GROUND RESISTANCE TESTERS
CLAMP-ON
MODELS 6416, 6417 & 6418

IP 40 | 600 V CAT IV | 100 V CAT IV | Bluetooth | Android | ETL | CE | Double Insulated
6416, 6417 | 6418 | 6417 Only

Test grounding systems without isolating electrodes!



6416 6417 6418

DataView® 6417 only



Models 6416 and 6417 have a jaw opening of 1.38 in (35 mm)



Model 6418 has a jaw opening of 1.26 in (32 mm)

FEATURES

- Clamp-on ground resistance tester for measuring resistance-to-ground on grounding electrodes
- Large clamp opening accommodates most ground conductors, Model 6418's oblong jaw fits bus bars and electrodes in test wells
- Rugged, field-ready design with smooth clamp jaws to reduce the risk of damage to sensitive components in harsh environments
- High-contrast OLED display with dual readout of resistance and current for clear visibility in all lighting conditions
- Induces a circulating test current and measures the returned current to calculate ground resistance at 2083 Hz, Advanced functions calculate ground resistance at (50, 60, or 128) Hz *(Models 6416 & 6417 only)*
- Instantaneous, continuous measurements for rapid back-to-back testing
- Advanced measurement mode displays inductive component and touch voltage *(Models 6416 & 6417 only)*
- Stores up to 300 readings *(Model 6416)* or up to 2000 readings with Bluetooth® DataView® reporting *(Model 6417)*
- LOOP alarm alerts the user to improper clamp placement that may affect measurement accuracy
- CAT IV safety rating with touch voltage warning for operation in industrial environments

PRODUCT INCLUDES

CAT. #2141.01 GROUND RESISTANCE TESTER MODEL 6416
CAT. #2141.02 GROUND RESISTANCE TESTER MODEL 6417
CAT. #2141.03 GROUND RESISTANCE TESTER MODEL 6418
Hard carrying case, wrist strap, calibration loop, (4) AA batteries and user manual.

MODEL 6417
Hard carrying case, calibration loop, (4) AA batteries, quick start guide, and USB Drive with DataView® software and user manual.

APPLICATIONS

- Resistance-to-ground testing of permanently bonded electrode systems
- Quickly verify the individual resistance of parallel grounding electrodes
- Measure loop resistance on grounding conductors

Includes FREE DataView® software for configuring, data retrieval, real-time display, analysis and report generation

See pages 130 to 133 for Accessories/Replacements

CAT. #	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)
2141.03	Ground Resistance Tester Model 6418 (Clamp-On, Alarm, Memory, Oblong Jaws)

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CLAMP-ON
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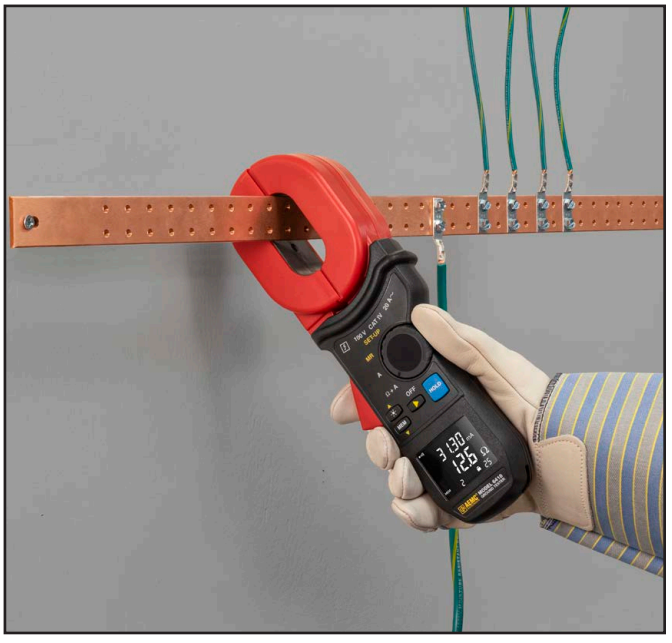
MODELS	6416	6417	6418
TEST METHODS			
Ground Impedance - Ω	Yes		
Current	Yes		
ELECTRICAL			
Test Frequency Selections	(50, 60, 128, 2083) Hz		2083 Hz
Clamp-On Ω Range	(.01 to 1500) Ω		(.01 to 1200) Ω
Clamp-On Accuracy	± 1.5 %		
Current - A	200 µA to 40 A		500 µA to 20 A
Current Typical Accuracy	± 2 %		
MEASUREMENT VALUES & ALARMS			
Measurements	Ω, V, I		Ω, I
Inductive Component - mH	Yes		N/A
Ground Impedance[1] - Ω @ (50, 60, 128) Hz	Yes		N/A
Touch Voltage[2] - V	Yes		N/A
Audible Alarms (Ω, V, A)	Yes		Ω, A
DATA STORAGE & REPORTING			
Communication	N/A	Bluetooth®	N/A
DataView® Reporting	N/A	Yes	N/A
Onboard Measurement Storage	300 measurements	2000 measurements	300 measurements
GENERAL			
Clamp Diameter	1.38 in (35 mm)		1.26 in (32 mm) or (1.18 × 1.57) in (30 × 40 mm) or 0.79 × 2.17 in (20 × 55 mm) bus bar
Display	Multi-parameter OLED display		
Power Supply	(2) AA alkaline batteries		
Battery Life	>1,400 measurements		
SAFETY & ENVIRONMENT			
CAT Rating	CAT IV 600 V		CAT IV 100 V
IP Rating	IP40		

Consult factory for NIST Calibration prices.

[1] In expert mode, impedances at frequencies of (50, 60 and 128) Hz can be displayed

[2] Value calculated as the product of the loop impedance by the leakage current





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MODELS 6416, 6417 & 6418

FUNCTIONAL DISPLAYS *(MODEL DEPENDENT)*



Note: Display shown larger than actual 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



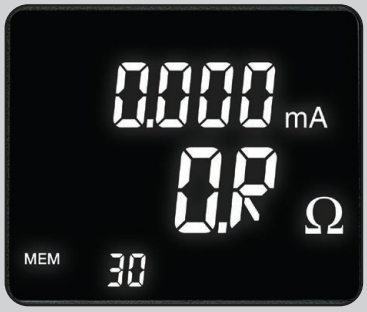
Detects and displays possible false readings associated with metal loops

GROUND VOLTAGE



Indicates voltage potential at the point of measurement

IMPEDANCE OVER RANGE



Indicates that the impedance is greater than 1500 Ω

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GROUND RESISTANCE TESTERS

ACCESSORIES / REPLACEMENTS

	CAT. #	DESCRIPTION	6422	6424	4620	4630	6416	6417	6418	6471	6472	6474	CA 6011
	2117.76	Bag – Small Flat Black Canvas Bag for Ground/Accessories Dimensions: (17 × 6.5 × 2.75) in	•	•	•	•	•	•	•	•	•	•	
	2118.09	Case – General Carrying Case Dimensions: (13 × 9.5 × 3) in					•	•	•				
	2119.48	Multi-purpose Canvas Pouch Dimensions: (11 × 5 × 2.25) in					•	•					
	2119.82	Multi-purpose Large Canvas Bag Dimensions: (22 × 10.5 × 12) in	•	•	•	•	•	•	•	•	•	•	
	2126.45	Adapter, Bluetooth® USB						•					
	2126.71	Case – Replacement Carrying Case Dimensions: (10.5 × 6.5 × 6) in	•	•									
	2130.59	25 Ω Calibration Checker			•	•							
	2130.60	100 ft Tape Measure for use with Ground Resistance Tester Kits	•	•	•	•	•	•	•	•	•	•	
	2133.72	Small Classic Tool Bag for field use Dimensions: (13.0 × 9.8 × 9.5) in											•
	2135.39	Set of (2) 14.5 in T-shaped Ground Rods for use with all Ground Testers *(except clamp-ons)*	•	•	•	•				•	•	•	
	2135.40	Bag – Replacement Carrying Bag								•	•	•	
	2135.41	Optical USB Cable								•	•	•	
	2135.43	Inverter – 12 VDC to 120 VAC 200 Watt for Vehicle Use		•		•				•	•	•	
	2135.44	Ground Rods – Set of (2) 17 in Stainless Steel Threaded T-shaped Auxiliary Ground Electrodes	•	•	•	•				•	•	•	
	2135.47	Replacement wrist strap for Ground Tester					•	•	•				

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GROUND RESISTANCE TESTERS
ACCESSORIES / REPLACEMENTS

	CAT. #	DESCRIPTION	6422	6424	4620	4630	6416	6417	6418	6471	6472	6474	CA 6011
	2135.71	AC Current Probe Model MN82								•	•		
	2135.72	AC Current Probe Model SR182								•	•		
	2135.75	Replacement – Connection Lead									•		
	2135.76	BNC 50 ft (15 m) M/F Extension Lead – for use with any instrument that requires BNC connection										•	
	2135.77	Replacement – Set of (12) Groundflex® Rings for Model 6472/6474 Kit										•	
	2135.78	Green Extension Lead (5 m) on H Reel – for use with General Test Equipment accepting a 4 mm Safety Banana Plug										•	
	2135.79	Black Extension Lead (5 m) on H Reel – for use with general test equipment accepting a 4 mm Safety Banana Plug										•	
	2135.80	Replacement – Set of (3) C-Clamps										•	
	2135.81	Fuse – Set of (5) 0.63 A, 250 V (5 × 10) mm								•	•		
	2135.82	Replacement – Calibration Loop										•	
	2135.83	Replacement – Carrying Case for Model 6474 *(tray not included)*										•	
	2135.85	Set of (2) Reel Caddies for use w/ Ground Kit Spools	•	•	•	•				•	•	•	
	2135.86	BNC 150 ft (45 m) M/F Extension Lead										•	
	2135.87	Groundflex® (10m) Sensor for use only with Model 6474										•	
	2135.92	Replacement – (1) Groundflex® Sensor (5 m w/ 16 m black cable) for use with Model 6474										•	

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GROUND RESISTANCE TESTERS

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	CAT. #	DESCRIPTION	6422	6424	4620	4630	6416	6417	6418	6471	6472	6474	CA 6011
	2135.93	Cable - Replacement USB charger cable w/ wall plug	•	•									
	2138.54	Continuity Probe											•
	2141.50	Case - Replacement, ABS w/ slot					•	•					
	2141.51	Calibration Loop - 5 Ohm Field Test Loop					•	•	•				
	2141.52	Case - Replacement, ABS w/ slot for Models 6418							•				
	2153.06	AC Current Probe Model MN72										•	
	2960.21	Replacement 9.6 V Rechargeable Battery Pack								•	•		
	5000.01	Green replacement wire (30 ft hand-tied) for ground resistance tester kits			•	•				•	•	•	
	5000.02	Red replacement wire (500 ft) on reel for ground resistance tester kits			•	•				•	•	•	
	5000.03	Red replacement wire (300 ft) on reel for ground resistance tester kits			•	•				•	•	•	
	5000.04	Red replacement wire (150 ft) on reel for ground resistance tester kits	•	•	•	•				•	•		•
	5000.05	Blue replacement wire (500 ft) on reel for ground resistance tester kits			•	•				•	•	•	
	5000.06	Blue replacement wire (300 ft) on reel for ground resistance tester kits			•	•				•	•	•	
	5000.07	Blue replacement wire (150 ft) on reel for ground resistance tester kits	•	•	•	•				•	•		
	5000.08	Green replacement wire (100 ft hand-tied) for ground resistance tester kits	•	•	•	•				•	•	•	
	5000.09	Black replacement wire (100 ft hand-tied) for ground resistance tester kits	•	•	•	•				•	•	•	

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	CAT. #	DESCRIPTION	6422	6424	4620	4630	6416	6417	6418	6471	6472	6474	CA 6011
	5000.10	Set of (5) replacement screw-on spaded lugs for ground resistance tester kits			•	•				•	•	•	
	5000.13	Power adapter 110/240 V and power cord 120 V US								•	•		
	5000.14	Power cord 120 V	•	•	•	•				•	•	•	
	5000.18	Empty replacement reel for ground kits *(holds up to 500 ft of wire)*	•	•	•	•				•	•	•	
	5000.32	Power cord 220 V	•	•	•	•				•	•	•	
	5000.34	Lead - Set of (2), 5 ft Color-coded *(red/blue)* leads for use with AEMC® Ground Tester Reels incorporating banana jack input	•	•	•	•				•	•	•	
	5000.57	Power adapter, 24 VDC charger *(vehicle use)*								•	•	•	
	5000.64	Spindle - replacement for the 150 ft ground kit reels			•	•				•	•	•	•
	5000.65	Spindle - replacement for 300 & 500 ft ground kit reels			•	•				•	•		
	5000.74	Ground resistance calibration checker - 5/25 Ω								•	•		
	5000.92	Calibration Checker	•	•									
	5000.97	Probe - black test probe {Rated 1000 V CAT IV, 15 A, UL V2}											•
	5100.19	Reel - Empty Wire Reel *(Holds up to 150 ft of wire)*	•	•	•	•				•	•	•	•

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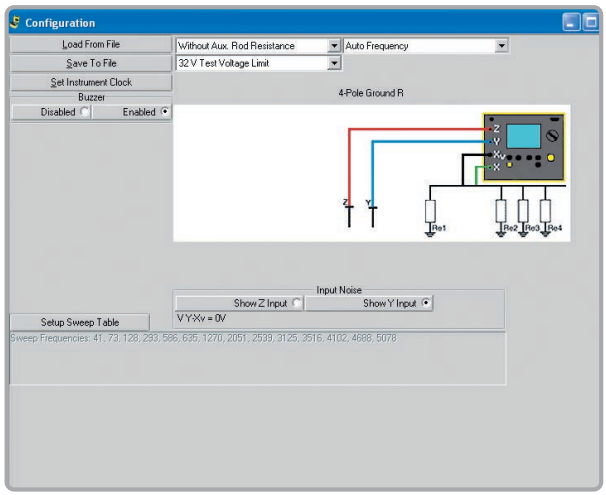
DataView®

DATA ANALYSIS AND REPORTING SOFTWARE

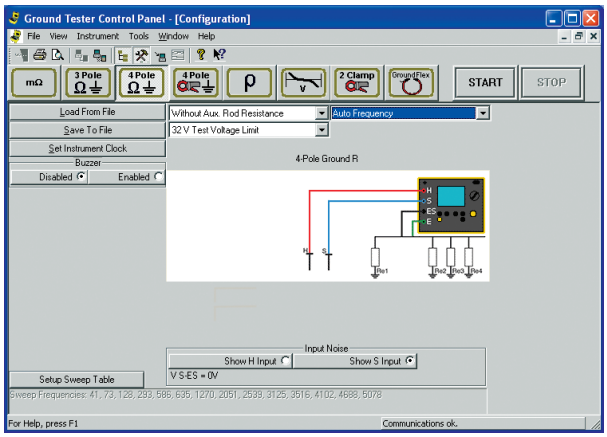
DataView® software, user manual and quick start guide are included in the USB Drive

Configure all functions:

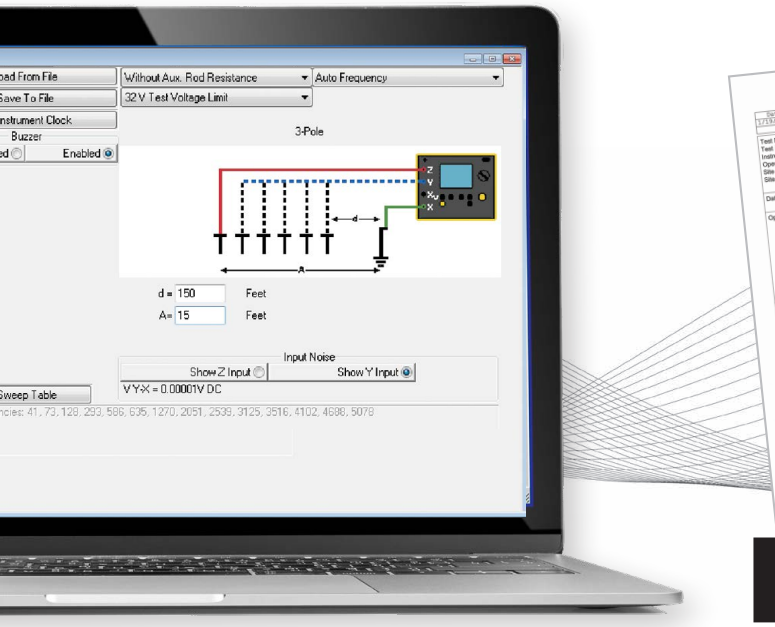
- Capture, download, display and analyze real-time data on your PC
- Upload stored test results to your PC
- Easily configure all functions and parameters specific to each instrument from your PC
- Create and store a complete library of configurations that can be uploaded to a device as needed
- Create custom views, templates, and reports to your exact needs
- Zoom in and out and pan through sections of graphs to analyze the data
- Perform measurements in real-time *(model dependent)*, download, display and analyze recorded and stored data
- Display Fall-of-Potential plots, tabular listings of test results, resistance vs. frequency plots, soil resistivity and point-to-point tests *(Models 6417, 6471, 6472, and 6474)*
- Print all test result reports using our standard report templates or create custom templates for branded reporting
- Free updates available on our website: ***www.aemc.com***

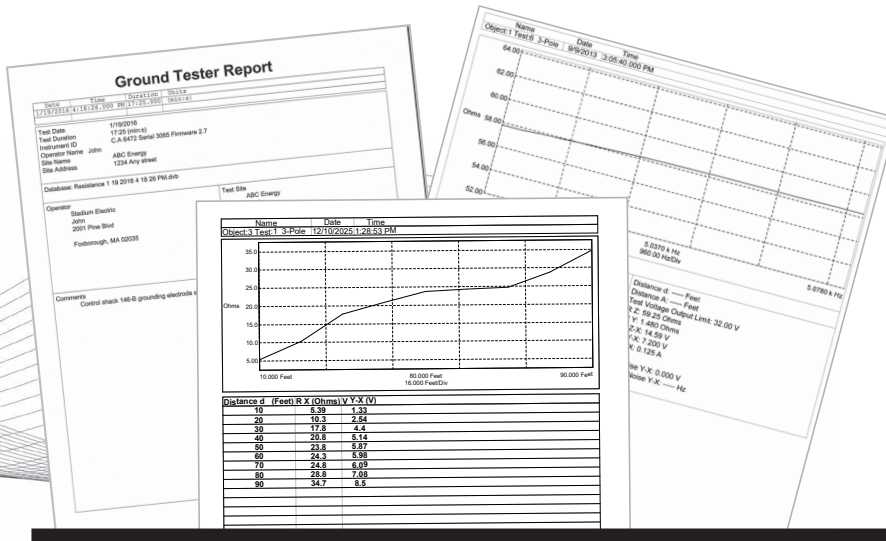


Configure and control ground resistance tests from your computer through the use of clear and easy-to-use tabbed dialog boxes.



All Ground Tester functions can be configured and tests can be initiated with graphical illustration of proper connections





Typical reports showing test measurement data

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