

HM Digital DM-2

HM Digital DM-2 Commercial In-Line Dual TDS Monitor User Manual

Model: DM-2

INTRODUCTION

The HM Digital DM-2 Commercial In-Line Dual TDS Monitor is designed for continuous monitoring of Total Dissolved Solids (TDS) levels in water systems. This device provides real-time readings for both incoming (feed) water and outgoing (product) water, utilizing advanced microprocessor technology for accuracy. It is suitable for various industrial and commercial applications, including reverse osmosis (RO) systems, car washes, window washing, manufacturing, and food processing.

This manual provides instructions for the proper installation, operation, and maintenance of your DM-2 monitor to ensure optimal performance and longevity.

PRODUCT OVERVIEW

The DM-2 monitor features a compact design with an LCD display and two electrode probes for simultaneous measurement. Key components include:

- **Main Unit:** Houses the display, control buttons, and microprocessor.
- **IN Electrode Probe:** Measures TDS of the incoming water.
- **OUT Electrode Probe:** Measures TDS of the outgoing water.
- **Power Button:** To turn the unit on/off.
- **IN/OUT Buttons:** To switch between displaying IN or OUT TDS readings.





Figure 1: HM Digital DM-2 Commercial In-Line Dual TDS Monitor. This image shows the main display unit with its power button, IN/OUT indicators, and the two attached electrode probes (red for IN, blue for OUT).



Figure 2: Close-up view of the IN and OUT electrode probes. The red-marked probe is for the input line, and the blue-marked probe is for the output line, each designed for insertion into water lines.

SETUP AND INSTALLATION

Proper installation is crucial for accurate readings and reliable operation. Follow these steps carefully:

- 1. Choose a Mounting Location:** Select a dry, accessible location near your water system. The monitor can be mounted using the provided bracket, either with double-sided tape or screws. Ensure the location allows for easy viewing of the display and access for future battery changes.
- 2. Install the Mounting Bracket:** Secure the bracket to your chosen surface. The monitor unit slides into and out of this bracket.
- 3. Identify Water Lines:** Determine the incoming (feed) water line and the outgoing (product) water line of your system (e.g., Reverse Osmosis system).
- 4. Install Electrode Probes:**
 - The DM-2 comes with 1/4-inch quick-connect plastic "T" fittings for the probes. If your water lines are a different size (e.g., 3/8-inch), appropriate adapters or "T" fittings will be required (not included).
 - Cut the incoming water line and insert the "IN" probe's T-fitting. Ensure the probe is securely seated and oriented correctly for water flow.

- Cut the outgoing water line and insert the "OUT" probe's T-fitting. Ensure the probe is securely seated.
 - **Caution:** When inserting tubing into quick-connect fittings, do not push the tubing too far, as this can damage the sensor. Measure and mark the tubes before insertion to prevent over-insertion.
5. **Connect Probes to Monitor:** Plug the red-coded probe cable into the "IN" port and the blue-coded probe cable into the "OUT" port on the main monitor unit.
 6. **Insert Batteries:** The unit requires 2 AA batteries (included). To access the battery compartment, remove the four screws on the back of the unit. Insert the batteries, observing polarity, then replace the cover and screws.

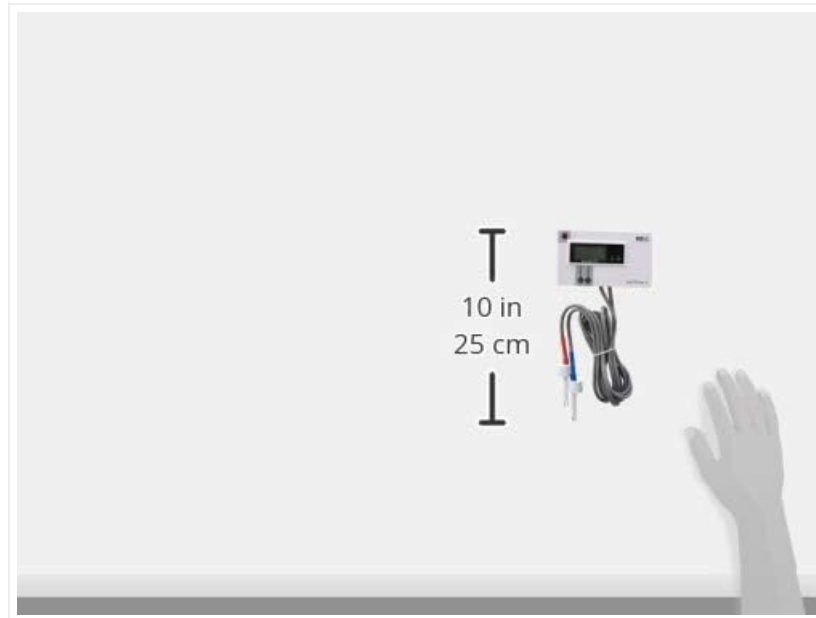


Figure 3: HM Digital DM-2 TDS monitor shown with a hand for size reference, indicating its compact dimensions of approximately 4.6 inches in height.

OPERATING INSTRUCTIONS

The DM-2 monitor is designed for straightforward operation.

1. **Power On/Off:** Press the **POWER** button located on the top left of the unit to turn the monitor on. Press it again to turn it off. The unit features an automatic shut-off function to conserve battery life, typically activating after a few minutes of inactivity.
2. **View TDS Readings:**
 - Upon powering on, the display will show the TDS reading for either the IN or OUT line, indicated by a corresponding light.
 - Press the **IN** button to view the TDS level of the incoming water.
 - Press the **OUT** button to view the TDS level of the outgoing water.
 - The monitor will continuously update the displayed reading. The unit remembers the last selected line (IN or OUT) for convenience.
3. **Interpreting Readings:** TDS is measured in parts per million (ppm). Lower TDS values generally indicate purer water. For RO systems, a significant reduction in TDS from IN to OUT indicates effective filtration.

MAINTENANCE

Regular maintenance ensures the accuracy and longevity of your DM-2 monitor.

- **Battery Replacement:** When the display dims or the unit fails to power on, it's time to replace the batteries.
 - a. Turn off the unit and carefully remove it from its mounting bracket.
 - b. Unscrew the four screws on the back panel to open the battery compartment.
 - c. Remove the old AA batteries and insert two new AA batteries, ensuring correct polarity.
 - d. Replace the back panel and secure it with the screws.
- **Probe Cleaning:** Over time, mineral deposits can accumulate on the electrode probes, affecting accuracy.
 - Disconnect the probes from the water lines.
 - Gently clean the metal tips of the probes with a soft brush or cloth and distilled water. Avoid abrasive materials.
 - Rinse thoroughly and re-install.
- **Calibration:** The DM-2 monitor is factory-calibrated. According to manufacturer specifications, this model does not feature user-adjustable calibration screws. If you suspect significant inaccuracy, compare readings with a known calibration solution or a recently calibrated reference meter.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Monitor does not turn on.	Dead or incorrectly installed batteries.	Replace batteries with new AA batteries, ensuring correct polarity. Ensure the power button is pressed firmly.
Inaccurate or inconsistent readings.	• Dirty electrode probes. • Air bubbles around probes. • Incorrect probe installation (e.g., not fully submerged). • System issues (e.g., failing RO membrane).	• Clean probes as described in the Maintenance section. • Ensure probes are fully submerged and free of air bubbles. • Verify proper installation of probes in the water lines. • Check the performance of your water filtration system.
No reading displayed for IN or OUT.	Probe not connected or faulty.	Ensure the probe cables are securely plugged into the correct ports on the monitor unit. Inspect cables and probes for damage.

SPECIFICATIONS

Feature	Detail
Model	DM-2
Measurement Range	0-9990 ppm (mg/L)
Resolution	1 ppm (0-999 ppm); 10 ppm (1000-9990 ppm)
Accuracy	±2%
Temperature Compensation	Automatic (ATC) 1-80°C (33-176°F)

Feature	Detail
Calibration	Factory calibrated (not user-adjustable)
Electrodes	2 x 1/4 inch sensor probes (included)
Power Source	2 x AA batteries (included)
Battery Life	Approximately 13,000 hours of continuous use
Dimensions	4.6 x 2.6 x 0.7 inches (11.7 x 6.6 x 1.8 cm)
Weight	8 ounces (227 grams)
Material	Plastic
Display Style	LCD

WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the documentation included with your purchase or contact HM Digital customer service directly. Keep your purchase receipt as proof of purchase.

Manufacturer: HM Digital
Website: www.hmdigital.com

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question