

## Specifications

TDS Range: 0~9990 ppm

Resolution: 1 ppm (0~999);

10 ppm (1000~9990) indicated by a blinking 'x10' image)

Accuracy: +/- 2%

Cable Length: 24.5" (including sensor)

Power Source: 2 x 1.5V button cell batteries (size: 357-A)

Auto Shut-Off: After 10 minutes

Dimensions: 7.6 x 2 x 4.7 cm (3 x 0.8 x 1.9 in)

Weight: 79.5 g (2.8 oz)

## Care, Maintenance and Troubleshooting

Very little care is necessary for your SM-1.

- Never touch the sensor pins, as skin oils may adversely affect the TDS measurement.
- To clean the sensor pins, clean with rubbing alcohol and let air dry.
- If you notice the readings are off from what they should be, replace the batteries or re-calibrate.
- If your meter displays an 'ERR' message this could be for one of the following reasons:
  - The TDS level is out of the range of the meter (over 9,990 ppm).
  - The sensor connector has been pulled out of the monitor.
  - There is something wrong with the unit. Contact HM Digital.

**Please contact the manufacturer of your water system  
for recommended TDS levels.**

## Instructions

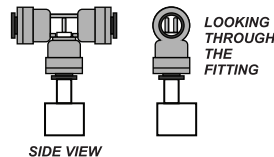
The SM-1 can be configured in a variety of ways, depending upon your needs. Typically, the sensor is connected to the product (filtered) water. The SM-1 can also be used in conjunction with HM Digital's Dual In-Line TDS Monitor (model DM-1) or a handheld TDS meter, such as HM Digital's TDS-EZ, for checking the tap water.

## Installation

To install the SM-1 to a water purification or filtration system:

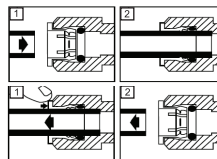
1. Ensure the white sensor is fully inserted into the T-fittings.
2. Orient the sensor pins so that they are perpendicular to the direction of the T. (You should be able to see both pins if you look through the titling.) See the illustration below.
3. Disconnect the water source.
4. Select the waterline on which you will attach the SM-1. Snip the water hose at a point between the tap and the filter (for monitoring the source water) OR at a point between the filter and a dispenser (for monitoring the product water).
5. Insert the two snipped ends of each water hose into the corresponding T-fitting.
6. The SM-1 monitor can be attached anywhere on or near the water system using the Velcro tape.
7. Reconnect the water source. Your monitor is now ready for use.

**Illustration #1**



**Illustration #2**

To insert the tubing into the fitting  
Push tubing straight in as far as it can go.



## Changing the Batteries

1. Unscrew the three metal screws (not the orange plastic screw) on the rear of the unit and remove the back panel.
2. Remove the batteries.
3. Replace with new batteries (size 357-A). Ensure the polarity is correct.
4. Close the back panel and replace the screws.

## Usage

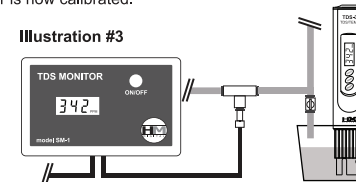
1. Press the "ON/OFF" button.
2. The monitor will display the TDS level of the selected line.
3. The displayed TDS will be most accurate after approximately 10 seconds.
4. Determining filter effectiveness depends on your particular system. For an RO system, for example, compare the tap water TDS levels with the product water TDS.
5. Turn off the unit. It will automatically shut off after 10 min.

## Calibration

Your monitor was factory calibrated to 342 ppm (NaCl). This level is suitable for most tap water/filtered water applications. However, you may need to re-calibrate based on your needs, as well as from time-to-time to ensure the best results.

1. Connect the water tubes to the T-fitting as shown on the diagram below. When calibrating, the TDS of water you are calibrating to must be over 10 ppm. Insert the sensor you wish to calibrate in the T-fitting. Ensure the orientation of the sensor to the fitting is correct, as shown in illustration #1.
2. Let the water flow in the tubes to allow the sensor to measure and calibrate.
3. Measure TDS of the water with a handheld TDS meter to determine the TDS of the water flowing in the tubes as shown in the diagram below. Make a note of the TDS reading as this will be the TDS value you will be calibrating your monitor. (illustration #3)
4. Turn on the Monitor.
5. Put the sensor to be calibrated into the solution.
6. If the reading on the monitor does not match the solution, adjust the reading up or down by gently turning the orange screw on the rear of the monitor clockwise or counter-clockwise.
7. Once the reading is correct, turn the monitor off and remove from the solution. Your monitor is now calibrated.

**Illustration #3**



## What Is TDS?

Total Dissolved Solids (TDS) are the total amount of inorganic elements, including minerals, salts or metals, dissolved in a given volume of water, other than the pure water molecules (H<sub>2</sub>O) and suspended solids. TDS is expressed in parts per million (ppm). TDS affects everything that consumes, lives in, or uses water. For people, a lower TDS level in drinking water is preferred.

### *Useful link for more information*

More information on TDS:  
HMDigital.com



Designed in Korea and USA  
Made in China

HMDigital.com  
info@HMDigital.com

An ISO-9001 Certified Company

## Warranty

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

**What Is covered:** Repair parts and labor, or replacement at the Company's option. Transportation charges for repaired or new product to be returned to the purchaser.

**What Is not covered:** Transportation charges for the defective product to be sent to the Company. Any consequential damages, incidental damages, or incidental expenses, including damages to property. This includes damages from abuse or improper maintenance such as tampering, wear and tear, water damage, or any other physical damage. This product is not waterproof 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](mailto: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 Data

*\*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.

## *SINGLE INLINE TDS MONITOR*



### **Model SM-1**

Measure the TDS levels of a water line, such as the tap water or filtered water, at any time.

The SM-1 is an ideal monitor to know if a filter cartridge or membrane is functioning effectively. Install the SM-1 so you'll always know how a water filtration or purification system is performing.