

### Models 6416 & 6417

Provides high safety level with new ground voltage indication feature

#### SPECIFICATIONS

| MODELS                                  | 6416 & 6417   |                   |                                |
|---|---|-------------------|--------------------------------|
| <b>ELECTRICAL</b>                       |   |                   |                                |
| <b>Ground Resistance</b>                | <b>Measurement Range</b>  | <b>Resolution</b> | <b>Accuracy (% of Reading)</b> |
| Auto-Ranging<br>1 to 199Ω               | 0.010 to 0.099Ω   | 0.001Ω            | ±1.5% ±0.01Ω                   |
|   | 0.10 to 0.99Ω   | 0.01Ω             | ±1.5% ±0.02Ω                   |
|   | 1.0 to 49.9Ω  | 0.1Ω              | ±1.5% ±0.1Ω                    |
|   | 50.0 to 99.5Ω   | 0.5Ω              | ±2% ±0.5Ω                      |
|   | 100 to 199Ω   | 1Ω                | ±3% ±1Ω                        |
|   | 200 to 395Ω   | 5Ω                | ±5% ±5Ω                        |
|   | 400 to 590Ω   | 10Ω               | ±10% ±10Ω                      |
|   | 600 to 1150Ω  | 50Ω               | 20% approx                     |
| Auto-Ranging<br>1mA to 40A              | 1200 to 1500Ω   | 50Ω               | 25% approx                     |
|   | <b>Current Measurement</b>  | <b>Resolution</b> | <b>Accuracy</b>                |
|   | 0.200 to 0.999mA  | 1μA               | ±2% ±50μA                      |
|   | 1.000 to 2.990mA<br>3.00 to 9.99mA  | 10μA              | ±2% ±50μA                      |
|   | 10.00 to 29.90mA<br>30.0 to 99.9mA  | 100μA             | ±2% ±100μA                     |
| Auto-Ranging<br>1mA to 40A              | 100.0 to 299.0mA<br>0.300 to 0.990A   | 1mA               | ±2% ±1mA                       |
|   | 1.000 to 2.990A<br>3.00 to 39.99A   | 10mA              | ±2% ±10mA                      |
| <b>Selectable Measurement Frequency</b> | 50, 60, 128 or 2083Hz   |                   |                                |
| <b>Current Measurement Frequency</b>    | 47 to 800Hz   |                   |                                |
| <b>Inductance Measurement</b>           | 10 to 100μH;<br>100 to 500μH  |                   |                                |
| <b>Current Overload</b>                 | OL displayed above 39.99Arms  |                   |                                |
| <b>Communication</b>                    | Bluetooth connection (Model 6417 only)  |                   |                                |
| <b>Power Source</b>                     | 4x1.5V LR6 (AA) Alkaline batteries or 4 NiMH batteries;<br>Battery life: 12 hours, or 1440 30-second measurements approx. |                   |                                |



#### FEATURES

- Ground Integrity® Measurement
- 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 1.37" (35mm) with large jaw design
- Storage of measurements (Ω and/or A, with time-stamping)  
Model 6416: up to 300 measurements stored  
Model 6417: up to 2000 measurements stored
- View stored measurements on the OLED display or via Bluetooth (Class 2 - communicates up to 30ft) to a PC or the Android™ based mobile application (Model 6417)
- 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
- Includes DataView® software for data storage, real-time display, analysis, report generation and system configuration (Model 6417)
- Noise icon and buzzer alert user to presence of dangerous voltage and current levels
- Designed to EN 61010-1, 600V CAT IV safety standards

#### PRODUCT INCLUDES

Model 6416 includes a hard carrying case, calibration loop, four 1.5V AA batteries and user manual.

Model 6417 also includes a Bluetooth USB adapter, quick start guide, and a USB drive with DataView® software, ground workbook and user manual.



## Models 6416 & 6417

### Functional Displays



#### Measurement Results



Displays the leakage current and loop impedance at the test frequency

#### Memory Recall Mode



Measurement storage date-time screen

#### Alarm



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

#### Ground Voltage



Indicates voltage potential at the point of measurement

#### Current Disturbance



Indicates that the current is greater than 10A

#### Impedance Over Range



Indicates that the impedance is greater than 1500Ω

| CATALOG NO. | DESCRIPTION  |
|-------------|--|
| 2141.01     | Ground Resistance Tester Model 6416 (Clamp-On, Alarm, Memory)            |
| 2141.02     | Ground Resistance Tester Model 6417 (Clamp-On, Bluetooth, Alarm, Memory) |

# GROUND RESISTANCE TESTER

## Selection Chart

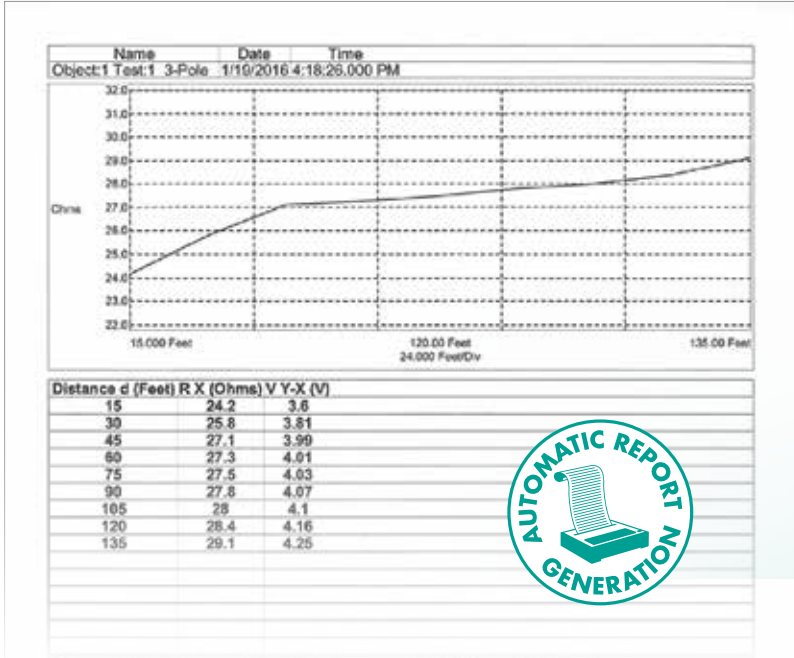
| AEMC MODEL NUMBER                | AEMC CATALOG NUMBER | RESISTANCE RANGE  | POWER SOURCE         | 2 POINT TEST  | 3 POINT TEST | 4 POINT/ SELECTIVE | SOIL RESISTIVITY TEST | EARTH COUPLING | 2 CLAMP | BONDING | DISPLAY | VOLTAGE INDICATION | INDUCTANCE INDICATION                  | SWEEP FREQUENCY |   |
|----------------------------------|---------------------|-------------------|----------------------|---|--------------|--------------------|-----------------------|----------------|---------|---------|---------|--------------------|--|-----------------|---|
| 6416                             | 2141.01             | 0.01 to 1500Ω     | Battery              | Clamp-On Ground Resistance Tester w/Alarm & Memory                          |              |                    | —                     | —              | —       | —       | ✓**     | Digital            | Voltage Displayed (noise icon, buzzer) | ✓               | — |
| 6417                             | 2141.02             | 0.01 to 1500Ω     | Battery              | Clamp-On Ground Resistance Tester w/Alarm, Memory & Bluetooth communication |              |                    | —                     | —              | —       | —       | ✓**     | Digital            | Voltage Displayed (noise icon, buzzer) | ✓               | — |
| GroundFlex® Field Kit Model 6474 | 2136.03             | 0.001Ω to 99.99kΩ | Rechargeable Battery | —   | ✓            | ✓                  | ✓                     | ✓              | —       | ✓       | Digital | Value Displayed    | —                                      | ✓               |   |
| 6471 (SR182 probes not included) | 2135.48             | 0.01 to 99.99kΩ   | Rechargeable Battery | —   | —            | —                  | —                     | —              | —       | —       | —       | —                  | —                                      | —               |   |
| 6471                             | 2135.49             |                   |                      | ✓   | ✓            | ✓                  | ✓                     | ✓              | ✓       | ✓       | ✓       | Digital            | Value Displayed                        | —               | — |
| 6471 Kit 300FT                   | 2135.50             |                   |                      | —   | —            | —                  | —                     | —              | —       | —       | —       | —                  | —                                      | —               | — |
| 6472                             | 2135.51             | 0.01 to 99.99kΩ   | Rechargeable Battery | —   | —            | —                  | —                     | —              | —       | —       | —       | —                  | —                                      | —               |   |
| 6472 Kit 300FT                   | 2135.53             |                   |                      | ✓   | ✓            | ✓                  | ✓                     | ✓              | ✓       | ✓       | ✓       | Digital            | Value Displayed                        | —               | ✓ |
| 6472 Kit 500FT                   | 2135.54             |                   |                      | —   | —            | —                  | —                     | —              | —       | —       | —       | —                  | —                                      | —               | — |
| 4620                             | 2130.43             | 0.0 to 1999Ω      | Battery              | ✓   | ✓            | —                  | ✓                     | —              | —       | —       | —       | Digital            | LED/Buzzer                             | —               | — |
| 4620 Kit 150FT                   | 2135.19             |                   |                      | —   | —            | —                  | —                     | ✓*             | —       | —       | —       | —                  | —                                      | —               | — |
| 4620 Kit 300FT                   | 2135.20             | 0.0 to 2000Ω      | Battery              | ✓   | ✓            | —                  | ✓                     | —              | —       | —       | Digital | LED/Buzzer         | —                                      | —               |   |
| 4620 Kit 500FT                   | 2135.21             | 0.0 to 1999Ω      | Battery              | ✓   | ✓            | —                  | ✓                     | —              | —       | —       | Digital | LED/Buzzer         | —                                      | —               |   |
| 4630                             | 2130.44             | 0.0 to 1999Ω      | Rechargeable Battery | —   | —            | —                  | ✓                     | —              | —       | —       | —       | —                  | —                                      | —               |   |
| 4630 Kit 150FT                   | 2135.22             |                   |                      | —   | —            | —                  | —                     | ✓*             | —       | —       | —       | Digital            | LED/Buzzer                             | —               | — |
| 4630 Kit 300FT                   | 2135.23             |                   |                      | —   | —            | —                  | —                     | ✓              | —       | —       | —       | —                  | —                                      | —               | — |
| 4630 Kit 500FT                   | 2135.24             |                   |                      | —   | —            | —                  | —                     | ✓              | —       | —       | —       | —                  | —                                      | —               | — |
| 3640                             | 2114.92             | 0.0 to 1999Ω      | Battery              | —   | —            | —                  | —                     | —              | —       | —       | —       | —                  | —                                      | —               |   |
| 3640 Kit 150FT                   | 2135.13             |                   |                      | ✓   | ✓            | —                  | —                     | —              | —       | —       | —       | Digital            | LED                                    | —               | — |
| 3640 Kit 300FT                   | 2135.14             |                   |                      | —   | —            | —                  | —                     | —              | —       | —       | —       | —                  | —                                      | —               | — |

\* Performing soil resistivity tests with this kit requires two additional auxiliary electrodes not supplied in the 150ft kit and one additional test lead.

\*\* Clamp-on Ground Resistance Tester can measure system continuity inclusive of all bonding points.

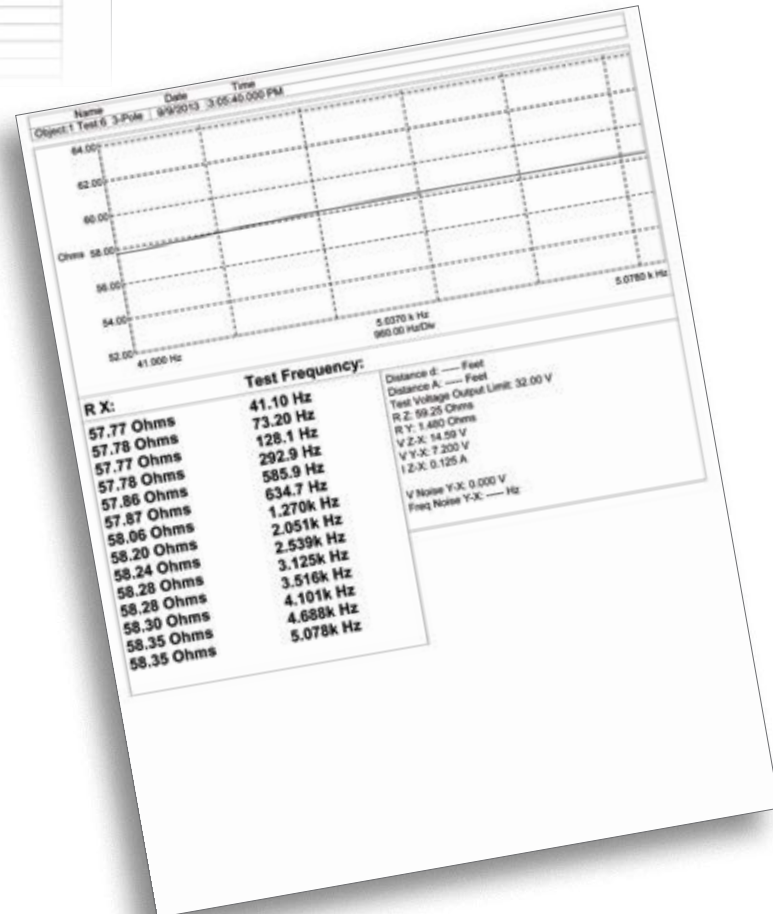
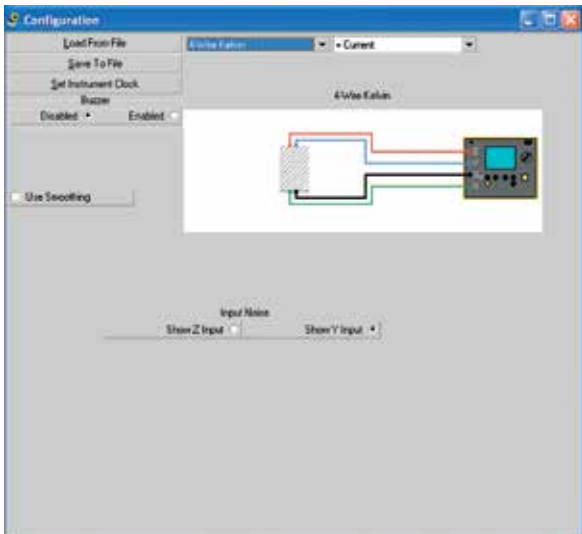
# DataView®

Data Analysis and Reporting Software for Ground Testers



## Configure all functions of Models 6417, 6471 & 6472

- Run tests and analyze real-time data from your PC
- Configure all test functions and parameters from your PC
- Customize views, templates and reports to your exact needs
- Display Fall-of-Potential plots, tabular listings of test results, resistance vs. frequency plots, soil resistivity and bonding tests (Models 6471 & 6472)
- Print reports using standard or custom templates you design



DataView® software provides a convenient way to configure and control ground resistance tests from your computer. Through the use of clear and easy-to-use tabbed dialog boxes, all ground tester functions can be configured and tests can be initiated. Results can be displayed in real-time and stored in your PC. Reports may be printed along with the operator's comments and analysis.

