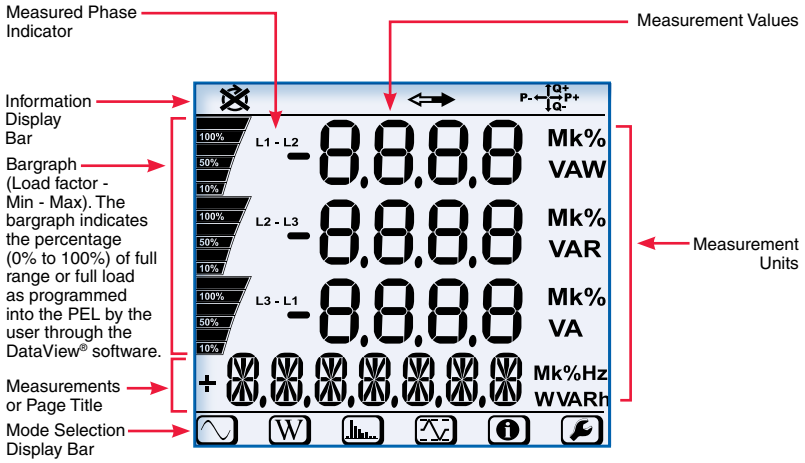
NEW!

Models PEL 102 & PEL 103

Economical, compact and simple to use!

▶KEY FEATURES OF THE PEL 103 DISPLAY



▶TOP AND BOTTOM DISPLAY BARS INDICATE THE FOLLOWING

TOP DISPLAY BAR	
ICON	**DESCRIPTION**
	Phase Sequence reversal indicator or missing phase (displayed in 3-Phase distribution systems)
	Data available for recording (non-display indicates possible internal problem)
P-↔Q+ P+ Q-	Power Quadrant Indication

BOTTOM DISPLAY BAR	
	Measurement Mode (Real-time values)
W	Power and Energy Mode
	Harmonics Mode
	Min/Max Mode
	Information Mode
	Not used

▶FEATURES

- Simple to use, single-, dual- (split-phase) and three-phase (Y, Δ) power & energy loggers
- Provides all the necessary functions for Power and Energy data logging for 50Hz, 60Hz, 400Hz and DC distribution systems
- Current measurements from 100mA up to 10,000A using flexible current sensors
- Automatic recognition of the connected current sensors/probes
- Power measurements: VA, W and var
- Energy measurements VAh, Wh (source/load indication) and varh (including quadrant indication)
- Record cost of energy usage
- Power Factor (PF), Cos (φ), Tan (Φ) and DPF
- Total Harmonic Distortion (THD) for voltages and currents
- Harmonics up to the 50th order for 50/60Hz voltages and currents and 7th order for 400Hz
- Simultaneous RMS measurements of each phase @ 128 samples/cycle and DC
- Bright blue, four line LCD on Model PEL 103 (3 phases shown simultaneously)
- Storage of measured and calculated values on a SD-Card or SDHC-Card
- Configuration of current and voltage ratios to external PT and CT ratios
- USB, LAN, and *Bluetooth* communication
- Includes DataView® software for data storage, real-time display, analysis and report generation with supplied pre-defined or custom templates

▶PRODUCT INCLUDES

Models PEL 102 & PEL 103

Models PEL 102 and PEL 103 include: *Small Classic Tool Bag, Three MiniFlex® MA193-10-BK Sensors, 5 ft USB Cable, Four Black Test Leads and Alligator Clips, Power Cord, 12 Color-coded ID Markers, Multifix Mounting System, Safety Card for the PEL, Sensor Compliance Sheet, 2 GB SD-Card with USB-SD-Card Reader, Quick Start User Guide and USB Stick with DataView® and User Manual.*

▶SPECIFICATIONS

Models PEL 102 & PEL 103

GENERAL				
Sampling Frequency		128 samples per cycle; 50/60Hz (16 samples/cycle 400Hz)		
Data Storage Rate		1 per second		
Demand Period Storage Rate		User selectable (1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 and 60 minutes)		
Recorded Parameters (Single- and Poly-Phase)		V, I, W, VA, var, PF, Tan, Wh, Vah, varh, THD (V and I), Individual harmonics (from 1 through 50 per phase); Crest Factor (CF), Cos f / DPF		
Event Log		Tracks and records status changes and error messages along with recorded data		
Front Panel Indicator LEDs		*Bluetooth* active, recording in progress, phase connection reversal, overload, battery charging and SD Card status		
Storage Capacity		2GB SD card (included) is used for storage. SD cards (up to 2GB); SDHC cards (4 to 32GB) formatted FAT32 are supported		
INPUTS	**Voltage**	3 voltage input channels via 4mm safety banana jacks		
	Current	3 current input channels via custom 4 pin jacks that accept AEMC® probes and sensors		
ELECTRICAL				
VOLTAGE MEASUREMENT		**RANGE**	**RESOLUTION**	*** ACCURACY (% of Reading)**
	50/60Hz	42.5 to 69Hz	–	±0.1Hz
Single-Phase RMS Voltages		100 to 1000rms	0.1V	±0.2% Rdg ± 0.2V
Phase-to-Phase RMS Voltages		100 to 2000Vrms	0.1 to 1V	±0.2% Rdg ± 0.4V
	400Hz	340 to 460Hz	–	–
Single-Phase RMS Voltages		100 to 600Vrms	0.1V	±1% Rdg ± 1V
Phase-to-Phase RMS Voltages		200 to 1200Vrms	0.1 to 1V	±1% Rdg ± 1V
	DC	100 to 1000V	0.1V	±1% Rdg ± 3V (typical)
PT Ratios		Programmable from 50V to 65,0000V	0.01V to 0.1V	–
CURRENT MEASUREMENT				
Current Probe: MiniFlex® Sensor MA193***		100mA to 100Arms	1 to 100mA	±1% ± 50mA
		20 to 400Arms	10 to 100mA	±1% ± 0.2A
		100 to 2000Arms	0.1 to 1A	±1% ± 1A
		500 to 10,000Arms	0.1 to 1A	±1%
CT Ratios		Programmable from 1:1 to 25,000:1 (probe dependent)		
POWER MEASUREMENTS				
Active Power (P)*		-2 to 2GW	0.001W	±0.5% Rdg ± 0.005% Pnom
Reactive Power (Q)*		-2 to 2Gvar	0.001var	±1% Rdg ± 0.01% Qnom
Apparent Power (S)*		0 to 2GVA	0.001VA	±0.5% Rdg ± 0.005% Snom
Power Factor		-1 to +1	0.001	± 0.05
Tangent ϕ (active/reactive power ratio)		-3.2 to +3.2	0.001	± 0.02
ENERGY MEASUREMENTS				
Active Energy (EP)		0 to 4 x 10^{18}	1Wh	±0.5% Rdg
Reactive Energy (EQ)		0 to 4 x 10^{18}	1varh	±2% Rdg
Apparent Energy (ES)		0 to 4 x 10^{18}	1Vah	±0.5% Rdg
THD		± 655%		
Individual Harmonics		1 to 50 displayed in percentage; 1 to 7 at 400Hz		
External Supply		110V/250V (10%) @ 50/60Hz; 400Hz		
Back-Up Power Source / Charge Time		Rechargeable 8.4V NiMH battery pack / Approximately 5 hours		
Battery Life		Provides up to 30 minute ride through upon power loss		
MECHANICAL				
Communication Ports		USB 2.0, Ethernet (RJ45), Wireless *Bluetooth* Class 1 **		
Dimension/Weight		10.08 x 4.92 x 1.46" (256 x 125 x 37mm) / <1kg		
Case / Index of Protection		Double insulated, rubber over-molded, polycarbonate UL94 V1 rated / IP54 non operating		
Mounting / Security		Embedded magnets on back side, keyhole slot on back side / Kensington anti-theft system		
DISPLAY				
Display Type for Model PEL 103		2.63 x 2.16" (67 x 55mm), four line, monochrome, backlit LCD with adjustable brightness and contrast		
ENVIRONMENTAL / SAFETY				
Operating Temperature / Relative Humidity		32° to 122°F (0° to 50°C) / up to 85%		
Storage Temperature		-4° to 122°F (-20° to 50°C) with batteries; -4° to 158°F (-20° to 70°C without batteries)		
Safety Rating / CE Rating		Complies with IEC 61010-1:Ed3, and IEC 61010-2-030:Ed1 for 1000V CAT III / 600V CAT IV, Pollution Degree 2 / Yes		

* Maximum value is current probe dependent.
** Computers with Class II *Bluetooth* will restrict range to 40ft. Computers without *Bluetooth* will require a Class I or Class II *Bluetooth* radio adapter.
*** Maximum current reduced by a factor of 2 for 400Hz fundamental frequency.

CATALOG NO.	DESCRIPTION
2137.51	Power & Energy Logger Model PEL 102 (no LCD)
2137.52	Power & Energy Logger Model PEL 103 (includes LCD)