Multifunction Earth Tester Model 6471-AU

The AEMC 6471 Earth Tester is several earth testers in one. It allows the user to perform all necessary earth measurements comprising:

- Earth Resistance of an isolated electrode
- Earth Resistance of a connected electrode without disconnection by the Selective method
- Earth Resistance of a connected electrode without disconnection by the Stakeless method
- Soil Resistivity directly in Ohm-m by either the Wenner or Schlumberger methods
- Earth Bond Resistance (milli-ohmmeter)
- External AC and DC voltage measurement

The 6471 distinguishes itself from other portable earth testers in that it has a test current of up to 250mA improving its ability to make accurate and repeatable measurements in poor soil conditions as frequently encountered in Australia.

The 6471-AU is an Australian derivation of the standard European & US 6471 Multi-function Earth tester, developed in co-operation with Australian Power utilities and includes:

1. Connecting and CT leads 4m in length to reach pole transformer test points from ground
2. 50/25m test leads on A-frame reel for fast roll out and rewind. (100/50m optional)
3. Stainless steel helical stakes for strength, corrosion resistance and superior ground contact
4. Supplied with 100kA fused bridging lead with insulation piercing connectors for safe stakeless testing of HV earths when not bonded to LV earth.
5. Connecting leads and crocodile clips Cat 4, 600V
6. Optional heavy duty HPRC resin case with foam cut-outs accommodating instrument & accessories.

Features

- **Measure earth resistance using 2-clamp (stakeless method) – No auxiliary stakes needed**
- **Measure earth resistance using single clamp (selective method)**
- **Measure earth resistance using 3-pole Fall of Potential method**
- **Measure Soil Resistivity with automatic calculation of ρ in Ohm-m using Wenner or Schlumberger methods**
- **Measure resistance (earth bonding) by 2 and 4-pole (Kelvin) DC resistance methods**
- **Automatic or manual selection of test frequency from 41 to 513Hz**
- **Selectable test voltage of 16 or 32V**
- **Test current up to 250mA**
- **All leads and connectors colour coded**
- **Automatic recognition of test stake connections and their resistance values**
- **Stores up to 512 complete test results in internal memory**
- **Rugged weather and dustproof case to IP54**
- **DataView report generation software included**

Specifications

2 CLAMP METHOD	
Range	0.1 to 500Ω
Resolution	0.01 to 1Ω
Measurement Frequency	Auto: 1376Hz Manual 128 to 1758Hz
3-POLE METHOD	
Range (auto ranging)	0.09Ω to 99.9kΩ
Resolution	0.01Ω to 100Ω
Test Voltage	16 or 32 V RMS
Resistance Measurement Frequency	41 to 513Hz automatic or user selectable
Test Current	250mA max.
Accuracy	±2% reading + 1 count @128Hz
SOIL RESISTIVITY	
Test Methods	Wenner or Schlumberger with automatic calculation in Ω-metres
Range (auto ranging)	0.01 to 99.9kΩ ρ max 999kΩ-m
Resolution	0.01Ω to 100Ω
Test Voltage	16 or 32 V RMS
Resistance Measurement Frequency	41 to 513Hz automatic or user selectable
EXTERNAL VOLTAGE MEASUREMENT	
Range (auto ranging)	0.1 to 65V AC/DC DC to 440Hz
Accuracy	±2% reading + 1 count
RESISTANCE MEASUREMENT (Bond Testing)	
Measurement Type	2-pole with lead resistance compensation or 4-pole Kelvin
Range (auto ranging)	2-pole 0.01Ω to 99.9kΩ 4-pole 0.001Ω to 99.99kΩ
Accuracy	±2% reading + 2 counts
Test Voltage	16V DC (+/- or auto polarity)
Test Current	250mA max.
DATA STORAGE	
Memory Capacity	512 test results
Communication	Optically isolated USB
POWER SOURCE	
Battery Type	9.6V NiMh rechargeable battery pack
Recharging	110/230V external charger with 18V DC 1.9A output or 12V DC

Distributed and serviced in Australia & New Zealand exclusively by:

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