

Lightning Protection

GROUND RESISTANCE TESTERS

**EASY-TO-USE,
DURABLE, AND
HIGHLY ACCURATE
TESTERS THAT HELP
KEEP YOU SAFE!**

- Confidently safeguard any structure or facility against the destructive effects of lightning strikes
- Ensure that all components of the lightning protection system are in good condition
- Test grounds, bonds, and insulation to verify safe operation and reduce down time
- Effortlessly ensure ground systems meet all local electrical code, designs and standards
- Large graphic displays
- Store and report test results

Our products are backed by over 130 years of experience in test and measurement equipment, and encompass the latest international standards for quality and safety.

Technical Hotline: (800) 343-1391
www.aemc.com

 **AEMC[®]**
INSTRUMENTS
CHAUVIN ARNOUX GROUP



Understanding Ground Resistance Testing

The term **ground** is defined as a conducting connection by which a circuit or equipment is connected to the earth. The connection is used to establish and maintain, as closely as possible, the potential of the earth on the circuit or equipment connected to it. A **ground** consists of a grounding electrode, a bonding connector, its grounding electrode(s) and the soil in contact with the electrode.

Grounding Electrode Systems Have Several Protection Applications:

For natural phenomena, such as lightning, grounds are used to discharge current from the system to protect people from possible injury or system components from possible damage.

For faults in electric power systems with ground returns, grounds help ensure rapid operation of the protection relays by providing low resistance fault current paths. This provides for the removal of the potential as quickly as possible. The ground should equalize the potential before people are injured and the power or communications system is damaged.

For maintaining a reference potential for instrument safety, protect against static electricity, and limit the system to frame voltage for operator safety, a ground resistance should be zero ohms. In reality, this value is difficult to obtain. For low ground resistance, it is essential to meet NEC®, OSHA and other electrical safety standards.



Lightning Protection System

A lightning protection system is a fundamental component for safeguarding any structure or facility against the destructive effects of lightning strikes. Ensuring good grounding is paramount in preventing costly damage and downtime due to service interruptions or inoperative surge protection caused by poor grounds.

Regular testing of a lightning protection system is crucial for detecting faults and ensuring its functioning correctly. Inspections and testing should occur at different stages, including during construction and installations, after installation, periodic testing recommended by IEC 62305-3, LPI 175 and NFPA 780 Standards, and after alterations or repairs. Grounds help ensure rapid operation of the protection relays by providing low resistance fault paths in the event of foreign potentials due to faults.

The essential methods for testing the reliability of a lightning protection system:

- Ground resistance testing
- Point-to-point testing
- Ground or soil resistivity testing

These methods are utilized to inspect the mechanical and electrical conditions of all conductors, connections, joints, and ground electrodes. Additionally, each individual earth grounding point and its conductors need to be electronically tested for resistance to ground. Proper testing of the lightning protection system can ensure that the structure and all its elements are safe from the effects of lightning strikes.

By regularly performing grounding tests you can confidently:

- Confirm that the lightning protection system fits into the requirements mentioned in the standard documents
- Ensure that all the components of the lightning protection system are in good condition, there is no corrosion and are capable of performing their functions
- Make sure that any recently added service or construction is properly incorporated into the lightning protection system

APPLICATIONS

- ▶ Measure ground rod and grid resistance
- ▶ Use in multi-grounded systems without disconnecting the ground under test
- ▶ Measure resistance and continuity of ground loops around transformer pads and buildings
- ▶ Measure leakage current flowing to ground or circulating in ground loops
- ▶ Conduct quick field checks
- ▶ Conduct field surveys and retrieve and analyze readings from stored data
- ▶ Measure ground resistance of the type of single rod or small ground grids often found in remote telecommunication switching stations
- ▶ Measure ground electrode resistance on lightning protection equipment
- ▶ Measure the ground electrode resistance of equipment in recreational areas, especially public swimming pools
- ▶ Test electrode resistance of installed ground rods and grids at new construction sites before utility power is supplied
- ▶ Test the ground electrode resistance of grounded towers and counterpoises at cellular phone remote installations and power transmission towers
- ▶ Three- and Four-Point measurement of large grounding grids, counterpoises, ground mats, and grounded equipment
- ▶ Locate areas of lowest soil resistivity which is essential for achieving an economical grounding installation

Ground Tester Selection Guide

Ground resistance testers play a vital role in maintaining electrical safety, protecting equipment, and ensuring reliable operation in a wide range of applications and industries. It's important to understand the differences and choose the right test instrument for your application.

TO MEASURE	INSTRUMENT TO USE
Soil Resistivity	4-Point tester
Step and Touch Potential	4-Point tester
Individual Ground Rods	3-Point tester
Ground Resistance testing without the need for auxiliary electrodes or isolating the system under test	Clamp-on tester or instrument using clamp-on features
Bonding Resistance	Micro-Ohmmeter
Point-to-point verification of a conductive path	2-, 3-, 4-Point tester with lead compensation



Micro-ohmmeter model 6240 is a low resistance tester designed for both plant maintenance and field use. It's designed to conduct tests on both resistive and inductive material.



Maintenance and inspection activities for infrastructure systems are simplified with ground, bond, and insulation testers.

▶ Clamp-On Ground Resistance Testers

Clamp-On Ground Resistance Testers measure ground rod and grid resistance without the use of auxiliary ground rods. They offer accurate readings from (0.01 to 1500) Ω , as well as ground leakage current from 0.2 mA to 40 A, **without disconnecting the ground system under test.**



▶ 3-Point Ground Resistance Testers

Our new 3-Point Ground Resistance Testers, Models 6422 and 6424, are affordable and feature-rich. Their innovative design simplifies the process and provides reliable results. A single button operation allows users to easily connect, press, and read measurements. The Model 6424 stores and calculates measurements using the simplified 62% test method, displaying average and % deviation for accurate pole spacing determination.



Complete kits available!

▶ 4-Point Multifunction Ground Resistance Testers

The 4-Point Ground Resistance Testers are ideal for both soil resistivity and Fall-of-Potential testing. Models are available as battery powered or with an AC power cord. All models are available in complete kit form which includes leads, auxiliary electrodes, 100 ft tape measure, carrying bag and cable.



▶ Bond Testers

Micro-Ohmmeter Models 6240 and 6255 perform reliable low resistance measurements with test current to 10 A and resolution to 1 $\mu\Omega$. Both models also use a four-wire Kelvin Bridge method, which eliminates test lead resistance for best measurement accuracy.





The Ground Resistance Tester Model 6416 can measure the resistance and impedance of ground rods and grids without auxiliary rods.



The Ground Resistance Tester Model 6424 measures 2-pole resistance and 3-pole ground resistance. It is easy to use - simply connect the leads, press to measure, and read!



The Ground Resistance Tester Model 6471 can measure Ground Resistance with two clamps, no auxiliary rods, Bond Resistance, Ground Resistance, Ground Coupling Resistance, Selective Ground Resistance, and Soil Resistivity.



The 10 A Micro-Ohmmeter Model 6240 is a rugged, low resistance tester designed for both plant maintenance and field use.

Ground Resistance Testers Models 6416 & 6417

Measure ground resistance without disconnecting or de-energizing the system!

The Ground Resistance Tester Models 6416 and 6417 measure ground rod and grid resistance without the use of auxiliary rods. Clamp-on ground resistance testers can be used in multi-grounded systems without disconnecting the ground system under test or de-energizing them. Models 6416 and 6417 simply clamp around the ground conductor or rod and measure the resistance to ground. By performing measurements on intact ground systems, the user also verifies the quality of the grounding connections and bonds. Resistance and continuity of grounding loops around pads and buildings may also be measured.

Two new features unique to AEMC® Instruments are test frequency selection and ground voltage indication. The ability to select the test frequency provides more accurate results in inductive environments. The inductance can also be measured and displayed. Displaying voltage derived from current and resistance measurements provides an extra level of safety for the user, indicating a potentially dangerous touch condition. Both models include a current measurement function. The probe's high sensitivity enables measurement of leakage current flowing to ground or circulating in ground loops from 0.2 mA to 40 A and resistances from 0.01 to 1500 Ω .

Both models offer battery life information at power-up and Auto-Off for power management. Additional features are also displayed on the large OLED display to ensure precise measurements. The Buzzer and Auto Power Off features may be disabled from the push-buttons at any time. Both models offer an alarm function and a data storage function. In the Alarm mode, the probe will audibly and visually indicate if the reading is beyond the user programmed set point. The user may have the alarm activate above or below the set point. This alarm feature permits quick field checks where only 'pass' or 'fail' readings are required.

The data storage function enables the user to conduct field surveys, and to retrieve and analyze the readings at a later time. The alarm settings and stored data are saved when the ground tester is turned off. When using the FREE DataView® software, the 6417 provides Bluetooth transmission to a PC for analysis and report generation.



MODEL 6417

DataView®



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Model 6417 is available with an Android™ application for easy configuration, downloading, displaying of real-time data, printing and e-mailing test results from your mobile device. With its mobile GPS capability, users are now able to easily locate the site associated with the measurements.



**DOWNLOAD
THE APP!**



- ▶ A simple solution to read your measurements
- ▶ Results, on the go!



* Model 6417 only

ELECTRICAL

Ground Resistance	Measurement Range	Resolution	Accuracy (% of Reading)
Auto-Ranging 0.01 to 1500 Ω	(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 % ±0.01 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 Auto-Ranging 0.2 mA to 40 A	(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	±2 % ±50 μA
	(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		
Ground Voltage Display	(0.1 to 75.0) V _{AC}		
Inductance Measurement	(10 to 500) μH		
Power Source	(4) 1.5 V LR6 (AA) alkaline batteries or (4) NiMH batteries; Battery life: 12 h, or 1440, 30 - s measurements (approx.)		
Data Storage	Model 6416: 300 measurements Model 6417: 2000 measurements		
Communication	Bluetooth Class 2 - communicates up to 30 ft (Model 6417)		

MECHANICAL

Dimensions	(2.16 x 3.74 x 10.31) in (55 x 95 x 262 mm)
Weight	2.06 lbs (935 g) approx. with batteries
Jaw Opening	1.38 in (35 mm) max
Display	Multi-function, bright yellow organic display (OLED)

ENVIRONMENTAL

Operating Temperature	(-4 to 131) °F (-20 to 55) °C
Operating Humidity	(10 to 90) % RH

SAFETY

Safety Rating	EN 61010-1, 600 V CAT IV
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FEATURES

- ▶ Ground voltage is displayed to alert user to potential unsafe conditions
- ▶ Large multi-function, bright yellow organic display (OLED) usable in all lighting conditions
- ▶ Display in Standard mode (1 screen) or Advanced mode (3 screens)
- ▶ Selectable test frequency improves accuracy in inductive environments
- ▶ Differentiates between loop and ground resistance measurements
- ▶ Data storage Ω and/or A, with time-stamping
Model 6416: stores up to 300 measurements
Model 6417: stores up to 2000 measurements
- ▶ Displays stored measurements on the OLED display or by Bluetooth to a PC or the Android based mobile application. **(Model 6417)**
- ▶ Easy clamp opening by a force compensation trigger system
- ▶ Large jaw design, 1.38 in (35 mm) accommodating up to 1000 kcmil cables
- ▶ Alarm function with adjustable set point and buzzer for quick field checks
- ▶ Rugged Lexan® head and body construction resists breakage
- ▶ Alarm settings and stored memory information saved during shutdown
- ▶ NOISE icon and buzzer alert user to presence of dangerous voltage and current levels
- ▶ Automatic Hold of measurement when jaw is opened

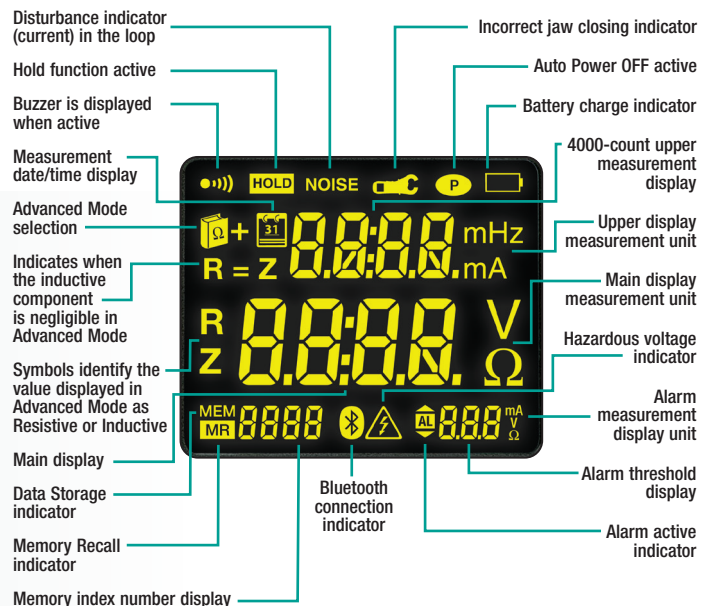
PRODUCT INCLUDES

Model 6416 and 6417: a hard carrying case, calibration loop, four 1.5 V AA batteries and a user manual.

Model 6417 also includes: a Bluetooth USB adapter, quick start guide, and a USB stick with DataView® software and user manual.

ORDERING INFORMATION

Ground Resistance Tester Model 6416	Catalog #2141.01
Ground Resistance Tester Model 6417	Catalog #2141.02



Ground Resistance Testers

Model 6418

	150 V CAT III	100 V CAT IV		
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Measure ground impedance on ground rods and bus bars

The Ground Resistance Tester Model 6418 measures ground rod, busbar, and grid resistance and impedance without the use of auxiliary rods. Clamp-on ground resistance testers can be used in multi-grounded systems without disconnecting or de-energizing the ground system under test. The Model 6418 simply clamps around the grounding electrode or conductor and measures the resistance to ground. By performing measurements on intact ground systems, the user also verifies the quality of the grounding connections and bonds. Resistance and continuity of grounding loops around pads and buildings may also be measured.



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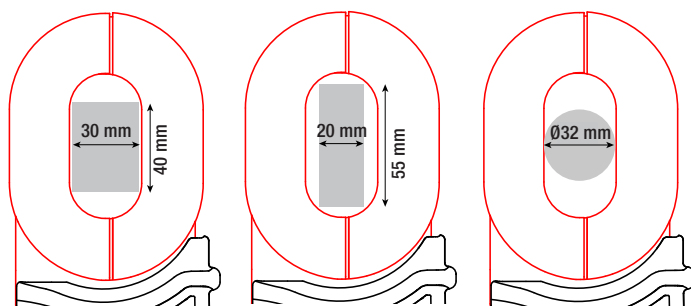
FEATURES

- ▶ Ground Integrity Measurement
- ▶ Large multi-function bright yellow OLED (organic LED display) (1.89 x 1.55) in (48 x 39) mm
- ▶ Clamping diameter accommodates both cable and bus bar
- ▶ Storage of measurements (Ω and/or A, with time-stamping)
- ▶ Up to 300 measurements stored
- ▶ View stored measurements on the OLED display
- ▶ Auto Power OFF function and Auto HOLD function
- ▶ Alarm function with adjustable set point and buzzer for quick field checks for amps and ohms
- ▶ Rugged Lexan® head and body construction resists breakage
- ▶ Alarm settings and stored memory information saved during shutdown
- ▶ Noise icon and buzzer alert user to presence of dangerous current levels
- ▶ Automatic calibration of the jaw gap at power-up

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	
	(1.0 to 49.9) Ω	0.1 Ω	± 1.5 % ± 0.2 Ω	
	(50.0 to 149) Ω	1 Ω	± 2.5 % ± 2 Ω	
	Auto Ranging	(150 to 245) Ω	5 Ω	± 5 % ± 10 Ω
		(250 to 440) Ω	10 Ω	± 10 % ± 20 Ω
(450 to 640) Ω		10 Ω	± 15 % ± 20 Ω	
	(650 to 1200) Ω	50 Ω	± 20 % Reading + 100 Ω	
Measurement Frequency	2083 Hz			
Current Measurement	(0.50 to 9.950) mA	50 μA	± 2 % + 200 μA	
	(10.00 to 99.90) mA	100 μA	± 2 % + 100 μA	
Auto Ranging 1 mA to 20 A	(100.0 to 299.0) mA	1 mA	± 2 % ± 1 mA	
	(0.300 to 2.990) A	10 mA	± 2 % ± 10 mA	
	(3.000 to 20.00) A	100 mA	± 2 % ± 100 mA	
Current Measurement Frequency	(47 to 800) Hz			
Current Overload	OL displayed above 19.99 Arms			
Power Supply	(4) 1.5 V LR6 (AA) alkaline batteries or (4) NiMH batteries; Battery life: 12 h, or 1440 30 - s measurements (approx.)			

CLAMPING CHARACTERISTICS



PRODUCT INCLUDES

Hard carrying case, 5 Ω calibration loop, (4) 1.5 V AA batteries, wrist strap and a user manual.

ORDERING INFORMATION

Ground Resistance Tester Model 6418

Catalog #2141.03

Ground Resistance Testers Models 6422 & 6424

To keep your installation safe, measure the resistance connection to ground

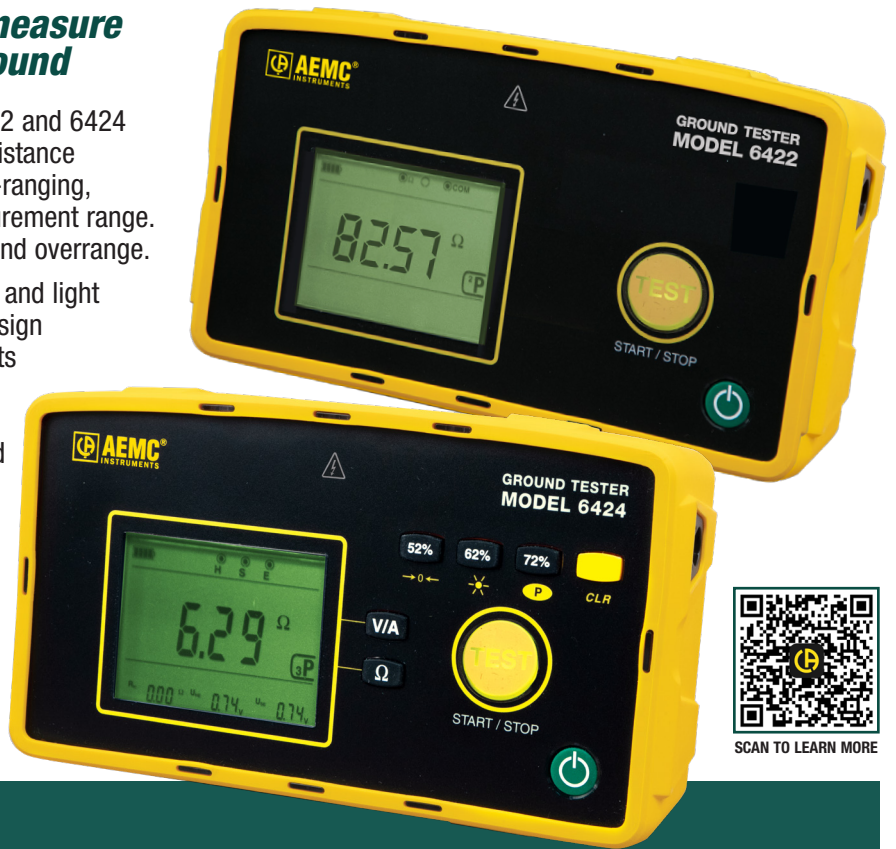
The Digital Ground Resistance Tester Models 6422 and 6424 perform 2-pole resistance and 3-pole ground resistance measurements. This direct reading tester is auto-ranging, so it automatically seeks out the optimum measurement range. The large LCD also indicates low battery status and overrange.

They are ideal for testing commercial, residential and light industrial grounding systems. Their innovative design simplifies the process and provides reliable results eliminating confusion in setting it up correctly.

The Model 6424 is capable of storing and calculating the measurements from the simplified test method (62% test method) and displaying the average and % deviation which is important in determining correct pole spacing for the test.

**Simple to use,
it's as easy as 123!**

- 1 Connect the leads
- 2 Press to measure
- 3 Read



SCAN TO LEARN MORE

FEATURES

- ▶ Simple, one button operation – eliminates errors in testing
- ▶ Test button turns green when measurement is stable
- ▶ 2P resistance measurement up to 50 kΩ
- ▶ 3P ground resistance measurement up to 2 kΩ (**Model 6422**) and up to 50 kΩ (**Model 6424**) for highly resistive terrain
- ▶ Large back lit digital display – easier to read in all lighting conditions
- ▶ Automatic HOLD function – retains last measurement after the reading stabilizes ensuring the measurement is valid
- ▶ Automatic test frequency selection between (128 to 256) Hz, providing stable results in adverse environments
- ▶ Powers up in 2 pole mode – automatically checks the injector lead connection when connected to the H auxiliary rod
- ▶ Convenient storage of the three measurements along with the average and % deviation - easily determines proper test results
- ▶ Built in test lead compensation capability – improves the accuracy of low resistance measurements
- ▶ CAT IV 600 V rated for a high level of operator safety
- ▶ Checks AC/DC voltage (**Model 6424**)
- ▶ Stores (52, 62 and 72) % measurements – eliminates errors in determining the ground resistance (**Model 6424**)
- ▶ Leakage current measurement from 0.5 mA to 60 A (**Model 6424**)
- ▶ Battery recharging via AC adapter, USB or vehicle DC port (**Model 6424**)
- ▶ Color coded leads and terminals provide fast, error-free connection
- ▶ Detects the presence of hazardous voltage and prohibits measurement
- ▶ Direct access to all functions, even when wearing work gloves
- ▶ Rugged water resistance case, for all terrain use
- ▶ Built-in display stand to prop up instrument for seeing the display better when placed on the ground

Ground Resistance Testers

Model 6422 & 6424

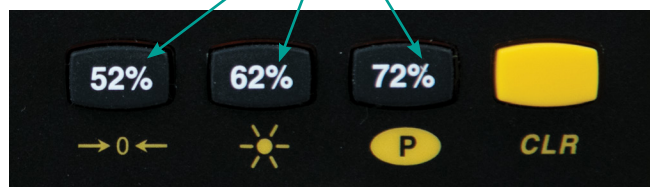
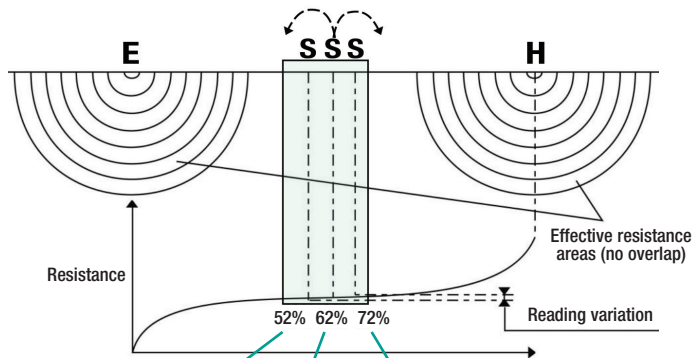
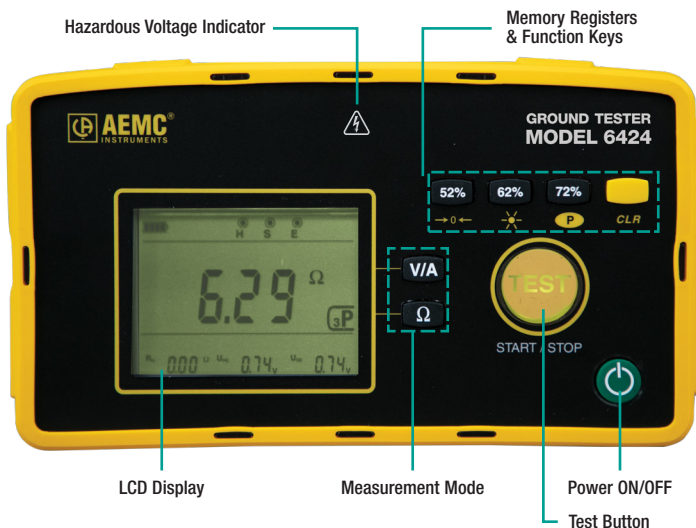


MODELS	6422			6424			
ELECTRICAL							
Voltage							
Range	-			(0.1 to 600) V _{AC/DC}			
Resolution	-			0.1 V			
Accuracy	-			±(1 % R + 1 ct)			
Current							
Range	-			(0.5 to 60.00) A _{AC} (requires optional MN72 probe)			
Resistance (2P Mode)							
Measurement Range	(0.05 to 99.99) Ω, (80.0 to 999.9) Ω, (0.800 to 9.999) kΩ, (8.00 to 50.00) kΩ						
Resolution	(0.01, 0.1, 1, and 10) Ω						
Intrinsic Uncertainty	±(2 % R + 10 ct), ±(2 % R + 2 ct), ±(2 % R + 1 ct), ±(2 % R + 1 ct)						
Ground Resistance (3P Mode)							
Measurement Range	(0.50 to 99.99) Ω	(80.0 to 999.9) Ω	(0.800 to 2.000) kΩ	(0.50 to 99.99) Ω	(80.0 to 999.9) Ω	(0.800 to 9.999) kΩ	(8.00 to 50.000) kΩ
Resolution	0.01 Ω	0.1 Ω	1 Ω	0.01 Ω	0.1 Ω	1 Ω	10 Ω
Intrinsic Uncertainty	±(1 % R + 10 ct)	±(1 % R + 2 ct)	±(1 % R + 1 ct)	±(1 % R + 10 ct)	±(1 % R + 2 ct)	±(1 % R + 1 ct)	
Measurement Frequency	(128 or 256) Hz (automatically selected)						
No-load Voltage	±10 V peak						
Maximum Test Current	20 mA						
Measurement Mode	One shot or continuous						
Data Storage	-			Stores the (52, 62 and 72) % 3P resistance measurements			
Calculation	-			Calculates average and % deviation of the three saved readings			
MECHANICAL							
Display	Backlit LCD						
Measurement Mode	2P Ω, 3P Ω			V, I, 2P Ω, 3P Ω			
Power Supply	(6) AA Alkaline batteries			(6) NiMH rechargeable batteries, charging time approx. 6 h			
Battery Life	> 2,000 x 3P ground measurements at 100 Ω			> 1,500 x 3P ground measurements at 100 Ω			
Dimensions	(8.78 x 4.96 x 2.75) in (223 x 126 x 70) mm						
SAFETY							
Safety Ratings	EMC: IEC 61326-1; IEC 61010-2-030 / 600 V CAT IV						



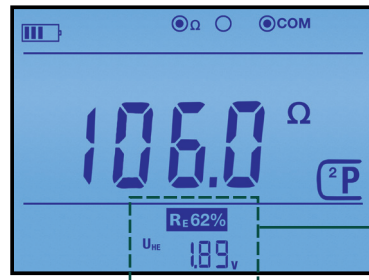
The Digital Ground Resistance Tester Model 6424 performs 2-pole resistance and 3-pole ground resistance measurements.

CONSTRUCTION

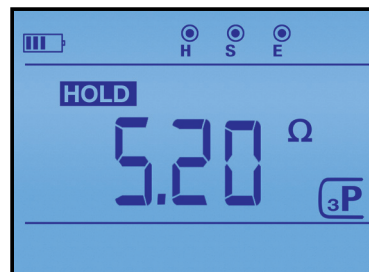


Memory Registers

FUNCTIONAL DISPLAYS



2 P mode used for continuity and bonding checks – is active when the instrument is turned on



3 P mode used for measuring the grounding system. The resistance of the injector electrode and the test voltage are also displayed



Live voltage is displayed when the V/A function is selected and test leads are connected to AC or DC voltage (Model 6424)



Leakage current is displayed when the optional MN72 probe is connected and the V/A function is selected (Model 6424)

PRODUCT INCLUDES

Models 6422 and 6424: (2) 150 ft color-coded leads on spools (red/blue), (1) 30 ft lead (green), (2) T-shaped auxiliary ground electrodes, set of (2) 5 ft color-coded (red/blue) leads, (1) 100 ft tape measure, (6) AA rechargeable NiMH batteries, carrying bag and user manual

Model 6424 also includes: USB to wall charger, 5 V, 2 A, USB charger cable

ORDERING INFORMATION

Ground Resistance Tester Model 6422 (Digital, 3-Point)	Catalog #2135.55
Ground Resistance Tester Model 6422 Kit - 150 ft (Digital, 3-Point)	Catalog #2135.56
Ground Resistance Tester Model 6424 (Digital, 3-Point)	Catalog #2135.57
Ground Resistance Tester Model 6424 Kit - 150 ft (Digital, 3-Point)	Catalog #2135.58
Ground Resistance Tester Model 6424 Kit - 300 ft (Digital, 3-Point)	Catalog #2135.59

Ground Resistance Testers Models 4620 & 4630

Easy-to-use ground resistance and soil resistivity testers that automatically select the optimum resistance range

Digital Ground Resistance Tester Models 4620 and 4630 perform both ground resistance and soil resistivity tests. These testers measure from 0 to 2000 Ω , and are auto-ranging, so they automatically seek out the optimum measurement range.

The large LCDs are easy-to-read, and also indicate low battery status, overrange, test lead shorts and lead reversals. The display is backlit for easy readings in all lighting conditions. Three LED indicators on the front panel continuously warn the user of measurement problems to ensure accurate and reliable tests.

The Models 4620 and 4630 are fuse protected up to >250 V_{AC} against accidental connection to live circuits. In the event of a system fault, they can withstand 250 V_{AC} with spikes of up to 3000 V_{AC} or 1000 V_{DC}.

The heavy-duty field case is sealed against dust and water when closed. The meter itself is self-contained within an inner case providing additional environmental and insulation protection (double wall construction). The test button is also sealed against the elements.

The Model 4620 is powered by (8) Alkaline C cell batteries. The Model 4630 is powered by a 9.6 V, 3.5 A-h NiMH rechargeable battery pack. A built-in recharge circuit, powered from (120 to 230) V (50 to 60) Hz line, also provides for testing while recharging.

Both models exceed mechanical and safety specifications for shock, vibration and drop tests called out in IEC standards. They are designed to reject high levels of interference, so they can be used under difficult conditions, such as high stray currents that normally affect accuracy.



SCAN TO LEARN MORE

**Simple to use,
it's as easy as 123!**

- 1 Connect the leads
- 2 Press to measure
- 3 Read

APPLICATIONS

- ▶ 3-Point measurements of resistance to ground of ground rods and grids. 3-Point measurements are generally used when the electrode or grid can be easily disconnected, if corrosion is suspected, or in circumstances where ground faults are unlikely to occur.
- ▶ 4-Point soil resistivity measurements. Locating areas of lowest soil resistivity is essential for achieving an economical grounding installation.
- ▶ Touch potential measurements, an alternative to 3-Point tests in evaluating electrical safety. This test is recommended when the ground cannot be disconnected, where ground faults are highly likely to occur, or when the 'footprint' of grounded equipment (*the outline of the part of equipment in contact with the earth*) is comparable to the size of the ground to be tested.



FEATURES

- ▶ Ground integrity measurement
- ▶ Measures soil resistivity (4-Point)
- ▶ Measures ground resistance 2- and 3-Point Fall-of-Potential method
- ▶ Step voltage tests and touch potential measurements
- ▶ Auto-Ranging: automatically selects the optimum resistance range and test current
- ▶ Designed to reject high levels of noise and interference
- ▶ Extremely simple to operate: connect / press / hold / read
- ▶ LED on faceplate informs operator of high input noise, high auxiliary rod resistance and faulty connections
- ▶ Large easy-to-read backlit display
- ▶ Battery powered (**Model 4620**)
- ▶ AC powered with rechargeable NiMH battery pack (**Model 4630**)
- ▶ Rugged dustproof and watertight field case
- ▶ Color-coded terminals

MODELS	4620	4630	
ELECTRICAL			
Range	20 Ω	200 Ω	2000 Ω
Measurement Range	(0.00 to 19.99) Ω	(20.0 to 199.9) Ω	(200 to 1999) Ω
Resolution	10 mΩ	100 mΩ	1 Ω
Open Voltage	≤ 42 V peak		
Measurement Frequency	128 Hz square wave		
Test Current	10 mA	1 mA	0.1 mA
Accuracy	± 2 % of Reading ± 1 ct		± 5 % of Reading ± 3 cts
Aux Electrode Influence			
Max Res. - Current Circuit	3 kΩ	30 kΩ	50 kΩ
Max Res. - Voltage Circuit	50 kΩ		
Response Time	Approximately four to eight seconds for a stabilized measurement		
Withstanding Voltage	250 V _{AC} or 100 V _{DC}		
Power Supply	(8) C cell batteries (included) Alkaline recommended	(120/230) V, (50/60) Hz Rechargeable 9.6 V, 3.5 A-h NiMH battery pack (included)	
Battery Life	> 2000 15 - s measurements; LO BAT indication on LCD		
Fuse Protection	0.1 A > 250 V , (0.25 x 1.25) in; 30 kA Interrupt Capacity		
MECHANICAL			
Connection	Color-coded terminals accept spade lugs with min. gap of 6 mm or standard 4 mm banana jacks		
Dimensions	(10.8 x 9.7 x 5.0) in (273 x 247 x 127) mm		
Weight	6.28 lbs (2.85 kg)	7.38 lbs (3.35 kg)	
Case	Heavy duty o-ring sealed field case		
Index of Protection	O-ring sealed against dust and water to IP50 when case is closed		
DISPLAY			
Display Type	3½ digit, 0.71 in (18 mm) high; 2000-counts; electroluminescent blue backlight LCD also indicates overrange, test lead shorts and lead reversals		
LED Indication	Three LEDs indicate high input noise, high auxiliary rod resistance, open leads, blown fuse		

PRODUCT INCLUDES

Model 4620: (8) C-cell batteries and user manual.

Model 4630: Rechargeable 9.6 V NiMH battery pack, AC power cord, and user manual.

ORDERING INFORMATION

Ground Resistance Tester Model 4620 (Digital, 4-Point, Battery Powered)	Catalog #2130.40
Ground Resistance Tester Model 4630 (Digital, 4-Point, Rechargeable Battery)	Catalog #2130.44
Ground Resistance Tester Model 4620 Kit – 150 ft	Catalog #2135.19
Ground Resistance Tester Model 4620 Kit – 300 ft	Catalog #2135.20
Ground Resistance Tester Model 4620 Kit – 500 ft	Catalog #2135.21
Ground Resistance Tester Model 4630 Kit – 150 ft	Catalog #2135.22
Ground Resistance Tester Model 4630 Kit – 300 ft	Catalog #2135.23
Ground Resistance Tester Model 4630 Kit – 500 ft	Catalog #2135.24



Ground Resistance Testers

Model 6471

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

The Digital Ground Resistance Tester Model 6471 is a portable measurement instrument designed to measure Ground Resistance with 2 clamps (sold separately), no auxiliary rods needed, Bond/Connection Resistance (2-Pole and 4-Pole Kelvin sensing), Ground Resistance (3-Pole or 4-Pole), Ground Coupling Resistance, Selective Ground Resistance, and Soil Resistivity (Wenner or Schlumberger method). The Model 6471 measures from 0.01 to 99.99 k Ω and is auto-ranging, automatically seeking out the optimum measurement range, test frequency and test current.

► Ground Resistance with 2 clamps

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/1367 Hz) while the other probe measures the current circulating in the loop. This method saves time when ground testing because it is no longer necessary to set up auxiliary rods or to disconnect the ground connector.

► Ground Resistance with 3-Point method

The 3-Point method is the traditional method using rods to measure the resistance of an existing ground connection. Model 6471 can also be used to measure the resistances of the auxiliary rods RS and RH, as well as any disturbance voltages.

► Ground Resistance with 4-Point method

The 4-Point measurement method is particularly suitable for measuring very low ground resistance. If there are several resistances connected in parallel, it is possible to use the instrument with a clamp-on ammeter to carry out selective measurements, in order to avoid the effect of the parallel ground connections. This “selective 4P” measurement method saves considerable time because it is no longer necessary to disconnect the ground resistance before measuring it.

► Ground Coupling Resistance

To estimate the reciprocal influence of 2 normally unrelated ground resistances, you must calculate the coupling coefficient, which should be as low as possible. The operator takes 3 successive measurements (2 classic ground measurements using the classic 3P – R1 & R2 method), and 1 ground measurement using the 2P – R1-2 method. The instrument then automatically calculates the coupling resistance.

► Soil Resistivity

When it is possible to choose the position of the ground connection, resistivity measurements can be used to check the soil and determine where the ground resistance will be lowest (optimization of building costs). Model 6471 automatically calculates soil resistivity using the Wenner or Schlumberger methods as soon as the distances between the rods have been entered.



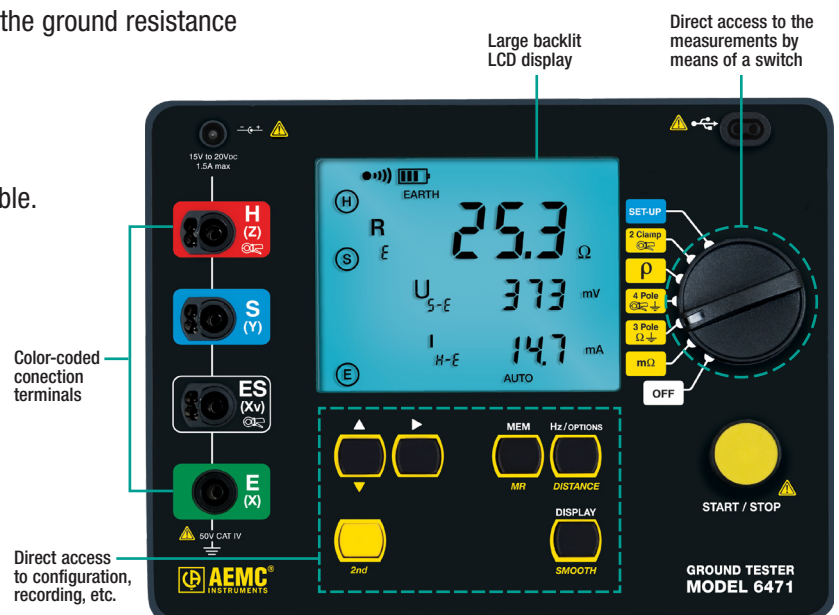
A favorite instrument among the lightning protection industry!

DataView®



SCAN TO LEARN MORE

CONSTRUCTION





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 k Ω
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	$\pm 2\%$ 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) k Ω ; ρ max: 999 k Ω m
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 65.0) V _{AC/DC} – DC to 440 Hz
Accuracy	$\pm 2\%$ 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) k Ω 4-Pole (0.02 to 99.99) k Ω
Accuracy	$\pm 2\%$ 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 V/220 V, (50/60) Hz external charger with 18 V _{DC} , 1.9 A output

FEATURES

- ▶ **Multi-function tester:**
 - 3-pole and 4-pole measurements
 - Selective 4-pole measurements (2 clamps)
 - Soil resistivity (Wenner & Schlumberger methods)
 - Ground coupling
 - Continuity and resistance
- ▶ Measurements possible even with highly resistive soils
- ▶ 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

PRODUCT INCLUDES

Model 6471 (without probes): Meter, 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.

Model 6471 (with probes): Meter, 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.

ORDERING INFORMATION

Ground Resistance Tester Model 6471 (Digital, 3-Point, 4-Point, Clamp-on (SR182 probes not included), DataView® Software)	Catalog #2135.48
Ground Resistance Tester Model 6471 (Digital, 3-Point, 4-Point, Clamp-on, (includes 2-SR182 probes), DataView® Software)	Catalog #2135.49
Ground Resistance Tester Model 6471 Kit – 300 ft	Catalog #2135.50
Ground Resistance Tester Model 6471 Kit – 300 ft (without Probes)	Catalog #2135.60
Ground Resistance Tester Model 6471 Kit – 500 ft (without Probes)	Catalog #2135.61

Ground Resistance Testers Model 6472

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

The Digital Ground Resistance Tester Model 6472 is a portable measurement instrument designed to measure Bond Resistance, Ground Resistance (*with and without clamps*), Soil Resistivity, Ground Coupling, Step and Touch Potential.

Additional features of the Model 6472 include a heavy-duty field case sealed against dust and water when closed (the test button is also sealed against the elements); manual and automatic test frequency selection from (41 to 5078) Hz; user selectable 3-Pole Fall of Potential or 4-Pole Soil Resistivity test methods and user selectable 2-Pole or 4-Pole Bond Resistance test method.

The Ground Resistance Tester Model 6472 is rugged, easy-to-use and ideal for maintenance crews performing numerous tests. It exceeds mechanical and safety specifications for shock, vibration and drop tests per IEC standards. The adjustable test frequency provides for rejection of high levels of interference, allowing it to be used under difficult conditions such as high stray currents that affect accuracy.

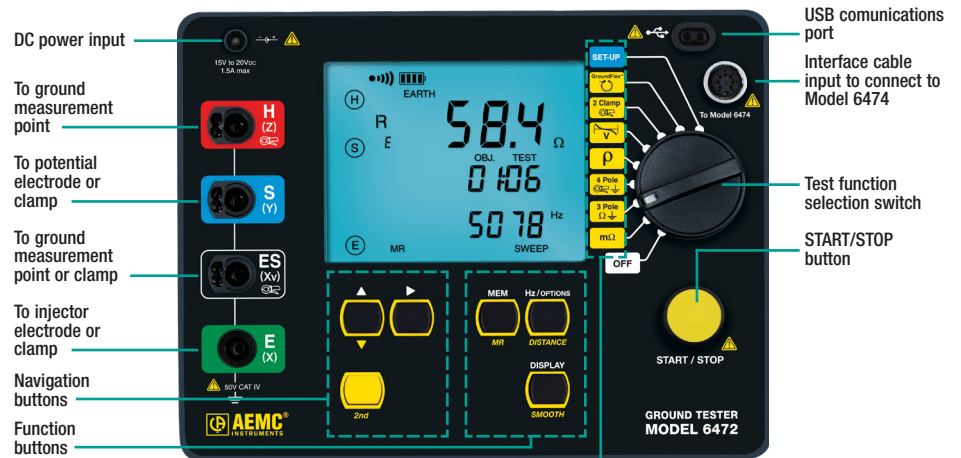


DataView®



SCAN TO LEARN MORE

CONSTRUCTION



SET-UP	SET-UP Position	Soil Resistivity Measurement Position
GroundFlex	GroundFlex® Measurement Position	4 Pole Ground Resistance Measurement Position
2 Clamp	Two Clamp Position	DC Resistance Measurement Position
V Potential	V Potential Measurement Position	3 Pole Ground Resistance Measurement Position



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 k Ω
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	$\pm 2\%$ 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) k Ω ; ρ max: 999 k Ω m
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 65.0) V _{AC/DC} – DC to 440 Hz
Accuracy	$\pm 2\%$ 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 k Ω 4-Pole 0.02 Ω to 99.99 k Ω
Accuracy	$\pm 2\%$ 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 V/220 V, (50/60) Hz external charger with 18 V _{DC} , 1.9 A output

PRODUCT INCLUDES

Model 6472: Carrying bag, (110/240) V power adapter with US power cord, optical USB cable, rechargeable NiMH battery, and a USB stick with DataView® software, ground tester workbook and user manual.

ORDERING INFORMATION

Ground Resistance Tester Model 6472	Catalog #2135.51
Ground Resistance Tester Model 6472 Kit – 300 ft	Catalog #2135.53
Ground Resistance Tester Model 6472 Kit – 500 ft	Catalog #2135.54

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 Ground Coupling measurement
- ▶ Manual and Automatic frequency scan from (41 to 5078) Hz for optimum test accuracy in electrically noisy environments
- ▶ 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

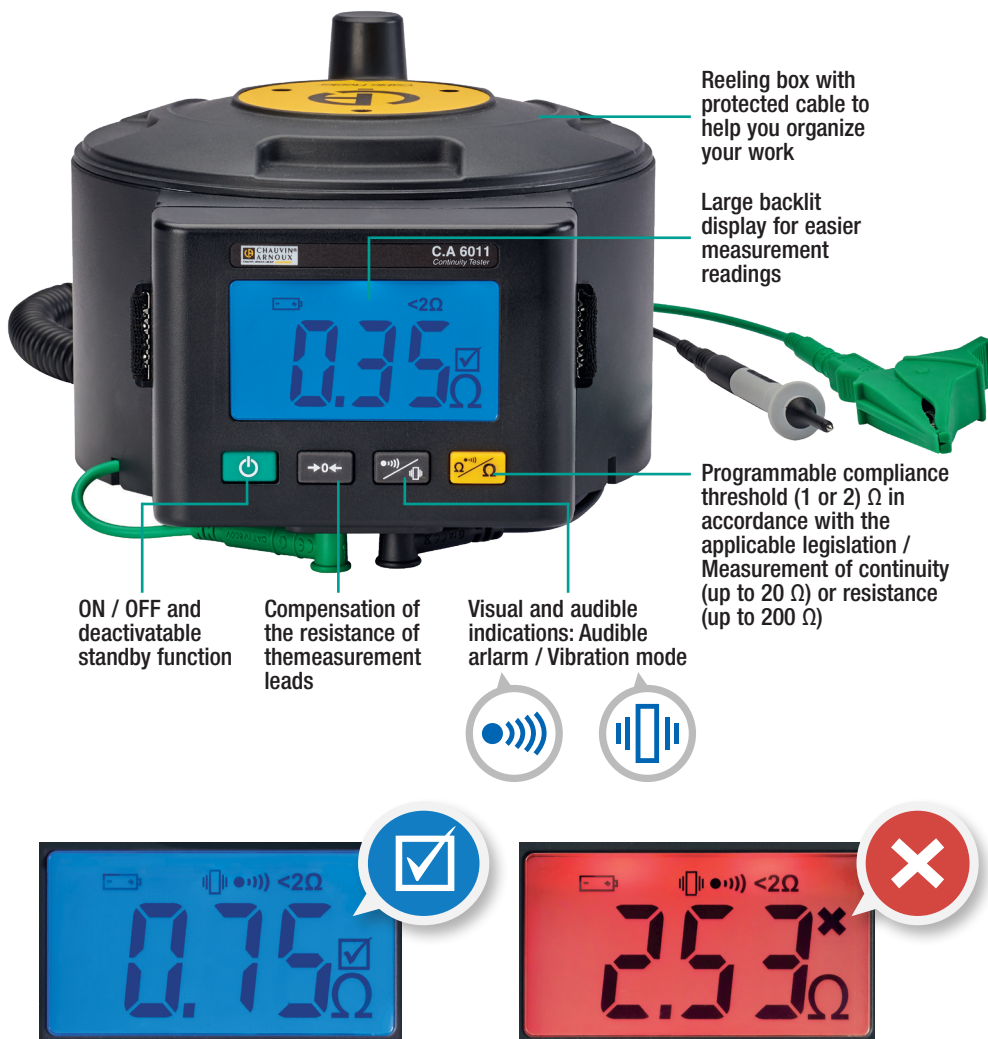


Point-to-Point Continuity Tester Model CA 6011

A Faster, Simpler, and Lightweight Solution for Testing Bonded Pathways and Connections Over Long Distances – Even in Hard-to-Reach Locations!

The Model CA 6011 Continuity Tester is a unique wrist-worn point-to-point test instrument for verifying continuity across large interconnected systems. With a 200 mA output, automatic polarity reversal, and a continuity probe (available in the Testing Kit), the CA 6011 can accurately verify a connection even in hard-to-reach locations. Verify a conductive path exists on lightning conductors, EGCs, motor frames or grounds, and cabinets by simply connecting one end of the meter's reel to a ground bus or conductor and then making contact with the conductor under test at any point of the system. The CA 6011 is equipped to emit an audible alarm, vibrate, or both when it detects a low resistance range, providing assurance to the operator that a conductive path is present between the two points.

CONSTRUCTION



Clear indications: intuitive colors and symbols



APPLICATIONS

Test ECG (Equipment Ground Conductors) and other components bonded to a ground system to verify a low resistance connection.

Objects that could be tested:

- ▶ Lightning conductors
- ▶ Equipment grounds
- ▶ Isolated ground conductors
- ▶ Electrical cabinets
- ▶ Motors
- ▶ Building steel
- ▶ Light fixtures
- ▶ Data centers
- ▶ Solar racks
- ▶ Windmill blades

Applicable industries:

- ▶ Lightning protection
- ▶ Traffic
- ▶ Data centers
- ▶ Solar/renewable energy
- ▶ MSHA (Mining and general contractors)
- ▶ Static grounds for hazardous material containers or tanker trucks (paint shops, chemical processing)
- ▶ Utility (commissioning grounds for substations)



ELECTRICAL	
Continuity	
Range	(0.00 to 2.00) Ω (2.00 to 20.00) Ω
Resolution	10 m Ω
Measurement Current	200 mA 20 mA with automatic polarity reversal
Open-circuit Voltage	$\pm(4 V_{DC} < U < 6 V_{DC})$
Continuity Treshold	Programmable 1 Ω ru 2 Ω
Resistance	
Range	(1.0 to 200.0) Ω
Resolution	100 m Ω
Measurement Current	10 mA
Open-circuit Voltage	$\pm(4 V_{DC} < U < 6 V_{DC})$
MECHANICAL	
Battery Life	30,000 measurements in real operating conditions
Power Supply	(4) 1.5 V AA / LR6 batteries
Dimensions (instrument + reeling box)	(8.9 x 7.3 x 5.3) in (225 x 185 x 135) mm
Weight	Meter only: 12.34 oz (350 g)
SAFETY	
Safety Ratings	IEC 61557-1 & IEC 61557-4 IEC 61010-1, IEC 61010-2-030 300 V CAT IV



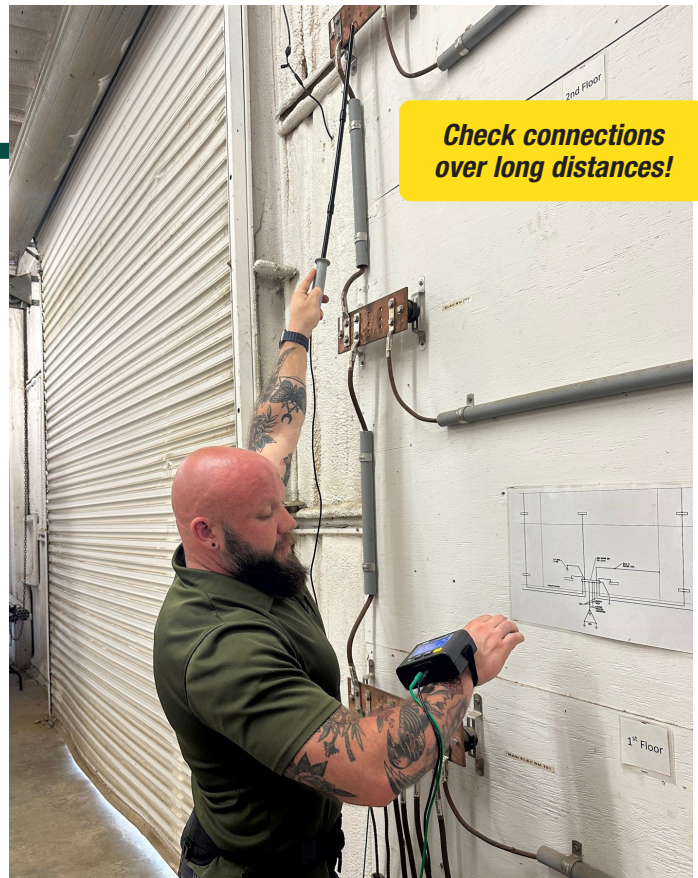
PRODUCT INCLUDES

Model CA 6011: Meter, (4) AA batteries and user manual.

Testing Kit Model CA 6011: Meter, (1) 500 ft spool of red wire, (1) 5 ft red lead, (1) reel caddy, continuity probe (Cat. #2138.54), (1) black test probe, (1) 5 ft black lead, and extra-large tool bag.

ORDERING INFORMATION

Point-to-Point Continuity Tester Model CA 6011	Catalog #2135.62
Point-to-Point Continuity Testing Kit Model CA 6011	Catalog #2135.63



FEATURES

- ▶ Continuity tester, completes Point-to-Point continuity type tests
- ▶ **Comfortable:** wrist mounted and lightweight
- ▶ **Convenient:** continuity wand assists with performing testing in hard-to-reach areas
- ▶ **Efficient:** performs significantly faster than a ground resistance type meter
- ▶ **Accurate:** automatic polarity reversal (*runs test + to - then - to + for more accurate results*)
- ▶ Lead compensation for accurate measurement options
- ▶ 200 mA output
- ▶ Audible and vibration alarm settings
- ▶ Constant operation: upon the circuit being completed by the instrument probe, the instrument automatically displays the resistance value of the pathway under test (*Always on - no button push to start/stop test*)
- ▶ Commissioning or troubleshooting bonded non-current carrying conductive pathways to earth
- ▶ **Checking connections over long distances**
- ▶ Compatible with AEMC® Instruments ground testing accessories (*instrument will work with our reel kits*)

Ground Resistance Testers

Complete Kits



Ground Resistance Tester Kit 150 ft

Test Kit for 3-Point testing includes:

- ▶ Model 4620 / 4630 / 6422 / 6424
- ▶ (2) 150 ft color-coded leads on spools (red and blue)
- ▶ (1) 30 ft lead (green)
- ▶ (2) 5 ft color-coded leads (red and blue)
- ▶ (2) 14.5 in T-shaped auxiliary ground electrodes
- ▶ (1) set of five spaded lugs
- ▶ (1) 100 ft AEMC® Instruments tape measure
- ▶ Carrying bag

Catalog #2135.35

Model 4620 Kit: Catalog #2135.19

Model 4630 Kit: Catalog #2135.22

Model 6422 Kit: Catalog #2135.56

Model 6424 Kit: Catalog #2135.58



Ground Resistance Tester Kit 300 ft

Test Kit for 4-Point testing includes:

- ▶ Model 4620 / 4630 / 6424 / 6471 / 6472
- ▶ (2) 300 ft color-coded leads on spools (red and blue)
- ▶ (2) 100 ft color-coded leads (green and black)
- ▶ (2) 5 ft color-coded leads (red and blue)
- ▶ (4) 14.5 in T-shaped auxiliary ground electrodes
- ▶ (1) set of five spaded lugs
- ▶ (1) 100 ft AEMC® Instruments tape measure
- ▶ Carrying bag

Catalog #2135.36

Model 4620 Kit: Catalog #2135.20

Model 4630 Kit: Catalog #2135.23

Model 6424 Kit: Catalog #2135.59

Model 6471 Kit: Catalog #2135.50 (with probes)

Model 6471 Kit: Catalog #2135.60 (no probes)

Model 6472 Kit: Catalog #2135.53





Ground Resistance Tester Kit 500 ft

Test Kit for 4-Point testing includes:

- ▶ Model 4620 / 4630 / 6471 / 6472
- ▶ (2) 500 ft color-coded leads on spools (red and blue)
- ▶ (2) 100 ft color-coded leads (green and black)
- ▶ (1) 30 ft lead (green)
- ▶ (2) 5 ft color-coded leads (red and blue)
- ▶ (2) 14.5 in T-shaped auxiliary ground electrodes
- ▶ (1) set of five spaded lugs
- ▶ (1) 100 ft AEMC® Instruments tape measure
- ▶ Carrying bag

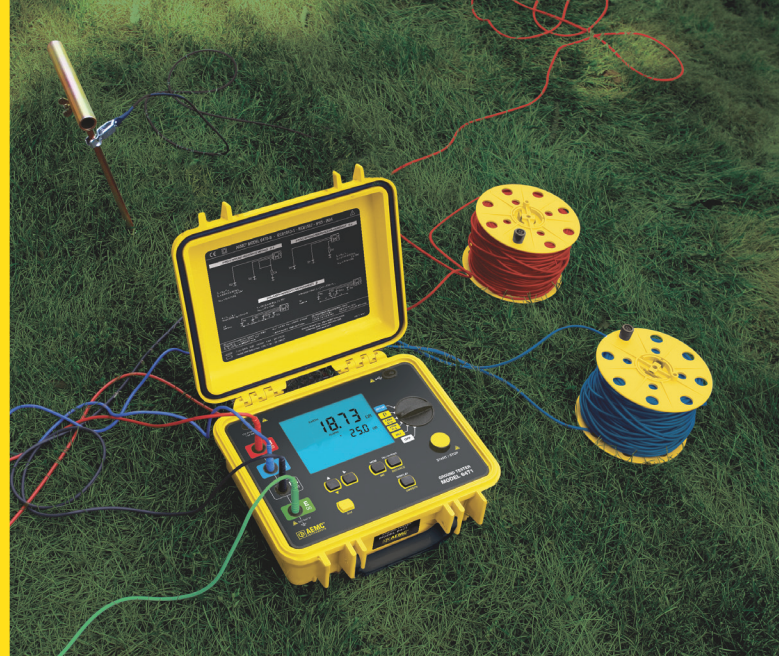
Catalog #2135.37

Model 4620 Kit: Catalog #2135.21

Model 4630 Kit: Catalog #2135.24

Model 6471 Kit: Catalog #2135.61

Model 6472 Kit: Catalog #2135.54



Micro-Ohmmeters Model 6240



Measure low resistance with high accuracy!

The 10 A Micro-Ohmmeter Model 6240 is a rugged, low resistance tester designed for both plant maintenance and field use. Utilizing a four-lead Kelvin method of testing, the Model 6240 Micro-Ohmmeter accurately measures very low resistance within 0.25 %.

Resistance measurements are automatically calculated from 5 $\mu\Omega$ to 400 Ω with resolutions down to 1 $\mu\Omega$. The Model 6240 has selectable test currents of 10 A, 1 A, 100 mA and 10 mA and includes a polarity reversal function.

The Model 6240 is designed to conduct tests on both resistive and inductive material. Up to 99 measurements can be stored and printed directly to a printer or from a PC.

DataView® (included) allows you to configure the instrument, temperature-compensate the test results, store data, and print reports.



ELECTRICAL						
Range	(5.0 to 3999) $\mu\Omega$	(4.0 to 39.99) m Ω	(40.0 to 399.9) m Ω	(400 to 3999) m Ω	(4.0 to 39.99) Ω	(40.0 to 399.9) Ω
Accuracy	± 0.25 % of Reading ± 2 cts					
Resolution	1 $\mu\Omega$	10 $\mu\Omega$	100 $\mu\Omega$	1 m Ω	10 m Ω	100 m Ω
Test Current	10.2 A ± 2 %	1.02 A ± 2 %	102 mA ± 2 %	10.2 mA ± 2 %		
Max. Inductive Load	0.5 H					
Memory	Stores up to 99 test results					
Power Supply	Rechargeable 6 V, 8.5 A-h NiMH battery pack (included)					
MECHANICAL						
Dimensions	(10.70 x 9.76 x 7.17) in (270 x 250 x 180) mm					
Weight	10 lbs. (4.5 kg)					
Index of Protection	IP53 (case open); IP54 (case closed)					
DISPLAY						
Display Type	4000-count LCD					
Size	(4 x 2.25) in (102 x 57) mm					
Blacklight	Blue electroluminescent					
COMMUNICATION						
Interface Port	Optically isolated USB					

APPLICATIONS

- ▶ Aerospace metallic coating resistance measurement
- ▶ Bonding verification on ground systems
- ▶ Weld joint integrity verification
- ▶ Contact resistance measurement of breakers and switchgear
- ▶ Aircraft and rail bonding checks
- ▶ Wire to terminal connections and resistance checks
- ▶ Battery strap resistance checks
- ▶ Cable joint and bus bar connection checks
- ▶ Mechanical bond tests



SCAN TO LEARN MORE

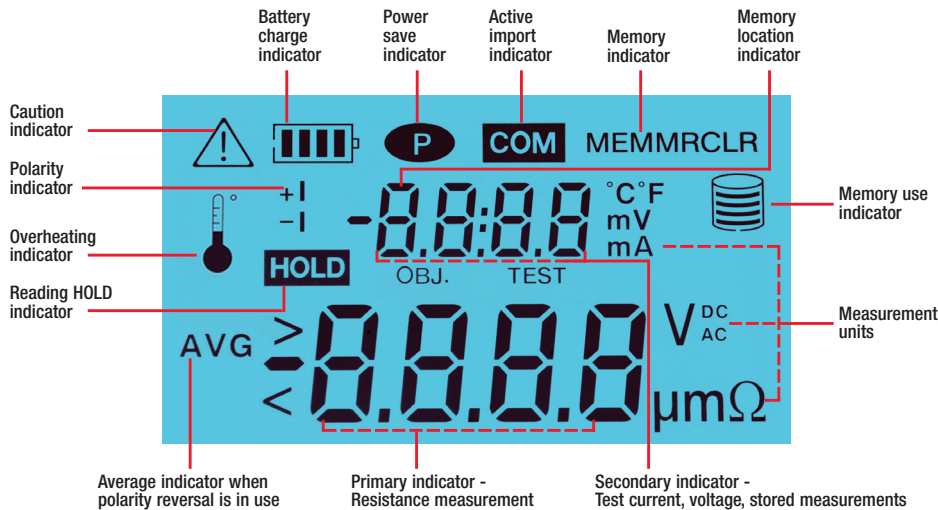
DataView®



CONSTRUCTION



FUNCTIONAL DISPLAY



FEATURES

- ▶ Reliable low resistance measurements
- ▶ Four-terminal Kelvin resistance measurement eliminates test lead resistance
- ▶ Measures up to 4000 $\mu\Omega$ with 10 A of test current
- ▶ 0.25 % basic accuracy
- ▶ 1 $\mu\Omega$ resolution
- ▶ Direct reading, easy to operate
- ▶ Test current selection of (1, 10, 100) mA, (1, 10) A
- ▶ Polarity reversal button
- ▶ Overload and input fuse protection
- ▶ Manufactured to international safety and environmental standards
- ▶ Automatic scaling and zeroing
- ▶ Large terminals accept banana plugs and spade lugs
- ▶ Rechargeable NiMH battery with internal charger (110 / 230) V that can be charged during operation
- ▶ Rugged, double insulated watertight case
- ▶ Includes DataView® software for instrument configuration, data storage, analysis and report generation

PRODUCT INCLUDES

Extra large tool bag, set of (2) 10 ft Kelvin clips (10 A - Hippo), set of (2) 10 ft Kelvin probes (1 A - Spring Loaded), optical USB cable, US 115 V power cord, (2) spare fuses (12.5 A), NiMH 6 V rechargeable battery pack, and USB drive with DataView® software and user manual.



ORDERING INFORMATION

Micro-Ohmmeter Model 6240 (10 A, Instantaneous, Continuous, Multiple Test, includes 10 ft Kelvin Clips (10 A - Hippo-Cat #1017.84), 10 ft Kelvin Probes (1 A Spring Loaded, Cat #2118.73) and DataView® Software)

Catalog #2129.80



DataView®



Data Analysis and Reporting Software

AEMC® Instruments developed our DataView® software interface for recording and displaying measurement data recorded on AEMC® Instruments devices and generates views for analysis and both custom and standard reports.

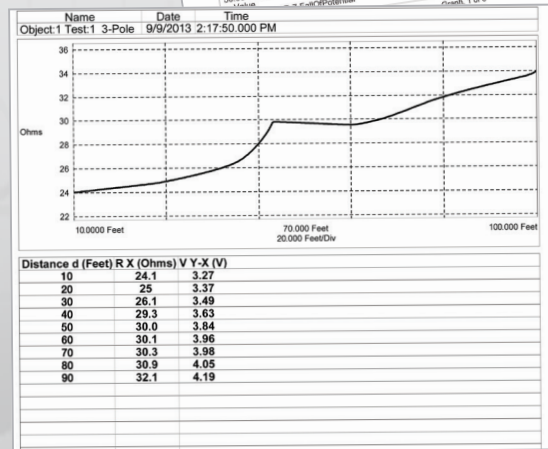
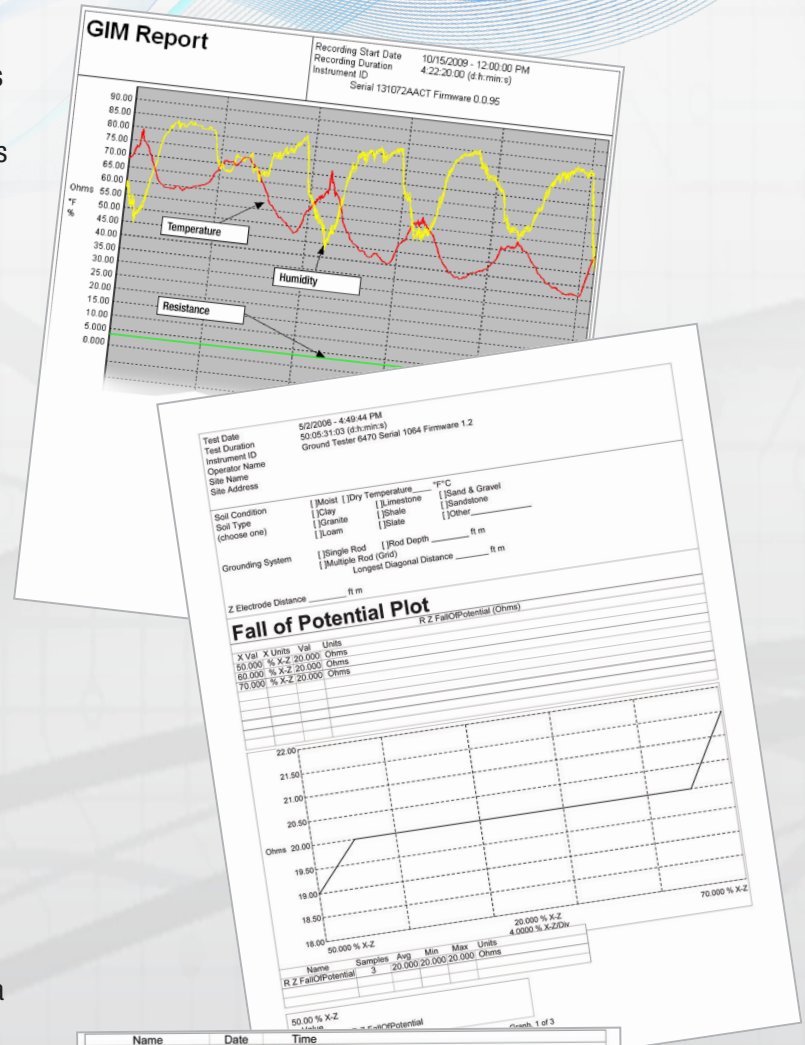
DataView® automatically identifies connected test instruments on a PC, opens their respective menus for direct data access to recorded data, and offers users quick access to preset reports with full safety compliance to current standards. You can also create and save custom reports and views.

Additionally any future software upgrades are always free. This approach ensures users can easily learn and utilize the software, regardless of the AEMC® instrument being used.

Functions for all applicable AEMC® Instruments devices

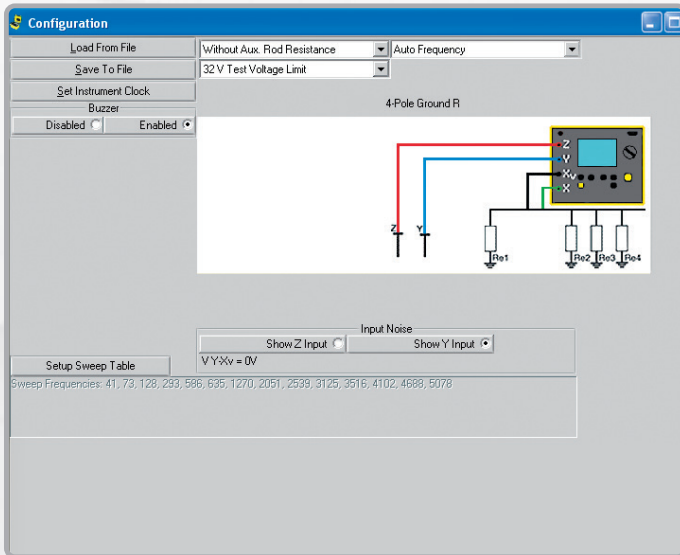
- ▶ Capture, download, display and analyze real-time data on your PC
- ▶ Upload stored test results to your PC
- ▶ Easily configure all functions and parameters specific to each instrument from your PC
- ▶ Create and store a complete library of configurations that can be uploaded to a device as needed
- ▶ Create custom views, templates, and reports to your exact needs
- ▶ Zoom in and out and pan through sections of graphs to analyze the data
- ▶ View 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 bonding tests (*Models 6417 & 6471*)
- ▶ Print all test result reports using our standard report templates or your custom templates
- ▶ Free updates available on our website: www.aemc.com

Already own an instrument with DataView® installed? It is quicker and easier to update the DataView® software from within the program itself. Simply click on the **Help** tab at the top of the main menu and then click on **Update**. DataView® will automatically check to see if you have the latest version and direct you to the download process if necessary.

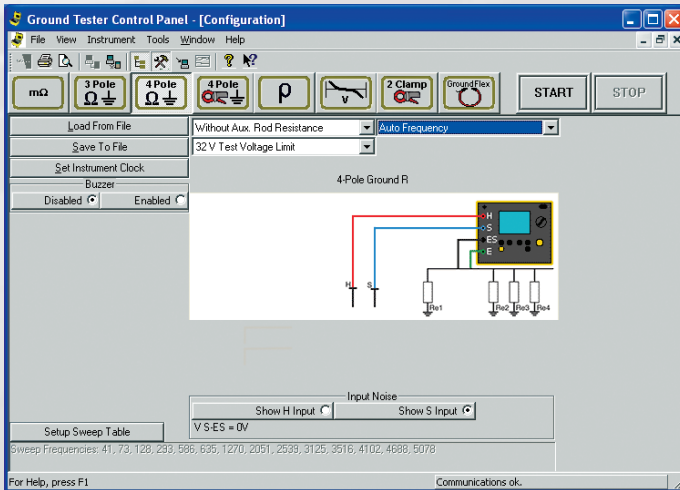


Typical reports showing test measurements data

GROUND TESTERS

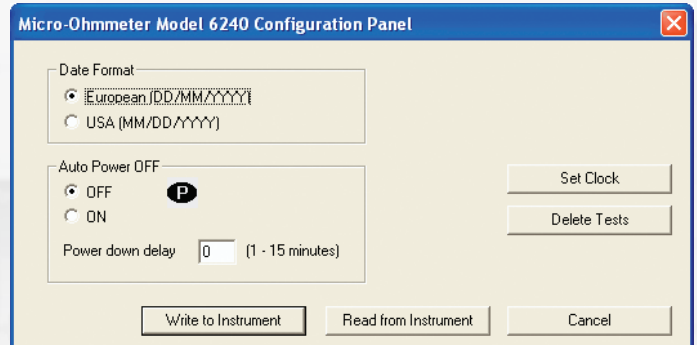


Configure and control ground resistance tests from your computer through the use of clear and easy-to-use tabbed dialog boxes.

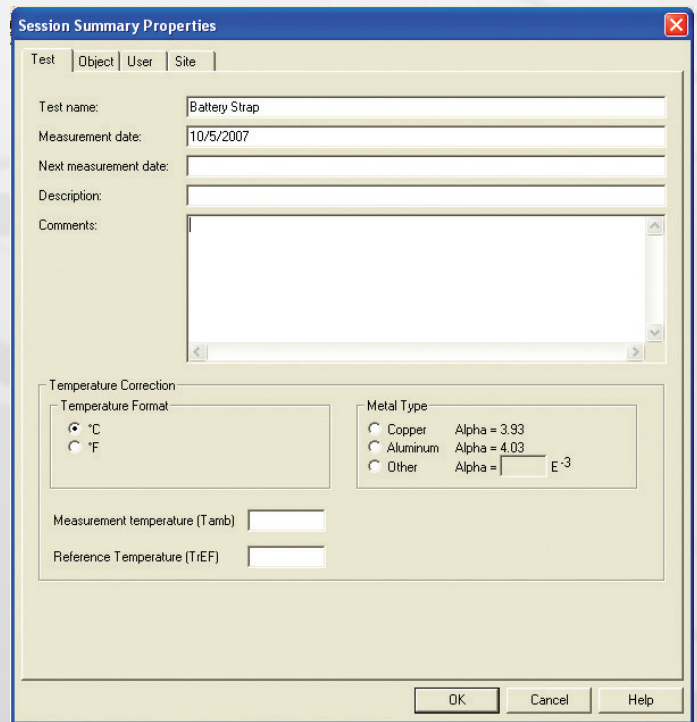


All Ground Tester functions can be configured and tests can be initiated with graphical illustration of proper connections

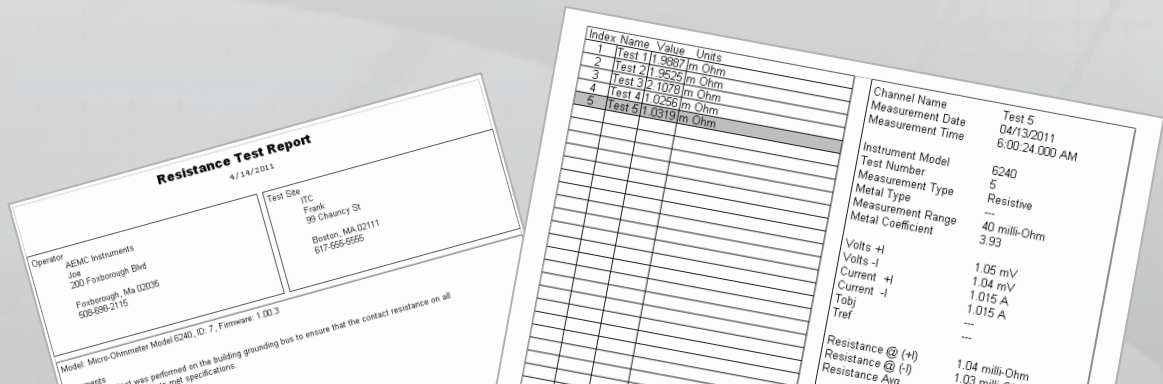
MICRO-OHM METERS



Model 6240 Configuration Panel:
All setup functions available from one screen



Session Summary Properties: easily document statistics about user and test site to be stored with the data



United States & Canada

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d.b.a. AEMC[®] Instruments**

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