

# GROUND RESISTANCE TESTERS

## CLAMP-ON



### MODELS 6416 & 6417

Provides high safety level with new ground voltage indication feature

## SPECIFICATIONS

MODELS	6416 & 6417				
ELECTRICAL					
Ground Resistance	Measurement Range	Resolution	Accuracy (% of Reading)		
	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		
Auto-Ranging 0.01 to 1499Ω	600 to 1150Ω	50Ω	20% approx		
	1200 to 1500Ω	50Ω	25% approx		
	Current Measurement	0.200 to 0.999mA	1μA	±2% ±50μA	
		Auto-Ranging 1mA to 40A	1.000 to 2.990mA	10μA	±2% ±50μA
			3.00 to 9.99mA		
		10.00 to 29.90mA	100μA	±2% ±100μA	
30.0 to 99.9mA					
100.0 to 299.0mA	1mA	±2% ±1mA			
0.300 to 0.990A					
1.000 to 2.990A	10mA	±2% ±10mA			
3.00 to 39.9A					
Selectable Measurement Frequency	50, 60, 128 or 2083Hz				
Current Measurement Frequency	47 to 800Hz				
Inductance Measurement	10 to 100μH; 100 to 500μH				
Current Overload	OL displayed above 39.99Arms				
Communication	Bluetooth connection (Model 6417 only)				
Power Source	4x1.5V LRG (AA) Alkaline batteries or 4 NiMH batteries; Battery life: 12 hours, or 1440 30-second measurements approx.				



\*Model 6417 only

## 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 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
- 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.



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)



Technical Assistance (800) 343-1391

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### Functional Displays

Disturbance indicator (current) in the loop  
 HOLD Function active  
 Buzzer is displayed when active  
 Measurement date/time display  
 Advanced Mode selection  
 Indicates when the inductive component is negligible in Advanced Mode  
 Main measurement display  
 Measurement unit display  
 Data Storage Mode  
 Memory Recall Mode  
 Memory index number display  
 Bluetooth connection indicator (6417 only)

Incorrect jaw closing indicator  
 Auto Power OFF active  
 Battery charge indicator  
 4000-count upper measurement display  
 Upper display measurement unit  
 Main display measurement unit  
 Hazardous voltage indicator (not available on model 6418)  
 Alarm measurement display unit  
 Alarm threshold display  
 Alarm active indicator

Note: Display shown larger than real size.

#### 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 15000Ω

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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 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						✓*							
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.