

## MTD20KWR

### Features

- Digital and automatic
- Earth resistance measurement
- Ground resistivity (Wenner's method)
- Spurious voltage measurement
- High spurious voltage rejection
- Indication of anomalies in the current circuit
- 0.01  $\Omega$  resolution
- Up to 2 k $\Omega$  resistance range
- Rechargeable NiMH battery
- IP65 rated (with closed lid)
- Graphic display (128 x 64 px)

Illustrative Image



### Description

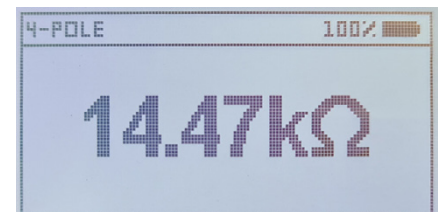
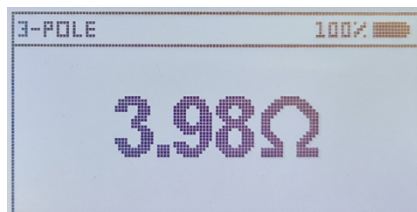
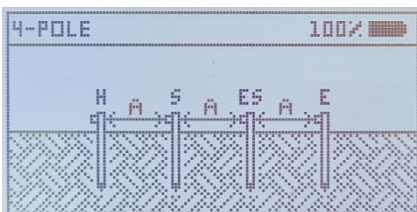
The **MTD20KWR** digital earth tester allows the measurement of earth resistance and soil resistivity, and also the spurious voltages caused by parasitic voltages present in the soil.

This equipment is suitable for fast and easy measurement of the grounding resistance in house and industrial buildings, hospital installations, lightning rods, antennas, substations, etc. Soil resistivity measurement allows for soil stratification in order to optimize the most complex grounding systems engineering. Its state-of-the-art system of active and passive filters provides it with high immunity to electric interferences, making it possible to obtain reliable measurements even in the presence of spurious voltages, such as the ones that can be found in some urban areas and near primary substations.

It has abnormalities indications on the display which advises the operator when the generated current is not enough to carry out reliable measurements.

Because of its wide range of measurement (from 0.01  $\Omega$  up to 20 k $\Omega$ ), this equipment allows for reliable testing in all kinds of soils, including those that offer very high resistivity.

This earth tester is supplied with a rechargeable internal battery. The smart charger is microprocessor-controlled, and can be powered from a 12 V car battery (or a similar one).



### Technical specifications

#### ELECTRICAL

<b>Resistance range</b>	0 - 20 kΩ
<b>Resistance measurement accuracy</b>	± 2% of the measured value ± 2 digits
<b>Resistance reading resolution</b>	0.01 Ω
<b>Voltage range</b>	0 - 200 V~
<b>Voltage measurement accuracy</b>	± 2% of the measured value ± 2 digits
<b>Voltage reading resolution</b>	0.1 V
<b>Output current</b>	Limited to less than 10 mA (max.)
<b>Output power</b>	Less than 0.5 W

#### CHARACTERISTICS

<b>Measurement modes</b>	Measurement of grounding resistances (with 3 terminals), Soil resistivity by the Wenner method (with 4 terminals) and Voltages present in the ground
<b>Immunity to spurious voltage interference</b>	<p>Operation frequency: 1,470 Hz. This operation frequency complies with the equation:</p> $fg = \frac{2n + 1}{2} \times fi$ <p>Where: fg = frequency of the current generated by the earth meter n = integer number fi = industrial frequency (50 or 60 Hz)</p> <p>The compliance with this equation implies that the operation frequency will not coincide with any harmonic of the industrial frequency, in order to minimize the effect of parasitic currents present in the surveyed soils, by means of the use of appropriate filters</p>
<b>Display</b>	LCD graphic (128 x 64 px)

#### STANDARDS

<b>Safety</b>	IEC 61010-1, IEC 61557-1 and IEC 61557-5
<b>Overvoltage protection</b>	CAT II - 300 V
<b>EMC</b>	IEC 61326-1

#### ENVIRONMENTAL

<b>Protection grade</b>	IP65 (with closed lid)
<b>Operating temperature range</b>	14 °F to 122 °F (-10 °C to 50 °C)
<b>Storage temperature range</b>	-13 °F to 158 °F (-25 °C to 70 °C)
<b>Humidity range</b>	95% RH (non condensing)

#### POWER SUPPLY

<b>Rechargeable battery</b>	NiMH
<b>Battery charger</b>	AC adapter 12 V - 1 A

#### MECHANICAL (OF THE INSTRUMENT)

<b>Equipment weight</b>	Approx. 3.3 lb (1.5 kg)
<b>Dimensions</b>	8.70 x 7.44 x 3.89" (221 x 189 x 99 mm)

### Accessories

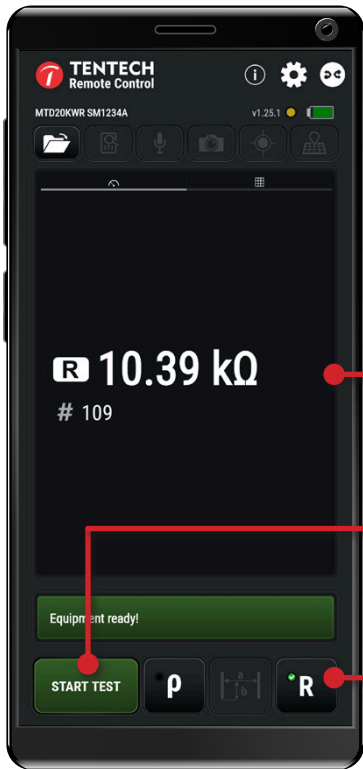
- 4 steel spikes
- AC Adapter
- Reel with 131.23' (40 m) red cable
- Reel with 65.62' (20 m) blue cable
- Reel with 65.62' (20 m) green cable
- 16.40' (5 m) short black cable
- 16.40' (5 m) short green cable for connection to the ground to be measured
- Connection wire to supply the charger with a 12 V external battery (the car battery)
- Quick reference
- User manual (download)
- TENTECH Remote Control App (download)
- Bag to transport the equipment
- Bag to transport accessories





## Remote control by App

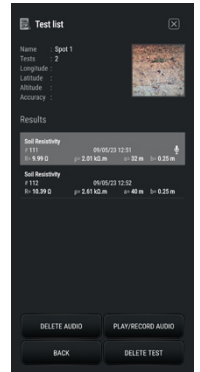
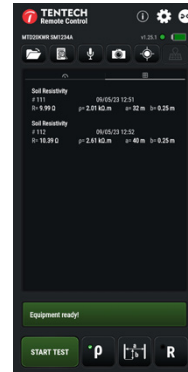
TENTECH equipment that has Bluetooth® interface can be controlled remotely via an Android™ smartphone / tablet running the TENTECH Remote Control application. Set the parameters, start / stop a test, save the data and generate reports.



Real-time measurement

Test Start / Stop

Test settings



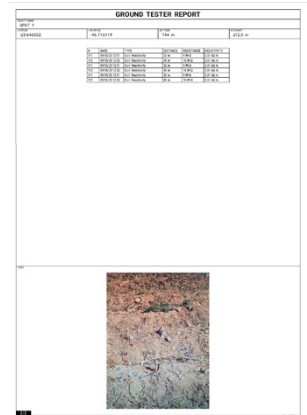
## Increased safety

TENTECH Remote Control communicates with the equipment through a Bluetooth® connection, allowing remote control of the tests, further increasing user safety in tests with potential risks.



## Smartphone features and automatic reporting

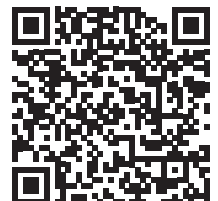
Record voice annotation for each measurement, generate automatic test reports directly on the App. Incorporate smartphone / tablet features into the report (photo, GPS coordinates and test location map).



Using the remote control does not require Internet connection (the Internet is only necessary if you want to see a map of the test site or send reports by email).



- Android, Google Play and the Google Play logo are trademarks of Google LLC
- Bluetooth is a registered trademark of the Bluetooth SIG, Inc. Worldwide



TENTECH equipment are used in more than 40 countries around the world.



### Test & Measurement equipment

- Earth ground testers
- Hipots
- Insulating glove tester
- Insulation testers
- Kilovoltmeters
- Micro-ohmmeters



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