GROUND RESISTANCE TESTERS
MULTIFUNCTION

IP 53 cover closed | 50 V CAT IV | CE

MODEL 6471

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

AUTOMATIC REPORT GENERATION
DataView®

SCAN TO LEARN MORE

GROUND RESISTANCE MEASUREMENT USING 2 PROBES

For systems with parallel ground connections, Models 6471 and 6472 are capable of accurately measuring a ground resistance using probes only. This method involves placing 2 probes around the ground conductor to be tested and connecting them each to the instrument. One probe injects a known signal (32 V/1611 Hz) while the other probe measures the current circulating in the loop. This method saves considerable time when ground testing because it is no longer necessary to set up auxiliary rods or to disconnect the ground connector.

PRODUCT INCLUDES

CAT. #2135.48 MODEL 6471 ***(without probes)***
Carrying bag, (110/240) V power adapter with US power cord, optical USB cable, rechargeable NiMH battery, and a USB drive with DataView® software, ground tester workbook and user manual.

CAT. #2135.49 MODEL 6471 ***(with probes)***
Carrying bag, set of (2) SR182 current probes, (110/240) V power adapter with US power cord, optical USB cable, rechargeable NiMH battery, and a USB drive with DataView® software, ground tester workbook and user manual.

KIT SHOWN **300 FT KIT: CAT. #2135.50**
Carrying bag for kit, (2) 300 ft color-coded *(red/blue)* leads on spools, (2) 5 ft color-coded *(red/blue)* leads, (2) 100 ft hand-tied color-coded *(green/black)* leads, set of (2) SR182 current probes, (110/240) V power adapter with US power cord, optical USB cable, (4) T-shaped auxiliary ground electrodes, set of (5) spaded lugs, 100 ft tape measure, rechargeable NiMH battery, and a USB drive with DataView® software, ground tester workbook and user manual.

2 probes required to perform stakeless testing

MODEL	6471
ELECTRICAL	
2-Clamp Measurement	
Range	(0.10 to 500) Ω
Resolution	(0.01 to 1) Ω
Measurement Frequency	Auto: 1611 Hz Manual: (128, 1367, 1611, or 1758) Hz
3-Point Measurement	
Range *(Auto-Ranging)*	0.09 Ω to 99.9 kΩ
Resolution	(0.01 to 100) Ω
Test Voltage	Nominal (16 or 32) Vrms user selectable
Resistance Measurement Frequency	(41 to 513) Hz automatic or user selectable
Test Current	Up to 250 mA
Accuracy	± 2 % of Reading + 1 ct @ 128 Hz
Soil Resistivity 4-Point Measurement	
Test Method	Wenner or Schlumberger selectable with automatic calculation in Ω-meters.
Range *(Auto-Ranging)*	(0.01 to 99.9) kΩ; ρ max: 999 kΩm
Resolution	(0.01 to 100) Ω
Test Voltage	(16 or 32) V user selectable
Frequency	From (41 to 128) Hz selectable
External Voltage Measurement	
Range *(Auto-Ranging)*	(0.1 to 65) $V_{AC/DC}$ – DC to 440 Hz
Accuracy	± 2 % of Reading + 1 ct
Resistance Measurement *(Bond Testing)*	
Measurement Type	2-Pole *(with lead resistance compensation)* or 4-Pole *(Kelvin sensing)* user selectable.
Range *(Auto-Ranging)*	2-Pole (0.12 to 99.99) kΩ; 4-Pole (0.02 to 99.99) kΩ
Accuracy	± 2 % of Reading + 2 cts
Test Voltage	16 V_{DC} *(+, - or auto polarity)*
Test Current	Up to 250 mA max
Data Storage	
Memory Capacity	512 test results (64 kB)
Communication	Optically Isolated USB
Power Supply	9.6 V rechargeable battery pack *(included)*
Recharging Source	(110 / 220) V, (50 / 60) Hz external charger with 18 V_{DC}, 1.9 A output

Consult factory for NIST Calibration prices.

ACCESSORIES

REEL CADDY
CAT. #2135.85 Set of (2), for use with ground kit spools

MN82 CURRENT PROBE
(2 mA to 10 Arms)
CAT. #2135.71

SR182 CURRENT PROBE
(0.5 mA to 40 Arms)
CAT. #2135.72

Technical Assistance (800) 343-1391
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AEMC® INSTRUMENTS

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MODEL 6472

Use under difficult conditions such as the presence of high stray currents that normally affect accuracy

DataView®

SCAN TO LEARN MORE

The Model 6472 provides an automated way to measure the value of the earth/ground using the Fall-of-Potential method and storing measurements.

PRODUCT INCLUDES

Carrying bag, (110/240) V power adapter with US power cord, optical USB cable, rechargeable NiMH battery, and a USB drive with DataView® software, ground tester workbook and user manual.

TEST KITS

6472 METER
300 ft Kit: CAT. #2135.53
500 ft Kit: CAT. #2135.54 *(shown)*

Refer to page 85 for
Model 6472 Kit descriptions
CAT. #2135.35, #2135.36 and #2135.37

2 probes required to perform stakeless testing

MODEL	6472
ELECTRICAL	
2-Clamp Measurement	
Range	(0.1 to 500) Ω
Resolution	(0.01 to 1) Ω
Measurement Frequency	Auto: 1611 Hz Manual: (128, 1367, 1611, or 1758) Hz
3-Point Measurement	
Range *(Auto-Ranging)*	0.09 Ω to 99.9 kΩ
Resolution	(0.01 to 100) Ω
Test Voltage	Nominal (10, 16, 32 or 60) Vrms user selectable
Resistance Measurement Frequency	(41 to 5078) Hz automatic or user selectable
Test Current	Up to 250 mA
Accuracy	± 2 % of Reading + 1 ct @ 128 Hz
Soil Resistivity 4-Point Measurement	
Test Method	Wenner or Schlumberger selectable with automatic calculation of test results in Ω-meters
Range *(Auto-Ranging)*	(0.01 to 99.9) kΩ; ρ max: 999 kΩm
Resolution	(0.01 to 100) Ω
Test Voltage	(10, 16, 32 or 60) V user selectable
Frequency	From (41 to 128) Hz selectable
External Voltage Measurement	
Range *(Auto-Ranging)*	(0.1 to 65) $V_{AC/DC}$ – DC to 440 Hz
Accuracy	± 2 % of Reading + 1 ct
Resistance Measurement *(Bond Testing)*	
Measurement Type	2-Pole *(with lead resistance compensation)* or 4-Pole *(Kelvin sensing)* user selectable.
Range *(Auto-Ranging)*	2-Pole 0.12 Ω to 99.99 kΩ; 4-Pole 0.02 Ω to 99.99 kΩ
Accuracy	± 2 % of Reading + 2 cts
Test Voltage	16 V_{DC} *(+, - or auto polarity)*
Test Current	Up to 250 mA max
Data Storage	
Memory Capacity	512 test results (64 kB)
Communication	Optically Isolated USB
Power Supply	9.6 V rechargeable battery pack *(included)*
Recharging Source	(110 / 220) V, (50 / 60) Hz external charger with 18 V_{DC}, 1.9 A output

Consult factory for NIST Calibration prices.

ACCESSORIES

MN82 CURRENT PROBE
(2 mA to 10 Arms)
CAT. #2135.71

SR182 CURRENT PROBE
(0.5 mA to 40 Arms)
CAT. #2135.72

REEL CADDY
CAT. #2135.85 Set of (2), for use with ground kit spools

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GROUND RESISTANCE TESTERS
MULTIFUNCTION

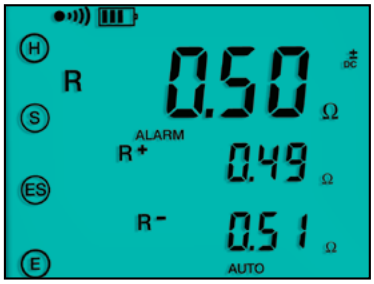
FEATURES

- Ground Resistance testing using the 2-clamp method *(no auxiliary rods needed)*
- 2- and 4-Point 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 (ρ) 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 (10, 16, 32 or 60) V up to 250 mA of test current *(model dependent)*
- 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 *(CAT. #2135.43 needed for 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

2 probes required to perform stakeless testing.

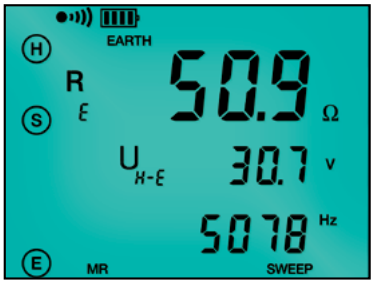
LARGE FUNCTIONAL DISPLAYS

4-POINT-RESISTANCE



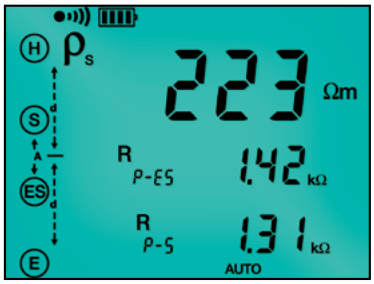
The 4-Point test shows lead connections, Continuity test results, test voltage and current.

3-POINT FALL-OF-POTENTIAL TEST



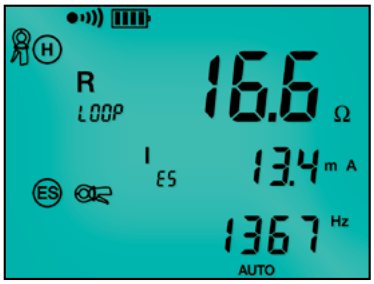
The 3-Point Fall-of-Potential test displays test lead connection, grounding rod resistance and test electrode resistances.

SCHLUMBERGER TEST



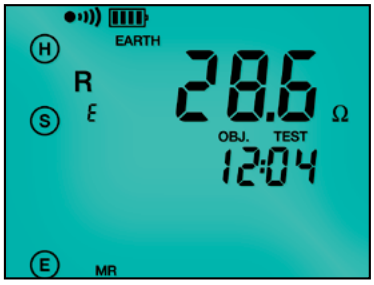
The Schlumberger test displays test lead connection, soil resistivity (ρ) test results and electrode spacing.

2-CLAMP TEST



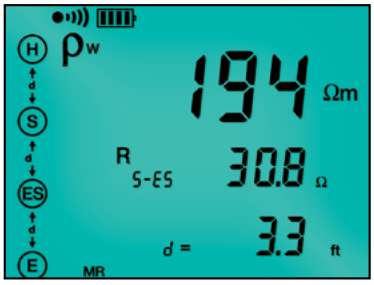
The 2-Clamp method displays clamp connection resistance, test current and frequency.

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.

CAT. #	DESCRIPTION
2135.48	Ground Resistance Tester Model 6471 (Digital, 3-Point, 4-Point, Clamp-on (SR182 probes not included), DataView® Software)
2135.49	Ground Resistance Tester Model 6471 (Digital, 3-Point, 4-Point, Clamp-on, (includes 2-SR182 probes), DataView® Software)
2135.50	Ground Resistance Tester Model 6471 Kit – 300 ft (CAT. #2135.49 and CAT. #2135.36)
2135.51	Ground Resistance Tester Model 6472 (Digital, 2-Point, 3-Point, 4-Point, Bond Test, DataView® software)
2135.53	Ground Resistance Tester Model 6472 Kit – 300 ft (CAT. #2135.51 and CAT. #2135.36)
2135.54	Ground Resistance Tester Model 6472 Kit – 500 ft (CAT. #2135.51 and CAT. #2135.37)
2135.60	Ground Resistance Tester Model 6471 Kit – 300 ft w/o Probes (CAT. #2135.48 and CAT. #2135.36)
2135.61	Ground Resistance Tester Model 6471 Kit – 500 ft w/o Probes (CAT. #2135.48 and CAT. #2135.37)

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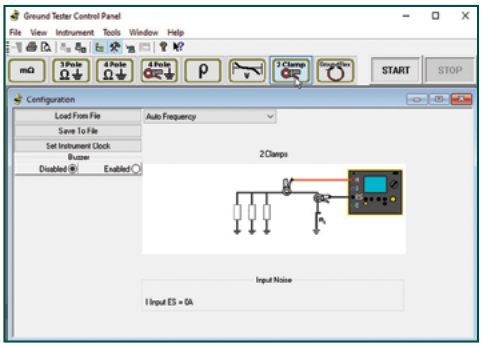
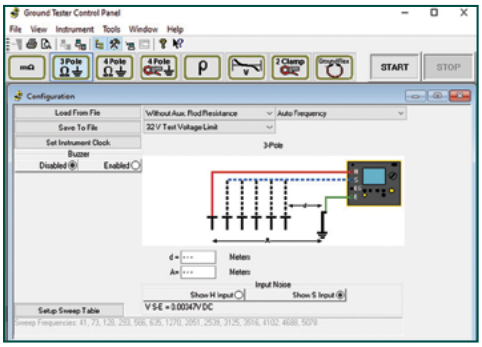
GROUND TESTERS MODELS 6471 & 6472 — *TYPICAL DATAVIEW® FUNCTIONAL DISPLAYS*

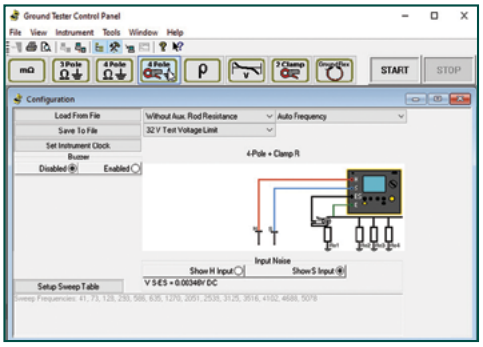
2-CLAMP METHOD SETUP



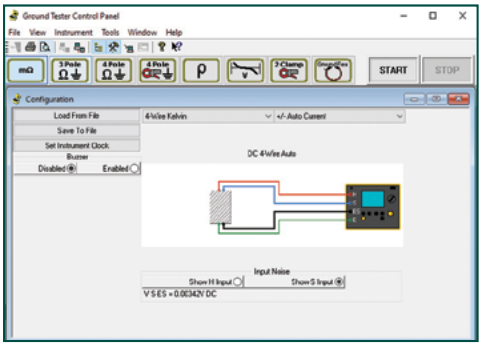
FALL-OF-POTENTIAL, STEP-TOUCH POTENTIAL



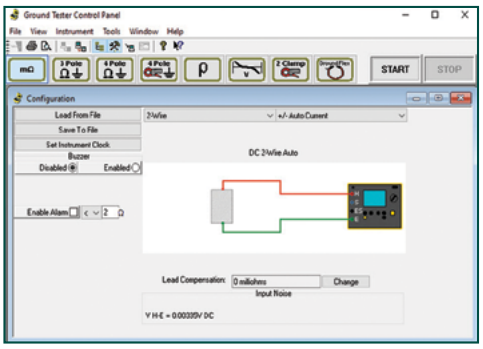
SELECTIVE 3-POINT TESTING OF MULTIPLE RODS



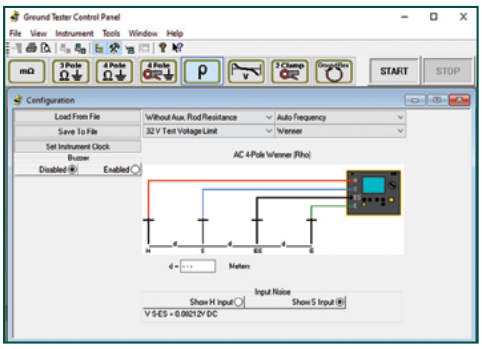
4-POINT-RESISTANCE



2-POINT-RESISTANCE



SOIL RESISTIVITY



OPTIONAL KITS

150 FT KIT
CAT. #2135.35

Test Kit for 3-Point testing includes carrying bag, (2) 150 ft color-coded *(red/blue)* leads on spools, (2) 5 ft color-coded *(red/blue)* leads, (1) 30 ft lead *(green)*, (2) 14.5 in T-shaped auxiliary ground electrodes, a set of (5) spaded lugs and (1) 100 ft tape measure.

300 FT KIT
CAT. #2135.36

Test Kit for 4-Point testing includes carrying bag, (2) 300 ft color-coded *(red/blue)* leads on spools, (2) 5 ft color-coded *(red/blue)* leads, (2) 100 ft hand-tied color-coded leads *(green/black)*, (4) 14.5 in T-shaped auxiliary ground electrodes, a set of (5) spaded lugs and (1) 100 ft tape measure.

500 FT KIT
CAT. #2135.37

Test Kit for 4-Point testing includes carrying bag, (2) 500 ft color-coded *(red/blue)* leads on spools, (2) 5 ft color-coded *(red/blue)* leads, (2) 100 ft hand-tied color-coded *(green/black)* leads, (1) 30 ft lead *(green)*, (4) 14.5 in T-shaped auxiliary ground electrodes, a set of (5) spaded lugs and (1) 100 ft tape measure.

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