

PowerPad® III Model 8336

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



* Registration must take place within 30 days of purchase

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/bc SL261 Clamp: 50mA to 100Aac/bc J93: 50 to 3500Aac/bc 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 5.82" (148mm)
Snapshots	50
Electrical Safety	IEC 61010, 1000V CAT III / 600V CAT IV
Protection	IP53
Languages	more than 27
Communication Interface	USB
Battery Life	>13 hrs, 25 hrs in Record Mode
Power Supply	9.6V NiMH rechargeable battery pack (included) External AC supply: 110/230VAC ±10% (50/60Hz)
Dimensions / Weight	9.8 x 7.8 x 2.6" (240 x 180 x 55mm) / 4.3lbs (1.95kg)

KIT INCLUDES

AmpFlex® 193 flexible current probe (6500A)
24" or 36", rated 600V CAT IV



OR

MN193 current probe (5A/100A)
Rated 600V CAT III



KIT INCLUDES

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



ACCESSORIES

Phase Power Adapter for Models 8333 & 8336
Catalog #2140.77 (optional)



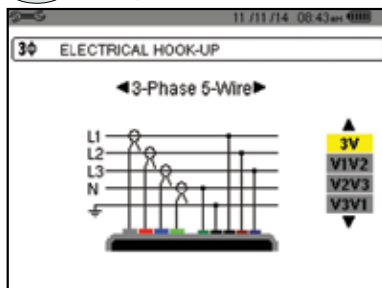
PowerPad® III Model 8336

Large Color Functional Displays

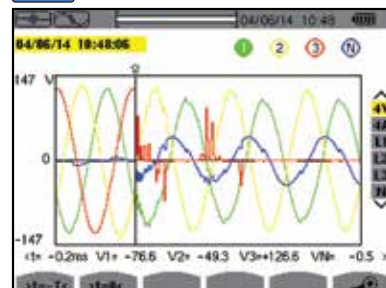
FEATURES

- Measurement of TRMS voltages up to 1000Vrms AC/DC for two-, three-, four- or five-wire systems
- Measurement of TRMS currents up to 10,000Arms (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 41 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 kVAh, kvarh, kWh & kVAh
- 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

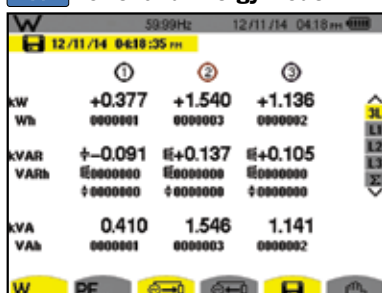
Configuration



Transient Mode



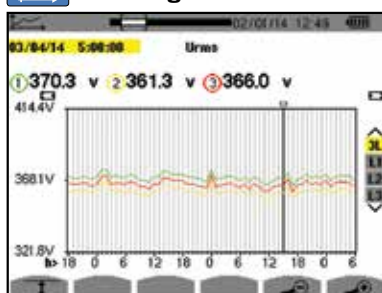
Power and Energy Mode



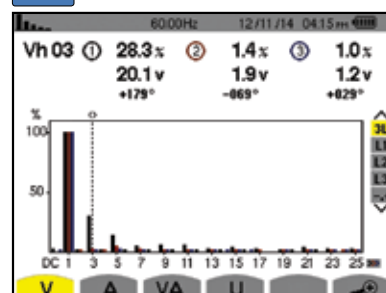
Phasor Diagram



Recording Mode



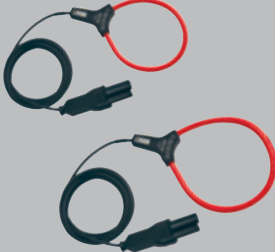
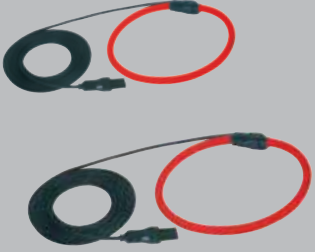
Harmonics Mode



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) See pages 3-4 & 6 for more optional current probes	
2133.73	Extra Large Classic Tool Bag
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
2140.44	Lead, 1 10ft (3m) black lead w/black alligator clip
2140.48	MiniFlex® Sensor 10" Model MA193-10-BK
2140.49	AC/DC Current Probe Model J93-BK
2140.50	MiniFlex® Sensor 14" Model MA193-14-BK
2140.77	Adapter – Phase Power Adapter for use with PowerPad® Models 8333 & 8336

POWER QUALITY ANALYZERS, METERS & LOGGERS

Optional Accessories

SENSOR TYPE	CURRENT RANGE	ACCURACY (TYPICAL)	TYPICAL ERROR ON Φ AT 50/60Hz	MAX CONDUCTOR SIZE	USED WITH MODEL	LIMITED RANGE IF USED WITH MODEL	CATALOG NUMBER
MiniFlex® MA193-BK *  10" or 14" sensor	100mA to 3000A _{AC}	±1%	0°	2.75" (70mm)	PEL 102 PEL 103 PEL 105** 8333 8336	8220 8230 8435	2140.48 (10" sensor)
							2140.50 (14" sensor)
MR193-BK  Battery operated	1 to 1000A _{AC} 1 to 1300A _{DC}	±2.5%	-0.80°	1.6" (41mm)	8220 8230 PEL 102 PEL 103 PEL 105** 8333 8336 8435**	N/A	2140.28
SR193-BK 	1 to 1200A _{AC}	±0.3%	0.2°	2.05" (52mm)	8220 8230 PEL 102 PEL 103 PEL 105** 8333 8336 8435**	N/A	2140.33
AmpFlex® 193-BK *  24" or 36" sensor	100mA to 12,000A _{AC}	±1%	0°	7.64" (190mm) or 11.46" (290mm)	PEL 102 PEL 103 PEL 105** 8333 8336	8220 8230 8435	2140.34 (24" sensor)
							2140.35 (36" sensor)
AmpFlex® 196A  24" sensor IP67	100mA to 12,000A _{AC}	±2%	0°	5.73" (145mm)	PEL 105 8435	N/A	2140.75 (24" sensor)

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

** Not waterproof with Model 8435 & PEL 105.

SENSOR TYPE	CURRENT RANGE		ACCURACY (TYPICAL)	TYPICAL ERROR ON Φ AT 50/60Hz	MAX CONDUCTOR SIZE	USED WITH MODEL	LIMITED RANGE IF USED WITH MODEL	CATALOG NUMBER
MN93-BK 	0.5 to 240Aac		$\pm 1\%$	0.8°	0.78" (20mm)	PEL 102 PEL 103 PEL 105** 8333 8336 8435**	8220 8230	2140.32
MN193-BK 	100A	200mA to 120Aac	$\pm 1\%$	0.75°	0.78" (20mm)	8220 8230 PEL 102 PEL 103 PEL 105** 8333 8336 8435**	N/A	2140.36
	5A	5mA to 6Aac	$\pm 1\%$	1.7°				
SL261 **  Battery operated	100A	5 to 100Aac/dc	$\pm 4\%$	$\pm 0.5^\circ$	0.46" (11.8mm)	8220 8230 PEL 102 PEL 103 PEL 105** 8333 8336 8435**	N/A	1201.51
	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 PEL 105** 8333 8336 8435**	N/A	2140.49

Note: Refer to the Power Meter's product user manual for complete specifications.

All current sensors can be used with the Models PEL 102 & PEL 105.

However, only the 196A flexible sensors are waterproof.

Power Adapter for
Models PEL 102 &
PEL 103 only
Catalog #2137.77



** 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)
2137.77	Adapter – Power Adapter PEL 102 & PEL 103 only
2140.28	AC/DC Current Probe Model MR193-BK
2140.32	AC Current Probe Model MN93-BK
2140.33	AC Current Probe Model SR193-BK
2140.34	AmpFlex® Sensor 24" Model 193-24-BK
2140.35	AmpFlex® Sensor 36" Model 193-36-BK
2140.36	AC Current Probe Model MN193-BK
2140.37	Adapter – US 110V Power Adapter (eliminates need for batteries) 8220 & 8230 only
2140.48	MiniFlex® Sensor 10" Model MA193-10-BK
2140.49	AC/DC Current Probe Model J93-BK
2140.50	MiniFlex® Sensor 14" Model MA193-14-BK
2140.75	AmpFlex® Sensor 24" (waterproof - IP67) Model 196A-24-BK
2140.77	Adapter – Phase Power Adapter for use with PowerPad Models 8333 & 8336

DataView®

Data Analysis and Reporting Software

Configure all functions of the Power & Energy Loggers



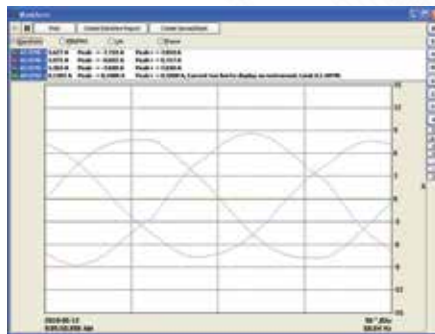
- Display and analyze real-time data on your PC
- Configure functions and parameters from your PC
- Customize views, templates and reports to your exact needs
- Create and store a complete library of configurations that can be uploaded as needed
- Zoom in and out and pan through sections of the graph 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



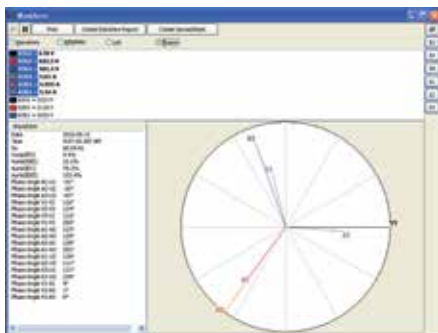
Clear and easy setup of all functions from one tabbed dialog box.



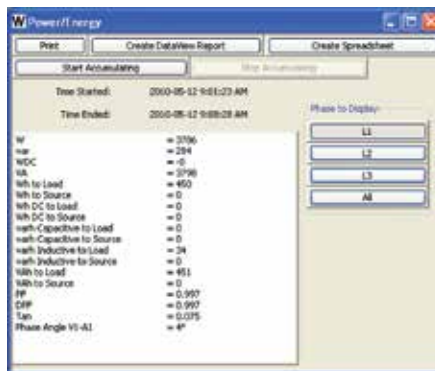
Display real-time waveforms by phase, parameter or total.



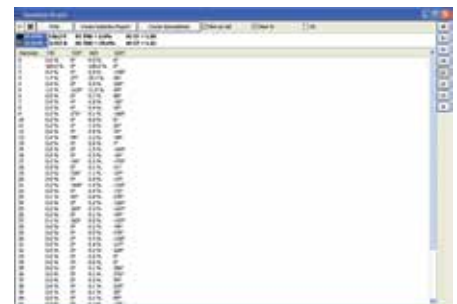
Display all harmonics from 1st to 50th in bargraph form for voltage, current and power.



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



Display power and energy parameters – both instantaneous and total.



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

POWER QUALITY ANALYZERS, METERS & LOGGERS

Selection Chart

AEMC MODEL NUMBER	AEMC CATALOG NUMBER	INPUT TERMINALS	CHANNELS	RMS VOLTAGE MAX PHASE-TO-NEUTRAL	RMS VOLTAGE MAX PHASE-TO-PHASE	PEAK VOLTAGE MAX PHASE-TO-NEUTRAL	PEAK VOLTAGE MAX PHASE-TO-PHASE	DC VOLTAGE MAX	AC CURRENT MAX (PROBE DEPENDENT)	DC CURRENT MAX (PROBE DEPENDENT)	RATIOS VOLT	RATIOS AMPERE
8220	2130.90	1V/1A	1V/1A	600Vrms	660Vrms	850Vpk	935Vpk	600Vdc	6500Aac	1400Adc	Yes	No
8230	2130.81	1V/1A	1V/1A	600Vrms	660Vrms	850Vpk	935Vpk	600Vdc	6500Aac	1400Adc	Yes	No
8333	2136.10	4V/3I	3V/4I	1000Vrms	2000Vrms	1414Vpk	2828Vpk	1200Vdc	10,000Aac	5000Adc	Yes	Yes
8336	2136.30	5V/4I	4V/4I	1000Vrms	2000Vrms	1414Vpk	2828Vpk	1200Vdc	10,000Aac	5000Adc	Yes	Yes
8435	2136.41	5V/4I	4V/4I	1000Vrms	2000Vrms	1697Vpk	3394Vpk	1697Vdc	10,000Aac	5000Adc	Yes	Yes
PEL 102	2137.51	4V/3I	3V/3I	1000Vrms	1700Vrms	1414Vpk	2400Vpk	1000Vdc	10,000Aac	5000Adc	Yes	Yes
PEL 103	2137.52	4V/3I	3V/3I	1000Vrms	1700Vrms	1414Vpk	2400Vpk	1000Vdc	10,000Aac	5000Adc	Yes	Yes
PEL 105	2137.57	4V/3I	3V/3I	1000Vrms	1000Vrms	1414Vpk	2400Vpk	1000Vdc	10,000Aac	5000Adc	Yes	Yes

AEMC MODEL NUMBER	AEMC CATALOG NUMBER	DISTRIBUTION SYSTEMS	PHASE ROTATION	WAVEFORM MODE	TRANSIENT MODE	TRUE INRUSH MODE/ TYPE/ DURATION	ALARM MODE	SNAPSHOT MODE	HARMONIC MODE	TYPE LCD	POWER SOURCE
8220	2130.90	1P-2W 3P-3W DB	Yes, 2-Wire Method	Yes, Realtime through DataView® (recordable to PC)	No	Yes (RMS) duration: unspecified	No	Yes (9)	Yes	Backlit LCD	6 x AA batteries or external adapter
8230	2130.81	1P-2W 3P-3W DB	Yes, 2-Wire Method	Yes	No	Yes (RMS) <15 seconds at 60Hz	18 types/ up to 10 active/ 4096 recorded	Yes (8)	Yes	Color LCD	External adapter with internal NiMH battery pack
8333	2136.10	1P-2W, 2P-3W, 3P-3W, 3P-4W	Yes	Yes	Yes	No	10 types/ up to 2 active/ 4662 recorded	Yes (12)	Yes	TFT - 5.7" diagonal 320 x 240 resolution	External adapter with internal NiMH battery pack
8336	2136.30	1P-2W, 1P-3W, 2P-2W, 2P-3W, 2P-4W, 3P-3W, 3P-4W, 3P-5W	Yes	Yes	Yes	Yes (RMS+PEAK & RMS) up to 1 & 10 mins	40 types/ up to 7 active/ 16,362 recorded	Yes (50)	Yes	TFT - 5.7" diagonal 320 x 240 resolution	External adapter with internal NiMH battery pack
8435	2136.41	1P-2W, 1P-3W, 2P-2W, 2P-3W, 2P-4W, 3P-3W, 3P-4W, 3P-5W	Yes	Yes	Yes	Yes (RMS+PEAK & RMS) up to 1 & 10 mins	40 types/ up to 7 active/ 16,362 recorded	Yes (50)	Yes	STN	External adapter with internal NiMH battery pack
PEL 102	2137.51	1P-2W, 1P-3W, 3P-3W D2, 3P- 3W O2, 3P-3W Y2, 3P-3W D3, 3P-3W O3, 3P-3W Y, 3P-3W DB, 3P-4W Y, 3P-4W YB, 3P-4W Y2 1/2, 3P-4W D, 3P- 4WOD, DC-2W DC-3W, DC-4W	Yes	No	No	No	No	No	Yes	None	External adapter with internal NiMH battery pack
PEL 103	2137.52		Yes	No	No	No	No	No	Yes	Monochrome LCD	
PEL 105	2137.57		Yes	No	No	No	No	No	Yes		Power phase input or external adapter with internal NiMH battery pack