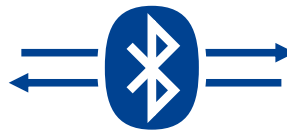


TM25R

HIGH FREQUENCY EARTH TESTER

- ✓ INTENDED FOR MEASUREMENT OF EARTH RESISTANCE OF ELECTRICITY PYLONS
- ✓ MINIMIZES THE INFLUENCE OF ADJACENT PYLONS, CONNECTED BY THE GUARD CABLE
- ✓ AUTOMATIC CURRENT INJECTION
- ✓ USB INTERFACE
- ✓ OPERATION FREQUENCY: 25 kHz
- ✓ RESISTANCE READING: 0 - 300 Ω
- ✓ AUTOMATIC COMPENSATION OF INDUCTIVE COMPONENT
- ✓ BUILT-IN MEMORY AND PRINTER
- ✓ RECHARGEABLE BATTERY
- ✓ BLUETOOTH INTERFACE FOR REMOTE CONTROL VIA A TABLET



Testing of the power transmission towers grounding (G) quality poses a serious problem as they are all electrically interconnected by means of Ground Wires which act as lightning rods, protecting the lines from atmospheric discharges.

Due to the existence of this connection, any attempt to measure a tower grounding (G) resistance using a conventional earth meter leads to wrong results as what is really being measured is all the shunt towers grounding (G) resistance (or, more precisely, its impedance at low frequency). Trying to disconnect the ground wire from an energized line is a risky operation due to the need for climbing to the tower highest part as well as for the proximity to the high-voltage conductors.

To make this kind of test feasible, which is of vital importance to ensure the transmission of the electrical power without interruptions, TM25R grounding resistance meter for high frequency has been developed. This is the appropriate tool for a fast, safe and reliable grounding resistance measurement in each tower of a working line transmission, without disconnecting the ground wire.

Its operation is based on the use of a high-frequency measurement current (25 kHz), for which ground wire inductive impedance - taking into account a typical length span is reasonably high, making it possible to reduce the effect of the adjacent towers under measurement. The equipment only measures the ground resistance of the surveyed tower, including its base. The extensive G systems, such as meshes, buried wires, metal pipes, etc, are measured only considering the closest section to the connection point, so that the measured value represents the performance, against a pulse signal similar to an atmospheric discharge. Thus, values that better represent the system capacity to ground lightning currents than the ones obtained with low frequency conventional equipments, even when disconnecting the ground wire, are obtained.

The test is performed by making the known-value current flow through the earth diffusion resistance and an auxiliary electrode, called the current electrode, and by measuring the voltage produced between grounding and another auxiliary electrode, thrust into the ground in the area of the potential created by flowing current (Potential Plateau). The current injected by the earth meter is automatically adjusted to the predetermined value and the equipment and it directly indicates the resistance value on its ohms-grades scale.

The TM25R has a Bluetooth interface that allows remote control of it through a tablet with BlueLogg software. With it you can save the photos of the towers and the GPS coordinates of each. It also allows you to record voice comments for each measurement. This equipment is powered with its universal charger, from a built-in rechargeable battery. It is a strong equipment, easy to carry, resistant to the hard weather and geographical features of the tropical and high-mountain regions, that is why it is described as an excellent product for field works under the most severe environmental conditions.

TM25R:: TECHNICAL SPECIFICATIONS

Measurement ranges

0 - 300 Ω

Operation frequency

25,000 Hz

Test current

20 mA automatic

Inductive component compensation

Through bank of capacitors integrated to the equipment
Maximum capacity: 4.2 μ F
Resolution: 10 nF

Measurement accuracy

\pm 2.5 % of reading \pm 1 digit

Display

Alphanumeric display (LCD)

Max. Earth resistance of auxiliary rods

2,000 Ω (current rod)
2,000 Ω (voltage rod)

Built-in memory

It allows for the storage of 2,000 tests readings in its internal NVRAM memory.

Built-in printer

For a printed register document of measured values.

Interfaces

USB and Bluetooth

BlueLogg

Software for remote control via a tablet. Compatible with Android 4.0 Ice Cream Sandwich (API 14) or higher.

Power supply

Internal rechargeable battery, 12.6 V 6000 mAh

Battery charger

12 V - 2 A (AC adapter)

Operating temperature

-5°C to 50°C

Storage temperature

-15 °C to 65 °C

Humidity

Up to 95% RH (non condensing)

Dimensions

340 x 295 x 152 mm

Equipment weight

Approx. 4.9 kg

Accessories

4x 50 cm long steel core rods with copper coating
1x Rod extractor
1x 70 m shielded cable
1x 50 m shielded cable
1x 30 m cable to current rod
1x 70 m cable to auxiliary potential rod
1x 50 m cable to auxiliary potential rod
1x Cable adapter for current electrode
1x Cable for connection to the unknown electrode (Tower)
1x AC adapter
1x BlueLogg license
1x Case to carry accessories
1x User guide

Subject to technical change without notice. This catalogue is not a contractual document.



MEGABRAS INDÚSTRIA ELETRÔNICA LTDA.
Rua Gibraltar, 172 - Santo Amaro - CEP 04755-070
São Paulo - SP - Brasil
Tel. +55 11 5641-8111 - Fax +55 11 5641-9755
megabras@megabras.com - www.megabras.com



114010901E