

# GROUND RESISTANCE TESTERS

## CLAMP-ON

### MODELS 6416 & 6417

*Provides high safety level with new ground voltage indication feature*

### SPECIFICATIONS

MODELS	6416 & 6417		
<b>ELECTRICAL</b>			
	<b>Measurement Range</b>	<b>Resolution</b>	<b>Accuracy (% of Reading)</b>
<b>Ground Resistance</b>	(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
<b>Auto-Ranging (0.01 to 1499) Ω</b>	(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
<b>Current Measurement</b>	(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	
<b>Auto-Ranging 1 mA to 40 A</b>	(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
<b>Selectable Measurement Frequency</b>	(50, 60, 128 or 2083) Hz		
<b>Current Measurement Frequency</b>	(47 to 800) Hz		
<b>Inductance Measurement</b>	(10 to 100) μH; (100 to 500) μH		
<b>Current Overload</b>	OL displayed above 39.99 Arms		
<b>Communication</b>	Bluetooth connection (Model 6417 only)		
<b>Power Supply</b>	(4) 1.5 V LR6 (AA) alkaline batteries or (4) NiMH batteries; Battery life: 12 h, or 1440, 30 - s measurements approx.		
<b>SAFETY</b>			
<b>Safety Rating</b>	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.

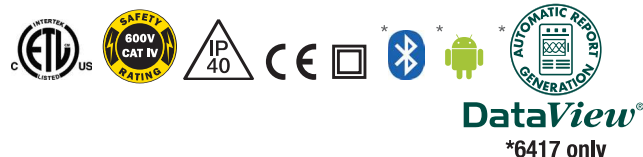
#### 6417

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



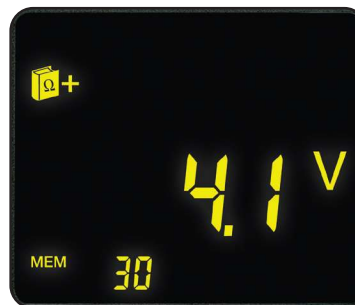
Indicates voltage/current alarm threshold along with the direction of impedance

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

