



## MODEL 8220

A measurement tool for electrical parameters and distribution network disturbances

## SPECIFICATIONS

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

(1)Crest factor at 6500 = 1

## FEATURES

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

## METERS INCLUDE

### 8220

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



SEE PAGES 123 & 124 FOR MORE OPTIONAL ACCESSORIES

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

## SOFTWARE FOR POWER QUALITY ANALYZERS & ENERGY LOGGERS

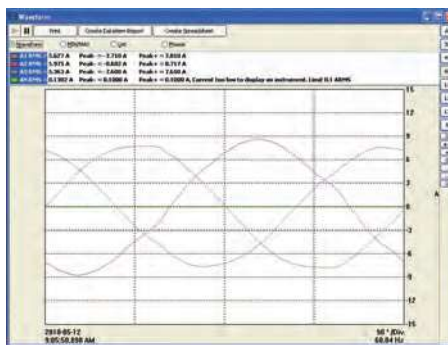
### Configure all functions:

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

## TYPICAL DATAVIEW® FUNCTIONAL, DIGITAL & GRAPHICAL DISPLAYS



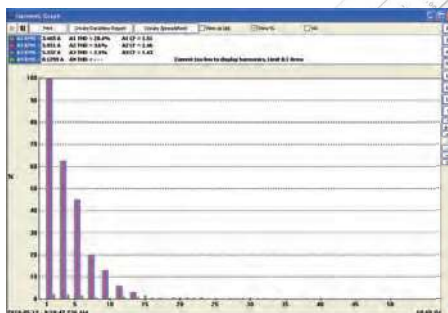
Clear and easy setup of all functions from one tabbed dialog box.



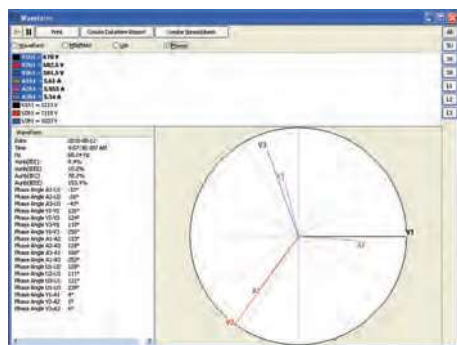
Display real-time waveforms by phase, parameter or total.

Harmonic	Magnitude	Phase
0	1.000	0.000
1	0.010	0.000
2	0.005	0.000
3	0.002	0.000
4	0.001	0.000
5	0.001	0.000
6	0.001	0.000
7	0.001	0.000
8	0.001	0.000
9	0.001	0.000
10	0.001	0.000
11	0.001	0.000
12	0.001	0.000
13	0.001	0.000
14	0.001	0.000
15	0.001	0.000
16	0.001	0.000
17	0.001	0.000
18	0.001	0.000
19	0.001	0.000
20	0.001	0.000
21	0.001	0.000
22	0.001	0.000
23	0.001	0.000
24	0.001	0.000
25	0.001	0.000
26	0.001	0.000
27	0.001	0.000
28	0.001	0.000
29	0.001	0.000
30	0.001	0.000
31	0.001	0.000
32	0.001	0.000
33	0.001	0.000
34	0.001	0.000
35	0.001	0.000
36	0.001	0.000
37	0.001	0.000
38	0.001	0.000
39	0.001	0.000
40	0.001	0.000
41	0.001	0.000
42	0.001	0.000
43	0.001	0.000
44	0.001	0.000
45	0.001	0.000
46	0.001	0.000
47	0.001	0.000
48	0.001	0.000
49	0.001	0.000
50	0.001	0.000

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



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



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

Parameter	Value
W	= 3796
Var	= 284
WDC	= 0
VA	= 3796
Wh to Load	= 450
Wh to Source	= 0
Wh DC to Load	= 0
Wh DC to Source	= 0
Varh Capacitive to Load	= 0
Varh Capacitive to Source	= 0
Varh Inductive to Load	= 34
Varh Inductive to Source	= 0
VAh to Load	= 451
VAh to Source	= 0
PF	= 0.997
DPF	= 0.997
Tan	= 0.075
Phase Angle V1-A1	= 41

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



# POWER QUALITY ANALYZERS, METERS & LOGGERS SELECTION CHART

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

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