RCYAGO DO9100

Dissolved Oxygen Meter with Electrode Filling Fluid

Brand: RCYAGO | Model: DO9100

1. Introduction

The RCYAGO Dissolved Oxygen Meter is a high-precision instrument designed for accurate measurement of dissolved oxygen (DO) and temperature in various water bodies. It utilizes a polarographic sensor with a thermistor for automatic temperature compensation, ensuring reliable readings across different conditions. This manual provides comprehensive instructions for setup, operation, and maintenance of your DO meter.

Figure 1: RCYAGO Dissolved Oxygen Meter and Probe

2. What's in the Box

Please check the package contents to ensure all items are present:

- 1 x RCYAGO Dissolved Oxygen Meter (Model: DO9100)
- 1 x Electrode Probe
- 6 x Probe Protective Covers (Membrane Sleeves)
- 1 x Electrode Filling Solution
- 1 x Anaerobic Water Powder (for calibration)
- 1 x User Manual

3. Setup

3.1 Battery Installation

The meter requires 3 x 1.5V button batteries. These are typically pre-installed or included in the top cap of the device. Ensure they are correctly oriented before use.

3.2 Electrode Connection

Connect the electrode probe to the main meter unit by screwing the metal knob securely. Ensure a firm connection to prevent inaccurate readings.

Figure 2: Meter Components and Dimensions

3.3 Filling the Probe Protective Cover

The probe protective cover contains a permeable membrane. Before first use, or when replacing the membrane sleeve, fill it with the provided electrode filling solution. This solution is crucial for the sensor's proper function. Do not press on the membrane itself.

Figure 3: Highly Sensitive Probe and Protective Covers

4. Operation

4.1 Power On/Off and Display

Press the power button ( ) to turn the meter on. The digital screen will illuminate with a backlight, displaying DO readings and temperature. The backlight improves readability in low-light conditions. The device features an auto-power-off function after 8 minutes of inactivity to conserve battery life.

Figure 4: HD Backlight Display and Battery Compartment

4.2 Measurement Modes

The meter can display dissolved oxygen in mg/L (parts per million, ppm) or as a saturation percentage (%). Press the **MODE/CAL** button to toggle between these modes.

4.3 Temperature Compensation

The meter features automatic temperature compensation (ATC) within the range of 0-50°C (32-122°F). This ensures that dissolved oxygen readings are accurate despite variations in water temperature, as oxygen solubility is affected by temperature.

Figure 5: Automatic Temperature Compensation in action

4.4 Calibration

Regular calibration is essential for accurate measurements. The meter supports two-point calibration: 100% air calibration and 0% anaerobic water calibration.

4.4.1 100% Air Calibration

1. Ensure the probe is exposed to air.
2. Long press the **MODE/CAL** button for 5 seconds.
3. Release the button. The screen will flash 3 times at 100%. Calibration is complete.

4.4.2 0% Anaerobic Water Calibration

1. Prepare anaerobic water: Pour 1 packet of anaerobic powder into the attached calibration bottle, add 30ml of purified water or tap water, and wait 5-10 minutes for the powder to fully dissolve.
2. Submerge the electrode in the anaerobic water.
3. Press the **MODE/CAL** key to switch to mg/L mode.
4. Wait for the value to drop to 0.
5. Long press the **MODE/CAL** button for 5 seconds.
6. Release the button. The screen will flash 3 times at 0%. Calibration is complete.

Figure 6: Calibration Procedures

4.5 Taking a Measurement

Once calibrated, submerge the electrode probe into the water sample you wish to measure. The meter will display the dissolved oxygen and temperature readings. Allow a few moments for the readings to stabilize.

Figure 7: Measuring Dissolved Oxygen in a Pond

4.6 Switching Temperature Units

To switch between Celsius (°C) and Fahrenheit (°F), long press the**HOLD/TEMP** button.

4.7 Understanding Oxygen Solubility

Oxygen solubility in water is influenced by temperature, atmospheric pressure, and salinity. The provided table illustrates the saturation concentration of oxygen at different temperatures:

Figure 8: Oxygen Saturation Concentration at Different Temperatures

5. Maintenance

5.1 Probe Protective Cover (Membrane Sleeve)

The film inside the protective cover cannot be taken apart. If test values become inaccurate even after calibration, the membrane sleeve needs to be replaced. The meter comes with 6 spare covers.

5.2 Cleaning

The meter unit and probe should be cleaned with care. The product care instructions specify 'Hand Wash Only'. Avoid harsh chemicals or abrasive materials.

5.3 Storage

When not in use, ensure the probe protective cover is properly filled with solution and securely attached to protect the sensor. Store the meter in a cool, dry place.

6. Troubleshooting

- **Inaccurate Readings:** Ensure the electrode is properly connected and the membrane sleeve is filled with the electrode filling fluid. Perform calibration regularly (both air and anaerobic water calibration) as described in Section 4.4.
- **Display Issues:** Check battery levels. If the display is dim or erratic, replace the batteries.
- **No Reading:** Verify the electrode is fully submerged in the sample and that the connection to the meter is secure.
- **Calibration Failure:** Ensure the anaerobic water powder is fully dissolved for 0% calibration. For air calibration, ensure the probe is exposed to stable ambient air. If issues persist, the membrane sleeve might need replacement.

7. Specifications

Feature	Detail
Product Dimensions	6.1 x 0.01 x 0.01 inches
Item Model Number	DO9100
Weight	12.56 ounces
Brand	RCYAGO
Special Feature	High Accuracy
Color	Black
Outer Material	Plastic
Display Type	Digital with Backlight
Dissolved Oxygen Range	0.0-40.0 mg/L
Dissolved Oxygen Saturation	0.0-300.0%
Temperature Range	0.0-40.0°C (32.0-104.0°F)
Automatic Temperature Compensation	0-50°C
Power Source	3 x 1.5V Button Batteries
Auto Shut-off	8 minutes

8. Product Videos

8.1 Digital Dissolved Oxygen Meter - Basic Operation & Calibration

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This video provides a quick overview of the RCYAGO Dissolved Oxygen Meter, demonstrating how to power it on, install the electrode, and perform both air and oxygen-free water calibrations. It highlights the key steps for initial setup and ensuring accurate readings.

8.2 Portable Dissolved Oxygen Meter - Detailed Review & Usage

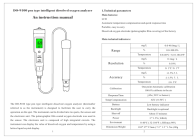
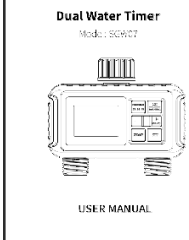
Your browser does not support the video tag.

This comprehensive video offers a detailed review of the portable dissolved oxygen meter. It covers unboxing, battery installation, electrode setup, and practical demonstrations of measuring dissolved oxygen in different water samples (tap water vs. boiled water). The video also discusses the included accessories like membrane caps and electrolyte solution, and explains the temperature conversion chart.

9. Warranty and Support

For warranty information, technical support, or to purchase replacement parts (such as probe protective covers or electrode filling solution), please contact RCYAGO customer service. Refer to the product packaging or the official RCYAGO website for contact details.

Related Documents - DO9100

	DO-9100 Pen Type Intelligent Dissolved Oxygen Analyzer Instruction Manual This document provides instructions for the DO-9100 pen type intelligent dissolved oxygen analyzer, covering its features, technical parameters, operation, maintenance, and troubleshooting.
	RCYAGO SGW07 Dual Water Timer User Manual Comprehensive user manual for the RCYAGO SGW07 Dual Water Timer. Learn about product overview, specifications, installation, automatic watering programs, manual watering, rain delay, troubleshooting, and battery status for your garden irrigation system.

	[Портативный оксиметр Yinmik DO9100, BLE9100: Руководство пользователя](#) Полное руководство пользователя для портативного оксиметра Yinmik моделей DO9100 и BLE9100. Охватывает технические характеристики, калибровку, эксплуатацию, обслуживание и гарантию.