

TEST & MEASUREMENT INSTRUMENTS



VOLUME 19



Cable Testers
Clamp-On Meters
Current Measurement Probes
Data Loggers
Digital Multimeters
Electrical Test Tools
Environmental Testers
Ground Resistance Testers
Leakage Current Meters & Probes
Megohmmeters
Micro-Ohmmeters
Oscilloscopes
Power Quality Analyzers, Meters & Loggers
Test and Measurement (Lab) Instruments
Thermal Imaging Cameras
Transformer Ratiometers

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

WWW.AEMC.COM

TECHNICAL HOTLINE: (800) 343-1391



HOW TO ORDER

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If you have difficulty locating a North American distributor near you, contact AEMC® Instruments or your local AEMC® Instruments sales representative or check www.aemc.com for a distributor in your area by clicking on the "Where to Order" tab:

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FOR ORDERING INFORMATION (WITHIN NORTH AMERICA):

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WHEN ORDERING, PLEASE USE THE CATALOG NUMBER AND PRODUCT DESCRIPTION.

Example:

QUANTITY	CATALOG #	DESCRIPTION
1	2141.02	Ground Resistance Tester Model 6417 (Clamp-On) with memory and alarm

A separate price list is available. Contact your AEMC® Instruments distributor or AEMC® Instruments for an up-to-date copy.

AEMC® Instruments reserves the right to discontinue models at any time, or change specifications, price or design without notice and without incurring any obligation. Please contact us, your local representative, agent or distributor for updates.

CHAUVIN ARNOUX®, INC.
D.B.A. AEMC® INSTRUMENTS
Chauvin Arnoux One Source®

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Dover, NH offices



Foxborough, MA offices

AEMC® Instruments with US operations in Dover, New Hampshire and Foxborough, Massachusetts began operations here in 1976 in downtown Boston. As a legal entity, AEMC is Chauvin Arnoux®, Inc. d.b.a. AEMC Instruments and is affiliated with Chauvin Arnoux SA in France founded in 1893 and today is still a test and measurement instrument industry leader. Our products are backed by over 125 years of experience in test and measurement equipment, and encompass the latest international standards for quality and safety.

AEMC manufactures professional electrical test and measurement instruments for the industrial, commercial and utility marketplace. Product reliability, excellent customer support and expert technical assistance are our top priority.

AEMC is the worldwide industry leading manufacturer of current measurement probes and is an industry leader in ground resistance testers, insulation resistance testers and power quality and energy meters and loggers. Our full product line also includes clamp-on meters, ratiometers, power meters, harmonic power meters, data loggers, thermal imagers, lightmeters, oscilloscopes, micro-ohmmeters and numerous other electrical test tools.

Our Megohmmeter line finds its roots in the early 1900s when Chauvin Arnoux introduced its first model made from a galvanometer and a decade resistance box combined with a DC power source. Today, AEMC's megohmmeters are digital and incorporate many intelligent features. Timers, alarms and variable test voltages are standard features. AEMC has introduced a unique line of professional 1000, 5000, 10,000, and 15,000 volt megohmmeters with added features, such as: data storage; automated tests and results (internal calculations of DAR, PI, DD and other factors); PC Control; and report compliant software.

Our Ground Tester line finds its roots in the early 1930s. A null balance galvanometer, a decade resistance box and a DC power source combined to make one of the first ground testers on the market. Over 20 years ago, AEMC revolutionized the ground testing market by offering clamp-on ground resistance testers, eliminating the need to disconnect the system to test it and eliminating the need for auxiliary rods to do the test. Several generations of improvements and additional features has strengthened AEMC's position as the industry standard and leader in clamp-on ground resistance testers.

We again led the way in fall-of-potential ground testing with the introduction of an automatic tester in 2006 that automatically locked onto the optimum frequency to test at and calculated all test results for soil resistivity, ground resistance earth coupling and bond resistance, as well as, stored the test data and generated

computer reports including fall-of-potential plots. Our latest introduction, a tower test system, again is an innovative design providing the ability to test tower grounding systems without de-energizing them or removing the overhead ground conductor, saving considerable time and money and improving operator safety.

AEMC's line of current probes has long been the standard for Power Quality analysis with the world leaders in power quality instruments standardizing on these probes for their current measurement source. We also manufacture and sell a wide variety of Power and Power Quality measuring instruments ranging from clamp-on meters to single and three-phase power quality analyzers and digital power meters.

AEMC's DataView® software designed to configure instruments, run tests, download and store results and generate final reports was added to the product offering in late 1990s. Today DataView® is compatible with our Megohmmeters, Ground Resistance Testers, Micro-Ohmmeters, Power Quality Analyzers, Data Loggers and Multi-meters, thus offering the user a standard for interface and control to all its products eliminating the need to learn new software every time. Additionally, tablet and Smartphone Apps based on the Android platform are now available free of charge for our power, ground and clamp-on products.

In addition to its product offering AEMC offers a one day accredited course in ground resistance testing. The Ground Resistance Testing seminar is designed to give the attendee all the information needed to understand proper sizing and testing of grounding systems. Through a combination of classroom instruction and hands-on demonstrations, they will learn the various types of ground resistance tests, the proper application for each test and how to correctly operate the equipment used in conducting these tests. In addition, the student will have all the information to conduct ground resistance testing correctly and efficiently, saving them substantial time and money in the future. Classes on Power Quality were added in 2016.

Sales and marketing are located in Foxborough, MA while production, product service and NIST calibration are located in Dover, NH. AEMC products can be purchased through a worldwide network of distributors who can be found on our website at www.aemc.com. We also offer custom products on an OEM basis.

Visit our website at www.aemc.com to get information on our products and services and to get detailed information on attending one of our seminars. AEMC prides itself as your one source for test and measurement instruments and training.

CABLE TESTERS



SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

CABLE TESTERS

CABLE LOCATOR

MODEL 6681

Detects and locates faults in electrical cables, telecommunication cables, live and de-energized conductors buried or in walls

SPECIFICATIONS

MODEL	6681 (TRANSMITTER)
Display	LCD screen with display of functions and bargraph
Output Signal Frequency	125kHz
External Voltage Measurement Range	12 to 300VAC/DC
Functions	Digital coding of signals for easy signal identification, selection of transmission signal code, flashlight
Power Supply	9V battery
Dimension	7.48 x 3.5 x 1.67" (190 x 89 x 42.5mm)
Weight	14.81oz (420g) with battery
Electrical Safety	300V CAT III

MODEL	6681 (RECEIVER)
Display	Backlit LCD with display of functions and bargraph, transmission code, receiver and transmitter battery-charge status
Detection Depth	
Single-Pole Application	0 to 6ft (0 to 2m)
Two-Pole Application	0 to 1.6ft (0 to 0.5m)
Single Loopback Line	Up to 8.2ft (2.5m)
Line Voltage	Approximately 0 to 1.3ft (0 to 0.4m)
Functions	Automatic shutdown, automatic or manual adjustment of reception sensitivity, flashlight
Power Supply	6 x 1.5V AAA batteries
Dimension	9.5 x 3.07 x 1.5" (241.5 x 78 x 38.5mm)
Weight	12oz (360g) with battery
Electrical Safety	300V CAT III



FEATURES

- Operates in both single-pole and two-pole modes
- Locates and traces hidden cables
- Detects and locates line breaks
- Detects faults in floor radiant heating systems
- Detects constricted sections of non-metallic pipes
- Detects circuit breakers/fuses
- Detects short circuits
- Backlight and flashlight functions
- Compliant with standards electrical safety standard EN 61010-1 and electromagnetic compatibility standard EN 61326-1

PRODUCT INCLUDES

Soft carrying case, set of 2 color-coded (red/black) leads w/4mm banana plugs, set of 2 color-coded alligator clips, adapter-110V outlet w/banana plugs, 1 mini ground rod, 9V battery, 6 AAA batteries and user manual.



CATALOG NO.	DESCRIPTION
2127.85	Cable Locator Model 6681



MODEL CA7024
Fault Mapper Cable Length Meter
& Fault Locator Alphanumeric TDR



MODEL CA7027
Fault Mapper Pro® Telephone
Cable Tester / Graphical TDR

MODELS CA7024 & CA7027

Maps and pinpoints the locations of faults on power and communication cables

FEATURES

Built-in tone generator for tracing and locating cables
Large high-visibility blue electroluminescent backlit display
Compatible with industry standard Tone Receivers

MODEL CA7024

- Hand-held Cable Length Meter and Fault Locator for multiple conductor cables
- Detects opens and shorts and the distance to them from one end of the cable
- Measure cable length up to 6000ft or 2000m (selectable)
- Automatic cable impedance compensation
- Built-in library of most common cables and their Velocity of Propagation (Vp)
- Manual selection of Vp for all cables not found in library
- User programmable cable library with 15 storage positions
- Vp setting displayed along with length and cable type (if in library)

MODEL CA7027

- Works on de-energized conductors
- 11 range scales indicating cable faults and terminations up to 19,000ft (6000m) in feet or meters
- Unique graphical and digital display of fault information and length
- Detects opens, shorts, taps, faulty taps, bridge taps, splitters, high resistance, wet cables, splices and more
- Identifies impedance mismatches
- Works with twisted pair, parallel and coaxial cable
- Dead band less than 9ft
- Selectable cable impedance (25Ω, 50Ω, 75Ω, 100Ω)
- Over-voltage protection up to 250V
- Adjustable cursor assists in locating faults and termination

SPECIFICATIONS



MODEL	CA7024	CA7027
MEASUREMENTS		
Range @ Vp = 70%	6000ft or 2000m (selectable)	23, 49, 98, 197, 394, 820, 1640, 3280, 6560, 9850, 19000ft
Range Selection	-	Manual range control
Resolution	0.1ft up to 100ft, then 1ft (0.1m up to 100m, then 1m)	Approximately 1% of selected range
Accuracy	±2% of Reading	±1% of range
Minimum Cable Length	12ft (4m)	1.5ft (0.5m)
Cable Library	Built-in, user selectable and user programmable	-
Sensitivity	-	Minimum 3 pixel return on a fault at 4km on 0.6mm O, PE, TP
Velocity of Propagation (Vp)	Adjustable from 0 to 99%	Adjustable from 1% to 99%
Output Pulse	5V (peak to peak) into open circuit; nanosecond rise Step Function	+5V peak to peak into an open circuit
Output Pulse Width	-	3 ns to 3 ms, Automatic with range
Scan Rate	-	2 scans / second or scan held
Output Impedance	Automatic compensation	Selectable between 25, 50, 75 & 100Ω
Display Resolution	128 x 64 pixel graphical LCD	-
Tone Generator	Oscillating 810 to 1110Hz	
Voltage Warning	Triggers at >10VAC/DC	-
Power Source	Four 1.5V AA Alkaline batteries (included)	
Auto Power OFF	After three minutes	Selectable 1, 2, 3, 5 minutes or disabled
Weight	12oz (350g)	

MODEL CA7024

Soft carrying case, BNC pigtail cable with alligator clips, four 1.5V AA batteries and user manual.



MODEL CA7027

Soft carrying case, set of two color-coded (red/black) leads, test probes, alligator clips, four 1.5V AA batteries and user manual.



PRODUCT INCLUDES

CATALOG NO.	DESCRIPTION
2127.80	Fault Mapper Model CA7024 (Cable Fault / Length Tester – Alphanumeric TDR)
2127.84	Fault Mapper Pro® Model CA7027 (Telephone Cable Tester / Graphical TDR)

CABLE TESTERS

WIRE MAPPER PRO LAN & CABLE TESTER

MODEL CA7028

The only wire-mapper in its class with graphical and digital display of fault type and fault location

SPECIFICATIONS

MODEL	CA7028
MEASUREMENTS	
Range	500ft or 150m (selectable)
Accuracy	±5% of Reading
Cable Type	UTP, STP, FTP and SSTP
Faults Indicated	Short Circuit Pair, Open Circuit Wire, Short Between Pairs, Split/Cross Pairs, Pair Reversals, Shield Continuity
Fault Location	Near end, remote end, or distance to fault
Fault Display	All fault and setting info displayed textually and graphically
Wiring Schemes	TIA 568A/B, USOC and ISDN
Service Indication	Telephone, 10BaseT, 100Mbit+, Token Ring
Voltage Warning	Audible and visual warning of TNV (Telecom Network Voltage)
Test Inhibit	Inhibits testing in the presence of live voltages
Tone Generator	Oscillating 810 to 1110Hz
Power Source	Four 1.5V AA Alkaline batteries (included)
Display Backlight	Blue electroluminescent
Remote Display	Green/Red Pass/Fail LED
Auto Power OFF	After three minutes
Weight	Main unit: 12oz (350g); Remote unit: 1.5oz (40g)

PRODUCT INCLUDES

Soft carrying case, remote ID (#1), two patch cords, four 1.5V AA batteries, remote unit and user manual.



FEATURES

- Hand-held LAN Cable Mapping and Troubleshooting Tester
- Indicates all common wiring faults including split pairs, shorts, opens, reversed pairs and crossed wires
- Unique graphical and digital display of fault information and length
- Active remote unit indicates Pass/Fail at remote end by green/red LED during the test
- Indicates distances to opens and shorts and identifies location
- Display fault location up to 500ft (150m) (selectable)
- Built-in tone generator for tracing and locating cables
- Built-in service check function to detect telephone, 10BaseT, 100Mbit+ and Token Ring
- Visual and audible warning of live telephone network voltages
- Works with all category cables
- Rugged design weighs less than 12oz (350g)
- Large high-visibility blue electroluminescent backlit display
- Complete with remote unit and mini patch leads
- Works with TIA 568A/B, USOC and ISDN wiring schemes
- Compatible with industry standard Tone Receivers

CATALOG NO.

DESCRIPTION

2127.82

Wire Mapper Pro Model CA7028 (LAN Cable Tester)

CLAMP-ON METERS



SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

CLAMP-ON METERS

200, 400 & 600 SERIES
GENERAL PURPOSE METERS

MODELS 203/403/603 & 205/405/605

Users can be sure of working in a higher degree of safety with 1000V CAT IV rated meters (model dependent)



SPECIFICATIONS

MODELS	203/403/603 TRMS	205/405/605 TRMS
ELECTRICAL		
Current AC (rms)	600/1000/2000A	600/1000/2000A
Current DC	900/1500/3000A	900/1500/3000A
Current AC+DC	-	900/1500/3000A
Voltage AC (rms)	1000/1000/1000V	1000/1000/1000V
Voltage DC	1000/1000/1000V	1000/1000/1000V
Voltage AC+DC	-	1000/1000/1000V
Ohms	60/100/100kΩ	60/100/100kΩ
Continuity (Buzzer)	Yes (< 40Ω)	Yes (< 40Ω)
Diode Test	Yes	Yes
Total Harmonic Distortion	-	Yes
Single- and 3-Phase Real Power (AC, DC, AC/DC)*	-	600/1000/2000kW
Single- and 3-Phase Reactive Power (AC, DC, AC/DC)*	-	600/1000/2000kvar
Single- and 3-Phase Apparent Power (AC, DC, AC/DC)*	-	600/1000/2000kVA
Temperature (int., ext., C°, F°)	Yes	-
Voltage Frequency (Hz)	20kHz	20kHz
Current Frequency (Hz)	3/2/1kHz	3/2/1kHz
Power Function (W, var, VA)	-	Yes
Power Factor	-	Yes
THD-r/THD-f	-	Yes
Adapter (AC/DC)	0 to 6V (203) 0 to 10V (403/603)	-
Phase Rotation	-	Yes (2 wire)
Auto AC/DC	Yes (V & A)	Yes (V & A)
Auto Power OFF	Yes	Yes
Hold Button	Yes	Yes
Backlight Button	Yes	Yes
Min/Max Button	Yes	Yes
True InRush® Function	Yes	Yes
Relative Function	Yes	Yes
Peak ± Function	-	Yes
Hz Button	Yes	Yes

*3-phase measurements assume balanced load



*Models 203 & 205 only

200 Series

400 & 600 Series
Housing Only

FEATURES

- 1000V CAT IV Rated (Models 403/603 & 405/605)
- UL 94 VI flame retardant self-extinguishing
- 10,000-count (400 & 600 Series) and 6000 count (200 Series) blue electroluminescent backlit display
- Measures up to 1000VAc (1400V peak), 1000Vdc and AC+DC with resolution to 10mV
- Measures up to 2000Aac and 3000Adc (model dependent)
- Measures single- and three-phase power (real, reactive and apparent) up to 3MW with resolution to 1W (model dependent)
- Measures W, VA, var and PF for single- and three-phase balanced systems (Models 205, 405 & 605)
- Measures frequency to 20kHz with 0.1Hz resolution
- Auto selects AC or DC measurement voltage
- True InRush® current measurement with 100mS capture
- Jaw opening up to 1.33" (34mm) (200 series), 1.89" (48mm) (400 series) and 2.36" (60mm) (600 series)
- K-thermocouple and adapter included (Models 203, 403 & 603)

CATALOG NO. DESCRIPTION

2139.12	Clamp-On Meter Model 203 (TRMS, 1000VAc/dc, 600Aac/900Adc, Ohms, Continuity, Temperature)
2139.40	Power Clamp-On Meter Model 205 (TRMS, 1000VAc/dc, 600Aac/900Adc, Ohms, Continuity, Phase Rotation, Power, THD)
2139.21	Clamp-On Meter Model 403 (TRMS, 1000VAc/dc, 1000Aac/1500Adc, Ohms, Continuity, Temperature)
2139.50	Power Clamp-On Meter Model 405 (TRMS, 1000VAc/dc, 1000Aac/1500Adc, Phase Rotation, Ohms, Continuity, Power, THD)
2139.31	Clamp-On Meter Model 603 (TRMS, 1000VAc/dc, 2000Aac/3000Adc, Ohms, Continuity, Temperature)
2139.60	Power Clamp-On Meter Model 605 (TRMS, 1000VAc/dc, 2000Aac/3000Adc, Phase Rotation, Ohms, Continuity, Power, THD)

CLAMP-ON METERS

400 & 600 SERIES BLUETOOTH EDITION

POWER AND HARMONIC METERS

MODELS 407 & 607

Now available with
Android™ mobile application



400 & 600 Series
Housing Only

FEATURES

- 1000V CAT IV Rated
- UL 94 VI flame retardant self-extinguishing
- 10,000-count blue electroluminescent backlit display
- Measures up to 1000VAC (1400V peak), 1000VDC and AC+DC with resolution to 10mV
- Measures up to 2000AAC and 3000AAC (Model 607)
- Measures W, VA, var and PF for single- and three-phase balanced systems
- Measures single- and three-phase power (real, reactive and apparent) up to 3MW with resolution to 1W
- Measures frequency to 20kHz with 0.1Hz resolution
- Auto selects AC or DC measurement
- True InRush® current measurement with 100mS capture
- Measures harmonics up to the 25th
- Records up to 1000 measurements
- Bluetooth communication (communicates up to 30ft)
- Includes FREE DataView® software for download and report generation
- Jaw opening up to 1.89" (48mm) (400 series) and up to 2.36" (60mm) (600 series)

SPECIFICATIONS

MODELS	407 TRMS	607 TRMS
ELECTRICAL		
Current AC (rms)	1000A	2000A
Current DC	1500A	3000A
Current AC+DC	1500A Peak	3000A Peak
Voltage AC (rms)	1000V	1000V
Voltage DC	1000V	1000V
Voltage AC+DC	1000V	1000V
Ohms	100kΩ	100kΩ
Continuity (Buzzer)	Yes (< 40Ω)	Yes (< 40Ω)
Total Harmonic Distortion	Yes	Yes
Individual Harmonics (to 25th)	Yes	Yes
Single- and 3-Phase Real Power (AC, DC, AC/DC)*	1000kW	1000kW
Single- and 3-Phase Reactive Power (AC, DC, AC/DC)*	1000kvar	2000kvar
Single- and 3-Phase Apparent Power (AC, DC, AC/DC)*	1000kVA	2000kVA
Voltage Frequency (Hz)	20kHz	20kHz
Current Frequency (Hz)	2kHz	1kHz
Power Function (W, var, VA)	Yes	Yes
Power Factor	Yes	Yes
THD-r/THD-f	Yes	Yes
Auto AC/DC	Yes (V & A)	Yes (V & A)
Auto Power OFF	Yes	Yes
Hold Button	Yes	Yes
Backlight Button	Yes	Yes
Min/Max Button	Yes	Yes
True InRush® Function	Yes	Yes
Peak ± Function	Yes	Yes
Harmonics Function	Yes	Yes
Rec (Record) Function	Yes	Yes
Wireless BT (Bluetooth) Function	Yes	Yes
Record (Recordings)	1000	1000
Hz Button	Yes	Yes

*3-phase measurements assume balanced load



PRODUCT INCLUDES

MODELS 407 & 607

Hard carrying case, set of two color-coded silicone test leads, test probes and alligator clips, Bluetooth USB adapter, four 1.5V AA batteries, safety information sheet, and USB drive supplied with DataView® software and user manual.

CATALOG NO.	DESCRIPTION
2139.51	Power Clamp-On Meter Model 407 (TRMS, 1000VAC/DC, 1000AAC/1500ADC, Ohms, Continuity, Energy, Harmonics, Power, THD, Recording)
2139.61	Power Clamp-On Meter Model 607 (TRMS, 1000VAC/DC, 2000AAC/3000ADC, Ohms, Continuity, Energy, Harmonics, Power, THD, Recording)



Technical Assistance (800) 343-1391

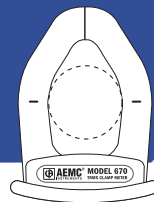
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CLAMP-ON METERS

670 SERIES

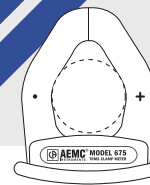
MODELS 670 & 675

Dual display simultaneously measures and displays voltage and current!



MODEL 670

Jaw Opening: 1.65" (42mm)
Conductor Size: one 750kcmil cable or two 350kcmil cables



MODEL 675

Jaw Opening: 1.58" (40mm)
Conductor Size: one 750kcmil cable or two 350kcmil cables



SPECIFICATIONS

MODELS	670 TRMS		675 TRMS	
ELECTRICAL				
AC Current				
Measuring Range	0.00 to 99.99A	100 to 1000A	0.00 to 99.99A	100 to 1000A
Resolution	0.01A	0.1A	0.01A	0.1A
Accuracy	±1.5% of Reading ±5cts (50 to 60Hz) ±2.0% of Reading ±5cts (60 to 500Hz) ±4.5% of Reading ±5cts (500Hz to 3kHz)		±1.5% of Reading ±5cts (50 to 60Hz) ±2.0% of Reading ±5cts (60 to 500Hz) ±4.5% of Reading ±5cts (500Hz to 3kHz)	
DC Current				
Measuring Range	-		0.00 to 99.99A	100.0 to 999.9A
Resolution	-		0.01A	0.1A
Accuracy	-		±1.2% of Reading ±5cts	±2.5% of Reading ±5cts
AC Voltage				
Measuring Range	0.0 to 999.9V		0.0 to 999.9V	
Resolution	0.1V		0.1V	
Accuracy	±1.0% of Reading ±5cts (50 to 60Hz) ±1.2% of Reading ±5cts (60 to 500Hz) ±2.5% of Reading ±5cts (500Hz to 3kHz)		±1.0% of Reading ±5cts (50 to 60Hz) ±1.2% of Reading ±5cts (60 to 500Hz) ±2.5% of Reading ±5cts (500Hz to 3kHz)	
Input Resistance	1MΩ		1MΩ	
DC Voltage				
Measuring Range	0.0 to 999.9V	1000 to 1400V	0.0 to 999.9V	1000 to 1400V
Resolution	0.1V	1V	0.1V	1V
Accuracy	±1% of Reading ±2cts		±1% of Reading ±2cts	
Input Resistance	1MΩ		1MΩ	
Resistance-Ohms (Ω)				
Measuring Range	0.0 to 999.9Ω	1000 to 9999Ω	0.0 to 999.9Ω	1000 to 9999Ω
Resolution	0.1Ω	1Ω	0.1Ω	1Ω
Accuracy	±1% of Reading ±3cts, 3.3Vdc (Vmax)		±1% of Reading ±3cts, 3.3Vdc (Vmax)	
Continuity (••)				
Beeper Activation	< 35Ω		< 35Ω	
Accuracy	±1% of Reading ±3cts, 3.3Vdc (Vmax)		±1% of Reading ±3cts, 3.3Vdc (Vmax)	
Frequency (Hz)				
Function	A - Hz	V - Hz	A - Hz	V - Hz
Range	1000Hz	10,000Hz	1000Hz	10,000Hz
Resolution	0.1Hz	1Hz	0.1Hz	1Hz
Accuracy	±10% of Reading ±2cts		±10% of Reading ±2cts	
Temperature (°C/°F)				
Measuring Range	-40° to 999.5°C	1000° to 1200°C	-40° to 999.5°C	1000° to 1200°C
Resolution	0.5°C	1°C	0.5°C	1°C
GENERAL				
Power Supply	One 9V, NEDA 1604 (6F22) Alkaline battery (included)			
Battery Life	(no buzzer or backlight) 35 hours		(no buzzer or backlight) 30 hours	
MECHANICAL				
Digital Display	3 ¾ digits LCD dual display (max reading 9999)		3 ¾ digits LCD dual display (max reading 9999)	
Jaw Opening	1.65" (42mm)		1.58" (40mm)	
ENVIRONMENTAL				
Operating Temperature	*-14° to 122°F (-25 to 50°C), 80% RH, non-condensing		*-14° to 122°F (-25 to 50°C), 80% RH, non-condensing	

FEATURES

- Dual display
- Standard size, full function clamp-on meter
- 1000AAC/DC current measurements (DC current on Model 675 only)
- 1400Vdc volt measurements
- TRMS measurements
- Resistance measurement to 10,000Ω
- Continuity with beeper below 35Ω
- Frequency measurements from V and A inputs
- 1ms peak function for fast capture of signals
- Hold function to "freeze" readings
- Designed to measure amps and volts at the same time
- Push-button for easy ADC zeroing
- Large, easy-to-read 10,000-count, backlit LCD display
- Includes test leads and soft carrying case

*Note: If the meter is to be used below 32°F (0°C), we suggest that the battery be replaced to ensure proper results.



PRODUCT INCLUDES

Soft carrying case, set of test leads (red/black with safety needle tips), K-type thermocouple, one 9V battery and a user manual.

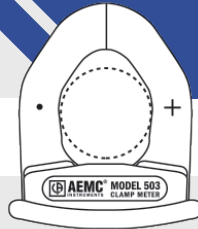
CATALOG NO. DESCRIPTION

2117.49	Clamp-On Meter Model 670 (Dual Display, TRMS, AC Amps, AC/DC Volts, Ohms, Continuity, Frequency, & Temperature)
2117.50	Clamp-On Meter Model 675 (Dual Display, TRMS, AC/DC Amps & Volts, Ohms, Continuity, Frequency & Temperature)

CLAMP-ON METERS

500 SERIES

MODEL 503



MODEL 503
Jaw Opening: 1.1" (28mm)
Conductor Size: one 500kcmil cable

Small compact size clamp-meter that fits comfortably in a tool bag



FEATURES

- Compact size - fits into your pocket
- 400Aac or 400Aac/DC current measurements
- 600Vac/DC volts measurements
- Resistance measurements to 400Ω
- Continuity with beeper below 40Ω
- Hold function to "freeze" readings
- Push-button for easy A_{dc} zeroing
- Large, easy-to-read 4000-count LCD display
- 42-segment analog bargraph
- Includes test leads and soft carrying pouch

SPECIFICATIONS

MODEL	503
AC Current (Auto-Ranging)	0.05 to 400A
Resolution	0.01A and 0.1A
Accuracy 50 to 60Hz 60 to 500Hz	±1.5% of Reading ±10cts ±2.5% of Reading ±10cts
AC Voltage (Auto-Ranging)	0.5 to 600V
Resolution	0.1V and 1V
Accuracy 50 to 60Hz 60 to 500Hz	±0.8% of Reading ±5cts ±1.5% of Reading ±5cts
Input Impedance	10MΩ
DC Current (Auto-Ranging)	0.10 to 400A
Resolution	0.01A and 0.1A
Accuracy	±2.5% of Reading ±10cts
DC Voltage (Auto-Ranging)	0.2 to 600V
Resolution	0.1V and 1V
Accuracy	±1% of Reading ±2cts
Input Impedance	10MΩ
Resistance	0.2 to 400Ω
Accuracy	±1% of Reading ±2cts
Max Test Voltage	1.5VDC
Continuity	<40Ω
Max Test Voltage	1.5VDC
Power Source	Two 1.5V AAA batteries (included)

PRODUCT INCLUDES



Soft carrying case, set of two test leads, two 1.5V AAA batteries and user manual.

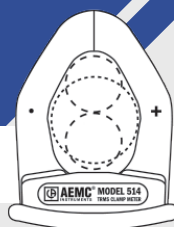
CATALOG NO.	DESCRIPTION
2117.22	Clamp-On Meter Model 503 (AC/DC, 400Aac/DC, 600Vac/DC, Ohms, Continuity)

CLAMP-ON METERS

500 SERIES

MODELS 512 & 514

Full ranges and compliance to international safety and quality standards ensure a professional and reliable tool



MODELS 512 & 514
Jaw Opening: 1.575" (40mm)
Conductor Size: one 750kcmil cable or two 350kcmil cables



SPECIFICATIONS

MODELS	512 TRMS	514 TRMS
AC Current (Auto-Ranging)	0.05 to 1000Arms	0.05 to 1000Arms
Resolution	0.01A, 0.1A and 1A	0.01A, 0.1A and 1A
Accuracy	±1.9% of Reading ±5cts	±1.9% of Reading ±5cts
	±1.9% of Reading ±5cts	±2.5% of Reading ±5cts
AC Voltage (Auto-Ranging)	0.5 to 750Vrms	0.5 to 750Vrms
Resolution	0.1V and 1V	0.1V and 1Vrms
Accuracy	±1.2% of Reading ±5cts	±1.5% of Reading ±5cts
Input Impedance	10MΩ	10MΩ
DC Current (Auto-Ranging)	-	1A to 1000A
Resolution	-	0.01A, 0.1A and 1A
Accuracy	-	±2.5% of Reading ±10cts
DC Voltage (Auto-Ranging)	0.2 to 1000V	0.2 to 1000V
Resolution	0.1V and 1V	0.1V and 1Vrms
Accuracy	±0.75% of Reading ±2cts	±1% of Reading ±2cts
Input Impedance	10MΩ	10MΩ
Resistance	0.2 to 4000Ω	0.2 to 4000Ω
Accuracy	±1% of Reading ±2cts	±1% of Reading ±2cts
Max Test Voltage	3Vdc	3Vdc
Diode Test	0.6mA	1.7mA
Open Circuit Voltage	3Vdc	3Vdc
Continuity	<40Ω	<40Ω
Max Test Voltage	3Vdc	3Vdc
Frequency (Auto-Ranging)		
CURRENT INPUT		
Range	4kHz	1Hz Resolution
	10kHz	-
Accuracy	20Hz to 10kHz	±0.1% of Reading ±1ct
Min Input Signal	4kHz	2Arms
	10kHz	-
VOLTAGE INPUT		
Range	4kHz	1Hz Resolution
	10kHz	10Hz Resolution
Accuracy	10Hz to 10kHz	±0.1% of Reading ±1ct
Min Input Signal	4kHz	5Vrms
	10kHz	5Vrms
Power Source	9V Alkaline battery (included)	
ENVIRONMENTAL		
Operating Temperature	32° to 104°F (0° to 40°C) < 80% RH, non-condensing	*-14° to 122°F (-25° to 50°C), 80% RH, non-condensing



FEATURES

- Standard size, full function clamp-on meter
- 1000AAC or 1000AAC/DC current measurements
- 750VAC or 1000VDC volt measurements
- TRMS measurements
- Resistance measurements to 4000Ω
- Continuity with beeper below 40Ω
- Frequency measurements from V and A
- Diode test
- 1ms peak function for fast capture of signals
- Hold function to "freeze" readings
- Push-button for easy ADC zeroing
- Large, easy-to-read, 4000-count LCD display
- 42-segment analog bargraph
- Includes test leads, soft carrying pouch and batteries

PRODUCT INCLUDES

Soft carrying case, set of two test leads, 9V battery and user manual.



*Note: If Model 514 is to be used below 32°F (0°C), we suggest that the battery be replaced to ensure proper results.

CATALOG NO. DESCRIPTION

2117.68	Clamp-On Meter Model 512 (TRMS, 1000AAC, 750VAC/1000Vdc, Ohms, Continuity, Hz)
2117.70	Clamp-On Meter Model 514 (AC/DC, TRMS, 1000AAC/dc, 750VAC/1000Vdc, Ohms, Continuity, Hz)

CLAMP-ON METERS

100AAC/DC LOW CURRENT

MODEL CM605

For general industrial monitoring and troubleshooting



FEATURES

- 10,000-count LCD display - excellent resolution
- 100AAC/DC Ammeter with low 10A range (1mA resolution)
- Tapered jaws for crowded wiring areas
Jaw opening:
Ø 0.60" - 15mm
Cable diameter:
Ø 0.45" - 12mm
- 600VAC/DC voltmeter
- Analog output in AAC/DC to data loggers, etc
- Auto-ranging & ADC zero push-button
- Data HOLD & PEAK functions
- Relative function to compare two measurements
- Ohm range & continuity test with beeper
- Auto Power OFF and low battery indicator
- IEC/EN 61010 safety rated & CE mark
- 600Vrms overload protection



SPECIFICATIONS

MODEL	CM605
ELECTRICAL	
AC Current	
Measurement Ranges	2 Ranges: 10A, 100A
Accuracy & Resolution	10A: $\pm 2.0\%$ of Reading ± 10 cts - 1mA Resolution 80A: $\pm 2.0\%$ of Reading ± 10 cts - 10mA Resolution > 80A: $\pm 3.5\%$ of Reading ± 10 cts - 10mA Resolution
Frequency Range	2 Ranges: 50 to 500Hz
DC Current (positive only)	
Measurement Ranges	2 Ranges: 10A, 100A
Accuracy & Resolution	10A: $\pm 2.5\%$ of Reading ± 10 cts - 1mA Resolution 80A: $\pm 2.5\%$ of Reading ± 10 cts - 10mA Resolution > 80A: $\pm 4.5\%$ of Reading ± 10 cts - 10mA Resolution
AC Volts	
Measurement Ranges	600Vrms
Accuracy & Resolution	$\pm 1.5\%$ of Reading ± 5 cts - 100mV Resolution
Frequency	40 to 500Hz
Input Impedance	10M Ω , < 50pF
DC Volts (positive only)*	
Measurement Ranges	600V
Accuracy & Resolution	$\pm 1.0\%$ of Reading ± 2 cts - 100mV Resolution
Input Impedance	10M Ω
Resistance (Ohms)	
Measurement Ranges	10k Ω (9999 Ω)
Accuracy & Resolution	$\pm 1.0\%$ of Reading ± 3 cts - 1 Ω Resolution
Test Voltage	< 3.0Vdc
Continuity	
Measurement Ranges	Buzzer < 100 Ω $\pm 25\Omega$
Resolution	1 Ω
Test Voltage	< 3.0Vdc
Analog Output	
Output	10mV/Aac & Aoc through front banana jacks
Frequency	0 to 20kHz @ ± 3 db
Output Impedance	3k Ω , < 50pF
Other Functions	
Adc Zero & Relative Function	One touch push button (Δ ZERO Button) to Zero Aoc, or other readings. Relative function also used in the other ranges to compare two measurements.
HOLD Function	Holds A & V measurements when pressed (HOLD button)
PEAK Function	Captures PEAK (1ms) V or A measurement when activated (PEAK Button)
Auto-Ranging	"AUTO" displayed on LCD
Over Range	"OL" displayed on LCD for all measurements
Auto Power OFF	Auto Power OFF after approx 10 minute with Over-Ride
Low Battery	Low Battery indication on LCD
MECHANICAL	
Max. Cable Diameter	Ø 0.45" (12mm)
Max. Jaw Opening	Ø 0.60" (15mm)
Power Source	Two 1.5V AAA (LR03) batteries (included)
Dimensions & Weight	7.95 x 2.76 x 1.33" (202 x 70 x 34mm) - 6.5oz (180g)
Safety Standards	IEC/EN 61010-1 and 2-032 - 600V CAT II and 300V CAT III - Pollution Degree 2 Class 2 - Double or reinforced insulation, CE mark

*For negative measurement, add 2cts to the accuracy

PRODUCT INCLUDES

Soft carrying case, set of two test leads, two 1.5V AAA batteries and user manual.

CATALOG NO.

DESCRIPTION

7000.02

Clamp-On Meter Model CM605 (100AAC/DC, Low Current)



Technical Assistance (800) 343-1391

www.aemc.com 13

CLAMP-ON METERS

SELECTION GUIDE

MODELS	CATALOG NUMBER	TYPE	AC CURRENT	AC VOLTAGE	DC CURRENT	DC VOLTAGE	RESISTANCE (Ω)	CONTINUITY	FREQUENCY (Hz)		JAW SIZE	DIMENSIONS
									CURRENT	VOLTAGE		
203	2139.12	AC/DC TRMS	600A	1000V	900A	1000V	60kΩ	<40Ω	3kHz	20kHz	1.33" (34mm)	8.7 x 3.1 x 1.65"
205	2139.40	AC/DC TRMS	600A	1000V	900A	1000V	60kΩ	<40Ω	3kHz	20kHz	1.33" (34mm)	8.7 x 3.1 x 1.65"
403	2139.21	AC/DC TRMS	1000A	1000V	1500A	1000V	100kΩ	<40Ω	2kHz	20kHz	1.89" (48mm)	10.7 x 3.6 x 1.6"
405	2139.50	AC/DC TRMS	1000A	1000V	1500A	1000V	100kΩ	<40Ω	2kHz	20kHz	1.89" (48mm)	10.7 x 3.6 x 1.6"
407	2139.51	AC/DC TRMS	1000A	1000V	1500A	1000V	100kΩ	<40Ω	2kHz	20kHz	1.89" (48mm)	10.7 x 3.6 x 1.6"
603	2139.31	AC/DC TRMS	2000A	1000V	3000A	1000V	100kΩ	<40Ω	1kHz	20kHz	2.36" (60mm)	11.65 x 4.37 x 1.61"
605	2139.60	AC/DC TRMS	2000A	1000V	3000A	1000V	100kΩ	<40Ω	1kHz	20kHz	2.36" (60mm)	11.65 x 4.37 x 1.61"
607	2139.61	AC/DC TRMS	2000A	1000V	3000A	1000V	100kΩ	<40Ω	1kHz	20kHz	2.36" (60mm)	11.65 x 4.37 x 1.61"
503	2117.22	AC/DC	0.05 to 400A	0.5 to 600V	0.10 to 400A	0.2 to 600V	400Ω	<40Ω	—	—	1.1" (28mm)	7.60 x 1.97 x 1.1"
512	2117.68	AC TRMS	0.05 to 1000A	0.5 to 750V	—	0.2 to 1000V	4000Ω	<40Ω	20kHz to 10kHz	10Hz to 10kHz	1.58" (40mm)	9.53 x 2.60 x 1.42"
514	2117.70	AC/DC TRMS	0.05 to 1000A	0.5 to 750V	1 to 1000A	0.2 to 1000V	4000Ω	<40Ω	20kHz to 10kHz	10Hz to 10kHz	1.58" (40mm)	9.53 x 2.60 x 1.42"
565	2117.56	AC TRMS	0 to 600mA; 10 to 100A	0 to 600V	—	0 to 600V	0 to 1kΩ	0 to 1kΩ	0 to 1kHz	0 to 1kHz	1.1" (28mm)	8.5 x 2.5 x 1.18"
CM605	7000.02	AC/DC	1mA to 100A	600Vrms	1mA to 100A	600V	0 to 9999Ω	Buzzer <100Ω ± 25Ω	50 to 500Hz	40 to 500Hz	0.60" (15mm)	7.95 x 2.76 x 1.33"
670	2117.49	AC TRMS	0 to 1000A	0 to 1000V	—	1000 to 1400V	1000 to 10,000Ω	<35Ω	1000Hz	10,000Hz	1.65" (42mm)	10.71 x 3.15 x 1.69"
675	2117.50	AC/DC TRMS	0 to 1000A	0 to 1000V	0 to 1400A	0 to 1400V	0 to 9999Ω	<35Ω	1000Hz	10,000Hz	1.58" (40mm)	10.12 x 3.15 x 1.69"

CURRENT MEASUREMENT PROBES



SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

CURRENT MEASUREMENT PROBES

MINIFLEX® SERIES

HIGH FREQUENCY OSCILLOSCOPE COMPATIBLE MINIFLEX® PROBES

A compact AC current measurement device composed of a flexible sensor and an electronic module designed to measure frequency response up to 1MHz



Model MF 300-6-2-10-HF (6" probe)

Model MF 300-10-2-10-HF (10" probe)



FEATURES

- Measures from 0.5 to 300Arms
- Accuracy $\pm 1\%$ of Reading $\pm 0.2A$
- TRMS measurements when connected to a TRMS instrument
- No core saturation or damage if overloaded
- 9V battery for typical 150 hours continuous operation
- 1MHz frequency response
- Low phase shift for power measurements
- Insensitive to DC, measures only AC component on DC + AC signals
- Excellent linearity
- Lightweight
- Sensor is resistant to oils and aliphatic hydrocarbons
- Perfect accessory for all oscilloscopes

SPECIFICATIONS

MODELS	MF 300-6-2-10-HF		MF 300-10-2-10-HF
ELECTRICAL			
Range	30/300A		
Signal Output	100mV/10mV/A		
Frequency Range	5 to 1MHz @ -3db		
Influence of Conductor Positioning	1.5% typical, 3% max		
Influence of Conductor Positioning in Sensor Against Handle	4% typical, 6% max		
External Conductor Influence	35dB to 40dB on contact		
Power Source	9V Alkaline battery (6LF22)		
MECHANICAL			
Sensor Diameter	Ø 0.2" (5mm)		
Sensor Length	6" (152mm)	10" (250mm)	
Max Conductor Size	1.77" (45mm)	2.95" (70mm)	
Connection Cable Length	6.5ft (2m)		
Drop Test	Per IEC 68-2-32		
Vibration	Per IEC 68-2-6		
Mechanical Shock	Per IEC 68-2-27		
Weatherproofing	IP50		
ENVIRONMENTAL			
Operating Temperature Range	14° to 131°F (-10° to +55°C)		
Storage Temperature Range	-40° to 158°F (-40° to +70°C)		
Altitude	Operating: 0 to 6562ft (0 to 2000m), working voltage derating above; Non-operating: 0 to 39,000ft (0 to 12,000m)		
SAFETY			
Safety Rating	EN 61010, 1000V CAT III; 600V CAT IV		

CATALOG NO.	DESCRIPTION
2126.83	MiniFlex® Model MF 300-6-2-10-HF
2126.84	MiniFlex® Model MF 300-10-2-10-HF

CURRENT MEASUREMENT PROBES

FLEXIBLE CURRENT PROBES

MINIFLEX® FLEXIBLE CURRENT PROBES FOR GENERAL USE

A flexible sensor equipped with banana or BNC connector that can be connected directly to any multimeter, wattmeter or logger for effective measurements at the standard frequencies



Model MF 300-6-2-10 (6" probe)



Model MF 3000-10-2-1 (10" probe)



FEATURES

- Measures from 0.5 to 3000Arms
- Accuracy $\pm 1\%$ of Reading $\pm 0.25A$
- TRMS measurements when connected to a TRMS instrument
- No core saturation or damage if overloaded
- Overrange LED for measurement circuitry
- 20kHz frequency response
- Low phase shift for power measurements
- Insensitive to DC, measures only AC component on DC + AC signals
- Excellent linearity
- 9V Alkaline battery, provides typical 150 hours of continuous operation
- EN 61010; 1000V CAT III; 600V CAT IV

SPECIFICATIONS

MODELS	MF 300-6-2-10	MF 3000-10-2-1
ELECTRICAL		
Range	30/300A	300/3000A
Signal Output	100mV/10mV/A	10mV/1mV/A
Frequency Range	10 to 20kHz with current derating	
Influence of Conductor Positioning	1.5% typical, 3% max	
Influence of Conductor Positioning in Sensor Against Handle	4% typical, 5% max	
External Conductor Influence	35dB to 40dB on contact	
Power Source	9V Alkaline battery (included)	
MECHANICAL		
Sensor Diameter	Ø 0.2" (5mm) – vs 0.5" (12.5mm) for AmpFlex®	
Sensor Length	6" (152mm)	10" (250mm)
Max Conductor Size	1.77" (45mm)	2.95" (74.9mm)
Connection Cable Length	6.5ft (2m)	
Drop Test	Per IEC 68-2-32	
Vibration	Per IEC 68-2-6	
Mechanical Shock	Per IEC 68-2-27	
ENVIRONMENTAL		
Operating Temperature Range	14° to 131°F (10° to 55°C)	
Storage Temperature Range	-40° to 158°F (-40° to 70°C)	
Altitude	Operating: 0 to 6562ft (0 to 2000m), working voltage derating above; Non-operating: 0 to 39,000 (0 to 12,000m)	
SAFETY		
Safety Rating	EN 61010, 1000V CAT III; 600V CAT IV; Pollution Degree II	

CATALOG NO.	DESCRIPTION
2126.81	MiniFlex® Model MF 300-6-2-10
2126.82	MiniFlex® Model MF 3000-10-2-1
Accessories/Replacement - available on website store from www.aemc.com	
2119.94	Adapter - BNC (Female) to 4mm Banana (Male)

CURRENT MEASUREMENT PROBES

MINIFLEX® SERIES

MODEL MA114

Provide a welcomed solution when accessing electrical conductors in tight places or clamping onto cable bundles



FEATURES

- 14-inch flexible sensor capable of clamping around a 3.93 inch cable or bundle
- Waterproof sensor rated to IP 67
- User selectable ranges of 3, 30, 300 and 3000 Amps
- 600V CAT IV, 1000V CAT III rated
- Not effected by magnetic saturation, provides excellent linearity and low phase shift
- Battery or USB powered for long term use
- Red LED indicates overload condition
- Positive click locking sensor eliminates disconnection errors
- Banana plug termination compatible with multimeters, data loggers and other instruments



3Aac
1 mV/mA



30Aac
100 mV/A



300Aac
10 mV/A



3,000Aac
1 mV/A



SPECIFICATIONS

MODEL	MA114
Nominal Range	3; 30; 300; 3000Aac
Measurement Range	3A Range: 0.5 to 3Aac, 30A Range: 2 to 30Aac 300A Range: 5 to 300Aac, 3000A Range: 50 to 3000Aac
Transformation Ratio	Voltage Output
Output Signal	3A Range: 1V/A (1mV/mA) (3Vac @ 3A), 30A Range: 100 mV/A (3Vac @ 30A) 300A Range: 10 mV/A (3Vac @ 300A), 3000A Range: 1 mV/A (3Vac @ 3000A)
Accuracy	3A, 30A Range: ≤ 1% of Reading ± 40mA 300A, 3000A Range: ≤ 1.5% of Reading + 40mA (I≤10% Inom) ≤ 1% of Reading + 40mA (I≥10% Inom)
Phase Shift	≤ 1° (0.5° typical)
Overload	3A Range: 4.5A, 30A Range: 45A, 300A Range: 450A, 3000A Range: 4500A
Frequency Range	3A Range: 10Hz to 10kHz, 30A, 300A, 3000A Range: 10Hz to 20kHz
Load Impedance	≥ 1MΩ
Working Voltage	600Vrms (CAT IV), 1000Vrms (CAT III)
Battery	Two 1.5V AA batteries or LR6 alkaline, +5Vdc with type B micro-USB
Battery Life	300 hours typical. Approximately 1,800 10-minute measurements.
Output Termination	1.6ft (0.5m) lead with two 4mm safety banana plugs
MECHANICAL	
Operating Temperature	14° to 131°F (-10° to 55°C)
Storage Temperature	-40° to 158°F (-40° to 70°C)
Operating Relative Humidity	0 to 95% @ 95°F (35°C)
Sensor Length	14" (35.6 cm)
Cable Length	6.5ft (2m)
Maximum Conductor Size	Ø 3.93" (10cm)
Dimensions	4.7 x 2.3 x 1.4" (12 x 5.8 x 3.6cm)
Weight	Approximately 10.58oz (300g)
SAFETY	
Electrical	IEC 61010-2-32 type B, 1000V CAT III, 600V CAT IV, Pollution Degree 2
Electromagnetic Compatibility	IEC 61326-1
Protection	IP54 (electronic unit), IP67 (flexible sensor)
Double Insulation	Yes

CATALOG NO.

DESCRIPTION

2153.41 MiniFlex® 14" Model MA114 (3A/1mV/A, 30A/100mV/A, 300A/10mV/A, 3000A/1mV/A)

CURRENT MEASUREMENT PROBES

FLEXIBLE CURRENT PROBES



AMPFLEX® FLEXIBLE CURRENT PROBES

Flexible AC current probe composed of a flexible sensor and an electronic module

FEATURES

- Models ranging from 0.5 to 30,000Arms
- Accuracy $\pm 1\%$ of Reading
- TRMS measurements when connected to a TRMS instrument
- No core saturation or damage if overloaded
- Overrange LED for measurement circuitry
- Waterproof sensor
- 9V Alkaline battery, provides typical 150 hours of continuous operation (battery included)
- Shape memory for custom pre-shaping of sensor before use (no drooping)
- Very high frequency response
- Low phase shift for power measurements of $<1.3^\circ$, 0.7° typical
- Insensitive to DC, measures only AC component on DC + AC signals
- Excellent linearity
- Lightweight



FEATURES

- 24" flexible sensor fits around conductors up to 7.6" in diameter
- Dual measurement ranges of 300A and 3000 AAC
- Read amperage directly on DMM display
- mV output directly proportional to the AC current measured
- Output is 10mV/A on 300A range and 1mV/A on 3000A range
- Accuracy of $\pm 1\%$ of Reading $\pm 500\text{mA}$
- 4% influence of conductor position in jaw
- Up to 150 hours of battery life
- Dual banana plug termination for direct input into DMMs
- Flashing LED low battery indicator
- 9V Alkaline battery, provides typical 150 hours of continuous operation (battery included)

MODEL	MEASUREMENT RANGE	OUTPUT	SENSOR LENGTH INCHES (MM)	MAX CONDUCTOR SIZE INCHES (MM)	CATALOG NO.
300-24-2-10	30/300A	100/10mV/A	24 (610)	8 (190)	2112.88
1000-24-1-1	1000A	1mV/A	24 (610)	8 (190)	2112.39
1000-24-2-1	100/1000A	10/1mV/A	24 (610)	8 (190)	2112.98
1000-36-2-1	100/1000A	10/1mV/A	36 (910)	11 (290)	2113.00
3000-24-1-1	3000A	1mV/A	24 (610)	8 (190)	2112.46
3000-36-1-1	3000A	1mV/A	36 (910)	11 (290)	2112.48
3000-24-2-1	300/3000A	10/1mV/A	24 (610)	8 (190)	2113.05
3000-36-2-1	300/3000A	10/1mV/A	36 (910)	11 (290)	2112.00
3000-48-2-1	300/3000A	10/1mV/A	48 (1220)	15 (390)	2112.01
6000-36-2-0.1	600/6000A	1/0.1mV/A	36 (910)	11 (290)	2113.21
30000-24-2-0.1	3000/30,000A	1/0.1mV/A	24 (610)	8 (190)	2113.33

Consult factory for NIST Calibration prices

Consult factory for special offers and ranges/lengths not shown here.

Note: Output is safety shrouded 4mm male banana plug

FLEXPBROBE® FLEXIBLE CURRENT PROBE MODEL 24-3001

Low cost AC current measurement probe designed to plug into digital multimeters, oscilloscopes and power recorders

SPECIFICATIONS

MODEL	24-3001
ELECTRICAL	
Current Range	300/3000AAC
Output Signal	mV output (4000mV peak max)
Three Position Slide Switch 10mV/A 1mV/A ON/OFF	5A to 300Arms 50A to 3000Arms
Power Source	9V Alkaline battery (included)
MECHANICAL	
Maximum Conductor Size	7.6" (193mm)
Sensor Length	24" $\pm 1"$ (610mm $\pm 25.4\text{mm}$)
Cable Length	6.5ft (2m)
Output Connection	Double insulated 14" (355mm) lead with safety banana plugs

ACCESSORIES

BANANA (FEMALE) BNC (MALE) (XM-BB)

Catalog #2118.46
(optional for AmpFlex® & FlexProbe® Flexible Current Probes)



CATALOG NO.	DESCRIPTION
2120.81	FlexProbe® Model 24-3001 (300/3000AAC, 24", 10mV/A/1mV/A, Lead)
Accessories/Replacement - available on website store from www.aemc.com	
2118.46	Adapter - Banana (Female) - BNC (Male) (XM-BB)



Technical Assistance (800) 343-1391

www.aemc.com 19

CURRENT MEASUREMENT PROBES

DC/AC MICROPROBES AND CURRENT PROBES

MD SERIES & K SERIES

MD Series probes are rugged and designed for use on cables and bus bars. K Series small probes designed for high accuracy measuring low currents

MD SERIES

K SERIES



SPECIFICATIONS

MODELS	MD301	MD305
ELECTRICAL		
Nominal Range	500A _{AC}	600A _{AC}
Measurement Range	2 to 500A _{AC}	1 to 700A _{AC}
Transformation Ratio	Voltage output	1000:1
Output Signal	1mV/A (0.5V _{DC} @ 500A)	1mA/A (0.6A _{AC} @ 600A)
Accuracy	(500A Range) 25A 5% of Reading 100A 2% of Reading 250A 1% of Reading 500A 1% of Reading 600A -	(600A Range) 3% of Reading 1.5% of Reading 1% of Reading 1% of Reading 2% of Reading
Phase Shift	25A - 100A - 250A - 500A - 600A -	3° 1.5° 1° 1° 1°
Overload	700A for 10 min	
Frequency Range	48 to 1000Hz (error: add 2% to the ref.)	40 to 1000Hz (error: add 2% to the ref.)
Load Impedance	≥100kΩ	5Ω max non-inductive
Working/Common Voltage	600V _{rms}	
Output Termination	Double-insulated 5ft (1.5m) lead with two 4mm safety banana plugs	
MECHANICAL		
Operating Temperature	5° to 122°F (-15° to 50°C)	
Storage Temperature	-40° to 185°F (-40° to 85°C)	
Jaw Opening	1.3" (33mm)	
Maximum Conductor Size	1.18" (30mm), Max Bus Bar size: 2.48 x 0.20" (63 x 5mm)	
Dimensions	2.6 x 7.68 x 1.34" (66 x 195 x 34mm)	
Weight	14.82 oz (420g)	
Material	Polycarbonate UL 94	
SAFETY		
Electrical	EN 61010-2-032 600V CAT III, Pollution: 2; 300V CAT IV, Pollution: 2	
Electromagnetic Compatibility	EN 50081-1 Class B; EN 50082-2 Electrostatic discharge IEC 1000-4-2; Radiated field IEC 1000-4-3; Fast transients IEC 1000-4-4; Magnetic field at 50/60Hz IEC 1000-4-8	
Double Insulation	Yes	
CE Mark	Yes	

SPECIFICATIONS

MODELS	K100	K110
Current Range	0 to ±4.5Adc 0 to 3Arms	0 to ±450mAac 0 to 300Arms
Output Signal	1mV/mA	10mV/mA
Resolution	DC: 50µA typical, AC: 100µA typical	DC: 50µA typical, AC: 100µA typical
Accuracy	DC: ±1% of Reading, ±200µA AC: ±2% of Reading, ±200µA	DC: ±0.5% of Reading, ±150µA AC: ±0.8% of Reading, ±200µA
Output Noise	<100µV, DC to 3kHz	<100µV, DC to 3kHz
Frequency Response	DC to 2kHz (@ -3dB sine)	DC to 1.5kHz (@ -3dB sine)
Output Termination	5ft (1.5m) lead with two 4mm safety banana plugs; standard 3/4" (19mm) spacing	
Power Source	One 9V Alkaline battery (included)	
Battery Life	20 hours	

CHARACTERISTICS

K SERIES

- Measures extremely low level DC from 100µA
- Outputs signal proportional to total current (DC + AC)
- Low noise
- Ultra-compact size and non-contact clamp-on convenience
- Simple plug-in operation
- Designed for use with digital multimeters and oscilloscopes
- Accurate display of waveforms
- No range or mode (AC/DC) switching required
- Red LED indicates momentary or continuous overload
- Green LED indicates power and battery condition

MD SERIES

- 600A range with mA or mV output
- Unique hook-shaped jaws that enable the user to "pry" into or "hook" onto cables
- Maximum conductor size is 2 x 500kcmil
- Works as a traditional current transformer with ratio of 1000:1
- AC/DC outputs available

CATALOG NO.	DESCRIPTION
1200.67	DC/AC MicroProbe Model K100
2111.73	DC/AC MicroProbe Model K110
1201.07	AC Current Probe Model MD301
1201.36	AC Current Probe Model MD305
Accessories/Replacement - available on website store from www.aemc.com	
1017.45	Adapter - 4mm Non-insulated for Safety Leads
2119.94	Adapter-BNC (Female) to 4mm Banana (Male) 600V CAT III

CURRENT MEASUREMENT PROBES

SL SERIES AC/DC CURRENT PROBES

SL SERIES



Compact, long nose probes designed for accurate measurements of low currents with 10mA dc sensitivity, capable of measuring both AC and DC current



Only SL261

FEATURES

SL SERIES AC/DC CURRENT PROBES

- Low AC and DC measurements
- Measures from 10mA to 100A
- Dual range selection
- Unique design for probing in crowded wiring areas
- Hall effect sensor technology
- UL approved for the US and Canada
- Flame retardant UL94 V2 rated
- Use with DMMs, voltmeters and other voltage measuring instruments

SPECIFICATIONS

MODELS	SL206	SL261
Nominal Range	2A; 80A	10A; 100AAC/DC peak
Measurement Range	10mA to 80ADC; 10mA to 60AAC	100 mA to 100AAC/DC peak
Transformation Ratio	Voltage output	
Output Signal	2A: 1mV/mA (2V @ 2A) 80A: 10mV/A (0.8V @ 80A)	10A: 100mV/A (1V @ 10A) 100A: 10mV/A (1V @100A)
Accuracy		-
(1mV/mA Range) 10mA to 2ADC/10mA to 1.5AAC	2% of Reading ± 5mA	-
(10mV/A Range) 50mA to 50ADC 50mA to 40AAC 50 to 80ADC 40 to 60AAC	4% of Reading ± 20mA 4% of Reading ± 20mA 12% of Reading 12% of Reading	-
(10mV/A Range) 500mA to 40AAC/DC Peak 40 to 80AAC/DC Peak 80 to 100AAC/DC Peak	-	4% of Reading ± 50mA 12% of Reading ± 50mA 15% of Reading
(100mV/A Range) 50mA to 10AAC/DC Peak	-	3% of Reading ± 50mA
Phase Shift (DC to 65 Hz)		
(1mV/mA Range)	1°	-
(10mV/mA Range)	1°	<1°
(100mV/mA Range)	-	<1.5°
Overload	120A continuous	Red LED indicator
Frequency Range	DC to 8kHz	DC to 100kHz (-3dB with current derating)
Load Impedance	100kΩ (1mV/mA); 10kΩ (1V/A)	>1MΩ/100pF
Working/Common Mode Voltage	600Vrms	
Output Termination	5ft (1.5m) lead with double insulated 4mm safety banana plugs	6.5 ft (2 m) coaxial cable with insulated BNC terminal
MECHANICAL		
Operating Temperature	32° to 122°F (0° to 50°C)	
Storage Temperature	-22° to 176°F (-30° to 80°C)	
Operating Relative Humidity	10° to 30°C: 85 ± 5% RH (without condensation) 40° to 50°C: 45 ± 5% RH (without condensation)	
Maximum Conductor Size	0.46" (11.8mm)	
Dimensions	9.09 x 1.42 x 2.64" (231 x 36 x 67mm)	
Weight	11.6 oz (330g) with battery	
Material	Polycarbonate UL 94	
SAFETY		
Electrical	EN 61010-2-32, 600V CAT III	
CE Mark	Yes	

CATALOG NO.	DESCRIPTION
1201.45	AC/DC Current Probe Model SL206
1201.51	AC/DC Current Probe Model SL261 (BNC)

CURRENT MEASUREMENT PROBES

SR SERIES CURRENT PROBES

SR600 SERIES

Current probes well-suited for power applications where high accuracy and low phase shift is important



Model SR601

SPECIFICATIONS

MODELS	SR600	SR601	SR604	SR634	SR651	SR661	
Nominal Range	1000A _{AC}			250, 500, 1000A _{AC}	1000A _{AC}	10, 100, 1000A _{AC}	
Measurement Range	0.1 to 1200A _{AC}						
Transformation Ratio	1000: 1			250:5, 500:5, 1000:5	Voltage Output	Voltage output	
Output Signal	1mA/A (1A _{AC} @ 1000A)			5mA; 10mA; 20mA/A (5A _{AC} @ 250; 500; 1000A)	1mV/A (1V _{AC} @ 1000A)	1mV; 10mV; 100mV/A (1V _{AC} @10, 100; 1000A)	
Accuracy	0.1 to 10A: ≤3% of Reading ± 0.1A 10A: 3% of Reading 50A: 0.5% of Reading 200A: 0.75% of Reading 1000A: 0.5% of Reading 1200A: 0.5% of Reading			(250A Range) 1 to 5A: ≤10% of Reading ± 0.1A 5A: 10% of Reading 50A: 2.5% of Reading 250A: 2% of Reading 300A: 2% of Reading (500A Range) 1 to 10A: ≤6% of Reading ± 0.1A 10A: 6% of Reading; 25A: 3% of Reading 100A: 2% of Reading; 500A: 1% of Reading 600A: 1% of Reading (1000A Range) 1 to 20A: ≤6% of Reading ± 0.1A; 20A: 5% of Reading; 50A: 3% of Reading 200A: 1.5% of Reading; 1000A: 1% of Reading 1200A: 1% of Reading	1 to 50A: ≤3% of Reading ± 0.1 A 50 to 200A: 1.5% of Reading 200 to 1000A: 0.75% of Reading 1000 to 1200A: 0.5% of Reading	(10A Range) ≤3% of Reading ± 0.1A (100A Range) ≤2% of Reading ± 0.5 A (1000A Range) ≤2% of Reading ± 1 A	
Phase Shift	10A: 3°; 50A: 1.5°; 200A: 0.75°; 1000A: 0.5°; 1200A: 0.5°			(250A Range) 12.5A: 10°; 50A: 10°; 250A: 10°; 300A: 10° (500A Range) 10A: 6°; 25A: 4°; 100A: 3°; 500A: 2.5°; 600A: 2.5° (1000A Range) 20A: 5°; 50A: 3°; 200A: 1.5°; 1000A: 1°; 1200A: 1°	10A: 3° 50A: 1.5° 200A: 0.75° 1000A: 0.5° 1200A: 0.5°	(10A Range) 10A: ≤15° (100A Range) 20A: ≤15°; 100A: ≤10° 120A: ≤5° (1000A Range) 200A: ≤3°; 1000A: ≤2° 1200A: ≤1	
Overload	1200A for 40 min ON, 20 min OFF			1200A for 30 min ON, 15 min OFF	1200A for 40 min ON, 20 min OFF		
Frequency Range				30Hz to 5kHz*	10Hz to 100kHz*		
Load Impedance	5Ω max			0.4Ω max	100kΩ min	1MQ min	
Working/Common Mode Voltage	600V CAT III						
Output Surge Protection	No	30V peak			N/A		
Output Termination	Two 4mm safety banana jacks	Lead with plugs	Two 4mm safety banana jacks			Two 4mm safety banana jacks	6.5 ft (2m) coaxial cable with BNC terminal
MECHANICAL							
Operating Temperature	14° to 122°F (-10° to 50°C)						
Storage Temperature	-4° to 158°F (-20° to 70°C)						
Operating Relative Humidity	0 to 85% decreasing linearly above 95°F (35°C)						
Jaw Opening	2.25" (57mm) max						
Maximum Conductor Size	2.05" (52mm)						
Maximum Bus Bar Size	One 1.95 x 0.19" (50 x 5mm)						
Dimensions	4.37 x 8.50 x 1.77" (111 x 216 x 45mm)						
Weight	1.21 lbs (550g)						
Material	Polycarbonate UL 94						
SAFETY							
Electrical	EN 61010-2-32, 600 V CAT III						
UL Approval	Yes - Canada and United States						
Double Insulation	Yes						
CE Mark	Yes						

*Current derating above 1kHz using the formula: 1000A x 1/F (in kHz)



FEATURES

- Measurement range of 100mA to 1200A_{AC}
- Large jaw opening accommodates up to two 500kcmil conductors
- Ergonomic design and easy operation
- Low phase shift for power measurements
- Available with mA or mV output signals
- Designed for DMMs, recorders, loggers, oscilloscopes, power and harmonic meters
- UL approved

ACCESSORIES

Catalog #2152.24
Leads, set of two, 5 ft safety (1000V)

Catalog #1017.45
Banana plug adaptor (Safety Leads to nonrecessed plug)

Catalog #2118.46
Banana (Female) - BNC (Male) Adaptor

CATALOG NO. DESCRIPTION

2113.42	AC Current Probe Model SR600
2113.43	AC Current Probe Model SR601
2113.44	AC Current Probe Model SR604
2113.48	AC Current Probe Model SR634
2113.45	AC Current Probe Model SR651
2113.49	AC Current Probe Model SR661

CURRENT MEASUREMENT PROBES

SR SERIES CURRENT PROBES

SR700 SERIES



Model SR701

Excellent linearity and low phase shift, plus a broad frequency response, permit accurate measurements of current for power and power quality measurements



FEATURES

- Measurement range of 1mA to 1200AAC
- Large jaw opening accommodates conductors up to two 500MCM conductors
- Ergonomic design and easy operation
- Low phase shift for power measurements
- Available with mA output signals
- Designed for DMMs, recorders, loggers, oscilloscopes, power and harmonic meters
- UL approved

ACCESSORIES

Catalog #2152.24
Leads, set of two, 5 ft safety (1000V)

Catalog #1017.45
Banana plug adaptor (Safety Leads to nonrecessed plug)

Catalog #2118.46
Banana (Female) - BNC (Male) Adaptor

SPECIFICATIONS

MODELS	SR701	SR704	SR752	SR759
Nominal Range	1000A _{AC}			1; 10; 100; 1000A _{AC}
Measurement Range	1mA to 1200A _{AC}		100mA to 1200A _{AC}	1mA to 1200A _{AC}
Transformation Ratio	1000: 1		Voltage output	
Output Signal	1mA/A (1A _{AC} @ 1000A)		1mV/A (1V _{AC} @ 1000A)	1000; 100; 10; 1mV/A, (1V _{AC} @ 1, 10, 100 or 1000A)
Accuracy	1 to 100mA: ≤3% of Reading ± 5 mA 0.1 to 1A: ≤2% of Reading ± 3 mA 1 to 10A: <1% of Reading 10 to 100A: ≤0.5% of Reading 100 to 1200A: ≤0.3% of Reading		0.1 to 1A: ≤2% of Reading ± 3µA 1 to 10A: <1% of Reading 10 to 100A: ≤0.5% of Reading 100 to 1200A: ≤0.3% of Reading	(1A Range) 1 to 10 mA: 3% of Reading ± 1mA 10mA to 0.1 A: ≤3% of Reading ± 1mA 0.1 to 1.2 A: ≤0.7% of Reading ± 1mA (10A Range) 10mA to 0.1A: 1% of Reading ± 2mA 0.1 to 1A: ≤0.5% of Reading ± 2mA 1 to 12A: ≤0.5% of Reading (100A Range) 0.1 to 1A: 1% ± 20mA 1 to 10A: ≤0.5% of Reading ± 20mA 10 to 100A: ≤0.3% of Reading 100 to 120A: ≤0.2% of Reading (1000A Range) 1 to 10A:1% of Reading ± 0.2A; 10 to 100A: ≤0.5% of Reading ± 0.2A; 100 to 1200 A: ≤0.2% of Reading
Phase Shift	1 to 10A: ≤2° 10 to 100A: ≤1° 100 to 1200A: ≤0.7°		1 to 10A: ≤2° 10 to 100A: ≤1° 100 to 1200A: ≤0.7°	(1A Range) 0.1 to 1.2 A: ≤10° (10A Range) 0.1 to 1A: ≤5°; 1 to 12A: ≤2° (100A Range) 1 to 10 A: ≤2°; 10 to 120A: ≤1° (1000A Range) 10 to 100A: ≤2°; 100 to 1200A: ≤1°
Overload	1200A for 40 min ON, 20 min OFF			
Frequency Range	30Hz to 5kHz; current derating above 1kHz using the formula: 1000A x 1/F (in kHz)			
Load Impedance	5Ω max		100kΩ min	
Working/Common Mode Voltage	600V CAT III			
Output Termination	Two 4mm safety banana jacks		5ft (1.5m) lead with 4mm safety banana plugs	
MECHANICAL				
Operating Temperature	14° to 122°F (-10° to 50°C)			
Storage Temperature	-4° to 158°F (-20° to 70°C)			
Operating Relative Humidity	0 to 85%		0 to 90%	
Jaw Opening	2.25" (57mm) max			
Maximum Conductor Size	2.05" (52mm)			
Maximum Bus Bar Size	One 1.95 x 0.19" (50 x 5mm)			
Dimensions	4.37 x 8.50 x 1.77" (111 x 216 x 45mm)			
Weight	1.21 lbs (550g)			
Material	Polycarbonate UL 94			
SAFETY				
Electrical	EN 61010-2-32			
UL Approval	Yes - Canada and United States			
Double Insulation	Yes			
CE Mark	Yes			

CATALOG NO.	DESCRIPTION
2116.29	AC Current Probe Model SR701
2116.30	AC Current Probe Model SR704
2116.32	AC Current Probe Model SR752
2116.33	AC Current Probe Model SR759

CURRENT MEASUREMENT PROBES

MN SERIES AC CURRENT PROBES

MN SERIES

Small and compact, ideal complement for any meter to measure AC currents in low-power secondary transformers or industrial applications



Model MN01



SPECIFICATIONS

MODELS	MN01	MN02	MN03	MN05
ELECTRICAL				
Nominal Range	150AAC	100AAC		10; 100AAC
Measurement Range	2 to 150AAC	50mA to 100AAC (1Ω load) 50mA to 90AAC (10Ω load)	1 to 100AAC	5mA to 10AAC 1A to 100AAC
Transformation Ratio	1000:1		Voltage output	
Output Signal	1mA/A (150mAAC @ 150A)	1mA/A (100mAAC @ 100A)	1mV/A (100mVAC @ 100A)	1mV/mA, 1mV/A (10VAC @ 10A, 100mVAC @ 100A)
Accuracy	2.5% ± 0.15A (1Ω load) 3% ± 0.15A (10Ω load)	≤ 1% of Reading ± 0.02A (1Ω load) ≤ 1.5% of Reading ± 0.01A (10Ω load)	≤ 2% of Reading ± 50mA	(10A Range) ≤ 3% of Reading ± 0.15mA (100 Range A) ≤ 2% of Reading ± 50mA
Phase Shift	Not specified	<3° (1Ω load) <6° (10Ω load)	Not specified	
Overload	170A for 10 min ON, 30 min OFF		150A	10A Range: 15A 100A Range: 150A
Frequency Range	48 to 500Hz	48Hz to 10kHz	48 to 500Hz	
Load Impedance	≤10Ω		≥1MΩ	
Open Secondary Voltage	≤30V		-	
Output Termination	5ft (1.5m) lead with two 4mm safety banana plugs			
MECHANICAL				
Operating Temperature	14° to 122°F (-10° to +50°C)			
Storage Temperature	-40° to 176°F (-40° to +80°C)			
Operating Relative Humidity	0 to 85% RH decreasing linearly above 95°F (35°C)			
Protection	IP40 (EN 60529 Ed. 1995)			
Maximum Conductor Size	Ø 0.39" (10mm)			
Dimension	4.43 x 1.48 x 1.02" (112.5 x 37.5 x 26mm)			
Weight	6.35 oz (180g)			
Material	Polycarbonate UL 94			
SAFETY				
Electrical	IEC 1010-2-32 300 V CAT IV, 600V CAT III Pollution Degree 2			
Double Insulation	Yes			
CE Mark	Yes			

FEATURES

MODEL MN01

- "Clothes pin" shape makes them ideal for use in tight areas, such as breaker panels, controller panels or outlets
- Measurements from 1mA to 150AAC
- Excellent companions to all DMMs, permits very low AC current measurements

MODEL MN02

- Measurement ranges of 50mA to 100A (1Ω load) 50mA to 90A (10Ω)
- Jaw opening accommodates conductors up to 0.39" diameter
- Designed for DMMs, loggers, recorders and oscilloscopes
- 48 to 10,000Hz frequency range
- 1mA/A from 1Ω to 10Ω output signals

MODEL MN03

- Measurement range of 1 to 100AAC
- Jaw opening accommodates conductors up to 0.39" diameter
- Designed for DMMs, loggers, recorders and oscilloscopes
- 48Hz to 500Hz response
- 1mVAC/AAC output signals
- Designed to EN 61010, 600V CAT III safety standard

MODEL MN05

- Measurements from 5mA to 100AAC (Model MN05)
- Measurements from 1mA to 10AAC (Model MN114)
- Excellent companion to DMMs
- Permits very low AC current measurements

CATALOG NO. DESCRIPTION

2129.17	AC Current Probe Model MN01
2129.20	AC Current Probe Model MN02
2129.18	AC Current Probe Model MN03
2129.19	AC Current Probe Model MN05

CURRENT MEASUREMENT PROBES

MN SERIES AC CURRENT PROBES

MN SERIES



Model MN103



Model MN185

Compact sized probes ideal for measuring low currents and leakage currents. Standard millivolt or milli-amp outputs are compatible with multimeters, data loggers and oscilloscopes

SPECIFICATIONS

MODELS	MN103	MN106	MN114	MN185
ELECTRICAL				
Nominal Range	10, 100Aac	150Aac	10Aac	120Aac
Measurement Range	1mA to 10Aac 1A to 100Aac	2 to 150Aac	1mA to 10Aac	50mA to 120Aac
Transformation Ratio	Voltage output	1000:1	Voltage output	1000:1
Output Signal	1mV/mA, 1mV/A (10V _{AC} @ 10A, 100mV _{AC} @ 100A)	1mA/A (150mA _{AC} @ 150A)	100mV/A (1V _{AC} @ 10A)	1mA/A (120mA _{AC} @ 120A)
Accuracy	(10A Range) 45 to 65Hz: ±3% of Reading ± 1mA 65 to 500Hz: -2, +6% of Reading ± 1mA (100A Range) 45 to 65Hz: ±2% of Reading± 0.1A 65 to 500Hz: -2, +3% of Reading ± 0.1A	45 to 65Hz: ±2.5% of Reading ± 0.15 A 65 to 1000Hz: ±4.5% of Reading ± 0.15 A	1mA to 10A: 2% of Reading ± 2mA 40Hz to 3 kHz: 3.5% of Reading ± 2mA	50mA to 100A: 1% of Reading ± 0.01A (with non-inductive load) 100 to 120A: 1.5% of Reading ± 0.01 A
Phase Shift	-	2 to 120A, 50 to 60Hz: ≤10°	10A to 100A, 45 to 65Hz: ≤8°	1 to 100A, 50 to 60Hz: ≤3.5°
Overload	-	170A continuous	20A continuous	170A continuous
Frequency Range	45 to 500Hz	45Hz to 1kHz	30Hz to 5kHz	30Hz to 10kHz
Load Impedance	≥100 kΩ	≤5Ω non-inductive	≥100kΩ	≤5Ω non-inductive
Working/Common Mode Voltage	250V _{AC} /250V _{AC}			250V _{AC} /30V _{AC}
Output Termination	5ft (1.5m) lead with 4mm safety banana plugs			Two 4mm banana jacks
MECHANICAL				
Operating Temperature	14° to 122°F (-10° to 50°C)		-13° to 122°F (-25° to 50°C)	
Storage Temperature	-40° to 176°F (-40° to 80°C)			
Jaw Opening	0.78" (20mm)			
Maximum Conductor Size	0.47"Ø max (12mm)			
Dimensions	1.26 x 4.53 x 0.87" (32 x 115 x 22mm)			
Weight	5.6 oz (160g)			
Material	Polycarbonate UL 94			
SAFETY				
Electrical	3kV 50/60Hz dielectric for 1min			

FEATURES

- Measurement range of 1mA to 150AAC
- Jaw opening of 0.78"
- Accommodates conductors up to 0.47" in diameter
- Ergonomic design and easy operation
- Compact size accommodates hard to reach locations
- Low phase shift for power measurements
- Available with mV or mA output signals
- Constructed with UL94VO flame retardant material
- Designed for DMMs, recorders, loggers and oscilloscopes

CATALOG NO.	DESCRIPTION
1031.02	AC Current Probe Model MN103
1031.17	AC Current Probe Model MN106
2110.71	AC Current Probe Model MN114
100.185	AC Current Probe Model MN185

CURRENT MEASUREMENT PROBES

LM SERIES

MODEL LM102 & LM103

Equipped with high performance magnetic material offering excellent linearity and improved performance. Ideal current measurement tool for use with multimeters, data loggers and power analyzers

SPECIFICATIONS

MODELS	LM102	LM103
ELECTRICAL		
Nominal Range	200A _{AC}	
Measurement Range	50mA to 200 A _{AC} (1Ω load) 50mA to 200A _{AC} (10Ω load)	100mA to 200A
Transformation Ratio	1000:1	Voltage Output
Output Signal	1mA/A (200mA _{AC} @ 200A)	1mV/A (200mV _{AC} @ 200A)
Accuracy	≤1% of Reading + 0.02 A (1Ω load) ≤1.5% of Reading + 0.01 A (10Ω load)	≤1.5% of Reading+ 0.02A
Phase Shift	≤3° (1 Ω load) ≤6° (10Ω load)	≤3°
Overload	350A continuous @ ≤1kHz 200 A continuous @ ≤8kHz	
Frequency Range	48 Hz to 10kHz	
Load Impedance	≤10Ω	≤10kΩ
Open Secondary Voltage	≤30V	-
Output Termination	Double-insulated 5ft (1.5m) lead with two 4mm safety banana plugs	
MECHANICAL		
Operating Temperature	14° to 122°F (-10° to 50°C)	
Storage Temperature	-40° to 176°F (-40° to 80°C)	
Operating Relative Humidity	0 to 85% RH decreasing linearly above 95°F (35°C)	
Protection	IP20 (EN 60529)	
Maximum Conductor Size	Ø 0.63" (16mm)	
Dimensions	5.13 x 1.81 x 1.34" (130.4 x 46 x 34mm)	
Weight	Approximately 8.8oz (250g)	
Material	Polycarbonate UL 94	
SAFETY		
Electrical	EN 61010-1, EN 61010-2-031, EN 61010-2-032 600V CAT III, 300V CAT IV Pollution Degree 2	
Double Insulation	Yes	
CE Mark	Yes	



FEATURES

- Clamping diameter 0.63" (16mm)
- Measurement range from 0.1 to 200 Amps
- Over range up to 350 Amps continuous
- 1mA/A output (model LM102)
- 1mV/A output (model LM103)
- Clothes pin design allows access to tight places
- Frequency response from 48 to 10kHz
- Arrow marker clearly assist in proper orientation for power measurement applications

CATALOG NO.	DESCRIPTION
2153.04	AC Current Probe Model LM102
2153.05	AC Current Probe Model LM103

MODEL MH60



FEATURES

- Clamping diameter 1.02" (26mm)
- Measurement range from 0.5 to 140 Amps AC, 100 Amps DC
- Measures AC+DC signals
- 10mV/A output
- Automatic compensation for earth's magnetic influence
- Battery Power (8 hour battery life) or USB continuous
- Frequency response from DC to 1 MHz
- Selectable 3 or 30kHz filter selection
- Push button zero adjust
- LED indicators for power, overload and filter selection
- UL 94 V2 self-extinguishing case material

Designed to measure AC and DC currents using dual Hall effect and transformer technology at frequencies to 1MHz

SPECIFICATIONS

MODEL	MH60
ELECTRICAL	
Nominal Range	100AAC/DC (140A peak)
Measurement Range	500mA to 140AAC/100Adc
Transformation Ratio	Voltage Output
Output Signal	10mV/A (1VAC/DC @ 100A)
Accuracy	0.5 to 64AAC/DC: ≤1.5% of Reading + 0.01A 64 to 90AAC/DC: ≤4% of Reading 90 to 140AAC/100Adc: ≤5% of Reading
Phase Shift	≤1°
Overload	150A Continuous
Frequency Range (@ -3dB)	DC to 1MHz
Load Impedance	0.25mΩ (at 400Hz) 0.628mΩ (at 1MHz) In RF: 0.1μH for a primary transition
Common Mode Voltage	(600V Max) At 50Hz: 3.5mA/5mA @ 100V At 400Hz: 25.9mA/50mA @ 100V
Battery	Internal NiMH rechargeable battery; 5 Vdc external via female micro-USB type B connection
Battery Life	8 hours typical with fully-charged battery
Output Termination	6.6ft (2m) lead with molded isolated male BNC connector
MECHANICAL	
Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	-4° to 122°F (-20° to 50°C)
Operating Relative Humidity	0 to 85% RH decreasing linearly above 95°F (35°C)
Maximum Conductor Size	Ø 1.02" (26mm)
Dimensions	5.43 x 1.92 x 1.10" (138 x 49 x 28mm)
Weight	Approximately 705oz (200g)
Material	Polycarbonate UL 94
SAFETY	
Electrical	EN 61010-1 EN 61010-2-31 600V CAT II, 300V CAT III Pollution Degree 2
Double Insulation	Yes
Protection	IP40 (EN 60529)
CE Mark	Yes

CATALOG NO.	DESCRIPTION
2153.03	AC/DC Current Probe Model MH60

CURRENT MEASUREMENT PROBES

MN SERIES AC CURRENT PROBES

MN200 SERIES

General purpose AC current probe with voltage outputs, for use with DMMs or with measuring instruments with voltage inputs. Permits measurement or recording of current with instruments that do not have current ranges. Voltage output proportional to current measured



Model MN213



SPECIFICATIONS

MODELS	MN213	MN251	MN253	MN255	MN291
Nominal Range	200A _{AC}	200A _{AC}	200A _{AC}	20A _{AC} ; 200A _{AC}	200A _{AC}
Measurement Range	0.5 to 240A _{AC}	0.1 to 240A _{AC}		0.1 to 24A _{AC} ; 0.1 to 240A _{AC}	0.5 to 240A _{AC}
Transformation Ratio	1000: 1	Voltage output	Voltage output	Voltage output	DC Voltage output
Output Signal	1mA/A (200mA _{AC} @ 200A)	1 mV/A (200mV _{AC} @ 200A)	10 mV _{AC} /A (2V _{AC} @ 200A)	20A: 100mV/A (20V _{AC} @ 200A) 200A : 10mV/A (2V _{AC} @ 200A)	100mV/A (20V _{DC} @ 200A)
Accuracy (20A Range)		-		1% ± 50mV	-
(200A Range)		3% of Reading ± 0.5 A 2.5% of Reading ± 0.5 A 2% of Reading ± 0.5 A 1% of Reading ± 0.5 A		3% of Reading ± 0.5 A 2.5% of Reading ± 0.5 A 2% of Reading ± 0.5 A 1% of Reading ± 0.5 A	3% of Reading ± 0.5 A 2.5% of Reading ± 0.5 A 2% of Reading ± 0.5 A 2% of Reading
Phase Shift (20A Range)		-		Not Specified	
(200A Range)		Not Specified ≤5° ≤3° ≤2.5°		Not Specified ≤5° ≤3° ≤2.5°	N/A
Overload	240A for 10 min ON, 30 min OFF				
Frequency Range	40Hz to 10kHz				
Load Impedance	1Ω, 10Ω max. with derating	>1MΩ			
Working/Common Mode Voltage	600V				
Output Termination	Double-insulated 5ft (1.5m) lead with two 4mm safety banana plugs				
MECHANICAL					
Operating Temperature	14° to 131°F (-10° to 55°C)				
Storage Temperature	-40° to 158°F (-40° to 70°C)				
Operating Relative Humidity	10 to 90% RH				
Jaw Opening	0.83" (21mm)				
Maximum Conductor Size	Ø 0.78" max (20mm)				
Maximum Bus Bar size	0.78 x 0.19" (20 x 5mm)				
Dimensions	5.47 x 2.00 x 1.18" (139 x 51 x 30mm)				
Weight	6.5 oz (180g)				
Material	Polycarbonate UL 94				
SAFETY					
Electrical	EN/IEC 61010-2-32 600 V CAT III, EN/IEC 61010-032				
UL Approval	Yes - Canada and United States				
Protection	IP40				
Double Insulation	Yes				
CE Mark	Yes				

FEATURES

- Small compact size
- Measurement ranges from 100mA to 240A
- Frequency response to 10kHz
- UL approved for both US and Canada
- Designed to EN61010, 600V CAT III
- Jaw opening accommodates 250kcmil cables
- Constructed with UL94VO flame retardant material
- Double insulated construction

CATALOG NO.	DESCRIPTION
2115.75	AC Current Probe Model MN213
2115.77	AC Current Probe Model MN251
2115.79	AC Current Probe Model MN253
2115.81	AC Current Probe Model MN255
2115.84	AC Current Probe Model MN291

CURRENT MEASUREMENT PROBES

MN SERIES AC CURRENT PROBES



Model MN307



MN300 SERIES

Compact sized probes ideal for measuring low currents and leakage currents. Standard millivolt outputs are compatible with multimeters, data loggers and oscilloscopes

SPECIFICATIONS

MODELS	MN307	MN312	MN313	MN352	MN353	MN373	MN375	MN379*
Nominal Range	10Aac	150Aac				2Aac; 150Aac	10Aac	5Aac; 100Aac
Measurement Range	0.1 to 12Aac	0.1 to 200Aac				0.01 to 2.4Aac; 0.2 to 200Aac	0.1 to 10Aac	5mA to 6Aac; 0.1 to 120Aac
Transformation Ratio	Voltage output	1000:1		Voltage output		Voltage output		
Output Signal	100mV/A (1Vac @ 10A)	1mA/A (150mAac @ 150A)		10mV/A (1.5Vac @ 150A)		2A: 1V/A (2Vac @ 2A) 150A: 10mV/A (1.5Vac @ 150A)	100 mV/A (1 Vac @ 10A)	5 A: 200 mV/A (1 Vac @ 5 A) 100 A: 10 mV/A (1 Vac @ 100 A)
Accuracy	0.1 to 0.5A: ≤2.5% of Reading ± 1mA 0.5 to 1A: ≤2.5% of Reading 1 to 12A: ≤1.0% of Reading	0.1 to 1A: 2% of Reading ± 20mA 1 to 80A: 1% of Reading ± 20mA 80 to 100A: 1.5% of Reading ± 0.1A 100 to 150A: 0.5% of Reading ± 0.5A 150 to 200A: Not specified		0.1 to 1 A: ≤3% of Reading ± 20mA 1 to 20 A: ≤2% of Reading ± 20mA 20 to 80A: ≤1% of Reading 80 to 150A: ≤3% of Reading 150 to 200A: ≤7% of Reading		0.01 to 0.1A: ≤5% of Reading ± 2mA 0.1 to 1A: ≤3% of Reading ± 1mA 1 to 2 A: ≤1% of Reading 2 to 2.4 A: ≤1% of Reading (150A Range) 0.1 to 1A: ≤3% of Reading ± 200mA 1 to 20A: ≤2% of Reading ± 20mA 20 to 80A: ≤1% of Reading 80 to 150A: ≤3% of Reading 150 to 200A: Not specified	0.1 to 1A: 1% of Reading ± 20mA 1 to 10A: 1% of Reading ± 0.15A	(5A Range) 5mA: 1.5% ± 0.1mA 50mA: 1.5% 0.5A: 1% 5A: 1% (100A Range) 0.1 A: 1% ± 1mA 1; 10; 100 A: 1%
Phase Shift	0.1 to 1A: ≤5° 1 to 5A: ≤3° 5 to 12A: ≤2.5°	0.1 to 1A: Not specified 1 to 20A: ≤3° 20 to 80A: ≤2° 80 to 150A:≤2.5° 150 to 200A: Not specified				(2A Range) Not Specified (150A Range) 0.1 to 1 A: Not specified 1 to 20 A: ≤3° 20 to 80 A:≤2° 80 to 150 A: ≤3° 150 to 200 A: ≤4°	1 to 5A : ≤1° @ 60 Hz 5 to 10A: ≤1.5° @ 60 Hz	(5A Range) 5mA: 6.5° 50mA: 5° 0.5A: 4.5° 5A: 4° (100A Range) 0.1A: 3.2° 1; 10; 100A: 2.2°
Overload	20A Continuous	200A Continuous		240A for 10 min ON, 30 min OFF		240A for 10 min ON, 30 min OFF	20A Continuous	200A Continuous
Frequency Range	40Hz to 10kHz					40Hz to 3kHz		40Hz to 10kHz
Load Impedance	1MΩ	1Ω		1MΩ				
Crest Factor	3 @ 10Arms with an error (due to CF) of 3%	3 @ 200A peak with an error (due to CF) of 3%		3 @ 150A peak (due to CF) of 3%		3 @ 2A; 3 @ 150A peak with an error (due to CF) of 3%	3 @ 10Arms with an error (due to CF) of 3%.	Not specified
Working/Common Mode Voltage	600Vrms							
Output Termination	Double-insulated 5ft (1.5m) lead with two 4mm safety banana plugs	Two standard safety 4mm banana jacks	Double-insulated 5ft (1.5m) lead with two 4mm safety banana plugs	Two standard safety 4mm banana jacks	Double-insulated 5ft (1.5m) lead with two 4mm safety banana plugs			
MECHANICAL								
Operating Temperature	14° to 131°F (-10° to 55°C)							
Storage Temperature	-40° to 158°F (-40° to 70°C)							
Operating Relative Humidity	85% RH without roll-off above 95°F(95°C)							
Jaw Opening	0.83" (21mm)							
Maximum Conductor Size	0.78" max (20mm)							
Dimensions	5.47 x 2.00 x 1.18" (139 x 51 x 30mm)							
Weight	6.5 oz (180g)							
Material	Polycarbonate UL 94							
SAFETY								
Electrical	EN/IEC 61010-1 600 V CAT III, EN 61010-2-32, Pollution Degree 2							
UL Approval	Yes - Canada and United States *excludes MN379							
Protection	IP40							
Double Insulation	Yes							
CE Mark	Yes							

CATALOG NO.	DESCRIPTION
2116.23	AC Current Probe Model MN307
2116.24	AC Current Probe Model MN312
2116.25	AC Current Probe Model MN313
2116.26	AC Current Probe Model MN352
2116.27	AC Current Probe Model MN353
2116.28	AC Current Probe Model MN373
2115.41	AC Current Probe Model MN375
2153.01	AC Current Probe Model MN379

CURRENT MEASUREMENT PROBES

JM SERIES AC CURRENT PROBES

JM800 SERIES

High performance for higher currents, AC current probes have excellent transformation and low phase shift



Model JM813



SPECIFICATIONS

MODELS	JM813	JM810A	JM830A	JM865A
Nominal Range	3000A _{AC} (2400A _{AC} >95°F [35°C])	2000A _{AC}	3000A _{AC} (2400A _{AC} >95°F [35°C])	1000; 2000; 3000A _{AC} (2400A _{AC} >95°F [35°C])
Measurement Range	1 to 3000A _{AC}	1 to 2000A _{AC}	1 to 3000A _{AC}	1 to 3600A _{AC}
Transformation Ratio	3000:3	2000: 2	3000: 1	1000:5; 2000: 5; 3000: 5
Output Signal	1mA/A (3A _{AC} @ 3000A)	1mA/A (2A _{AC} @ 2000A)	0.333mA/A (1A _{AC} @ 3000A)	5 mA/A 2.5 mA/A 1.666 mA/A (5A _{AC} @ 1000, 2000, 3000A)
Accuracy	150A: 1.5% of Reading 600A: 0.75% of Reading 3000A: 0.5% of Reading	100A: 2% of Reading 400A: 1% of Reading 2000A: 0.5% of Reading	150A: 1.5% of Reading 600A: 0.75% of Reading 3000A: 0.5% of Reading	(1000A Range) 50A: 3% of Reading 200A: 1.5% of Reading 1000A: 1% of Reading (2000A Range) 100A: 1.5% of Reading 400A: 0.75% of Reading 2000A: 0.5% of Reading (3000A Range) 150A: 1.5% of Reading 600A: 0.75% of Reading 3000A: 0.5% of Reading
Phase Shift	150A: 1.5° 600A: 0.75° 3000A: 0.5°	100A: 1.5° 400A: 0.75° 2000A: 0.5°	150A: 1.5° 600A: 0.75° 3000A: 0.5°	(1000A Range) 50A: 3° 200A: 1.5° 1000A: 1° (2000A Range) 100A: 1.5° 400A: 0.75° 2000A: 0.5° (Rango de 3000A) 150A: 1.5° 600A: 0.75° 3000A: 0.5°
Overload	3600A for 5 min	2400A for 10 min	3600A for 5 min	1200; 2400; 3600A for 10 min
Frequency Range	30Hz to 5kHz; current derating above 1kHz for continuous use			30Hz to 1.5kHz; current derating above 1.5kHz for continuous use
Load Impedance	≤0.6Ω	≤1Ω	≤5Ω	0.1Ω; 0.2Ω; ≤2Ω
Working/Common Mode Voltage	600V			
Output Termination	Two safety 4mm banana jacks	5ft (1.5m) lead with two 4mm safety banana plugs		Two safety 4mm banana jacks
MECHANICAL				
Operating Temperature	14° to 122°F (-10° to 50°C)			
Storage Temperature	-13° to 176°F (-25° to 80°C)			
Jaw Opening	3.54" (90mm)			
Maximum Conductor Size	Ø 2.52" (64mm)			
Maximum Bus Bar Size	1.97 x 5.31" (50 x 135mm); 2.52 x 3.94" (64 x 100mm)			
Dimensions	4.72 x 12.40 x 1.89" (120 x 315 x 48mm)			
Weight	2.65 lbs (1.2kg)			
Material	Polycarbonate UL 94			
SAFETY				
Electrical	EN 61010-2-32, 600V CAT III, Pollution Degree 2			
Protection	IP20			
Double Insulation	Yes			
CE Mark	Yes			

FEATURES

- Current output: up to 3000A_{AC} (continuous cycle for the full temperature range)
- Designed for use on DMMs, power and harmonic meters, recorders or instruments with AC current ranges

CATALOG NO. DESCRIPTION

2110.93	AC Current Probe Model JM813
2110.80	AC Current Probe Model JM810A
2110.83	AC Current Probe Model JM830A
2110.88	AC Current Probe Model JM865A

CURRENT MEASUREMENT PROBES

DIGITAL FLEXPROBE®

MODELS 400D & 4000D

Provide a welcomed solution when accessing electrical conductors in tight places



MINIFLEX:
Model 4000D-24 (24" probe)



MINIFLEX:
Model 4000D-14 (14" probe)



MINIFLEX:
Model 400D-6 (6" probe)
Model 400D-10 (10" probe)

FEATURES

- Easy access and measurement, even in confined spaces
- Measurement from 20mAAC to 4000A (model dependent)
- Available with 6", 10", 14" and 24" sensor lengths
- Sensor diameter 1.77" to 8" (model dependent)
- Resolution down to 1mA (model dependent)
- HOLD feature
- Direct reading
- Compact and simple to use
- Flexible current sensor
- True RMS
- Safety rating of 600V CAT IV

SPECIFICATIONS



MODEL	400D		
ELECTRICAL			
Display Range	4A _{AC}	40A _{AC}	400A _{AC}
Measurement Range	0.020 to 3.999A	4.00 to 39.99A	40.0 to 399.9A
Resolution	1mA	10mA	100mA
Accuracy	±(2% + 10cts)	±(1.5% + 2cts)	±(1.5% + 2cts)
Sensor Diameter	400D-6: Ø 1.77" (45mm) / 400D-10: Ø 2.75" (70mm)		
Sensor Length	400D-6: 6" (170mm) / 400D-10: 10" (250mm)		
Bandwidth	10Hz to 3kHz		
MODEL	4000D		
Display Range	40A _{AC}	400A _{AC}	4000A _{AC}
Measurement Range	0.20 to 39.99A	40.0 to 399.9A	400 to 3999A
Resolution	10mA	100mA	1A
Accuracy	±(2% + 10cts)	±(1.5% + 2cts)	±(1.5% + 2cts)
Sensor Diameter	4000D-14 : Ø 3.94" (100mm) / 4000D-24 : Ø 8" (190mm)		
Sensor Length	4000D-14: 14" (350mm) / 4000D-24: 24" (610mm)		
Bandwidth	10Hz to 3kHz		
MECHANICAL			
Power Supply	2 x 1.5V AAA / LR3 batteries		
Operating Temperature	32° to 122°F (0° to 50°C)		
Weight	approx. 0.29lbs (130g) MiniFlex		
Casing Dimensions	3.94 x 2.36 x 0.79" (100 x 60 x 20mm)		
Connection Cable Length	6ft (1.8m)		
Safety	IEC 61010, 600V CAT IV		

PRODUCT INCLUDES

Digital FlexProbe®, 2 AAA batteries and user manual.

CATALOG NO.	DESCRIPTION
2153.30	Digital FlexProbe® Model 400D-6 w/6' Lead (TRMS, 4Aac, 40Aac, 400Aac)
2153.31	Digital FlexProbe® Model 400D-10 w/6' Lead (TRMS, 4Aac, 40Aac, 400Aac)
2153.32	Digital FlexProbe® Model 4000D-14 w/6' Lead (TRMS, 40Aac, 400Aac, 4000Aac)
2153.35	Digital FlexProbe® Model 4000D-24 w/6' Lead (TRMS, 40Aac, 400Aac, 4000Aac)
Accessories/Replacement - available on website store from www.aemc.com	
5000.44	MultiFix Multi-Position Magnetic Accessory (available on website storefront)







Technical Assistance (800) 343-1391

www.aemc.com 31







CURRENT MEASUREMENT PROBES

SELECTION CHARTS

AMPFLEX® AND MINIFLEX® PROBES

SERIES	MODEL	RATIO	MEASUREMENT RANGE	OUTPUT SIGNAL	MAXIMUM CONDUCTOR SIZE	CATALOG NO.
	MF 300-6-2-10-HF	-	30A 300A	100mV/A 10mV/A	1.77" (45mm)	2126.83
	MF 3000-10-2-10-HF	-			2.95" (70mm)	2126.84
	MF 300-6-2-10	-			1.77" (45mm)	2126.81
	MF 3000-10-2-1	-	300A 3000A	10mV/A 1mV/A	2.95" (70mm)	2126.82
	MA114	-	3A 30A 300A 3000A	1mV/A 100mV/A 10mV/A 1mV/A	4" (101mm)	2153.41
	300-24-2-10	-	30A 300A	100mV/A 10mV/A	8" (190mm)	2112.88
	1000-24-1-1	-	1000A	1mV/A	8" (190mm)	2112.39
	1000-24-2-1	-	100A 1000A	10mV/A 1mV/A	8" (190mm)	2112.98
	1000-36-2-1	-	100A 1000A	10mV/A 1mV/A	11" (290mm)	2113.00
	3000-24-1-1	-	3000A	1mV/A	8" (190mm)	2112.46
	3000-36-1-1	-	3000A	1mV/A	11" (290mm)	2112.48
	3000-24-2-1	-	300A 3000A	10mV/A 1mV/A	8" (190mm)	2113.05
	3000-36-2-1	-	300A 3000A	10mV/A 1mV/A	11" (290mm)	2112.00
	3000-48-2-1	-	300A 3000A	10mV/A 1mV/A	15" (390mm)	2112.01
	6000-36-2-0.1	-	600A 6000A	1mV/A 0.1mV/A	11" (290mm)	2113.21
	30000-24-2-0.1	-	3000A 30,000A	1mV/A 0.1mV/A	8" (190mm)	2113.33
	24-3001	-	300A 3000Aac	10mV/A 1mV/A	8" (190mm)	2120.81

OSCILLOSCOPE & BNC TERMINATED PROBES

MODEL	MEASUREMENT RANGE		OUTPUT SIGNAL	PHASE SHIFT*	MAXIMUM CONDUCTOR SIZE		OUTPUT CONNECTION
	AC	DC			Ø CABLE	BUS BAR	
SL261 	100mA to 10A 1 to 100A	100mA to 10A 1 to 100A	100mV/A 10mV/A	<1.5°	0.46" (11.8mm)	N/A	Lead w/BNC
MN261 	0.1 to 24A 0.5 to 240A	—	100mV/A 10mV/A	<2.5°	0.78" (19.8mm)	N/A	Lead w/BNC
SR661 	0.1 to 12A 0.1 to 120A 1 to 1200A	—	100mV/A 10mV/A 1mV/A	<1°	2.05" (52mm)	1.96 x 0.19" (50 x 5mm)	Lead w/BNC
JM861 	1 to 30A 1 to 300A 1 to 3000A	—	10mV/A 1mV/A 0.1mV/A	<1°	2.52" (64mm)	2.52 x 3.94" (64 x 100mm)	Lead w/BNC
MN251T MN379T 	1 to 200A	—	1mV/A	<2.5°	0.78" (20mm)	0.78" (20mm)	Lead w/BNC
	0.005 to 6A 0.1 to 120A 1 to 100A		200mV/A 10mV/A	<4°			
MH60 	0.5 to 140A	0.5 to 100A	10mVAc/DC/AAC/DC	<1°	1.02" (26mm)	N/A	Lead w/BNC






*Phase shift indicated at maximum rating.

Note: All probes are rated 600V CAT III and CE compliant. Not all models are UL approved; please consult factory.

CURRENT MEASUREMENT PROBES

GENERAL PURPOSE PROBES SELECTION CHART

GENERAL PURPOSE PROBES

SERIES	MODEL	RATIO	MEASUREMENT RANGE		OUTPUT SIGNAL		PHASE SHIFT**	MAXIMUM CONDUCTOR SIZE		OUTPUT CONNECTION	CATALOG NO.
			AC	DC	CURRENT	VOLTAGE		Ø CABLE	BUS BAR		
	MN01	-	2 to 150A	-	1mA/A*	-	N/A	0.39" (10mm)		Lead	2129.17
	MN02	1000:1	50mA to 100A 50mA to 90A	-	1mA/A*	-	N/A			Lead	2129.20
	MN03	-	2 to 100A	-	-	1mV/A	N/A			Lead	2129.18
	MN05	-	5mA to 10A 1 to 100A	-	-	1mV/A 1mV/A	N/A			Lead	2129.19
	MN103	-	1mA to 10A 1 to 100A	-	-	1mV/A 1mV/A	N/A	0.47" (12mm)		Lead	1031.02
	MN106	1000:1	2 to 150A	-	1mA/A	-	<10°			Lead	1031.17
	MN114	-	1mA to 10A	-	-	100mV/A	<8°			Lead	2110.71
	MN185	1000:1	50mA to 120A	-	1mA/A	-	<3.5°			Jack	100.185
	MN213	1000:1	0.5 to 240A	-	1mA/A*	-	<2.5°	0.78" (19.8mm)	N/A	Lead	2115.75
	MN251	-	0.5 to 240A	-	-	1mV/A	<2.5°			Lead	2115.77
	MN253	-	0.5 to 240A	-	-	10mV/A	<2.5°			Lead	2115.79
	MN255	-	0.1 to 24A 0.1 to 240A	-	-	100mV/A 10mV/A	<2.5°			Lead	2115.81
	MN291	-	0.5 to 240A	-	-	100mV/A	N/A			Lead	2115.84
	MN307	-	10mA to 12A	-	-	100mV/A	<2.5°			Lead	2116.23
	MN312	1000:1	0.1 to 200A	-	1mA/A*	-	<2.5°			Jack	2116.24
	MN313	1000:1	0.1 to 200A	-	1mA/A*	-	<2.5°			Lead	2116.25
	MN352	-	0.1 to 150A	-	-	10mV/A	<2.5°			Jack	2116.26
	MN353	-	0.1 to 150A	-	-	10mV/A	<2.5°			Lead	2116.27
	MN373	-	0.01 to 2.4A 0.1 to 200A	-	-	1000mV/A 10mV/A	<3°			Lead	2116.28
	MN375	-	0.1 to 10A	-	-	100mV/A	<1.5°			Lead	2115.41
	MN379	-	5mA to 6A 0.1 to 120A	-	-	200mV/A 10mV/A	<1.5°			Lead	2153.01
	SL206	-	10mA to 1.5A 50mA to 60A	10mA to 2A 50mA to 80A	-	1mV/mAac/dc 10mV/Aac/dc	<1°	0.46" (11.8mm)		Lead	1201.45
	MD301	1000:1	2 to 500A	-	-	1mVDC/Aac	N/A	1.18" (30mm) 2 x 500kcmil	2.48 x 0.20" (63 x 5mm)	Lead	1201.07
	MD305	1000:1	1 to 600A	-	1mA/A*	-	<1°			Lead	1201.36

*Output Protection for open secondary

**Phase shift indicated at maximum rating





Note: Models MN103, MN106, MN114 & MN185 are not CE compliant. MN200 & MN300 series are UL approved.

Consult factory for NIST Calibration price

CURRENT MEASUREMENT PROBES

GENERAL PURPOSE PROBES SELECTION CHART



SERIES	MODEL	RATIO	MEASUREMENT RANGE		OUTPUT SIGNAL		PHASE SHIFT**	MAXIMUM CONDUCTOR SIZE		OUTPUT CONNECTION	CATALOG NO.
			AC	DC	CURRENT	VOLTAGE		Ø CABLE	BUS BAR		
	SR600	1000:1	0.1 to 1000A	-	1mA/A	-	<0.5°	2.05" (52mm)	1.96 x 0.19" (50 x 5mm)	Jack	2113.42
	SR601	1000:1	0.1 to 1000A	-	1mA/A*	-	<0.5°			Jack	2113.43
	SR604	1000:1	0.1 to 1000A	-	1mA/A*	-	<0.5°			Lead	2113.44
	SR634	250:5 500:5 1000:5	1 to 250A 1 to 500A 1 to 1000A	-	20mA/A 10mA/A 5mA/A*	-	<1°			Jack	2113.48
	SR651	-	0.1 to 1000A	-	-	1mV/A	<0.5°			Jack	2113.45
	SR701	1000:1	1mA to 1000A	-	1mA/A*	-	<0.5°			Jack	2116.29
	SR704	1000:1	1mA to 1000A	-	1mA/A*	-	<0.5°			Lead	2116.30
	SR752	-	0.1 to 1000A	-	-	1mV/A	<0.7°			Lead	2116.32
	SR759	-	1mA to 1A 10mA to 10A 0.1 to 100A 1 to 1000A	-	-	1000mV/A 100mV/A 10mV/A 1mV/A	<1°			Lead	2116.33
	JM810A	2000:2	1 to 2000A	-	1mA/A*	-	<0.5°	2.52" (64mm)	1.97 x 5.31" (50 x 135mm) 2.52 x 3.94" (64 x 100mm)	Lead	2110.80
	JM813	3000:3	1 to 2400A	-	1mA/A*	-	<0.5°			Jack	2110.93
	JM830A	3000:1	1 to 2400A	-	.333mA/A*	-	<0.5°			Lead	2110.83
	JM865A	1000:5 2000:5 3000:5	1 to 1000A 1 to 2000A 1 to 2400A	-	5mA/A 2.5mA/A 1.67mA/A	-	<0.5°			Jack	2110.88
	K100	-	0.1mA to 3A	0.05mA to ±4A	-	1mV/mAac/dc	N/A	0.18" (4.5 mm)	N/A	Plugs	1200.67
	K110	-	0.1mA to 300mA	0.05mA to ±450mA	-	10mV/mAac/dc	N/A			Plugs	2111.73
	LM102	1000:1	50mA to 200A	-	1mA/A*	-	<3°	0.63" (16 mm)	N/A	Lead	2153.04
	LM103	-	0.1 to 200A	-	-	1mV/A	<3°			Lead	2153.05

*Output Protection for open secondary

**Phase shift indicated at maximum rating

Note: SR series probes are UL approved

Consult factory for NIST Calibration price

OUTPUT TERMINATIONS

LEAD WITH BNC

Insulated 6.5ft (2m) coaxial cable with insulated BNC connector rated 600Vrms



JACK

Two standard safety banana jacks (4mm)



LEADS

Double/reinforced 5ft (1.5m) lead with 4mm safety banana plug

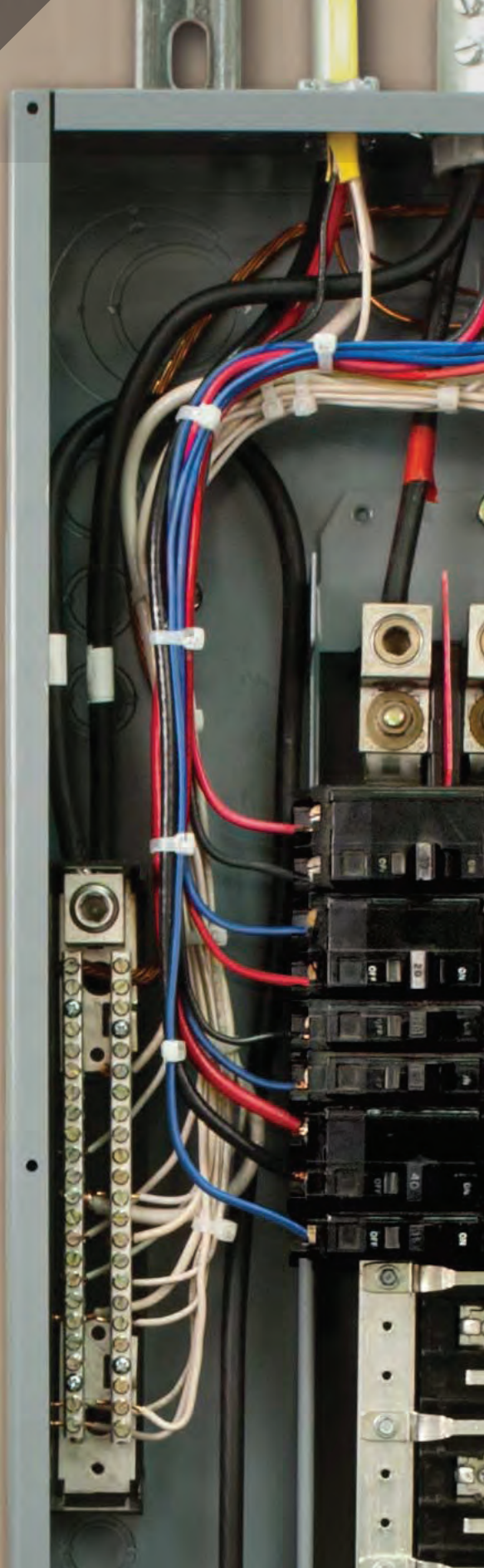


SHROUDED BANANA PLUGS

Two 4mm safety banana plugs; standard ¾" (19mm) spacing



DATA LOGGERS



SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

DATA LOGGERS

SIMPLE LOGGER® II TRMS CLAMP-ON CURRENT

MODEL CL601

Designed for plant and field service applications and for use in harsh environments



SPECIFICATIONS

MODEL	CL601
ELECTRICAL	
Channels	One
Input	Split CT - AC Current
Measurement Range	0 to 600Aac
Resolution	0.1A
Accuracy (50/60Hz)	0 to 5A: unspecified 5 to 50A: $\pm(1\% \text{ of Reading} + 1A)$ 50 to 400A: $\pm(1\% \text{ of Reading} + 0.5A)$ 400 to 600A: $\pm(3\% \text{ of Reading} + 1A)$
Sample Rate	64 samples/cycle
Storage Rate	Programmable from 8 every second to 1 every day
Storage Modes	Start/Stop, FIFO, Extended Recording Mode (XRM™)* and Alarm
Recording Length	15 minutes to 8 weeks, programmable using DataView®
Memory	240,000 measurements (512KB) - The recorded data is stored in non-volatile memory and will be retained even if the battery is low or removed.
Communication	USB 2.0 optically isolated
Power Source	2 x 1.5V AA-cell Alkaline batteries (included)
Battery Life	100 hours to >45 days (dependent on sample rate and recording length)
MECHANICAL	
Dimensions	9.25 x 4.0 x 1.63" (235 x 102 x 41mm)
Max Conductor Size	1 conductor - Ø 1.42" (36mm) 2 conductor s- Ø 1.00" (25mm) each
Weight (with battery)	171oz (485g)
Case	UL94-V0
Vibration	IEC 68-2-6 (1.5mm, 10 to 55Hz)
Shock	IEC 68-2-27 (30G)
Drop	IEC 68-2-32 (1m)

*EXTENDED RECORDING MODE (XRM™)

This unique recording mode provides the opportunity to continuously record over long periods of time by reducing the stored samples of the oldest data and maintaining matching resolution for the newest data. Each time the memory fills up using XRM™ every other of the oldest stored samples is discarded making room for newer samples. This process continues until the recording is manually stopped.



FEATURES

- 0 to 600Arms
- True RMS measurements
- Self contained, no exposed connections
- Overload indication
- Optically isolated USB 2.0 communication cable included
- One button operation
- Alarm function
- 5 LED indicators quickly and clearly display logger status
- Powered by standard Alkaline batteries
- Includes FREE DataView® software for data retrieval, real-time display, analysis and report generation
- EN 61010-1; 300V CAT IV, 600V CAT III

APPLICATIONS

- Machine load monitoring
- HVAC troubleshooting
- Load profiling
- Electrical troubleshooting
- Start-Stop time stamping

CATALOG NO. DESCRIPTION

2126.01 Simple Logger® II Model CL601 (1-Channel, TRMS, Clamp-On, 0 to 600Aac, DataView® software)

DATA LOGGERS

SIMPLE LOGGER® II 4-CHANNEL BLUETOOTH EDITION

4-CHANNEL AMPFLEX® MODEL AL834

Four channel logger with 24" long flexible sensors capable of wrapping around an 8" conductor



cover open cover closed

FEATURES

- Includes four integral AmpFlex® flexible current probes that will measure up to 3000A TRMS with 0.5A resolution
- Dual range 300/3000A user selectable per channel
- 64 samples per cycle
- Programmable storage rates from 125ms to 1 per day
- 4 user selectable storage modes
- Stores up to 1,000,000 measurements in non-volatile memory
- Powered by standard Alkaline batteries for a period of up to 180 days
- Lightweight, compact and watertight
- 6 LED indicators quickly and clearly display logger status
- Wireless Bluetooth data communication (Class 2 Bluetooth module included)
- Includes FREE DataView® software for data storage, real-time display, analysis and report generation
- EN 61010-1; 600V CAT IV, 1000V CAT III

APPLICATIONS

- Single/Split-phase and 3-phase load monitoring
- Neutral and ground current monitoring
- Intermittent problem detection
- Harmonic current monitoring using DataView® software
- Machine load monitoring
- Fault current detection
- Load profiling

SPECIFICATIONS

MODEL	AL834	
ELECTRICAL		
Channels	Four	
Input	Captive AmpFlex [®] AC Current Flexible Sensors	
Range	5 to 300Aac	15 to 3000Aac
Accuracy (50/60Hz)	0 to 5A unspecified 5 to 300A: ±(1% of Reading + 0.5A)	0 to 15A unspecified 15 to 3000A: ±(1% of Reading + 1A)
Resolution	0.1Aac	0.5Aac
Sample Rate	64 samples/cycle	
Storage Rate	Programmable from 125ms to 1 per day	
Storage Modes	Start/Stop, FIFO, Extended Recording Mode (XRM [™]), Store on Alarm	
Recording Length	15 minutes to 8 weeks, programmable using DataView [®]	
Memory	1,000,000 measurements (2MB) The recorded data is stored in non-volatile memory and will be retained even if the battery is low or removed.	
Communication	Bluetooth connection (communicates up to 30 ft)	
Power Source	4 x 1.5V C-cell Alkaline batteries (included)	
Battery Life	Up to 180 days (dependent on storage rate/recording length)	
MECHANICAL		
Dimensions	5.904 x 5.904 x 3.568" (150 x 150 x 91mm) w/o Sensor	
Max Conductor Size	Ø 8" (203mm)	
Weight (with battery)	3.9 lbs (1.77kg)	
Case	UL94-V0	
Vibration	IEC 68-2-6 (1.5mm, 10 to 55Hz)	
Shock	IEC 68-2-27 (30G)	
Drop	IEC 68-2-32 (1m)	

PRODUCT INCLUDES



Bluetooth USB adapter, twelve color-coded input ID markers, mounting hardware, 4 x 1.5V C-Cell Alkaline batteries, and USB drive supplied with DataView® software and user manual.

CATALOG NO. DESCRIPTION

2126.14

Simple Logger® II Model AL834 (4-Channel, TRMS, Bluetooth, AmpFlex® 300/3000Aac, DataView® software)



Technical Assistance (800) 343-1391

www.aemc.com 37

DATA LOGGERS

SIMPLE LOGGER® II TRMS VOLTAGE

600VAC/DC MODEL L261

One channel loggers for voltage measuring, monitoring and troubleshooting



SPECIFICATIONS

MODELS	L261
ELECTRICAL	
Channels	One
Input Connection	Two recessed 4mm safety banana jacks
Measurement Range	0 to 600VAC/DC
Resolution	0.1V
Accuracy (50/60Hz)	0 to 5V: unspecified 5 to 50V: $\pm(0.5\% \text{ of Reading} + 1V)$ 50 to 600V: $\pm(0.5\% \text{ of Reading} + 0.5V)$
Input Impedance	40MΩ
Sample Rate	64 samples/cycle
Storage Rate	Programmable from 8 every second to 1 every day
Storage Modes	Start/Stop, FIFO, Extended Recording Mode (XRM™) and Alarm
Recording Length	15 minutes to 8 weeks, programmable using DataView
Memory	240,000 measurements (512KB) The recorded data is stored in non-volatile memory and will be retained even if the battery is low or removed.
Communication	USB 2.0 optically isolated
Power Source	2 x 1.5V AA-cell Alkaline batteries (included)
Battery Life	100 hours to >45 days (dependent on sample rate and recording length)
MECHANICAL	
Dimensions	4.94 x 2.75 x 1.28" (125 x 70 x 32mm)
Weight (with battery)	6.4oz (181g)
Case	UL94-V0
Vibration	IEC 68-2-6 (1.5mm, 10 to 55Hz)
Shock	IEC 68-2-27 (30G)
Drop	IEC 68-2-32 (1m)



FEATURES

- TRMS voltage recording up to 600VAC/DC
- AC: 64 samples per cycle and DC: 8 samples per sec
- Programmable storage rates from 8 every second to 1 every day
- 4 user selectable storage modes
- Stores up to 240,000 measurements in non-volatile memory
- Powered by standard Alkaline batteries
- Lightweight, compact, fits anywhere
- 5 LED indicators quickly and clearly display logger status
- Includes FREE DataView® software for data retrieval, real-time display, analysis and report generation
- Optically isolated USB 2.0 communication cable included
- EN 61010-1; 300V CAT IV; 600V CAT III

APPLICATIONS

- Surge and Sag recording
- Long term supply monitoring
- Industrial, commercial and residential monitoring
- Monitor voltage harmonics
- Find intermittent voltage problems
- Machine monitoring

PRODUCT INCLUDES

Set of two color-coded 5ft voltage leads, color-coded alligator clips (red/black), USB type A to 5 pin Mini-B, and USB drive supplied with DataView® software and user manual.



CATALOG NO. DESCRIPTION

2126.05 Simple Logger® II Model L261 (1-Channel, TRMS, 600VAC/DC, DataView® software)



DATA LOGGERS

SIMPLE LOGGER® II TRMS VOLTAGE & CURRENT

MODEL L562

Two input channel logger capable of recording Arms, Vrms and VA



FEATURES

- 2 input channels
- Voltage: 0 to 600VAC TRMS
- Current: compatible with voltage output AC current probes with voltage outputs (see page 33 - sold separately)
- 64 samples per cycle
- Records Arms, Vrms & VA (VA displays in DataView® software)
- 4 user selectable storage modes
- Programmable storage rates from 8 every second to 1 every day
- Stores up to 240,000 measurements in non-volatile memory
- Powered by standard Alkaline batteries
- Lightweight, compact, fits anywhere
- 5 LED indicators quickly and clearly display logger status
- Includes FREE DataView® software for data retrieval, real-time display, analysis and report generation
- Optically isolated USB 2.0 communication cable included
- Complies with EN 61010-1; 300V CAT IV; 600V CAT III (a safety rated current probe is required)

APPLICATIONS

- Single phase power monitoring
- Residential, commercial, industrial, troubleshooting
- Find sags and surges
- Track energy usage
- Start-Stop time stamping



Set of two color-coded 5ft voltage leads, color-coded alligator clips (red/black), USB type A to 5 pin Mini-B, and USB drive supplied with DataView® software and user manual.

SEE PAGE 33 FOR COMPATIBLE CURRENT PROBES (SOLD SEPARATELY)

SPECIFICATIONS

MODEL	L562	
ELECTRICAL		
Channels	Two	
Connection	Current Channel	Voltage Channel
Input Connection	BNC	Two recessed banana jacks
Input Range	0 to 1V _{AC} (for use with current probes with a voltage output)	0 to 600V _{AC}
Resolution	0.1mV	0.1V
Accuracy (50/60Hz)	0 to 10mV unspecified 10 to 50mV: ±(0.5% of Reading + 1mV) 50 to 1000mV: ±(0.5% of Reading + 0.5mV)	0 to 5V unspecified 5 to 50V: ±(0.5% of Reading + 1V) 50 to 600V: ±(0.5% of Reading + 0.5V)
Input Impedance	800kΩ	40MΩ
Maximum Input Voltage	5V _{rms} or ±707V peak	1.2 x 600V
Sample Rate	64 samples/cycle	
Storage Rate	Programmable from 8 every second to 1 every day	
Storage Modes	Start/Stop, FIFO, Extended Recording Mode (XRm™) and Alarm	
Recording Length	15 minutes to 8 weeks, programmable using DataView®	
Memory	240,000 measurement (512KB). The recorded data is stored in non-volatile memory and will be retained even if the battery is low or removed.	
Communication	USB 2.0 optically isolated	
Power Source	2 x 1.5V AA-cell Alkaline batteries (included)	
Battery Life	100 hours to > 45 days (dependent on sample rate and recording length)	
MECHANICAL		
Dimensions	5.38 x 2.75 x 1.28" (136 x 70 x 32mm)	
Max Conductor Size	Current probe dependent	
Weight (with battery)	6.4oz (181g)	
Case	UL94-V0	
Vibration	IEC 68-2-6 (1.5mm, 10 to 55Hz)	
Shock	IEC 68-2-27 (30G)	
Drop	IEC 68-2-32 (1m)	

PRODUCT INCLUDES

CATALOG NO.

DESCRIPTION

2126.35

Simple Logger® II Model L562 (2-Channel, TRMS, Voltage & Current, DataView® software)



Technical Assistance (800) 343-1391

www.aemc.com 39

DATA LOGGERS

SIMPLE LOGGER® II TRMS VOLTAGE

MINIFLEX® MODELS ML912 & ML914

AC current recording loggers incorporate two selectable measurement ranges



SPECIFICATIONS

MODEL	ML912	ML914
ELECTRICAL		
Channels	Two	Four
Input	Captive MiniFlex® AC Current Flexible Sensors	
Range	1 to 100A _{AC} 5 to 1000A _{AC}	
Accuracy (50/60Hz)	0 to 1A unspecified 1 to 100A: ±(1% of Reading + 0.5A) 0 to 5A unspecified 5 to 1000A: ±(1% of Reading + 1A)	
(100A Range)		
(1000A Range)		
Resolution	0.1A	
Sample Rate	64 samples/cycle	
Storage Rate	Programmable from 8 every second to 1 every day	
Storage Modes	Start/Stop, FIFO, Extended Recording Mode (XRM™) and Alarm	
Recording Length	15 minutes to 8 weeks, programmable using DataView®	200 hours to 180 days, programmable using DataView®
Memory	240,000 measurement (512KB)	1,000,000 measurement (2MB)
	The recorded data is stored in non-volatile memory and will be retained even if the battery is low or removed.	
Communication	USB 2.0 optically isolated	
Power Source	2 x 1.5V AA-cell Alkaline batteries (included)	4 x 1.5V C-cell Alkaline batteries (included)
Battery Life	100 hrs to >45 days (dependent on storage rate/recording length)	Up to 180 days (dependent on storage rate/recording length)
MECHANICAL		
Dimensions	4.95 x 2.75 x 1.28" (136 x 70 x 32mm) w/o Sensor	5.904 x 5.904 x 3.568" (150 x 150 x 91mm) w/o Sensor
Max Conductor Size	Sensor: 6" (152mm)	
Cable Length	6ft (2m)	
Weight (with battery)	8.67oz (245g)	2.4lbs (1.1kg)
Case	UL94-V0	
Vibration	IEC 68-2-6 (1.5mm, 10 to 55Hz)	
Shock	IEC 68-2-27 (30G)	
Drop	IEC 68-2-32 (1m)	



FEATURES

- Includes two or four integral MiniFlex® flexible current probes that will measure from 1A to 1000A TRMS with 0.1A resolution
- Dual range 100/1000A user selectable per channel in software
- 64 samples per cycle
- Programmable storage rates from 8 every second to 1 every day
- 4 user selectable storage modes
- ML912 stores up to 240,000 measurements in non-volatile memory and ML914 stores up to 1,000,000 measurements
- Powered by standard Alkaline batteries
- Lightweight, compact, fits anywhere
- 5 LED indicators quickly and clearly display logger status
- Includes FREE DataView® software for data retrieval, real-time display, analysis and report generation
- Optically isolated USB 2.0 communication cable included
- EN 61010-1; 600V CAT IV, 1000V CAT III

APPLICATIONS

- Single and Split phase load monitoring
- Neutral and ground current monitoring
- Intermittent problem detection
- Harmonic current monitoring using DataView® software
- Machine load monitoring
- Fault current detection
- Load profiling

CATALOG NO.

DESCRIPTION

2126.37	Simple Logger® II Model ML912 (2-Channel, TRMS, Bluetooth, MiniFlex®, 100/1000A _{AC} , DataView® software)
2126.40	Simple Logger® II Model ML914 (4-Channel, TRMS, Bluetooth, MiniFlex®, 100/1000A _{AC} , DataView® software)

PROBE SELECTION CHART FOR MODEL L562

AEMC MODEL NUMBER	AEMC CATALOG NUMBER	PROBE OUTPUT	PROBE RANGE	MAX RANGE FOR SLII	CABLE DIAMETER	BUS BAR SIZE	OUTPUT CONNECTION	NOTES
MN261	2115.82	100mV/A 10mV/A	0.1 to 24A 0.5 to 240A	10A 100A	0.78" (19.8mm)	N/A	Lead w/BNC	—
MF 300-6-2-10	2126.81	100mV/A 10mV/A	30A 300A	10A 100A	1.77" (44.96mm)	2.25 x 0.75" (57.15 x 19.05mm)	Sensor w/BNC	—
1000-24-2-1	2112.98	10mV/A 1mV/A	5 to 100A 5 to 1000A	100A 1000A	8" (203.2mm)	N/A	Sensor w/Banana Plugs	Must use adapter # 2118.46
MN251	2115.77	1mV/A _{AC}	0.5 to 240A	240A	0.78" (19.81mm)	N/A	Lead w/Banana Plug	Must use adapter # 2118.46
MN379T	2153.02	200mV/A 10mV/A	5A 100A	5A 100A	0.78" (19.8mm)	N/A	Lead w/BNC	—
SR661	2113.49	1mV/A 10mV/A 100mV/A	1000A 100A 10A	1000A 100A 10A	2.13" (54.1mm)	N/A	BNC	—
JM861	2110.90	10mV/A 1mV/A 0.1mV/A	1 to 30A 1 to 300A 1 to 3000A	30A 300A 3000A	2.52" (64.01mm)	1.97 x 5.31" (50.03 x 134.87mm)	Lead w/BNC	—

OPTIONAL ACCESSORY



Banana (female) BNC (male) (XM-BB)

Catalog #2118.46

(use with probes that have banana plug outputs to connect to a Model L562)

DATA LOGGERS

TWO-CHANNEL DC VOLTAGE, CURRENT,
PULSE & EVENT

MODEL L452

Bluetooth-enabled logger and
event counter that records DC voltage, DC current,
4 to 20mA or pulse counts

Real-time display!

Powered by batteries or through a USB cable



SPECIFICATIONS

MODEL	L452			
ELECTRICAL				
Channels	Two*			
Input	Six-pin terminal strip			
Measurements	DC Current	DC Voltage	Event	Pulse
Range	4 to 20mA	100mV, 1V, 10V	N/A	N/A
Accuracy (% of Reading)	±(0.25% + 5cts)	±(0.5% + 1ct)	N/A	N/A
Resolution	0.01mA	0.1mV, 1mV, 10mV	N/A	N/A
Input Impedance	100Ω	1MΩ	1MΩ	N/A
Sample Rate	5 samples/s	5 samples/s	16 samples/s	100 samples/s
Sample Period	DC inputs: 200, 400, 600, or 800ms; or from 1 to 60 seconds Pulse detection: 10ms			
Storage Modes	Start/Stop (ends when memory is full or when the recording stop time is reached, whichever comes first)			
Recording Length	10 minutes to 1 year, set via instrument front panel or through DataView®			
Memory	32MB internal Flash memory (up to 1024 logging sessions, 16M samples)			
Communication	Bluetooth 2.1, Class 1 or USB 2.0			
Power Source	External: via USB connector Internal: 2 x AA NIMH rechargeable batteries (charges through USB port)			
Battery Life	Up to 180 days (dependent on storage rate/recording length)			
MECHANICAL				
Dimensions	1.275 x 2.578 x 5.413" (32.4 x 65.5 x 137.5mm)			
Weight (with battery)	6.7oz (190g) with batteries			
Vibration	IEC 68-2-6 (1.5mm, 10 to 55Hz)			
Shock	IEC 68-2-27 (30G)			
ENVIRONMENTAL				
Operating Temperature	32° to 122°F (0° to 50°C)			
Humidity	16 to 85%			
Protection	IP40 (instrument alone); IP20 (instrument with terminal strip)			

*Both channels must have the same input type.

PRODUCT INCLUDES

6ft USB cable, US 120V wall-to-USB
plug, 6-pin screw terminal block, 2 x
AA rechargeable NiMH batteries, quick
start guide, and a USB drive containing
DataView® software and a user manual.



DATA LOGGERS

TWO-CHANNEL DC VOLTAGE, CURRENT, PULSE & EVENT

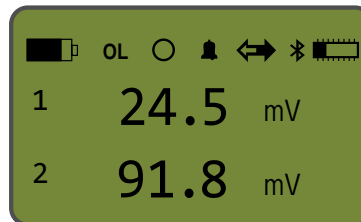
Front Panel & Functional Displays



FEATURES

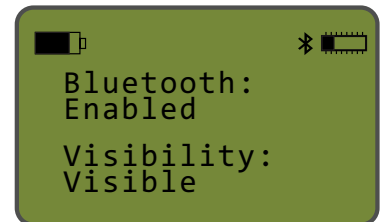
- Multiple data input types. The L452 can log DC voltage, DC current, 4 to 20mA pulse counts, or events. Measurements can be performed directly on the instrument, or through a variety of sensors. This data is stored in the instrument's large 32MB internal Flash memory.
- Expanded user interface. You can set up the instrument and view real-time measurement data through the front panel LCD screen and input buttons. The L452 features an on-board menu-based interface for navigating measurement data and selecting configuration options.
- Enhanced DataView® support. The instrument connects to a PC using either Bluetooth or USB. Once connected, logged data can be downloaded, analyzed, and formatted into reports using DataView's new Data Logger Control Panel. This Control Panel also enables users to change settings on the instrument, view real-time measurements, schedule recording sessions, and perform other configuration tasks.

INSTRUMENT CONFIGURATION



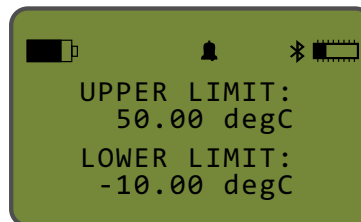
Instrument configuration parameters can be set through the front panel interface.

BLUETOOTH ENABLED/VISIBILITY



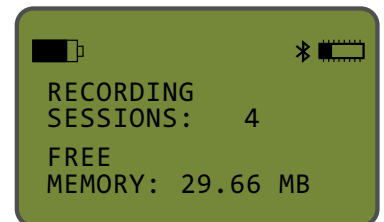
Enable and configure Bluetooth's functionality.

ALARM TRIGGERS



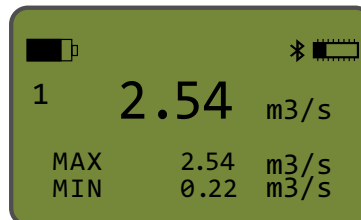
Allows you to set the upper and/or lower alarm trigger limits.

RECORDING SESSION



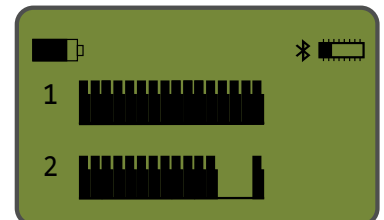
Displays the number of recording sessions currently stored in memory. It also shows the amount of free memory left for storing additional recording sessions.

MIN/MAX MEASUREMENTS



For analog input types, this screen displays the session's MIN/MAX measurement values for each channel.

EVENT MEASUREMENT DATA



For event input, the Channels 1 & 2 measurement graphic data screen appears.

CATALOG NO.	DESCRIPTION
2153.51	Data Logger Model L452 (2-Channel, w/LCD, 100mV/1V/10Vdc, 4 to 20mA, Event & Pulse, DataView® software)

DATA LOGGERS

8 TO 16 CHANNEL LOGGER

MODELS DL-1080 & DL-1081

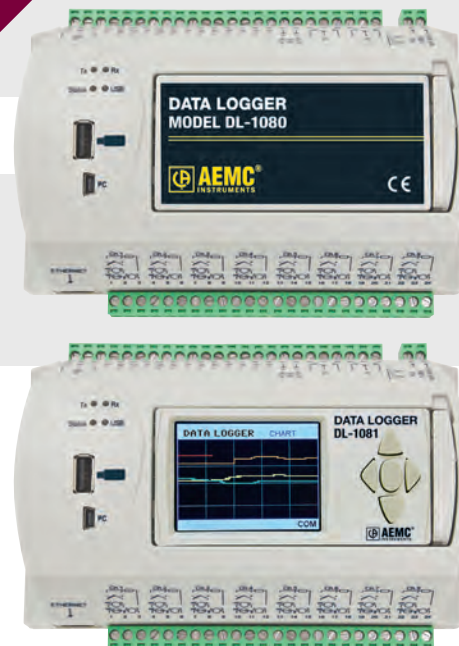
Versatile, powerful and cost effective data loggers handling analog, digital and other types of variables with high resolution and speed

SPECIFICATIONS

MODELS	DL-1080 & DL-1081	
ELECTRICAL		
Input Type	Measuring Range:	Accuracy:
J	-184° to 1832°F (-120° to 1000°C)	±0.2% (F.R.) ±1°C
K	-202° to 2501.6°F (-130° to 1372°C)	
T	-202° to 752°F (-130° to 400°C)	
E	-202° to 1436°F (-130° to 780°C)	
N	-202° to 2372°F (-130° to 1300°C)	
R	68° to 3214.4°F (20° to 1768°C)	±0.2% (F.R.) ±3°C
S	68° to 3214.4°F (20° to 1768°C)	
B	212° to 3308°F (100° to 1820°C)	
Pt100	-328° to 1562°F (-200° to 850°C)	±0.15% (F.R.)
Pt1000	-328° to 1562°F (-200° to 850°C)	
Linear 0 to 20mA	User Programmable	±0.15% (F.R.)*
Linear 4 to 20mA		
Linear 0 to 20mV		
Linear 0 to 50mV		
Linear 0 to 60mV		
Linear -20 to 20mV		
Linear 0 to 5V		
Linear 0 to 10V		
Digital Inputs	Logic level "0": from 0 to 0.8Vdc Logic level "1": from 3 to 30Vdc	
Internal Memory	2MB	
Excitation Current	Pt100s: 360µA; ; Pt1000s: 320µA	
Maximum Pt100/Pt1000 Compensated Cable Resistance	40Ω	
Maximum Input Voltage	30Vdc	
Input Current @ 30Vdc (typical)	3mA	
Digital Outputs	Maximum output voltage: 30Vdc Maximum output current: 200mA Maximum relay current: 3A @ 250VAc; 3A @ 30Vdc	
Storage Rate	from 1ms to 24 hours	
Maximum Channel Logged	100	
Supported Modbus Commands	Read Coil Status (01h) Read Holding Registers (03h) Write Single Coil (05h) Write Single Register (06h) Write Multiple Registers (0Fh)	
Power Supply	100 to 240Vac, 50/60Hz. 20VA (max)	
ENVIRONMENTAL		
Operating Temperature	32° to 122°F (0° to 50°C)	
Relative Humidity	80% up to 85°F (30°C) For temperatures higher than 85°F (30°C), decrease 3% per °C	
Altitude	< 6500ft (2000m)	
Protection	IP20	

F.R. = Full Range

*The full scale refers to the input of the sensor signal and not the range of configured indication.



INPUTS RATED CAT II



FEATURES

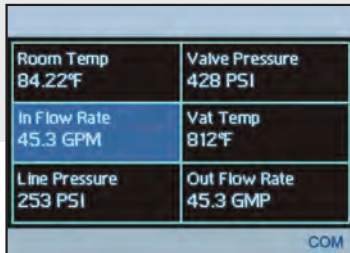
- 8 universal analog input channels
- 8 digital I/Os (individually configured as inputs or outputs)
- 2 relay outputs (NO, NC and common)
- RS485 interface (Modbus master or slave)
- 24Vdc output to power up to eight 4 to 20mA transmitters
- Ethernet interface for LAN and internet use
- USB-device interface for configuring, monitoring and download
- USB-host interface for logged data retrieval through a USB flash drive
- Up to 32 configurable alarms
- Up to 128 virtual channels
- Detachable display (optional)
- Up to 100 channels can be logged at a configurable rate
- Includes FREE software for data retrieval, real-time display, analysis and report generation
- 4 input channel types: analog, digital, remoted and virtual
- Up to 16GB SD card interface

DATA LOGGERS

8 TO 16 CHANNEL LOGGER

MODEL DL-1081 Color Functional Displays

"FAVORITES" SCREEN



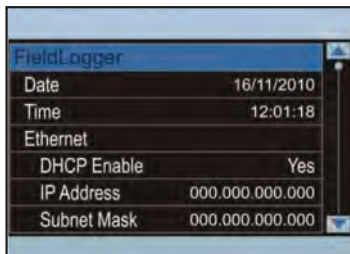
Shows a six-position grid where you can assign a channel to be displayed real-time in each position.

"CHART" SCREEN



Displays a plot of the favorite channels values.

"CONFIGURATION" SCREEN



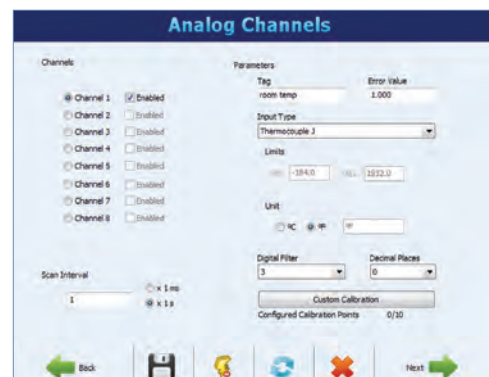
Data logger and display parameters can be changed and viewed on this screen.

"ALARMS" SCREEN



A 32-position grid where each numbered position is related to its equivalent alarm or event. When an alarm is active, its number will be displayed in red on this screen.

SOFTWARE SCREENS



PRODUCT INCLUDES

DL-1080 & DL-1081 SOFTWARE

USB drive supplied with software, drivers and user manual

CATALOG NO.	DESCRIPTION
2134.61	Data Logger Model DL-1080 (8 Analog to 8 Digital Channel, no LCD)
2134.62	Data Logger Model DL-1081 (8 Analog to 8 Digital Channel, LCD)

DATA LOGGERS

SIMPLE LOGGER® DATA LOGGERS

MODELS SL01 TO SL13

These small AC and DC simple loggers can be ready to go in minutes with just a few parameters to set up



Model SL01



Model SL10



Model SL11



Model SL12



Model SL13

SPECIFICATIONS

MODELS	SL01	SL10	SL11	SL12	SL13
VOLTAGE					
Range	0 to 5 V _{AC}	±100 mV _{DC}	±1 V _{DC}	±10 V _{DC}	±50 V _{DC}
Resolution	10 mV	0.1 mV	1 mV	10 mV	50 mV
Accuracy	±(0.5% of reading + 50 mV)*	±(0.5% of reading + 0.5 mV)*	±(0.5% of reading + 5 mV)*	±(0.5% of reading + 50 mV)*	±(0.5% of reading + 250 mV)*
Maximum Input Voltage	60 V _{DC}				
Input Impedance	800 kΩ				
Power Source	Internal: Two 1.5 V AA non-rechargeable batteries External: USB 2.0 (computer or other USB power source)				
Power Consumption	Internal power: 1 mA (average) External power: 100 mW				



FEATURES

- Simple 1 button operation
- Quick 2 wire input connection
- User configurable scaling, units of measure and recording length
- Stores up to 4 million measurements
- Data analysis software included
- Software provides real-time trend graph display, data download, analysis and report generation
- Micro-B USB cable included

The Simple Logger Control Panel allows you to configure how data measured by these instruments is recorded and displayed. The available settings depend on which model is connected to the computer. The following table shows which configuration options are available for each model.

FEATURE	SL01	SL10	SL11	SL12	SL13	SL20	SL30	SL31	SL40	SL50
Set up recording	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Define units	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Set instrument clock	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Erase instrument memory	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Scaling	✓	✓	✓	✓	✓	✓	✓			
Filtering	✓	✓	✓	✓	✓	✓			✓	✓
Thermocouple type										✓
Cold Junction Compensation										✓
Rising/Falling events								✓		

CATALOG NO. DESCRIPTION

2156.01	Simple Logger Model SL01 (Voltage, 5 V _{AC})
2156.10	Simple Logger Model SL10 (Voltage, 100mV _{DC})
2156.11	Simple Logger Model SL11 (Voltage, 1 V _{DC})
2156.12	Simple Logger Model SL12 (Voltage, 10 V _{DC})
2156.13	Simple Logger Model SL13 (Voltage, 50 V _{DC})

DATA LOGGERS

SIMPLE LOGGER® DATA LOGGERS

MODELS SL20 TO SL50

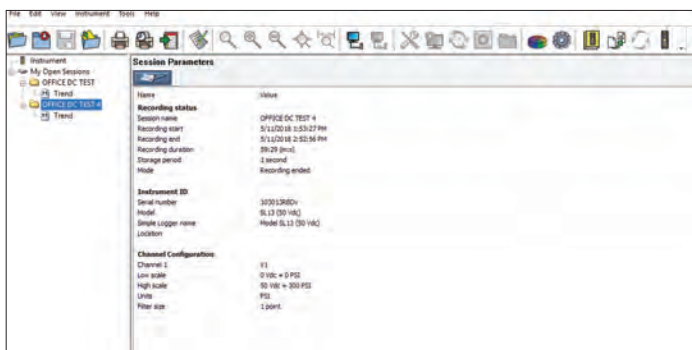
Models available for logging
DC Current, Temperature,
Pulse and Events



SPECIFICATIONS

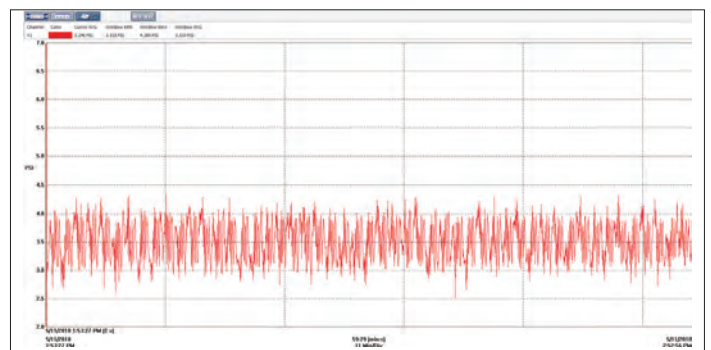
MODELS	SL20	SL30	SL31	SL40	SL50						
					Thermocouple Type:						
					J	K	N	T	E	R	S
	CURRENT	PULSE	EVENT	TEMPERATURE							
Range	±20 mA	Contact closure, 0 to 5 Vdc	Contact closure, 0 to 5 Vdc	-94 to 1022°F (-70C to +550C)	-346 to 2192°F (-210 to 1200°C)	-328 to 2502°F (-200 to 1372°C)	-328 to 2372°F (-200 to 1300°C)	-328 to 752°F (-200 to 400°C)	-328 to 1832°F (-200 to 1000°C)	32 to 3200°F (0 to 1760°C)	
Resolution	0.02 mA	n/a		0.1°C	0.1°C						
Accuracy	±(0.5% of reading + 0.1 mA)*	n/a	±(1% of reading + 1.8°F [1°C])*	Below -148°F (-100°C): ±(0.4% of reading + 9°F [5°C])*					32 to 212°F (0° to +100°C): ±(0.3% of reading + 18°F [10°C])*		
				-148 to 212°F (-100° to 100°C): ±(0.3% of reading + 7.2°F [4°C])*							
				Above 212°F (100°C): ±(0.2% of reading + 5.4°F [3°C])*					Above 212°F (100°C): ±(0.2% of reading + 14°F [8°C])*		
Maximum Input Voltage	3 Vdc	10 Vdc		n/a	1 V						
Input Impedance	49 Ω	800 KΩ		n/a	800 KΩ						
Power Source	Internal: Two 1.5 V AA non-rechargeable batteries External: USB 2.0 (computer or other power source, when powered by the USB the battery is automatically disconnected)										
Power Consumption	Internal power: 1 mA (average) External power: 100 mW										

SESSION PARAMETER



Shows the current configuration of the logger.

REAL-TIME TREND GRAPH



Typical real-time trend graph.

CATALOG NO.	DESCRIPTION
2156.20	Simple Logger Model SL20 (Current, 4 to 20 mADC)
2156.30	Simple Logger Model SL30 (Pulse)
2156.31	Simple Logger Model SL31 (Event)
2156.40	Simple Logger Model SL40 (Temperature, RTD/PT1000)
2156.50	Simple Logger Model SL50 (Temperature, Thermocouple)



USE DATAVIEW® TO CONFIGURE ALL USER SELECTABLE FUNCTIONS ON
MODELS CL601, AL834, L261, L562, ML912, ML914, L452

TYPICAL DATAVIEW® FUNCTIONAL DISPLAYS

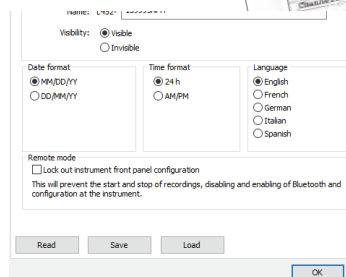
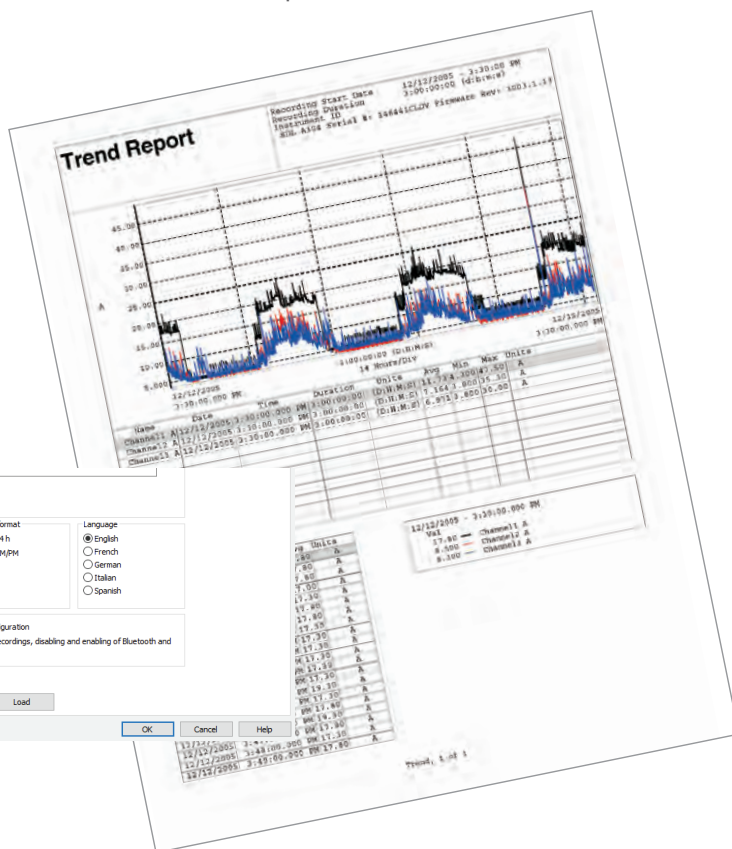


Quick and simple configuration of all functions and settings from one dialog box.



CONFIGURE ALL DATA LOGGER FUNCTIONS

- Display and analyze real-time data on your PC
- Configure all data logger functions and parameters from your PC including sample rate, recording length, channel configuration and more
- Create and store a complete library of configurations that can be uploaded to the logger as needed
- Zoom in and out and pan through sections of the graph to analyze the data
- Download, display and analyze recorded data
- Display waveforms, trend graphs, harmonics (AC models) and text summaries
- Create custom views and reports
- Print reports using standard or custom templates you design
- Free upgrade available from the help menu



DIGITAL MULTIMETERS



SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

MODELS 5212, 5215, 5217, 5231 & 5233

Compact and simple to use, these multimeters with a large backlit display and non-contact voltage detection are exceptional products and a great value for today's market



SPECIFICATIONS

MODELS	5212	5215	5217	5231	5233
GENERAL					
True RMS	Yes				
AC Bandwidth	1000Hz				
Auto/Manual Ranging	Yes				
LCD Display	4000-count	6000-count	6000-count	6000-count + 61 segment bargraph	
Auto/Manual Range Select	Yes				
Voltage AC/DC	600V	750Vac/1000Vdc	750Vac/1000Vdc	6 ranges/60mV to 1000V; Resolution: 0.01mV	
Current AC/DC	4A/10A	6A/10A		With 1mV/A clamp: 600A Resolution: 0.1A	2 ranges / 6 to 10A Resolution: 0.001A
μAmps AC/DC	400/4000μA	600/6000μA	600/6000μA	-	
Resistance	40MΩ	60MΩ	60MΩ	6 ranges/60MΩ; Resolution: 0.1Ω	
Frequency/Duty Cycle	-		1000Hz/Yes	-	3 ranges: up to 3kHz/Yes
Capacitance	100mF			6 ranges/1000μF; Resolution: 0.01nF	
Temperature	-		-61° to 2192°F (-55° to 1200°C)	-	4° to 1400°F (-20° to 760°C) Resolution: 1°
Continuity with Beeper	Yes				
Diode Test	Yes				
V Low Z	Yes			4 ranges/60mV to 1000V; Resolution: 0.01mV	
Non Contact Voltage Detection (NCV)	Yes/Red flashing display with buzzer			Yes/Red display	
Max/Min/Max-Min	No	Yes/Yes	Yes/Yes	No/No	Yes/No
Δ REL	No	Yes	Yes	No	Yes
OTHER FEATURES					
Display Hold	Yes				
Flashlight	Yes			No	
Backlight	Yes - Blue/Red				
Removable Holster	Yes			No	
Magnetic Hanger	Yes - in the holster			No	
Auto Power OFF	Yes				
Auto Power OFF Disable	Yes				
Power Supply	2 x 1.5V AA			9V	
Battery Life	500 hrs			> 100 hrs	
Low Battery Indication	Yes				
Direct Fuse Access	Yes				
Protection Index	IP54				
Drop Resistant	Yes - 6.56ft (2m)			Yes - 3.28ft (1m)	
Operating Temperature Range	-4° to 122°F (-20° to 50°C)			32° to 122°F (0° to 50°C)	
Double Insulated	Yes				
WARRANTY/SAFETY					
Warranty	3 Years			2 Years	
CAT III	600V			1000V	
CAT IV	-			600V	

MODELS 5212, 5215 & 5217



Non-contact detection
of network voltage
(NCV Function-AC only)



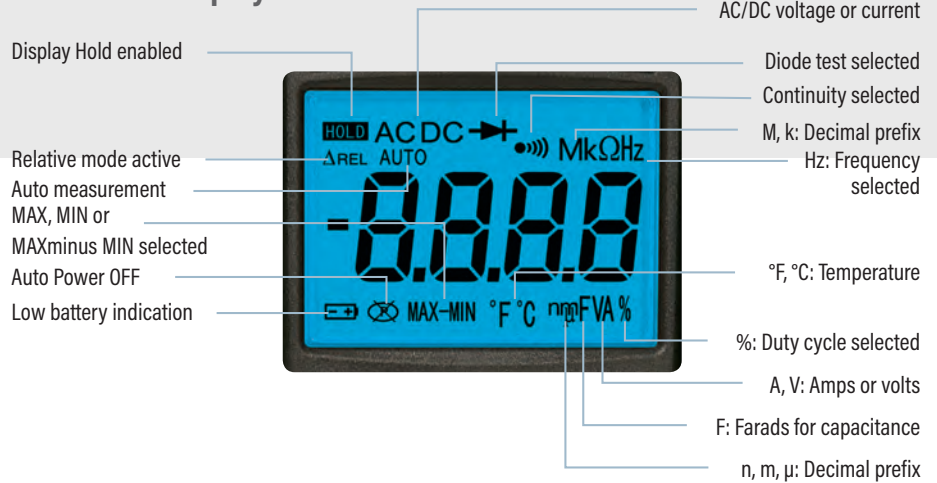
*(Models 5212, 5215 & 5217 only)



FEATURES

- AC/DC current up to 10A or 600A with a current clamp giving direct readings (Model 5231)
- High sensitivity with a resolution of 0.01mV
- Withstands overloads up to 8000V
- VLowZ function detects and eliminates ghost voltages by placing a burden on the circuit
- Multi-position mounting
- Battery life extended with "sleep mode" feature (Models 5212, 5215 & 5217)
- Backlight screen and flashlight (Models 5212, 5215 & 5217)
- Displays MAX, MIN and MAX-MIN (Models 5215 & 5217; Model 5233 displays MAX & MIN only)
- Displays relative measurement (Models 5215, 5217 & 5233)
- Measures temperature (Models 5217 & 5233)
- Measures frequency and duty cycle (Models 5217 & 5233)

Functional Displays



MODELS 5231 & 5233



PRODUCT INCLUDES

MODELS 5212, 5215 & 5217

Soft carrying pouch, set of two color-coded leads (red/black), 2 x 1.5V AA batteries and user manual.

THERMOCOUPLE ADAPTER

Included with Model 5217

MODELS 5231 & 5233

Soft carrying case, set of two 5ft color-coded test leads and user manual.

THERMOCOUPLE ADAPTER

Included with Model 5233



CATALOG NO.	DESCRIPTION
2154.07	DMM Model 5212 (TRMS, 4000-cts, NCV, V, A, AC/DC, Ohm, Auto Hold)
2154.08	DMM Model 5215 (TRMS, 6000-cts, NCV, V, A, AC/DC, Ohm, Auto Hold)
2154.09	DMM Model 5217 (TRMS, 6000-cts, NCV, V, A, AC/DC, Ohm, T, Frequency, Auto Hold)
2125.64	DMM Model 5231 (TRMS, 6000-cts, V, AC/DC, Ohm, CT, NCV)
2125.65	DMM Model 5233 (TRMS, 6000-cts, V, A, AC/DC, Cap, Ohm, T, NCV)

DIGITAL MULTIMETERS

3000 SERIES

MODELS MTX 3290 & MTX 3291

A compact, rugged, comfortable to grip, waterproof (to IP67 standard) meter



Model MTX 3290



Model MTX 3291



Model MTX 3290 only

SPECIFICATIONS

MODELS	MTX 3290		MTX 3291
ELECTRICAL			
DC, AC & AC+DC Voltages	60mV to 1000V		
DC Accuracy	±0.3%	±0.05%	
AC & AC+DC Bandwidth	20kHz	100kHz	
DC, AC & AC+DC Current	600µA to 10A / 20A (30s max) (MTX 3291)		
DC Accuracy	±0.08%		
Frequency	60Hz to 600kHz		
Resistance	600Ω to 60MΩ		
Audible Continuity	600Ω signal < 30Ω ±5Ω < 5V		
Diode Test	3V with 1mV resolution		
Capacitance	6nF to 60mF		
Temperature Pt100/1000	-328° to 1472°F (-200° to 800°C)		
Temperature K/J TC	-		
OTHER FUNCTIONS			
MIN/MAX/PEAK	Time/date-stamped MAX/MIN/AVG or PEAK ±, on all the functions		
Relative Mode (ΔRel)	Relative value + measured reference value on secondary display (MTX 3291)		
PWM Filter	4th-order 300Hz low-pass filter for measuring variable speed drives with asynchronous motors		
V-Output Clamp Function for Direct Reading	Integration of the ratio: 1/1, 1/10, 1/100, 1/1000mV/A		
Secondary Functions or Measurements	dBm and VA resistive power, +/- duty cycle, and pulse width (MTX 3291)		
SPEC Mode	-		
GRAPH	-		
Center Zero	Selectable or automatic (MTX 3291) bargraph for VDC and ADC		
Memory	-		
GENERAL			
Display	LCD with backlighting (MTX 3291) and digits 14mm high; Dual-line 60,000 (MTX 3291) or 6000-count display		
Communication	-	USB optical connector & SX-DMM software (included)	
Power Source	4 x AA batteries or NiMH batteries (included)		
Environment	Storage: -4° to 158°F (-20° to 70°C) Operation: 32° to 104°F (0° to 40°C)		
Dimensions / Weight	7.72 x 3.54 x 1.85" (196 x 90 x 47.1mm) / 20.1oz (570g)		

FEATURES

MODEL MTX 3290 & MODEL MTX 3291

- Easy-to-read 2.75 x 2.04" (70 x 52mm) backlit LCD screen
- On screen connection indicator
- Current: auto-ranging up to 10A
- Secondary measurements in addition to the main measurement to facilitate analysis
- MIN/MAX and AVG data with relative time/date-stamping and voltage and current peaks
- SX-DMM software for real-time processing of the data on a PC (MTX 3291)
- Powered by 4 standard AA batteries or 4 NiMH batteries rechargeable available with optional external charging module

PRODUCT INCLUDES

MTX 3290 & MTX 3291

Set of 2, Color-coded safety leads (Red/Black), Set of 2, Color-coded (Red/Black) test probes, quick start guide, 4-1.5V alkaline batteries (installed) and user manual on USB drive. Model MTX 3291 includes a soft carrying case, USB cable, and USB drive with SX-DMM software.



CATALOG NO.	DESCRIPTION
2154.01	DMM Model MTX 3290 (ASYC IV, TRMS, 6000-cts, Digital LCD)
2154.02	DMM Model MTX 3291 (ASYC IV, TRMS, 60,000-cts, USB, Backlit, Digital LCD)



Model MTX 3292



Model MTX 3293



MODELS MTX 3292 & MTX 3293

Portable multimeter measuring resistance, capacitance, temperature, duty cycle, pulse counts, and frequency



FEATURES

MODEL MTX 3292 & MODEL MTX 3293

- Easy-to-read 320 x 240 pixel color matrix graphical screen with black background
- Trace, cursors and zoom on recordings
- Programmable storage rate
- Stores up to 6500 measurements (MTX 3293)
- On screen connection indicator (MTX 3293)
- USB or Bluetooth Class II communication available as an option
- NiMH AA rechargeable battery
- No downtime: instrument operates while charging

PRODUCT INCLUDES

MTX 3292, MTX 3292-BT, MTX 3293 & MTX 3293-BT

Soft carrying case, Set of 2, Color-coded safety leads (Red/Black), Set of 2, Color-coded (Red/Black) test probes, quick start guide, 4 NiMH 2400mAh 1.5V rechargeable batteries (installed), optical USB cable, power supply with US plug adapter, quick start guide, and USB drive with SX-DMM software.



SPECIFICATIONS

MODELS	MTX 3292		MTX 3293
ELECTRICAL			
DC, AC & AC+DC Voltages	100mV to 1000V		
DC Accuracy	±0.03%	±0.02%	
AC & AC+DC Bandwidth	100kHz	200kHz	
DC, AC & AC+DC Current	1000µA to 10A / 10 to 20A (30s max)		
DC Accuracy	±0.01%		
Frequency	10Hz to 5MHz		
Resistance	100Ω to 100MΩ		
Audible Continuity	1000Ω signal < 20Ω < 3.5V		
Diode Test	Diode 0 to 2.6V < 1mA + Zener Diode or LED 0 to 20V < 11mA		
Capacitance	1nF to 10mF		
Temperature Pt100/1000	-328° to 1472°F (-200° to 800°C)		
Temperature K/J TC	-40° to 2192°F (-40° to 1200°C)		
OTHER FUNCTIONS			
MIN/MAX/PEAK	SURV time/date-stamped MAX/MIN/AVG or PEAK ±, on all the functions		
Relative Mode (ΔRel)	Relative value REF-delta unit or on 3 displays + main measurement		
PWM Filter	4th-order 300Hz low-pass filter for measuring variable speed drives with asynchronous motors		
V-Output Clamp Function for Direct Reading	Programmable ratio		
Secondary Functions or Measurements	3 measurements + main measurement		
SPEC Mode	Display of measurement tolerance: Smin, Smax		
GRAPH	Trends of main measurements < 60s + Zoom + Cursor		
Center Zero	Automatic trend bargraph		
Memory	1000	6500	
GENERAL			
Display	Color graphical display (70 x 52) with backlighting on four-line 100,000-count display		
Communication	USB optical connector or Bluetooth Class II (optional) & SX-DMM software (included)		
Power Source	Charger or 4 x AA batteries or NiMH batteries (included)		
Environment	Storage: -4° to 158°F (-20° to 70°C) Operation: 32° to 104°F (0° to 40°C)		
Dimensions / Weight	7.72 x 3.54 x 1.85" (196 x 90 x 47.1mm) / 20.1oz (570g)		

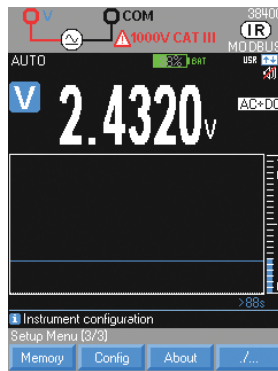
*Bluetooth Communication for Models 3292-BT & 3293-BT only

CATALOG NO.	DESCRIPTION
2154.03	DMM Model MTX 3292 (ASYC IV, TRMS, 100,000-cts, USB, Color Graphical Display)
2154.04	DMM Model MTX 3293 (ASYC IV, TRMS, 100,000-cts, USB, Color Graphical Display)
2154.05	DMM Model MTX 3292-BT (ASYC IV, TRMS, 100,000-cts, Bluetooth, USB, Color Graphical Display)
2154.06	DMM Model MTX 3293-BT (ASYC IV, TRMS, 100,000-cts, Bluetooth, USB, Color Graphical Display)

Functional Displays

The TRMS measurements of AC voltages and currents are also accurate on non-linear signals

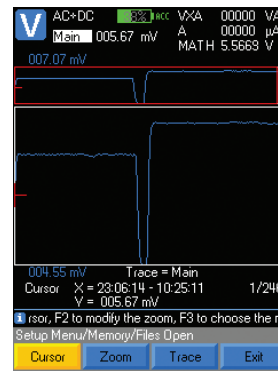
MODELS MTX 3292 & MTX 3293 COLOR MATRIX GRAPHICAL SCREENS



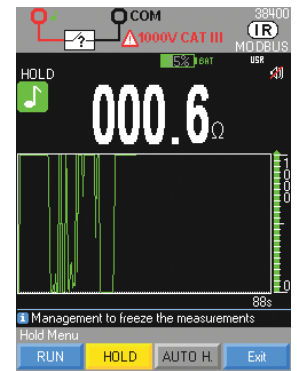
SETUP MENU
Configuration of measurements



MEASUREMENT
Configuration of the measurement parameters



MEM
Storing of the measurements, recording mode

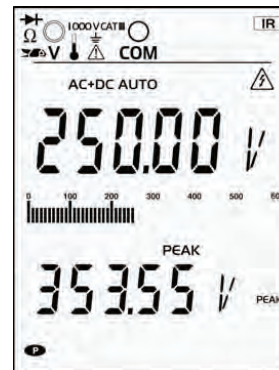


HOLD
Management and hold of the display

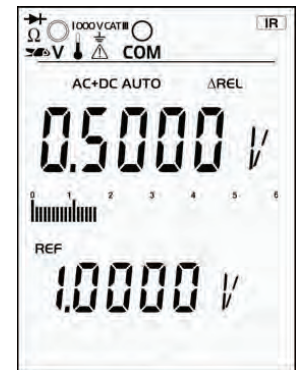
MODELS MTX 3290 & MTX 3291 BACKLIT LCD SCREENS



MAX/MIN AVG
Displays maximum, minimum and average values



PEAK MODE
Example of screen showing Peak+ value



ΔREL MODE
Displays relative values with respect to referenced measured value

ELECTRICAL TEST TOOLS



SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

ELECTRICAL TEST TOOLS

PHASE AND MOTOR ROTATION METERS

MODELS 6608, 6609 & 6610

Ideal for installing rotating machinery or motors, and for checking generator output phase direction

SPECIFICATIONS

MODELS	6608	6609	6610
ELECTRICAL			
Operating Voltage	40 to 850V _{AC} between phases	With leads connected: 40 to 600V _{AC} between phases	Static induction
Frequency Range	15 to 400Hz		45 to 65Hz
Power Supply	Self-powered via the measurement inputs	9V Alkaline battery (included)	One 9V Alkaline battery (included)
MECHANICAL			
Dimensions	5.1 x 2.7 x 1.3" (130 x 69 x 32mm)		5.0 x 2.8 x 1.8" (128 x 72 x 44mm)
Weight	4.5oz (130g)	6oz (170g)	13.4oz (380g) battery included
ENVIRONMENTAL			
Operating Temperature	32° to 104°F (0° to 40°C)		14° to 122°F (-10° to 50°C); max. 80% RH
Storage Temperature	-4° to 122°F (-20° to 50°C); < 80% RH		-4° to 140°F (-20° to 60°C); max. 80% RH
SAFETY			
Safety Ratings	IEC 61010-1, DIN VDE 0411; IEC 61557-7, DIN VDE 0413-7; Tightness: IP40		EN 61010-1, EN 61326-1
Electrical Safety	600V CAT III		1000V CAT III; 600V CAT IV



(Model 6610 Only)

FEATURES

- Voltage sensing detector clips – no metal contact points to promote greater safety (Model 6610)
- Indication of live phase presence or phase absence
- Designed for checking a wider range of 3-phase power source from 75V to 1000Vac (Model 6610)
- Determination of a motor's rotation direction (Model 6609)
- Automatic testing as soon as the instrument is connected
- Terminals and cables identified by color-coding to simplify connection (test leads are attached to Model 6610)
- Phase rotation indicators (Model 6608)
- Phase and motor rotation indicators (Models 6609 & 6610)
- Color-coded leads (red, black, blue) and alligator clips (black)
- Color-coded jacks for common U.S. phase colors
- Line supplied – no battery needed (Model 6608)
- Protected internally by high impedance circuit to limit the current to user safe limits

PRODUCT INCLUDES

6608 & 6609

Carrying case, three test leads (4ft), three alligator clips and a user manual.

6610

Soft carrying case, meter with attached test leads (black, red & blue) with alligator clips, 9V battery and user manual.



CATALOG NO.	DESCRIPTION
2121.10	Phase Rotation Meter Model 6608
2121.11	Phase & Motor Rotation Meter Model 6609
2121.12	Phase Rotation Meter Model 6610 (Non-contact)

ELECTRICAL TEST TOOLS

TESTER, SPLITTER AND DETECTOR



AC LINE SPLITTER MODEL ALS-1

For use with clamp-on meters & multimeters using current probes

FEATURES

- Avoids splitting lines - makes reading current easy
- Increases sensitivity of clamp-on current probes and clamp-on meters ten times in X10 mode
- Direct reading X1 mode
- Voltmeter input jacks
- Integral ground conductor
- Facilitates reading current draw of device plugged into it
- Facilitates reading current draw through extension cords
- 120V, 15A capacity



NON-CONTACT AC VOLTAGE DETECTOR MODEL NC-1



SPECIFICATIONS

MODEL	NC-1
Voltage Sensitivity	120 to 240Vac
Frequency	50/60Hz
Detection Distance	<5mm
Over Voltage	600V CAT III
Battery	2 x 1.5V AAA Alkaline (included)
Safety	For indoor use and in accordance with over voltage 600V CAT III, Pollution Degree 2

CATALOG NO.	DESCRIPTION
2121.05	AC Line Splitter Model ALS-1
2121.09	Non-Contact AC Voltage Detector Model NC-1

ELECTRICAL TEST TOOLS

NON-CONTACT HIGH VOLTAGE DETECTOR

MODEL 275HVD

Warns the operator of live conductors with the use of its detection sensor

SPECIFICATIONS

MODEL	275HVD
ELECTRICAL	
Detection Frequency	45 to 70Hz
Ranges	240V, 2kV, 6kV, 11kV, 22kV, 33kV, 132kV, 275kV
Detection	Selection range is detected at approximately 10" (25cm) from the voltage. Greater detection distances can be obtained at lower voltage positions
Power Source	Three 1.5V C cell batteries (included)
MECHANICAL	
Self Test	User selectable
Indicators	Bright red LED and audible buzzer
ENVIRONMENTAL	
Operating Temperature	5° to 130°F (-15° to 55°C)
Storage Temperature	-4° to 150°F (-20° to 65°C)
Humidity	0 to 93% RH @ 104°F (40°C)

FEATURES

- Non-contact high voltage detector
- Wide range of detection; 80V to 275kV; one instrument fits all applications
- Eight switch-selectable voltage sensitivity ranges
- Lightweight, minimizes sway at the end of long hot sticks
- Audible and visual (LED) indication of live voltage
- Self-test ensures that all system functions and indicators are working properly by energizing the complete system
- Designed for use with hot sticks incorporating a shotgun adapter

Note: Not designed to work on shielded cable or enclosure.

PRODUCT INCLUDES

Hard carrying case, 3 C cell batteries, shotgun adapter and user manual.



CATALOG NO.

DESCRIPTION

2131.12

Non-Contact High Voltage Detector Model 275HVD (240V to 275kV) Manual self-test

ELECTRICAL TEST TOOLS

VOLTAGE ABSENCE TESTERS (VATs)



FEATURES

- Full autotest
- Voltage detection, LED display:
 $12\text{VAC} \leq U \leq 1000\text{VAC}$
 $12\text{VDC} \leq U \leq 1400\text{VDC}$
- Frequency: DC, 16.67 to 800Hz
- Detection of stray voltages
- Unipolar phase detection (a single contact)
- Two-pole phase-sequence testing with 2-wire method = a third hand is not required
- Continuity test with audible and visual indication ($R < 100\Omega$)
- Extended continuity test with visual indication for $R < 2\text{k}\Omega$, $60\text{k}\Omega$ and $300\text{k}\Omega$ (Model C.A 771) $R < 0.5\Omega$ to $2.999\text{k}\Omega$ (Model C.A 773)
- RCD trip test
- Complies with EN 61243-3 & IEC 61010 1000V CAT IV
- Climatic conditions: -25.6° to 140°F (-30° to 60°C) (Class S) (Model C.A 771) and 5° to 113°F (-15° to 45°C) (Class N) (Model C.A 773)
- Battery life > 5000 x 10s (Model C.A 771) 2500 x 10s (Model C.A 773) measurements
- Removable lead and test probe
- Delivered complete and ready to use

MODEL C.A 771 & C.A 773

An essential tool for electricians to ensure no voltage is present before working on any electrical installation connected to the network

SPECIFICATIONS

MODELS	C.A 771	C.A 773
ELECTRICAL		
Display	LEDs	LEDs + backlit digital display
Voltage Absence Testing (VAT)	12Vac ≤ U ≤ 1000Vac; 12Vdc ≤ U ≤ 1400Vdc	
Voltage	12 to 1000Vac 12 to 1400Vdc	
Frequency	DC, 16.67 to 800Hz	
Impedance	> 500kΩ	
Max. Peak Current	3.5mA RMS	
Polarity Indication	Yes	
Redundant Hazardous Voltage Indication	The ELV (Extra-Low Voltage) LED indicates that the voltage is higher than the SELV (Safety Extra-Low Voltage) with the rate at which it flashes proportional to the voltage level	
Stray Voltage Detection	Yes (by low-impedance load switching)	
GFI Tripping	up to 30mA	
Phase/Neutral Identification	Above 50V (45 to 65Hz); Above 150V (16.67 to 45Hz)	
CONTINUITY & RESISTANCE		
Buzzer Trigger Threshold	100Ω typical (150Ω max.)	
Extended Continuity Test (Resistance)	2kΩ, 60kΩ, 300kΩ	0.5Ω to 2999kΩ
Test Current/ Open-circuit Voltage	≤ 1mA / ≤ 3.3V	
Phase Rotation	2-wire method with microprocessor	
Ph/Ph Voltage	50V ≤ U ≤ 1000Vac (45 to 400Hz)	
Buzzer	Intermittent beep for Voltage Detection Continuous beep for continuity	
Standards & Electrical Safety	IEC 61243-3, EN 61243-3, IEC 61010 1000V CAT IV	
Operating Temperatures	-25.6° to 140°F (-30° to 60°C) (Class S)	5° to 113°F (-15° to 45°C) (Class N)
Power Source	2 x AA batteries (included) or NiMH batteries	
Environment	Storage: -40° to 158°F (-40° to 70°C)	
Dimensions/Weight	7.72 x 3.54 x 1.85" (196 x 90 x 47.1mm) / 570g	

PRODUCT INCLUDES



2 x 1.5V LR06/AA batteries, velcro strap, set of removable test probes \varnothing 2mm with crystal safety cover, probe-tip protection, and user manual in 5 languages.

CATALOG NO.	DESCRIPTION
2121.14	Voltage Tester Model C.A 771
2121.15	Voltage Tester Model C.A 773

C.A 1725 & C.A 1727

Simple to use and offers numerous measurement capabilities with or without contact

SPECIFICATIONS

MODELS	C.A 1725 & C.A 1727
MEASUREMENTS	
Rotational Speed Function	Range: 6 to 100,000rpm Resolution: 0.0006 to 6rpm depending on range Accuracy: $\pm 1 \times 10^{-4}$ of Reading ± 6 counts
Linear Speed Function	Range: 0.1 to 10,000m/min or ft/min Resolution: 0.0006 to 6m/min depending on range Accuracy: $\pm 1 \times 10^{-4}$ of Reading ± 1 increment
Frequency Function	Range: 0.1 to 10,000Hz Resolution: 0.0004 to 0.4Hz depending on range Accuracy: $\pm 4 \times 10^{-5}$ of Reading ± 4 counts
Period Function	Range: 0.1 to 10,000ms Resolution: 0.0003 to 0.3ms depending on range Accuracy: $\pm 1 \times 10^{-4}$ of Reading ± 5 counts
Duty Cycle Function	Range: 10 to 10,000% Resolution: 0.1 to 1% depending on range Accuracy: $\pm 0.1\%$ of scale from 0.2 to 50Hz $\pm 0.2\%$ of scale from 50 to 125Hz / $\pm 1\%$ of scale otherwise
Count function	Range: 0 to 99,999 events; Accuracy: ± 1 event (Model C.A 1727)
GENERAL	
Power Source	9V battery Alkaline (included)
Battery life	250 x 5 min measurements with optical sensor; 600 x 5 min measurements with external sensor
Data Storage	4000 measurements (Model C.A 1727)
Dimensions	8.5 x 2.83 x 1.85" (216 x 72 x 47mm)
Weight	8.8oz (250g)
Weatherproofing	IP51
Environment	Storage: -4 to +158°F (-20 to +70°C) 95% RH; Operation: 32 to 131°F (0 to 55°C) 90% RH
SENSOR	
Optical	Reflective area: 10 to 90% of the target area. Measurement distance: 0.4 x 19.7" (1 to 50cm). The maximum distance is given for a reflective adhesive strip with a minimum area of 10cm ² . Measurement angle: $\pm 15^\circ$ in relation to the perpendicular of the reflective surface.
Mechanical	Mechanical adapter: End-fittings: elastomer with a durometer hardness of 80 Pressure on moving part: between 2 and 40N; maximum speed: 10,000rpm Service life: approx. 1000 hours at 3000rpm with a pressure of 20N Conical end-fitting accessory: Minimum diameter of measurement shaft: 0.2" (5mm) Cylindrical end-fitting accessory: Speed measurements on shafts with a diameter greater than 0.2" (5mm) or flat-ended shafts End-fitting accessory with wheel; Wheel diameter: 1.19" (30.183mm); Wheel development: 3.94" ± 0.004 " (10cm ± 0.1 mm)



FEATURES

- Measurements up to 100,000 RPM
- Multiple functions and automatic routines for data acquisition and storage: measurement of rotational speed, linear speed, count, frequency and period
- Extensive programming possibilities
- Digital display with analog bargraph
- USB interface for processing results on a PC (Model C.A 1727)
- Includes TachoGraph software on CD-ROM (Model C.A 1727) download memory only
- Stores up to 4000 measurements results (Model C.A 1727)

ACCESSORIES

MECHANICAL ACCESSORIES KIT

Catalog #1749.02

Mechanical adapter, calibrated wheel, conical end fitting and cylindrical end fitting



PRODUCT INCLUDES

Hard case, FRB F connector, 9V battery, set of fifteen reflective strips, quick start guide and user manual.
The Model C.A 1727 also includes a USB cable and TachoGraph software.

CATALOG NO.	DESCRIPTION
1748.10	Tachometer Model C.A 1725
1748.30	Tachometer Model C.A 1727
Accessories/Replacement - available on website store from www.aemc.com	
1749.02	Mechanical accessories kit



ENVIRONMENTAL TESTERS

SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

ENVIRONMENTAL TESTERS

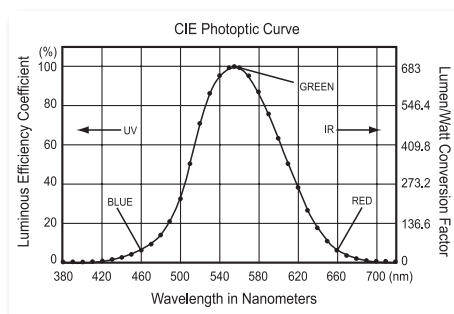
LIGHTMETER

MODELS CA811 & CA813

Features optical sensors that are designed to match the response of the human eye

SPECIFICATIONS

MODELS	CA811	CA813*
Range	20fc, 200fc, 2000fc, 20kfc	20fc, 200fc, 2000fc, 20kfc
	20lux, 200lux, 2000lux, 20klux	20lux, 200lux, 2000lux, 20klux, 200klux
Display Resolution	0.01fc or 0.01lux	
Sensor	Silicon photodiode	
Spectral Response	CIE Photopic Curve	
Accuracy	±5% of Reading ±10cts ±18% of Reading ±2cts	
2856K Light Source Common Light Source	±5% of Reading ±10cts ±11% of Reading ±2cts	
Sample Rate	2.5 times per second, nominal	2.5 times per second, nominal
GENERAL		
Display	3½ digit liquid crystal display (LCD), 2000-count	
Operating Temperature	32° to 122°F (0° to 50°C), <80% RH	
Storage Temperature	-4° to 140°F (-20° to 60°C), 0 to 80% RH without battery	
Polarity	Automatic	
Power Source	One 9V Alkaline battery (included)	
Low Battery Indication	- + is displayed when battery voltage is low	
Dimensions	6.81 x 2.38 x 1.5" (173 x 60.5 x 38mm)	
Weight	Approx. 7.55oz (214g) including battery	Approx. 7.9oz (224g) including battery



*Note: Model CA813 offers higher sensitivity (200klux) and has a better spectral response to common light sources. Model CA811 is used to measure incandescent lighting.

PRODUCT INCLUDES

- Shockproof holster
- 9V battery
- User manual



FEATURES

- Easy one-hand operation
- Designed to measure a wide range of lighting types
- Removable sensor for remote reading
- Measures in footcandles (fc) or lux
- Measures incandescent lighting
- Cosine corrected
- Hold function
- Max function (Model CA811)
- Peak function (Model CA813)
- CIE photopic (human eye) response
- 2000-count backlit LCD
- Lightweight and compact
- Removable protective sensor cover
- Includes rugged, shockproof, protective and dirt resistant gray cover

APPLICATIONS

- Testing for OSHA compliance in workplace, cleanroom and industrial settings
- Ambient testing for light-sensitive displays and archives in museums and art galleries

CATALOG NO.

DESCRIPTION

2121.20	Lightmeter Model CA811
2121.21	Lightmeter Model CA813

MODEL CA832

Designed to assess sound ambiances or nuisances in accordance with international safety and quality standards




FEATURES

- Easy one-hand operation
- Measures sound according to the sensitivity of the human ear
- Max function
- Three measurement ranges from 37 to 130dB
- Accuracy $\pm 1.5\text{dB}$ (ref. 94dB@1kHz)
- Two time weighting curves: S (slow) - 550ms and F (fast) - 55ms
- Two frequency weighting curves: A and C
- Auxiliary output for recording
- Tripod mountable
- 2000-count backlit LCD
- Lightweight and compact
- Includes rugged, shockproof, protective and dirt resistant gray cover

APPLICATIONS

- Factories
- Schools and Libraries
- Airports
- Office environments and Studios
- Auditoriums
- Hospitals
- Art Galleries

SPECIFICATIONS

MODEL	CA832
MEASUREMENTS	
Measurement Range	37 to 80dB 50 to 100dB 80 to 130dB
Measurement Rate	2.5 times per second
Dynamic Range	50db
Frequency Range	31.5 to 8000Hz
Accuracy	$\pm 1.5\text{dB}$ (ref. 94dB@1kHz)
Resolution	0.1dB
Precision	$\pm 2.0\text{dB}$
Display	2000-count
Sensor Type	0.5" (13mm) electric (prepolarized) condenser microphone True RMS measurement with independent frequency weighting
Applicable Standard	IEC 651 type 2/ANSI S 1.4 type 2/JIS C 1502
Auxiliary Output	DC output: 10mV/dB - 50 Ω AC output: 1.0Vrms - 600 Ω
Frequency Weighting	Curves A and C
Time Weighting	S (slow) - 550ms and F (fast) - 55ms
GENERAL	
Display	3½ digit liquid crystal display (LCD), 2000-count
Operating Temperature	32° to 122°F (0° to 50°C), 80% RH without condensation
Storage Temperature	-4° to 140°F (-20° to 60°C), 0 to 80% RH without battery
Power Source	One 9V Alkaline battery (included)
Low Battery Indication	 is displayed when battery voltage is low
Dimensions	9.33 x 2.38 x 1.5" (237 x 60.5 x 38mm)
Weight	8.11oz (230g) including battery

PRODUCT INCLUDES

Shockproof holster, protective foam microphone cap, screwdriver, male jack connector, assembly screw for camera type tripod, 9V battery and user manual.



Tripod mounting screw allows for mounting on a standard tripod stand. (Tripod not included)

CATALOG NO.	DESCRIPTION
2121.23	Sound Level Meter Model CA832


ENVIRONMENTAL TESTERS

THERMO-HYGROMETER

MODEL CA846

Provides excellent response time to changes in temperature, good repeatability and accurate readings

SPECIFICATIONS

MODEL	CA846
MEASUREMENTS — TEMPERATURE	
Measurement Range	-4° to 140°F (-20° to 60°C)
Display Resolution	0.1°F (0.1°C)
Sensor	NTC Temperature Sensor
Accuracy	-4° to 32°F: ±2°F (-20° to 0°C: ±1°C) 32° to 140°F: ±1°F (0° to 60°C: ±0.5°C)
MEASUREMENTS — RELATIVE HUMIDITY	
Measurement Range	0 to 100% RH
Display Resolution	0.1% RH
Sensor	Capacitive Humidity Sensor
Accuracy	±5.0%, 25°C, 10% to 90% RH ±10.0%, 25°C, 0% to 10% RH, 90% to 100% RH
GENERAL	
Display	3½ digit liquid crystal display (LCD), 2000-count
Operating Temperature	32° to 122°F (0° to 50°C), 80% RH
Storage Temperature	-4° to 140°F (-20° to 60°C), 0 to 80% RH without battery
Polarity	Automatic
Power Source	One 9V Alkaline battery (included)
Low Battery Indication	 is displayed when battery voltage is low
Dimensions	6.81 x 2.38 x 1.5" (173 x 60.5 x 38mm)
Weight	Approx. 7oz (197g) including battery



FEATURES

- Easy one-hand operation
- Measures temperature in °F and °C
- Accurate NTC sensor
- Quick response RH sensor
- Max and Hold functions
- 2000-count backlit LCD
- Lightweight and compact
- Removable protective sensor cover
- Includes rugged, shockproof, protective and dirt resistant gray cover

APPLICATIONS

- Greenhouses
- HVAC installation and maintenance
- Office environments
- Labs
- Environmental studies
- Weather monitoring
- Food distribution and storage
- Blood banks

PRODUCT INCLUDES

- Shockproof holster
- 9V battery
- User manual

CATALOG NO.	DESCRIPTION
2121.24	Thermo-Hygrometer Model CA846 (NTC)

ENVIRONMENTAL TESTERS

INFRARED THERMOMETER

MODEL CA879

Provides precision measurement with its laser target feature



FEATURES

- Easy one-hand operation
- Non-contact infrared sensor
- Laser guide for precise aim
- 12:1 Field of Vision Ratio
- Measures temperature in °F and °C
- Fixed 0.95 emissivity
- Auto-HOLD function
- 2000-count backlit LCD

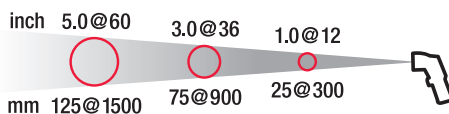
APPLICATIONS

- Electrical troubleshooting
- Food safety and processing
- Automotive repair and maintenance
- Marine maintenance and repairs
- Test faulty motor winding insulation
- Test overheated high voltage transformers
- Test terminals on circuit breaker panels
- Perform HVAC energy audits
- For Continental US only

FIELD OF VISION RATIO

Distance (D) to Spot Size (S)

D:S=12:1



-58.0 to 1022°F (-50.0 to 550°C)

SPECIFICATIONS

MODEL	CA879
ELECTRICAL	
Measuring Range	-58° to 1022°F (-50° to 550°C)
Resolution	0.1°F from -58° to 200°F, 1°F beyond this range 0.1°C from -50° to 200°C, 1°C beyond this range
Polarity	Automatic (minus only)
Accuracy	±1.5% of Reading ±4°F from -4° to +1022°F / ±9°F of -58° to -4°F ±1.5% of Reading ±2°C from -20° to +550°C / ±5°C of -50° to -20°C
Emissivity	Preset at 0.95
Spectral Response	6 to 14μm
Response Time	400ms
Laser Target	1mW (670nm type)
Power Source	One 9V Alkaline battery included (6LR61 or 6LF22)
MECHANICAL	
Dimensions	9.05 x 3.93 x 2.20" (230 x 100 x 56mm)
Weight	10.23oz (290g)
ENVIRONMENTAL	
Operating: Temperature Humidity	32° to 122°F (0° to 50°C) 10 to 90% RH
Storage: Temperature Humidity	-4° to 140°F (-20° to 60°C) without battery < 80% RH
SAFETY	
Electromagnetic Compatibility	EN 50081-1: EN 55022 EN 50082-1: EN 55024

PRODUCT INCLUDES



Soft carrying case, 9V battery and user manual.

CATALOG NO.	DESCRIPTION
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2121.37 Infrared Thermometer Model CA879 (-58° to 1022°F)



Technical Assistance (800) 343-1391

www.aemc.com 65

ENVIRONMENTAL TESTERS

TEMPERATURE

MODEL 1821/1822/1823

Versatility & high performance temperature measurement



FEATURES

- Selectable Thermocouple type, J, K, T, N, E, R, S (Models 1821 & 1822)
- Single and dual channel (Models 1821 & 1822)
- Dual line display (Model 1822)
- RTD temperature measurement (Model 1823)
- Works with 100 or 1000 Ohm platinum sensor (Model 1823)
- User selectable temperature units, °F, °C
- Min and Max measurements stored
- HOLD function freezes the display
- Spot or continuous recording up to 1 million measurements
- Blue luminescent backlit display
- Programmable store on alarm function
- Magnetic mount
- Programmable alarms through software
- DataView® graphing and analysis software included
- Battery or USB powered
- Free app for Android™ from the Google® Play Store

PRODUCT INCLUDES

- 3 x 1.5V AA alkaline batteries
- 6ft USB cable, type A to type B USB
- Quick start guide
- Soft carrying case
- K Thermocouple flexible sensor (Model 1821 only)
- (2) K Thermocouple flexible sensor (Model 1822 only)
- (1) 3 pin RTD connector (Model 1823 only)
- User manual and DataView® application software included on USB Drive

CATALOG NO.	DESCRIPTION
2121.74	Thermocouple Thermometer Data Logger Model 1821
2121.75	Thermocouple Thermometer Data Logger Model 1822
2121.76	RTD Thermometer Data Logger Model 1823
Accessories/Replacement - available on website store from www.aemc.com	
2138.66	Cable - 6ft USB Type A - Type B Micro
5000.82	3-Prong Mini Flat Pin Connector (RTD) (for Model 1823)
5000.44	MultiFix Universal Mounting System
2154.71	Carrying Pouch
2153.78	Adapter - US Wall Plug to USB
2122.31	Shock Proof Housing

TEMPERATURE DATA LOGGERS MODELS 1821, 1822, 1823

	1821 THERMOCOUPLE THERMOMETER	1822 THERMOCOUPLE THERMOMETER	1823 RTD THERMOMETER
	J, K, T, N, E, R, S 1 Channel	J, K, T, N, E, R, S 2 Channel	PT100, PT1000 1 Channel
Measurement range	J 210 to + 1,200 °C / -346 to + 2,192 °F K 200 to + 1,372 °C / -328 to + 2,501 °F T 250 to + 400 °C / -418 to + 752 °F N 200 to + 1,300 °C / -328 to + 2,372 °F E 150 to + 950 °C / -238 to + 1,742 °F R, S 0 to + 1,767 °C / 32 to + 3,212 °F		- 100 to + 400°C -148 to + 752°F
Resolution	Display in °C: $\emptyset < 1,000\text{ }^{\circ}\text{C}$: 0.1 °C and $\emptyset \geq 1,000^{\circ}\text{C}$: 1 °C Display in °F: $\emptyset < 1,000\text{ }^{\circ}\text{F}$: 0.1 °F and $\emptyset \geq 1,000^{\circ}\text{F}$: 1 °F		Display in °C : 0.1°C Display in °F : 0.1°F
Accuracy (°C)	J, K, T, N, E $\emptyset \leq - 100^{\circ}\text{C} \pm (0.2\% \text{ Reading} + 0.6^{\circ}\text{C})$ - 100°C < $\emptyset \leq + 100^{\circ}\text{C} \pm (0.15\% \text{ R} + 0.6^{\circ}\text{C})$ + 100°C < $\emptyset \pm (0.1\% \text{ R} + 0.6^{\circ}\text{C})$		$\pm (0.4\% \text{ R} + 0.3^{\circ}\text{C})$
	R, S $\emptyset \leq + 100^{\circ}\text{C} \pm (0.15\% \text{ R} + 1.0^{\circ}\text{C})$ + 100°C < $\emptyset \pm (0.1\% \text{ R} + 1.0^{\circ}\text{C})$		
FUNCTIONS			
Recording	Manual start/stop Short press on MEM: spot recording / Long press on REC: recording at the user selectable rate Programmed recording rates from 1 minute to 2 hours Start date and end date can be customized with the PC software		
Alarms	Alarm thresholds set using the software. Visual alert on the product in the event of an overrun Recording can be triggered on alarm thresholds		
Data storage	More than 1 million measurements		
Min-Max	Real-time display of Min and Max readings available at the press of a button		
Hold	Freezes the measurement value on the display		
Differential measurement	Model 1822 only		
Units	°C or °F		
Backlighting	Blue luminescent		
Automatic power off	User selectable choice of 3 minutes, 5 minutes, 10 minutes, or off through DataView® software		
POWER SUPPLY			
Type	3 x 1.5V AA / LR6 alkaline batteries Connection to line power using supplied micro-USB cable. Wall adapter sold separately		
Battery life	Model 1821 & 1822: 1,000 hrs (portable mode) Model 1823 : 800 hrs (portable mode) 3 years for recording (15-minute measurement interval)		
PHYSICAL SPECIFICATIONS			
Interfaces	2 communication modes: Bluetooth and USB		
Mounting	Case equipped with a magnet, a wall mount system and a slot for suspension of the product. Compatible with the Multifix accessory (Cat. 5000.44). Shock proof housing available as an accessory		
Connections	Compensated miniature female connectors		3-point flat connector
Dimensions/Weight	5.9 x 2.84 x 1.28" (150 x 72 x 32mm) / 9.2oz (260g) with batteries		
Protection	IP54		
Operating Range	Temperature from 14 to 140 °F (-10 to +60 °C) / Humidity from 10 to 90 %RH		
Standards	IEC61010-1 / IEC 61326-1		
GENERAL SPECIFICATIONS			
DataView® Software Functions	Real-time mode; Automatic report generation in Microsoft Word format Graph or value-table presentation; Data export in graph or Microsoft Excel table format		
Warranty	2 years		

MODEL 1110

Features optical sensors that are designed to match the response of the human eye



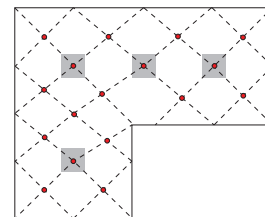
SPECIFICATIONS

MODELS	1110	
Measurement Range	.01 lx to 200,000lx	0.01 fc to 18,580 fc
Accuracy	$\pm 3\%$ of R on incandescent sources $\pm 6\%$ of R on LEDs (3,000K to 6,000K) $\pm 9\%$ of R on fluorescent sources	
Accuracy with compensation	LED mode: $\pm 4\%$ of R (at 4,000K) Flou mode: $\pm 4\%$ of R (type F11, 4,000K)	
Display Resolution	0.1 lx (0.1 lx to 999.9 lx) 1 lx (1,000 lx to 9,999 lx) 10 lx (10,000 lx to 99,999 lx) 100 lx beyond	0.01 fc (0.01 fc to 99.99 fc) 0.1 fc (100.0 fc to 999.9 fc) 1 fc (1,000 fc to 9,999 fc) 10 fc beyond
Recording	Manual start/stop on the product Short press for MEM: spot recording/long press for REC at the defined default rate Programed recording: start date, recording interval, and end date defined using DataView® software	
Other Functions	MIN-AVG-MAX-HOLD	
Sampling Rate	Programmable from 1s, 2s, 5s, 10s, 20s, 30s, 2min, 5min, 10min, 15min, 30min, and 1hr	
MAP mode	The MAP mode can be used to map the lighting on the surface of a room. In this case the measurements are saved in the same file	
Memory	1,000,000 measurements on each channel (4MB). Recorded data is stored in non-volatile memory and will be retained even if battery is low or removed.	
Communication	USB 2.0 and Bluetooth	
Power Source	3x1.5V AA (LR6) alkaline batteries or USB port (micro-USB adaptor offered as an accessory)	
Battery Life	500hrs, 3yrs with 15min intervals	
Dimensions	Case: 5.9 x 2.84 x 1.28" (150 x 72 x 32mm) Sensor: 2.64 x 2.52 x 1.38" (67 x 64 x 35mm)	
Weight (with battery)	12.2 oz (345g) with batteries	
Case	Polycarbonate	
Operating temperature	14° to 140°F (-10° to 60°C)	
Storage temperature	-4° to 140°F (-20° to 60°C)	
Relative Humidity	Up to 90%	
Ingress Protection (IP)	IP50 with USB connector closed and protective cap on sensor	
EMC	EN 61326-1	
Safety Compliance	IEC 61010-1	
Warranty	2 years	



FEATURES

- User selectable light source, natural, LED or fluorescent
- Spectral error compensation for LED and fluorescent lighting
- Removable light sensor with expandable cable up to 48"
- Map mode profiles the illuminance map of the area or room by storing multiple measurements
- Min, Max, and Average measurements stored
- Free app for Android™ from the Google® Play Store
- Spot or continuous recording of up to 1,000,000 measurements stored in 8MB flash memory
- Blue luminescent backlit display
- User selectable Foot Candle or Lux units
- USB and Bluetooth communication
- Magnetic mount
- Battery or USB powered
- DataView® graphing and analysis software included



Measure and record multiple measurements to create an illuminance map of the room or area of interest

CATALOG NO.

DESCRIPTION

2121.71 Lightmeter Data Logger Model 1110

Accessories/Replacement - available on website store from www.aemc.com

2118.65 Soft Carrying Case

2138.66 Cable - 6 ft USB Type A - Type B Micro

2118.09 General Purpose Carrying Case

2122.31 Shock Proof Housing

2153.78 Adapter - US Wall Plug to USB

5000.44 Multifix Universal Mounting System

ENVIRONMENTAL TESTERS

THERMO-ANEMOMETER

MODEL 1227

Easily measure and record wind speed, air flow, and temperature



FEATURES

- Measures temperature and air measurements
- Free app for Android™ from the Google® Play Store
- User selectable wind speed or air flow measurement
- User selectable measurement units m/s, fpm, km/h, mph or m³/s, m³/h, R/s, cfm
- Map mode profiles the illuminance map of the area or room by storing multiple measurements
- Removable anemometer with expandable cord up to 48"
- Min, Max and Average measurements stored
- Hold function freezes the display
- Spot or continuous recording up to 1 million measurements stored in 8MB flash memory
- Blue luminescent backlit display
- USB and Bluetooth communication
- Magnetic mount
- Battery or USB powered
- DataView® graphing and analysis software included



2122.32
Set of Air Flow
Measurement Cones

SPECIFICATIONS

MODELS	1227	
	Air Speed	Air Flow
Measurement Range	0.52m/s to 27.0m/s (98.0 to 5,315fpm)	0.00 to 2,999m ³ /h
Accuracy	±3% of R ± 0.1m/s	8% of R
Resolution	0.01m/s from 0.5 to 98.0m/s .1fpm from 98.4 to 99.9fpm 0.1m/s from 3.0 to 27.0m/s 1fpm from 100 to 5,315fpm	0.01m ³ /h from 0.00 to 2.99m ³ /h 0.1 m ³ /h from 3.0 to 99.9m ³ /h 1m ³ /h from 100 to 2.99fm ³ /h
Recording	Manual start/stop on the product Short press for MEM: spot recording/long press for REC at the defined default rate Programed recording: start date, recording interval, and end date defined using DataView® software	
TEMPERATURE		
Sensor	CTN	
Accuracy	32° to 122°F: ±1.4°F -4° to 32°F: ±2.3°F	0° to 50°C: ±0.8°C -20° to 0°C: ±1.6°C
Resolution	0.1°F	0.1°C
GENERAL		
Other Functions	MIN-AVG-MAX-HOLD	
Sampling Rate	Programmable from 1s, 2s, 5s, 10s, 20s, 30s, 2min, 5min, 10min, 15min, 30min, and 1hr	
MAP mode	The MAP mode can be used to map the air speeds on the surface of a room. In this case the measurements are saved in the same file	
Memory	1,000,000 measurements on each channel (4MB). Recorded data is stored in non-volatile memory and will be retained even if battery is low or removed.	
Communication	USB 2.0 and Bluetooth 4.0 BLE range 1m typical	
Power Source	3x1.5V AA (LR6) alkaline batteries or USB port (micro-USB adaptor offered as an accessory)	
Battery Life	200 hrs., / 8 days when recording with 15 minutes intervals	
Dimensions	Case: 5.9 x 2.84 x 1.28" (150 x 72 x 32mm) Sensor: 6.3 x 3.15 x 1.5" (160 x 80 x 38mm)	
Weight (with battery)	14.1oz (400g) with batteries	
Case	Polycarbonate	
Operating temperature	14° to 140°F (-10° to 60°C)	
Storage temperature	-4° to 140°F (-20° to 60°C)	
Relative Humidity	Up to 90%	
Ingress Protection (IP)	IP40	
EMC	EN 61326-1	
Safety Compliance	IEC 61010-1	
Warranty	2 years	

CATALOG NO.	DESCRIPTION
2121.72	Thermo-Anemometer Data Logger Model 1227
Accessories/Replacement - available on website store from www.aemc.com	
2118.65	Case - Soft Carrying Case
2122.33	Replacement Air Flow Sensor
2138.66	Cable - 6ft USB Type A - Type B Micro
2118.09	General Purpose Carrying Case
2122.31	Shock Proof Housing
2122.32	Set of Air Flow Measurement Cones
2153.78	Adapter - US Wall Plug to USB
5000.44	Multifix Universal Mounting System

ENVIRONMENTAL TESTERS

THERMO-HYGROMETER

MODEL 1246

Measure humidity & temperature in all conditions

FEATURES

- Measures temperature, humidity and dew point
- Dual line display toggles between any two of the measurements
- User selectable temperature units, °F, °C
- Built in sensor with removable protective cap
- Min, and Max measurements stored
- Hold function freezes the display
- Spot or continuous recording up to 1 million measurements
- Blue luminescent backlit display
- Programmable alarms for temperature and humidity through included software
- USB and Bluetooth communication
- Magnetic mount
- Battery or USB powered
- DataView® graphing and analysis software included



PRODUCT INCLUDES

- Soft carrying case
- 3 x 1.5 V AA alkaline batteries
- 6ft USB cable, type A to type B USB
- Quick start guide
- User manual and DataView® application software included on USB Drive



CATALOG NO.	DESCRIPTION
2121.73	Thermo-Hygrometer Data Logger Model 1246
Accessories/Replacement - available on website store from www.aemc.com	
2138.66	Cable - 6ft USB Type A - Type B Micro
2154.71	Carrying Pouch
2118.09	General Purpose Carrying Case
2122.31	Shock Proof Housing
2153.78	Adapter - US Wall Plug to USB
5000.44	Multifix Universal Mounting System

MODEL 1510

Monitor CO₂, temperature, and humidity for a healthy environment



FEATURES

- CO₂, temperature, and humidity logger
- Free app for Android™ from the Google® Play Store
- Compact and stand-alone: for mounting or portable use
- User-friendly: comfort indicators based on the CO₂, temperature and humidity levels
- Accurate: complies with the latest standards concerning air quality monitoring
- Quick, simple data download using supplied DataView® software
- On-site calibration test module with adapter, tube and software for adjusting the zero and thresholds

PRODUCT INCLUDES

- Meter in carrying pouch
- Adapter - US wall to USB
- 6ft USB cable
- 2 AA batteries
- Quick start guide
- User manual and DataView® application software included on USB Drive

CATALOG NO.	DESCRIPTION
2138.08	Air Quality Logger Model 1510 (Gray)
2138.09	Air Quality Logger Model 1510 (White)
Accessories/Replacement - available on website store from www.aemc.com	
2138.61	Wall Mount Holster (Gray)
2138.62	Desktop Stand (White)
2153.78	Adapter - US Wall Plug to USB
2138.67	Wall Mount Holster (White)

SPECIFICATIONS

CO ₂ Measurement	
Measuring Principle	Non-dispersive infrared (NDIR) technology
Type of Sensor	Double-beam infrared cell sensor
Measurement Range	0 to 5000 ppm
Accuracy (CO ₂)	±50 ppm ±3% of value measured
Response Time, 63%	< 200 seconds
Resolution	1 ppm
Temperature Measurement	
Type of Sensor	CMOS
Units	°C or °F
Measurement Range	14° to 140°F (-10° to 60°C)
Accuracy	±0.1°F (±0.5°C)
Resolution	0.1°F (0.1°C)
Humidity Measurement	
Type of Sensor	Capacitive
Measurement Range	5 to 95% RH
Accuracy	±2% RH
Resolution	0.1% RH
General	
Recording Interval	Programmable from 1 minute to 2 hours
Storage	> 1 million measurements
Alarm	Yes
Backlighting Display, Hold, Min & Max	Yes
Auto Power OFF	Yes (in portable mode only)
Dimensions/Weight	4.92 x 2.58 x 1.26" (125 x 65.5 x 32mm)/ 6.7oz (190g) with batteries
Protection	IP40
Compliance	IEC 61010-1, 50V CAT II - IEC 61326-1
Power Supply	Alkaline batteries: 2 AA or rechargeable battery connection to 120V 60Hz line/USB to wall adapter
Communication	Bluetooth (Class I) wireless communication/USB link; the product is then recognized as a USB drive for easy file transfer
Mounting	Optional padlockable wall mount (padlock is not included), optional desktop stand and tear drop wall hook
DataView® Software	Graphic representation or as table of values, data export, real-time mode calculation of the confinement index with selection of presence periods & report generation

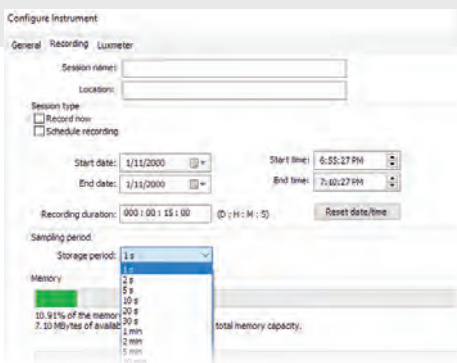


USE DATAVIEW® TO CONFIGURE ALL USER SELECTABLE FUNCTIONS ON
MODELS 1110, 1227, 1246, 1821, 1822, 1823 & 1510

You can view measurements in real-time, download & analyze stored data, and create customizable reports all with DataView®.

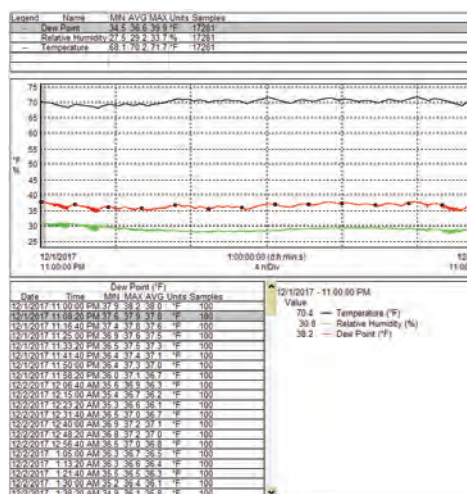
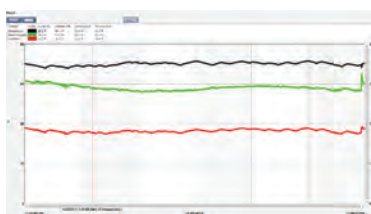


Typical status screen shows current state of the instrument



The recording configuration screen provides the ability to assign a name & location to the recording session, set the retrieval rate, and schedule when recordings will start and stop. It also displays memory usage.

Other screens allow for the selection of measurement units, alarm set points, and other user selectable parameters.



A typical report will include a plot of the data as well as a listing of the measurements.



A report cover sheet provides information about the operator and the test site as well as a comment section for the operator to type in the test results and recommendations



GROUND RESISTANCE TESTERS

SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

GROUND RESISTANCE TESTERS

DIGITAL TESTER

MODELS 4620 & 4630

Both models will perform over 2000 measurements for the 15 second tests between recharging or battery replacement



cover closed

cover open

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 fault 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



SPECIFICATIONS

MODELS	4620		4630
ELECTRICAL			
Range	20Ω	200Ω	2000Ω
Measurement Range	0.00 to 19.99Ω	20.0 to 199.9Ω	200 to 1999Ω
Resolution	10mΩ	100mΩ	1Ω
Open Voltage	≤42V peak	≤42V peak	≤42V peak
Resistance Measurement Frequency	128Hz square wave	128Hz square wave	128Hz square wave
Test Current	10mA	1mA	0.1mA
Accuracy	±2% of Reading ±1ct	±2% of Reading ±1ct	±5% of Reading ±3cts
Auxiliary Electrode Influence			
Max Res. in Current Circuit	3kΩ	30kΩ	50kΩ
Max Res. in Voltage Circuit	50kΩ	50kΩ	50kΩ
Response Time	Approximately four to eight seconds for a stabilized measurement		
Withstanding Voltage	250Vac or 100Vdc		
Power Source	Eight C cell batteries (included); Alkaline recommended		120/230V 50/60Hz Rechargeable 9.6V, 3.5 Ah NiMH battery pack (included)
Battery Life	>2000 15-second measurements; LO BAT indication on LCD		
Fuse Protection	0.1A, >250V, 0.25 x 1.25"; 30kA Interrupt Capacity		

PRODUCT INCLUDES

Soft carrying case, batteries (4620 is C-cell & 4630 is rechargeable) and user manual

Model 4630 Kit - 500 ft. shown

PLEASE REFER TO PAGE 81 FOR TEST KIT DESCRIPTIONS

CATALOG NO.	DESCRIPTION
2130.43	Ground Resistance Tester Model 4620 (Digital, 4-Point, Battery Powered)
2130.44	Ground Resistance Tester Model 4630 (Digital, 4-Point, Rechargeable Battery)
2135.19	Ground Resistance Tester Model 4620 Kit - 150ft (Model 4620 and Catalog #2135.35)
2135.20	Ground Resistance Tester Model 4620 Kit - 300ft (Model 4620 and Catalog #2135.36)
2135.21	Ground Resistance Tester Model 4620 Kit - 500ft (Model 4620 and Catalog #2135.37)
2135.22	Ground Resistance Tester Model 4630 Kit - 150ft (Model 4630 and Catalog #2135.35)
2135.23	Ground Resistance Tester Model 4630 Kit - 300ft (Model 4630 and Catalog #2135.36)
2135.24	Ground Resistance Tester Model 4630 Kit - 500ft (Model 4630 and Catalog #2135.37)
Accessories/Replacement - available on website store from www.aemc.com	
2130.60	Tape Measure (100 ft)
2135.35	Test Kit for 3-Point Testing - 150ft (see page 70 for descriptions)
2135.36	Test Kit for 4-Point Testing - 300ft (see page 70 for descriptions)
2135.37	Test Kit for 4-Point Testing - 500ft (see page 70 for descriptions)
2135.38	Ground Test Kit for 3-Point Testing (Supplemental for 4-Point testing - includes two 100ft color-coded leads, one 30ft lead (green), two 14.5" T-shaped auxiliary ground electrodes and soft carrying bag)
2130.59	Calibration Checker - 25Ω for Models 3640, 4500, 4610, 4620 and 4630

GROUND RESISTANCE TESTERS

CLAMP-ON



MODELS 6416 & 6417

Provides high safety level with new ground voltage indication feature

SPECIFICATIONS

MODELS	6416 & 6417		
ELECTRICAL			
Ground Resistance	Measurement Range	Resolution	Accuracy (% of Reading)
Auto-Ranging 0.01 to 1499Ω	0.010 to 0.099Ω	0.001Ω	±1.5% ±0.01Ω
	0.10 to 0.99Ω	0.01Ω	±1.5% ±0.02Ω
	1.0 to 49.9Ω	0.1Ω	±1.5% ±0.1Ω
	50.0 to 99.5Ω	0.5Ω	±2% ±0.5Ω
	100 to 199Ω	1Ω	±3% ±1Ω
	200 to 395Ω	5Ω	±5% ±5Ω
	400 to 590Ω	10Ω	±10% ±10Ω
	600 to 1150Ω	50Ω	20% approx
	1200 to 1500Ω	50Ω	25% approx
Current Measurement	0.200 to 0.999mA	1μA	±2% ±50μA
Auto-Ranging 1mA to 40A	1.000 to 2.990mA 3.00 to 9.99mA	10μA	±2% ±50μA
	10.00 to 29.90mA 30.0 to 99.9mA	100μA	±2% ±100μA
	100.0 to 299.0mA 0.300 to 0.990A	1mA	±2% ±1mA
	1.000 to 2.990A 3.00 to 39.99A	10mA	±2% ±10mA
Selectable Measurement Frequency	50, 60, 128 or 2083Hz		
Current Measurement Frequency	47 to 800Hz		
Inductance Measurement	10 to 100μH; 100 to 500μH		
Current Overload	OL displayed above 39.99Arms		
Communication	Bluetooth connection (Model 6417 only)		
Power Source	4x1.5V LR6 (AA) Alkaline batteries or 4 NiMH batteries; Battery life: 12 hours, or 1440 30-second measurements approx.		



*Model 6417 only

FEATURES

- Ground Integrity® Measurement
- Ground voltage indication (warns of possible unsafe conditions)
- Large multi-function bright yellow organic LED display (OLED)
- Selectable test frequency (improves accuracy in inductive environments)
- Clamping diameter of 1.37" (35mm) with large jaw design
- Storage of measurements (Ω and/or A, with time-stamping)
- Model 6416: up to 300 measurements stored
- Model 6417: up to 2000 measurements stored
- View stored measurements on the OLED display or via Bluetooth (Class 2 - communicates up to 30ft) to a PC or the Android™ based mobile application (Model 6417)
- Auto Power OFF function
- Alarm function with adjustable set point and buzzer for quick field checks for volts, amps and ohms
- Rugged Lexan® head and body construction resists breakage
- Alarm settings and stored memory information saved during shutdown
- Includes DataView® software for data retrieval, real-time display, analysis, report generation and system configuration (Model 6417)
- Noise icon and buzzer alert user to presence of dangerous voltage and current levels
- Designed to EN 61010-1, 600V CAT IV safety standards

PRODUCT INCLUDES

MODEL 6416

includes a hard carrying case, calibration loop, four 1.5V AA batteries and user manual.

MODEL 6417

also includes a Bluetooth USB adapter, quick start guide, and a USB drive with DataView® software, ground workbook and user manual.



CATALOG NO.	DESCRIPTION
2141.01	Ground Resistance Tester Model 6416 (Clamp-On, Alarm, Memory)
2141.02	Ground Resistance Tester Model 6417 (Clamp-On, Bluetooth, Alarm, Memory)



Technical Assistance (800) 343-1391

www.aemc.com 75

GROUND RESISTANCE TESTERS

CLAMP-ON

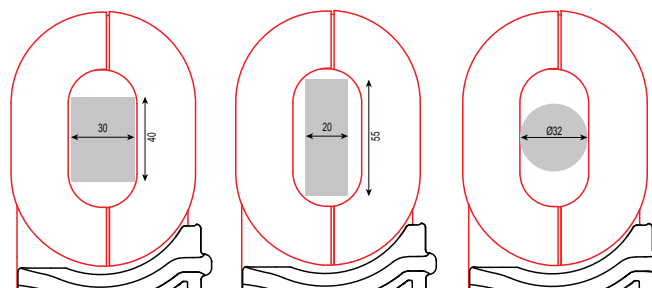
MODEL 6418

Designed for measuring ground impedance on ground rods and bus bars



SPECIFICATIONS

MODEL	6418		
ELECTRICAL			
Ground Resistance	Measurement Range	Resolution	Accuracy (% of Reading)
Auto Ranging	0.010 to 0.099Ω	0.001Ω	±1.5% ±0.01Ω
	0.10 to 0.99Ω	0.01Ω	±1.5% ±0.02Ω
	1.0 to 49.9Ω	0.1Ω	±1.5% ±0.1Ω
	50.0 to 149Ω	1Ω	±2.5% ±2Ω
	150 to 245Ω	5Ω	±5% ±10Ω
	250 to 440Ω	10Ω	±10% ±20Ω
	450 to 640Ω	10Ω	±15% ±20Ω
	650 to 1200Ω	50Ω	±20% Reading +100Ω
Measurement Frequency	2083Hz		
Current Measurement	0.50 to 9.950mA	50μA	±2% +200μA
Auto Ranging 1mA to 40A	10.00 to 99.90mA	100μA	±2% +100μA
	100.0 to 299.0mA	1mA	±2% ±1mA
	0.300 to 2.990A	10mA	±2% ±10mA
	3.000 to 20.00A	100mA	±2% ±100mA
Current Measurement Frequency	47 to 800Hz		
Current Overload	OL displayed above 19.99Arms		
Power Source	4x1.5V LR6 (AA) Alkaline batteries or 4 NiMH batteries; Battery life: 12 hours, or 1440 30-second measurements approx.		



CLAMPING CHARACTERISTICS

FEATURES

- Ground Integrity® Measurement
- Large multi-function bright yellow organic LED display (OLED) 48 x 39mm
- 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
- Auto Hold
- 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
- Designed to EN 61010-1, 100V CAT IV 150V CAT III safety standards
- Automatic calibration of the jaw gap at power-up

PRODUCT INCLUDES

MODEL 6418

Includes a hard carrying case, calibration loop, four 1.5V AA batteries and user manual.



CATALOG NO.

DESCRIPTION

2141.03

Ground Resistance Tester Model 6418 (Clamp-On, Alarm, Memory, Oblong Jaws)

GROUND RESISTANCE TESTERS

CLAMP-ON

Functional Displays



MEASUREMENT RESULTS



Displays the leakage current and loop impedance at the test frequency

MEMORY RECALL MODE



Measurement storage date-time screen

ALARM



Indicates voltage/current alarm threshold along with the direction of impedance

LOOP DETECTION



Detects and displays possible false readings associated with metal loops

GROUND VOLTAGE



Indicates voltage potential at the point of measurement

IMPEDANCE OVER RANGE



Indicates that the impedance is greater than 15000 Ω

GROUND RESISTANCE TESTERS

MULTI-FUNCTION

MODEL 6471

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



SPECIFICATIONS

MODEL	6471
ELECTRICAL	
2 Clamp Measurement	
Range	0.10 to 500Ω
Resolution	0.01 to 1Ω
Measurement Frequency	Auto: 1611Hz Manual: 128Hz-1367Hz-1611Hz-1758Hz
3-Point Measurement	
Range (Auto-Ranging)	0.09Ω to 99.9kΩ
Resolution	0.01Ω to 100Ω
Test Voltage	Nominal 16 or 32Vrms user selectable
Resistance Measurement Frequency	41 to 513Hz automatic or user selectable
Test Current	Up to 250mA
Accuracy	±2% of Reading + 1ct @ 128Hz
Soil Resistivity 4-Point Measurement	
Test Method	Wenner or Schlumberger selectable with automatic calculation in Ω-meters
Range (Auto-Ranging)	0.01 to 99.99kΩ; max: 999kΩm
Resolution	0.001 to 10Ω
Test Voltage	16 or 32V user selectable
Frequency	From 41 to 128Hz selectable
External Voltage Measurement	
Range (Auto-Ranging)	0.1 to 65.0V _{AC/DC} – DC to 440Hz
Accuracy	±2% of Reading + 1ct
Resistance Measurement (Bond Testing)	
Measurement Type	2-Pole (with lead resistance compensation) or 4-Pole (Kelvin sensing) user selectable
Range (Auto-Ranging)	2-Pole 0.02 to 99.99kΩ; 4-Pole 0.02 to 99.99kΩ
Accuracy	±2% of Reading + 2cts
Test Voltage	16V _{DC} (+, - or auto polarity)
Test Current	Up to 250mA max
Data Storage	
Memory Capacity	512 test results (64KB)
Communication	Optically Isolated USB
Power Source	9.6V rechargeable battery pack (included)
Recharging Source	110/220V, 50/60Hz external charger with 18V _{DC} , 1.9A output



The Model 6471 provides a fast and easy way to measure the value of the earth/ground using the 2 Clamp method (no auxiliary rods needed).



KIT SHOWN 300FT KIT: CATALOG #2135.50

Includes meter, carrying bag for meter, carrying bag for kit, two 300ft color-coded leads on spools (red/blue), two 5ft color-coded leads (red/blue), two 100ft color-coded leads (hand-tied, green/black), two SR182 current probes, rechargeable NiMH batteries, optical USB cable, power adapter 110/240V with power cord 115V US, four T-shaped auxiliary ground electrodes, set of five spaded lugs, one 100ft tape measure, and USB drive supplied with DataView® software, ground tester workbook and user manual.

PRODUCT INCLUDES

2135.48

Meter, carrying bag, 110/240V power adapter with US power cord, optical USB cable, rechargeable NiMH battery, DataView® software, ground tester workbook and user manual.

2135.49

Meter, carrying bag, set of two SR182 current probes, 110/240V power adapter with US power cord, optical USB cable, rechargeable NiMH battery, DataView® software, ground tester workbook and user manual.

ACCESSORIES



MN82 CURRENT PROBE
(2mA to 10Arms)
Catalog #2135.71
(optional)



SR182 CURRENT PROBE
(0.5MA TO 40ARMS)
Catalog #2135.72 (optional)



REEL CADDY
Catalog #2135.85
(optional) Set of two, for use with ground kit spools

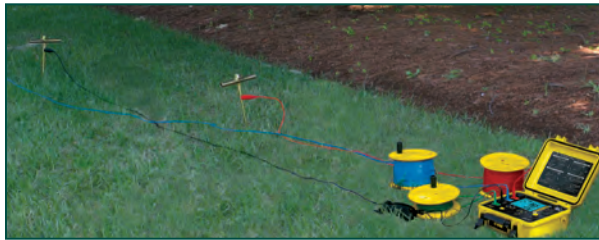
GROUND RESISTANCE TESTERS

MULTI-FUNCTION



MODEL 6472

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



The Model 6472 provides an automated way to measure the value of the earth/ground using the Fall-of-Potential method and storing measurements.

TEST KITS

6472 METER

300ft Kit: Catalog #2135.53

500ft Kit: Catalog #2135.54 (shown)

Refer to page 40 for
Model 6472 Kit descriptions
Catalog #2135.35, #2135.36 & #2135.37



ACCESSORIES

MN82 CURRENT PROBE (2MA TO 10ARMS)

Catalog #2135.71 (optional)



SR182 CURRENT PROBE (0.5MA TO 40ARMS)

Catalog #2135.72 (optional)



REEL CADDY

Catalog #2135.85 (optional)

Set of two, for use with
ground kit spools



SPECIFICATIONS

MODEL	6472
ELECTRICAL	
3-Point Measurement	
Range (Auto-Ranging)	0.09Ω to 99.9kΩ
Resolution	0.01 to 100Ω
Test Voltage	Nominal 10, 16, 32 or 60Vrms user selectable
Resistance Measurement Frequency	41 to 5078Hz automatic or user selectable
Test Current	Up to 250mA
Accuracy	±2% of Reading + 1ct @ 128Hz
2 Clamp Measurement	
Range	0.1 to 500Ω
Resolution	0.01 to 1Ω
Measurement Frequency	Auto: 1611Hz Manual: 128Hz-1367Hz-1611Hz-1758Hz
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 99.99kΩ; P max: 999kΩm
Resolution	0.01 to 100Ω
Test Voltage	16 or 32V user selectable
Frequency	From 41 to 128Hz selectable
External Voltage Measurement	
Range (Auto-Ranging)	0.1 to 65.0VAC/DC - DC to 440Hz
Accuracy	±2% of Reading + 1ct
Resistance Measurement (Bond Testing)	
Measurement Type	2-Pole (with lead resistance compensation) or 4-Pole (Kelvin sensing) user selectable
Range (Auto-Ranging)	2-Pole 0.02Ω to 99.99kΩ; 4-Pole 0.02Ω to 99.99kΩ
Accuracy	±2% of Reading + 2cts
Test Voltage	16Vdc (+, - or auto polarity)
Test Current	Up to 250mA max
Data Storage	
Memory Capacity	512 test results (64KB)
Power Source	9.6V rechargeable battery pack (included)
Recharging Source	110/220V, 50/60Hz external charger with 18Vdc, 1.9A output

PRODUCT INCLUDES

Meter, carrying bag, 110/240V power adapter with US power cord, optical USB cable, rechargeable NiMH battery pack, DataView® software, ground tester workbook and user manual.

GROUND RESISTANCE TESTERS

MULTI-FUNCTION

Large Functional Displays

FEATURES

Ground Integrity® Measurement

Ground Resistance testing using the 2 clamp method (no auxiliary rods needed)

2- and 4-Point Bond 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 Earth Coupling measurement

Manual and Automatic frequency scan from 41 to 5078 Hz for optimum test accuracy in electrically noisy environments

Selectable test voltage of 16 or 32V up to 250mA of test current

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

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

4-POINT BOND TEST



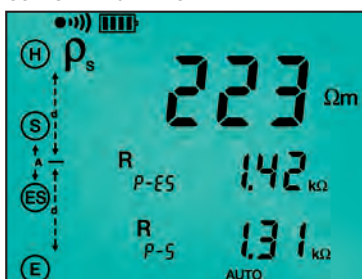
The 4-Point Bond test shows lead connections, bond resistance test results, test voltage and current.

3-POINT FALL-OF-POTENTIAL TEST



The 3-Point Fall-of-Potential test displays test lead connection, grounding rod resistance and test electrode resistances.

SCHLUMBERGER TEST



The Schlumberger test displays test lead connection, soil resistivity (ρ) test results and electrode spacing.

TWO CLAMP TEST



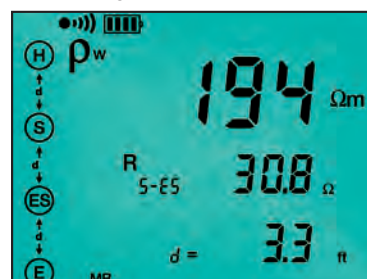
The 2 Clamp method displays clamp connection resistance, test current and frequency.

DATA STORAGE



Memory Recall displays test results stored at a specific memory location.

WENNER TEST



The Wenner test displays test lead connection, soil resistivity (ρ) test results, electrode spacing and resistance.

CATALOG NO.	DESCRIPTION
2135.48	Ground Resistance Tester Model 6471 (2-Point, 3-Point, 4-Point, Bond Test, Digital, Rechargeable Battery, DataView® software) SR182 probes not included
2135.49	Ground Resistance Tester Model 6471 (set of two SR182 current probes, 2-Point, 3-Point, 4-Point, Bond Test, Digital, Rechargeable Battery, DataView® software)
2135.50	Ground Resistance Tester Model 6471 Kit – 300ft (Catalog #2135.49 and Catalog #2135.36)
2135.51	Ground Resistance Tester Model 6472 (2-Point, 3-Point, 4-Point, Bond Test, Digital, Rechargeable Battery, DataView® software)
2135.53	Ground Resistance Tester Model 6472 Kit – 300ft (Model 6472 and Catalog #2135.36)
2135.54	Ground Resistance Tester Model 6472 Kit – 500ft (Model 6472 and Catalog #2135.37)
2135.60	Ground Resistance Tester Model 6471 Kit – 300ft (Catalog #2135.48 and Catalog #2135.36) w/o SR
2135.61	Ground Resistance Tester Model 6471 Kit – 500ft (Catalog #2135.48 and Catalog #2135.37) w/o SR
Accessories/Replacement - available on website store from www.aemc.com	
2135.71*	AC Current Probe Model MN82 for use with Model 6471 and 6472
2135.72*	AC Current Probe Model SR182 for use with Model 6471 and 6472
2135.85	Caddy – Set of 2, Reel Caddy for use w/ Ground Kit Spools

*2 probes required for two clamp testing method.

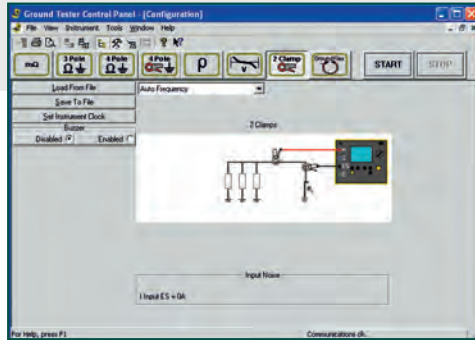
GROUND RESISTANCE TESTERS

MULTI-FUNCTION

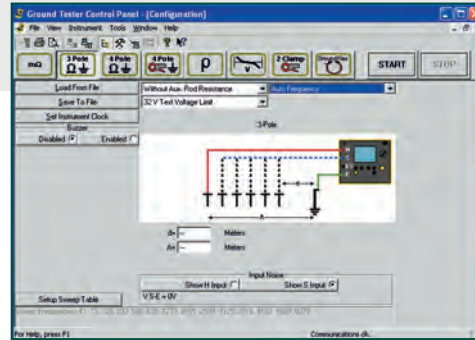
GROUND TESTERS MODELS 6471 & 6472

Typical DataView® Functional Displays

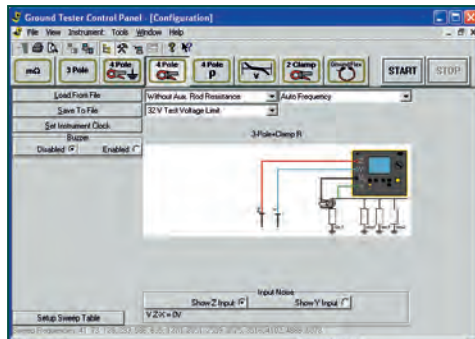
2 CLAMP METHOD SETUP



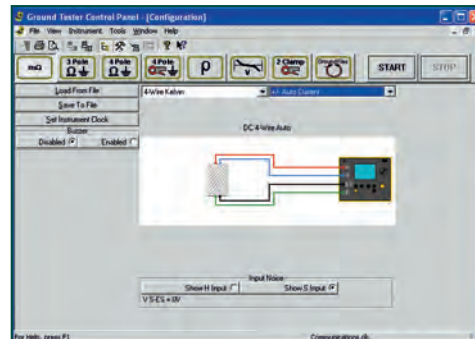
FALL-OF-POTENTIAL, STEP-TOUCH POTENTIAL



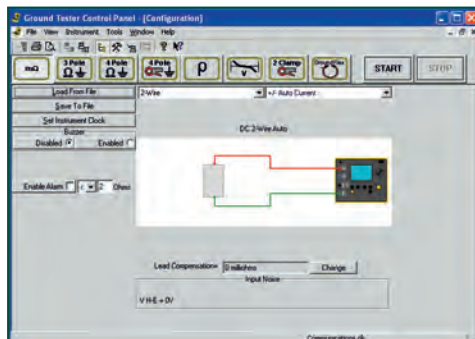
SELECTIVE 3-POINT TESTING OF MULTIPLE RODS



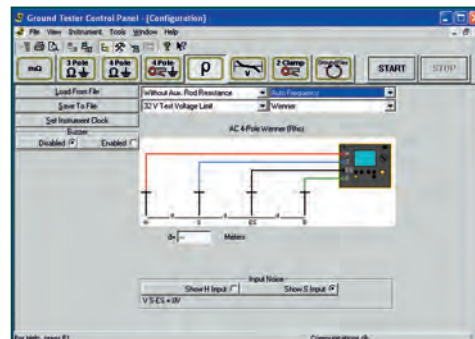
4-POINT BONDING FOR VERY LOW RESISTANCE



BONDING



SOIL RESISTIVITY



OPTIONAL KITS

150FT KIT

Catalog #2135.35
Test Kit for 3-Point testing includes carrying bag, two 150ft color-coded leads on spools (red/blue), two 5ft color-coded leads (red/blue), one 30ft lead (green), two 14.5" T-shaped auxiliary ground electrodes, one set of five spaded lugs and 100ft tape measure.



300FT KIT

Catalog #2135.36
Test Kit for 4-Point testing includes carrying bag, two 300ft color-coded leads on spools (red/blue), two 5ft color-coded leads (red/blue), two 100ft color-coded leads (green and black), four 14.5" T-shaped auxiliary ground electrodes, one set of five spaded lugs and 100ft tape measure.



500FT KIT

Catalog #2135.37
Test Kit for 4-Point testing includes carrying bag, two 500ft color-coded leads on spools (red/blue), two 5ft color-coded leads (red/blue), two 100ft color-coded leads (green and black), one 30ft lead (green), four 14.5" T-shaped auxiliary ground electrodes, one set of five spaded lugs and 100ft tape measure.



GROUND RESISTANCE TESTERS

MULTI-FUNCTION

GROUNDFLEX® FIELD KIT

Test active tower grounds safely without de-energizing or disconnecting any cables. Unique in the industry!



cover closed



SPECIFICATIONS

MODELS	6472 & 6474						
ELECTRICAL	3-POINT METHOD	4-POINT SELECTIVE METHOD	GROUND MEASUREMENT WITH 2 CLAMPS	SOIL RESISTIVITY	GROUND POTENTIAL MEASUREMENT	DC RESISTANCE MEASUREMENT	MEASUREMENTS WITH 6474
Range (Auto-Ranging)	0.01W to 99.9kW	0.001 to 99.99W	0.01 to 500W	0.01W to 99.9kW	0.01mV to 65.00V	0.001W to 99.9kW	0.001W to 99.9kW
Resolution	0.01 to 100W	0.001 to 10W	0.01 to 1W	0.01 to 100W	0.01 to 10mV	2 wires: 0.01 to 100W 4 wires: 0.001 to 10W	0.001 to 10W
Accuracy	±(2% + 1 count)	±(2% + 1 count)	±(10% + 1 count)	±(2% + 1 count)	±(5% + 1 count)	±(2% + 2 counts)	±(5% + 1 count)
No-Load Voltage	10, 16, 32 or 60Vrms	10, 16, 32 or 60Vrms	10, 16, 32 or 60Vrms	10, 16, 32 or 60Vrms	10, 16, 32 or 60Vrms	±16Vdc	10, 16, 32 or 60Vrms
Measurement Frequency	41 to 5078Hz	41 to 5078Hz	Auto: 1611Hz Manual: 128Hz, 1367Hz, 1611Hz, 1758Hz	41 to 128Hz	41 to 128Hz	DC	41 to 5078Hz
Coupling Measurement	Yes	-	-	-	-	-	-
Auxiliary Rod Resistance Measurement	0.1W to 100kW	0.01W to 100kW	-	-	-	-	0.01W to 100kW
Voltage Interference	Maximum 60Vpeak						
Soil Resistivity	-	-	-	Wenner and Schlumberger	-	-	-
Type of Measurement	3 wires	4 wires	-	4 wires	3 wires	2 wires or 4 wires	-
Measurement Current	-	-	-	-	-	> 200mA DC	-
MECHANICAL							
Memory/Communication	512-record memory / optical link / USB						
Dimensions/Weight	10.7 x 9.84 x 5.04" (272 x 250 x 128mm) / Model 6472: 7.05lbs (3.2kg) / Model 6474: 5.07lbs (2.3kg)						
Protection Safety	IP53 (cover closed)						
Electrical Safety	50V CAT IV, complies with IEC 61326-1 / IEC 61010 / IEC 61557-1-4-5						

GROUNDFLEX® FIELD KIT MODEL 6474

Includes Groundflex® Adapter Model 6474, four Groundflex® sensors (5m) with twelve color-coded rings, connection lead, two extension leads on H reel (black/green) with color-coded alligator clips, one extra black and green alligator clip, six BNC extension leads, calibration loop, three C-clamps, carrying case with wheels and handle for meters, one inverter 12Vdc to 120Vac 200 watt (vehicle use) and user manual. Catalog #2136.03 (includes Cat. #2135.54)

Shown: Model 6474 Kit



INCLUDED IN KIT:

GROUND TESTER MODEL 6472 KIT-500FT

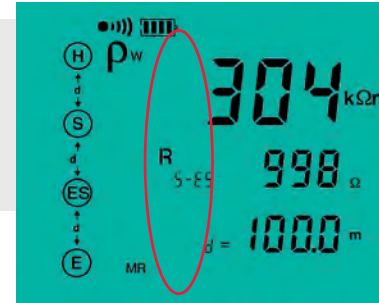
Includes meter, rechargeable NiMH batteries, optical USB cable, power adapter 110/240V with power cord 115V US, two 500ft color-coded leads on spools (red/blue), two 100ft color-coded leads (hand-tied, green/black), one 30ft lead (green), four T-shaped auxiliary ground electrodes, one 100ft AEMC® tape measure, DataView® software, ground tester workbook and user manual on USB drive, carrying bag for meter and carrying bag for kit. Catalog #2135.54

GROUND RESISTANCE TESTERS

MULTI-FUNCTION

AUTOMATIC RECOGNITION AND DISPLAY OF INPUT CONNECTIONS TO MATCH TEST

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



FEATURES

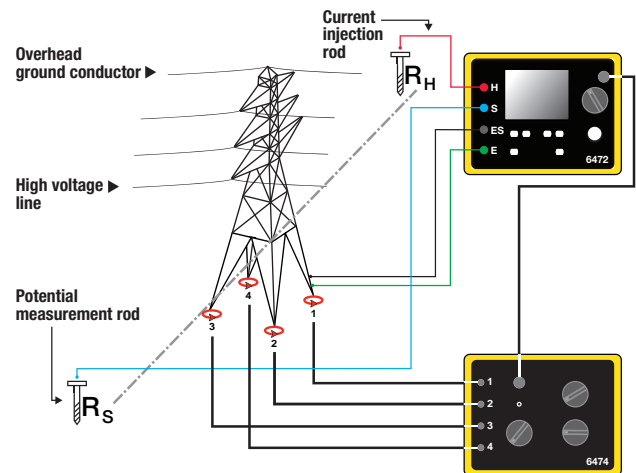
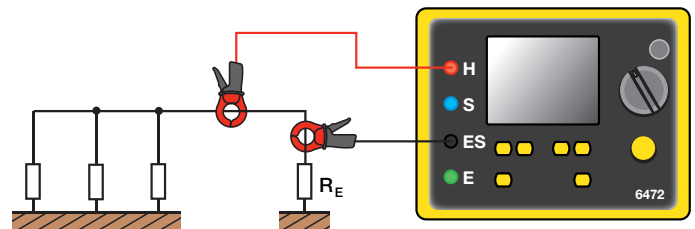
- Ground Integrity® Measurement
- 3- and 4-Point Fall-of-Potential measurement with manual or automatic frequency selection
- 4-Point soil resistivity measurement with automatic calculation of Rho (ρ) and user selection of the Wenner or Schlumberger test method
- 2- and 4-Wire DC resistance measurement (Bond testing) with automatic polarity reversal
- 3-Point Earth coupling measurement
- Automatic frequency scan from 40 to 5078Hz for optimum test accuracy in electrically noisy environments
- Selectable test voltage limit of 16 or 32V with up to 250mA 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
- Automatic report generation
- Rechargeable NiMH batteries from wall charger or vehicle power
- Rugged dustproof and water-resistant field case — IP53 rated in closed position
- IEC 61557 parts 4 and 5 compliant
- Includes DataView® software for data retrieval, real-time display, analysis, report generation and system configuration

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 all 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.

GROUND RESISTANCE MEASUREMENT USING 2 CLAMPS

For systems with parallel ground connections, the Model 6472 is capable of accurately measuring a ground resistance using clamps only. This method involves placing 2 clamps around the ground conductor to be tested and connecting them each to the instrument. One clamp injects a known signal (32V/1367Hz) while the other clamp measures the current circulating in the loop. This method saves considerable time when ground testing because it is no longer necessary to set up auxiliary rods or to disconnect the ground connector.



4 AmpFlex® channels connected

CATALOG NO.	DESCRIPTION
2136.03	Groundflex® Field Kit Model 6474 (Includes Cat. #2135.54)
2136.05	Groundflex® Adapter Model 6474 w/{1} 10m Groundflex® Sensor (Includes Cat. #2135.54)

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 & Memory				—	—	✓**	Digital	Voltage Displayed (noise icon, buzzer)	✓	—
6417	2141.02	0.01 to 1500Ω	Battery	Clamp-On Ground Resistance Tester w/Alarm, Memory & Bluetooth communication				—	—	✓**	Digital	Voltage Displayed (noise icon, buzzer)	✓	—
Groundflex® Field Kit Model 6474	2136.03	0.001Ω to 99.99kΩ	Rechargeable Battery	—	✓	✓	✓	✓	—	✓	Digital	Value Displayed	—	✓
6471 (SR182 probes not included)	2135.48	0.01 to 99.99kΩ	Rechargeable Battery											
6471	2135.49			✓	✓	✓	✓	✓	✓	✓	Digital	Value Displayed	—	—
6471 Kit 300FT	2135.50													
6472	2135.51	0.01 to 99.99kΩ	Rechargeable Battery											
6472 Kit 300FT	2135.53			✓	✓	✓	✓	✓	✓	✓	Digital	Value Displayed	—	✓
6472 Kit 500FT	2135.54													
4620	2130.43	0.0 to 1999Ω	Battery	✓	✓	—	✓	—	—	—	Digital	LED/Buzzer	—	—
4620 Kit 150FT	2135.19						✓*							
4620 Kit 300FT	2135.20	0.0 to 2000Ω	Battery	✓	✓	—	✓	—	—	—	Digital	LED/Buzzer	—	—
4620 Kit 500FT	2135.21	0.0 to 1999Ω												
4630	2130.44	0.0 to 1999Ω	Rechargeable Battery	✓	✓	—	✓	—	—	—	Digital	LED/Buzzer	—	—
4630 Kit 150FT	2135.22						✓*							
4630 Kit 300FT	2135.23													
4630 Kit 500FT	2135.24						✓							

* Performing soil resistivity tests with this kit requires two additional auxiliary electrodes not supplied in the 150ft kit and one additional test lead.

** Clamp-on Ground Resistance Tester can measure system continuity inclusive of all bonding points.



LEAKAGE CURRENT METERS & PROBES

SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

LEAKAGE CURRENT METERS & PROBES

TRMS CLAMP-ON LEAKAGE CURRENT METER

MODEL 565

Designed to measure low AC currents, which are typically leakage currents in ground conductors

10mA
Resolution

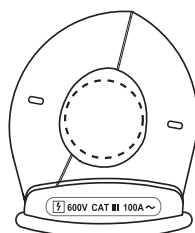
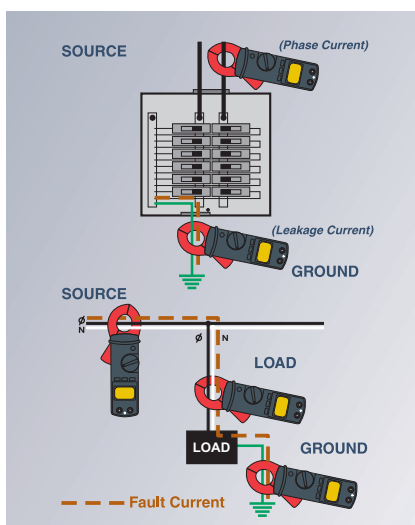


SPECIFICATIONS

MODEL		565 TRMS
mA AC Current (TRMS, Auto-Ranging)		0 to 600mA
Resolution		0.01mA (10μA) 0.1mA (100μA)
Accuracy		±1.2% of Reading ±5cts ±2.5% of Reading ±5cts ±3.5% of Reading ±10cts
AC Current (TRMS, Auto-Ranging)		0 to 100A
Resolution		0.001A (1mA) 0.01A (10mA)
Accuracy		±1.2% of Reading ±5cts ±2.5% of Reading ±5cts ±3.5% of Reading ±10cts
AC Voltage (TRMS)		0 to 600V
Accuracy		±1.0% of Reading ±5cts ±1.2% of Reading ±5cts ±2.5% of Reading ±5cts
DC Voltage		0 to 600V
Resolution		0.1V
Accuracy		±1.0% of Reading ±3cts
Resistance		0 to 1kΩ
Accuracy		±1.0% of Reading ±3cts
Continuity		Buzzer activates <35Ω (0 to 1kΩ)
Frequency (Auto-Ranging)		
Function		A-Hz V-Hz
Resolution		0 to 100Hz 0.1Hz 100Hz to 1kHz 1Hz
Sensitivity		10mA rms min 5V rms min
Accuracy		±0.5% of Reading ±2cts
Filter		On (50/60Hz only); Off (Full frequency range)
In-Rush		Max 100mS sample time
Power Source		Two 1.5V AAA batteries (included)

FEATURES

- Check for leakage and locate insulation breakdowns on live circuits
- Measures leakage current down to 0.1mA with up to 10μA resolution
- Measures current up to 100Arms
- Measures up to 600V_{AC/DC}
- Measures Hz on either V or A inputs
- Measures resistance and continuity
- Hold feature freezes value
- Max feature keeps track of highest measured in-rush value
- Zero button ideal for measuring relative values
- Filter to isolate 50/60Hz fundamental from harmonics
- Compatible with VDE 0404
- Backlight LCD display



Jaw Opening: 1.10" (28mm)
Conductor Size: 1" (26mm)

PRODUCT INCLUDES



Two color-coded 5ft test leads, carrying case, batteries and user manual.

CATALOG NO. DESCRIPTION

2117.56 Clamp-On Leakage Current Meter Model 565
(TRMS, 60mA, 600mA, 10A, 100A, 600V_{AC/DC}, Hz, Ohms, Continuity)

LEAKAGE CURRENT METERS & PROBES

ARTIFICIAL NEUTRAL & LEAKAGE CURRENT PROBE

MODEL AN-1

Generates a momentary grounded artificial neutral to allow the measurement of fault currents on ungrounded three-phase systems



FEATURES

- Designed for ungrounded networks - provides intermittent path to ground for leakage current measurements
- Works from 30 to 600VAC
- Red LED phase voltage indicators
- Switch selectable ground fault cycling of 500mS or 2.3 seconds
- Buzzer alerts each momentary fault
- Battery operated
- Double insulated, fire retardant case
- Four color-coded 5ft 1000V rated leads supplied with alligator clips
- Works with Model 2620 and other leakage current probes

SPECIFICATIONS

MODEL	AN-1
ELECTRICAL	
Working Voltage	30 to 600V
Frequency	45 to 65Hz
Resistance Per Phase	3.9k Ω \pm 5%
Relay Duty Time	Slow position: 500mS / Fast position: 2.3 seconds
Power Source	12VDC - Eight 1.5V AA batteries (included)
Power Consumption	180mA
Battery Life	Approx. 40 hours of use
MECHANICAL	
Dimensions	8.7 x 5.4 x 5.9" (220 x 136 x 150mm)
Weight	2.9lbs (1.3kg)
Case	Fire resistant polycarbonate UL94 V0
ENVIRONMENTAL	
Reference Temperature	73.4° \pm 5°F (23° \pm 3°C)
Operating Temperature	32° to 122°F (0° to 50°C); 10 to 90% RH (non-condensing)
Storage Temperature	-40° to 158°F (-40° to 70°C); 10 to 90% RH (non-condensing)



CATALOG NO.	DESCRIPTION
1971.01	Artificial Neutral Model AN-1

LEAKAGE CURRENT METERS & PROBES

AC CURRENT PROBES

MODEL 2620

Check for leakage and locate insulation breakdowns on live circuits



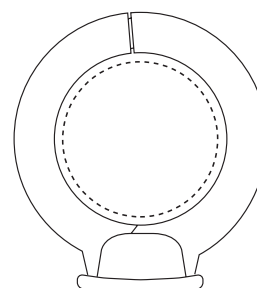
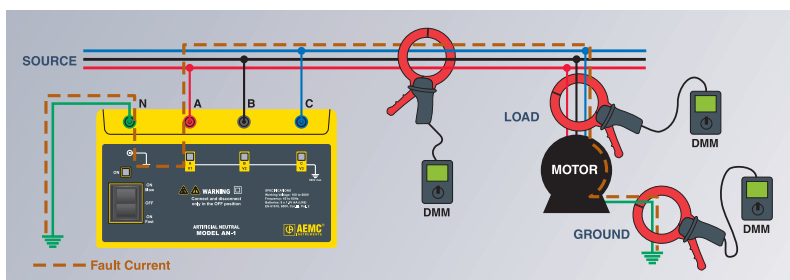
SPECIFICATIONS

MODEL	2620	
ELECTRICAL		
	4A Range	400A Range
Current Range	500μA to 4A	500mA to 400A
Output Signal	1mV/mA (4V max)	1mV/A (400mV max)
Accuracy		
500μA to 10mA	±3% of Reading ±1mV	-
10 to 100mA	±0.5% of Reading ±0.5mV	-
100mA to 4A	±0.5% of Reading ±0.5mV	-
500mA to 10A	-	±0.5% of Reading ±0.5mV
10 to 100A	-	±0.35% of Reading ±0.5mV
10A to 400A	-	±0.35% of Reading ±1mV
Phase Shift		
500μA to 10mA	<15°	-
10 to 100mA	<10°	-
100mA to 4A	-	<1°
500mA to 10A	-	<0.6°
Load Impedance	1MΩ min	1MΩ min
Frequency Range	48 to 1000Hz	48 to 1000Hz
MECHANICAL		
Dimensions	11.22 x 6.89 x 1.77" (285 x 175 x 45mm)	
Weight	2.87lbs (1.3kg)	



FEATURES

- Very high sensitivity
- Differential or leakage current from 500 μ A
- Current up to 400A
- Two switch-selectable measurement ranges: 4Aac/400Aac
- Large inside jaw diameter allows use on large or multiple conductors
- Works with single-, dual- and three-phase systems
- Connect directly to DMMs on mV or VAC range



Jaw Opening: 4.4" (112mm)
Conductor Size: 4.4" (112mm)

CATALOG NO. DESCRIPTION

2125.52 Leakage Current Probe Model 2620 (4A-1V/A, 400A-1mV/A output)

MEGOHMMETERS



MEGOHMMETERS

500V & 1000V HAND-CRANKED

MODELS 6501 & 6503

Designed for acceptance testing and preventive maintenance of wiring, cables, switchgear and motors

Low Cost!

SPECIFICATIONS

MODELS	6501	6503
INSULATION TESTS		
Test Ranges* 250V 500V 1000V	– 0.5 to 200MΩ –	1 to 500MΩ 1 to 500MΩ 10 to 5000MΩ
Short Circuit Current	5mA (max)	
Voltage Measurement/ Safety Check	0 to 600Vac	
Accuracy (MΩ)	±2.5% of Full Scale Length	
Automatic Discharge	5s/μF	8s/μF
Charge Time 250V 500V 1000V	– 0.5s/μF –	0.2s/μF 0.5s/μF 0.5s/μF
RESISTANCE TESTS		
Measurement Range	0 to 45kΩ; 45 to 500kΩ	–
Test Current	1mA _{DC}	–
Accuracy	±2.5% of Full Scale Length	–
CONTINUITY TESTS		
Measurement Range	0 to 9Ω; 10 to 100Ω	–
Test Voltage	5mA _{DC} (10V max)	–
Accuracy	±2.5% of Full Scale Length	–

*DC test voltage generated 5.5 to 200MΩ in full across the entire measurement range.



FEATURES

- True Megohmmeter*
- Test voltages of 250V, 500V and 1000V (model dependent)
- Insulation measurements to 200MΩ and 5000MΩ (model dependent)
- LED indicates constant voltage output and proper cranked speed controlled by voltage regulator
- Automatic discharge when measurement is finished
- Auto-Ranging – dual scale operation for better sensitivity and easier readings
- Compact self-contained package; folded crank
- Voltage displayed prior to, during and at the end of test
- Large direct reading scale
- EN 61010-1, 600V CAT II, 300V CAT III

PRODUCT INCLUDES

MODEL 6501

Soft carrying case, two color-coded leads, two color-coded alligator clips (red/black) and user manual.

MODEL 6503

Soft carrying case, three color-coded leads, three color-coded alligator clips (red/black/blue), black test probe and user manual.



Shown: Model 6503

CATALOG NO.

DESCRIPTION

2126.51 Megohmmeter Model 6501 (Hand-cranked, 500V, Resistance, Continuity)

2126.52 Megohmmeter Model 6503 (Hand-cranked, 250V, 500V, 1000V)

MODEL 6527

Specially designed for testing installations and equipment including DMM functions



FEATURES

- True Megohmmeter®
- Insulation test voltage selections of 250V, 500V and 1000V
- Measure insulation to 4000MΩ (4GΩ)
- TEST LOCK feature for time sensitive measurements up to 15 minutes
- Auto discharge after insulation test
- AC/DC voltmeter to 600V_{AC}/1000V_{DC}
- Ohmmeter to 400kΩ
- Continuity meter up to 200mA test current
- Test lead resistance compensation for accurate low resistance measurements
- Auto HOLD function to "freeze" readings
- Large and bright dual display with blue backlight
- Auto Power OFF feature
- Ergonomic over-molded case with back-stand
- Complies with International Insulation Testing Standards including EN61557

SPECIFICATIONS

MODEL	6527
INSULATION TESTS	
Test Voltage	250V 500V 1000V
	1kΩ to 4000MΩ (4GΩ) 1kΩ to 4000MΩ (4GΩ) 1kΩ to 4000MΩ (4GΩ)
Accuracy	4MΩ/40MΩ 400MΩ 4000MΩ (4GΩ)
	±2% of Reading ±10cts ±3% of Reading ±5cts ±4% of Reading ±5cts
VOLTMETER	
V AC/DC	600V/1000V
Accuracy	DC AC
	±0.8% of Reading ±3cts ±1.2% of Reading ±10cts
RESISTANCE TESTS - OHMMETER	
Range	0.0 to 400.0kΩ
Accuracy	±1.2% of Reading ±3cts
CONTINUITY TESTS	
Range	0.00 to 400Ω
Accuracy	±1.2% of Reading ±3cts
Test Current	>200mA (0.2Ω/2Ω)
Test Lead Compensation	Yes - dedicated push-button
Beeper	Yes - <35Ω ±3Ω
ELECTRICAL	
Power Supply	Six 1.5V AA batteries - Alkaline recommended (included)

PRODUCT INCLUDES



Soft carrying case, set of two 5ft color-coded test leads with alligator clips, one black test probe and user manual.



CATALOG NO.	DESCRIPTION
2126.53	Megohmmeter Model 6527 (Digital, 250V, 500V, 1000V, Continuity, 400kΩ, V)

MODEL 1026

Provides a variety of functions:
megohmmeter, DC voltmeter, AC voltmeter,
ohmmeter and continuity testing

SPECIFICATIONS

MODEL	1026
INSULATION TESTS	
Test Voltage	250V 1kΩ to 4000MΩ 500V 1kΩ to 4000MΩ 1000V 1kΩ to 4000MΩ
Accuracy	<2000MΩ ±3% of Reading + 5cts ≥2000MΩ ±5% of Reading + 5cts
RESISTANCE TESTS	
Measurement Range	Auto ranging to 4000Ω
Resolution	0.1 to 1Ω
Accuracy	±1% of Reading + 5cts
CONTINUITY TESTS	
Measurement Range	Displays and beeps below 40Ω
Active	≤40Ω
Protection	600Vrms
VOLTAGE TESTS	
AC VOLTAGE Measurement Range	0 to 600V
Accuracy	±1.5% of Reading + 5cts
DC VOLTAGE Measurement Rang	0 to 600V
Accuracy	±1% of Reading + 3cts
ELECTRICAL	
Power Source	Eight 1.5V AA Alkaline batteries (included)



FEATURES

- Test voltage selections of 250V, 500V and 1000V
- Insulation measurements to 4000MΩ
- Resistance measurements to 4000Ω
- Continuity test
- Continuity beeper
- 600Vac/dc test voltage range
- Large, easy-to-read digital display
- Data hold switch
- Test button may be "locked-on" for three minutes for hands-free operation
- Automatic discharge when test button is released
- Low battery indicator
- Includes test leads and soft carrying case
- EN 61010-1, 1000V CAT II, 600V CAT III

PRODUCT INCLUDES

Soft carrying case, set of 2 color-coded leads, alligator clips and test probes (Red/Black)



CATALOG NO.

DESCRIPTION

2117.72

Megohmmeter Model 1026 (Digital, 250V, 500V, 1000V, 4000Ω, V)

MEGOHMMETERS

DIGITAL/ANALOG & MULTI-FUNCTION HANDHELD

MODELS 6522, 6524, 6526, 6532, 6534 & 6536



SPECIFICATIONS

MODELS	6522	6524	6526	6532	6534	6536
INSULATION TESTS						
Test Voltages	250V, 500V, 1000V	50V, 100V, 250V, 500V, 1000V	50V, 100V, 250V, 500V, 1000V	50V, 100V	10V, 25V, 100V, 250V, 500V	Variable 10 to 100V (1V steps)
Insulation Resistance	40GΩ (40,000MΩ)	200GΩ (200,000MΩ)	200GΩ (200,000MΩ)	20GΩ (20,000MΩ)	50GΩ (50,000MΩ)	20GΩ (20,000MΩ)
PI/DAR Ratios	-	Yes	Yes	Yes	-	-
Test Lock	Yes					
Timer	0 to 40min	0 to 40min	0 to 40min	0 to 40min	0 to 40min	0 to 40min
Auto Discharge	Yes					
Automatic Test Inhibit	>25V					
DMM FUNCTIONS						
Voltage	700VAc/Dc					
Resistance	-	1000kΩ	1000kΩ	1000kΩ	1000kΩ	1000kΩ
Continuity	10Ω	10Ω, 100Ω	10Ω, 100Ω	10Ω, 100Ω	10Ω, 100Ω	10Ω, 100Ω
Test Current	200mA					
Capacitance Measurement	-	-	0.1n to 10μF	0.1n to 10μF	-	-
Frequency	-	15.3 to 800Hz	15.3 to 800Hz	15.3 to 800Hz	-	-
GENERAL FUNCTIONS						
Alarm	-	Yes	Yes	Yes	Yes	Yes
△ Rel						
Auto Power OFF						
Data Hold						
Test Lead Compensation						
Remote Probe	Yes (optional)					
Memory	-	300 measurements	1300 measurements	1300 measurements	1300 measurements	-
Bluetooth	-	-	2.1 Class II	2.1 Class II	2.1 Class II	-
DataView® Software	-	-	Included	Included	Included	-
Display Type	Digital w/Analog Bargraph					
Display Counts	4000					
Backlight	Yes					
Safety	600V CAT IV					
Power Supply	6 x AA Alkaline					
Protection	IP54/IK 04					
Magnetic Mount	Yes					
Additional Features	-	-	Green/Red Pass/Fail Indicator	Cable length measurement (0 to 100km)	-	-
Applications	Industrial Maintenance	Industrial Maintenance	Industrial Maintenance	Telecom	Electronics, ESD	Avionics, Space, Defense

CATALOG NO.	DESCRIPTION
2155.51	Megohmmeter Model 6522 (Digital w/Analog Bargraph, 250V, 500V, 1000V, Continuity, V)
2155.52	Megohmmeter Model 6524 (Digital w/Analog Bargraph, Alarm, 50V, 100V, 250V, 500V, 1000V, Ohm, Continuity, V, kΩ, Memory)
2155.53	Megohmmeter Model 6526 (Digital w/Analog Bargraph, Alarm, 50V, 100V, 250V, 500V, 1000V, Ohm, Continuity, V, kΩ, Capacitance, Memory, Bluetooth w/DataView® software)
2155.54	Megohmmeter Model 6532 (Digital w/Analog Bargraph, Alarm, 50V, 100V, Ohm, Continuity, V, kΩ, Cap, Memory, Bluetooth w/DataView® software)
2155.55	Megohmmeter Model 6534 (Digital w/Analog Bargraph, Alarm, 10V, 25V, 100V, 250V, 500V, Ohm, Continuity, V, kΩ, Memory, Bluetooth w/DataView® software)
2155.56	Megohmmeter Model 6536 (Digital w/Analog Bargraph, Alarm, Variable 10 to 100V, Ohm, Continuity, V, kΩ)
2155.57	Megohmmeter Model 6536 ESD Floor Kit (Meter, set of 2, 5lb weights and carrying case)

MODELS 1050 & 1060

Test insulation on cables, transformers, motors and wiring installations

SPECIFICATIONS

MODELS	1050	1060
INSULATION TESTS		
Test Voltage	50V 100V 250V 500V 1000V	2kΩ to 200GΩ 4kΩ to 400GΩ 10kΩ to 1000GΩ (1TΩ) 20kΩ to 2000GΩ (2TΩ) 40kΩ to 4000GΩ (4TΩ)
Accuracy	2kΩ to 40GΩ 40GΩ to 4TΩ	±5% of Reading ±3cts ±15% of Reading ±10cts
Voltage Test/Safety Check		0 to 1000VAC/DC
Voltage Warning Indicator		>25V
Test Inhibition		Yes >25V
Smooth Function		Yes
RESISTANCE TESTS		
Measurement Range		0.01Ω to 400kΩ
Test Voltage		12.4VDC max
Test Current		<6mA DC
Accuracy	>4kΩ	±3% of Reading ±3cts
CONTINUITY TESTS		
Measurement Range		0.01 to 39.99Ω
Test Current		≥200mA from 0.01 to 20.00Ω
Accuracy		±3% of Reading ±4cts
COMMUNICATION		
Memory of Reading over Time R(t)	Yes (20 Readings)	Yes (128kB memory)
Memory of Test Results in Files	No	128kB memory with RS-232 to USB adapter (included)
PC Software/Report Generation	No	DataView* (included)
ELECTRICAL		
Power Source	Eight 1.5V C Cells (included)	9.6V NiMH Battery Pack (included) 85 to 256V (50/60Hz)



Model 1060 only

FEATURES

- True Megohmmeter*
- Test voltage selections of 50V, 100V, 250V, 500V and 1000V
- Insulation measurements to 4000GΩ (4TΩ)
- Direct measurement of DAR and PI values
- Direct measurement of sample capacitance
- Display of test voltage and run time
- Programmable test run times and PI times
- Smooth and Alarm functions
- Automatic test inhibition (if live sample >25V)
- Automatic discharge and display of discharge voltage
- Large dual display with time, voltage and measurement
- Bright blue electroluminescent backlight
- Battery powered (Model 1050)
- Auto Power OFF when not in use
- Remote operation with optional test probe
- Rugged, dual wall, water-resistant field case with detachable lead/accessory pouch
- EN 61010-1, 600V CAT III, EN 61557

PRODUCT INCLUDES

MODEL 1050 Catalog #2130.01

Meter, detachable accessory pouch, two 5 ft. color-coded (red/blue) leads, one black shield lead, three color-coded (red/blue/black) alligator clips, one black test probe, spare fuses, eight C cell batteries and USB stick with user manual.



MODEL 1060 Catalog #2130.03

Meter, detachable accessory pouch, two 5 ft. color-coded (red/blue) leads, one black shield lead, three color-coded (red/blue/black) alligator clips, one black test probe, RS-232 DB9 F/F 6 ft. null model cable, RS-232 to USB adapter, US 115V power cord, rechargeable NiMH battery, spare fuses, and USB stick with DataView* software and user manual.

CATALOG NO.	DESCRIPTION
2130.01	Megohmmeter Model 1050 (Digital, with Analog Bargraph, Backlight, Alarm, Timer, 50V, 100V, 250V, 500V, 1000V, Auto DAR/PI, Resistance, Continuity)
2130.03	Megohmmeter Model 1060 (Digital, with Analog Bargraph, Backlight, Alarm, Timer, 50V, 100V, 250V, 500V, 1000V, Auto DAR/PI, Resistance, Continuity, DataView software, 128kB Memory)

Accessories/Replacement - available on website store from www.aemc.com

2155.75 Megohmmeter Test Probe (600V CAT IV)



Technical Assistance (800) 343-1391

www.aemc.com 95

MODEL 6505

Contributes to the safety of electrical installations and equipment



SPECIFICATIONS

MODEL	6505
INSULATION TESTS	
Test Voltage/Range	500V 30kΩ to 2000GΩ (2TΩ) 1000V 100kΩ to 4000GΩ (4TΩ) 2500V 100kΩ to 10,000GΩ (10TΩ) 5000V 300kΩ to 10,000GΩ (10TΩ)
User Programmable Test	40 to 1000V: 10V increments 1000 to 5100V: 100V increments
Short Circuit Current	<1.6mA ±5%
Accuracy	10kΩ to 40GΩ ±5% of Reading ±3cts 40GΩ to 10TΩ ±15% of Reading ±10cts
DAR (1 min/30 sec)	0.02 to 50.00
PI (10 min/1 min & user programmable)	0.02 to 50.00
Capacitance Measurement	0.005 to 49.99μF; Max resolution 1nF
Leakage Current Measurement	0.00nA to 3mA; Max resolution 1pA
Programmable Run Time R(t)	1 to 60 minutes
Discharge After Test	Yes, automatic
Discharge Voltage Display	Yes
Voltage Test/Safety Check	2500VAC/4000VDC (16 to 420Hz); 1V Resolution
Voltage Warning Indicator	Yes >25V
Test Inhibition	>40% of test voltage
Guard Terminal	Yes
ELECTRICAL	
Power Source	One 9.6V NiMH battery pack (included); Line power: 85 to 256VAC (50/60Hz)



FEATURES

- True Megohmmeter*
- Simple operation
- Test voltage selections of 500V, 1000V, 2500V and 5000V
- Insulation measurements from 30kΩ to 10,000GΩ (10TΩ)
- Adjustable and programmable test voltage (40 to 5100V)
- Automatic calculation of DAR and PI values
- Direct measurement and display of capacitance and leakage current
- Display resistance, test voltage and run time
- Programmable test run times and PI ratio times
- Automatic test inhibition (if live sample >40% of test voltage)
- Automatic discharge and display of discharge voltage
- Large backlit LCD dual-display with time, voltage and measurements shown
- Rugged, dual wall, water-resistant field case
- Designed and built to IEC safety standards
- EN 61010-1, 1000V CAT III

PRODUCT INCLUDES

Extra large classic tool bag, three color-coded leads, one blue jumper lead for use with guard terminal, three alligator clips (600V CAT IV), US 115V power cord, rechargeable battery pack and USB drive with user manual.



CATALOG NO.	DESCRIPTION
2130.18	Megohmmeter Model 6505 (Digital, with Analog Bargraph, Backlight, 500V, 1000V, 2500V, 5000V, Auto DAR/PI)
Accessories/Replacement - available on website store from www.aemc.com	
2119.76	Lead - Set of 3, Color-coded 10ft 5kV Safety w/3 Color-coded Alligator Clips (1000V CAT IV) [15A] for use with Megohmmeter Models 5050/5060/5070/6505
2119.77	Lead - Replacement, Set of 3, Color-coded 6ft 5kV safety for Megohmmeter Model 6505
2119.85	Lead - Set of 3, Color-coded 10ft 5kV Safety with Integral Hippo Clips, and jumper lead for use with Megohmmeter Model 6505 (replacement for 5050/5060/5070)
2119.86	Lead - Set of 3, Color-coded 25ft 5kV Safety with Integral Hippo Clips for use with Megohmmeter Models 5050/5060/5070/6505 (Blue jumper lead not included)
2119.87	Lead - Set of 3, Color-coded 45ft 5kV Safety with Integral Hippo Clips for use with Megohmmeter Models 5050/5060/5070/6505 (Blue jumper lead not included)

MEGOHMMETERS

5000V DIGITAL/ANALOG

MODELS 5050 & 5060

Designed with the highest level of safety features built in

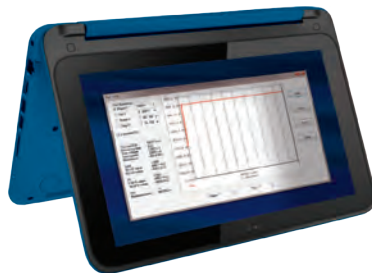


Model 5060

DataView®

DATA ANALYSIS AND REPORTING SOFTWARE

Print reports directly from your computer using DataView® software
(Models 5060 & 5070)



SEE PAGE 101 FOR DETAILS

SPECIFICATIONS

MODELS	5050	5060
INSULATION TESTS		
Test Voltage	500V 1000V 2500V 5000V	30kΩ to 2000GΩ (2TΩ) 100kΩ to 4000GΩ (4TΩ) 100kΩ to 10,000GΩ (10TΩ) 300kΩ to 10,000GΩ (10TΩ)
User Selectable Test Voltage		Programmable: 40 to 1000V: 10V increments; 1000 to 5100V: 100V increments
Accuracy	1kΩ to 40GΩ 40GΩ to 10TΩ	±5% of Reading ±3cts ±15% of Reading ±10cts
Voltage Test/Safety Check		2500VAC/4000Vdc
Voltage Warning Indicator		Yes >25V
Test Inhibition		Yes — selectable at 3, 10 or 20% of test voltage
Smooth Function (user selectable)		Digital filtering stabilizes display readings
COMMUNICATION		
Storage of Readings over Time R(t)	4kB memory	128kB memory
Storage of Test Results	20 readings	1500 readings
Communication Port	-	Serial and RS-232 to USB adapter (included)
PC Software/Report Generation	No	DataView® (included)
ELECTRICAL		
Power Source	One 9.6V NiMH battery pack (included) Line power: 85 to 256V (50/60Hz)	

PRODUCT INCLUDES

5050, 5060 & 5070

Extra large classic tool bag, set of three 10 ft. (5kV) leads (red/black/blue) with integral 5000V rated hippo clips, one guard terminal jumper lead, US 115V power cord, rechargeable battery pack and user manual.



Shown: Model 5050

PC RS-232 CABLE

Catalog #2119.45
DB9 F/F 6ft null modem cable
Catalog #5000.60
RS-232 to USB adapter
(Models 5060 & 5070)

USB DRIVE

Supplied with DataView® software and user manual (Models 5060 & 5070)



CATALOG NO.	DESCRIPTION
2130.20	Megohmmeter Model 5050 (Digital, with Analog Bargraph, Backlight, Alarm, Timer, 500V, 1000V, 2500V, 5000V, Auto DAR/PI/DD)
2130.21	Megohmmeter Model 5060 (Digital, with Analog Bargraph, Backlight, Alarm, Timer, 500V, 1000V, 2500V, 5000V Auto DAR/PI/DD, RS-232 with DataView® software)



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MODEL 5070

Offers real-time graphic plot of measurements and digital presentation of test results



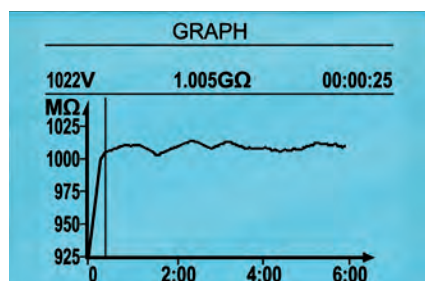
SPECIFICATIONS

MODEL	5070
INSULATION TESTS	
Test Voltage	500V 30kΩ to 2000GΩ (2TΩ) 1000V 100kΩ to 4000GΩ (4TΩ) 2500V 100kΩ to 10,000GΩ (10TΩ) 5000V 300kΩ to 10,000GΩ (10TΩ)
User Selectable Test Voltage	Programmable: 40 to 1000V: 10V increments; 1000 to 5100V: 100V increments
Automatic Step Voltage	Programmable step voltage and duration up to five steps. Three profiles can be stored.
Accuracy	1kΩ to 40GΩ ±5% of Reading ±3cts 40GΩ to 10TΩ ±15% of Reading ±10cts
Voltage Test/Safety Check	2500VAC/4000Vdc
Voltage Warning Indicator	Yes >25V
Test Inhibition	Yes — selectable at 3, 10 or 20% of test voltage
Smooth Function (user selectable)	Digital filtering stabilizes display readings
COMMUNICATION	
Storage of Readings over Time R(t)	128kB memory
Storage of Test Results	Stores over 1500 test results
Communication Port	Serial and RS-232 to USB adapter (included)
PC Software/ Report Generation	DataView® (included)
ELECTRICAL	
Power Source	One 9.6V NiMH battery pack (included) Line power: 85 to 256V (50/60Hz)



FEATURES

- True Megohmmeter®
- Test voltage selections of 500V, 1000V, 2500V and 5000V
- Insulation measurements from 30kΩ to 10,000GΩ (10TΩ)
- Selectable and programmable test voltage (40 to 5100V)
- Automatic calculation of DAR, PI and DD ratios
- Calculations of Step Voltage through front panel
- Direct measurement and display of capacitance and leakage current
- Display resistance, test voltage and run time
- Programmable test run times and PI ratio times
- Smooth and Alarm functions
- Automatic test inhibition (if live sample >3%, 10%, or 20% of test voltage)
- Automatic discharge and display of discharge voltage
- Graphic and digital display of test voltage, resistance and more (Model 5070)
- Bright blue electroluminescent backlight
- Programmable temperature compensation (Model 5070)
- Programmable test voltage lock-out
- Programmable alarm setting
- Auto Power OFF when not in use
- AC or DC powered with rechargeable NiMH battery pack - run while charging
- Rugged, water-resistant field case
- Designed and built to IEC safety standards
- Includes DataView® software for data retrieval, real-time display, analysis and report generation (Models 5060 & 5070)
- EN 61010-1, 1000V CAT III



Insulation resistance measurement graphically displayed at the completion of the test at the push of a button.

CATALOG NO.	DESCRIPTION
2130.30	Megohmmeter Model 5070 (Graphical, Analog Bargraph, Backlight, Alarm, Timer, 500V, 1000V, 2500V, 5000V, Step V, Auto DAR/PI/DD, RS-232 with DataView® software)
Accessories/Replacement - available on website store from www.aemc.com	
2119.45	Cable- Replacement PC RS-232, DB9 F/F 6 ft Null Modem Cable

MODELS 6550

Expert tools for testing insulation safely and accurately; ideal for use on rotating machinery and cables operating at higher voltages



FEATURES

- True Megohmmeter®
- Fixed or programmable test voltage from 40V to 10kV
- Wide measurement range from 10kΩ to 25TΩ
- 5mA short circuit current
- Step voltage testing
- Ramp voltage testing
- Automatic calculation of DAR / PI / DD /ΔR (ppm/V) ratios
- Large, backlit graphical LCD screen with digital display, bargraph and R(t)+V(t), I(t) and I(V) graphs
- Multiple test modes: voltage ramp and step with "Burn-In", "Early-Break" and "I-Limit" modes
- Three filter settings to optimize measurement stability
- Calculation of R at a reference temperature
- Storage of 80,000 measurements
- Includes DataView® software for data retrieval, real-time display, analysis and report generation
- Optically-isolated USB communication for transfer onto PC and report generation with DataView® software

SPECIFICATIONS

MODELS	6550
INSULATION TESTS	
Test Voltage	500V 10kΩ to 2000GΩ (2TΩ) 1000V 10kΩ to 4000GΩ (4TΩ) 2500V 10kΩ to 10,000GΩ (10TΩ) 5000V 10kΩ to 15,000GΩ (15TΩ) 10,000V 10kΩ to 25,000GΩ (25TΩ)
Fixed Test Voltages	500/1000/2500/5000/10,000V
Variable Voltages	Variable: 40 to 10kV Three user programmable voltage schemes
Ramp Mode	Programmable ramps: start voltage/end voltage/duration
Ramp Configuration Range	40 to 1100V/500 to 10,000V
Step Mode	Up to 10 steps (voltage and duration configurable for each step)
Voltage Test/Safety Test	0 to 2500Vac; 0 to 4000Vdc
Capacitance Measurement	0.005 to 9.999μF/10.00 to 49.99μF
Leakage Current Measurement	0 to 8mA
Discharge After Test	Yes/Automatic
Additional Test Stop Modes	
I-Limit	Programmable: 0.2 to 5mA
Early-Break	di/dt
Timer	Up to 99 minutes 59 seconds
Burn Mode	Constant testing
Ratio Calculation	PI, DAR, DD
Calculation of R at ref. T°	Yes
Measurement Display Filter	3 filters with 3 possible time-constants
Graphs on Display	R(t)+V(t); I(t); I(V)
Storage	256 registers, stores 80,000 points: R, V, I and date
Communication	USB optically-isolated port
PC Software	DataView®
Power Supply	NiMH rechargeable batteries, two 9.6V 4Ah battery packs charging by external voltage: 90 to 260V; 50/60Hz
Battery Charging	Battery charging allowed while performing insulation measurements
Dimensions / Weight	13.39 x 11.81 x 7.87" (340 x 300 x 200mm)/approx. 13.7lbs (6.2kg)
EMC, Mechanical Protection, Altitude	EN 61326-1, IP54, 2000m
Electrical Safety	1000V CAT IV; IEC61010-1 and IEC 61557

PRODUCT INCLUDES

Small classic tool bag, set of color-coded (red/blue/black) 9ft (15kV) integral leads and alligator clips (1000V CAT IV), one 15kV jumper lead (blue), set of two color-coded test probes (red/black-1000V CAT IV), optical USB cable, 115V US power cord, 9.6V rechargeable NiMH batteries.



USB DRIVE

USB drive supplied with DataView® software and user manual.



CATALOG NO.

DESCRIPTION

2130.31

Megohmmeter Model 6550 (Graphical, Analog Bargraph, Backlight, Alarm, Timer, 500V, 1000V, 2500V, 5000V, 10kV, Ramp, StepV, Variable, Auto DAR/PI/DD, DataView® software)



Technical Assistance (800) 343-1391

www.aemc.com 99

MODEL 6555

The only fully automated 15,000V graphical insulation tester, including the ability to test program up to three step voltage profiles



SPECIFICATIONS

MODELS	6555
INSULATION TESTS	
Test Voltage	500V 10kΩ to 2000GΩ (2TΩ) 1000V 10kΩ to 4000GΩ (4TΩ) 2500V 10kΩ to 10,000GΩ (10TΩ) 5000V 10kΩ to 15,000GΩ (15TΩ) 10,000V 10kΩ to 25,000GΩ (25TΩ) 15,000V 10kΩ to 30,000GΩ (30TΩ)
Fixed Test Voltages	500/1000/2500/5000/10,000/15,000V
Variable Voltages	Variable: 40 to 15kV Three user programmable voltage schemes
Ramp Mode	Programmable ramps: start voltage/end voltage/duration
Ramp Configuration Range	40 to 1100V/500 to 15,000V
Step Mode	Up to 10 steps (voltage and duration configurable for each step)
Voltage Test/Safety Test	0 to 2500V _{ac} ; 0 to 4000V _{dc}
Capacitance Measurement	0.005 to 9.999μF/10.00 to 49.99μF
Leakage Current Measurement	0 to 8mA
Discharge After Test	Yes/Automatic
Additional Test Stop Modes	
I-Limit	Programmable: 0.2 to 5mA
Early-Break	di/dt
Timer	Up to 99 minutes 59 seconds
Burn Mode	Constant testing
Ratio Calculation	PI, DAR, DD
Calculation of R at ref. T°	Yes
Measurement Display Filter	3 filters with 3 possible time-constants
Graphs on Display	R(t)+V(t); I(t); I(V)
Storage	256 registers, stores 80,000 points: R, V, I and date
Communication	USB optically-isolated port
PC Software	DataView®
Power Supply	NiMH rechargeable batteries, two 9.6V 4Ah battery packs charging by external voltage: 90 to 260V; 50/60Hz
Battery Charging	Battery charging allowed while performing insulation measurements
Dimensions / Weight	13.39 x 11.81 x 7.87" (340 x 300 x 200mm)/approx. 13.7lbs (6.2kg)
EMC, Mechanical Protection, Altitude	EN 61326-1, IP54, 2000m
Electrical Safety	1000V CAT IV; IEC61010-1 and IEC 61557

FEATURES

- True Megohmmeter*
- Fixed or programmable test voltage from 40V to 15kV
- Wide measurement range from 10kΩ to 30TΩ
- 5mA short circuit current
- Step voltage testing
- Ramp voltage testing
- Automatic calculation of DAR / PI / DD /ΔR (ppm/V) ratios
- Large, backlit graphical LCD screen with digital display, bargraph and R(t)+V(t), I(t) and I(V) graphs
- Multiple test modes: voltage ramp and step with "Burn-In", "Early-Break" and "I-Limit" modes
- Three filter settings to optimize measurement stability
- Calculation of R at a reference temperature
- Storage of 80,000 measurements
- Includes DataView® software for data retrieval, real-time display, analysis and report generation
- Optically-isolated USB communication for transfer onto PC and report generation with DataView® software

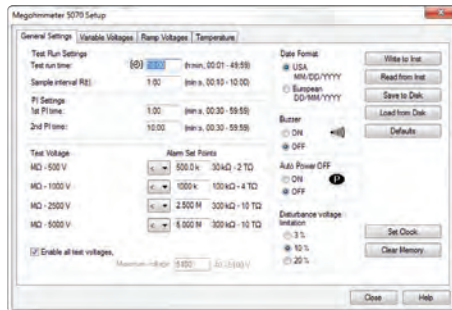
CATALOG NO.	DESCRIPTION
2130.32	Megohmmeter Model 6555 (Graphical, Analog Bargraph, Backlight, Alarm, Timer, 500V, 1000V, 2500V, 5000V, 10kV, 15kV, Ramp, StepV, Variable, Auto DAR/PI/DD, DataView® software)
Accessories/Replacement - available on website store from www.aemc.com	
2151.18	Lead - One Shielded Safety Lead (black) 25 ft w/Hippo Clips (15kV)
2151.19	Lead - One Shielded Safety Lead (blue) 25 ft w/Hippo Clips (15kV)
2151.20	Lead - One Shielded Safety Lead (red) 25 ft w/Hippo Clips (15kV)
2151.21	Lead - One Shielded Safety Lead (black) 45 ft w/Hippo Clips (15kV)
2151.22	Lead - One Shielded Safety Lead (blue) 45 ft w/Hippo Clips (15kV)
2151.23	Lead - One Shielded Safety Lead (red) 45 ft w/Hippo Clips (15kV)

CONFIGURE ALL FUNCTIONS OF THE MEGOHMMETER MODELS 1060, 5060, 5070, 6526, 6532, 6534, 6550 & 6555

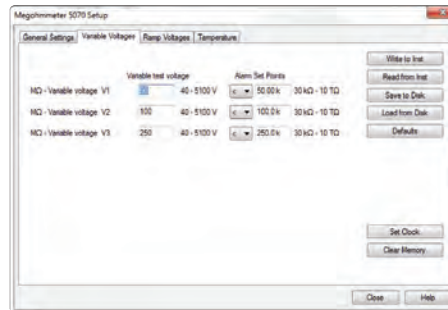


- Print reports of all test results
- Select test voltage and run tests from your computer with a simple click and execute process
- Capture and display data in real-time
- Retrieve data from the instrument's memory for:
 - Over 1500 insulation resistance measurements
 - Over 4000 resistance measurements
- Display DAR and PI ratios
- Plot graphs of manual and timed tests
- Include your analysis comments section with the report
- Store a library of setups for different applications
- Certification of results through report generation
- Free updates are available on our website www.aemc.com

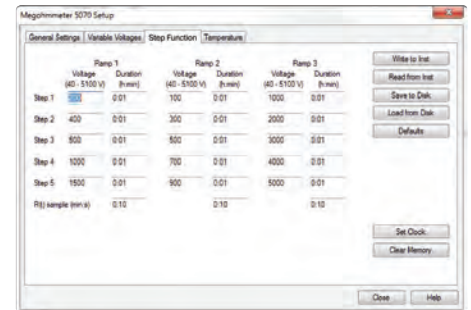
TYPICAL DATAVIEW® FUNCTIONAL DISPLAYS



Four tabbed dialog boxes allow for clear and easy setup of all functions of the Model 5070, including setup for variable voltage and alarm set points, as well as step voltage tests and temperature compensation.

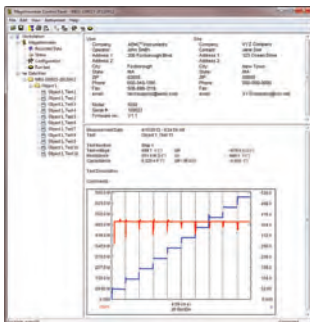


Variable Voltage selections from 40 to 5100V and can also be programmed along with alarm set points.

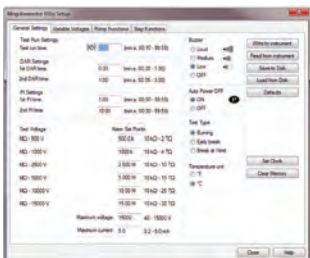


Model 5070 includes Step Function which allows programming of three different ramp test profiles, each containing up to five voltage steps between 40 and 5100V and time per step of up to 10 hours.

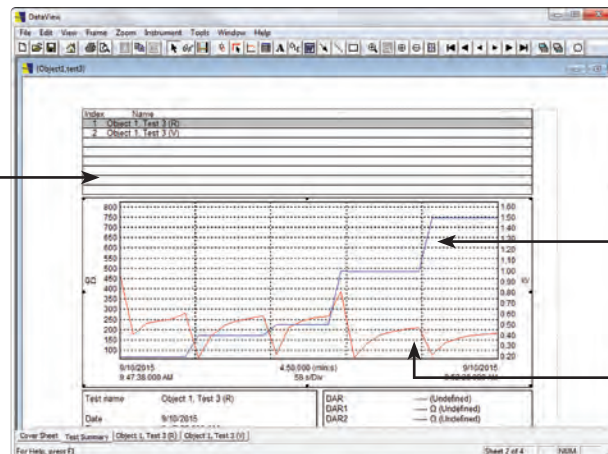
DISPLAYS



All stored test results presented on screen.



Clear and straightforward set up of parameters.



Run test and display text and graphical results from one dialog box. Model 5070 also displays step voltage.

MEGOHMMETERS

SELECTION CHART

AEMC MODEL NUMBER	AEMC CATALOG NUMBER	TEST VOLTAGE	INSULATION RANGE	RESISTANCE RANGE	CONTINUITY RANGE	CAPACITANCE RANGE	VOLTAGE DETECTION	POWER SOURCE	DISPLAY	DATAVIEW SOFTWARE
6501	2126.51	500V	0.5 to 200M Ω	0 to 500k Ω	0 to 100 Ω	—	0 to 600Vac	Hand-cranked	Analog	No
6503	2126.52	250V 500V 1000V	1 to 500M Ω 1 to 500M Ω 10 to 5000M Ω	—	—	—	0 to 600Vac	Hand-cranked	Analog	No
6527	2126.53	250V 500V 1000V	1k Ω to 4G Ω 1k Ω to 4G Ω 1k Ω to 4G Ω	0.0 to 400.0k Ω	0.00 to 400 Ω	—	0 to 600Vac 0 to 1000Vdc	6 x AA Alkaline Batteries	Digital/ Analog	No
1026	2117.72	250V 500V 1000V	1k Ω to 4G Ω	4k Ω	0 to 40 Ω	—	0 to 600Vac/dc	8 x AA Alkaline Batteries	Digital/ Analog	No
6522	2155.51	250V 500V 1000V	50k Ω to 40G Ω	—	10 Ω	—	700Vac/dc	6 x AA Alkaline Batteries	Digital/ Analog	No
6524	2155.52	50V 100V 250V 500V 1000V	10k Ω to 200G Ω	1000k Ω	10 Ω , 100 Ω	—	700Vac/dc	6 x AA Alkaline Batteries	Digital/ Analog	No
6526	2155.53	50V 100V 250V 500V 1000V	10k Ω to 200G Ω	1000k Ω	10 Ω , 100 Ω	0.1n to 10 μ F	700Vac/dc	6 x AA Alkaline Batteries	Digital/ Analog	Yes
6532	2155.54	50V 100V	10k Ω to 20G Ω	1000k Ω	10 Ω , 100 Ω	0.1n to 10 μ F	700Vac/dc	6 x AA Alkaline Batteries	Digital/ Analog	Yes
6534	2155.55	10V 25V 100V 250V 500V	2k Ω to 50G Ω	1000k Ω	10 Ω , 100 Ω	—	700Vac/dc	6 x AA Alkaline Batteries	Digital/ Analog	Yes
6536	2155.56	10V 100V	2k Ω to 20G Ω	1000k Ω	10 Ω , 100 Ω	—	700Vac/dc	6 x AA Alkaline Batteries	Digital/ Analog	No
6536 ESD Floor Kit	2155.57									
1050	2130.01	50V 100V 250V 500V 1000V	2k Ω to 200G Ω 4k Ω to 400G Ω 10k Ω to 1T Ω 20k Ω to 2T Ω 40k Ω to 4T Ω	0.01 to 400k Ω	0.01 to 39.99 Ω	0.005 to 4.999 μ F	0 to 1000Vac/dc	8 x 1.5V C Cell Batteries	Digital/ Analog	No
1060	2130.03	50V 100V 250V 500V 1000V	2k Ω to 200G Ω 4k Ω to 400G Ω 10k Ω to 1T Ω 20k Ω to 2T Ω 40k Ω to 4T Ω	0.01 to 400k Ω	0.01 to 39.99 Ω	0.005 to 4.999 μ F	0 to 1000Vac/dc	Rechargeable NiMH Battery	Digital/ Analog	Yes
6505	2130.18	500V 1000V 2500V 5000V	30k Ω to 2000G Ω 100k Ω to 4000G Ω 100k Ω to 10,000G Ω 300k Ω to 10,000G Ω	—	—	0.005 to 49.99 μ F	2500Vac 4000Vdc	Rechargeable NiMH Battery	Digital/ Analog	No
5050	2130.20	500V 1000V 2500V 5000V	30k Ω to 2T Ω 100k Ω to 4T Ω 100k Ω to 10T Ω 300k Ω to 10T Ω	—	—	0 to 49.99 μ F	2500Vac 4000Vdc	Rechargeable NiMH Battery	Digital/ Analog	No
5060	2130.21	500V 1000V 2500V 5000V	30k Ω to 2T Ω 100k Ω to 4T Ω 100k Ω to 10T Ω 300k Ω to 10T Ω	—	—	0 to 49.99 μ F	2500Vac 4000Vdc	Rechargeable NiMH Battery	Digital/ Analog	Yes
5070	2130.30	500V 1000V 2500V 5000V	30k Ω to 2T Ω 100k Ω to 4T Ω 100k Ω to 10T Ω 300k Ω to 10T Ω	—	—	0 to 49.99 μ F	2500Vac 4000Vdc	Rechargeable NiMH Battery	Graphic/ Digital	Yes
6550	2130.31	500V 1000V 2500V 5000V 10,000V	10k Ω to 2000G Ω 10k Ω to 4000G Ω 10k Ω to 10,000G Ω 10k Ω to 15,000G Ω 10k Ω to 25,000G Ω	—	—	0.001 to 9.999 μ F 10.00 to 19.99 μ F	0 to 2500Vac 0 to 4000Vdc	Rechargeable NiMH Battery	Digital/ Analog	Yes
6555	2130.32	500V 1000V 2500V 5000V 10,000V 15,000V	10k Ω to 2000G Ω 10k Ω to 4000G Ω 10k Ω to 10,000G Ω 10k Ω to 15,000G Ω 10k Ω to 25,000G Ω 10k Ω to 30,000G Ω	—	—	0.001 to 9.999 μ F 10.00 to 19.99 μ F	0 to 2500Vac 0 to 4000Vdc	Rechargeable NiMH Battery	Digital/ Analog	Yes

MICRO-OHM METERS



SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

MODEL 6240

Auto calculates resistance from $5\mu\Omega$ to 400Ω
with resolutions down to $1\mu\Omega$



SPECIFICATIONS

MODEL	6240					
Range	4000 $\mu\Omega$	40m Ω	400m Ω	4000m Ω	40 Ω	400 Ω
Accuracy	$\pm 0.25\%$ of Reading ± 2 cts					
Resolution	1 $\mu\Omega$	10 $\mu\Omega$	0.1m Ω	1m Ω	10m Ω	100m Ω
Test Current	10A	1A	1A	100mA	10mA	10mA
Max. Inductive Load	0 to 5 H					
Memory	Stores up to 99 test results					
Power Source	Rechargeable 6V, 8.5Ah NiMH battery pack (included)					



cover closed

FEATURES

- Reliable low resistance measurements from $5\mu\Omega$ to 400Ω
- Four-terminal Kelvin resistance measurement eliminates test lead resistance
- 10A test current up to $4000\mu\Omega$
- $\pm 0.25\%$ basic accuracy
- 1 $\mu\Omega$ resolution
- Direct reading, easy to operate
- Six selectable resistance ranges
- Reverse polarity switch
- Overload and input fuse protection
- Manufactured to international safety and environmental standards
- Automatic decimal point and zeroing
- Large terminals accept banana plugs and spaded lugs
- Rechargeable NiMH battery with internal charger (110/220V)
- Large multifunctional backlit display
- Includes power cord and isolated USB cable
- Includes FREE DataView® software for data retrieval, real-time display, analysis and report generation

PRODUCT INCLUDES

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



ACCESSORIES

KELVIN CLIPS, SET OF TWO

Catalog #1017.84 (replacement)
(10A - Hippo) 10ft
Catalog #2118.70 (optional)
(10A - Hippo) 20ft



KELVIN CLIPS, SET OF TWO

Catalog #2118.79 (optional)
(1-10A) 10ft
Catalog #2118.80 (optional)
(1-10A) 20ft



KELVIN PROBES, SET OF TWO

Catalog #2118.77 (optional)
(10A - spring loaded) 10ft
Catalog #2118.78 (optional)
(10A - spring loaded) 20ft



CATALOG NO.	DESCRIPTION
2129.80	Micro-Ohmmeter Model 6240 (10A)
Accessories/Replacement - available on website store from www.aemc.com	
1017.84	Kelvin Clips 10ft (10A - Hippo)
2118.70	Kelvin Clips 20ft (10A - Hippo)
2118.73	Kelvin Probes 10ft (1A, Spring Loaded)
2118.74	Kelvin Probes 20ft (1A, Spring Loaded)
2118.75	Kelvin Probes Pistol Grip (10A - Spring Loaded), 10ft
2118.76	Kelvin Probes Pistol Grip (10A - Spring Loaded), 20ft
2118.77	Kelvin Probes (10A - Spring Loaded), 10ft
2118.78	Kelvin Probes (10A - Spring Loaded), 20ft
2118.79	Kelvin Clips 10ft (1-10A) Replacement for Cat #2118.71
2118.80	Kelvin Clips 20ft (1-10A) Replacement for Cat #2118.72

MODEL 6255

Accurate results within 0.05%. Provides extended test time at 10 Amps without overheating

SPECIFICATIONS

MODEL	6255						
Range	5.0000 mΩ	25.000 mΩ	250.00 mΩ	2500.0 mΩ	25.000 Ω	250.00 Ω	2500.0 Ω
Accuracy	±0.15% of Reading +1.0μΩ	±0.05% of Reading + 3μΩ	±0.05% of Reading + 30μΩ	±0.05% of Reading + 0.3mΩ	±0.05% of Reading + 3mΩ	±0.05% of Reading + 30mΩ	±0.05% of Reading + 300mΩ
Resolution	0.1μΩ	1μΩ	10μΩ	0.1mΩ	1mΩ	10mΩ	100mΩ
Test Current	10A	10A	10A	1A	100mA	10mA	1mA
Measurement Mode	Selectable: Inductive (continuous test), Resistive (instantaneous test) or Auto (multiple tests)						
Metal Type Alpha	Selectable: copper, aluminum or other metal Programmable from 000.00 to 99.99						
Alarms	Two - programmable set points from 0.0 to 2500.0Ω						
Memory	Stores up to 1500 test results; data in memory can be reviewed on the instrument display, on a PC or via direct printout						
Power Source	Rechargeable 6V, 8.5Ah NiMH battery pack (included)						
Battery Life	Approximately 5000 10A tests						



cover closed

cover open

FEATURES

- Measure from 1μΩ (0.1μΩ resolution) to 2500.0Ω
- Test current selection of 1mA, 10mA, 100mA, 1A and 10A
- RTD temperature probe to check tested sample (optional)
- Selectable metal types
- Automatic and manual temperature correction
- Two programmable alarm set points
- Stores up to 1500 test results
- Selectable inductive or resistive test modes
- Automatic multiple test mode (multiple tests without pressing the test button)
- Large multi-line electroluminescent display
- Local or remote test setup and control
- Internal rechargeable batteries conduct up to 5000 - 10A tests
- Rugged, double insulated watertight case
- Includes RS-232 to USB 2.0 cable and AC line cord
- Includes FREE DataView® software for data retrieval, real-time display, analysis and report generation

PRODUCT INCLUDES



Extra large tool bag, set of two 10ft Kelvin clips (10A-Hippo), set of two 10ft Kelvin probes (1A - Spring Loaded), one RS-232 DB9 F/F 6ft null modem cable, RS-232 to USB adapter, US 115V power cord, quick reference guide, NiMH rechargeable battery pack, and USB thumb drive supplied with user manual and DataView® software.

ACCESSORIES

KELVIN PROBES PISTOL GRIP, SET OF TWO



(optional) Catalog #2118.75
(10A - spring loaded) 10ft
(optional) Catalog #2118.76
(10A - spring loaded) 20ft



KELVIN PROBES, SET OF TWO

Catalog #2118.77 (optional)
(10A - spring loaded) 10ft
Catalog #2118.78 (optional)
(10A - spring loaded) 20ft



KELVIN PROBES, SET OF TWO
(replacement) Catalog #2118.73
(1A - spring loaded) 10ft
(optional) Catalog #2118.74
(1A - spring loaded) 20ft



RTD TEMPERATURE PROBE
(optional) Catalog #2129.95
RTD probe plugs into faceplate
(optional) Catalog #2129.96
RTD probe w/7ft extension cable

CATALOG NO.	DESCRIPTION
2129.84	Micro-ohmmeter Model 6255 (10A, Dataview®)
Accessories/Replacement - available on website store from www.aemc.com	
1017.84	Kelvin Clips 10ft (10A - Hippo)
2118.70	Kelvin Clips 20ft (10A - Hippo)
2118.73	Kelvin Probes 10ft (1A, Spring Loaded)
2118.74	Kelvin Probes 20ft (1A, Spring Loaded)
2118.75	Kelvin Probes Pistol Grip (10A - Spring Loaded), 10ft
2118.76	Kelvin Probes Pistol Grip (10A - Spring Loaded), 20ft
2118.77	Kelvin Probes (10A - Spring Loaded), 10ft
2118.78	Kelvin Probes (10A - Spring Loaded), 20ft
2118.79	Kelvin Clips 10ft (1-10A) Replacement for Cat #2118.71
2118.80	Kelvin Clips 20ft (1-10A) Replacement for Cat #2118.72
2119.45	Cable, PC RS-232, DB9 F/F 6ft Null Modem Cable
2129.95	RTD Temperature Probe (plug into faceplate for ambient temperature)
2129.96	RTD Temperature Probe with 7ft extension cable

MICRO-OHMMETERS

200A

MODEL 6292

Programmable test currents and test duration with data storage and report generation using included application software. Includes both sides grounded test feature



Case color may vary

SPECIFICATIONS

MODEL	6292	
ELECTRICAL		
Test Current Range	Adjustable from 5 to 200A (True DC)	
Resistance Range	0.1μΩ to 2mΩ 2 to 200mΩ 200mΩ to 1Ω	
Accuracy	±1% of reading from 50μΩ to 1Ω	
Resolution	0.1μΩ to 2mΩ 2 to 200mΩ 200mΩ to 1Ω	0.1μΩ (5 to 200A) 10μΩ (25A @ 200mΩ) 1mΩ (5A @ 1Ω)
Output Voltage	100VAC: 4.2V @ 200A 220VAC: 8.6V @ 200A	
Max. Load Resistance	100VAC: 20mΩ @ 200A 220VAC: 42mΩ @ 200A	
Measurement Method	Four-terminal, Kelvin-type	
Adjustable Test Time	5 to 120 seconds or unlimited	
Memory	Stores up to 8000 measurements	
Power Supply	100 to 240VAC, 50/60Hz	



cover closed

FEATURES

- Adjustable test currents from 5 to 200A
- Programmable test duration from 5 to 120 sec
- BSG Ground Test with optional current probe
- Accurately measures low contact resistance with test currents up to 200A
- Measures resistances from 0.1 $\mu\Omega$ to 1 Ω
- Low resolution of 0.1 $\mu\Omega$
- Cooling system to improve the number of sequential tests that can be performed
- Backlit display
- Measures objects with both sides grounded
- Stores up to 8000 test results
- Direct printout of measurement results using DataView® software and a PC
- Rugged and water-resistant case

ACCESSORIES

CURRENT PROBE MODEL MR6292
Catalog #2129.86 (optional)



PRODUCT INCLUDES

Accessory bag supplied with a set of two 25 ft. Kelvin clips (200A - Hippo), ground lead (green) with clamp, 5 ft. USB cable, 110V US power cord, quick start guide and USB drive with user manual and DataView® software.



Test results	R =	100.0 $\mu\Omega$	
Test current	It =	142A	Ig = 8.0A
	DURATION:	015/060s	
Date & time	02/10/13	10:25 AM	

Ground current
Elapsed and total test times

CATALOG NO.	DESCRIPTION
2129.83	Micro-Ohmmeter Model 6292 (200A, 120/230V, DataView® software)
Accessories/Replacement - available on website store from www.aemc.com	
2129.72	Lead - Set of two 25ft Kelvin clips (200A - Hippo)
2129.73	Lead - Set of two 50ft Kelvin clips (200A - Hippo)
2129.86	AC/DC Current Probe Model MR6292
5000.40	110V US Power Cord

OSCILLOSCOPES



SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

MODEL OX 5042

One of the few oscilloscopes on the market with isolated channels that fit into one hand



SPECIFICATIONS

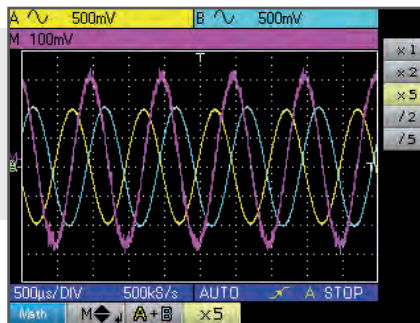
INTERFACE	
Display	3.5" color TFT LCD screen; Resolution 320 x 240 – LED backlighting
Commands	Direct adjustments on front panel & on-screen menus via browser (principal & secondary without "hidden menus")
Display Mode	2500 real acquisition points on screen
Display of Curves on Screen	2 curves + 2 references + memory trace or mathematical calculation
Integrated Interactive Help Function	11 languages: French, English, German, Spanish, Italian, Swedish, Romanian, Russian, Finnish, Polish, Dutch
OSCILLOSCOPE MODE	
VERTICAL DEFLECTION	
Bandwidth	40MHz
Bandwidth Limiter	1.5MHz, 5kHz
Number of Channels	2 totally isolated channels
Input Impedance	1M Ω \pm 0.5%, approx. 17pF
Maximum Input Voltage	600V – Derating -20dB per decade from 100kHz
Vertical Sensitivity	5mV to 200V/div
HORIZONTAL DEFLECTION	
Sweep Speed	25ns/div to 200s/div – Roll Mode from 100ms to 200s/div
Horizontal Zoom	Zoom factor: x1, x2, x5
TRIGGERING	
Mode	Automatic, triggered, one-shot & triggered Roll
Type	Edge, pulse width (20ns – 20s)
Coupling	AC or DC (depending on the coupling of the triggering channel) HF, LF or noise rejection
Sensitive	\leq 1.2 divisions p-p up to 40MHz
DIGITAL MEMORY	
Maximum Sampling Rate	2GS/s in ETS mode – 50MS/s in one-shot mode on each channel
Vertical Resolution	9 bits
Memory Depth	2500 points per channel
User Storage	2MB for storing files: trace (.trc), text (.txt), configuration (.cfg), image files (.bmp)
Glitch Mode	Duration \geq 20ns – 1250 min/max pairs
Display Modes	Envelope, Averaging (factors 2 to 64) and XY (vector)
Other Functions	
Math Functions	Channel inversion, addition, subtraction, multiplication and division (adjustable scaling)
Cursor Measurement	2 cursors: V, T, dV, dt simultaneously – 4-digit display resolution
Automatic Measurement	18 time or level measurements and phase measurement
MULTIMETER MODE	
General Specifications	2 channels, 8000-count display + min/max bargraph – Graphic recording of 2700 measurements (5min to 1 month)
Operating Modes	Absolute or relative display (absolute, deviation, ref, ref%) – Monitoring (instantaneous, min, max, Avg)
AC, DC & AC+DC Voltages	Ranges from 600mV to 600Vrms, 800mV to 800Vdc – accuracy for Vdc \pm 1% reading +20D –50kHz bandwidth
Resistance	Range from 80 Ω to 32M Ω – accuracy \pm 2% reading + 10D –10ms quick continuity test
Capacitance	Ranges from 5nF to 5mF – basic accuracy \pm 2% reading + 10D
Other Measurements	Frequency, rotation speed, 3.3V diode test, temperature measurement (with K-type thermocouple or infrared probe)
POWER	
Measurements	Single-phase and balanced three-phase active power values (with or without neutral), simultaneous display of current
HARMONIC ANALYZER MODE	
Multi-Channel Analysis	2 channels, 31 orders, fundamental frequency from 40 to 450Hz
Simultaneous Measurements	Total VRMS, THD and selected order (% fundamental, phase, frequency, VRMS)
GENERAL	
Screenshots	Up to 100 files in standard ".bmp" format, viewable on the instrument
PC Communication	Isolated optical USB interface "SX-Metro" PC application software (included)
Power Supply	6 LR6 or 6AA NiMH batteries – Battery life up to 8hrs 30min Universal line adapter isolated from the channels – Quick charging in 2hrs 30min
Safety/EMC	Safety according to IEC61010-1 Ed3 – 600V CAT III, EMC according to EN61000-3 & EN61326-1

Functional Displays

FEATURES

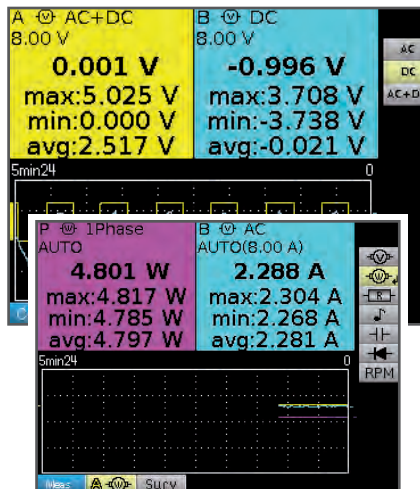
- Two isolated channels
- Three instruments in one
 - 40MHz oscilloscope
 - Double 8000-count TRMS multimeter / Power analyzer
 - Harmonic analyzer
- 3.5" color LCD screen LED backlighting technology
- Integrated interactive multilingual help function
- 2MB recording data
- Store graphic recordings of 2700 measurements (5 min to 1 month)
- Communication via isolated USB SCPI protocol

HIGH PERFORMANCE



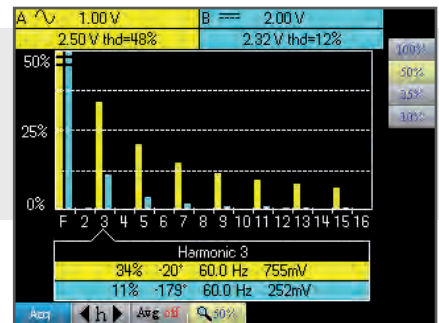
Automatically displays measurements for both isolated channels from your choice of 19 measurement types.

TWO INDEPENDENT 8000-COUNT TRMS DIGITAL MULTIMETERS



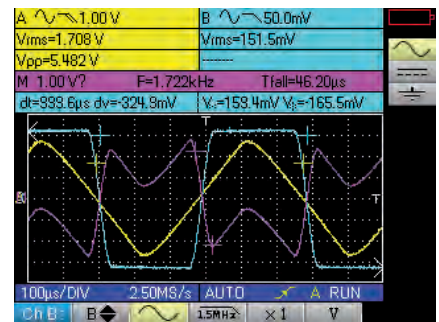
Instantly displays measurements in multimeter mode at the press of a button.

HARMONIC ANALYZER



Measures two channels of individual harmonic content up to the 31st harmonic.

STORAGE COMMUNICATION & PC SOFTWARE



View real-time measurements on your PC, configure the Handscope, export data to spreadsheet using the SX-Metro included software.



Shown: Model 2150.22 and 2150.23

KITS INCLUDE

2150.21

Meter, small classic tool bag, US Wall plug, USB Cable, Set of 2, 10 ft. Color-coded Leads (red/black), Set of 2, Color-coded Alligator Clips (red/black), Set of 2, color-coded Probes (red/black), BNC Adapter, 2 Probe 10:1 600V BNC male, 1.2V NiMH rechargeable batteries, quick start guide, and USB drive with software and user manual.

2150.22

Meter, field case, US Wall plug, USB Cable, Set of 2, 10 ft. Color-coded Leads (red/black), Set of 2, Color-coded Alligator Clips (red/black), Set of 2, Color-coded Probes (red/black), BNC adapter, 1- Probe 10:1 600V BNC male, AC Current Probe Model MN251T, MiniFlex Sensor 3000-24-1-1, 1.2V NiMH rechargeable batteries, quick start guide, and USB drive with software and user manual.

2150.23

Meter, field case, US Wall plug, USB Cable, Set of 2, 10 ft. Color-coded Leads (red/black), Set of 2, Color-coded Alligator Clips (red/black), Set of 2, Color-coded Probes (red/black), BNC adapter, 1- Probe 10:1 600V BNC male, AC Current Probe Model MN379T, MiniFlex Sensor 3000-24-1-1, 1.2V NiMH rechargeable batteries, quick start guide, and USB drive with software and user manual.

CATALOG NO.	DESCRIPTION
2150.21	Handscope Portable Oscilloscope Model OX 5042
2150.22	Handscope Model OX 5042 w/MN251T & MF 3000-24-1-1 {BNC Output}
2150.23	Handscope Model OX 5042 w/MN379T & MF3000-24-1-1 (BNC output; Low AC current measurement)



MODEL MN251T & MN379T

RANGE 0.05 TO 240A

MODEL #MN251T

RANGE 0.005 TO 120A

MODEL #MN379T

SPECIFICATIONS

	MN251T	MN379T
ELECTRICAL		
Nominal Range	200A	5A / 100A
Measurement Range	0.5 to 240A	0.005 to 6A; 0.1 to 120A
Accuracy	3% of Reading @ 5A; 1% of Reading @ 200A	1% of Reading @ 5A; 1% of Reading @ 100A
Phase Shift	≤2.5° @ 20A / ≤2.5° @ 100A	≤4° @ 5A / ≤2.2° @ 100A
Overload	240A for 10 min ON, 30 min OFF	
Frequency Range	40 to 10kHz	
Limit Operating Conditions	200A permanently to 1kHz; Derating above 3kHz: 200A x (1/0.333F), F in kHz	
Working/Common Mode Voltage	600Vrms	
Output Termination	10ft (~3m) BNC Lead	
Output Signal	1mV/AAC (200mV @ 200A)	200mV/A AC (1V @ 5A) & 10mV/A AC (1V @ 100A)
MECHANICAL		
Operating Temperature	14° to 131°F (-10° to 55°C)	
Storage Temperature	-40° to 158°F (-40° to 70°C)	
Operating Relative Humidity	10 to 35°C (50 to 95°F) 85% RH (without roll-off above 35°C (95°F))	
Jaw Opening	0.83" (21mm)	
Maximum Conductor Size	0.78" (20mm)	
Dimensions	5.47 x 2.00 x 1.18" (139 x 51 x 30mm)	
Weight	6.5 oz (180g)	
Polycarbonate Material	Polycarbonate with fiberglass charge, UL94 V0	
SAFETY		
Electrical	EN 61010-2-32	
Double Insulation	Yes	
CE Mark	Yes	



FEATURES

- Small, compact size
- True RMS measurements
- Large jaw opening accommodates conductor sizes up to 250MCM
- 10 foot leads makes measurement in hard to reach areas possible
- 40Hz to 10kHz response

MINIFLEX® 3000-14-1-1 & 3000-24-1-1

SPECIFICATIONS

	3000-14-1-1	3000-24-1-1
ELECTRICAL		
Range	3000A	
Signal Output	1mV/A	
Frequency Range	10Hz to 20kHz with current derating	
Influence Of Conductor Positioning	1.5% typical, 3% max	
Influence Of Conductor Positioning In Sensor Against Handle	4% typical, 6% max	
External Conductor Influence	35dB to 40dB on contact	
Power Source	9V Alkaline battery (included)	
MECHANICAL		
Sensor Diameter	Ø 0.2 (5mm)	
Sensor Length	14" (~355mm)	24" (~609mm)
Max Conductor Size	3.93" (~100mm)	7.6" (~190mm)
Connection Cable Length	10ft (~3.04m)	
Drop Test	Per IEC 68-2-32	
Vibration	Per IEC 68-2-6	
Mechanical Shock	Per IEC 68-2-27	
Weatherproofing	IP 50	
ENVIRONMENTAL		
Operating Temperature Range	14° to 131°F (-10° to +55°C)	
Storage Temperature Range	-40° to 158°F (-40° to +70°C)	
Altitude	Operating: 0 to 6560ft (2000m), working voltage derating above; Non-operating: 0 to 39370ft (12,000m)	
SAFETY		
Safety Rating	EN 61010, 1000V CAT III; 600V CAT IV	



FEATURES

- True RMS Measurements
- 14" (~35cm) sensor included, 24" (~60cm) sensor optional
- 10 foot (~3m) leads makes measurement in hard to reach areas possible
- Measurement range of 0.5 to 3000Arms
- Accuracy ±1% of Reading ±0.25A
- No core saturation or damage if measured circuit is overloaded
- 20kHz frequency response
- Low phase shift for power measurements
- Insensitive to DC: measures only the AC component on DC + AC signals
- Excellent linearity
- 9V Alkaline battery typically provides 150 hrs of continuous operation

RANGE 5 TO 3000A

MODEL #3000-14-1-1 optional

RANGE 5 TO 3000A

MODEL #3000-24-1-1 included in kit



OSCILLOSCOPES

OX 9000 SERIES

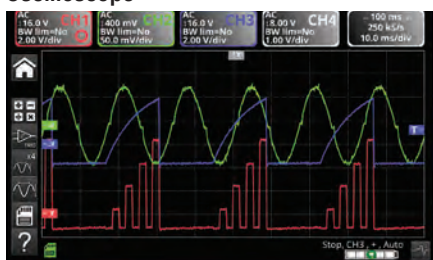


NEW!

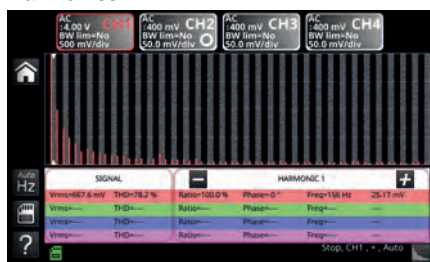
MODEL OX 9062, OX 9102, OX 9104 & OX 9304

Ergonomic, hand-held oscilloscope with 100MHz bandwidth and 4 models: oscilloscope, multimeter, analyzer and recorder

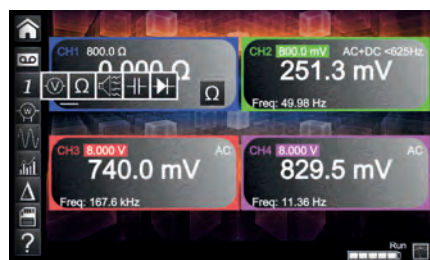
Oscilloscope



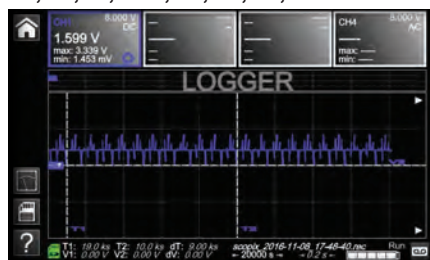
Harmonics



4 Simultaneous Channels



Measurement between H and V cursors:
T1, T2, Dt, 1/Dt, V1, V2, dV, Ph



FEATURES

- wider bandwidth up to 300 MHz
- new triggering and recording options
- increased storage capacity, and more!
- 12 bit resolution
- 2.5 GS/sec

PRODUCT INCLUDES

Scope in carrying case with shoulder strap, set of two 5 ft color-coded leads, alligator clips and test probes, 10 ft USB cable, μ SD memory card, 1-PROBIX Banana Plug Adapter, set of 5 stylus pens, LI-ION 5.8 Ah battery pack, PA40W-2 power adapter with 110V power cord. Additional accessories may be model dependent.

ACCESSORIES & REPLACEMENTS

2124.73

PROBIX PRHX1 10:1 Probe,
250MHz 600V CAT III

2124.77

PROBIX Current Probe,
20mA-20A 1MHz-3dB

5000.17

Set of 5 stylus pens



CATALOG NO.

DESCRIPTION

2150.31	Handscope Portable Oscilloscope Model OX 9062
2150.32	Handscope Portable Oscilloscope Model OX 9102
2150.33	Handscope Portable Oscilloscope Model OX 9104
2150.34	Handscope Portable Oscilloscope Model OX 9304

Accessories/Replacement - available on website store from www.aemc.com



Technical Assistance (800) 343-1391

www.aemc.com 111

TECHNICAL SPECIFICATIONS	OX 9062	OX 9102	OX 9104	OX 9304
HUMAN-MACHINE INTERFACE				
Type of display	7" WVGA color TFT LCD touch screen, 800x480 – LED backlighting (adjustable standby mode)			
Different display mode	2,500 real acquisition points on screen - Vectors with interpolation			
Display of curves on screen	4 curves + 4 references – Split Screen & Full Screen modes			
Screen commands	Touch screen – icons and graphical commands – customizable channel colors			
Choice of language	15 complete languages, menus & online help			
OSCILLOSCOPE MODE				
Vertical deflection				
Bandwidth	60 MHz	100 MHz	100 MHz	300 MHz
	15 MHz, 1.5 MHz or 5 kHz bandwidth limiter			
Number of channels	2 isolated channels		4 isolated channels	
Input impedance	1 M Ω \pm 0.5% , approx. 12 pF			
Maximum input voltage	600 V / CAT III (1,000V per Probix) – from 50 to 400 Hz – Probix safety connectors			
Vertical sensitivity	16 ranges from 2.5 mV to 200 V/div and up to 156 μ V/div in vertical zoom mode (12-bit converter) – Accuracy \pm 2%			
Vertical zoom	"One Click Winzoom" mode (12-bit converter and direct graphical zoom on screen) – x 16 max.			
Probe factor (non-Probix)	1 / 10 / 100 / 1,000 or any scaling – definition of measurement unit			
Horizontal deflection				
Sweep speed	35 ranges from 1 ns/div to 200 s/div., accuracy \pm [50 ppm + 500 ps] – Roll mode from 100 ms to 200 s/div			
Horizontal zoom	"One Click Winzoom" system (direct graphical zoom on screen) x 1 to x 5 or x 100 – storage 100 kpts/channel			
Triggering				
Mode	On all the channels: automatic, triggered, one-shot, auto level 50%			
Type	Edge, pulse width (16 ns-20 s), delay (48 ns to 20 s), counting (3 to 16,384 events) Continuous adjustment of Trigger position			
Coupling	AC, DC GND, HFR, LFR, noise – Level and Hold-Off adjustable from 64 ns to 15 s			
Sensitivity	\leq 1.2 division p-p up to 300 MHz			
Digital storage				
Maximum sampling rate	2.5 GS/s in one-shot mode on each channel (100 GS/s max. in ETS mode)			
Vertical resolution	12 bits (vertical resolution 0.025 %)			
Memory depth	100 kpts per channel and file viewer in the manager			
User storage	Internal = 1 GB to store the files: trace, text, configuration, math functions, System memory: .pdf print files, .png image files			
File management	+ high-capacity removable μ SD-Card: SD 2 GB, SDHC 4-32 GB and SDXC > 32 GB			
GLITCH mode	Duration \leq 2 ns – 500,000 Min/Max pairs			
Display modes	Envelope, vector, accumulation-, averaging (factors 2 to 64) – XY (vector) and Y(f)=FFT			
Other functions				
AUTOSET	Complete in under 5 s, with recognition of the channels – Frequency > 30 Hz			
FFT analyzer & MATH functions	2,500-point FFT (Lin or Log) with measurement cursors – Functions + , - , x , / and mathematical function editor			
Cursors	2 or 3 cursors: simultaneous V and T with AUTO measurement: T1, T2, Dt, 1/Dt, dBV, Ph			
Automatic measurements	Simultaneously with waveform, 20 automatic measurements per channel and on the 4 channels simultaneously with scroll			
MULTIMETER MODE				
General specifications	2 or 4 channels – 8,000 cts min/max/frequency/relative – TRMS – Time/date-stamped graphical recording in logger mode			
AC, DC and AC + DC voltages	600 mV to 600 VRMS, 800 mV to 800 VDC – VDC accuracy +/- (0.5 % + 25 D) – 200 kHz bandwidth			
Resistance	80 Ω to 32 M Ω – accuracy 0.5%R+ 25D – Quick continuity test < 10 ms			
Other measurements	Temperature (HX0035 = KTC, HX0036 = Pt100) / Capacitance 5nF to 5mF / Frequency 200 kHz / Diode test 3.3 V			
Single and three-phase power	Active, Reactive and Apparent power values plus Power Factor simultaneously with the U & I measurements			
HARMONIC ANALYSER MODE				
Multi-channel analysis	2 or 4 (depending on model), 63 orders, fundamental frequency 40 to 450 Hz in auto or manual mode			
Simultaneous measurements	Total Vrms, THD and selected order (% fundamental, phase, frequency, Vrms)			
LOGGER MODE				
Acquisition	Duration: 20,000 s – Interval: 0.2 s – Files: 100,000 measurements			
GENERAL SPECIFICATIONS				
Configuration memories	Not limited according to device - variable file sizes			
Printing	Network printing via Ethernet/Wifi in .png format			
PC communication – software link	Ethernet (100 baseT), WiFi-USB (device, 12 Mbs) – "ScopeNet" application software for PC			
Software	PC: Ethernet and USB, ScopeNet (remote control, data recovery, cursors and automatic measurements) Android tablet – ScopeAdmin Fleet Administration utility			
Mains power supply	Li-Ion rechargeable battery (6,900mAH-40 Wh) – Battery life of up to 8 hrs – Adjustable standby mode Adapter / 2-hour fast charger, universal 98-264 V / 50/60 Hz)			
Safety / EMC	Safety as per IEC 61010-2-30, 600V CAT III / 1000V CAT II – EMC as per EN61326-1			
Mechanical specifications	292.5 x 210.6 x 66.2 mm – 2.1 kg with batteries – IP54 protection			

POWER QUALITY ANALYZERS, METERS & LOGGERS



SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

MODEL 8220

A measurement tool for electrical parameters and distribution network disturbances

SPECIFICATIONS

MODEL	8220
ELECTRICAL	
Voltage (TRMS)	Phase-to-Phase: 660V; Phase-to-Neutral: 600V
Current (TRMS)	MN Clamp: 0.2 to 6A/120A or 2 to 240A MR Clamp: 10 to 1000Aac, 10 to 1400Adc SR Clamp: 3 to 1200A MiniFlex [®] : 10 to 1000A AmpFlex [®] : 10 to 6500A ⁽¹⁾
Frequency (Hz)	40 to 70Hz
Other Measurements	kW, kvar, PF, DPF, kVA, kWh, kvarh, VAh, Phase Rotation, Temperature, RPM, Resistance, Continuity, Diode Test
Harmonics	1 st to 50 th
Sampling Frequency	256 samples / cycle
Data Storage	Stores nine sets of readings totaling up to 99 snapshots for volts, amps, power and harmonics
Power Source	Six 1.5V AA Alkaline batteries (included)
Battery Life	≥8 hrs with display on ≥40 hrs with display off (recording mode)
MECHANICAL	
Communication Port	Optically isolated USB
Display	Three-line backlit color LCD digital display with custom icons and adjustable brightness & contrast
Dimensions	8.3 x 4.3 x 2.4" (211 x 108 x 60mm)
Weight	1.9lbs (0.88kg)
Safety Rating	EN 61010, 600V CAT III, IP54, Pollution Degree 2

(1) Crest factor at 6500 = 1

METERS INCLUDE

8220

Meter, 10ft. color-coded voltage leads and alligator clips (red/black), optical USB cable, six 1.5V batteries, two safety test probes, carrying bag, and USB drive supplied with DataView[®] software and user manual.



SEE PAGES 123 & 124 FOR MORE OPTIONAL ACCESSORIES



FEATURES

- Measures up to 660Vrms or Vbc
- Measures up to 6500Aac or 1400Adc (probe dependent)
- Displays Min, Max and Average Volts and Amps, Crest Factor, Peak Value and K-Factor
- Calculates and displays Watts, vars and VA, Power Factor and Displacement Power Factor for single-phase and balanced three-phase
- Measures and records power systems (kW, kVA, kvar)
- Energy metering (kAh, kvarh, kWh)
- Displays total harmonic distortion (THD-F and THD-R) for voltage and current
- Displays individual harmonic values and % for volts and amps through the 50th harmonic
- The Max and Min RMS measurements are calculated every half-period
- Captures and displays inrush current
- Calculates and displays phase rotation and RPM
- Displays temperature in both °F and °C
- Displays resistance up to 2000Ω
- Conducts continuity and diode tests
- Stores up to 99 complete sets of readings for all volt, amp, power and harmonic measurements
- Operates on batteries or optional power adapter
- Download stored data snapshots to DataView[®] software via optical USB cable (included)
- Includes FREE DataView[®] software for configuring data retrieval, real-time waveform display, analysis and report generation

CATALOG NO.

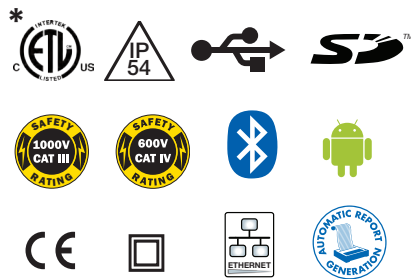
DESCRIPTION

2130.90	Power Quality Meter Model 8220 (no probes)
2130.93	Power Quality Meter Model 8220 193-24-BK (Sensor)
2130.96	Power Quality Meter Model 8220 w/MN193-BK (Probe)



MODEL PEL 102

Monitor your energy usage & costs locally or from anywhere in the world!



FEATURES

- Simple-to-use, single-, dual- (split-phase) and three-phase (Y, Δ) power & energy loggers
- Designed to work in 1000V CAT III and 600V CAT IV environments and fits in many distribution panels
- Power measurements: kVA, kW and kvar
- Energy measurements: kVAh, kWh (source, load) and kvarh (quadrant indication)
- Updated features in DataView® software for configuring real-time communication with a PC and report generation with pre-defined or user defined templates
- 8GB SD card supplied, can be upgraded up to 32GB
- USB, LAN, Ethernet and Bluetooth (Class 1 wireless communication, up to 300ft away)
- Satisfies the monitoring requirements of NEC Code 220.87
- Power adapter allows the PEL 102 to be powered from a phase measurement input
- Provides all the necessary functions for power and energy data logging for 50Hz, 60Hz, 400Hz and DC distribution systems
- Automatic recognition of the connected current sensors/probes
- Magnetic case – can be mounted inside power panel

ACCESSORIES



CAT #2137.51 INCLUDES

PEL 102 KIT

Small classic tool bag, three MiniFlex® MA193-10-BK sensors, 5ft USB cable, four black test leads and alligator clips, power cord, twelve color-coded ID markers, safety data sheet, compliance sheet, SD-Card with USB-SD-Card reader, quick start user guide, and USB drive supplied with DataView® software and user manual.



ANDROID™ APP AVAILABLE

FOR PEL 102, 103 & 105!

Configure Measurements and Recordings

Display Data in Real-Time

For Use on Devices with an Android Platform



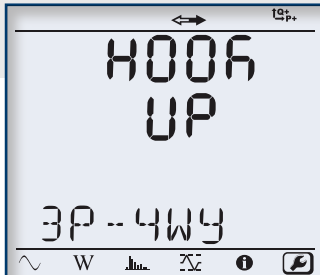
SEE PAGES 123 & 124 FOR MORE OPTIONAL ACCESSORIES

CATALOG NO.	DESCRIPTION
2137.51	Power & Energy Logger Model PEL 102 (no LCD w/3 MA193-10-BK Sensors)
2137.61	Power & Energy Logger Model PEL 102 (no LCD or Sensors)
Accessories/Replacement - available on website store from www.aemc.com See pages 123 & 124 for more optional current probes	
2137.77	Adapter-Power Adapter for use with Models PEL 102 & PEL 103

MODEL PEL 103

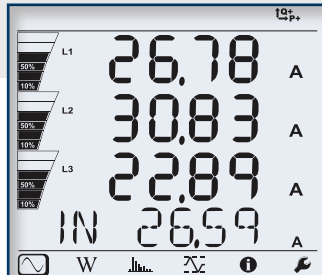
Large Functional Displays

INFORMATION MODE



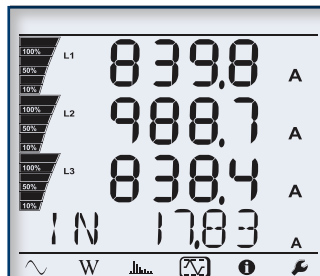
Hook up, voltage and current ratios and aggregation period can be configured from the front panel of the PEL 103.

MEASUREMENT MODE



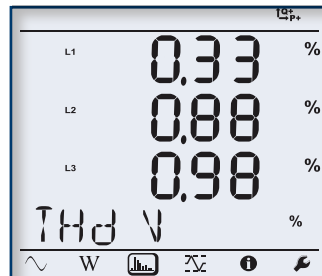
Real-time updates are displayed for voltage, current, power, frequency, power factor and tangent.

MAX MODE



Max values for voltage, current (including neutral current), power and harmonics.

HARMONIC MODE



Total Harmonic Distortion (THD) can be displayed by phase or phase to phase. Neutral current THD can also be displayed.

FEATURES

- Simple-to-use, single-, dual- (split-phase) and three-phase (Y, Δ) power & energy loggers
- Designed to work in 1000V CAT III and 600V CAT IV environments and fits in many distribution panels
- Power measurements: kVA, kW and kvar
- Energy measurements: kVAh, kWh (source, load) and kvarh (quadrant indication)
- Updated features in DataView® software for configuring real-time communication with a PC and report generation with pre-defined or user defined templates
- 8GB SD card supplied, can be upgraded up to 32GB
- USB, LAN, Ethernet and Bluetooth (Class 1 wireless communication, up to 300ft away)
- Satisfies the monitoring requirements of NEC Code 220.87
- PEL 103 can be configured from front panel, DataView® control panel or the FREE Android™ application
- Provides all the necessary functions for power and energy data logging for 50Hz, 60Hz, 400Hz and DC distribution systems
- Automatic recognition of the connected current sensors/probes
- Magnetic case – can be mounted inside power panel
- Supports 17 network configurations



CAT #2137.52 INCLUDES



PEL 103 KIT (W/ LCD)

Small classic tool bag, three MiniFlex® MA193-10-BK sensors, 5ft USB cable, four black test leads and alligator clips, power cord, twelve color-coded ID markers, safety data sheet, compliance sheet, SD-Card with USB-SD-Card reader, quick start user guide, and USB drive supplied with DataView® software and user manual.

ACCESSORIES

*ADAPTER SOLD SEPARATELY

Cat. # 2137.77



CATALOG NO. DESCRIPTION

2137.52 Power & Energy Logger Model PEL 103 (with LCD w/3 MA193-10-BK Sensors)

2137.62 Power & Energy Logger Model PEL 103 (with LCD, no Sensors)

Accessories/Replacement - available on website store from www.aemc.com See pages 123 & 124 for more optional current probes

2137.77 Adapter-Power Adapter for use with Models PEL 102 & PEL 103



MODEL PEL 105

Three-Phase Power and Energy Logger
Watertight...great for outdoor use!

CAT #2137.59 INCLUDES

PEL 105 Kit

Extra-large tool bag, accessory pouch, 5ft USB cable, five 10ft black voltage leads (watertight cap) with alligator clips, power adapter 110/230V with US power cord, four water-tight AmpFlex® 196A-24-BK (not included with Cat. #2137.57), 9.6V NiMH battery, 8GB SD-card, USB SD-card reader, twelve color-coded input ID markers, quick start guide, and a USB drive supplied with DataView® software and user manual.



cover closed



FEATURES

- Simple-to-use, single-, dual- (split-phase) and three-phase (Y, Δ) power & energy loggers
- Designed to work in 1000V CAT III and 600V CAT IV environments
- Supports 17 different network connections
- Power measurements: kVA, kW and kvar
- Energy measurements: kVAh, kWh (source, load) and kvarh (four quadrant indication)
- Includes DataView® software for configuring, real-time display, analysis and report generation
- 8GB SD card supplied, can be upgraded up to 32GB
- USB, LAN, Ethernet, Wi-Fi and Bluetooth communication (Class 1 wireless communication, up to 300ft away)
- Satisfies the monitoring requirements of NEC Code 220.87
- PEL 105 can be configured from front panel, DataView® control panel or the FREE Android™ application
- Provides all the necessary functions for power and energy data logging for 50Hz, 60Hz, 400Hz and DC distribution systems
- Automatic recognition of the connected current sensors/probes
- Powers directly from phase input
- Pole mountable

ACCESSORIES

POLE MOUNTING KIT

Catalog #2137.82 (optional)
Set of two, with hardware



CATALOG NO.	DESCRIPTION
2137.57	Power & Energy Logger Model PEL 105 w/o Sensors (Watertight IP67)
2137.59	Power & Energy Logger Model PEL 105 w/4 196A-24-BK (AmpFlex® - Watertight IP67)
Accessories/Replacement - available on website store from www.aemc.com See pages 123 & 124 for more optional current probes	
2137.82	Pole Mounting Kit

POWER QUALITY ANALYZERS, METERS & LOGGERS

POWER & ENERGY LOGGERS PEL 100 SERIES

SPECIFICATIONS

MODELS		PEL 102, PEL 103 & PEL 105		
GENERAL				
Sampling Frequency		128 samples per cycle; 50/60Hz (16 samples/cycle 400Hz)		
Data Storage Rate		1 per second (200ms also available on PEL 105)		
Demand Period Storage Rate		User selectable (1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 and 60 minutes)		
Recorded Parameters (Single- and Poly-Phase)		V, I, W, VA, var, PF, Tan, Wh, VAh, varh, THD (V and I), Individual harmonics (from 1 through 50 per phase); Crest Factor (CF), Cos f / DPF		
Event Log		Tracks and records status changes and error messages along with recorded data		
Front Panel Indicator LEDs		Bluetooth active, recording in progress, phase connection reversal, overload, battery charging and SD Card status		
Storage Capacity		8GB SD card included / SD cards up to 32GB formatted FAT32 are supported		
INPUTS	Voltage	PEL 102/103 – 3 input channels; PEL 105 – 4 input channels via 4mm safety banana jacks		
	Current	PEL 102/103 - 3 input channels; PEL 105 – 4 input channels via custom 4 pin jacks that accept AEMC [®] probes and sensors		
ELECTRICAL				
VOLTAGE MEASUREMENT		RANGE	RESOLUTION*	ACCURACY*
50/60Hz		42.5 to 69Hz	–	±0.1Hz
Single-Phase RMS Voltages		10 to 1000Vrms	0.1V	±0.2% Rdg ±0.2V
Phase-to-Phase RMS Voltages		17 to 1700Vrms	0.1 to 1V	±0.2% Rdg ±0.4V
400Hz		340 to 460Hz	–	–
Single-Phase RMS Voltages		10 to 600Vrms	0.1V	±1% Rdg ±1V
Phase-to-Phase RMS Voltages		17 to 1200Vrms	0.1 to 1V	±1% Rdg ±1V
DC		100 to 1000V	0.1V	±1% Rdg ±3V (typical)
PT Ratios		Programmable from 50V to 650,000V	–	0.01 to 0.1V
CURRENT MEASUREMENT		A193*** (PEL 102/103)	196A*** (PEL 105)	
Nominal range for current probes supplied with kit. See chart on Pages 26 and 27 for other probes		200mA to 10,000A	200mA to 10,000A	–
CT Ratios		Programmable from 1:1 to 25,000:1 (probe dependent)		
POWER MEASUREMENTS		RANGE	RESOLUTION*	ACCURACY*
Active Power (P)*		-2 to 2GW	0.001W	±0.5% Rdg ±0.005% Pnom
Reactive Power (Q)*		-2 to 2Gvar	0.001var	±1% Rdg ±0.01% Qnom
Apparent Power (S)*		0 to 2GVA	0.001VA	±0.5% Rdg ±0.005% Snom
Power Factor		-1 to 1	0.001	±0.05
Tangent φ (active/reactive power ratio)		-3.2 to 3.2	0.001	±0.02
ENERGY MEASUREMENTS		RANGE	RESOLUTION*	ACCURACY*
Active Energy (EP)		0 to 4 x 10 ⁹	1Wh	±0.5% Rdg
Reactive Energy (EQ)		0 to 4 x 10 ⁹	1varh	±2% Rdg
Apparent Energy (ES)		0 to 4 x 10 ⁹	1Vah	±0.5% Rdg
THD		±655%		
Individual Harmonics		1 to 50 displayed in percentage; 1 to 7 at 400Hz		
External Supply		110V/250V (10%) @ 50/60Hz; 400Hz		
Power From Phase Measurement		PEL 102/103 requires optional Power Adapter Cat #2137.77; PEL 105 Internal up to 1000VAc		
Back-Up Power Source/Charge Time		Rechargeable 8.4V NiMH battery pack / Approximately 5 hours		
Battery Life		30 minutes minimum, 60 minutes typical		
MECHANICAL				
Communication Ports		USB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **/ Wi-Fi (PEL 105 only)		
Dimension/Weight		10.08 x 4.92 x 1.46" (256 x 125 x 37mm) / 2.20lbs (1kg) (PEL 102 & PEL 103); 9.8 x 7.8 x 2.6" (250 x 200 x 67mm) / 8.8lbs (4kg) (PEL 105)		
Case		Double insulated, rubber over-molded, polycarbonate UL94 V1 rated		
DISPLAY				
Display Type for Model PEL 103 / PEL 105		2.63 x 2.16" (67 x 55mm), four line, monochrome, backlit LCD with adjustable brightness and contrast		
ENVIRONMENTAL / SAFETY				
Operating Temperature/Relative Humidity		50° to 122°F (10° to 50°C) / up to 85%; 32° to 108.5°F (0° to 42.5°C) / up to 85% (PEL 103 & PEL 105)		
Storage Temperature		-4° to 122°F (-20° to 50°C) with batteries; -4° to 158°F (-20° to 70°C) without batteries		
Safety Rating/CE Rating		Complies with IEC 61010-1, and IEC 61010-2-030 for 1000V CAT III / 600V CAT IV (PEL 102 & PEL 103) & 1000V CAT IV (PEL 105), Pollution Degree 2 / Yes		
Index of Protection		IP54 non operating (PEL 102 & PEL 103) / IP67 with cover closed (PEL 105)		

* Maximum value is current probe dependent.

** Computers with Class II Bluetooth will restrict range to 40ft. Computers without Bluetooth will require a Class I or Class II Bluetooth radio adapter.

*** Maximum current reduced by a factor of 2 for 400Hz fundamental frequency.

POWER QUALITY ANALYZERS, METERS & LOGGERS

THREE-PHASE POWER QUALITY ANALYZER



MODEL #8333

MODEL #8336

POWERPAD® III MODEL 8333 & MODEL 8336

SD card for trend recordings and data storage,
extensive memory for high snapshot quantity,
captured transients/inrush and alarm events

SPECIFICATIONS

MODEL	8333	8336
Input Terminals	4 voltage / 3 current	5 voltage / 4 current
Inputs	3 voltage / 3 current	4 voltage / 4 current
Voltage (TRMS AC+DC)	2 to 1000V	
Voltage Ratio	up to 500kV	
Current (TRMS AC+DC)	MN93: 500mA to 200Aac; MN193: 0.005 to 100Aac SR193 Clamp: 1A to 1000Aac AmpFlex® or MA193 Clamps: 100mA to 10000Aac MR193 Clamp: 1A to 1300Aac/dc SL261 Clamp: 50mA to 100Aac/dc Current Ratio: up to 60kA	
Frequency (Hz)	40 to 69Hz	
Distribution Systems	1P 2W, 1P 3W, 2P 2W, 2P 3W, 2P 4W, 3P 3W, 3P 4W, Split-Phase 2W & 3W & Aron meters	1P 2W, 1P 3W, 2P 2W, 2P 3W, 2P 4W, 3P 3W, 3P 4W and 3p 5W, 2 ½ Element & Aron meters
Power Values	W, VA, var, VAD, PF, DPF, cos ϕ , tan ϕ	
Energy Values	Wh, varh, VAh, VADh	
Harmonics	1 st to 50 th , Direction, Sequence; THD: 0 to 50, phase	
Transients	up to 51	up to 210
Flicker (Pst)	Yes	
Unbalance	Yes	
Recording	Yes	
Alarm Mode	10 types; 4000 recorded	40 types; 16,000 recorded
Peak	Yes	
Phasor Display	Automatic	
Display	Color ¼ VGA TFT screen (320 x 240) diagonal 5.82" (148mm)	
Snapshots	12	50
Electrical Safety	IEC 61010, 1000V CAT III / 600V CAT IV	
Protection	IP53	
Languages	more than 27	
Communication Interface	USB	
Battery Life	>13 hrs, 25 hrs in Record Mode	
Power Supply	9.6V NiMH rechargeable battery pack (included) External AC supply: 110/230Vac \pm 10% (50/60Hz)	
Dimensions / Weight	9.8 x 7.8 x 2.6" (240 x 180 x 55mm) / 4.3lbs (1.95kg)	



METER INCLUDES

MODEL 8333

Four black 10ft voltage leads, 5ft USB cable, four black alligator clips, twelve color-coded input ID markers, NiMH battery, 110/240V power adapter with US power cord, carrying bag, soft carrying pouch, and USB drive supplied with product user manual and DataView® software.



MODEL 8336

Five black 10ft voltage leads, five black alligator clips, twelve color-coded input ID markers, USB cable, NiMH battery, 110/240V power adapter with US power cord, large classic tool bag, soft carrying pouch, quick start user guide, and USB drive supplied with product user manual and DataView® software.



KIT OPTION INCLUDES

MODEL 8333

AS ABOVE, WITH AMPFLEX® 193 FLEXIBLE CURRENT PROBE (10KA)
Catalog #2136.11, 24" rated 600V CAT IV



OR

AS ABOVE, MN193 CURRENT PROBE (5A/100A)
Catalog #2136.12, Rated 600V CAT III



MODEL 8336

AS ABOVE, WITH AMPFLEX® 193 FLEXIBLE CURRENT PROBE (10KA)
Catalog #2136.31, 24" rated 600V CAT IV



OR

AS ABOVE, MN193 CURRENT PROBE (5A/100A)
Catalog #2136.32, Rated 600V CAT III



ACCESSORIES

PHASE POWER ADAPTER FOR MODELS 8333 & 8336

Catalog #2140.77 (optional)



POWER QUALITY ANALYZERS, METERS & LOGGERS

THREE-PHASE POWER QUALITY ANALYZER



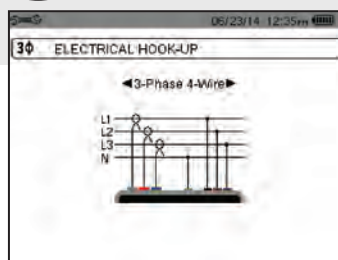
* Registration must take place within 30 days of purchase

FEATURES

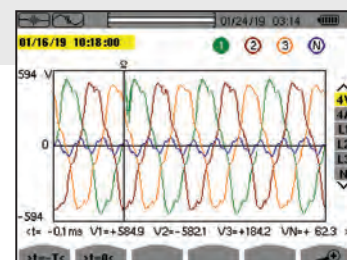
- True RMS single-, two- and three-phase measurements at 256 samples/cycle, plus DC
- Real-time color waveforms
- Easy-to-use on-screen setup
- Automatic current probe recognition and scaling
- True RMS voltage and current measurement
- Measures DC volts, amps and power
- Displays and captures voltage, current and power harmonics to 50th order, including direction, in real-time
- Captures transients down to 1/256th of a cycle
- Stores comprehensive data base of logged data
- Phasor diagram display
- kVA, kvar and kW per phase and total
- kVAh, kvarh and kWh per phase and total
- Neutral current calculated and displayed for three-phase
- Transformer K-Factor display (8220 and 8230)
- Transformer Factor K display (8333, 8336, 8436)
- Power Factor, displacement PF display
- Captures up to 51 transients
- Short term flicker display
- Phase unbalance (current and voltage)
- Harmonic Distortion (total and individual) from 1st to 50th
- Alarms, surges and sags
- Screen snapshot function captures waveforms or other information on the display
- Includes FREE DataView[®] software for configuring data retrieval, real-time display, analysis and report generation

Large Color Functional Displays

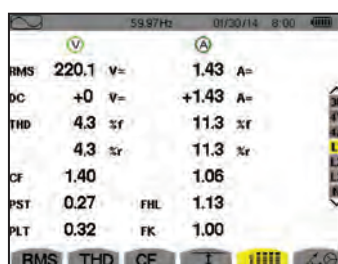
CONFIGURATION



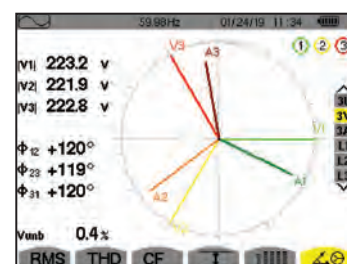
TRANSIENT MODE



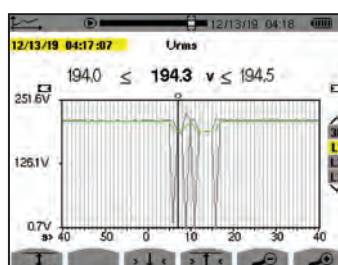
POWER AND ENERGY MODE



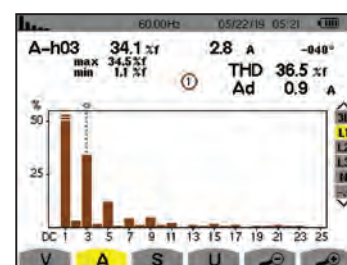
PHASOR DIAGRAM



RECORDING MODE



HARMONICS MODE



CATALOG NO.

DESCRIPTION

2136.10	PowerPad [®] III Model 8333 (no probes)
2136.11	PowerPad [®] III Model 8333 w/3 193-24-BK AmpFlex [®] Sensors
2136.12	PowerPad [®] III Model 8333 w/3 MN193-BK Probes
2136.30	PowerPad [®] III Model 8336 (no probes)
2136.31	PowerPad [®] III Model 8336 w/4 193-24-BK Sensors
2136.32	PowerPad [®] III Model 8336 w/4 MN193-BK Probes

Accessories/Replacement - available on website store from www.aemc.com. See page 119 for more optional current probes.

2133.73	Extra Large Classic Tool Bag
2140.28	AC/DC Current Probe Model MR193-BK
2140.32	AC Current Probe Model MN93-BK
2140.33	AC Current Probe Model SR193-BK
2140.34	AmpFlex [®] Sensor 24" Model 193-24-BK
2140.35	AmpFlex [®] Sensor 36" Model 193-36-BK
2140.36	AC Current Probe Model MN193-BK
2140.40	BNC Adapter for use with AC/DC Current Probe Model SL261 & Models 8220, 8333, 8335, 8336, 8435, 8436, & PEL Series
2140.44	Lead, 110ft (3m) black lead w/black alligator clip
2140.48	MiniFlex [®] Sensor 10" Model MA193-10-BK
2140.50	MiniFlex [®] Sensor 14" Model MA193-14-BK
2140.77	Adapter - Phase Power Adapter for use with PowerPad Models 8333 & 8336



cover closed

POWERPAD® III MODEL 8436

Supplied with an 8GB SD card for storing up to 2GB trend recordings



* Registration must take place within 30 days of purchase



cover closed

Four current and five voltage input terminals

SPECIFICATIONS

MODEL	8436
ELECTRICAL	
Sampling Frequency	256 samples/cycle
Data Storage	SD card for trend recording; Additional separate 12.5MB partitioned memory for snapshots, transient/inrush & alarms
Voltage (TRMS)	Phase-to-Phase: 2000V Phase-to-Neutral: 1000V Voltage Ratio: up to 500kV
Current (TRMS)	MN Clamp: 0 to 6A/120A or 0 to 240A SR Clamp: 0 to 1200A MR Clamp: 0 to 1000Aac, 0 to 1400Adc MiniFlex®: 10 to 3000A AmpFlex®: 10 to 10kA(1) SL261 Clamp: 50mA to 100Aac/dc J93: 50 to 3500Aac/dc Current Ratio: 10mA to 50kA
Frequency (Hz)	40 to 69Hz
Other Measurements	kW, kvar, kVA, PF, DPF, kWh, kvarh, kVAh, Factor K, Flicker
Harmonics	1st to 50th, Direction, Sequence
Power Source	9.6V NiMH rechargeable battery pack (included) 110V to 1000V DC to 400Hz
Battery Life	≥8 hours with display on; ≤35 hours with display off (record mode)
MECHANICAL	
Communication Port	Optically isolated USB
Display	¼ VGA (320 x 240) color LCD display with adjustable brightness & contrast
Dimensions	10.6 x 9.8 x 7.1" (270 x 250 x 180mm)
Weight	8.2lbs (3.7kg) with batteries
Safety Rating	EN 61010, 600V CAT IV(2), 1000V CAT III, Pollution Degree 2

(1) Crest factor at 6500=1.

(2) When used with SR193 or AmpFlex® probes.
600V CAT III with MN193 or MR193 probes.

FEATURES

- Measurement of TRMS voltages up to 1000Vrms AC/DC for two-, three-, four- or five-wire systems
- Measurement of TRMS currents up to 10,000Arms (sensor dependent)
- 65µs sample rate
- Direct measurement of neutral current & voltage
- Record and display trend data as fast as once per second for one month for up to 25 variables
- Transient detection on all V and I inputs (up to 210)
- Selectable PT and CT ratios
- Inrush current measurement
- Calculation of Crest Factors for V and A
- Calculation of Factor K for transformers
- Calculation of short and long term flicker and three-phase voltage unbalance
- Measures harmonics (referenced to the fundamental or RMS value) for voltage, current or power, up to 50th harmonic
- Displays of harmonic sequencing and direction and calculation of overall harmonics
- Real-time display of phasor diagrams including values and phase angles
- Measurement of active, reactive and apparent power per phase and their respective sum total
- Calculation of power factor, displacement power factor and tangent factor
- Recording, time stamping and characterization of disturbance (swells, sags and interruptions, exceedence of power and harmonic thresholds)
- 2GB Trend Recording memory; Alarm, Snapshot and Transient/Inrush memories are separate
- Measurement of energy kVAh, kvarh & kWh
- The Max and Min RMS measurements are calculated every half-period
- Includes DataView® software for configuring, real-time display, analysis and report generation

KIT OPTION INCLUDES

8436 KIT

Cat. #2136.44

Extra large tool bag, accessory pouch, 5ft USB cable, five 10ft black voltage leads with alligator clips, 110V US power cord, line power adapter 110-1000V DC to 400Hz, four water-tight AmpFlex® 196A-24-BK, NiMH battery, SD card, twelve color-coded input ID markers, quick start guide, and a USB drive containing DataView® software and user manual.



POWER QUALITY ANALYZERS, METERS & LOGGERS

THREE-PHASE POWER QUALITY ANALYZER

Large Color Functional Displays

INSTALLATION OF THE LEADS AND CURRENT SENSORS

Color-coded ID markers are supplied with the PowerPad® III to identify the leads and input terminals.



The voltage and current inputs, as well as the power cord connection are constructed with screw on, watertight connectors rated to IP67.



Cat. #2140.73
Lead & Alligator Clip



Cat. #5000.63
Power Cord



Cat. #2140.75
(For Cat. #2136.44 only)
AmpFlex® Sensor

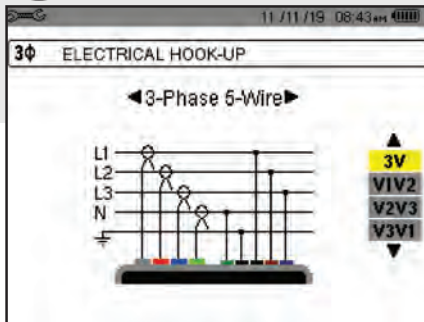


Cat. #5000.89
Line Power Adapter

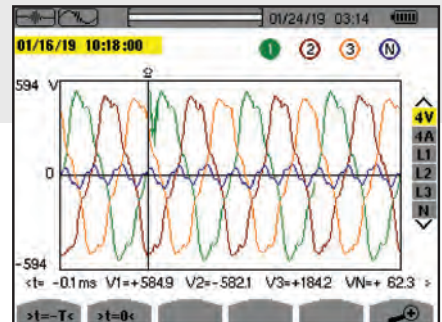


Cat. #2137.82 (Optional)
Pole Mounting Kit

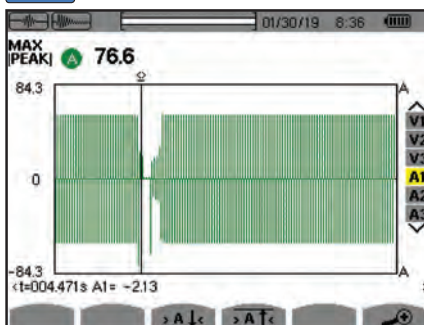
Configuration



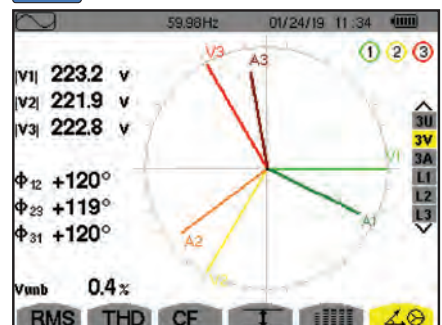
Transient Mode



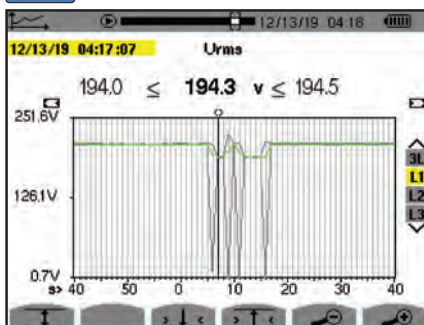
Inrush Peak



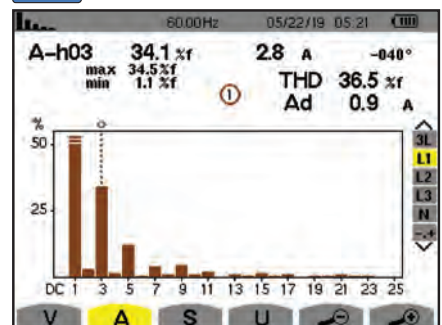
Phasor Diagram



Trend Analysis



Harmonics Mode



CATALOG NO.	DESCRIPTION
2136.43	PowerPad® III Model 8436 (No Sensors - Waterproof IP67)
2136.44	PowerPad® III Model 8436 w/4 196A-24-BK (AmpFlex® - Waterproof IP67)
Accessories and Replacement Parts (Optional)	
2133.73	Extra Large Classic Tool Bag
2137.82	Pole Mounting Kit
2140.19	Replacement – Battery 9.6V NiMH
2140.45	Replacement – Set of 12, Color-coded Input ID Markers
2140.73	Lead – One 10ft (3M) Black Lead (Waterproof cap) [Rated 1000V CATIV] & one Black Alligator Clip (Rated 1000V CAT IV, 15A,UL)
2140.75	AmpFlex® Sensor 24" (waterproof - IP67) Model 196A-24-BK
5000.43	Probe - Set of 2, Color-coded (Red/Black) Magnetized Voltage Probes [Rated 600V CATIV, 1000V CATIII]
5000.63	Power Cord 110V for use only with Models 8435 & 8436
5000.77	Cable Reeling Box
5000.89	Line Power Adapter 110-1000V DC to 400Hz (Replacement - for use only with Model 8436)

POWER QUALITY ANALYZERS, METERS & LOGGERS




OPTIONAL ACCESSORIES

SENSOR TYPE	CURRENT RANGE	ACCURACY (TYPICAL)	TYPICAL ERROR ON Φ AT 50/60HZ	MAX CONDUCTOR SIZE	USED WITH MODEL	LIMITED RANGE IF USED WITH MODEL	CATALOG NUMBER
MiniFlex® MA193-BK*  10" or 14" sensor	100mA to 3000Aac	±1%	0°	2.75" (70mm)	PEL 102 PEL 103 PEL 105 8333 8336	8220 8230	2140.48 (10" sensor)
							2140.50 (13.93" sensor)
MR193-BK  Battery operated	1 to 1000Aac 1 to 1300Adc	±2.5%	-0.80°	1.6" (41mm)	8220 8230 PEL 102 PEL 103 PEL 105 8333 8336	N/A	2140.28
SR193-BK 	1 to 1200Aac	±0.3%	0.2°	2.05" (52mm)	8220 8230 PEL 102 PEL 103 PEL 105 8333 8336	N/A	2140.33
AmpFlex® 193-BK*  24" or 36" sensor	100mA to 12,000Aac	±1%	0°	7.64" (190mm) or 11.46" (290mm)	PEL 102 PEL 103 PEL 105 8333 8336	8220 8230	2140.34 (24" sensor)
							2140.35 (36" sensor)
AmpFlex® 196-24-BK*  Waterproof - 24" sensor IP67	100mA to 12,000Aac	±2%	0°	5.73" (145mm)	PEL 105 8436	N/A	2140.75 (24" sensor)

*Maximum current reduced by a factor of 2 for 400Hz fundamental frequency.
 All current sensors can be used with Models PEL 105, 8435 and 8436.
 However, only the 196A-24-BK flexible sensors are waterproof.

POWER QUALITY ANALYZERS, METERS & LOGGERS

OPTIONAL ACCESSORIES

SENSOR TYPE	CURRENT RANGE		ACCURACY (TYPICAL)	TYPICAL ERROR ON AT 50/60HZ	MAX CONDUCTOR SIZE	USED WITH MODEL	LIMITED RANGE IF USED WITH MODEL	CATALOG NUMBER
MN93-BK 	0.5 to 240Aac		±1%	0.8°	0.78" (20mm)	PEL 102 PEL 103 PEL 105 8333 8336	8220 8230	2140.32
MN193-BK 	100A	200mA to 120Aac	±1%	0.75°	0.78" (20mm)	8220 8230 PEL 102 PEL 103 PEL 105 8333 8336	N/A	2140.36
	5A	5mA to 6Aac	±1%	1.7°				
SL261 	100A	5 to 100Aac/dc	±4%	±0.5°	0.46" (11.8mm)	8220 8230 PEL 102 PEL 103 PEL 105 8333 8336	N/A	1201.51
	10A	50mA to 10Aac/dc	±3%	±1°				

All current sensors can be used with models PEL 105, 8435 and 8436.
However, only the 196A-24-BK flexible sensors are waterproof.

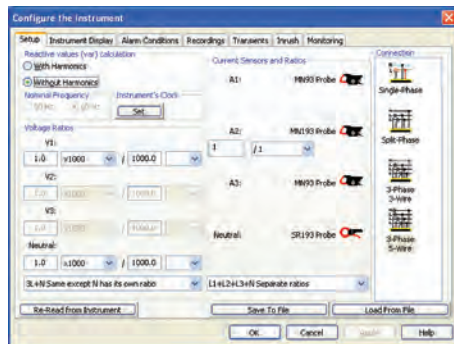
CATALOG NO.	DESCRIPTION
Accessories/Replacement - available on website store from www.aemc.com	
1201.51	AC/DC Current Probe Model SL261 (BNC)
2137.77	Adapter - Power Adapter PEL 102 & PEL 103 only
2140.28	AC/DC Current Probe Model MR193-BK
2140.32	AC Current Probe Model MN93-BK
2140.33	AC Current Probe Model SR193-BK
2140.34	AmpFlex® Sensor 24" Model 193-24-BK
2140.35	AmpFlex® Sensor 36" Model 193-36-BK
2140.36	AC Current Probe Model MN193-BK
2140.37	Adapter - US 110V Power Adapter (eliminates need for batteries) 8220 & 8230 only
2140.40	AC/DC Current Probe BNC Adapter Model SL261 only
2140.48	MiniFlex® Sensor 10" Model MA193-10-BK
2140.50	MiniFlex® Sensor 14" Model MA193-14-BK
2140.75	AmpFlex® Sensor 24" (watertight - IP67) Model 196A-24-BK
2140.77	Adapter - Phase Power Adapter for use with PowerPad Models 8333 & 8336

SOFTWARE FOR POWER QUALITY ANALYZERS & ENERGY LOGGERS

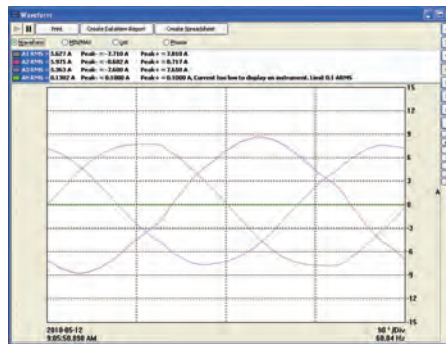
Configure all functions:

- Display and analyze real-time data on your PC
- Configure functions and parameters from your PC
- Customize views, templates and reports to your exact needs
- Create and store a complete library of configurations that can be uploaded as needed
- Zoom in and out and pan through sections of the graph to analyze the data
- Download, display and analyze recorded data
- Display waveforms, trend graphs, harmonic spectrums, text summaries, transients, event logs and stored alarms
- Print reports using standard or custom templates you design
- Free updates are available on our website www.aemc.com

TYPICAL DATAVIEW® FUNCTIONAL, DIGITAL & GRAPHICAL DISPLAYS



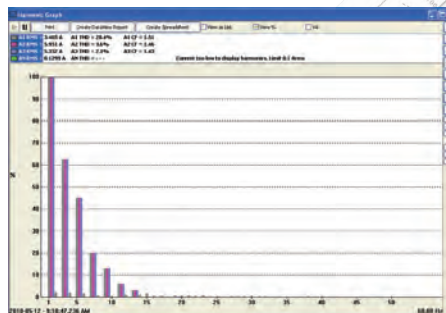
Clear and easy setup of all functions from one tabbed dialog box.



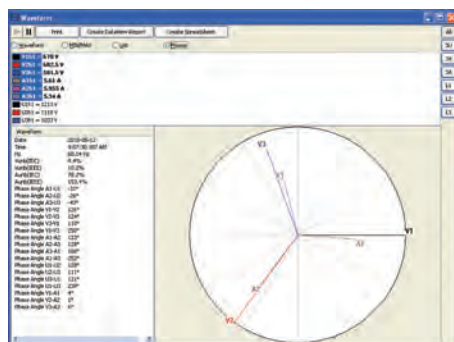
Display real-time waveforms by phase, parameter or total.

Harmonic	V	I	P
0	120.0	0.0	0.0
1	120.0	0.0	0.0
2	120.0	0.0	0.0
3	120.0	0.0	0.0
4	120.0	0.0	0.0
5	120.0	0.0	0.0
6	120.0	0.0	0.0
7	120.0	0.0	0.0
8	120.0	0.0	0.0
9	120.0	0.0	0.0
10	120.0	0.0	0.0
11	120.0	0.0	0.0
12	120.0	0.0	0.0
13	120.0	0.0	0.0
14	120.0	0.0	0.0
15	120.0	0.0	0.0
16	120.0	0.0	0.0
17	120.0	0.0	0.0
18	120.0	0.0	0.0
19	120.0	0.0	0.0
20	120.0	0.0	0.0
21	120.0	0.0	0.0
22	120.0	0.0	0.0
23	120.0	0.0	0.0
24	120.0	0.0	0.0
25	120.0	0.0	0.0
26	120.0	0.0	0.0
27	120.0	0.0	0.0
28	120.0	0.0	0.0
29	120.0	0.0	0.0
30	120.0	0.0	0.0
31	120.0	0.0	0.0
32	120.0	0.0	0.0
33	120.0	0.0	0.0
34	120.0	0.0	0.0
35	120.0	0.0	0.0
36	120.0	0.0	0.0
37	120.0	0.0	0.0
38	120.0	0.0	0.0
39	120.0	0.0	0.0
40	120.0	0.0	0.0
41	120.0	0.0	0.0
42	120.0	0.0	0.0
43	120.0	0.0	0.0
44	120.0	0.0	0.0
45	120.0	0.0	0.0
46	120.0	0.0	0.0
47	120.0	0.0	0.0
48	120.0	0.0	0.0
49	120.0	0.0	0.0
50	120.0	0.0	0.0

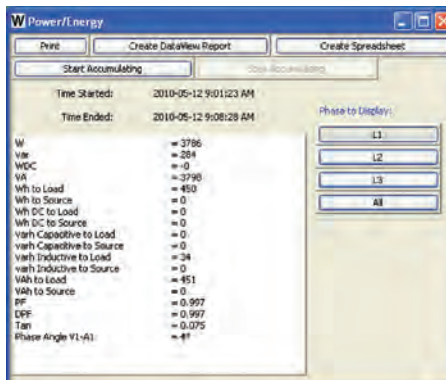
Display harmonics in a text table from harmonic 0 (DC) through the 50th.



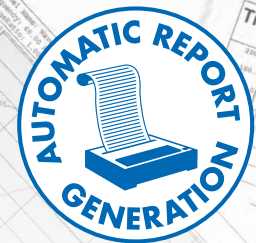
Display all harmonics from 1st to 50th in bar graph form for voltage, current and power.



Display harmonics in a text table from harmonic 0 (DC) through the 50th.



Display all harmonics from 1st to 50th in bargraph form for voltage, current and power.



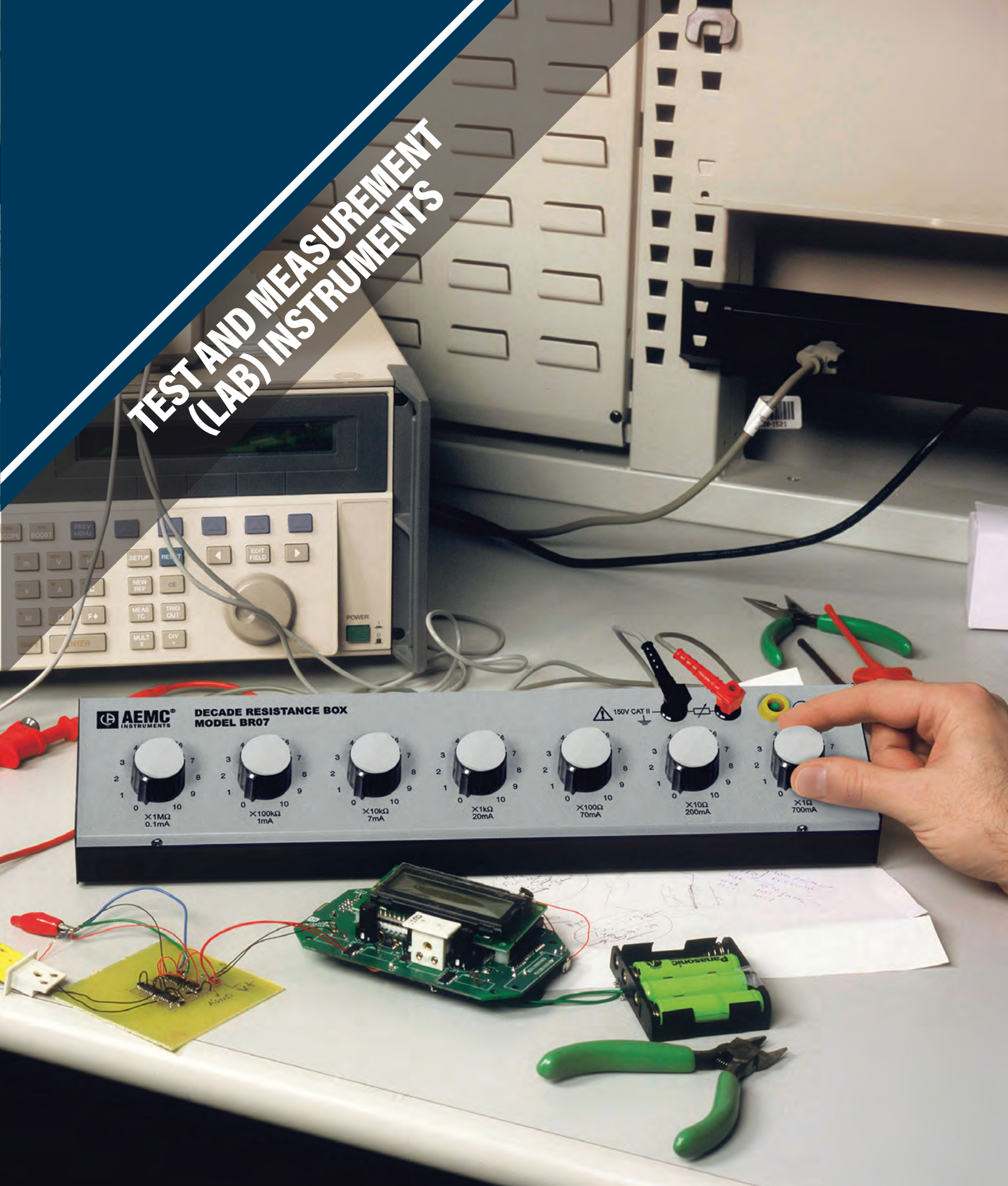
POWER QUALITY ANALYZERS, METERS & LOGGERS

SELECTION CHART

AEMC MODEL NUMBER	AEMC CATALOG NUMBER	INPUT TERMINALS	CHANNELS	RMS VOLTAGE MAX PHASE-TO-NEUTRAL	RMS VOLTAGE MAX PHASE-TO-PHASE	PEAK VOLTAGE MAX PHASE-TO-NEUTRAL	PEAK VOLTAGE MAX PHASE-TO-PHASE	DC VOLTAGE MAX	AC CURRENT MAX (PROBE DEPENDENT)	DC CURRENT MAX (PROBE DEPENDENT)	RATIOS VOLT	RATIOS AMPERE
8220	2130.90	1V/1A	1V/1A	600Vrms	660Vrms	850Vpk	935Vpk	600Vdc	6500Aac	1400Adc	Yes	No
8333	2136.10	4V/3I	3V/4I	1000Vrms	2000Vrms	1414Vpk	2828Vpk	1200Vdc	10,000Aac	5000Adc	Yes	Yes
8336	2136.30	5V/4I	4V/4I	1000Vrms	2000Vrms	1414Vpk	2828Vpk	1200Vdc	10,000Aac	5000Adc	Yes	Yes
PEL 102	213751	4V/3I	3V/3I	1000Vrms	1700Vrms	1414Vpk	2400Vpk	1000Vdc	10,000Aac	5000Adc	Yes	Yes
PEL 103	213752	4V/3I	3V/3I	1000Vrms	1700Vrms	1414Vpk	2400Vpk	1000Vdc	10,000Aac	5000Adc	Yes	Yes
PEL 105	213757	4V/3I	3V/3I	1000Vrms	1000Vrms	1414Vpk	2400Vpk	1000Vdc	10,000Aac	5000Adc	Yes	Yes

AEMC MODEL NUMBER	AEMC CATALOG NUMBER	DISTRIBUTION SYSTEMS	PHASE ROTATION	WAVEFORM MODE	TRANSIENT MODE	TRUE INRUSH MODE/TYPE/ DURATION	ALARM MODE	SNAPSHOT MODE	HARMONIC MODE	TYPE LCD	POWER SOURCE
8220	2130.90	1P-2W 3P-3W DB	Yes, 2-Wire Method	Yes, Realtime through [®] DataView (recordable to PC)	No	Yes (RMS) duration: unspecified	No	Yes (99)	Yes	Backlit LCD	6 x AA batteries or external adapter
8333	2136.10	1P-2W, 2P-3W, 3P-3W, 3P-4W	Yes	Yes	Yes	No	10 types/ up to 2 active/ 4662 recorded	Yes (12)	Yes	TFT - 5.7" diagonal 320 x 240 resolution	External adapter with internal NiMH battery pack
8336	2136.30	1P-2W, 1P-3W, 2P-2W, 2P-3W, 2P-4W, 3P-3W, 3P-4W, 3P-5W	Yes	Yes	Yes	Yes (RMS+PEAK & RMS) up to 1 & 10 mins	40 types/ up to 7 active/ 16,362 recorded	Yes (50)	Yes	TFT - 5.7" diagonal 320 x 240 resolution	External adapter with internal NiMH battery pack
PEL 102	213751	1P-2W, 1P-3W, 3P-3W D2, 3P-3W O2, 3P-3W Y2, 3P-3W D3, 3P-3W O3, 3P-3W Y, 3P- 3W DB, 3P-4W Y, 3P-4W YB, 3P-4W Y2 1/2, 3P-4W D, 3P-4WOD, DC-2W DC-3W, DC-4W	Yes	No	No	No	No	No	Yes	None	External adapter with internal NiMH battery pack
PEL 103	213752		Yes	No	No	No	No	No	Yes	Monochrome LCD	
PEL 105	213757		Yes	No	No	No	No	No	Yes		Power phase input or external adapter with internal NiMH battery pack

TEST AND MEASUREMENT (LAB) INSTRUMENTS



SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

MODELS AX502 & AX503

Rugged and accurate power supplies can handle a direct short without causing damage



SPECIFICATIONS

MODELS	AX502	AX503
Number of Outputs	2	3
VOLTAGE		
Output 1 & 2	0 to 30Vdc	0 to 30VDC
Output 3 (No display)	-	2.7 to 5.5VDC
Display Resolution	100mV	100mV
Basic Accuracy	±0.5% of Reading ±1ct	±0.5% of Reading ±1ct
Residual Ripple	±1mVrms	±1mVrms
LINE REGULATION		
±10% Line Voltage	±0.03% of Reading ±2mV	
LOAD REGULATION		
0 to 2.5A	±0.02% of Reading ±5mV	
0 to 5A	-	±0.2% Reading ±10mV
CURRENT		
Output 1 & 2	0 to 2.5A	0 to 2.5A
Output 3	-	5A max (no adjustment)
Resolution	10mA	10mA
Basic Accuracy	±0.5% of Reading ±1ct	±0.5% of Reading ±1ct
Limit Indicator	LED, Outputs 1 and 2	LED, Outputs 1, 2 and 3
Short-circuit Protection	Electronic current limitation with voltage shutdown	
Overheating Protection	Thermal protection	
OUTPUT COUPLING		
Tracking	Output 1: Master/Output 2: Slave Proportional Slave Tracking (0 to 100% of Master)	
Series Mode	0 to 60VDC/0 to 2.5A	
Parallel Mode	0 to 30VDC/0 to 5A	
Power Source	110V, 50/60Hz (220V optional)	



FEATURES

- Dual 0 to 30Vdc/0 to 2.5A outputs
- 5.5V/5A output (Model AX503)
- Series and parallel operation permit 0 to 60V or 0 to 5A output
- Low noise (<1mV ripple) and stable linear technology for clean output
- High efficiency toroidal transformers: no fan and low electromagnetic emissions
- Active protection against overloads, short circuits and overheating
- Unique variable tracking mode for master/slave operation: slave or master track proportionally to the original setting
- Simultaneous display of voltage and current
- Highly visible green (V) and red (A) LED displays

ACCESSORIES

Optional lead set includes two color-coded leads, one ground lead (stripped), two alligator clips and two grip probes. Catalog #211778



CATALOG NO.	DESCRIPTION
2130.06	DC Power Supply Model AX502 (110V, 60Hz, US Plug)
2130.07	DC Power Supply Model AX503 (110V, 60Hz, US Plug)
Accessories/Replacement - available on website store from www.aemc.com	
2117.78	Lead - Set of 3, (2 Color-coded Safety Leads, 1 Ground Lead, 2 Color-coded Alligator Clips and 2 Color-coded Grip Probes) for Power Supply Models AX501-AX503

MODELS BR07 & BC05

Bench top decade boxes that stand up to the task



SPECIFICATIONS

TYPES	Multiplying factor in Ω						
	1	10	100	1k	10k	100k	1M
BR07	+	+	+	+	+	+	+
Accuracy	1% $\pm 10m\Omega$	1% $\pm 10m\Omega$	1% $\pm 10m\Omega$	1% $\pm 10m\Omega$	1% $\pm 10m\Omega$	1% $\pm 10m\Omega$	1% $\pm 10m\Omega$
Max current mADC	700mA	200mA	70mA	20mA	7mA	1mA	0.1mA

TYPE	Multiplying factor in nF				
	0.1	1	10	100	1k
BC05	+	+	+	+	+

Operating Temperature:	14° to 131°F (-10° to + 55°C)
Storage Temperature:	-40° to 158°F (-40° to + 70°C)
Relative Humidity:	20% < RH < 96%
Altitude:	2000m
Dimensions - BC05:	12 x 3.4 x 3" (310 x 86 x 76mm)
Weight - BC05:	2.2 lbs (1kg)
Dimensions - BR07:	16 x 3.4 x 3" (410 x 86 x 76mm)
Weight - BR07:	3 lbs (1.4kg)
Watertightness (as per EN 60529 Ed. 92):	Protection index IP 40
Rated Voltage:	150V
Installation Category II - Pollution level 2	

FEATURES

RESISTANCE DECADE BOX MODEL BR07

- Resistance box: 7 decades covering a range from 1 Ω to 11.11111M Ω
- 11-position switches
- Output on safety sockets \varnothing 4mm
- Accuracy: 1% $\pm 10m\Omega$ on all ranges

CAPACITANCE DECADE BOX MODEL BC05

- Capacitance box with 5 decades; 11 position switches
- Total capacitance 11.111 μ F
- Very high insulation
- Output on safety sockets \varnothing 4mm
- The residual capacitance is approximately 25 pF
- Accuracy: 3% on all the ranges (residual capacitance deducted)

CATALOG NO.	DESCRIPTION
2131.25	Resistance Decade Box Model BR07 (x1 Ω , x10 Ω , x100 Ω , x1k Ω , x10k Ω , x100k Ω , x1M Ω , 1%)
2131.26	Capacitance Decade Box Model BC05 (x0, 1nF, x1nF, x10nF, x100nF, x1knF, 3%)
Accessories/Replacement - available on website store from www.aemc.com	
2131.35	Lead - Replacement, 6ft Safety Lead, 4mm Female to Female for use with Decade Boxes

TEST AND MEASUREMENT (LAB) INSTRUMENTS

MULTIFUNCTION INSTALLATION TESTERS

MODELS C.A 6116N & C.A 6117

Safety for your electrical installations and high performance with these unique instruments



SPECIFICATIONS

MODELS	C.A 6116N	C.A 6117
CONTINUITY / RESISTANCE		
I Rated/Range/Resolution	I > 200mA/39.99Ω/0.01Ω/±(1.5% of measurement + 2cts) 12mA/39.99Ω & 399.9Ω/0.01 & 0.1Ω/±(1.5% of measurement + 5cts) with beep	
Range/Resolution/Accuracy	4kΩ/1Ω/±(1.5% of measurement + 5cts) 40 to 400kΩ/10 to 100Ω/±(1.5% of measurement + 2cts)	
INSULATION		
Rated Voltage	50/100/250/500/1000Vdc	
Range/Resolution/Accuracy	0.01MΩ to 2GΩ/10kΩ to 1MΩ/±(5% of measurement + 3cts)	
Short-Circuit Current	≤ 3mA	
GROUND RESISTANCE		
3-Point		
Range/Resolution/Accuracy	0.50 to 40Ω/0.01Ω/±(2% of measurement + 10cts) 40Ω to 15kΩ/0.1 to 1Ω/±(2% of measurement + 2cts) 15 to 40kΩ/10Ω/±(10% of measurement + 2cts)	
Ufk	Complies with SEV 3569	
1-Point Selective		
Range/Resolution/Accuracy	0.20 to 39.99Ω – 40 to 399.9Ω/0.01 to 0.1Ω/±(10% of measurement + 10cts) (ISel via clamp)	
LOOP IMPEDANCE (ZS (L-PE) & ZI (L-N OR L-L)) / 1-POINT LIVE GROUND		
Live Ground		
Installation Voltage/Frequency	90 to 500V/15.8 to 175Hz – 45 to 65Hz	
HIGH-CURRENT MODE WITH TRIP ZS (L-PE) & ZI (L-N OR L-L)		
Range/Resolution/Accuracy	Max. test current: 75 A (0.050) 0.100 to 0.5Ω/0.001Ω/±(10% of measurement + 20cts); 0.5 to 3.999Ω/0.001Ω/±(5% of measurement + 20cts) 3.999 to 39.99Ω/0.01Ω/±(5% of measurement + 2cts); 39.99 to 399.99Ω/0.1Ω/±(5% of measurement + 2cts)	
No TRIP Mode (Zs (L-PE) only)	Test current: 6mA – 9mA – 12mA (as required) 0.20 to 0.99Ω/0.01Ω/±(15% of measurement + 10cts) 1.00 to 1.99Ω/0.01Ω/±(15% of measurement + 3cts) 2.00 to 39.99Ω/0.01Ω/±(10% of measurement + 3cts) 40.00 to 399.9Ω/0.1Ω/±(5% of measurement + 2cts) 400 to 3999Ω/1Ω /±(5% of measurement + 2cts)	
Calculation of Ik Short-Circuit Current (PFC (Zs)), I Sc PSCC (Zi)	Fault current and short-circuit current: 0.1A to 20kA	
Integrated Fuse Table	-	Yes
Voltage Drop ΔV% (Zi)	-	-40% to 40%
Others	Measurement of the resistive and inductive components of the Zs and Zi impedances	
AC & A-TYPE RCDS		
Installation Voltage/Frequency	90 to 500V/15.8 to 175Hz and 45 to 65Hz	
IΔn	10/30/100/300/500/650/1000mA (90 to 280V) or variable – 10/30/100/300/500mA (280 to 550V) or variable Ramp and pulse test	
No TRIP Test	at ½ IΔn – Duration: 1000 or 2000ms	
Ramp Mode	0.2 to 0.5 x IΔn (Uf)/0.3 x IΔn to 1.06 x IΔn in increments of 3.3% x IΔn	
TRIP Time Measurement		
Range/Resolution/Accuracy	0.50 to 40Ω/0.01Ω/±(2% of measurement + 10cts) 40Ω to 15kΩ/0.1 to 1Ω/±(2% of measurement + 2cts) 15 to 40kΩ/10Ω/±(10% of measurement + 2cts)	
B-TYPE RCDS		
Installation Voltage/Frequency	-	90 to 275V/15.8 to 175Hz and 45 to 65Hz
IΔn: Ramp/Pulse 2 x IΔn Pulse 4 x IΔn	-	10/30/100/300/500mA and 10/30/100mA with pulse 4IΔn Duration: 150ms with 4 x IΔn or 300ms with 2 x IΔn
Test in Ramp Mode	-	0.2 x IΔn to 2.2 x IΔn
TRIP Test: 2 x IΔn & 4 x IΔn	-	IΔN ≤ 200mA: 2.2 x 2 x IΔn IΔN > 200mA: 1.1 x 2 x IΔn IΔN ≤ 100mA: 2.2 x 4 x IΔn

TEST AND MEASUREMENT (LAB) INSTRUMENTS

MULTIFUNCTION INSTALLATION TESTERS

OTHER MEASUREMENTS

Current by Clamps C177	5.0mA to 199.9A
Current by Clamp MN77	(1mA*) 5.0mA to 19.99A
Voltage	0 to 550VAC/dc and 15.8 to 500Hz
Frequency	10 to 500Hz
Phase Rotation	20 to 500VAC
Active Power	0 to 110kW single-phase - 0 to 330kW three-phase Simultaneous display of voltage and current waveforms
Harmonics	Voltage and current/up to 50 th order/THD-F/THD-R

GENERAL SPECIFICATIONS

Display	Large 5.7" backlit graphic color, LCD screen, 320 x 240 points
Storage/Communication	via USB for data transfer and report creation
Power Supply (rechargeable battery)	Lithium-ion 10.8V rated 5.8 Ah
Battery Life	up to 30 hours
Dimensions/Weight	11.02 x 7.48 x 5.04" (280 x 190 x 128mm)/ 4.85lbs (2.2kg)
Protection	IP53/IK04
EMC	IEC 61326-1
Electrical Safety	IEC 61010 -1/600V CAT III & 300V CAT IV/IEC 61557

*If a voltage is connected to the instrument



FEATURES

- Testing according to the international standards: IEC 60364-6, NF C 15-100, VDE 100, XP C 16-600, etc.
- Simple, reliable connection thanks to the contextual help for each function, including all the connection diagrams
- Suitable for all neutral systems (TT, TN, IT)
- Type-B RCD testing available (Model C.A 6117)
- Li-Ion battery for a longer battery life
- Measurements: voltage, current via clamp, power, waveforms and harmonics.
- Measurement of voltage drop for correct sizing of conductor diameters
- Loop measurement with 1mΩ resolution
- 3-level storage
- Includes FREE DataView® analysis software for programming, downloading, storing and report generation of test data
- Integrated fuse table for quick reading of the results on the instrument

PRODUCT INCLUDES

C.A 6116N & C.A 6117

carrying bag, US power cord and charger, Li-Ion battery pack, USB A/B cable, set of three 3-prong safety voltage leads, set of three test probes & set of three alligator clips (red/blue/green), set of two color-coded safety leads (red/black) 4mm straight plug, 3-prong US measurement cord, remote test probe, wrist strap, hands-free strap, and a USB drive with DataView® software and user manual.



CATALOG NO.	DESCRIPTION
2138.06	Multi-Function Installation Tester Model C.A 6116N (US) (Includes DataView® software)
2138.07	Multi-Function Installation Tester Model C.A 6117 (Includes DataView® software)
2138.10	Multi-Function Installation Tester Model C.A 6116N w/ CI77A Probe (US) (DataView® software)
2138.11	Multi-Function Installation Tester Model C.A 6117 w/ CI77A Probe (US) (DataView® software)



MODEL GX320

Cascade arrangement for simulating complex signals with 20MHz and integrated external frequency meter

SPECIFICATIONS

MODEL	GX320
INTERFACE	
Display	LCD 4.92 x 1.77" (125 x 45mm) – Adjustable brightness Display of frequency on 5 digits 0.79" (20mm) high
Commands	19 direct-access commands (9 backlit and adjustable) 1 Line Out On/Off key – 1 digital encoder wheel
Adjustment of Signal Parameters	Continuous by the encoder, automatic frequency and level ranges, selection of the increment digit (F,P,N...)
BNC Output Terminals	TTL, Sweep, Clock and Synch outputs
BNC Input Terminals	VCG, Gate, Clock and Synch inputs
CONTINUOUS SIGNAL GENERATION	
Frequency	0.001Hz to 20.000MHz (11 ranges)
Resolution/Accuracy	5-digit display – resolution from 1mHz to 1kHz according to frequency range, $\pm 20\text{ppm}$ for $F > 10\text{kHz}$, $\pm 30\text{ppm}$ for $F < 10\text{kHz}$
Amplitude	1mV to 20.0Vpp with open circuit in 3 automatic ranges – 3-digit Vpp or Vrms display
Flatness	$\pm 1\text{dB}$ up to 20MHz (specs. for level from 0.1Vpp to 20Vpp)
Vdc Offset	$\pm 10\text{Vdc}$ with open circuit – accuracy $\pm 5\%$ $\pm 5\text{mV}$
Waveforms	Sine/Triangle (max frequency 2MHz)/Square & "LOGIC"/TTL output
FREQUENCY	
Modes	LIN (linear) or LOG (logarithmic)
"INT" internal sweep	"Sawtooth" or "Triangle" mode Unlimited excursion between "F Start" & "F Stop" (256 steps) Sweep time adjustable from 10ms to 100s
"EXT" internal sweep	Sweep by signal < 15kHz, amplitude $\pm 10\text{V}$ VCF IN input impedance 10k Ω approx.
MODULATIONS	
Internal AM	Modulation by a sine signal with a frequency of 1kHz Modulation rate 20% or 80%
External AM	Modulation by a signal with a frequency < 15kHz
Internal FM	Modulation by a sine signal with a frequency of 1kHz
External FM	Modulation by a signal with a frequency < 15kHz
FUNCTIONS	
Shift K	FSK (Internal/External) = switching between F start & F stop PSK (Internal/External) = phase switching $\pm 180^\circ$
Burst	Internal External 1 to 65,535 impulsions pulse train period from 10ms to 100s 1 to 65,535 impulsions – Synch/Period by a TTL signal with a frequency < 200 kHz (VCG IN input)
Gate	Validation of the AC component of "Line Out" by a TTL signal with a frequency < 2MHz (GATE IN input)
Synch	Maximum frequency of signals generated 100kHz Adjustment of phase shift across $\pm 180^\circ$ (resolution 1°)
EXTERNAL FREQUENCYMETER	
Measurement Range	5Hz to 100MHz
Accuracy	$\pm 0.05\% + 1$ count
Max Acceptable Voltage	300VRMS
GENERAL	
Configuration Memories	Storage/Recall of 15 complete instrument configurations
Communication Interface	"USB A/B" link for the programmable versions and Ethernet interface
Power Supply	115V $\pm 10\%$ or 230V $\pm 10\%$; 50/60Hz – 20VA max. – Internal selection
Safety/EMC	Safety as per IEC 61010-1 – EMC as per EN 61326-1



FEATURES

- Frequency range from 20MHz
- DDS technology and frequency accuracy of $\pm 20\text{ppm}$
- Frequency adjustment stable to the nearest digit
- "LOGIC signal" function for direct adjustment of high and low levels
- LIN or LOG sweep, triangle or sawtooth, with adjustable duration from 10ms to 100s
- Internal and external AM & FM modulation, GATE, BURST, FSK and PSK functions
- Adjustable phase synchronization of several generators in a cascade arrangement
- 100MHz frequency meter
- Storage of 15 complete instrument configurations
- Versions programmable via USB link and Ethernet with standard SCPI protocol

CATALOG NO. DESCRIPTION

2138.02 Function Generator Model GX320 (DDS, 20MHz, USB)



THERMAL IMAGING CAMERAS

SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

THERMAL IMAGING CAMERAS

INFRARED CAMERA

MODEL 1950 & 1954

Versatile tool for performing infrared thermography
Indispensable means for ensuring safety in industrial application

SPECIFICATIONS

MODEL	1950	1954
IR DETECTOR		
Type	UFPA microbolometer	
Spectral Range	8 ~14μm	
Resolution	80 x 80	120 x 160
IMAGING PERFORMANCE		
NETD	80mK @ 86°F (30°C)	
Frequency	9Hz	
Field of View	20° x 20°	28° x 38°
IFOV (spatial resolution)	4.4mrad	4.1mrad
Minimal Focal Distance	1.3 ft (0.4m), fixed focus	0.98ft (0.3m), fixed focus
FOCUSING		
Adjustment	Fixed	
VISUAL IMAGE		
Resolution	240 x 320 pixels	480 x 640 pixels
Minimal Focal Distance	2" (0.05cm), fixed focus	
PRESENTATION OF IMAGES		
Images Displayed	Infrared image, visual image with automatic parallax compensation. Merging of both images is possible with included PC software	
LCD Screen	2.8" (7.1cm)	
Display Colors	Pseudo-colors, multiple palettes	
FUNCTIONS		
Image Freezing	Animated or fixed image	
Data Storage	2GB Micro SD card included (approx. 4,000 images). Replaceable with up to 32 GB SD card	
MEASUREMENT		
Temperature Range	-4°F to 482°F (-20°C to 250°C)	
Accuracy	±3.6°F (±2°C) or ±2% of reading	
ANALYSIS FUNCTIONS		
Measurement Tools	Manual cursor, automatic detection, min/max/avg on adjustable area, temperature profile, and isotherm	
Adjustment	Automatic or manual adjustment palette min-max	
Parameter Settings	Emissivity, environmental temperature, distance, relative humidity	
Isotherm Display	Color display of a temperature range adjustable by the user	
Voice Recordings	via Bluetooth headset (included)	
ENVIRONMENTAL SPECIFICATIONS		
Operating Temperature	-4° to 122°F (-15° to 50°C); 95% RH	
Storage Temperature	-40° to 158°F (-40° to 70°C)	
Humidity	10% to 95%	
Drop Resistance	6' (2m) on all sides	
Impact Resistance	25G	
Vibration Resistance	2G	
Ingress Protection	IP54	
LASER POINTER		
Type	-	Class 2 645-655nm power: 1mW
GENERAL SPECIFICATIONS		
Start Up	Less than 3 seconds	Less than 10 seconds
Safety	EN 61326-1: 2006, EN 61010-1 Ed.02	
Power Supply	4 x AA NiMH rechargeable batteries with external charger included	
Laser	-	Class 2
Laser Output	-	< 1mW
Laser Wavelength	-	645-655nm
Software	CAmReport® software included, for data analysis and report generation	
Tripod Mounting	1/4" insert on camera (tripod not included)	
Battery Life	13.30 hrs typical (11 hours minimum)	9 hrs typical (7 hours minimum)
Dimensions/Weight	8.86 x 4.92 x 3.27" (225 x 125 x 83mm) / 24.7oz (700g) with rechargeable batteries	
Bluetooth Product Communication	407, 607 clamps and DMMs MTX3292-BT and MTX3293-BT	407, 607 clamps, DMMs MTX3292-BT and MTX3293-BT and logger models 1110, 1200 and 1800 Series



MODEL 1954

Thermo Resolution
120 x 160

MODEL 1950

Thermo Resolution
80 x 80



FEATURES

- Focus-free with 20°x 20° field of view (model 1950) and 28°x 38° field of view (model 1954)
- Automatic brightness control
- Exceptionally long battery life
- Quick startup in 3 to 10 seconds (model dependent)
- User configurable emissivity table
- User configurable cursor and trigger functions
- User selectable color palette
- Captures thermal and real image simultaneously
- Verbally record your comments directly to the image using included Bluetooth headset
- Wirelessly connect to AEMC® Clamp-on Meters and Multimeters, and environmental meters (model dependent) and record their measurements simultaneously with your thermograms
- Comprehensive CAmReport® software included that offers all the necessary functions for reliable analysis of the measurement results and report generation

REPLACEMENT ACCESSORIES

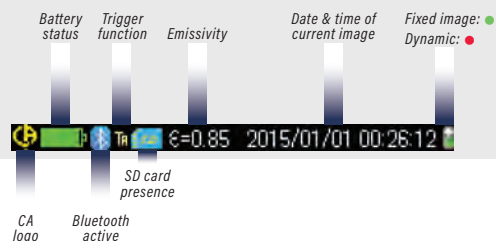
Carrying Case with Foam Insert
Cat. #2121.60

Cable - USB (Type A to 5-pin Mini-B)
Cat. #2126.49



Display & Menu Contents

STATUS BAR



FUNCTION KEYS

Linked to selected menu choice or camera image



MENU

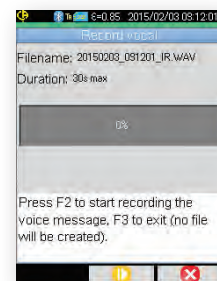
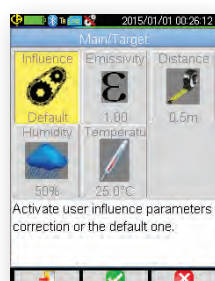
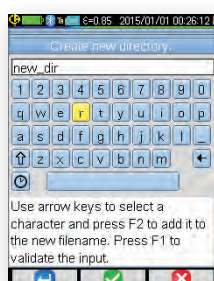
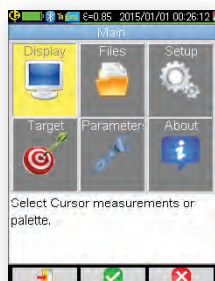
Selectable using navigation keys



CONTEXTUAL HELP

This display area updates based on the menu item selected

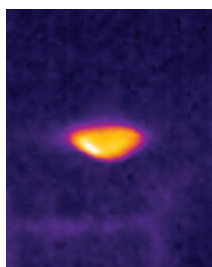
A comprehensive set of easy access menus are available on screen. You can use the function and navigation keys to easily configure the camera for your specific needs. Trigger functions can be programmed, color palettes can be selected, cursor tools can be configured as well as environmental conditions including ambient temperature and humidity, distance and emissivity.



SELECTABLE CURSOR TOOLS

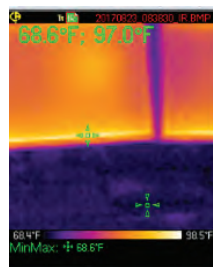
User programmable cursors provide a comprehensive set of options for evaluating thermal profiles

NONE



No cursor display, temperature evaluation is determined by color palette only.

MIN/MAX



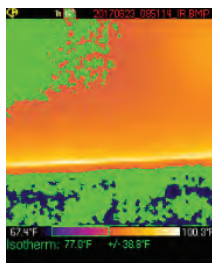
Automatically displays the cold and hot spot values at the Min and Max cursor positions.

POINT



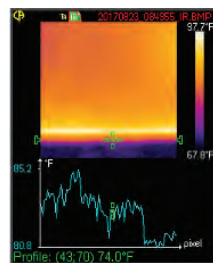
Displays the value at the cursor. Cursor is movable using the navigation keys.

ISOTHERM



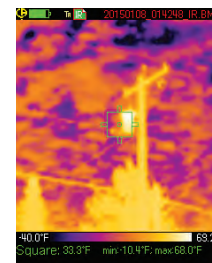
Displays points that fall in the same temperature range in the same color. User picks green, red or brown as the display color and defines the range and tolerance.

PROFILE



Displays the temperature profile of a horizontal line defined by the cursor. Cursor can be moved along the line to get an individual temperature.

SQUARE



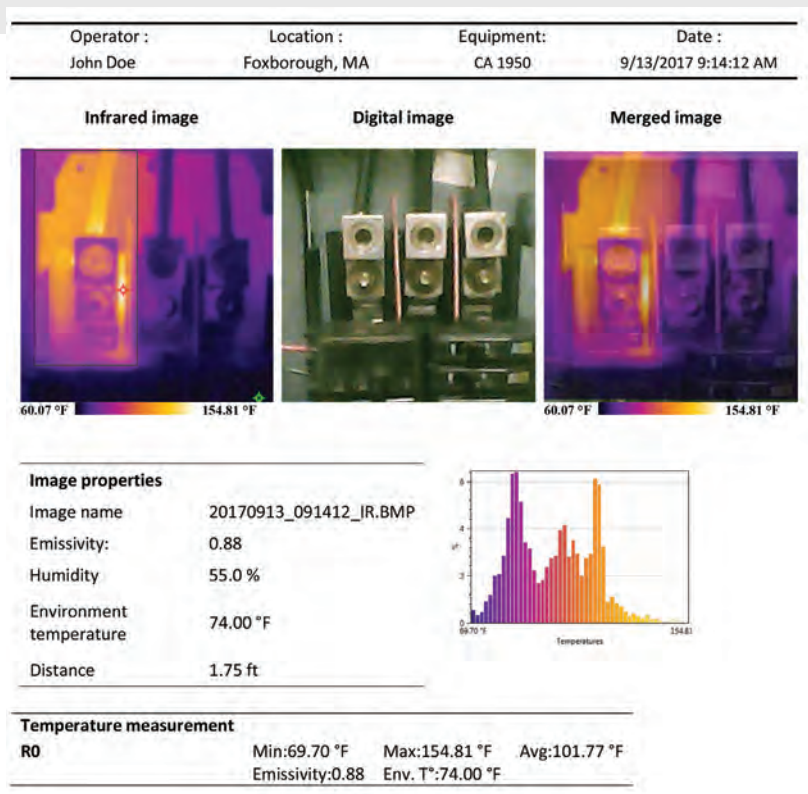
Displays the Min/Max and mean values within the box. Box size and location is user adjustable.

THERMAL IMAGING CAMERAS

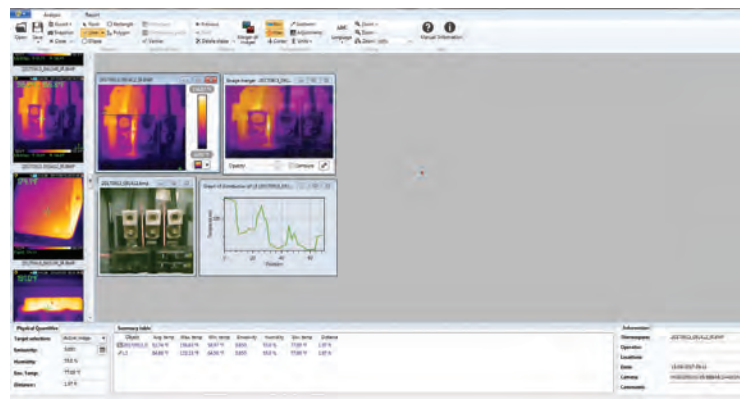
INFRARED CAMERA (CONTINUED)

CAMREPORT® SOFTWARE FOR ANALYZING THERMOGRAMS

This comprehensive software offers all the necessary functions for effective analysis of the measurement results and report generation



Report creation is automatic, using one of three available templates.
Reports can be exported in Word or PDF format.
This makes it simple to print and/or archive them.



Typical analysis tab screen

FEATURES

- Transfer measurements from your camera to the software by USB cable, or transportable SD card
- Drag-and-drop measurement images from the storage directory to the analysis window in the software
- Includes thermal and real images automatically
- Superimpose thermal images over real images for better visual analytical results
- Locate Min/Max and mean temperatures of the image or an area of the image
- User selectable color palette from seven different types
- Summary table automatically displays environmental parameters and statistical results of the measurement
- Include dictated audio comments into the report with the Bluetooth headset
- Includes multiple analytical tools for assessing thermal images
- Manually enter measurement analysis findings, site characteristics and operator information to your report.
- Add graphics such as logos to your reports
- Correct the measurement results using built-in or user configured emissivity tables
- Include multiple measurements in any report
- Save reports as a Word or PDF document

CATALOG NO.

DESCRIPTION

2121.40	Thermal Imaging IR Camera Model 1950 (Resolution 80 x 80)
2121.41	Thermal Imaging IR Camera Model 1954 (Resolution 120 x 160)



TRANSFORMER RATIONMETERS

SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

TRANSFORMER RATIONMETERS

QUICK TESTER MODEL 8505

Designed to check the basic integrity of power transformers and capacitors



SPECIFICATIONS

MODEL	8505
ELECTRICAL	
Short	<20Ω
Open	>20Ω
Transformer	>1mh
Capacitor	0.5μf to <1mf
Power Source	4 x 1.5V AA (LR6) Alkaline batteries (included)
Battery Life	More than 2500 ten second tests on a full charge
Low Battery Indicator	Red LED blinks; approximately 100 tests can be conducted when LED starts to blink
MECHANICAL	
Dimensions	7.2" x 3.65" x 1.26" (182.9 x 92.7 x 32mm) w/o leads
Weight (with battery)	14.4oz (408g)
Case	UL94
Vibration	IEC 68-2-6 (1.5mm, 10 to 55Hz)
Shock	IEC 68-2-6 (1.5mm, 10 to 55Hz)
Drop	IEC 68-2-32 (1m)
ENVIRONMENTAL	
Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	-4° to 140°F (-20° to 60°C)
Relative Humidity	0 to 85% @ 95°F (35°C), non-condensing
Altitude	2000m
SAFETY	
Safety Rating	EN61010-1; 50V CAT IV
Environmental	IP30

Reference Conditions: 23°C ±3°C, 30-50% RH, battery voltage: 4.5V ±10%.



FEATURES

- Checks coil continuity on single- and three-phase transformers
- Detects open or shorted coils and capacitors
- Detects switch open and closed positions
- Automatically identifies device as a transformer or capacitor
- Single button operation
- Bright LED indicators and buzzer for T and C
- Coiled captive test lead extends to 6ft each
- Test probe with 5.75" (146mm) shaft ideal for insertion into protective shroud to reach test point
- Multi-frequency source signals improves test reliability and accuracy
- Microprocessor based design for control, stability and repeatability
- Built-in self-test for inductance and capacitance
- Fuse protected
- Battery operated; more than 2500 tests on a full charge
- Low battery indicator begins to blink when capacity of ~100 tests remain

CATALOG NO.

DESCRIPTION

2136.51

Quick Tester Model 8505

DTR® MODEL 8510

Designed for on-site testing of power, potential and current transformers



cover closed



FEATURES

- Measures power transformers, VT/PTs and current transformer CT turns ratios
- Displays turn ratio, excitation current, winding polarity and % deviation from the nameplate values
- Universal voltage (90-240V supply, 50-60Hz) via external smart/fast battery charger; complete charge in less than 4 hours
- Two internal NiMH batteries provide up to 10 hours of continuous operation
- Tests performed by exciting the primary and reading the secondary; provides safer conditions for the operator
- Display warns of incorrect lead connection, reverse polarity, open and short circuits
- Easy connection and test setup; no calibration or balancing required
- Large dual display with adjustable contrast ensures clearer visibility in any lighting environment day or night
- Low battery indicator
- Includes 15 foot lead set and soft carrying bag
- Stores up to 10,000 test results in internal memory
- USB port facilitates configuring the instrument and downloading test results
- Includes FREE DataView® analysis software for programming, downloading, storing and report generation of test data
- N 61010-1; 50V CAT IV

SPECIFICATIONS

MODEL	DTR® 8510
VT/PT Ratio Range	Auto-Ranging 0.8000:1 to 8000:1
CT Ratio Range	Auto-Ranging 0.8000 to 1000.0
Accuracy*	Ratio <10 to 1: ±0.2% of Reading Ratio 0 to 1000 to 1: ±0.1% of Reading Ratio >1000 to 1: ±0.2% of Reading Ratio 5000 to 8000.0: ±0.25% of Reading
Excitation Signal	VT/PT Mode: 32Vrms maximum CT Mode: 0 to 1A, 0.1 to 4.5Vrms
Excitation Current Display	Range: 0 to 1000mA; Accuracy: ±2% of Reading ±2mA
Excitation Frequency	70Hz
Measurement Method	In accordance with ANSI/IEEE C57.12.90™-2006
Display	LCD 16 character, 2 line, large format, LED backlight, day/night visible
Languages Supported	English, Spanish, French, Italian, German, Portuguese
Communication	Optically isolated USB 2.0
Data Storage	Stores up to 10,000 complete measurements
Power Source	Two rechargeable 12V NiMH batteries (included)
External Charger	90/240V, 50/60Hz (smart charger)
Battery Life	Up to 10 hours continuous operation; May not be used while recharging; Low battery LED/LCD indication
Charging Time	<4 hours

*23°C ±5°C, 50 to 70% RH, full battery charge,
no external fields or noise.

PRODUCT INCLUDES



NiMH batteries (installed), 115V power cord, set of two 15ft leads, 2 red & 2 black alligator clips, 10ft USB cable, external battery charger (90-264Vac, 50/60Hz) and soft carrying case.

USB DRIVE

Supplied with DataView® software and user manual.

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Accessories/Replacement - available on website store from www.aemc.com	
2136.76	Lead-Set of 2, 30ft for use with DTR® Models 8500 & 8510
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