

# Earth ground tester

## MTD 20KWR



Remote control  
by App

IEC/EN  
61557-5



Illustrative image

### 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 20 k $\Omega$  resistance range
- Rechargeable NiMH battery
- IP65 rated (with closed lid)
- Graphic display (128 x 64 px)

### Description

The **MTD20KWR** digital earth ground tester allows for the measurement of earth resistances 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.

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.

A 1,470 Hz internal generator injects alternated current on the soil through an auxiliary rod. The voltage generated over the earth resistance is measured by the apparatus, and the resistance value is evaluated. The test current is automatically regulated.

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.

It has a sturdy cabinet, easy and safe-to-carry, with an IP65 protection grade (closed lid). It is suitable to work under adverse geographical and environmental conditions, with extreme temperatures in cold or tropical regions and in high mountain areas, showing a reliable performance in the field.

### Remote control by Android App

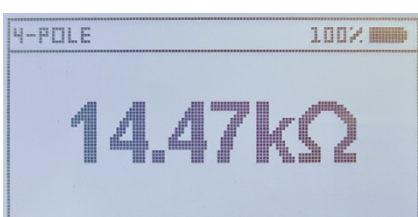
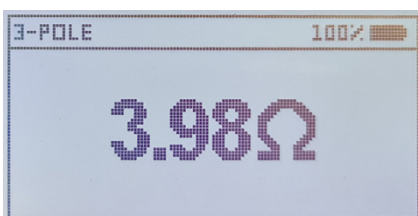
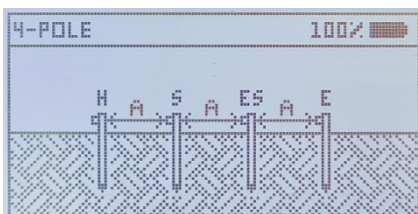
**Increased safety and comfort:** Set up, start and stop tests in an even safer and more comfortable way

**Automatic reports:** Generate test reports directly on the App

**Smartphone / tablet features:** Incorporate smartphone features into your reports (photo, GPS coordinates and test location map)



• Android, Google Play and the Google Play logo are trademarks of Google LLC



# Technical specifications

ELECTRICAL		MTD20KWR
Resistance range	0 - 20 kΩ	
Resistance measurement accuracy	± 2% of the measured value ± 2 digits	
Resistance reading resolution	0.01 Ω	
Voltage range	0 - 200 V~	
Voltage measurement accuracy	± 2% of the measured value ± 2 digits	
Voltage reading resolution	0.1 V	
Output current	Limited to less than 10 mA (max.)	
Output power	Less than 0.5 W	
FEATURES		
Measurement modes	Measurement of grounding resistances (with 3 terminals), Soil resistivity by the Wenner method (with 4 terminals) and Voltages present in the ground	
Immunity to spurious voltage interference	<p>Operation frequency: 1,470 Hz. This operation frequency complies with the equation:</p> $fg = \frac{2n + 1}{2} \times fi$ <p>Where:  <b>fg</b> = frequency of the current generated by the earth meter  <b>n</b> = integer number  <b>fi</b> = 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>	
Display	LCD graphic (128 x 64 px)	
COMMUNICATION		
Protocol	Modbus	
Bluetooth	For configuration and control	
STANDARDS		
Safety	IEC 61010-1, IEC 61557-1 and IEC 61557-5	
Overvoltage protection	CAT II - 300 V	
EMC	IEC 61326-1	
ENVIRONMENTAL		
Protection grade	IP65 (with closed lid)	
Operating temperature	-10 °C to 50 °C	
Storage temperature	-25 °C to 70 °C	
Humidity range	95% RH (non condensing)	

POWER SUPPLY	
Rechargeable battery	NiMH
Battery charger	AC adapter 12 V - 1 A
MECHANICAL (OF THE INSTRUMENT)	
Equipment weight	Approx. 1.5 kg
Dimensions	221 x 189 x 99 mm

## Included accessories

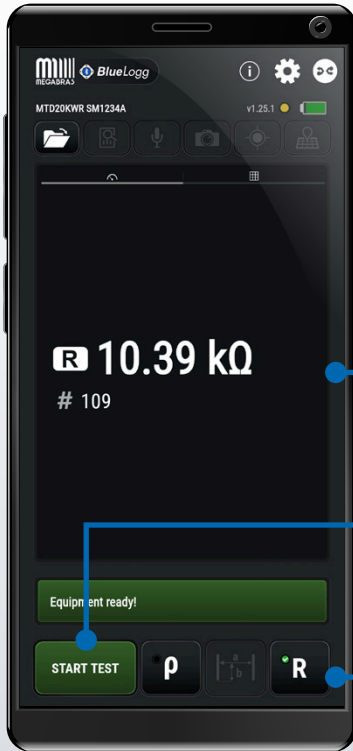
- 4 steel spikes
- AC Adapter
- Reel with 40 m, red cable
- Reel with 20 m, blue cable
- Reel with 20 m, green cable
- 5 m short black cable
- 5 m short green cable for connection to the ground to be measured
- Connection wire to supply the charger with a 12 V external battery (the car battery)
- Quick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

## Optional accessories

- Steel spike
- 2 m cable for interconnection of the additional spikes



# Smartphone App



## BlueLogg

### Remote control by App

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



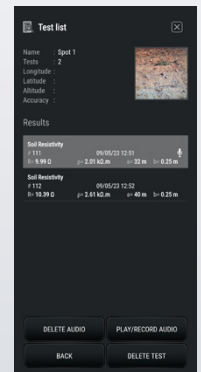
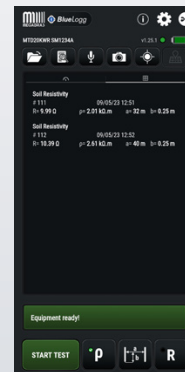
Real-time measurement



Test Start / Stop



Test settings



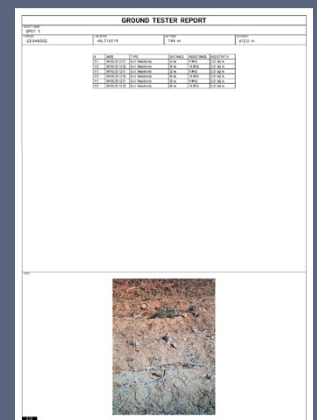
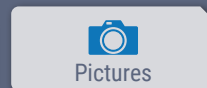
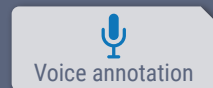
## Increased safety

BlueLogg 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

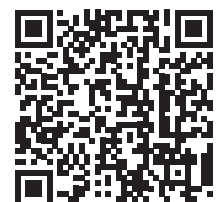
Record voice annotation for each measurement, generate automatic test reports directly on the App. Incorporate smartphone / tablet features into the report (photo, GPS coordinates and test location map).



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



## Global Presence

MEGABRAS equipment are used in more than 40 countries around the world



### Test & Measurement equipment

Digital transformer ratiometer  
Earth ground testers  
Hipots  
Insulating glove tester  
Insulation testers  
Kilovoltmeters  
Micro-ohmmeters  
Power quality analyzers  
Vibration meter



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