

# PowerSight®

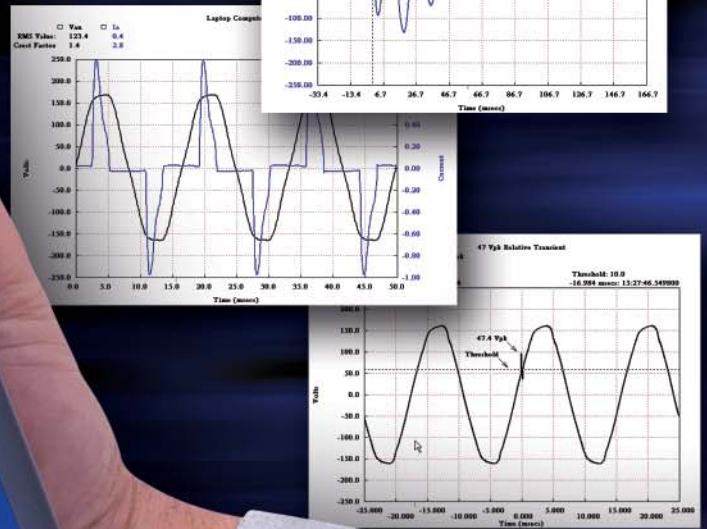
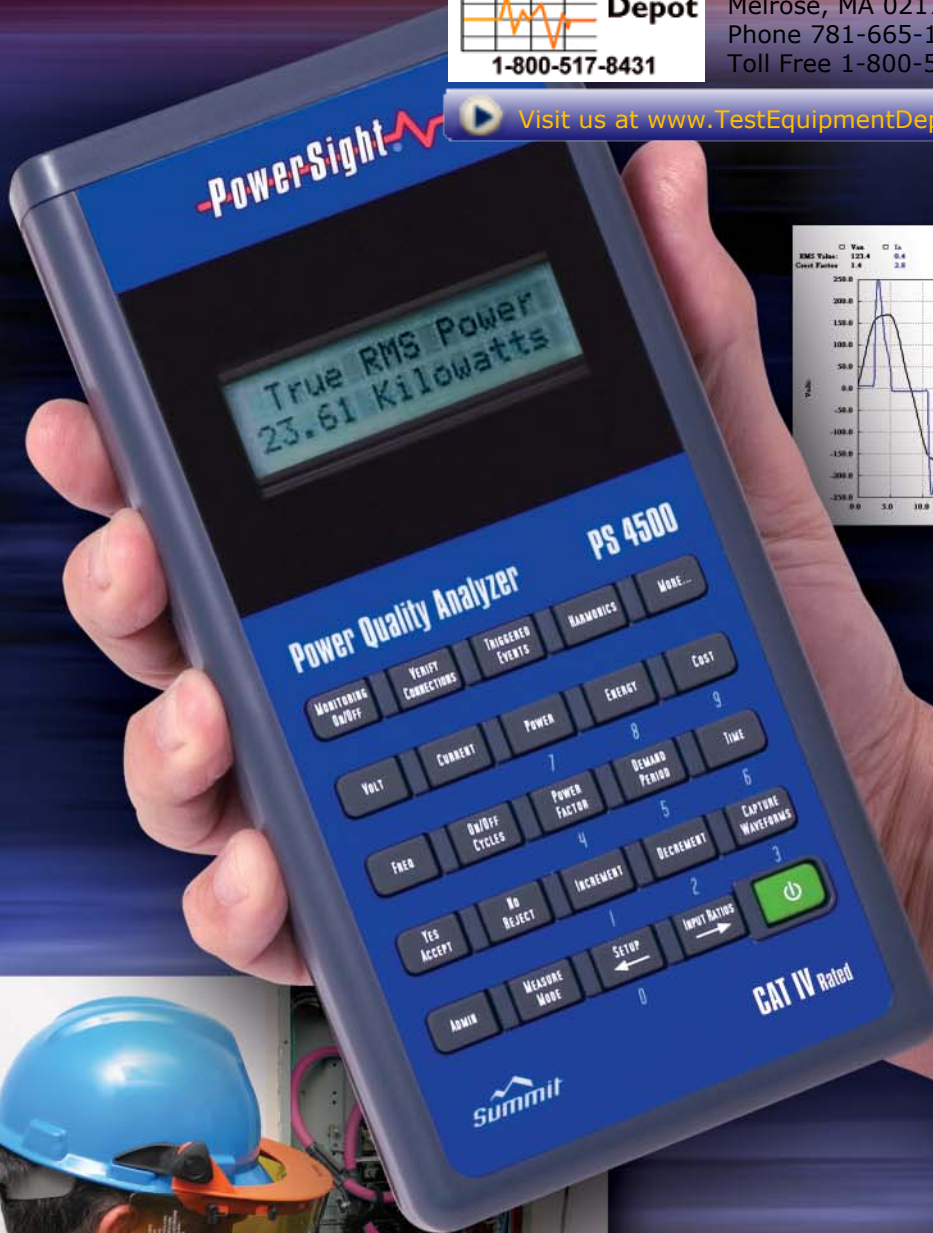
## PS4500 Power Quality Analyzer

*Smallest, Safest,  
Easiest to Use*



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Melrose, MA 02176  
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Everything you need for  
comprehensive single and  
three-phase power analysis in  
one instrument. Power Quality,  
Energy and Harmonics!

# PS4500 Power Quality ...Smallest,

## Here's why you need the PS4500

### It measures it all, accurately!

- ▲ Voltage, current, and frequency
- ▲ All power parameters, energy (kWh), demand
- ▲ Harmonic distortion & spectrum, to 65<sup>th</sup>
- ▲ Power quality - sags, swells, transients
- ▲ True RMS, AC or DC, 50/60 Hz, 400 Hz

### It handles well.

- ▲ Small footprint: 3.9"x 7.75" x 1.6" at base
- ▲ Lightweight: 1.1 lbs, 0.5 kg
- ▲ Contoured, cushion grip for comfort
- ▲ Ruggedized construction for field use

### It's the easiest to use.

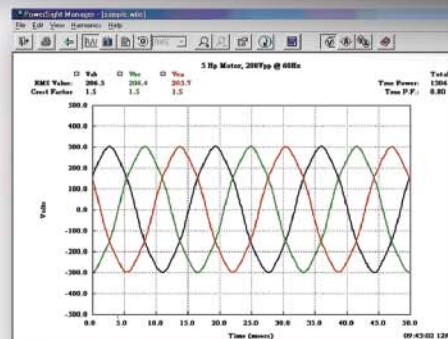
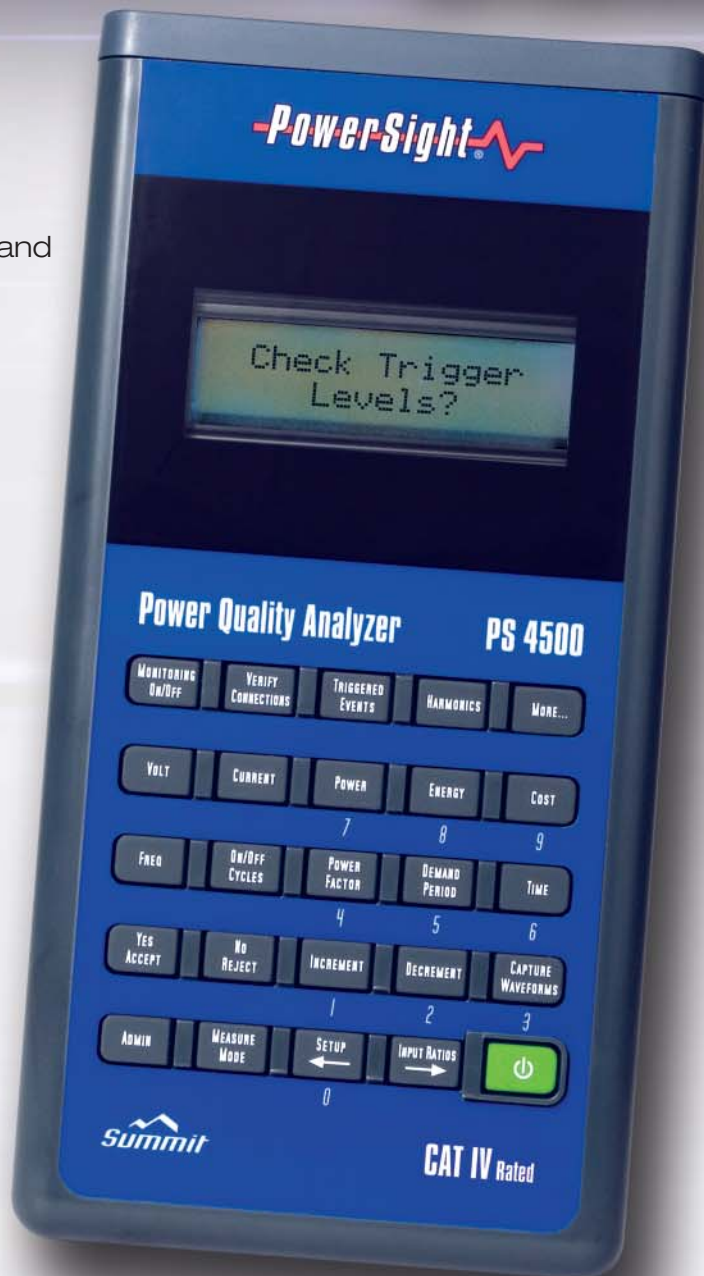
- ▲ Backlit LCD for clear readings
- ▲ Real-time meter display
- ▲ Buttons labeled for ease of navigation
- ▲ SureStart® checks for correct connections

### And the safest to connect and operate.

- ▲ Highest safety rating CAT IV 600V/8000V
- ▲ SureStart® minimizes re-connections
- ▲ Flexible current transformers for tight, confined spaces
- ▲ SafeConnect® option for motor control centers, switchboards etc.
- ▲ Wireless remote control from PC via Bluetooth - up to 25 feet range

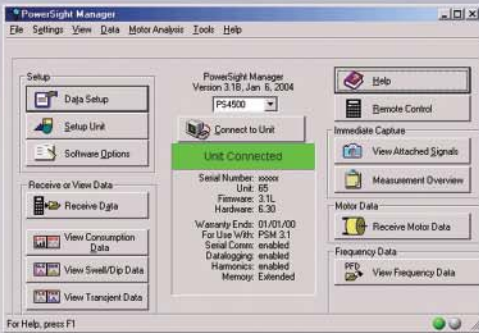
### Plus, it's the smartest.

- ▲ Bluetooth wireless for data download to PC
- ▲ Secure Digital removable memory card slot
- ▲ Current probes self-identify and set range
- ▲ PSM software for graphs, logs, and analysis
- ▲ Report Writer summarizes results
- ▲ Captures events and data for weeks
- ▲ Optional DC line converter powers PS4500 from same point as measured voltage



# Analyzer

## Safest, Easiest to Use!



PSM Software comes with the PS4500. It is compatible with data from all PowerSight meters

### Multifunction / Multifunction-ing

Simultaneous measurements on all channels of:

- ▲ RMS Volts, RMS Amps
- ▲ Watts, VA, VAR, power factor, kWh
- ▲ Total Harmonic Distortion
- ▲ Sags, swells, dips to 1/2 cycle
- ▲ Transients (impulses) to 8 usec, 1000 Vpk
- ▲ Frequency 22 to 440 Hz
- ▲ DC Voltage and Current

### Versatile Enough for all Power Studies

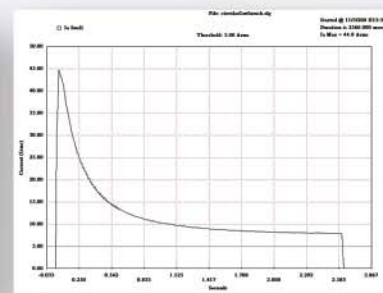
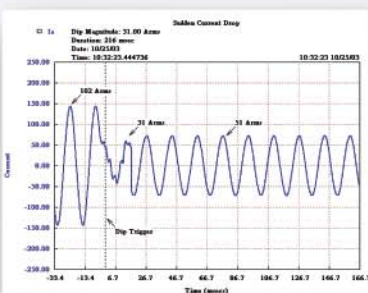
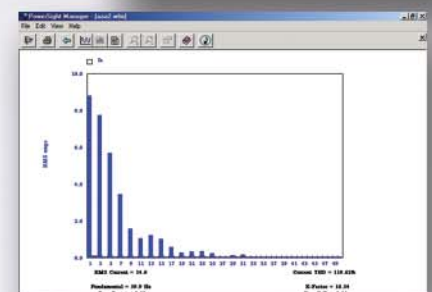
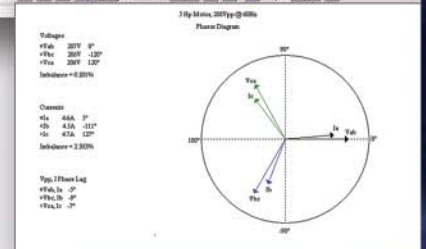
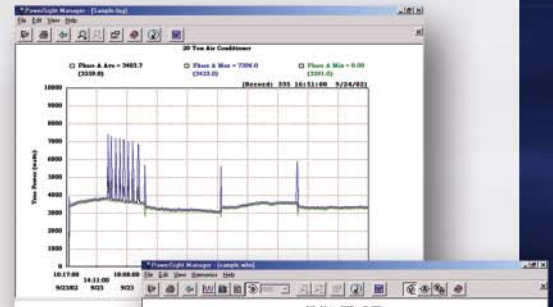
- ▲ Single-phase, dual single-phase, three-phase AC circuits
- ▲ Wye (star) and all delta connections
- ▲ 50Hz, 60 Hz and 400 Hz systems
- ▲ DC Systems
- ▲ Programmable PT and CT ratios for switchgear, substations
- ▲ Optional voltage probes for 5KV and 15KV
- ▲ Use with or without PC
- ▲ Battery or AC operation or power from measurement point
- ▲ Custom Triggering
- ▲ Waveform Capture

### Application Examples

- ▲ Load profiles with min, max, avg
- ▲ Circuit and panel loading
- ▲ Effects of harmonics
- ▲ Frequency stability of generators
- ▲ Neutral current studies
- ▲ Power factor improvement
- ▲ Power Quality investigations
- ▲ Energy consumption: kWh, peak demand and cost
- ▲ Start-up behavior and inrush currents
- ▲ Commissioning of electrical equipment

### Who can use it?

- ▲ Electrical Engineers
- ▲ Plant and Facility Engineers
- ▲ Maintenance Personnel
- ▲ Contractors
- ▲ Consultants
- ▲ Field Service Technicians
- ▲ Utility Engineers
- ▲ Energy Managers
- ▲ Anyone who needs to perform electrical studies!



# PS4500

## Power Quality Analyzer

### Specifications

**Size:** 3.89" (9.86 cm) W x 7.72" (19.61 cm) L x 1.58" (4.01 cm) Deep (in hand-held region); 2.14" (5.44 cm) deep at top end

**Weight:** 1.1 lb. (0.5 kg)

**Operating Range:** 32 - 122 degrees F (0 - 50 degrees C)  
Relative humidity to 70% (non-condensing)

**Power Requirement:** 12 VDC @ 500 mA, wall mount power supply included (specify 120V or 240V). Internal Li-ion operates up to 8-10 hours after 4 hours charge

**Measurement Rate:** Samples every cycle of every input, voltage and current at 2083 samples per cycle (8  $\mu$ seconds). All measurements updated once per second

#### Voltage Measurement

**Range:** 1-600 Vrms steady-state (direct input),  
or 600-5,000 Vrms with 5 KVP probes,  
or 600-15,000 Vrms with 15 KVP probes.

**Display Range:** 1-6 MV (using input ratios)

**Accuracy:**  $\pm$  0.1% of reading  $\pm$ 0.3 Vrms

#### Current Measurement

**Range:**

- With HA5: 0.02 - 5 A
- With HA100: 0.1 - 100 A
- With HA1000: 1 - 1000 A
- With FX3000: 10 - 3000 A
- With FX5000: 100 - 5000 A
- With DC600: 5 - 600 A DC

**Display Range:** 1 mA - 6 MA (using input ratios)

**Accuracy:**  $\pm$  0.1% of reading plus accuracy of probe

#### Frequency Measurement:

**Range:** DC, 22 - 200 Hz, 360 - 440 Hz fundamental

**Accuracy:**  $\pm$  0.25%

#### Harmonics Measurement:

22 - 3900 Hz (65th harmonic @ 50/60Hz)

**Harmonics Accuracy:**  $\pm$  0.25%

PS4500 displays THD and individual harmonics through 25th (1800 Hz) of all signals. With PowerSight Manager PC software displays harmonics through 65th harmonic

#### Power, Energy, Cost, Power Factor

**Display Range:** 1 watt - 60 MW (using input ratios)

**Accuracy:**  $\pm$  0.5% plus accuracy of current probe

#### Swell/Sag Detection

**Response:** 1/2 cycle

**Transient Detection** High-speed Transient Sampling every 8  $\mu$ sec

#### Waveform Snapshot

User captured waveforms set by user allocation of memory

#### Logging Period (resolution)

User selectable from 1 second - 99 minutes

#### Logging Duration (length of monitoring session)

User selectable up to 2 years according to memory allocation

#### Safety

600V/8000V CAT IV

#### Secure Digital Card Slot

Accepts SD cards to 2GB

#### Free PC Software with Report Writer

No license restrictions, available for free download. Multiple users can freely share power study data and collaborate. Zoom and expand tools for graphs and waveforms. One-click export to Excel. Set-up and control of PowerSight meters. Save commonly used set-up configurations for recall. View real-time meters and waveforms remotely via PC, notebook or netbook. ReportWriter "wizard" automatically documents power study data in table and graphs. Reports can be customized. Comparison mode compares two studies for energy savings verifications.



**HA5** 0.02A to 5A AC  
**HA100** 0.1A to 100A AC  
Clamp-on types  
Accuracy: 2%,  
Size: 5.25" x 2.1" x 1.35" for  
conductors up to 0.8" diameter



**HA1000**  
Clamp-on type  
1A to 1000A AC  
Accuracy: 0.5%,  
Size 9" x 4.4" x 1.75" for  
conductors up to 2.13" diameter



**DC600**  
Hall-effect clamp-on type  
5A to 600A DC;  
5A to 400A, DC/AC  
Accuracy:  $\pm$ 1A  $\pm$ 2%, 5A to 400A;  
 $\pm$ 1A  $\pm$ 3%, 400 to 600A DC  
Size: 7.68" x 2.6" x 1.34" for  
conductors up to 1.18" diameter



**eFX6000**  
Wide Range Flexible Probe  
Dual range: 1 - 150 amps;  
10 - 6000 amps AC  
Accuracy:  $\pm$ 1%  
( $\pm$  2% for varying position  
around the conductor)  
 $\pm$  0.5A (high range) or  
 $\pm$  0.1A (low range),  
24" or 36" lengths



#### Complete, pre-packaged systems **BUY OR RENT**

Systems are equipped with your choice of clamp-on or flexible current probes, voltage leads, plug-in charger unit, PC software and instruction manual. Other options available: 5 KV and 15 KV medium voltage probes; soft carry case; weatherproof operating case; line-to-DC converter.

Rental systems: US & Canada Only

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