HM Digital DM-3

HM Digital DM-3 Inline Dual TDS/EC Monitor Meter Instruction Manual

Model: DM-3

1. Introduction

The HM Digital DM-3 is a commercial-grade inline monitor designed to measure Electrical Conductivity (EC) and Total Dissolved Solids (TDS) levels. It simultaneously monitors both feed (input) water and product (output) water in water filtration systems, such as Reverse Osmosis (RO) and Deionized (DI) systems. This device features a large backlit screen for visibility in various environments, shielded cables, and diagnostic messaging for reliable performance. It is suitable for applications including drinking water, water treatment, aquariums, and hydroponics.

Key Features:

- Advanced microprocessor technology for high efficiency and accuracy.
- Simultaneous display of TDS levels for feed water and product water using two electrode probes.
- Factory calibrated with a 342 ppm NaCl solution; features digital calibration.
- Diagnostic error messaging for easy troubleshooting.
- Equipped with shielded sensor cables.
- Includes two 1/4 inch T-fittings (also compatible with 3/8 inch or 1/2 inch fittings).

2. Package Contents

Verify that all items are present and undamaged upon opening the package.

- HM Digital DM-3 Inline Dual TDS/EC Monitor Meter
- Two 1/4 inch T-fittings
- Two AA batteries (pre-installed or included separately)
- Instruction Manual (this document)


RO/DI
2 SENSOR
WATER QUALITY
MONITOR
RO/DI
DM-3: Dual inline EC/TDS Monitor
Monitor EC/TDS Levels at two points
Check Tap water, Filters, Membranes,
Resin and more Ideal for Ro/DI Systems
Features and Specifications
• Instantly displays EC/TDS levels at two sensing points
• Color-coded sensors
• Accuracy of +/- 2%
• Measurement Range
µS: 0 ~ 9999 uS ppm: 0~5000 ppm
mS: 0 ~9.99 mS ppt : 0~5.00 ppt
• Long-Lasting batteries
• Auto-off Function
• Factory calibrated
Designed in Korea and USA.
HM DIGITAL
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DM-3
HM DIGITAL

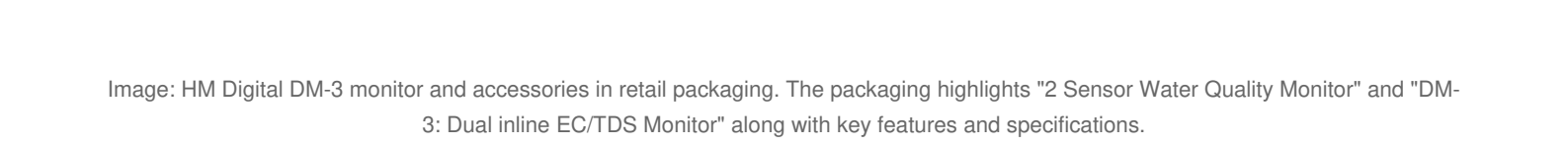


Image: HM Digital DM-3 monitor and accessories in retail packaging. The packaging highlights "2 Sensor Water Quality Monitor" and "DM-3: Dual inline EC/TDS Monitor" along with key features and specifications.

3. Installation

The DM-3 monitor is designed for inline installation in water filtration systems. Ensure the system is depressurized and water flow is stopped before beginning installation.

1. **Identify Installation Points:** Determine the "feed water" (input) and "product water" (output) lines in your filtration system where you wish to monitor TDS/EC levels.
2. **Prepare Tubing:** Cut the tubing at the chosen installation points. Ensure clean, straight cuts.
3. **Install T-Fittings:** Insert the provided 1/4 inch T-fittings into the cut tubing sections. Ensure a secure, leak-free connection. If your tubing is 3/8 inch or 1/2 inch, use appropriately sized T-fittings (not included).
4. **Connect Sensor Probes:** Connect the "IN" sensor probe to the T-fitting on the feed water line and the "OUT" sensor probe to the T-fitting on the product water line. The probes are 1/4 inch diameter for quick-connect fittings. Ensure the probes are fully inserted and sealed.
5. **Mount the Monitor:** Choose a suitable location to mount the DM-3 display unit. Ensure it is easily visible and accessible. Use appropriate mounting hardware (not included) if necessary.
6. **Route Cables:** Route the shielded sensor cables from the probes to the display unit, ensuring they are not kinked or exposed to excessive strain.
7. **Restore Water Flow:** Once all connections are secure, slowly restore water flow to the system and check for any leaks.

4. Operation

The DM-3 monitor is designed for continuous monitoring.

Powering On/Off:

- The unit typically powers on automatically when water flows through the sensors or when a button is pressed.
- The DM-3 features an auto-off function to conserve battery life. It will automatically shut off after a period of inactivity.

Reading the Display:

- The large backlit screen will display the EC/TDS levels for both the "IN" (feed water) and "OUT" (product water) lines simultaneously.
- Readings are typically shown in ppm (parts per million) for TDS and µS (microsiemens) or mS (millisiemens) for EC.
- Refer to the specifications section for the measurement range and resolution.

Diagnostic Messaging:

The DM-3 includes diagnostic error messaging to alert users to potential issues. If an error message appears on the display, refer to the Troubleshooting section for guidance.

5. Calibration

The HM Digital DM-3 is factory calibrated to 342 ppm NaCl solution. It features digital calibration, allowing for re-calibration of each line separately if needed. For detailed re-calibration procedures, please refer to the full product manual or contact customer support.

6. Maintenance

Battery Replacement:

The DM-3 operates on two AA batteries. When the battery indicator appears on the display or the unit fails to power on, replace the batteries.

1. Locate the battery compartment on the back of the unit.
2. Open the compartment cover.
3. Remove the old AA batteries.
4. Insert two new AA batteries, ensuring correct polarity (+/-).
5. Close the battery compartment cover securely.

Sensor Care:

To ensure accurate readings, keep the sensor probes clean. If buildup occurs, gently clean the probes with a soft brush and distilled water. Avoid abrasive materials or harsh chemicals.

7. Troubleshooting

If you encounter issues with your DM-3 monitor, refer to the following common problems and solutions:

- **No Display/Unit Not Powering On:**
  - Check battery levels and replace if necessary.
  - Ensure batteries are inserted with correct polarity.
- **Inaccurate Readings:**
  - Ensure sensor probes are clean and free of buildup.
  - Verify that the probes are securely connected to the T-fittings and the display unit.
  - Consider re-calibrating the unit if readings are consistently off.
- **Diagnostic Error Message:**
  - Consult the full product manual for specific error code interpretations.
  - Ensure all connections are secure.
  - If the issue persists, contact customer support.
- **Leaks at Fittings:**
  - Ensure tubing is cut cleanly and inserted fully into T-fittings.
  - Check that sensor probes are properly seated and sealed in the T-fittings.

8. Specifications

Parameter	Value
EC Range	0~9999 µS / 0~9.99 mS
TDS Range	0~5000 ppm / 0~5 ppt
EC Resolution	0.1 µS (0~99.9), 1 µS (100~999), 10 µS (1000~9990), 0.01 mS (0.00~9.99)

TDS Resolution	0.1 ppm (0~99.9), 1 ppm (100~999), 10 ppm (1000~5000), 0.01 ppt (0.00~5.00)
Accuracy	±2%
Conversion Factor	NaCl (avg. 0.5)
Cable Length	1.2 m / 3.9 ft (shielded cables)
Sensor Type	Dual, 1/4 inch diameter for quick-connect fittings (Model SP-3)
Calibration	Digitally factory calibrated to NaCl 342 ppm. Re-calibration possible for each line.
Power Source	2 x AA batteries (included)
Dimensions	11.6 x 1.9 x 7.0 cm (4.6 x 0.7 x 2.8 in)
Weight	225 g (7.9 oz)

9. Warranty Information

This product is warranted to the purchaser against material and workmanship defects for one (1) year from the date of purchase.

What is covered:

Repair, parts, labor, or replacement at the Company's option. Return shipping to the customer is also covered. The customer is responsible for shipping the product to the Company.

What is not covered:

Transportation charges for the return of the product to the Company. This warranty does not cover consequential damages, incidental damages, or incidental expenses, including damage to property. This warranty does not cover damage due to abuse, misuse, alteration, neglect, unauthorized repair, fire, flood, or other acts of God. This warranty does not cover physical damage. This product is designed for water quality monitoring. Damage caused by exposure to water with any evidence of such damage will not be repaired nor replaced.

To obtain warranty service:

Please contact 800.383.2777 or email warranty@hmdigital.com. Before sending the product, please include the following information:

- Your name
- Phone number/Address
- Description of problem
- Proof of purchase, must include Date

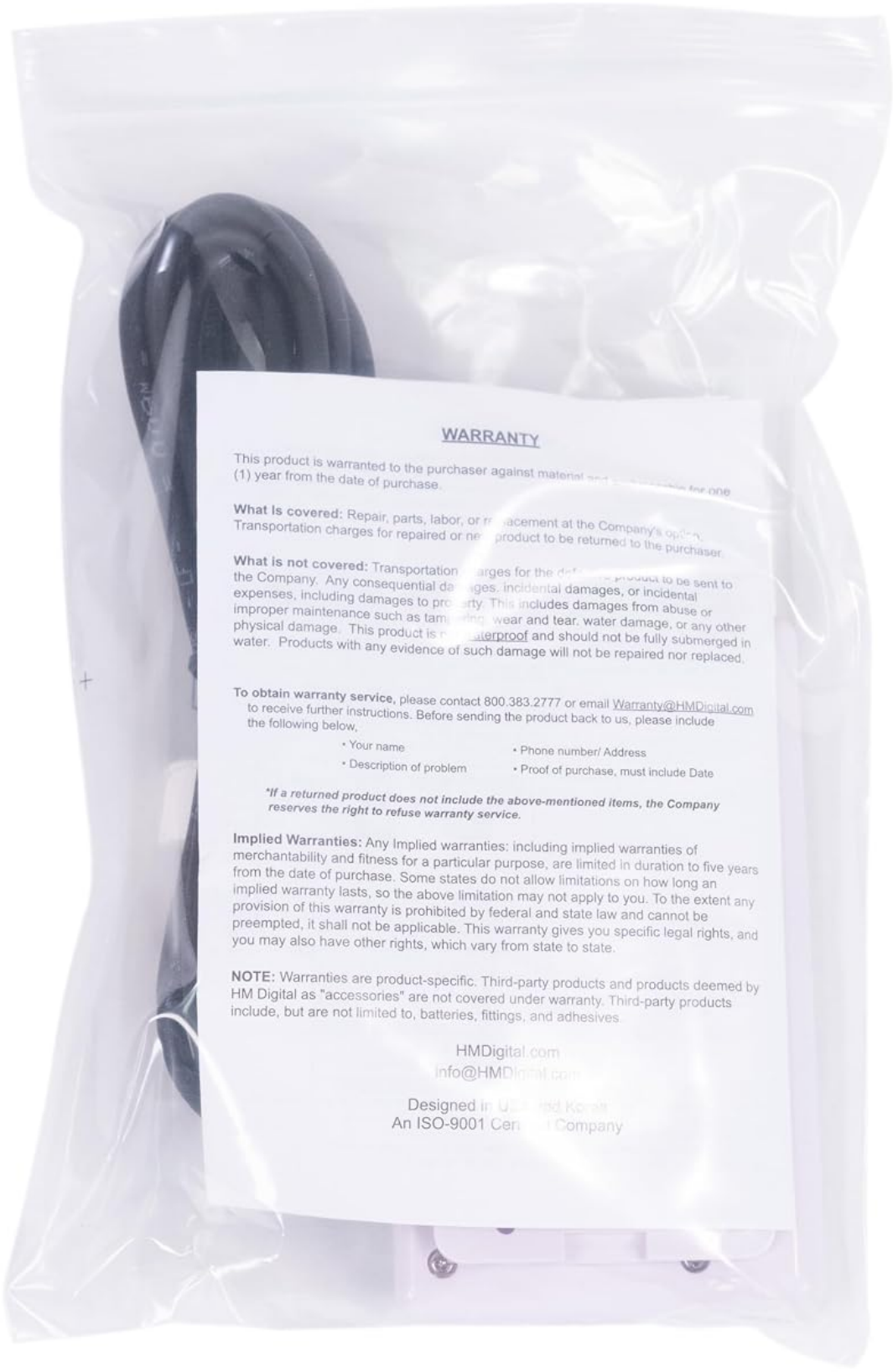
"If a returned product does not include the above-mentioned items, the Company reserves the right to refuse warranty service."

Implied Warranties:

Any implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to five years from the date of purchase. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

NOTE:

Warranties are product-specific. Third-party products and products deemed by the Company as "consumable" are not covered under warranty. Third-party products include, but are not limited to, batteries, fittings, and adhesives.



WARRANTY

This product is warranted to the purchaser against material [illegible] for one (1) year from the date of purchase.

What is covered: Repair, parts, labor, or r[illegible]acement at the Company's option. Transportation charges for repaired or ne[illegible] product to be returned to the purchaser.

What is not covered: Transportation [illegible]arges for the d[illegible] product to be sent to the Company. Any consequential da[illegible]ges, incidental damages, or incidental expenses, including damages to pro[illegible]rty. This includes damages from abuse or improper maintenance such as tam[illegible]ng, wear and tear, water damage, or any other physical damage. This product is n[illegible]terproof and should not be fully submerged in water. Products with any evidence of such damage will not be repaired nor replaced.

To obtain warranty service, please contact 800.383.2777 or email Warranty@HMDigital.com to receive further instructions. Before sending the product back to us, please include the following below,

- Your name
- Phone number/ Address
- Description of problem
- Proof of purchase, must include Date

If a returned product does not include the above-mentioned items, the Company reserves the right to refuse warranty service.

Implied Warranties: Any Implied warranties: including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to five years from the date of purchase. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. To the extent any provision of this warranty is prohibited by federal and state law and cannot be preempted, it shall not be applicable. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

NOTE: Warranties are product-specific. Third-party products and products deemed by HM Digital as "accessories" are not covered under warranty. Third-party products include, but are not limited to, batteries, fittings, and adhesives.

HMDigital.com
info@HMDigital.com

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Image: Rear view of the HM Digital DM-3 packaging, displaying detailed warranty terms and conditions, including what is covered, what is not covered, and how to obtain service.

10. Customer Support

For technical assistance, warranty claims, or general inquiries, please contact HM Digital customer support:

- **Phone:** 800.383.2777
- **Email:** warranty@hmdigital.com
- **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.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

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