

GROUND RESISTANCE TESTERS

CLAMP-ON

MODELS 6416 & 6417

Provides high safety level with new ground voltage indication feature

SPECIFICATIONS

MODELS	6416 & 6417		
ELECTRICAL			
	Measurement Range	Resolution	Accuracy (% of Reading)
Ground Resistance	(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 % ± 0.02 Ω
Auto-Ranging (0.01 to 1499) 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	20 % approx
	(1200 to 1500) Ω	50 Ω	25 % approx
Current Measurement	(0.200 to 0.999) mA	1 μA	± 2 % ± 50 μA
	(1.000 to 2.990) mA (3.00 to 9.99) mA	10 μA	
Auto-Ranging 1 mA to 40 A	(10.00 to 29.90) mA (30.0 to 99.9) mA	100 μA	± 2 % ± 100 μA
	(100.0 to 299.0) mA (0.300 to 0.990) A	1 mA	± 2 % ± 1 mA
	(1.000 to 2.990) A (3.00 to 39.99) A	10 mA	± 2 % ± 10 mA
Selectable Measurement Frequency	(50, 60, 128 or 2083) Hz		
Current Measurement Frequency	(47 to 800) Hz		
Inductance Measurement	(10 to 100) μH; (100 to 500) μH		
Current Overload	OL displayed above 39.99 Arms		
Communication	Bluetooth connection (Model 6417 only)		
Power Supply	(4) 1.5 V LR6 (AA) alkaline batteries or (4) NiMH batteries; Battery life: 12 h, or 1440, 30 - s measurements approx.		
SAFETY			
Safety Rating	EN 61010-1, 600 V CAT IV		

Consult factory for NIST Calibration prices

PRODUCT INCLUDES

6416 & 6417

Hard carrying case, wrist strap calibration loop, (4) 1.5 V AA batteries and user manual.

6417

Also includes Bluetooth USB adapter, printed quick start guide, a USB drive with DataView® software, ground tester workbook and user manual.



6416

6417



FEATURES

- Ground Integrity Measurement
- Ground voltage indication (warns of possible unsafe conditions)
- Large multi-function bright yellow OLED (organic LED display)
- Selectable test frequency (improves accuracy in inductive environments)
- Clamping diameter of 1.37 in (35 mm) 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 30 ft) 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 retrieval, 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

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, DataView® Software)



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FUNCTIONAL DISPLAYS



MEASUREMENT RESULTS



Displays the leakage current and loop impedance at the test frequency

MEMORY RECALL MODE



Measurement storage date-time screen

ALARM



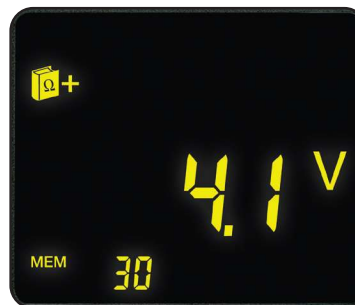
Indicates voltage/current alarm threshold along with the direction of impedance

LOOP DETECTION



Detects and displays possible false readings associated with metal loops

GROUND VOLTAGE



Indicates voltage potential at the point of measurement

IMPEDANCE OVER RANGE



Indicates that the impedance is greater than 1500 Ω

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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 1500) Ω	Battery	Clamp-On Ground Resistance Tester w/Alarm and Memory				–	✓	✓**	Digital	Voltage Displayed (noise icon, buzzer)	✓	–
6417	2141.02	(0.01 to 1500) Ω	Battery	Clamp-On Ground Resistance Tester w/Alarm, Memory and Bluetooth communication				–	✓	✓**	Digital		✓	–
6418	2141.03	(0.01 to 1200) Ω	Battery	Clamp-On Ground Resistance Tester w/Alarm and Memory				–	✓	✓**	Digital	Noise Icon	–	–
6422	2135.55	0.05 Ω to 50 kΩ	Battery	✓			–			✓	Digital	Noise Icon	–	–
6422 Kit 150 FT	2135.56	0.05 Ω to 50 kΩ	Rechargeable Battery	✓			–			✓	Digital	Noise Icon	–	–
6424	2135.57	0.05 Ω to 50 kΩ	Rechargeable Battery	✓			–			✓	Digital	Noise Icon	–	–
6424 Kit 150 FT	2135.58	0.05 Ω to 50 kΩ	Rechargeable Battery	✓			–			✓	Digital	Noise Icon	–	–
6424 Kit 300 FT	2135.59	0.05 Ω to 50 kΩ	Rechargeable Battery	✓			–			✓	Digital	Noise Icon	–	–
GroundFlex® Field Kit Model 6474	2136.03	0.001 Ω to 99.99 kΩ	Rechargeable Battery	–		✓			–	✓	Digital	Voltage Displayed	–	✓
6471 (SR182 probes not included)	2135.48	0.001 Ω to 99.99 kΩ	Rechargeable Battery			✓			✓***	✓	Digital	Voltage Displayed	–	✓
6471	2135.49	0.001 Ω to 99.99 kΩ	Rechargeable Battery			✓			✓	✓	Digital	Voltage Displayed	–	✓
6471 Kit 300 FT (with probes)	2135.50	0.001 Ω to 99.99 kΩ	Rechargeable Battery			✓			✓	✓	Digital	Voltage Displayed	–	✓
6471 Kit 300 FT (no probes)	2135.60	0.001 Ω to 99.99 kΩ	Rechargeable Battery			✓			✓	✓	Digital	Voltage Displayed	–	✓
6471 Kit 500 FT (no probes)	2135.61	0.001 Ω to 99.99 kΩ	Rechargeable Battery			✓			✓	✓	Digital	Voltage Displayed	–	✓
6472	2135.51	0.001 Ω to 99.99 kΩ	Rechargeable Battery			✓			✓***	✓	Digital	Voltage Displayed	–	✓
6472 Kit 300 FT	2135.53	0.001 Ω to 99.99 kΩ	Rechargeable Battery			✓			✓***	✓	Digital	Voltage Displayed	–	✓
6472 Kit 500 FT	2135.54	0.001 Ω to 99.99 kΩ	Rechargeable Battery			✓			✓***	✓	Digital	Voltage Displayed	–	✓
4620	2130.43	(0.0 to 1999) Ω	Battery	✓	–	✓			–		Digital	LED/Buzzer	–	–
4620 Kit 150 FT	2135.19	(0.0 to 1999) Ω	Battery	✓	–	✓*			–		Digital	LED/Buzzer	–	–
4620 Kit 300 FT	2135.20	(0.0 to 1999) Ω	Battery	✓	–	✓			–		Digital	LED/Buzzer	–	–
4620 Kit 500 FT	2135.21	(0.0 to 1999) Ω	Battery	✓	–	✓			–		Digital	LED/Buzzer	–	–
4630	2130.44	(0.0 to 1999) Ω	Rechargeable Battery	✓	–	✓			–		Digital	LED/Buzzer	–	–
4630 Kit 150 FT	2135.22	(0.0 to 1999) Ω	Rechargeable Battery	✓	–	✓*			–		Digital	LED/Buzzer	–	–
4630 Kit 300 FT	2135.23	(0.0 to 1999) Ω	Rechargeable Battery	✓	–	✓			–		Digital	LED/Buzzer	–	–
4630 Kit 500 FT	2135.24	(0.0 to 1999) Ω	Rechargeable Battery	✓	–	✓			–		Digital	LED/Buzzer	–	–

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

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

*** Must purchase an additional (2) SR182 or (2) MN82 accessory clamps.

