

VOLUME 21

**Over 125 Years
Developing
Test and
Measurement
Instruments**



- 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**



WWW.AEMC.COM

TECHNICAL HOTLINE: (800) 343-1391

HOW TO ORDER

All AEMC® Instruments' products are available through a network of authorized electrical, electronic and instrumentation distributors.

For a list of authorized North American distributors in your area, contact AEMC® Instruments, or your local AEMC® Instruments sales representative or search on the "Where to Buy" web page of our website www.aemc.com: <https://www.aemc.com/where-to-buy/>

CONTACT SALES & MARKETING



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ORDERING INFORMATION (WITHIN NORTH AMERICA)

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WHEN ORDERING PLEASE USE THE CATALOG NUMBER AND PRODUCT DESCRIPTION

Example:

QUANTITY	CATALOG #	DESCRIPTION
1	2137.52	Power & Energy Logger Model PEL 103 (W/LCD, w/3 MA193-10-BK Sensors)

PRICE LIST

A price list is available. Contact your AEMC® Instruments distributor or AEMC® Instruments directly 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®

950.CAT-MASTER-VOL21
Printed in the USA
Rev.01 07/2021

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COMPANY PROFILE

AEMC® Instruments with US operations in Dover, New Hampshire began operations in 1976 in downtown Boston. As a legal entity, AEMC is Chauvin Arnoux®, Inc. AEMC® Instruments and is affiliated with Chauvin Arnoux S.A.S. 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 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.

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. Our Power & Energy Loggers (PEL) can be used to monitor your power & energy usage and costs locally or from anywhere in the world!

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 our product offering AEMC offers a one-day accredited course in "Understanding Ground Resistance Testing" and in 'Understanding Insulation Resistance Testing'. We also offer a 3-day comprehensive class in 'Understanding Power Quality Training'. Completing any of these three courses will give the student all the information they need to conduct resistance testing or power quality analyzing, safely, correctly and efficiently, as well as saving substantial time and money in the future. Since 2020, we now offer a 2 day, 2 ½ hours per day technical training online webinar in ground resistance testing and insulation testing and FREE monthly informational webinars on electrical, thermal and energy topics. We also offer private classes that can be designed and customized to your specific needs.

Our corporate office comprised of sales, marketing, exports, engineering, production, technical support, 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 obtain information on our products and services and to get detailed information on attending one of our seminars. AEMC prides itself as being your primary 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/bc
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	15oz (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	0 to 6 ft (0 to 2m)
Single and Pole Application	0 to 1.6 ft (0 to 0.5m)
Two and Pole Application	Up to 8.2 ft (2.5m)
Single Loopback Line	
Line Voltage Detection	Approximately 0 to 1.3 ft (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
Safety Rating	300V CAT III

PRODUCT INCLUDES

Soft carrying case, set of (2) color-coded (red/black) leads w/4mm banana plugs {1000V CAT III}, set of (2) color-coded (red/black) alligator clips {1000V CAT II}, adapter-110V outlet w/ banana plugs, mini ground rod, 9V battery, (6) AAA batteries and a user manual.



RECEIVER



TRANSMITTER



Flashlight



FEATURES

- Operates in both single 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

CATALOG NO.	DESCRIPTION
2127.85	Cable Locator Model 6681

CABLE TESTERS FAULT MAPPERS

MODELS CA7024 & CA7027

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

SPECIFICATIONS

MODEL	CA7024	CA7027
MEASUREMENTS		
Range @ Vp = 70%	6000 ft or 2000m (selectable)	23, 49, 98, 197, 394, 820, 1640, 3280, 6560, 9850, 19000ft
Range Selection	–	Manual range control
Resolution	0.1 ft up to 100ft, then 1 ft (0.1m up to 100m, then 1m)	Approximately 1% of selected range
Accuracy	±2% of Reading	±1% of range
Minimum Cable Length	12 ft (4m)	1.5 ft (0.5m)
Cable Library	Built-in, user selectable and user programmable	–
Sensitivity	–	Minimum 3 pixel return on a fault at 4km on 0.6mm 0, PE, TP
Velocity of Propagation (Vp)	Adjustable from 0 to 99%	Adjustable from 1% to 99%
Output Pulse	5V peak to peak into an 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	
Auto Power OFF	After three minutes	Selectable 1, 2, 3, 5 minutes or disabled
Weight	12oz (350g)	

PRODUCT INCLUDES

MODEL CA7024

Soft carrying case, BNC pigtail cable with alligator clips, (4) 1.5V AA batteries and a user manual.



MODEL CA7027

Soft carrying case, set of (2) color-coded (red/black) leads, test probes, alligator clips, (4) 1.5V AA batteries and a user manual.



CA7024

Fault Mapper Cable Length Meter & Fault Locator Alphanumeric TDR

CA7027

Fault Mapper Pro® Telephone Cable Tester / Graphical TDR



FEATURES

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

CA7024

- Detects opens and shorts and the distance to them from one end of the cable
- Measure cable length up to 6000 ft 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)

CA7027

- Works on de-energized conductors
- 11 range scales indicating cable faults and terminations up to 19,000 ft (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

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 wiremap, fault type and fault location

SPECIFICATIONS

MODEL	CA7028
MEASUREMENTS	
Range	500 ft 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, (2) patch cords, (4) 1.5V AA batteries, and a 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 500 ft (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	
Current DC	900 / 1500 / 3000A	
Current AC+DC	–	900 / 1500 / 3000A
Voltage AC (rms)	1000 / 1000 / 1000V	
Voltage DC	1000 / 1000 / 1000V	
Voltage AC+DC	–	1000 / 1000 / 1000V
Ohms	60 / 100 / 100kΩ	
Continuity (Buzzer)	Yes (< 40Ω)	
Diode Test	Yes	
THD	–	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	
Current Frequency (Hz)	3 / 2 / 1kHz	
Power Factor	–	Yes
THD-r/THD-f	–	Yes
Current Probe Adapter Function (AC/DC)	0 to 6V (203) 0 to 10V (403/603)	–
Phase Rotation	–	Yes (2 wire)
Auto AC/DC	Yes (V & A)	
Auto Power OFF	Yes	
Hold Button	Yes	
Backlight Button	Yes	
Min/Max Button	Yes	
True InRush® Function	Yes	
Relative Function	Yes	
Peak ± Function	–	Yes
Hz Button	Yes	

*Three-phase measurements assume balanced load
Consult factory for NIST Calibration prices



*203 & 205 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 1.34" (34mm) (200 series), 1.89" (48mm) (400 series) and 2.36" (60mm) (600 series)
- K-thermocouple and adapter included (Models 203, 403 & 603)

PRODUCT INCLUDES

Visit our website or review the product manual for a list of included items.

CATALOG NO. DESCRIPTION

2139.12	Clamp-On Meter Model 203 (TRMS, 1000VAC/DC, 600AAC/900ADC, Ohms, Continuity, Temperature)
2139.21	Clamp-On Meter Model 403 (TRMS, 1000VAC/DC, 1000AAC/1500ADC, Ohms, Continuity, Temperature)
2139.31	Clamp-On Meter Model 603 (TRMS, 1000VAC/DC, 2000AAC/3000ADC, Ohms, Continuity, Temperature)
2139.40	Power Clamp-On Meter Model 205 (TRMS, 1000VAC/DC, 600AAC/900ADC, Ohms, Continuity, Phase Rotation, Power, THD)
2139.50	Power Clamp-On Meter Model 405 (TRMS, 1000VAC/DC, 1000AAC/1500ADC, Phase Rotation, Ohms, Continuity, Power, THD)
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

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	
Voltage DC	1000V	
Voltage AC+DC	1000V	
Ohms	100kΩ	
Continuity (Buzzer)	Yes (< 40Ω)	
Total Harmonic Distortion	Yes	
Individual Harmonics (to 25th)	Yes	
Single- and 3-Phase Real Power (AC, DC, AC/DC)*	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	
Current Frequency (Hz)	2kHz	1kHz
Power Factor	Yes	
THD-r/THD-f	Yes	
Auto AC/DC	Yes (V & A)	
Auto Power OFF	Yes	
Hold Button	Yes	
Backlight Button	Yes	
Min/Max Button	Yes	
True InRush® Function	Yes	
Peak ± Function	Yes	
Harmonics Function	Yes	
Rec (Record) Function	Yes	
Wireless BT (Bluetooth) Function	Yes	
Record (Recordings)	1000	
Hz Button	Yes	

*Three-phase measurements assume balanced load
Consult factory for NIST Calibration prices

PRODUCT INCLUDES

Hard carrying case, set of (2) color-coded silicone test leads, test probes and alligator clips, Bluetooth USB adapter, (4) 1.5V AA batteries, safety information sheet, and USB drive supplied with DataView® software and a user manual.



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)

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)



CLAMP-ON METERS

500 SERIES

MODEL 505

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

SPECIFICATIONS

MODEL	505
ELECTRICAL	
AC Current (Auto-Ranging)	0.05 to 400A
Resolution	0.01A and 0.1A
AC Voltage (Auto-Ranging)	0.5 to 600V
Resolution	0.1V and 1V
Input Impedance	10M Ω
DC Current (Auto-Ranging)	0.10 to 400A
Resolution	0.01A and 0.1A
DC Voltage (Auto-Ranging)	0.2 to 600V
Resolution	0.1V and 1V
Input Impedance	10M Ω
Resistance	0.2 to 600 Ω
Max Test Voltage	1.5Vdc
Continuity	<35 Ω
Max Test Voltage	1.5Vdc
Zero Mode / Delta Function	Yes
Peak Function	No Yes
MECHANICAL	
Dimensions	7.83 x 2.95 x 1.42" (199 x 75 x 36mm)
Weight	8.57 oz. (243g) with batteries
Jaw Opening	1.18" (30mm)
Power Source	2 x AAA, IEC LR3 (included)
Battery Life	40 hours
ENVIRONMENTAL	
Operating Temperature	+32° to 104°F (0° to +40°C)
Storage Temperature	+14° to 140°F (-10° to +60°C)
Operating Humidity	<70%
Pollution Degree	2
SAFETY	
Safety Standards	EN/IEC 61010 to 600V CAT III

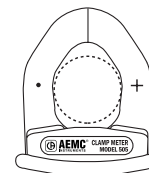
Consult factory for NIST Calibration prices

PRODUCT INCLUDES

Soft carrying case, set of (2) color-coded (red/black) test leads with probe tips, (2) 1.5V AAA batteries and a user manual.



505



505

Jaw Opening:
1.18" (30mm)
Conductor Size:
500kcmil cable

FEATURES

- Compact size - fits into your pocket
- 400Aac or 400Aac/dc current measurements
- 600VAc/dc volts measurements
- Resistance measurements to 600 Ω
- Continuity with beeper below 35 Ω
- Hold function to "freeze" readings
- Push-button for easy Adc zeroing
- Large, easy-to-read 6000-cts LCD Display
- 42-segment analog bar graph
- Includes test leads and soft carrying pouch

CATALOG NO.	DESCRIPTION
2139.82	Clamp-On Meter Model 505 (TRMS, AC/DC, 400Aac/dc, 600VAc/dc, Ohms, Continuity) RATED 600V CAT III

CLAMP-ON METERS

500 SERIES

MODELS 512 & 514

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

SPECIFICATIONS

MODELS	512 TRMS	514 TRMS
AC Current (Auto-Ranging)	0.05 to 1000Arms	
Resolution	0.01A, 0.1A and 1A	
AC Voltage (Auto-Ranging)	0.5 to 750Vrms	
Resolution	0.1V and 1Vrms	
Input Impedance	10MΩ	
DC Current (Auto-Ranging)	–	1A to 1000A
Resolution	–	0.01A, 0.1A and 1A
DC Voltage (Auto-Ranging)	0.2 to 1000V	
Resolution	0.1V and 1V	
Input Impedance	10MΩ	
Resistance	0.2 to 4000Ω	
Max Test Voltage	3Vdc	3Vdc
Diode Test	0.6mA	1.7mA
Open Circuit Voltage	3Vdc	
Continuity	<40Ω	
Max Test Voltage	3Vdc	
Frequency (Auto-Ranging)		
CURRENT INPUT Range	4kHz	1Hz Resolution
	10kHz	10Hz Resolution
Min Input Signal	4kHz	2Arms
	10kHz	5Arms
VOLTAGE INPUT Range	4kHz	1Hz Resolution
	10kHz	10Hz Resolution
Min Input Signal	4kHz	5Vrms
	10kHz	10Vrms
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

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

Consult factory for NIST Calibration prices

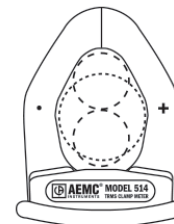
PRODUCT INCLUDES

Soft carrying case, set of (2) color-coded (red/black) test leads with probe tips, 9V battery and a user manual.



512

514



512 & 514

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

FEATURES

- Standard size, full function clamp-on meter
- 1000Aac or 1000Aac/dc current measurements
- Measures up to 750Vac and 1000Vdc
- 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 A/dc zeroing (Model 514)
- Large, easy-to-read, 4000-count LCD display
- 42-segment analog bargraph
- Includes test leads, soft carrying pouch and batteries

CATALOG NO.	DESCRIPTION
2117.68	Clamp-on Meter Model 512 (TRMS, 1000Aac, 750Vac/1000Vdc, Hz, Ohms, Continuity)
2117.70	Clamp-on Meter Model 514 (AC/DC, TRMS, 1000Aac/dc, 750Vac/1000Vdc, Hz, Ohms, Continuity)



CLAMP-ON METERS

100Aac/dc LOW CURRENT

MODEL CM605

For general industrial monitoring and troubleshooting

SPECIFICATIONS

MODEL	CM605
ELECTRICAL	
AC Current	
Measurement Ranges	2 Ranges: 10A, 100A
Frequency Range	50 to 500Hz
DC Current (positive only)	
Measurement Ranges	2 Ranges: 10A, 100A
AC Volts	
Measurement Ranges	600Vrms
Frequency	40 to 500Hz
Input Impedance	10M Ω
DC Volts (positive only)*	
Measurement Ranges	600V
Input Impedance	10M Ω
Resistance (Ohms)	
Measurement Ranges	10k Ω (9999 Ω)
Test Voltage	< 3.0Vdc
Continuity	
Measurement Ranges	Buzzer < 100 Ω \pm 25 Ω
Resolution	1 Ω
Test Voltage	< 3.0Vdc
Analog Output	
Output	10mV/Aac & Adc through front banana jacks
Frequency	0 to 20kHz @ \pm 3db
Output Impedance	3k Ω , < 50pF
Other Functions	
A _{dc} Zero & Relative Function	One touch push button to Zero A _{dc} , or other readings. Relative function 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 minutes with Over-Ride
Low Battery	Low Battery indication on LCD
Mechanical	
Max. Cable Diameter	\varnothing 0.45" (12mm)
Max. Jaw Opening	\varnothing 0.60" (15mm)
Power Source	Two 1.5V AAA (LR03) batteries (included)
Dimensions & Weight	7.44 x 2.80 x 1.46" (189 x 71 x 37mm) – 6.5oz (180g)
SAFETY	
Safety Rating	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
Consult factory for NIST Calibration prices



FEATURES

- 10,000-count LCD display
- 100Aac/dc Ammeter with low 10A range (1mA resolution)*
- Tapered jaws for crowded wiring areas
Jaw opening: \varnothing 0.60" - 15mm
Cable diameter: \varnothing 0.45" - 12mm
- 600VAc/dc voltmeter
- Analog output in Aac/dc to data loggers, etc
- Auto-ranging & A_{dc} 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

PRODUCT INCLUDES

Soft carrying case, set of (2) color-coded (red/black) test leads with probe tips, (2) 1.5V AAA batteries and a user manual.



CATALOG NO.	DESCRIPTION
7000.02	Clamp-on Meter Model CM605 (100Aac/dc, Low Current)

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	.15 to 600A	.15 to 1000V	0 to 900A	0 to 1000V	0Ω to 60kΩ	<40Ω	5Hz to 3kHz	5Hz to 20kHz	1.34" (34mm)	8.7 x 3.1 x 1.65"
205	2139.40	AC/DC TRMS	600A	1000V	900A	1000V	60kΩ	<40Ω	3kHz	20kHz	1.34" (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"
505	2139.82	AC/DC TRMS	400A	600V	400A	600V	600Ω	<35Ω	400Hz	400Hz	1.18" (30mm)	7.83 x 2.95 x 1.42"
512	2117.68	AC TRMS	0.05 to 1000A	0.5 to 750V	-	0.2 to 1000V	4000Ω	<40Ω	20Hz 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	20Hz to 10kHz	10Hz to 10kHz	1.58" (40mm)	9.53 x 2.60 x 1.42"
566*	2139.83	AC TRMS	1μA to 100A	0.01 to 600V	-	0.01 to 600V	0.1Ω to 600kΩ	<45Ω	48 to 500Hz	48 to 500Hz	.91" (23mm)	8.27 x 3.0 x 1.32"
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"

*Model 566 can be found in the Leakage Current Meters & Probes on Page 83

Consult factory for NIST Calibration prices

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, a BNC connector, and an electronic module designed to measure frequency response up to 1MHz

SPECIFICATIONS

MODELS	MF 300-10-2-10-HF	MF 3000-14-1-1-HF
ELECTRICAL		
Current Range	30/300A	3000A
Measurement Range	0.5 to 300A	0.5 to 3000A
Accuracy	1% ± 300mA	
Signal Output	100mV / 10mV/A	1mV/A
Frequency Range	2 to 1MHz @ -3db	
Influence of Conductor Positioning	1% typical, 2% max	
Influence of Conductor Positioning in Sensor Against Handle	1% typical, 6% max	
External Conductor Influence	30.5db to 40db on contact	
Power Source	9V Alkaline battery (6 LF22)	
MECHANICAL		
Sensor Diameter	Ø 0.2" (5mm)	
Sensor Length	10" (250mm)	14" (350mm)
Max Conductor Size	2.75" (70mm)	3.93" (100mm)
Connection Cable Length	6.5 ft (2m)	15.75" (40 cm)
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 6562 ft (0 to 2000m), working voltage derating above; Non-operating: 0 to 39,000 ft (0 to 12,000m)	
SAFETY		
Safety Rating	Housing: EN 61010 600V CAT III, 300V CAT IV Sensor: EN 61010 1000V CAT III, 600V CAT IV	



MF 300-10-2-10-HF (10" PROBE)



MF 3000-14-2-10-HF (14" PROBE)



FEATURES

- Measures from 0.5 to 300Arms
- Accuracy ±1% of Reading ±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 AC + DC signals
- Excellent linearity
- Lightweight
- Sensor is resistant to oils and aliphatic hydrocarbons
- Perfect accessory for any BNC oscilloscopes

CATALOG NO. DESCRIPTION

2126.84	MiniFlex® 30/300A, 10", 100mV/10mV/A High Frequency (for any BNC Oscilloscope)
2126.86	MiniFlex® 3000A, 14", 1mV/A High Frequency (for any BNC Oscilloscope)



CURRENT MEASUREMENT PROBES

MINIFLEX® SERIES

MODEL MA114

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

SPECIFICATIONS

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



3Aac 1 mV/mA
30Aac 100 mV/A
300Aac 10 mV/A
3000Aac 1 mV/A

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 affected 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

CATALOG NO.	DESCRIPTION
2153.41	MiniFlex® 14" Model MA114 (3 A/1mV/mA, 30 A/100mV/A, 300 A/10mV/A, 3000 A/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



SPECIFICATIONS

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			36 (910)	11 (290)	2113.00
3000-24-1-1	3000A	1mV/A	24 (610)	8 (190)	2112.46
3000-36-1-1			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			36 (910)	11 (290)	2112.00
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		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.

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

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

FEATURES

- 24" flexible sensor fits around conductors up to 7.6" in diameter
- Dual measurement ranges of 300A and 3000A_{AC} 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 ± 500 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)



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 (Lead)



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



SPECIFICATIONS

MODELS	MD301
ELECTRICAL	
Nominal Range	500A _{AC}
Measurement Range	2 to 500A _{AC}
Transformation Ratio	Voltage output
Output Signal	1mV/A (0.5V _{DC} @ 500A)
Phase Shift	—
25A	—
100A	—
250A	—
500A	—
600A	—
Overload	700A for 10 min
Frequency Range	48 to 1000Hz (error: add 2% to the ref.)
Load Impedance	≥100kΩ
Working/Common Voltage	600V _{rms}
Output Termination	Double-insulated 5 ft (1.5m) lead with two 4mm safety banana plugs
MECHANICAL	
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
ENVIRONMENTAL	
Operating Temperature	5° to 122°F (-15° to 50°C)
Storage Temperature	-40° to 185°F (-40° to 85°C)
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

Consult factory for NIST Calibration prices

CATALOG NO. DESCRIPTION

1201.07	AC Current Probe Model MD301 (500A, 1mV _{DC} /A _{AC} , Lead)
1200.67	DC/AC MicroProbe Model K100 (4.5A, 1mV/mA)
2111.73	DC/AC MicroProbe Model K110 (450mA, 10mV/mA)

SPECIFICATIONS

MODELS	K100	K110
ELECTRICAL		
Current Range	0 to ±4.5A _{DC} 0 to 3A _{rms}	0 to ±450mA _{DC} 0 to 300mA _{rms}
Output Signal	1mV/mA	10mV/mA
Resolution	DC: 50µA typical, AC: 100µA typical	
Output Noise	<100µV, DC to 3kHz	
Frequency Response	DC to 2kHz (@ -3dB sine)	DC to 1.5kHz (@ -3dB sine)
Output Termination	5 ft (1.5m) lead with two 4mm safety banana plugs; standard ¾" (19mm) spacing	
Power Source	One 9V Alkaline battery (included)	
Battery Life	20 hours	

Consult factory for NIST Calibration prices

FEATURES

MD SERIES

- 500A 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

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

ACCESSORIES

Catalog #1017.45

Adapter – 4mm Non-insulated for Safety Leads

Catalog #2118.46

Adapter - Banana (Female) – BNC (Male) (XM-BB)
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

SPECIFICATIONS

MODELS	SL206	SL261
ELECTRICAL		
Nominal Range	2A; 80A	10A; 100A _{ac/dc} peak
Measurement Range	10mA to 80A _{dc} 10mA to 60A _{ac}	100 mA to 100A _{ac/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)
Phase Shift (DC to 65 Hz) (1mV/mA Range) (10mV/mA Range) (100mV/mA Range)	1° 1° -	- <1° <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	5 ft (1.5m) lead with double insulated 4mm safety banana plugs	6.5 ft (2 m) coaxial cable with insulated BNC terminal
MECHANICAL		
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	
ENVIRONMENTAL		
Operating Temperature	32° to 122°F (0° to 50°C)	
Storage Temperature	-22° to 176°F (-30° to 80°C)	
SAFETY		
Electrical	EN 61010-2-32, 600V CAT III	
CE Mark	Yes	
UL Approval	No	Yes

Consult factory for NIST Calibration prices



SL206 W/ BANANA PLUGS



SL261 W/ BNC CONNECTOR



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 (not SL206)
- Flame retardant UL94 V2 rated
- Use with DMMs, voltmeters and other voltage measuring instruments

CATALOG NO.	DESCRIPTION
1201.45	AC/DC Current Probe Model SL206 (2A, 1mV/mA & 80A, 10mV/A, Lead)
1201.51	AC/DC Current Probe Model SL261 (10A, 100mV/A & 100A, 10mV/A, 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

SPECIFICATIONS

MODELS	SR601	SR604	SR651	SR661
ELECTRICAL				
Nominal Range	1000AAC		1000AAC	10, 100, 1000AAC
Measurement Range	0.1 to 1200AAC			
Transformation Ratio	1000: 1		Voltage output	
Output Signal	1mA/A (1AAC @ 1000A)		1mV/A (1VAC @ 1000A)	100mV; 10mV; 1mV/A (1VAC @10, 100; 1000A)
Phase Shift	10A: 3° 50A: 1.5° 200A: 0.75° 1000A: 0.5° 1200A: 0.5°		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 40 min ON, 20 min OFF	
Frequency Range	30Hz to 5kHz*			10Hz to 100kHz*
Load Impedance	5Ω max		100kΩ min	1MΩ min
Working/Common Mode Voltage	600V CAT III			
Output Surge Protection	30V peak		N/A	
Output Termination	Two 4mm safety banana jacks	Lead with plugs	Two 4mm safety banana jacks	6.5 ft (2m) coaxial cable with BNC terminal
MECHANICAL				
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			
ENVIRONMENTAL				
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)			
SAFETY				
Electrical	EN 61010-2-32, 600 V CAT III			
UL Approval	Yes - Canada and United States			
Double Insulation	Yes			
CE Mark	Yes			

Consult factory for NIST Calibration prices



SR601

FEATURES

- Measurement range of 100mA to 1200AAC
- 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 #1017.45

4mm Banana plug adaptor
(Safety Leads to non-recessed plug)

Catalog #2118.46

Banana (Female)
BNC (Male) Adaptor

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

CATALOG NO.	DESCRIPTION
2113.43	AC Current Probe Model SR601 (1000A, 1mA/A, Lead) L**
2113.44	AC Current Probe Model SR604 (1000A, 1mA/A, Lead) L**
2113.45	AC Current Probe Model SR651 (1000A, 1mV/A, Jack)
2113.49	AC Current Probe Model SR661 (10A, 100mV/A; 100A, 10mV/A & 1000A, 1mV/A, BNC)

**L - Limited open Voltage Output

CURRENT MEASUREMENT PROBES

SR SERIES CURRENT PROBES

SR700 SERIES

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

SPECIFICATIONS

MODELS	SR701	SR704	SR752	SR759
ELECTRICAL				
Nominal Range	1000Aac			1; 10; 100; 1000Aac
Measurement Range	1mA to 1200Aac	100mA to 1200Aac		1mA to 1200Aac
Transformation Ratio	1000: 1		Voltage output	
Output Signal	1mA/A (1Aac @ 1000A)	1mV/A (1VAC @ 1000A)		1000; 100; 10; 1mV/A, (1VAC @ 1, 10, 100 or 1000A)
Phase Shift	1 to 10A: $\leq 2^\circ$ 10 to 100A: $\leq 1^\circ$ 100 to 1200A: $\leq 0.7^\circ$			(1A Range) 0.1 to 1.2 A: $\leq 10^\circ$ (10A Range) 0.1 to 1A: $\leq 5^\circ$; 1 to 12A: $\leq 2^\circ$ (100A Range) 1 to 10 A: $\leq 2^\circ$; 10 to 120A: $\leq 1^\circ$ (1000A Range) 10 to 100A: $\leq 2^\circ$; 100 to 1200A: $\leq 1^\circ$
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	5 Ω max		100k Ω min	
Working/Common Mode Voltage	600V CAT III			
Output Termination	Two 4mm safety banana jacks	5 ft (1.5m) lead with 4mm safety banana plugs		
MECHANICAL				
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			
ENVIRONMENTAL				
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%	
SAFETY				
Electrical	EN 61010-2-32			
UL Approval	Yes - Canada and United States			
Double Insulation	Yes			
CE Mark	Yes			

Consult factory for NIST Calibration prices

CATALOG NO.	DESCRIPTION
2116.29	AC Current Probe Model SR701 (1000A, 1mA/A, Jack) HA* L**
2116.30	AC Current Probe Model SR704 (1000A, 1mA/A, Lead) HA* L**
2116.32	AC Current Probe Model SR752 (1000A, 1mV/A, Lead) HA*
2116.33	AC Current Probe Model SR759 (1A, 10A, 100A, 1000A, mV/A, Lead) HA*



SR701



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 #1017.45
4mm Banana plug adaptor (Safety Leads to non-recessed plug)

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

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

SPECIFICATIONS

Patent #1385787 - Mini-Clamp Design

MODELS	MN01	MN02	MN03	MN05	MN09
ELECTRICAL					
Nominal Range	150AAC	100AAC		10; 100AAC	150AAC
Measurement Range	2 to 150AAC	50mA to 100AAC (1Ω load) 50mA to 90AAC (10Ω load)	1 to 100AAC	5mA to 10AAC 1A to 100AAC	1 to 150AAC
Transformation Ratio	1000:1		Voltage output		N/A
Output Signal	1mA/A (150mAAC @ 150A)	1mA/A (100mAAC @ 100A)	1mV/A (100mVAC @ 100A)	1mV/mA, 1mV/A (10VAC @ 10A, 100mVAC @ 100A)	100mV/A (15VDC @ 150AAC)
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	170A for 10 min ON, 30 min OFF
Frequency Range	48 to 500Hz	48Hz to 10kHz	48 to 500Hz		
Load Impedance	≤10Ω		≥1MΩ		≥50KΩ
Open Secondary Voltage	≤30V		-		≤30V
Output Termination	5 ft (1.5m) lead with two 4mm safety banana plugs				
MECHANICAL					
Maximum Conductor Size	Ø 0.39" (10mm)				
Dimension	5.12 x 1.5 x 1" (130 x 37 x 25mm)				
Weight	6.35 oz (180g)				
Material	Polycarbonate UL 94 V2				
ENVIRONMENTAL					
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)				
SAFETY					
Safety Rating	IEC 61010-2-32: 300 V CAT IV, 600V CAT III, Pollution Degree 2				
Ingress Protection	IP40				
Double Insulation	Yes				
CE Mark	Yes				

Consult factory for NIST Calibration prices

CATALOG NO.	DESCRIPTION
2129.17	AC Current Probe Model MN01 (150A, 1mA/A, Lead)
2129.20	AC Current Probe Model MN02 (100A, 1mA/A, Lead, 1% Accuracy)
2129.18	AC Current Probe Model MN03 (100A, 1mV/A, Lead)
2129.19	AC Current Probe Model MN05 (100A, 1mV/A & 10A, 1V/A, Lead)
2129.21	AC Current Probe Model MN09 (150A, 100mVDC/AAC, Lead)



MN01



FEATURES

- “Clothes pin” shape makes them ideal for use in tight areas, such as breaker panels, controller panels or outlets
- Jaw opening accommodates conductors up to 0.39" diameter

MN01

- Measurements from 1mA to 150AAC
- Excellent companions to all DMMs, permits very low AC current measurements

MN02

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

MN03

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

MN05

- Measurements from 5mA to 100AAC
- Measurements from 1mA to 10AAC
- Permits very low AC current measurements

MN09

- Measurements from 1 to 150AAC
- DC voltage output enables you to overcome low AC sensitivity of certain measurement instruments

CURRENT MEASUREMENT PROBES

MN SERIES AC CURRENT PROBES

MN SERIES

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

Patent #1385787 - Mini-Clamp Design

MODELS	MN103	MN114	MN185
ELECTRICAL			
Nominal Range	10, 100Aac	10Aac	120Aac
Measurement Range	1mA to 10Aac 1A to 100Aac	1mA to 10Aac	50mA to 120Aac
Transformation Ratio	Voltage output	Voltage output	1000:1
Output Signal	1mV/mA, 1mV/A (10VAC @ 10A, 100mVAC @ 100A)	100mV/A (1VAC @ 10A)	1mA/A (120mAac @ 120A)
Phase Shift	–	10A to 100A, 45 to 65Hz: 8°	1 to 100A, 50 to 60Hz: ≤3.5°
Overload	–	20A continuous	170A continuous
Frequency Range	45 to 500Hz	30Hz to 5kHz	30Hz to 10kHz
Load Impedance	≥100 kΩ	≥100kΩ	≤5Ω non-inductive
Working/Common Mode Voltage	250VAC/250VAC		250VAC/30VAC
Output Termination	5 ft (1.5m) lead with 4mm safety banana plugs		Two 4mm banana jacks
MECHANICAL			
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		
ENVIRONMENTAL			
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)		
SAFETY			
Safety Rating	3kV 50/60Hz dielectric for 1min. Probes MN 103/106/114 and 185 are not CE marked		

Consult factory for NIST Calibration prices



MN103



MN185

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 UL94V0 flame retardant material
- Designed for DMMs, recorders, loggers and oscilloscopes

CATALOG NO.	DESCRIPTION
1031.02	AC Current Probe Model MN103 (10A, 1mV/mA & 100A, 1mV/A, Lead)
2110.71	AC Current Probe Model MN114 (10A, 100mV/A, Lead)
100.185	AC Current Probe Model MN185 (100A, 1mA/A, Jack)

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

Patent #1385787 - Mini-Clamp Design

MODELS	LM102	LM103
ELECTRICAL		
Nominal Range	200AAC	
Measurement Range	50mA to 200AAC (1Ω or 10Ω load)	100mA to 200A
Transformation Ratio	1000:1	Voltage Output
Output Signal	1mA/A (200mAAC @ 200A)	1mV/A (200mVAC @ 200A)
Phase Shift	≤3° (1Ω load) ≤6° (10Ω load)	≤3°
Overload	350A continuous @ ≤1kHz 200A continuous @ ≤8kHz	
Frequency Range	48 Hz to 10kHz	
Load Impedance	≤10Ω	≥10kΩ
Open Secondary Voltage	≤30V	—
Output Termination	Double-insulated 5 ft (1.5m) lead with two 4mm safety banana plugs	
MECHANICAL		
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	
ENVIRONMENTAL		
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)	
SAFETY		
Safety Rating	EN 61010-1, EN 61010-2-031, EN 61010-2-032 600V CAT III, 300V CAT IV Pollution Degree 2	
Ingress Protection	IP20 (EN 60529)	
Double Insulation	Yes	
CE Mark	Yes	



FEATURES

- Clamping diameter 0.63" (16mm)
- Measurement range from 0.05 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 48Hz to 10kHz
- Arrow marker clearly assists in proper orientation for power measurement applications

CATALOG NO.	DESCRIPTION
2153.04	AC Current Probe Model LM102 (200A/1mA/A)
2153.05	AC Current Probe Model LM103 (200A/1mV/A)

CURRENT MEASUREMENT PROBES

MN SERIES AC CURRENT PROBES

MN200 SERIES

General purpose AC current probe with voltage output, for use with DMMs or with measuring instruments with voltage input

Permits measurement or recording of current with instruments that do not have current ranges. Output signal proportional to current measured

SPECIFICATIONS

MODELS	MN255	MN291
ELECTRICAL		
Nominal Range	20A _{AC} ; 200A _{AC}	200A _{AC}
Measurement Range	0.1 to 24A _{AC} ; 0.1 to 240A _{AC}	0.5 to 240A _{AC}
Transformation Ratio	Voltage output	DC Voltage output
Output Signal	20A: 100mV/A (20V _{AC} @ 200A) 200A: 10mV/A (2V _{AC} @ 200A)	100mV _{DC} /A _{AC} (20V _{DC} @ 200A)
Phase Shift (20A Range) (200A Range) 0.5 to 10A 10 to 40A 40 to 100A 100 to 240A	Not Specified Not Specified ≤5° ≤3° ≤2.5°	N/A
Overload	240A for 10 min ON, 30 min OFF	
Frequency Range	40Hz to 10kHz	
Load Impedance	>1MΩ	
Working/Common Mode Voltage	600V	
Output Termination	Double-insulated 5 ft (1.5m) lead with two 4mm safety banana plugs	
MECHANICAL		
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	
ENVIRONMENTAL		
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	
SAFETY		
Safety Rating	EN/IEC 61010-2-32 600 V CAT III, EN/IEC 61010-032	
UL Approval	Yes - Canada and United States	
Ingress Protection	IP40	
Double Insulation	Yes	
CE Mark	Yes	

Consult factory for NIST Calibration prices



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 UL94V0 flame retardant material
- Double insulated construction

CATALOG NO. DESCRIPTION

2115.81 AC Current Probe Model MN255 (20A, 100mV/A & 200A, 10mV/A, Lead)

2115.84 AC Current Probe Model MN291 (200A, 100mVDC/A, Lead)



CURRENT MEASUREMENT PROBES

MN SERIES AC CURRENT PROBES



MN300 SERIES

Compact sized probes ideal for measuring low currents and leakage currents

Standard millivolt and milliamp outputs are compatible with multimeters, data loggers and oscilloscopes

SPECIFICATIONS

MODELS	MN307	MN312	MN352	MN353	MN373	MN375	MN379*
ELECTRICAL							
Nominal Range	10AAC	150AAC				10AAC	5AAC; 100AAC
Measurement Range	0.1 to 12AAC	0.1 to 200AAC				0.1 to 10AAC	5mA to 6AAC; 0.1 to 120AAC
Transformation Ratio	Voltage output	1000:1	Voltage output				
Output Signal	100mV/A (1V _{AC} @ 10A)	1mA/A (150mA _{AC} @ 150A)	10mV/A (1.5V _{AC} @ 150A)	2A: 1V/A (2V _{AC} @ 2A) 150A: 10 mV/A (1.5V _{AC} @ 150A) (2A Range)		100 mV/A (1 V _{AC} @ 10A)	5 A: 200 mV/A (1 V _{AC} @ 5 A) 100 A: 10 mV/A (1 V _{AC} @ 100 A) (5A Range)
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		Not Specified (150A Range) 0.1 to 1 A: Not specified 1 to 20A: ≤3° 20 to 80A: ≤2° 80 to 150A: ≤3° 150 to 200A: ≤4°		1 to 5A: ≤1° @ 60 Hz 5 to 10A: ≤1.5° @ 60 Hz	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			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 with an error (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 5 ft (1.5m) lead with two 4mm safety banana plugs	Two standard safety 4mm banana jacks		Double-insulated 5 ft (1.5m) lead with two 4mm safety banana plugs			
MECHANICAL / ENVIRONMENTAL							
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						
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)						
SAFETY							
Safety Rating	EN/IEC 61010-1 600 V CAT III, EN 61010-2-32, Pollution Degree 2						
UL Approval	Yes - Canada and United States (excludes MN379)						
Ingress Protection	IP40	Double Insulation:	Yes	CE Mark:	Yes		

Consult factory for NIST Calibration prices

CATALOG NO.	DESCRIPTION	CATALOG NO.	DESCRIPTION
2116.23	AC Current Probe Model MN307 (12A, 100mV/A, Lead)	2112.28	AC Current Probe Model MN373 (2.4A, 1000mV/A, Lead) & 150A, 10mV/A, Lead)
2116.24	AC Current Probe Model MN312 (150A, 1mA/A, Jack)	2115.41	AC Current Probe Model MN375 (10A, 100mV/A, Lead)
2116.26	AC Current Probe Model MN352 (150A, 10mV/A, Jack)	2153.01	AC Current Probe Model MN379 (5A, 200mV/A & 100A, 10mV/A, Lead)
2116.27	AC Current Probe Model MN353 (150A, 10mV/A, Lead)		

CURRENT MEASUREMENT PROBES

MR SERIES AC/DC CURRENT PROBES

MODELS MR415 / 416 / 526

General Purpose Hall Effect Current Probes for use with DMMs, Data Loggers and Power Analyzers



MR415

MR416

MR526



SPECIFICATIONS

MODELS	MR415	MR416	MR526
ELECTRICAL			
Current Range	0.5 to 400A _{AC} , 600A _{DC}	0.5 to 40A _{AC} , 60A _{DC} 0.5 to 400A _{AC} , 600A _{DC}	0.5 to 100A _{AC} , 150A _{DC} 0.5 to 1000A _{AC} , 1400A _{DC}
Output Signal	1mV/A	10mV/A, 1 mV/A	10mV/A, 1mV/A
Frequency Range	DC to 30kHz (-3dB) (depending of current value)		
Phase Shift At 50/60Hz	≤1.5°@ 400A	≤2.2°@ 40A ≤1.5° @ 400A	≤2°@ 100A ≤1.5° @ 800A
Load Impedance	>1MΩ and ≤100pF		
Overload	3000A _{DC} or 1000A _{AC} continuous for < 1kHz		
Zero Adjust	Automatic on both ranges		
Power Source	9V Alkaline battery (NEDA 1060A, 6LR61) or 5V DC Micro-USB type B		
Battery Life	50H typical		
Low Battery Indication	Green LED blinking		
Overload Indication	Red LED on when measurement > than selected range		
Output Termination	Double-insulated 5 ft (1.5m) lead with two 4mm safety banana plugs		
MECHANICAL			
Maximum Conductor Size	Cables: (1) 1.18" (30mm) or (2) .94" (24mm) Bus Bar: (1) 1.97 x 0.39" (50 x 10mm) or (2) 1.23 x 0.39" (31.5 x 10mm) or (3) 0.98 x 0.31" (25 x 8mm)	Cables: (1) 1.5" (39mm) or (2) 1" (25.4mm) Bus Bar: (1) 1.97 x 0.49" (50 x 12.5mm) or (2) 0.98 x 0.2" (25 x 5mm); (1) 1.24 x 0.30" (31.5 x 10mm) or (3) 0.98" x 0.31" (25 x 8mm)	
Dimensions (H x W x D)	8.82 x 3.82 x 1.73" (224 x 97 x 44mm)	9.31 x 3.82 x 1.73" (236.5 x 97 x 44mm)	
Weight (with Battery)	0.98lbs (440g)	1.15lbs (520g)	
ENVIRONMENTAL			
Operating Temperature	14° to +131°F (-10 to +55°C)		
Storage Temperature	-40° to +176°F (-40 to +80°C)		
Relative Humidity	Up to 85% @ 35°C		
SAFETY			
Ingress Protection	IP 40		
EMC	EN 61326-1		
Safety Rating	IEC 61010-1, EN 61010-2-32, Pollution Degree 2, 600V CAT III		

FEATURES

- The jaw shape enables users to clamp on to cables or small bus bars
- Powered by battery or standard external 5V power source via micro-USB connector
- Measures up to 1000A_{AC} and 1400A_{DC} (model dependent)
- Automatic Zero DC reset function
- Auto Power Off enable/disable function
- Millivolt output compatible with most equipment and instruments
- Battery life up to 50 hours
- Safety rating 600V CATIII



4mm Banana Plug Terminals

Consult factory for NIST Calibration prices

CATALOG NO.	DESCRIPTION
1200.80	AC/DC Current Probe Model MR415 (400A _{AC} , 1mV/A & 600A _{DC} , 1mV/A, 4mm Banana Plug Lead) - Replaces MR410
1200.82	AC/DC Current Probe Model MR416 (40A _{AC} , 60A _{DC} , 10mV/A & 400A _{AC} , 600A _{DC} , 1mV/A, 4mm Banana Plug Lead) - Replaces MR411
1200.83	AC/DC Current Probe Model MR526 (100A _{AC} , 150A _{DC} , 10mV/A & 1000A _{AC} , 1400A _{DC} , 1mV/A, 4mm Banana Plug Lead) - Replaces MR521



CURRENT MEASUREMENT PROBES

MR SERIES AC/DC CURRENT PROBES

MODELS MR417 / 527

Hall Effect AC/DC current probes for Oscilloscopes and other instruments with waveform displays

SPECIFICATIONS

MODEL	MR417	MR527
ELECTRICAL		
Current Range	0.5 to 40A _{AC} , 60A _{DC} 0.5 to 400A _{AC} , 600A _{DC}	0.5 to 100A _{AC} , 150A _{DC} 0.5 to 1000A _{AC} , 1400A _{DC}
Output Signal	10mV/A, 1mV/A	
Frequency Range	DC to 30kHz (-3dB) (depending of current value)	
Phase Shift At 50/60Hz	≤2°@ 40A ≤1.5° @ 400A	≤2.2°@ 100A ≤1.5° @ 1000A
Load Impedance	>1MΩ and ≤100pF	
Overload	3000A _{DC} or 1000A _{AC} continuous for < 1kHz	
Zero Adjust	Automatic on both ranges	
Power Source	9V alkaline battery (NEDA 1060A, 6LR61) or 5V DC Micro-USB type B	
Battery Life	50H typical	
Low Battery Indication	Green LED blinking	
Overload Indication	Red LED on when measurement > than selected range	
Output Termination	6.5 ft (2m) coaxial cable with insulated BNC terminal	
MECHANICAL		
Maximum Conductor Size	Cables: (1) 0.18" (30mm) or (2) .94" (24mm) Bus Bar: (1) 1.97 x 0.39" (50 x 10mm) or (2) 1.23 x 0.39" (31.5 x 10mm) or (3) 0.98 x 0.31" (25 x 8mm)	Cables: (1) 1.5" (39mm) or (2) 1" (25.4mm) Bus Bar: (1) 1.97 x 0.49" (50 x 12.5mm) or (2) 0.98 x 0.2" (25 x 5mm); (1) 1.24 x 0.30" (31.5 x 10mm) or (3) 0.98 x 0.31" (25 x 8mm)
Dimensions (H x W x D)	8.82 x 3.82 x 1.73" (224 x 97 x 44mm)	9.31 x 3.82 x 1.73" (236.5 x 97 x 44mm)
Weight (with Battery)	0.98lbs (440g)	1.15lbs (520g)
ENVIRONMENTAL		
Operating Temperature	14° to +131°F (-10 to +55°C)	
Storage Temperature	-40° to +176°F (-40 to +80°C)	
Relative Humidity	Up to 85% @ 35°C	
SAFETY		
Ingress Protection	IP 40	
EMC	EN 61326-1	
Safety Rating	IEC 61010-1, EN 61010-2-32, Pollution Degree 2, 600V CAT III	



MR417

MR527



FEATURES

- The jaw shape enables users to clamp on to cables or small bus bars
- Powered by battery or standard external 5V power source via micro-USB connector
- Measures up to 1000A_{AC} and 1400A_{DC} (model dependent)
- Equipped with a Zero DC reset function
- Auto Power Off enable/disable function
- LED overload and low battery indicators
- Millivolt output compatible with most equipment and instruments
- Equipped with a coaxial lead and isolated BNC connectors for direct connection to an oscilloscope
- Battery life up to 50 hours
- Safety rating 600V CATIII



BNC Connector

CATALOG NO.	DESCRIPTION
1200.84	AC/DC Current Probe Model MR417 (40A _{AC} , 60A _{DC} , 10mV/A & 400A _{AC} , 600A _{DC} , 1mV/A, BNC Output) Replaces MR461
1200.85	AC/DC Current Probe Model MR527 (100A _{AC} , 150A _{DC} , 10mV/A & 1000A _{AC} , 1400A _{DC} , 1mV/A, BNC Output) Replaces MR561

CURRENT MEASUREMENT PROBES

MH SERIES

MODEL MH60

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

Self-powered directly from oscilloscope or line-power via line-adaptor



SPECIFICATIONS

MODEL	MH60
ELECTRICAL	
Nominal Range	100A _{AC/DC} (140A peak)
Measurement Range	500mA to 140A _{AC} / 100A _{DC}
Transformation Ratio	Voltage Output
Output Signal	10mV/A (1V _{AC/DC} @ 100A)
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	6.6 ft (2m) lead with molded isolated male BNC connector
MECHANICAL	
Maximum Conductor Size	Ø 1.02" (26mm)
Dimensions	5.43 x 1.92 x 1.10" (138 x 49 x 28mm)
Weight	Approximately 7.05oz (200g)
Material	Polycarbonate UL 94
ENVIRONMENTAL	
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)
SAFETY	
CE Mark	Yes
Double Insulation	Yes
Ingress Protection	IP40 (EN 60529)
Safety Rating	EN 61010-1 EN 61010-2-31 600V CAT II, 300V CAT III Pollution Degree 2



FEATURES

- Clamping diameter 1.02" (26mm)
- Measurement range from 0.5 to 140 Amps AC, 100 Amps DC
- Measures AC and 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

CATALOG NO.	DESCRIPTION
2153.03	AC/DC Current Probe Model MH60 (100A, 1MHz, BNC)



CURRENT MEASUREMENT PROBES

DIGITAL FLEXPROBE®

MODELS 400D & 4000D

Provide a welcomed solution when accessing electrical conductors in tight places



MINIFLEX:
400D-10 (10" probe)



MINIFLEX:
4000D-14 (14" probe)



MINIFLEX:
400D-24 (24" probe)
4000D-24 (24" probe) (shown)



SPECIFICATIONS

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

Consult factory for NIST Calibration prices

PRODUCT INCLUDES

Digital FlexProbe®, (2) 1.5V AAA batteries and a user manual.

CATALOG NO.	DESCRIPTION
2153.31	Digital FlexProbe® Model 400D-10 w/6' Lead (TRMS, 4Aac, 40Aac, 400Aac)
2153.36	Digital FlexProbe® Model 400D-24 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)

FEATURES

- Easy access and measurement, even in confined spaces
- Measurement from 20mAac to 4000Aac (model dependent)
- Available with 10", 14" and 24" sensor lengths
- Sensor diameter 2.75" (70mm) to 8" (190mm) (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






ACCESSORIES

CATALOG #5000.44

MultiFix (universal mounting system) for use with models 5231, 5233, 400D, and 4000D

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		
	MN01	1000:1	2 to 150A	–	1mA/A*	–	N/A	0.39" (10mm)	N/A	Leads	2129.17
	MN02	1000:1	50mA to 100A 50mA to 90A	–		–	N/A	0.39" (10mm)	N/A	Leads	2129.20
	MN03	–	2 to 100A	–	–	1mV/A	N/A	0.39" (10mm)	N/A	Leads	2129.18
	MN05	–	5mA to 10A 1 to 100A	–	–	1mV/mA 1mV/A	N/A	0.39" (10mm)	N/A	Leads	2129.19
	MN09	–	1 to 150A	–	–	100mVdc/Aac	N/A	0.39" (10mm)	N/A	Leads	2129.21
	MN103	–	1mA to 10A 1 to 100A	–	–	1mV/mA 1mV/A	N/A	0.47" (12mm)	N/A	Leads	1031.02
	MN114	–	1mA to 10A	–	–	100mV/A	<8°	0.47" (12mm)	N/A	Leads	2110.71
	MN185	1000:1	50mA to 120A	–	1mA/A	–	<3.5°	0.47" (12mm)	N/A	Jacks	100.185
	MN255	–	0.1 to 24A 0.1 to 240A	–	–	100mV/A 10mV/A	<2.5°	0.78" (19.8mm)	N/A	Leads	2115.81
	MN291	–	0.5 to 240A	–	–	100mVdc/Aac	N/A	0.78" (19.8mm)	N/A	Leads	2115.84
	MN307	–	10mA to 12A	–	–	100mV/A	<2.5°	0.78" (19.8mm)	N/A	Leads	2116.23
	MN312	1000:1	0.1 to 200A	–	1mA/A*	–		0.78" (19.8mm)	N/A	Jacks	2116.24
	MN352	–	0.1 to 150A	–	–	10mV/A		0.78" (19.8mm)	N/A	Jacks	2116.26
	MN353	–		–	–		0.78" (19.8mm)	N/A	Leads	2116.27	
	MN375	–	0.1 to 10A	–	–	100mV/A	<1.5°	0.78" (19.8mm)	N/A	Leads	2115.41
	MN379	–	5mA to 6A 0.1 to 120A	–	–	200mV/A 10mV/A		0.78" (19.8mm)	N/A	Leads	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)	N/A	Leads	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)	Leads	1201.07

*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 except MN379.

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		
	MR415	–	0.5 to 400A	0.5 to 600A	–	1mV/A	≤1.5°	1.18" (30mm)	2 bus bar 1.24 x 0.39" (31.5 x 10mm)	5 ft (1.5m) Lead	1200.80
	MR416	–	0.5 to 40A 0.5 to 400A	0.5 to 60A 0.5 to 600A	–	10mV/A 1mV/A	≤2.2° ≤1.5°	1.53" (39mm)	2 bus bar 1.95 x 0.19" (50 x 5mm)	5 ft (1.5m) Lead	1200.81
	MR526	–	0.5 to 100A 0.5 to 1000A	0.5 to 150A 0.5 to 1400A	–	10mV/A 1mV/A	≤2° ≤1.5°	1.53" (39mm)	2 bus bar 1.95 x 0.19" (50 x 5mm)	5 ft (1.5m) Lead	1200.83
	SR601	1000:1	0.1 to 1200A	–	1mA/A*	–	<0.5°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Jacks	2113.43
	SR604	1000:1	0.1 to 1200A	–	1mA/A*	–	<0.5°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Leads	2113.44
	SR651	–	0.1 to 1200A	–	–	1mV/A	<0.5°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Jacks	2113.45
	SR701	1000:1	1mA to 1000A	–	1mA/A*	–	<0.7°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Jacks	2116.29
	SR704	1000:1	1mA to 1000A	–	1mA/A*	–	<0.7°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Leads	2116.30
	SR752	–	0.1 to 1000A	–	–	1mV/A	<0.7°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Leads	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°	2.05" (52mm)	1.95 x 0.19" (50 x 5mm)	Leads	2116.33
	K100	–	0.1mA to 3A	0.05mA to ±4A	–	1mV/mA	N/A	0.18" (4.5 mm)	N/A	Plugs	1200.67
	K110	–	0.1mA to 300mA	0.05mA to ±450mA	–	10mV/mA	N/A		N/A	Plugs	2111.73
	LM102	1000:1	50mA to 200A	–	1mA/A*	–	<3°	0.63" (16 mm)	N/A	Leads	2153.04
	LM103	–	0.1 to 200A	–	–	1mV/A	<3°		N/A	Leads	2153.05

*Output Protection for open secondary

**Phase shift indicated at maximum rating

Note: All SR probes listed on this chart are UL approved, however not all SR series probes are UL approved; please consult factory. Consult factory for NIST Calibration price.



OUTPUT TERMINATIONS

Lead with BNC

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



Jacks

Two standard safety banana jacks (4mm)



Leads

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







Shrouded Banana Plugs

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










AMPFLEX® AND MINIFLEX® PROBES - SELECTION CHARTS

SERIES	MODEL	RATIO	MEASUREMENT RANGE	OUTPUT SIGNAL	MAXIMUM CONDUCTOR SIZE	CATALOG NO.
	MF 300-10-2-10-HF	-	30A / 300A	100mV/A, 10mV/A	2.95" (70mm)	2126.84
	MA114	-	3A / 30A / 300A / 3000A	1mV/mA, 100mV/A 10mV/A, 1mV/A	4" (101mm)	2153.41
	300-24-2-10	-	30A / 300A	100mV/A, 10mV/A	7.48" (190mm)	2112.88
	1000-24-1-1	-	1000A	1mV/A	7.48" (190mm)	2112.39
	1000-24-2-1	-	100A / 1000A	10mV/A, 1mV/A	7.48" (190mm)	2112.98
	1000-36-2-1	-	100A / 1000A	10mV/A, 1mV/A	11" (290mm)	2113.00
	3000-24-1-1	-	3000A	1mV/A	7.48" (190mm)	2112.46
	3000-36-1-1	-			11" (290mm)	2112.48
	3000-24-2-1	-	300A / 3000A	10mV/A, 1mV/A	7.48" (190mm)	2113.05
	6000-36-2-0.1	-	600A / 6000A	1mV/A, 0.1mV/A	11" (290mm)	2113.21
	30000-24-2-0.1	-	3000A / 30,000A		7.48" (190mm)	2113.33
	24-3001	-	300A / 3000A _{Ac}	10mV/A, 1mV/A	7.48" (190mm)	2120.81

Consult factory for NIST Calibration price

OSCILLOSCOPE & BNC TERMINATED PROBES

MODEL	MEASUREMENT RANGE		OUTPUT SIGNAL VOLTAGE	PHASE SHIFT*	MAXIMUM CONDUCTOR SIZE		OUTPUT CONNECTION
	AC	DC			Ø CABLE	BUS BAR	
 SL261	100mA to 10A 1 to 100A		100mV/A 10mV/A	<1.5°	0.46" (11.8mm)	N/A	6.5 ft (2m) Lead w/BNC
 MN261	0.1 to 24A 0.5 to 240A			<2.5°	0.78" (19.8mm)		
 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)	
 MN251T MN379T	0.5 to 240A		1mV/A	<2.5°	0.78" (20mm)	0.78" (20mm)	10 ft (3m) Lead w/BNC
	0.005 to 6A		200mV/A	<4°			
	0.1 to 120A		10mV/A	<2.2°			
 MH60	0.5 to 100A	0.5 to 100A	10mV/A	<1°	1.02" (26mm)	N/A	
 MR417	0.5 to 40A 0.5 to 400A	0.5 to 60A 0.5 to 600A	10mV/A 1mV/A	≤2.2° ≤1.5°	1.18" (30mm)	2 bus bar 1.24 x 0.39" (31.5 x 10mm)	6.6 ft (2m) Lead w/BNC
	 MR527	0.5 to 100A 0.5 to 1000A		0.5 to 150A 0.5 to 1400A			

*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. Consult factory for NIST Calibration price.

DATA LOGGERS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

! SEE PAGE 129 FOR MORE INFO
ON DATAVIEW® SOFTWARE

CONFIGURE DATA LOGGERS

MODELS CL601, L261, L452, L562, ML912

Print reports of all test results / Configure all data logger functions and parameters from a PC including sample rate, recording length, channel configuration and more / Create and store a library of configurations / Capture, display and analyze data in real-time on a PC

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: ±(1% of Reading + 1A) 50 to 400A: ±(1% of Reading + 0.5A) 400 to 600A: ±(3% 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)	17.1oz (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)

Consult factory for NIST Calibration prices

*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.

PRODUCT INCLUDES

Soft carrying case, set of (2) color-coded (red/black) silicone insulated test leads, test probes and alligator clips, K-thermocouple with 4mm integrated adapter, (4) 1.5V AA batteries and a user manual.



DataView®

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

600VAC/AC+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/AC+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	40M Ω
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)

Consult factory for NIST Calibration prices

PRODUCT INCLUDES

USB cable, (1) set of color-coded (red/black) leads and alligator clips and a thumb drive with DataView® software.



DataView®

FEATURES

- TRMS voltage recording up to 600VAC/AC+DC
- AC: 64 samples per cycle and DC: 8 samples per second
- 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

CATALOG NO.

2126.05

DESCRIPTION

Simple Logger® II Model L261 (1-Channel, TRMS, 600VAC/AC+DC, DataView® Software)

DATA LOGGERS

SIMPLE LOGGER® II TRMS VOLTAGE & CURRENT



MODEL L562

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



DataView®



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 ±7.07V 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)	
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)	

Consult factory for NIST Calibration prices

FEATURES

- 2 input channels
- Voltage: 0 to 600V_{AC} TRMS
- Current: compatible with voltage output AC current probes with voltage outputs (see page 32 - 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
- 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

PRODUCT INCLUDES

Set of color-coded (red/black) 5 ft voltage leads and alligator clips, USB cable, (2) 1.5V AA batteries, printed quick start guide, USB drive with DataView® software.



PROBE MODEL NUMBER	CATALOG NUMBER	PROBE OUTPUT	PROBE RANGE	MAX RANGE FOR SLII	CABLE DIAMETER	BUS BAR SIZE	OUTPUT CONNECTION
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
MN379T	2153.02	200mV/A / 10mV/A	5A / 100A		0.78" (19.8mm)	N/A	Lead w/BNC
SR661	2113.49	1mV/A 10mV/A 100mV/A	1000A 100A 10A		2.13" (54.1mm)	N/A	Lead w/BNC

SEE PAGE 32 FOR MORE COMPATIBLE CURRENT PROBES (SOLD SEPARATELY)

CATALOG NO.	DESCRIPTION
2126.35	Simple Logger® II Model L562 (2-Channel, TRMS, Voltage & Current, DataView® Software)



DATA LOGGERS

SIMPLE LOGGER® II TRMS CURRENT

MINIFLEX® MODEL ML912

AC current recording loggers incorporate two selectable measurement ranges

SPECIFICATIONS

MODEL	ML912
ELECTRICAL	
Channels	Two
Input	Captive MiniFlex® AC Current Flexible Sensors
Range	1 to 100Aac 5 to 1000Aac
Accuracy (50/60Hz)	
(100A Range)	0 to 1A unspecified 1 to 100A: ±(1% of Reading + 0.5A)
(1000A Range)	0 to 5A unspecified 5 to 1000A: ±(1% of Reading + 1A)
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®
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 hrs to >45 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
Max Conductor Size	Sensor: 6" (152mm)
Cable Length	6 ft (2m)
Weight (with battery)	8.67oz (245g)
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)

Consult factory for NIST Calibration prices

APPLICATIONS

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



DataView®

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
- 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

PRODUCT INCLUDES

Includes USB cable, DataView® software, (2) 1.5V AA batteries and quick start guide.

CATALOG NO.	DESCRIPTION
2126.37	Simple Logger® II Model ML912 (2-Channel, TRMS, MiniFlex®, 100/1000Aac, DataView® Software)

DATA LOGGERS

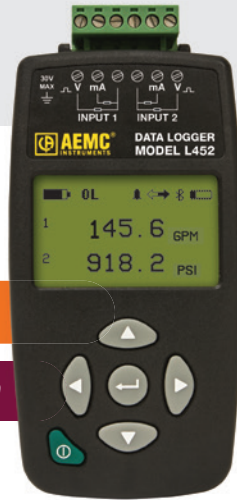
TWO-CHANNEL DC VOLTAGE, CURRENT, PULSE & EVENT

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



DataView®

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
Accuracy (% of Reading)	±(0.25% + 5cts)	±(0.5% + 1ct)		N/A
Resolution	0.01mA	0.1mV, 1mV, 10mV		N/A
Input Impedance	100Ω	1MΩ		N/A
Sample Rate	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%			
Ingress Protection	IP40 (instrument alone); IP20 (instrument with terminal strip)			

*Both channels must have the same input type.
Consult factory for NIST Calibration prices

PRODUCT INCLUDES

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



DATA LOGGERS

TWO-CHANNEL DC VOLTAGE, CURRENT, PULSE & EVENT

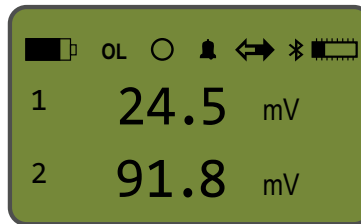
FEATURES

- 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 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.

FRONT PANEL & FUNCTIONAL DISPLAYS

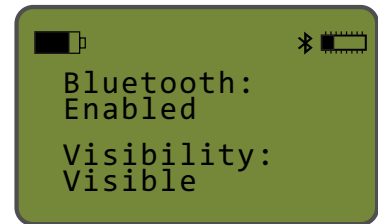


INSTRUMENT CONFIGURATION



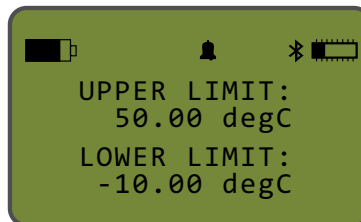
Instrument configuration parameters can be set through the front panel interface

BLUETOOTH ENABLED/VISIBILITY



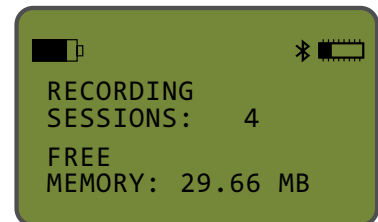
Enable and configure Bluetooth's functionality

ALARM TRIGGERS



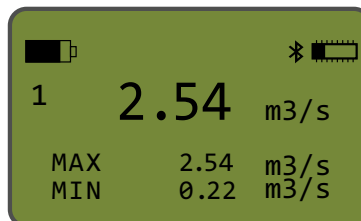
Allows you to set the upper and/or lower alarm trigger limits

RECORDING SESSION



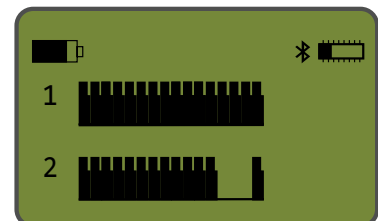
Displays the number of recording sessions currently stored in memory. It also shows the amount of free memory left for storing additional recording sessions

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

SIMPLE LOGGER® DATA LOGGERS

MODELS SL01 TO SL13

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

MODELS SL20 & SL50

Log DC Current and Temperature



SL01

SL11

SL13

SL50

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				

*Accuracy is specified with the 10-point filter selected to reduce noise.



FEATURES

- Simple one button operation
- Quick two 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

SPECIFICATIONS

MODELS	SL20	SL50							
		Thermocouple Type:							
		J	K	N	T	E	R	S	
	CURRENT	TEMPERATURE							
Range	±20 mA	-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)		
	0.02 mA	0.1°C							
Accuracy	±(0.5% of Reading + 0.1 mA)*	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	25 mA _{DC}	1 V							
Input Impedance	49 Ω	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								

*Accuracy is specified with the 10-point filter selected to reduce noise.



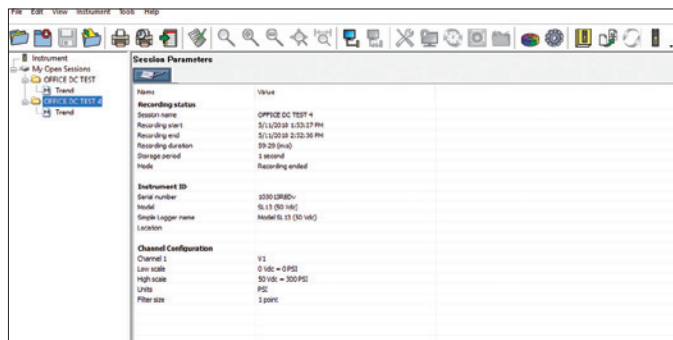
DATA LOGGERS

SIMPLE LOGGER® DATA LOGGERS

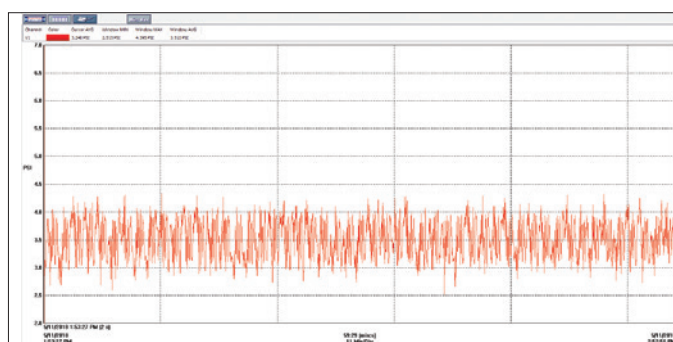
SIMPLE LOGGER CONTROL PANEL

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	SL50
Set up recording	✓	✓	✓	✓	✓	✓	✓
Define units	✓	✓	✓	✓	✓	✓	✓
Set instrument clock	✓	✓	✓	✓	✓	✓	✓
Erase instrument memory	✓	✓	✓	✓	✓	✓	✓
Scaling	✓	✓	✓	✓	✓	✓	
Filtering	✓	✓	✓	✓	✓	✓	✓
Thermocouple type							✓
Cold Junction Compensation							✓
Rising/Falling events							



Shows the current configuration of the logger



Typical real-time trend graph

CATALOG NO.	DESCRIPTION
2156.01	Simple Logger® Model SL01 (Low Voltage, 5 VAC)
2156.10	Simple Logger® Model SL10 (Voltage, 100mVDC)
2156.11	Simple Logger® Model SL11 (Voltage, 1 VDC)
2156.12	Simple Logger® Model SL12 (Voltage, 10 VDC)
2156.13	Simple Logger® Model SL13 (Voltage, 50 VDC)
2156.20	Simple Logger® Model SL20 (Current, 4 to 20 mAac)
2156.50	Simple Logger® Model SL50 (Temperature, Thermocouple)

DIGITAL MULTIMETERS



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

DIGITAL MULTIMETERS

5000 SERIES

MODELS 5212, 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	5217	5231	5233
GENERAL				
True RMS			Yes	
AC Bandwidth			1000Hz	
Auto/Manual Ranging			Yes	
LCD Display	4000-count	6000-count	6000-count + 61 segment bargraph	
Auto/Manual Range Select			Yes	
Voltage AC/DC	600V	750V _{AC} / 1000V _{DC}	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	-	
Resistance	40MΩ	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)
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 / No / No	Yes / Yes / Yes	No / No / No	Yes / Yes / No
Δ REL	No	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	
Drop Resistant	Yes – 6.56 ft (2m)		Yes – 3.28 ft (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	
Ingress Protection			IP54	
Safety	600V CAT III		1000V CAT III, 600V CAT IV	

Consult factory for NIST Calibration prices

DIGITAL MULTIMETERS

5000 SERIES



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



5212, & 5217

5231 & 5233



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 & 5217)
- Backlight screen and flashlight (Models 5212 & 5217)
- Displays MAX, MIN and MAX-MIN (Models 5217; Model 5233 displays MAX & MIN only)
- Displays relative measurement (Models 5217 & 5233)
- Measures temperature (Models 5217 & 5233)
- Measures frequency and duty cycle (Models 5217 & 5233)

FUNCTIONAL DISPLAYS



MODELS 5231 & 5233



PRODUCT INCLUDES

5212 & 5217

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

THERMOCOUPLE ADAPTER

Included with Model 5217

5231 & 5233

Soft carrying case, set of (2) 5 ft color-coded test leads and a 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)
2154.09	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



MTX 3290



MTX 3291

MODELS MTX 3290 & 3291

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

SPECIFICATIONS

MODELS	MTX 3290	MTX 3291
ELECTRIC		
DC, AC & AC+DC Voltages	60mV to 600V	60mV to 1000V
Voltage 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)	
Current 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 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, 10, 100, 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 V _{bc} and A _{bc}	
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)	

Consult factory for NIST Calibration prices



FEATURES

- 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

Set of color-coded (red/black) safety leads, set of (2) color-coded (red/black) test probes, (4) 1.5V AA alkaline batteries (installed), multilingual operation instructions, quick start guide, and a USB drive with a user manual. Model MTX 3291 also 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)

DIGITAL MULTIMETERS

3000 SERIES



MTX 3292B

MTX 3293B

MODELS MTX 3292B & 3293B

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

SPECIFICATIONS

MODELS	MTX 3292B	MTX 3293B
ELECTRICAL		
DC, AC & AC+DC Voltages	100mV to 1000V	
Voltage 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)	
Current 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 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 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	10,000 measurements	30,000 measurements
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) 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)	

Consult factory for NIST Calibration prices



Google Play *

*Bluetooth communication and Android App available on Google Play for Models 3292B-BT & 3293B-BT only

FEATURES

MTX 3292B & MTX 3293B

- 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 30,000 measurements (MTX 3293B)
- On screen connection indicator (MTX 3293B)
- USB or Bluetooth Class II communication available as an option
- NiMH AA rechargeable battery
- No downtime: instrument operates while charging

PRODUCT INCLUDES

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

Soft carrying case, set of (2) color-coded (red/black) safety leads, set of (2) color-coded (red/black) test probes, printed quick start guide, (4) NiMH 2400mAh 1.5V rechargeable batteries (installed), optical USB cable, USB Type A charger, USB charging cable and USB drive with SX-DMM software.



SHOWN: MTX 3293B

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



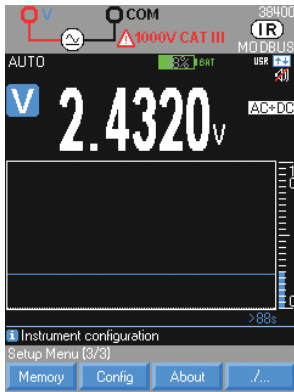
DIGITAL MULTIMETERS

3000 SERIES

FUNCTIONAL DISPLAYS

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

MTX 3292B & MTX 3293B COLOR MATRIX GRAPHICAL SCREENS



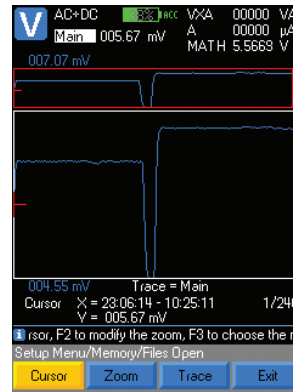
SETUP MENU

Configuration of measurements



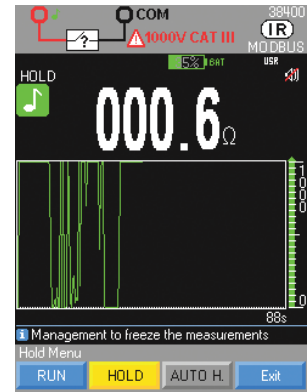
MEASUREMENT

Configuration of the measurement parameters



MEM

Storing of the measurements recording mode



HOLD

Management and hold of the display

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 checking generator output phase direction

SPECIFICATIONS

MODELS	6608	6609	6610
ELECTRICAL			
Operating Voltage	40 to 850VAC between phases	With leads connected: 40 to 600VAC 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 Rating / Ingress Protection	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

PRODUCT INCLUDES

6608 & 6609

Soft carrying case, (3) 4ft color-coded (red/black/blue) test leads, (3) color-coded (black) alligator clips and a user manual.

6610

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



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 supply 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

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

SPLITTER, TESTER AND DETECTOR

AC LINE SPLITTER

MODEL ALS-1

For use with clamp-on meters and 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



NC-1



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)
Electrical Safety	EN 61326-1, EN 61000-4-2, EN 61000-4-3, EN 55011

FEATURES

- Non-contact high voltage detector
- Wide range of detection; 80V to 275kV; one instrument fits all applications
- Eight switch-selectable voltage sensitivity ranges
- 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
- Lightweight, minimizes sway at the end of long hotsticks
- Suitable for indoor and outdoor use
- Easy access to batteries

PRODUCT INCLUDES

Hard carrying case, universal spline for hotstick connection, (3) C cell batteries, shotgun adapter and a user manual.

Note: Hot stick not supplied



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



ACCESSORIES/REPLACEMENTS

Catalog #5100.03

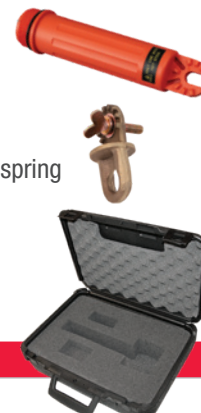
Metal Universal Spline Adapter

Catalog #5100.08

Battery housing with o-ring and spring

Catalog #2131.36

Replacement Carrying Case



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)

MODELS CA 771 & CA 773

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

SPECIFICATIONS

MODELS	CA 771	CA 773
ELECTRICAL		
Display	LEDs	LEDs + backlit digital display
Voltage Absence Testing (VAT)	12V _{AC} ≤ U ≤ 1000V _{AC} ; 12V _{DC} ≤ U ≤ 1400V _{DC}	
Voltage	LEDs	12 to 1000V _{AC} ; 12 to 1400V _{DC}
	LEDs + backlit digital display	1.0V to 299.0V _{AC/DC} 300V to 1,000V _{AC} / 1,400V _{DC}
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 rate at flashing 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 ≤ 1000V _{AC} (45 to 400Hz)	
Buzzer	Intermittent beep for Voltage Detection Continuous beep for continuity	
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

Set of removable test probes Ø 2mm with crystal safety cover, probe-tip protector, velcro strap, (2) 1.5V AA batteries, and a multilingual user manual.



FEATURES

- Full autotest
- Voltage detection, LED display:
 - 12V_{AC} ≤ U ≤ 1000V_{AC}
 - 12V_{DC} ≤ U ≤ 1400V_{DC}
- 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 < 100Ω)
- Extended continuity test with visual indication for:
 - R < 2kΩ, 60kΩ and 300kΩ (Model CA 771)
 - R < 0.5Ω to 2.999kΩ (Model CA 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 CA 771)
 - 5° to 113°F (-15° to 45°C) (Class N) (Model CA 773)
- Battery life > 5000 x 10s (Model CA 771)
2500 x 10s (Model CA 773) measurements
- Removable lead and test probe
- Delivered complete and ready to use

CATALOG NO.	DESCRIPTION
2121.14	Voltage Tester Model CA 771 (LED, VAT 12V _{AC} ≤ U ≤ 1000V _{AC} ; 12V _{DC} ≤ U ≤ 1400V _{DC} , Absence of Voltage)
2121.15	Voltage Tester Model CA 773 (LED & backlit display, VAT 12V _{AC} ≤ U ≤ 1000V _{AC} ; 12V _{DC} ≤ U ≤ 1400V _{DC} , Absence of Voltage)



ELECTRICAL TEST TOOLS

TACHOMETERS

MODELS CA 1725 & CA 1727

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

SPECIFICATIONS



MODELS	CA 1725	CA 1727
MEASUREMENTS		
Rotational Speed Function	Range: 6 to 100,000rpm Resolution: 0.0006 to 6rpm depending on range	
Linear Speed Function	Range: 0.1 to 10,000m/min or ft/min Resolution: 0.0006 to 6m/min depending on range	
Frequency Function	Range: 0.1 to 10,000Hz Resolution: 0.0004 to 0.4Hz depending on range	
Period Function	Range: 0.1 to 10,000ms Resolution: 0.0003 to 0.3ms depending on range	
Duty Cycle Function	Range: 10 to 10,000% Resolution: 0.1 to 1% depending on range	
Count Function	Range: 0 to 99,999 events; Accuracy: ± 1 event (Model CA 1727)	
GENERAL		
Power Source	9V Alkaline battery (included)	
Battery Life	250 x 5 min measurements with optical sensor; 600 x 5 min measurements with external sensor	
Data Storage	4000 measurements (Model CA 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	
OPTICAL SENSOR		
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		
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)	

Consult factory for NIST Calibration prices

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 CA 1727)
- Includes TachoGraph software on CD-ROM (Model CA 1727) download memory only
- Stores up to 4000 measurements results (Model CA 1727)

ACCESSORIES

MECHANICAL ACCESSORIES KIT Catalog #1749.02

Mechanical adapter, calibrated wheel, conical and cylindrical end fitting



PRODUCT INCLUDES

Hard case, FRB F connector, 9V battery, set of (15) reflective strips, quick start guide and a user manual.

CA 1727 also includes a USB cable and TachoGraph software.



CATALOG NO.	DESCRIPTION
1748.10	Tachometer Model CA 1725
1748.30	Tachometer Model CA 1727

ENVIRONMENTAL TESTERS



DataView[®]
DATA ANALYSIS AND REPORTING SOFTWARE

! SEE PAGE 129 FOR MORE INFO
ON DATAVIEW[®] SOFTWARE

CONFIGURE ENVIRONMENTAL TESTERS

MODELS 1823, 1110, 1227, 1246, 1510, 1821 & 1822

*Capture and display data in real-time / Configure all user selectable functions and parameters / Download and analyze stored data
Create customizable reports / Print reports of all test results*

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

ENVIRONMENTAL TESTERS

LIGHTMETER

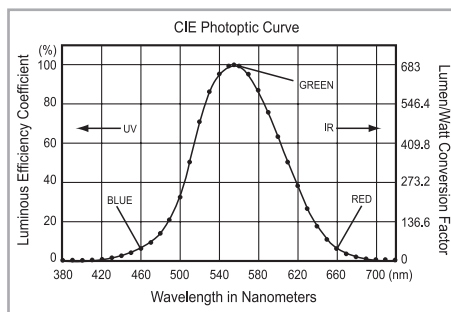
MODELS CA811 & CA813

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

SPECIFICATIONS

MODELS	CA811	CA813*
MEASUREMENTS		
Range	20fc, 200fc, 2000fc, 20kfc 20lux, 200lux, 2000lux, 20klux	20fc, 200fc, 2000fc, 20kfc 20lux, 200lux, 2000lux, 20klux
Display Resolution	0.01fc or 0.01lux	
Sensor	Silicon photodiode	
Spectral Response	CIE Photopic Curve	
Accuracy	±5% of Reading ±10cts	±5% of Reading ±10cts
2856K Light Source	±18% of Reading ±2cts	±11% of Reading ±2cts
Common Light Source		
Sample Rate	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	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

Consult factory for NIST Calibration prices



*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

Rugged shockproof protective holster, 9V battery and a user manual.



CA811

CA813



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 (CA811)
- Peak function (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


ENVIRONMENTAL TESTERS

SOUND LEVEL METER

MODEL CA832

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

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	±1.5dB (ref. 94dB@1kHz)
Resolution	0.1dB
Precision	±2.0dB
Display	2000-count
Sensor Type	0.5" (13mm) electric (pre-polarized) 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 – 50Ω AC output: 1.0Vrms – 600Ω
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 a user manual.



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



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 ±1.5dB (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

CATALOG NO.	DESCRIPTION
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2121.23	Sound Level Meter Model CA832
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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

PRODUCT INCLUDES

Shockproof holster, 9V battery and a user manual.

APPLICATIONS

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



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



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

ENVIRONMENTAL TESTERS

LIGHTMETER

MODEL 1110

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

SPECIFICATIONS

MODEL	1110	
Measurement Range	.01 lx to 200,000 lx	0.01 fc to 18,580 fc
Accuracy	±3% of R on incandescent sources ±6% of R on LEDs (3,000K to 6,000K) ±9% of R on fluorescent sources	
Accuracy with Compensation	LED mode: ±4% of R (at 4,000K) Flou mode: ±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.	
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%	
GENERAL		
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	(3) 1.5V 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	
SAFETY		
EMC	EN 61326-1	
Safety Rating	IEC 61010-1	
Ingress Protection	IP50 with USB connector closed and protective cap on sensor	
Warranty	2 years	

CATALOG NO.	DESCRIPTION
2121.71	Lightmeter Data Logger Model 1110

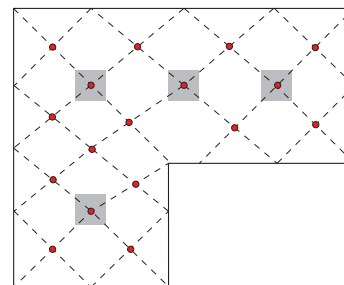


DataView®



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

ACCESSORIES/REPLACEMENTS

Catalog #2118.65
Soft Carrying Case

Catalog #2138.66
6 ft USB cable

Catalog #2118.09
General Purpose Carrying Case

Catalog #2122.31
Shock Proof Housing

Catalog #2153.78
Adapter - US Wall Plug to USB

Catalog #5000.44
MultiFix Universal Mounting System

PRODUCT INCLUDES

Soft carrying pouch, 6 ft cable USB cable, (3) 1.5V AA batteries, a printed quick start guide, USB drive with DataView® software and a user manual.

ENVIRONMENTAL TESTERS

TEMPERATURE

MODELS 1821, 1822 & 1823

Versatility & high performance temperature measurement



PRODUCT INCLUDES

Soft carrying case, 6 ft USB cable (type A to type B USB), K Thermocouple flexible sensor (1821 only), (2) K Thermocouple flexible sensor (1822 only), (1) 3 pin RTD connector (1823 only), (3) 1.5V AA alkaline batteries, printed quick start guide, and a USB drive with DataView® software and a user manual.



ACCESSORIES/REPLACEMENTS

Catalog #2138.66

6 ft USB cable

Catalog #5000.82

Adapter - 3-Prong Mini Flat Pin Connector (RTD)(1823 only)

Catalog #5000.44

MultiFlex Universal Mounting System

Catalog #2154.71

Carrying Pouch

Catalog #2153.78

Adapter – US Wall Plug to USB

Catalog #2122.31

Shock Proof Housing

FEATURES

- Selectable Thermocouple type, J, K, T, N, E, R, S (1821 & 1822)
- Single and dual channel (1821 & 1822)
- Dual line display (1822)
- RTD temperature measurement (1823)
- Works with 100 or 1000 Ohm platinum sensor (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

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

ENVIRONMENTAL TESTERS

TEMPERATURE

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
MEASUREMENTS			
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: $\emptyset < 1,000$ °C : 0.1 °C and $\emptyset \geq 1,000$ °C : 1 °C Display in °F: $\emptyset < 1,000$ °F : 0.1 °F and $\emptyset \geq 1,000$ °F : 1 °F		Display in °C : 0.1°C Display in °F : 0.1°F
Accuracy (°C)	J, K, T, N, E: $\emptyset \leq - 100^{\circ}\text{C} \pm (0.2\% \text{ Reading} + 0.6^{\circ}\text{C})$ $- 100^{\circ}\text{C} < \emptyset \leq + 100^{\circ}\text{C} \pm (0.15\% \text{ R} + 0.6^{\circ}\text{C})$ $+ 100^{\circ}\text{C} < \emptyset \pm (0.1\% \text{ R} + 0.6^{\circ}\text{C})$	R, S: $\emptyset \leq + 100^{\circ}\text{C} \pm (0.15\% \text{ R} + 1.0^{\circ}\text{C})$ $+ 100^{\circ}\text{C} < \emptyset \pm (0.1\% \text{ R} + 1.0^{\circ}\text{C})$	$\pm (0.4\% \text{ R} + 0.3^{\circ}\text{C})$
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	–	Yes	–
Units	°C or °F		
Backlighting	Blue luminescent		
Automatic Power Off	User selectable choice of 3, 5 or 10 minutes, or off through DataView® software.		
MECHANICAL			
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 (Cat. #2122.31).		
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		
Operating Range	Temperature from 14 to 140 °F (-10 to +60 °C) / Humidity from 10 to 90 %RH		
POWER SOURCE			
Type	(3) 1.5V AA / LR6 alkaline batteries		
Battery Life	Connection to line power using supplied micro-USB cable. Wall adapter sold separately Model 1821 & 1822: 1,000 hrs (portable mode) Model 1823 : 800 hrs (portable mode) 3 years for recording (15-minute measurement interval)		
SAFETY			
Safety Rating	IEC61010-1 / IEC 61326-1		
Ingress Protection	IP50 with the USB connector closed, per IEC 60 529		
GENERAL			
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		

ENVIRONMENTAL TESTERS

THERMO-ANEMOMETER

MODEL 1227

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



DataView®



SPECIFICATIONS

MODEL	1227	
MEASUREMENTS	Wind Speed	Air Flow
Measurement Range	0.52m/s to 27.0m/s (98.0 to 5,315fpm)	0.00 to 2,999m3/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	0.01m3/h from 0.00 to 2.99m3/h 0.1 m3/h from 3.0 to 99.9m3/h 1m3/h from 100 to 2.99m3/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	(3) 1.5V 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%	
SAFETY/WARRANTY		
Safety Rating	IEC 61010-1	
EMC	EN 61326-1	
Ingress Protection	IP40	
Warranty	2 years	

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 m3s, m3h, 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



Catalog #2122.32
Set of Air Flow Measurement Cones

ACCESSORIES

- Catalog #2118.09**
General Purpose Carrying Case
- Catalog #2118.65**
Soft Carrying Case
- Catalog #2122.31**
Shock Proof Housing
- Catalog #2122.32**
Set of Air Flow Measurement Cones
- Catalog #2122.33**
Replacement Air Flow Sensor
- Catalog #2138.66**
6 ft USB cable
- Catalog #2153.78**
Adapter - US Wall Plug to USB
- Catalog #5000.44**
MultiFix Universal Mounting System

CATALOG NO.	DESCRIPTION
2121.72	Thermo-Anemometer Data Logger Model 1227

ENVIRONMENTAL TESTERS

THERMO-HYGROMETER

MODEL 1246

Measure humidity and temperature in all conditions

SPECIFICATIONS

MODEL	1246
RELATIVE HUMIDITY	
Measurement Range	3.0 to 98.0 %RH
Accuracy	10 to 90 %RH: $\pm (2 \%RH \pm 1 \text{ ct})$, outside that range: $\pm (4 \%RH \pm 1 \text{ ct})$
Resolution	0.1 %RH
Response Time (66%)	60s
TEMPERATURE	
Type of Sensor	Temperature sensor with semiconductor
Measurement Range	- 10.0 to +60.0°C; 14.0 to +140.0°F
Resolution	Display in °C: 0.1°C; Display in °F: 0.1°F
Accuracy (°C)	10 to 40°C: $\pm (0.5^\circ\text{C} \pm 1 \text{ ct})$ Outside that range: $\pm (0.032 \times (T-25) \pm 1 \text{ ct})$ / T= temperature in °C
Response Time (66%)	30s
DEW POINT	
Measurement Range	- 10.0 to +60.0°Ctd; 14.0 to +140.0 °Ftd
Resolution	Display in °C: 0.1°C; Display in °F: 0.1°F
FUNCTIONS	
Recording	Manual Start/Stop Short press for MEM: spot recording Long press for 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 settable in the software Recording can be triggered on an alarm threshold
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
Units	°C or °F / %RH
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	1,000 hrs (portable mode) 3 years of recording (15-minute measurement interval)
GENERAL	
Interfaces	2 Communication modes: Bluetooth wireless link and USB
Mounting	Case equipped with a magnet for mounting to a metal surface and a tear drop for wall mounting. Compatible with the Multifix accessory (cat. #5000.44)
Dimensions / Weight	7.36 x 2.84 x 1.28" (187 x 72 x 32mm) / 14.1 oz (400 g) with batteries
Operating Range	Temperature: 14 to 140 °F (-10 to +60 °C) / Humidity: 10 to 90 %RH
DataView® software Functions	Display as a graph or table of values; Data export in graph/MS Excel table; Real-time mode; Automatic standard or custom report report generation
SAFETY/WARRANTY	
Safety Rating	IEC61010-1 / IEC 61326-1
Ingress Protection	IP54
Warranty	2 years

Consult factory for NIST Calibration prices



DataView®



FEATURES

- Measures temperature, humidity and dew point
- Dual line display toggles between any two of the measurements
- User selectable temperature units (°F or °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

PRODUCT INCLUDES

Soft carrying case, 6 ft USB cable (type A to type B USB), (3) 1.5 V AA alkaline batteries, printed quick start guide, and a USB drive with DataView® software and a user manual.

ACCESSORIES

- | | |
|--|---|
| Catalog #2118.09
General Purpose Carrying Case | Catalog #2138.66
6 ft USB cable |
| Catalog #2118.65
Soft Carrying Case | Catalog #2153.78
Adapter - US Wall Plug to USB |
| Catalog #2122.31
Shock Proof Housing | Catalog #5000.44
MultiFix Universal Mounting System |

CATALOG NO.	DESCRIPTION
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2121.73	Thermo-Hygrometer Data Logger Model 1246
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ENVIRONMENTAL TESTERS

AIR QUALITY

MODEL 1510

Monitor CO₂, temperature, and humidity for a healthy environment

Assists with the prevention of COVID 19 by testing indoor air quality. Contact us to learn more.



DataView®

SPECIFICATIONS

MODEL	1510
CO₂ 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	Blue - red when in alarm condition
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
Power Source	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 padlock wall mount (padlock is not included), optional desktop stand and wall mount holster
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
SAFETY	
Safety Rating	IEC 61010-1, 50V CAT II – IEC 61326-1
Ingress Protection	IP40

Consult factory for NIST Calibration prices

FEATURES

- CO₂, temperature, and humidity logger
- Free app for Android™ from the Google® Play Store
- Display turns red when any of the measurements are in alarm condition
- 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

Soft carrying pouch, adapter - US wall plug to USB, 6 ft USB cable, (2) 1.5V AA batteries, printed quick start guide, and a USB drive with DataView® software and a user manual.



ACCESSORIES/REPLACEMENTS

- | | |
|--|--|
| Catalog #2138.61
Wall Mount Holster (Gray) | Catalog #2138.67
Wall Mount Holster (White) |
| Catalog #2138.62
Desktop Stand (White) | Catalog #2153.78
Adapter - US Wall Plug to USB |
| Catalog #2138.63
Calibration Kit | Catalog #2154.71
Replacement Carrying Pouch |
| Catalog #2138.66
6 ft USB cable | |

CATALOG NO.	DESCRIPTION	CATALOG NO.	DESCRIPTION
2138.08	Air Quality Logger Model 1510 (Gray)	2138.09	Air Quality Logger Model 1510 (White)

GROUND RESISTANCE TESTERS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

! SEE PAGE 129 FOR MORE INFO
ON DATAVIEW® SOFTWARE

CONFIGURE GROUND RESISTANCE TESTERS MODELS 6417, 6471 & 6472

Run tests and analyze real-time data from your PC / Configure all test functions and parameters from your PC / Customize views, templates and reports / Display Fall-of-Potential plots, tabular listing of test results and more / Print reports of all test results

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

GROUND RESISTANCE TESTERS

MULTI-FUNCTION

MODELS 6422 & 6424

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



SPECIFICATIONS

MODELS	6422				6424			
ELECTRICAL								
Voltage								
Measurement Range	-				0.1-600VAc/dc			
Resolution	-				0.1V			
Accuracy	-				±(1%R + 1ct)			
Current								
Range	-				0.5-60.00Aac (requires optional MN72 probe)			
Ground Resistance (2P Mode)								
Measurement Range	0.05-99.99Ω, 80.0-999.9Ω, 0.800-9.999kΩ, 8.00-50.00kΩ							
Resolution	0.01Ω, 0.1Ω, 1Ω, 10Ω							
Accuracy	± (2%R + 10 ct), ± (2%R + 2 ct), ±(2%R + 1 ct), ±(2%R + 1 ct)							
Ground Resistance (3P Mode)								
Measurement Range	0.50-99.99Ω	80.0-999.9Ω	0.800-2.000kΩ	0.50-99.99Ω	80.0-999.9Ω	0.800-9.999kΩ	8.00-50.000kΩ	
Resolution	0.01Ω	0.1Ω	1Ω	0.01Ω	0.1Ω	1Ω	10Ω	
Accuracy	± (1%R + 10ct)	± (1%R + 2ct)	± (1%R + 1ct)	± (1%R + 10ct)	± (1%R + 2ct)	± (1%R + 1ct)		
Measurement Frequency	128Hz or 256Hz (automatically selected)							
No-load Voltage	±10 V peak							
Maximum Test Current	20mA							
Measurement Mode	One shot or continuous							
Data Storage	-				Stores the 52%, 62% and 72% 3P resistance measurements			
Calculation	-				Calculates average and % deviation of the three saved readings			
GENERAL								
Display	Backlit LCD							
Measurement Mode	2P (Ω), 3P (Ω)				V, I, 2P (Ω), 3P (Ω)			
Power Supply	(6) AA alkaline batteries				(6) NiMH rechargeable batteries, charging time approx. 6 hrs			
Battery Life	> 2,000 x 3P earth measurements at 100 Ω				>1,500 x 3P earth measurements at 100 Ω			
Dimensions	8.78 x 4.96 x 2.75" (223 x 126 x 70mm)							
SAFETY								
Safety Rating	EMC: IEC 61326-1; IEC 61010-2-030 / 600 V CAT IV							

Consult factory for NIST Calibration prices

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

GROUND RESISTANCE TESTERS

MULTI-FUNCTION

MODELS 6422 & 6424

FEATURES

- Simple, one button operation - eliminates errors in testing
- Test button turns green when measurement is stable
- 2P resistance measurement up to 50k Ω
- 3P ground resistance measurement up to 2k Ω (Model 6422) up to 50k Ω (Model 6424) for highly resistive terrain
- Large back lit digital display – easier to read in all lighting conditions
- Automatic hold function - retains last measurement after the reading stabilizes ensuring the measurement is valid
- Automatic test frequency selection between 128 and 256 Hz, providing stable results in adverse environments
- Powers up in 2 pole mode – automatically checks the injector lead connection when connected to the H auxiliary rod
- Convenient storage of the three measurements along with the average and % deviation - easily determines proper test results
- Built in test lead compensation capability – improves the accuracy of low resistance measurements
- CAT IV 600V rated for a high level of operator safety
- Checks AC/DC voltage (Model 6424)
- Stores 52, 62 and 72% measurements – eliminates errors in determining the ground resistance (Model 6424)
- Leakage current measurement from 0.5mA to 60A (Model 6424)
- Battery recharging via AC adapter, USB or vehicle DC port (Model 6424)
- Color coded leads and terminals provide fast, error-free connection
- Detects the presence of hazardous voltage and prohibits measurement
- Direct access to all functions, even when wearing work gloves
- Rugged water resistance case, for all terrain use
- Built-in display stand to prop up instrument for seeing the display better when placed on the ground

ACCESSORIES/REPLACEMENTS

Catalog #2135.39

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

Catalog #2153.06

MN72 AC Current Probe (6424 only)

CATALOG #5000.92

Calibration Checker



CATALOG #5000.92

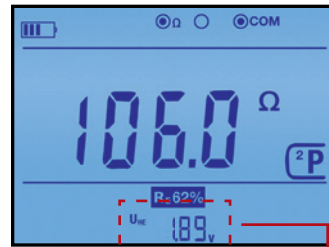


CATALOG #2153.06



KITS AVAILABLE SHOWN: CATALOG #2135.35

FUNCTIONAL DISPLAYS



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

Model 6424



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

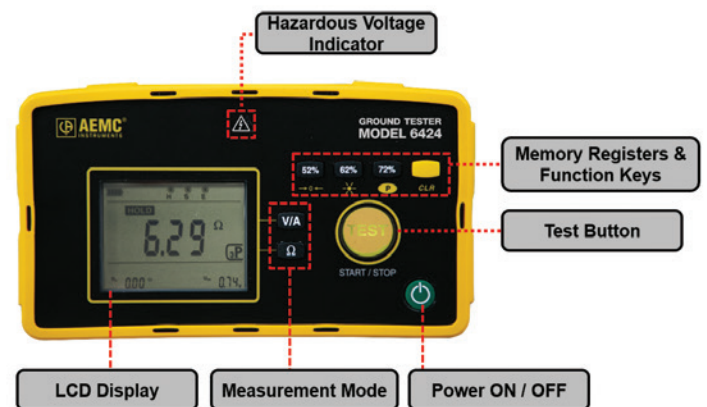


Live voltage is displayed when the V/A function is selected and test leads are connected to AC or DC voltage (Model 6424)



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

FRONT PANEL - 6424



GROUND RESISTANCE TESTERS

DIGITAL TESTERS

MODELS 4620 & 4630

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

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		
Measurement Frequency	128Hz square wave		
Test Current	10mA	1mA	0.1mA
Accuracy	±2% of Reading ±1ct		±5% of Reading ±3cts
Aux Electrode Influence			
Max Res. - Current Circuit	3kΩ	30kΩ	50kΩ
Max Res. - Voltage Circuit	50kΩ		
Response Time	Approximately four to eight seconds for a stabilized measurement		
Withstanding Voltage	250VAC or 100VDC		
Power Source	(8) 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		

Consult factory for NIST Calibration prices

ACCESSORIES/REPLACEMENTS

Catalog #2130.60

Tape Measure (100ft)

Catalog #2135.35*

Test Kit for 3-Point Testing – 150 ft

Catalog #2135.36*

Test Kit for 4-Point Testing – 300 ft

Catalog #2135.37*

Test Kit for 4-Point Testing – 500 ft

Catalog #5000.14

AC Power cord (4630)

Catalog #2135.38

Ground Test Kit for 3-Point Testing (Supplemental for 4-Point testing – includes (2) 100 ft color-coded leads, (1) 30 ft lead (green), (2) 14.5" T-shaped auxiliary ground electrodes and soft carrying bag)

Catalog #2130.59

Calibration Checker 25Ω for Models 3640, 4500, 4610, 4620 and 4630



KIT SHOWN

4630 KIT (500 ft)

*Refer to page 78 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 – 150 ft (Model 4620 and Catalog #2135.35)
2135.20	Ground Resistance Tester Model 4620 Kit – 300 ft (Model 4620 and Catalog #2135.36)
2135.21	Ground Resistance Tester Model 4620 Kit – 500 ft (Model 4620 and Catalog #2135.37)
2135.22	Ground Resistance Tester Model 4630 Kit – 150 ft (Model 4630 and Catalog #2135.35)
2135.23	Ground Resistance Tester Model 4630 Kit – 300 ft (Model 4630 and Catalog #2135.36)
2135.24	Ground Resistance Tester Model 4630 Kit – 500 ft (Model 4630 and Catalog #2135.37)



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

PRODUCT INCLUDES

(8) C-cell batteries (4620) or rechargeable 9.6V NiMH battery pack (4630), AC power cord (4630), and a user manual.

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)
	0.010 to 0.099Ω	0.001Ω	±1.5% ±0.01Ω
Auto-Ranging 0.01 to 1499Ω	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
	1.000 to 2.990mA 3.00 to 9.99mA	10μA	
Auto-Ranging 1mA to 40A	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	(4) 1.5V LR6 (AA) alkaline batteries or (4) NiMH batteries; Battery life: 12 hours, or 1440 30-second measurements approx.		
SAFETY			
Safety Rating	EN 61010-1, 600V CAT IV		

Consult factory for NIST Calibration prices

PRODUCT INCLUDES

6416 & 6417

Hard carrying case, calibration loop,
(4) 1.5V AA batteries and a user manual.

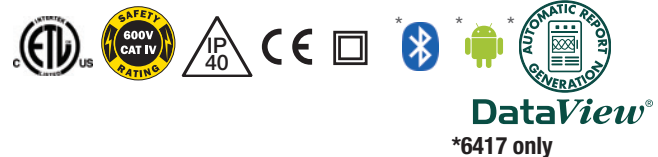
6417

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



6416

6417



FEATURES

- Ground Integrity Measurement
- Ground voltage indication (warns of possible unsafe conditions)
- Large multi-function bright yellow OLED (organic LED display)
- 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

DataView®
*6417 only

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, DataView® Software)



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)
	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% ±0.2Ω
	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
	10.00 to 99.90mA	100μA	±2% +100μA
Auto Ranging 1mA to 40A	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	(4) 1.5V LR6 (AA) alkaline batteries or (4) NiMH batteries; Battery life: 12 hours, or 1440 30-second measurements approx.		

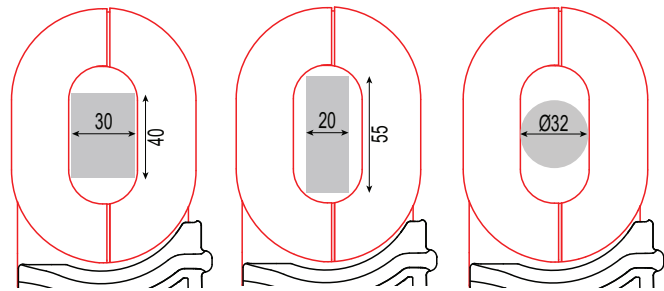
Consult factory for NIST Calibration prices

PRODUCT INCLUDES

Hard carrying case, 5Ω calibration loop, (4) 1.5V AA batteries, wrist strap and a user manual.



CLAMPING CHARACTERISTICS



FEATURES

- Ground Integrity Measurement
- Large multi-function bright yellow OLED (organic LED display) 1.89 x 1.55" (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 and 150V CATIII safety standards
- Automatic calibration of the jaw gap at power-up

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 1500Ω

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 500 Ω
Resolution	0.01 to 1 Ω
Measurement Frequency	Auto: 1611Hz Manual: 128Hz-1367Hz-1611Hz-1758Hz
3-Point Measurement	
Range (Auto-Ranging)	0.09 Ω to 99.9k Ω
Resolution	0.01 Ω to 100 Ω
Test Voltage	Nominal 16 or 32Vrms user selectable
Resistance Measurement Frequency	41 to 513Hz automatic or user selectable
Test Current	Up to 250mA
Accuracy	$\pm 2\%$ 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 99.99k Ω ; ρ max: 999k Ω m
Resolution	0.001 to 10 Ω
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	$\pm 2\%$ 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 0.12 to 99.99k Ω ; 4-Pole 0.02 to 99.99k Ω
Accuracy	$\pm 2\%$ of Reading + 2cts
Test Voltage	16Vdc (+, - 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 18Vdc, 1.9A output

Consult factory for NIST Calibration prices

ACCESSORIES



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



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



REEL CADDY
Catalog #2135.85 Set of (2),
for use with ground kit spools



DataView®



GROUND RESISTANCE MEASUREMENT USING 2 PROBES

For systems with parallel ground connections, Models 6471 and 6472 are capable of accurately measuring a ground resistance using probes only. This method involves placing 2 probes around the ground conductor to be tested and connecting them each to the instrument. One probe injects a known signal (32V/1367Hz) while the other probe 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.

PRODUCT INCLUDES

CAT #2135.48 MODEL 6471 (without probes)

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

CAT #2135.49 MODEL 6471 (with probes)

Carrying bag, set of (2) SR182 current probes, 110/240V power adapter with US power cord, optical USB cable, rechargeable NiMH battery, and a USB drive with DataView® software, ground tester workbook and a user manual.

KIT SHOWN 300 FT KIT: CATALOG #2135.50

Carrying bag for meter, carrying bag for kit, (2) 300 ft color-coded (red/blue) leads on spools, (2) 5 ft color-coded (red/blue) leads, (2) 100 ft hand-tied color-coded (green/black) leads, set of (2) SR182 current probes, 110/240V power adapter with US power cord, optical USB cable, (4) T-shaped auxiliary ground electrodes, set of (5) spaded lugs, 100 ft tape measure, rechargeable NiMH battery, and a USB drive with DataView® software, ground tester workbook and a user manual.



2 probes required to perform stakeless testing.

GROUND RESISTANCE TESTERS

MULTI-FUNCTION

MODEL 6472

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

SPECIFICATIONS

MODEL	6472
ELECTRICAL	
2 Clamp Measurement	
Range	0.1 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 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
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; ρ 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 0.12Ω 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)
Communication	Optically Isolated USB
Power Source	9.6V rechargeable battery pack (included)
Recharging Source	110/220V, 50/60Hz external charger with 18Vdc, 1.9A output

Consult factory for NIST Calibration prices

ACCESSORIES

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



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



REEL CADDY
Catalog #2135.85
Set of (2), for use with ground kit spools



DataView®



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

PRODUCT INCLUDES

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

TEST KITS

6472 METER
300 ft Kit: Catalog #2135.53
500 ft Kit: Catalog #2135.54 (shown)



Refer to page 78 for Model 6472 Kit descriptions Catalog #2135.35, #2135.36 and #2135.37

2 probes required to perform stakeless testing.

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

2 probes required to perform stakeless testing.

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



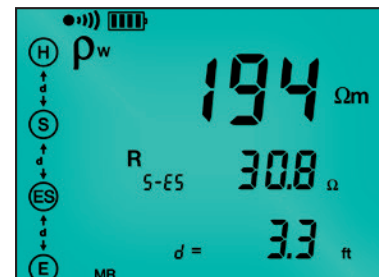
The 2 Clamp method displays clamp connection resistance, test current and frequency

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

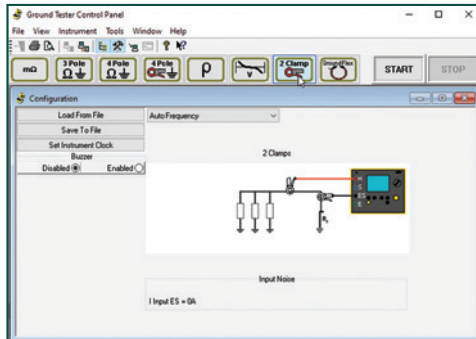
CATALOG NO.	DESCRIPTION
2135.48	Ground Resistance Tester Model 6471 (Digital, 3-Point, 4-Point, Clamp-on (SR182 probes not included), DataView® Software)
2135.49	Ground Resistance Tester Model 6471 (Digital, 3-Point, 4-Point, Clamp-on, (includes 2-SR182 probes), DataView® Software)
2135.50	Ground Resistance Tester Model 6471 Kit – 300 ft (Catalog #2135.49 and Catalog #2135.36)
2135.51	Ground Resistance Tester Model 6472 (Digital, 2-Point, 3-Point, 4-Point, Bond Test, DataView® software)
2135.53	Ground Resistance Tester Model 6472 Kit – 300 ft (Catalog #2135.51 and Catalog #2135.36)
2135.54	Ground Resistance Tester Model 6472 Kit – 500 ft (Catalog #2135.51 and Catalog #2135.37)
2135.60	Ground Resistance Tester Model 6471 Kit – 300 ft w/o Probes (Catalog #2135.48 and Catalog #2135.36)
2135.61	Ground Resistance Tester Model 6471 Kit – 500 ft w/o Probes (Catalog #2135.48 and Catalog #2135.37)

GROUND RESISTANCE TESTERS

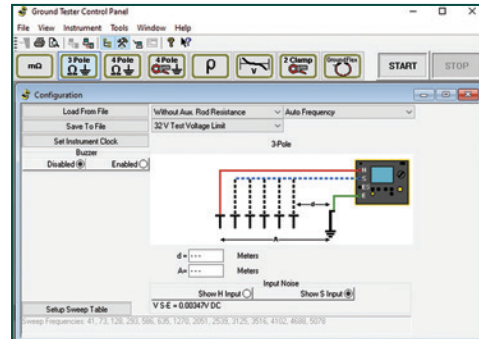
MULTI-FUNCTION

GROUND TESTERS MODELS 6471 & 6472 — TYPICAL DATAVIEW® FUNCTIONAL DISPLAYS

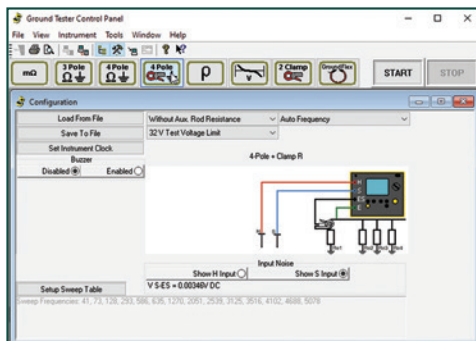
2 CLAMP METHOD SETUP



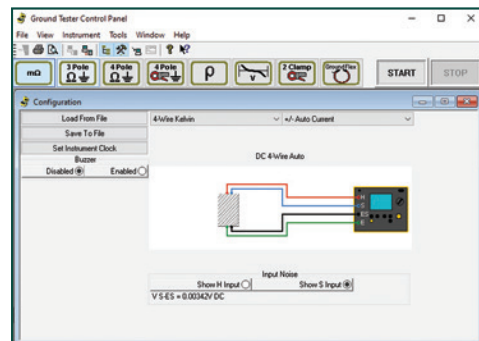
FALL-OF-POTENTIAL, STEP-TOUCH POTENTIAL



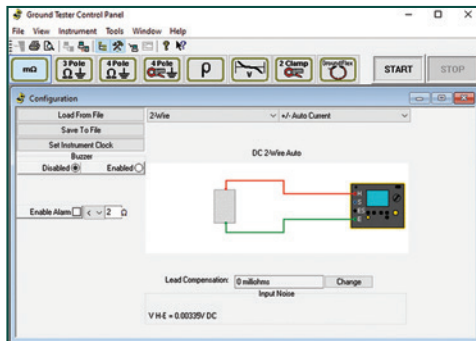
SELECTIVE 3-POINT TESTING OF MULTIPLE RODS



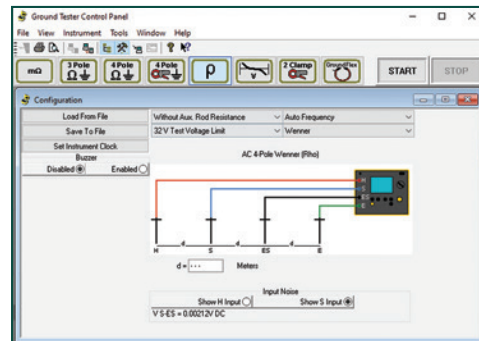
4-POINT BONDING FOR VERY LOW RESISTANCE



BONDING



SOIL RESISTIVITY



OPTIONAL KITS

150 FT KIT

Catalog #2135.35

Test Kit for 3-Point testing includes carrying bag, (2) 150 ft color-coded (red/blue) leads on spools, (2) 5 ft color-coded (red/blue) leads, (1) 30 ft lead (green), (2) 14.5" T-shaped auxiliary ground electrodes, a set of (5) spaded lugs and (1) 100 ft tape measure.



300 FT KIT

Catalog 2135.36

Test Kit for 4-Point testing includes carrying bag, (2) 300 ft color-coded (red/blue) leads on spools, (2) 5 ft color-coded (red/blue) leads, (2) 100 ft hand-tied color-coded leads (green/black), (4) 14.5" T-shaped auxiliary ground electrodes, a set of (5) spaded lugs and (1) 100 ft tape measure.



500 FT KIT

Catalog #2135.37

Test Kit for 4-Point testing includes carrying bag, (2) 500 ft color-coded (red/blue) leads on spools, (2) 5 ft color-coded (red/blue) leads, (2) 100 ft hand-tied color-coded (green/black) leads, (1) 30 ft lead (green), (4) 14.5" T-shaped auxiliary ground electrodes, a set of (5) spaded lugs and (1) 100 ft tape measure.



GROUND RESISTANCE TESTERS

MULTI-FUNCTION



DataView®

GROUND FLEX® FIELD KIT

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

Unique in the industry!

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)	.09 to 99.9kΩ	0.011 to 99.99kΩ	0.1 to 500Ω	0.01 to 99.9kΩ	0.01mV to 65.00V	0.02 to 99.99kΩ	0.067 to 99.99kΩ	
Resolution	0.01 to 100Ω	0.001 to 10Ω	0.01 to 1Ω	0.01 to 100Ω	0.01 to 10mV	2 wires: 0.01 to 100Ω 4 wires: 0.001 to 10Ω	0.001 to 10Ω	
Accuracy	±(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					±16Vdc	10, 16, 32 or 60Vrms	
Measurement Frequency	41 to 5078Hz		Auto: 1611Hz Manual: 128Hz, 1367Hz, 1611Hz, 1758Hz	41 to 128Hz	41 to 5078Hz	DC	41 to 5078Hz	
Coupling Measurement	Yes		-					
Auxiliary Rod Resistance Measurement	0.14 to 99.9kΩ		-					0.14 to 99.9kΩ
Voltage Interference	Maximum 60Vpeak							
Soil Resistivity	-		Wenner and Schlumberger		-			
Type of Measurement	3 wires	4 wires	2 clamps	4 wires	3 wires	2 or 4 wires	GroundFlex®	
Measurement Current	> 200mAac		<26 ARMS (w/ SR182) <5 ARMS (w/ MN82)	> 200mAac		> 200mAac	> 200mAac	
MECHANICAL								
Memory/Communication	512-record memory / Optically isolated USB							
Dimensions/Weight	10.7 x 9.84 x 5.04" (272 x 250 x 128mm) / Model 6472: 7.05 lbs (3.2kg) / Model 6474: 5.07 lbs (2.3kg)							
Safety								
Safety Rating	50V CAT IV, complies with IEC 61326-1 / IEC 61010 / IEC 61557-1-4-5							
Ingress Protection	IP53 (cover closed)							

Consult factory for NIST Calibration prices

GROUND TESTER 6472 KIT-500FT - Catalog #2135.54

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

GROUND FLEX® FIELD KIT 6474

Catalog #2136.03 (includes Catalog #2135.54)

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

SHOWN: 6474 KIT



GROUND RESISTANCE TESTERS

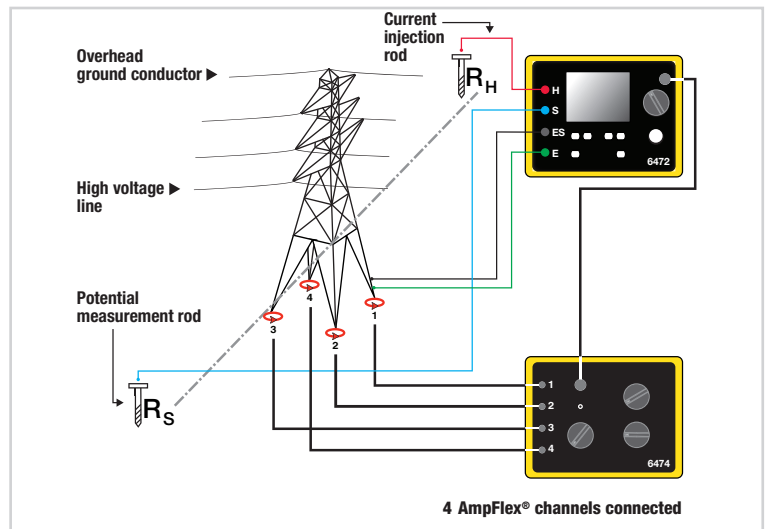
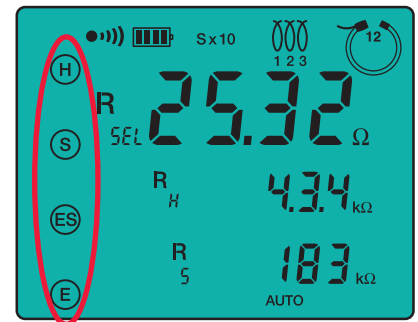
GROUND FLEX® FIELD KIT

FEATURES

- Ground Integrity Measurement
- 3- and 4-Point Fall-of-Potential measurement with manual or automatic frequency selection
- 4-Point soil resistivity measurement with automatic calculation of Rho (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 41 to 5078Hz for optimum test accuracy in electrically noisy environments
- Selectable test voltage limit of 10, 16, 32, or 60V 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
- Rechargeable NiMH batteries from wall charger or vehicle power
- Rugged dustproof and water-resistant field case (IP53 rated in closed position)
- Includes DataView® software for data retrieval, real-time display, analysis, automatic report generation and system configuration

AUTOMATIC RECOGNITION AND DISPLAY OF INPUT CONNECTIONS TO MATCH TEST

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



GROUND MEASUREMENT ON TOWERS WITH GROUND CABLE

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

ACCESSORIES

CAT #2135.87

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

CAT #2135.90

GroundFlex® Sensor
75 ft (22.8m)
(Model 6474 only)

CAT #2135.91

GroundFlex® Sensor
150 ft (45.7m)
(Model 6474 only)

CAT #2135.72

Model SR182
AC Current Probe
(Models 6471 & 6472)

CAT #2135.86

Lead – BNC 150 ft (45m)
M/F Extension Lead
(Model 6474 only)



CATALOG NO.

DESCRIPTION

2136.03

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

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

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

*** Must purchase an additional (2) SR182 or (2) MN82 accessory clamps

LEAKAGE CURRENT METERS & PROBES



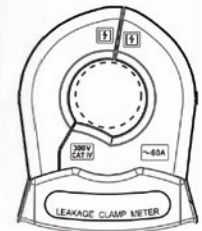
SEE WEBSITE FOR PRICING AND AVAILABILITY: WWW.AEMC.COM

LEAKAGE CURRENT METERS & PROBES

TRMS CLAMP-ON LEAKAGE CURRENT METER

MODEL 566

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



Jaw Opening: .91" (23mm)



SPECIFICATIONS

MODEL	566	
ACmA Current (TRMS, Auto-Ranging)		
Resolution	6mA 60mA 600mA	0.001mA (1µA) 0.01mA (10µA) 0.1mA (100µA)
Accuracy	50 to 60Hz (6mA) 50 to 60Hz (60mA & 600mA) 60 to 500Hz (6mA) 60 to 500Hz (60mA & 600mA)	±1.0% of Reading ±8cts ±1.0% of Reading ±5cts ±2.0% of Reading ±8cts ±2.0% of Reading ±5cts
AC Current (TRMS, Auto-Ranging)		
Resolution	6A 60A	1mA 10mA
Accuracy	50 to 60Hz 60 to 500Hz	±1.0% of Reading ±5cts ±2.0% of Reading ±5cts
AC Voltage (TRMS)		
Accuracy	60V 600V	±1.0% of Reading ±3cts
DC Voltage		
Resolution	60V 600V	0.01V 0.1V
Accuracy	60V 600V	±1.0% of Reading ±2cts
Resistance	0 to 1kΩ	
Accuracy	±1.0% of Reading ±2cts	
CONTINUITY	Buzzer activates <45Ω (0 to 1kΩ)	
Frequency (Auto-Ranging)		
Function	A-Hz	V-Hz
Resolution	0 to 100Hz 100Hz to 1kHz	0.1Hz 1Hz
Sensitivity	10mA _{rms} min	5V _{rms} min
Accuracy	±0.5% of Reading ±2cts	
Filter	On (50/60Hz only); Off (full frequency range)	
MAX Sample Rate	100mS	
MECHANICAL		
Jaw Opening Max Conductor Size	0.91" (23mm)	
Weight	10.4 oz (296g) with batteries	
Power Source	Two 1.5V AAA batteries (included)	
ENVIRONMENTAL		
Operating Temperature	32° to 104°F (0° to 40°C); < 80% RH (non-condensing)	
SAFETY		
Safety Rating	EN 61010-1, EN 61010-2-032, 600V Cat. III	

Consult factory for NIST Calibration prices

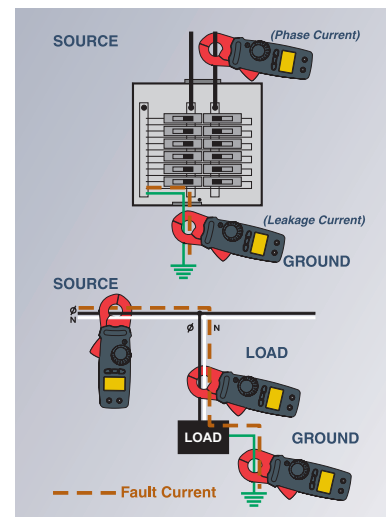
PRODUCT INCLUDES

Soft carrying case, (2) color-coded (red/black) 5 ft test leads, (2) 1.5V AAA (LR03) batteries and a user manual.



FEATURES

- Check for leakage and locate insulation breakdowns on live circuits
- Measures leakage current down to 0.001mA with up to 1µA resolution
- Measures current up to 60Arms
- Measures up to 600Vac/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
- Low pass filter to isolate 50/60Hz fundamental from harmonics
- Compatible with VDE 0404
- Backlight LCD display



CATALOG NO.	DESCRIPTION
2139.83	TRMS Clamp-on Leakage Current Meter Model 566 (6/60/600mA, 1/10/100A, 600Vac/dc, Hz, Ohms, Continuity)

LEAKAGE CURRENT METERS & PROBES

ARTIFICIAL NEUTRAL & LEAKAGE CURRENT PROBE

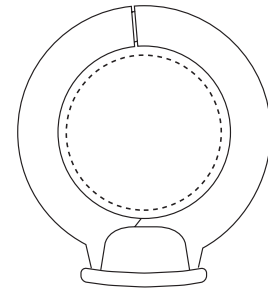
MODEL 2620

Check for leakage and locate insulation breakdowns on live circuits

SPECIFICATIONS

MODEL	2620	
ELECTRICAL		
	4A Range	400A Range
Current Range	500 μ A to 4A	500mA to 400A
Output Signal	1mV/mA (4V max)	1mV/A (400mV max)
Accuracy		
500 μ A to 10mA	\pm 3% of Reading \pm 1mV	–
10 to 100mA	\pm 0.5% of Reading \pm 0.5mV	–
100mA to 4A	\pm 0.5% of Reading \pm 0.5mV	–
500mA to 10A	–	\pm 0.5% of Reading \pm 0.5mV
10 to 100A	–	\pm 0.35% of Reading \pm 0.5mV
10A to 400A	–	\pm 0.35% of Reading \pm 1mV
Phase Shift		
500 μ A to 10mA	–	–
10 to 100mA	<15°	–
100mA to 4A	<10°	–
500mA to 10A	–	–
10 to 100A	–	<1°
100 to 400A	–	<0.6°
Load Impedance	1M Ω min	
Frequency Range	48 to 1000Hz	
MECHANICAL		
Dimensions	11.22 x 6.89 x 1.77" (285 x 175 x 45mm)	
Weight	2.87lbs (1.3kg)	
Jaw Opening	4.4" (112mm)	
Maximum Conductor Size	4.4" (112mm)	
ENVIRONMENTAL		
Operating Temperature	-14° to 131°F (-10° to 55°C); 0 to 85% RH (non-condensing)	
SAFETY		
Safety Rating	EN 61010-2-032, 600V Cat. III	

Consult factory for NIST Calibration prices

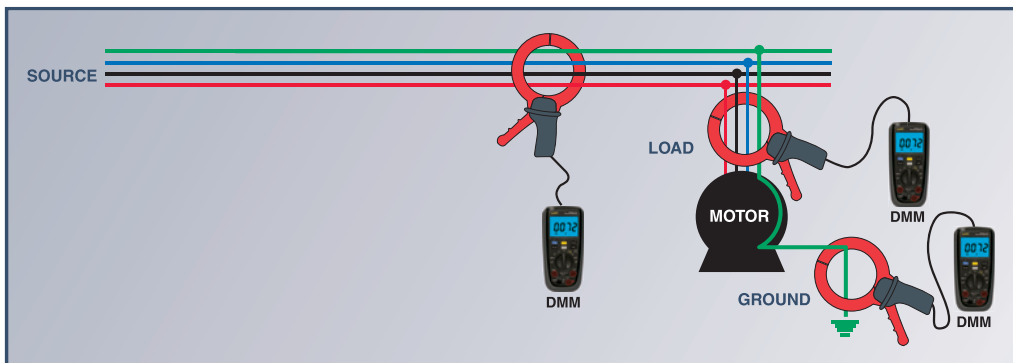


Jaw Opening: 4.4" (112mm)
Conductor Size: 4.4" (112mm)



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 V_{AC} range



CATALOG NO.	DESCRIPTION
2125.52	Leakage Current Probe Model 2620 (4A, 1V/A & 400A, 1mV/A output)



MEGOHMMETERS



DataView[®]
DATA ANALYSIS AND REPORTING SOFTWARE

! SEE PAGE 129 FOR MORE INFO
ON DATAVIEW[®] SOFTWARE

CONFIGURE MEGOHMMETERS MODELS 1060, 5060, 5070, 6526, 6534, 6550 & 6555

Print reports of all test results / Select test voltage and run tests from your PC with a simple click and execute process / Capture and display data in real-time / Retrieve data from the instrument's memory

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

MEGOHMMETERS

500V & 1000V HAND-CRANKED

MODELS 6501 & 6503

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

Ideal for use in areas affected by floods



SPECIFICATIONS

MODELS	6501	6503
INSULATION TESTS		
Test Ranges*		
250V	–	1 to 500M Ω
500V	0.5 to 200M Ω	1 to 500M Ω
1000V	–	10 to 5000M Ω (5G Ω)
Short Circuit Current	5mA (max)	
Voltage Measurement/ Safety Check	0 to 600Vac	
Accuracy (M Ω)	\pm 2.5% of Full Scale Length	
Automatic Discharge	5s/ μ F	8s/ μ F
Charge Time		
250V	–	0.2s/ μ F
500V	0.5s/ μ F	0.5s/ μ F
1000V	–	0.5s/ μ F
RESISTANCE TESTS		
Measurement Range	0 to 500k Ω	–
Test Current	1mA _{dc}	–
Accuracy	\pm 2.5% of Full Scale Length	–
CONTINUITY TESTS		
Measurement Range	0 to 100 Ω	–
Test Current	5mA _{dc}	–
Accuracy	\pm 2.5% of Full Scale Length	–
SAFETY		
Safety Rating / IP Protection	EN 61010-1, 600V Cat. II, 300V CATIII / IP54	

*DC test voltage generated in full across the entire measurement range.
Consult factory for NIST Calibration prices



FEATURES

- True Megohmmeter®
- No batteries or power needed to operate
- Test voltages of 250V, 500V and 1000V (model dependent)
- Insulation measurements to 200M Ω and 5000M Ω (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

PRODUCT INCLUDES

MODEL 6501

Soft carrying case, (2) color-coded (red/black) leads and alligator clips and a user manual.

MODEL 6503

Soft carrying case, (3) color-coded (red/black/blue) leads and alligator clips, black test probe and a user manual.



SHOWN: 6503

CATALOG NO.	DESCRIPTION
2126.51	Megohmmeter Model 6501 (Hand-cranked, 500V, Resistance, Continuity)
2126.52	Megohmmeter Model 6503 (Hand-cranked, 250V, 500V, 1000V)



MEGOHMMETERS

1000V DIGITAL & MULTI-FUNCTION HANDHELD



MODEL 6529

Insulation tester ideal for maintenance and repair operations on electrical equipment such as motors, cables, etc.

SPECIFICATIONS

US Design Patent US D890,617 S

MODELS	6529
AC/DC VOLTAGE MEASUREMENT	
Range	700 VAC, 700VAC+DC
Accuracy	DC AC+DC $\pm(1\%R + 1ct)$ $\pm(1.2\%R + 1ct)$
Resolution	1V
Frequency Range	DC & 30 to 440 Hz
Input Impedance	25MΩ
INSULATION MEASUREMENT	
Test Voltage/Resistance Range	
50V	0.010MΩ to 420.0MΩ
100V	0.020MΩ to 420.0MΩ
250V	0.050MΩ to 4200MΩ
500V	0.100MΩ to 4200MΩ
1000V	0.20MΩ to 11.00GΩ
Measurement Accuracy	40Ω/40MΩ/400MΩ 4.2GΩ 11GΩ $\pm(1.5\%R + 10ct)$ $\pm(4\%R + 10ct)$ $\pm(10\%R + 10ct)$ (1000V range)
CONTINUITY MEASUREMENT	
Range	0 to 40Ω (200mA test current $\leq 2\Omega$)
Accuracy	1.2%R + 3ct
Resolution Max	0.01Ω
Leads Compensation	Up to 5Ω
Threshold	Audible signal triggered, Selectable ≤ 1 or 2Ω
RESISTANCE MEASUREMENT	
Range	0 to 420kΩ (Auto ranging)
Accuracy	$\pm(1.2 R + 3ct)$
Resolution Max	0.1Ω
DMR Mode	Compares successive measurements to a reference value with alarm indication and red backlit display if deviation changes by the programmed %. The difference between the new reading and the reference measurement, along with the % deviation are displayed.
GENERAL	
Time Test	10 seconds to 39.59 mins selectable
Display	LCD with backlight
Power Supply	(6) AA alkaline batteries (NEDA 15A or IEC LR6)
Battery Life (5s ON, 25s OFF)	>2000 measurement in MΩ, >300h in V AC/DC, >6000 measurement in Continuity Test
Dimensions	8.54 x 3.54 x 2.44" (217 x 90 x 62mm)
Weight	1.68 lbs (760g)
Operating Temperature	14° to 122°F (-10° to +50°C), 90% RH
SAFETY	
Safety Rating	IEC / EN 61010-1, 600V CAT IV, CE mark
Ingress Protection	IP 40 (with leads connected)

Consult factory for NIST Calibration prices

PRODUCTS INCLUDE

Includes soft carrying case, set of (2) 5 ft color-coded (red/black) silicone leads and alligator clips, (2) color-coded (red/black) test probes (Rated 1000V CAT IV, UL V2), (6) 1.5V AA batteries and a user manual.



FEATURES

- Selectable test voltages 50, 100, 250, 500 and 1000V
- Basic DMM functions; Volts, Continuity, Resistance
- DAR and PI ratio test functions
- Dual line display to view the insulation value and real-time test voltage simultaneously in an easy-to-read format
- DMR mode - relative resistance comparison to a reference value
- 2-color backlighting easily shows alarm conditions
- Shockproof sheath for excellent handling
- Automatic power-off function to optimize the battery life
- Programmable alarm thresholds

ACCESSORIES/REPLACEMENTS

Catalog #2138.54

Continuity probe

Catalog #2119.02

Soft carrying pouch

Catalog #2971.04

Fuse – Set of (2) FF, 200mA, 1000V, 10kA, 6x32mm

Catalog #5000.94

Lead – Set of (2) 5 ft color-coded (red/black) silicone leads with 4mm straight/right angle banana plugs (Rated 1000V CAT IV, UL)

Catalog #5000.97/#5000.98

Black/Red Test Probe (1000V CAT IV, 15A, UL V2)

Cat #5000.99/#5100.00

Clip – Safety Alligator – Black/Red (1000V CAT IV, 15A, UL V2)



CATALOG NO.	DESCRIPTION
2126.55	Megohmmeter Model 6529 (Digital, 50V, 100V, 250V, 500V, 1kV, 420k-Ohm, Continuity, Alarm, Timer & PI/DAR)

MEGOHMMETERS

DIGITAL/ANALOG & MULTI-FUNCTION HANDHELD



6522

6526

MODELS 6522, 6526, 6534 & 6536

6522 & 6526 - ideal for testing cables, small motors, pumps, transformers and industrial equipment

6534 - ideal for insulation measurements on communication cables, Ethernet cables and other low voltage DC wiring

6536 - ideal for special applications in the aerospace and defense sectors and for ESD testing where specific test voltages are required

SPECIFICATIONS

MODELS	6522	6526	6534	6536
INSULATION TESTS				
Test Voltages	250V, 500V, 1000V	50V, 100V, 250V, 500V, 1000V	10V, 25V, 100V, 250V, 500V	Variable 10 to 100V (1V steps)
Insulation Resistance	40GΩ (40,000MΩ)	200GΩ (200,000MΩ)	50GΩ (50,000MΩ)	20GΩ (20,000MΩ)
PI/DAR Ratios	No	Yes		No
Test Lock			Yes	
Timer			0 to 40min	
Auto Discharge			Yes	
Automatic Test Inhibit			>25V	
DMM FUNCTIONS				
Voltage			700Vac/dc	
Resistance	-		1000kΩ	
Continuity	10Ω		10Ω, 100Ω	
Test Current			200mA	
Capacitance Measurement	-	0.1n to 10μF		-
Frequency	-	15.3 to 800Hz		-
GENERAL FUNCTIONS				
Alarm / Δ Rel	No/No		Yes / Yes	
Auto Power OFF			Yes	
Data Hold			Yes	
Test Lead Compensation			Yes (optional)	
Memory	-	1300 measurements		-
Bluetooth	-	2.1 Class II		-
DataView® Software	-	Included		-
Display Type			Digital w/Analog Bargraph	
Display Counts			4000	
Backlight			Yes	
Power Supply			6 x AA Alkaline	
Magnetic Mount			Yes	
SAFETY				
Safety Rating			600V CAT IV	
Ingress Protection			IP54 / IK 04	

Consult factory for NIST Calibration prices



6534



6536



DataView®
6526 & 6534 (only)



CATALOG NO.	DESCRIPTION
2155.51	Megohmmeter Model 6522 (Digital w/Analog Bargraph, 250V, 500V, 1000V, Continuity, V)
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)
2155.55	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)

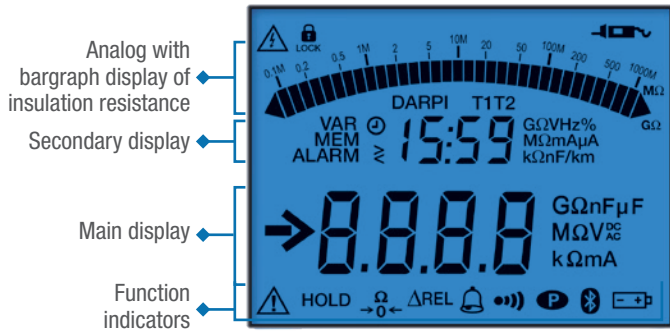


MEGOHMMETERS

DIGITAL/ANALOG & MULTI-FUNCTION HANDHELD

MODELS 6526, 6534 & 6536

FRONT PANEL & FUNCTIONAL DISPLAYS



PRODUCT INCLUDES

6526

Soft carrying case, (2) 5 ft color-coded (red/black) leads, (2) color-coded (red/black) alligator clips, (1) black test probe, (6) AA batteries, quick start guide, USB stick with DataView® software and a user manual.

6534

Soft carrying case, (2) 5 ft color-coded (red/black) leads, (2) color-coded (red/black) alligator clips, (1) black test probe, (2) color-coded (red/black) grip probes, (6) AA batteries, quick start guide, USB stick with DataView® software

and a user manual.

6536

Soft carrying case, (2) 5 ft color-coded (red/black) leads, (2) color-coded (red/black) alligator clips, (1) black test probe, (2) color-coded (red/black) grip probes, (6) AA batteries, and a user manual.

6536 ESD FLOOR KIT

Field case, (2) 5 ft color-coded (red/black) leads, (2) color-coded (red/black) alligator clips, (1) black test probe, (2) color-coded (red/black) grip probes, (2) 5 lb weights with conductive rubber bottom pad, (2) 4mm non-insulated adapters, (6) AA batteries, and a user manual.

SHOWN: 6526



DataView®
6526 & 6534

FEATURES*

- True Megohmmeter®
- Test voltage from 10 to 1000V
- Insulation resistance up to 200GΩ
- Manual, Lock, Timer modes & PI/DAR Ratio calculations
- Alarms with Green/Red Pass/Fail indicator light
- 200mA/20mA continuity with active protection without fuses
- Measurement of V (TRMS & DC), F, Ω, kΩ, Hz, C and cable length
- ΔRel mode for comparison measurements
- Configurable alarms
- Data retrieval
- Automatic discharge after test
- Automatic test inhibit if device under test is energized >25V

* Features are model dependent. Bluetooth on selected models.

MEGOHMMETERS

1000V DIGITAL/ANALOG

MODEL 1060

Test insulation on cables, transformers, motors and wiring installations

SPECIFICATIONS

MODELS	1060
INSULATION TESTS	
Test Voltage	
50V	2kΩ to 200GΩ
100V	4kΩ to 400GΩ
250V	10kΩ to 1000GΩ (1TΩ)
500V	20kΩ to 2000GΩ (2TΩ)
1000V	40kΩ to 4000GΩ (4TΩ)
Accuracy	
2kΩ to 40GΩ	±5% of Reading ±3cts
40GΩ to 4TΩ	±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	<6mApc
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 (128kB memory)
Memory of Test Results in Files	128kB memory with RS-232 to USB adapter (included)
PC Software/Report Generation	DataView® (included)
ELECTRICAL	
Power Source	9.6V NiMH Battery Pack (included) 85 to 256V (50/60Hz)
SAFETY	
Safety Rating/ IP Protection	EN 61010-1, 600V CAT III, EN 61557 / IP54

Consult factory for NIST Calibration prices

PRODUCT INCLUDES

Detachable accessory pouch, (2) 5 ft color-coded (red/blue) leads, (1) black shielded lead, (3) color-coded (red/black/blue) alligator clips, (1) black test probe, (1) RS-232 DB9 F/F 6 ft null model cable, (1) RS-232 to USB adapter, US 115V power cord, rechargeable NiMH battery, spare fuses, and a USB drive with DataView® software and a user manual.



ACCESSORIES

CATALOG #2155.75
Megohmmeter Test Probe
(600V CAT IV)



DataView®

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
- 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

CATALOG NO.	DESCRIPTION
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)



MEGOHMMETERS

5000V DIGITAL/ANALOG

MODEL 6505

Contributes to the safety of electrical installations and equipment



SPECIFICATIONS

MODEL	6505	
INSULATION TESTS		
Test Voltage/Range		
500V	10kΩ	to 2000GΩ (2TΩ)
1000V	10kΩ	to 4000GΩ (4TΩ)
2500V	10kΩ	to 10,000GΩ (10TΩ)
5000V	10kΩ	to 10,000GΩ (10TΩ)
User Programmable Test	40 to 1000V: 10V increments 1000 to 5100V: 100V increments	
Short Circuit Current	<1.6mA ±5%	
Accuracy	±5% of Reading ±3cts ±15% of Reading ±10cts	
10kΩ to 399.9GΩ 400GΩ to 10TΩ		
DAR (1 min/30 sec)	0.02 to 50.00	
PI (10 min/1 min & User Programmable)	0.02 to 50.00	
Capacitance Measurement	0.001 to 49.99µF; Max resolution 1nF	
Leakage Current Measurement	0.00nA to 3mA; Max resolution 1pA	
Programmable PI Ratio Times	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)	
SAFETY		
Safety Rating	EN 61010-1, 1000V CAT III	

Consult factory for NIST Calibration prices

FEATURES

- True Megohmmeter®
- Simple operation
- Test voltage selections of 500V, 1000V, 2500V and 5000V
- Insulation measurements from 10kΩ 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 PI ratio times
- Automatic test inhibition (if live sample >40% of test voltage)
- Automatic discharge and display of discharge voltage
- Large backlight LCD dual-display with time, voltage and measurements shown
- Rugged, dual wall, water-resistant field case
- Designed and built to IEC safety standards

PRODUCT INCLUDES

Extra large classic tool bag, (3) 10 ft color-coded (red/black/blue) leads {5000V}, (3) color-coded (red/black/blue) alligator clips {1000V CAT IV} [15A], (1) blue jumper lead for use with guard terminal, US 115V power cord, 9.6V NiMH rechargeable battery pack (installed) and a USB drive with a user manual.



ACCESSORIES/REPLACEMENTS

CATALOG #2151.30 Lead – Set of (3) color-coded 10 ft 5kV safety w/(3) color-coded alligator clips (1000V CAT IV, 15A) for use with models 5050, 5060, 5070 & 6505

CATALOG #2151.31 Lead – Replacement 1 ft (5kV) Blue Jumper Lead for Megohmmeter models 5050, 5060, 5070 & 6505

CATALOG #2151.32 Lead – Set of (3) Color-coded 25 ft 5kV safety with integral hippo clips for use with models 5050, 5060, 5070 & 6505 (blue jumper lead not included)

CATALOG #2151.33 Lead – Set of (3) color-coded 45 ft 5kV safety with integral hippo clips for use with models 5050, 5060, 5070 & 6505 (blue jumper lead not included)

CATALOG NO.	DESCRIPTION
2130.18	Megohmmeter Model 6505 (Digital, with Analog Bargraph, Backlight, 500V, 1000V, 2500V, 5000V, Auto DAR/PI)



MEGOHMMETERS

5000V DIGITAL/ANALOG

MODELS 5050 & 5060

Designed with the highest level of built-in safety features

SPECIFICATIONS

MODELS	5050	5060
INSULATION TESTS		
Test Voltage	500V 1000V 2500V 5000V	10kΩ to 2000GΩ (2TΩ) 10kΩ to 4000GΩ (4TΩ) 10kΩ to 10,000GΩ (10TΩ) 10kΩ to 10,000GΩ (10TΩ)
User Selectable Test Voltage	Programmable: 40 to 1000V: 10V increments; 1000 to 5100V: 100V increments	
Accuracy	10kΩ to 399.9GΩ 400GΩ 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	—	DataView® (included)
ELECTRICAL		
Power Source	One 9.6V NiMH battery pack (included) Line power: 85 to 256V (50/60Hz)	
SAFETY		
Safety Rating / Ingress Protection	EN 61010-1, 600V, CAT III 1000V / IP53	

Consult factory for NIST Calibration prices

PRODUCT INCLUDES

5050, 5060 & 5070

Extra large classic tool bag, set of (3) 10 ft (5kV) color-coded leads (red/black/blue) with integral 5000V rated hippo clips, (1) guard terminal jumper lead, US 115V power cord, 9.6V NiMH rechargeable battery pack and a user manual.

CATALOG #2119.45

PC RS-232 DB9 F/F 6 ft Null Modem Cable
(Models 5060 & 5070)

CATALOG #5000.60

Adapter RS-232 to USB 2.0
(Models 5060 & 5070)

USB THUMB DRIVE

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



CATALOG #2119.45, #5000.60 & USB DRIVE
(5060 & 5070 only)



DataView®
5060 only

FEATURES

- True Megohmmeter®
- Test voltage selections of 500V, 1000V, 2500V and 5000V
- Variable test voltage from 50 to 5100V (model 5060)
- Wide measurement range up to 10TΩ
- Automatic discharge at the completion of the test
- Measure AC voltage up to 4000V
- Automatic test inhibit if live voltage detected above a set value
- Programmable alarms for all functions
- Automatic calculation of DAR, PI and DD ratios
- Large, backlit LCD screen with digital display and bargraph
- Measures capacitance up to 49.99µf
- Stores up to 1500 measurements (model 5060)
- Includes DataView® software for data retrieval, real-time display, analysis and report generation

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



MEGOHMMETERS

5000V GRAPHICAL

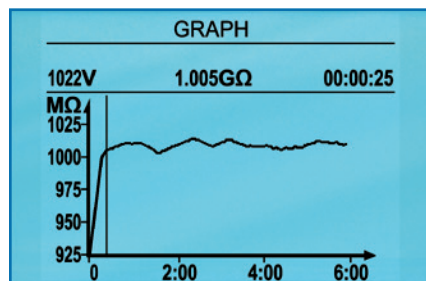
MODEL 5070

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

SPECIFICATIONS

MODEL	5070	
INSULATION TESTS		
Test Voltage	500V 1000V 2500V 5000V	10kΩ to 2000GΩ (2TΩ) 10kΩ to 4000GΩ (4TΩ) 10kΩ to 10,000GΩ (10TΩ) 10kΩ 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	10kΩ to 99.9GΩ 400GΩ 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)		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)
SAFETY		
Safety Rating/IP Protection		EN 61010-1, 1000V CAT III / IP53

Consult factory for NIST Calibration prices



With the push of a button: Insulation Resistance measurement is graphically displayed at the completion of the test.



DataView®



FEATURES

- True Megohmmeter®
- Test voltage selections of 500V, 1000V, 2500V and 5000V
- Insulation measurements from 10kΩ 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
- Bright blue electroluminescent backlight
- Programmable temperature compensation
- 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
- Includes DataView® software for data retrieval, real-time display, analysis and report generation

ACCESSORIES/REPLACEMENTS

CATALOG #2133.73

Extra Large Classic Tool Bag (18x9x12")

CATALOG #2119.45

PC RS-232, DB9 F/F 6 ft Null Modem Cable

CATALOG #2119.76

Set of 3, Color-coded 10 ft 5kV Safety w/3 Color-coded Alligator Clips (Rated 1000V CAT IV, 15A)

CATALOG #2119.77

Set of 3, 6 ft Color-coded 5kV safety

CATALOG #2119.78

1 ft (5kV) Jumper Lead

CATALOG #2119.79

Set of 3, 10 ft Color-coded 5kV Safety with Integral Hippo Clips, and Jumper Lead

CATALOG #2119.84

Fuse-Set of 3, FF, 0.1A, 380V, 10kA, 5 x 20mm

CATALOG #2119.85/.86

Set of 3, 10/25 ft Color-coded 5kV Safety with Integral Hippo Clips, and Jumper Lead

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)

MEGOHMMETERS

10,000V / 15,000V DIGITAL

MODELS 6550 & 6555

Expert tools for testing insulation safely and accurately
Ideal for use on rotating machinery, transformers and cables operating at higher voltages

SPECIFICATIONS

MODELS	6550	6555
INSULATION TESTS		
Test Voltage		
500V	10kΩ to 2000GΩ (2TΩ)	10kΩ to 2000GΩ (2TΩ)
1000V	10kΩ to 4000GΩ (4TΩ)	10kΩ to 4000GΩ (4TΩ)
2500V	10kΩ to 10,000GΩ (10TΩ)	10kΩ to 10,000GΩ (10TΩ)
5000V	10kΩ to 15,000GΩ (15TΩ)	10kΩ to 15,000GΩ (15TΩ)
10,000V	10kΩ to 25,000GΩ (25TΩ)	10kΩ to 25,000GΩ (25TΩ)
15,000V	—	10kΩ to 30,000GΩ (30TΩ)
Fixed Test Voltages	500/1000/2500/5000/10,000V	500/1000/2500/5000/10,000/15,000V
Variable Voltages	Variable: 40 to 10 KV with three user programmable voltage schemes	Variable: 40 to 15 KV with three user programmable voltage schemes
Ramp Mode	Programmable ramps: start voltage/end voltage/duration	
Ramp Configuration Range	40 to 1100V/500 to 10,000V	40 to 1100V/500 to 15,000V
Step Mode	Up to 10 steps (voltage and duration configurable for each step)	
Voltage Test/Safety Test	2500V _{AC} to 4000V _{DC}	
Capacitance Measurement	0.005 to 19.99μF	
Leakage Current Measurement	0 to 10mA	
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	
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)	
SAFETY		
Safety Rating	1000V CAT IV; IEC61010-1 and IEC 61557	
EMC/Mechanical Protection/Altitude	EN 61326-1/IP54/2000m	

Consult factory for NIST Calibration prices

PRODUCT INCLUDES

Small classic tool bag, set of (3) 10 ft color-coded (red/black/blue) safety leads with clips {3000V CAT IV}, (1) 15kV jumper lead (blue), optical USB cable, 115V US power cord, 9.6V rechargeable NiMH batteries, and a USB drive with DataView® software and a 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, USB, w/DataView® Software)
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)



DataView®

FEATURES

- True Megohmmeter®
- Fixed or programmable test voltage from 40V to 10kV/15kV
- Wide measurement range from 10kΩ to 25TΩ/30TΩ
- 5mA short circuit current
- Step and 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

ACCESSORIES/REPLACEMENTS

CATALOG #2151.36

Lead – Set of (3), 10 ft 15kV Safety w/ Clips for Models 6550 and 6555

CATALOG #2151.37

Lead – Replacement 1.5 ft Blue Jumper Lead (15kV) for use with Megohmmeter Models 6550 and 6555

CATALOG #2151.38

Lead – Set of (3), 25 ft 15kV Safety w/ Clips for Models 6550 and 6555

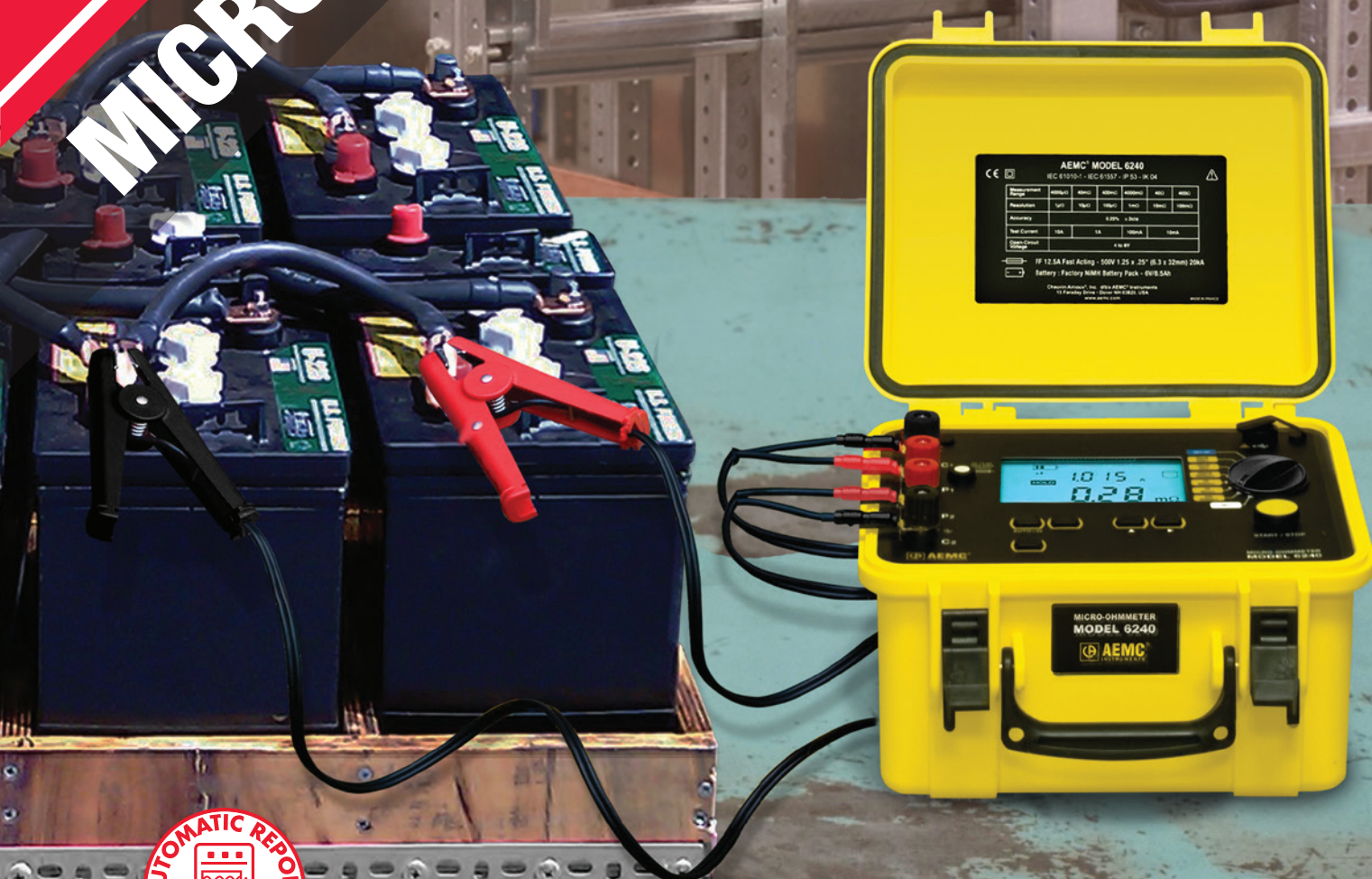
MEGOHMMETERS

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 200MΩ	500kΩ	100Ω	–	600V _{AC}	Hand-cranked	Analog	No
6503	2126.52	250V 500V 1000V	1 to 500MΩ 1 to 500MΩ 10 to 5000MΩ		–		600V _{AC}	Hand-cranked	Analog	No
6529	2126.55	50V 100V 250V 500V 1000V	0.010MΩ to 420MΩ 0.020MΩ to 420MΩ 0.050MΩ to 420MΩ 0.100MΩ to 420MΩ 0.20MΩ to 11GΩ	0 to 420kΩ	0 to 40Ω (200mA test current ≤ 2Ω)	–	700V _{AC} 700V _{AC/DC}	6 x AA Alkaline Batteries	Digital	No
6526	2155.53	50V 100V 250V 500V 1000V	10kΩ to 10GΩ 20kΩ to 20GΩ 50kΩ to 50GΩ 100kΩ to 100GΩ 200kΩ to 200GΩ	1000kΩ	10Ω, 100Ω	0.1n to 10μF	700V _{AC/DC}	6 x AA Alkaline Batteries	Digital/ Analog	Yes
6534	2155.55	10V 25V 100V 250V 500V	2kΩ to 1GΩ 5kΩ to 2GΩ 10kΩ to 10GΩ 50kΩ to 25GΩ 100kΩ to 50GΩ	1000kΩ	10Ω, 100Ω	–	700V _{AC/DC}	6 x AA Alkaline Batteries	Digital/ Analog	Yes
6536	2155.56	10V 100V	2kΩ to 20GΩ	1000kΩ	10Ω, 100Ω	–	700V _{AC/DC}	6 x AA Alkaline Batteries	Digital/ Analog	No
6536 ESD Floor Kit	2155.57	(variable in 1V steps)								
1060	2130.03	50V 100V 250V 500V 1000V	2kΩ to 200GΩ 4kΩ to 400GΩ 10kΩ to 1TΩ 20kΩ to 2TΩ 40kΩ to 4TΩ	400kΩ	40Ω	0.005 to 4.999μF	1000V _{AC/DC}	Rechargeable NiMH Battery	Digital/ Analog	Yes
6505	2130.18	500V 1000V 2500V 5000V	10kΩ to 2TΩ 10kΩ to 4TΩ 10kΩ to 10TΩ 10kΩ to 10TΩ	–	–	0.001 to 49.99μF	2500V _{AC} 4000V _{DC}	Rechargeable NiMH Battery	Digital/ Analog	No
5050	2130.20	500V 1000V 2500V 5000V	10kΩ to 2TΩ 10kΩ to 4TΩ 10kΩ to 10TΩ 10kΩ to 10TΩ	–	–	0.001 to 49.99μF	2500V _{AC} 4000V _{DC}	Rechargeable NiMH Battery	Digital/ Analog	No
5060	2130.21	500V 1000V 2500V 5000V	10kΩ to 2TΩ 10kΩ to 4TΩ 10kΩ to 10TΩ 10kΩ to 10TΩ	–	–	0.001 to 49.99μF	2500V _{AC} 4000V _{DC}	Rechargeable NiMH Battery	Digital/ Analog	Yes
5070	2130.30	500V 1000V 2500V 5000V	10kΩ to 2TΩ 10kΩ to 4TΩ 10kΩ to 10TΩ 10kΩ to 10TΩ	–	–	0.001 to 49.99μF	2500V _{AC} 4000V _{DC}	Rechargeable NiMH Battery	Graphic/ Digital	Yes
6550	2130.31	500V 1000V 2500V 5000V 10,000V	10kΩ to 2000GΩ 10kΩ to 4000GΩ 10kΩ to 10,000GΩ 10kΩ to 15,000GΩ 10kΩ to 25,000GΩ	–	–	0.001 to 19.99μF	2500V _{AC} 4000V _{DC}	Rechargeable NiMH Battery	Digital/ Analog	Yes
6555	2130.32	500V 1000V 2500V 5000V 10,000V 15,000V	10kΩ to 2000GΩ 10kΩ to 4000GΩ 10kΩ to 10,000GΩ 10kΩ to 15,000GΩ 10kΩ to 25,000GΩ 10kΩ to 30,000GΩ	–	–	0.001 to 19.99μF	2500V _{AC} 4000V _{DC}	Rechargeable NiMH Battery	Digital/ Analog	Yes

Consult factory for NIST Calibration prices

MICRO-OHMMETERS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

! SEE PAGE 129 FOR MORE INFO
ON DATAVIEW® SOFTWARE

CONFIGURE MICRO-OHMMETER MODELS 6240, 6255 & 6292

Customize views and templates / Configure test options / Display and print reports of all test results / Retrieve data from the instrument's memory

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

MICRO-OHMMETERS

10A

MODEL 6240

Auto calculates resistance from 5μΩ to 400Ω with resolutions down to 1μΩ

SPECIFICATIONS

MODEL	6240					
Range	5.0 to 3999μΩ	4.0 to 39.99mΩ	40.0 to 399.9mΩ	400 to 3999mΩ	4.0 to 39.99Ω	40.0 to 399.9Ω
Accuracy	±0.25% of Reading ±2cts					
Resolution	1μΩ	10μΩ	100μΩ	1mΩ	10mΩ	100mΩ
Test Current	10.2A ±2%	1.02A ±2%		102mA ±2%		10.2mA ±2%
Max. Inductive Load	0.5H					
Memory	Stores up to 99 test results					
Power Source	Rechargeable 6V, 8.5Ah NiMH battery pack (included)					

Consult factory for NIST Calibration prices

ACCESSORIES/REPLACEMENTS

CATALOG #1017.84 (Replacement)

Kelvin Clips 10 ft (10A - Hippo)

CATALOG #2118.70

Kelvin Clips 20 ft (10A - Hippo)

CATALOG #2118.73 (Replacement)

Kelvin Probes 10 ft (1A, Spring Loaded)

CATALOG #2118.74

Kelvin Probes 20 ft (1A, Spring Loaded)

CATALOG #2118.75

Kelvin Probes Pistol Grip 10 ft (10A, Spring Loaded)

CATALOG #2118.76

Kelvin Probes Pistol Grip 20 ft (10A, Spring Loaded)

CATALOG #2118.77

Kelvin Probes 10 ft (10A, Spring Loaded)

CATALOG #2118.78

Kelvin Probes 20 ft (10A, Spring Loaded)

CATALOG #2118.79

Kelvin Clips 10 ft (1-10A)
Replacement for Cat. #2118.71

CATALOG #2118.80

Kelvin Clips 20 ft (1-10A)
Replacement for Cat. #2118.72

CATALOG #2118.82

Kelvin Clips 10 ft (1-10A)

PRODUCT INCLUDES

Extra large tool bag, set of (2) 10 ft Kelvin clips (10A - Hippo), set of (2) 10 ft Kelvin probes (1A - Spring Loaded), optical USB cable, US 115V power cord, (2) spare fuses (12.5A), NiMH 6V rechargeable battery pack*, and USB drive with DataView® software and a user manual.

*Can be charged during operation

CATALOG NO.	DESCRIPTION
2129.80	Micro-Ohmmeter Model 6240 (10A, Instantaneous, Continuous, Multiple Test, includes 10 ft Kelvin Clips (10A - Hippo-Cat #1017.84), 10 ft Kelvin Probes (1A Spring Loaded, Cat #2118.73) and DataView® Software)
2131.02	Micro-Ohmmeter Model 6240 (10A, Instantaneous, Continuous, Multiple Test and DataView® Software), Kelvin Clips/Probes not included)



DataView®



cover closed cover open

FEATURES

- Reliable low resistance measurements from 5μΩ to 400Ω
- Four-terminal Kelvin resistance measurement eliminates test lead resistance
- 10A test current up to 4000μΩ
- ±0.25% basic accuracy
- 1μΩ resolution
- Direct reading, easy to operate
- Six selectable resistance ranges
- Reverse polarity button
- 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). Can be charged during operation
- Large multifunctional backlit display
- Includes power cord and isolated USB cable
- Includes DataView® software for data retrieval, real-time display, analysis and report generation



MICRO-OHMMETERS

10A

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		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						

Consult factory for NIST Calibration prices

ACCESSORIES/REPLACEMENTS

CATALOG #1017.84 Kelvin Clips 10 ft (10A - Hippo)

CATALOG #2118.70 Kelvin Clips 20 ft (10A - Hippo)

CATALOG #2118.73

Kelvin Probes 10 ft (1A, Spring Loaded)

CATALOG #2118.74

Kelvin Probes 20 ft (1A, Spring Loaded)

CATALOG #2118.75

Kelvin Probes Pistol Grip 10 ft (10A, Spring Loaded)

CATALOG #2118.76

Kelvin Probes Pistol Grip 20 ft (10A, Spring Loaded)

CATALOG #2118.77

Kelvin Probes 10 ft (10A, Spring Loaded)

CATALOG #2118.78

Kelvin Probes 20 ft (10A, Spring Loaded)

CATALOG #2118.79

Kelvin Clips 10 ft (1-10A) / Replacement for Cat. #2118.71

CATALOG #2118.80

Kelvin Clips 20 ft (1-10A) / Replacement for Cat. #2118.72

CATALOG #2118.82

Kelvin Clips 10 ft (1-10A)

CATALOG #2119.45

Cable, PC RS-232, DB9 F/F 6 ft Null Modem Cable

CATALOG #2129.95

RTD Temperature Probe (plug into faceplate for ambient temperature)

CATALOG #2129.96

RTD Temperature Probe with 7 ft extension cable

CATALOG NO. DESCRIPTION

2129.84	Micro-Ohmmeter Model 6255 (10A, Instantaneous, Continuous, Multiple Test, Manual/Auto Temperature Compensation; includes 10 ft Kelvin Clips (10A-Hippo, Cat #1017.84), 10 ft Kelvin Probes (1A Spring Loaded, Cat #2118.73) and DataView® Software)
2131.03	Micro-Ohmmeter Model 6255 (10A, Instantaneous, Continuous, Multiple Test, Manual/Auto Temperature Compensation, and DataView® Software), Kelvin Clips/Probes not included)



DataView®



cover closed



cover open



FEATURES

- Measure from 1 μΩ (0.1 μΩ 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 FREE DataView® software for data retrieval, real-time display, analysis and report generation

PRODUCT INCLUDES

Extra large tool bag, set of (2) 10 ft Kelvin Clips (10A - Hippo), set of (2) 10 ft Kelvin Probes (1A - Spring Loaded), RS-232 DB9 F/F 6 ft null modem cable, RS-232 to USB adapter, US 115V power cord, NiMH rechargeable 6V battery pack (installed in meter), quick start guide and a USB drive with DataView® software and a user manual.

SHOWN: CAT. #2129.84



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	0.1 $\mu\Omega$ to 2m Ω 2 to 200m Ω 200m Ω to 1 Ω
Accuracy	$\pm 1\%$ of reading from 50 $\mu\Omega$ to 1 Ω
Resolution	
0.1 $\mu\Omega$ to 2m Ω	0.1 $\mu\Omega$ (5 to 200A)
2 to 200m Ω	10 $\mu\Omega$ (25A @ 200m Ω)
200m Ω to 1 Ω	1m Ω (5A @ 1 Ω)
Output Voltage	100Vac: 4.2V @ 200A 220Vac: 8.6V @ 200A
Max. Load Resistance	100Vac: 20m Ω @ 200A 220Vac: 42m Ω @ 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

Consult factory for NIST Calibration prices

ACCESSORIES/REPLACEMENTS

CATALOG #2129.86

Current Probe MR6292

CATALOG #2129.72

Lead - Set of (2) 25 ft Kelvin clips (200A - Hippo)

CATALOG #2129.73

Lead - Set of (2) 50 ft Kelvin clips (200A - Hippo)

CATALOG #2129.88

Lead - 10 ft Earth/Ground (Green) with attached Clamp

CATALOG #5000.40

110V US Power Cord



PROBE MR6292



DataView®

FEATURES

- Adjustable test currents from 5 to 200A
- Programmable test duration from 5 to 120 sec
- BSG Ground Test with optional current probe
- Incorporates True DC high output with minimum, near zero, ripple lower than 2% of full range
- 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

PRODUCT INCLUDES

Extra-large tool bag, set of (2) 25 ft Kelvin clips (200A - Hippo), (1) ground lead (green) with clamp, 5 ft USB cable, 110V US power cord, printed quick start guide and a USB thumb drive with DataView® software and a user manual.



FRONT PANEL DISPLAY

Test Results	◆ R= 100.0 $\mu\Omega$	
Test Current	◆ It=142A	◆ Ig=8.0A
	DURATION: 015/060s	◆ Elapsed and Total Test Times
Date & Time	◆ 02/10/13	10:25 AM

CATALOG NO.	DESCRIPTION
2129.83	Micro-Ohmmeter Model 6292 (200A, 120/230V, DataView® Software)

OSCILLOSCOPES



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

OSCILLOSCOPES HANDSCOPE

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 pixels – 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 complete languages, menus and online help
OSCILLOSCOPE MODE	
Vertical Deflection	
Bandwidth	40MHz
Bandwidth Limiter	1.5MHz, 5kHz
Number of Channels	2 totally isolated channels
Input Impedance	1MΩ ±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	≤ 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 ≥ 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
Multimode 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 ±1% reading+20D –50kHz bandwidth
Resistance	Range from 80Ω to 32MΩ - accuracy ±2% reading + 10D –10ms quick continuity test
Capacitance	Ranges from 5nF to 5mF – basic accuracy ±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 8 hrs 30 mins Universal line adapter isolated from the channels – Quick charging in 2 hrs 30 mins
Safety/EMC	Safety according to IEC61010-1 Ed3 – 600V CAT III / EMC according to EN61000-3 & EN61326-1



Consult factory for NIST Calibration prices

OSCILLOSCOPES HANDSCOPE

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

PRODUCT INCLUDES

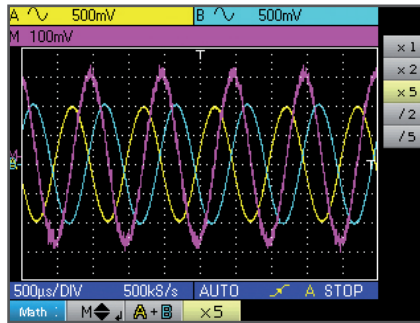
2150.21

Meter, small classic tool bag, US wall plug, USB cable, set of (2) 10 ft color-coded (red/black) leads, set of (2) color-coded (red/black) alligator clips, set of (2) color-coded (red/black) probes, BNC adapter, (2) probes 10:1 600V BNC male, (6) 1.2V NiMH rechargeable batteries, printed quick start guide, and a USB drive with software and a user manual.

2150.22

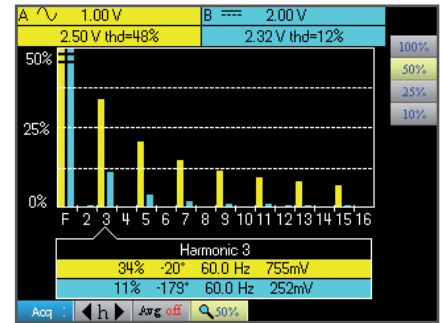
Meter, field case, US wall plug, USB cable, set of (2) 10 ft color-coded (red/black) leads, set of (2) color-coded (red/black) alligator clips, set of (2) color-coded (red/black) probes, BNC adapter, (1) probe 10:1 600V BNC male, (1) AC current probe Model MN251T, MiniFlex® Sensor 3000-24-1-1, (6) 1.2V NiMH rechargeable batteries, printed quick start guide, and a USB drive with software and a user manual.

HIGH PERFORMANCE



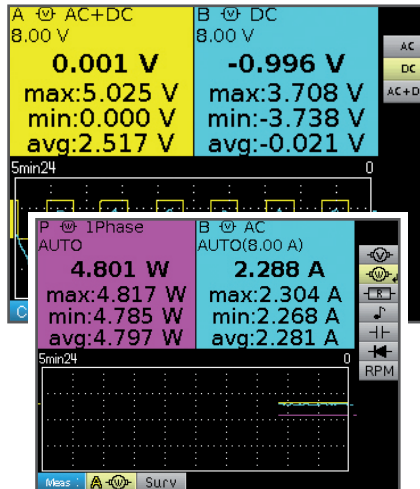
Automatically displays measurements for both isolated channels from your choice of 19 measurement types

HARMONIC ANALYZER



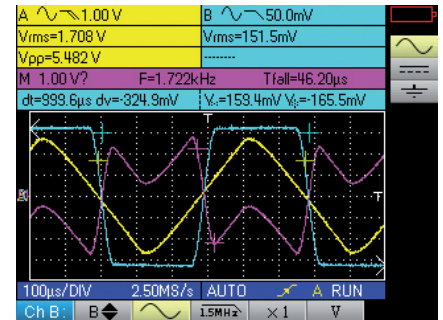
Measures two channels of individual harmonic content up to the 31st harmonic

TWO INDEPENDENT 8000-COUNT TRMS DIGITAL MULTIMETERS



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

STORAGE COMMUNICATION & PC SOFTWARE



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

2150.23

Meter, field case, US wall plug, USB cable, set of (2) 10 ft color-coded (red/black) leads, set of (2) color-coded (red/black) alligator clips, set of (2) color-coded (red/black) probes, BNC adapter, (1) probe 10:1 600V BNC male, (1) AC current probe Model MN379T, MiniFlex® Sensor 3000-24-1-1, (6) 1.2V NiMH rechargeable batteries, printed quick start guide, and a USB drive with software and a user manual.



SHOWN: CATALOG #2150.22

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

MODELS MN251T & 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	10 ft (~3m) BNC Lead	
Output Signal	1mV/Aac (200mV @ 200A)	200mV/Aac (1V @ 5A) & 10mV/Aac (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		
Safety Rating	EN 61010-2-32	
Double Insulation	Yes	
CE Mark	Yes	

Consult factory for NIST Calibration prices

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	10 ft (~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 6560 ft (2000m), working voltage derating above; Non-operating: 0 to 39370 ft (12,000m)	
SAFETY		
Safety Rating	EN 61010, 1000V CAT III; 600V CAT IV	

Consult factory for NIST Calibration prices



CATALOG #2132.59
Range 0.05 to 240A



CATALOG #2153.02
Range 0.005 to 120A

FEATURES

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



3000-14-1-1 &
3000-24-1-1 only



CATALOG #2132.60 (14") **CATALOG #2132.63 (24")**
Range 5 to 3000A Range 5 to 3000A

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 offers 150 hrs of continuous operation

OSCILLOSCOPES

OX 9000 SERIES

MODELS OX 9062, OX 9102, OX 9104 & OX 9304

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

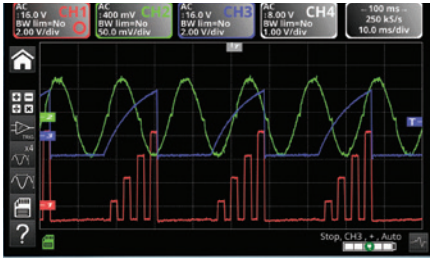


OX 9104

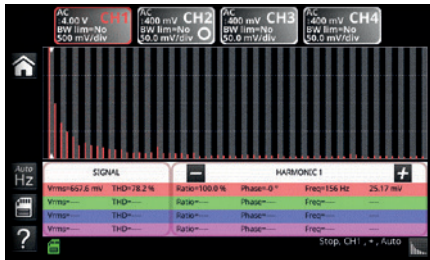


OX 9062

OSCILLOSCOPE



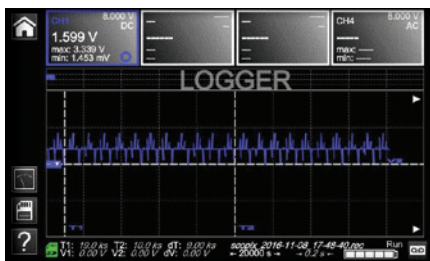
HARMONICS



MULTIMETER - DISPLAYS UP TO 4 CHANNELS SIMULTANEOUSLY



MEASUREMENT BETWEEN H AND V CURSORS: T1, T2, DT, 1/DT, V1, V2, DV, PH



FEATURES

- Wider bandwidth up to 300 MHz (model dependent)
- Advanced 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 (2) 5 ft color-coded leads, alligator clips and test probes (4mm diameter), 10 ft USB cable, µSD memory card, 1-PROBIX Banana Plug (4mm) adapter, (1) stylus pen, LI-ION 5.8Ah battery pack, PA40W-2 power adapter with 110V power cord. Additional accessories (model dependent).



ACCESSORIES/REPLACEMENTS

- 2124.77**
PROBIX Current Probe, 20mA-20A 1MHz-3dB
- 5000.17**
Set of 5 stylus pens

CATALOG NO.	DESCRIPTION
2150.31	Handheld Portable Oscilloscope Model OX 9062 IV 60MHz (2-Channel, 60 MHz) — SPECIAL ORDER ONLY
2150.32	Handheld Portable Oscilloscope Model OX 9102 IV 100MHz (2-Channel, 100MHz) — SPECIAL ORDER ONLY
2150.33	Handheld Portable Oscilloscope Model OX 9104 IV 100MHz (4-Channel, 100MHz)
2150.34	Handheld Portable Oscilloscope Model OX 9304 IV 300MHz (4-Channel, 300MHz)

OSCILLOSCOPES

OX 9000 SERIES

ERGONOMICS

Designed to simplify use with one button access to most functions

In a housing tailor-made to be as compact as possible, the mechanical design makes it possible to integrate the hardware components in a small size with the keypad benefits from new technology developed in the automotive industry.

ISOLATED CHANNELS

Each channel is isolated from each other and from ground (earth) rated at 600V CAT III.

CHANNEL AND PARAMETER IDENTIFICATION

Each channel and related parameters are identified with identical color against a black background for simpler, quicker viewing.

EASY ACCESS VIA TOUCH SCREEN

Intuitive icons are provided to facilitate their use, even with gloves on.

ADJUSTABLE STRAP

This helps to optimize operation of the oscilloscope in your hand or on your shoulder when working in the field.

A stand is also available to vary the orientation of the oscilloscope when it is placed on a bench. The oscilloscope can be safely left unattended using the Kensington locking system.

NEW KEYPAD DESIGN FOR OPTIMUM USER COMFORT

Configuration and measurement displays are simple to access from the front panel in one of these 5 specific areas: Utilities (brightness, full screen, screenshot), Measurements, Vertical, Horizontal, Trigger.

LINE POWER AND LI-ION BATTERY CHARGING PORT

Port on left side.



OSCILLOSCOPES

OX 9000 SERIES

APPLICATIONS

Ideal for electronic and industrial maintenance

IP54

Housing protected against dust and water spray.

7" WVGA WIDE COLOR TFT TOUCH SCREEN

Makes it easy to view and read the measurements clearly. It also provides a screen resolution of 800 x 480 dpi with manual or automatic brightness.

TOUCH-SCREEN STYLUS STORAGE

Among the essential tools available, the stylus is equipped with a hook for the addition of a cord to make it captive, as required. One end is slightly flattened to prevent rolling when placed on a table or bench.

AUTOSET BUTTON

Quickly and effortlessly adjusts the horizontal and vertical; sensitivity and scales to provide the best resolution.

DIRECT SETTING AND SET-UP BUTTONS

COMMUNICATION INTERFACES

These are isolated from one another and from the measurement channels. A dedicated compartment on the right side protected by a flexible cover contains all the different communication interface ports:

- USB host for communication with a PC
- Wired RJ45 or WiFi for communication with a PC or printing via a network printer
- μ SD card for data storage with quick transfer and for upgrading of the instrument's firmware

DIRECT ACCESS ZOOM BUTTON

Activates/deactivates the horizontal Zoom function

ELECTRONIC MAINTENANCE

The OX 9304 model is ideal for electronics with its 300 MHz bandwidth, 4 x 600V CAT III isolated channels, advanced trigger functions, integrated FFT function, complex mathematical calculations on the curves, automatic measurements on 4 channels and the built-in WEB server.



INDUSTRIAL MAINTENANCE

The OX 9304's large 7-inch screen, 300 MHz bandwidth, 4 x 600V CAT III isolated channels and Harmonic Analyzer and Multimeter modes make it ideal for industrial maintenance applications.



OSCILLOSCOPES

OX 9000 SERIES

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 and 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 / File Management	Internal = 1 GB to store the files: trace, text, configuration, math functions, system memory / PDF print files, PNG image files + 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 Analyzer 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				
Configuration Memories	Not limited according to device - variable file sizes			
Printing	Network printing via Ethernet/Wifi in .png format			
PC Communication – Software	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 / IP Protection	Safety as per IEC 61010-2-30, 600V CAT III, 1000V CAT II / EMC as per EN61326-1 / IP54 protection			
Mechanical Specifications	292.5 x 210.6 x 66.2 mm – 2.1 kg with batteries			

POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

! SEE PAGE 129 FOR MORE INFO
ON DATAVIEW® SOFTWARE

CONFIGURE POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS MODELS PEL 102, 103 & 105, POWERPAD® III 8333, 8336 & 8436

Configure functions and parameters from your PC / Customize views, templates and reports / Create and store a complete library of configurations and test options / Display waveforms, trend graphs, harmonic spectrums, text summaries, transients, event logs and stored alarms / Display and print reports of all test results / Retrieve data from the instrument's memory

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

POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS

PowerPad® IV Model 8345

The PowerPad® moves up a grade - Class A!

NEW

POWERPAD IV
Class A



DataView®



SPECIFICATIONS

MODEL	8345
ELECTRICAL	
Inputs	5 x voltage / 4 x current, isolated
Voltage	5 V to 1,000 V _{AC} and V _{DC}
Harmonics Mode	DC to 63rd order; < 3 % U _{din}
Interharmonics Mode	0 to 62nd order; < 0.5 % U _{din}
Inrush & Transient Capture (number)	No maximum (limited by SD card)
Shockwaves (Fast transient)	Up to 12 kV sampled every 500 ns
Flicker (Pst)	< 0,1
Voltage Unbalance (u0,u2)	0.5 to 5 % (absolute); ± 0.15 % (absolute)
Trend Recording	> 900 parameters 3 days with a sampling period of 200 ms 15 days with a sampling period of 1 s 45 days with a sampling period of 3 s
Sampling Rate	Voltage 400 kSps / Current 200 kSps / Surge 2 MSps
Alarm Mode (types / number)	52 / 20,000 with Email notifications
Real-time / Power / Energy / Unbalance Modes	Yes / Yes / Yes / Composite
Screenshots	No maximum (limited by SD card)
Power Supply	Power from phase from 100 to 1000 V AC/DC with external supply block (included)
Carrier Current Detection	Yes
Battery	Cartridge LI-ION – 5800 Ah battery pack (included) ≤ 6 hrs w/ display on; ≤ 10 hrs w/ display off
MECHANICAL	
Data Storage	16 GB SD-Card (included) for snapshot, transients, alarms and trend recording
Display	7 in color LCD touch screen: 800 x 480 (WVGA)
Clock / GPS	Yes, built-in
Operating Temperature	(32 to 104) °F [+ 0 °C; + 40 °C]
Communication	USB, Ethernet, Wi-Fi, Web server, IRD server, USB stick port (type A)
Dimensions	(7.87 x 11.22 x 2.17) in (200 x 285 x 55) mm
Weight (meter only)	4.19 lb (1.9 kg)
COMPLIANCE & STANDARDS	
Safety	IEC 61010 1000 V CAT IV
Environmental	IEC 61557-12 & IEC 62586
Measurement Standard	IEC 61000-4-30 (Ed 3) Class A (Full)
EN50160 Monitoring Mode	With PAT3 software
Warranty	*3 years (registration must be done within 30 days of the date of purchase)



PRODUCT INCLUDES

CAT. # 2136.35 - POWERPAD IV MODEL 8345 (NO PROBES)

CAT. # 2136.36 - POWERPAD IV MODEL 8345 (WITH (4) MINIFLEX® MA193-24-BK FLEXIBLE CURRENT SENSORS)

Extra-large tool bag, internal carrying pouch, hand strap, USB cable, (5) 10 ft black voltage leads with alligator clips, (12) color-coded input ID markers, power adapter (PA32ER) with US power cord, (2) 6 ft stackable leads, (2) 10 ft black voltage leads with alligator clips for power adapter PA32ER, (1) power plug adaptor for PA32ER, 5.8AH Li-ion battery pack, quick start guide, and a USB stick with DataView® software and user manual.



(4) MINIFLEX® MA193-24-BK FLEXIBLE CURRENT SENSORS (WITH CAT.# 2136.36)



CATALOG NO. DESCRIPTION

2136.35	PowerPad® IV Model 8345 (no probes)
2136.36	PowerPad® IV Model 8345 w/4 193-24-BK MiniFlex® Sensors

POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS FEATURES

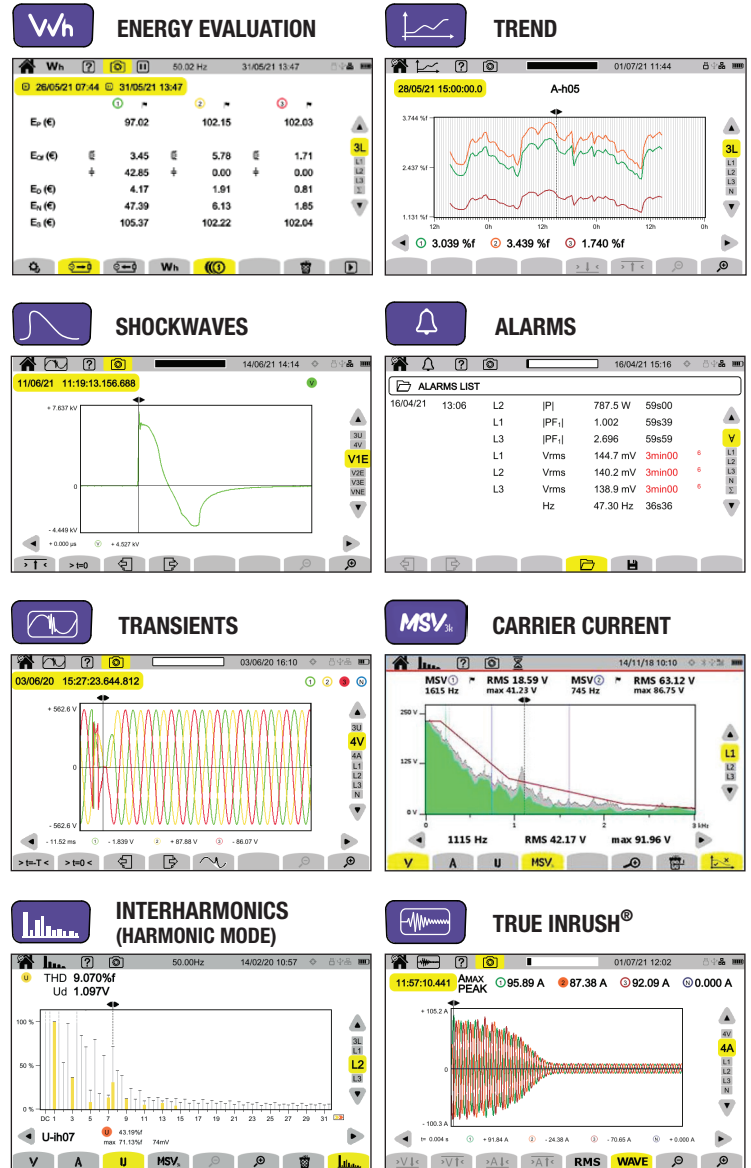
FEATURES

- Full compliance with IEC 61000-4-30 ed. 3.0 Class A functions
- Voltage quality diagnostics
- Real-time display of color waveforms (5 voltage/4 current) from 1 cycle to 10/12 cycles
- Calculation of unbalance (current and voltage)
- Automatic recognition of different current sensors
- Capture shockwaves up to 12 kV with a resolution of 500 ns
- Trend recording period from 200 ms to 2 hrs
- RMS and Peak InRush for up to 30 mins
- Display of phasor diagrams
- Waveforms at 512 samples per cycle, with Min/Max 2.5 μ s
- True InRush capabilities to study loads during setup
- Parameterization with software for True RMS single-, two- and three-phase measurements at 512 samples/cycle, plus DC
- Records and stores hundreds of parameters in memory every 10/12 periods
- Measurements and recordings accessible on 7 inch color touch screen display
- True RMS voltage and current measurement
- Measurements on all installation types: three-phase, Aron connection, etc.
- Electrical network monitoring with setting of alarms
- Fast transient events are captured and stored in memory
- Communication options: Webserver, Wi-Fi, Ethernet and USB
- Power W, VA and VAR (P, N, Q1, S and D) measurements
- Measurement of energy values (total and per phase) with energy valuation
- PF, DPF, CF and THD calculations and measurements
- Calculation so P_{st} & P_{It} flicker and sliding P_{st}
- Harmonics (amplitude/phase shift) from DC to the 63rd order
- Inter-harmonic subgroups from 0 to the 62nd order
- Calculations of K factor & FHL
- 2 carrier current frequencies monitored

ACCESSORIES/REPLACEMENTS

- CATALOG #2140.28** AC/DC Current Probe Model MR193-BK
CATALOG #2140.32 AC Current Probe Model MN93-BK
CATALOG #2140.33 AC Current Probe Model SR193-BK
CATALOG #2140.34 AmpFlex® Sensor 24 in Model 193-24-BK
CATALOG #2140.35 AmpFlex® Sensor 36 in Model 193-36-BK
CATALOG #2140.36 AC Current Probe Model MN193-BK
CATALOG #2140.48 MiniFlex® Sensor 10 in Model MA193-10-BK
CATALOG #2140.50 MiniFlex® Sensor 14 in Model MA193-14-BK
CAT. #5100.16 Magnetic Hook for use with PowerPad® IV Model 8345

Large Functional Displays



Includes FREE DataView® software for configuring, data retrieval, real-time display, analysis and report generation

- CATALOG #2133.76** Carrying Bag
CATALOG #2140.43 Lead - Set of 5, 10 ft (3M) Black Leads w/5 Black Alligator Clips
CATALOG #2140.44 (1) 10 ft (3 M) Black Lead w/ (1) Black Alligator Clip
CATALOG #2140.46 Cable - Replacement 5 ft USB Cable
CATALOG #2140.80 Sensor - MiniFlex® Sensor Model MA194-24-BK
CATALOG #2960.47 Sensor - Battery-5.8 AH 64 WH Li-ion Battery Pack
CATALOG #5100.14 Adapter - Replacement Power Plug Adapter for PA32ER
CATALOG #5100.15 Adapter - Replacement 1000 V PA32ER Power Supply

POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS

THREE-PHASE POWER QUALITY ANALYZERS



* SEE NOTE
AT BOTTOM
OF PAGE



8333

8336



POWERPAD® III MODELS 8333 & 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 1000Aac/1300Aac 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 and Aron meters	1P 2W, 1P 3W, 2P 2W, 2P 3W, 2P 4W, 3P 3W, 3P, 4W and 3P 5W, 2 ½ Element and Aron meters
Power Values	W, VA, var, VAD, PF, DPF, cos φ, tan φ	
Energy Values	Wh, varh, VAh, VADh	
Harmonics	1st to 50th, Direction, Sequence; THD: 0 to 50, phase	
Transients	up to 51	up to 210
Flicker (Pst/Pit)	Yes/No	Yes/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
Languages	> 27	
Communication Interface	USB	
MECHANICAL		
Battery Life	≤10 hrs, ≥15 hrs in Record mode	
Power Supply	9.6V NiMH rechargeable battery pack (included) External AC supply: 110/230Vac ±10% (50/60Hz)	
Dimensions / Weight	9.8 x 7.8 x 2.6" (240 x 180 x 55mm) / 4.3 lbs (1.95kg)	
SAFETY		
Safety Rating / IP	IEC 61010, 1000V CAT III; 600V CAT IV / IP53	

Consult factory for NIST Calibration prices

KIT OPTIONS

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

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



* 3 YEAR WARRANTY ONLY APPLIES WHEN METER IS REGISTERED WITHIN 30 DAYS OF PURCHASE

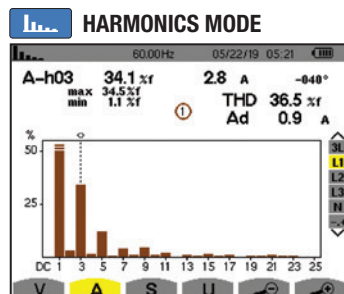
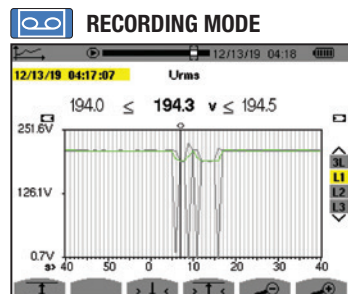
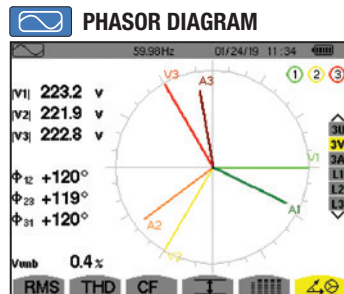
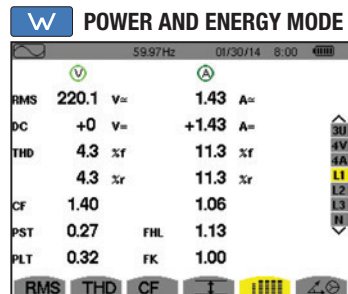
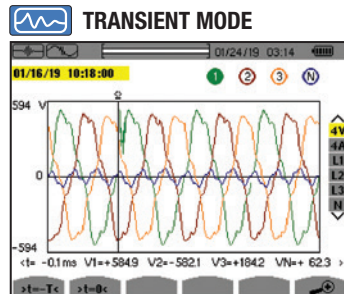
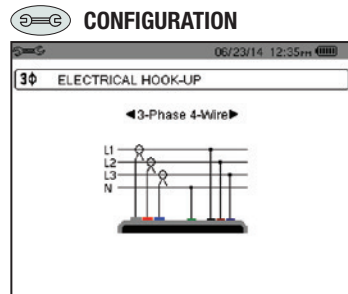
POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS

THREE-PHASE POWER QUALITY ANALYZERS

*Captures and Records
Transients, Events & Waveforms
Simultaneously!*

MODELS 8333 & 8336

Large Functional Displays



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 210 transients (8336 and 8436)
- Short term (8333) and Long term (8336 and 8436) 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

ACCESSORIES/REPLACEMENTS

- CATALOG #2133.73** Extra Large Classic Tool Bag (18 x 9 x 12")
- CATALOG #2140.28** AC/DC Current Probe Model MR193-BK
- CATALOG #2140.32** AC Current Probe Model MN93-BK
- CATALOG #2140.33** AC Current Probe Model SR193-BK
- CATALOG #2140.34** AmpFlex® Sensor 24" Model 193-24-BK
- CATALOG #2140.35** AmpFlex® Sensor 36" Model 193-36-BK
- CATALOG #2140.36** AC Current Probe Model MN193-BK

- CATALOG #2140.40** BNC Adapter for AC/DC Current Probe Model SL261 and models for use with 8220, 8333, 8335, 8336, 8435, 8436 & PEL Series
- CATALOG #2140.44** (1) 10 ft (3M) Black Lead w/Black Alligator Clip (Lead rated 600V CAT IV 10A, Clip rated 1000V CAT IV, UL)
- CATALOG #2140.48** MiniFlex® Sensor 10" Model MA193-10-BK
- CATALOG #2140.50** MiniFlex® Sensor 14" Model MA193-14-BK
- CATALOG #2140.78** MiniFlex® Sensor 24" Model MA193-24-BK
- CATALOG #2140.77** Phase Power Adapter (8333 & 8336)

CATALOG NO.	DESCRIPTION
2136.10	PowerPad® III Model 8333 (no probes)
2136.11	PowerPad® III Model 8333 w/3 193-24-BK 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



POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS

THREE-PHASE POWER QUALITY ANALYZERS

POWERPAD® III MODEL 8436

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

(4) current and (5) 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 60kA
Frequency (Hz)	40 to 69Hz
Other Measurements	kW, kvar, kVA, PF, DPF, kWh, kvarh, kVAh, Factor K, Flicker
Harmonics	1 st to 50 th , Direction, Sequence
Power Source	9.6V NiMH rechargeable battery pack (included) 110V to 1000V DC to 400Hz
Battery Life	≤10 hours with display on; ≥15 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	
Safety Rating/IP	EN 61010, 600V CAT IV ⁽²⁾ , 1000V CAT III, IP 67 Pollution Degree 2

(1) Crest factor at 6500=1 Consult factory for NIST Calibration prices

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

PRODUCT INCLUDES

8436 KIT CATALOG #2136.44

Extra large tool bag, accessory pouch, 5 ft USB cable, (5) 10 ft black voltage leads with alligator clips, 110V US power cord, line power cord 110-1000V DC to 400Hz, (12) color-coded input ID markers, (4) water-tight AmpFlex® 196A-24-BK sensors (2136.44 only), 9.6V NiMH battery, SD card, printed quick start guide and high-voltage warning card, and a USB drive with DataView® software and a user manual.



* SEE NOTE AT BOTTOM OF PAGE

Captures & Records Transients, Events & Waveforms Simultaneously



cover closed



DataView®



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 and 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, exceedance 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

* 3 YEAR WARRANTY ONLY APPLIES WHEN METER IS REGISTERED WITHIN 30 DAYS OF PURCHASE

POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS

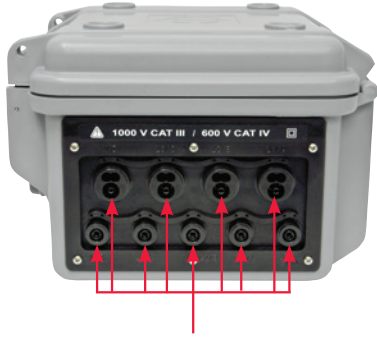
THREE-PHASE POWER QUALITY ANALYZERS

MODEL 8436

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.



LEAD & ALLIGATOR CLIP
Catalog #2140.73

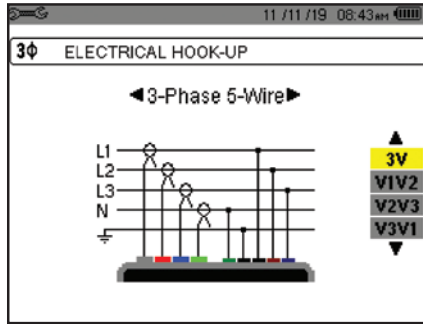
POWER CORD
Catalog #5000.63

AMPFLEX® SENSORS
Catalog #2140.75
(Included with Cat. #2136.44 only)

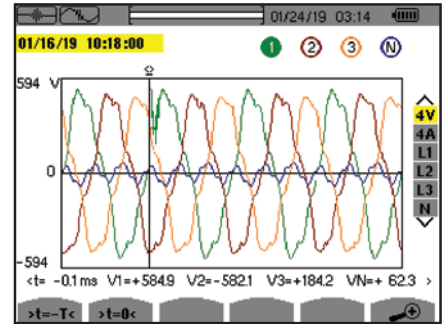
LINE POWER ADAPTER
Catalog #5000.89

POLE MOUNTING KIT
Catalog #2137.82

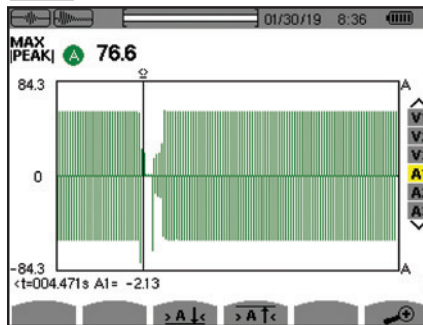
Configuration



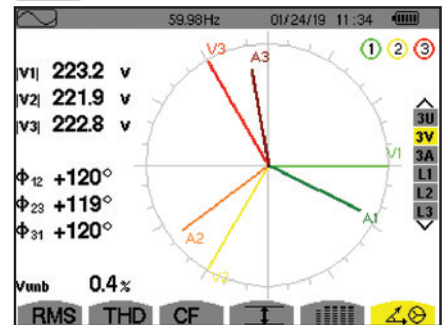
Transient Mode



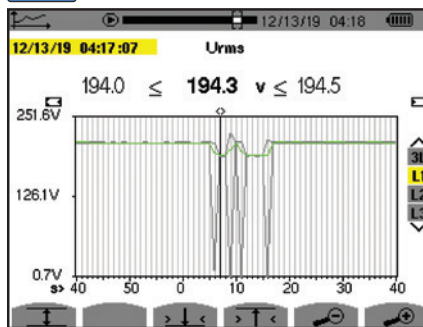
Inrush Peak



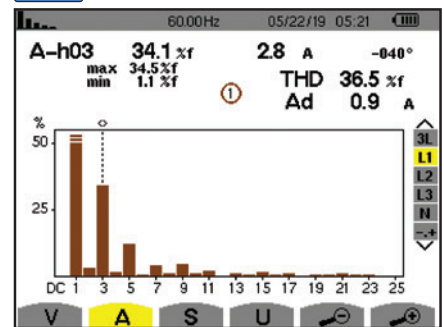
Phasor Diagram



Trend Analysis



Harmonics Mode



ACCESSORIES/REPLACEMENTS

CATALOG #2133.73 Extra Large Classic Tool Bag (18 x 9 x 12")

CATALOG #2137.82 Pole Mounting Kit

CATALOG #2140.19 Replacement - 9.6V NiMH Rechargeable

CATALOG #2140.45 Set of 12, Color-coded Input ID Markers

CATALOG #2140.73 (1) 10 ft (3M) Black Lead (Waterproof cap) (Rated 1000V CAT IV) and (1) Black Alligator Clip (Rated 1000V CAT IV, 15A, UL)

CATALOG #2140.75 AmpFlex® Sensor 24" Model 196A-24-BK (waterproof - IP67)

CATALOG #2140.79 MiniFlex® Sensor 14" Model MA196-14-BK (waterproof - IP67)

CATALOG #5000.43 Probe - Set of 2, Color-coded (Red/Black) Magnetized Voltage Probes (Rated 600V CATIV, 1000V CATIII)

CATALOG #5000.63 Power Cord 110V for use only with Models 8435 and 8436

CATALOG #5000.77 Cable Reeling Box

CATALOG #5000.89 Line Power Adapter 110-1000V DC to 400Hz (Replacement - for use only with Model 8436)

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)



POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS

POWER & ENERGY LOGGERS PEL 100 SERIES

MODEL PEL 102

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

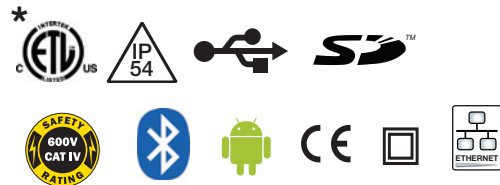
FEATURES

- 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 300 ft 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 panels

PRODUCT INCLUDES

PEL 102 KIT CATALOG #2137.51 (SHOWN)

Small classic tool bag, (3) MiniFlex® MA193-10-BK sensors, 5 ft USB cable, (4) black test leads and alligator clips, 5 ft 115V power cord, (12) color-coded ID markers, safety and compliance sheets, 8 GB SD card with USB-SD card reader, printed quick start guide, and USB drive with DataView® software and a user manual.



ACCESSORIES

CATALOG # 2137.83

Adapter - 600V Power Adapter for use with Models PEL 102 & PEL 103

***ADAPTER SOLD SEPARATELY**

SEE PAGE 118 & 119 FOR MORE OPTIONAL ACCESSORIES



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



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, No Sensors)

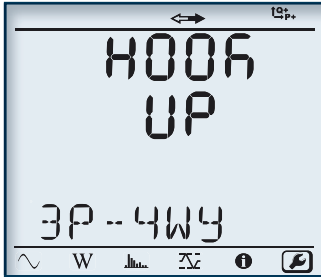
POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS

POWER & ENERGY LOGGERS PEL 100 SERIES

MODEL PEL 103

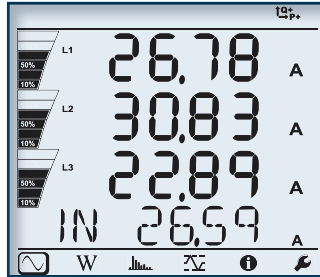
Large Functional Displays

INFORMATION MODE



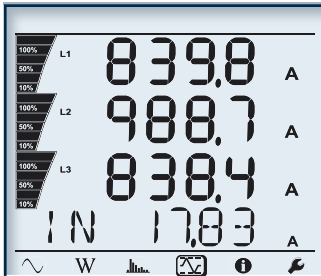
Hook up, voltage and current ratios and aggregation period can be configured from the front panel of the PEL 103

MEASUREMENT MODE



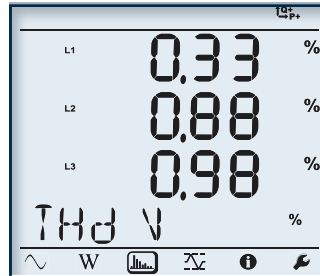
Real-time updates are displayed for voltage, current, power, frequency, power factor and tangent

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.

PRODUCT INCLUDES

PEL 103 KIT (W/LCD) CATALOG #2137.52 (SHOWN)

Small classic tool bag, (3) MiniFlex® MA193-10-BK sensors, 5 ft USB cable, (4) black test leads and alligator clips, power cord, (12) color-coded ID markers, safety data sheet, compliance sheet, 8 GB SD card with USB-SD card reader, printed quick start user guide, and USB drive with DataView® software and a user manual.



ACCESSORIES

CATALOG # 2137.83

Adapter - 600V Power Adapter for use with Models PEL 102 & PEL 103

***ADAPTER SOLD SEPARATELY**

SEE PAGES 118 & 119 FOR MORE
OPTIONAL ACCESSORIES



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 300 ft 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 and probes
- Magnetic case – can be mounted inside power panel
- Supports 17 network configurations

CATALOG NO. DESCRIPTION

2137.52	Power & Energy Logger Model PEL 103 (w/LCD, w/3 MA193-10-BK Sensors)
2137.62	Power & Energy Logger Model PEL 103 (w/LCD, No Sensors)



POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS

POWER & ENERGY LOGGERS PEL 100 SERIES

MODEL PEL 105

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

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 300 ft 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 and probes
- Powers directly from phase input
- Pole mountable

ACCESSORIES

POLE MOUNTING KIT CATALOG # 2137.82

Set of (2) with hardware



SEE PAGES 118 & 119 FOR MORE
OPTIONAL ACCESSORIES



DataView®



cover open



cover closed



PRODUCT INCLUDES

PEL 105 KIT CATALOG #2137.59 (SHOWN)

Large classic tool bag, accessory pouch, (5) 10 ft black voltage leads (watertight cap) with alligator clips, (4) water-tight AmpFlex® 196A-24-BK sensors (Cat.# 2137.59 only), (12) color-coded input ID markers, 5 ft USB cable, power adapter 110/240V with US power cord, 9.6V NiMH battery, 8GB SD card, USB SD card reader, printed quick start guide, high-voltage warning card, and a USB drive with DataView® software and a user manual.



CATALOG NO.	DESCRIPTION
2137.57	Power & Energy Logger Model PEL 105 (No sensors, Waterproof IP67, DataView® Software)
2137.59	Power & Energy Logger Model PEL 105 w/4 196A-24-BK (Waterproof IP67, DataView® Software)

POWER QUALITY/ENERGY 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 ϕ / 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 32 and 33 for other probes)		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)		4 EWh	1Wh	±0.5% Rdg
Reactive Energy (EQ)		4 Evarh	1varh	±2% Rdg
Apparent Energy (ES)		4 EVah	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 600V Power Adapter Cat #2137.83 / 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	USB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **/ Wi-Fi (PEL 105)			
Dimension/Weight	PEL 102/103: 10.08 x 4.92 x 1.46" (256 x 125 x 37mm) / 2.20lbs (1kg) PEL 105: 9.8 x 7.8 x 2.6" (250 x 200 x 67mm) / 8.8lbs (4kg)			
Case	Double insulated, rubber over-molded, polycarbonate UL94 V1 rated			
Display Type for Models PEL 103 & 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	PEL 102/103/105: 32° to 108.5°F (0° to 42.5°C) / up to 85%			
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	PEL 102/103: Complies with IEC 61010-1, and IEC 61010-2-030 for 1000V CAT III / 600V CAT IV 1000V CAT IV (PEL 105), Pollution Degree 2 / Yes			
Ingress Protection	PEL 102/103: IP54 non operating / PEL 105: IP67 with cover closed			

Consult factory for NIST Calibration prices

* Maximum value is current probe dependent.


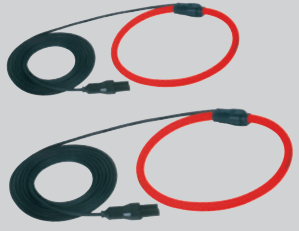

** Computers with Class II Bluetooth will restrict range to 40 ft Computers without Bluetooth will require a Class I or Class II Bluetooth radio adapter.

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



POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS

OPTIONAL ACCESSORIES

SENSOR TYPE	CURRENT RANGE	ACCURACY (TYPICAL)	TYPICAL ERROR ON Φ AT 50/60 HZ	MAX CONDUCTOR SIZE	USED WITH MODEL	CATALOG NUMBER
MiniFlex® MA193-BK*  10,14 or 24" sensor	100mA to 12,000Aac ⁽¹⁾	±1%	0°	2.75" (70mm) (10" sensor)	PEL 102 PEL 103 PEL 105 8333 8336	2140.48 (10" sensor)
				3.94" (100mm) (14" sensor)		2140.50 (14" sensor)
				7.64" (190mm) (24" sensor)		2140.78 (24" sensor)
MR193-BK  Battery operated	1 to 1000Aac 1 to 1300Aac	±2.5%	-0.80°	1.6" (41mm)	PEL 102 PEL 103 PEL 105 8333 8336	2140.28
SR193-BK 	1 to 1200Aac	±0.3%	0.2°	2.05" (52mm)	PEL 102 PEL 103 PEL 105 8333 8336	2140.33
AmpFlex® 193-BK*  24" or 36" sensor	100mA to 12,000Aac ⁽¹⁾	±1%	0°	7.64" (190mm) (24" sensor)	PEL 102 PEL 103 PEL 105 8333 8336	2140.34 (24" sensor)
				11.46" (290mm) (36" sensor)		2140.35 (36" sensor)
MiniFlex® 196-BK*  Waterproof, IP67 14 or 24" sensor	100mA to 12,000Aac ⁽¹⁾	±1%	0°	3.9" (100mm) (14" sensor)	PEL 105 8436	2140.79 (14" sensor)
				7.64" (190mm) (24" sensor)		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 MA196-14-BK and 196A-24-BK flexible sensors are waterproof.

(1) Current range may be limited by sensor size or meter type.

Consult factory for NIST Calibration prices

POWER QUALITY/ENERGY 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
MN93-BK 	0.5 to 240Aac		$\pm 1\%$	0.8°	0.78" (20mm)	PEL 102 PEL 103 PEL 105 8333 8336	N/A	2140.32
MN193-BK 	100A	200mA to 120Aac	$\pm 1\%$	0.75°	0.78" (20mm)	PEL 102 PEL 103 PEL 105 8333 8336	N/A	2140.36
	5A	5mA to 6Aac	$\pm 1\%$	1.7°				
SL261 	100A	5 to 100Aac/dc	$\pm 4\%$	$\pm 0.5^\circ$	0.46" (11.8mm)	PEL 102 PEL 103 PEL 105 8333 8336	N/A	1201.51
	10A	50mA to 10Aac/dc	$\pm 3\%$	$\pm 1^\circ$				

All current sensors can be used with models PEL 105 and 8436. However, only the MA196-14-BK and 196A-24-BK flexible sensors are waterproof. Consult factory for NIST Calibration prices

ACCESSORIES/REPLACEMENTS

CATALOG #1201.51

AC/DC Current Probe
Model SL261 (BNC)



CATALOG #2137.83

600V Power Adapter for use with
Models PEL 102 and PEL 103 only



CATALOG #2140.28

AC/DC Current Probe
Model MR193-BK



CATALOG #2140.32

AC Current Probe
Model MN93-BK



CATALOG #2140.33

AC Current Probe
Model SR193-BK



CATALOG #2140.34

AmpFlex® Sensor 24"
Model 193-24-BK



ACCESSORIES/REPLACEMENTS

CATALOG #2140.35

AmpFlex® Sensor 36"
Model 193-36-BK



CATALOG #2140.36

AC Current Probe
Model MN193-BK



CATALOG #2140.40

BNC Adapter for AC/DC Current Probe
Model SL261



CATALOG #2140.48

MiniFlex® Sensor 10" Model MA193-10-BK

CATALOG #2140.50

MiniFlex® Sensor 14" Model MA193-14-BK

CATALOG #2140.78

MiniFlex® Sensor 24" Model MA193-24-BK



CATALOG #2140.75

AmpFlex® Sensor 24" (Waterproof - IP67)
Model 196A-24-BK

CATALOG #2140.79

MiniFlex® Sensor 14" Waterproof - IP67
Model MA196-14-BK

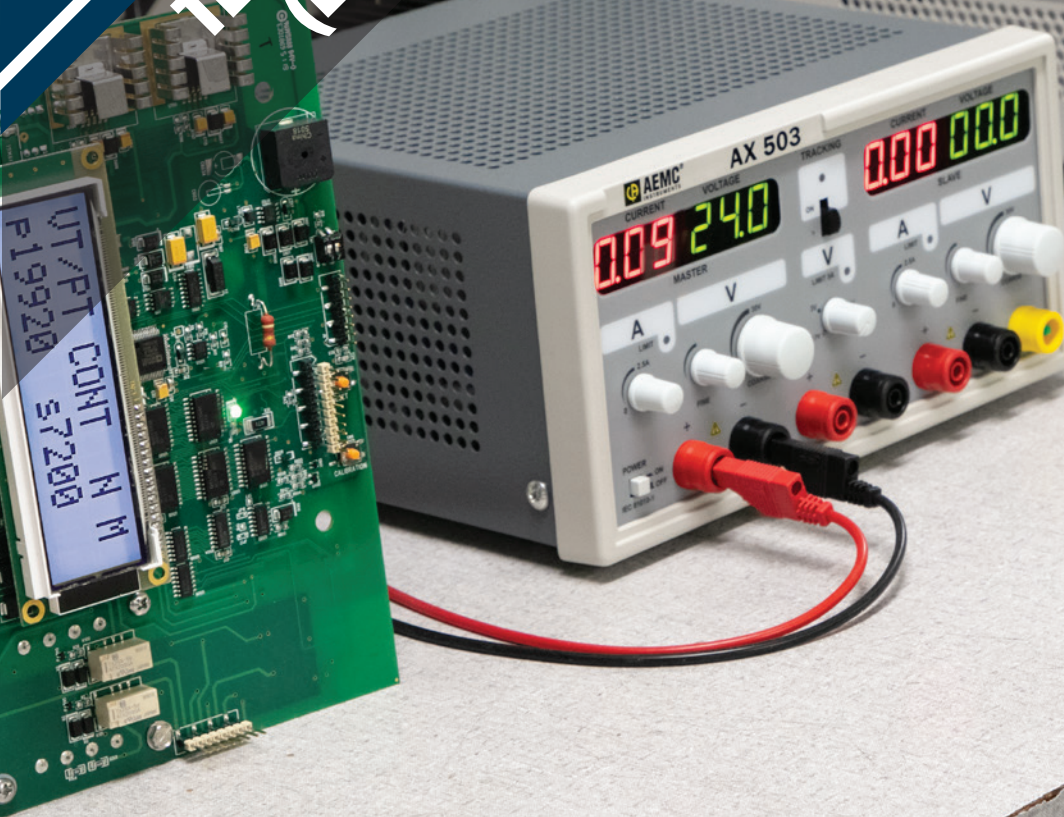


POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS SELECTION CHART

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
8333	2136.10	4V/3I	3V/4I	1000Vrms	2000Vrms	1414Vpk	2828Vpk	1200Vdc	10,000AAC	5000Adc		Yes
8336	2136.30	5V/4I	4V/4I	1000Vrms	2000Vrms	1414Vpk	2828Vpk	1200Vdc	10,000AAC	5000Adc		Yes
8436	2136.43	5V/4I	4V/4I	1000Vrms	2000Vrms	1414Vpk	2828Vpk	1200Vdc	10,000AAC	5000Adc		Yes
PEL 102	2137.51	4V/3I	3V/3I	1000Vrms	1700Vrms	1414Vpk	2400Vpk	1000Vdc	10,000AAC	5000Adc		Yes
PEL 103	2137.52	4V/3I	3V/3I	1000Vrms	1700Vrms	1414Vpk	2400Vpk	1000Vdc	10,000AAC	5000Adc		Yes
PEL 105	2137.57	5V/4I	4V/4I	1000Vrms		1414Vpk	2400Vpk	1000Vdc	10,000AAC	5000Adc		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
8333	2136.10	1P-2W, 2P-3W, 3P-3W, 3P-4W		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 (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
8436	2136.43	1P-2W, 1P-3W, 2P-2W, 2P-3W, 2P-4W, 3P-3W, 3P-4W, 3P-5W		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	Line Power with internal NiMH battery pack
PEL 102	2137.51	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			Yes	None	Line Power with internal NiMH battery pack
PEL 103	2137.52		Yes			No		Yes	Mono-chrome LCD	Line Power with internal NiMH battery pack	
PEL 105	2137.57		Yes			No		Yes	Mono-chrome LCD	Power phase input or external adapter with internal NiMH battery pack	

TEST AND MEASUREMENT (LAB) INSTRUMENTS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

! SEE PAGE 129 FOR MORE INFO
ON DATAVIEW® SOFTWARE

CONFIGURE INSTALLATION TESTERS

MODELS CA 6116N & CA 6117

*Print reports of all test results / Set instrument parameters and measurement settings on your PC and transfer to the instrument /
Retrieve data from the instrument's memory*

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

TEST AND MEASUREMENT (LAB) INSTRUMENTS

DC POWER SUPPLIES & DECADE BOX

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	
Output 3 (No display)	–	2.7 to 5.5Vdc
Display Resolution	100mV	
Basic Accuracy	±0.5% of Reading ±1ct	
Residual Ripple	±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	
Output 3	–	5A max (no adjustment)
Resolution	10mA	
Basic Accuracy	±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)	

Consult factory for NIST Calibration prices

MODEL BR07

Bench top decade box that stands up to the task!

SPECIFICATIONS

TYPES	MULTIPLYING FACTOR IN Ω						
	1	10	100	1k	10k	100k	1M
BR07	+						
Accuracy	1% ±10m Ω						
Max Current mAcc	700mA	200mA	70mA	20mA	7mA	1mA	0.1mA

For more product specifications visit www.aemc.com/products/decade-boxes/
Consult factory for NIST Calibration prices

ACCESSORIES/REPLACEMENTS

CATALOG #2131.35

Replacement, 6 ft safety lead, 4mm female to female for Decade Boxes

CATALOG NO.	DESCRIPTION
2130.06	DC Power Supply Model AX502 (Dual outputs, 0 to 2.5A; 0 to 30Vdc)
2130.07	DC Power Supply Model AX503 (Triple outputs, two 0 to 2.5A; 0 to 30VDC; 2.7 to 5.5Vdc)
2131.25	Resistance Decade Box Model BR07 (x1 Ω , x10 Ω , x100 Ω , x1k Ω , x10k Ω , x100k Ω , x1M Ω , 1%)

FEATURES

- Dual 0 to 30Vdc/0 to 2.5A outputs
- 5.5V/5A output (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/REPLACEMENTS

CATALOG #2117.78

Lead set includes (2) color-coded (red/black) safety leads, (2) color-coded (red/black) alligator clips (1) ground lead (green), and (2) color-coded (red/black) grip probes



BR07



FEATURES

RESISTANCE DECADE BOX BR07

- Resistance box: 7 decades covering a range from 1 Ω to 11.11111M Ω
- 11-position switches
- Output via 4mm safety banana jacks
- Accuracy: 1% ± 10m Ω on all ranges

TEST AND MEASUREMENT (LAB) INSTRUMENTS

DDS GENERATOR AND FREQUENCY METER

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 / ± 20 ppm for $F > 10$ kHz, ± 30 ppm for $F < 10$ kHz	
Amplitude	1mV to 20.0Vpp with open circuit in 3 automatic ranges – 3-digit Vpp or Vrms display	
Flatness	± 1 dB up to 20MHz (specs. for level from 0.1Vpp to 20Vpp)	
Voc Offset	± 10 Vdc with open circuit – accuracy $\pm 5\%$ ± 5 mV	
Waveforms	Sine/Triangle (max frequency 2MHz)/Square & "LOGIC" / TTL output	
FREQUENCY		
Modes	LIN (linear) or LOG (logarithmic) "Sawtooth" or "Triangle" mode	
"INT" internal sweep	Unlimited excursion between "F Start" & "F Stop" (256 steps) Sweep time adjustable from 10ms to 100s	
"EXT" internal sweep	Sweep by signal < 15kHz, amplitude ± 10 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	1 to 65,535 impulsions pulse train period from 10ms to 100s
	External	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 FREQUENCY METER		
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 ± 20 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

Consult factory for NIST Calibration prices

CATALOG NO. DESCRIPTION

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



The image shows three safety helmets hanging on a chain-link fence. The helmets are yellow, blue, and orange. Each helmet has a small logo on the side. The background is an industrial setting with a grey wall and some electrical equipment. A dark blue diagonal banner is overlaid on the top left corner of the image.

INSTALLATION TESTERS

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

TEST AND MEASUREMENT (LAB) INSTRUMENTS

MULTIFUNCTION INSTALLATION TESTERS

MODELS CA 6116N & CA 6117

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



SPECIFICATIONS

MODELS	CA 6116N	CA 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, 1000V _{bc}	
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)	
U _{fk}	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 (Z_s (L-PE) & Z_i (L-N or L-L)) / 1-POINT LIVE GROUND		
Live Ground Installation Voltage/Frequency	90 to 500V / 15.8 to 17.5Hz – 45 to 65Hz	
HIGH-CURRENT MODE WITH TRIP Z_s (L-PE) & Z_i (L-N or L-L)		
Range/Resolution/Accuracy	Max. test current: 7.5 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 (Z _s (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 I _k Short-Circuit Current PFC (Z _s), I _{Sc} PSCC (Z _i)	Fault current and short-circuit current: 0.1A to 20kA	
Integrated Fuse Table	–	Yes
Voltage Drop ΔV% (Z _i)	–	-40% to 40%
Others	Measurement of the resistive and inductive components of the Z _s and Z _i impedances	
AC & A-TYPE RCDs		
Installation Voltage/Frequency	90 to 500V / 15.8 to 17.5Hz 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 (U _f) / 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 17.5Hz 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

Specifications continued on next page.

TEST AND MEASUREMENT (LAB) INSTRUMENTS

MULTIFUNCTION INSTALLATION TESTERS

SPECIFICATIONS - CONTINUED

MODELS	CA 6116N	CA 6117
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 Source (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)	
SAFETY		
Safety Rating	IEC 61010 -1/600V CAT III & 300V CAT IV/IEC 61557	
Ingress Protection	IP53 / IK04	
EMC	IEC 61326-1	

*If a voltage is connected to the instrument



DataView®

PRODUCT INCLUDES

Carrying bag, US power cord and charger, Li-Ion battery pack, USB A/B cable, set of (3) 3-prong color-coded (red, blue, green) safety voltage leads, set of (3) color-coded (red, blue, green) test probes, set of (3) color-coded (red/blue/green) alligator clips, set of (2) color-coded (red/black) safety leads 4mm straight plug, 3-prong US measurement cord, remote test probe, wrist strap, hands-free strap, multilingual safety card, and a USB drive with DataView® software and a user manual.



FEATURES

- Testing according to the international standards: IEC 60364-6, NF C 15-100, VDE 100, XP C 16-600, etc.
- Simple, reliable connection supported by contextual help for each function, including all the connection diagrams
- Suitable for all neutral systems (TT, TN, IT)
- Type-B RCD testing available (Model CA 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 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

SPECIAL ORDERS ONLY

CATALOG NO.	DESCRIPTION
2138.06	Multi-Function Installation Tester Model CA 6116N (US) (includes DataView® Software)
2138.07	Multi-Function Installation Tester Model CA 6117 (US) (includes DataView® Software)
2138.10	Multi-Function Installation Tester Model CA 6116N Kit (US) (includes C177A, DataView® Software)
2138.11	Multi-Function Installation Tester Model CA 6117 Kit (US) (includes C177A, DataView® Software)

THERMAL IMAGING CAMERAS



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THERMAL IMAGING CAMERAS

INFRARED CAMERAS



1950

1954

THERMO RESOLUTION

1950: 80 X 80 | 1954: 120 X 160



MODELS 1950 & 1954

Versatile tool for performing infrared thermography

Indispensable means for ensuring safety in industrial application

SPECIFICATIONS

MODEL	1950	1954
IR DETECTOR		
Type	UFPFA 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	0.98 ft (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	
LASER POINTER		
Type	–	Class 2 645-655nm power: 1mW
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, and relative humidity	
Isotherm Display	Color display of a temperature range adjustable by the user	
Voice Recordings	via Bluetooth headset (included)	
ENVIRONMENTAL		
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	
GENERAL		
Start Up	Less than 3 seconds	Less than 10 seconds
Power Supply	4 x AA NiMH rechargeable batteries with external charger included	
Laser/Output/Wavelength	- / - / -	Class 2 / < 1mW / 645-655nm
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 Communication	407, 607 clamps and DMMs MTX 3292B-BT and MTX 3293B-BT	407, 607 clamps, DMMs MTX 3292B-BT and MTX 3293B-BT and logger models 1110, 1200 and 1800 Series
Safety Rating / IP Protection	EN 61326-1: 2006, EN 61010-1 Ed.02 / IP54	

FEATURES

- Focus-free with 20° x 20° field of view (1950) and 28° x 38° field of view (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, 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

ACCESSORIES/ REPLACEMENTS

CATALOG #2121.60

Carrying case with foam insert

CATALOG #2126.49

USB cable Type A to 5-pin Mini-B

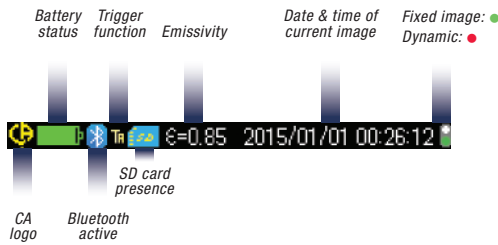
Consult factory for
NIST Calibration prices



THERMAL IMAGING CAMERAS INFRARED CAMERAS

DISPLAY & MENU CONTENTS

STATUS BAR



FUNCTION KEYS

Linked to selected menu choice or camera image



MENU

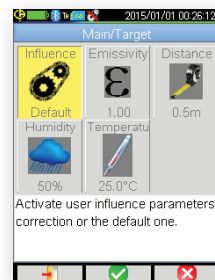
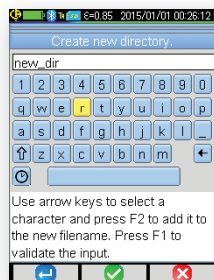
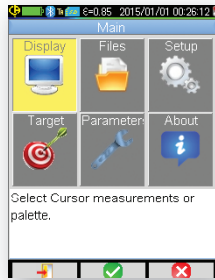
Selectable using navigation keys



CONTEXTUAL HELP

This display area updates based on the menu item selected

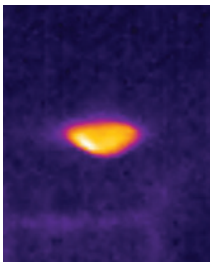
A comprehensive set of easy access menus are available on screen. You can use the function and navigation keys to easily configure the camera for your specific needs. Trigger functions can be programmed, color palettes can be selected, cursor tools can be configured as well as environmental conditions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



SELECTABLE CURSOR TOOLS

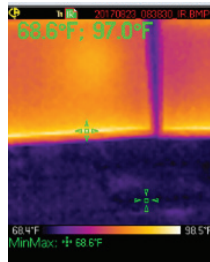
User programmable cursors provide a comprehensive set of options for evaluating thermal profiles

NONE



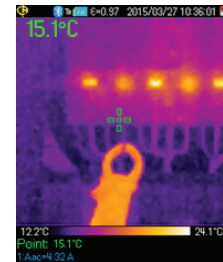
No cursor display, temperature evaluation is determined by color palette only.

MIN/MAX



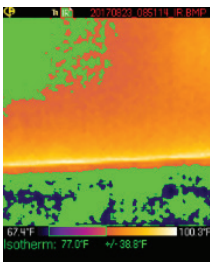
Automatically displays the cold and hot spot values at the Min and Max cursor positions.

POINT



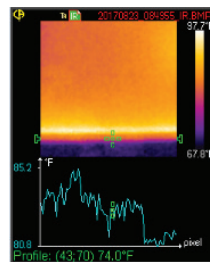
Displays the value at the cursor. Cursor is movable using the navigation keys.

ISOTHERM



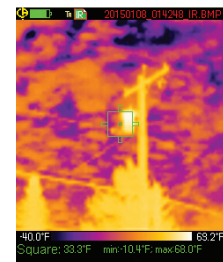
Displays points that fall in the same temperature range in the same color. User picks green, red or brown as the display color and defines the range and tolerance.

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 CAMERAS

CAMREPORT® SOFTWARE FOR ANALYZING THERMOGRAMS

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



Operator :	Location :	Equipment:	Date :
John Doe	Foxborough, MA	CA 1950	9/13/2017 9:14:12 AM

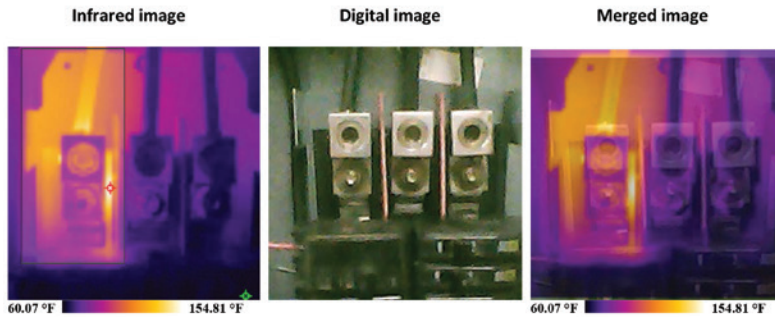
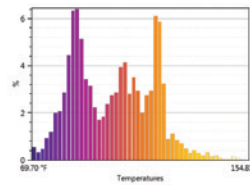
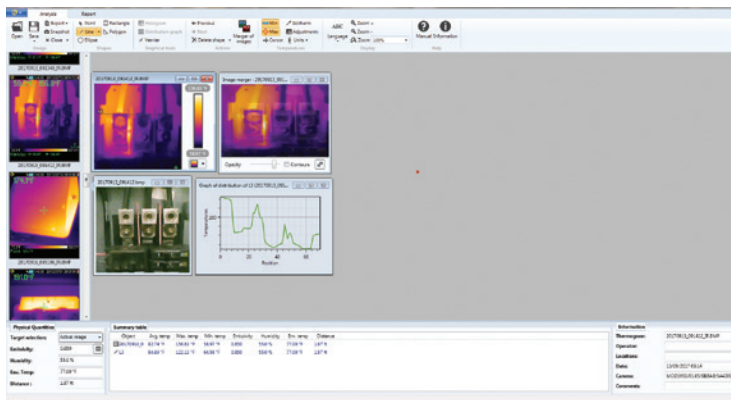


Image properties	
Image name	20170913_091412_IR.BMP
Emissivity:	0.88
Humidity	55.0 %
Environment temperature	74.00 °F
Distance	1.75 ft



Temperature measurement			
RO	Min:69.70 °F	Max:154.81 °F	Avg:101.77 °F
	Emissivity:0.88	Env. T°:74.00 °F	

Report creation is automatic, using one of three available templates. Reports can be exported in Word or PDF format making 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

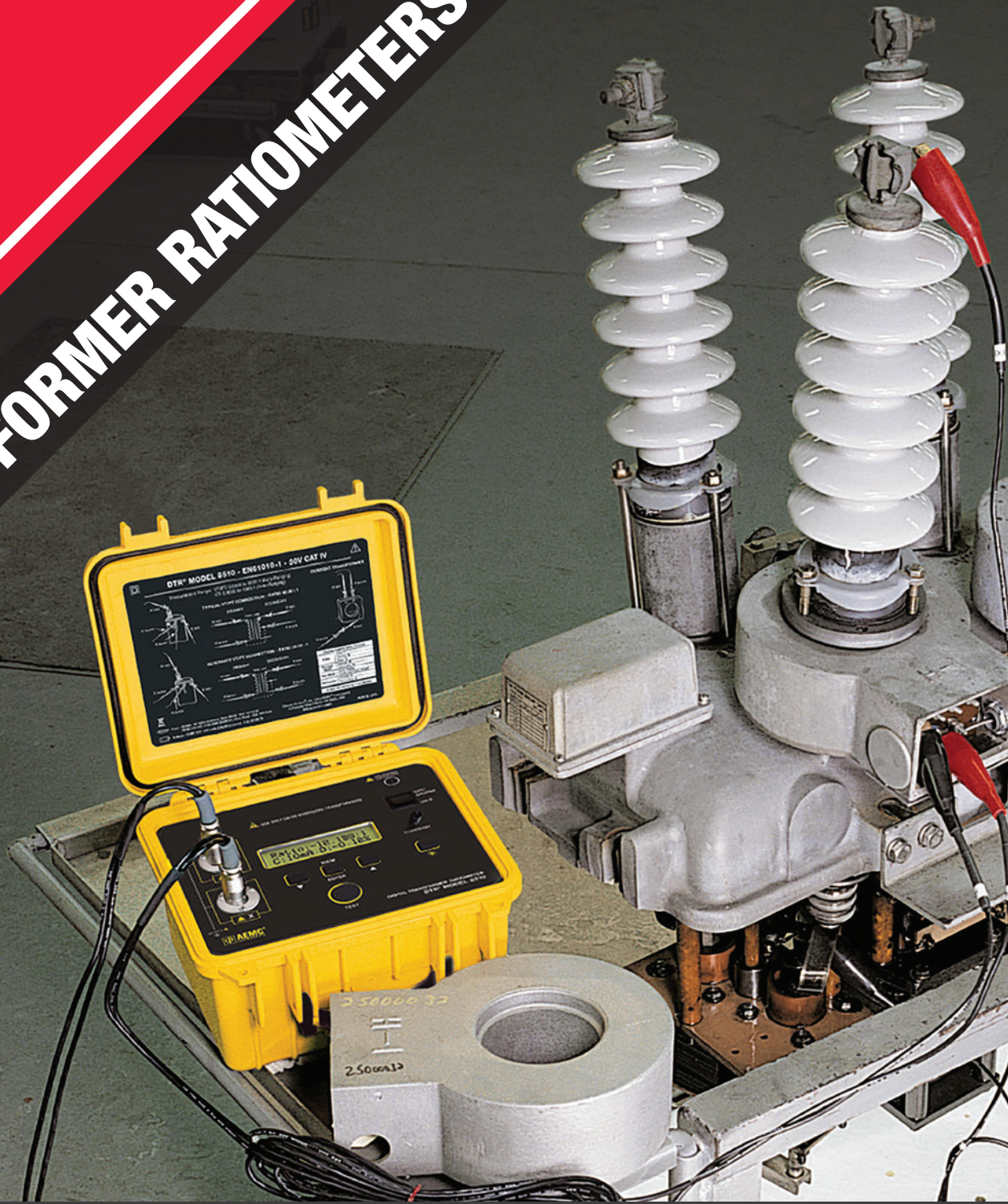
PRODUCT INCLUDES

Carrying case, USB cable, external battery charger (Cat. # 2121.41 only), (4) NiMH rechargeable batteries, micro SD card with adapter, Bluetooth headset, printed quick start guide, and a USB drive with CamReport software, and user and software manuals.

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 RATIO METERS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

! SEE PAGE 129 FOR MORE INFO
ON DATAVIEW® SOFTWARE

CONFIGURE TRANSFORMER RATIO METERS

DTR® MODEL 8510

Display and analyze data on your PC computer / 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 to the instrument / Print reports using standard or custom templates

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

TRANSFORMER RATIOMETERS

DTR® MODEL 8510

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

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 0.8000 to 9.9999 ±0.2% of Reading Ratio 10.000 to 999.99 ±0.1% of Reading Ratio 1000.0 to 4999.9 ±0.2% of Reading Ratio 5000.0 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
SAFETY	
Safety Rating / IP	EN 61010-1; 50V CAT IV / IP54 (cover closed)

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

Consult factory for NIST Calibration prices

PRODUCT INCLUDES

Soft carrying case, set of (2) 15 ft black leads, set of (2) color-coded (red/black) alligator clips, 10 ft USB cable, external battery charger (90-264VAC, 50/60Hz), NiMH batteries (installed), 115V power cord, and USB drive with DataView® software and a user manual.



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; completely 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
- Stores up to 10,000 test results in internal memory
- USB port facilitates configuring the instrument and downloading test results
- Includes DataView® analysis software for programming, downloading, storing and report generation of test data

ACCESSORIES/REPLACEMENTS

CATALOG #2136.76

Set of (2) leads, 30 ft for DTR®

CATALOG #2136.77

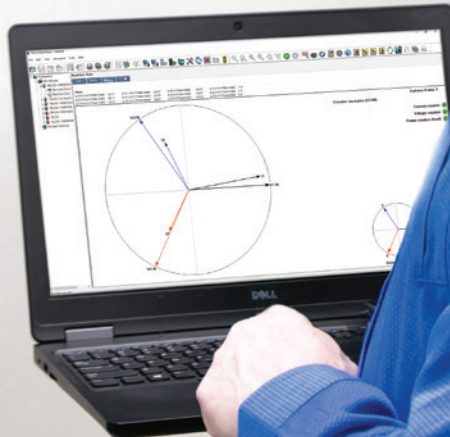
Set of (2) leads, 15 ft for DTR®
(Replacement)



CATALOG NO. DESCRIPTION

2136.50 Digital Transformer Ratiometer DTR® Model 8510 (110/220V)

DATAVIEW® DATA ANALYSIS & REPORTING SOFTWARE



- LOCAL & REMOTE COMMUNICATIONS
- CONFIGURE
- DOWNLOAD AND STORE RECORDED DATA

- ANALYZE
- ANNOTATE
- CREATE STANDARD AND CUSTOM REPORTS

The DataView® software platform designed and developed by AEMC® Instruments, is a comprehensive and powerful analytical and reporting tool used in conjunction with our broad line of electrical test instruments. Our goal in developing this unique software package was to make available one application compatible with any of our instruments that requires software, making it easier for the end-user who operates different AEMC products. In this way, learning and using the software does not change with the instrument in use.

We also implemented it in such a way that it will be backward compatible with older instruments even as new versions are released and new innovative instruments are supported. Plus, we supply it free with each instrument purchased, and upgrades when released are always free.

INSTRUMENTS EQUIPPED WITH DATAVIEW SOFTWARE:

DATA LOGGERS

**MODELS CL601,
AL834, L261, L562,
ML912 & L452**

ENVIRONMENTAL INSTRUMENTS

**MODELS 1110,
1227, 1246, 1821,
1822, 1823 & 1510**

GROUND TESTERS

**MODELS 6417,
6471 & 6472**

MEGOHMMETERS

**MODELS 1060, 5060,
5070, 6526, 6534,
6550 & 6555**

MICRO-OHMMETERS

**MODELS 6240,
6255 & 6292**

POWER QUALITY AND ENERGY ANALYZERS AND LOGGERS

**MODELS PEL 102,
103, 105, 8220, 8230,
8333, 8336 & 8436**

TRANSFORMER RATIO METER

MODELS 8510

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



DataView automatically recognizes a device when it is connected to a PC and starts the corresponding menu providing direct access to a device's recorded data. An end-user can access predefined reports with full safety compliance to current standards for quick editing. They can also define and save their own configured reports, views, etc. as well as the instrument according to their needs saving significant time in the field.

STANDARD DATAVIEW FUNCTIONS

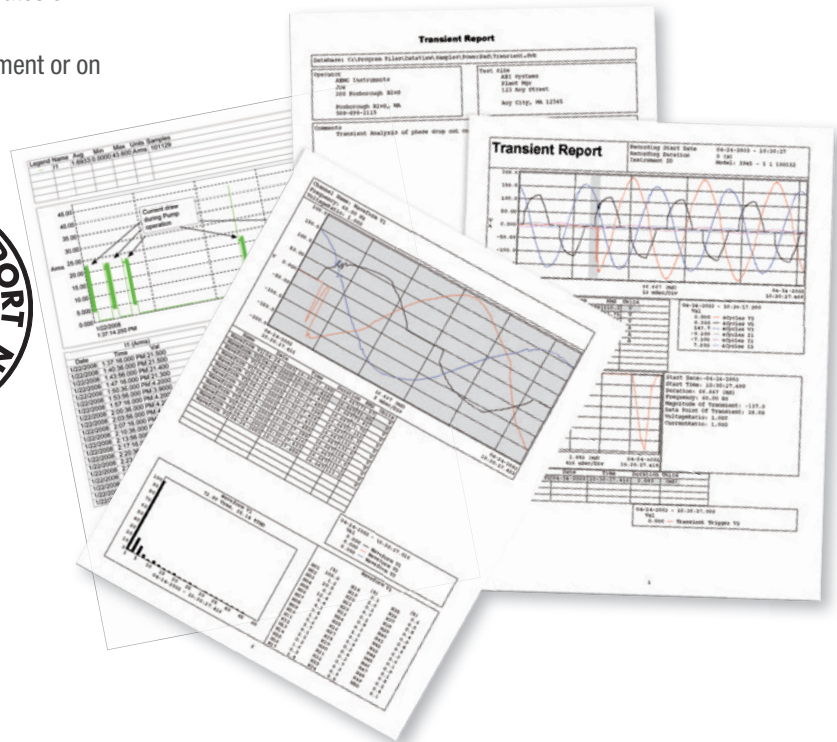
For All Applicable Instruments:

- Capture, display and analyze real-time data on your PC
- Easily configure all functions and parameters specific to each instrument from your PC
- Create and store a complete library of configurations that can be uploaded to a device as needed
- Create custom views, templates, and reports to your exact needs
- Zoom in and out and pan through sections of graphs to analyze the data
- View measurements in real-time (model specific), download, display and analyze recorded and stored data
- Display waveforms, trend graphs, harmonic spectrums, text summaries, transients, event logs and stored alarms
- Print all test result reports using our standard report templates or your custom templates
- Free updates available from the help menu on your instrument or on our website: www.aemc.com/resources

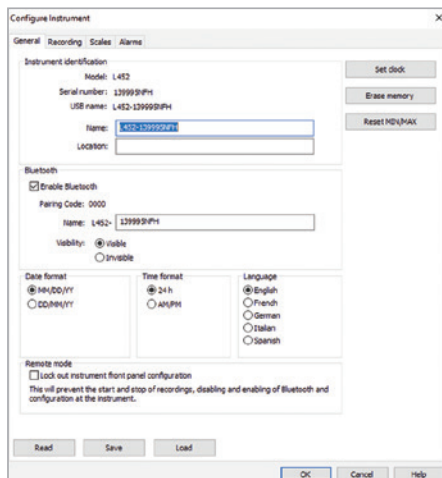
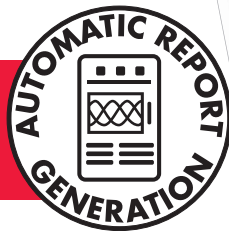
ADDITIONAL DATAVIEW FUNCTIONS

For Meghommeters:

- Select test voltage and run tests from your computer with a simple click and execute process
- Retrieve data from the instruments' 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



AUTOMATIC REPORT GENERATION
Easily create reports from an instrument with the click of a button.



Reports can be displayed on a PC and printed. Each report includes all test results in a tabular and graphic format, as well as operator and test site information. Comments typed by the operator will also be included.

INSTRUMENTS SUPPORTED BY DATAVIEW®

- Power & Energy Loggers and Analyzers
- Ground Resistance Testers
- Insulation Resistance Testers
- Low Resistance Micro-Ohmmeters
- Transformer Ratiometers
- Data Loggers
- Environmental Loggers
- Clamp-on Meters
- Installation Testers

COMMUNICATION

- USB
- Wi-Fi
- Bluetooth
- Ethernet

INSTRUMENT CONFIGURATION

- User defined
- Load from stored configurations
- Save new configurations

DATA RETRIEVAL AND STORAGE

- Direct connect to the instrument
- Transfer from SD card
- Over the internet
- From local area network

LOCAL & REMOTE REAL-TIME MONITORING

- Single Instrument
- Multiple Instruments

DATA ANALYSIS

- Zoom in and out to identify important data points
- Annotation and labeling of data points
- Tracking Min, Max, Peak and Average values
- Object linking and embedding

REPORT GENERATION

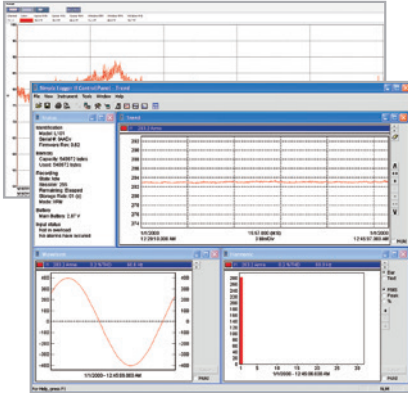
- Predefined report templates
- Customizable report templates
- Data Export to other formats (Excel, .csv)
- Creation of PDF files



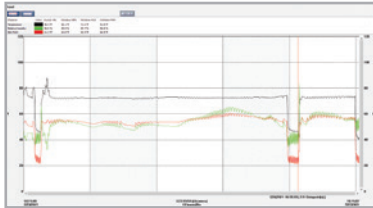
TYPICAL DATAVIEW® DIGITAL AND GRAPHIC DISPLAYS

CLEAR AND SIMPLE SETUP OF ALL FUNCTIONS AND SETTINGS FROM ONE TABBED DIALOG BOX

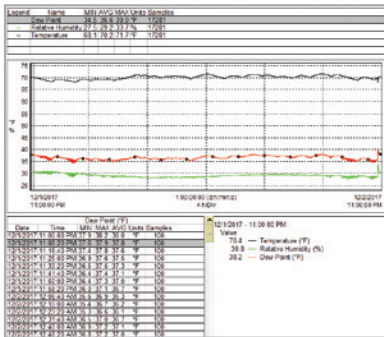
DATA LOGGERS



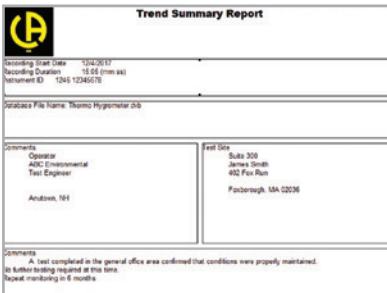
ENVIRONMENTAL



Recorded data displays recorded measurements vs. time as well as min, max, and average measurements for the recording. A movable cursor lets you see values at the cursor location.

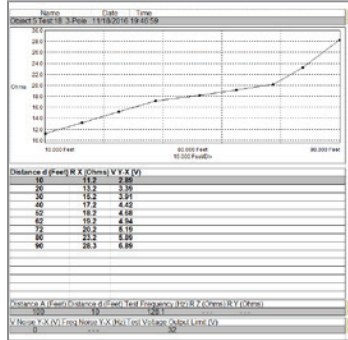


A typical report will include a plot of the data as well as a listing of the measurements

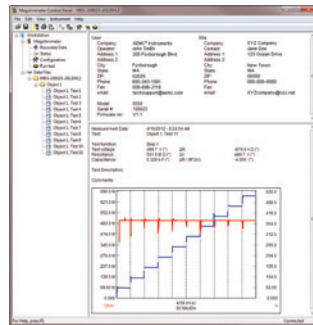


A report cover sheet provides information about the operator, test site and a comment section to type in the test results and recommendations.

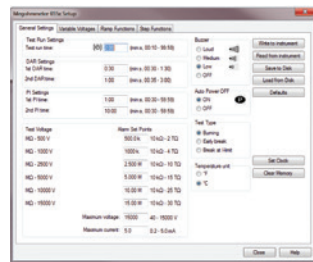
GROUND TESTERS



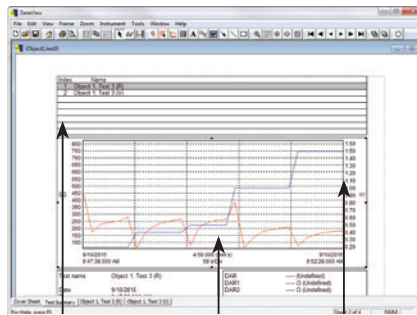
MEGOhMMETERS



All stored test results presented on screen



Clear and straightforward set up of parameters



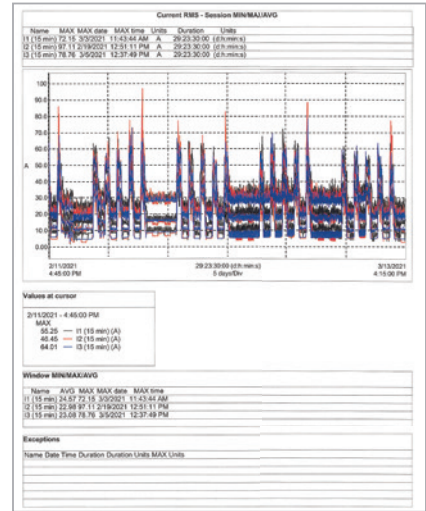
Run test and display text and graphical results from one dialog box. Model 5070 also displays step voltage.

Test result status box displays complete test results in real-time

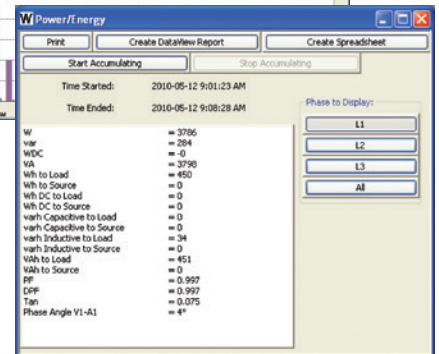
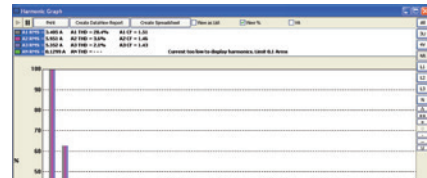
Insulation resistance with temperature compensation

Step voltage during the test run

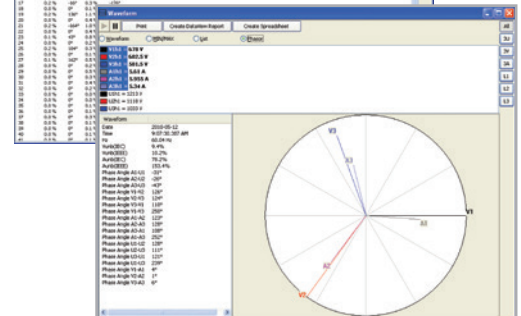
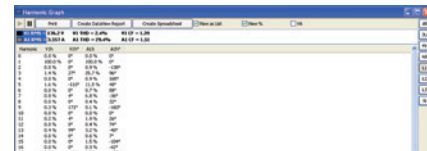
POWER QUALITY AND ENERGY ANALYZERS AND LOGGERS



Display report waveforms by phase, parameter or total



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

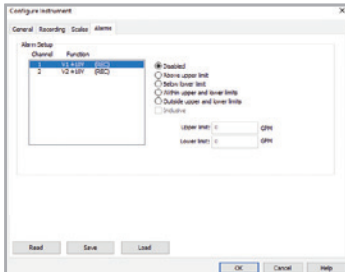
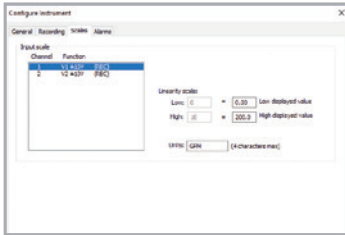


Display real-time phasor diagrams with phase angles

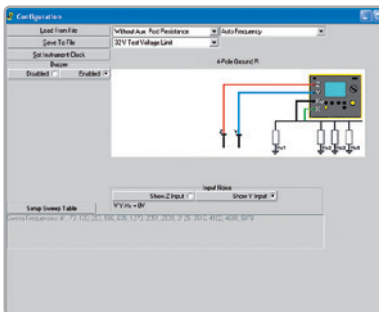
TYPICAL DATAVIEW[®] FUNCTIONAL DISPLAYS

CLEAR AND SIMPLE SETUP OF ALL FUNCTIONS AND SETTINGS FROM ONE TABBED DIALOG BOX

DATA LOGGERS

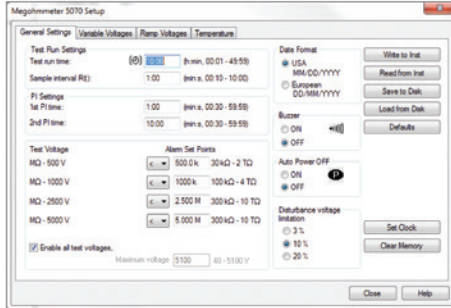


GROUND TESTERS

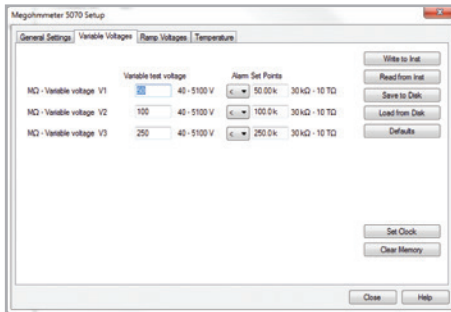


Configure and control ground resistance tests from your computer through the use of clear and easy-to-use tabbed dialog boxes. All Ground Tester functions can be configured and tests can be initiated with graphical illustration of the proper connections

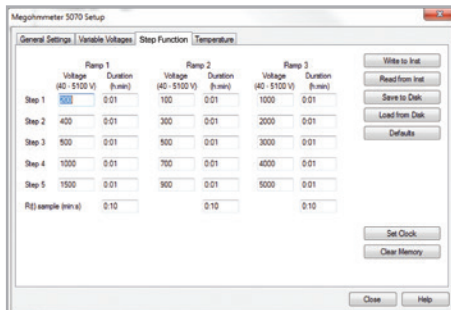
MEGOhmmeters



Tabbed dialog boxes allow for clear and easy setup of all functions of the Megohmmeters, including setup for variable voltage and alarm set points, as well as step voltage tests and temperature compensation

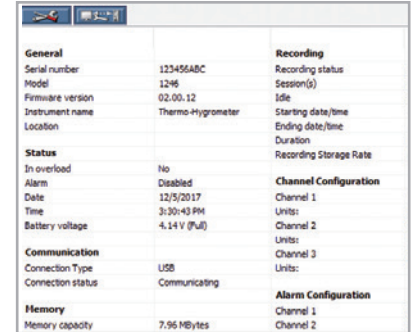


Variable Voltage selections from 40 to 5100V and can also be programmed along with alarm set points (model dependent)

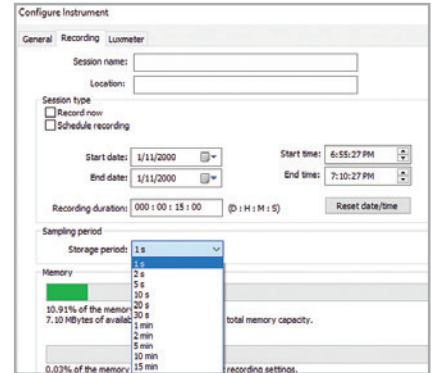


Model 5070 includes Step Function which allows programming of three different ramp test profiles, each containing up to five voltage steps between 40 and 5100V and time per step of up to 10 hours

ENVIRONMENTAL



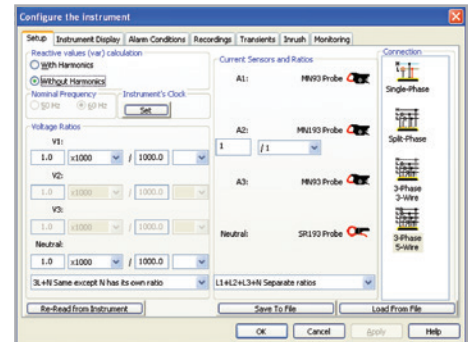
Typical status screen showing the current state of the instrument



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.

POWER QUALITY AND ENERGY ANALYZERS AND LOGGERS



Configure alarms, inrush and transient capture, network configuration, recording storage rate and length and more.

TRAINING SEMINARS

AEMC® TECHNICAL TRAINING WEBINARS & SEMINARS

- Offered throughout the USA on Ground Resistance Testing
- Insulation Resistance Testing and Power Quality
- Public and private courses are available
- Online training courses

UNDERSTANDING GROUND RESISTANCE TESTING



For field engineers, technicians, utility engineers, supervisors, electricians and inspectors interested in testing and certifying grounding systems.

KEY TOPICS INCLUDE

- Soil Resistivity
- Bond Resistance
- Ground Resistance
 - 3 and 4 Point Fall-of-Potential Testing
 - Clamp-on Testing
 - Alternate Test Methods
- Step and Touch Potential Measurements

UNDERSTANDING INSULATION RESISTANCE TESTING



For technicians, supervisors, electricians, plant maintenance personnel and inspectors interested in insulation resistance testing on motors, cables, transformers and other electrical equipment.

KEY TOPICS INCLUDE

- Insulation Test Theory
- Motor Theory
- Spot Testing
- Timed Testing
- DAR, PI and DD Ratio Tests
- Temperature Correction
- Report Generation

UNDERSTANDING POWER QUALITY



For engineers, technicians, supervisors, electricians, plant maintenance personnel and inspectors interested in monitoring, recording and analyzing power quality and energy monitoring.

KEY TOPICS INCLUDE

- Why Power Quality is Important to you
- Symptoms and Problems Associated with Poor Power Quality
- Types of Disturbances and How to Tell Them Apart
- Harmonic Analysis - What, Why and How to Measure
- THD - What is it and How Much is Too Much
- Power Factor - What is it, Why Know it and How to Measure it

**FOR THE SCHEDULE OF UPCOMING TRAINING SEMINARS CONTACT
SALES@AEMC.COM, VISIT OUR WEBSITE AT WWW.AEMC.COM
OR CALL (800) 343-1391**

TECHNICAL SALES AND ASSISTANCE



If you experience technical problems, or require assistance with the proper use or application of any AEMC® instrument, please call our technical hotline at (800) 343-1391 ext. 351. Technical assistance in Spanish is available at ext. 544.

15 Faraday Drive • Dover, NH 03820 USA
Tel: (800) 343-1391 • (508) 698-2115 • Fax: (508) 698-2118
techsupport@aemc.com • www.aemc.com

REPAIR AND CALIBRATION



To guarantee your instrument complies with the factory specifications, we recommend that your AEMC® purchased product be submitted to our factory service center at one year intervals for recalibration, or as required by other standards.

For instrument repairs and/or calibrations, please call our factory, toll-free, at (800) 945-2362 x360.

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments
15 Faraday Drive • Dover, NH 03820 USA
Tel: (800) 945-2362 x360 • (603) 749-6434 • Fax: (603) 749-6309
repair@aemc.com • www.aemc.com

Costs for repair, normal recalibration, and calibration traceable to NIST are available. NIST calibration pricing is listed within each product ordering chart. All customers must call for an authorization number (CSA#) before returning any instrument.

WARRANTY



All AEMC® Instruments products carry a 2-year warranty (unless specified) against defects of material and workmanship which develop under normal and proper use within one to three years (product dependent) of original date of purchase when inspection proves the fault to be one of manufacturing. Detailed warranty coverage is located on our website. Products can be registered online at:

www.aemc.com/support/product-registration.cfm

Specifications and prices are subject to change without notice.

CORPORATE AND MANUFACTURING



Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments
15 Faraday Drive • Dover, NH 03820 USA
Tel: (603) 749-6434 • Fax: (603) 742-2346

Order entry:

Tel: (800) 945-2362 x361 • Fax: (603) 749-9153
customerservice@aemc.com • www.aemc.com

Exports order entry:

Tel: +1 (603) 749-6434 x520 • Fax: +1 (603) 740-7550
export@aemc.com • www.aemc.com



ONLINE STORE

The AEMC® online store offers the opportunity to purchase replacement parts such as fuses, test leads and other accessory items for your test instruments. The online store also offers refurbished and discontinued items at a reduced price. Product specials also offered. Visit the store at www.aemc.com/store

FIND MORE AT: WWW.AEMC.COM

NEW PRODUCTS

CLAMP-ON METERS
MODEL 505



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CURRENT MEASUREMENT PROBES
MR SERIES
MODELS MR415/416/526 & MR417/527



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GROUND RESISTANCE TESTERS
MODELS 6422/6424 & MN72



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LEAKAGE CURRENT METERS & PROBES
MODEL 566



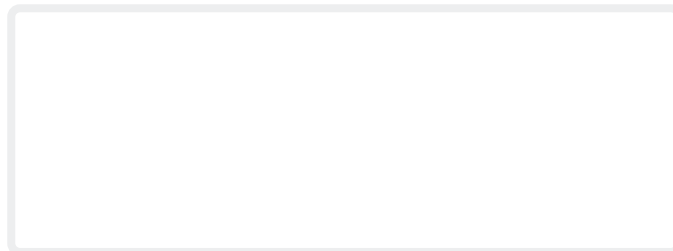
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MEG OHMMETERS
MODEL 6529



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Your authorized AEMC® Instruments distributor is:



AEMC® Instruments 15 Faraday Dr. • Dover, NH 03820-4352 • USA
(603) 749-6434 • (800) 343-1391 • Fax (603) 742-2346 • Email: sales@aemc.com
Export Department 1+ (603) 749-6434 ext. 520 • Fax 1+ (603) 750-7550 • Email: export@aemc.com

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