or filter paper. Never rub the sensor.
4. Insert the electrode into your sample solution and stir it for a few seconds in the solution to remove potential air bubbles, which may cause unstable readings. Then wait for the stable reading and take the measurement.
5. After use, insert the electrode while twisting clockwise into the storage bottle, then tighten the bottle cap. If the KCL storage solution (SKU: AI1107) in the cap is contaminated, please fill in new storage solution (other brands' storage solution may not work with this electrode).

How to Maintain the Electrode

1. Always rinse the electrode with purified water (distilled or deionized water) before and after each test and calibration. For organic contaminants stuck on the glass bulb sensor, use warm soap water and a soft brush to clean off; for inorganic contaminants, soak the electrode in 0.1M HCL solution for 30 minutes, then rinse with purified water, then soak in the KCL storage solution over night before using again.
2. Make sure the sensor is covered by the KCL storage solution (SKU: AI1107) in the storage cap when not in use.
3. Keep the electrode connector clean and dry. Use cotton balls with isopropyl alcohol to clean if it gets dirty and then blow-dry it. This is to prevent a potential short circuit, which will undermine the electrode's performance.
4. If the test result falls out of range in the standard ORP solution, soak the ORP electrode in the 222 mV standard solution for 30-60 minutes to condition it. Then test the standard again to see if it goes back to the working condition.