

Hanna Instruments HI9147-04

Hanna Instruments HI9147-04 Dissolved Oxygen Meter User Manual

Model: HI9147-04

Brand: Hanna Instruments

1. INTRODUCTION

The Hanna Instruments HI9147-04 is a water-resistant dissolved oxygen (DO) meter designed for aquaculture applications. It provides accurate measurements of dissolved oxygen in water, crucial for monitoring water quality and supporting aquatic life.

Key features include automatic temperature compensation, manual salinity and altitude compensation, a backlit LCD screen for clear readings, and a galvanic DO probe with a 4-meter cable that requires no conditioning time, allowing for quick measurements.



Image shows the Hanna Instruments HI9147-04 dissolved oxygen meter. The main unit is black with a digital display showing '10.0 mg/L', '60.8 °F', and '9.7 g/L Salinity'. Below the display are six circular buttons: On/Off, CAL, %, BL ▲, SAL, mg/L, and °C/°F ▼. A galvanic probe with a 4-meter cable is connected to the right side of the meter.

2. What's in the Box

Upon unpacking your HI9147-04 Dissolved Oxygen Meter, please verify that all items are present and in good condition:

- HI9147-04 Dissolved Oxygen Meter
- HI 76409/4 probe with 4m (13') cable

- (2) Spare membranes
- HI 7042S electrolyte solution (30 mL bottle)
- (3) 1.5V AAA batteries
- HI 710016 shockproof rubber boot
- Screwdriver
- Instruction Manual

3. SETUP

3.1 Battery Installation

The meter operates on three 1.5V AAA batteries. To install or replace batteries:

1. Locate the battery compartment on the back of the meter.
2. Open the battery compartment cover.
3. Insert the three 1.5V AAA batteries, ensuring correct polarity as indicated inside the compartment.
4. Securely close the battery compartment cover.

3.2 Probe Connection

Connect the galvanic DO probe to the designated port on the top right side of the meter. Ensure a secure connection to prevent water ingress and ensure proper electrical contact.

3.3 Initial Calibration

Before first use and periodically, calibrate the meter for accurate readings. Calibration should be performed in air.

1. Power on the meter.
2. Press the **CAL** button. The '%' indicator on the display will blink.
3. With the probe exposed to air (not immersed in water), turn the trimmer (usually a small screw on the meter) until the display reads 100%.
4. Press the **CAL** button again to confirm the calibration. The meter is now calibrated.

4. OPERATION

4.1 Powering On/Off

Press the **On/Off** button located on the meter's keypad to power the device on or off.

4.2 Taking Measurements

To take a dissolved oxygen measurement:

1. Ensure the meter is calibrated.
2. Immerse the probe into the sample water. Ensure the membrane is fully submerged and there are no air bubbles trapped around it.
3. Allow sufficient time for the reading on the display to stabilize before recording the measurement.

4.3 Compensation Settings

The HI9147-04 offers compensation features for accurate readings in various conditions:

- **Salinity Compensation:** Press the **SAL** button to manually adjust for salinity. Refer to your sample's known salinity for accurate readings.
- **Altitude Compensation:** The meter features manual altitude compensation. Adjust this setting based on your operating altitude for precise measurements. Consult the full manual for detailed instructions on setting altitude.
- **Temperature Compensation:** The meter automatically compensates for temperature variations, ensuring accurate DO readings across different temperatures.

4.4 Unit Selection

You can switch between different measurement units:

- Press the **mg/L** button to toggle between dissolved oxygen concentration in mg/L (parts per million, ppm) and % saturation.
- Press the **°C/°F ▼** button to toggle between Celsius and Fahrenheit temperature units.

5. MAINTENANCE

5.1 Probe Care

To ensure the longevity and accuracy of your DO probe:

- Keep the probe membrane clean and free from debris.
- Rinse the probe with distilled or deionized water after each use.
- Store the probe properly, typically with the protective cap filled with electrolyte solution, to keep the membrane hydrated.

5.2 Membrane Replacement

The probe membrane should be replaced periodically or if it becomes damaged, scratched, or fouled. Refer to the included spare membranes and the detailed instructions provided with the probe for proper replacement procedures.

5.3 Electrolyte Solution Refill

Ensure the probe is filled with the HI 7042S electrolyte solution. The electrolyte solution needs to be replaced when the membrane is changed or if it becomes contaminated. Refill as needed, following the specific instructions for the probe.

5.4 Cleaning the Meter

Wipe the meter's exterior with a damp cloth. Do not use abrasive cleaners, solvents, or immerse the meter in water, as it is water-resistant but not fully submersible.

6. TROUBLESHOOTING

If you encounter issues with your HI9147-04 meter, refer to the following common problems and solutions:

- **Inaccurate or Unstable Readings:**
 - Ensure the probe is clean and properly calibrated.
 - Check the electrolyte solution level and membrane condition; replace if necessary.
 - Verify that salinity and altitude compensation settings are correct for your sample.
 - Allow sufficient time for the probe to stabilize in the sample.

- **Difficulty Calibrating:**

- Confirm the probe is in air during calibration.
- Ensure the trimmer is adjusted correctly to reach 100%.
- If issues persist, check the probe membrane and electrolyte solution for contamination or depletion.

- **Meter Not Powering On:**

- Check battery installation and ensure batteries are not depleted. Replace batteries if necessary.
- Ensure the battery compartment is securely closed.

- **Damaged Cable:**

- Inspect the probe cable for any visible damage, kinks, or breaks.
- A damaged cable may require probe replacement to restore functionality.

7. SPECIFICATIONS

Parameter	Value
Range	0.0 to 50.0 mg/L (ppm) O ₂ , 0 to 600% O ₂ , -5.0 to 50.0 °C
Resolution	0.1 mg/L or 1% (O ₂) / 0.1 °C
Accuracy	±1% of reading (O ₂) / ±0.2 °C
Power Source	Three 1.5V AAA batteries (included)
Dimensions	164 x 76 x 45mm / 6.5 x 3.0 x 1.8 inches (H x W x D)
Weight (with HI 76409/4 probe)	511g / 1.12 lb
Item Model Number	HI9147-04
ASIN	B0085X2GZ6
Manufacturer	Hanna Instruments

8. WARRANTY INFORMATION

This Hanna Instruments product is covered by a manufacturer's warranty against defects in materials and workmanship. For specific warranty terms and conditions, including duration and coverage details, please refer to the warranty documentation included with your product or visit the official Hanna Instruments website. Keep your proof of purchase for warranty claims.

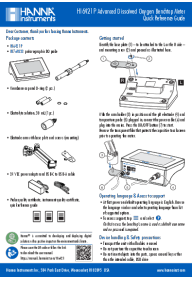
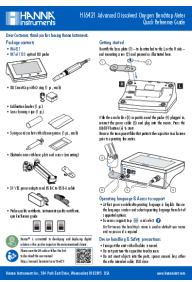
9. SUPPORT AND CONTACT INFORMATION

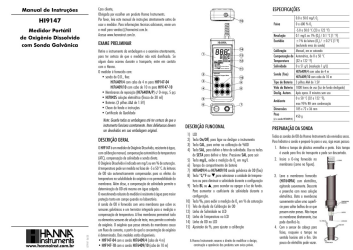
For further assistance, technical support, or to purchase accessories and replacement parts, please visit the official Hanna Instruments website or contact their customer service department:

Hanna Instruments Store: [Visit Hanna Instruments Store on Amazon](#)

For direct support, please refer to the contact information provided in your product's packaging or on the main Hanna Instruments corporate website.

Related Documents - HI9147-04

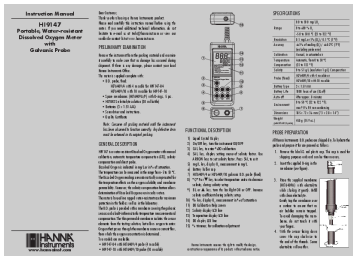
	Hanna Instruments HI98203 SALINTEST Pocket-sized Meter Instruction Manual Comprehensive instruction manual for the Hanna Instruments HI98203 SALINTEST pocket-sized salinity concentration meter, detailing its features, specifications, calibration, measurement procedures, care, maintenance, and disposal guidelines.
	Hanna Instruments HI6421P: Quick Start Guide for Advanced Dissolved Oxygen Benchtop Meter Concise guide for setting up, using, and calibrating the Hanna Instruments HI6421P Advanced Dissolved Oxygen Benchtop Meter, including package contents, operational tips, and safety precautions.
	Hanna HI6421 Advanced Dissolved Oxygen Benchtop Meter Quick Reference Guide Quick reference guide for the Hanna Instruments HI6421 Advanced Dissolved Oxygen Benchtop Meter, covering package contents, setup, operation, safety, calibration, and measurement tips.
	Hanna Instruments pHep HI 98107 Pocket-Sized pH Meter The Hanna Instruments pHep HI 98107 is a rugged, pocket-sized pH meter designed for accurate pH measurements. Features include a replaceable electrode, manual 2-point calibration, and a long battery life.
	HANNA HI 8424NEW Portable pH/mV/°C Meter Instruction Manual Comprehensive instruction manual for the HANNA HI 8424NEW portable pH/mV/°C meter. Learn about its features, specifications, operational guide, calibration procedures, maintenance, and troubleshooting. Includes details on automatic calibration and inductive charging.



[pdf] User Manual Documentation

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[pdf] User Manual Instructions

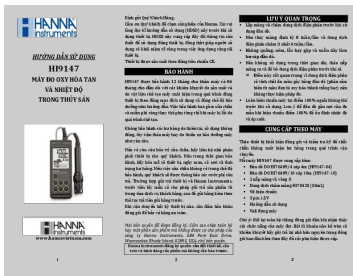
HI9147 0 to 50 mg L O Portable Water resistant CALIBRATION Calibration is a very simple 1 point
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Instruction Manual HI9147 Portable, Water-resistant Dissolved Oxygen Meter with
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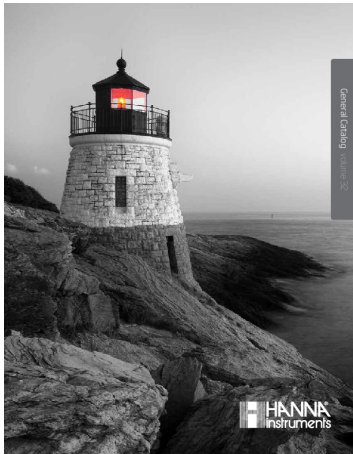
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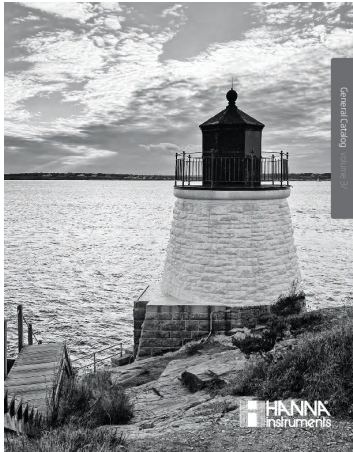


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[Hanna Instruments General Catalog Volume 37: Testers and Monitors](#)

Hanna Instruments' General Catalog Volume 37 showcases a comprehensive range of advanced electro-analytical instrumentation, focusing on testers and monitors for various applications. Discover innovative pH, EC, TDS, temperature, and ORP meters, alongside specialized testers for food, agriculture, and marine environments, emphasizing accuracy, ease of use, and reliability.

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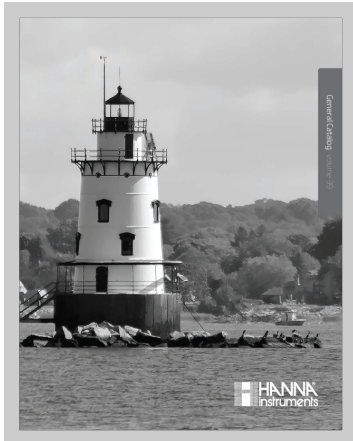


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General Catalog volume 35 Catalog Contents Introduction 1 Testers and Monitors 2 pH 3 ISE 4 Titrat ... 09/4 galvanic DO probe fixed with internal temperature sensor, DIN connector and 4 m 13 cable **HI9147-04** , 10 m 33 cable HI9147-10 , or 15 m 49 cable HI9147-15 Battery Type / Life Envir...

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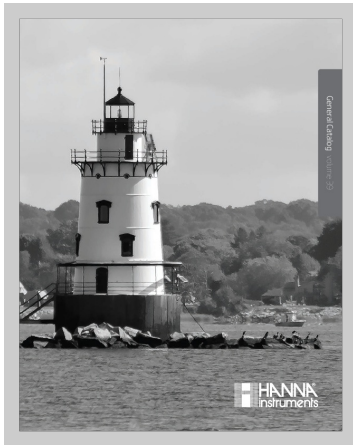


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Table of Contents

5

Conductivity / TDS

Introduction.....	5.2	Solutions.....	5.34
Product Highlights.....	5.4	Conductivity (CTD).....	5.34
Component Guide.....	5.5	TDS.....	5.39
		Salinity.....	5.40
edge®.....	5.6	Quick Cal.....	5.40
edge®.....	5.6		
edge®.....	5.6		
Benchmark.....	5.14		
Portable.....	5.19		
Ultrapure Water.....	5.21		
Ultrapure Water and Water.....	5.22		
For Wastewater.....	5.22		
Regulation Specific.....	5.28		
Education.....	5.31		

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[\[pdf\]](#) Catalog

Hanna Instruments General Catalog V32 Part 2 Impex Produkter 315 606 impex no 2017 05 |||

Table of Contents 5 Conductivity / TDS table of contents Introduction 5.2 Product Spotlights 5. ... 09/4 galvanic DO probe fixed with internal temperature sensor, DIN connector and 4 m 13 cable **HI9147-04** , 10 m 33 cable HI9147-10 , or 15 m 49 cable HI9147-15 Battery Type / Life Envir...

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Table of Contents		11
		Chemical Oxygen Demand
Introduction.....	11.2	
Product Highlights.....	11.3	
Benchmark.....	11.4	
CO2 with the Color Reagent.....	11.4	
CO2 with the Color Reagent.....	11.4	
CO2 with the Color Reagent.....	11.4	
CO2 with the Color Reagent.....	11.4	
Certified Reagents.....	11.15	
Test Tube Heater.....	11.15	
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Table of Contents 11 Chemical Oxygen Demand table of contents Introduction 11.2 Product Spotlight6.20 HI9147..... 6.19 **HI9147-04**..... 6.19 HI9...

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