TENTECH

Earth ground tester

DENVER
metrología electrónica, S.L.

TM25R

- Intended for measurement of earth resistance of transmission towers
- Minimizes the influence of adjacent towers, even when, connected by the guard cable
- Operation frequency: 25 kHz
- Resistance reading: up to 300 Ω
- Automatic compensation of inductive component
- Automatic current injection
- USB interface and remote interface
- Built-in memory and printer
- Powered by LFP (LiFePO4) rechargeable battery, a safer, more reliable and longer-lasting battery technology

Description

Testing the grounding quality of individual transmission towers presents a complex problem, as they are all electrically interconnected by means of Guard Wires. As the adjacent towers influence the measurement, when using conventional instruments it becomes necessary to disconnect the guard wire.

By using high frequency test current, the TM25R minimizes that effect allowing for a fast, safe and reliable grounding resistance measurement in each tower of a live transmission line, without the need to disconnect the guard wire.

Considering that the lightning is an impulsive phenomenon, with the energy concentrated in high frequency components, this technology gives results that are more representative of the true grounding quality associated with lightning systems.

The TM25R connects with Android Tablets, allowing for full remote control during the measurement through an easy to use application, saving time and making the job much more comfortable.

Additional features include the option to capture the geolocation (GPS coordinates), take and save photos and record voice comments for each measurement, all of which can be incorporated into rich and highly professional reports that are easily generated using this powerful application.

(*) This is an estimation based on data provided by battery manufacturers and cannot be guaranteed. Warranty period for LFP batteries is the same as the warranty period of the equipment itself.

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 µF.
Resolution: 10 nF.

MEASUREMENT ACCURACY
± 2.5 % of reading ± 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.

INTERFACE
USB and remote interface.

Android App
Software for remote control via a tablet.

POWER SUPPLY
Internal or external rechargeable battery, 12 V. Internal battery autonomy: at least 2 hours.

BATTERY CHARGER
For 100 - 240 V~ 50/60 Hz.

OPERATING TEMPERATURE
23°F to 122°F (-5°C to 50°C).

STORAGE TEMPERATURE
5°F to 149°F (-15°C to 65°C).

HUMIDITY
Up to 95% RH (non condensing).

EQUIPMENT WEIGHT
Approx. 10.8 lb (4.9 kg).

DIMENSION
13.39" x 11.62" x 5.98" (340 x 295 x 152 mm).

ACCESSORIES WEIGHT
Approx. 36.38 lb (16.5 kg).

ACCESSORIES
4- 1.64 ft (0.5 meters) Long steel core rods with copper coating.
1- Rod extractor.
1- 229.66 ft (70 meters) Shielded cable.
1- 164.04 ft (50 meters) Shielded cable.
1- 98.52 ft (30 meters) Cable to current rod.
1- 229.66 ft (70 meters) Cable to auxiliary potential rod.
1- 164.04 ft (50 meters) Cable to auxiliary potential rod.
1- Cable adapter for current electrode.
1- External battery cable.
1- Cable for connection to the unknown electrode (Tower).
1- USB Cable.
1- Case to carry accessories.
1- Operating handbook.

Rechargeable battery (LiFePO4)

Expected lifetime: 2000 charge / discharge cycles (average).

Low self-discharge: when the equipment is not in use, battery charge decreases with time at a much lower rate than other battery technologies.

Safety: in contrast to other lithium battery technologies commonly used, LFP batteries are thermally and chemically stable, significantly improving battery safety.

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MADE IN USA