POWER QUALITY LOGGER

Power & Energy Logger PEL 105

Model PEL 105



► SPECIFICATIONS

Data Storage Rate 1 per second and 200ms 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						
Demand Period Storage Retored Parameters (Single-and Poly-Phase) User selectable (1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 and 60 minutes) Recorded Parameters (Single-and Poly-Phase) Tacks and records status changes & error message salong with recorded data Front Panel Indicator Ebs Storage Capacity SD card included / SD cards up to 32 GB tormatted FAT32 are supported Inputs Storage Capacity SD card included / SD cards up to 32 GB tormatted FAT32 are supported Storage Capacity SD card included / SD cards up to 32 GB tormatted FAT32 are supported Storage Capacity Voltage Measurement Range Resolution/Accuracy* Storage FABSE RMS 10 to 1000Vrms 0.11V±0.2% Rdg ± 0.2V Phase-to-Phase RMS 17 to 600Vrms 0.11V±0.2% Rdg ± 0.4V Voltages 10 to 1000Vrms 0.11V±1% Rdg ± 1V Phase-to-Phase RMS 17 to 1200Vrms 0.11 to 11V±1% Rdg ± 1V Voltages 10 to 1000V 0.11V±1% Rdg ± 1V Phase-to-Phase RMS 17 to 1200Vrms 0.11 to 11V±1% Rdg ± 1V Voltages - 0.011 to 1.0V PT Ratios - 0.011 to 1.0V CT ratios Programmable from 1:1 to 25,000:1 (probe dependent) Active Power (0* 0.001 ± 0.5% Rdg	Sampling Frequency					
Rate Over Selectadol (1, 2, 3, 4, 5, 0, 10, 12, 13, 20, 30 and 00 minutes) Recorded Parameters (single- and Poly-Phase) V, I, W, VA, var, PF, Tan, Wh, VAh, varh, THO (V and I), Individual harmonics (from 1 through 50 per phase); Crest Factor (CF), Cos f / DFF Event Log Tracks and records status changes & error messages along with recorded data Front Panel Indicator LEDs Storage Capacity SD card included / SD cards up to 32 GB formatted [AT32 are supported inputs Voltage SD card included / SD cards up to 32 GB formatted [AT32 are supported with age in pl (2, 2, 2, 4, 2, 3, 4, 2, 2, 4, 2, 3, 4, 4, 2, 3, 4, 2, 3, 4, 2, 3, 4, 2, 3, 4, 2, 3, 4, 2, 3, 4, 2, 3, 4, 2, 3, 4, 2, 3, 4, 4, 2, 3, 4, 2, 3, 4, 4, 4, 2, 3, 4, 4, 4, 2, 3, 4, 4, 4, 4, 2, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	•	1 per second and 200ms				
Event LogTracks and records status changes & error messages along with recorded data Bluetooth active, recording in progress, phase less sequence, overload, battery charging & SD Card statusStorage CapacitySD card included / SD cards up to 32 GB formatted FAT32 are supported linputsInputsVoltageCurrent4 input channels via custom 4 pin jacks that accept AEMC® probes & sensorsVoltage MeasurementRangeRangeResolution/Accuracy*30/60HZ42.5 to 69Hz10 to 1000Vrms0.11V/±0.2% Rdg ± 0.2VPhase-to-Phase RMS Voltages10 to 1000Vrms0.1 to 1V/±0.2% Rdg ± 0.4VVoltage Ad0HZ-Single-Phase RMS Voltages10 to 600Vrms0.1 to 1V/±1% Rdg ± 1VPhase-to-Phase RMS Voltages10 to 1000V0.1 to 1V/±1% Rdg ± 1VPhase-to-Phase RMS Voltages0.1 to 110 to 110 to 100V0.1 to 11V/±1% Rdg ± 1VPhase-to-Phase RMS Voltages-0.0 to 10 to 1000V0.11V/±1% Rdg ± 1VPhase-to-Phase RMS Voltages-0.0 to 10 to 1000V0.11V/±1% Rdg ± 1VPhase-to-Phase RMS Voltages-0.0 to 10 to 1000V0.11V/±1% Rdg ± 1VCurrent Measurement196A***Nominal range - probe dependent200mA to 10,000ACT RatiosProgrammable from 1:1 to 25,000:1 (probe dependent)Active Power (P)*0.001W±0.5% Rdg ± 0.05% SnomReactive Energy (EP)1Wh±0.5% Rdg ± 0.05% SnomReactive Energ						
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Single-Phase RMS Voltages10 to 600Vrms $0.1V/\pm1\% \text{ Rdg} \pm 1V$ Phase-to-Phase RMS voltages17 to 1200Vrms $0.1 \text{ to } 1V/\pm1\% \text{ Rdg} \pm 1V$ DC10 to 1000V $0.1V/\pm1\% \text{ Rdg} \pm 3V$ (typical)PT Ratios-0.01 to $0.1V$ Current Measurement196A***-Nominal range - probe dependent200mA to $10,000A$ -CT RatiosProgrammable from 1:1 to 25,000:1 (probe dependent)Active Power (P)* $0.001W$ $\pm 0.5\% \text{ Rdg} \pm 0.005\% \text{ Pnom}$ Reactive Power (Q)* $0.001Va$ $\pm 1.5\% \text{ Rdg} \pm 0.005\% \text{ Snom}$ Power Factor 0.001 $\pm 0.5\% \text{ Rdg} \pm 0.005\% \text{ Snom}$ Power Factor 0.001 $\pm 0.05\% \text{ Rdg}$ Tangent (active/reactive power ratio) 0.001 $\pm 0.05\% \text{ Rdg}$ Reactive Energy (EP)11Wh $\pm 0.5\% \text{ Rdg}$ Reactive Energy (ES)1VAh $\pm 0.5\% \text{ Rdg}$ Individual Harmonics1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply $110V/250V (10\%) \oplus 50/60Hz; 400Hz$ Power From Phase Measurement $100V \text{ to } 1000V \text{ to } 1000Vac$ Back-Up Power Source/ Charge TimeRechargeable 8.4V NIMH battery pack / Approx. 5 hoursBattery Life Display Type $4.2 \times 3.3" (107 \times 84mm), four line, monochrome, backkit LGD with adjustable brightness and contrastOperating Temperature /Relative Humidity-4^{\circ} to 128^{\circ} (-40° to 50^{\circ}) / 45 to 75\% RHStorage Temperature /Relative Humidity-4^{\circ} to 128^{\circ} (-40° to 50^{\circ}) / 45 to 75\% RHStorage Temperature /Neales$		17 to 600Vrms	0.1 to 1V/±0.2% Rdg ± 0.4V			
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VoltagesIf No 12000111s0.1 to 10/±1% Rdg ± 1VDC10 to 1000V0.1V/±1% Rdg ± 3V (typical)PT Ratios-0.01 to 0.1VCurrent Measurement196A***-Nominal range - probe dependent200mA to 10,000A-CT RatiosProgrammable from 1:1 to 25,000:1 (probe dependent)Active Power (P)*0.001W±0.5% Rdg ± 0.005% PnomReactive Power (Q)*0.001VA±0.5% Rdg ± 0.005% SnomPower Factor0.001± 0.5% Rdg ± 0.005% SnomPower Factor0.001± 0.05Tangent (active/reactive power ratio)0.001± 0.02Active Energy (EP)1Wh± 0.5% RdgApparent Energy (EP)1Wh± 0.5% RdgIndividual Harmonics1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply110V/250V (10%) @ 50/60Hz; 400HzPower From Phase Measurement100V to 1000VacBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.81bs (4kg)Case Delycarbonate UL94 V1 rated24.2 x 3.3" (107 x 84mm), four line, monochrome, backfit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-4° to 122°F (-40° to 35°C from 0 to 75% HRSafety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollucin Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed		10 to 600Vrms	$0.1V/\pm1\%$ Rdg $\pm 1V$			
PT Ratios - 0.01 to 0.1V Current Measurement 196A*** - Nominal range - probe dependent 200mA to 10,000A - CT Ratios Programmable from 1:1 to 25,000:1 (probe dependent) Active Power (P)* 0.001W ±0.5% Rdg ± 0.05% Pnom Reactive Power (0)* 0.001VA ±1% Rdg ± 0.01% Qnom Apparent Power (S)* 0.001VA ±0.5% Rdg ± 0.005% Snom Power Factor 0.001 ± 0.05 Tangent (active/reactive power ratio) 0.001 ± 0.02 Active Energy (EP) 1Wh ±0.5% Rdg Reactive Energy (EP) 1Wh ±0.5% Rdg Apparent Energy (ES) 1VAh ±0.5% Rdg Individual Harmonics 1 to 50 displayed in percentage; 1 to 7 at 400Hz External Supply 110V/250V (10%) @ 50/60Hz; 400Hz Power From Phase Measurement Rechargeable 8.4V NiMH battery pack / Approx. 5 hours Battery Life 30 minutes minimum, 60 minutes typical Communication Ports USB 2.0, Ethernet (RJ45), Wireless Bluetoth Class 1 **, Wi-Fi Display Type 4.2 x 3.3" (107 x 84 mm), four line, monochrome, backiti LCD with adju		17 to 1200Vrms				
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Nominal range - probe dependent200mA to 10,000A-CT RatiosProgrammable from 1:1 to 25,000:1 (probe dependent)Active Power (P)*0.001W±0.5% Rdg ± 0.005% PnomReactive Power (Q)*0.001Var±1% Rdg ± 0.01% QnomApparent Power (S)*0.001VA±0.5% Rdg ± 0.005% SnomPower Factor0.001± 0.05Tangent (active/reactive power ratio)0.001± 0.02Active Energy (EP)1Wh±0.5% RdgReactive Energy (EQ)1varh±2% RdgApparent Energy (EQ)1varh±0.5% RdgHD± 655%Individual Harmonics1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply110V/250V (10%) @ 50/60Hz; 400HzPower From Phase Measurement100V to 1000VacBack-Up Power Source/ Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-4° to 122°F (-20° to 50°C) / 45 to 75%RHStorage Temperature / Vith Batteries-40° to 95°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR)Safety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution De	PT Ratios	_				
probe dependent 200IIIA ID 10,000A - CT Ratios Programmable from 1:1 to 25,000:1 (probe dependent) Active Power (P)* 0.001W ±0.5% Rdg ± 0.005% Pnom Reactive Power (Q)* 0.001Var ±1% Rdg ± 0.005% Snom Apparent Power (S)* 0.001VA ±0.5% Rdg ± 0.005% Snom Power Factor 0.001 ±0.5% Rdg ± 0.005% Snom Power Factor 0.001 ±0.05 Tangent (active/reactive power ratio) 0.001 ±0.02 Active Energy (EP) 1Wh ±0.5% Rdg Active Energy (EQ) 1varh ±2% Rdg Apparent Energy (EQ) 1varh ±2% Rdg Apparent Energy (ES) 1VAh ±0.5% Rdg Individual Harmonics 1 to 50 displayed in percentage; 1 to 7 at 400Hz External Supply 110V/250V (10%) @ 50/60Hz; 400Hz Power From Phase 100V to 1000Vac Back-Up Power Source/ Charge Time Rechargeable 8.4V NIMH battery pack / Approx. 5 hours Battery Life 30 minutes minimum, 60 minutes typical Communication Ports USB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-Fi D	Current Measurement	196A***	_			
Active Power (P)* $0.001W$ $\pm 0.5\%$ Rdg $\pm 0.005\%$ PnomReactive Power (Q)* $0.001Var$ $\pm 1.\%$ Rdg $\pm 0.005\%$ PnomApparent Power (S)* $0.001Va$ $\pm 0.5\%$ Rdg $\pm 0.005\%$ SnomPower Factor 0.001 ± 0.05 Tangent (active/reactive power ratio) 0.001 ± 0.02 Active Energy (EP)1Wh ± 0.02 Active Energy (EQ) $1varh$ $\pm 2\%$ RdgApparent Energy (EQ) $1varh$ $\pm 2\%$ RdgApparent Energy (ES) $1VAh$ $\pm 0.5\%$ RdgIndividual Harmonics 1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply $110V/250V$ (10%) @ $50/60Hz$; $400Hz$ Power From Phase Measurement $100V$ to $1000Vac$ Back-Up Power Source/ Charge TimeRechargeable 8.4V NIMH battery pack / Approx. 5 hoursBattery Life 30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight $10.6 \times 7.1 \times 9.65"$ ($270 \times 180 \times 245mm$) / $8.81bs$ ($4kg$)CasePolycarbonate UL94 V1 ratedDisplay Type $4.2 \times 3.3"$ ($107 \times 84mm$), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity -4° to $122^{\circ}F$ (-20° to $50^{\circ}C$) / 4 to 75% RHStorage Temperature / Pollution Degree 4 closed (3 when open)Complies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed		200mA to 10,000A –				
Reactive Power (Q)* $0.001var$ $\pm 1\% Rdg \pm 0.01\% Qnom$ Apparent Power (S)* $0.001VA$ $\pm 0.5\% Rdg \pm 0.005\% Snom$ Power Factor 0.001 ± 0.05 Tangent (active/reactive power ratio) 0.001 ± 0.02 Active Energy (EP) $1Wh$ $\pm 0.5\% Rdg$ Active Energy (EQ) $1varh$ $\pm 2.5\% Rdg$ Apparent Energy (EQ) $1varh$ $\pm 2.5\% Rdg$ Individual Harmonics $1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply110V/250V (10\%) \oplus 50/60Hz; 400HzPower From PhaseMeasurement100V to 1000VacBack-Up Power Source/Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (R,J45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 \times 7.1 \times 9.65" (270 \times 180 \times 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 \times 3.3" (107 \times 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature /Relative Humidity-4^{\circ} to 122^{\circ}F (-20^{\circ} to 50^{\circ}C) / 45 to 75\% RHStorage Temperature /Nelateries-40^{\circ} to 95^{\circ}F (-40^{\circ} to 35^{\circ}C from 0 to 95\% HR);-40^{\circ} to 158^{\circ}F (-40^{\circ} to 70^{\circ}C from 0 to 75\% RHSafety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2:03:Ed1 for 1000V CAT IV,Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed$		Programmable from 1:1 to 2	25,000:1 (probe dependent)			
Apparent Power (S)* $0.001VA$ $\pm 0.5\% \text{ Rdg} \pm 0.005\% \text{ Snom}$ Power Factor 0.001 ± 0.05 Tangent (active/reactive power ratio) 0.001 ± 0.02 Active Energy (EP)1Wh $\pm 0.05\% \text{ Rdg}$ Reactive Energy (EQ)1varh $\pm 2.\% \text{ Rdg}$ Apparent Energy (ES)1VAh $\pm 0.5\% \text{ Rdg}$ Individual Harmonics1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply110V/250V (10%) @ 50/60Hz; 400HzPower From Phase Measurement100V to 1000VacBack-Up Power Source/ Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type $4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-4^{\circ} to 122°F (-20^{\circ} to 50°C) / 45 to 75%RHStorage Temperature-40^{\circ} to 95°F (-40^{\circ} to 35°C from 0 to 95%HR);-40^{\circ} to 158°F (-40^{\circ} to 75%RHSafety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed$	Active Power (P)*	0.001W	±0.5% Rdg ± 0.005% Pnom			
Power Factor0.001± 0.05Tangent (active/reactive power ratio)0.001± 0.02Active Energy (EP)1Wh±0.5% RdgReactive Energy (EQ)1varh±2% RdgApparent Energy (ES)1VAh±0.5% RdgIndividual Harmonics1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply110V/250V (10%) @ 50/60Hz; 400HzPower From Phase Measurement100V to 1000VacBack-Up Power Source/ Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-4° to 122°F (-20° to 50°C) / 45 to 75%RHStorage Temperature / With Batteries-40° to 138°F (-40° to 33°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR)Safety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed	Reactive Power (Q)*					
Tangent (active/reactive power ratio)0.001± 0.02Active Energy (EP)1Wh± 0.5% RdgReactive Energy (EQ)1 varh± 2% RdgApparent Energy (ES)1VAh± 2% RdgIndividual Harmonics1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply110V/250V (10%) @ 50/60Hz; 400HzPower From Phase Measurement100V to 1000VacBack-Up Power Source/ Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-4° to 122°F (-20° to 50°C) / 45 to 75%RHStorage Temperature / Pollution Degree 4 closed (3 when open)-40° to 158°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR)Safety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed	Apparent Power (S)*					
power ratio)1000 000000000000000000000000000000000	Power Factor	· · · · · · · · · · · · · · · · · · ·				
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Apparent Energy (ES)1VAh±0.5% RdgTHD± 655%Individual Harmonics1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply110V/250V (10%) @ 50/60Hz; 400HzPower From Phase Measurement100V to 1000VacBack-Up Power Source/ Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-4° to 122°F (-20° to 50°C) / 45 to 75%RHStorage Temperature With Batteries-40° to 158°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR)Safety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed	Active Energy (EP)	1Wh	±0.5% Rdg			
THD± 655%Individual Harmonics1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply110V/250V (10%) @ 50/60Hz; 400HzPower From Phase Measurement100V to 1000VAcBack-Up Power Source/ Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (R,J45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-4° to 122°F (-20° to 50°C) / 45 to 75%RHStorage Temperature With Batteries-40° to 158°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR)Safety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed	Reactive Energy (EQ)					
Individual Harmonics1 to 50 displayed in percentage; 1 to 7 at 400HzIndividual Harmonics1 to 50 displayed in percentage; 1 to 7 at 400HzExternal Supply110V/250V (10%) @ 50/60Hz; 400HzPower From Phase Measurement100V to 1000VacBack-Up Power Source/ Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / With Batteries-40° to 122°F (-20° to 50°C) / 45 to 75%RHStorage Temperature With Batteries-40° to 158°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR)Safety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed	Apparent Energy (ES)	1VAh	±0.5% Rdg			
External Supply110V/250V (10%) @ 50/60Hz; 400HzPower From Phase Measurement100V to 1000VacBack-Up Power Source/ Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-40° to 122°F (-20° to 50°C) / 45 to 75%RHStorage Temperature With Batteries-40° to 158°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR)Safety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed	THD	± 65	55%			
Power From Phase Measurement100V to 1000VAcBack-Up Power Source/ Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-4° to 122°F (-20° to 50°C) / 45 to 75%RHStorage Temperature With Batteries-40° to 95°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR)Safety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed	Individual Harmonics	1 to 50 displayed in percentage; 1 to 7 at 400Hz				
MeasurementTOUV to TOUOVACBack-Up Power Source/ Charge TimeRechargeable 8.4V NiMH battery pack / Approx. 5 hoursBattery Life30 minutes minimum, 60 minutes typicalCommunication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-40° to 122°F (-20° to 50°C) / 45 to 75%RHStorage Temperature with Batteries-40° to 158°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR)Safety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed	External Supply	110V/250V (10%)	@ 50/60Hz; 400Hz			
Charge Time Rechargeable 3.4V Ninh Battery Dack / Approx. 5 Hours Battery Life 30 minutes minimum, 60 minutes typical Communication Ports USB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-Fi Dimension/Weight 10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg) Case Polycarbonate UL94 V1 rated Display Type 4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrast Operating Temperature / Relative Humidity -4° to 122°F (-20° to 50°C) / 45 to 75%RH Storage Temperature / With Batteries -40° to 95°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 170°C from 0 to 75%HR) Safety Rating Complies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open) Index of Protection IP67 with cover closed		100V to	1000Vac			
Communication PortsUSB 2.0, Ethernet (RJ45), Wireless Bluetooth Class 1 **, Wi-FiDimension/Weight10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)CasePolycarbonate UL94 V1 ratedDisplay Type4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrastOperating Temperature / Relative Humidity-4° to 122°F (-20° to 50°C) / 45 to 75%RHStorage Temperature with Batteries-40° to 95°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR)Safety RatingComplies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)Index of ProtectionIP67 with cover closed	Charge Time	Rechargeable 8.4V NiMH battery pack / Approx. 5 hours				
Dimension/Weight 10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg) Case Polycarbonate UL94 V1 rated Display Type 4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrast Operating Temperature / Relative Humidity -4° to 122°F (-20° to 50°C) / 45 to 75%RH Storage Temperature with Batteries -40° to 158°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR) Safety Rating Complies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open) Index of Protection IP67 with cover closed	Battery Life					
Case Polycarbonate UL94 V1 rated Display Type 4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrast Operating Temperature / Relative Humidity -4° to 122°F (-20° to 50°C) / 45 to 75%RH Storage Temperature with Batteries -4° to 158°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR) Safety Rating Complies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open) Index of Protection IP67 with cover closed						
Display Type 4.2 x 3.3" (107 x 84mm), four line, monochrome, backlit LCD with adjustable brightness and contrast Operating Temperature / Relative Humidity -4° to 122°F (-20° to 50°C) / 45 to 75%RH Storage Temperature With Batteries -40° to 95°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR) Safety Rating Complies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open) Index of Protection IP67 with cover closed	Dimension/Weight	10.6 x 7.1 x 9.65" (270 x 180 x 245mm) / 8.8lbs (4kg)				
Operating Temperature / Relative Humidity -4° to 122°F (-20° to 50°C) / 45 to 75%RH Storage Temperature With Batteries -40° to 95°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR) Safety Rating Complies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open) Index of Protection IP67 with cover closed	Case	Polycarbonate UL94 V1 rated				
Storage Temperature With Batteries -40° to 95°F (-40° to 35°C from 0 to 95%HR); -40° to 158°F (-40° to 70°C from 0 to 75%HR) Safety Rating Complies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open) Index of Protection IP67 with cover closed	Display Type					
Safety Rating Complies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open) Index of Protection IP67 with cover closed	Operating Temperature / Relative Humidity					
Pollution Degree 4 closed (3 when open) Index of Protection IP67 with cover closed	Storage Temperature With Batteries					
	Safety Rating	Complies w/ IEC 61010-1:Ed3, IEC 61010-2-030:Ed1 for 1000V CAT IV, Pollution Degree 4 closed (3 when open)				
Maximum value is current probe dependent. ** Computers with Class II Bluetooth Class II Bluetooth radio adapter.	Index of Protection	IP67 with c	over closed			
	Maximum value is current probe	e dependent. ** Computers with Class II Blue	tooth Class II Bluetooth radio adapter.			



FEATURES

- Simple to use, single-, dual- (split-phase) and three-phase (Y, △) power & energy loggers
- Pole mountable
- Powers directly from AC phase input up to 1000V
- Waterproof flexible current sensors
- Designed to work in 1000V CAT IV environments
- Supports 17 different network connections
- Power measurements: VA, W and var
- Energy measurements: VAh, Wh (source, load) and varh (four quadrant indication)
- Includes DataView[®] software for configuring, real-time display, analysis and report generation
- USB, LAN, Ethernet, Wi-Fi and *Bluetooth* communication (Class 1 wireless communication, up to 300 ft away)
- Satisfies the monitoring requirements of NEC Code 220.87
- PEL 105 can be configured from front panel, DataView[®] control panel or the FREE Android[™] application
- Supports AC/DC Current Probe Model J93 for measuring current up to 5000Apc & 3500Aac
- Provides all the necessary functions for power and energy data logging for 50Hz, 60Hz, 400Hz and DC distribution systems
- Automatic recognition of the connected current sensors/probes up to 10,000Aac (sensor dependent)
- Minimal programming required



POWER QUALITY LOGGER

Power & Energy Logger PEL 105



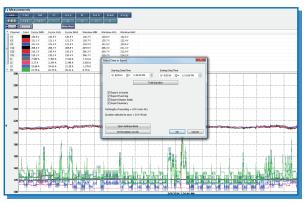
KIT OPTION INCLUDES

▶ PEL 105 Kit

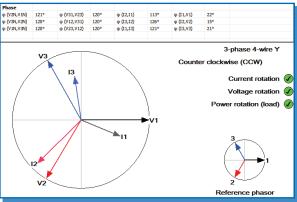
Extra-large tool bag, accessory pouch, 5 ft USB cable, five 10 ft black voltage leads (waterproof cap) with alligator clips, power adapter 110/230V with US power cord, four water-tight AmpFlex® A196-24-BK (included with Cat. #2137.59 only), 9.6V NiMH battery, SD-card, USB SD-card reader, twelve colorcoded input ID markers. quick start guide, and a USB stick supplied with DataView[®] software and user manual.



THE PEL 105 has the ability to be configured directly from the front panel, DataView[®] control panel or the Android[™] App.



Export User Selectable1 Sec or 200mS Data: Ability to create DataView® reports from 1 sec or 200mS data, as well as aggregate data



Phasor Diagram Screen:

Shows actual and reference diagrams and indicates whether voltage, current and/or power phase orientations are as expected

Options								
Default Tariffs for new	sessions Progra	am Options C	ownload Options	Set Exception	Levels			
Default Tariffs for new	Default Tariffs for new sessions							
Currency symbol first Space between symbol and value 2 Decimal places								
P Load (Wh)				Enable tariff	for P Load (Wh)			
Override base	Start time	End time	New Tariff	Monday	Tuesday	Wednesd		
	12:00 AM 🚔	7:59 AM	÷ 0.10	V		V		
	7:01 AM 🌲	6:00 PM	0.10	V		V		

Time of Use Selection:

Ability to program up to 8 different tariffs for energy cost based on day of week and time of day



► ACCESSORIES

► Pole Mounting Kit Catalog #2137.82 (optional) Set of two, with hardware

Cable Reeling Box Catalog #5000.77 (optional) For organizing leads less than 10 ft.





CATALOG NO.	DESCRIPTION
2137.57	Power & Energy Logger Model PEL 105 w/o Sensors (Waterproof IP67)
2137.59	Power & Energy Logger Model PEL 105 w/4 A196-24-BK (AmpFlex [®] – Waterproof IP67)
2137.82	Pole Mounting Kit

You Tube AEMC[®] YouTube Channel Visit us to view a wide range of

Visit us to view a wide range of useful videos for using our products.

POWER QUALITY LOGGER Power & Energy Logger PEL 105

Sensors & Probes

All current probes below can be used with the PEL 105

SENSOR TYPE							
		RENT RANGE	ACCURACY (TYPICAL)	TYPICAL Error On Φ At 50/60Hz	MAX Conductor Size	USED WITH MODEL	CATALOG # AND DESCRIPTION
MiniFlex [®] MA193 * (€ □	200mA to 3000Aac		±1%	0°	2.75" (70mm)	PEL 102 PEL 103 PEL 105	MiniFlex® Sensor 10" MA193-10-BK Cat #2140.48 MiniFlex® Sensor 14" MA193-14-BK Cat #2140.50
MR193 C C C	1 to 1000Aac 1 to 1300Add		±2.5%	-0.80°	1.6" (41mm)	PEL 102 PEL 103 PEL 105	AC Current Probe MR193-BK Cat #2140.28
SR193 (€□	1 to 1200Aac		±0.3%	+0.2°	2.05" (52mm)	PEL 102 PEL 103 PEL 105	AC Current Probe SR193-BK Cat #2140.33
AmpFlex° 193 * (C C C C C C C C C C C C C C C C C C C	200mA to 12,000Aac		±1%	0°	7.64" (190mm) or 11.46" (290mm)	PEL 102 PEL 103 PEL 105	AmpFlex® Sensor 24" 193-24-BK Cat #2140.34 AmpFlex® Sensor 36" 193-36-BK Cat #2140.35
	0.5 to 240Aac		±1%	+0.8°	0.78" (20mm)	PEL 102 PEL 103 PEL 105	AC Current Probe MN93-BK Cat #2140.32
MN193 C € 🗆	100A	10mA to 120Aac	±1%	+0.75°	0.78" (20mm)	PEL 102 PEL 103	AC Current Probe MN193-BK
	5A	5mA to 6Aac	±1%	+1.7°	(201111)	PEL 105	Cat #2140.36
SL261 ** C € □	100A	5 to 100Aac/dc	±4%	±0.5°	0.46"	PEL 102 PEL 103	AC/DC Current Probe SL261
	Battery operated 10A 50mA to 10Aac/bc ±3% ±1°	(11.8mm)	PEL 105	Cat #1201.51			
J93 C C C D Battery operated	50 to 3500Aac 50 to 5000Abc		±1%	±1°	2.83" (72mm) Busbar: 5 x 1.69" (127 x 43mm)	PEL 102 PEL 103 PEL 105	AC/DC Current Probe J93-BK Cat #2140.49
196A-24 Waterproof 24" Sensor	200mA to 10,000A		±2%	0°	7.64" (190mm)	PEL 105	AmpFlex [®] Sensor 24" 196A-24-BK Cat #2140.75

* Maximum current reduced by a factor of 2 for 400Hz fundamental frequency. **Note:** Refer to the instrument's user manual for complete specifications.

XX CE DEVENDER

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

