

Special product features



POWER QUALITY ANALYZERS, METERS & LOGGERS

Three-Phase Power Quality Analyzer

PowerPad® III Model 8336

2GB of memory for trend data storage and additional memory for: up to 50 snapshots, 210 captured transients/inrush and 10,000 alarm events



(upon registering)

Five voltage and four current input terminals

► SPECIFICATIONS

MODEL	8336
Input Terminals	5 voltage / 4 current
Inputs	4 voltage / 4 current
Voltage (TRMS AC+DC)	2 to 1000V
Voltage Ratio	up to 500kV
Current (TRMS AC+DC)	MN93: 500mA to 200Aac; MN193: 0.005 to 100Aac SR193 Clamp: 1A to 1000Aac AmpFlex® or MA193 Clamps: 100mA to 10000Aac MR193 Clamp: 1A to 1300Aac/dc SL261 Clamp: 50mA to 100Aac/dc Current Ratio: up to 60kV
Frequency (Hz)	40 to 69Hz
Distribution Systems	1P 2W, 1P 3W, 2P 2W, 2P 3W, 2P 4W, 3P 3W, 3P 4W and 3p 5W, 2 ½ Element & Aron meters
Power Values	W, VA, var, VAD, PF, DPF, cos φ, tan φ
Energy Values	Wh, VARh, VAh, VADh
Harmonics	1 st to 50 th , Direction, Sequence; THD: 0 to 50, phase
Transients	up to 210
Flicker (Pst & Plt)	Yes
Inrush Mode	Yes, >10 min
Unbalance	Yes
Recording	Yes
Alarm Mode	40 types; 10,000 recorded
Peak	Yes
Phasor Display	Automatic
Display	Color ¼ VGA TFT screen (320 x 240) diagonal 148mm
Snapshots	50
Electrical Safety	IEC 61010, 1000V CAT III / 600V CAT IV
Protection	IP50
Languages	more than 27
Communication Interface	USB
Battery Life	>13 hrs, 25 hrs in Record Mode
Power Supply	9.6V NiMH rechargeable battery pack (included) External AC supply: 110/230Vac ±10% (50/60Hz)
Dimensions / Weight	9.8 x 7.8 x 2.6" (240 x 180 x 55mm) / 4.3 lbs (1.95kg)



► PRODUCT INCLUDES

8336 Kit

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



The Right Source For Your Test & Measurement Needs

8715 Mesa Point Terrace San Diego, CA 92154
Toll Free: 1.866.363.6634 Tel: 1.619.429.4545 Fax: 1.619.374.7012
Email: sales@calright.com <http://www.calright.com>

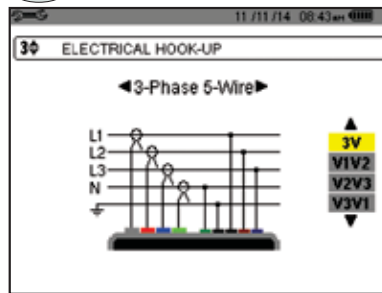
PowerPad® III Model 8336

Large Color Functional Displays

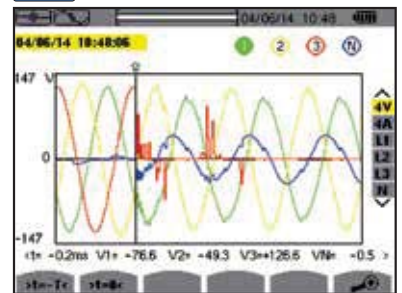
FEATURES

- Measurement of TRMS voltages up to 1000Vrms AC/DC for two-, three-, four- or five-wire systems
- Measurement of TRMS currents up to 6500Arms (sensor dependent)
- Direct measurement of neutral current & voltage
- Frequency measurement (40 to 69Hz systems)
- 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 the K-Factor for transformers
- Calculation of short-term and long-term flicker
- Calculation of the Three-Phase voltage unbalance
- Harmonic measurements (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
- Monitors the average value of any parameter, calculated for a period from 1 sec to 2 hrs
- Measurement of active, reactive and apparent power per phase and their respective sum total
- Calculation of power factor, displacement power factor and tangent factor
- Recording, time stamping and characterization of disturbance (swells, sags and interruptions, exceedence of power and harmonic thresholds)
- 2GB internal Trend Recording memory; Alarm, Photo and Transient Inrush memories are separate
- Measurement of energy VAh, VARh, Wh & VADh
- The Max and Min RMS measurements are calculated every half-period
- Includes FREE DataView® software for configuring data storage, real-time display, analysis and report generation
- 65µs/sample trend recording

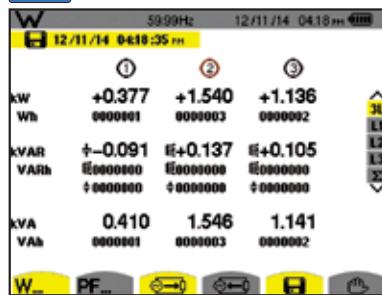
Configuration



Transient Mode



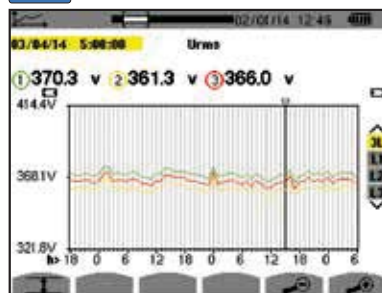
Power and Energy Mode



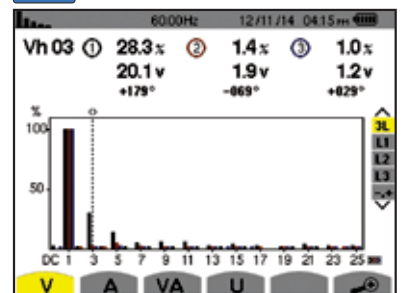
Phasor Diagram



Recording Mode



Harmonics Mode



CATALOG NO.	DESCRIPTION
2136.30	PowerPad® III Model 8336 (no probes)
2136.31	PowerPad® III Model 8336 w/4 193-24-BK Sensors
2136.32	PowerPad® III Model 8336 w/4 MN193-BK Probes
Accessories (Optional)	
2133.73	Extra Large Classic Tool Bag
2140.15	Replacement – Soft Carrying Pouch
2140.17	5A Adapter Box (<i>special order only</i>)
2140.19	Replacement – Battery 9.6V NiMH
2140.28	AC Current Probe Model MR193-BK
2140.32	AC Current Probe Model MN93-BK
2140.33	AC Current Probe Model SR193-BK
2140.34	AmpFlex® Sensor 24" Model 193-24-BK
2140.35	AmpFlex® Sensor 36" Model 193-36-BK
2140.36	AC Current Probe Model MN193-BK
2140.43	Replacement – Set of 5, 10 ft (3m) black leads w/5 black alligator clips
2140.44	Lead, 1 10 ft (3m) black lead w/black alligator clip
2140.45	Replacement – Set of 12, Color-coded Input ID Markers
2140.46	Replacement – 5 ft USB Cable
2140.48	MiniFlex® Sensor 10" Model MA193-10-BK




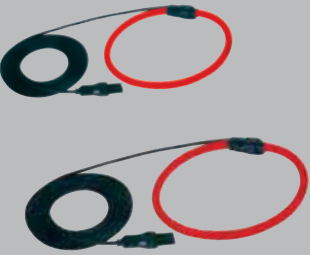








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POWER QUALITY ANALYZERS, METERS & LOGGERS

Optional Accessories

SENSOR TYPE	CURRENT RANGE		ACCURACY (TYPICAL)	TYPICAL ERROR ON Φ AT 50/60HZ	MAX CONDUCTOR SIZE	USED WITH MODEL	LIMITED RANGE IF USED WITH MODEL
 MiniFlex® MA193 *	100mA to 3000Aac		±1%	0°	2.75" (70mm)	PEL 102 PEL 103 8333 8336	8220 8230 8435
 MR193 Battery operated	1 to 1000Aac 1 to 1300Adc		±2.5%	-0.80°	1.6" (41mm)	PEL 102 PEL 103 8333 8336	8220 8230 8435
 SR193	1 to 1200Aac		±0.3%	+0.2°	2.05" (52mm)	PEL 102 PEL 103 8333 8336	8220 8230 8435
 AmpFlex® 193 * 24" or 36" sensor	100mA to 12,000Aac		±1%	0°	7.64" (190mm) or 11.46" (290mm)	PEL 102 PEL 103 8333 8336	8220 8230 8435
 MN93	0.5 to 240Aac		±1%	+0.8°	0.78" (20mm)	PEL 102 PEL 103 8333 8336	8220 8230 8435
 MN193	100A	200mA to 120Aac	±1%	+0.75°	0.78" (20mm)	PEL 102 PEL 103 8333 8336	8220 8230 8435
	5A	5mA to 6Aac	±1%	+1.7°			

SENSOR TYPE	CURRENT RANGE		ACCURACY (TYPICAL)	TYPICAL ERROR ON Φ AT 50/60HZ	MAX CONDUCTOR SIZE	USED WITH MODEL	LIMITED RANGE IF USED WITH MODEL
	100A	5 to 100Aac/dc					
SL261 **  Battery operated	100A	5 to 100Aac/dc	$\pm 4\%$	$\pm 0.5^\circ$	0.46" (11.8mm)	PEL 102 PEL 103 8333 8336	8220 8230 8435
	10A	50mA to 10Aac/dc	$\pm 3\%$	$\pm 1^\circ$			
J93  Battery operated	50 to 3500Aac 50 to 5000Adc		$\pm 1\%$	$\pm 1^\circ$	2.83" (72mm) Busbar: 5 x 1.69" (127 x 43mm)	PEL 102 PEL 103 8333 8336 8435	N/A
J193  Powered by meter	50 to 3500Aac 50 to 5000Adc		$\pm 1\%$	$\pm 1^\circ$	2.83" (72mm) Busbar: 5 x 1.69" (127 x 43mm)	PEL 102 PEL 103	N/A
A196-18  18" sensor IP67	10 to 10,000Aac		$\pm 2\%$	0°	5.73" (145mm)	8435	N/A

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

Note: Refer to the power meter's product user manual for complete specifications.

** AC/DC Current Probe BNC Adapter for Model SL261 only
Catalog #2140.40



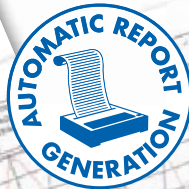
CATALOG NO.	DESCRIPTION
1201.51	AC/DC Current Probe Model SL261 (BNC)
2137.78	AC/DC Current Probe Model J193-BK
2140.37	Adapter – US 110V Power Adapter (eliminates need for batteries) 8220 & 8230 only
2140.28	AC Current Probe Model MR193-BK
2140.32	AC Current Probe Model MN93-BK
2140.33	AC Current Probe Model SR193-BK
2140.34	AmpFlex® Sensor 24" Model 193-24-BK
2140.35	AmpFlex® Sensor 36" Model 193-36-BK
2140.36	AC Current Probe Model MN193-BK
2140.48	MiniFlex® Sensor 10" Model MA193-10-BK
2140.49	AC/DC Current Probe Model J93-BK
2140.74	AmpFlex® Sensor 18" (Waterproof - IP67) Model A196-18-BK

DataView®

Data Analysis and Reporting Software for Power Quality Meters



Configure all functions of the Power Quality Meters

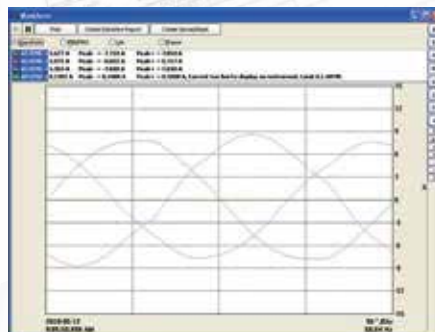


- Display and analyze real-time data on your PC
- Configure functions and parameters from your PC
- Customize views, templates and reports to your exact needs
- Create and store a complete library of configurations that can be uploaded as needed
- Zoom in and out and pan through sections of the graph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

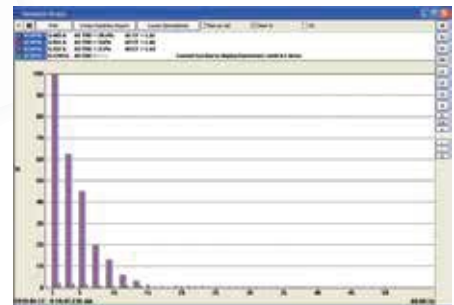
Typical DataView® Functional, Digital & Graphical Displays



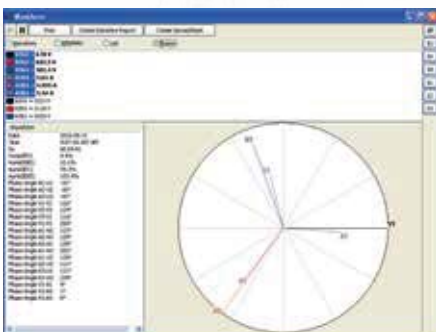
Clear and easy setup of all functions from one tabbed dialog box.



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



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



Display real-time Phasor diagrams. Includes unbalance for both voltage and current.

Power/Energy

Time Started: 2000-05-12 10:12:23 AM
Time Ended: 2000-05-12 08:08:28 AM

Phase to Display: L1, L2, L3, All

W	= 3706
Wc	= 284
WDC	= 0
VA	= 3798
VA to Load	= 453
VA to Source	= 0
VA DC to Load	= 0
VA DC to Source	= 0
VA with Capacitive to Load	= 0
VA with Inductive to Load	= 24
VA to Load	= 453
VA to Source	= 0
PF	= 0.997
DPF	= 0.997
Tan	= 0.035
Phase Angle V-I All	= 4°

Display power and energy parameters – both instantaneous and total.

Table with 2 columns: Harmonic Order, Value

0 (DC) through the 50th.

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