HM Digital TDS-4

HM Digital TDS-4 Pocket Water Quality Tester Instruction Manual

Model: TDS-4
Brand: HM Digital

Introduction

The HM Digital TDS-4 is a compact and convenient digital tool designed to measure the Total Dissolved Solids (TDS) in water. TDS refers to any salts, metals, or minerals dissolved in water. This meter provides an instant reading of your water's purity level, displayed in parts per million (ppm). It is suitable for various applications including drinking water quality checks, water filtration and purification systems, hydroponics, aquariums, and more.

Key Features

- Measures Total Dissolved Solids (TDS) in parts per million (ppm).
- Equipped with Automatic Temperature Compensation (ATC) for accurate readings.
- Features a Hold Function to freeze measurements for easy viewing.
- Automatic shut-off after 10 minutes of non-use to conserve battery life.
- Compact, pen-style design for portability.

Product Overview

The HM Digital TDS-4 meter is designed for ease of use and portability. It features a digital display, ON/OFF button, and a HOLD button. The electrodes are protected by a removable cap.

Figure 1: HM Digital TDS-4 Pocket Water Quality Tester with its protective cap in place.

Figure 2: HM Digital TDS-4 Pocket Water Quality Tester with the protective cap removed, revealing the measurement electrodes.

Setup

Battery Installation

The HM Digital TDS-4 requires two LR44 batteries, which are included with the device. To install or replace batteries:

1. Unscrew the top cap of the meter.
2. Carefully remove the old batteries (if replacing).
3. Insert two new LR44 batteries, ensuring correct polarity.
4. Screw the top cap back on securely.

Initial Inspection

Before first use, inspect the meter for any visible damage. Ensure the protective cap is present and fits securely over the electrodes.

Operating Instructions

Basic Measurement Procedure

Follow these steps to obtain an accurate TDS reading:

1. **Remove the Protective Cap:** Gently pull off the cap covering the electrodes at the bottom of the meter.
2. **Turn On the Meter:** Press the `ON/OFF` button. The display will illuminate.
3. **Immerse the Meter:** Dip the electrode end of the meter into the water sample. Ensure the water level does not exceed the maximum immersion line (approximately 2 inches from the bottom).
4. **Stabilize Reading:** Wait for the reading on the digital display to stabilize. This typically takes 10-30 seconds. Gently swirl the meter to dislodge any air bubbles that may be trapped around the electrodes, as these can affect accuracy.
5. **Hold Reading (Optional):** If you need to remove the meter from the water to view the reading, press the `HOLD` button. The display will freeze the current measurement. Press `HOLD` again to release the reading.
6. **Record Reading:** Note the TDS value displayed in ppm.
7. **Turn Off the Meter:** Press the `ON/OFF` button to turn off the meter.
8. **Replace Cap:** Always replace the protective cap after use to prevent damage to the electrodes.

Understanding TDS Readings

TDS is measured in parts per million (ppm). A lower TDS value generally indicates purer water, as it contains fewer dissolved impurities. For example, distilled water typically reads 0 ppm, while tap water can vary significantly. The ideal TDS level depends on the specific application (e.g., drinking water, hydroponics, aquariums).

Maintenance

Cleaning the Electrodes

To ensure accurate readings, it is important to keep the electrodes clean. After each use, rinse the electrode area with clean, distilled water. Avoid touching the electrodes with your fingers, as oils and dirt can affect performance. If significant buildup occurs, gently clean with a soft brush and a mild detergent solution, then rinse thoroughly with distilled water.

Storage

Store the TDS-4 meter in a cool, dry place with the protective cap securely in place. Avoid exposing the meter to extreme temperatures or direct sunlight for prolonged periods.

Calibration

While the TDS-4 is factory-calibrated, periodic recalibration may be necessary to maintain accuracy, especially after extended use or if readings appear inconsistent. Calibration typically involves using a known TDS calibration solution (e.g., 342 ppm NaCl solution). Refer to the specific calibration instructions provided with your calibration solution or contact HM Digital support for guidance.

Troubleshooting

Common Issues and Solutions

- **Meter Does Not Turn On:**
  Check if the batteries are correctly installed and have sufficient charge. Replace batteries if necessary.
- **Inconsistent or Erratic Readings:**
  Ensure the electrodes are clean. Rinse them with distilled water. Check for air bubbles around the electrodes during measurement and gently swirl to remove them. Recalibrate the meter if the issue persists.
- **Reading Does Not Stabilize:**
  Allow sufficient time (10-30 seconds) for the reading to stabilize. Ensure the meter is fully immersed up to the recommended level.
- **Meter Dropped:**
  If the meter has been dropped, it may require recalibration to ensure continued accuracy.

For issues not listed here, or if troubleshooting steps do not resolve the problem, please contact HM Digital customer support.

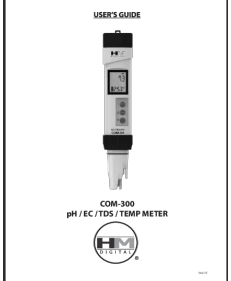
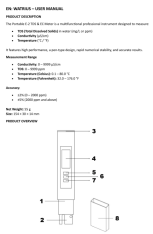
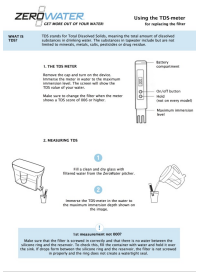
Specifications

Specification	Detail
Manufacturer	HM Digital, Inc.
Part Number	TDS-4
Item Weight	1.76 ounces
Product Dimensions	0.55 x 0.9 x 5.5 inches
Item Model Number	TDS-4
Batteries	2 LR44 batteries required (included)
Material	Plastic, Silver electrodes
Display Style	LCD
Temperature Range	1-50 Degrees Celsius (Automatic Temperature Compensation)
Average Battery Life	1000 Hours

Warranty and Support

For information regarding product warranty, technical support, or service, please contact HM Digital customer service directly. Details can typically be found on the HM Digital official website or product packaging.

Related Documents - TDS-4

	[HM Digital COM-300 pH/EC/TDS/Temp Meter User Guide] Comprehensive user guide for the HM Digital COM-300, a waterproof pH, EC, TDS, and temperature meter. Learn about its features, operation, calibration, maintenance, and troubleshooting.
	[HM Digital PH-200 Waterproof pH Meter - Features, Specifications, and Applications] Explore the HM Digital PH-200, a robust and waterproof pH meter designed for accurate measurements in diverse applications like water purification, aquaculture, and laboratories. Learn about its key features, detailed specifications, and FAQs.
	[HM Digital General Catalog: Water Testing Instruments] Explore the comprehensive HM Digital General Catalog featuring a wide range of professional water testing instruments including handhold meters, in-line monitors, controllers, sensors, and calibration solutions for EC, TDS, pH, ORP, and temperature.
	[WATRIUS E-2 TDS & EC Meter User Manual] User manual for the WATRIUS E-2 Portable TDS & EC Meter, detailing its product description, measurement ranges, accuracy, functions, maintenance, product use, and disposal instructions for home use.
	[Health Metric TDS & EC Meter 2.0 User Guide] A user guide for the Health Metric TDS & EC Meter 2.0, explaining what TDS is, how TDS meters work, and their applications in various water testing scenarios including tap water, aquariums, pools, and hydroponics. It also provides instructions on caring for and calibrating the meter.
	[ZeroWater TDS Meter Usage Guide] Learn how to use the ZeroWater TDS meter to measure water purity and understand when to replace your filter. This guide explains TDS and provides step-by-step instructions for accurate readings.