

# Model 842-PE Hand-Held Optical Power and Energy Meter

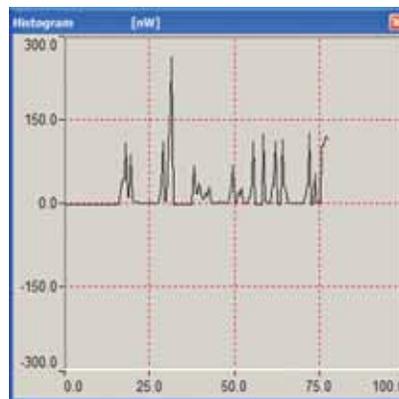
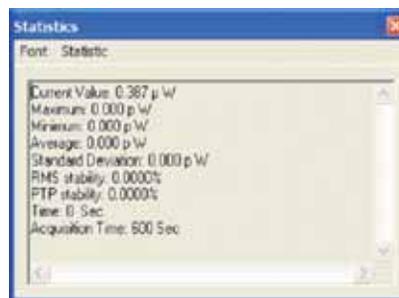
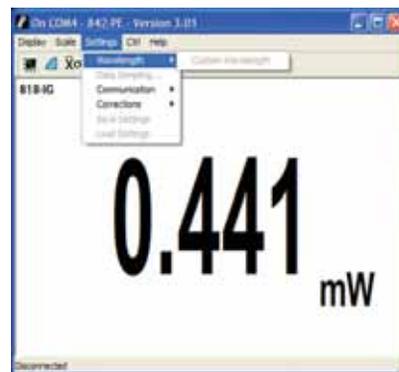


- Large backlit LCD display
- Power measurements, 5 pW - 10 kW
- Energy measurements, 1  $\mu$ J - 20 kJ
- Microsoft Windows CE™ interface
- Full statistical functions
- USB and RS-232 interfaces

Introducing the newest addition to Newport's power and energy meter family - the Model 842-PE Handheld Power/Energy Meter. Its bold new look is matched by its menu-driven Windows CE™ based interface. This powerful tool is also easy to use and intuitive enough to master in minutes. While the handheld style makes it great for field service, this meter can also be networked via USB or RS-232. A special USB cable is included, while a special RS-232 cable may be purchased separately.

The built-in features of the 842-PE include a complete statistics package that lets you choose between a line plot and a histogram. Using the same screen enables you to set the data sampling parameters depending on whether a power or energy detector is being used. It is easy to recover data from measurement interferences: for example, the last value or the last period in the statistics buffer can be canceled, enabling you to continue without stopping your work. In addition, you can zero your reading when measuring pulse energy. There are also many options for saving data, saving statistics, or both.

The 842-PE meter is equipped with a DB15 input connector for direct compatibility with Newport's 818P Series High Power (Thermopile), 818E Series Energy (Pyroelectric) or new 918D and 918L Series Low Power (Photodiode) Detectors. For interfacing with 818 Series Low Power Detectors, the 841-DIN adapter can be used (ordered separately). See below for ordering information.



Software screenshots

## 842-PE Specifications

### 842-PE General Power/Energy Meter Specifications

Compatible Newport Detectors	918D, 918L, 818P, 818E, and 818 (w/adaptor)
Sampling Rate (kHz)	50
Max Rep Rate (kHz)	3 (Pyroelectric Detectors - Energy)
Max Rep Rate (kHz)	390 (Photodiode Detectors - P-to-P Power)
Resolution (% of Full Scale)	0.01
CW Accuracy	±0.5
Accuracy (%)	±1 (Peak to Peak, Pulse to Pulse, Integration)
Maximum Detector Input Current (mA)	17
Maximum Detector Input Voltage (V)	163
Analog Output	0-1 V into 1 MΩ, mono audio 1/8" jack
Analog Output Bandwidth	DC-31 kHz
Display Type	78 x 58 mm Graphical LCD
Display Formats	23mm Numeric, Analog/Digital Needle, Statistics
Communication Interfaces	USB, RS-232
Internal Sample Storage (data points)	225,000
External Sample Storage (data points)	Defined by external PC (user supplied)
Battery Type and Life (Typical)	Rechargeable, 11 Hours (6 Hours w/backlight)
Power Requirements	100-240 VAC 50/60, 9V 1.66A
Operating Temperature	10°C to 40°C, <80% RH
Storage Temperature Range	-20°C to 60°C, <90% RH
Weight [lb (kg)]	1.14 (0.58)
Dimensions (W x H x D) [in. (mm)]	8.3 (210) x 4.8 (122) x 1.7 (44)
<b>Calibrated Measurements with 918D and 918L Series Photodiode Detectors <sup>(1)</sup></b>	
Minimum Detectable Power (pW)	5.3
Maximum Input Power (W)	2
Wavelength Range (nm)	190-1800
<b>Calibrated Measurements with 818P Series Thermopile Detectors <sup>(1)</sup></b>	
Minimum Detectable Power (mW)	1
Maximum Input Power (W)	400
Wavelength Range	200 nm - 10 μm
<b>Calibrated Measurements with 818E Series Pyroelectric Detectors <sup>(1)</sup></b>	
Minimum Detectable Energy ( μJ)	6.7
Maximum Measurable Energy (J)	75
Wavelength Range	190 nm - 10 μm

1) Instrument range is determined by detector used, please refer to our complete offering on detector types for complete specifications of individual detectors: Photodiode (see page 1088), Thermopile (see page 1101) and Pyroelectric (see page 1104) detectors.

## Ordering Information

Model	Description
842-PE	842-PE Handheld Power/Energy Meter
841-DIN	Mini-DIN to DB15 Detector Adaptor for 818/CAL Series Detectors
842-BAT	Spare Battery Pack for the 842-PE
842-CAB	RS232 Cable for 842-PE
PM-PS9	9 VDC External Power Supply

Call Newport's Applications Engineers to help you select the optical detector that best meets your application requirements.