

# POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

## POWER & ENERGY LOGGERS PEL 100 SERIES

### MODEL PEL 102

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

### FEATURES

- Simple-to-use, single-, dual- (split-phase) and three-phase (Y, Δ) power & energy loggers
- Designed to work in 1000 V CAT III and 600 V CAT IV environments and fits in many distribution panels
- Power measurements: kVA, kW and kvar
- Energy measurements: kVAh, kWh (source, load) and kvarh (quadrant indication)
- Updated features in DataView® software for configuring real-time communication with a PC and report generation with pre-defined or user defined templates
- 8 GB SD card supplied, can be upgraded up to 32 GB
- USB, LAN, Ethernet and Bluetooth (Class 1 wireless communication, up to 300 ft away)
- Satisfies the monitoring requirements of NEC Code 220.87
- Power adapter allows the PEL 102 to be powered from a phase measurement input
- Provides all the necessary functions for power and energy data logging for 50 Hz, 60 Hz, 400 Hz and DC distribution systems
- Automatic recognition of the connected current sensors/probes
- Magnetic case – can be mounted inside power panels

### PRODUCT INCLUDES

#### PEL 102 KIT CATALOG #2137.51 (SHOWN)

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



DataView®



### ACCESSORIES

#### CATALOG #2137.98

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

**\*ADAPTER SOLD SEPARATELY**

SEE PAGE 120 & 121 FOR MORE OPTIONAL ACCESSORIES



### ANDROID™ APP AVAILABLE FOR PEL 102, 103 & 105!

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



#### CATALOG NO. DESCRIPTION

2137.51	Power & Energy Logger Model PEL 102 (No LCD, w/3 MA193-10-BK Sensors)
2137.61	Power & Energy Logger Model PEL 102 (No LCD, No Sensors)



# POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS

## OPTIONAL ACCESSORIES

SENSOR TYPE	CURRENT RANGE	ACCURACY (TYPICAL)	TYPICAL ERROR ON $\Phi$ AT (50/60) HZ	MAX CONDUCTOR SIZE	USED WITH MODEL	CATALOG NUMBER
<b>MiniFlex® MA193-BK* &amp; MiniFlex® MA194-BK*</b>  10, 14 or 24 in sensor	100 mA to 12,000 Aac <sup>(1)</sup>	± 1 %	0 °	2.75 in (70 mm) (10 in sensor)	PEL 102 PEL 103 PEL 105 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)
<b>MR193-BK</b>  Battery operated	(1 to 1000) Aac (1 to 1300) Aac	± 2.5 %	-0.80 °	1.6 in (41 mm)	PEL 102 PEL 103 PEL 105 8333 8336 8436 8345	2140.28
<b>SR193-BK</b> 	(1 to 1200) Aac	± 0.3 %	0.2 °	2.05 in (52 mm)	PEL 102 PEL 103 PEL 105 8333 8336 8436 8345	2140.33
<b>AmpFlex® 193-BK*</b>  24 in or 36 in sensor	100 mA to 12,000 Aac <sup>(1)</sup>	± 1 %	0 °	7.64 in (194 mm) (24 in sensor)	PEL 102 PEL 103 PEL 105 8333 8336 8436 8345	2140.34 (24 in sensor)
				11.46 in (291 mm) (36 in sensor)		2140.35 (36 in sensor)
<b>MiniFlex® 196-BK*</b>  Waterproof, IP67 14 in or 24 in sensor	100 mA to 12,000 Aac <sup>(1)</sup>	± 1 %	0 °	3.9 in (99 mm) (14 in sensor)	PEL 105 8436	2140.79 (14 in sensor)
				7.64 in (194 mm) (24 in sensor)		2140.75 (24 in sensor)

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




All current sensors can be used with Models PEL 105, 8435 and 8436. However, only the MA196-14-BK and 196A-24-BK flexible sensors are waterproof.

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

Consult factory for NIST Calibration prices



# POWER QUALITY/ENERGY ANALYZERS, METERS & LOGGERS OPTIONAL ACCESSORIES

SENSOR TYPE	CURRENT RANGE		ACCURACY (TYPICAL)	TYPICAL ERROR ON $\phi$ AT (50/60) HZ	MAX CONDUCTOR SIZE	USED WITH MODEL	LIMITED RANGE IF USED WITH MODEL	CATALOG NUMBER
<b>MN93-BK</b> 	(0.5 to 240) Aac		$\pm 1\%$	$0.8^\circ$	0.78 in (20 mm)	PEL 102 PEL 103 PEL 105 8333 8336 8345	N/A	2140.32
<b>MN193-BK</b> 	100 A	200 mA to 120 Aac	$\pm 1\%$	$0.75^\circ$	0.78 in (20 mm)	PEL 102 PEL 103 PEL 105 8333 8336 8345	N/A	2140.36
	5 A	5 mA to 6 Aac	$\pm 1\%$	$1.7^\circ$				
<b>SL261</b> 	100 A	(5 to 100) Aac/DC	$\pm 4\%$	$\pm 0.5^\circ$	0.46 in (12 mm)	PEL 102 PEL 103 PEL 105 8333 8336 8345	N/A	1201.51
	10 A	50 mA to 10 Aac/DC	$\pm 3\%$	$\pm 1^\circ$				

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

## ACCESSORIES/REPLACEMENTS

### CATALOG #1201.51

AC/DC Current Probe  
Model SL261 (BNC)



### CATALOG #2140.40

BNC Adapter for AC/DC Current Probe  
Model SL261



### CATALOG #2140.77

Phase Power Adapter for use with  
PowerPad Models 8333 & 8336



### CATALOG #2137.98

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



### CATALOG #2140.28

AC/DC Current Probe  
Model MR193-BK



### CATALOG #2140.32

AC Current Probe  
Model MN93-BK



### CATALOG #2140.33

AC Current Probe  
Model SR193-BK



## ACCESSORIES/REPLACEMENTS

### CATALOG #2140.34

AmpFlex® Sensor 24 in  
Model 193-24-BK



### CATALOG #2140.35

AmpFlex® Sensor 36 in  
Model 193-36-BK

### CATALOG #2140.36

AC Current Probe  
Model MN193-BK



### CATALOG #2140.48

MiniFlex® Sensor 10 in Model MA193-10-BK

### CATALOG #2140.50

MiniFlex® Sensor 14 in Model MA193-14-BK

### CATALOG #2140.80

MiniFlex® Sensor 24 in Model MA194-24-BK



### CATALOG #2140.75

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

### CATALOG #2140.79

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



# POWER QUALITY / ENERGY ANALYZERS, METERS & LOGGERS SELECTION CHART

AEMC MODEL NUMBER	AEMC CATALOG NUMBER	INPUT TERMINALS	CHANNELS	RMS VOLTAGE MAX PHASE-TO-NEUTRAL	RMS VOLTAGE MAX PHASE-TO-PHASE	PEAK VOLTAGE MAX PHASE-TO-NEUTRAL	PEAK VOLTAGE MAX PHASE-TO-PHASE	DC VOLTAGE MAX	AC CURRENT MAX (PROBE DEPENDENT)	DC CURRENT MAX (PROBE DEPENDENT)	RATIOS VOLT	RATIOS AMPERE
8333	2136.10	4 V/3 I	3 V/4 I	1000 Vrms	2000 Vrms	1414 Vpk	2828 Vpk	1200 Vdc	10,000 Aac	5000 Adc	Yes	Yes
8336	2136.30	5 V/4 I	4 V/4 I	1000 Vrms	2000 Vrms	1414 Vpk	2828 Vpk	1200 Vdc	10,000 Aac	5000 Adc	Yes	Yes
8345	2136.35	5 V/4 I	4 V/4 I	1000 Vrms	2000 Vrms	1414 Vpk	2828 Vpk	1200 Vdc	10,000 Aac	5000 Adc	Yes	Yes
8436	2136.43	5 V/4 I	4 V/4 I	1000 Vrms	2000 Vrms	1414 Vpk	2828 Vpk	1200 Vdc	10,000 Aac	5000 Adc	Yes	Yes
PEL 52	2137.71	2 V/2 I	2 V/2 I	660 Vrms	1200 Vrms	-	-	-	3600 Aac	-	No	Yes
PEL 102	2137.51	4 V/3 I	3 V/3 I	1000 Vrms	1700 Vrms	1414 Vpk	2400 Vpk	1000 Vdc	10,000 Aac	5000 Adc	Yes	Yes
PEL 103	2137.52	4 V/3 I	3 V/3 I	1000 Vrms	1700 Vrms	1414 Vpk	2400 Vpk	1000 Vdc	10,000 Aac	5000 Adc	Yes	Yes
PEL 105	2137.57	5 V/4 I	4 V/4 I	1000 Vrms		1414 Vpk	2400 Vpk	1000 Vdc	10,000 Aac	5000 Adc	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/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 notificatoins	Yes (no limit with SD card)	DC to 63 <sup>rd</sup> order; < 3 % U <sub>din</sub> / 0 to 62 <sup>nd</sup> order; < 0.5 % U <sub>din</sub>	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			No / No	Monochrome LCD	Power phase input with internal NiMH battery pack
PEL 102	2137.51	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 Y3, 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 W OD, DC-2 W DC-3 W, DC-4 W	Yes			No			Yes / No	None	Line Power with internal NiMH battery pack
PEL 103	2137.52		Yes			No		Yes / No	Monochrome LCD	Line Power with internal NiMH battery pack	
PEL 105	2137.57		Yes			No		Yes / No	Monochrome LCD	Power phase input or external adapter with internal NiMH battery pack	

