



E-Test Ltd.

Stasin 90, 21-030 Motycz -Poland

tel. +48 508499494

Web: www.e-test.eu

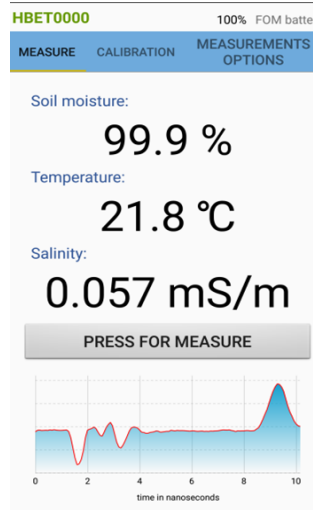
E-mail: info@e-test.eu

FOM2/mts : TDR Soil Moisture Meter

(Field Operated Meter for determination of Moisture, Temperature and Salinity of Soils)



**FOM2/mts:
TDR Soil Moisture,
Temperature, EC Meter**



FOM2/mts meter as well as the related probes developed in the Institute of Agrophysics Polish Academy of Sciences, Lublin, Poland and manufactured in E-Test Ltd. -Poland.

The FOM2/mts and is a measurement device for Soil moisture (**on the base of Time Domain Reflectometry technique**), and electrical conductivity (salinity). FOM2/mts is a new TDR meter for field measurements of soil moisture, temperature and electrical conductivity. The new field instrument is smaller, lighter and has better battery. It is equipped with a Bluetooth Low Energy module and can be operated by a smartphone or a tablet using an Android app. Due to implemented modifications and manufacturing improvements, the new FOM2/mts is a more economical solution without losing measurement accuracy.

Features:-

- Controlled remotely via Bluetooth Low Energy by an Android (v. 4.3 and higher) app available on web.
- Measurement capabilities and accuracy as: soil moisture (accuracy: $\pm 2\%$), bulk electrical conductivity (accuracy: ± 0.01 S/m) and temperature (accuracy: $\pm 0.5^\circ\text{C}$).
- Operates with FP/mts and LP/ms TDR probes with cable lengths 1.5 m to 6 m.
- USB port enables full control by a PC application.



**FP/mts: Field Probe For
Moisture, Temp. & Salinity**

FP/mts : Field TDR Probe

FP/mts is a Time-Domain Reflectometry probe for momentary or semipermanent installation for in situ simultaneous measurement of Moisture, Temperature and Salinity (bulk electrical conductivity) of the soil from the same sampling volume. Thin-wall PVC body of the probe provides ultimate low heat conductivity, thus allowing to avoid the parasite "thermal bridge" effects on distribution of soil moisture in the probe's sensor vicinity.

Features:

- Measurement of soil moisture, bulk electrical conductivity and Temp.
- Operates with FP/mts field meter and TDR/MUX/mpts laboratory meter.
- Applicable for field use or monitoring purposes.

Physical characteristics:-

- Two 10 cm long sharpened acid-resistant steel rods (2 mm in diameter, separated by 14 mm).
- Sensor support made from a section of a PVC tube of 2 cm outer diameter and length from 15 to 150 cm (or longer on request), dependent on the intended depth of the sensor installation.
- Available straight or curved sensor support for easy installation.
- Available cable lengths from 5 m from the sensor to the terminating SMA connector.
- On special request, additional support shapes, rods of different lengths and diameters are available.

The Device Developed in Institute of Agrophysics Polish Academy of Sciences and Manufactured in E-Test Ltd. -Poland.

Institute of Agrophysics, Polish Academy of Sciences is a part of the E-Test Ltd. -Poland



E-Test Ltd.

Stasin 90, 21-030 Motycz -Poland

tel. +48 508499494

Web: www.e-test.eu

E-mail: info@e-test.eu

Technical Specifications

Features:-

- Light handheld enclosure
- Ability to store up to 1000000 readings in memory
- 5-inch capacitive touch screen display with user friendly operating software
- Connection by a USB interface with PC compatible for data transfer, probe calibration and firmware upgrade
- TDR meter's Lithium-polymer battery (2500 mAh, 3.7VDC) 3000 measurements or 182 days of stand-by
- No special maintenance means are required
- Recharge the battery each three - four months

Technical Specification

Soil Moisture:-

Volumetric Soil Moisture Range : 0 to 100 % (VWC)

Accuracy : ± 2 % (or less if the measured soil is individually calibrated)

Resolution : 0.1 %

Repeatability : $\pm 0.1\%$ VWC

Soil Temperature:-

Temperature Range : -20 to +50 °C

Accuracy : ± 0.5 °C or less if read from individually calibrated probe

Resolution : 0.1 °C

Electrical conductivity:-

Electrical Conductivity Range : 0.000 ÷ 1 S/m

Accuracy : ± 10 % for 0 ÷ 1 S/m or less if read from individually calibrated probe

Resolution : 0.001 S/m

TDR Meter : Hand Held TDR Meter & Display Unit

Display Unit : 5-inch capacitive touch screen display

Display Unit Software : user friendly software

Communication with PC : By USB cable

Data Storage : up to 1000000 data set

Time of test : less than 5 sec.

Working temperature : 0 to +50 °C

Storage Temperature : -10 to +50°C

Probe length : 15 cm to 150 cm (Probe length as per customer requirement)

Pulse : sin² -like needle pulse having 200 ps rise-time

Calibration : User can calibrate FOM2/mts TDR meter using the supplied software

Probe Cable : 5 meter

Power : Li-Polymer, 2500 mAh, 3.7VDC (Rechargeable)

Battery Life : 3000 measurements or 182 days of stand-by

Charging : >0.5A/5V micro USB plug charger or power bank

Meter Dimensions: 180 x 85 x 58 mm

Weight : 200.5 g

The detailed configuration of the new FOM2/mts measurement system is:

- FOM2/mts - field operated TDR meter with Display Unit - **1 pcs.**
- FP/mts - field TDR probe for soil moisture, temperature and electrical conductivity (salinity) - **1 pcs.**
- Software and Use Manual file (PDF format) - **1 pcs.**
- USB cable & Battery Charger - **1 pcs.**

Indian Distributor

Shailron Technology Pvt. Ltd.

E-21, Surya Kunj, Near C.R.P.F, New Delhi -110 072 (INDIA)

Phone:+ 91 11 – 28011947, Fax :+ 91 11 – 28010280

Web: shailrontechnology.com , Email: info@shailrontechnology.com