

## EM5254

### Clamp-on ground resistance meter

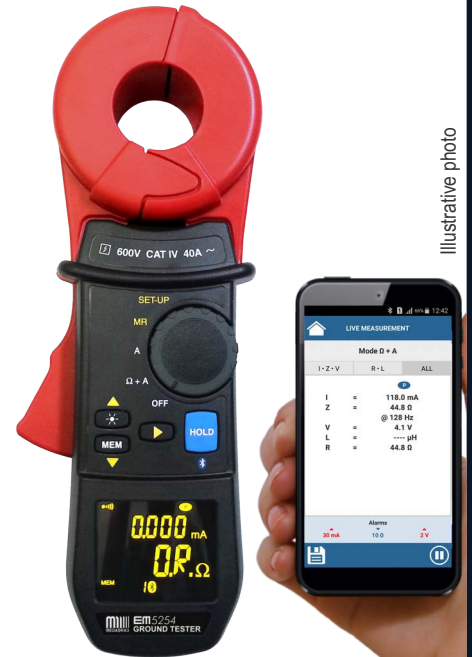
Provides high safety level with new ground voltage indication feature



GROUND VOLTAGE INDICATION



SELECTABLE TEST FREQUENCIES



Illustrative photo

#### Features

- Ground voltage indication (warns of possible unsafe conditions)
- Large multi-function bright yellow organic LED display (OLED)
- Selectable test frequency (improves accuracy in inductive environments)
- Clamping diameter of 35mm with large jaw design
- Storage of measurements ( $\Omega$  and/or A, with time-stamping) up to 2000 measurements stored
- Displays stored measurements on the OLED display or via Bluetooth® (Class 2 - communicates up to 30 ft) to a Android™ based mobile application
- Auto Power OFF function
- Alarm function with adjustable set point and buzzer for quick field checks for volts, amps and ohms
- Rugged Lexan® head and body construction resists breakage
- Alarm settings and stored memory information saved during shutdown
- Noise icon and buzzer alert user to presence of dangerous voltage and current levels
- Designed to EN 61010-1, 600V CAT IV safety standards

#### Description

The Ground Resistance Tester model **EM5254**, measure ground rod and small grid resistance through any season, without the use of auxiliary ground rods. Clamp-on ground resistance testers are used in multi-grounded systems without disconnecting the ground under test. The **EM5254** simply clamp around the ground conductor or rod and measure the resistance to ground. By performing measurements on intact ground systems, the user also verifies the quality of the grounding connections and bonds. Resistance and continuity of grounding loops around pads and buildings may also be measured.

The **EM5254** also includes a current measurement function. The probe's high sensitivity enables measurement of leakage current flowing to ground or circulating in ground loops down to 0.2mA and neutral currents to 40A. This feature provides additional information which is becoming vital as distribution ground networks carry higher levels of noise and harmonics which affect power quality.

The equipment offer battery life information at power-up and Auto-Off for power management. Additional features are also displayed on the large LCD to ensure precise measurements. The Buzzer and Auto-Off features may be disabled from the push-buttons at any time.

The **EM5254** offers an Alarm function and a Memory (logging) function. In the Alarm mode, the probe will audibly and visually indicate if the reading is beyond an input set point. The user may also have the Alarm initiated above or below the set point. This Alarm feature permits quick field checks where only "pass" or "fail" readings will suffice.

The Memory function logs up to 2000 measurements (Ohms or Amperes). This enables the user to conduct field surveys, and to retrieve and analyze the readings at a later time. The alarm settings and stored memory information are saved when the ground tester is turned off.

## Technical specifications

### Electrical

| Ground Resistance                                   | Measurement range   | Resolution | Accuracy (% of reading) |
|---|---|------------|-------------------------|
| Auto-Ranging<br>1 to 199 Ω                          | 0.010 to 0.099 Ω  | 0.001 Ω    | ± 1.5% ± 0.01 Ω         |
|   | 0.10 to 0.99 Ω  | 0.01 Ω     | ± 1.5% ± 0.01 Ω         |
|   | 1.0 to 49.9 Ω   | 0.1 Ω      | ± 1.5% ± 0.1 Ω          |
|   | 50.0 to 99.5 Ω  | 0.5 Ω      | ± 2% ± 0.5 Ω            |
|   | 100 to 199 Ω  | 1 Ω        | ± 3% ± 1 Ω              |
|   | 200 to 395 Ω  | 5 Ω        | ± 5% ± 5 Ω              |
|   | 400 to 590 Ω  | 10 Ω       | ± 10% ± 10 Ω            |
|   | 600 to 1150 Ω   | 50 Ω       | approx. 20%             |
| Current Measurement<br>Auto-Ranging<br>1 mA to 40 A | 1200 to 1500 Ω  | 50 Ω       | approx. 25%             |
|   | 0.200 to 0.999 mA   | 1 μA       | ± 2% ± 50 μA            |
|   | 1.000 to 2.990 mA<br>3.00 to 9.99 mA  | 10 μA      | ± 2% ± 50 μA            |
|   | 10.00 to 29.90 mA<br>30.0 to 99.9 mA  | 100 μA     | ± 2% ± 100 μA           |
|   | 100.0 to 299.0 mA<br>0.300 to 0.990 A   | 1 mA       | ± 2% ± 1 mA             |
|   | 1.000 to 2.990 A<br>3.00 to 39.99 A   | 10 mA      | ± 2% ± 10 mA            |
| Resist. Measurement Frequency                       | 2083 Hz   |            |                         |
| Current Measurement Frequency                       | 47 to 800 Hz  |            |                         |
| Loop Impedance Measurement                          | 10 to 100 μH;<br>100 to 500 μH  |            |                         |
| Current Overload                                    | OL displayed above 39.99Arms  |            |                         |
| Measurement category                                | EN 61010: CAT IV - 600 V  |            |                         |
| Communication                                       | Bluetooth®  |            |                         |
| Power Source  | 4x1.5V LR6 (AA) Alkaline batteries;<br>Battery life: 12 hours, or 1440 30-second measurements approx. |            |                         |

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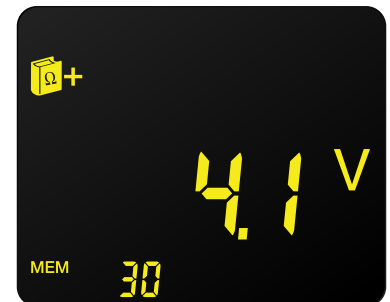
### Display

#### MEASUREMENT RESULTS



Displays the leakage current and loop impedance at the test frequency

#### GROUND VOLTAGE



Indicates voltage potential at the point of measurement

#### ALARM



Indicates voltage/current alarm threshold along with the direction of impedance

### Supplied accessories

- Carry bag
- Calibration loop
- 4x AA batteries of 1.5 V
- User manual
- Software for Android system



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