Operating Manual

OAKTON®

EcoTestr™ TDS1 Pocket Tester

CE

Keypad Functions

Short press = <2 seconds

Long press = >2 seconds

MEAS	1. Short press to turn on; long press to turn off. 2. When turned off, long press to enter setup mode. 3. In mode setting, short press to change parameter.
CAL ↵	1. When turned on, long press to enter calibration mode. 2. In calibration mode, short press to confirm calibration. 3. In mode setting, short press to confirm parameter selection.

Calibration

1. Rinse the probe in distilled water and gently dry it with a clean tissue. Short press ⏻/MEAS to turn on the tester.
2. Long press CAL/↵ to enter calibration mode; short press ⏻/MEAS to exit.
3. Dip the probe into 1413 µS/cm (1003 ppm) calibration solution. Stir gently, leave it to stand. Wait for the measurement stability icon (☺) to appear and stay on the display (see Fig 1); then short press CAL/↵ to complete the 1st calibration. Tester returns to measurement mode, and calibration icon "**M**" appears on bottom left side of display.

Figure 1

4. Rinse probe in distilled water and dry it. Repeat steps #2 and #3 to complete 2nd calibration in 12.88 mS/cm (9.14 ppt) calibration solution. Tester returns to measurement mode, and calibration icons "**M**" and "**H**" will appear on bottom left side of display.

Measurement

1. Short press ⏻/MEAS to turn on the tester. Rinse probe in distilled water and dry it gently with a clean tissue to remove excess water.
2. Stir the probe in the sample solution gently, leave it to stand. Wait for the stability icon (☺) to remain on, then take a reading.
3. Rinse off the tester thoroughly in distilled water after each test.

Notes:

- If this is the first-time use or the tester hasn't been used for a long time, we recommend soaking the probe in 12.88 mS/cm solution for 15 to 30 minutes to restore its sensitivity and speed up the response time.
- The tester adopts 1413 µS/cm and 12.88 mS/cm standard calibration solutions. User can use 1 and 2 point calibrations as needed. For most circumstances, calibrating in 1413 µS/cm to complete the 1st point calibration will meet testing requirements.
- The tester has already been calibrated after manufacture. User can use the tester immediately or can test it in the calibration solutions to test its accuracy. If error is large, calibrate the tester before using.
- We recommend replacing the calibration solution after 5 to 10 calibrations to maintain accuracy.

Setting the Parameters

When tester is off, long press ⏻/MEAS to enter setup mode. Short press ⏻/MEAS to switch from P1 to P2 to P3. Short press CAL/↵ and parameter will flash, then short press ⏻/MEAS to choose desired parameter. Short press CAL/↵ to confirm parameter selection. Long press ⏻/MEAS to return to measurement mode.

Symbol	Menu setting	Selection	Factory default
P1	Set TDS factor	0.40 to 1.00	0.71
P2	Select temperature unit	°F – °C	°C
P3	Restore to factory default	No – Yes	No

Notes:

- Users can adjust TDS factor (P1) by experimental data or experience. The following chart lists some commonly used TDS factors for reference:

Conductivity of the solution	TDS factor (P1)
0 to 100 µS/cm	0.60
100 to 1000 µS/cm	0.71
1 to 10 mS/cm	0.81
10 to 100 mS/cm	0.94

- Select "Yes" for P3 to restore the calibration to the theoretical values and parameter setting to original values. When tester's calibration or measurement performs abnormally, this function can be adopted so the tester returns to factory default setting and then users can conduct calibration or take measurements again.

Self-Diagnostic Messages

Symbol	Self-diagnosis information	How to fix
Er 1	Wrong calibration solution, or measured value is not within the range of the tester.	• Check if calibration solution is correct. • Check if probe is damaged.
Er 2	CAL/↵ is pressed before measurement is stable (☺ appears).	Wait for the measurement stability icon (☺) to appear and stay, then press CAL/↵ .

Specifications

TDS	Range	0 to 100.0 ppm, 0 to 1000 ppm, 0 to 10.00 ppt
	Resolution	0.1 ppm, 1 ppm, 0.01 ppt
	Accuracy	±1% full-scale
	Calibration points	1 or 2 points, auto standard recognition
	Automatic temperature compensation	32 to 122°F (0 to 50°C)
Temperature	Range	32 to 122°F (0 to 50°C)
	Resolution	0.1°F/°C
	Accuracy	±0.9°F (0.5°C)

Power: four AAA batteries (included); >400 hours of continuous operation

Low-voltage warning: battery status icon flashes

Auto power-off: tester automatically turns off after 8 minutes of nonuse

IP rating: IP67 (waterproof), floats on water when sensor cap is on

Dimensions (L x W x H): 7" x 1.5" x 1.25" (17.8 x 4 x 3.1 cm)

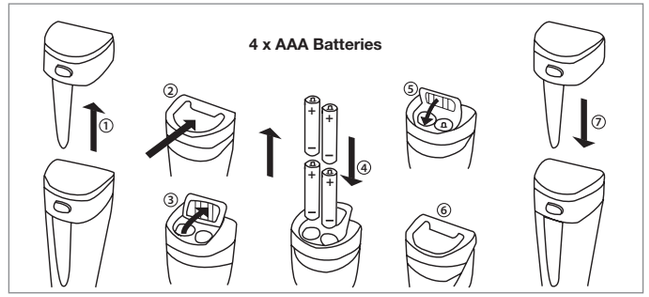
Weight: 3.8 oz (107 g)

Ordering Information

Model	Product description	Catalog number
TDS1	EcoTestr pocket total dissolved solids tester	35634-08

Battery Installation

The tester uses four AAA batteries. Please install batteries according to the following steps. Note the correct direction of battery installation: the positive side (+) of every single battery must face up. Incorrect installation of batteries will cause damage to the tester and create a potential hazard.



1. Pull the battery cap up.
2. Slide the battery cap along the direction of arrow.
3. Open the battery cap.
4. Insert the batteries **(ALL POSITIVE SIDES FACING UP)**.
5. Close the battery cap.
6. Slide and lock the battery cap along the direction of arrow.
7. Fit the tester's cap while making sure to push all the way down. The tester's waterproof design may be compromised if the cap is not fitted correctly.

Warranty

We warrant this instrument to be free from defects in material and workmanship and agrees to repair or replace free of charge, at option of Oakton Instruments, any malfunctioned or damaged product attributable to responsibility of Oakton Instruments, for a period of **two years** from the delivery (a **six-month** limited warranty applies to probes). This warranty does not apply to defects resulting from actions such as misuse (violation of the instructions in this manual or operations in the manner not specified in this manual), improper maintenance, and unauthorized repairs. Warranty period is the time limit to provide free service for the products purchased by customers, not the service life of the tester or probe.

Oakton Instruments reserves the right to update the information in this manual without giving notice in advance.

OAKTON® INSTRUMENTS

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