

GROUND RESISTANCE TESTERS

MULTI-FUNCTION

MODEL 6471

Test ground resistance without the need of auxiliary rods or with the 3- and 4- Point methods



SPECIFICATIONS

MODEL	6471
ELECTRICAL	
2 Clamp Measurement	
Range	0.10 to 500Ω
Resolution	0.01 to 1Ω
Measurement Frequency	Auto: 1611Hz Manual: 128Hz-1367Hz-1611Hz-1758Hz
3-Point Measurement	
Range (Auto-Ranging)	0.09Ω to 99.9kΩ
Resolution	0.01Ω to 100Ω
Test Voltage	Nominal 16 or 32Vrms user selectable
Resistance Measurement Frequency	41 to 513Hz automatic or user selectable
Test Current	Up to 250mA
Accuracy	±2% of Reading + 1ct @ 128Hz
Soil Resistivity 4-Point Measurement	
Test Method	Wenner or Schlumberger selectable with automatic calculation in Ω-meters
Range (Auto-Ranging)	0.01 to 99.99kΩ; max: 999kΩm
Resolution	0.001 to 10Ω
Test Voltage	16 or 32V user selectable
Frequency	From 41 to 128Hz selectable
External Voltage Measurement	
Range (Auto-Ranging)	0.1 to 65.0V _{ac/dc} - DC to 440Hz
Accuracy	±2% of Reading + 1ct
Resistance Measurement (Bond Testing)	
Measurement Type	2-Pole (with lead resistance compensation) or 4-Pole (Kelvin sensing) user selectable
Range (Auto-Ranging)	2-Pole 0.02 to 99.99kΩ; 4-Pole 0.02 to 99.99kΩ
Accuracy	±2% of Reading + 2cts
Test Voltage	16V _{oc} (+, - or auto polarity)
Test Current	Up to 250mA max
Data Storage	
Memory Capacity	512 test results (64KB)
Communication	Optically Isolated USB
Power Source	9.6V rechargeable battery pack (included)
Recharging Source	110/220V, 50/60Hz external charger with 18V _{oc} , 1.9A output



The Model 6471 provides a fast and easy way to measure the value of the earth/ground using the 2 Clamp method (no auxiliary rods needed).



KIT SHOWN 300FT KIT: CATALOG #2135.50

Includes meter, carrying bag for meter, carrying bag for kit, two 300ft color-coded leads on spools (red/blue), two 5ft color-coded leads (red/blue), two 100ft color-coded leads (hand-tied, green/black), two SR182 current probes, rechargeable NiMH batteries, optical USB cable, power adapter 110/240V with power cord 115V US, four T-shaped auxiliary ground electrodes, set of five spaded lugs, one 100ft tape measure, and USB drive supplied with DataView® software, ground tester workbook and user manual.

PRODUCT INCLUDES

2135.48

Meter, carrying bag, 110/240V power adapter with US power cord, optical USB cable, rechargeable NiMH battery, DataView® software, ground tester workbook and user manual.

2135.49

Meter, carrying bag, set of two SR182 current probes, 110/240V power adapter with US power cord, optical USB cable, rechargeable NiMH battery, DataView® software, ground tester workbook and user manual.

ACCESSORIES



MN82 CURRENT PROBE
(2mA to 10Arms)
Catalog #2135.71
(optional)



SR182 CURRENT PROBE
(0.5MA TO 40ARMS)
Catalog #2135.72 (optional)



REEL CADDY
Catalog #2135.85
(optional) Set of two, for use with ground kit spools

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Large Functional Displays

FEATURES

Ground Integrity® Measurement

Ground Resistance testing using the 2 clamp method (no auxiliary rods needed)

2- and 4-Point Bond Resistance/Continuity measurement (DC Resistance) with automatic polarity reversal

3-Point Fall-of-Potential measurement with manual or automatic frequency selection

4-Point Soil Resistivity measurement with automatic calculation of Rho (r) and user selection of the Wenner or Schlumberger test method

3-Point Earth Coupling measurement

Manual and Automatic frequency scan from 41 to 5078 Hz for optimum test accuracy in electrically noisy environments

Selectable test voltage of 16 or 32V up to 250mA of test current

Auto Power OFF feature

Automatic recognition of all electrode connections and their resistance value

Stores up to 512 complete test results in internal memory

Display with automatic backlight when entering a function

Optically isolated USB communication cable included

Rechargeable NiMH batteries from wall charger or vehicle power

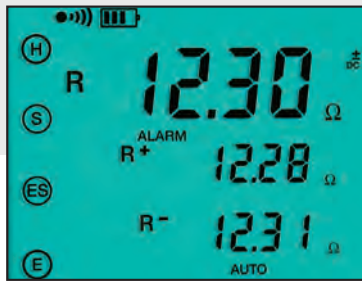
Rugged dustproof and water-resistant field case - IP53 rated in closed position

Grounding standards IEC 61557 parts 4 and 5 compliant

Includes DataView® software for set up, data retrieval, real-time display, analysis, report generation and system configuration

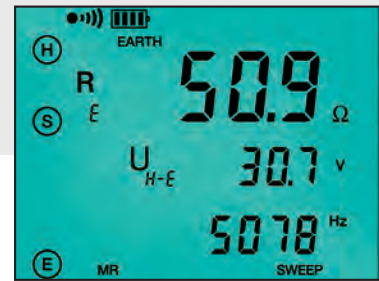
Can also be used for continuity tests on bonding

4-POINT BOND TEST



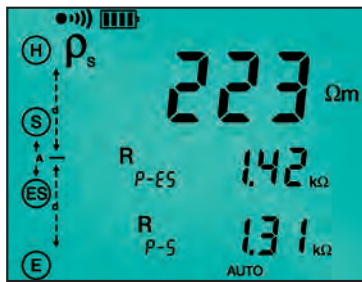
The 4-Point Bond test shows lead connections, bond resistance test results, test voltage and current.

3-POINT FALL-OF-POTENTIAL TEST



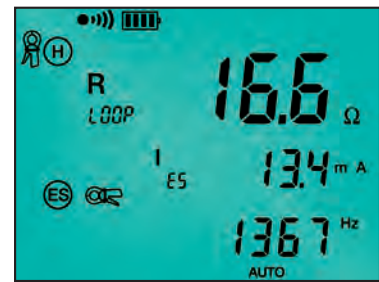
The 3-Point Fall-of-Potential test displays test lead connection, grounding rod resistance and test electrode resistances.

SCHLUMBERGER TEST



The Schlumberger test displays test lead connection, soil resistivity (ρ) test results and electrode spacing.

TWO CLAMP TEST



The 2 Clamp method displays clamp connection resistance, test current and frequency.

DATA STORAGE



Memory Recall displays test results stored at a specific memory location.

WENNER TEST



The Wenner test displays test lead connection, soil resistivity (ρ) test results, electrode spacing and resistance.

CATALOG NO.	DESCRIPTION
2135.48	Ground Resistance Tester Model 6471 (2-Point, 3-Point, 4-Point, Bond Test, Digital, Rechargeable Battery, DataView® software) SR182 probes not included
2135.49	Ground Resistance Tester Model 6471 (set of two SR182 current probes, 2-Point, 3-Point, 4-Point, Bond Test, Digital, Rechargeable Battery, DataView® software)
2135.50	Ground Resistance Tester Model 6471 Kit - 300ft (Catalog #2135.49 and Catalog #2135.36)
2135.51	Ground Resistance Tester Model 6472 (2-Point, 3-Point, 4-Point, Bond Test, Digital, Rechargeable Battery, DataView® software)
2135.53	Ground Resistance Tester Model 6472 Kit - 300ft (Model 6472 and Catalog #2135.36)
2135.54	Ground Resistance Tester Model 6472 Kit - 500ft (Model 6472 and Catalog #2135.37)
2135.60	Ground Resistance Tester Model 6471 Kit - 300ft (Catalog #2135.48 and Catalog #2135.36) w/o SR
2135.61	Ground Resistance Tester Model 6471 Kit - 500ft (Catalog #2135.48 and Catalog #2135.37) w/o SR
Accessories/Replacement - available on website store from www.aemc.com	
2135.71*	AC Current Probe Model MN82 for use with Model 6471 and 6472
2135.72*	AC Current Probe Model SR182 for use with Model 6471 and 6472
2135.85	Caddy - Set of 2, Reel Caddy for use w/Ground Kit Spools

*2 probes required for two clamp testing method.

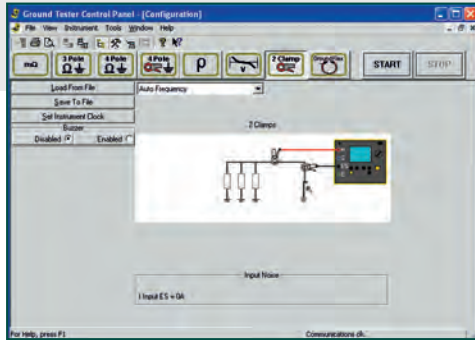
GROUND RESISTANCE TESTERS

MULTI-FUNCTION

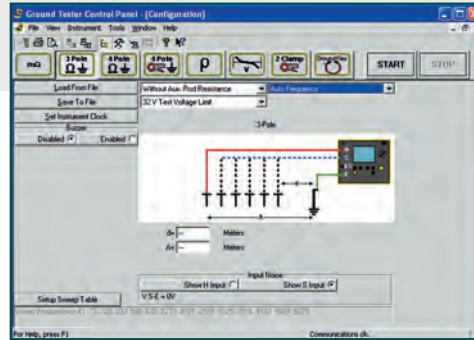
GROUND TESTERS MODELS 6471 & 6472

Typical DataView® Functional Displays

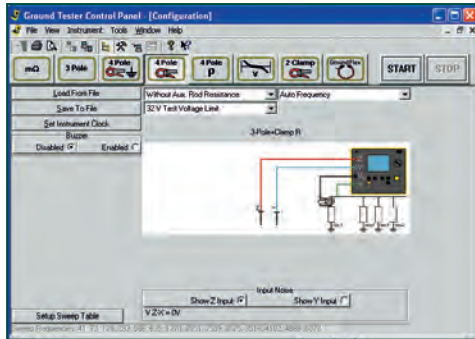
2 CLAMP METHOD SETUP



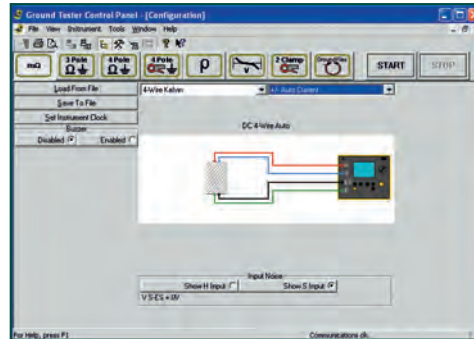
FALL-OF-POTENTIAL, STEP-TOUCH POTENTIAL



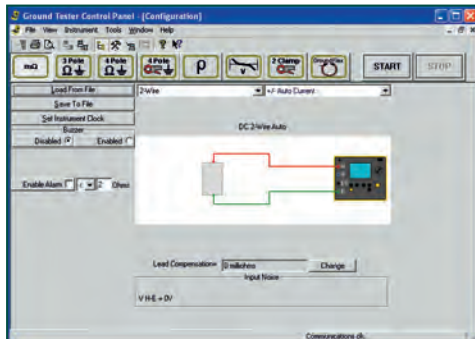
SELECTIVE 3-POINT TESTING OF MULTIPLE RODS



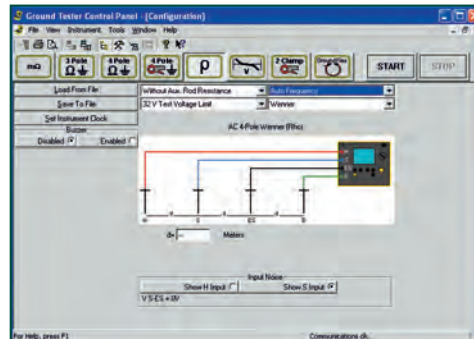
4-POINT BONDING FOR VERY LOW RESISTANCE



BONDING



SOIL RESISTIVITY



OPTIONAL KITS

150FT KIT

Catalog #2135.35
Test Kit for 3-Point testing includes carrying bag, two 150ft color-coded leads on spools (red/blue), two 5ft color-coded leads (red/blue), one 30ft lead (green), two 14.5" T-shaped auxiliary ground electrodes, one set of five spaded lugs and 100ft tape measure.



300FT KIT

Catalog #2135.36
Test Kit for 4-Point testing includes carrying bag, two 300ft color-coded leads on spools (red/blue), two 5ft color-coded leads (red/blue), two 100ft color-coded leads (green and black), four 14.5" T-shaped auxiliary ground electrodes, one set of five spaded lugs and 100ft tape measure.



500FT KIT

Catalog #2135.37
Test Kit for 4-Point testing includes carrying bag, two 500ft color-coded leads on spools (red/blue), two 100ft color-coded leads (green and black), one 30ft lead (green), four 14.5" T-shaped auxiliary ground electrodes, one set of five spaded lugs and 100ft tape measure.



GROUND RESISTANCE TESTERS

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													
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								✓						

* 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.