

# GROUND RESISTANCE TESTERS

## MULTI-FUNCTION

### MODELS 6422 & 6424

*To keep your installation safe, measure the resistance of its connection to earth*



### SPECIFICATIONS

MODELS		6422			6424		
ELECTRICAL							
Voltage							
Measurement Range	-			0.1-600V <sub>AC/DC</sub>			
Resolution	-			0.1V			
Accuracy	-			±(1%R + 1 ct)			
Current							
Range	-			0.5-60.00A <sub>ac</sub> (requires optional MN72 probe)			
Ground Resistance (2P Mode)							
Measurement Range	0.05-99.99Ω, 80.0-999.9Ω, 0.800-9.999kΩ, 8.00-50.00kΩ						
Resolution	0.01Ω, 0.1Ω, 1Ω, 10Ω						
Accuracy	± (2%R + 10 ct), ± (2%R + 2 ct), ±(2%R + 1 ct), ±(2%R + 1 ct)						
Ground Resistance (3P Mode)							
Measurement Range	0.50-99.99Ω	80.0-999.9Ω	0.800-2.000kΩ	0.50-99.99Ω	80.0-999.9Ω	0.800-9.999kΩ	8.00-50.000kΩ
Resolution	0.01Ω	0.1Ω	1Ω	0.01Ω	0.1Ω	1Ω	10Ω
Accuracy	± (1%R + 10ct)	± (1%R + 2ct)	± (1%R + 1ct)	± (1%R + 10ct)	± (1%R + 2ct)	± (1%R + 1ct)	
Measurement Frequency	128Hz or 256Hz (automatically selected)						
No-load Voltage	±10 V peak						
Maximum Test Current	20mA						
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			
GENERAL							
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 hrs			
Battery Life	> 2,000 x 3P earth measurements at 100 Ω			>1,500 x 3P earth measurements at 100 Ω			
Dimensions	8.78 x 4.96 x 2.75" (223 x 126 x 70mm)						
SAFETY							
Safety Rating	EMC: IEC 61326-1; IEC 61010-2-030 / 600 V CAT IV						

Consult factory for NIST Calibration prices

CATALOG NO.	DESCRIPTION
2135.55	Ground Resistance Tester Model 6422 (Digital, 3-Point)
2135.56	Ground Resistance Tester Model 6422 Kit-150 ft (Digital, 3-Point)
2135.57	Ground Resistance Tester Model 6424 (Digital, 3-Point)
2135.58	Ground Resistance Tester Model 6424 Kit-150 ft (Digital, 3-Point)
2135.59	Ground Resistance Tester Model 6424 Kit-300 ft (Digital, 3-Point)

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### MODELS 6422 & 6424

#### FEATURES

- Simple, one button operation - eliminates errors in testing
- Test button turns green when measurement is stable
- 2P resistance measurement up to 50k $\Omega$
- 3P ground resistance measurement up to 2k $\Omega$  (Model 6422) up to 50k $\Omega$  (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 and 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 600V 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 0.5mA to 60A (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

#### ACCESSORIES/REPLACEMENTS

##### Catalog #2135.39

Ground Rod – Set of (2) 14.5" T-shaped Auxiliary Rods

##### Catalog #2153.06

MN72 AC Current Probe (6424 only)

##### CATALOG #5000.92

Calibration Checker



CATALOG #5000.92

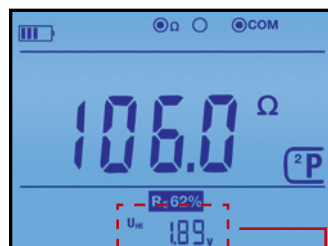


CATALOG #2153.06



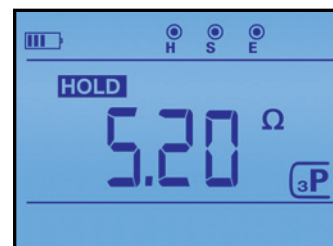
KITS AVAILABLE  
SHOWN: CATALOG #2135.35

#### FUNCTIONAL DISPLAYS



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

Model 6424



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

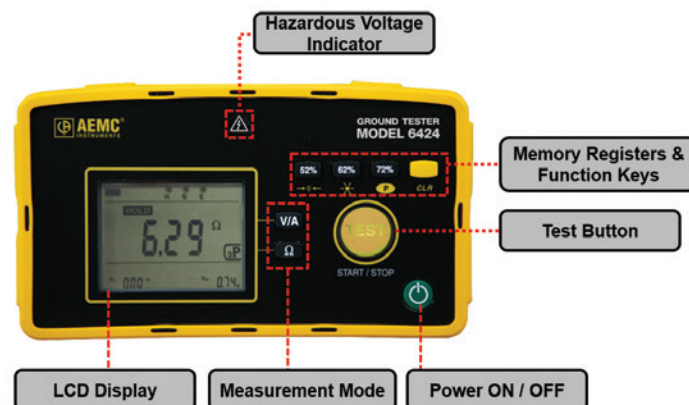


Live voltage is displayed when the V/A function is selected and test leads are connected to AC or DC voltage (Model 6424)



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

#### FRONT PANEL - 6424



# GROUND RESISTANCE TESTERS

## 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 and Memory				–	✓	✓**	Digital	Voltage Displayed (noise icon, buzzer)	✓	–	
6417	2141.02	0.01 to 1500Ω	Battery	Clamp-On Ground Resistance Tester w/Alarm, Memory and Bluetooth communication				–	✓	✓**	Digital		✓	–	
6418	2141.03	0.01 to 1200Ω	Battery	Clamp-On Ground Resistance Tester w/Alarm and Memory				–	✓	✓**	Digital	Noise Icon	–		
6422	2135.55	0.05 to 50kΩ	Battery	✓	–						✓	Digital	Noise Icon	–	
6422 Kit 150FT	2135.56	0.05 to 50kΩ	Rechargeable Battery	✓	–						✓	Digital	Noise Icon	–	
6424	2135.57	0.05 to 50kΩ	Rechargeable Battery	✓	–						✓	Digital	Noise Icon	–	
6424 Kit 150FT	2135.58	0.05 to 50kΩ	Rechargeable Battery	✓	–						✓	Digital	Noise Icon	–	
6424 Kit 300FT	2135.59	0.05 to 50kΩ	Rechargeable Battery	✓	–						✓	Digital	Noise Icon	–	
GroundFlex® Field Kit Model 6474	2136.03	0.001Ω to 99.99kΩ	Rechargeable Battery	–	✓				–		✓	Digital	Voltage Displayed	–	✓
6471 (SR182 probes not included)	2135.48	0.01 to 99.99kΩ	Rechargeable Battery	✓				✓***		✓	Digital	Voltage Displayed	–		
6471	2135.49	0.01 to 99.99kΩ	Rechargeable Battery	✓				✓		✓	Digital	Voltage Displayed	–		
6471 Kit 300FT	2135.50	0.01 to 99.99kΩ	Rechargeable Battery	✓				✓		✓	Digital	Voltage Displayed	–		
6472	2135.51	0.01 to 99.99kΩ	Rechargeable Battery	✓				✓***		✓	Digital	Voltage Displayed	✓		
6472 Kit 300FT	2135.53	0.01 to 99.99kΩ	Rechargeable Battery	✓				✓***		✓	Digital	Voltage Displayed	✓		
6472 Kit 500FT	2135.54	0.01 to 99.99kΩ	Rechargeable Battery	✓				✓***		✓	Digital	Voltage Displayed	✓		
4620	2130.43	0.0 to 1999Ω	Battery	✓	–	✓	–				Digital	LED/Buzzer	–		
4620 Kit 150FT	2135.19	0.0 to 1999Ω	Battery	✓	–	✓*	–				Digital	LED/Buzzer	–		
4620 Kit 300FT	2135.20	0.0 to 1999Ω	Battery	✓	–	✓	–				Digital	LED/Buzzer	–		
4620 Kit 500FT	2135.21	0.0 to 1999Ω	Battery	✓	–	✓	–				Digital	LED/Buzzer	–		
4630	2130.44	0.0 to 1999Ω	Rechargeable Battery	✓	–	✓	–				Digital	LED/Buzzer	–		
4630 Kit 150FT	2135.22	0.0 to 1999Ω	Rechargeable Battery	✓	–	✓*	–				Digital	LED/Buzzer	–		
4630 Kit 300FT	2135.23	0.0 to 1999Ω	Rechargeable Battery	✓	–	✓	–				Digital	LED/Buzzer	–		
4630 Kit 500FT	2135.24	0.0 to 1999Ω	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