

# GROUND RESISTANCE TESTERS

## MULTI-FUNCTION



### GROUND FLEX® FIELD KIT

Test active tower grounds safely without de-energizing or disconnecting any cables

Unique in the industry!



DataView®

### SPECIFICATIONS

MODELS		6472 & 6474					
ELECTRICAL	3-POINT METHOD	4-POINT & SELECTIVE METHODS	GROUND MEASUREMENT WITH 2 CLAMPS	SOIL RESISTIVITY	GROUND POTENTIAL MEASUREMENT	DC RESISTANCE MEASUREMENT	MEASUREMENTS WITH 6474
<b>Range (Auto-Ranging)</b>	0.09 Ω to 99.9 kΩ	0.011 Ω to 99.99 kΩ	(0.1 to 500) Ω	0.01 Ω to 99.9 kΩ	0.01 mV to 65.00 V	0.02 Ω to 99.99 kΩ	0.067 Ω to 99.99 kΩ
<b>Resolution</b>	(0.01 to 100) Ω	(0.001 to 10) Ω	(0.01 to 1) Ω	(0.01 to 100) Ω	(0.01 to 10) mV	2 wires: (0.01 to 100) Ω 4 wires: (0.001 to 10) Ω	(0.001 to 10) Ω
<b>Accuracy</b>	± (2 % + 1 count)		± (10 % + 1 count)	± (2 % + 1 count)	± (5 % + 1 count)	± (2 % + 2 counts)	± (5 % + 1 count)
<b>No-Load Voltage</b>	(10, 16, 32 or 60) Vrms (Not applicable w/2-clamp method)					± 16 Vdc	(10, 16, 32 or 60) Vrms
<b>Measurement Frequency</b>	(41 to 5078) Hz		Auto: 1611 Hz Manual: (128, 1367, 1611, or 1758) Hz	(41 to 128) Hz	(41 to 5078) Hz	DC	(41 to 5078) Hz
<b>Coupling Measurement</b>	Yes	-					
<b>Auxiliary Rod Resistance Measurement</b>	0.14 Ω to 99,9 kΩ		-				0.14 Ω to 99,9 kΩ
<b>Voltage Interference</b>	Maximum 60 V peak						
<b>Soil Resistivity</b>	-		Wenner and Schlumberger		-		
<b>Type of Measurement</b>	3 wires	4 wires	2 clamps	4 wires	3 wires	2 or 4 wires	GroundFlex®
<b>Measurement Current</b>	> 200 mAac		< 26 ARMS (w/SR182) < 5 ARMS (w/MN82)	> 200 mAac		> 200 mAac	> 200 mAac
<b>MECHANICAL</b>							
<b>Memory/Communication</b>	512-record memory / Optically isolated USB						
<b>Dimensions/Weight</b>	(10.7 x 9.84 x 5.04) in (272 x 250 x 128) mm / Model 6472: 7.05 lb (3.2 kg) / Model 6474: 5.07 lb (2.3 kg)						
<b>Safety</b>							
<b>Safety Rating</b>	50 V CAT IV, complies with IEC 61326-1 / IEC 61010 / IEC 61557-1-4-5						

Consult factory for NIST Calibration prices

#### GROUND TESTER 6472 KIT-500 FT

Includes meter, rechargeable NiMH batteries, optical USB cable, power adapter (110/240) V with power cord 115 V US, (2) 500 ft color-coded leads on spools (red/blue), (2) 100 ft color-coded leads (hand-tied, green/black), (1) 30 ft lead (green), (4) T-shaped auxiliary ground electrodes, (1) 100 ft AEMC® tape measure, DataView® software, ground tester workbook, user manual on USB drive, (1) carrying bag for meter and (1) carrying bag for kit.

#### GROUND FLEX® FIELD KIT 6474

Catalog #2136.03 (Includes Ground Tester 6472 KIT-500 FT)

Includes GroundFlex® Adapter Model 6474, Ground Tester Model 6472, (4) GroundFlex® sensors (16 ft/5 m) with (12) color-coded rings, connection lead, (2) extension leads on H reel (black/green) with color-coded alligator clips, (1) extra black and green alligator clip, (6) BNC extension leads, (1) calibration loop, (3) C-clamps, a carrying case with wheels and handle for meters, carrying bag for meter and kit, (1) inverter 12 Vdc to 120 Vac 200 watt (vehicle use) and user manual.

#### SHOWN: 6474 KIT



# GROUND RESISTANCE TESTERS

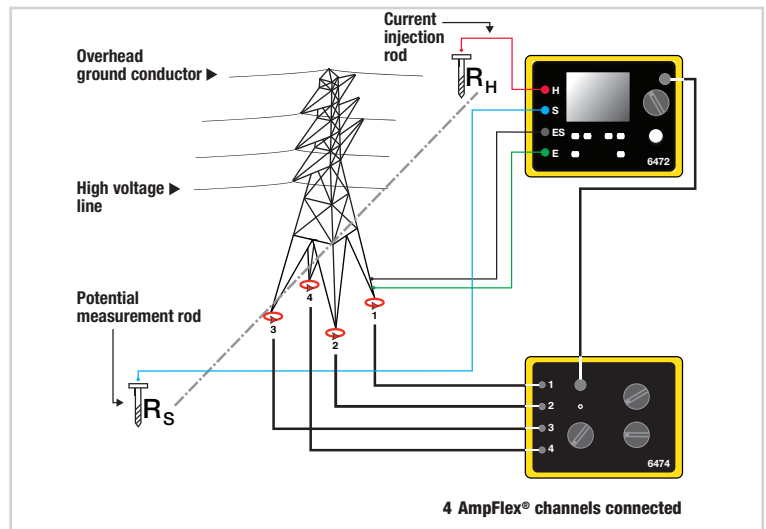
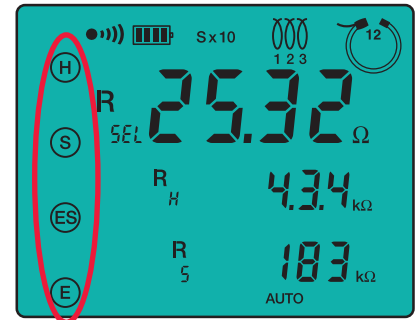
## GROUND FLEX® FIELD KIT

### FEATURES

- Ground Integrity Measurement
- 3- and 4-Point Fall-of-Potential measurement with manual or automatic frequency selection
- 4-Point soil resistivity measurement with automatic calculation of Rho ( $\rho$ ) and user selection of the Wenner or Schlumberger test method
- 2- and 4-Wire DC resistance measurement (Bond testing) with automatic polarity reversal
- 3-Point Earth coupling measurement
- Automatic frequency scan from (41 to 5078) Hz for optimum test accuracy in electrically noisy environments
- Selectable test voltage limit of (10,16, 32, or 60) V with up to 250 mA of test current
- Automatic recognition of all electrode connections and measurement of their resistance value
- Determines bonding condition of overhead ground conductors
- Auto Power OFF management
- Optically isolated USB communication
- Remote set up and operation of all measurements using DataView® software supplied
- 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)
- Includes DataView® software for data retrieval, real-time display, analysis, automatic report generation and system configuration

### AUTOMATIC RECOGNITION AND DISPLAY OF INPUT CONNECTIONS TO MATCH TEST

The connections are displayed and flash if incorrect or absent for the test selected.



### GROUND MEASUREMENT ON TOWERS WITH GROUND CABLE

High-voltage lines are usually equipped with a ground cable to allow lightning to discharge to ground via the tower. As all the towers are connected to this conductor, all the tower's resistances are in parallel. This means it is impossible to measure tower resistance using traditional 3-Point methods unless the ground cable is disconnected, which is a dangerous and time-consuming operation.

### ACCESSORIES

#### CAT #2135.87

GroundFlex® Sensor  
32 ft (10 m)  
(Model 6474 only)

#### CAT #2135.72

Model SR182  
AC Current Probe  
(Models 6471 & 6472)

#### CAT #2135.86

Lead – BNC 150 ft (46 m)  
M/F Extension Lead  
(Model 6474 only)



#### CATALOG NO.

2136.03

#### DESCRIPTION

GroundFlex® Field Kit Model 6474 (Tower Tester)

# 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	-