

# 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			
<b>ELECTRICAL</b>							
<b>Voltage</b>							
Measurement Range	-			(0.1 to 600) VAC/DC			
Resolution	-			0.1 V			
Accuracy	-			± (1 % R + 1 ct)			
<b>Current</b>							
Range	-			(0.5 to 60.00) Aac (requires optional MN72 probe)			
<b>Ground Resistance (2P Mode)</b>							
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)						
<b>Ground Resistance (3P Mode)</b>							
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			
<b>GENERAL</b>							
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						
<b>SAFETY</b>							
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)

# GROUND RESISTANCE TESTERS

## MULTI-FUNCTION

### MODELS 6422 & 6424

#### 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 $\Omega$
- 3 P ground resistance measurement up to 2 k $\Omega$  (Model 6422) up to 50 k $\Omega$  (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 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

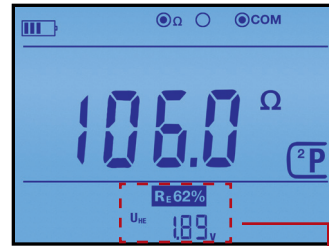


CATALOG #2153.06



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

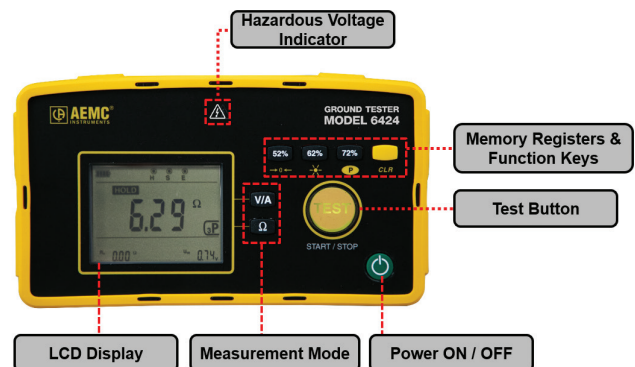


Live voltage is displayed when the V/A function is selected and test leads are connected to AC or DC voltage (Model 6424)



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

# 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	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	-