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> GRAIGAR Smart Sensor AR8210 Dissolved Oxygen Meter User Manual

GRAIGAR AR8210

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Model: AR8210 | Brand: GRAIGAR

1. INTRODUCTION

The GRAIGAR Smart Sensor AR8210 is a portable digital dissolved oxygen meter designed for precise measurement of dissolved oxygen and temperature in various water systems. Its ergonomic design ensures ease of use with simple key operations and a comfortable grip. This device is suitable for applications in water sources, aquariums, hydroponics, spas, and swimming pools.

Package Contents:

- 1 x Dissolved Oxygen Meter (AR8210)
- 1 x Dissolved Oxygen Probe with Cable
- 1 x Storage Bag
- 1 x User Manual
- 4 x LR44 Button Batteries (pre-installed or included separately)



Image 1.1: Contents of the AR8210 package, including the meter, probe, and retail box.



Image 1.2: The included black storage bag for the AR8210 Dissolved Oxygen Meter.

2. PRODUCT FEATURES

- Rapid measurements of Dissolved Oxygen and Temperature (within 30 seconds).
- Wide measuring range: 0.00-20.00 mg/L for Dissolved Oxygen.
- Large and clear LCD with backlight for easy readability in various lighting conditions.
- High accuracy with automatic temperature compensation.
- Durable plastic shell construction.
- Data hold function.
- Calibration function.
- Temperature unit conversion (Celsius/Fahrenheit).



Image 2.1: The AR8210 meter with its LCD display and control buttons (SET, CAL, Power, HOLD, Up/Down arrows).



Image 2.2: Rear view of the AR8210 meter, displaying specifications and serial number.

3. SETUP

3.1 Battery Installation

The AR8210 meter operates on 4 x LR44 button batteries. These are typically included with the device. To install or replace batteries:

1. Unscrew the battery compartment cover, usually located at the top or bottom of the meter.
2. Insert the LR44 button batteries, ensuring correct polarity (+/-).
3. Securely close the battery compartment cover.

3.2 Probe Connection


Connect the dissolved oxygen probe to the meter by aligning the connector and gently pushing it in until it clicks or is firmly seated. Ensure the connection is secure to prevent water ingress and ensure accurate readings.



Image 3.1: The AR8210 meter connected to its dissolved oxygen probe via a cable.

4. OPERATING INSTRUCTIONS

4.1 Power On/Off


Press the **Power** button () to turn the meter on. Press and hold the **Power** button again to turn it off.

4.2 Measurement Procedure


1. Ensure the probe is clean and properly connected.
2. Immerse the probe into the water sample to be tested. Ensure the sensor part of the probe is fully submerged.
3. Allow approximately 30 seconds for the reading to stabilize on the LCD display.
4. Read the dissolved oxygen concentration (mg/L) and temperature (°C/°F) from the display.

4.3 Calibration

Regular calibration ensures measurement accuracy. Refer to the specific calibration solution requirements and procedure outlined in the full user manual. Typically, calibration involves:

1. Prepare the appropriate calibration solution (e.g., zero oxygen solution or saturated oxygen solution).
2. Press the **CAL** button () to enter calibration mode.
3. Follow the on-screen prompts to complete the calibration process.

4.4 Data Hold Function

Press the **HOLD** button () to freeze the current reading on the display. Press it again to release the hold and resume live measurements.

4.5 Backlight Function

Press the **SET** button () to toggle the display backlight on or off, improving visibility in low-light conditions.

4.6 Temperature Unit Conversion

The meter supports temperature display in both Celsius (°C) and Fahrenheit (°F). Use the arrow buttons or a combination with the SET button (refer to the full manual for exact key press) to switch between units.

Your browser does not support the video tag.

Video 4.1: An overview of the GRAIGAR Smart Sensor AR8210 Dissolved Oxygen Meter, demonstrating its features and operation. (Note: The video source URL is a placeholder as a specific m3u8 link was not provided.)

5. MAINTENANCE

5.1 Probe Cleaning

After each use, rinse the probe thoroughly with distilled water to remove any residue. Do not use abrasive materials or harsh chemicals, as this can damage the sensor membrane.

5.2 Storage

When not in use, store the meter and probe in the provided storage bag in a cool, dry place, away from direct sunlight and extreme temperatures. Ensure the probe's protective cap is in place to keep the sensor moist (if applicable to the probe type) or protected.

5.3 Battery Replacement

Replace batteries when the low battery indicator appears on the display or if the meter fails to power on. Refer

to section 3.1 for battery installation instructions.

6. TROUBLESHOOTING

- **Meter does not power on:** Check battery installation and ensure batteries are not depleted. Replace if necessary.
- **Inaccurate readings:** Ensure the probe is clean and properly calibrated. Recalibrate if readings are consistently off. Check for damage to the probe membrane.
- **Display is dim or flickering:** Replace batteries.
- **No reading:** Ensure the probe is fully submerged and properly connected to the meter.

7. SPECIFICATIONS

Parameter	Specification
Model	AR8210
Dissolved Oxygen Measuring Range	0.00 - 20.00 mg/L
Accuracy	±0.4 mg/L
Response Time	< 30 seconds
Temperature Measuring Range	0 - 40°C (32 - 104°F)
Temperature Compensation Range	0 - 40°C (32 - 104°F)
Battery Type	4 x LR44 Button Batteries
Data Hold	Yes
Backlight	Yes
Calibration	Yes
Dimensions	140 x 40 x 40 mm
Weight	132 g
Material	Plastic

8. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the contact details provided with your purchase documentation or visit the official GRAIGAR website. Keep your purchase receipt as proof of purchase.

For additional resources and support, you may visit the following link:

<http://weixin.qq.com/r/TDmzt4bEwU69KcLUb2zI>