

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 to 600) VAC/DC			
Resolution	-			0.1 V			
Accuracy	-			± (1 % R + 1 ct)			
Current							
Range	-			(0.5 to 60.00) Aac (requires optional MN72 probe)			
Ground Resistance (2P Mode)							
Measurement Range	(0.05 to 99.99) Ω, (80.0 to 999.9) Ω, (0.80 to 9.999) kΩ, (8.00 to 50.00) kΩ						
Resolution	0.01 Ω, 0.1 Ω, 1 Ω, 10 Ω						
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 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 50.00) kΩ
Resolution	0.01 Ω	0.1 Ω	1 Ω	0.01 Ω	0.1 Ω	1 Ω	10 Ω
Accuracy	± (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			
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 h			
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) in (223 x 126 x 70) mm						
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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FEATURES

- Simple, one button operation - eliminates errors in testing
- Test button turns green when measurement is stable
- 2 P resistance measurement up to 50 k Ω
- 3 P ground resistance measurement up to 2 k Ω (Model 6422) up to 50 k Ω (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 Hz 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 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

ACCESSORIES/REPLACEMENTS

Catalog #2135.39

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

Catalog #2153.06

MN72 AC Current Probe (6424 only)

CATALOG #5000.92

Calibration Checker



CATALOG #5000.92

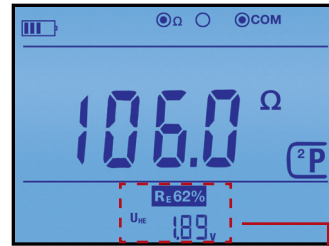


CATALOG #2153.06



KITS AVAILABLE SHOWN: CATALOG #2135.35

FUNCTIONAL DISPLAYS



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

Model 6424



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

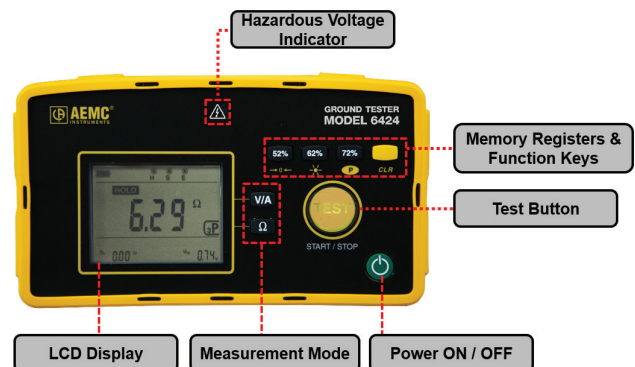


Live voltage is displayed when the V/A function is selected and test leads are connected to AC or DC voltage (Model 6424)



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

FRONT PANEL - 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

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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	DISPLAY	ADJUSTABLE FREQUENCY	SWEEP FREQUENCY
6422	2135.55	0.05 Ω to 2 kΩ	Battery	✓		- / -		-		Digital	Auto (128 or 256) Hz	-
6422 Kit 150 FT	2135.56	0.05 Ω to 2 kΩ	Battery	✓		- / -		-		Digital	Auto (128 or 256) Hz	-
6424	2135.57	0.05 Ω to 50 kΩ	Rechargeable Battery	✓		- / -		-		Digital	Auto (128 or 256) Hz	-
6424 Kit 150 FT	2135.58	0.05 Ω to 50 kΩ	Rechargeable Battery	✓		- / -		-		Digital	Auto (128 or 256) Hz	-
6424 Kit 300 FT	2135.59	0.05 Ω to 50 kΩ	Rechargeable Battery	✓		- / -		-		Digital	Auto (128 or 256) Hz	-
GroundFlex® Field Kit Model 6474	2136.03	0.001 Ω to 99.99 kΩ	Rechargeable Battery	-	✓	✓ / -	✓		-	Digital	Auto (41 to 5078) Hz	✓
6471 (SR182 probes not included)	2135.48	0.001 Ω to 99.99 kΩ	Rechargeable Battery	✓		✓ / ✓	✓		✓***	Digital	Auto (41 to 513) Hz	✓
6471	2135.49	0.001 Ω to 99.99 kΩ	Rechargeable Battery	✓		✓ / ✓	✓			Digital	-	✓
6471 Kit 300 FT (with probes)	2135.50	0.001 Ω to 99.99 kΩ	Rechargeable Battery	✓		✓ / ✓	✓			Digital	-	✓
6471 Kit 300 FT (no probes)	2135.60	0.001 Ω to 99.99 kΩ	Rechargeable Battery	✓		✓ / ✓	✓			Digital	Auto (41 to 513) Hz	✓
6471 Kit 500 FT (no probes)	2135.61	0.001 Ω to 99.99 kΩ	Rechargeable Battery	✓		✓ / ✓	✓			Digital	Auto (41 to 513) Hz	✓
6472	2135.51	0.001 Ω to 99.99 kΩ	Rechargeable Battery	✓		✓ / ✓	✓		✓***	Digital	Auto (41 to 5078) Hz	✓
6472 Kit 300 FT	2135.53	0.001 Ω to 99.99 kΩ	Rechargeable Battery	✓		✓ / ✓	✓		✓***	Digital	Auto (41 to 5078) Hz	✓
6472 Kit 500 FT	2135.54	0.001 Ω to 99.99 kΩ	Rechargeable Battery	✓		✓ / ✓	✓		✓***	Digital	Auto (41 to 5078) Hz	✓
4620	2130.43	(0.0 to 1999) Ω	Battery	✓		✓ / -	✓		-	Digital	-	-
4620 Kit 150 FT	2135.19	(0.0 to 1999) Ω	Battery	✓		✓ / -	✓*		-	Digital	-	-
4620 Kit 300 FT	2135.20	(0.0 to 1999) Ω	Battery	✓		✓ / -	✓		-	Digital	-	-
4620 Kit 500 FT	2135.21	(0.0 to 1999) Ω	Battery	✓		✓ / -	✓		-	Digital	-	-
4630	2130.44	(0.0 to 1999) Ω	Rechargeable Battery	✓		✓ / -	✓		-	Digital	-	-
4630 Kit 150 FT	2135.22	(0.0 to 1999) Ω	Rechargeable Battery	✓		✓ / -	✓*		-	Digital	-	-
4630 Kit 300 FT	2135.23	(0.0 to 1999) Ω	Rechargeable Battery	✓		✓ / -			-	Digital	-	-
4630 Kit 500 FT	2135.24	(0.0 to 1999) Ω	Rechargeable Battery	✓		✓ / -	✓		-	Digital	-	-

* 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.

CLAMP-ON

AEMC MODEL NUMBER	AEMC CATALOG NUMBER	RESISTANCE RANGE	POWER SOURCE	VOLTAGE INDICATION	INDUCTANCE MEASUREMENT- mH	SELETABLE FREQUENCY	ALARM	MEMORY	BLUETOOTH
6416	2141.01	(0.01 to 1500) Ω	Battery	Voltage Displayed (noise icon, buzzer)	✓		3 separate alarms (Ω, V and A)	300 measurements	-
6417	2141.02	(0.01 to 1500) Ω	Battery	Voltage Displayed (noise icon, buzzer)	✓		3 separate alarms (Ω, V and A)	2000 measurements	Yes
6418	2141.03	(0.01 to 1200) Ω	Battery	Noise Icon	-	✓	2 separate alarms (Ω and A)	300 measurements	-