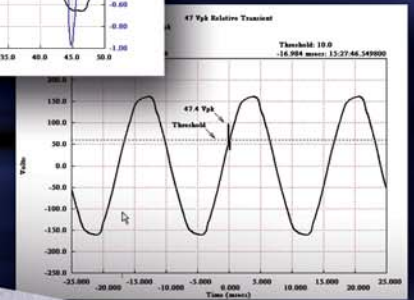
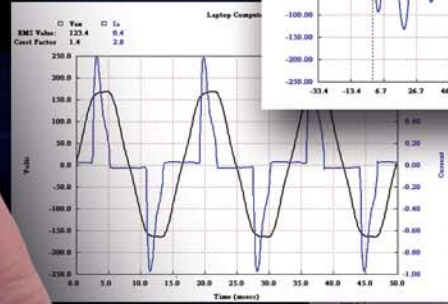
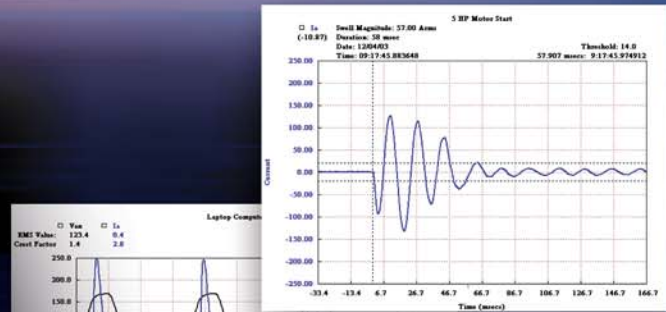


# PowerSight®

## PS4500 Power Quality Analyzer

*Smallest, Safest,  
Easiest to Use*



*SD Card Capable  
store more, share data  
with the card of your choice*



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

*AC and DC measurements | 400Hz and VSD-capable | PC Report Writer Software*



# PS4500 Power Quality ...Smallest,

## Here's why you need the PS4500

### It measures it all, accurately!

- ▲ Voltage, current, and frequency
- ▲ Power, energy, demand
- ▲ Harmonic distortion
- ▲ Power quality
- ▲ Motor Current Signature Analysis (MCSA)

### It handles well.

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

### It's the easiest to use.

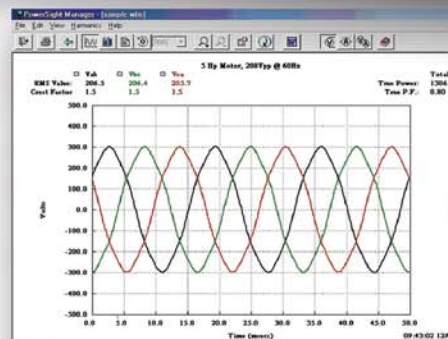
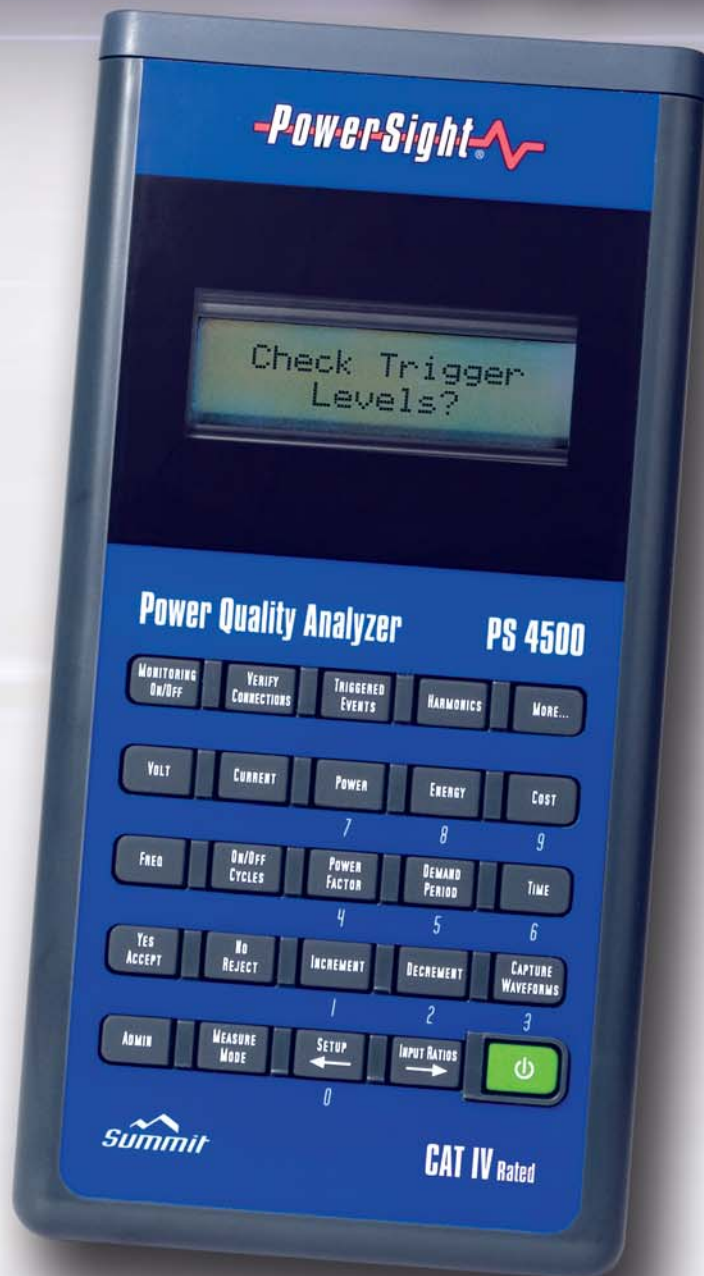
- ▲ Backlit LCD for clear readings
- ▲ Real-time meter display
- ▲ Buttons labeled for ease of navigation
- ▲ Surestart<sup>®</sup> checks for correct connections

### And the safest to connect and operate.

- ▲ Highest safety rating (CAT IV) at 600V
- ▲ Surestart<sup>®</sup> minimizes re-connections
- ▲ Flexible current transformers for tight, confined spaces
- ▲ SafeConnect<sup>®</sup> option for switchboards and other equipment
- ▲ Wireless remote control from PC via Bluetooth

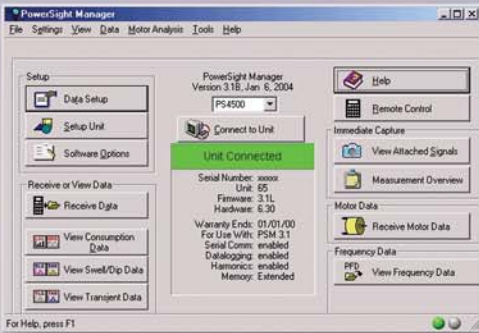
### Plus, it's the smartest.

- ▲ 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:

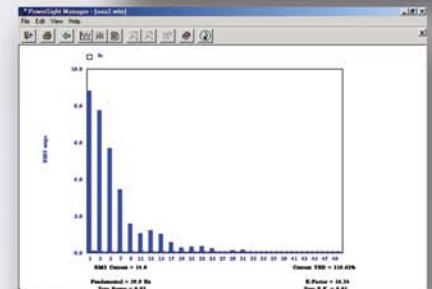
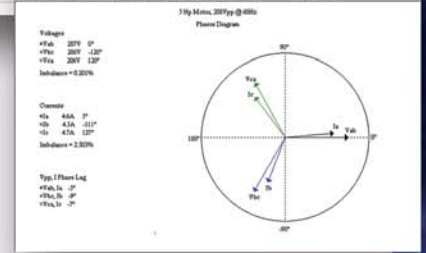
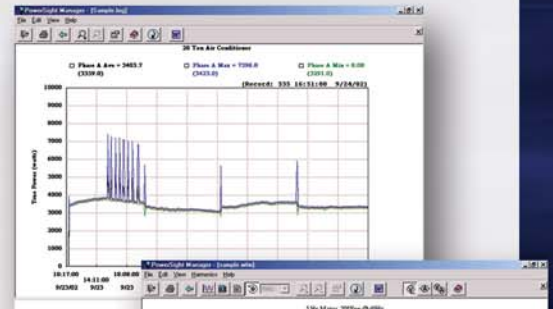
- ▲ RMS Volts, RMS Amps
- ▲ Watts, VA, VAR, power factor
- ▲ Total Harmonic Distortion
- ▲ Sags, swells, dips to 1/2 cycle
- ▲ Transients to 16 usec
- ▲ Frequency- 22 to 440 Hz
- ▲ DC Voltage and Current

### 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
- ▲ Medium voltage probes for 5KV and 15KV
- ▲ Use with or without PC
- ▲ Battery or AC operation or power from measurement point
- ▲ Custom Triggering
- ▲ Waveform Capture

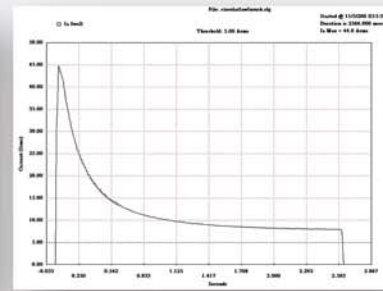
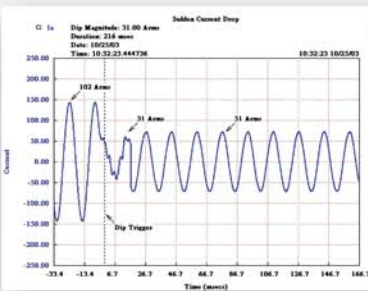
### Application Examples

- ▲ Load profiles with min, max, avg
- ▲ Circuit and panel loading
- ▲ Effects of harmonics
- ▲ Frequency stability of generators
- ▲ Neutral current studies
- ▲ Power factor improvement
- ▲ Electric motor diagnostics and predictive maintenance
- ▲ 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:** 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:** 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)

**Accuracy:** 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:** 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

#### Motor Current Signature Analysis (MCSA) Option

Analyzes rotor/armature health; stator mechanical/electrical health; field coil faults; bearing health; eccentricity and loose connection problems. For induction, synchronous, DC, wound rotor and induction with VFD type motors. Evaluate motors while running. Compares performance against database of motor models. Report summarizes problem areas for predictive maintenance. (Order option AMD)



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



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



**DC600**  
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



**FX3000**  
10 amps to 3000 amps AC  
**FX5000** 100 amps to  
5000 amps AC  
Both models: Accuracy 2%,  
Size 24" long for conductors  
up to 7.5" diameter



#### Complete, pre-packaged systems

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.

# PowerSight®

## Summit Technology

2717 N. Main St., Suite 15

Walnut Creek, CA 94597-2747

Phone: 925-944-1212 Fax: 925-944-7126

www.powersight.com

Email: sales@powersight.com