



VOLUME 24

TEST & MEASUREMENT INSTRUMENTS

130 

**OVER 130 YEARS DEVELOPING
ELECTRICAL TEST AND
MEASUREMENT INSTRUMENTS**

WWW.AEMC.COM

TECHNICAL HOTLINE: (800) 343-1391

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

HOW TO ORDER

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

For a list of authorized distributors in your state (US) or country (International), contact AEMC® Instruments or search on the 'Where to Buy' tab of our website www.aemc.com



SALES & MARKETING

15 Faraday Drive
Dover, NH 03820 USA
Tel: (603) 749-6434
Technical Hotline: (800) 343-1391
sales@aemc.com
marketing@aemc.com

ORDERING INFORMATION

NORTH AMERICA:

Tel: (800) 343-1391 ext. 361
customerservice@aemc.com

EXPORT:

(All countries other than USA & Canada)
Tel: +1 (603) 749-6434 ext. 520
export@aemc.com

When ordering please use the catalog number and product description.

Example:

QUANTITY	CATALOG #	DESCRIPTION
1	2136.37	PowerPad® IV Model 8345 w/ 4 193-24-BK AmpFlex® 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 district sales engineer or distributor for updates.

CHAUVIN ARNOUX®, INC. d.b.a. AEMC® INSTRUMENTS

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*Kits available

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* Kits available

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COMPANY PROFILE

WHO WE ARE

AEMC® Instruments stands as a beacon of excellence in the field of test and measurement instruments. With a rich history dating back to 1893 when we began operations in downtown Boston, Massachusetts, and strong affiliations with Chauvin Arnoux® S.A.S. in France, founded in 1893, our legacy is built upon over 130 years of expertise in test and measurement instruments.

Our corporate headquarters in Dover, NH, is a hub of sales, marketing, engineering, production, technical support, and NIST calibration. AEMC® Instruments 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.

WHY WE MATTER

AEMC® Instruments manufactures professional electrical test and measurement instruments for the industrial, commercial and utility marketplace.

We are the worldwide leading manufacturer of current measurement probes and an industry leader in ground resistance testers, insulation resistance testers, and power/energy quality analyzers, meters and loggers.

Our Megohmmeter line, tracing its origins to the early 1900s, has evolved into a digital marvel, boasting intelligent features like timers, alarms, variable test voltages, and advanced data management capabilities.

Our ground resistance testing instruments date back to the 1930s. We revolutionized the market with clamp-on testers, eliminating system disconnections and auxiliary rods. Today, we lead the industry with fall-of-potential ground testing solutions that automate and simplify testing processes, saving time, money, and enhance operator safety.

Our tower test system is another testament to our innovation, allowing testing without de-energizing or removing overhead ground conductors, offering significant cost savings and safety improvements.

Our Static Ground and Bond Test System Kit is a comprehensive set that encompasses all the essential components required at a HAZMAT transfer site ensuring the safety of first responders and hazmat teams.

We also offer a wide range of Power and Power Quality measuring instruments, including clamp-on meters, power quality analyzers, digital power meters, and Power & Energy Loggers (PEL) that can monitor usage and costs from anywhere in the world.

Our proprietary DataView® software, streamlines configuration, testing, data storage, and report generation. Our commitment to user-friendly interfaces extends to tablet and smartphone apps, ensuring universal communication.

We are dedicated to enhancing testing education through technical training in order to improve education, help save lives in the field, and reduce operational costs. We matter because we care. We care about the quality of our products, end user safety, timely and knowledgeable customer and technical support, and the sustainability of our planet.

TIMELINE



RENÉ
ARNOUX



RAPHAËL
CHAUVIN



OUR FIRST
MEGOhmmETER



TRANSFORMER
CLAMP



CLAMP-ON GROUND
TESTER MODEL 3710



CURRENT PROBE
MODEL K100

1893 Founding of the company in France by René Arnoux and Raphaël Chauvin and still a leader in the test and measurement instrument industry

1930 Our Ground Tester line finds its roots. A null balance galvanometer, a resistance box, and a DC power source were combined to create one of the earliest ground testers available

1976 AEMC® Instruments founded in downtown Boston, MA

1986 Inventory moved to Dover, NH and purchasing followed

1994 The CA 6411 and CA 6413 Earth Clamps inaugurate a new concept: a rapid control of interconnected earth loops

1996 Our US engineers designed a new DC/AC current probe Models K100 and K110 which measure extremely low-level DC Amps

1900 Our Megohmmeter line finds its roots when Chauvin Arnoux® introduced its first model made from a galvanometer and a decade resistance box combined with a DC power source

1934 Invention of the Transformer Clamp—the first current clamp

1993 Introduced revolutionary Clamp-On Ground Tester Models 3710 and 3730 (still going strong thirty years later and continues to thrive even after three decades)

1997 AEMC® Corporation and Instrumentation Corporation (US manufacturer of current probes) legally adopted the name Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments

MEASUREMENT EXPERTS



130

Years of Development

Our products are backed by over 130 years of experience in test and measurement instruments, and encompass the latest international standards for quality and safety.



11%

of Revenue Invested in R&D

With nearly 11% of its revenues currently invested in Research and Development every year, the Chauvin Arnoux® Group has always been proud of the priority given to in-house design and development of its electrical measuring instruments. An important part of the Group's strategy, R&D at Chauvin Arnoux® is based on the two keywords: *Engineer Manufacturer*.



6

R&D Departments Worldwide

- Paris, France
- Antony, France
- Annecy, France
- Lyon, France
- Dover, USA
- Milan, Italy



8

Production Sites Worldwide

- 3 in Normandy, France
- 1 in Lyon, France
- 1 in Montpellier, France
- 1 in Milan, Italy
- 1 in Dover, USA
- 1 in Shanghai, China



10

Subsidiaries Across the World

- Austria
- China
- Germany
- Great Britain
- Italy
- Lebanon
- Spain
- Sweden
- Switzerland
- United States



1000

Worldwide Employees

The quality of our products and services, like the level of productivity, the lead times and the environmental impact, is the result of work by our efficient professionals. The keystone of employees relations is respect for the individual.



ECO-DESIGN

Quality Standards and Eco-responsible Approach

In our partner labs, rigorous quality checks and tests occur throughout the design and production process. This includes functional, metrological, mechanical, climatic, electromagnetic compatibility, electrical safety, aging tests, and more.

The ISO 9001 certification for design and ISQ 14001 certification for manufacturing and sales highlight our company's commitment to aligning business practices with environmental protection.



WHY AEMC® INSTRUMENTS?

Our commitment to product reliability, exceptional customer support, and expert technical assistance is unwavering.

Our focus spans residential, industrial, commercial, and utility sectors, delivering solutions that meet top international quality and safety standards.

Innovation is in our DNA. We are proud to be the global industry leader in current measurement probes, setting benchmarks in ground resistance testers, insulation resistance testers, and power and energy quality analyzers, meters, and loggers.

Education is at the core of our mission. AEMC® Instruments offers technical training seminars and webinars, empowering individuals with the knowledge to conduct resistance testing and power quality analysis safely and efficiently.

With a legacy built on over a century of experience, a dedication to innovation, and a commitment to customer success, we stand as the industry's foremost choice for reliability, accuracy, and excellence.

Experience the AEMC® Instruments difference today!



RATIOMETER DTR®
MODEL 8510



POWER QUALITY
LOGGER MODEL
PQL 100



OSCILLOSCOPES
MODEL 7104



GROUND FLEX®
FIELD KIT
MODEL 6474



CLASS A IV
POWERPAD®
MODEL 8345



PEL 52

1998

Our US engineers introduced Ratiometer DTR® Model 8500 which today is in its second generation and still among our top sellers

1999

AEMC® DataView® software, designed to configure instruments, run tests, download and store results, and generate final reports was added to product offerings

2006

AEMC® pioneered fall-of-potential ground testing by introducing an automated tester that seamlessly identifies the optimal testing frequency and calculates all soil resistivity test results

2012

Revolutionized the field of InRush current measurement with our True InRush® technology, seamlessly integrated with the recording capabilities of the PEL 100 recorders and the smallest oscilloscope: the HandScope

2022

The unveiling of the inaugural Class A certified device, the PowerPad® IV Model 8345, with the highest safety rating in the industry of 1000 V CAT IV

2001

Introduced our DataView® software with our Power Quality Logger PQL series

Launch of the PowerPad® family of three-phase electrical network analyzers

2004

Launch of the Scopix family of portable Metrix® Oscilloscopes with isolated channels

2008

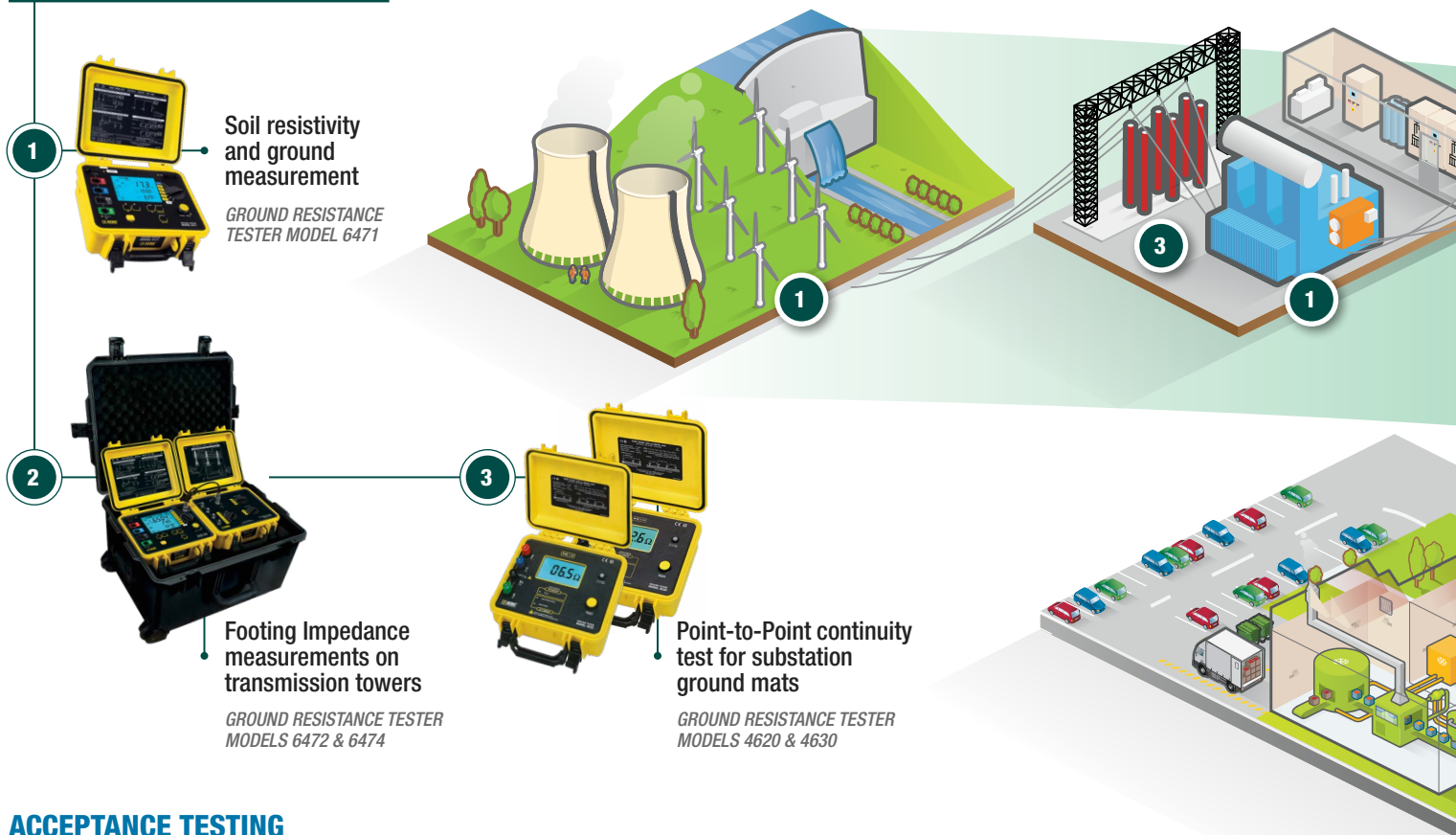
Introduced the groundbreaking GroundFlex® Field Kit Model 6474, better known as a Tower Tester, capable of measuring ground resistance of power transmission tower legs individually and determine the total resistance without disconnecting the overhead ground wire

2023

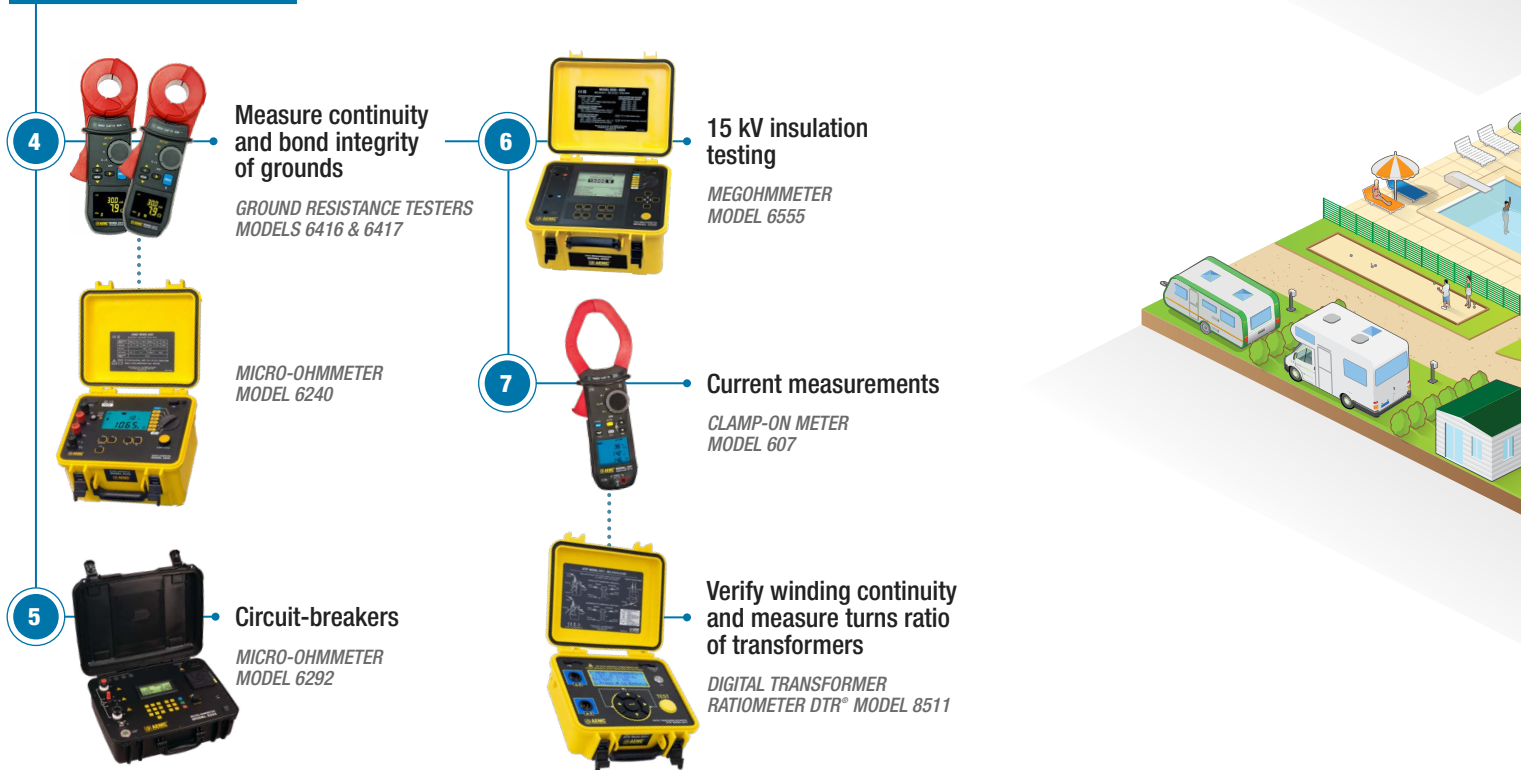
Introduced the PEL 52, our most compact Power and Energy Logger for residential and light commercial applications

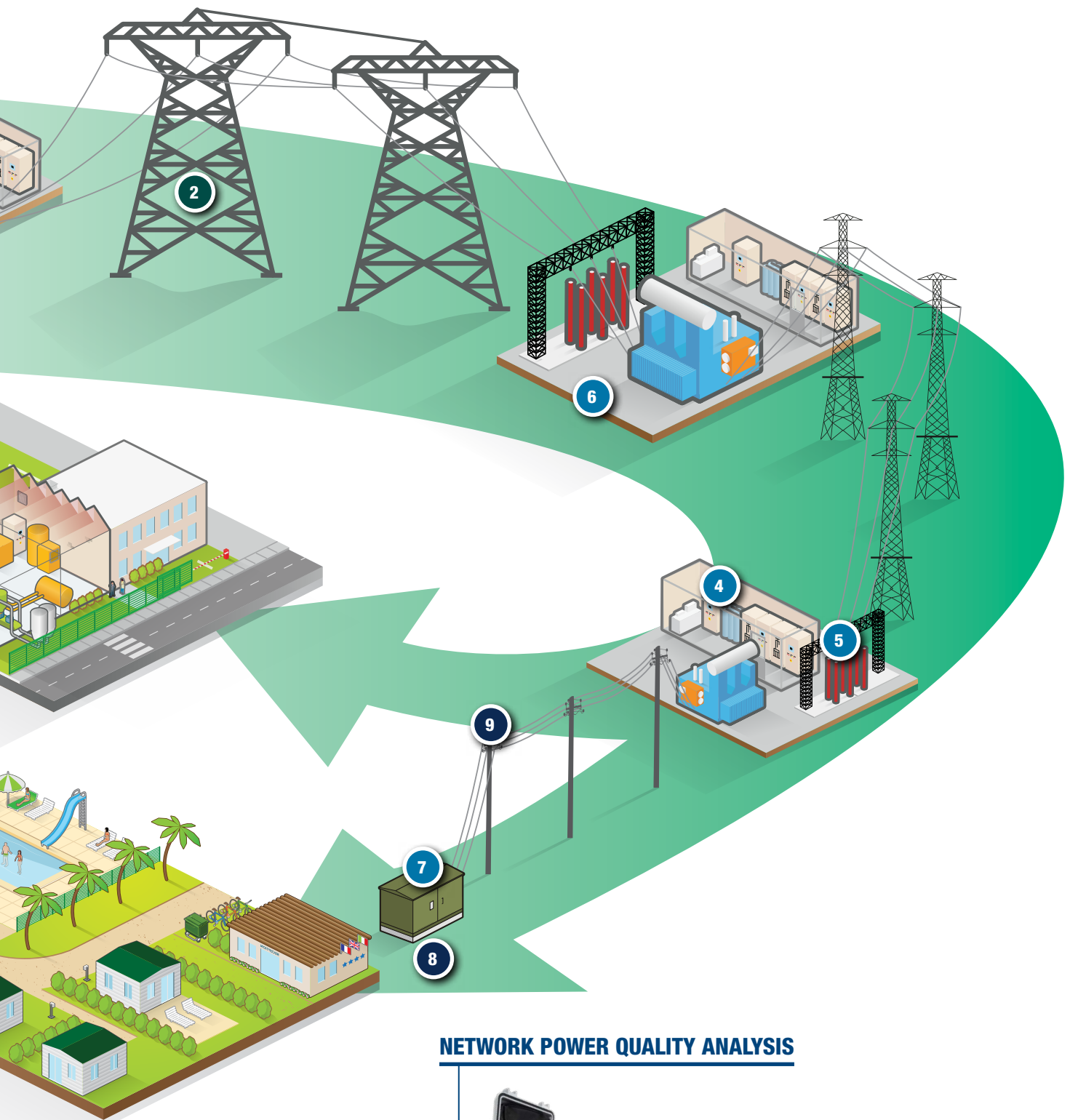


GROUND RESISTANCE TESTING



ACCEPTANCE TESTING





NETWORK POWER QUALITY ANALYSIS



8

Electrical
consumption
monitoring

POWER & ENERGY LOGGER
MODEL PEL 115

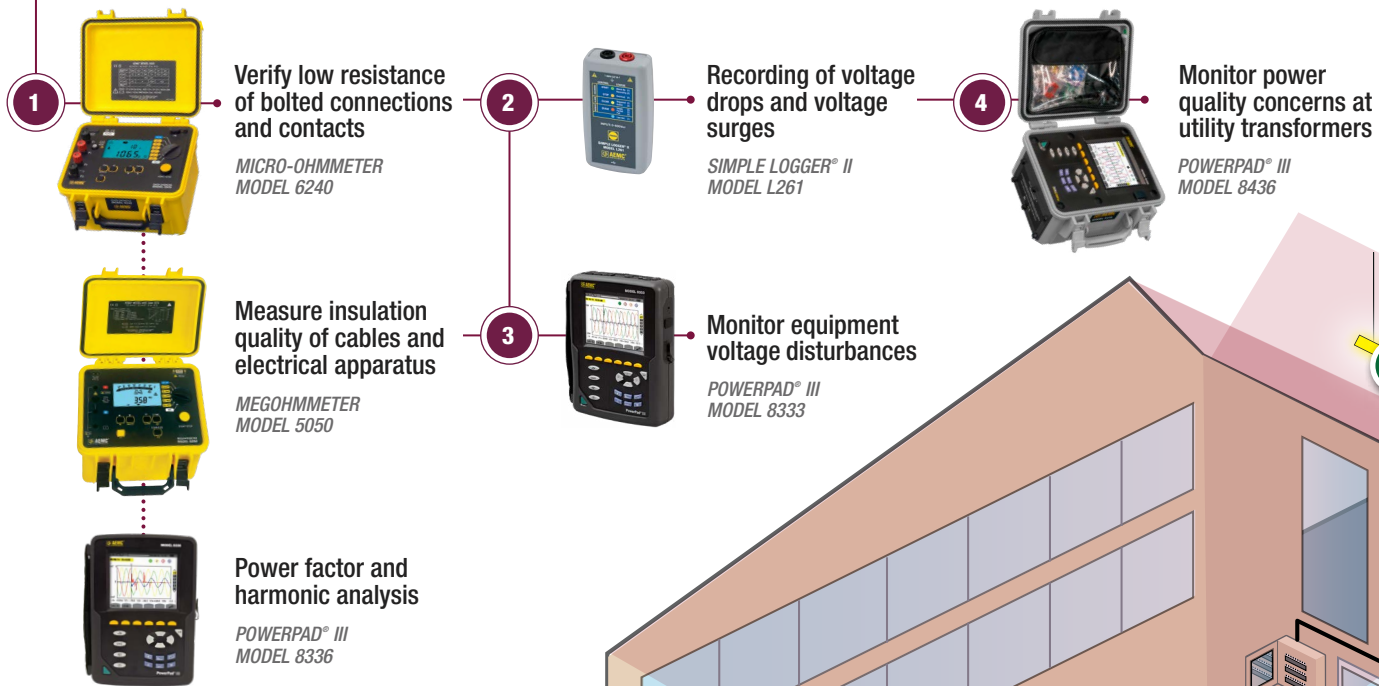


9

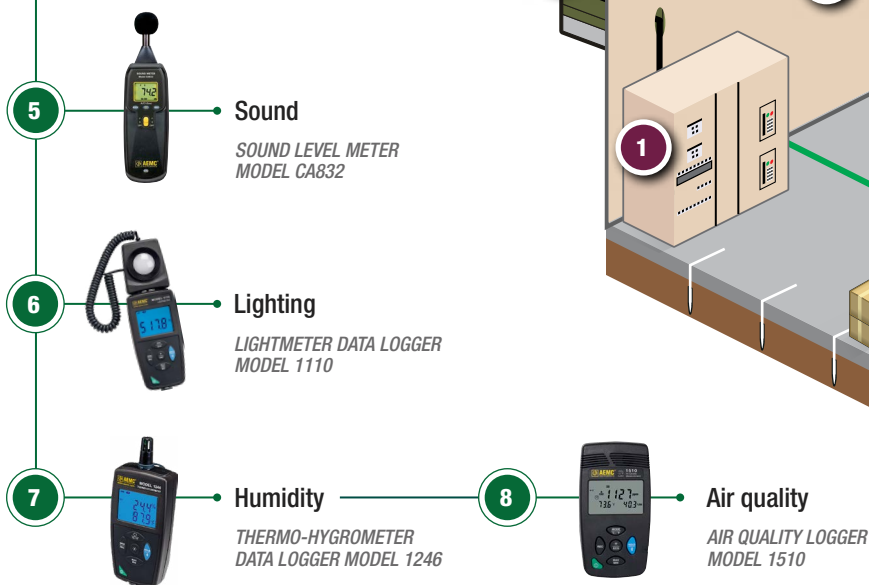
Analysis of electrical
network quality

POWER QUALITY ANALYZER
POWERPAD® IV, CLASS A,
MODEL 8345

SWITCHGEAR AND ELECTRICAL PANEL TESTING

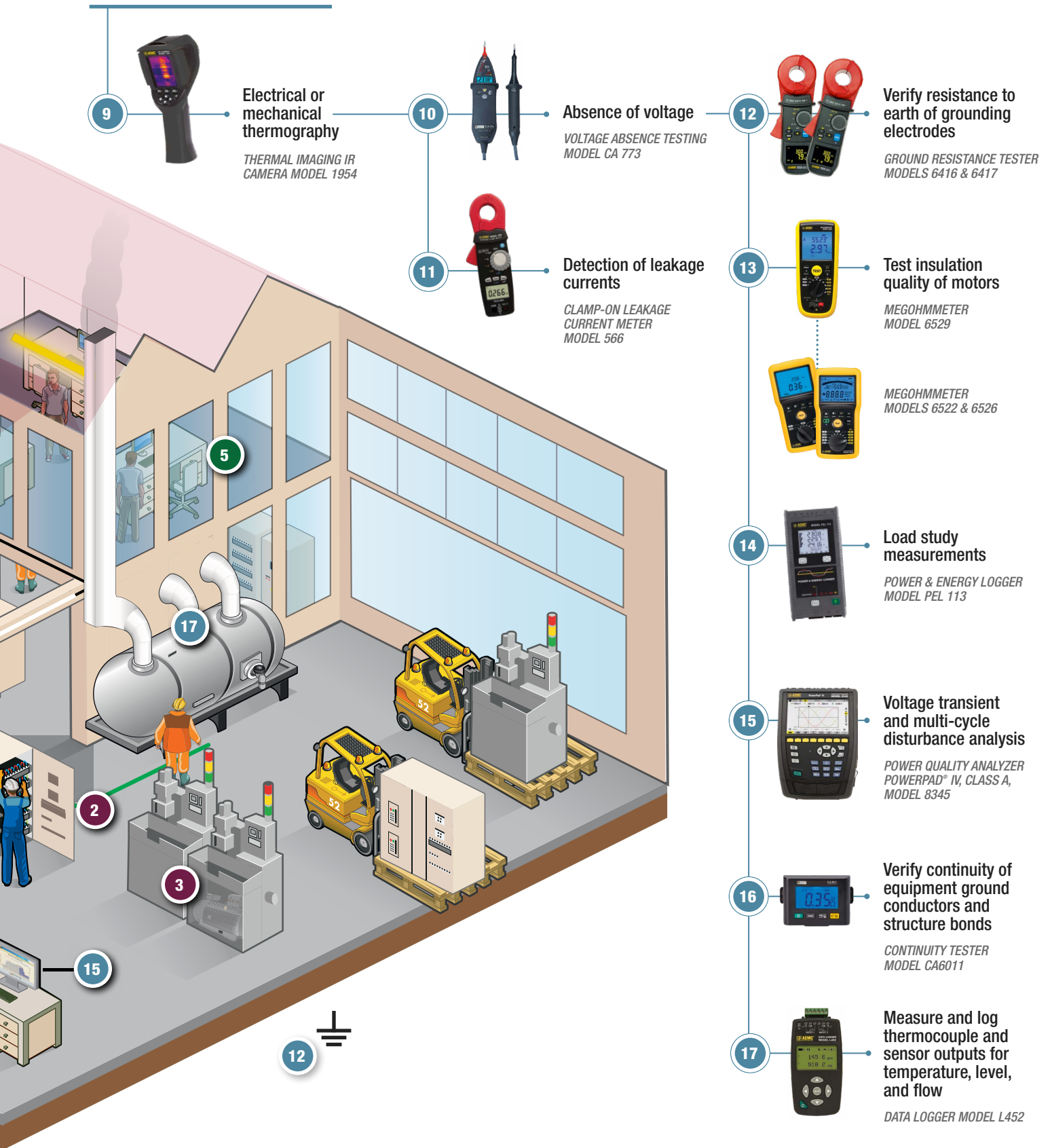


ENVIRONMENTAL TESTING



Electrical Network

INDUSTRIAL MAINTENANCE



CURRENT TRANSFORMERS

- 1  DC/AC voltages and current measurements
*HARMONIC ANALYZER
MODEL OX 5042B*
- 2  Verify winding continuity and measure turns ratio of transformers
*DIGITAL TRANSFORMER
RATIOMETER DTR® MODEL 8511*

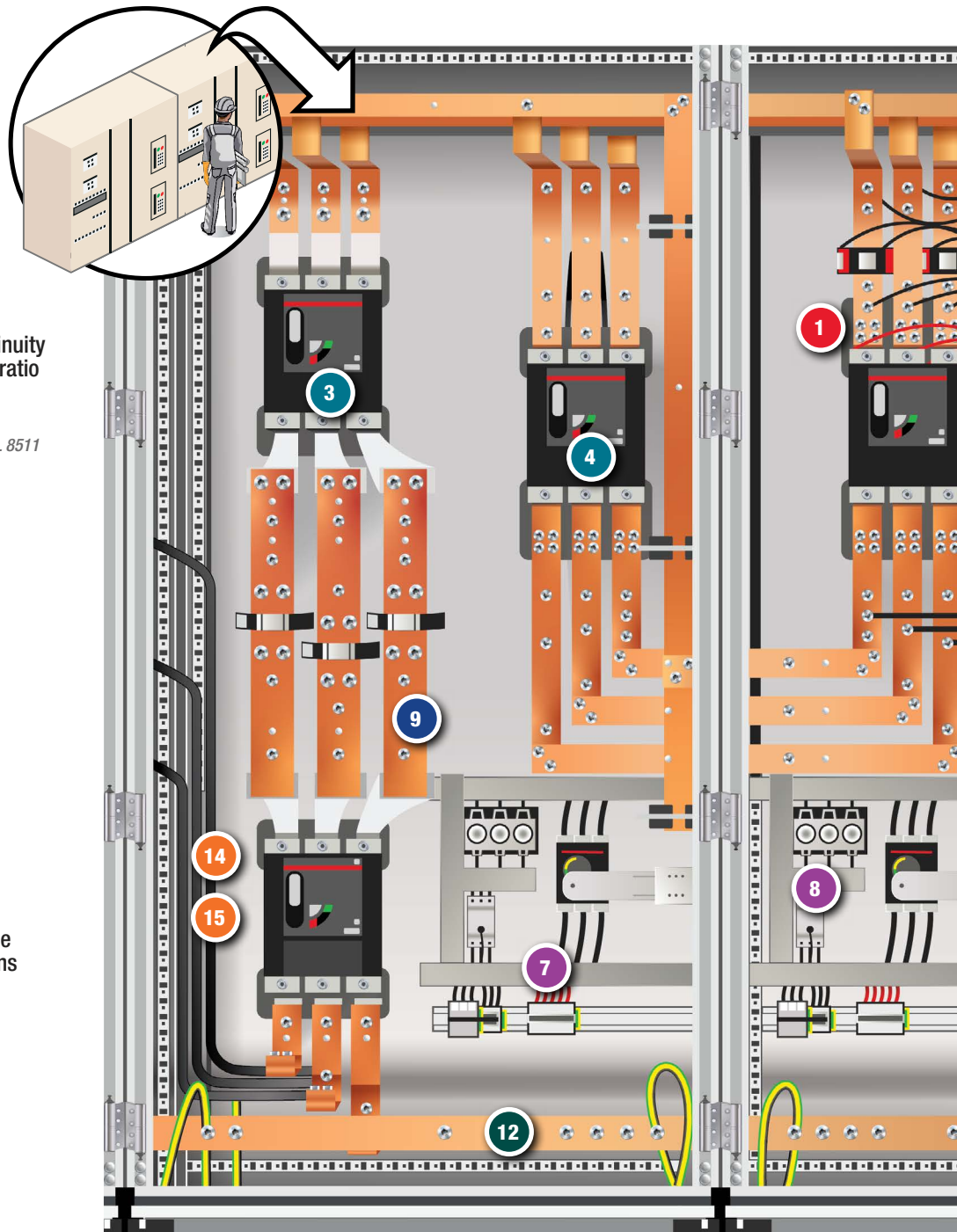
BREAKERS

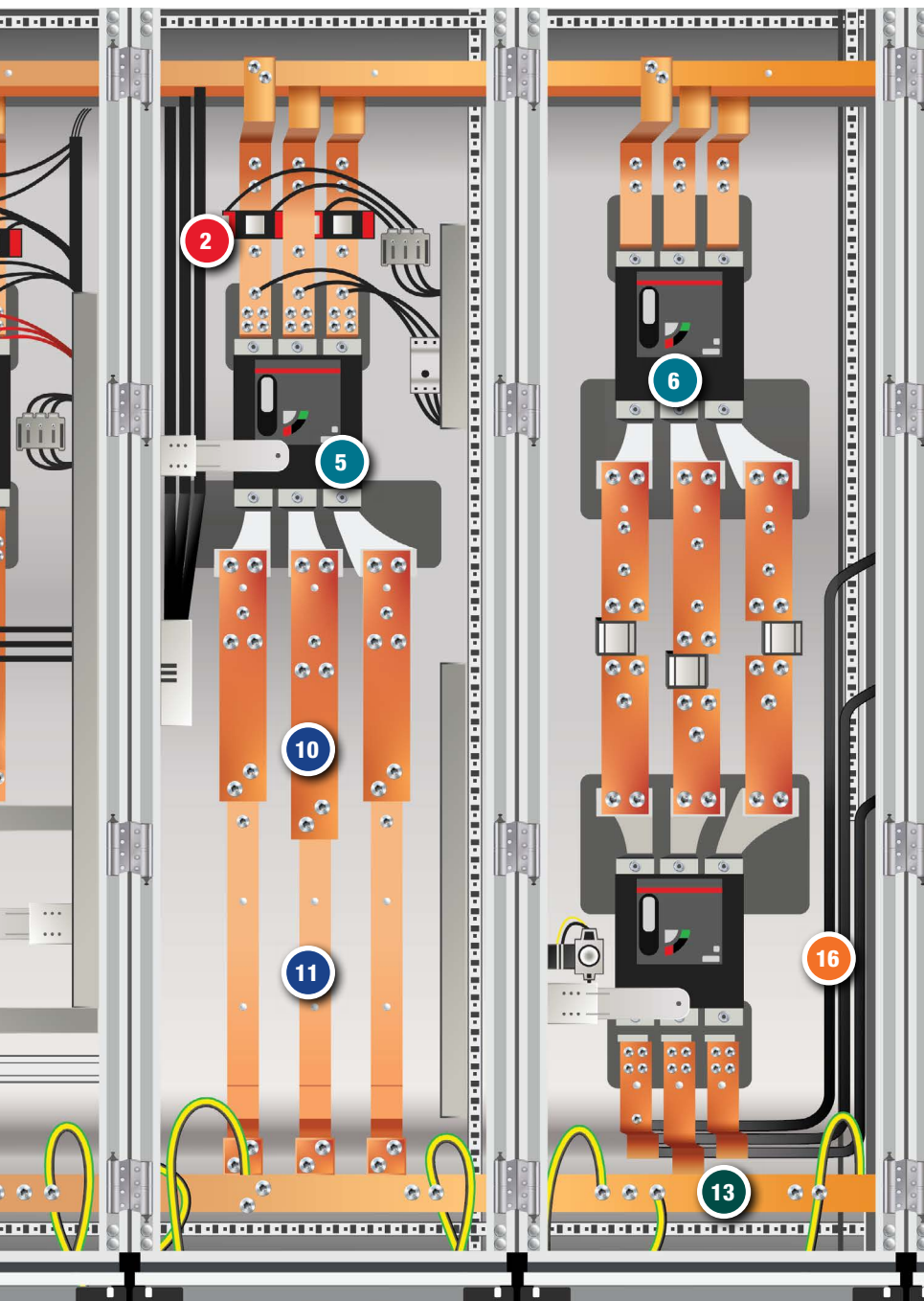
- 3  5 kV insulation resistance testing
*MEGOHMMETER
MODEL 5060*
- 4  Verify low resistance of bolted connections and contacts
*MICRO-OHMMETER
MODEL 6240*
- 5  Infrared thermal imaging, real-time non-contact inspection method
*THERMAL IMAGING IR
CAMERA MODEL 1954*

- 6  Measure voltage, current, resistance, millivolt drop test
*HARMONIC ANALYZER
MODEL OX 5042B &
MEGOHMMETER MODEL 6529*

PROTECTIVE RELAYS

- 7  Insulation, resistance, and continuity testing
*HARMONIC ANALYZER
MODEL OX 5042B &
MEGOHMMETER MODEL 6529*
- 8  Measure voltage drop, DC/AC milliAmp currents
*DIGITAL MULTIMETER
MODEL MTX 3290*





PHASE BUSBARS

- 

9 Presence of voltage
NON-CONTACT HIGH VOLTAGE DETECTOR
MODEL 275HVD
- 

10 Measure contact resistances of bolted connections
MICRO-OHMMETER
MODEL 6292
- 

11 Measure voltage, current, power, and harmonic content
CLAMP-ON METER
MODEL 607

GROUND BUSBARS

- 

12 Absence of voltage
VOLTAGE ABSENCE TESTER
MODEL CA 773
- 

13 Test bond resistance on equipment ground conductors
MICRO-OHMMETER
MODEL 6255

FEEDER CONDUCTORS

- 

14 Load study analysis
POWER ENERGY LOGGER
MODELS 112 & 113
- 

15 Power quality analysis
POWER QUALITY ANALYZER
POWERPAD® SERIES
- 

16 1 kV insulation resistance testing
MEGOHMMETER
MODELS 1060 & 6526

GROUND RESISTANCE AND INSTALLATION TESTING



Ground resistance testing

GROUND RESISTANCE TESTER
MODEL 6424



Comprehensive electrical safety testing on installations

MULTI-FUNCTION
INSTALLATION TESTER
MODEL CA 6116N

ENERGY EFFICIENCY



Measurement of insulation, leakproofing and thermal bridges

THERMAL IMAGING IR
CAMERA MODEL 1954



CO₂ temperature and humidity testing

AIR QUALITY LOGGER
MODEL 1510



Recording and analysis of electrical consumption

POWER & ENERGY LOGGER
MODEL PEL 113



POWER & ENERGY LOGGER
MODEL PEL 52





GENERAL ELECTRICAL RENOVATION WORK

- 

6 Measure voltages and verify function of GFCI's
*VOLTAGE ABSENCE TESTER
MODEL CA 773*
- 

7 Identify cables and locate open circuits or faults
*CABLE VERIFICATION &
TRACING ANALYZER
MODEL 6683*
- 

8 Verification of voltages, currents and electrical continuity
*CLAMP-ON METER
MODEL 205*
- 

9 Measure voltage, current, and resistance
*DIGITAL MULTIMETER
MODEL 5217*



As a global frontrunner, we specialize in Power Quality and Energy Analyzers Meters & Loggers, Ground Resistance Testers, and Insulation Testers, ensuring superior performance and reliability in every product.

Measure Up
WITH AEMC INSTRUMENTS®

CABLE VERIFICATION & TRACING ANALYZER



Why choose AEMC® Instruments Cable Verification & Tracing Analyzers?

AEMC® Instruments innovative hand-held Cable Verification & Tracing Analyzers offer the very best quality and are simple-to-use. All models feature push-button operation and easy-to-read data display. Our Cable Verification & Tracing Analyzers reliably identify faults, locate metal conductors, troubleshoot problems, measure cable length, and more on telecommunications, electric, power and other cables — eliminating the need for multiple instruments to get the job done.

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

CABLE VERIFICATION & TRACING ANALYZER

300 V
CAT III

CE

MODEL 6683

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



FEATURES

- Quickly locates and traces electrical or metallic conductors, and identifies cable fault locations such as shorts and open circuits
- Non-contact voltage detection (NCV) up to 1000 V_{AC}
- Dual operation modes: Unipolar (*de-energized*) and Bipolar (*live or de-energized*)
- Adjustable sensitivity — automatic for quick scans or manual for fine detection
- Clear digital, visual, and audible indicators with adjustable pitch or optional mute for precise tracing
- Multiple transmitter ID codes (*up to 7*) for identifying several lines simultaneously
- Digital filtering technology ensures reliable detection and strong immunity to interference
- Large backlit LCDs on both transmitter and receiver show transmission power, digital ID, voltage presence indicator, and battery status
- Built-in LED flashlight for low-light spaces
- Auto power-off on receiver to extend battery life

MODEL	6683E (TRANSMITTER)
Display	Backlit LCD display
Information Display	Measured voltage level, type (AC or DC), transmitted signal power, battery status, identification code, voltage presence
Output Signal Frequency	125 kHz
External Voltage Identification Range	(12, 50, 120, 230) V and 400 V (50/60) Hz or DC $\pm 2.5\%$
Signal Power	Adjustable (3 levels)
Transmitter Identification	Digital signal coding allowing the use of 7 transmitters simultaneously
Power Supply	(6) 1.5 V AAA batteries
Safety	IEC/EN 61010-2-030 300 V CAT III
Operating / Storage Temperature	Operating Temperature: (32 to 104) °F (0 to 40) °C Storage Temperature: (-4 to 140) °F (-20 to 60) °C
Dimensions / Weight	Dimensions: (6.3 x 3.30 x 1.57) in (160 x 84 x 40) mm / Weight: 12.34 oz (350 g)

MODEL	6683R (RECEIVER)
Display	Backlit LCD display
Information Displayed	Signal amplitude, detection sensitivity, transmitter identification code and transmitted signal strength, battery status, voltage presence
Detection Depth With Transmitter	Unipolar application: (0 to 6) ft (0 to 2) m Bipolar application: (0 to 1.6) ft (0 to 0.5) m Single loopback line: Up to 8.2 ft (2.5 m)
Detection Sensitivity	Automatic or manual adjustment (7 levels)
Non-Contact Voltage (NCV) Function	(12 to 1000) V _{AC}
Other Functions	Flashlight; audible signal deactivation
Power Supply	(6) 1.5 V AAA batteries
Safety	Type F sensor compliant with IEC/EN 61010-031 300 V CAT III
Operating / Storage Temperature	Operating Temperature: (32 to 104) °F (0 to 40) °C Storage Temperature: (-4 to 140) °F (-20 to 60) °C
Dimensions / Weight	Dimensions: (7.8 x 2.63 x 1.42) in (198 x 67 x 36) mm / Weight: 10.93 oz (310 g)

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

Soft carrying case, set of (2) 5 ft silicone color-coded (*red/black*) safety leads w/ 4 mm straight/right angle banana plugs, (2) alligator clips (*red/black*), 110 V outlet adapter with banana plugs, mini ground rod, E14 bulb adapter, (6) 1.5 V AAA (LR03) batteries and multilingual user manual.



CAT. #	DESCRIPTION
2127.89	Cable Verification & Tracing Analyzer Model 6683

CLAMP-ON METERS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

Why choose AEMC® Instruments Clamp-On Meters?

AEMC® Instruments rugged, dependable and safe Clamp-On Meters employ the latest technology, offer the very best quality and are simple-to-use. We offer a range of Clamp-On Meters to meet your need with economical and competitive pricing. Users can be sure of working in total safety with 1000 V CAT IV ratings (*model dependent*).

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

CLAMP-ON METERS

400 & 600 SERIES BLUETOOTH® EDITION
POWER AND HARMONIC METERS



POWER CLAMP-ON MODELS 407 & 607

Measures single- and three-phase power (real, reactive and apparent) up to 3 MW (only on DC) with resolution to 1 W



407

607



SCAN TO
LEARN
MORE



DataView®



FEATURES

- UL 94 VI flame retardant self-extinguishing
- 10,000-count blue electroluminescent backlit display
- Measures up to 1000 V_{AC} (1400 V peak), 1000 V_{DC} and AC+DC with resolution to 10 mV
- Measures up to 2000 A_{AC} and 3000 A_{DC} (Model 607)
- Measures single- and three-phase power (real, reactive and apparent) up to 2 MW with resolution to 1 W
- Measures frequency to 20 kHz with 0.1 Hz resolution
- True InRush® current measurement with 100 mS capture
- Measures harmonics up to the 25th
- Records up to 1000 measurements
- Bluetooth® communication (communicates up to 30 ft)
- Includes FREE DataView® software for download and report generation
- Jaw opening up to:
 - 1.89 inches (48 mm) (400 series)
 - 2.36 inches (60 mm) (600 series)

MODELS	407 TRMS	607 TRMS
ELECTRICAL		
Current AC (rms)	1000 A	2000 A
Current DC	1500 A	3000 A
Current AC+DC	1500 A Peak	3000 A Peak
Voltage AC (rms)	1000 V	
Voltage DC	1000 V	
Voltage AC+DC	1400 V Peak	
Ohms	0.1 Ω to 99.99 kΩ	
Continuity (Buzzer)	Yes (< 40 Ω)	
Total Harmonic Distortion	Yes	
Individual Harmonics (to 25 th)	Yes	
Single- and 3-Phase Real Power (AC, DC, AC / DC)*	1000 kW	2000 kW
Single- and 3-Phase Reactive Power (AC, DC, AC / DC)*	1000 kvar	2000 kvar
Single- and 3-Phase Apparent Power (AC, DC, AC / DC)*	1000 kVA	2000 kVA
Voltage Frequency	20 kHz	
Current Frequency	2 kHz	1 kHz
Power Factor	Yes	
THD-r / THD-f	Yes / 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) 1.5 V AA batteries, safety information sheet, and USB drive supplied with DataView® software and user manual.



CAT. #	DESCRIPTION
2139.51	Power Clamp-On Meter Model 407 (TRMS, 1000 V _{AC} /DC, 1000 A _{AC} /1500 A _{DC} , Ohms, Continuity, Energy, Harmonics, Power, THD, Recording)
2139.61	Power Clamp-On Meter Model 607 (TRMS, 1000 V _{AC} /DC, 2000 A _{AC} /3000 A _{DC} , Ohms, Continuity, Energy, Harmonics, Power, THD, Recording)

CLAMP-ON METERS

200 SERIES GENERAL PURPOSE METERS



POWER CLAMP-ON MODEL 205

Measures AC+DC volts and amps, frequency, continuity, resistance, power, Power Factor and phase rotation



SCAN TO
LEARN
MORE



FEATURES

- UL 94 VI flame retardant self-extinguishing
- 6000 count blue electroluminescent backlit display
- Measures up to 1000 V_{AC} (1400 V peak), 1000 V_{DC} and AC+DC with resolution to 10 mV
- Measures W, VA, var and PF for single- and three-phase balanced system
- Measures frequency to 20 kHz with 0.1 Hz resolution
- Auto selects AC or DC measurement voltage
- True InRush® current measurement with 100 mS capture
- Jaw opening up to: 1.34 in (34 mm)

MODELS	205 TRMS
ELECTRICAL	
Current AC (rms)	600 A
Current DC	900 A
Current AC+DC	900 A
Voltage AC (rms)	1000 V
Voltage DC	1000 V
Voltage AC+DC	1000 V
Ohms	(60 / 100) kΩ
Continuity (Buzzer)	Yes (< 40 Ω)
Diode Test	Yes
Single- and 3-Phase Real Power (AC, DC, AC / DC)*	600 kW
Single- and 3-Phase Reactive Power (AC, DC, AC / DC)*	900 kvar
Single- and 3-Phase Apparent Power (AC, DC, AC / DC)*	900 kVA
Voltage Frequency	20 kHz
Current Frequency	3 kHz
Power Factor	Yes
THD-r / THD-f	Yes
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.

PRODUCT INCLUDES

CAT. #2139.40 Includes set of (2) 5 ft (1.5 m) needle tip color-coded leads with 4 mm right angle plug, soft carrying case, (1) 9 V battery and user manual.



CAT. #	DESCRIPTION
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2139.40	Power Clamp-On Meter Model 205 (TRMS, 1000 V _{AC} /DC, 600 A _{AC} /900 A _{DC} , Ohms, Continuity, Phase Rotation, Power, THD)
---------	--

CLAMP-ON METERS

400 & 600 SERIES GENERAL PURPOSE METERS



MODELS 404 & 606

Users can be sure of working in a higher degree of safety with 1000 V CAT IV



FEATURES

- 1000 V CAT IV Rated
- UL 94 VI flame retardant self-extinguishing
- 10,000-count blue electroluminescent backlit display
- Measures up to 2000 A_{AC} and 3000 A_{DC} (model dependent)
- Measures W, VA, var and PF for single- and three-phase balanced systems (Model 606)
- Measures frequency to 20 kHz with 0.1 Hz resolution
- Auto selects AC or DC measurement voltage
- True InRush® current measurement with 100 mS capture
- Jaw opening up to:
 - 1.90 inches (48 mm) (400 series),
 - 2.36 inches (60 mm) (600 series)
- K-thermocouple and adapter included (Model 404)

MODELS	404	606
ELECTRICAL		
Current AC (rms)	1000 A	2000 A
Current DC	1500 A	3000 A
Current AC+DC	-	2000 A Peak
Voltage AC (rms)	1200 V	
Voltage DC	1700 V	
Voltage AC+DC	1700 V Peak	
Ohms	0.1 Ω to 99.99 kΩ	
Continuity (Buzzer)	Yes (< 40 Ω)	
Diode Test	Yes	
THD	-	Yes
Single- and 3-Phase Real Power (AC, DC, AC / DC)*	-	2400 kW
Single- and 3-Phase Reactive Power (AC, DC, AC / DC)*	-	2400 kvar
Single- and 3-Phase Apparent Power (AC, DC, AC / DC)*	-	2400 kVA
Temperature (int., ext., °C, °F)	Yes	-
Voltage Frequency	20 kHz	
Current Frequency	2 kHz	1 kHz
Power Factor	-	Yes
THD-r / THD-f	-	Yes
Current Probe Adapter Function (AC / DC)	Yes	-
Phase Rotation	-	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	
Relative Function	Yes	
Peak ± Function	-	Yes
Hz Button	Yes	

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

PRODUCT INCLUDES

CAT. #2139.22 Includes set of (2) color-coded silicone insulated test leads, test probes and alligator clips, K-thermocouple with 4 mm integrated adapter, soft carrying case, (4) 1.5 V AA batteries, and user manual.

CAT #2139.62 Includes set of (2) color-coded silicone insulated test leads, test probes and alligator clips, soft carrying case, (4) 1.5 V AA batteries, and user manual.

CAT. #	DESCRIPTION
2139.22	Clamp-On Meter Model 404 (TRMS, 1200 V _{AC} /1700 V _{DC} , 1000 A _{AC} /1500 A _{DC} , Ohms, Continuity, Temperature)
2139.62	Clamp-On Meter Model 606 (TRMS, 1200 V _{AC} /1700 V _{DC} , 2000 A _{AC} /3000 A _{DC} , Ohms, Continuity, Power, THD)

CLAMP-ON METERS

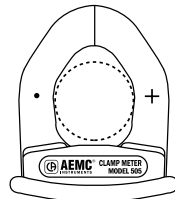
500 SERIES

600 V
CAT III



MODEL 505

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



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



SCAN TO
LEARN
MORE

FEATURES

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

MODEL	505
ELECTRICAL	
AC Current (Auto-Ranging)	(0.05 to 400) A
Resolution	(0.01 and 0.1) A
AC Voltage (Auto-Ranging)	(0.5 to 600) V
Resolution	(0.1 and 1) V
Input Impedance	10 M Ω
DC Current (Auto-Ranging)	(0.10 to 400) A
Resolution	(0.01 and 0.1) A
DC Voltage (Auto-Ranging)	(0.2 to 600) V
Resolution	(0.1 and 1) V
Input Impedance	10 M Ω
Resistance	(0.2 to 600) Ω
Max Test Voltage	1.5 V _{DC}
Continuity	< 35 Ω
Max Test Voltage	1.5 V _{DC}
Zero Mode / Delta Function	Yes
Peak + / - Function	Yes / No
MECHANICAL	
Dimensions	(7.83 x 2.95 x 1.42) in (199 x 75 x 36) mm
Weight	8.57 oz. (243 g) with batteries
Jaw Opening	1.18 in (30 mm)
Power Supply	(2) AAA, IEC LR3 (included)
Battery Life	40 h
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 600 V 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) 1.5 V AAA batteries and user manual.



CAT. # DESCRIPTION

2139.82 Clamp-On Meter Model 505 (TRMS, AC/DC, 400 A_{AC/DC}, 600 V_{AC/DC}, Ohms, Continuity) RATED 600 V CAT III

CLAMP-ON METERS

500 SERIES (CONTINUED)

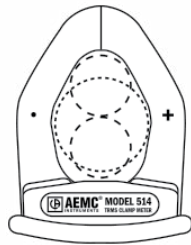
300 V
CAT IV

600 V
CAT III



MODEL 514

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



Jaw Opening: 1.575 in (40 mm)
Conductor Size: (1) 750 kcmil cable or
(2) 350 kcmil cables



SCAN TO
LEARN
MORE

FEATURES

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

MODEL	514 TRMS
AC Current (Auto-Ranging)	(0.05 to 1000) Arms
Resolution	(0.01, 0.1 and 1) A
AC Voltage (Auto-Ranging)	(0.5 to 750) Vrms
Resolution	0.1 V and 1 Vrms
Input Impedance	10 M Ω
DC Current (Auto-Ranging)	(1 to 1000) A
Resolution	(0.01, 0.1 and 1) A
DC Voltage (Auto-Ranging)	(0.2 to 1000) V
Resolution	(0.1 and 1) V
Input Impedance	10 M Ω
Resistance	(0.2 to 4000) Ω
Max Test Voltage	3 V _{DC}
Diode Test	1.7 mA
Open Circuit Voltage	3 V _{DC}
Continuity	< 40 Ω
Max Test Voltage	3 V _{DC}

FREQUENCY (AUTO-RANGING)

CURRENT INPUT Range	4 kHz	1 Hz Resolution
	10 kHz	10 Hz Resolution
Min Input Signal	4 kHz	2 Arms
	10 kHz	5 Arms
VOLTAGE INPUT Range	4 kHz	1 Hz Resolution
	10 kHz	10 Hz Resolution
Min Input Signal	4 kHz	5 Vrms
	10 kHz	10 Vrms
Power Supply	9 V Alkaline battery (included)	

ENVIRONMENTAL

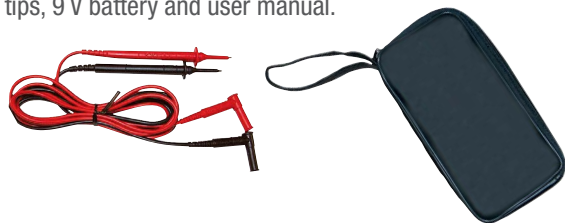
Operating Temperature	*(-14 to 122) °F (-25 to 50) °C, 80 % RH, non-condensing
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Consult factory for NIST Calibration prices.

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

PRODUCT INCLUDES

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



CAT. # DESCRIPTION

2117.70 Clamp-on Meter Model 514 (AC/DC, TRMS, 1000 A_{AC/DC}, 750 V_{AC}/1000 V_{DC}, Hz, Ohms, Continuity)

CLAMP-ON METERS

100 A_{AC/DC} LOW CURRENT

600 V
CAT II

300 V
CAT III



MODEL CM605

*For general industrial monitoring
and troubleshooting*



SCAN TO
LEARN
MORE

FEATURES

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

MODEL	CM605
ELECTRICAL	
AC Current	
Measurement Ranges	2 Ranges: 10 A, 100 A
Frequency Range	(50 to 500) Hz
DC Current (positive only)	
Measurement Ranges	2 Ranges: 10 A, 100 A
AC Volts	
Measurement Ranges	600 V _{rms}
Frequency	(40 to 500) Hz
Input Impedance	10 MΩ
DC Volts (positive only)	
Measurement Ranges	600 V
Input Impedance	10 MΩ
Resistance (Ohms)	
Measurement Ranges	10 kΩ (9999 Ω)
Test Voltage	< 3.0 V _{DC}
Continuity	
Measurement Ranges	Buzzer < 100 Ω ± 25 Ω
Resolution	1 Ω
Test Voltage	< 3.0 V _{DC}
Analog Output	
Output	10 mV/A _{AC} & A _{DC} through front banana jacks
Frequency	(0 to 20) kHz @ ± 3 db
Output Impedance	3 kΩ, < 50 pF
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 (1 ms) 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 approximately 10 m with Over-Ride
Low Battery	Low Battery indication on LCD
MECHANICAL	
Max. Cable Diameter	Ø 0.45 in (12 mm)
Max. Jaw Opening	Ø 0.60 in (15 mm)
Power Supply	(2) 1.5 V AAA (LR03) batteries (included)
Dimensions	(7.44 x 2.80 x 1.46) in (189 x 71 x 37) mm
Weight	6.5 oz (184 g)
SAFETY	
Safety Rating	IEC / EN 61010-1 and 2-032 – 600 V CAT II and 300 V CAT III – Pollution Degree 2 Class 2

For negative measurement, add 2 cts to the accuracy.
Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

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



CAT. # DESCRIPTION

7000.02 Clamp-on Meter Model CM605 (100 A_{AC/DC}, Low Current)



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Technical Assistance (800) 343-1391

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CLAMP-ON METERS

SELECTION GUIDE

Models	CAT. #	Type	AC Current	AC Voltage	DC Current	DC Voltage	Resistance (Ω)	Continuity	Frequency (Hz)		Jaw Size	Dimensions
									Current	Voltage		
205	2139.40	AC / DC TRMS	600 A	1000 V	900 A	1000 V	60 k Ω	< 40 Ω	3 kHz	20 kHz	1.34 in (34 mm)	(8.7 x 3.1 x 1.65) in
404	2139.22	AC / DC TRMS	1000 A	1200 V	1500 A	1700 V	100 k Ω	< 40 Ω	2 kHz	20 kHz	1.89 in (48 mm)	(10.7 x 3.6 x 1.6) in
407	2139.51	AC / DC TRMS	1000 A	1000 V	1500 A	1000 V	100 k Ω	< 40 Ω	2 kHz	20 kHz	1.89 in (48 mm)	(10.7 x 3.6 x 1.6) in
606	2139.62	AC / DC TRMS	2000 A	1200 V	3000 A	1700 V	100 k Ω	< 40 Ω	1 kHz	20 kHz	2.36 in (60 mm)	(11.65 x 4.37 x 1.61) in
607	2139.61	AC / DC TRMS	2000 A	1000 V	3000 A	1000 V	100 k Ω	< 40 Ω	1 kHz	20 kHz	2.36 in (60 mm)	(11.65 x 4.37 x 1.61) in
505	2139.82	AC / DC TRMS	400 A	600 V	400 A	600 V	600 Ω	< 35 Ω	400 Hz		1.18 in (30 mm)	(7.83 x 2.95 x 1.42) in
514	2117.70	AC / DC TRMS	1000 A	750 V	1000 A	1000 V	4000 Ω	< 40 Ω	10 kHz		1.58 in (40 mm)	(9.53 x 2.60 x 1.42) in
566*	2139.83	AC TRMS	100 A	600 V	—	600 V	600 k Ω	< 45 Ω	500 Hz		0.91 in (23 mm)	(8.27 x 3.0 x 1.32) in
CM605	7000.02	AC / DC	100 A	600 V	100 A	600 V	9999 Ω	< 100 Ω	500 Hz		0.60 in (15 mm)	(7.95 x 2.76 x 1.33) in

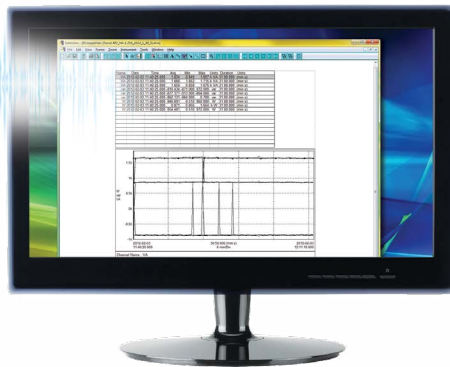
*Model 566 can be found in the Leakage Current Meters & Probes.
Consult factory for NIST Calibration prices.

CLAMP-ON METERS

DataView® Data Analysis and Reporting Software

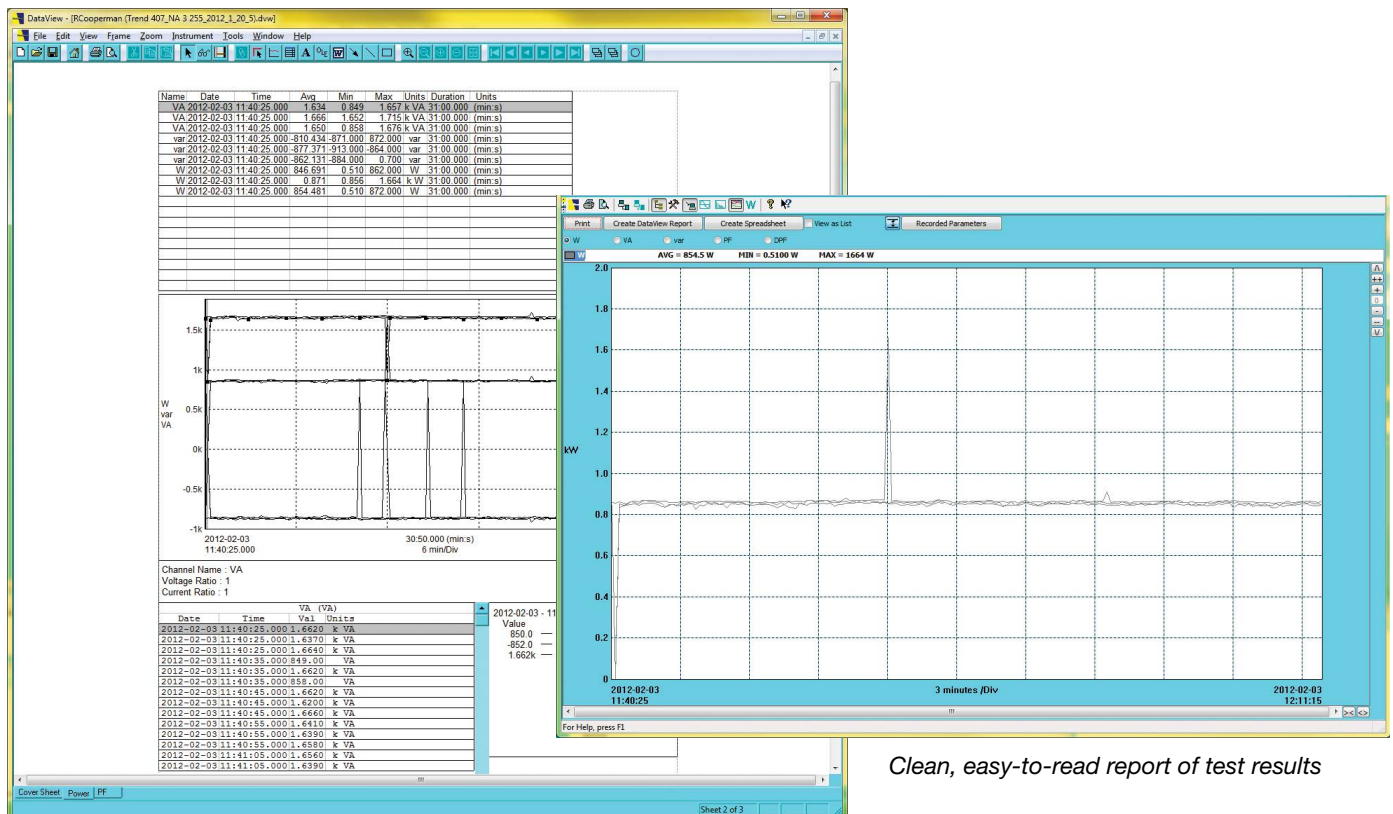


DataView® software, user manual and quick start guide are included on the USB



FEATURES

- Download and store recorded data
- Wireless Bluetooth® communication
- Print reports using the included default templates or custom templates that you design
- Free updates are available on our website www.aemc.com



DataView® software report



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WITH AEMC INSTRUMENTS®

CURRENT MEASUREMENT PROBES



Why choose AEMC® Instruments Current Measurement Probes?

Our range of current probes are compact, simple-to-use, accurate and are designed and tested by electrical engineers offering superior knowledge in safety and time-saving features to help you confidently troubleshoot and solve problems. Standard and customized output options provide easy interface to data loggers, meters, oscilloscopes, control systems, and more.

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

CURRENT MEASUREMENT PROBES

MINIFLEX® SERIES

1000 V
CAT III

600 V
CAT IV



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 1 MHz



MF 300-10-2-10-HF (10 in probe)



SCAN TO
LEARN
MORE



MF 3000-14-1-1-HF (14 in probe)

FEATURES

- Measures from (0.5 to 3000) Arms
- Accuracy $\pm 1\%$ of Reading ± 0.3 A
- TRMS measurements when connected to a TRMS instrument
- No core saturation or damage if overloaded
- 9 V battery for up to 150 hours continuous operation
- 1 MHz 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 oscilloscope

MODELS	MF 300-10-2-10-HF	MF 3000-14-1-1-HF
ELECTRICAL		
Current Range	(30 / 300) A	3000 A
Measurement Range	(0.5 to 300) A	(0.5 to 3000) A
Accuracy	1 % ± 300 mA	
Signal Output	100 mV / 10 mV/A	1 mV/A
Frequency Range	5 Hz to 1 MHz @ -3 db	
Influence of Conductor Positioning	1.5 % typical, 3 % max	
Influence of Conductor Positioning in Sensor Against Handle	4 % typical, 6 % max	
External Conductor Influence	(35 to 40) db on contact	
Power Supply	9 V Alkaline battery (6 LF22)	
MECHANICAL		
Sensor Diameter	Ø 0.2 in (5 mm)	
Sensor Length	10 in (254 mm)	14 in (355 mm)
Max Conductor Size	2.75 in (70 mm)	3.93 in (100 mm)
Connection Cable Length	6.5 ft (2 m)	15.75 in (400 mm)
Drop Test	Per IEC 60068-2-32	
Vibration	Per IEC 60068-2-6	
Mechanical Shock	Per IEC 6002-27	
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 2000) m, working voltage derating above; Non-operating: (0 to 39,000) ft (0 to 12,000) m	
SAFETY		
Safety Rating	Housing: EN 61010 600 V CAT III, 300 V CAT IV Sensor: EN 61010 1000 V CAT III, 600 V CAT IV	

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2126.84	MiniFlex® 30/300 A, 10 in, 100 mV/10 mV/A High Frequency (for any BNC Oscilloscope)
2126.86	MiniFlex® 3000 A, 14 in, 1 mV/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



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LEARN
MORE

FEATURES

- 14-inch flexible sensor capable of clamping around a 3.93 inch cable or bundle
- Waterproof sensor rated to IP67
- User selectable ranges of (3, 30, 300 and 3000) Amps
- 600 V CAT IV, 1000 V 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

MODEL	MA114
ELECTRICAL	
Nominal Range	3 A _{AC} ; 30 A _{AC} ; 300 A _{AC} ; 3000 A _{AC}
Measurement Range	3 A Range: (0.5 to 3) A _{AC} , 30 A Range: (2 to 30) A _{AC} , 300 A Range: (5 to 300) A _{AC} , 3000 A Range: (50 to 3000) A _{AC}
Transformation Ratio	Voltage Output
Output Signal	3 A Range: 1 V/A (1 mV/mA) (3 V _{AC} @ 3 A), 30 A Range: 100 mV/A (3 V _{AC} @ 30 A), 300 A Range: 10 mV/A (3 V _{AC} @ 300 A), 3000 A Range: 1 mV/A (3 V _{AC} @ 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	3 A Range: 10 Hz to 10 kHz, (30, 300, 3000) A Range: 10 Hz to 20 kHz
Load Impedance	≥ 1 MΩ
Working Voltage	600 Vrms (CAT IV), 1000 Vrms (CAT III)
Power Supply	(2) 1.5 V AA batteries or LR6 alkaline, +5 V _{DC} with Type B micro-USB
Battery Life	300 hours typical. Approximately 1800 10-minute measurements.
Output Termination	1.6 ft (0.5 m) lead with (2) 4 mm safety banana plugs
MECHANICAL	
Sensor Length	14 in (35.6 cm)
Cable Length	6.5 ft (2 m)
Maximum Conductor Size	Ø 3.93 in (10 cm)
Dimensions	(4.7 x 2.3 x 1.4) in (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) % RH @ 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

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2153.41	MiniFlex® 14 in Model MA114 (3 A/1 mV/mA, 30 A/100 mV/A, 300 A/10 mV/A, 3000 A/1 mV/A)

CURRENT MEASUREMENT PROBES

FLEXIBLE CURRENT PROBES



AMPFLEX® FLEXIBLE CURRENT PROBES

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



SCAN TO
LEARN
MORE

FEATURES

- Models ranging from (0.5 to 30,000) Arms
- Accuracy $\pm 1\%$ of Reading
- TRMS measurements when connected to a TRMS instrument
- No core saturation or damage if overloaded
- Over range LED for measurement circuitry
- Waterproof sensor
- 9 V Alkaline battery, typically provides 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

MODEL	MEASUREMENT RANGE	OUTPUT SIGNAL	SENSOR LENGTH	MAX CONDUCTOR SIZE	CAT. #
300-24-2-10	(30 / 300) A	(100 / 10) mV/A	24 in (610 mm)	8 in (203 mm)	2112.88
300-120-2-10	(30 / 300) A	(100 / 10) mV/A	120 in (3048 mm)	38 in (970 mm)	2113.39
1000-24-2-1	(100 / 1000) A	(10 / 1) mV/A	24 in (610 mm)	8 in (203 mm)	2112.98
1000-36-2-1	(100 / 1000) A	(10 / 1) mV/A	36 in (914 mm)	11 in (279 mm)	2113.00
3000-24-1-1	3000 A	1 mV/A	24 in (610 mm)	8 in (203 mm)	2112.46
3000-36-1-1	3000 A	1 mV/A	36 in (914 mm)	11 in (279 mm)	2112.48
3000-24-2-1	(300 / 3000) A	(10 / 1) mV/A	24 in (610 mm)	8 in (203 mm)	2113.05
3000-36-2-1	(300 / 3000) A	(10 / 1) mV/A	36 in (914 mm)	11 in (279 mm)	2112.00
3000-48-2-1	(300 / 3000) A	(10 / 1) mV/A	48 in (1219 mm)	15 in (381 mm)	2112.01
6000-36-2-0.1	(600 / 6000) A	(1 / 0.1) mV/A	36 in (914 mm)	11 in (279 mm)	2113.21
30000-24-2-0.1	(3000 / 30,000) A	(1 / 0.1) mV/A	24 in (610 mm)	8 in (203 mm)	2113.33

Consult factory for NIST Calibration prices. Consult factory for special offers and ranges/lengths not shown
Note: Output is safety shrouded 4 mm male banana plug.

FLEXPROBE® FLEXIBLE CURRENT PROBE 24-3001

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



SCAN TO
LEARN
MORE

FEATURES

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

ACCESSORIES

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

CAT #2118.46

(optional for AmpFlex® & FlexProbe® Flexible Current Probes)



MODEL	24-3001
ELECTRICAL	
Current Range	(300 / 3000) A _{AC}
Output Signal	mV output (4000 mV peak max)
Three Position Slide Switch	10 mV/A 1 mV/A ON / OFF
Power Supply	9 V Alkaline battery (included)
MECHANICAL	
Maximum Conductor Size	7.6 in (193 mm)
Sensor Length	24 in ± 1 in (610 ± 25) mm
Cable Length	6.5 ft (2 m)
Output Termination	Double insulated 14 in (355 mm) lead with 4 mm safety banana plugs

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2120.81	FlexProbe® Model 24-3001 (Lead)

CURRENT MEASUREMENT PROBES

DC/AC MICROPROBES AND CURRENT PROBES

600 V CAT III	300 V CAT II		
MD Series	K Series		MD Series

MD SERIES & K SERIES

MD Series probes are rugged and designed for use on cables and bus bars

K Series small probes are designed for high accuracy measuring low currents



MD301

K100



SCAN TO
LEARN
MORE

FEATURES

MD SERIES

- 500 A 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 500) kcmil
- Works as a traditional current transformer with ratio of 1000:1
- AC or DC outputs available

K SERIES

- Measures extremely low level DC from 100 μ A
- 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

CAT. #1017.45

Adapter – 4 mm Non-insulated for Safety Leads

CAT. #2118.46

Adapter - Banana (Female) – BNC (Male) (XM-BB) 600 V CAT III

MODEL	MD301	MD305
ELECTRICAL		
Nominal Range	500 A _{AC}	600 A _{AC}
Measurement Range	(2 to 500) A _{AC}	(1 to 600) A _{AC}
Transformation Ratio	Voltage output	
Output Signal	1 mV _{AC} / A _{DC} (0.5 V _{DC} for 500 A _{AC})	1 mA _{AC} / A _{AC} (600 mA _{AC} @ 600 A _{AC})
Phase Shift		
25 A	—	3 °
100 A	—	1.5 °
250 A	—	1 °
500 A	—	1 °
600 A	—	1 °
Overload	700 A for 10 min	
Frequency Range	(48 to 1000) Hz	(40 to 1000) Hz
Load Impedance	≥ 100 kΩ	5 Ω max non-inductive
Working / Common Voltage	600 V _{rms}	
Output Termination	Double-insulated 5 ft (1.5 m) lead with (2) 4 mm safety banana plugs	
MECHANICAL		
Jaw Opening	1.3 in (33 mm)	
Maximum Conductor Size	1.18 in (30 mm) Max Bus Bar size: (2.48 x 0.20) in (63 x 5) mm	
Dimensions	(2.6 x 7.68 x 1.34) in (66 x 195 x 34) mm	
Weight	14.82 oz (420 g)	
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 61010-2-032 600 V CAT III, Pollution: 2 300 V CAT IV, Pollution: 2	EN 61010-2-032 600 V CAT III, Pollution: 2
Electromagnetic Compatibility	EN 50081-1 Class B; EN 50082-2 Electrostatic discharge IEC 61000-4-2; Radiated field IEC 61000-4-3; Fast transients IEC 61000-4-4; Magnetic field at (50 / 60) Hz IEC 61000-4-8	
MODELS	K100	K110
ELECTRICAL		
Current Range	(0 to ± 4) A _{DC} (0 to 3) A _{rms} (0 to 2) A Peak	(0 to ± 400) mA _{DC} (0 to 300) mA _{rms} (0 to 200) mA Peak
Output Signal	1 mV / mA	10 mV / mA
Resolution	DC: 100 µA typical, AC: 200 µA typical	DC: 50 µA typical, AC: 150 µA typical
Output Noise	< 100 µV, DC to 3 kHz	
Frequency Response	DC to 2 kHz (@ -3 dB sine)	DC to 1.2 kHz (@ -3 dB sine)
Output Termination	5 ft (1.5 m) lead with (2) 4 mm safety banana plugs; standard ¾ in (19 mm) spacing	
Power Supply	(1) 9 V Alkaline battery (included)	
Battery Life	20 h	

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
1201.07	AC Current Probe Model MD301 (500 A, 1 mV _{DC} /A _{AC} , Lead)
1201.36	AC Current Probe Model MD305 (600 A, 1 mA/A, Lead)
1200.67	DC/AC MicroProbe Model K100 (4.5 A, 1 mV/mA)
2111.73	DC/AC MicroProbe Model K110 (450 mA, 10 mV/mA)



CURRENT MEASUREMENT PROBES

SL SERIES AC/DC CURRENT PROBES

600 V
CAT III



SL SERIES

Precision AC/DC current measurement without circuit interruption

TOTAL FLEXIBILITY
Compatible with AEMC® and non-AEMC® instruments!



SL306



SL361



SCAN TO
LEARN
MORE

FEATURES

SL SERIES AC/DC CURRENT PROBES

- SL306 is compatible with meters featuring banana inputs
- SL361 is compatible with oscilloscopes and meters with BNC inputs
- **Compact and portable design** makes it easy to access hard-to-reach spaces
- **Automatic standby mode** after 10 minutes of inactivity to **prolong battery life** (can be disabled)
- **Overload indicator** that **prevents damage** to the device when the current exceeds the measurement capacity
- Wide jaw opening **accommodates large conductors** (up to 0.46 in (11.8 mm) in diameter)
- DC zero adjustment function to **eliminate offset errors** before each measurement
- 9 V battery or external 5 V power via micro-USB (up to 80 hours with alkaline battery)
- Safety standard 600 V CAT III and 300 V CAT IV
- **Precise measurements** with low uncertainty, accuracy of $\pm 2\%$ for 2 A range and $\pm 4\%$ for 80 A range (Model SL306)
- **Bandwidth of up to 100 kHz**, allowing for accurate measurement of high-frequency signals (Model SL361)

MODELS	SL306	SL361
ELECTRICAL		
Nominal Range	1.5 A _{AC} 2 A _{DC} ; 60 A _{AC} 80 A _{DC}	10 A _{peak} ; 100 A _{peak}
Measurement Range	5 mA to 1.5 A _{AC} 2 A _{DC} 50 mA to 60 A _{AC} 80 A _{DC}	100 mA to 100 A _{peak} 500 mA to 100 A _{peak}
Bandwidth	20 kHz (-3 dB) (depending on current value)	100 kHz (-3 dB) (depending on current value)
Output Signal	1 mV/mA (1 V/A) (2 A range) 10 mV/A (80 A range)	100 mV/A (10 A range) 10 mV/A (100 A range)
Phase Shift (DC to 65 Hz)		
1 mV/mA Range	< 1 °	-
10 mV/mA Range	< 1 °	< 1 °
100 mV/mA Range	-	< 1.5 °
Load Impedance	≥ 1 MΩ and ≤ 100 pF	
Common Mode Voltage (600 V max) with AC measurement	600 V max Current leakage at 50/60 Hz: ≤ 1 mA/100 V	600 V max Current leakage at 50/60 Hz: ≤ 1 mA/100 V at 400 Hz: ≤ 7 mA/100 V
MECHANICAL		
Power Supply	9 V alkaline battery or 5 V _{DC} via micro-USB (up to 80 hours with alkaline battery)	
Output Termination	4.9 ft (1.5 m) two-wire cable terminated by (2) male banana plugs	6.5 ft (2 m) coaxial cable terminated by (1) insulated BNC plug
Maximum Conductor Ø Size	Ø 0.46 in (11.8 mm)	
Dimensions	(9.09 x 1.42 x 2.64) in (231 x 36 x 67) mm	
Weight	11.6 oz (330 g) with battery	
ENVIRONMENTAL		
Operating Relative Humidity	(0 to 85) % RH with a linear decrease above 95 °F (35 °C)	
Operating Temperature	(14 to 122) °F (-10 to 50) °C	
Storage Temperature	(-22 to 176) °F (-30 to 80) °C	
SAFETY		
Electrical	IEC 61010-1, IEC 61010-2-032, 600 V CAT III, 300 V CAT IV	
Ingress Protection	IP20	
UL Approval	Yes	

Consult factory for NIST Calibration prices.

ACCESSORIES/REPLACEMENTS

CAT. #2153.78

Adapter – US Wall Plug to USB

CAT. #2138.66

Cable – 6 ft. USB Type A - Type B micro

CAT. #2118.46

Adapter – Banana (Female) – BNC (Male) (XM-BB) 600 V CAT III (Model SL306 only)

CAT. #2119.94

Adapter – BNC (Female) to 4mm Banana (Male) 600 V CAT III (Model SL361 only)



Cat. #2153.78



Cat. #2138.66



Cat. #2119.94
(Model SL361 only)



Cat. #2118.46
(Model SL306 only)

CAT. #	DESCRIPTION
2153.08	AC/DC Current Probe Model SL306 (1.5 A _{AC} , 2 A _{DC} , 1 mV/mA (1 V/A) & 60 A _{AC} , 80 A _{DC} , 10 mV/A, Lead)
2153.09	AC/DC Current Probe Model SL361 (10 A _{peak} , 100 mV/A & 100 A _{peak} , 10 mV/A, BNC)

CURRENT MEASUREMENT PROBES

SR SERIES CURRENT PROBES

600 V
CAT III



SR600 SERIES

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



SR601



SCAN TO
LEARN
MORE

FEATURES

- Measurement range of 100 mA to 1200 A_{AC}
- Large jaw opening accommodates up to two 500 kcmil 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

CAT. #1017.45

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

CAT. #2118.46

Banana (Female) BNC (Male) adapter

MODELS	SR601	SR604	SR651	SR661
ELECTRICAL				
Nominal Range	1000 A _{AC}		1000 A _{AC}	(10, 100, 1000) A _{AC}
Measurement Range	(0.1 to 1200) A _{AC}			
Transformation Ratio	1000: 1		Voltage output	
Output Signal	1 mA/A (1 A _{AC} @ 1000 A)		1 mV/A (1 V _{AC} @ 1000 A)	100 mV; 10 mV; 1 mV/A (1 V _{AC} @ 10, 100; 1000 A)
Phase Shift	10 A: 3 ° 50 A: 1.5 ° 200 A: 0.75 ° 1000 A: 0.5 ° 1200 A: 0.5 °			(10 A Range) 10 A: ≤ 15 ° (100 A Range) 20 A: ≤ 15 ° 100 A: ≤ 10 ° 120 A: ≤ 5 ° (1000 A Range) 200 A: ≤ 3 ° 1000 A: ≤ 2 ° 1200 A: ≤ 1 °
Overload	1200 A for 15 min ON, 30 min OFF			
Frequency Range	30 Hz to 5 kHz*			10 Hz to 100 kHz*
Load Impedance	5 Ω max		100 kΩ min	1 MΩ min
Working / Common Mode Voltage	600 V CAT III			
Output Surge Protection	30 V peak		N / A	
Output Termination	(2) 4 mm safety banana jacks	Lead with plugs	(2) 4 mm safety banana jacks	6.5 ft (2 m) coaxial cable with BNC terminal
MECHANICAL				
Jaw Opening	2.25 in (57 mm) max			
Maximum Conductor Size	2.05 in (52 mm)			
Maximum Bus Bar Size	(1) (1.95 x 0.19) in (50 x 5) mm			
Dimensions	(4.37 x 8.50 x 1.77) in (111 x 216 x 45) mm			
Weight	1.21 lb (550 g)			
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) % RH decreasing linearly above 95 °F (35 °C)			
SAFETY				
Electrical	EN 61010-2-32, 600 V CAT III			
UL Approval	Yes - United States and Canada			

Consult factory for NIST Calibration prices.

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

CAT. #	DESCRIPTION
2113.43	AC Current Probe Model SR601 (1000 A, 1 mA/A, Jack) L**
2113.44	AC Current Probe Model SR604 (1000 A, 1 mA/A, Lead) L**
2113.45	AC Current Probe Model SR651 (1000 A, 1 mV/A, Jack)
2113.49	AC Current Probe Model SR661 (10 A, 100 mV/A; 100 A, 10 mV/A & 1000 A, 1 mV/A, BNC)

**L - Limited open Voltage Output



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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



SR701



SCAN TO
LEARN
MORE

FEATURES

- Measurement range of 1 mA to 1200 A_{AC}
- Large jaw opening accommodates conductors up to two 500 MCM 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

CAT. #1017.45

4 mm banana plug adapter
(Safety Leads to non-recessed plug)

CAT. #2118.46

Banana (Female)
BNC (Male) Adapter

MODELS	SR701	SR704	SR752	SR759
ELECTRICAL				
Nominal Range	1000 A _{AC}		(1, 10, 100, 1000) A _{AC}	
Measurement Range	1 mA to 1200 A _{AC}	100 mA to 1200 A _{AC}	1 mA to 1200 A _{AC}	
Transformation Ratio	1000: 1	Voltage output		
Output Signal	1 mA/A (1 A _{AC} @ 1000 A)	1 mV/A (1 V _{AC} @ 1000 A)	(1000, 100, 10, 1) mV/A, (1 V _{AC} @ 1, 10, 100 or 1000 A)	
Phase Shift	(1 to 10) A: ≤ 2 ° (10 to 100) A: ≤ 1 ° (100 to 1200) A: ≤ 0.7 °		(1 A Range) (0.1 to 1.2) A: ≤ 10 ° (10 A Range) (0.1 to 1) A: ≤ 5 °; (1 to 12) A: ≤ 2 ° (100 A Range) (1 to 10) A: ≤ 2 °; (10 to 120) A: ≤ 1 ° (1000 A Range) (10 to 100) A: ≤ 2 °; (100 to 1200) A: ≤ 1 °	
Overload	1200 A for 15 min ON, 30 min OFF			
Frequency Range	30 Hz to 5 kHz; current derating above 1 kHz using the formula: 1000 A x 1 / F (in kHz)			
Load Impedance	5 Ω max	100 kΩ min		
Working / Common Mode Voltage	600 V CAT III			
Output Termination	(2) 4 mm safety banana jacks	5 ft (1.5 m) lead with 4 mm safety banana plugs		
MECHANICAL				
Jaw Opening	2.25 in (57 mm) max			
Maximum Conductor Size	2.05 in (52 mm)			
Maximum Bus Bar Size	(1) (1.95 x 0.19) in (50 x 5) mm			
Dimensions	(4.37 x 8.50 x 1.77) in (111 x 216 x 45) mm			
Weight	1.21 lb (550 g)			
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 - United States and Canada			

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2116.29	AC Current Probe Model SR701 (1000 A, 1 mA/A, Jack) HA* L**
2116.30	AC Current Probe Model SR704 (1000 A, 1 mA/A, Lead) HA* L**
2116.32	AC Current Probe Model SR752 (1000 A, 1 mV/A, Lead) HA*
2116.33	AC Current Probe Model SR759 (1 A, 10 A, 100 A, 1000 A, mV/A, Lead) HA*

*HA - High Accuracy and Low Phase Shift, **L - Limited open Voltage Output

CURRENT MEASUREMENT PROBES

LM SERIES



MODELS 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



Patent #1385787 - Mini-Clamp Design



SCAN TO
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MORE

FEATURES

- Clamping diameter 0.63 inch (16 mm)
- Measurement range from (0.05 to 200) Amps
- Over range up to 350 Amps continuous
- 1 mA/A output (Model LM102)
- 1 mV/A output (Model LM103)
- Clothes pin design allows access to tight places
- Frequency response from 48 Hz to 10 kHz
- Arrow marker clearly assists in proper orientation for power measurement applications

MODELS	LM102	LM103
ELECTRICAL		
Nominal Range	200 A _{AC}	
Measurement Range	50 mA to 200 A _{AC} (1 Ω or 10 Ω load)	100 mA to 200 A
Transformation Ratio	1000:1	Voltage Output
Output Signal	1 mA/A (200 mA _{AC} @ 200 A)	1 mV/A (200 mV _{AC} @ 200 A)
Phase Shift	≤ 3 ° (1 Ω load) ≤ 6 ° (10 Ω load)	≤ 3 °
Overload	350 A continuous @ ≤ 1 kHz 200 A continuous @ ≤ 8 kHz	
Frequency Range	48 Hz to 10 kHz	
Load Impedance	≤ 10 Ω	≥ 10 kΩ
Open Secondary Voltage	≤ 30 V	—
Output Termination	Double-insulated 5 ft (1.5 m) lead with (2) 4 mm safety banana plugs	
MECHANICAL		
Maximum Conductor Size	Ø 0.63 in (16 mm)	
Dimensions	(5.13 x 1.81 x 1.34) in (130 x 46 x 34) mm	
Weight	Approximately 8.8 oz (250 g)	
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 61010-2-032 600 V CAT III, 300 V CAT IV Pollution Degree 2	
Ingress Protection	IP20 (EN 60529)	

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2153.04	AC Current Probe Model LM102 (200 A/1 mA/A)
2153.05	AC Current Probe Model LM103 (200 A/1 mV/A)

CURRENT MEASUREMENT PROBES

MN SERIES AC CURRENT PROBES



600 V
CAT III



MODELS MN01 & MN02

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



Patent #1385787 - Mini-Clamp Design



SCAN TO
LEARN
MORE

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 inch diameter

MN01

- Measurements from 2 A to 150 A_{AC}
- Excellent companions to all DMMs, permits very low AC current measurements

MN02

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

MODELS	MN01	MN02
ELECTRICAL		
Nominal Range	150 A _{AC}	100 A _{AC}
Measurement Range	(2 to 150) A _{AC}	50 mA to 100 A _{AC} (1 Ω load) 50 mA to 90 A _{AC} (10 Ω load)
Transformation Ratio	1000:1	
Output Signal	1 mA/A (150 mA _{AC} @ 150 A)	1 mA/A (100 mA _{AC} @ 100 A)
Phase Shift	Not specified	< 3 ° (1 Ω load) < 6 ° (10 Ω load)
Overload	170 A for 10 min ON, 30 min OFF	
Frequency Range	(48 to 500) Hz	48 Hz to 10 kHz
Load Impedance	≤ 10 Ω	
Open Secondary Voltage	≤ 30 V	
Output Termination	5 ft (1.5 m) lead with (2) 4 mm safety banana plugs	
MECHANICAL		
Maximum Conductor Size	Ø 0.39 in (10 mm)	
Dimension	(4.43 x 1.48 x 1.02) in (112.5 x 37.5 x 26) mm	
Weight	6.35 oz (180 g)	
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, 600 V CAT III, Pollution Degree 2	
Ingress Protection	IP40	

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2129.17	AC Current Probe Model MN01 (150 A, 1 mA/A, Lead)
2129.20	AC Current Probe Model MN02 (100 A, 1 mA/A, Lead, 1 % Accuracy)

CURRENT MEASUREMENT PROBES

MN SERIES AC CURRENT PROBES



600 V
CAT III



MODELS MN05 & MN09

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



Patent #1385787 - Mini-Clamp Design



MN05



MN09

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 inch diameter

MN05

- Measurements from 5 mA to 100 A_{AC}
- Permits very low AC current measurements
- Compatible with any voltmeter, multimeter, or other current measurement instrument with an input impedance greater than 1 M Ω .

MN09

- Measurements from (1 to 150) A_{AC}
- DC voltage output enables you to overcome low AC sensitivity of certain measurement instruments
- Bandwidth up to 500 Hz

MODELS	MN05	MN09
ELECTRICAL		
Nominal Range	10 A _{AC} ; 100 A _{AC}	150 A _{AC}
Measurement Range	5 mA to 10 A _{AC} (1 to 100) A _{AC}	(1 to 150) A _{AC}
Transformation Ratio	Voltage output	N / A
Output Signal	1 mV/mA, 1 mV/A (10 V _{AC} @ 10 A, 100 mV _{AC} @ 100 A)	100 mV/A (15 V _{DC} @ 150 A _{AC})
Phase Shift	Not specified	
Overload	10 A Range: 15 A 100 A Range:150 A	170 A for 10 min ON, 30 min OFF
Frequency Range	(48 to 500) Hz	
Load Impedance	≥ 1 MΩ	≥ 50 KΩ
Open Secondary Voltage	—	≤ 30 V
Output Termination	5 ft (1.5 m) lead with (2) 4 mm safety banana plugs	
MECHANICAL		
Maximum Conductor Size	Ø 0.39 in (10 mm)	
Dimension	(4.43 x 1.48 x 1.02) in (112.5 x 37.5 x 26) mm	
Weight	6.35 oz (180 g)	
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, 600 V CAT III, Pollution Degree 2	
Ingress Protection	IP40	

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2129.19	AC Current Probe Model MN05 (100 A, 1 mV/A & 10 A, 1 V/A, Lead)
2129.21	AC Current Probe Model MN09 (150 A, 100 mV _{DC} /A _{AC} , Lead)



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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



MN255



SCAN TO
LEARN
MORE

FEATURES

- Small compact size
- Measurement ranges from 100 mA to 240 A
- Frequency response to 10 kHz
- UL approved for both United States and Canada
- Jaw opening accommodates 250 kcmil cables
- Constructed with UL94V0 flame retardant material
- Double insulated construction
- Designed to EN 601010, 600 V CAT III

MODELS	MN251T	MN255	MN261	MN291
ELECTRICAL				
Nominal Range	200 A	20 A _{AC} ; 200 A _{AC}		200 A _{AC}
Measurement Range	(0.1 to 240) A	(0.1 to 24) A _{AC} ; (0.1 to 240) A _{AC}		(0.5 to 240) A _{AC}
Transformation Ratio	Voltage output		–	DC Voltage output
Output Signal	1 mV/A	20 A: 100 mV/A (2 V _{AC} @ 20 A) 200 A: 10 mV/A (2 V _{AC} @ 200 A)		100 mV _{DC} / A _{AC} (20 V _{DC} @ 200 A)
Phase Shift				
(200 A Range)	Not Specified		Not Specified	-
0.5 A to 10 A	≤ 5 °		≤ 6 °	-
10 A to 40 A	≤ 3 °		≤ 4 °	-
40 A to 100 A	≤ 2.5 °		≤ 3 °	-
100 A to 240 A				
Overload	240 A for 10 min ON, 30 min OFF	(24 and 240) A for 10 min ON, 30 min OFF		
Frequency Range	40 Hz to 10 kHz (-3dB)			
Load Impedance	1 MΩ	> 1 MΩ		
Working / Common Mode Voltage	600 Vrms	600 V		
Output Termination	10 ft (3m) insulated lead with BNC connector	Double-insulated 5 ft (1.5 m) lead with (2) 4 mm safety banana plugs	6 ft (2 m) insulated lead with insulated BNC connector	Double-insulated 5 ft (1.5 m) lead with (2) 4 mm safety banana plugs
MECHANICAL				
Jaw Opening	0.83 in (21 mm)			
Maximum Conductor Size	Ø 0.78 in max (20 mm)			
Maximum Bus Bar Size	(0.78 x 0.19) in (20 x 5) mm			
Dimensions	(5.47 x 2.00 x 1.18) in (139 x 51 x 30) mm			
Weight	6.5 oz (184 g)			
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	(50 to 95) °F (10 to 35) °C 85% RH (without roll-off above 95 °F [35 °C])		(10 to 90) % RH	
SAFETY				
Safety Rating	EN / IEC 61010-2-32 600 V CAT III			
UL Approval	Yes - United States and Canada			
Ingress Protection	IP40			

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2132.59	AC Current Probe Model MN251T (200 A, 1 mV/A, Lead)
2115.81	AC Current Probe Model MN255 (20 A, 100 mV/A & 200 A, 10 mV/A, Lead)
2115.82	AC Current Probe Model MN261 (20 A, 100 mV/A & 200 A, 10 mV/A, BNC)
2115.84	AC Current Probe Model MN291 (200 A, 100 mV _{DC} /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



SCAN TO
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MN307

MODELS	MN307	MN312	MN352	MN353	MN375	MN379*
ELECTRICAL						
Nominal Range	10 A _{AC}	150 A _{AC}			10 A _{AC}	5 A _{AC} ; 100 A _{AC}
Measurement Range	(0.1 to 12) A _{AC}	(0.1 to 200) A _{AC}			(0.1 to 10) A _{AC}	5 mA to 6 A _{AC} ; (0.1 to 120) A _{AC}
Transformation Ratio	Voltage output	1000:1	Voltage output			
Output Signal	100 mV/A (1 V _{AC} @ 10 A)	1 mA/A (150 mA _{AC} @ 150 A)	10 mV/A (1.5 V _{AC} @ 150 A)		100 mV/A (1 V _{AC} @ 10 A)	5 A: 200 mV/A (1 V _{AC} @ 5 A) 100 A: 10 mV/A (1 V _{AC} @ 100 A) (5 A Range) 5 mA: 6.5 ° 50 mA: 5 ° 0.5 A: 4.5 ° 5 A: 4 ° (100 A Range) 0.1 A: 3.2 ° (1; 10; 100) A: 2.2 °
Phase Shift	(0.1 to 1) A: ≤ 5 ° (1 to 5) A: ≤ 3 ° (5 to 12) A: ≤ 2.5 °	(0.1 to 1) A: Not specified (1 to 20) A: ≤ 3 ° (20 to 80) A: ≤ 2 ° (80 to 150) A: ≤ 2.5 ° (150 to 200) A: Not specified			(1 to 5) A: ≤ 1 ° @ 60 Hz (5 to 10) A: ≤ 1.5 ° @ 60 Hz	
Overload	20 A Continuous	200 A Continuous	240 A for 10 min ON, 30 min OFF		20 A Continuous	200 A Continuous
Frequency Range	40 Hz to 10 kHz				40 Hz to 3 kHz	40 Hz to 10 kHz
Load Impedance	1 MΩ	1 Ω	1 MΩ			
Crest Factor	3 @ 10 Arms with an error (due to CF) of 3 %	3 @ 200 A peak with an error (due to CF) of 3 %	3 @ 150 A peak with an error (due to CF) of 3 %		3 @ 10 Arms with an error (due to CF) of 3 %	Not specified
Working / Common Mode Voltage	600 Vrms					
Output Termination	Double-insulated 5 ft (1.5 m) lead with (2) 4 mm safety banana plugs	(2) standard safety 4 mm banana jacks		Double-insulated 5 ft (1.5 m) lead with (2) 4 mm safety banana plugs		
MECHANICAL / ENVIRONMENTAL						
Jaw Opening	0.83 in (21 mm)					
Maximum Conductor Size	0.78 in max (20 mm)					
Dimensions	(5.47 x 2.00 x 1.18) in (139 x 51 x 30) mm					
Weight	6.5 oz (180 g)					
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 - United States and Canada *(excludes MN379)					

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION	CAT. #	DESCRIPTION
2116.23	AC Current Probe Model MN307 (12 A, 100 mV/A, Lead)	2116.27	AC Current Probe Model MN353 (150 A, 10 mV/A, Lead)
2116.24	AC Current Probe Model MN312 (150 A, 1 mA/A, Jack)	2115.41	AC Current Probe Model MN375 (10 A, 100 mV/A, Lead)
2116.26	AC Current Probe Model MN352 (150 A, 10 mV/A, Jack)	2153.01	AC Current Probe Model MN379 (5 A, 200 mV/A & 100 A, 10 mV/A, Lead)



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CURRENT MEASUREMENT PROBES

MR SERIES AC/DC CURRENT PROBES



600 V
CAT III



MODELS MR415/416/526

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



SCAN TO
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MORE

FEATURES

- The jaw shape enables users to clamp on to cables or small bus bars
- Powered by battery or standard external 5 V power source via micro-USB connector
- Measures up to 1000 A_{AC} and 1400 A_{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 600 V CAT III

MODELS	MR415	MR416	MR526
ELECTRICAL			
Current Range	(0.5 to 400) A _{AC} , 600 A _{DC}	(0.5 to 40) A _{AC} , 60 A _{DC} (0.5 to 400) A _{AC} , 600 A _{DC}	(0.5 to 100) A _{AC} , 150 A _{DC} (0.5 to 1000) A _{AC} , 1400 A _{DC}
Output Signal	1 mV/A	10 mV/A, 1 mV/A	
Frequency Range	DC to 30 kHz (-3 dB) (depending of current value)		
Phase Shift at (50 / 60) Hz	≤ 1.5 ° @ 400 A	≤ 2.2 ° @ 40 A ≤ 1.5 ° @ 400 A	≤ 2 ° @ 100 A ≤ 1.5 ° @ 800 A
Load Impedance	> 1 MΩ and ≤ 100 pF		
Overload	3000 A _{DC} or 1000 A _{AC} continuous for < 1 kHz		
Zero Adjust	Automatic on both ranges		
Power Supply	9 V Alkaline battery (NEDA 1060A, 6LR61) or 5 V DC Micro-USB Type B		
Battery Life	50 h typical		
Low Battery Indication	Green LED blinking		
Overload Indication	Red LED on when the measurement is greater than selected range		
Output Termination	Double-insulated 5 ft (1.5 m) lead with (2) 4 mm safety banana plugs		
MECHANICAL			
Maximum Conductor Size	Cables: (1) 1.18 in (30 mm) or (2) .94 in (24 mm) Bus Bar: (1) (1.97 x 0.39) in (50 x 10) mm or (2) (1.23 x 0.39) in (31 x 10) mm or (3) (0.98 x 0.31) in (25 x 8) mm		Cables: (1) 1.5 in (38 mm) or (2) 1 in (25 mm) Bus Bar: (1) (1.97 x 0.49) in (50 x 12) mm or (2) (0.98 x 0.2) in (25 x 5) mm; (1) (1.24 x 0.30) in (31 x 8) mm or (3) (0.98 x 0.31) in (25 x 8) mm
Dimensions (H x W x D)	(8.82 x 3.82 x 1.73) in (224 x 97 x 44) mm		(9.31 x 3.82 x 1.73) in (236 x 97 x 44) mm
Weight (with Battery)	0.98 lb (444 g)		1.15 lb (521 g)
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 % RH @ 35 °C		
SAFETY			
Ingress Protection	IP40		
EMC	EN 61326-1		
Safety Rating	IEC 61010-1, EN 61010-2-32, Pollution Degree 2, 600 V CAT III		

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
1200.80	AC/DC Current Probe Model MR415 (400 A _{AC} , 1 mV/A & 600 A _{DC} , 1 mV/A, 4 mm Banana Plug Lead) - Replaces MR410
1200.82	AC/DC Current Probe Model MR416 (40 A _{AC} , 60 A _{DC} , 10 mV/A & 400 A _{AC} , 600 A _{DC} , 1 mV/A, 4 mm Banana Plug Lead) - Replaces MR411
1200.83	AC/DC Current Probe Model MR526 (100 A _{AC} , 150 A _{DC} , 10 mV/A & 1000 A _{AC} , 1400 A _{DC} , 1 mV/A, 4 mm Banana Plug Lead) - Replaces MR521

CURRENT MEASUREMENT PROBES

MR SERIES AC/DC CURRENT PROBES



600 V
CAT III



MODELS MR417/MR527

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



MR417

MR527



SCAN TO
LEARN
MORE

FEATURES

- The jaw shape enables users to clamp on to cables or small bus bars
- Powered by battery or standard external 5 V power source via micro-USB connector
- Measures up to 1000 A_{AC} and 1400 A_{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 600 V CAT III

MODELS	MR417	MR527
ELECTRICAL		
Current Range	(0.5 to 40) A _{AC} , 60 A _{DC} (0.5 to 400) A _{AC} , 600 A _{DC}	(0.5 to 100) A _{AC} , 150 A _{DC} (0.5 to 1000) A _{AC} , 1400 A _{DC}
Output Signal	10 mV/A, 1 mV/A	
Frequency Range	DC to 30 kHz (-3 dB) <i>(depending of current value)</i>	
Phase Shift At (50 / 60) Hz	≤ 2 ° @ 40 A ≤ 1.5 ° @ 400 A	≤ 2.2 ° @ 100 A ≤ 1.5 ° @ 1000 A
Load Impedance	> 1 MΩ and ≤ 100 pF	
Overload	3000 A _{DC} or 1000 A _{AC} continuous for < 1 kHz	
Zero Adjust	Automatic on both ranges	
Power Supply	9 V alkaline battery <i>(NEDA 1060 A, 6LR61)</i> or 5 V DC Micro-USB Type B	
Battery Life	50 h typical	
Low Battery Indication	Green LED blinking	
Overload Indication	Red LED on when the measurement is greater than selected range	
Output Termination	6.5 ft (2 m) coaxial cable with insulated BNC terminal	
MECHANICAL		
Maximum Conductor Size	Cables: (1) 0.18 in (5 mm) or (2) .94 in (24 mm) Bus Bar: (1) (1.97 x 0.39) in (50 x 10) mm or (2) (1.23 x 0.39) in (31 x 10) mm or (3) (0.98 x 0.31) in (25 x 8) mm	Cables: (1) 1.5 in (38 mm) or (2) 1 in (25 mm) Bus Bar: (1) (1.97 x 0.49) in (50 x 12) mm or (2) (0.98 x 0.2) in (25 x 5) mm; (1) (1.24 x 0.30) in (31 x 8) mm or (3) (0.98 x 0.31) in (25 x 8) mm
Dimensions <i>(H x W x D)</i>	(8.82 x 3.82 x 1.73) in (224 x 97 x 44) mm	(9.31 x 3.82 x 1.73) in (236 x 97 x 44) mm
Weight <i>(with Battery)</i>	0.98 lb (440 g)	1.15 lb (521 g)
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 % RH @ 35 °C	
SAFETY		
Ingress Protection	IP 40	
EMC	EN 61326-1	
Safety Rating	IEC 61010-1, EN 61010-2-32, Pollution Degree 2, 600 V CAT III	

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
1200.84	AC/DC Current Probe Model MR417 (40 A _{AC} , 60 A _{DC} , 10 mV/A & 400 A _{AC} , 600 A _{DC} , 1 mV/A, BNC Output) Replaces MR461
1200.85	AC/DC Current Probe Model MR527 (100 A _{AC} , 150 A _{DC} , 10 mV/A & 1000 A _{AC} , 1400 A _{DC} , 1 mV/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 1 MHz

Self-powered directly from rechargeable battery or line-power via line-adaptor



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FEATURES

- Clamping diameter 1.02 in (26 mm)
- Measurement range from (0.5 to 100) Amps AC, 100 Amps DC
- Measures AC and DC signals
- 10 mV/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 30) kHz filter selection
- Push button zero adjust
- LED indicators for power, overload and filter selection
- UL 94 V2 self-extinguishing case material

MODEL	MH60
ELECTRICAL	
Nominal Range	100 A _{AC} / DC (140 A peak)
Measurement Range	500 mA to 100 A _{AC} / 100 A _{DC}
Transformation Ratio	Voltage Output
Output Signal	10 mV/A (1 V _{AC} /DC @ 100 A)
Phase Shift at 50 Hz	±1 °
Overload	150 A Continuous
Frequency Range (@ -3 dB)	DC to 1 MHz
Load Impedance	0.25 mΩ (at 400 Hz) 0.628 mΩ (at 1 MHz) In RF: 0.1 μH for a primary transition
Common Mode Voltage	(600 V Max) At 50 Hz: 3.5 mA / 5 mA @ 100 V At 400 Hz: 25.9 mA / 50 mA @ 100 V
Power Supply	Internal NiMH rechargeable battery; 5 V _{DC} external via female micro-USB Type B connection
Battery Life	8 h typical with fully-charged battery
Output Termination	6.6 ft (2 m) lead with molded isolated male BNC connector
MECHANICAL	
Maximum Conductor Size	Ø 1.02 in (26 mm)
Dimensions	(5.43 x 1.92 x 1.10) in (138 x 49 x 28) mm
Weight	Approximately 7.05 oz (200 g)
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	Up to 85 % RH decreasing linearly above 95 °F (35 °C)
SAFETY	
Ingress Protection	IP40 (EN 60529)
Safety Rating	EN 61010-1 EN 61010-2-31 600 V CAT II, 300 V CAT III Pollution Degree 2

CAT. #	DESCRIPTION
2153.03	AC/DC Current Probe Model MH60 (100 A, 1 MHz, BNC)

CURRENT MEASUREMENT PROBES

DIGITAL FLEXPROBE®

600 V
CAT IV



MODELS 400D & 4000D

Provide a welcomed solution when accessing electrical conductors in tight places



MINIFLEX®:
400D-10 (10 in probe)



MINIFLEX®:
4000D-14 (14 in probe)



MINIFLEX®:
400D-24 (24 in probe)
4000D-24 (24 in probe) (shown)



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FEATURES

- Easy access and measurement, even in confined spaces
- Measurement from 20 mA_{AC} to 4000 A_{AC} (model dependent)
- Available with (10, 14 and 24) inch sensor lengths
- Sensor diameter (2.75 to 8) in (70 to 203) mm (model dependent)
- Resolution down to 1 mA (model dependent)
- HOLD feature
- Direct reading
- Compact and simple to use
- Flexible current sensor
- True RMS
- Safety rating of 600 V CAT IV

ACCESSORIES

CAT. #5000.44

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

MODELS	400D-10 & 400D-24	4000D-14 & 4000D-24
ELECTRICAL		
Display Range	4 A _{AC} , 40 A _{AC} , 400 A _{AC}	40 A _{AC} , 400 A _{AC} , 4000 A _{AC}
Measurement Range	(0.020 to 3.999) A, (4.00 to 39.99) A, (40.0 to 399.9) A	(0.20 to 39.99) A, (40.0 to 399.9) A, (400 to 3999) A
Resolution	1 mA, 10 mA, 100 mA	10 mA, 100 mA, 1 A
Sensor Diameter	400D-10: Ø 2.75 in (70 mm) 400D-24: Ø 8 in (203 mm)	4000D-14: Ø 3.94 in (100 mm) 4000D-24: Ø 8 in (203 mm)
Sensor Length	400D-10: Ø 10 in (254 mm) 400D-24: Ø 24 in (610 mm)	4000D-14: Ø 14 in (355 mm) 4000D-24: Ø 24 in (610 mm)
Bandwidth	10 Hz to 3 kHz	
MECHANICAL		
Power Supply	(2) 1.5 V AAA / LR3 batteries	
Weight	Approximately 0.29 lb (132 g) MiniFlex®	
Casing Dimensions	(3.94 x 2.36 x 0.79) in (100 x 60 x 20) mm	
Connection Cable Length	6 ft (1.8 m)	
ENVIRONMENTAL		
Operating Temperature	(32 to 122) °F (0 to 50) °C	
SAFETY		
Safety Rating	IEC 61010, 600 V CAT IV	

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

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

CAT. #	DESCRIPTION
2153.31	Digital FlexProbe® Model 400D-10 w/6 ft Lead (TRMS, 4 A _{AC} , 40 A _{AC} , 400 A _{AC})
2153.36	Digital FlexProbe® Model 400D-24 w/6 ft Lead (TRMS, 4 A _{AC} , 40 A _{AC} , 400 A _{AC})
2153.32	Digital FlexProbe® Model 4000D-14 w/6 ft Lead (TRMS, 40 A _{AC} , 400 A _{AC} , 4000 A _{AC})
2153.35	Digital FlexProbe® Model 4000D-24 w/6 ft Lead (TRMS, 40 A _{AC} , 400 A _{AC} , 4000 A _{AC})



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CURRENT MEASUREMENT PROBES

GENERAL PURPOSE PROBES SELECTION CHART

Series	Model	Ratio	Measurement Range		Output Signal		Phase Shift**	Maximum Conductor Size		Output Connection	CAT. #
			AC	DC	Current	Voltage		Ø Cable	Bus Bar		
	MN01	1000:1	(2 to 150) A	—	1 mA/A*	—	N / A	0.39 in (10 mm)	N / A	Leads	2129.17
	MN02	1000:1	50 mA to 100 A 50 mA to 90 A	—	1 mA/A*	—	N / A	0.39 in (10 mm)	N / A	Leads	2129.20
	MN05	—	5 mA to 10 A (1 to 100) A	—	—	1 mV/mA 1 mV/A	N / A	0.39 in (10 mm)	N / A	Leads	2129.19
	MN09	—	(1 to 150) A	—	—	100 mV _{DC} / A _{AC}	N / A	0.39 in (10 mm)	N / A	Leads	2129.21
	MN134	—	1 mA to 10 A	—	—	100 mV/A	< 10°	0.39 in (10 mm)	N / A	Leads	2129.22
	MN185	1000:1	50 mA to 120 A	—	1 mA/A	—	< 3.5 °	0.47 in (12 mm)	N / A	Jacks	100.185
	MN255	—	(0.1 to 24) A (0.1 to 240) A	—	—	100 mV/A 10 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	Leads	2115.81
	MN261	—	(0.1 to 24) A (0.5 to 240) A	—	—	100 mV/A 10 mV/A	< 6 °	0.78 in (20 mm)	N / A	BNC	2115.82
	MN291	—	(0.5 to 240) A	—	—	100 mV _{DC} / A _{AC}	N / A	0.78 in (20 mm)	N / A	Leads	2115.84
	MN307	—	10 mA to 12 A	—	—	100 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	Leads	2116.23
	MN312	1000:1	(0.1 to 200) A	—	1 mA/A*	—	< 2.5 °	0.78 in (20 mm)	N / A	Jacks	2116.24
	MN352	—	(0.1 to 150) A	—	—	10 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	Jacks	2116.26
	MN353	—	(0.1 to 150) A	—	—	10 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	Leads	2116.27
	MN373	—	(0.01 to 2.4) A (0.1 to 200) A	—	—	1000 mV/A 10 mV/A	< 3 °	0.78 in (20 mm)	N / A	Leads	2116.28
	MN375	—	(0.1 to 10) A	—	—	100 mV/A	< 1.5 °	0.78 in (20 mm)	N / A	Leads	2115.41
	MN379	—	5 mA to 6 A (0.1 to 120) A	—	—	200 mV/A 10 mV/A	< 4 °	0.78 in (20 mm)	N / A	Leads	2153.01
	MN379T	—	5 mA to 6 A (0.1 to 120) A	—	—	200 mV/A 10 mV/A	< 4 °	0.78 in (20 mm)	N / A	Lead w/BNC	2153.02
	SL306	—	5 mA to 1.5 A 50 mA to 60 A	5 mA to 2 A 50 mA a 80 A	—	1 mV/mA 10 mV/A	< 1 °	0.46 in (11.8 mm)	N / A	Leads	2153.08
	SL361	—	100 mA a 10 A peak 500 mA a 100 A peak	—	—	100 mV/A 10 mV/A	< 1 °	0.46 in (11.8 mm)	N / A	Lead w/BNC	2153.09
	MD301	1000:1	(2 to 500) A	—	—	1 mV _{DC} / A _{AC}	N / A	1.18 in (30 mm) (2 x 500) kcmil	(2.48 x 0.20) in (63 x 5) mm	Leads	1201.07
	MD305	1000:1	(1 to 600) A	—	1 mA/A	—	< 1 °	1.18 in (30 mm) (2 x 500) kcmil	(2.48 x 0.20) in (63 x 5) mm	Leads	1201.36

*Output protection for open secondary.

**Phase shift indicated at maximum rating.

Note: Model 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	CAT. #
			AC	DC	CURRENT	VOLTAGE		Ø CABLE	BUS BAR		
	MR415	—	(0.5 to 400) A	(0.5 to 600) A	—	1 mV/A	≤ 1.5 °	1.18 in (30 mm)	2 bus bar (1.24 x 0.39) in (31 x 10) mm	5 ft (1.5 m) Lead	1200.80
	MR416	—	(0.5 to 40) A (0.5 to 400) A	(0.5 to 60) A (0.5 to 600) A	—	10 mV/A 1 mV/A	≤ 2.2 ° ≤ 1.5 °	1.53 in (39 mm)	2 bus bar (1.95 x 0.19) in (50 x 5) mm	5 ft (1.5 m) Lead	1200.82
	MR526	—	(0.5 to 100) A (0.5 to 1000) A	(0.5 to 150) A (0.5 to 1400) A	—	10 mV/A 1 mV/A	≤ 2 ° ≤ 1.5 °	1.53 in (39 mm)	2 bus bar (1.95 x 0.19) in (50 x 5) mm	5 ft (1.5 m) Lead	1200.83
	SR601	1000:1	(0.1 to 1200) A	—	1 mA/A*	—	< 0.5 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Jacks	2113.43
	SR604	1000:1	(0.1 to 1200) A	—	1 mA/A*	—	< 0.5 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Leads	2113.44
	SR651	—	(0.1 to 1200) A	—	—	1 mV/A	< 0.5 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Jacks	2113.45
	SR701	1000:1	1 mA to 1000 A	—	1 mA/A*	—	< 0.7 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Jacks	2116.29
	SR704	1000:1	1 mA to 1000 A	—	1 mA/A*	—	< 0.7 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Leads	2116.30
	SR752	—	(0.1 to 1000) A	—	—	1 mV/A	< 0.7 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Leads	2116.32
	SR759	—	1 mA to 1 A 10 mA to 10 A (0.1 to 100) A (1 to 1000) A	—	—	1000 mV/A 100 mV/A 10 mV/A 1 mV/A	< 1 °	2.05 in (52 mm)	(1.95 x 0.19) in (50 x 5) mm	Leads	2116.33
	K100	—	0.1 mA to 3 A	0.05 mA to ± 4 A	—	1 mV/mA	N / A	0.18 in (4.5 mm)	N / A	Plugs	1200.67
	K110	—	(0.1 to 300) mA	(0.05 to ± 400) mA	—	10 mV/mA	N / A	0.18 in (4.5 mm)	N / A	Plugs	2111.73
	LM102	1000:1	50 mA to 200 A	—	1 mA/A*	—	< 3 °	0.63 in (16 mm)	N / A	Leads	2153.04
	LM103	—	(0.1 to 200) A	—	—	1 mV/A	< 3 °	0.63 in (16 mm)	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 (2 m) coaxial cable with insulated BNC connector rated 600 Vrms



Jacks

Two standard safety banana jacks (4 mm)



Leads

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



Shrouded Banana Plugs

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



CURRENT MEASUREMENT PROBES

AMPFLEX® AND MINIFLEX® PROBES - SELECTION CHARTS

SERIES	MODEL	RATIO	MEASUREMENT RANGE	OUTPUT SIGNAL	MAXIMUM CONDUCTOR SIZE	CAT. #
	MF 300-10-2-10-HF	—	(30 / 300) A	100 mV/A, 10 mV/A	2.95 in (75 mm)	2126.84
	MF 3000-14-1-1-HF	—	3000 A	1 mV/A	3.93 in (100 mm)	2126.86
	MA114	—	(3 / 30 / 300 / 3000) A	1 mV/mA, 100 mV/A 10 mV/A, 1 mV/A	4 in (101 mm)	2153.41
	300-24-2-10	—	(30 / 300) A	100 mV/A, 10 mV/A	7.48 in (190 mm)	2112.88
	1000-24-1-1	—	1000 A	1 mV/A	7.48 in (190 mm)	2112.39
	1000-24-2-1	—	(100 / 1000) A	10 mV/A, 1 mV/A	7.48 in (190 mm)	2112.98
	1000-36-2-1	—	(100 / 1000) A	10 mV/A, 1 mV/A	11 in (280 mm)	2113.00
	3000-24-1-1	—	3000 A	1 mV/A	7.48 in (190 mm)	2112.46
	3000-36-1-1	—	3000 A	1 mV/A	11 in (280 mm)	2112.48
	3000-24-2-1	—	(300 / 3000) A	10 mV/A, 1 mV/A	7.48 in (190 mm)	2113.05
	3000-48-2-1	—	(300 / 3000) A	10 mV/A, 1 mV/A	15 in (381 mm)	2112.01
	6000-36-2-0.1	—	(600 / 6000) A	1 mV/A, 0.1 mV/A	11 in (280 mm)	2113.21
	30000-24-2-0.1	—	(3000 / 30,000) A	1 mV/A, 0.1 mV/A	7.48 in (190 mm)	2113.33
	24-3001	—	300 A / 3000 A _{AC}	10 mV/A, 1 mV/A	7.48 in (190 mm)	2120.81

Consult factory for NIST Calibration price.

OSCILLOSCOPE & BNC TERMINATED PROBES

MODEL	MEASUREMENT RANGE		OUTPUT SIGNAL	PHASE SHIFT*	MAXIMUM CONDUCTOR SIZE		OUTPUT CONNECTION
	AC	DC	VOLTAGE		Ø CABLE	BUS BAR	
 SL361	(0.1 to 100) A		100 mV/A 10 mV/A	< 1.5 °	0.46 in (11.8 mm)	N / A	6.5 ft (2 m) Lead w/BNC
 MN261	(0.1 to 24) A (0.5 to 240) A	—	100 mV/A 10 mV/A	< 2.5 °	0.78 in (20 mm)	N / A	6.5 ft (2 m) Lead w/BNC
 SR661	(0.1 to 12) A (0.1 to 120) A (1 to 1200) A	—	100 mV/A 10 mV/A 1 mV/A	< 1 °	2.05 in (52 mm)	(1.96 x 0.19) in (50 x 5) mm	6.5 ft (2 m) Lead w/BNC
 MN251T MN379T	(0.5 to 240) A	—	1 mV/A	≤ 2.5 °	0.78 in (20 mm)	(0.78 x 0.19) in (20 x 5) mm	10 ft (3 m) Lead w/BNC
	(0.005 to 6) A (0.1 to 120) A	—	200 mV/A 10 mV/A	≤ 4 ° ≤ 2.2 °	0.78 in (20 mm)	(0.78 x 0.19) in (20 x 5) mm	10 ft (3 m) Lead w/BNC
 MH60	(0.5 to 100) A	(0.5 to 100) A	10 mV/A	< 1 °	1.02 in (26 mm)	N / A	6.6 ft (2 m) Lead w/BNC
 MR417	(0.5 to 40) A (0.5 to 400) A	(0.5 to 60) A (0.5 to 600) A	10 mV/A 1 mV/A	≤ 2.2 ° ≤ 1.5 °	1.18 in (30 mm)	2 bus bar (1.24 x 0.39) in (32 x 10) mm	6.6 ft (2 m) Lead w/BNC
 MR527	(0.5 to 100) A (0.5 to 1000) A	(0.5 to 150) A (0.5 to 1400) A	10 mV/A 1 mV/A	≤ 2.2 ° ≤ 1.5 °	1.53 in (39 mm)	2 bus bar (1.96 x 0.19) in (50 x 5) mm	6.6 ft (2 m) Lead w/BNC

*Phase shift indicated at maximum rating. Note: All probes are rated 600 V CAT III and CE compliant. Not all models are UL approved; please consult factory.
Consult factory for NIST Calibration price.

DATA LOGGERS



The image is a composite of two photographs. The left photograph shows a white, ruggedized AEMC Data Logger Model 91915 mounted on a wall. The device has a small LCD screen displaying numerical data and a circular control knob. A person wearing a blue and white striped safety glove is interacting with the device. The right photograph shows the interior of an electrical control panel, featuring a complex arrangement of multi-colored wires (red, blue, white, black) connected to a terminal block and various electronic components.

DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

Why choose AEMC® Instruments Data Loggers?

Elevate your data monitoring with AEMC® Instruments Data Loggers, offering unparalleled versatility, precision, and cost-effectiveness. Our range includes single, dual, and four-channel loggers, addressing applications such as voltage and current. Experience the power of cutting-edge technology at a cost that respects your budget. Our design prioritizes user-friendliness, guaranteeing effortless operation within minutes. Our DataView® software provides in-depth analysis and reporting capabilities for a comprehensive user experience. Enjoy the convenience of remote access via the internet, providing real-time control and monitoring from anywhere (*model dependent*). Choose AEMC® Instruments for a data monitoring solution that combines reliability, power, and affordability.

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

DATA LOGGERS

THREE- AND FOUR- CHANNEL AC CURRENT



with USB cap on and cover closed

MODELS DL913 & DL914

Waterproof three and four channel AC current data loggers with flexible sensors



FEATURES

- Simple-to-use, 3 (Model DL913) and 4 (Model DL914) channel AC current data loggers
- 4th channel for neutral current monitoring (Model DL914)
- Includes 3 (Model DL913) or 4 (Model DL914) integral 24-inch flexible current sensors
- Current measurements from 500 mA up to 3600 A
- LCD displays real-time measurements and parameters such as memory, power, and communication status
- Front panel navigation of configuration options and measurement screens
- Built-in web server for remote monitoring
- Extended recording mode for increased battery life
- Battery and/or USB powered options
- Frequency measurements
- Wi-Fi and USB communications
- Waterproof IP67 rated (USB cap on, cover closed)

APPLICATIONS

- Single/Split-phase and 3- phase load monitoring
- Neutral and ground current monitoring
- Intermittent problem detection
- Machine load monitoring/Load profiling
- Fault current detection

PRODUCT INCLUDES

Includes small classic tool bag, 10 ft USB Type A to Type B cable, (4) stainless steel mounting brackets, (4) stainless steel M4 machine screws, USB power adapter, quick start guide, and USB drive with DataView® software and user manual.

MODELS	DL913 / DL914				
ELECTRICAL					
Channels	3 (Model DL913) / 4 (Model DL914)				
Inputs	MiniFlex®				
Measurement Ranges	(300 / 3000) Aac				
Accuracy (50 / 60) Hz	300 A range		3000 A range		
	(0.50 to 99.99) A ± (1 %r + 10 D)	(90.0 to 360.0) A ± (1 %r + 4 D)	(4.00 to 99.99) A ± (1 %r + 10 D)	(90.0 to 999.9) A ± (1 %r + 5 D)	(0.900 to 3.600) kA ± (1 %r + 4 D)
Resolution	0.01 A	0.1 A	0.01 A	0.1 A	1 A
Frequency	(45 to 65) Hz ± 0.1 Hz				
Storage Rate	Normal recording mode: Once per second Extended recording mode: Four per aggregation period				
Recording Length	Battery Power: 4 d with no missing samples (normal recording mode) 7 to 30 d depending on the selected aggregation period (extended recording mode) External Power: 365 d				
Memory	Internal 8 GB				
Communication	USB, Wi-Fi via router (Ethernet), or Wi-Fi Direct				
Battery Charge Time	10 h maximum (Wi-Fi off)				
Power Supply	Internal: 4.2 A·h NiMH rechargeable battery pack External: USB connection				
Battery Life	Normal recording mode: 4 d Extended recording mode: 7 to 30 d* (*Depending on the selected aggregation period) Reference user manual for in-depth information on the battery life, aggregation period, storage interval, and recording modes.				
MECHANICAL					
Dimensions	(5.9 x 5.9 x 3.57) in (150 x 150 x 91) mm w/o sensors				
Weight (with battery)	DL913: 2.2 lbs (1 kg) / DL914: 2.42 lbs (1.1 kg)				
Sensor / Cable Length	3 (DL913) or 4 (DL914) integral 24 in (610 mm) MiniFlex® probes with 6.5 ft (2 m) leads				
Max. Conductor	7.64 in (194 mm)				
Case	UL94-V0 Flame retardant				
Vibration	IEC 60068-2-6 (1.5 mm, (10 to 55) Hz)				
Shock	IEC 60068-2-27 (30 G)				
Drop	IEC 60068-2-32 (3.3 ft [1 m] in the most severe position without permanent mechanical damage or functional deterioration)				
ENVIRONMENTAL					
Operating / Storage Temperature	(14 to 122) °F (-10 to 50) °C / (-40 to 158) °F (-40 to 70) °C				
Relative Humidity	Operation: up to 85 % RH (non-condensing) Storage: up to 95 % RH				

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2153.61	Data Logger Model DL913 (3-channel, TRMS, MiniFlex® 300/3000 A, Wi-Fi, DataView® Software)
2153.62	Data Logger Model DL914 (4-channel, TRMS, MiniFlex® 300/3000 A, Wi-Fi, DataView® Software)

DATA LOGGERS

SIMPLE LOGGER® II



MODEL L261

One channel simple -logger for voltage measuring, monitoring and troubleshooting



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MORE



DataView®

FEATURES

- TRMS voltage recording up to 600 V_{AC/AC+DC}
- AC: 64 samples per cycle
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 and compact
- 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; 300 V CAT IV; 600 V CAT III

APPLICATIONS

- Long term supply monitoring
- Industrial, commercial and residential monitoring
- Find intermittent voltage problems
- Machine monitoring

MODEL	L261
ELECTRICAL	
Channels	One
Input Connection	Two recessed 4 mm safety banana jacks
Measurement Range	(0 to 600) V _{AC} / AC+DC
Resolution	0.1 V
Accuracy (50 / 60) Hz	(0 to 5) V: unspecified (5 to 50) V: ± (0.5 % of Reading + 1 V) (50 to 600) V: ± (0.5 % of Reading + 0.5 V)
Input Impedance	40 MΩ
Sample Rate	64 samples / cycle
Storage Rate	Programmable from 8 every s to 1 every d
Storage Modes	Start / Stop, FIFO, Extended Recording Mode (XRM™) and Alarm
Recording Length	15 min to 8 weeks, programmable using DataView®
Memory	240,000 measurements (512 kB) 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 Supply	(2) 1.5 V AA-cell alkaline batteries (included)
Battery Life	100 h to > 45 d (dependent on sample rate and recording length)
MECHANICAL	
Dimensions	(4.94 x 2.75 x 1.28) in (125 x 70 x 32) mm
Weight (with battery)	6.4 oz (181 g)
Case	UL94-V0
Vibration	IEC 60068-2-6 (1.5 mm, 10 Hz to 55 Hz)
Shock	IEC 60068-2-27 (30 G)
Drop	IEC 60068-2-32 (1 m)

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

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



CAT. # DESCRIPTION

2126.05 Simple Logger® II Model L261 (1-Channel, TRMS, 600 V_{AC/AC+DC}, DataView® Software)



Vol. 24 Rev.00 06/2024

Technical Assistance (800) 343-1391

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DATA LOGGERS

TWO-CHANNEL DC VOLTAGE, CURRENT, PULSE & EVENT



with
terminals

MODEL L452

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



Real-time display!

Powered by batteries or through a USB



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MODEL	L452			
ELECTRICAL				
Channels	Two*			
Input	Six-pin terminal strip			
Measurements	DC Current	DC Voltage	Event	Pulse
Range	(4 to 20) mA	100 mV, 1 V, 10 V	N / A	
Accuracy (% of Reading)	± (0.25 % + 5 ct)	± (0.5 % + 1 ct)	N / A	
Resolution	0.01 mA	0.1 mV, 1 mV, 10 mV	N / A	
Input Impedance	100 Ω	1 MΩ		N / A
Sample Rate	5 samples / s		16 samples / s	100 samples / s
Storage Rate	DC inputs: (200, 400, 600, or 800) ms; or from (1 to 60) s Pulse detection: 10 ms			
Storage Modes	Start / Stop <i>(ends when memory is full or when the recording stop time is reached, whichever comes first)</i>			
Recording Length	10 min to 1 year, selectable set via instrument front panel or through DataView®			
Memory	32 MB internal Flash memory <i>(up to 1024 logging sessions, 16 M samples)</i>			
Communication	Bluetooth® 2.1, Class 1 or USB 2.0			
Power Supply	External: via USB connector Internal: (2) AA NiMH rechargeable batteries <i>(charges through USB port)</i>			
Battery Life	Up to 180 d <i>(dependent on storage rate / recording length)</i>			
MECHANICAL				
Dimensions	(1.28 x 2.58 x 5.4) in (32 x 65 x 137) mm			
Weight <i>(with battery)</i>	6.7 oz (190 g) with batteries			
Vibration	IEC 60068-2-6 (1.5 mm, (10 to 55) Hz)			
Shock	IEC 60068-2-27 (30 G)			
ENVIRONMENTAL				
Operating Temperature	(32 to 122) °F (0 to 50) °C			
Humidity	(16 to 85) %			
Ingress Protection	IP40 <i>(instrument alone)</i> ; IP20 <i>(instrument with terminal strip)</i>			

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

DATA LOGGERS

TWO-CHANNEL DC VOLTAGE, CURRENT, PULSE & EVENT

FEATURES

- Multiple data input types. The L452 can log DC voltage (up to ± 10 V), DC current, (4 to 20 mA), 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 32 MB 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 onboard 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 the DataView® 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.

PRODUCT INCLUDES

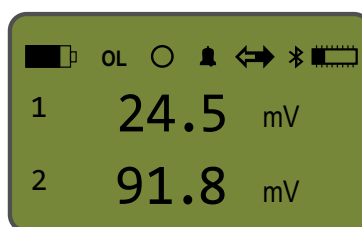
6 ft USB cable, US 120 V wall-to-USB plug, 6-pin screw terminal block, (2) AA rechargeable NiMH batteries, a printed quick start guide, a USB drive containing DataView® software and user manual.



FRONT PANEL & FUNCTIONAL DISPLAYS

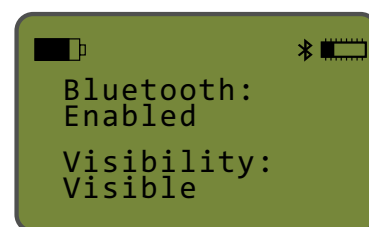


INSTRUMENT CONFIGURATION



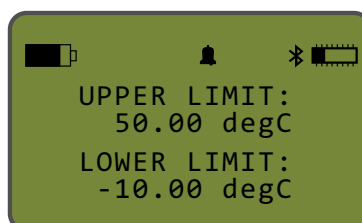
Instrument configuration parameters can be set through the front panel interface.

BLUETOOTH® ENABLED/VISIBILITY



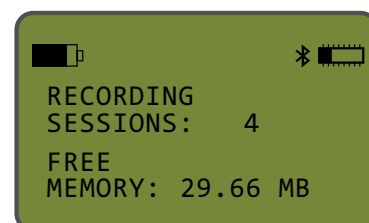
Enable and configure Bluetooth® functionality.

ALARM TRIGGERS



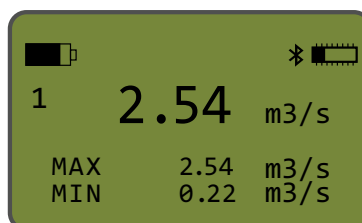
Allows you to set the upper and/or lower alarm trigger limits.

RECORDING SESSION



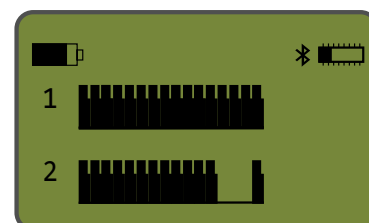
Displays the number of recording sessions currently stored in memory. It also shows the amount of free memory left for storing additional recording sessions.

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.

CAT. # DESCRIPTION

CAT. #	DESCRIPTION
2153.51	Data Logger Model L452 (2-Channel, w/LCD, 100 mV/1 V/10 V _{DC} , (4 to 20) mA _{DC} , Event & Pulse, DataView® Software)

DATA LOGGERS

SIMPLE LOGGER® DATA LOGGERS



MODELS SL10 TO SL13

Small DC voltage Simple Logger® can be ready to go in minutes with just a few parameters to set up

MODEL SL20

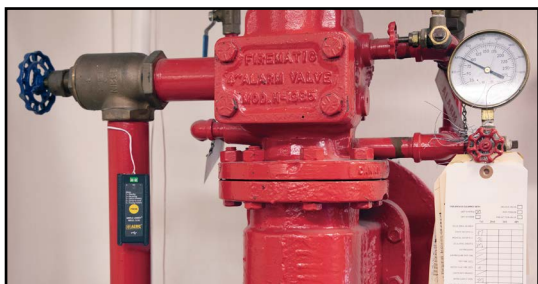
Log DC Current



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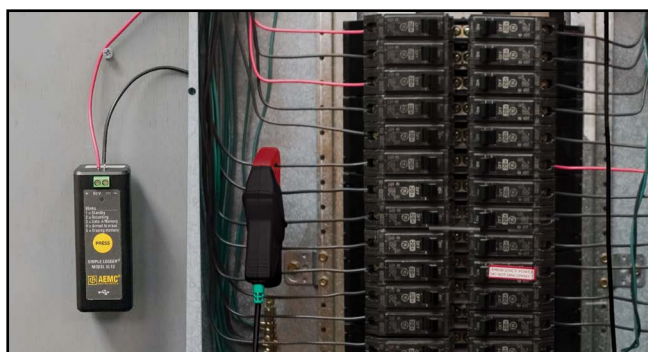
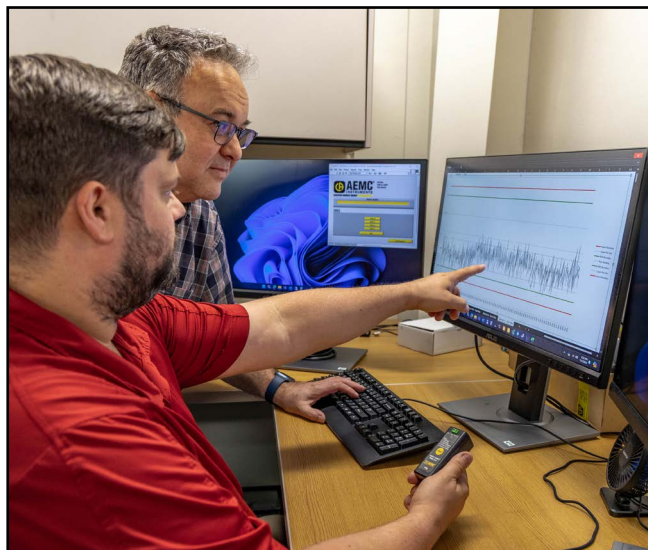
FEATURES

- 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



MODELS	SL10	SL11	SL12	SL13	SL20
VOLTAGE					CURRENT
Range	± 100 mVdc	± 1 Vdc	± 10 Vdc	± 50 Vdc	± 20 mA
Resolution	0.1 mV	1 mV	10 mV	50 mV	0.02 mA
Accuracy	± (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)*	± (0.5 % of Reading + 0.1 mA)*
Maximum Input Voltage	60 Vdc				25 mAac
Input Impedance	800 kΩ				49 Ω
Power Supply	Internal: (2) 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.
Consult factory for NIST Calibration prices.



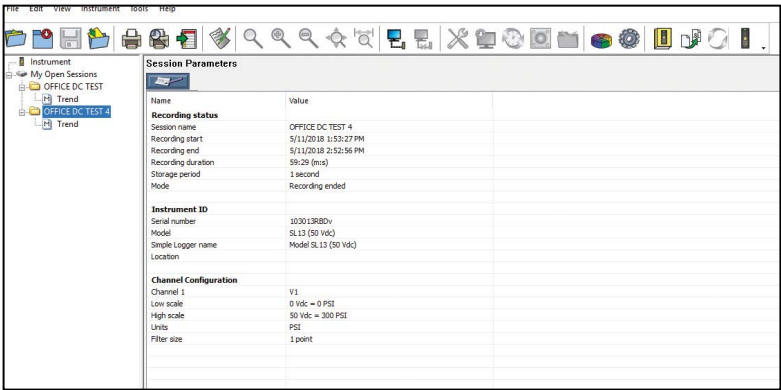
DATA LOGGERS

SIMPLE LOGGER® DATA LOGGERS

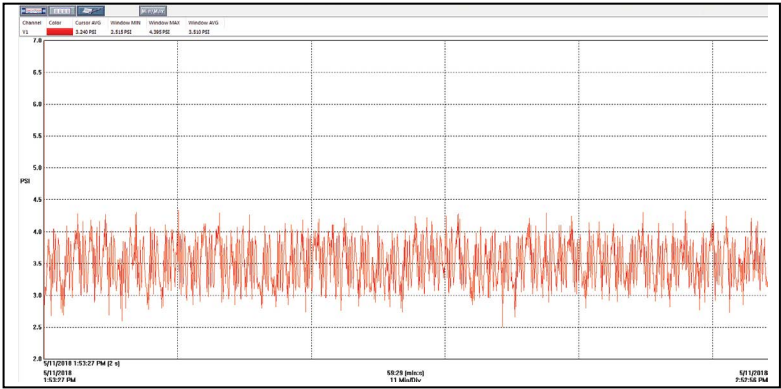
SIMPLE LOGGER® CONTROL PANEL

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	SL10	SL11	SL12	SL13	SL20
Set up recording	✓	✓	✓	✓	✓
Define units	✓	✓	✓	✓	✓
Set instrument clock	✓	✓	✓	✓	✓
Erase instrument memory	✓	✓	✓	✓	✓
Scaling	✓	✓	✓	✓	✓
Filtering	✓	✓	✓	✓	✓



Current configuration of a logger



Typical real-time trend graph

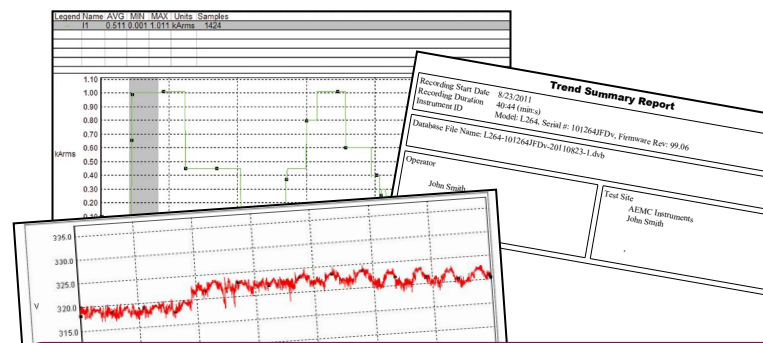
CAT. #	DESCRIPTION
2156.10	Simple Logger® Model SL10 (Voltage, 100 mVdc)
2156.11	Simple Logger® Model SL11 (Voltage, 1 Vdc)
2156.12	Simple Logger® Model SL12 (Voltage, 10 Vdc)
2156.13	Simple Logger® Model SL13 (Voltage, 50 Vdc)
2156.20	Simple Logger® Model SL20 (Current, 4 to 20 mA _{DC})

DataView® Data Analysis and Reporting Software



DataView® software, user manual and quick start guide are included in the USB Drive

- Display and analyze real-time data on your PC
- Configure all data logger functions and parameters from your PC including sample rate, communication, recording length, channel configuration and more
- Create and store a library of configurations that can be uploaded to the logger as needed
- Pan and zoom through sections of the graph to analyze the data
- Display trend graphs and text summaries
- Print reports using standard or custom templates
- Free software upgrades are available on our website www.aemc.com



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.

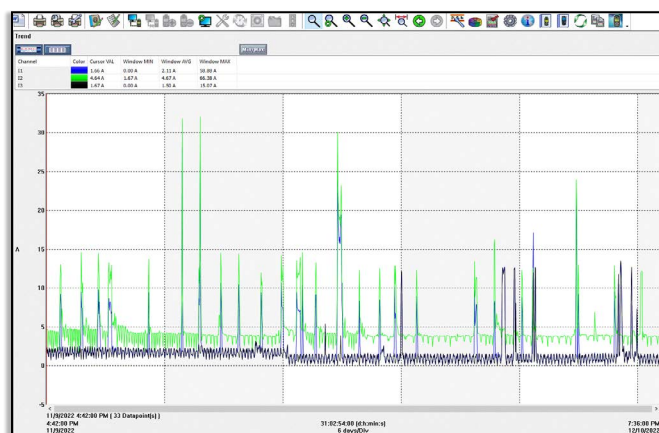
The figure shows the DataView software configuration window. The 'General' tab is selected, showing fields for Session name (Distribution Panel), Location (Warehouse), Session type (Record now, Schedule recording), Start date (12/11/2022), Start time (2:30 AM), End date (1/10/2023), End time (2:30 AM), Recording duration (030 : 00 : 00), and Aggregation period (1 min). The 'Communication' tab is also visible, showing fields for Wi-Fi settings (Enable Wi-Fi, Mode, Protocol, Port) and IRD Server settings (Enable, IRD server URL, Register).

Configuring the data logger's general communication, recording, and instrument options is simple with the DataView® control panel software.

The top left image represents the communication configuration tab with Wi-Fi enabled.

The recording tab provides sample and storage rate selections, recording length and schedule, session type, and the extended recording mode option.

Create, view, edit and store reports from the instrument's recorded data with the included DataView® software.



One month split-phase trend monitoring.

DIGITAL MULTIMETERS



Why choose AEMC® Instruments Digital Multimeters?

AEMC® Instruments range of hand-held digital multimeters are compact, simple-to-use, accurate and are designed and tested by electrical engineers offering superior knowledge in safety and time-saving features to help you confidently troubleshoot and solve problems. Our multimeter instruments are designed, manufactured and tested to meet the latest safety and measurement standards.

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

DIGITAL MULTIMETERS

5000 SERIES

	600 V CAT III	1000 V CAT III			
	5212 & 5217	5233 Only			

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



5212



5217



5231



5233



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MODELS	5212	5217	5231	5233
GENERAL				
True RMS	Yes			
AC Bandwidth	1000 Hz			
Auto / Manual Ranging	Yes			
LCD Display	4000-count	6000-count	6000-count + 61 segment bargraph	
Auto / Manual Range Select	Yes			
Voltage AC / DC	600 V	750 V _{AC} / 1000 V _{DC}	60 mV to 1000 V	
Current AC / DC	(4 / 10) A	(6 /10) A	With 1 mV/A clamp: 600 A	10 A
µAmps AC / DC	—	600 / 6000 µA	—	
Resistance	40 MΩ	60 MΩ		
Frequency / Duty Cycle	—	1000 Hz / Yes	—	3 kHz / Yes
Capacitance	100 mF		—	1000 µF
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		60 mV to 1000 V	
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) 1.5 V AA		9 V	
Battery Life	500 h		> 100 h	
Low Battery Indication	Yes			
Direct Fuse Access	Yes			
Drop Resistant	Yes: 3.28 ft (1 m)			
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 y		2 y	
Safety	600 V CAT III		1000 V CAT III, 600 V CAT IV	

Consult factory for NIST Calibration prices.

DIGITAL MULTIMETERS

5000 SERIES

FEATURES

- AC/DC current up to 600 A with a current clamp giving direct readings (*Model 5231*)
- High sensitivity with a resolution of 0.01 mV (*Model 5212*)
- VLowZ function detects and eliminates ghost voltages by placing a burden on the circuit
- Multi-position mounting
- Battery life extended with sleep mode (*Models 5212 & 5217*)
- Backlight screen and flashlight (*Models 5212 & 5217*)

Models 5217 & 5233

- Displays MAX, MIN and MAX-MIN (*Model 5233 displays MAX & MIN only*)
- Withstands overloads up to 8000 V (*Model 5233*)
- Displays relative measurement
- Measures temperature
- Measures frequency and duty cycle

PRODUCT INCLUDES

5212 & 5217

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

THERMOCOUPLE ADAPTER

Included with Model 5217

5231

Soft carrying case, set of (2) 5 ft color-coded leads (red/black) with needle tip (1000 V CAT IV 15 A), and user manual.

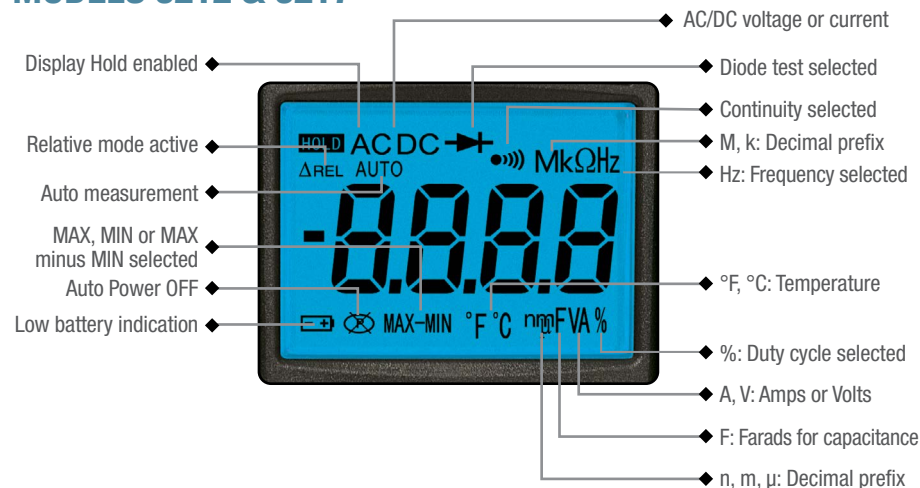
5233

Soft carrying case, set of (2) 5 ft color-coded leads (red/black), adapter - banana (male) to mini (female) with K-type thermocouple, and user manual.

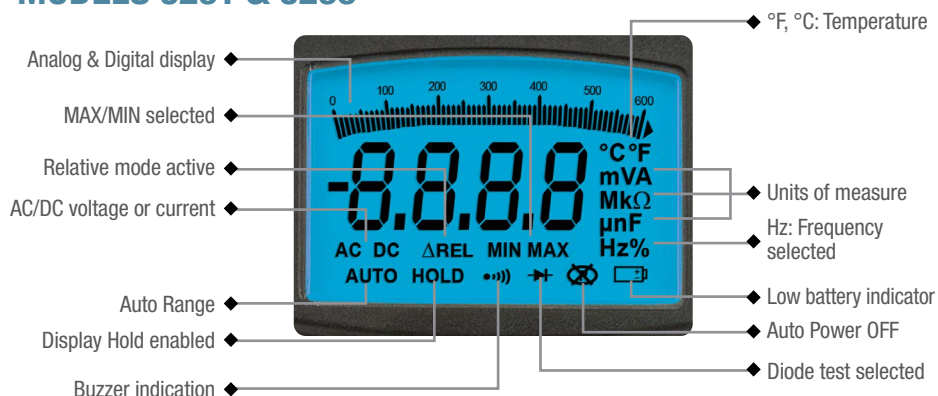


FUNCTIONAL DISPLAYS

MODELS 5212 & 5217



MODELS 5231 & 5233



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

CAT. # 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 only

MODELS MTX 3290 & 3291

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



MTX 3290

MTX 3291



FEATURES

- Easy-to-read (2.75 x 2.04) in (70 x 52) mm LCD screen
- On screen connection indicator
- Current: auto-ranging up to 10 A
- AC/DC/AC+DC current up to 6000 A with a current clamp giving direct readings
- 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 four standard AA batteries or four 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) 1.5 V AA alkaline batteries (installed), multilingual operation instructions, quick start guide, and a USB drive with user manual.

Model MTX 3291 also includes a soft carrying case, USB cable, and USB drive with SX-DMM software.



MODELS	MTX 3290	MTX 3291
ELECTRIC		
DC, AC & AC+DC Voltages	600 V	1000 V
Voltage DC Accuracy	± 0.3 %	± 0.05 %
AC & AC+DC Bandwidth	20 kHz	100 kHz
DC, AC & AC+DC Current	600 µA to 10 A (MTX 3291)	
Current DC Accuracy	± 1.2 %	± 0.08 %
Frequency	600 kHz	
Resistance	60 MΩ	
Audible Continuity	< 30 Ω	
Diode Test	3 V with 1 mV resolution	
Capacitance	60 mF	
Temperature Pt 100 / 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	4 th order 300 Hz 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, 1000) mV/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 _{DC} and A _{DC}	
Memory	—	
GENERAL		
Display	Digital LCD	Digital LCD with backlighting
Communication	—	USB optical connector & SX-DMM software (included)
Power Supply	(4) AA batteries (included) or NiMH batteries	
Environment	Storage: (-4 to 158) °F (-20 to 70) °C Operation: (32 to 104) °F (0 to 40) °C	
Dimensions	(7.72 x 3.54 x 1.85) in (196 x 90 x 47) mm	
Weight	20 oz (570 g)	

Consult factory for NIST Calibration prices.

CAT. # 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



1000 V
CAT III

600 V
CAT IV



3292B-BT &
3293B-BT only

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

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



MTX 3292B

MTX 3293B



(Android App available on Google Play
for Models 3292B-BT & 3293B-BT)



SCAN TO
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FEATURES

- 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
- 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 2400 mA·h 1.5 V rechargeable batteries (installed), optical USB cable, USB Type A charger, USB charging cable and USB drive with SX-DMM software.



CAT. #

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)



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MODELS	MTX 3292B, 3292B-BT	MTX 3293B, 3293B-BT
ELECTRICAL		
DC, AC & AC+DC Voltages	1000 V	
Voltage DC Accuracy	± 0.03 %	± 0.02 %
AC & AC+DC Bandwidth	100 kHz	200 kHz
DC, AC & AC+DC Current	10 A / (10 to 20) A (30 s max)	
Current DC Accuracy	± 0.01 %	
Frequency	5 MHz	
Resistance	1 Ω to 100 MΩ	
Audible Continuity	< 20 Ω	
Diode Test	Diode 0 to 2.6 V < 1 mA + Zener Diode or LED 0 to 20 V < 11 mA	
Capacitance	10 mF	
Temperature Pt 100 / 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	4 th order 300 Hz low-pass filter for measuring variable speed drives with asynchronous motors	
V / A-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 < 60 s + 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 Supply	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	(7.72 x 3.54 x 1.85) in (196 x 90 x 47.1) mm	
Weight	20 oz (570 g)	

Consult factory for NIST Calibration prices.

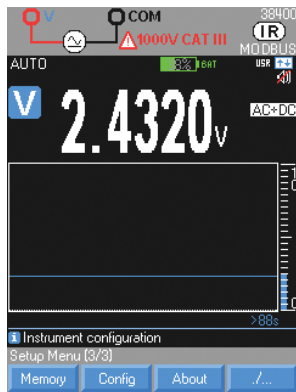
DIGITAL MULTIMETERS

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



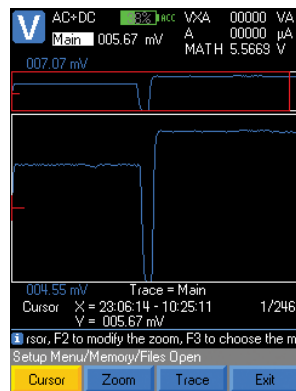
SETUP MENU

Configuration of measurements



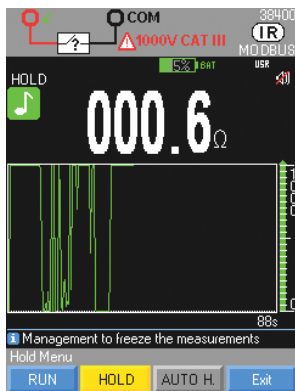
MEASUREMENT

Configuration of the measurement parameters



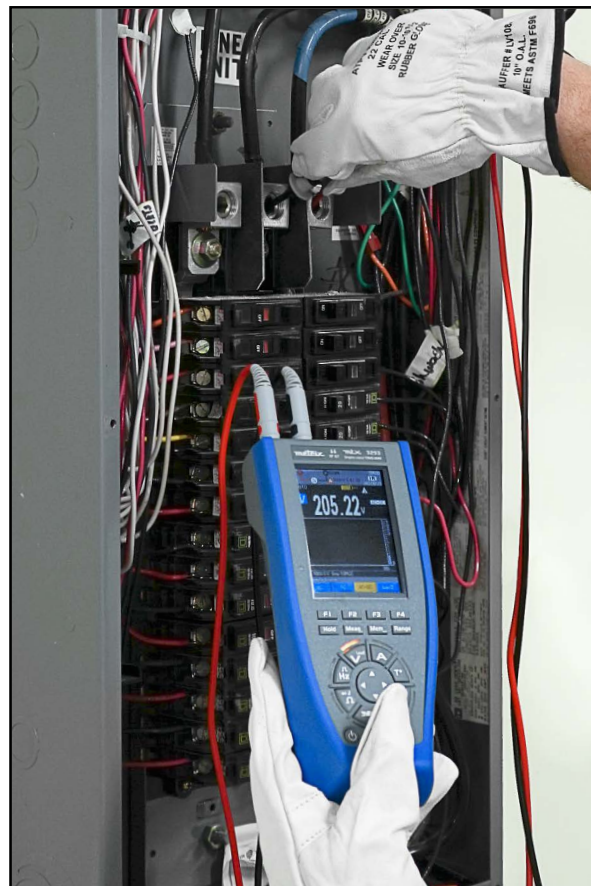
MEM

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

Displays Peak + value



ΔREL MODE

Displays relative values with respect to referenced measured value

ELECTRICAL TEST TOOLS



Why choose AEMC® Instruments Electrical Test Tools?

AEMC® Instruments offers economically priced phase/motor rotation meters, line splitters, voltage and outlet testers employing both contact and non-contact measurement. Essential for every electrician's tool bag.

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

ELECTRICAL TEST TOOLS
PHASE AND MOTOR ROTATION METERS



MODELS 6610, 6611 & 6612

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



SCAN TO
LEARN
MORE



6611



6612



SCAN TO
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MORE

PRODUCT INCLUDES

- 6610
Soft carrying case, meter with attached test leads (black/red/blue)
with non-contact sensor clips, 9 V battery and user manual.
- 6611 & 6612
Soft carrying case, (3) 4 ft color-coded (black/red/blue) test leads,
(3) color-coded (black) alligator clips and user manual.



Table with 2 columns: CAT. # and DESCRIPTION. Rows include Model 6610 (Non-contact), Model 6611, and Model 6612.

Table with 4 columns: MODELS, 6610, 6611, 6612. Rows include ELECTRICAL (Operating Voltage, Frequency Range, Power Supply), MECHANICAL (Dimensions, Weight), ENVIRONMENTAL (Operating Temperature, Storage Temperature), and SAFETY (Safety Rating / Ingress Protection, Electrical Safety).

Consult factory for NIST Calibration prices.

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 (75 to 1000) VAC (Model 6610)
- Determination of a motor's rotation direction (Model 6611)
- 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
- Color-coded leads (red, black, blue)
- Color-coded jacks for common U.S. phase colors
- Line supplied - no battery needed (Model 6612)
- Protected internally by high impedance circuit to limit
the current to user safe limits



ELECTRICAL TEST TOOLS

SPLITTER, TESTER AND DETECTOR

AC LINE SPLITTER

Model ALS-1

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



ALS-1



SCAN TO
LEARN
MORE

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
- 120 V, 15 A capacity

NON-CONTACT AC VOLTAGE DETECTOR MODEL NC-1

600 V
CAT III



NC-1



SCAN TO
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MORE

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

CAT. #	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



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MORE

MODEL	275HVD
ELECTRICAL	
Detection Frequency	(45 to 70) Hz
Ranges	240 V, (2, 6, 11, 22, 33, 132, 275) kV
Detection	Selection range is detected at approximately 10 in (25 cm) from the voltage. Greater detection distances can be obtained at lower voltage positions
Power Supply	(3) 1.5 V C cell batteries <i>(included)</i>
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	Up to 93 % RH @ 104 °F (40 °C)
Electrical Safety	EN 61326-1, EN 61000-4-2, EN 61000-4-3, EN 55011

Consult factory for NIST Calibration prices.

FEATURES

- Non-contact high voltage detector
- Wide range of detection; 80 V to 275 kV; 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 hot sticks
- Suitable for indoor and outdoor use
- Easy access to batteries



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

PRODUCT INCLUDES

Hard carrying case, universal spline for hot stick connection, (3) C cell batteries, shotgun adapter and a user manual.
Note: Hot stick not supplied



ACCESSORIES/REPLACEMENTS

- CAT. #5100.03 Battery Housing with O-Ring and Spring
- CAT. #5100.11 Universal Spline Adapter
- CAT. #2131.36 Replacement Carrying Case



CAT. #	DESCRIPTION
2131.12	Non-Contact High Voltage Detector Model 275HVD (240 V to 275 kV, Manual self-test)

ELECTRICAL TEST TOOLS

VOLTAGE ABSENCE TESTERS (VATs)



1000 V
CAT IV



MODEL CA 773

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



SCAN TO
LEARN
MORE

FEATURES

- Full autotest
- Voltage detection, LED display:
 $12 \text{ V}_{AC} \leq U \leq 1000 \text{ V}_{AC}$
 $12 \text{ V}_{DC} \leq U \leq 1400 \text{ V}_{DC}$
- Frequency: DC, (16.67 to 800) Hz
- Detection of stray voltages
- Unipolar phase detection
(a single contact)
- Two-pole phase-sequence testing
with 2-wire method
- Continuity test with audible and visual
indication ($R < 100 \Omega$)
- Extended continuity test with visual
indication for: $R < 0.5 \Omega$ to $2.999 \text{ k}\Omega$
- RCD trip test
- Complies with EN 61243-3 & IEC 61010
1000 V CAT IV
- Battery life > 2500 x 10 s measurements
- Removable lead and test probe
- Delivered complete and ready to use

MODEL	CA 773
ELECTRICAL	
Display	LEDs + backlit digital display
Voltage Absence Testing (VAT)	$12 \text{ V}_{AC} \leq U \leq 1000 \text{ V}_{AC}$; $12 \text{ V}_{DC} \leq U \leq 1400 \text{ V}_{DC}$
Voltage	(12 to 1000) V_{AC} ; (12 to 1400) V_{DC}
LEDs	(1.0 to 299.0) $\text{V}_{AC/DC}$ (300 to 1,000) V_{AC} / 1,400 V_{DC}
LEDs + backlit digital display	
Frequency	DC, (16.67 to 800) Hz
Impedance	> 500 $\text{k}\Omega$
Max. Peak Current	3.5 mA 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 30 mA
Phase / Neutral Identification	Above 50 V (45 to 65) Hz; Above 150 V (16.67 to 45) Hz
CONTINUITY & RESISTANCE	
Buzzer Trigger Threshold	100 Ω typical (150 Ω max.)
Extended Continuity Test (Resistance)	0.5 Ω to 2999 $\text{k}\Omega$
Test Current / Open-circuit Voltage	$\leq 1 \text{ mA}$ / $\leq 3.3 \text{ V}$
Phase Rotation	2-wire method with microprocessor
Ph / Ph Voltage	$50 \text{ V} \leq U \leq 1000 \text{ V}_{AC}$ (45 to 400) Hz
Buzzer	Intermittent beep for Voltage Detection Continuous beep for continuity
Electrical Safety	IEC 61243-3, EN 61243-3, IEC 61010 1000 V CAT IV
Operating Temperatures	(5 to 113) $^{\circ}\text{F}$ (-15 to 45) $^{\circ}\text{C}$ (Class N)
Power Supply	(2) AA batteries (included) or NiMH batteries
Environment	Storage: (-40 to 158) $^{\circ}\text{F}$ (-40 to 70) $^{\circ}\text{C}$
Dimensions	(7.72 x 3.54 x 1.85) in (196 x 90 x 47) mm
Weight	1.25 lb (567 g)

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

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



CAT. #	DESCRIPTION
2121.15	Voltage Tester Model CA 773 (LED & backlit display, VAT $12 \text{ V}_{AC} \leq U \leq 1000 \text{ V}_{AC}$; $12 \text{ V}_{DC} \leq U \leq 1400 \text{ V}_{DC}$, Absence of Voltage)



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MODELS CA 1725 & CA 1727

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



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)

PRODUCT INCLUDES

Hard case, FRB F connector, 9 V battery, set of (15) reflective strips, quick start guide and user manual. CA 1727 also includes a USB cable and TachoGraph software.



Table with 2 columns: CAT. #, DESCRIPTION. Rows include CA 1725 and CA 1727 models.

Table with 3 columns: MODELS, CA 1725, CA 1727. Sections include MEASUREMENTS (Rotational Speed, Linear Speed, Frequency, Period, Duty Cycle, Count), GENERAL (Power Supply, Battery Life, Data Storage, Dimensions, Weight, Environment, Communication), OPTICAL SENSOR (Reflective Area, Measurement Distance, Measurement Angle), and MECHANICAL (Adapter, Pressure on Moving Part, Service Life, Conical End-fitting Accessory, Cylindrical End-fitting Accessory, End-fitting Accessory with Wheel).

Consult factory for NIST Calibration prices.

ACCESSORIES

MECHANICAL ACCESSORIES KIT
CAT. #1749.02

Mechanical adapter, calibrated wheel, conical and cylindrical end fitting



ENVIRONMENTAL TESTERS



DataView®

DATA ANALYSIS AND REPORTING SOFTWARE

Why choose AEMC® Instruments Environmental Testers?

Looking for dependable, easy-to-use testing instruments for all your light, temperature, humidity, dew point, sound and CO₂ tests? AEMC® Instruments offers a full line of quality hand-held environmental test instruments that are easy-to-use and produce accurate results. All our models are ergonomically designed, perform multiple tasks, are battery operated and provide a digital display with backlighting.

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

MODEL CA813

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



CA813



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FEATURES

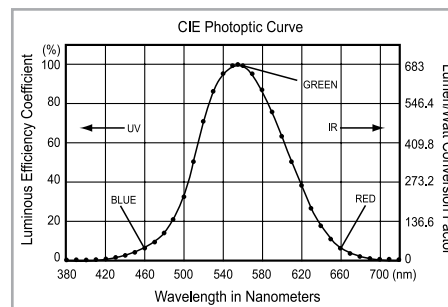
- Easy one-hand operation
- Designed to measure a wide range of lighting types
- Removable sensor for remote reading
- Measures in foot-candles (fc) or lux (lx)
- Measures incandescent lighting
- Cosine corrected
- Hold function
- Peak function
- CIE photopic (*human eye*) response
- 2000-count backlit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

PRODUCT INCLUDES

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

MODELS	CA813*
MEASUREMENTS	
Range	(20, 200, 2000) fc, 20 kfc (20, 200, 2000) lx, (20, 200) klx
Display Resolution	0.01 fc or 0.01 lx
Sensor	Silicon photodiode
Spectral Response	CIE Photopic Curve
Accuracy	
2856 K Light Source	± 5 % of Reading ± 10 cts
Common Light Source	± 11 % of Reading ± 2 cts
Sample Rate	2.5 times per s, 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 Supply	(1) 9 V Alkaline battery (<i>included</i>)
Low Battery Indication	 Displayed when battery voltage is low
Dimensions	(6.81 x 2.38 x 1.5) in (173 x 60 x 38) mm
Weight	Approx. 7.9 oz (224 g) (<i>including battery</i>)

Consult factory for NIST Calibration prices.



*Note: Model CA813 offers higher sensitivity (200 klx) and has a better spectral response to common light sources

APPLICATIONS

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

CAT. #	DESCRIPTION
2121.21	Lightmeter Model CA813

ENVIRONMENTAL TESTERS

AIR QUALITY



50 V
CAT II



MODEL 1510

Monitor CO₂, temperature, and humidity for a healthy environment



DataView®

Google Play
(Free Android® App available on Google Play)



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LEARN
MORE

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

PRODUCT INCLUDES

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



ACCESSORIES/REPLACEMENTS

CAT. #2138.61

Wall Mount Holster (Gray)

CAT. #2138.63

Calibration Kit

CAT. #2138.66

Cable - 6 ft. USB Type A - Type B micro

CAT. #2153.78

Adapter - US Wall Plug to USB

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

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 s
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 min to 2 h
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) in (125 x 65 x 32) mm / 6.7 oz (190 g) (with batteries)
Power Supply	Alkaline batteries: (2) AA or rechargeable battery connection to 120 V 60 Hz line / USB to wall adapter
Communication	Bluetooth® (Class II) 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, 50 V CAT II – IEC 61326-1

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2138.08	Air Quality Logger Model 1510 (Gray)
2138.09	Air Quality Logger Model 1510 (White)



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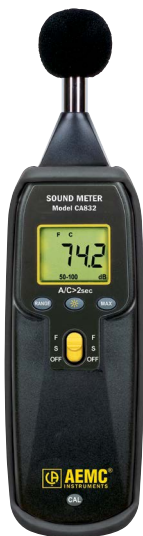
ENVIRONMENTAL TESTERS

SOUND LEVEL METER



MODEL CA832

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



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FEATURES

- Easy one-hand operation
- Measures sound according to the sensitivity of the human ear
- Max function
- Three measurement ranges from (37 to 130) dB
- Accuracy ± 1.5 dB (ref. 94 dB @ 1 kHz)
- Two time weighting curves:
S (*slow*) - 550 ms and F (*fast*) – 55 ms
- 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

- Hotels
- Factories
- Schools and libraries
- Airports
- Office environments and studios
- Auditoriums
- Hospitals
- Art Galleries

MODEL	CA832
MEASUREMENTS	
Measurement Range	(37 to 80) dB (50 to 100) dB (80 to 130) dB
Measurement Rate	2.5 times per s
Dynamic Range	50 db
Frequency Range	(31.5 to 8000) Hz
Accuracy	± 1.5 dB (ref. 94 dB @ 1 kHz)
Resolution	0.1 dB
Precision	± 2.0 dB
Display	2000-count
Sensor Type	0.5 in (13 mm) electric (<i>pre-polarized</i>) 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: 10 mV / dB – 50 Ω AC output: 1.0 Vrms – 600 Ω
Frequency Weighting	Curves A and C
Time Weighting	S (<i>slow</i>) - 550 ms and F (<i>fast</i>) - 55 ms
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 Supply	(1) 9 V Alkaline battery (<i>included</i>)
Low Battery Indication	is displayed when battery voltage is low
Dimensions	(9.33 x 2.38 x 1.5) in (237 x 60 x 38) mm
Weight	8.11 oz (230 g) including battery

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

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



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



CAT. #	DESCRIPTION
2121.23	Sound Level Meter Model CA832

ENVIRONMENTAL TESTERS

THERMO-HYGROMETER



MODEL 1246

Measure humidity and temperature in all conditions



FEATURES

- Measures temperature, humidity and dew point
- Dual line display toggles between any two of the measurements
- User selectable temperature units ($^{\circ}\text{F}$ or $^{\circ}\text{C}$)
- 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 micro), (3) 1.5 V AA alkaline batteries, printed quick start guide, and a USB drive with DataView® software and user manual.

ACCESSORIES

CAT. #2118.09 General Purpose Carrying Case	CAT. #2138.66 Cable - 6 ft. USB Type A - Type B micro
CAT. #2118.65 Soft Carrying Case	CAT. #2153.78 Adapter - US Wall Plug to USB
CAT. #2122.31 Shockproof Housing	CAT. #5000.44 MultiFix Universal Mounting System

MODEL	1246
RELATIVE HUMIDITY	
Measurement Range	(3.0 to 98.0) % RH
Accuracy	(10 to 90) % RH: $\pm (2 \% \text{ RH} \pm 1 \text{ ct})$; outside that range: $\pm (4 \% \text{ RH} \pm 1 \text{ ct})$
Resolution	0.1 % RH
Response Time (66 %)	60 s
TEMPERATURE	
Type of Sensor	Temperature sensor with semiconductor
Measurement Range	(-10.0 to + 60.0) $^{\circ}\text{C}$; (14.0 to + 140.0) $^{\circ}\text{F}$
Resolution	Display in $^{\circ}\text{C}$: 0.1 $^{\circ}\text{C}$; Display in $^{\circ}\text{F}$: 0.1 $^{\circ}\text{F}$
Accuracy ($^{\circ}\text{C}$)	(10 to 40) $^{\circ}\text{C}$: $\pm (0.5 \text{ }^{\circ}\text{C} \pm 1 \text{ ct})$ Outside that range: $\pm (0.032 \times (T-25) \pm 1 \text{ ct})$ / T= temperature in $^{\circ}\text{C}$
Response Time (66 %)	30 s
DEW POINT	
Measurement Range	(-10.0 to + 60.0) $^{\circ}\text{C}$ td; (14.0 to + 140.0) $^{\circ}\text{F}$ td
Resolution	Display in $^{\circ}\text{C}$: 0.1 $^{\circ}\text{C}$; Display in $^{\circ}\text{F}$: 0.1 $^{\circ}\text{F}$
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 min to 2 h. Start and end dates 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	$^{\circ}\text{C}$ or $^{\circ}\text{F}$ / % RH
Automatic power-off	User selectable choice of 3 min, 5 min, 10 min, or OFF through DataView® software
POWER SUPPLY	
Type	(3) 1.5 V AA / LR6 alkaline batteries. Connection to line power using supplied micro-USB cable. Wall adapter sold separately.
Battery Life	1000 h (portable mode) 3 y 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) in (187 x 72 x 32) mm / 14.1 oz (400 g) with batteries
Operating Range	Temperature: (14 to 140) $^{\circ}\text{F}$ (-10 to +60) $^{\circ}\text{C}$ / 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 generation
SAFETY / WARRANTY	
Safety Rating	IEC 61010-1 / IEC 61326-1
Ingress Protection	IP54
Warranty	2 y

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2121.73	Thermo-Hygrometer Data Logger Model 1246



ENVIRONMENTAL TESTERS

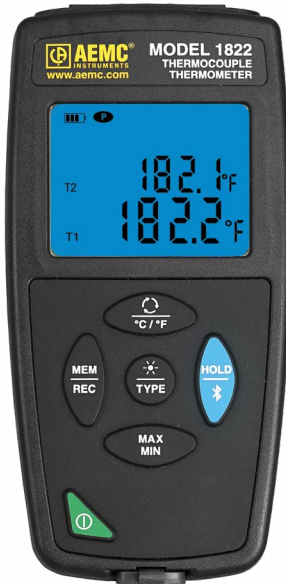
TEMPERATURE



with USB
connector
closed

MODEL 1822

*Versatility & high performance
temperature measurement*



FEATURES

- Selectable Thermocouple type, J, K, T, N, E, R, S
- Dual channel
- Dual line display
- User selectable temperature units, °F, °C
- Min and Max measurements stored
- HOLD function freezes the display
- Spot or continuous recording up to 1 million measurements
- Blue luminescent backlit display
- Programmable store on alarm function
- Magnetic mount
- Programmable alarms through software
- DataView® graphing and analysis software included
- Battery or USB powered
- Free app for Android™ from the Google® Play Store

PRODUCT INCLUDES

Soft carrying case, 6 ft USB cable (Type A to Type B micro), (2) K Thermocouple flexible sensors, (3) 1.5 V AA alkaline batteries, printed quick start guide, and a USB drive with DataView® software and user manual.



ACCESSORIES/REPLACEMENTS

CAT. #2138.66

Cable - 6 ft. USB Type A - Type B micro

CAT. #5000.44

MultiFlex Universal Mounting System

CAT. #2153.78

Adapter - US Wall Plug to USB

CAT. #2122.31

Shockproof Housing

CAT. #	DESCRIPTION
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2121.75	Thermocouple Thermometer Data Logger Model 1822
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ENVIRONMENTAL TESTERS

TEMPERATURE DATA LOGGER MODEL 1822

1822 Thermocouple Thermometer	
J, K, T, N, E, R, S: 2 Channel	
MEASUREMENTS	
Measurement Range	J: (-210 to +1200) °C / (-346 to +2192) °F K: (-200 to +1372) °C / (-328 to +2501) °F T: (-200 to +400) °C / (-328 to +752) °F N: (-200 to +1300) °C / (-328 to +2372) °F E: (-150 to +950) °C / (-238 to +1742) °F R,S: (0 to +1767) °C / (32 to +3212) °F
Resolution	Display in °C: $\emptyset < 1000\text{ }^{\circ}\text{C}$: 0.1 °C and $\emptyset \geq 1000\text{ }^{\circ}\text{C}$: 1 °C Display in °F: $\emptyset < 1000\text{ }^{\circ}\text{F}$: 0.1 °F and $\emptyset \geq 1000\text{ }^{\circ}\text{F}$: 1 °F
Accuracy (°C)	$\emptyset \leq -100\text{ }^{\circ}\text{C} \pm (0.2\text{ \% Reading} + 0.6\text{ }^{\circ}\text{C})$ $-100\text{ }^{\circ}\text{C} < \emptyset \leq +100\text{ }^{\circ}\text{C} \pm (0.15\text{ \% R} + 0.6\text{ }^{\circ}\text{C})$ $+100\text{ }^{\circ}\text{C} < \emptyset \pm (0.1\text{ \% R} + 0.6\text{ }^{\circ}\text{C})$
	$\emptyset \leq +100\text{ }^{\circ}\text{C} \pm (0.15\text{ \% R} + 1.0\text{ }^{\circ}\text{C})$ $+100\text{ }^{\circ}\text{C} < \emptyset \pm (0.1\text{ \% R} + 1.0\text{ }^{\circ}\text{C})$
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 min to 2 h Start and end dates 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 min, 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). Shockproof housing available as an accessory (CAT. #2122.31)
Connections	Compensated miniature female connectors
Dimensions / Weight	(5.9 x 2.84 x 1.28) in (150 x 72 x 33) mm / 9.2 oz (260 g) with batteries
Operating Range	Temperature from (14 to 140) °F (-10 to +60) °C / Humidity from (10 to 90) % RH
POWER SOURCE	
Type	(3) 1.5 V AA / LR6 alkaline batteries Connection to line power using supplied micro-USB cable. Wall adapter sold separately.
Battery Life	Model 1822: 1000 h (portable mode) 3 y for recording (15-minute measurement interval)
SAFETY	
Safety Rating	IEC 61010-1 / 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 y

Consult factory for NIST Calibration prices.

ENVIRONMENTAL TESTERS

LIGHTMETER



MODEL 1110

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



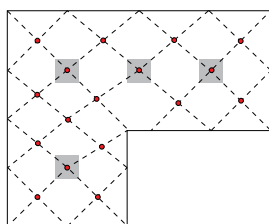
DataView®



(Free Android™ App available on Google® Play)



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

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 inches
- 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 8 MB flash memory
- Blue luminescent backlit display
- User selectable foot-candle (fc) or lux (lx) units
- USB and Bluetooth® communication
- Magnetic mount
- Battery or USB powered
- DataView® graphing and analysis software included

PRODUCT INCLUDES

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

MODEL	1110	
Measurement Range	(0.01 to 200,000) lx	(0.01 to 18,580) fc
Accuracy	$\pm 3\%$ of R on incandescent sources $\pm 6\%$ of R on LEDs (3000 to 6000) K $\pm 9\%$ of R on fluorescent sources	
Accuracy with Compensation	LED mode: $\pm 4\%$ of R (at 4000 K) Flou mode: $\pm 4\%$ of R (type F11, 4000 K)	
Display Resolution	0.1 lx (0.1 to 999.9) lx 1 lx (1000 to 9999) lx 10 lx (10,000 to 99.99) lx 100 lx beyond	0.01 fc (0.01 to 99.99) fc 0.1 fc (100.0 to 999.9) fc 1 fc (1000 to 9999) 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 (1, 2, 5, 10, 20, or 30) s, (2, 5, 10, 15 or 30) min, and 1 hr	
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 % RH	

GENERAL

Memory	1,000,000 measurements on each channel (4 MB) 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 Supply	(3) 1.5 V AA (LR6) alkaline batteries or USB port (micro-USB adaptor offered as an accessory)
Battery Life	500 h, 3 yrs with 15 min intervals
Dimensions	Case: (5.9 x 2.84 x 1.28) in (150 x 72 x 33) mm Sensor: (2.64 x 2.52 x 1.38) in (67 x 64 x 35) mm
Weight (with battery)	12.2 oz (34 g) 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 y

Consult factory for NIST Calibration prices.

ACCESSORIES/REPLACEMENTS

CAT. #2118.65

Soft Carrying Case

CAT. #2138.66

Cable - 6 ft. USB Type A - Type B micro

CAT. #2118.09

General Purpose Carrying Case

CAT. #2122.31

Shockproof Housing

CAT. #2153.78

Adapter - US Wall Plug to USB

CAT. #5000.44

MultiFix Universal Mounting System

CAT. #

DESCRIPTION

2121.71

Lightmeter Data Logger Model 1110

GROUND RESISTANCE TESTERS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

Why choose AEMC® Instruments Ground Resistance Testers?

We know it's essential for you to have the ability to properly measure Ground Resistance to prevent costly downtime due to service interruptions caused by poor grounds. That's why we offer one of the largest selections of easy-to-use Ground Resistance Testers. Our revolutionary Clamp-On Ground Resistance Testers will save you time and money with the ability to measure resistance without disconnecting the ground system. We developed and introduced the only Ground Tester capable of testing energized transmission towers (*Models 6472 & 6474*). It can also test Ground Resistance of individual power transmission tower legs (*as well as total resistance*) without disconnecting the overhead ground wire. Whether you perform a simple Point-to-Point test, a Clamp-On Ground Resistance test, or a more complete 3-or 4-Point Fall-of-Potential test, AEMC® Instruments manufactures the right instrument to fit your application.

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

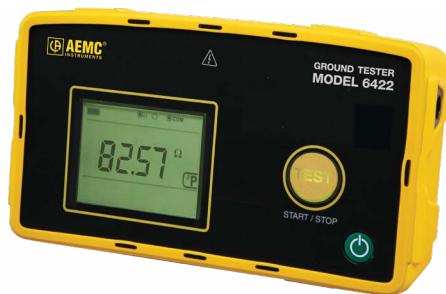
GROUND RESISTANCE TESTERS

MULTIFUNCTION



MODELS 6422 & 6424

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



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MODELS	6422			6424			
ELECTRICAL							
Voltage							
Measurement Range	—			(0.1 to 600) V _{AC/DC}			
Resolution	—			0.1 V			
Accuracy	—			± (1 % R + 1 ct)			
Current							
Range	—			(0.5 to 60) A _{AC} (requires optional MN72 probe)			
Ground Resistance (2 P Mode)							
Measurement Range	(0.05 to 99.99) Ω, (80 to 999.9) Ω, (0.80 to 9.999) kΩ, (8 to 50) kΩ						
Resolution	(0.01, 0.1, 1, 10) Ω						
Accuracy	± (2 % R + 10 cts), ± (2 % R + 2 cts), ± (2 % R + 1 ct), ± (2 % R + 1 ct)						
Ground Resistance (3 P Mode)							
Measurement Range	(0.50 to 99.99) Ω	(80 to 999.9) Ω	(0.800 to 2.000) kΩ	(0.50 to 99.99) Ω	(80 to 999.9) Ω	(0.800 to 9.999) kΩ	(8 to 50) kΩ
Resolution	0.01 Ω	0.1 Ω	1 Ω	0.01 Ω	0.1 Ω	1 Ω	10 Ω
Accuracy	± (1 % R + 10 cts)	± (1 % R + 2 cts)	± (1 % R + 1 ct)	± (1 % R + 10 cts)	± (1 % R + 2 cts)	± (1 % R + 1 ct)	
Measurement Frequency	(128 or 256) Hz (automatically selected)						
No-load Voltage	± 10 V peak						
Maximum Test Current	20 mA						
Measurement Mode	One shot or continuous						
Data Storage	—			Stores the (52, 62 and 72) % 3 P resistance measurements			
Calculation	—			Calculates average and % deviation of the three saved readings			
GENERAL							
Display	Backlit LCD						
Measurement Mode	2 P (Ω), 3 P (Ω)			V, I, 2 P (Ω), 3 P (Ω)			
Power Supply	(6) AA alkaline batteries			(6) NiMH rechargeable batteries, charging time approximately 6 h			
Battery Life	> 2000 x 3 P earth measurements at 100 Ω			> 1500 x 3 P earth measurements at 100 Ω			
Dimensions	(8.7 x 4.9 x 2.7) in (223 x 126 x 70) mm						
SAFETY							
Safety Rating	EMC: IEC 61326-1; IEC 61010-2-030 / 600 V CAT IV						

Consult factory for NIST Calibration prices.

CAT. #	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

MULTIFUNCTION

FEATURES

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

ACCESSORIES/REPLACEMENTS

CAT. #2135.39

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

CAT. #2153.06

MN72 AC Current Probe (6424 only)

CAT. #5000.92

Calibration Checker



CAT. #5000.92

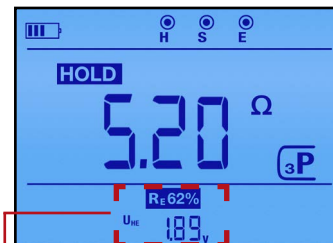


CAT. #2153.06

FUNCTIONAL DISPLAYS



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



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

Model 6424

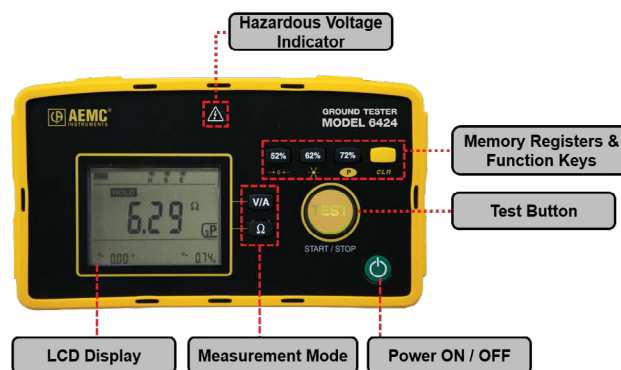


Live voltage is displayed when the V/A function is selected and test leads are connected to AC or DC voltage. (Model 6424)



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

FRONT PANEL - 6424



PRODUCT INCLUDES

Models 6422 and 6424: (2) 150 ft color-coded leads on spools (red/blue), (1) 30 ft lead (green), (2) T-shaped auxiliary ground electrodes, set of (2) 5 ft color-coded (red/blue) leads, (1) 100 ft tape measure, (6) AA rechargeable NiMH batteries, carrying bag and user manual

Model 6424 also includes: USB to wall charger, 5 V, 2 A, USB charger cable

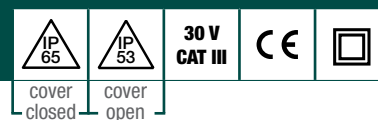


**KITS AVAILABLE
SHOWN: CAT. #2135.35**



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



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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 faulty 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

MODELS	4620		4630
ELECTRICAL			
Range	20 Ω	200 Ω	2000 Ω
Measurement Range	(0 to 19.99) Ω	(20 to 199.9) Ω	(200 to 1999) Ω
Resolution	10 mΩ	100 mΩ	1 Ω
Open Voltage	≤ 42 V peak		
Measurement Frequency	128 Hz square wave		
Test Current	10 mA	1 mA	0.1 mA
Accuracy	± 2 % of Reading ± 1 ct		± 5 % of Reading ± 3 cts
Aux Electrode Influence			
Max Res. - Current Circuit	3 kΩ	30 kΩ	50 kΩ
Max Res. - Voltage Circuit	50 kΩ		
Response Time	Approximately four to eight seconds for a stabilized measurement		
Withstanding Voltage	250 V _{AC} or 100 V _{DC}		
Power Supply	(8) C cell batteries (included); Alkaline recommended		(120 / 230) V, (50 / 60) Hz Rechargeable 9.6 V, 3.5 A·h NiMH battery pack (included)
Battery Life	> 2000 15 s measurements; LO BAT indication on LCD		
Fuse Protection	0.1 A, > 250 V , (0.25 x 1.25) in; 30 kA Interrupt Capacity		

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

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

ACCESSORIES/REPLACEMENTS

CAT. #2130.60

Tape Measure (100 ft)

CAT. #2135.35*

Test Kit for 3-Point Testing – 150 ft

CAT. #2135.36*

Test Kit for 4-Point Testing – 300 ft

CAT. #2135.37*

Test Kit for 4-Point Testing – 500 ft

CAT. #5000.14

AC Power cord (Model 4630)

CAT. #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 in T-shaped auxiliary ground electrodes and soft carrying bag)

CAT. #2130.59

Calibration Checker 25 Ω for Models 3640, 4620 and 4630

KIT SHOWN

4630 KIT (500 ft)

*Refer to page 87 for Test Kit descriptions



CAT. #	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 CAT. #2135.35)
2135.20	Ground Resistance Tester Model 4620 Kit – 300 ft (Model 4620 and CAT. #2135.36)
2135.21	Ground Resistance Tester Model 4620 Kit – 500 ft (Model 4620 and CAT. #2135.37)
2135.22	Ground Resistance Tester Model 4630 Kit – 150 ft (Model 4630 and CAT. #2135.35)
2135.23	Ground Resistance Tester Model 4630 Kit – 300 ft (Model 4630 and CAT. #2135.36)
2135.24	Ground Resistance Tester Model 4630 Kit – 500 ft (Model 4630 and CAT. #2135.37)

GROUND RESISTANCE TESTERS

CLAMP-ON



6417 Only

MODELS 6416 & 6417

Provides high safety level with new ground voltage indication feature



FEATURES

- Ground Integrity Measurement
- Ground voltage indication (*warns of possible unsafe conditions*)
- Large multifunction bright yellow OLED (*organic LED display*)
- Selectable test frequency (*improves accuracy in inductive environments*)
- Clamping diameter of 1.37 in (35 mm) 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 30 ft*) 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 alerts the user to presence of dangerous voltage and current levels

MODELS	6416 & 6417		
ELECTRICAL			
	Measurement Range	Resolution	Accuracy (% of Reading)
Ground Resistance	(0.010 to 0.099) Ω	0.001 Ω	± 1.5 % ± 0.01 Ω
	(0.10 to 0.99) Ω	0.01 Ω	± 1.5 % ± 0.02 Ω
	(1 to 49.9) Ω	0.1 Ω	± 1.5 % ± 0.1 Ω
	(50 to 99.5) Ω	0.5 Ω	± 2 % ± 0.5 Ω
Auto-Ranging (0.01 to 1499) Ω	(100 to 199) Ω	1 Ω	± 3 % ± 1 Ω
	(200 to 395) Ω	5 Ω	± 5 % ± 5 Ω
	(400 to 590) Ω	10 Ω	± 10 % ± 10 Ω
	(600 to 1150) Ω	50 Ω	20 % approx.
	(1200 to 1500) Ω	50 Ω	25 % approx.
Current Measurement	(0.200 to 0.999) mA	1 μA	± 2 % ± 50 μA
	(1.000 to 2.990) mA (3 to 9.99) mA	10 μA	
	(10 to 29.90) mA (30 to 99.9) mA	100 μA	± 2 % ± 100 μA
	Auto-Ranging 1 mA to 40 A	(100 to 299) mA (0.300 to 0.990) A	1 mA
(1.000 to 2.990) A (3 to 39.99) A		10 mA	± 2 % ± 10 mA
Selectable Measurement Frequency	(50, 60, 128 or 2083) Hz		
Current Measurement Frequency	(47 to 800) Hz		
Inductance Measurement	(10 to 100) μH; (100 to 500) μH		
Current Overload	OL displayed above 39.99 Arms		
Communication	Bluetooth® connection (<i>Model 6417 only</i>)		
Power Supply	(4) 1.5 V LR6 (AA) alkaline batteries or (4) NiMH batteries; Battery life: 12 h, or 1440, 30 - s measurements approx.		
SAFETY			
Safety Rating	EN 61010-1, 600 V CAT IV		

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

6416 & 6417

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

6417

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



CAT. #	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)



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GROUND RESISTANCE TESTERS

CLAMP-ON



MODEL 6418

Designed for measuring ground impedance on ground rods and bus bars



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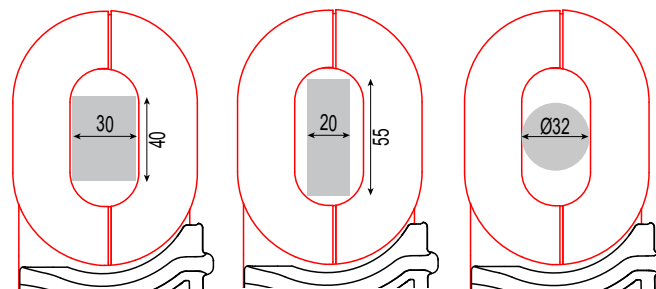
FEATURES

- Ground Integrity Measurement
- Large multifunction bright yellow OLED (*organic LED display*) (1.89 x 1.55) in (48 x 39) mm
- 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 alerts the user to presence of dangerous current levels
- Designed to EN 61010-1, 100 V CAT IV and 150 V CAT III safety standards
- Automatic calibration of the jaw gap at power-up

MODEL	6418		
ELECTRICAL			
	Measurement Range	Resolution	Accuracy (% of Reading)
Ground Resistance	(0.010 to 0.099) Ω	0.001 Ω	± 1.5 % ± 0.01 Ω
	(0.10 to 0.99) Ω	0.01 Ω	± 1.5 % ± 0.02 Ω
	(1 to 49.9) Ω	0.1 Ω	± 1.5 % ± 0.2 Ω
	(50 to 149) Ω	1 Ω	± 2.5 % ± 2 Ω
	(150 to 245) Ω	5 Ω	± 5 % ± 10 Ω
Auto Ranging	(250 to 440) Ω	10 Ω	± 10 % ± 20 Ω
	(450 to 640) Ω	10 Ω	± 15 % ± 20 Ω
	(650 to 1200) Ω	50 Ω	± 20 % Reading + 100 Ω
Measurement Frequency	2083 Hz		
Current Measurement	(0.50 to 9.950) mA	50 μA	± 2 % + 200 μA
	(10 to 99.90) mA	100 μA	± 2 % + 100 μA
	(100 to 299) mA	1 mA	± 2 % ± 1 mA
Auto Ranging 1 mA to 20 A	(0.300 to 2.990) A	10 mA	± 2 % ± 10 mA
	(3.000 to 20) A	100 mA	± 2 % ± 100 mA
Current Measurement Frequency	(47 to 800) Hz		
Current Overload	OL displayed above 19.99 Arms		
Power Supply	(4) 1.5 V LR6 (AA) alkaline batteries or (4) NiMH batteries; Battery life: 12 h, or 1440 30 s <i>Measurements approx.</i>		

Consult factory for NIST Calibration prices.

CLAMPING CHARACTERISTICS



PRODUCT INCLUDES

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



CAT.

DESCRIPTION

2141.03

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

GROUND RESISTANCE TESTERS

CLAMP-ON

FUNCTIONAL DISPLAYS (MODEL DEPENDENT)



MEASUREMENT RESULTS



MEMORY RECALL MODE



ALARM



LOOP DETECTION



GROUND VOLTAGE



IMPEDANCE OVER RANGE



GROUND RESISTANCE TESTERS

MULTIFUNCTION



50 V
CAT IV



cover
closed

MODEL 6471

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



DataView®



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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 (32 V/1611 Hz) 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, (110/240) V power adapter with US power cord, optical USB cable, rechargeable NiMH battery, and a USB drive with DataView® software, ground tester workbook and user manual.

CAT. #2135.49 MODEL 6471 (with probes)

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

KIT SHOWN 300 FT KIT: CAT. #2135.50

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, (110/240) V 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 user manual.



2 probes required to perform stakeless testing

MODEL	6471
ELECTRICAL	
2-Clamp Measurement	
Range	(0.10 to 500) Ω
Resolution	(0.01 to 1) Ω
Measurement Frequency	Auto: 1611 Hz Manual: (128, 1367, 1611, or 1758) Hz
3-Point Measurement	
Range (Auto-Ranging)	0.09 Ω to 99.9 kΩ
Resolution	(0.01 to 100) Ω
Test Voltage	Nominal (16 or 32) Vrms user selectable
Resistance Measurement Frequency	(41 to 513) Hz automatic or user selectable
Test Current	Up to 250 mA
Accuracy	± 2 % of Reading + 1 ct @ 128 Hz
Soil Resistivity 4-Point Measurement	
Test Method	Wenner or Schlumberger selectable with automatic calculation in Ω-meters.
Range (Auto-Ranging)	(0.01 to 99.9) kΩ; ρ max: 999 kΩm
Resolution	(0.01 to 100) Ω
Test Voltage	(16 or 32) V user selectable
Frequency	From (41 to 128) Hz selectable
External Voltage Measurement	
Range (Auto-Ranging)	(0.1 to 65) Vac/dc – DC to 440 Hz
Accuracy	± 2 % of Reading + 1 ct
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 99.99) kΩ; 4-Pole (0.02 to 99.99) kΩ
Accuracy	± 2 % of Reading + 2 cts
Test Voltage	16 Vdc (+, - or auto polarity)
Test Current	Up to 250 mA max
Data Storage	
Memory Capacity	512 test results (64 kB)
Communication	Optically Isolated USB
Power Supply	9.6 V rechargeable battery pack (included)
Recharging Source	(110 / 220) V, (50 / 60) Hz external charger with 18 Vdc, 1.9 A output

Consult factory for NIST Calibration prices.

ACCESSORIES

REEL CADDY

CAT. #2135.85 Set of (2), for use with ground kit spools



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



SR182 CURRENT PROBE
(0.5 mA to 40 Arms)
CAT. #2135.72

GROUND RESISTANCE TESTERS

MULTIFUNCTION



cover
closed

MODEL 6472

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



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

TEST KITS

6472 METER

300 ft Kit: CAT. #2135.53

500 ft Kit: CAT. #2135.54 (shown)

Refer to page 87 for

Model 6472 Kit descriptions

CAT. #2135.35, #2135.36 and #2135.37



2 probes required to perform stakeless testing

MODEL	6472
ELECTRICAL	
2-Clamp Measurement	
Range	(0.1 to 500) Ω
Resolution	(0.01 to 1) Ω
Measurement Frequency	Auto: 1611 Hz Manual: (128, 1367, 1611, or 1758) Hz
3-Point Measurement	
Range (Auto-Ranging)	0.09 Ω to 99.9 k Ω
Resolution	(0.01 to 100) Ω
Test Voltage	Nominal (10, 16, 32 or 60) Vrms user selectable
Resistance Measurement Frequency	(41 to 5078) Hz automatic or user selectable
Test Current	Up to 250 mA
Accuracy	$\pm 2\%$ of Reading + 1 ct @ 128 Hz
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 99.9) k Ω ; ρ max: 999 k Ω m
Resolution	(0.01 to 100) Ω
Test Voltage	(10, 16, 32 or 60) V user selectable
Frequency	From (41 to 128) Hz selectable
External Voltage Measurement	
Range (Auto-Ranging)	(0.1 to 65) V _{AC/DC} – DC to 440 Hz
Accuracy	$\pm 2\%$ of Reading + 1 ct
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 Ω to 99.99 k Ω ; 4-Pole 0.02 Ω to 99.99 k Ω
Accuracy	$\pm 2\%$ of Reading + 2 cts
Test Voltage	16 V _{DC} (+, - or auto polarity)
Test Current	Up to 250 mA max
Data Storage	
Memory Capacity	512 test results (64 kB)
Communication	Optically Isolated USB
Power Supply	9.6 V rechargeable battery pack (included)
Recharging Source	(110 / 220) V, (50 / 60) Hz external charger with 18 V _{DC} , 1.9 A output

Consult factory for NIST Calibration prices.

ACCESSORIES



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



SR182 CURRENT PROBE
(0.5 mA to 40 Arms)
CAT. #2135.72



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



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GROUND RESISTANCE TESTERS

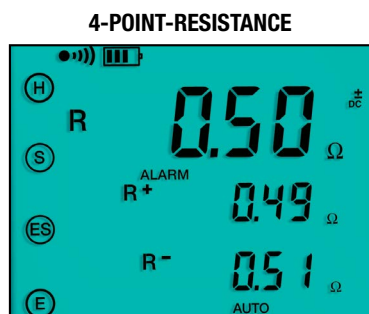
MULTIFUNCTION

FEATURES

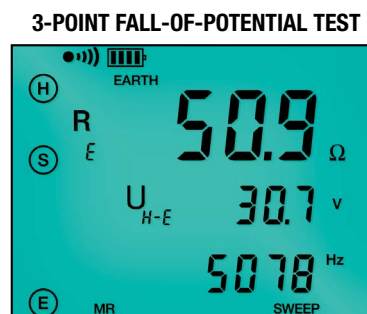
- Ground Resistance testing using the 2-clamp method (*no auxiliary rods needed*)
- 2- and 4-Point Resistance/Continuity measurement (*DC Resistance*) with automatic polarity reversal
- 3-Point Fall-of-Potential measurement with manual or automatic frequency selection
- 4-Point Soil Resistivity measurement 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 (10, 16, 32 or 60) V up to 250 mA of test current (*model dependent*)
- 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 (*CAT. #2135.43 needed for 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.

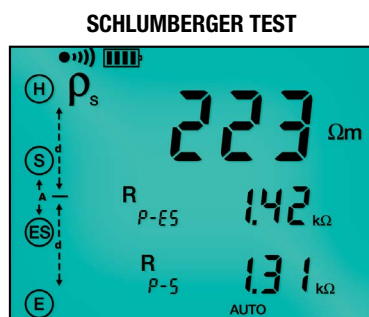
LARGE FUNCTIONAL DISPLAYS



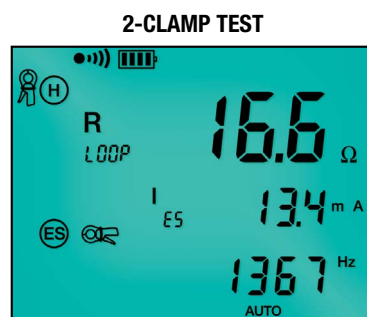
The 4-Point test shows lead connections, Continuity test results, test voltage and current.



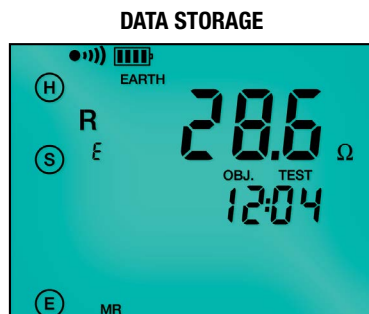
The 3-Point Fall-of-Potential test displays test lead connection, grounding rod resistance and test electrode resistances.



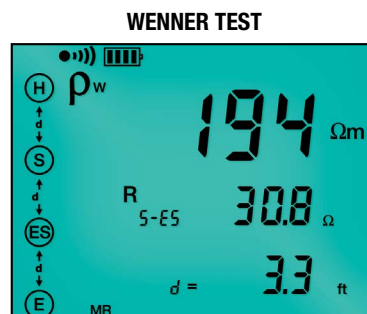
The Schlumberger test displays test lead connection, soil resistivity (ρ) test results and electrode spacing.



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



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



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

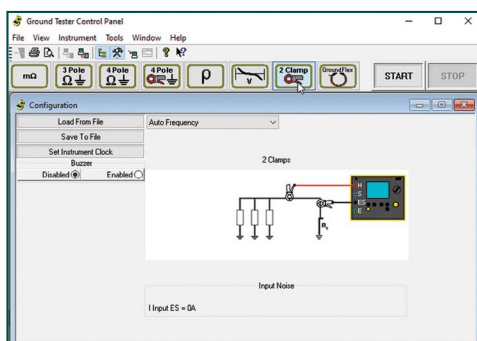
CAT. #	DESCRIPTION
2135.48	Ground Resistance Tester Model 6471 (Digital, 3-Point, 4-Point, Clamp-on (SR182 probes not included), DataView® Software)
2135.49	Ground Resistance Tester Model 6471 (Digital, 3-Point, 4-Point, Clamp-on, (includes 2-SR182 probes), DataView® Software)
2135.50	Ground Resistance Tester Model 6471 Kit – 300 ft (CAT. #2135.49 and CAT. #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 (CAT. #2135.51 and CAT. #2135.36)
2135.54	Ground Resistance Tester Model 6472 Kit – 500 ft (CAT. #2135.51 and CAT. #2135.37)
2135.60	Ground Resistance Tester Model 6471 Kit – 300 ft w/o Probes (CAT. #2135.48 and CAT. #2135.36)
2135.61	Ground Resistance Tester Model 6471 Kit – 500 ft w/o Probes (CAT. #2135.48 and CAT. #2135.37)

GROUND RESISTANCE TESTERS

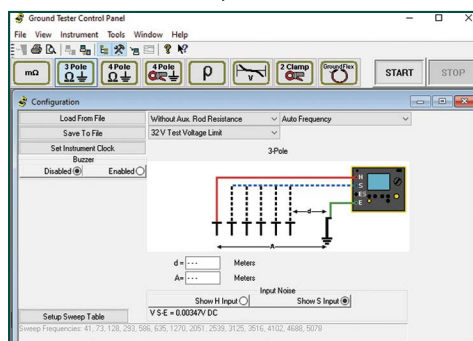
MULTIFUNCTION

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

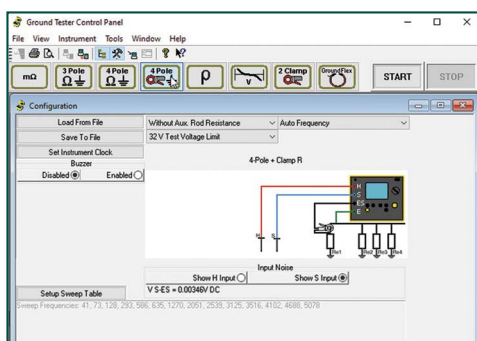
2-CLAMP METHOD SETUP



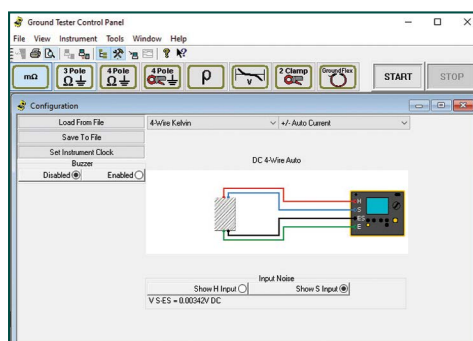
FALL-OF-POTENTIAL, STEP-TOUCH POTENTIAL



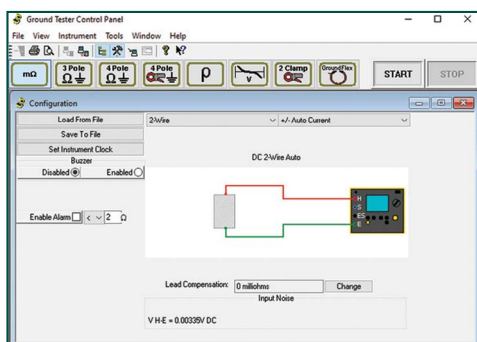
SELECTIVE 3-POINT TESTING OF MULTIPLE RODS



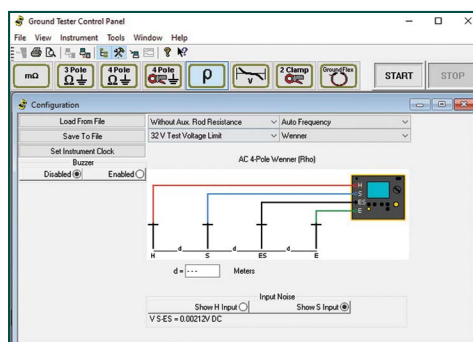
4-POINT-RESISTANCE



2-POINT-RESISTANCE



SOIL RESISTIVITY



OPTIONAL KITS

150 FT KIT

CAT. #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 in T-shaped auxiliary ground electrodes, a set of (5) spaded lugs and (1) 100 ft tape measure.



300 FT KIT

CAT. #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 in T-shaped auxiliary ground electrodes, a set of (5) spaded lugs and (1) 100 ft tape measure.



500 FT KIT

CAT. #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 in T-shaped auxiliary ground electrodes, a set of (5) spaded lugs and (1) 100 ft tape measure.



GROUND RESISTANCE TESTERS

GROUNDFLEX® FIELD KIT



50 V
CAT IV



cover
closed

GROUNDFLEX® FIELD KIT

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



DataView®



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Revolutionize Tower Grounding Assessment

GROUND TESTER 6472 KIT-500 FT

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

GROUNDFLEX® FIELD KIT 6474

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

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

MODELS	6472 & 6474						
ELECTRICAL							
	3-POINT METHOD	4-POINT & SELECTIVE METHODS	GROUND MEASUREMENT WITH 2 CLAMPS	SOIL RESISTIVITY	GROUND POTENTIAL MEASUREMENT	DC RESISTANCE MEASUREMENT	MEASUREMENTS WITH 6474
Range (Auto-Ranging)	0.09 Ω to 99.9 kΩ	0.011 Ω to 99.99 kΩ	(0.1 to 500) Ω	0.01 Ω to 99.9 kΩ	0.01 mV to 65 V	0.02 Ω to 99.99 kΩ	0.067 Ω to 99.99 kΩ
Resolution	(0.01 to 100) Ω	(0.001 to 10) Ω	(0.01 to 1) Ω	(0.01 to 100) Ω	(0.01 to 10) mV	2 wires: (0.01 to 100) Ω 4 wires: (0.001 to 10) Ω	(0.001 to 10) Ω
Accuracy	± (2 % + 1 ct)		± (10 % + 1 ct)	± (2 % + 1 ct)	± (5 % + 1 ct)	± (2 % + 2 cts)	± (5 % + 1 ct)
No-Load Voltage	(10, 16, 32 or 60) Vrms (Not applicable w / 2-clamp method)					± 16 Vdc	(10, 16, 32 or 60) Vrms
Measurement Frequency	(41 to 5078) Hz		Auto: 1611 Hz Manual: (128, 1367, 1611, or 1758) Hz	(41 to 128) Hz	(41 to 5078) Hz	DC	(41 to 5078) Hz
Coupling Measurement	Yes	—					
Auxiliary Rod Resistance Measurement	0.14 Ω to 99.9 kΩ		—				0.14 Ω to 99.9 kΩ
Voltage Interference	Maximum 60 V peak						
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	> 200 mAAC		< 26 A _{RM} (w / SR182) < 5 A _{RM} (w / MN82)	> 200 mAAC		> 200 mA _{DC}	> 200 mAAC
MECHANICAL							
Memory / Communication	512-record memory / Optically isolated USB						
Dimensions / Weight	(10.7 x 9.84 x 5.04) in (272 x 250 x 128) mm / Model 6472: 7.05 lb (3.2 kg) / Model 6474: 5.07 lb (2.3 kg)						
SAFETY							
Safety Rating	50 V CAT IV, complies with IEC 61326-1 / IEC 61010 / IEC 61557-1-4-5						

Consult factory for NIST Calibration prices.

GROUND RESISTANCE TESTERS

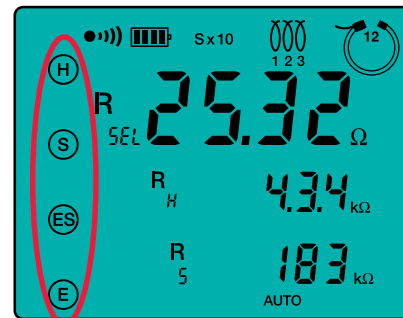
GROUND FLEX® FIELD KIT

SHOWN: 6474 KIT



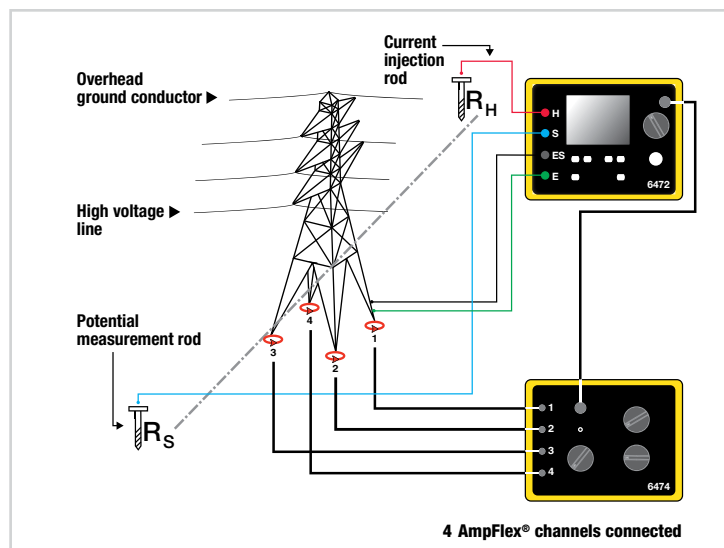
AUTOMATIC RECOGNITION AND DISPLAY OF INPUT CONNECTIONS TO MATCH TEST

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



FEATURES

- Ground Integrity Measurement
- 3- and 4-Point Fall-of-Potential measurement with manual or automatic frequency selection
- 4-Point soil resistivity measurement with automatic calculation of Rho (ρ) and user selection of the Wenner or Schlumberger test method
- 2- and 4-Wire DC resistance measurement (*Bond testing*) with automatic polarity reversal
- 3-Point Earth coupling measurement
- Automatic frequency scan from (41 to 5078) Hz for optimum test accuracy in electrically noisy environments
- Selectable test voltage limit of (10, 16, 32, or 60) V with up to 250 mA of test current
- Automatic recognition of all electrode connections and measurement of their resistance value
- Determines bonding condition of overhead ground conductors
- Auto Power OFF management
- Optically isolated USB communication
- Remote set up and operation of all measurements using DataView® software supplied
- Rechargeable NiMH batteries from wall charger or vehicle power (CAT. #2135.43 needed for vehicle power)
- Rugged dustproof and water-resistant field case (IP53 rated in closed position)
- Includes DataView® software for data retrieval, real-time display, analysis, automatic report generation and system configuration



GROUND MEASUREMENT ON TOWERS WITH GROUND CABLE

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

ACCESSORIES

CAT. #2135.87

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



CAT. #2135.72

Model SR182
AC Current Probe
(Models 6471 & 6472)



CAT. #2135.86

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



CAT. #

DESCRIPTION

2136.03 GroundFlex® Field Kit Model 6474 (Tower Tester)



Vol. 24 Rev.00 06/2024

Technical Assistance (800) 343-1391

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GROUND RESISTANCE TESTERS

POINT-TO-POINT CONTINUITY TESTER

300 V
CAT IV



MODEL CA 6011

A faster, simpler, and lightweight solution for testing grounded pathways and connections over long distances – even in hard-to-reach locations!



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MORE

FEATURES

- **Comfortable:** wrist-worn and lightweight
- **Convenient:** continuity probe assists with performing testing in hard-to-reach areas
- **Efficient:** performs significantly faster than a ground resistance type meter
- **Accurate:** automatic polarity reversal (*applies current + to - then - to + for more accurate results*)
- **Lead compensation** for accurate measurements
- **Constant operation:** continuously measures — no need to press a button to start or stop a test
- Commissioning or troubleshooting bonded non-current carrying conductive pathways to ground
- Checking connections over long distances
- **Compatible with AEMC® Instruments ground testing accessories** (*instrument will work with our reel kits*)

APPLICATIONS

Test continuity on:

- EGC (*equipment ground conductors*)
- Swimming pool grounds
- Lightning conductors
- GEC (*ground electrode conductors*)
- Isolated ground conductors
- Electrical cabinets
- Motors
- Building steel
- Light fixtures
- Data centers
- Solar racks
- Windmill blades

Applicable industries:

- Lightning Protection
- Traffic management
- Data centers communications
- Solar/renewable energy
- MSHA (*Mining and general contractors*)
- Static ground for hazardous materials (*paint shops, chemical processing*)
- Utility (*construction for commissioning ground integrity for substations*)

MODEL	CA 6011	
ELECTRICAL		
Continuity Mode		
Range	(0.00 to 2.00) Ω	(2.00 to 20.00) Ω
Resolution	10 mΩ	
Measurement Current (with automatic polarity reversal)	200 mA	20 mA
Open-Circuit Voltage	±(4 V _{DC} < U < 6 V _{DC})	
Threshold	Programmable 1 Ω or 2 Ω	
Resistance Mode		
Range	(1.0 to 200.0) Ω	
Resolution	100 mΩ	
Measurement Current	10 mA	
Open-Circuit Voltage	±(4 V _{DC} < U < 6 V _{DC})	
Compensation of Lead Resistance	Yes, < 5 Ω	
MECHANICAL		
Battery Life	30,000 measurements typically	
Automatic Standby	10 min / deactivatable	
Power Supply	(4) 1.5 V AA / LR6 batteries	
Dimensions	(8.86 x 7.28 x 5.31) in (225 x 185 x 135) mm	
Weight	12.34 oz (350 g)	
SAFETY		
Safety Ratings	IEC 61557 parts 1 and 4, IEC 61010-1, IEC 61010-2-030, 300 V CAT IV	

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

Model CA 6011: Includes elastic wrist strap, (4) AA batteries in small white box with sleeve, safety sheet and user manual.

Testing Kit Model CA 6011: Includes elastic wrist strap, (4) AA batteries, small classic tool bag, (1) 5 ft red lead (*straight/straight*), (1) 5 ft black lead (*straight/straight*), (1) black test probe, (1) 150 ft red lead on spool, (1) continuity probe set, safety sheet and user manual.

Testing Kit Model CA 6011 Cat. #2135.63



CAT. #	DESCRIPTION
2135.62	Point-to-Point Continuity Tester Model CA 6011
2135.63	Point-to-Point Continuity Testing Kit Model CA 6011

LEAKAGE CURRENT METERS & PROBES



Why choose AEMC® Instruments Leakage Current Meters & Probes?

Detect hidden electrical dangers such as fire risks and shock hazards stemming from faulty wiring, aging appliances, and damaged insulation with our TRMS Clamp-on Leakage Current Meters, which accurately measure low AC currents in the (60 and 600) mA ranges. Our Clamp-on Meters effortlessly attach to wires and detect even the slightest current leaks that conventional methods may miss, thanks to our high sensitivity resolution enabled by special jaw construction and critical noise shielding for precise and consistent measurements. Our Clamp-on Leakage Meters measure up to 60 Arms, as well as V_{AC} and V_{DC} ranges, resistance, and continuity with a buzzer. Designed with ergonomics in mind, all our Clamp-on Meters fit comfortably in hand, allowing for easy one-handed operation. Ensure electrical safety in homes and businesses with confidence – choosing our Clamp-On Leakage Current Meters is a wise decision for electrical peace of mind.

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

LEAKAGE CURRENT METERS & PROBES

TRMS CLAMP-ON LEAKAGE CURRENT METER

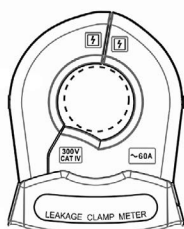
600 V
CAT III



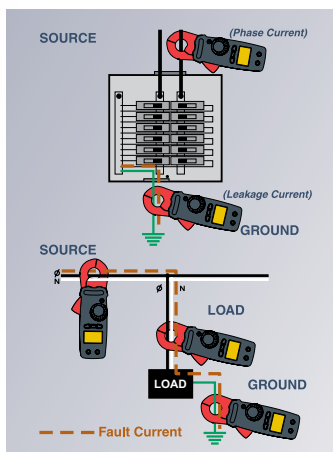
**1 μ A
Resolution**

MODEL 566

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



Jaw Opening: .91 in (23 mm)



SCAN TO
LEARN
MORE

FEATURES

- Check for leakage and locate insulation breakdowns on live circuits
- Measures leakage current down to 0.001 mA with up to 1 μ A resolution
- Measures current up to 60 Arms
- Measures up to 600 Vac/dc
- Measures Hz on either V or A inputs
- Measures resistance and continuity
- Hold feature freezes value
- MAX feature keeps track of highest measured value
- Zero button ideal for measuring relative values
- Low pass filter to isolate (50/60) Hz fundamental from harmonics
- Compatible with VDE 0404
- Backlight LCD display

MODEL	566
ELECTRICAL	
ACmA Current (TRMS, Auto-Ranging)	
Resolution	6 mA 60 mA 600 mA
	0.001 mA (1 μ A) 0.01 mA (10 μ A) 0.1 mA (100 μ A)
Accuracy	(50 to 60) Hz (6 mA) (50 to 60) Hz (60 and 600) mA (60 to 500) Hz (6 mA) (60 to 500) Hz (60 and 600) mA
	± 1.0 % of Reading ± 8 cts ± 1.0 % of Reading ± 5 cts ± 2.0 % of Reading ± 8 cts ± 2.0 % of Reading ± 5 cts
AC Current (TRMS, Auto-Ranging)	
Resolution	6 A 60 A
	1 mA 10 mA
Accuracy	(50 to 60) Hz (60 to 500) Hz
	± 1.0 % of Reading ± 5 cts ± 2.0 % of Reading ± 5 cts
AC Voltage (TRMS)	
Accuracy	60 V 600 V
	± 1.0 % of Reading ± 3 cts
Resolution	60 V 600 V
	0.01 V 0.1 V
DC Voltage	
Resolution	60 V 600 V
	0.01 V 0.1 V
Accuracy	60 V 600 V
	± 1.0 % of Reading ± 2 cts
Resistance	
Accuracy	± 1.0 % of Reading ± 2 cts
Low Pass Filter (LPF)	On 60 Hz only; Off (full frequency range)
MECHANICAL	
Jaw Opening Max Conductor Size	0.91 in (23 mm)
Weight	10.4 oz (296 g) with batteries
Power Supply	(2) 1.5 V AAA batteries (included)
ENVIRONMENTAL	
Operating Temperature	(32 to 104) $^{\circ}$ F (0 to 40) $^{\circ}$ C; < 80 % RH (non-condensing)
SAFETY	
Safety Rating	600 V CAT III

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

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



CAT. # DESCRIPTION

2139.83 TRMS Clamp-on Leakage Current Meter Model 566 (6/60/600 mA, 6/60 A, 600 Vac/dc, Ohms, Continuity)

LEAKAGE CURRENT METERS & PROBES

LEAKAGE CURRENT PROBE

600 V
CAT III

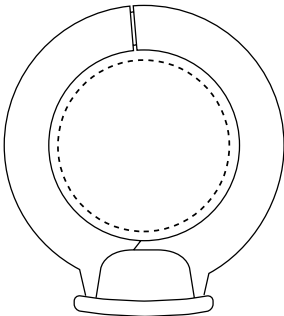


MODEL 2620

Check for leakage and locate insulation breakdowns on live circuits



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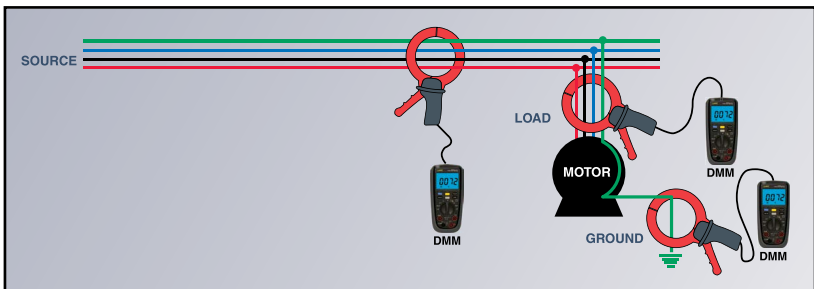
Jaw Opening: 4.4 in (112 mm)
Conductor Size: 4.4 in (112 mm)

FEATURES

- Very high sensitivity
- Differential or leakage current from 500 μ A
- Current up to 400 A
- Two switch-selectable measurement ranges: (4/400) A_{AC}
- 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

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

Consult factory for NIST Calibration prices.



CAT. #	DESCRIPTION
2125.52	Leakage Current Probe Model 2620 (4 A, 1 V/A & 400 A, 1 mV/A output)



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and consistent results. We meticulously test and verify millions
of data points, striving for complete customer satisfaction.

Measure Up
WITH AEMC INSTRUMENTS®

MEGOHMMETERS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

Why choose AEMC® Instruments Megohmmeters?

We know it's essential for you to have the ability to properly determine the condition of the insulation on wire and motor windings to prevent damage of expensive equipment and unplanned shutdowns as well as ensure personal safety. That's why we offer the widest range of Megohmmeters with test voltages from 500 V to 15 kV (*model dependent*), capable of measuring insulation resistances from 1 MΩ to 30 TΩ. These rugged, weather resistant meters are accurate, reliable and built to perform. Routinely using a Megohmmeter to check both new installations and as a maintenance program helps to ensure your circuits are safe. AEMC® Instruments Megohmmeters perform spot, timed, step voltage, and ramp voltage testing to measure resistance, Dielectric Absorption Ratio (DAR), Polarization Index (PI) and Dielectric discharge (DD).

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

MEGOHMMETERS

1000 V HAND-CRANKED



600 V
CAT II

300 V
CAT III



MODEL 6503

Designed for acceptance testing and preventive maintenance of wiring, cables, switchgear and motors
Ideal for use in areas affected by floods (hand-cranked)



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TRUE MegOhmmeter®

FEATURES

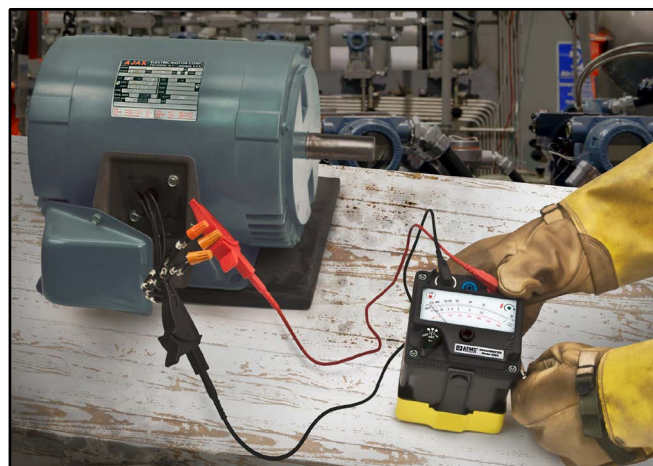
- True Megohmmeter®
- No batteries or power needed to operate
- Test voltages of (250, 500, and 1000) V
- Insulation measurements to 5000 MΩ
- LED indicates constant voltage output and proper cranked speed controlled by voltage regulator
- Automatic discharge when measurement is finished
- Auto-Ranging – 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

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

MODEL	6503
INSULATION TESTS	
Test Ranges*	250 V (1 to 500) MΩ 500 V (1 to 500) MΩ 1000 V (10 to 5000) MΩ (5 GΩ)
Short Circuit Current	5 mA (max)
Voltage Measurement / Safety Check	(0 to 600) V _{AC}
Accuracy (MΩ)	± 2.5 % of Full Scale Length
Automatic Discharge	8 s / μF
SAFETY	
Test Voltage Indicator	Green LED indicates proper test voltage and crank speed (If the LED is not ON during testing, the reading is not valid)
Safety Rating	600 V CAT II, 300 V CAT III

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



CAT. #	DESCRIPTION
2126.52	Megohmmeter Model 6503 (hand-cranked, (250, 500, 1000) V)

MEGOhMMETERS

1000 V DIGITAL

**600 V
CAT IV**

MODEL 6527

Insulation tester with DMM functions specially designed for testing wiring, small motors and other equipment



SCAN TO
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MORE

TRUE MegOhmmeter®

FEATURES

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

MODEL	6527			
Range	4 MΩ	40 MΩ	400 MΩ	4000 MΩ (4 GΩ)
INSULATION TESTS (250 V)				
Resolution	0.001 MΩ	0.01 MΩ	0.1 MΩ	1 MΩ
Accuracy	± 2 % of Reading ± 10 cts		± 3 % of Reading ± 5 cts	± 4 % of Reading ± 5 cts
Test Current	1 mA test current into a 250 kΩ load			
INSULATION TESTS (500 V)				
Resolution	0.001 MΩ	0.01 MΩ	0.1 MΩ	1 MΩ
Accuracy	± 2 % of Reading ± 10 cts		± 2 % of Reading ± 5 cts	± 4 % of Reading ± 5 cts
Test Current	1 mA test current into a 500 kΩ load			
INSULATION TESTS (1000 V)				
Resolution	0.001 MΩ	0.01 MΩ	0.1 MΩ	1 MΩ
Accuracy	± 3 % of Reading ± 10 cts	± 2 % of Reading ± 10 cts	± 3 % of Reading ± 5 cts	± 4 % of Reading ± 5 cts
Test Current	1 mA test current into a 1 MΩ load			
VOLTMETER RANGES				
V AC / DC	600 V		1000 V	
Resolution	1 V			
Accuracy	DC ± 0.8 % of Reading ± 3 cts AC ± 1.2 % of Reading ± 10 cts			
Input Impedance	DC 10 MΩ AC 10 MΩ (40 / 400) Hz			
RESISTANCE TESTS - OHMMETER				
Range	(0 to 400) kΩ			
Resolution	0.1 kΩ			
Accuracy	± 1.2 % of Reading ± 3 cts			
CONTINUITY TESTS				
Range	(0 to 40) Ω		(0 to 400) Ω	
Resolution	0.01 Ω		0.1 Ω	
Accuracy	1.2 % ± 3 cts			
Test Current	> 200 mA (0.2 / 2) Ω			
Test Lead Compensation	Yes: Dedicated push-button			
Beeper	Yes: < 35 Ω ± 3 Ω			
ELECTRICAL				
Power Supply	(6) 1.5 V AA batteries – Alkaline recommended (included)			
MECHANICAL				
Dimensions	(7.9 x 3.6 x 2.0) in (200 x 92 x 50) mm			
Weight	24 oz (700 g)			
SAFETY				
Safety Rating	600 V CAT IV			

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

Soft carrying case, set of (2) 5 ft color-coded test leads with alligator clips, (1) black test probe and user manual.



CAT. #	DESCRIPTION
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2126.53	Megohmmeter Model 6527 (Digital (250, 500, 1000) V, Continuity, 400 kΩ, V)
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MEGOhMMETERS

1000 V DIGITAL & MULTI-FUNCTION HAND-HELD



(with leads connected)



US Design Patent US D890,617 S

MODEL 6529

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



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TRUE MegOhmmeter®

FEATURES

- Selectable test voltages (50, 100, 250, 500 and 1000) V
- 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

CAT. #2138.54

Continuity probe

CAT. #2119.02

Soft carrying pouch

CAT. #2971.04

Fuse – Set of (2) FF, 200 mA, 1000 V, 10 kA, (6 x 32) mm

CAT. #5000.94

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

CAT. #5000.97/#5000.98

Black/red test probe (1000 V CAT IV, 15 A, UL V2)

CAT. #5000.99/#5100.00

Clip – Safety alligator (black/red) (1000 V CAT IV, 15 A, UL V2)



MODEL	6529
AC / DC VOLTAGE MEASUREMENT	
Range	700 V _{AC} , 700 V _{AC+DC}
Accuracy	DC AC+DC $\pm (1 \% R + 1 \text{ ct})$ $\pm (1.2 \% R + 1 \text{ ct})$
Resolution	1 V
Frequency Range	DC & (30 to 440) Hz
Input Impedance	25 M Ω
INSULATION MEASUREMENT	
Test Voltage / Resistance Range	
50 V	(0.010 to 420.0) M Ω
100 V	(0.020 to 420.0) M Ω
250 V	(0.050 to 4200) M Ω
500 V	(0.100 to 4200) M Ω
1000 V	0.20 M Ω to 11.00 G Ω
Measurement Accuracy	
4 M / 40 M Ω / 400 M Ω	$\pm (3 \% R + 10 \text{ cts})$
4.2 G Ω	$\pm (4 \% R + 10 \text{ cts})$
11 G Ω	$\pm (10 \% R + 10 \text{ cts})$ (1000 V range)
CONTINUITY MEASUREMENT	
Range	(0 to 40) Ω (200 mA test current $\leq 2 \Omega$)
Accuracy	$\pm (1.2 \% R + 3 \text{ cts})$
Resolution Max	0.01 Ω
Leads Compensation	Up to 5 Ω
Threshold	Audible signal triggered, Selectable $\leq (1 \text{ or } 2) \Omega$
RESISTANCE MEASUREMENT	
Range	(0 to 400) k Ω (Auto ranging)
Accuracy	$\pm (1.2 R + 3 \text{ cts})$
Resolution Max	0.1 Ω
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 is displayed.
GENERAL	
Timed Test	1 s to 39.59 min selectable
Display	LCD with backlight
Power Supply	(6) AA alkaline batteries (NEDA 15 A or IEC LR6)
Battery Life (5 s ON, 25 s OFF)	> 2000 measurement in M Ω , > 300 h in V _{AC} / DC, > 6000 measurement in Continuity Test
Dimensions	(8.54 x 3.54 x 2.44) in (217 x 90 x 62) mm
Weight	1.68 lb (762 g)
Operating Temperature	(14 to 122) °F (-10 to 50) °C, 90 % RH
SAFETY	
Safety Rating	600 V CAT IV

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 1000 V CAT IV, UL V2), (6) 1.5 V AA batteries and user manual.

CAT. #	DESCRIPTION
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2126.55	Megohmmeter Model 6529 (Digital, (50, 100, 250, 500) V, 1 kV, 420 k-Ohm, Continuity, Alarm, Timer & PI/DAR)
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MEGOHMMETERS

DIGITAL/ANALOG & MULTI-FUNCTION HAND-HELD



(6526 &
6534 only)

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



6522

6526



6534

6536



DataView®
(6526 & 6534 only)



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MODELS	6522	6526	6534	6536
INSULATION TESTS				
Test Voltages	(250, 500, and 1000) V	(50, 100, 250, 500, and 1000) V	(10, 25, 100, 250, and 500) V	Variable (10 to 100) V (1 V steps)
Insulation Resistance	40 GΩ (40,000 MΩ)	200 GΩ (200,000 MΩ)	50 GΩ (50,000 MΩ)	20 GΩ (20,000 MΩ)
PI / DAR Ratios	No	Yes		No
Test Lock		Yes		
Timer		(0 to 40) min		
Auto Discharge		Yes		
Automatic Test Inhibit		> 25 V		
DMM FUNCTIONS				
Voltage		700 V _{AC/DC}		
Resistance	–	1000 kΩ		
Continuity	10 Ω	10 Ω, 100 Ω		
Test Current		200 mA		
Capacitance Measurement	–	0.1 n to 10 μF	–	
Frequency	–	(15.3 to 800) Hz	–	
GENERAL FUNCTIONS				
Alarm / Δ Rel	No / No	Yes / Yes		
Auto Power OFF		Yes		
Data Hold		Yes		
Test Lead Compensation		Yes		
Remote Probe		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) AA Alkaline		
Magnetic Mount		Yes		
SAFETY				
Safety Rating		600 V CAT IV		

Consult factory for NIST Calibration prices.

CAT. # DESCRIPTION

2155.51	Megohmmeter Model 6522 (Digital w/Analog Bargraph, (250, 500, 1000) V, Continuity, V)
2155.53	Megohmmeter Model 6526 (Digital w/Analog Bargraph, Alarm, (50, 100, 250, 500, 1000) V, Ohm, Continuity, V, kΩ, Capacitance, Memory, Bluetooth® w/DataView® software)
2155.55	Megohmmeter Model 6534 (Digital w/Analog Bargraph, Alarm, (10, 25, 100, 250, 500) V, Ohm, Continuity, V, kΩ, Memory, Bluetooth® w/DataView® software)
2155.56	Megohmmeter Model 6536 (Digital w/Analog Bargraph, Alarm, Variable (10 to 100) V, Ohm, Continuity, V, kΩ)
2155.57	Megohmmeter Model 6536 ESD Floor Kit (Meter, set of (2) 5 lb weights and carrying case)



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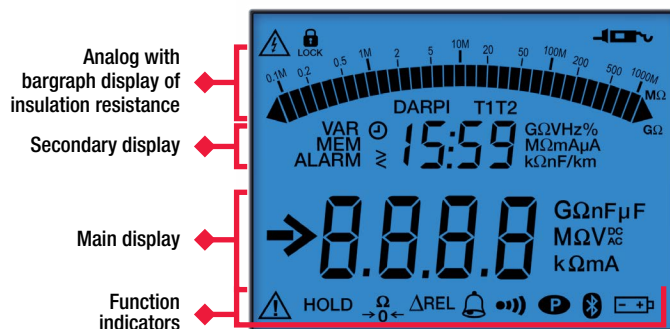
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MEGOHMMETERS

DIGITAL/ANALOG & MULTI-FUNCTION HAND-HELD

MODELS 6522, 6526, 6534 & 6536

PANELS & FUNCTIONAL DISPLAYS



TOP PANEL



FRONT PANEL

PRODUCT INCLUDES

6522

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 user manual.

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 drive with DataView® software and 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 drive with DataView® software and 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 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) 4 mm non-insulated adapters, (6) AA batteries, and user manual.

Navigation Buttons:

- Display instrument information
- Turn buzzer ON/OFF
- Turn power save ON/OFF
- Program test time
- Select displayed parameters
- Program alarm set points

Secondary Function:

- Hold
- Data storage



FEATURES*

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

* Features are model dependent. Bluetooth® on selected models.

SHOWN: 6526



MEGOHMMETERS

1000 V DIGITAL/ANALOG



MODEL 1060

Test insulation on cables, transformers, motors and wiring installations



FEATURES

- True Megohmmeter®
- Test voltage selections of (50, 100, 250, 500 and 1000) V
- Insulation measurements to 4000 GΩ (4 TΩ)
- 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 > 25 V*)
- 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

ACCESSORIES

CAT. #2155.75

Remote test probe
(600 V CAT IV)



CAT. #	DESCRIPTION
2130.03	Megohmmeter Model 1060 (Digital, with Analog Bargraph, Backlight, Alarm, Timer, (50, 100, 250, 500, 1000) V, Auto DAR/PI, Resistance, Continuity, DataView® software, 128 kB Memory)

MODEL	1060
INSULATION TESTS	
Test Voltage	50 V 2 kΩ to 200 GΩ 100 V 4 kΩ to 400 GΩ 250 V 10 kΩ to 1000 GΩ (1 TΩ) 500 V 20 kΩ to 2000 GΩ (2 TΩ) 1000 V 40 kΩ to 4000 GΩ (4 TΩ)
Accuracy	2 kΩ to 40 GΩ ± 5 % of Reading ± 3 cts 40 GΩ to 4 TΩ ± 15 % of Reading ± 10 cts
Voltage Test / Safety Check	(0 to 1000) V _{AC/DC}
Voltage Warning Indicator	> 25 V
Test Inhibition	Yes > 25 V
Smooth Function	Yes
RESISTANCE TESTS	
Measurement Range	0.01 Ω to 400 kΩ
Test Voltage	12.4 V _{DC} max
Test Current	< 6 mA _{DC}
Accuracy	± 3 % of Reading ± 3 cts
CONTINUITY TESTS	
Measurement Range	(0.01 to 39.99) Ω
Test Current	≥ 200 mA from (0.01 to 20.00) Ω
Accuracy	± 3 % of Reading ± 4 cts
COMMUNICATION	
Memory for Test Results	128 kB memory with RS-232 to USB adapter (<i>included</i>)
PC Software / Report Generation	DataView® (<i>included</i>)
ELECTRICAL	
Power Supply	9.6 V NiMH Battery Pack (<i>included</i>) (85 to 256) V (50 / 60) Hz
SAFETY	
Safety Rating	EN 61010-1, 600 V CAT III, EN 61557

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 115 V power cord, rechargeable NiMH battery, spare fuses, and a USB drive with DataView® software and user manual.



MEGOhMMETERS

5000 V DIGITAL/ANALOG



600 V
CAT III



MODEL 6505

Contributes to the safety of electrical installations and equipment



SCAN TO
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MORE

TRUE MegOhmmeter®

FEATURES

- True Megohmmeter®
- Simple operation
- Test voltage selections of (500, 1000, 2500 and 5000) V
- Insulation measurements from 10 kΩ to 10,000 GΩ (10 TΩ)
- Adjustable and programmable test voltage (40 to 5100) V
- 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, set of (3) 10 ft color-coded leads with clips (5000 V) (red/black/blue), (1) blue guard terminal jumper lead, fuse 0.1 A 380 V, rechargeable battery pack (installed), US 115 V power cord, and user manual.



CAT. #	DESCRIPTION
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2130.18	Megohmmeter Model 6505 (Digital, with Analog Bargraph, Backlight, (500, 1000, 2500, 5000) V, Auto DAR/PI)
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MODEL	6505
INSULATION TESTS	
Test Voltage / Range	500 V 10 kΩ to 2000 GΩ (2 TΩ) 1000 V 10 kΩ to 4000 GΩ (4 TΩ) 2500 V 10 kΩ to 10,000 GΩ (10 TΩ) 5000 V 10 kΩ to 10,000 GΩ (10 TΩ)
User Programmable Test	(40 to 1000) V: 10 V increments (1000 to 5100) V: 100 V increments
Short Circuit Current	< 1.6 mA ± 5 %
Accuracy	10 kΩ to 399.9 GΩ ± 5 % of Reading ± 3 cts 400 GΩ to 10 TΩ ± 15 % of Reading ± 10 cts
DAR (1 min / 30 s)	0.02 to 50.00
PI (10 min / 1 min & User Programmable)	0.02 to 50.00
Capacitance Measurement	(0.001 to 49.99) μF; Max resolution 1 nF
Leakage Current Measurement	0.00 nA to 3 mA; Max resolution 1 pA
Programmable PI Ratio Times	(1 to 60) min
Discharge After Test	Yes, automatic
Discharge Voltage Display	Yes
Voltage Test / Safety Check	2500 V _{AC} / 4000 V _{DC} (16 to 42) Hz / 1 V Resolution
Voltage Warning Indicator	Yes > 25 V
Test Inhibition	> 40 % of test voltage
Guard Terminal	Yes
ELECTRICAL	
Power Supply	(1) 9.6 V NiMH battery pack (included); Line power: (85 to 256) V _{AC} (50 / 60) Hz
SAFETY	
Safety Rating	EN 61010-1, 1000 V CAT III

Consult factory for NIST Calibration prices.

ACCESSORIES/REPLACEMENTS

CAT. #2133.73 Extra Large Tool Bag

CAT. #2960.21 9.6 V rechargeable NiMH battery pack

CAT. #2151.30 Lead – Replacement Set of 3, 10 ft 5kV w/ integral clips

CAT. #2151.31 Lead-Replacement 1 ft 5kV blue jumper lead

CAT. #2151.32 Lead – Set of 3, 25 ft 5kV w/ integral Clips

CAT. #2151.33 Lead – Set of (3), 45 ft (5 kV) w/ integral clips

CAT. #2119.84 Fuse – Set of (3), 0.1 A, 380 V, 5 x 20, 10 kA

CAT. #5000.14 Power Cord 115 V US Plug

MEGOHMMETERS

5000 V DIGITAL/ANALOG



MODELS 5050 & 5060

Designed with the highest level of built-in safety features



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FEATURES

- True Megohmmeter®
- Test voltage selections of (500, 1000, 2500, and 5000) V
- Variable test voltage from (50 to 5100) V (Model 5060)
- Wide measurement range up to 10 TΩ
- Automatic discharge at the completion of the test
- Measure AC voltage up to 4000 V
- 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 49.99 μf
- Stores up to 1500 measurements (Model 5060)
- Includes DataView® software for data retrieval, real-time display, analysis and report generation

PRODUCT INCLUDES

5050, 5060 & 5070

Extra large classic tool bag, set of (3) 10 ft (5 kV) safety leads (red/black/blue) with clips, one guard terminal jumper lead (blue), US 115 V power cord, rechargeable battery pack, and user manual (5050)

CAT. #	DESCRIPTION
2130.20	Megohmmeter Model 5050 (Digital, Analog Bargraph, Backlight, Alarm, Timer, (500, 1000, 2500, 5000) V, Auto DAR/PI/DD)
2130.21	Megohmmeter Model 5060 (Digital, Analog Bargraph, Backlight, Alarm, Timer, (500, 1000, 2500, 5000) V, Auto DAR/PI/DD, USB w/DataView® Software)

MODELS		5050	5060
INSULATION TESTS			
Test Voltage	500 V	10 kΩ to 2000 GΩ (2 TΩ)	
	1000 V	10 kΩ to 4000 GΩ (4 TΩ)	
	2500 V	10 kΩ to 10,000 GΩ (10 TΩ)	
	5000 V	10 kΩ to 10,000 GΩ (10 TΩ)	
User Selectable Test Voltage		Programmable: (40 to 1000) V: 10 V increments; (1000 to 5100) V: 100 V increments	
Accuracy	10 kΩ to 399.9 GΩ	± 5 % of Reading ± 3 cts	
	400 GΩ to 10 TΩ	± 15 % of Reading ± 10 cts	
Voltage Test / Safety Check		2500 V _{AC} / 4000 V _{DC}	
Voltage Warning Indicator		Yes > 25 V	
Test Inhibition		Yes – selectable at (3, 10, or 20) % of test voltage	
Smooth Function (<i>user selectable</i>)		Digital filtering stabilizes display readings	
COMMUNICATION			
Storage of Readings over Time R(t)		4 kB memory	128 kB memory
Storage of Test Results		20 readings	1500 readings
Communication Port		–	USB optically isolated port
PC Software / Report Generation		–	DataView® (<i>included</i>)
ELECTRICAL			
Power Supply		(1) 9.6 V NiMH battery pack (<i>included</i>) Line power: (85 to 256) V (50 / 60) Hz	
SAFETY			
Safety Rating		EN 61010-1, 600 V, CAT III 1000 V	

Consult factory for NIST Calibration prices.

ACCESSORIES/REPLACEMENTS

CAT. #2119.45 PC RS-232 DB9 F/F 6 ft Null Modem Cable (5060)

CAT. #2119.84 Fuse, set of (3), 0.1 A, 380 V, 5 x 20, .10 kA

CAT. #2133.73 Extra Large Classic Tool Bag (18 x 9 x 12) in

CAT. #2135.43 Inverter – 12 V_{DC} to 120 V_{AC} 400 Watt for Vehicle use

CAT. #2136.80 Cable – 10 ft USB Cable

CAT. #2151.30 Lead – Replacement Set of 3, 10 ft (5 kV) w/ integral Clips

CAT. #2151.31 Lead – Replacement 1 ft (5 kV) Blue Jumper Lead

CAT. #2151.32 Lead – Set of (3), 25 ft (5 kV) w/ integral Clips

CAT. #2151.33 Lead – Set of (3), 45 ft (5 kV) w/ integral clips

CAT. #2960.21 Battery – Rechargeable 9.6 V

CAT. #5000.60 Adapter RS-232 to USB 2.0 (5060)

CAT. #5000.14 US 115 V Power Cord

USB DRIVE Supplied with DataView® software and user manual (5060)



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MEGOHMMETERS

10,000 V/15,000 V DIGITAL



1000 V
CAT IV



MODELS 6550 & 6555

Ideal for use on rotating machinery, transformers and cables operating at higher voltages



DataView®



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FEATURES

- True Megohmmeter®
- Fixed or programmable test voltage from 40 V to (10/15) kV
- Wide measurement range from 10 kΩ to (25/30) TΩ
- 5 mA 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

CAT. #2133.72 Small classic tool bag

CAT. #2135.41 Optical USB cable

CAT. #2140.19 (1) 9.6 V NiMH battery (*two required*)

CAT. #2151.36 Lead – Replacement Set of 3, 10 ft (15 kV) with integral clips

CAT. #2151.37 Lead – Replacement 1.5 ft (15 kV) blue jumper lead

CAT. #2151.38 Lead – Set of (3), 25 ft, 15 kV w/ integral clips

CAT. #2151.39 Lead – One 45 ft, (15 kV), blue with integral clip

CAT. #2151.40 Lead – One 45 ft, (15 kV), red with integral clip

CAT. #2151.41 Lead – One 45 ft, (15 kV), black with integral clip

CAT. #5000.32 Power cord – 240 V EU

PRODUCT INCLUDES

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

MODELS		6550	6555
INSULATION TESTS			
Test Voltage	500 V	10 kΩ to 2000 GΩ (2 TΩ)	
	1000 V	10 kΩ to 4000 GΩ (4 TΩ)	
	2500 V	10 kΩ to 10,000 GΩ (10 TΩ)	
	5000 V	10 kΩ to 15,000 GΩ (15 TΩ)	
	10,000 V	10 kΩ to 25,000 GΩ (25 TΩ)	
	15,000 V	—	10 kΩ to 30,000 GΩ (30 TΩ)
Fixed Test Voltages		(500, 1000, 2500, 5000, and 10,000) V	(500, 1000, 2500, 5000, 10,000, and 15,000) V
Variable Voltages		Variable: 40 V to 10 kV with three user programmable voltage schemes	Variable: 40 V to 15 kV with three user programmable voltage schemes
Ramp Mode		Programmable ramps: start voltage / end voltage / duration	
Ramp Configuration Range		(40 to 1100) V / (500 to 10,000) V	(40 to 1100) V / (500 to 15,000) V
Step Mode		Up to 10 steps (<i>voltage and duration configurable for each step</i>)	
Voltage Test		2500 V _{AC} to 4000 V _{DC}	
Capacitance Measurement		(0.005 to 19.99) μF	
Leakage Current Measurement		(0 to 10) mA	
Discharge After Test		Yes (<i>Automatic</i>)	
Additional Test Stop Modes			
I-Limit		Programmable: (0.2 to 5) mA	
Early-Break		di / dt	
Timer		Up to 99 m 59 s	
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, (2) 9.6 V 4 A-h battery packs charging by external voltage: (90 to 260) V; (50 / 60) Hz	
Battery Charging		Battery charging allowed while performing insulation measurements	
Dimensions / Weight		(13.39 x 11.81 x 7.87) in (340 x 300 x 200) mm /approx. 13.7 lb (6.2 kg)	
SAFETY			
Safety Compliance		IEC / EN 61010-2-034 or BS EN 61010-2-034, IEC-61557 parts 1 and 2 (up to 10 kV), 1000 V CAT IV, Pollution Degree 2	
Mechanical Protection / Altitude		IP54 / 2000 m	

Consult factory for NIST Calibration prices.

CAT. # DESCRIPTION

2130.31	Megohmmeter Model 6550 (Graphical, Analog Bargraph, Backlight, Alarm, Timer, (500, 1000, 2500, 5000) V, 10 kV, Ramp, Step V, Variable, Auto DAR/PI/DD, USB, w/DataView® Software)
2130.32	Megohmmeter Model 6555 (Graphical, Analog Bargraph, Backlight, Alarm, Timer, (500, 1000, 2500, 5000) V, (10, 15) kV, Ramp, Step V, Variable, Auto DAR/PI/DD, DataView® software)

MEGOHMMETERS

SELECTION CHART

AEMC® MODEL NUMBER	CAT. #	TEST VOLTAGE	INSULATION RANGE	RESISTANCE RANGE	CONTINUITY RANGE	CAPACITANCE RANGE	VOLTAGE DETECTION	POWER SOURCE	DISPLAY	DATAVIEW® SOFTWARE
6503	2126.52	250 V 500 V 1000 V	(1 to 500) MΩ (1 to 500) MΩ (10 to 5000) MΩ	–			600 V _{AC}	Hand-cranked	Analog	No
6522	2155.51	250 V 500 V 1000 V	50 kΩ to 10 GΩ 100 kΩ to 20 GΩ 200 kΩ to 40 GΩ	–	10 Ω	–	700 V _{AC/DC}	(6) AA Alkaline Batteries	Digital / Analog	No
6527	2126.53	250 V 500 V 1000 V	1 kΩ to 4 GΩ	400 kΩ	400 Ω	–	600 V _{AC} 1000 V _{DC}	(6) AA Alkaline Batteries	Digital / Analog	No
6529	2126.55	50 V 100 V 250 V 500 V 1000 V	(0.010 to 420) MΩ (0.020 to 420) MΩ (0.050 to 420) MΩ (0.100 to 4200) MΩ 0.20 MΩ to 11 GΩ	(0 to 420) kΩ	(0 to 40) Ω (200 mA test current ≤ 2 Ω)	–	700 V _{AC} 700 V _{AC/DC}	(6) AA Alkaline Batteries	Digital	No
6526	2155.53	50 V 100 V 250 V 500 V 1000 V	10 kΩ to 10 GΩ 20 kΩ to 20 GΩ 50 kΩ to 50 GΩ 100 kΩ to 100 GΩ 200 kΩ to 200 GΩ	1000 kΩ	(10, 100) Ω	0.1 n to 10 μF	700 V _{AC/DC}	(6) AA Alkaline Batteries	Digital / Analog	Yes
6534	2155.55	10 V 25 V 100 V 250 V 500 V	2 kΩ to 1 GΩ 5 kΩ to 2 GΩ 10 kΩ to 10 GΩ 50 kΩ to 25 GΩ 100 kΩ to 50 GΩ	1000 kΩ	(10, 100) Ω	–	700 V _{AC/DC}	(6) AA Alkaline Batteries	Digital / Analog	Yes
6536	2155.56	10 V 100 V	2 kΩ to 20 GΩ	1000 kΩ	(10, 100) Ω	–	700 V _{AC/DC}	(6) AA Alkaline Batteries	Digital / Analog	No
6536 ESD Floor Kit	2155.57	(variable in 1 V steps)								
1060	2130.03	50 V 100 V 250 V 500 V 1000 V	2 kΩ to 200 GΩ 4 kΩ to 400 GΩ 10 kΩ to 1 TΩ 20 kΩ to 2 TΩ 40 kΩ to 4 TΩ	400 kΩ	40 Ω	(0.005 to 4.999) μF	1000 V _{AC/DC}	Rechargeable NiMH Battery	Digital / Analog	Yes
6505	2130.18	500 V 1000 V 2500 V 5000 V	10 kΩ to 2 TΩ 10 kΩ to 4 TΩ 10 kΩ to 10 TΩ 10 kΩ to 10 TΩ	–		(0.001 to 49.99) μF	2500 V _{AC} 4000 V _{DC}	Rechargeable NiMH Battery	Digital / Analog	No
5050	2130.20	500 V 1000 V 2500 V 5000 V	10 kΩ to 2 TΩ 10 kΩ to 4 TΩ 10 kΩ to 10 TΩ 10 kΩ to 10 TΩ	–		(0.001 to 49.99) μF	2500 V _{AC} 4000 V _{DC}	Rechargeable NiMH Battery	Digital / Analog	No
5060	2130.21	500 V 1000 V 2500 V 5000 V	10 kΩ to 2 TΩ 10 kΩ to 4 TΩ 10 kΩ to 10 TΩ 10 kΩ to 10 TΩ	–		(0.001 to 49.99) μF	2500 V _{AC} 4000 V _{DC}	Rechargeable NiMH Battery	Digital / Analog	Yes
6550	2130.31	500 V 1000 V 2500 V 5000 V 10,000 V	10 kΩ to 2000 GΩ 10 kΩ to 4000 GΩ 10 kΩ to 10,000 GΩ 10 kΩ to 15,000 GΩ 10 kΩ to 25,000 GΩ	–		(0.001 to 19.99) μF	2500 V _{AC} 4000 V _{DC}	Rechargeable NiMH Battery	Digital / Analog	Yes
6555	2130.32	500 V 1000 V 2500 V 5000 V 10,000 V 15,000 V	10 kΩ to 2000 GΩ 10 kΩ to 4000 GΩ 10 kΩ to 10,000 GΩ 10 kΩ to 15,000 GΩ 10 kΩ to 25,000 GΩ 10 kΩ to 30,000 GΩ	–		(0.001 to 19.99) μF	2500 V _{AC} 4000 V _{DC}	Rechargeable NiMH Battery	Digital / Analog	Yes

Consult factory for NIST Calibration prices.



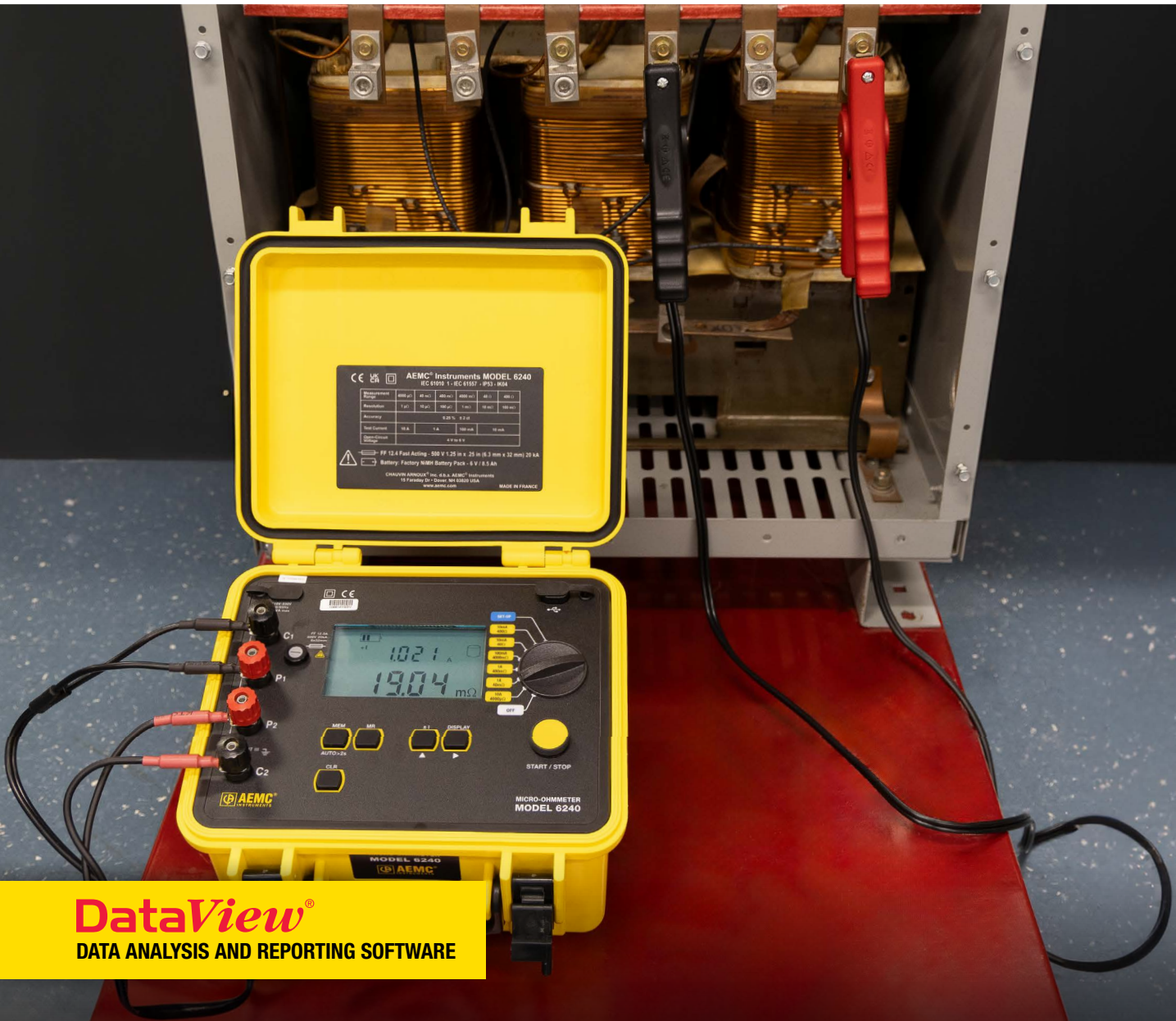
DataView[®]

Our exclusive DataView[®] software: the ultimate tool for configuring, testing, and managing your AEMC[®] instruments. Seamlessly run tests, download and store results, and generate comprehensive reports, all through an intuitive and standardized interface.

And the best part? It's completely **FREE**, and you retain full ownership of your data! No hidden fees, no access charges – just total control at your fingertips.

Measure Up
WITH AEMC INSTRUMENTS[®]

MICRO-OHMMETERS



DataView®

DATA ANALYSIS AND REPORTING SOFTWARE

Why choose AEMC® Instruments Micro-Ohmmeters?

We know it's fundamental to have the ability to precisely measure low and very low electrical resistance values to correctly diagnose problems in electrical wiring and determine the cause of a component or circuit failure. That's why we offer Micro-Ohmmeter models that are accurate, rugged and easy-to-use. Automatic temperature compensation (*model dependent*) aids in year to year analysis and preventive maintenance decisions. Suitable for lab and field use with available test currents from (1 to 200) A. Utilizing a four-lead Kelvin method of testing, our instruments accurately measure very low resistances in the micro-ohm range within 0.05 % (*model dependent*).

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

MICRO-OHMMETERS

10 A



cover
closed

cover
open

MODEL 6240

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



DataView®



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FEATURES

- Reliable low resistance measurements from 5 $\mu\Omega$ to 400 Ω
- Four-terminal Kelvin resistance measurement eliminates test lead resistance
- 10 A test current up to 4000 $\mu\Omega$
- $\pm 0.25\%$ basic accuracy
- 1 $\mu\Omega$ resolution
- Direct reading, easy-to-operate
- Six selectable resistance ranges
- Reverse polarity 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 (110/220 V) (*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

MODEL	6240					
Range	(5.0 to 3999) $\mu\Omega$	(4.0 to 39.99) m Ω	(40.0 to 399.9) m Ω	(400 to 3999) m Ω	(4.0 to 39.99) Ω	(40.0 to 399.9) Ω
Accuracy	$\pm 0.25\%$ of Reading ± 2 cts					
Resolution	1 $\mu\Omega$	10 $\mu\Omega$	100 $\mu\Omega$	1 m Ω	10 m Ω	100 m Ω
Test Current	10.2 A $\pm 2\%$	1.02 A $\pm 2\%$		102 mA $\pm 2\%$	10.2 mA $\pm 2\%$	
Max. Inductive Load	0.5 H					
Memory	Stores up to 99 test results					
Power Supply	Rechargeable 6 V, 8.5 A-h NiMH battery pack <i>(included)</i>					

Consult factory for NIST Calibration prices.

ACCESSORIES/REPLACEMENTS

CAT. #1017.84 (Replacement)

Kelvin Clips 10 ft (10 A - Hippo)

CAT. #2118.70

Kelvin Clips 20 ft (10 A - Hippo)

CAT. #2118.73 (Replacement)

Kelvin Probes 10 ft (1 A, Spring Loaded)

CAT. #2118.74

Kelvin Probes 20 ft (1 A, Spring Loaded)

CAT. #2118.84

Kelvin Probes Pistol Grip 10 ft (25 A, Spring Loaded)

CAT. #2118.85

Kelvin Probes Pistol Grip 20 ft (25 A, Spring Loaded)

CAT. #2118.77

Kelvin Probes 10 ft (10 A, Spring Loaded)

CAT. #2118.78

Kelvin Probes 20 ft (10 A, Spring Loaded)

CAT. #2118.79

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

CAT. #2118.80

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

PRODUCT INCLUDES

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



CAT. # DESCRIPTION

2129.80 Micro-Ohmmeter Model 6240 (10 A, Instantaneous, Continuous, Multiple Test, includes 10 ft Kelvin Clips (10 A - Hippo-CAT. #1017.84), 10 ft Kelvin Probes (1 A Spring Loaded, CAT. #2118.73) and DataView® Software)



cover
closed

cover
open

MODEL 6255

Accurate results within 0.05 %

Provides extended test time at 10 Amps without overheating



DataView®



SCAN TO
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FEATURES

- Measure from 1 $\mu\Omega$ (0.1 $\mu\Omega$ resolution) to 2500.0 Ω
- Test current selection of (1, 10, and 100) mA, and (1 and 10) A
- 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 – 10 A tests
- Rugged, double insulated watertight case
- Includes FREE DataView® software for data retrieval, real-time display, analysis and report generation

MODEL	6255						
Range	5.0000 m Ω	25.000 m Ω	250.00 m Ω	2500.0 m Ω	25.000 Ω	250.00 Ω	2500.0 Ω
Accuracy	± 0.15 % of Reading +1.0 $\mu\Omega$	± 0.05 % of Reading + 3 $\mu\Omega$	± 0.05 % of Reading + 30 $\mu\Omega$	± 0.05 % of Reading + 0.3 m Ω	± 0.05 % of Reading + 3 m Ω	± 0.05 % of Reading + 30 m Ω	± 0.05 % of Reading + 300 m Ω
Resolution	0.1 $\mu\Omega$	1 $\mu\Omega$	10 $\mu\Omega$	0.1 m Ω	1 m Ω	10 m Ω	100 m Ω
Test Current	10 A			1 A	100 mA	10 mA	1 mA
Measurement Mode	Selectable: Inductive (<i>continuous test</i>), Resistive (<i>instantaneous test</i>) or Auto (<i>multiple tests</i>)						
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 2500.0) Ω						
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 Supply	Rechargeable 6 V, 8.5 A-h NiMH battery pack (<i>included</i>)						
Battery Life	Approximately 5000 10 A tests						

Consult factory for NIST Calibration prices.

ACCESSORIES/REPLACEMENTS

CAT. #1017.84 Kelvin Clips 10 ft (10 A - Hippo)

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

CAT. #2118.73 Kelvin Probes 10 ft (1 A, Spring Loaded)

CAT. #2118.74 Kelvin Probes 20 ft (1 A, Spring Loaded)

CAT. #2118.84 Kelvin Probes Pistol Grip 10 ft (25 A, Spring Loaded)

CAT. #2118.85 Kelvin Probes Pistol Grip 20 ft (25 A, Spring Loaded)

CAT. #2118.77 Kelvin Probes 10 ft (10 A, Spring Loaded)

CAT. #2118.78 Kelvin Probes 20 ft (10 A, Spring Loaded)

CAT. #2118.79 Kelvin Clips 10 ft (1-10 A)/Replacement for Cat. #2118.71

CAT. #2118.80 Kelvin Clips 20 ft (1-10 A)/Replacement for Cat. #2118.72

CAT. #2119.45 Cable, PC RS-232, DB9 F/F 6 ft Null Modem Cable

CAT. #2129.95 RTD Temperature Probe (*plug into faceplate for ambient temperature*)

CAT. #2129.96 RTD Temperature Probe with 7 ft extension cable

PRODUCT INCLUDES

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

SHOWN: CAT. #2129.84



CAT. # DESCRIPTION

2129.84	Micro-Ohmmeter Model 6255 (10 A, Instantaneous, Continuous, Multiple Test, Manual/Auto Temperature Compensation; includes 10 ft Kelvin Clips (10 A-Hippo, CAT. #1017.84), 10 ft Kelvin Probes (1 A Spring Loaded, CAT. #2118.73) and DataView® Software)
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MICRO-OHMMETERS

200 A



300 V
CAT II



cover
closed

MODEL 6292

Programmable test currents and test duration with data storage and report generation using included application software



Case color
may vary



DataView®



SCAN TO
LEARN
MORE

FEATURES

- Adjustable test currents from (5 to 200) A
- Programmable test duration from (5 to 120) seconds
- 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 200 A
- 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

FRONT PANEL DISPLAY

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

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

Consult factory for NIST Calibration prices.

ACCESSORIES/REPLACEMENTS

CAT. #2129.86

Current Probe MR6292

CAT. #2129.72

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

CAT. #2129.73

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

CAT. #2129.88

Lead - 10 ft earth/ground (Green) with attached clamp

CAT. #5000.40

110 V US Power Cord



PROBE MR6292

PRODUCT INCLUDES

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

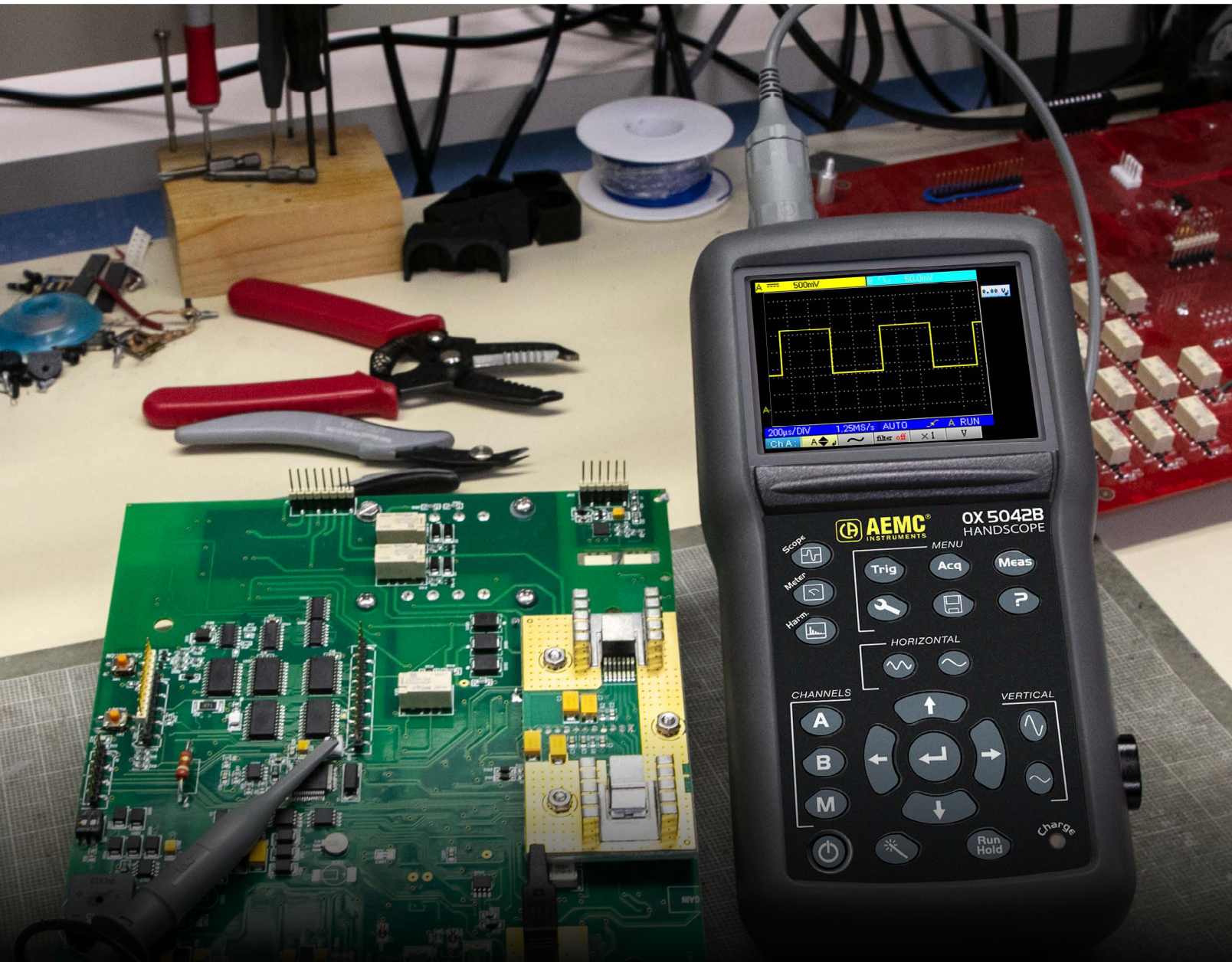


CAT.

DESCRIPTION

2129.83	Micro-Ohmmeter Model 6292 (200 A, (120/230) V, DataView® Software)
---------	--

OSCILLOSCOPES



Why choose AEMC® Instruments Oscilloscopes?

When choosing an oscilloscope, there are a few important factors to consider such as bandwidth, input channels, sample rate, and accuracy. At AEMC® Instruments, we understand the importance of these factors, which is why we offer oscilloscopes with true channel-to-channel isolation, simple one-button access to all functions, harmonic analysis, data storage, Ethernet connections, and self-calibrating probes. Our digital hand-held and benchtop oscilloscopes come in single, isolated dual, and four-channel options, and are accurate, reliable, and feature-rich. By providing expanded capabilities, many years of use, and saving time and money, our oscilloscopes are the perfect choice for your needs.

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

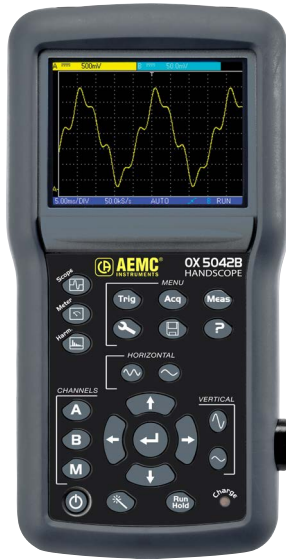
OSCILLOSCOPES

HANDSCOPE



MODEL OX 5042B

3-in-1 Instrument: Oscilloscope, Multimeter and Power Harmonic Analyzer with two fully isolated channels; fits into one hand



SCAN TO
LEARN
MORE

FEATURES

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

PRODUCT INCLUDES

2150.21

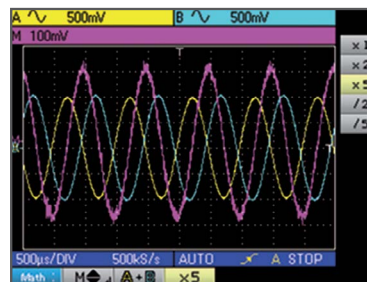
Small classic tool bag, USB wall plug 5 V, 2 A, USB cable, set of (2) 10 ft color-coded (red/black) leads, set of (2) color-coded (red/black) alligator clips, set of (2) color-coded (red/black) probes, BNC adapter, (2) probes 10:1 600 V BNC male, (6) 1.2 V NiMH rechargeable batteries, printed quick start guide, and a USB drive with software and user manual.

2150.22

Field case, USB wall plug 5 V, 2 A, 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 10:1 600 V BNC male, (1) AC current probe Model MN251T, MiniFlex® Sensor 3000-24-1-1, (6) 1.2 V NiMH rechargeable batteries, printed quick start guide, and a USB drive with software and user manual.

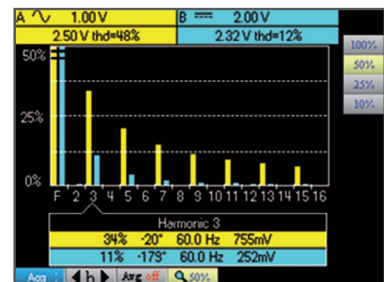
FUNCTIONAL DISPLAYS

HIGH PERFORMANCE



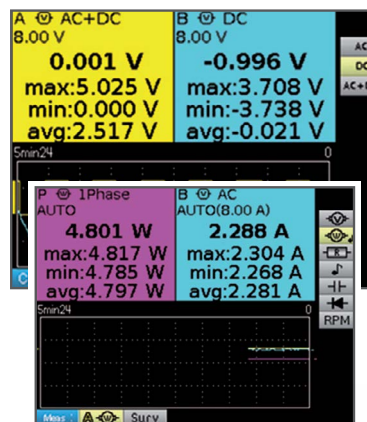
Automatically displays measurements for both isolated channels from your choice of 19 measurement types.

HARMONIC ANALYZER



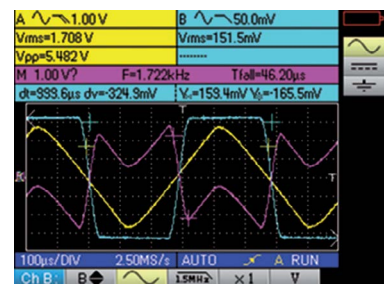
Measures two channels of individual harmonic content up to the 31st harmonic.

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 a spreadsheet using the SX-Metro included software.

SHOWN: CAT. #2150.22



2150.23

Field case, USB wall plug 5 V, 2 A, 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 10:1 600 V BNC male, (1) AC current probe Model MN379T, MiniFlex® Sensor 3000-24-1-1, (6) 1.2 V NiMH rechargeable batteries, printed quick start guide, and a USB drive with software and user manual.

OSCILLOSCOPES

HANDSCOPE

MODEL	OX 5042B
INTERFACE	
Display	3.5 in color TFT LCD screen; Resolution (320 x 240) pixels – LED backlighting
Commands	Direct adjustments on front panel and on-screen selection menus (<i>principal & secondary without hidden menus</i>)
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	14 complete languages, menus and contextual help
OSCILLOSCOPE MODE	
Vertical Deflection	
Bandwidth	40 MHz
Bandwidth Limiter	1.5 MHz, 5 kHz
Number of Channels	2 fully isolated channels
Input Impedance	1 M Ω $\pm$ 0.5 %, approximately 17 pF
Maximum Input Voltage	600 V – Derating -20 dB per decade from 100 kHz
Vertical Sensitivity	5 mV to 200 V / div
Horizontal Deflection	
Sweep Speed	25 ns / div to 200 s / div – Roll Mode from 100 ms to 200 s / div
Horizontal Zoom	Zoom factor: x1, x2, x5
Triggering	
Mode	Automatic, triggered, one-shot and triggered roll
Type	Edge, pulse width (20 ns – 20 s)
Coupling	AC or DC (<i>depending on the coupling of the triggering channel</i>) HF, LF or noise rejection
Sensitive	$\leq$ 1.2 divisions p-p up to 40 MHz
Digital Memory	
Maximum Sampling Rate	2 GS / s in ETS mode – 50 MS / s in one-shot mode on each channel
Vertical Resolution	9 bits
Memory Depth	2500 points per channel
User Storage	2 MB for storing files: trace (.trc), text (.txt), configuration (.cfg), image files (.bmp)
GLITCH Mode	Duration $\geq$ 20 ns – 1250 min / max pairs
Display Modes	Envelope, Averaging (factors 2 to 64) and XY (<i>vector</i>)
Other Functions	
Math Functions	Channel inversion, addition, subtraction, multiplication and division (<i>adjustable scaling</i>)
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 (<i>5 min to 1 mos</i>)
Operating Modes	Absolute or relative display (<i>absolute, deviation, ref, ref %</i>) – Monitoring (<i>instantaneous, min, max, avg</i>)
AC, DC & AC+DC Voltages	Ranges from 600 mV to 600 Vrms, 800 mV to 800 V _{DC} – accuracy for V _{DC} $\pm$ 1 % reading +20 D –50 kHz bandwidth
Resistance	Range from 80 Ω to 32 M Ω – accuracy $\pm$ 2 % reading + 10 D –10 ms quick continuity test
Capacitance	Ranges from 5 nF to 5 mF – basic accuracy $\pm$ 2 % reading + 10 D
Other Measurements	Frequency, rotation speed, 3.3 V diode test, temperature measurement (<i>with K-type thermocouple or infrared probe</i>)
POWER	
Measurements	Single-phase and balanced three-phase active power values (<i>with or without neutral</i>), simultaneous display of current
HARMONIC ANALYZER MODE	
Multi-Channel Analysis	2 channels, 31 orders, fundamental frequency from (40 to 450) Hz
Simultaneous Measurements	Total Vrms, THD and selected order (% <i>fundamental, phase, frequency, Vrms</i>)
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 (<i>included</i>)
Power Supply	6 LR6 or (6) AA NiMH batteries – Battery life up to 8 h 30 min Universal line adapter isolated from the channels – Quick charging in 2 h 30 min
Safety / EMC	Safety according to IEC 61010-1 600 V CAT III / EMC according to EN 61000-3 & EN 61326-1

Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2150.21	Hand-held Portable Oscilloscope Model OX 5042B
2150.22	Hand-held Portable Oscilloscope Model OX 5042B w / MN251T & MF 3000-24-1-1 (BNC Output)
2150.23	Hand-held Portable Oscilloscope Model OX 5042B w / MN379T & MF 3000-24-1-1 (BNC Output; Low AC current measurement)



OSCILLOSCOPES

CURRENT PROBES



3000-24-1-1
only

MODELS MN251T & MN379T



CAT. #2132.59
Range (0.05 to 240) A



CAT. #2153.02
Range (0.005 to 120) A



SCAN TO
LEARN
MORE

FEATURES

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

MINIFLEX® 3000-24-1-1



CAT. #2132.63 (24 IN)



SCAN TO
LEARN
MORE

FEATURES

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

MODELS	MN251T	MN379T
ELECTRICAL		
Nominal Range	200 A	(5 / 100) A
Measurement Range	(0.5 to 240) A	(0.005 to 6) A; (0.1 to 120) A
Accuracy	3 % of Reading @ 5 A; 1 % of Reading @ 200 A	1 % of Reading @ 5 A; 1 % of Reading @ 100 A
Phase Shift	≤ 5 ° @ 40 A / ≤ 2.5 ° @ 100 A	≤ 4 ° @ 5 A / ≤ 2.2 @ 100 A
Overload	240 A for 10 min ON, 30 min OFF	
Frequency Range	40 Hz to 10 kHz	
Limit Operating Conditions	200 A permanently to 1 kHz; Derating above 3 kHz: 200 A x (1 / 0.333 F), F in kHz	
Working / Common Mode Voltage	600 Vrms	
Output Termination	10 ft (~3 m) BNC Lead	
Output Signal	1 mV/A _{AC} (200 mV @ 200 A)	200 mV/A _{AC} (1 V @ 5 A) & 10 mV/A _{AC} (1 V @ 100 A)
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))	
Maximum Conductor Size	0.78 in (20 mm)	
Dimensions	(5.47 x 2.00 x 1.18) in (139 x 51 x 30) mm	
Weight	6.5 oz (184 g)	
Polycarbonate Material	Polycarbonate with fiberglass charge, UL94 V0	
SAFETY		
Safety Rating	EN 61010-2-32	

Consult factory for NIST Calibration prices.

MODEL	3000-24-1-1
ELECTRICAL	
Range	(5 to 3000) A
Signal Output	1 mV/A
Frequency Range	10 Hz to 20 kHz 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	(35 to 40) dB on contact
Power Supply	9 V Alkaline battery (<i>included</i>)
MECHANICAL	
Sensor Diameter	Ø 0.2 (5 mm)
Sensor Length	24 in (~609 mm)
Max Conductor Size	7.6 in (~190 mm)
Connection Cable Length	10 ft (~3.04 M)
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 6560) ft (2000 m), working voltage derating above; Non-operating: (0 to 39,370) ft (12,000 m)
SAFETY	
Safety Rating	EN 61010, 1000 V CAT III; 600 V CAT IV

Consult factory for NIST Calibration prices.

OSCILLOSCOPES

OX 9000 SERIES



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

Ergonomic, hand-held oscilloscope with 300 MHz bandwidth and 4 models: oscilloscope, multimeter, analyzer and recorder



OX 9104

OX 9062



SCAN TO
LEARN
MORE

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/s

PRODUCT INCLUDES

Scope in carrying case with shoulder strap, set of (2) 5 ft color-coded leads, alligator clips and test probes (4 mm diameter), 10 ft USB cable, µSD memory card, 1-PROBIX Banana Plug (4 mm) adapter, (1) stylus pen, LI-ION 5.8 A-h battery pack, PA40W-2 power adapter with 110 V power cord. Additional accessories (*model dependent*).

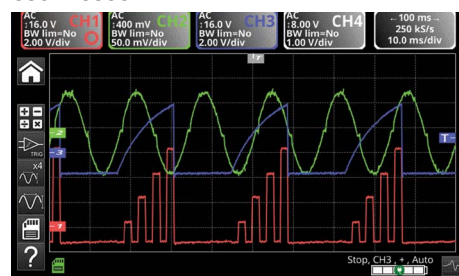


ACCESSORIES/REPLACEMENTS

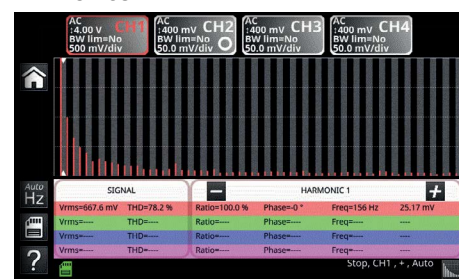
CAT. #5000.17 Set of 5 stylus pens



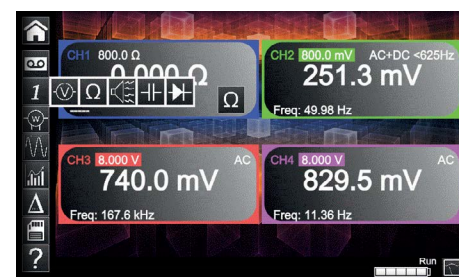
OSCILLOSCOPE



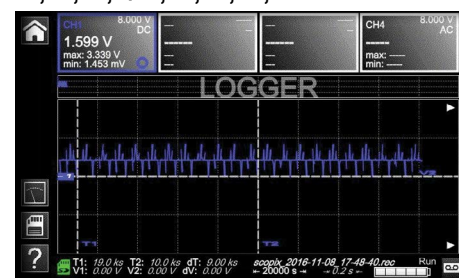
HARMONICS



MULTIMETER - DISPLAYS UP TO 4 CHANNELS SIMULTANEOUSLY



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



CAT. #	DESCRIPTION
2150.31	Hand-held Portable Oscilloscope Model OX 9062 IV 60 MHz (2-Channel, 60 MHz) — SPECIAL ORDER ONLY
2150.32	Hand-held Portable Oscilloscope Model OX 9102 IV 100 MHz (2-Channel, 100 MHz) — SPECIAL ORDER ONLY
2150.33	Hand-held Portable Oscilloscope Model OX 9104 IV 100 MHz (4-Channel, 100 MHz)
2150.34	Hand-held Portable Oscilloscope Model OX 9304 IV 300 MHz (4-Channel, 300 MHz)



OSCILLOSCOPES

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 600 V 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.

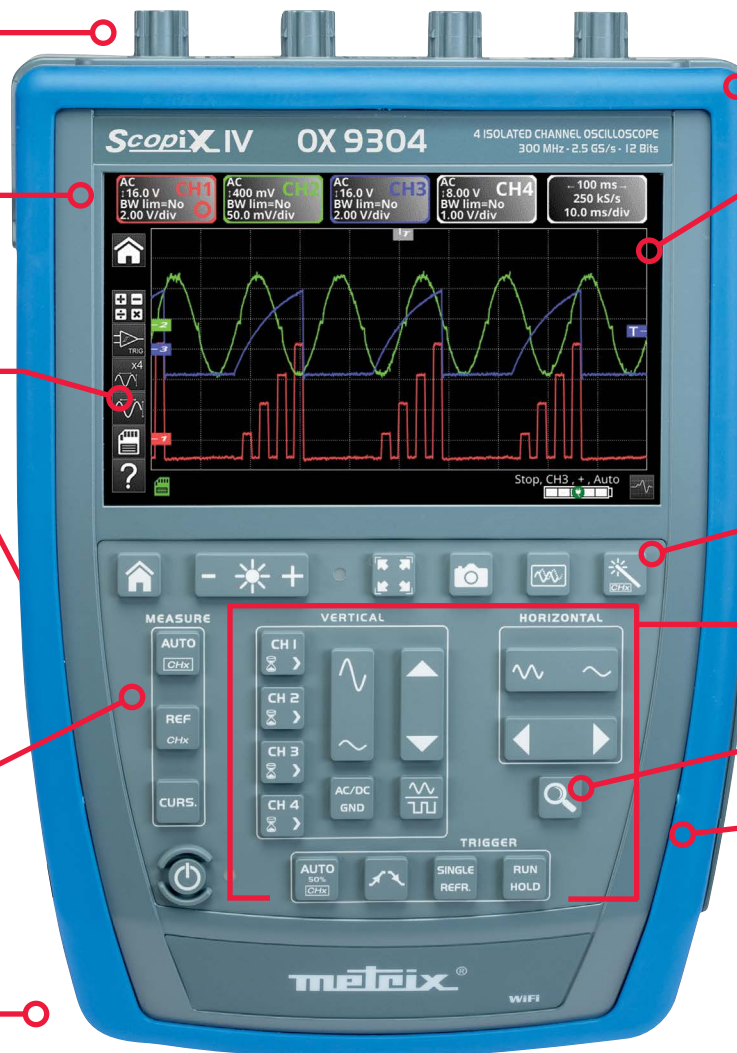
A stand is also available to vary the orientation of the oscilloscope when it is placed on a bench. The oscilloscope can be safely left unattended using the Kensington locking system.

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

APPLICATIONS

Ideal for electronic and industrial maintenance

IP54

Housing protected against dust and water spray.

7-INCH 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 SETUP BUTTONS

DIRECT ACCESS ZOOM BUTTON

Activates/Deactivates the horizontal Zoom function.

COMMUNICATION INTERFACES

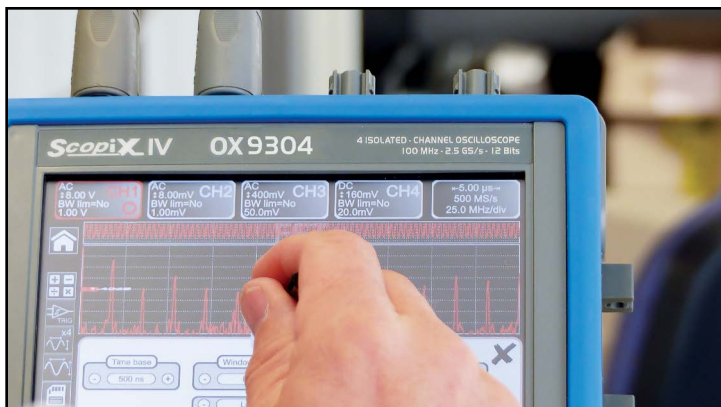
These are isolated from one another and from the measurement channels. A dedicated compartment on the right side protected by a flexible cover contains all the different communication interface ports:

- USB host for communication with a PC
- Wired RJ45 or Wi-Fi 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



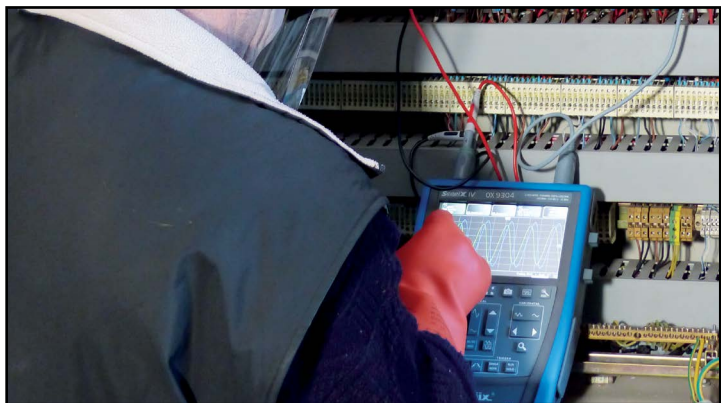
ELECTRONIC MAINTENANCE

The OX 9304 model is ideal for electronics with its 300 MHz bandwidth, (4) 600 V 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, Harmonic Analyzer and Multimeter modes make it ideal for industrial maintenance applications.

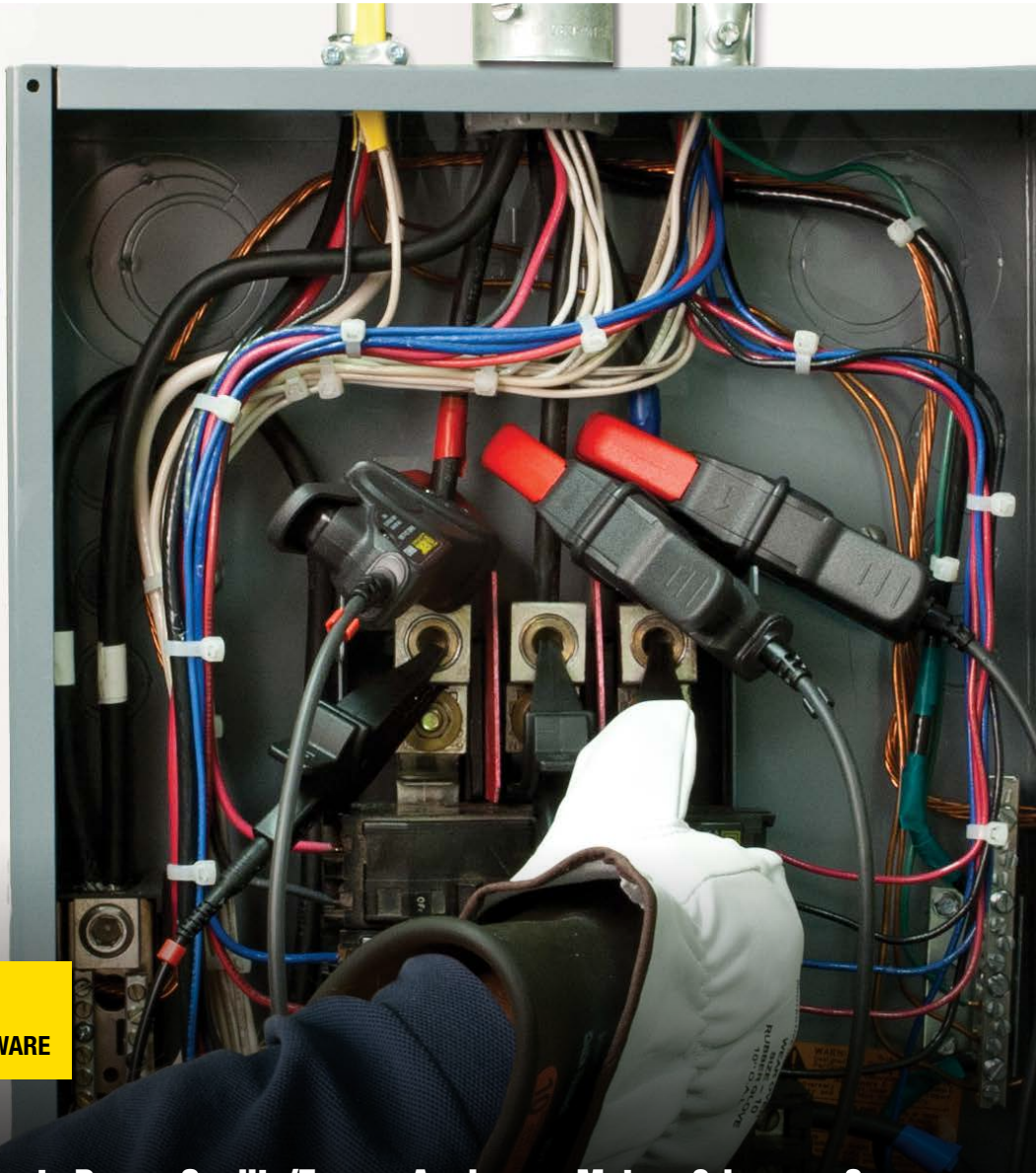
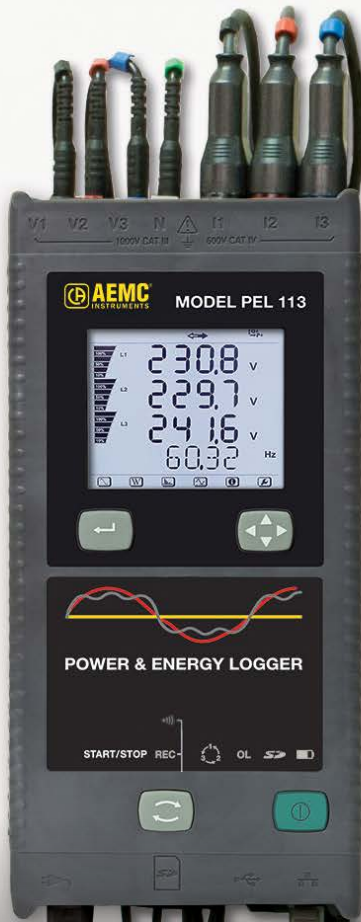


OSCILLOSCOPES

TECHNICAL SPECIFICATIONS	OX 9062	OX 9102	OX 9104	OX 9304
HUMAN-MACHINE INTERFACE				
Type of Display	7 in WVGA color TFT LCD touch screen, (800 x 480) dpi, LED backlighting (<i>adjustable standby mode</i>)			
Different Display Mode	2500 real acquisition points on screen - vectors with interpolation			
Display of Curves on Screen	4 curves, 4 references, split screen and full screen modes			
Screen Commands	Touch screen / icons and graphical commands / customizable channel colors			
Choice of Language	15 complete languages, menus and contextual help			
OSCILLOSCOPE MODE				
Vertical Deflection				
Bandwidth	60 MHz	100 MHz		300 MHz
	(15, 1.5) MHz or 5 kHz bandwidth limiter			
Number of Channels	2 isolated channels		4 isolated channels	
Input Impedance	1 MΩ ± 0.5 %, approximately 12 pF			
Maximum Input Voltage	600 V CAT III (<i>1000 V per ProbiX</i>), from (50 to 400) Hz, ProbiX safety connectors			
Vertical Sensitivity	16 ranges from 2.5 mV to 200 V / div and up to 156 μV / div in vertical zoom mode (<i>12-bit converter</i>), Accuracy ± 2 %			
Vertical Zoom	One click Winzoom mode (<i>12-bit converter and direct graphical zoom on screen</i>), x 16 max.			
Probe Factor (<i>non-ProbiX</i>)	1 / 10 / 100 / 1000 or any scaling – definition of measurement unit			
Horizontal Deflection				
Sweep Speed	35 ranges from 1 ns / div to 200 s / div., accuracy ± [50 ppm + 500 ps] (<i>Roll mode from 100 ms to 200 s / div</i>)			
Horizontal Zoom	One click Winzoom system (<i>direct graphical zoom on screen</i>) x 1 to x 5 or x 100 (<i>storage 100 kpts / channel</i>)			
Triggering				
Mode	On all the channels: automatic, triggered, one-shot, auto level 50 %			
Type	Edge, pulse width (16 ns to 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	≤ 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 (<i>100 GS / s max. in ETS mode</i>)			
Vertical Resolution	12 bits (<i>vertical resolution 0.025 %</i>)			
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 μSD card: SD 2 GB, SDHC (4 to 32) GB and SDXC > 32 GB			
GLITCH Mode	Duration ≤ 2 ns to 500,000 min / max pairs			
Display Modes	Envelope, vector, accumulation-, averaging (<i>factors 2 to 64</i>) – XY (<i>vector</i>) and Y(f) = FFT			
Other Functions				
AUTOSET	Complete in under 5 s, with recognition of the channels, Frequency > 30 Hz			
FFT Analyzer & MATH Functions	2500-point FFT (<i>Lin or Log</i>) 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 – 8000 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 MΩ – accuracy 0.5 % R+ 25 D – quick continuity test < 10 ms			
Other Measurements	Temperature / Capacitance 5 nF to 5 mF / 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 (<i>depending on model</i>), 63 orders, fundamental frequency (40 to 450) Hz in auto or manual mode			
Simultaneous Measurements	Total Vrms, THD and selected order (<i>% fundamental, phase, frequency, Vrms</i>)			
Logger Mode				
Acquisition	Duration: 20,000 s / Interval: 0.2 s / Files: 100,000 measurements			
GENERAL				
Configuration Memories	Not limited according to device (<i>variable file sizes</i>)			
Printing	Network printing via Ethernet / Wi-Fi in .png format			
PC Communication – Software	Ethernet (<i>100 baseT</i>), Wi-Fi-USB (<i>device, 12 Mbps</i>), ScopeNet application software for PC			
Software	PC: Ethernet and USB, ScopeNet (<i>remote control, data recovery, cursors and automatic measurements</i>) Android™ tablet – ScopeAdmin Fleet Administration utility			
Mains Power Supply	Li-ion 5.8 Ah rechargeable battery pack / Battery life of up to 8 h / Adjustable standby mode Adapter / 2-hour fast charger, universal (98 to 264) V / (50 / 60) Hz)			
Safety / EMC / IP Protection	Safety as per IEC 61010-2-30, 600 V CAT III, 1000 V CAT II / EMC as per EN 61326-1 / IP54 protection			
Mechanical Specifications	(11.52 x 8.29 x 2.60) in (293 x 211 x 66) mm / 4.6 lb (2.1 kg) with batteries			

Consult factory for NIST Calibration prices.

POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

Why choose AEMC® Instruments Power Quality/Energy Analyzers, Meters & Loggers?

As an electrician or a facility maintenance professional, it is crucial to troubleshoot and benchmark power quality issues over time. To make this process easy for you, we offer a line of portable power quality analyzers, power and energy loggers, and meters that are user-friendly. Our products are designed to identify power, quality, and energy waste in your facility, ensure continuity of service, find intermittent problems with voltage, detect and prevent power issues before they become costly problems, and record trend, transient, event, and harmonic data simultaneously. This will save you time in finding problem areas and assist in capturing accurate power and energy data necessary to maintain optimum performance and reliability. Additionally, all needed probes and accessories are included, so you don't have to worry about guesswork and be sure you have everything you need.

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

PowerPad® IV Model 8345 *The PowerPad® moves up a grade - Class A!*



DataView®

POWERPAD IV
Class A

DataViewSync™



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PRODUCT INCLUDES

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

CAT. #2136.36 - POWERPAD® IV MODEL 8345 (WITH (4) MINIFLEX® MA194-24-BK FLEXIBLE CURRENT SENSORS)

CAT. #2136.37 - POWERPAD® IV MODEL 8345 (WITH (4) AMPFLEX® 193-24-BK FLEXIBLE CURRENT SENSORS)

Extra-large tool bag, internal carrying pouch, hand strap, (4) 193-24-BK sensors, 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, SD Card, (1) power plug adaptor for PA32ER, 5.8 A-h Li-ion battery pack, quick start guide, and USB drive with DataView® software and user manual.



MODEL	8345
ELECTRICAL	
Measurement Frequency	Measurement Range without Ratio (with unity ratio)
	Min Max
	42.50 Hz 69.00 Hz
Inputs	5 x voltage / 4 x current, isolated
Voltage	(5 to 1000) VAC / 1200 Vdc
Harmonics Mode	DC to 127 th order
Interharmonics Mode	0 to 126 th order
Inrush & Transient Capture (number)	No maximum (limited by SD card)
Transient Capture	1000 ct Max
Shockwaves (Fast transient)	Up to 12 kV sampled every 500 ns
Voltage Unbalance (u0,u2)	(0.5 to 5) % (absolute) ; ± 0.15 % (absolute)
Trend Recording	> 900 parameters
	3 d with a sampling period of 200 ms
	15 d with a sampling period of 1 s
	45 d with a sampling period of 3 s
Sampling Rate	Voltage 400 kSps / Current 200 kSps / Surge 2 MSps
Alarm Mode (types / number)	40 / 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) VAC/DC with external supply block (included)
Carrier Current Detection	Yes
Battery Life	Cartridge Li-ion – 5800 A-h battery pack (included) ≤ 6 h w / display ON; ≤ 10 h w / display OFF
MECHANICAL	
Data Storage	16 GB SD-Card (included) for snapshot, transients, alarms, InRush 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 to 40) °C
Communication	USB, Ethernet, Wi-Fi, Web server, DataViewSync™ / 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 lb (2 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)
EN 50160 Monitoring Mode	With DataView® software
Warranty	*3 y (registration must be done within 30 d of the date of purchase)

Consult factory for NIST Calibration prices.

CAT. # DESCRIPTION

2136.35	PowerPad® IV Model 8345 (no probes)
2136.36	PowerPad® IV Model 8345 w/(4) MA194-24-BK MiniFlex® Sensors
2136.37	PowerPad® IV Model 8345 w/(4) 193-24-BK Sensors (regular AmpFlex®)

POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

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 h
- RMS and Peak InRush for up to 30 min
- 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 cycles
- 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 of Pst & Plt flicker and sliding Pst
- Harmonics (amplitude/phase shift) from DC to the 127th order
- Inter-harmonic subgroups from 0 to the 126th order
- Calculations of K factor and FHL
- 2 carrier current frequencies monitored

ACCESSORIES/REPLACEMENTS

CAT. #2133.76 Carrying Bag

CAT. #2960.47 Battery - Replacement 5.8 A-h 61.9 W-h Li-ion Battery Pack

CAT. #5000.14 Power cord 115 V for Micro-ohmmeters, Megohmmeters, Power Instruments, Oscilloscopes & Ground Testers

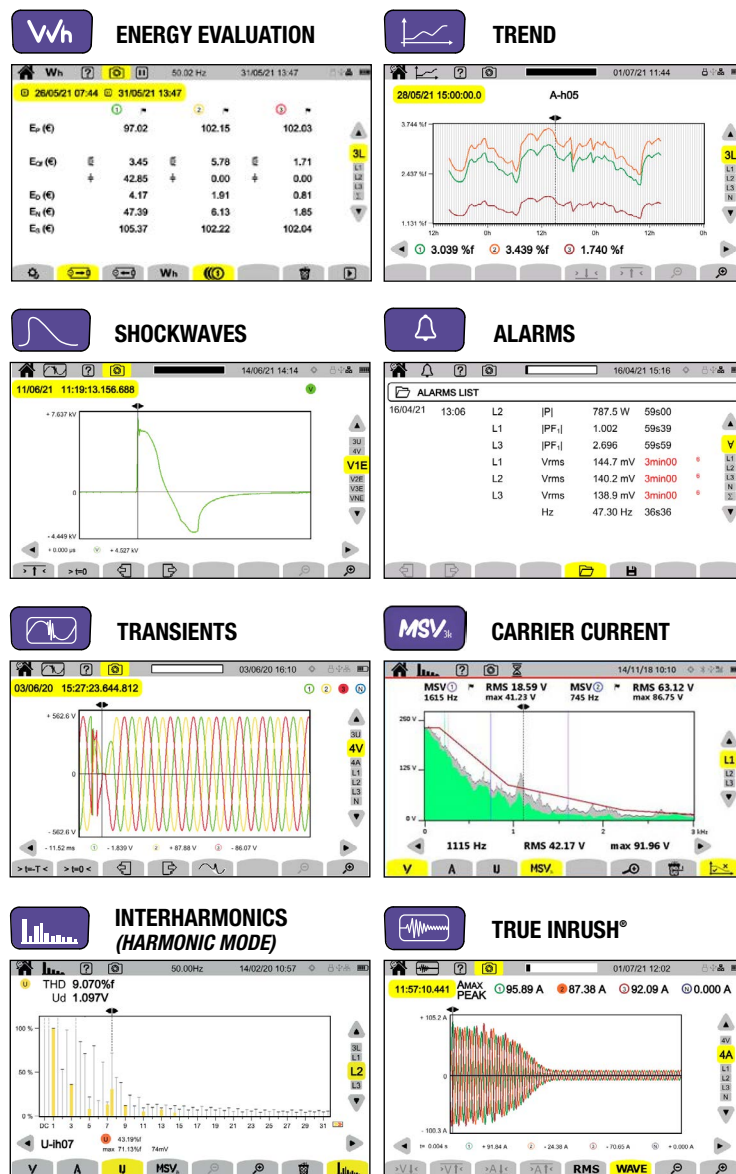
CAT. #5000.99 Clip – Safety alligator (black) (1000 V CAT IV, 15 A, UL V2)

CAT. #5100.14 Adapter - Replacement Power Plug Adapter for PA32ER

CAT. #5100.15 Adapter - Replacement 1000 V PA32ER Power Supply

CAT. #5100.16 Magnetic Hook

Large Functional Displays



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

See pages 132 to 133 for more Accessories/Replacements

POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

THREE-PHASE POWER QUALITY ANALYZERS



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



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



DataView®



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PRODUCT INCLUDES

CAT. #2136.10 MODEL 8333 (NO PROBES)

Extra large carrying bag, soft carrying pouch, (4) 10 ft black voltage leads with alligator clips, 5 ft USB cable, (12) color-coded input ID markers, (110/240) V power adapter with US power cord, 9.6 V NiMH battery, SD card, printed quick start guide and USB drive with DataView® software and user manual.



CAT. #2136.30 MODEL 8336 (NO PROBES)

Extra large carrying bag, soft carrying pouch, (5) 10 ft black voltage leads with alligator clips, 5 ft USB cable, (12) color-coded input ID markers, (110/240) V power adapter with US power cord, SD card, 9.6 V NiMH battery, printed quick start guide, and USB drive with DataView® software and user manual.

KIT OPTIONS

8333

AS ABOVE WITH AMPFLEX®
193 FLEXIBLE CURRENT PROBE
(10 kA) CAT. # 2136.11
24 IN, RATED 600 V CAT IV

OR

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



8336

AS ABOVE WITH AMPFLEX®
193 FLEXIBLE CURRENT PROBE
(10 kA) CAT. # 2136.31
24 IN, Rated 600 V CAT IV

OR

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



MODELS	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 1000) V	
Voltage Ratio	up to 500 kV	
Current (TRMS AC+DC)	MN93: 500 mA to 200 A _{AC} ; MN193: (0.005 to 100) A _{AC} SR193 Clamp: (1 to 1000) A _{AC} AmpFlex® or MA193 Clamps: 100 mA to 10000 A _{AC} MR193 Clamp: (1 to 1000) A _{AC} / 1300 A _{DC} SL261 Clamp: 50 mA to 100 A _{AC/DC} Current Ratio: up to 60 kA	
Frequency (Hz)	(40 to 69) Hz	
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	1 st to 50 th , Direction, Sequence; THD: 0 to 50, phase	
Transients	up to 50	up to 210
Flicker (Pst / Plt)	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 in (148 mm)	
Snapshots	12	50
Languages	> 27	
Communication Interface	USB	
MECHANICAL		
Battery Life	≤ 10 h, ≥ 15 h in Record mode	
Power Supply	9.6 V NiMH rechargeable battery pack (included) External AC supply: (110 / 230) V _{AC} ±10 % (50 / 60) Hz	
Dimensions	(9.8 x 7.8 x 2.6) in (249 x 198 x 66) mm	
Weight	4.3 lb (1.95 kg)	
SAFETY		
Safety Rating / IP	IEC 61010, 1000 V CAT III; 600 V CAT IV / IP53	

Consult factory for NIST Calibration prices.

POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

THREE-PHASE POWER QUALITY ANALYZERS

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

FEATURES

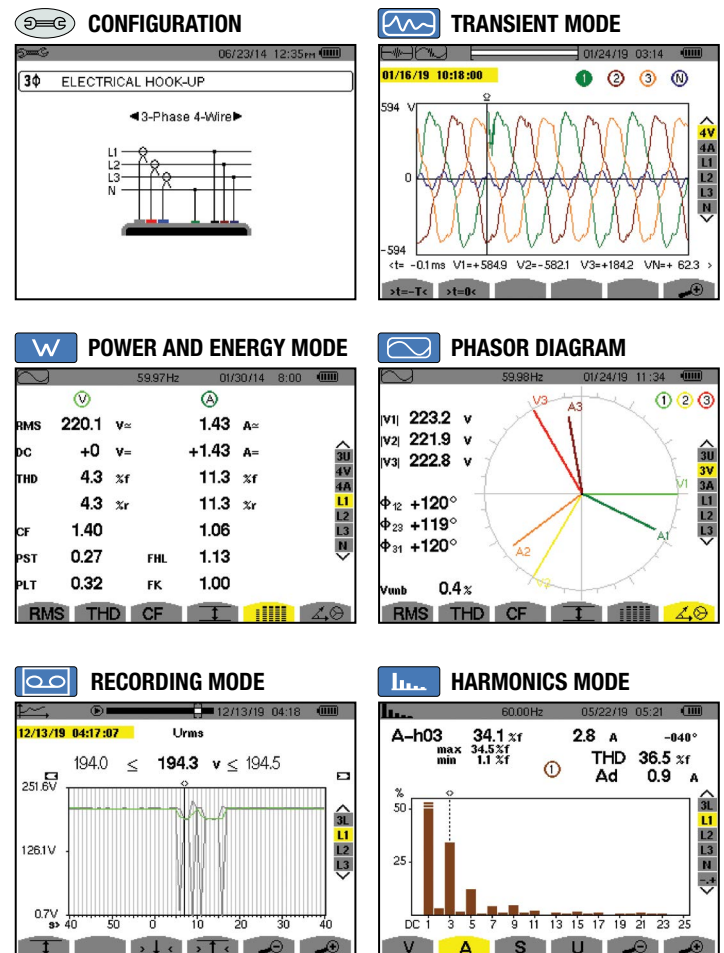
- True RMS single-, two- and three-phase measurements at 256 samples/cycle, plus DC
- Real-time color waveforms
- Easy-to-use on-screen setup
- Automatic current probe recognition and scaling
- True RMS voltage and current measurement
- Measures DC volts, amps and power
- Displays and captures voltage, 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 Factor K display
- Power Factor, displacement PF display
- Captures up to 210 transients (Model 8336)
- Short term (Model 8333) and Long term (Model 8336) 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

- CAT. #2133.73** Extra Large Classic Tool Bag (18 x 9 x 12) in
- CAT. #2140.19** 9.6 V NiMH Rechargeable Battery
- CAT. #2140.28** AC/DC Current Probe Model MR193-BK
- CAT. #2140.32** AC Current Probe Model MN93-BK
- CAT. #2140.33** AC Current Probe Model SR193-BK
- CAT. #2140.34** AmpFlex[®] Sensor 24 in Model 193-24-BK
- CAT. #2140.35** AmpFlex[®] Sensor 36 in Model 193-36-BK
- CAT. #2140.36** AC Current Probe Model MN193-BK

CAT. #	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

Large Functional Displays



CAT. #1201.51 AC/DC Current Probe Model SL261

CAT. #2140.40 BNC Adapter for AC/DC Current Probe Model SL261 and models for use with 8220, 8333, 8335, 8336, 8435, 8436 & PEL Series

CAT. #2140.44 (1) 10 ft (3 M) Black Lead w/(1) Black Alligator Clip (Lead rated 1000 V CAT IV 15 A, Clip rated 1000 V CAT IV 15 A, UL)

CAT. #2140.48 MiniFlex[®] Sensor 10 in Model MA193-10-BK

CAT. #2140.50 MiniFlex[®] Sensor 14 in Model MA193-14-BK

CAT. #2140.80 MiniFlex[®] Sensor 24 in Model MA194-24-BK

CAT. #2140.77 Phase Power Adapter (8333 & 8336)

CAT. #5000.14 Power cord 115 V for Micro-ohmmeters, Megohmmeters, Power Instruments, Oscilloscopes & Ground Testers

CAT. #5000.99 Clip – Safety alligator (black) (1000 V CAT IV, 15 A, UL V2)

POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

THREE-PHASE POWER QUALITY ANALYZERS



cover
closed

POWERPAD® III MODEL 8436

*Supplied with an 8 GB SD card for storing up to 2 GB trend recordings
(4) current and (5) voltage input terminals*



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



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



DataView®



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FEATURES

- Measurement of TRMS voltages up to 1000 Vrms AC/DC for two-, three-, four- or five-wire systems
- Measurement of TRMS currents up to 10,000 Arms (sensor dependent)
- 65 μ s 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)
- 2 GB 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

MODEL	8436
ELECTRICAL	
Sampling Frequency	256 samples / cycle
Data Storage	SD card for trend recording; Additional separate 12.5 MB partitioned memory for snapshots, transient / Inrush & alarms
Voltage (TRMS)	Phase-to-Phase: 2000 V Phase-to-Neutral: 1000 V Voltage Ratio: up to 500 kV
Current (TRMS)	MN Clamp: (0 to 6) A / 120 A or (0 to 240) A SR Clamp: (0 to 1200) A MR Clamp: (0 to 1000) A _{AC} , (0 to 1400) A _{DC} MiniFlex®: (10 to 3000) A AmpFlex®: (10 to 10) kA ⁽¹⁾ SL261 Clamp: 50 mA to 100 A _{AC/DC}
Frequency (Hz)	(40 to 69) Hz
Other Measurements	kW, kvar, kVA, PF, DPF, kWh, kvarh, kVAh, Factor K, Flicker
Harmonics	1 st to 50 th , Direction, Sequence
Power Supply	9.6 V NiMH rechargeable battery pack (included) (110 to 1000) V DC to 400 Hz
Battery Life	≤ 10 h with display on; ≥ 15 h 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) in (270 x 249 x 180) mm
Weight	8.2 lb (3.7 kg) with batteries
SAFETY	
Safety Rating	EN 61010, 600 V CAT IV ⁽²⁾ , 1000 V CAT III

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

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

PRODUCT INCLUDES

8436 KIT CAT. #2136.44

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

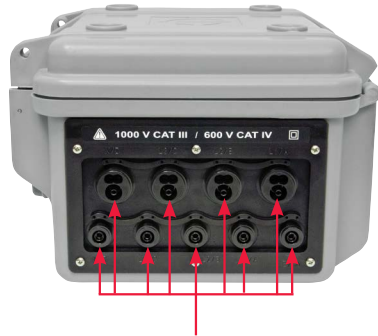


POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

THREE-PHASE POWER QUALITY ANALYZERS

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
CAT. #2140.73



POWER CORD
CAT. #5000.63



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



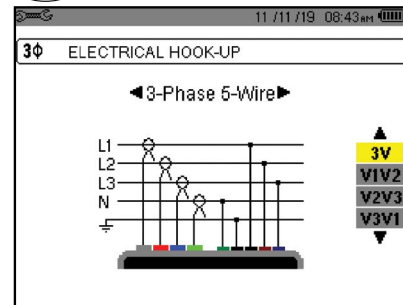
LINE POWER ADAPTER
CAT. #5000.89



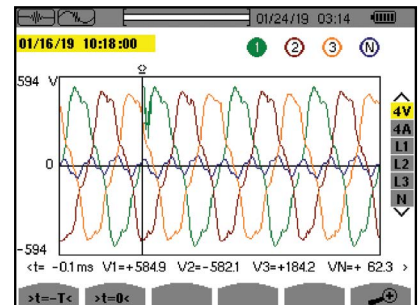
POLE MOUNTING KIT
CAT. #2137.82
Set of (2) with hardware

Large Color Functional Displays

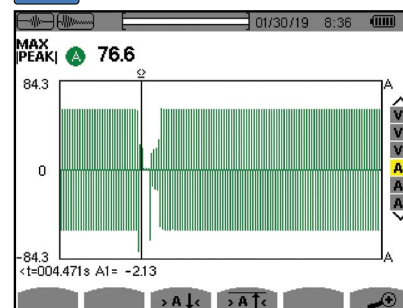
CONFIGURATION



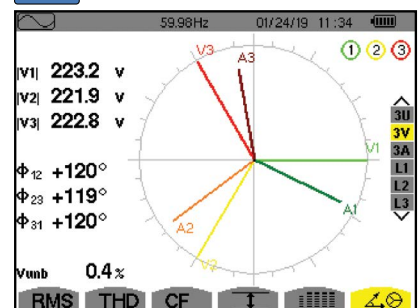
TRANSIENT MODE



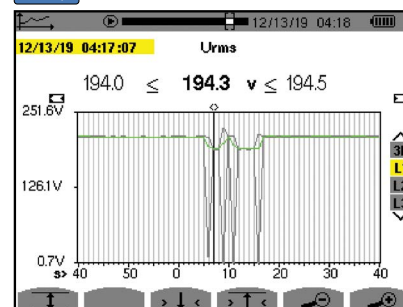
INRUSH PEAK



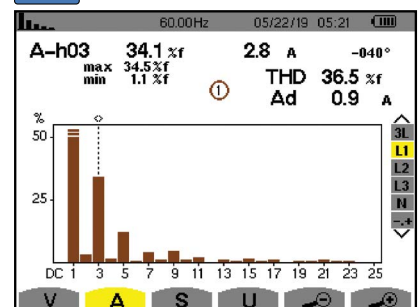
PHASOR DIAGRAM



TREND ANALYSIS



HARMONICS MODE



ACCESSORIES/REPLACEMENTS

- CAT. #2133.73 Extra Large Classic Tool Bag (18 x 9 x 12) in
- CAT. #2137.82 Pole Mounting Kit
- CAT. #2140.19 Replacement - 9.6 V NiMH Rechargeable Battery
- CAT. #2140.45 Set of (12) color-coded Input ID Markers
- CAT. #2140.73 (1) 10 ft (3 M) Black Lead (waterproof cap) (Rated 1000 V CAT IV) and (1) Black Alligator Clip (Rated 1000 V CAT IV, 15 A, UL)
- CAT. #2140.75 AmpFlex® Sensor 24 in Model 196A-24-BK (waterproof - IP67)

- CAT. #2140.79 MiniFlex® Sensor 14 in Model MA196-14-BK (waterproof IP67)
- CAT. #5000.14 Power cord 115 V for Micro-ohmmeters, Megohmmeters, Power Instruments, Oscilloscopes & Ground Testers
- CAT. #5000.43 Probe - Set of (2) Color-coded (red/black) Magnetize Voltage Probes (Rated 600 V CAT IV, 1000 V CAT III)
- CAT. #5000.63 Power Cord 110 V for use only with Models 8435 and 8436
- CAT. #5000.77 Cable Reeling Box
- CAT. #5000.89 Line Power Adapter 110-1000 V_{oc} to 400 Hz (Replacement - for use only with Model 8436)
- CAT. #5000.99 Clip - Safety alligator (black) (1000 V CAT IV, 15 A, UL V2)

CAT. #	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 LOGGER PEL 52



Pending

MODEL PEL 52

Time/date stamped electrical measuring instrument to understand and improve electrical consumption



DataView®



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DataViewSync™

PRODUCT INCLUDES

CAT. #2137.69 (WITH PROBES)

Soft carrying bag, (2) MiniFlex® MA193-10-BK sensors, (3) black test leads and alligator clips, 110 V US power Cord, (1) adapter for power cord, 8 GB SD card, USB SD card reader, (2) AAA rechargeable batteries, quick start guide, and USB drive with DataView® software and user manual.

CAT. #2137.71 (NO PROBES)

Soft carrying bag, (3) black test leads and alligator clips, 110 V US power Cord, (1) adapter for power cord, 8 GB SD card, USB SD card reader, (2) AAA rechargeable batteries, quick start guide, and USB drive with DataView® software and user manual.

MODEL	PEL 52		
GENERAL			
Inputs	2V / 2I		
Types of installations	Single-phase, split-phase or 2 single-phase channels		
Recording / Data Storage Rate	Unlimited duration (4 GB max recording size) / 1 s to 1 h (Min / Avg / Max)		
Network Frequency	(45 to 65) Hz		
Voltage	(10 to 600) V		
ELECTRICAL			
VOLTAGE	RANGE	RESOLUTION	ACCURACY
Vrms	(10 to 600) V P to N	0.1 V	± 0.2 % Reading ± 0.2 V
Urms	(20 to 600) V P to P	0.1 V	± 0.2 % Reading ± 0.4 V
CURRENT MEASUREMENT @ (50 and 60) HZ	RANGE	RESOLUTION	ACCURACY
Amps (1 V nominal) (excluding clamp accuracy)	Probe dependent (0.2 % < I < 120 % Inom)	Probe dependent	± 0.2 % Reading ± 0.02 Inom
POWER	RANGE	RESOLUTION	ACCURACY
Watts P-Q-S (W-var-VA)	V = (100 to 600) V I = (5 to 120) % Inom	Probe dependent	± 0.3 % R ± 0.003 % Pnom ± 1 % R ± 0.01 % Qnom ± 0.3 % R ± 0.003 % Snom
Power Factor	-1 to 1	0.001	±0.02 %
Cos φ (DPF)	-1 to 1	0.001	±0.05 %
ENERGY	RANGE	RESOLUTION	ACCURACY
Ep-Eq-Es (Wh, varh, VAh)	V = (100 to 600) V I = (5 to 120) % Inom	0.001 and ±0.02%	±0.5 % Reading ±2.5 % Reading ±0.5 % Reading
MECHANICAL			
Communication	Wi-Fi (access point and hot spot)		
Data Storage	8 GB SD-Card (included) ; expandable to 32 GB		
Dimension	(7.08 x 3.46 x 1.45) in (180 x 88 x 37) mm		
Weight	14.10 oz (400 g)		
Case	Compact and rugged, shock and vibration IEC 61010		
Display Type	LCD with blue backlight		
Real-Time Clock	Time and date stamp for Trend mode		
Power Supply	From phase 1 (90 to 660) V battery backup when power OFF		
Battery Life	3 h without Wi-Fi, 1 h typical with Wi-Fi enabled		
ENVIRONMENTAL			
Operating Temperature / Relative Humidity	(-4 to 122) °F (-20 to 50) °C / (10 to 85) % RH		
Storage Temperature	(-40° to 158) °F (-40 to 70) °C / (0 to 95) % RH w/out battery		
SAFETY			
Electro-Magnetic- Compatibility (EMC)	EN 61326-1 for emission and immunity		
Safety Rating / CE Rating	IEC / EN 61010-2-30 (600 V CAT III) / Yes		
IP Rating	IP54 per IEC 60529		

* Minimum and maximum values are current probe dependent.
Consult factory for NIST Calibration prices.

CAT. #	DESCRIPTION
2137.69	Power & Energy Logger Model PEL 52 (w/LCD, w/(2) MA193-10-BK sensors)
2137.71	Power & Energy Logger Model PEL 52 (w/LCD, no sensors)

POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

POWER & ENERGY LOGGER PEL 52

FEATURES

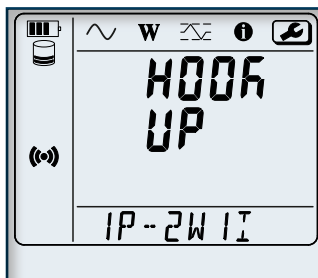
- Low cost, simple-to-use, portable, single- and dual- (*split-phase*) power & energy data logger
- Wide backlit LCD display
- Vital energy data is easily measured, recorded and analyzed
- TRMS voltage and current measurement up to 600 V
- Powered via the measuring phase
- Measurement of the AC phase currents (I1, I2) (*dependent on sensor*)
- RMS AC measurements (50 and 60) Hz, aggregation every second without missing measurements
- Easy to use, automatic recognition of current sensors
- W, VA and var (P, Q, S, N and D) power measurements
- Calculation of the Cos ϕ and Power Factor (DPF)
- Aggregation measurements over a period from 1 min to 1 h
- Storage of the 1 s and aggregated measurements on SD/SDHC card; data can be read directly on a PC
- Remote connectivity via DataViewSync®
- Integrated web server for remote viewing (*Android™, iOS, Windows, etc.*)
- Wi-Fi offers accessibility to diagnose problems in real-time and/or multi-station operation
- Data saved on SD card for easier transport
- Capable of performing load studies in compliance with NEC 220.87
- Includes FREE DataView® software for configuring, data retrieval, real-time measurement display, data analysis and report generation
- Compact casing with built-in magnet to facilitate mounting for easier implementation in electrical cabinets 2-year warranty
- ECO-DESIGN – environmental aspects considered during product development to make the lowest possible environmental impact throughout the product life cycle

APPLICATIONS

- Load surveys – Find out how much energy each item of equipment consumes operating at its min/max power level.
- Energy analysis – Estimate energy consumption before and after the improvements.
- Energy surveys – The measurements for energy surveys must be performed at several locations on the evaluation site. Starting with the main power, compare the power and energy measurements on the electricity meter and bills. Sub metering can then be performed on downstream of the installation.

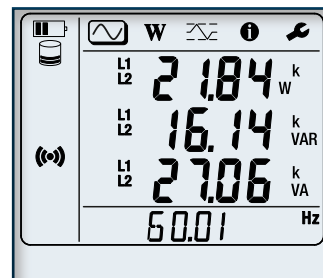
Large Functional Displays

INFORMATION MODE



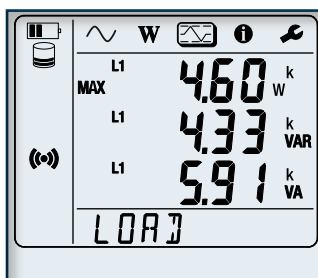
Hook up, Wi-Fi, aggregation period, can be configured from the front panel of the PEL 52. Current ratios and number of turns need to be configured via the PEL Transer software based on the current sensor type.

MEASUREMENT MODE (2P-3W2I)



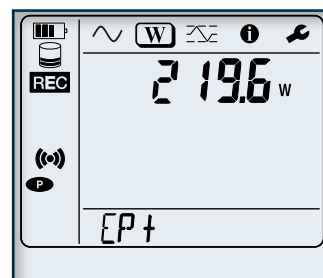
Real-time updates are displayed for voltage (V), current (A) active power (P), reactive power (Q), apparent power (S), frequency (Hz), power factor (PF).

MAX MODE (1P-2W1I)



Max aggregated values of measurements and energy.

ENERGY MODE



Active energy (Wh), reactive energy (varh), apparent energy (VAh). The energies displayed are the total energies, of the source or of the load. (The "h" symbol is not displayed on the screen. You will see W, VA, var for Wh, VAh and varh. Downloaded recordings will show the "h")

ACCESSORIES/REPLACEMENTS

CAT. #2140.32 AC Current Probe Model MN93-BK

CAT. #2140.33 AC Current Probe Model SR193-BK

CAT. #2140.34 AmpFlex® Sensor 24 in Model 193-24-BK

CAT. #2140.35 AmpFlex® Sensor 36 in Model 193-36-BK

CAT. #2140.36 AC Current Probe Model MN193-BK

CAT. #2140.48 MiniFlex® Sensor 10 in Model MA193-10-BK

CAT. #2140.50 MiniFlex® Sensor 14 in Model MA193-14-BK

CAT. #2140.80 MiniFlex® Sensor 24 in Model MA194-24-BK

CAT. #2140.81 AC Current Probe Model MN94

CAT. #2140.44 (1) 10 ft (3 M) Black Lead w/(1) Black Alligator Clip (Lead rated 1000 V CAT IV 15 A, Clip rated 1000 V CAT IV 15 A, UL)

CAT. #2140.45 Set of (12) color-coded Input ID Markers

CAT. #5000.14 Power cord 115 V for Micro-ohmmeters, Megohmmeters, Power Instruments, Oscilloscopes & Ground Testers

CAT. #5000.43 Magnetized Voltage Probe Set of (2) color-coded (red/black) magnetized voltage probes (Rated 600 V CAT IV, 1000 V CAT III)

CAT. #5000.99 Clip – Safety alligator (black) (1000 V CAT IV, 15 A, UL V2)

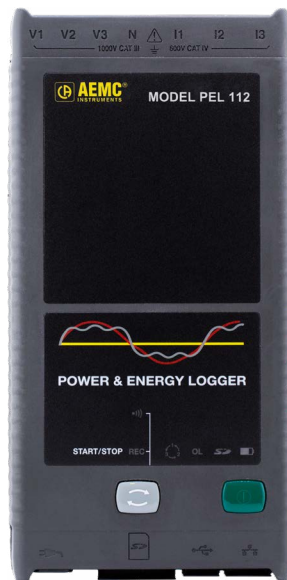
POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

PEL 110 SERIES



MODEL PEL 112

Supports Negative Temps!
Great for use in Cold Rooms (Down to -4 °F)



**Recordings Covering
Several Months!**

5x Faster!
(Than the PEL 102)



DataView®
DataViewSync™



SCAN TO
LEARN
MORE

FEATURES

- Simple-to-use, single-, dual- (*split-phase*) and three-phase (Y, Δ) power & energy loggers
- 3 voltage and 3 current channels with auto recognition of connected current sensors and probes
- 32 alarms can be configured to receive alerts and reports through email
- Multiple connectivity options supports USB, Ethernet, Wi-Fi, and remote access with DataViewSync™
- Secure SMTP e-mail transmission via DataViewSync™
- Remote access and real-time monitoring to view and analyze power consumption from anywhere
- Wide range of applications: predictive & preventive maintenance, energy audits, cost optimization and IT infrastructure maintenance
- Supports SD cards up to 32 GB
- Can be powered directly from the phases with PEL Adapter (*sold separately*)
- Compact and magnetized for mounting inside power panels
- Includes FREE DataView® software for configuring, data retrieval, real-time measurement display, data analysis and report generation

PRODUCT INCLUDES

PEL 112 (WITHOUT SENSORS)
CAT. #2137.63

Small classic tool bag, (4) 10 ft black test leads in reeling box, (4) black alligator clips, set of (12) color-coded input ID markers, 8 GB SD-card (*installed*), USB SD-card reader, USB type A to type B cable, 115 V power cord, NiMH AAA 8.4 V battery (*installed*), quick start guide, and USB drive with DataView® software and user manual.

PEL 112 (WITH SENSORS)
CAT. #2137.53 (SHOWN)

Small classic tool bag, (3) MiniFlex® MA193-10-BK Sensors, (4) 10 ft black test leads in reeling box, (4) black alligator clips, set of (12) color-coded input ID markers, 8 GB SD-card (*installed*), USB SD-card reader, USB type A to type B cable, 115 V power cord, NiMH AAA 8.4 V battery (*installed*), quick start guide, and USB drive with DataView® software and user manual.



ACCESSORIES

CAT. #2137.90

Adapter – 600 V CAT III Power to Phase Adapter for use with Models PEL 112 & PEL 113

***ADAPTER SOLD SEPARATELY**

**SEE PAGE 130-131 FOR MORE
OPTIONAL ACCESSORIES**



ANDROID™ APP AVAILABLE FOR PEL 112, 113 & 115

- Configure measurements and recordings
- Display data in real-time
- For use on devices with an Android™ platform
- Software sensors providing all comprehensive and instantaneous motors electrical parameters such as rotation speed, efficiency and torque



CAT. #	DESCRIPTION
2137.63	Power & Energy Logger Model PEL 112 (No LCD, No Sensors)
2137.53	Power & Energy Logger Model PEL 112 (No LCD, w/3 MA193-10-BK)

POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

PEL 110 SERIES



MODEL PEL 113

**Effortless Energy Logging for
Smarter Power Management!**



**Recordings Covering
Several Months!**

**5x Faster!
(Than the PEL 103)**



DataView®
DataViewSync™



SCAN TO
LEARN
MORE

FEATURES

- Simple-to-use, single-, dual- (*split-phase*) and three-phase (Y, Δ) power & energy loggers
- 3 voltage and 3 current channels with auto recognition of connected current sensors and probes
- 32 alarms can be configured to receive alerts and reports through email
- Multiple connectivity options supports USB, Ethernet, Wi-Fi access points (up to 5 clients), and remote access with DataViewSync™
- Remote access and real-time monitoring allows users to view and analyze power consumption from anywhere
- Secure SMTP e-mail transmission via DataViewSync™
- Wide range of applications: predictive & preventive maintenance, energy audits, cost optimization and IT infrastructure maintenance
- Supports SD cards up to 32 GB
- Can be powered directly from the phases with PEL Adapter (*sold separately*)
- Compact and magnetized for mounting inside power panels
- Includes FREE DataView® software for configuring, data retrieval, real-time measurement display, data analysis and report generation

PRODUCT INCLUDES

PEL 113 (WITHOUT SENSORS)
CAT. #2137.64 (SHOWN)

Small classic tool bag, (4) 10 ft black test leads in reeling box, (4) black alligator clips, set of (12) color-coded input ID markers, 8 GB SD-card (*installed*), USB SD-card reader, USB type A to type B cable, 115 V power cord, NiMH AAA 8.4 V battery (*installed*), quick start guide, and USB drive with DataView® software and user manual.

PEL 113 (WITH SENSORS)
CAT. #2137.54

Small classic tool bag, (3) MiniFlex® MA193-10-BK Sensors, (4) 10 ft black test leads in reeling box, (4) black alligator clips, set of (12) color-coded input ID markers, 8 GB SD-card (*installed*), USB SD-card reader, USB type A to type B cable, 115 V power cord, NiMH AAA 8.4 V battery (*installed*), quick start guide, and USB drive with DataView® software and user manual.



ACCESSORIES

CAT. #2137.90

Adapter – 600 V CAT III Power to Phase Adapter for use with Models PEL 112 & PEL 113

***ADAPTER SOLD SEPARATELY**

**SEE PAGE 130-131 FOR MORE
OPTIONAL ACCESSORIES**



CAT. #	DESCRIPTION
2137.64	Power & Energy Logger Model PEL 113 (w/LCD, No Sensors)
2137.54	Power & Energy Logger Model PEL 113 (w/LCD, w/3 MA193-10-BK)



POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

PEL 110 SERIES



cover
open



cover
closed



MODEL PEL 115

Three-Phase Power and Energy Logger

IP67 Watertight case - Use in the Field or Outdoors



**Recordings Covering
Several Months!**



DataView®
DataViewSync™



SCAN TO
LEARN
MORE

FEATURES

- Simple-to-use, single-, dual- (*split-phase*) and three-phase (Y, Δ) power & energy loggers
- 4 voltage and 4 current channels with auto recognition of connected current sensors and probes
- 32 alarms: configure, remote alerts and automatic reports
- Multiple connectivity options supports USB, Ethernet, Wi-Fi, and remote access with DataViewSync™
- Remote access and real-time monitoring to view and analyze power consumption from anywhere
- Wide range of applications: predictive & preventive maintenance, energy audits, cost optimization, and IT infrastructure maintenance
- Secure SMTP e-mail transmission via DataViewSync™
- Expandable storage records data on an SD card (*up to 32 GB*)
- Can be powered directly from the phases, eliminating battery reliance
- Includes FREE DataView® software for configuring, data retrieval, real-time measurement display, data analysis and report generation

PRODUCT INCLUDES

CAT. #2137.56 (WITHOUT SENSORS)

Extra large carrying bag with rubber bottom, (5) leads 10 ft (3 m) (*black, waterproof cap*) with (5) alligator clips (*black*), power adapter 110/230 V with US power cord, cable - 5 ft USB, SD-card (8 GB), USB SD- card reader, set of (12) color-coded input ID markers, 9.6 V NiMH battery (*installed*), set of (4) large and (5) small caps (*water-tight*), quick start guide, and USB drive with DataView® software and user manual.

CAT. #2137.58 (WITH SENSORS)

Extra large carrying bag with rubber bottom, (4) AmpFlex® sensors 24 in (*waterproof - IP67*), model 196A-24-BK, (5) leads 10 ft (3 m) (*black, waterproof cap*) with (5) alligator clips (*black*), power adapter 110/230 V with US power cord, cable - 5 ft USB, SD-card (8 GB), USB SD- card reader, set of (12) color-coded input ID markers, 9.6 V NiMH battery (*installed*), set of (4) large and (5) small caps (*water-tight*), quick start guide, and USB drive with DataView® software and user manual.



Phase
Powered

ACCESSORIES

POLE MOUNTING KIT CAT. #2137.82

Set of (2) with hardware

**SEE PAGES 130 - 131 FOR MORE
OPTIONAL ACCESSORIES**



CAT. # DESCRIPTION

2137.56	Power & Energy Logger Model PEL 115 (No sensors, Waterproof IP67, DataView® Software)
2137.58	Power & Energy Logger Model PEL 115 w/(4) 196A-24-BK (Waterproof IP67, DataView® Software)

POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

MODEL	PEL 112 & PEL 113		PEL 115	
Description	Meter Only	Meter with MA193-10-BK Sensors	Meter Only	Meter with 196A-24-BK Sensors
GENERAL				
Number of Voltage Channels	3- (V1, V2, V3)		4- (V1, V2, V3, Earth/Ground)	
Number of Current Channels	3 - (L1, L2, L3)		4 - (L1, L2, L3, Earth/Ground)	
Distribution Systems	Single-/Split-/3-Phase, DC, etc. (17 choices)			
MEASUREMENTS				
Voltage Range - Phase-Neutral (V) ²	(10 to 1000) V _{AC/DC} ²			
Voltage Range - Phase-Phase (U) ²	(10 to 1000) V _{AC}		(17 to 1000) V _{AC}	
Typical Accuracy - Voltage	±0.2 % R ±0.2 V			
Current Range AC	5 mA to 12 kA _{AC} ³	200 mA to 12 kA _{AC}	5 mA to 12 kA _{AC} ³	200 mA to 12 kA _{AC}
Current Range DC	50 mA to 1300 A _{DC} ³			
Typical Accuracy - Current (Meter Only) ⁴	±0.4 % R ± 0.04 % I _{nom}	—	±0.4 % R ± 0.04 % I _{nom}	—
Network Frequencies	DC/50/60/400 Hz (VFD/PWM not available)			
CALCULATED MEASUREMENTS				
Voltage Ratios	up to 650 kV			
Current Ratios	Up to 25 kA (MN193 probe, 5 A range)	Not available with AmpFlex®/ MiniFlex® sensors	Up to 25 kA (MN193 probe, 5 A range)	Not available with AmpFlex®/ MiniFlex® sensors
Power (P, P+ , Punb, Qf, N, D, S)	up to 10 GW/Gvar/GVA ⁵			
Energy	up to 4 EWh/EVAh/Evarh ⁵			
Phase	cos ϕ, tan ϕ, PF			
Phase Order / Phasor Diagram	Yes/Yes (with DataView® or App for Android™)			
Harmonics	THD for V, A and Harmonics to 50 th order for V, A			
RECORDING				
Aggregations (Fixed)	200 ms/1 s trends			
Aggregations (Selectable)	(1 to 60) min (12 choices)			
Min/Max Values	Yes			
Alarms	up to 32 separate alarms			
Emailed Reports	Yes, alarms and periodical Min/Max data through DataViewSync®			
Storage Media	SD Card (32 GB Max)			
Recording Length	Several weeks to years (Configuration dependent)			
OTHER FEATURES				
Communication	USB, Ethernet/Wi-Fi LAN, Ethernet/Wi-Fi Direct, DataViewSync®			
Software	DataView® included, free App for Android™			
NEC Article 220.87 Load Study Compliant	Yes, DataView® configuration button and report templates			
Mounting	Embedded Magnets in Case		Pole Mounting Kit (Cat. #2137.82)	
Powered from Phase	Phase Power Adapter (Cat. #2137.90)		Yes	
External Power Supply	120 / 240 V Line Power Cord		Power Adapter	
SAFETY AND MECHANICAL				
Electrical Safety (IEC 61010)	600 V CAT IV / 1000 V CAT III		1000 V CAT IV	
Ingress Protection ⁶	IP 54 / IP 20		IP 67	
Weight	<2.2 lb (1 kg)		7.5 lb (3.4 kg)	

¹ Please see user manual for complete technical specifications.

² 400 Hz - Phase-Neutral-V (5 to 600) V ; Phase-Phase-U (10 to 600) V.

³ Probe dependent.

⁴ Accuracy of connected current probe must be added to this value

⁵ (G = Giga =10⁹), (E = Exa= 10¹⁸)

⁶ (PEL 115) IP 67 with included waterproof accessories;

(PEL 112/113) IP 54 instrument disconnected (de-energized) / IP 20 instrument connected (energized and operating)

POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS OPTIONAL ACCESSORIES

MODEL	MAX CONDUCTOR SIZE	ACCURACY (TYPICAL)	TYPICAL ERROR ON Φ AT (50 / 60) HZ	CURRENT RANGE	USED WITH MODEL	CAT. #
MiniFlex® Model MA193-10-BK* & MiniFlex® Model MA193-14-BK* & MiniFlex® Model MA194-24-BK* 	2.75 in (70 mm) (10 in sensor)	± 1 %	0.5 °	100 mA to 12,000 A _{AC} ⁽¹⁾	PEL 52 PEL 112 PEL 113 PEL 115 8333 8336 8436 8345	2140.48 (10 in sensor)
	3.94 in (100 mm) (14 in sensor)					2140.50 (14 in sensor)
	7.64 in (194 mm) (24 in sensor)					2140.80 (24 in sensor)
10, 14 & 24 in Sensor 						
AC/DC Current Probe Model MR193-BK 	1.6 in (41 mm)	± 2.5 %	-0.80 °	(1 to 1000) A _{AC} (1 to 1300) A _{DC}	PEL 112 PEL 113 PEL 115 8333 8336 8436 8345	2140.28
AC Current Probe Model MN93-BK 	0.78 in (20 mm)	± 1 %	0.8 °	(0.5 to 240) A _{AC}	PEL 52 PEL 112 PEL 113 PEL 115 8333 8336 8436 8345	2140.32
AC Current Probe Model SR193-BK 	2.05 in (52 mm)	± 0.3 %	0.2 °	(1 to 1200) A _{AC}	PEL 52 PEL 112 PEL 113 PEL 115 8333 8336 8436 8345	2140.33
AmpFlex® Sensor 24 in Model 193-24-BK* 	7.64 in (194 mm) (24 in sensor)	± 1 %	0.5 °	100 mA to 12,000 A _{AC} ⁽¹⁾	PEL 52 PEL 112 PEL 113 PEL 115 8333 8336 8436 8345	2140.34
AmpFlex® Sensor 36 in Model 193-36-BK* 	11.64 in (291 mm) (36 in sensor)	± 1 %	0.5 °	100 mA to 12,000 A _{AC} ⁽¹⁾	PEL 52 PEL 112 PEL 113 PEL 115 8333 8336 8436 8345	2140.35

POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS OPTIONAL ACCESSORIES

MODEL	MAX CONDUCTOR SIZE	ACCURACY (TYPICAL)	TYPICAL ERROR ON ϕ AT (50 / 60) HZ	CURRENT RANGE		USED WITH MODEL	CAT. #
AC Current Probe Model MN193-BK 	0.78 in (20 mm)	$\pm 1\%$	0.75 °	100 A	200 mA to 120 Aac	PEL 52 PEL 112 PEL 113 PEL 115 8333 8336 8436 8345	2140.36
			1.7 °	5 A	5 mA to 6 Aac		
AmpFlex® Sensor 24 in Model 196A-24-BK* (Waterproof IP67) 	7.64 in (194 mm) (24 in sensor)	$\pm 1\%$	0 °	100 mA to 12,000 Aac ⁽¹⁾		PEL 115 8436	2140.75
MiniFlex® Sensor 14 in Model MA196-14-BK* (Waterproof IP67) 	3.9 in (99 mm) (14 in sensor)	$\pm 1\%$	0 °	100 mA to 12,000 Aac ⁽¹⁾		PEL 115 8436	2140.79
AC Current Probe Model MN94 	0.25 in (7 mm)	$\pm 0.2\%$	0.1 °	50 mA to 200 Aac		PEL 52 8345	2140.81
AC / DC Current Probe Model E94 	.464 in (11.8 mm)	$\pm 3\%$	1.5 °	10 A	100 mA to 10 Aac	PEL 112 PEL 113 PEL 115 8345	2140.82
		$\pm 4\%$	1 °	100 A	500 mA to 100 Aac		

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

All current sensors can be used with Models PEL 115 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 SELECTION CHART

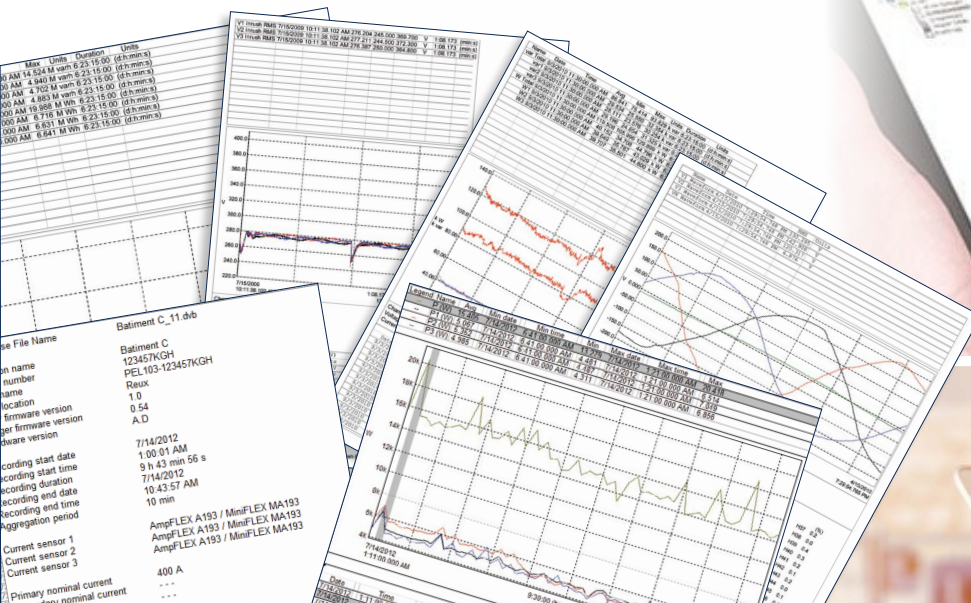
MODEL	CAT. #	INPUT TERMINALS	CHANNELS	RMS VOLTAGE MAX PHASE-TO- NEUTRAL	RMS VOLTAGE MAX PHASE-TO- PHASE	PEAK VOLTAGE MAX PHASE-TO- NEUTRAL	PEAK VOLTAGE MAX PHASE-TO- PHASE	DC VOLTAGE MAX	AC CURRENT MAX (PROBE DEPENDENT)	DC CURRENT MAX (PROBE DEPENDENT)	RATIOS VOLT	RATIOS AMPERE
8333	2136.10	4 V / 3 I	3 V / 4 I	1000 V _{RMS}	2000 V _{RMS}	1414 V _{pk}	2828 V _{pk}	1200 V _{DC}	10,000 A _{AC}	1300 A _{DC}		Yes
8336	2136.30	5 V / 4 I	4 V / 4 I	1000 V _{RMS}	2000 V _{RMS}	1414 V _{pk}	2828 V _{pk}	1200 V _{DC}	10,000 A _{AC}	5000 A _{DC}		Yes
8345	2136.35	5 V / 4 I	4 V / 4 I	1000 V _{RMS}	2000 V _{RMS}	1414 V _{pk}	2828 V _{pk}	1200 V _{DC}	10,000 A _{AC}	5000 A _{DC}		Yes
8436	2136.43	5 V / 4 I	4 V / 4 I	1000 V _{RMS}	2000 V _{RMS}	1414 V _{pk}	2828 V _{pk}	1200 V _{DC}	10,000 A _{AC}	5000 A _{DC}		Yes
PEL 52	2137.71	2 V / 2 I		600 V _{RMS}	1200 V _{RMS}	—			3600 A _{AC}	—	No	Yes
PEL 112	2137.63	4 V / 3 I	3 V / 3 I	1000 V _{RMS}	1700 V _{RMS}	1414 V _{pk}	2400 V _{pk}	1000 V _{DC}	12,000 A _{AC}	5000 A _{DC}		Yes
PEL 113	2137.64	4 V / 3 I	3 V / 3 I	1000 V _{RMS}	1700 V _{RMS}	1414 V _{pk}	2400 V _{pk}	1000 V _{DC}	12,000 A _{AC}	5000 A _{DC}		Yes
PEL 115	2137.56	5 V / 4 I	4 V / 4 I	1000 V _{RMS}		1414 V _{pk}	2400 V _{pk}	1000 V _{DC}	12,000 A _{AC}	5000 A _{DC}		Yes

MODEL	CAT. #	DISTRIBUTION SYSTEMS	PHASE ROTATION	WAVEFORM MODE	TRANSIENT MODE	TRUE INRUSH [®] MODE / TYPE / DURATION	ALARM MODE	SNAPSHOT MODE	HARMONIC MODE / INTERHARMONIC MODE	TYPE LCD	POWER SOURCE
8333	2136.10	1 P-2 W, 2 P-3 W, 3 P-3 W, 3 P-4 W		Yes		No	10 types / up to 2 active / 4662 recorded	Yes (12)	Yes / No	TFT - 5.7 in diagonal 320 x 240 resolution	External adapter with internal NiMH battery pack
8336	2136.30	1 P-2 W, 1 P-3 W, 2 P-2 W, 2 P-3 W, 2 P-4 W, 3 P-3 W, 3 P-4 W, 3 P-5 W		Yes		Yes (RMS+PEAK & RMS) up to 1 & 10 min	40 types / up to 7 active / 16,362 recorded	Yes (50)	Yes / No	TFT - 5.7 in diagonal 320 x 240 resolution	External adapter with internal NiMH battery pack
8345	2136.35	1 P-2 W, 1 P-3 W, 2 P-2 W, 2 P-3 W, 2 P-4 W, 3 P-3 W, 3 P-4 W, 3 P-5 W		Yes		Yes (RMS+PEAK & RMS) up to 10 & 30 min	40 types / 20,000 w / email notifications	Yes (no limit with SD card)	DC to 127 th order; < 3 % U _{din} / 0 to 62 nd order; < 0.5 % U _{din}	7 in color LCD touch screen: 800 x 480 (WVGA)	External adapter with Li-ion battery pack
8436	2136.43	1 P-2 W, 1 P-3 W, 2 P-2 W, 2 P-3 W, 2 P-4 W, 3 P-3 W, 3 P-4 W, 3 P-5 W		Yes		Yes (RMS+PEAK & RMS) up to 1 & 10 min	40 types / up to 7 active / 16,362 recorded	Yes (50)	Yes / No	TFT - 5.7 in diagonal 320 x 240 resolution	Line Power with internal NiMH battery pack
PEL 52	2137.71	1 P-2 W, 2 P-3 W, 1 P-3 W	Yes			No				Monochrome LCD	Power phase input with internal NiMH battery pack
PEL 112	2137.63	1 P-2 W, 1 P-3 W, 3 P-3 W D2, 3 P-3 W O2, 3 P-3 W Y2, 3 P-3 W D3, 3 P-3 W O3, 3 P-3 W Y, 3P-3 W DB, 3 P-4 W Y, 3 P-4 W YB, 3 P-4 W Y2 1/2, 3 P-4 W D, 3 P-4 WOD, DC-2 W DC-3 W, DC-4 W	Yes			No			Yes / No	None	Line Power with internal NiMH battery pack
PEL 113	2137.64	1 P-2 W, 1 P-3 W, 3 P-3 W D2, 3 P-3 W O2, 3 P-3 W Y2, 3 P-3 W D3, 3 P-3 W O3, 3 P-3 W Y, 3P-3 W DB, 3 P-4 W Y, 3 P-4 W YB, 3 P-4 W Y2 1/2, 3 P-4 W D, 3 P-4 WOD, DC-2 W DC-3 W, DC-4 W	Yes			No			Yes / No	Monochrome LCD	Line Power with internal NiMH battery pack
PEL 115	2137.56	1 P-2 W, 1 P-3 W, 3 P-3 W D2, 3 P-3 W O2, 3 P-3 W Y2, 3 P-3 W D3, 3 P-3 W O3, 3 P-3 W Y, 3P-3 W DB, 3 P-4 W Y, 3 P-4 W YB, 3 P-4 W Y2 1/2, 3 P-4 W D, 3 P-4 WOD, DC-2 W DC-3 W, DC-4 W	Yes			No			Yes / No	Monochrome LCD	Power phase input or external adapter with internal NiMH battery pack

DataView®

Data Analysis and Reporting Software

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



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.

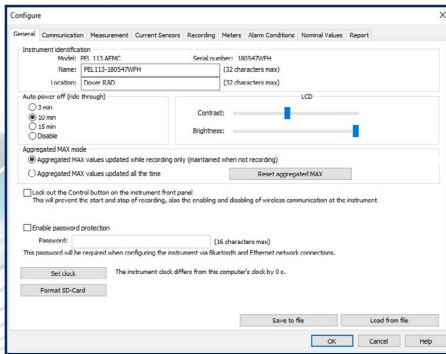


POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

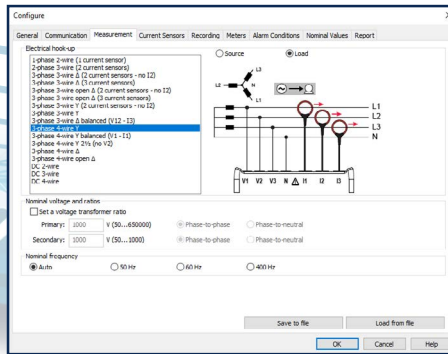
DataView® Data Analysis and Reporting Software



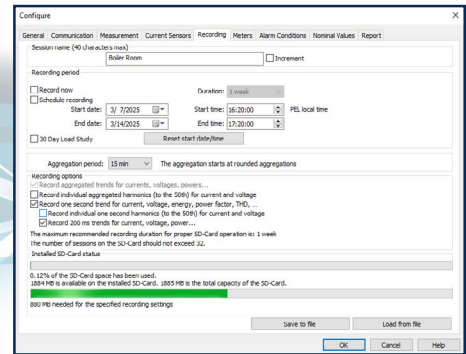
DataView® software, user manual and quick start guide are included in the USB Drive



Configure basic information regarding Auto Power OFF, instrument name and location, display contrast and brightness (*Models PEL 113 & PEL 115*), setting of the real-time clock and SD-card formatting is easily accomplished from the General tab.



The Measurement tab specifies the electrical distribution system, voltage ratios, and nominal frequency.

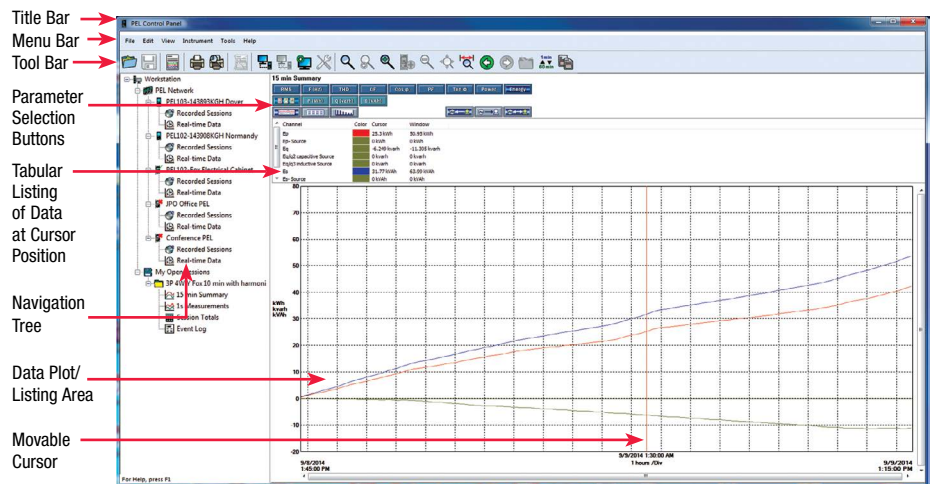


In the Recording tab, configure the instrument to measure (*and record*) over a user selectable recording period. Select demand intervals and view available memory for data storage.

Typical DataView® Functional Digital & Graphical Display

Control Panel Trend View

In the PEL Control Panel you will find all the necessary tools and selection buttons to review recorded data as trend plots or tabular lists.



NEW! Effortlessly Perform Load Study Analysis Meeting the NEC 220.87 Requirements with the PEL DataView® Control Panel Feature

TEST AND MEASUREMENT (LAB) INSTRUMENTS



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

Why choose AEMC® Instruments Test and Measurement (Lab) Instruments?

AEMC® Instruments power supplies are designed for use in a wide variety of applications. They consistently perform exceptionally whether executing the precise needs of an electronic design lab or meeting the demands of continuous operation required on a production test line. Our power supplies are designed for manufacturing, R&D, and education. They offer minimal heat dissipation and low electromagnetic emission while providing a continuous duty cycle at full-rated output.

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

TEST AND MEASUREMENT (LAB) INSTRUMENTS

DC POWER SUPPLY & DECADE BOX

MODEL AX503

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



SCAN TO
LEARN
MORE

FEATURES

- Dual (0 to 30) V_{oc}/(0 to 2.5) A outputs
- 5.5 V/5 A via a 3rd output
- Series and parallel operation permit (0 to 60) V or (0 to 5) A output
- Low noise (< 1 mV 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 leader/follower operation: follower tracks leader proportionally to the original setting
- Simultaneous display of voltage and current
- Highly visible green (V) and red (A) LED displays

MODEL BR07

Bench top decade box that stands up to the task



SCAN TO
LEARN
MORE

FEATURES

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

CAT. #	DESCRIPTION
2130.07	DC Power Supply Model AX503 (Triple outputs, two (0 to 2.5) A; (0 to 30) V _{oc} ; (2.7 to 5.5) V _{oc})
2131.25	Resistance Decade Box Model BR07 ((x1, x10, x100) Ω , (x1, x10, x100) k Ω , x1 M Ω , 1 %)

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

Consult factory for NIST Calibration prices.

ACCESSORIES/REPLACEMENTS

CAT. #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



150 V CAT II	50 V CAT III	CE	
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TYPES	MULTIPLYING FACTOR IN Ω						
	1	10	100	1 k	10 k	100 k	1 M
Accuracy	1 % $\pm$ 10 m Ω						
Max Current mA _{DC}	700 mA	200 mA	70 mA	20 mA	7 mA	1 mA	0.1 mA

Consult factory for NIST Calibration prices.

ACCESSORIES/REPLACEMENTS

CAT. #2131.35

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

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



MODELS	CA 6116N	CA 6117
CONTINUITY / RESISTANCE		
I Rated / Range / Resolution	I > 200 mA / 39.99 Ω / 0.01 Ω / ± (1.5 % of measurement + 2 cts); 12 mA / 39.99 Ω & 399.9 Ω / 0.01 & 0.1 Ω / ± (1.5 % of measurement + 5 cts)	
Range / Resolution / Accuracy	4 kΩ / 1 Ω / ± (1.5 % of measurement + 5 cts); (40 to 400 kΩ) / (10 to 100 Ω) / ± (1.5 % of measurement + 2 cts)	
INSULATION		
Rated Voltage	(50, 100, 250, 500, 1000) V _{DC}	
Range / Resolution / Accuracy	0.01 MΩ to 2 GΩ / 10 kΩ to 1 MΩ / ± (5 % of measurement + 3 cts)	
Short-Circuit Current	≤ 3 mA	
GROUND RESISTANCE		
3-Point Range / Resolution / Accuracy	(0.50 to 40) Ω / 0.01 Ω / ± (2 % of measurement + 10 cts); 40 Ω to 15 kΩ / (0.1 to 1) Ω / ± (2 % of measurement + 2 cts)	
Ufk	Complies with SEV 3569	
1-Point Selective Range / Resolution / Accuracy	(0.20 to 39.99) Ω to (40 to 399.9) Ω / (0.01 to 0.1) Ω / ± (10 % of measurement + 10 cts) (I _{Sel} 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 500) V / (15.8 to 17.5) Hz and (45 to 65) Hz	
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 (0.100 to 0.5) Ω / 0.001 Ω / ± (10 % of measurement + 20 cts); (0.5 to 3.999) Ω / 0.001 Ω / ± (5 % of measurement + 20 cts); (3.99 to 39.99) Ω / 0.01 Ω / ± (5 % of measurement + 2 cts); (39.9 to 399.9) Ω / 0.1 Ω / ± (5 % of measurement + 2 cts)	
No TRIP Mode (Z _s (L-PE) only) Range / Resolution / Accuracy	Test current: (6, 9, or 12) mA (as required) (0.20 to 0.99) Ω / 0.01 Ω / ± (15 % of measurement + 10 cts) (1.00 to 1.99) Ω / 0.01 Ω / ± (15 % of measurement + 3 cts) (2.00 to 39.99) Ω / 0.01 Ω / ± (10 % of measurement + 3 cts) (40.0 to 399.9) Ω / 0.1 Ω / ± (5 % of measurement + 2 cts) (400 to 3999) Ω / 1 Ω / ± (5 % of measurement + 2 cts)	
Calculation of I _k Short-Circuit Current PFC (Z _s), I _{Sc} PSCC (Z _i)	Fault current and short-circuit current: 0.1 A to 6 kA	
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 500) V / (15.8 to 17.5) Hz and (45 to 65) Hz	
IΔn	(6 / 10 / 30 / 100 / 300 / 500 / 650 / 1000) mA (90 to 280) V or variable – (6 / 10 / 30 / 100 / 300 / 500) mA (280 to 550) V or variable Ramp and pulse test	
No TRIP Test	at ½ IΔn – Duration: (1000 or 2000) ms	
Ramp Mode	(0.2 to 0.5) x IΔn (U _f) / (0.3 to 1.06) x IΔn in increments of 3.3 % x IΔn	
TRIP TIME MEASUREMENT		
Range / Resolution / Accuracy	(0.50 to 40) Ω / 0.01 Ω / ± (2 % of measurement + 10 cts); 40 Ω to 15 kΩ / (0.1 to 1) Ω / ± (2 % of measurement + 2 cts); (15 to 40) kΩ / 10 Ω / ± (10 % of measurement + 2 cts)	
B-TYPE RCDs		
Installation Voltage / Frequency	–	(90 to 275) V / (15.8 to 17.5) Hz and (45 to 65) Hz
IΔn: Ramp / Pulse 2 x IΔn Pulse 4 x IΔn	–	(6 / 10 / 30 / 100 / 300 / 500) mA and (10 / 30 / 100) mA with pulse 4 IΔn Duration: 150 ms with 4 x IΔn or 300 ms with 2 x IΔn
Test in Ramp Mode	–	(0.2 to 2.2) x IΔn
TRIP Test: 2 x IΔn & 4 x IΔn	–	IΔN ≤ 200 mA: 2.2 x 2 x IΔn IΔN > 200 mA: 1.1 x 2 x IΔn IΔN ≤ 100 mA: 2.2 x 4 x IΔn

Specifications continued on next page.

TEST AND MEASUREMENT (LAB) INSTRUMENTS

MULTIFUNCTION INSTALLATION TESTERS

MODELS	CA 6116N	CA 6117
OTHER MEASUREMENTS		
Current by Clamps C177	5 mA to 199.9 A	
Current by Clamp MN77	(1 mA*) 5.0 mA to 19.99 A	
Voltage	(0 to 550) V _{AC/DC} and (15.8 to 500) Hz	
Frequency	(15.8 to 500) Hz	
Phase Rotation	(20 to 500) V _{AC}	
Active Power	(5 to 110) kW single-phase, (0 to 330) kW 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 in backlit graphic color, LCD screen, 320 x 240 points	
Storage / Communication	Via USB for data transfer and report creation	
Power Supply (<i>rechargeable battery</i>)	Li-ion 10.8 V rated 5.8 A·h	
Battery Life	Up to 30 h	
Dimensions / Weight	(11.02 x 7.48 x 5.04) in (280 x 190 x 128) mm / 4.85 lb (2.2 kg)	
SAFETY		
Safety Rating	IEC 61010 -1 / 600 V CAT III & 300 V CAT IV / IEC 61557	
Ingress Protection	IP53 / IK04	
EMC	IEC 61326-1	

*If a voltage is connected to the instrument
Consult factory for NIST Calibration prices.

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, and harmonics
- Measurement of voltage drop for correct sizing of conductor diameters
- Loop measurement with 1 mΩ 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

CAT. #	DESCRIPTION
2138.06	Multi-Function Installation Tester Model CA 6116N (US) (includes DataView® Software) - SPECIAL ORDER ONLY
2138.07	Multi-Function Installation Tester Model CA 6117 (US) (includes DataView® Software) - SPECIAL ORDER ONLY
2138.10	Multi-Function Installation Tester Model CA 6116N Kit (US) (includes C177A, and DataView® Software) - SPECIAL ORDER ONLY
2138.11	Multi-Function Installation Tester Model CA 6117 Kit (US) (includes C177A, and DataView® Software) - SPECIAL ORDER ONLY

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 4 mm 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 user manual.



THERMAL IMAGING CAMERA



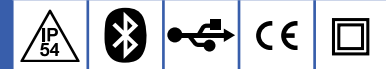
Why choose AEMC® Instruments Thermal Imaging Camera?

AEMC® Instruments thermal imaging camera provides a real-time non-contact inspection method. This detection method does not require you to shut off power, shut down the machines or interrupt production. It can diagnose latent malfunctions in advance, and so forestall their occurrence and prevent production incidents. Thermal imaging is an innovative non-contact evaluation technique that is safe, reliable, and rapid. It is used in sectors of industry as diverse as metallurgy and steel-making, electric power, petroleum, automation, the exploitation of natural gas, transportation, and in other committed professions such as fire-fighting and border surveillance. Bluetooth® communication supports acquisition of data from up to three peripheral devices such as clamp meters and DMMs.

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

THERMAL IMAGING CAMERA

INFRARED CAMERA



MODEL 1954

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



THERMO RESOLUTION
(120 X 160) Pixels



SCAN TO
LEARN
MORE

FEATURES

- Focus-free with (28 x 38) ° field of view
- Automatic brightness control
- Exceptionally long battery life
- Quick startup in less than 10 seconds
- 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® Instruments Clamp-on Meters, and Environmental Meters 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

CAT. #2121.60 Carrying case with foam insert

CAT.#2126.49 USB cable Type A to 5-pin Mini-B

MODEL	1954
IR DETECTOR	
Type	UFPA microbolometer
Spectral Range	8~14 μm
Resolution	(120 x 160) pixels
IMAGING PERFORMANCE	
NETD	< 80 mK @ 86 °F (30 °C)
Frequency	9 Hz
Field of View	(28 x 38) °
IFOV (spatial resolution)	4.1 mrad
Minimal Focal Distance	0.98 ft (0.3 m), fixed focus
FOCUSING	
Adjustment	Fixed
VISUAL IMAGE	
Resolution	(480 x 640) pixels
Minimal Focal Distance	2 in (5 cm), 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 in (7.1 cm)
Display Colors	Pseudo-colors, multiple palettes
LASER POINTER	
Type	Class 2 645-655 nm power: 1 mW
FUNCTIONS	
Image Freezing	Animated or fixed image
Data Storage	2 GB Micro SD card included (approximately 4000 images) Replaceable with up to 32 GB SD card
MEASUREMENT	
Temperature Range	(-4 to 482) °F (-20° 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 ft (2 m) on all sides
Impact Resistance	25 G
Vibration Resistance	2 G
GENERAL	
Start Up	Less than 10 s
Power Supply	(4) AA NiMH rechargeable batteries with external charger included
Laser / Output / Wavelength	Class 2 / < 1 mW / 645-655 nm
Tripod Mounting	1/4 in insert on camera (tripod not included)
Battery Life	9 h typical (7 h minimum)
Dimensions / Weight	(8.86 x 4.92 x 3.27) in (225 x 125 x 83) mm / 24.7 oz (700 g) with rechargeable batteries
Bluetooth® Communication	407, 607 Clamps, and Logger Models 1110, 1200 and 1800 Series
Safety Rating	EN 61326-1: 2006, EN 61010-1 Ed.02

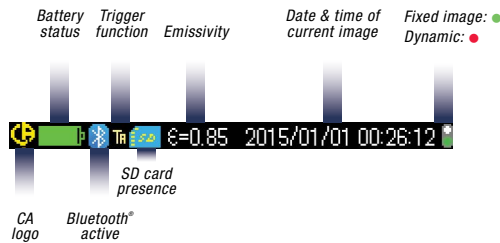
Consult factory for NIST Calibration prices.

THERMAL IMAGING CAMERA

INFRARED CAMERA

DISPLAY & MENU CONTENTS

STATUS BAR



FUNCTION KEYS

Linked to selected menu choice or camera image



MENU

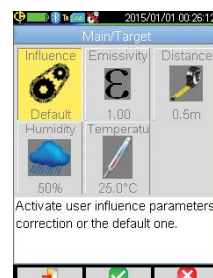
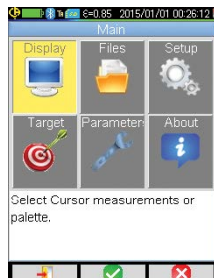
Selectable using navigation keys



CONTEXTUAL HELP

This display area updates based on the menu item selected

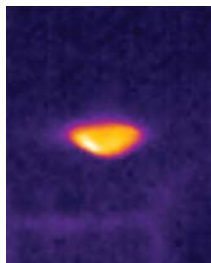
A comprehensive set of easy access menus are available on screen. You can use the function and navigation keys to easily configure the camera for your specific needs. Trigger functions can be programmed, color palettes can be selected, cursor tools can be configured as well as environmental conditions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



SELECTABLE CURSOR TOOLS

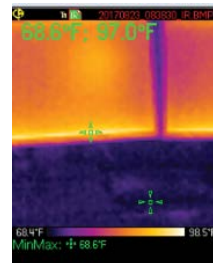
User programmable cursors provide a comprehensive set of options for evaluating thermal profiles

NONE



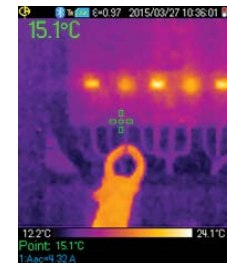
No cursor display, temperature evaluation is determined by color palette only.

MIN/MAX



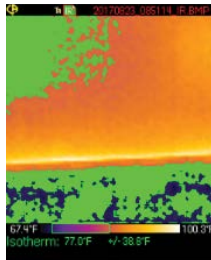
Automatically displays the cold and hot spot values at the Min and Max cursor positions.

POINT



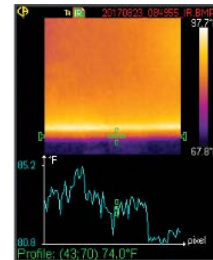
Displays the value at the cursor. Cursor is movable using the navigation keys.

ISOTHERM



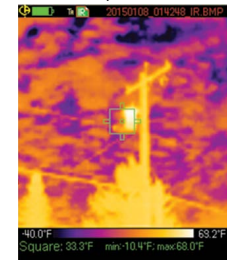
Displays points that fall in the same temperature range in the same color. User picks green, red or brown as the display color and defines the range and tolerance.

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 CAMERA

INFRARED CAMERA

CAmReport SOFTWARE FOR ANALYZING THERMOGRAMS

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



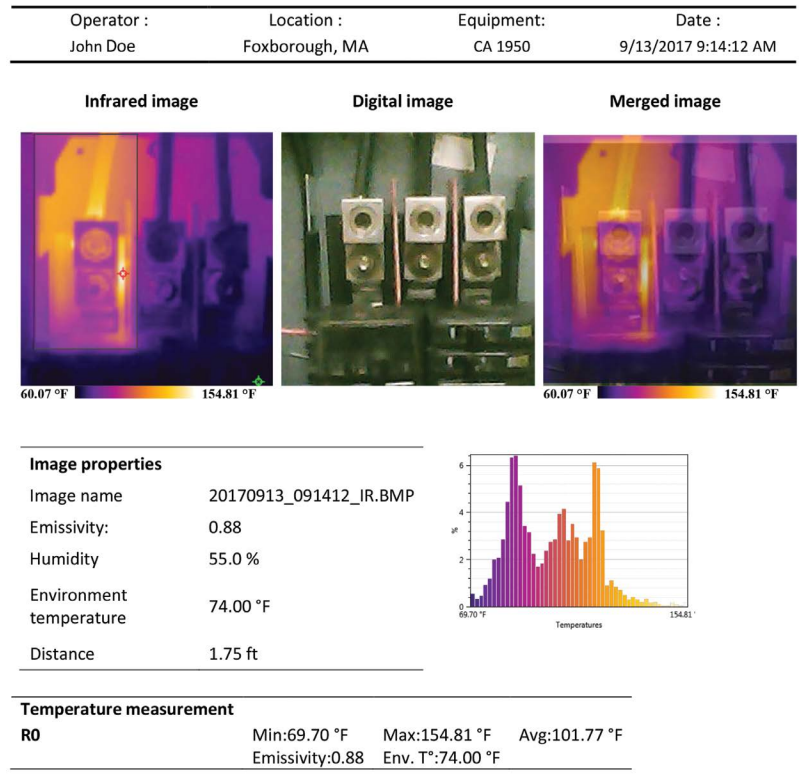
USB drive with software and manuals

FEATURES

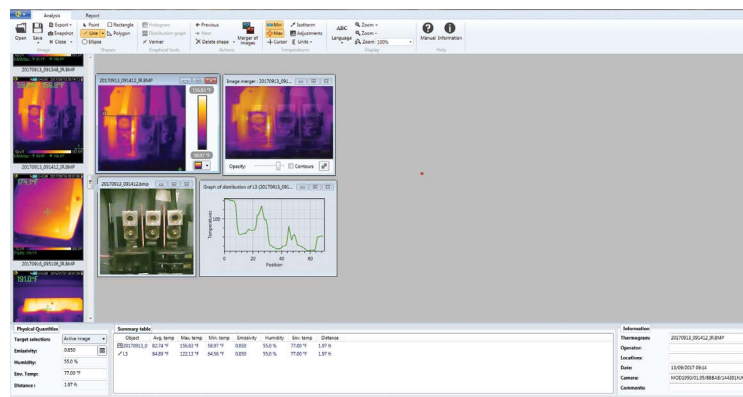
- Transfer measurements from your camera to the software by USB cable, or transportable SD card
- Drag-and-drop measurement images from the storage directory to the analysis window in the software
- Includes thermal and real images automatically
- Superimpose thermal images over real images for better 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, (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.



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

CAT. # DESCRIPTION

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

TRANSFORMER RATIO METER



DataView®
DATA ANALYSIS AND REPORTING SOFTWARE

Why choose AEMC® Instruments Transformer Ratiometer?

AEMC® Instruments has developed portable Digital Transformer Ratiometer (DTR®) that are specifically designed to ensure safety during on-site testing of power transformers, VT/PTs, and current transformers CT turn ratios. With easy setup, there is no need for calibration or balancing. The DTR® injects into primary and reads the secondary, thus making it safer for the operator. It also stores your 10 most common transformer nameplate values, which saves time and eliminates errors during testing. Additionally, the display contrast and backlighting are adjustable, providing clear reading in all lighting conditions. The transformer ratiometer come with polarized H and X input cable connectors that eliminate errors in setup. In addition, the intelligent battery charging feature prevents overcharging and extends battery life.

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

TRANSFORMER RATIO METER



cover
closed



DTR® MODEL 8511

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



DataView®



SCAN TO
LEARN
MORE

FEATURES

- **Wide Ratio Range** – Accurately measures transformer ratios up to 8000:1 for VT/PT mode and 1000:1 for CT mode
- **Advanced Low-Voltage Step-Down Measurement** – Applies test current to the primary side windings, enhancing operator safety and enabling testing across a wider range of transformer types and sizes
- **Automatic Test Cycles** – Quickly checks for lead reversal and open circuits with no manual balancing required
- **Built-in Continuity Testing** – Detects open transformer windings quickly
- **Deviation Calculations** – Compare measured values to stored nameplate data for instant pass/fail results
- **Large Storage Capacity** – Save up to 9801 test results for easy recall and reporting
- **PC Connectivity** – Transfer data, set nameplate values and control the instrument remotely with included DataView® software
- **Rugged and Portable** – Lightweight, field-ready design with an IP53-rated protective case (*with lid closed*)
- **Flexible Power Options** – Operates on NiMH batteries or 12 V_{DC} external supply. Batteries can be recharged through USB-C connector or 12 V_{DC} external supply.
- **User-Friendly Interface** – Bright backlit 4-line display, intuitive navigation keys, and audible test alerts

WARNING: This product can expose you to chemicals, including Bisphenol A, Styrene, Acrylonitrile, 1,3-Butadiene, Ethylbenzene, Nickel, Carbon, and Lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, visit www.P65Warnings.ca.gov.

MODEL	DTR® 8511
VT / PT Ratio Range	Auto-Ranging 0.8000:1 to 8000.0:1
VT / PT Accuracies*	Ratio 0.8000 to 9.9999: $\pm 0.2\%$ of Reading Ratio 10.000 to 999.99: $\pm 0.1\%$ of Reading Ratio 1000.0 to 4999.9: $\pm 0.2\%$ of Reading Ratio 5000.0 to 8000.0: $\pm 0.25\%$ of Reading
Excitation Current	Up to 2 A
CT Ratio Range	Auto-Ranging 0.8000 to 1000.0
CT Accuracy*	$\pm 0.5\%$ of Reading
Output Voltage (VT / PT)	30 V @ 64 Hz
Output Voltage (CT)	5 V @ 64 Hz
Display	LCD 20 characters x 4 line display
Languages Supported	English, Spanish, French, Italian, German, Portuguese
Communication	USB Type-A to Type-C USB 2.1
Data Storage	9801 measurements
Power Supply	USB Type-C and 12 V _{DC} charger
Measurement Method	In accordance with IEEE Std. C57.12.90™
Buttons	6 total buttons (One to start testing and five for navigation)
Battery Life	500 VT / PT tests
Battery Charge Time	10 h (See user manual for full details)
Weight	7.1 lbs (3.2 kg)

SAFETY

Safety Compliance IEC 61010-2-030, IEC 61326-1, IEC 60529, IEC 60068-2-6, IEC 60068-2-27, IEC 60068-2-31, Pollution 2

Reference Condition: $(23 \pm 5)^\circ\text{C}$, (50 to 70) % RH, full battery charge, no external fields or noise.

Consult factory for NIST Calibration prices.

PRODUCT INCLUDES

Includes (6) internal rechargeable AA NiMH batteries, extra large carrying bag, set of (2) 15 ft test leads (*primary and secondary*) with (4) alligator clips (*red/black*), 6 ft USB Type-C to Type-C cable, USB Type-C wall power adapter, 10 ft USB Type-A to Type-C cable, AC power adapter w/cord and USB drive with DataView® software and user manual.



ACCESSORIES/REPLACEMENTS

CAT. #2133.73: Bag – Extra Large Classic Tool Bag

CAT. #2133.76: Bag – Extra Large Carrying Bag w/ Rubber Bottom

CAT. #2136.76: Set of (2) leads, 30 ft for DTR® Models 8500, 8510 & 8511

CAT. #2136.77: Set of (2) leads, 15 ft for DTR® Models 8500, 8510 & 8511 (*Replacement*)

CAT. #5000.99: Clip - Safety Alligator - Black (1000 V CAT IV, 15 A, UL V2)

CAT. #5100.00: Clip - Safety Alligator - Red (1000 V CAT IV, 15 A, UL V2)

CAT. #5100.25: Adapter - USB Type-C Wall Power Adapter

CAT. #5100.26: Adapter - Replacement AC Power Adapter w/cord for DTR® 8511

CAT. #5100.27: Cable - 10 ft Type-C to Type-A USB 2.0 Full Speed (12 Mbps)

CAT. #5100.28: Cable - 6 ft USB Type C 3.2 PD to Type C

CAT. # DESCRIPTION

2136.55 Digital Transformer Ratio Meter DTR® Model 8511



Looking for tailor-made solutions to meet your unique requirements? We offer custom products on an OEM basis, designed specifically to fit your needs.

Our expert team works closely with you to develop high-quality, innovative products that align perfectly with your brand and specifications. From initial concept to final production, we ensure exceptional performance and reliability.

Partner with us for custom OEM products that elevate your business to the next level.

Measure Up
WITH AEMC INSTRUMENTS®

DataView®

- Power Quality Analyzers
- Power Energy Loggers
- Ground Resistance Testers
- Insulation Resistance Megohmmeters
- Low Resistance Micro-Ohmmeters
- Transformer Ratiometers
- Data Loggers
- Environmental Loggers
- Clamp-On Power Meters
- Installation Testers

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

DATA RETRIEVAL AND STORAGE

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

COMMUNICATION

- USB
- Wi-Fi
- Bluetooth®
- Ethernet

INSTRUMENT CONFIGURATION

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

LOCAL & REMOTE REAL-TIME MONITORING

- Single Instrument
- Multiple Instruments

SX-Metro

- Oscilloscopes

PROCESSING

- Acquisition, recording and processing of curves
- Mathematical processing, such as FFT of displayed signal
- Save or restore configurations

COMMUNICATION

- TCP/IP network connection

DATA ANALYSIS & RECORDING

- Display curves in real time
- Importing of screenshots
- Download stored measurements
- Export data to excel or text files

SX-DMM

- Digital Multimeter Model MTX Series



REAL-TIME PROCESSING

- Used for real-time processing of the data on a PC
- Automatic adjustment of the time on the instrument



DATA ANALYSIS

- Acquire, record, and use measurements
- XY derivative, integral, curve smoothing functions
- Data in the form of curves and tables

CAMReport

- Thermal Imaging Camera



THERMOGRAM ANALYSIS

- Cursors (automatic display of the temperature at the point selected)
- Thermal profile (automatic display of the Min/Max/Avg temperatures)
- Selectable and configurable shapes for area analysis
- Polygons and polylines for more accurate analysis of certain areas in the thermogram

OTHER FEATURES

- Download audio comments or related measurements
- Automatic merging of the thermal and real images recorded simultaneously
- Automatic creation of reports for export in .pdf or .docx format.

Tachograph

- Tachometer Model CA1727



DATA ANALYSIS & RECORDING

- Enables two-way management of data
- Acquire, process and re-use of the measurements
- Export data onto a PC hard disk or XLS format
- Allows the instrument's programming parameters to be transferred and displayed
- Digital processing of the results, such as calculating the mean value, the position or the acceleration, and viewing

Simple Logger®

- Data Logger Simple Logger® SL Series

DATA ANALYSIS & RECORDING

- View measurement data in real time
- Download a recording
- Print data
- Export to XLSX



DSG-8

- AC Digital Signal Generator Model DSG-8

SIMULATOR

- Simulates waveforms for AEMC® Instruments PowerPad® and PEL Series instruments (such as voltage and current levels, transients, inrush, and alarm events)
- Create, save, and load new custom waveform simulations



TRAINING SEMINARS

AEMC® INSTRUMENTS TECHNICAL TRAINING WEBINARS & SEMINARS

- Offered throughout the USA
- Ground Resistance Testing, Insulation Resistance Testing and Power Quality
- Public and private seminars available
- Custom product training solutions available
- On-site or online training seminars

UNDERSTANDING GROUND RESISTANCE TESTING



For field engineers, technicians, utility engineers, supervisors, electricians and inspectors interested in testing and 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
- NEC 250 requirements, NFPA 780 Lightning Protection Standards, and IEEE standards
- Continuity testing in common ground systems required by multiple standards
- Create plots and reports

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
- Insulation testing on motors, cables, and transformers
- Spot testing
- Timed testing
- DAR (Dielectric Absorption Ratio), PI (Polarization Index), DD (Dielectric Discharge)
- Temperature correction
- Report generation

UNDERSTANDING POWER QUALITY MEASUREMENTS



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

Key topics include:

- Symptoms and problems associated with poor Power Quality
- Measuring common voltage disturbances and transients
- Harmonic Analysis - causes and how to measure harmonics
- Grounding and bonding issues and their relationship with Power Quality
- Power Factor - measuring and understanding its importance to power quality
- How to create a PQ monitoring plan and select the proper measurement
- IEEE standards discussed in depth
- Report generation

FOR MORE DETAILS ABOUT OUR CUSTOM 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 contact us at:

Technical Hotline: **(800) 343-1391 ext. 351**

Technical assistance in Spanish is available at **ext. 544**
techsupport@aemc.com



REPAIR AND CALIBRATION

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

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

For instrument repairs and/or calibrations, please contact us at:

Tel: **(800) 945-2362 ext. 360**
repair@aemc.com



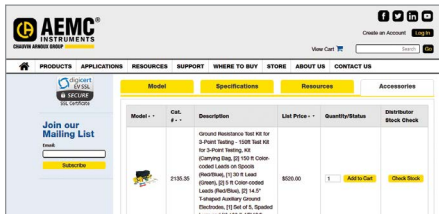
WARRANTY

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.



ONLINE STORE

The AEMC® Instruments 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 are also offered online, visit our online store regularly at:

www.aemc.com/store



CORPORATE AND MANUFACTURING

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15 Faraday Drive, Dover, NH 03820 USA

Tel: (603) 749-6434

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Export order entry:

Tel: +1 (603) 749-6434 ext. 520 • **export@aemc.com**

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NEW PRODUCTS



AC/DC CURRENT PROBE
MODEL E94 / page 133



AC CURRENT PROBE
MODEL MN94 / page 133



PHASE ROTATION METERS
MODELS 6611 & 6612 / page 64



HANDSCOPE PORTABLE OSCILLOSCOPE
MODEL OX 5042B / page 112

3-in-1 measuring instrument!

- Digital Multimeter
- 2-Channel Oscilloscope
- Harmonic Analyzer



CLAMP-ON METERS
MODELS 404 & 606 / page 20



POWER & ENERGY LOGGER
MODEL PEL 52 / page 126

Your authorized AEMC® Instruments distributor is:

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WITH AEMC INSTRUMENTS®

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