Power Quality Analyzers | PS5000 | PS4550 | PS3550

Advanced

The compact, versatile, high quality ruggedized **3 phase power quality and energy analyzer** from **PowerSight**, **USA** are offered in three different model options, PS3550, PS4550 and PS5000. The well laid out function based keypad allows power quality analysis easy for even a first-time user. The lightweight handheld design allows the instrument to be carried easily to site locations; Additionally, the comprehensive software analysis & reporting tools and a variety of current probe options provides versatility of use to the energy auditor and electrical engineers.

Safety :

- Each Power quality analyzer model offered is rated for both **1000V CAT III and 600V CAT IV** for your safety in the most compromising situations.
- **Bluetooth wireless communications** allow you to control and view data **remotely** from a safe distance outside the arc flash blast zone. The strong Bluetooth signal often allows communications with the analyzer even when locked in an electrical cabinet, achieving ultimate safety.
  The small size of the instrument allows locking them together inside a panel for extended monitoring.

Features :

All of the Power quality analyzer models Measures, log, and report the following:

- **RMS Volts**
- **RMS Amps**
- **Watts, VA , VAR , Power Factor, Hz**
- **THD, Live / scope waveform views**
- **Real time meters**
- **Phasors**
- **Harmonic Spectrum**
- **Sags, Swells (surges) and inrush (Depending on model)**
- **Transients, impulses (Depending on model)**

SureStart :

On the simple press of a button, the expert mode patented AI Expert System analyzes the inputs to the power analyzers and its operational settings. Prior to initiating monitoring, it provides you with warning of potential connection issues and operational settings.

Power Quality Analyzer | PS3550

Advanced

Feature Comparison:

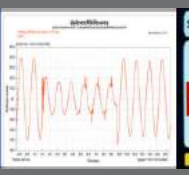
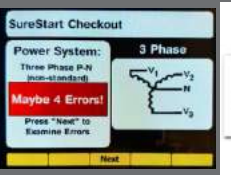
Model	Display		Function Access	Data transfer	Power Analysis Advanced Functions			Accuracy
	LCD Display	Waveform	Keypad	Bluetooth + USB	THD & Harmonics	Swell/Dip Capture	Hi-SpeedTran	Voltage
PS5000	Meter values displayed	On display	✓	✓	✓	✓	✓	+/-0.1%
PS4550		On software	25 touch keys for direct function access		✓	✓	✓	+/-0.1%
PS3550					✓			+/-0.5%

PSM-A software provided with the instrument presents multiple views of each event, including waveform view, scatterplot view, and RMS ½ cycle graphic view. It will also export the data to Excel for custom analysis.


Data Setup Wizard



TestPlan Manager

SureStart


ReportWriter Wizard

PS3550 Power Analyzer is a versatile, easy-to-use 3-phase power analyzer that is ideal for energy audits, load studies, harmonic analysis, and more. Provided with PowerSight Manager software (PSM-A), the PS3550 provides an Efficient and Error Free Solution **for doing Power Studies**.

Power Logging :

Monitor just about any power system or load in the world:

- 3 phase delta/wye, 4 wire delta, open/grounded delta, 2CT/2PT – 3CT/2PT – 3CT/3PT metering circuits, split-phase, single phase, multiple single phase, and of course DC.
- Select any of 68 different measurement types for regular recording of Voltage (V), Current (A), Power (KW), Apparent Power (KVA), True Power Factor (PF), Frequency (Hz), and THD.
- Summaries of the average, maximum, and minimum of each value, as well as the present values can be viewed on the analyzer's display at any time.
- All measurements and the initial automatic capture of waveforms can be viewed and analyzed in our PSM-A software.

Harmonic Analysis :

Log the THD of each input. Capture waveforms in the PS3550 with the press of a button at any time and then analyze the harmonic content with our PSM-A software (power analysis features) as either a harmonic bar chart or as an exported Excel spreadsheet.

Power Quality Analyzer | PS4550

Advanced

The PowerSight PS4550 Power Quality Analyzer is a versatile, easy-to-use power quality analyzer that is ideal for comprehensive power quality studies, energy audits, load studies, harmonic analysis, and more. It provides all of the features of PS3550 and more

The PS4550 couples small size with **sophisticated triggering and event capture** for power quality study.

Monitor just about any power system or load in the world:

- 3 phase delta/wye, 4 wire delta, open/grounded delta, 2CT/2PT – 3CT/2PT – 3CT/3PT metering circuits, split-phase, single phase, multiple single phase, and of course DC.
- Select any of 68 different measurement types for regular recording of Voltage (V), Current (A), Power (KW), Apparent Power (KVA), True Power Factor (PF), Frequency (Hz), and THD.
- Summaries of the average, maximum, and minimum of each value, as well as the present values can be viewed on the analyzer's display at any time.
- All measurements and the initial automatic capture of waveforms can be viewed and analyzed in our PSM-A software.

Power Quality studies :

Continuously examine every cycle of every input and trigger to a resolution of 8 microseconds.
Trigger on swell, sag (dip), inrush, and advanced triggering types such as absolute and relative high-speed transient events.
Choose your triggering mode:

- Automatic setting of thresholds for capture of swells, sags, high-speed absolute transients, and high-speed relative transients.
- "Fixed thresholds" that you can set for swells, sags, absolute transients, and relative transients for any of the voltage and current inputs you choose.

Our included PSM-A software (power analysis features) can present multiple views of each event, including waveform view, scatterplot view, and RMS ½ cycle graphic view. It will also export the data to Excel for custom analysis. Summaries of measurements are available on the analyzer's display.

Harmonic Analysis :

Log the THD of each input. Capture waveforms in the PS4550 with the press of a button at any time and then analyze the harmonic content with our PSM-A software as either a harmonic bar chart or as an exported Excel spreadsheet.

Power Quality Analyzer | PS5000

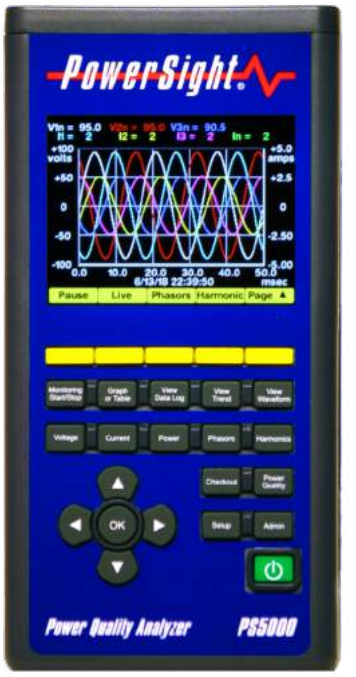
Advanced

The PowerSight PS5000 Power Quality Analyzer is the premier member of the PowerSight line of compact, versatile, easy-to-use power quality analyzers. It provides the Most Efficient and Error Free Solution for doing Power Studies.

- The full color display eliminates the need for laptops to see waveforms and logs. Phasor diagrams provide quick verification of connections.
- Visual presentation of SureStart™ potential connection and setting errors minimize the risk that the data will be incorrect at the end of the study.
- The graphical user interface allows easy changing of trigger thresholds.
- The large screen and "soft keys" allow quickly viewing all measurements of interest quickly.

Power Logging :

Monitor just about any power system or load in the world:



- 3 phase delta/wye, 4 wire delta, open/grounded delta, 2CT/2PT – 3CT/2PT – 3CT/3PT metering circuits, split-phase, single phase, multiple single phase, and of course DC.
- Select any of hundreds of different measurement types for regular recording of Voltage (V), Current (A), Power (KW), Apparent Power (KVA), Reactive Power (KVAR), True Power Factor (TPF), Displacement Power Factor (DPF), Unbalance, Frequency (Hz), THD, and individual harmonic magnitudes over time.
- Log net, positive, and negative VAR separately for meeting reporting requirements and understanding correct compensation required.
- Summaries of the average, maximum, and minimum of each value, as well as the present values can be viewed on the analyzer's display at any time.
- All measurements and the initial automatic capture of waveforms can be viewed and analyzed in our PSM-A software (power analysis features).

Power Quality studies :

Continuously examine every cycle of every input and trigger to a resolution of 8 microseconds.
Trigger on swell, sag (dip), inrush, and advanced triggering types such as absolute and relative high-speed transient events.
Choose your triggering mode:

- Automatic setting of thresholds for capture of swells, sags, high-speed absolute transients, and high-speed relative transients
- "Fixed thresholds" that you can set for swells, sags, absolute transients, and relative transients for any of the voltage and current inputs you choose.

Harmonic Analysis :

Log the THD of each input. Capture waveforms in the PS5000 with the press of a button at any time and then analyze the harmonic content with our PSM-A software as either a harmonic bar chart or as an exported Excel spreadsheet.

The display of the PS5000 provides:

- Versatile graphical viewing of waveforms, phasors, harmonics, log data, trending data, and error conditions.
- Tabular views of all relevant measurements grouped in the most meaningful views, in large fonts.

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Current Probe Options :

Product	Features	AC/ DC	Current Range	Max Diameter Opening (inch)	Accuracy (%) Resolution
eFX6000 	**Wide range flexible current probe** • Dual range probe Flexible rope-type technology allows use in tight spaces where clamp-ons cannot fit • Thin enough (0.4") to thread between tight conductors and long enough (24") to wrap around multiple conductors and bus bars • Dual range for high accuracy	AC	1 TO 6000A_{RMS} • 1.0 A_{RMS} to 150 A_{RMS} AC Current measurement • 10 A_{RMS} to 6000 A_{RMS} AC Current measurement	7.25 (24" length) IP65 ROHS and WEEE Compliant EN 61010-1:2001 EN 61010-031:2002 EN 61010-2-032:2002 IP65 (Ingress protection) EMC EN61326-2-2:2006	**Accuracy :** • +/- 1% of reading when coupling is situated away from conductor as shown • add +/- 2% if varying position around the conductor • plus +/- 0.5 A_{RMS} (high range) plus +/- 0.1 A_{RMS} (low range) • Frequency range: 22-440 Hz **Resolution :** • +/- 0.1 amps (in low range) • +/- 0.5 amps (in high range) **Linearity :** +/- 0.2% from 10% to 100% of range
HA1000 	**High Accuracy Current Probe** Minimal phase shift, for high accuracy power measurements	AC	1 to1000A_{RMS}	Inner dia : 2.13 inch inner dia Outside dimensions: 9 x 4.4 x 1.75 inches Cable length: 2 meters (6.5 feet).	Accuracy: • +/- 0.5% of reading including the accuracy of the PowerSight analyzer, • (+/- 0.2 A for currents below 400 amps AC +/- 0.5% of reading +/- 2.0 A for currents from 400 to1000 amps AC)
HA100 	**High Accuracy Clamp Current Probe 0.1 to 100A,** compact probe for limited space	AC	0.1 to 100A	Inside Dia: 0.8 inch diameter Outside dimensions: 5.25 x 2.1 x 1.35 inches Cable length: 2 meters (6 feet).	Accuracy/Linearity: +/- 2% of reading +/- 0.2 A
HA5 	**High Accuracy Clamp Current Probe 0.02** (20mA to 5A) best choice for measuring very small loads and the outputs of CT (Current Transformer) step-down circuits • compact size for confined spaces • 2 m cable length	AC	0.02 to 5A	Inside diameter: 0.8 inch diameter Outside dimensions: 5.25 x 2.1 x 1.35 inches Cable length: 2 meters (6 feet).	+/- 2% of reading +/- 0.02 A_{RMS}

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Product	Features	AC/ DC	Current Range	Max Diameter Opening (inch)	Accuracy (%) Resolution
HA-GFD 	• Mostsensitive **High Accuracy-Ground Fault Detector** Current Probe,5mA • Ideal for measuring leakage current and ground faults • Large jaw sallow clamping around all three phases to net out the currents and find the leakage current • Dual measurement range allows measuring upto 200 amps in high accuracy, so it is useful for all small to mid-size AC loads.	AC	0.005A to 200A	Inside Diameter: 4.5 inches Cable Length: 2 meters (6 feet).	Low Range Measurement Accuracy: • ±3 from 0.005 to 0.009 amps • ±2 from 0.010 to 0.049 amps • ±1 from 0.050 to 1.000 amps Hi Range Measurement Accuracy: • ±2 from 5 to 8.9 amps • ±1 from 9 to 200 amps
DC2000 	**AC/ DC Current Probe** for large measurement jobs • 2m cable length • Very large jaws to be able to clamp around large cables and bus bars	AC/ DC	DC :10 to 2000A AC :10 to 1500A	one cable up to 3.27" diameter two cables up to 3.27" diameter one bus bar 4.8" x 2.13" one bus bar 4.0" x 2.5 Overall Dimensions: 13.23 x 5.4 x 1.65 inches Cable length: 2 meters (6 feet).	• ±3% ±1 amp from 10 to 2000 amps DC • ±3% ±1 amp from 10 to 1500 amps AC
DC600 	**High Accuracy Clamp Current Probe 0.1 to 100A,** • **AC/ DC Current Probe** for most industrial DC measurement jobs • 2 m cable length • large jaws to be able to clamp around large cables and bus bars	AC/ DC	DC :5to 600A AC :5 to 400	Inside Clamping Capacity: one cable up to 1.18" diameter two cables up to 0.95" diameter Overall Dimensions: 7.68 x 2.6 x 1.34 inches Cable length: 2 meters (6 feet).	Accuracy (after zeroing): • ±1 amp ±2% from 5 to 400 amps DC or AC • ±1 amp ±3% from 400 to 600 amps DC

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Specifications :

Function	PS3550	PS4550	PS5000
Basic Measurement Capability			
True 3 Phase	Yes		
Frequency Range	45 - 66 Hz 360 - 440 nz, DC	22-200 Hz 360-440 Hz, DC	
Basic sampling rate	16µsec	8µsec	
Samples per cycle(@60Hz)	130	2083	2083
Basic RMS measurement rate	Once per second	Every cycle of every channel	
Measure Distortion Factor	Yes		
Single phase measurements/ Split Phase	Yes		
Three phase wye and delta	Yes		
4 wire delta measurements	Yes		
Open delta measurements	Yes		
AC/DC voltage and current measurement	Yes		
Logging			
Logging Capacity	unlimited with SD card (upto 32GB)		
Logging variables	61 default		
Logging rate set by user	1second- 99minutes		
Start/Stop at programmed time	Yes		
Max/Min/Ave/Present value of V, A, W, etc.	Yes		
Localized Trending on Meter	No		Yes
Pause/Resume of Trending	No		Yes
Power Quality			
Swell (surge) triggering/ capture	Check each second	Check every 1/2 cycle of every input	
Dip (sag) triggering/capture	Check each second	Check every 1/2 cycle of every input	
Inrush current capture	Check each second	Check every 1/2 cycle of every input	
Swell/Dip/Inrush capacity	View consumption log	Up to 15000 records, standard	
Swell/Dip/Transient triggered waveform capture	No	Up to 100 graphs of 12 cycles, standard	
RMS graph of swell/dip by ½ cycle	No	Up to 2000 graphs of 100 cycles,standard	
Simultaneous measurement of power / harmonics / swell / dip / transients	No	Yes	
High speed transient capture	No	Record every 8usec on every input	
Transient capacity	No	Up to 15000 in log, 100 wavesets	
Harmonics			
Harmonics analysis capability	1-50th on PC, 25th on unit, to the 7th at 400Hz	1-50th on PC, THD to 50th on meter, THD to the 31st at 400Hz on meter	Color Bar Graph on screen showing 1-50th, to the 31st at 400Hz
Harmonics Accuracy	0.5%	0.25%	
Measure Total Harmonic Distortion	all channels each second	every cycle of every channel	
Accuracy in measurement of Total Harmonics Distortion	2		
Harmonics direction	Yes, in software		
Max Harmonics measurement (Hz)	3000Hz		
Voltage Measurement			
Provision for input ratios for PTs/CTs	Yes		
No. of Voltage Channels	4		
Voltage Range (V)	1 to 1000Vrms Display range : 1-6000 kV (using input ratios)		
Voltage Accuracy (%)	±0.5% of reading ±0.3 V_{rms}	±0.1% of reading ±0.3 V_{rms}	
Direct measure of RMS voltage (V_{rms})	1-1000		
Peak voltage measurement (V)	1500		
DC voltage (Vdc)	1-1000		

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Function	PS3550	PS4550	PS5000
Voltage measurement with standard and optional medium voltage probes (V_{rms})	1-15000		
Voltage measurement with input ratios (MV_{rms})	0.5-999		
Display resolution (100-400V) (V)	0.1		
Current Measurement			
No. of Current Channels	4		
Current Range – with clamps (A)	6000, depending on current probes 1mA to 6MegaAmps (using input ratious)		
Current Accuracy (%)	±0.5% of reading plus accuracy of probes	±0.1% of reading plus accuracy of probes	
Current Resolution (A)	0.1		
Current Measurement- direct with accessories	0.005 – 6000 (A_{rms}) 5-2000 (A_{DC})		
Current measurement with input ratios	1 ma – 999 MA_{rms}		
Current Measurement Accuracy (%)	±0.2	±0.1	
Automatic current probe identification and scaling	Yes		
Power Measurement			
Max. Power (MW)	9.9		
Setup of power configuration	Automatic		
Power Accuracy (%)	±0.5 of reading plus accuracy of probes	±0.25 of reading plus accuracy of probes	
Power Resolution	1		
Power Measurement- True, Apparent & Reactive	Yes Active power upto 9999kW, Resolution : 0.1 for kW<1, 1 for kW>=1 Reactive Power upto 9999kVAR Minimum Apparent power 0.001kVA		
True Power Factor	Yes		
Displacement Power Factor	Yes		
Accuracy in measurement of Power Factor (%)	0.5	0.25	
Phasors, magnitude and angle	Displacement angles and V_{rms}/A_{rms} magnitudes		Color phasors on screen with measurements
Phase Angle	full range from -179 to +180, with accuracy of 1		
Measure Voltage & Current Unbalance	Yes		
Energy Measurement	Yes		
Cost Measurement	Yes		
Memory , Display & Software			
Internal Memory	4M or 16M with MEM2 option		16M
External Memory	SD Card up to 32 GB		
USB Output	Yes		
Bluetooth	Yes		
Display	Backlit Text, hi-res graphics on PC		Color graphics,1/4 VGA
Analysis Software	PSM-A included		
Multi-lingual	Yes		No
Battery	2200 mAH 7.2V Li-ion 110 ~230V AC Adaptor		
Size	3.85" x 7.6" x 1.60" to 2.07"		
Weight (Kg)	0.9		
Operating temperature	0 – 50 °C		
Safety	600V CAT IV, 1000V CAT III, per IEC 61010-1		

STANLAY™
Asian Contec Ltd.
Asian Center, B-28, Okhla Industrial Area, Phase-1, New Delhi -110020, India.
Contact Nos. : Tel : +91-11-41860000 (100 Lines), Direct Sales Helpline : +91-11-41406926
Web : www.stanlay.in www.stanlay.com email: sales@stanlay.com
Regional Offices : • Faridabad • Mumbai • Bengaluru • Hyderabad • Bhubaneshwar • Guwahati

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