

### No matter what your needs or budget there is probably a PowerSight model that is right for you

**There are four PowerSight models to choose from:** the PS5000 Graphical Power Quality Analyzer, the PS4550 Power Quality Analyzer, the PS3550 Energy Analyzer, and the PS2500 Power Monitor.

- The PS5000 provides complete analysis in power quality applications (swell / dip / inrush / hi-speed transient / harmonic analysis) in addition to supplying exact measurements for all common and advanced power related measurements and the Advanced Measurement package. Logs, trends, waveforms, phasors, and harmonic graphs can be displayed on its ¼ VGA color graphics display.
- The PS4550 provides all measurements except the Advanced Measurement package of the PS5000. It has a backlit 2 line LCD display rather than, the color graphical user interface and graphical presentations of the PS5000.
- The PS3550 is oriented toward complete power analysis and reporting with limited power quality capabilities. It does not include the power quality triggering features of the PS5000 and PS4550. Thousands of the PS3550 and its PS3500 and PS3000 predecessors are in service all over the world.
- The PS2500 provides basic power analysis and is best suited for occasional use or for those with a limited budget.

Our models offer combinations of price, performance, size, and ease of use that are unequalled in the industry.

### Comparison Table between PowerSight models\*\*

The following table lists key features and how they apply to each model. Features that end with an asterisk (“\*\*”) have explanatory notes in the next section.

Cells with a Green background are features that compare more favorably with the other models. Cells with a Red background are features that compare less favorably with the other models.

Basic Measurement Abilities	PS5000 / PS4550	PS3550	PS2500
Basic sampling rate*	8usec	16usec	16usec
Samples per cycle (@ 60Hz)	2083	130	130
Basic RMS measurement rate*	every cycle of every channel	every cycle of every channel	once per second
True 3-phase*	Yes, 7 channels	Yes, 7 channels	Yes, 7 channels
Setup of power configuration	automatic	automatic	automatic
Single phase measurements	Yes	Yes	Yes
Split phase measurements	Yes	Yes	Yes
Three phase wye and delta	Yes	Yes	Yes

Basic Measurement Abilities (cont'd)	PS5000 / PS4550	PS3550	PS2500
4 wire delta measurements	Yes	Yes	Yes
Open delta measurements	Yes	Yes	Yes
optional 2CT/2PT & 2 wattmeter method power modes	Yes	Yes	Yes
AC/DC voltage and current measurement*	Yes	Yes	Yes
400 Hz system measurements	Yes	Yes	No

Logging	PS5000 / PS4550	PS3550	PS2500
Logging capacity	Essentially unlimited with SD card	Essentially unlimited with SD card	Essentially unlimited with SD card
Logging variables	<b>PS5000: 558</b> PS4550: 68 default	68 default	61 default
Logging rate set by user (time between summarizing 1 second measurements)	1 second - 99 minutes	1 second - 99 minutes	1 second - 99 minutes
Start/Stop at programmed time	Yes	Yes	Yes
Pause/Resume of Logging	Yes	Yes	Yes
Max/Min/Ave/Present value of V,A,W, etc	Yes	Yes	Yes
Localized Trending on Meter*	<b>PS5000: Yes</b> PS4550: No	No	No
Pause/Resume of Trending	<b>PS5000: Yes</b> PS4550: No	No	No

Power Quality	PS5000 / PS4550	PS3550	PS2500
Swell (surge) triggering/capture*	<b>Check every 1/2 cycle of every input</b>	check each second, no triggering	check each second, no triggering
Dip (sag) triggering/capture*	<b>Check every 1/2 cycle of every input</b>	check each second, no triggering	check each second, no triggering
Inrush current capture*	<b>Check every 1/2 cycle of every input</b>	check each second	check each second
Swell/Dip/Inrush capacity	<b>Up to 15000 records, standard</b>	view consumption log	view consumption log

Power Quality (cont'd)	PS5000 / PS4550	PS3550	PS2500
Swell/Dip/Transient triggered waveform capture	Up to 100 graphs of 12 cycles, standard	No	No
RMS graph of swell/dip by 1/2 cycle	Up to 2000 graphs of 100 cycles, standard	No	No
Simultaneous measurement of power / harmonics / swell / dip / transients*	Yes	No	No
High speed transient capture*	Record every 8 microsecond on every input	No	No
Transient capacity	Up to 15000 in log, 100 wavesets	No	No
Adjust Thresholds via Keypad	PS5000: Yes	No	No
	PS4550: No		

Harmonics	PS5000 / PS4550	PS3550	PS2500
THD measurement	Yes, including 1-50th, for 22-200Hz, 1-19st for 360-440Hz	Yes, including 1-50th, for 45 to 66Hz, 1-7th for 360 to 440Hz	Yes (with HAO option)
THD Display	PS5000: Color Bar Graph on screen for each signal Yes, for each signal	Yes, for each signal	No
Individual Harmonic Display	PS5000: Color Bar Graph on screen showing 1-50th, 1-31st at 400Hz PS4550: 1-15th (odd only) on display. 1-50th on PC for 22-200Hz, 1-31st on PC for 360-440Hz	1-15th (odd only) on display. 1-50th on PC for 22-200Hz, 1-31st on PC for 360-440Hz	None on display. 1-50th on PC for 22-200Hz (with HAO option)
Log Individual Harmonics	PS5000: Log each harmonic of each signal, as %, V, or A PS4550: No	No	No
Harmonics direction	Yes, in software	Yes, in software	Yes, in software
THD calculation	all channels each second	all channels each second	4 seconds/channel
K factor	Yes, in software	Yes, in software	No

Voltage Measurement	PS5000 / PS4550	PS3550	PS2500
Provision for input ratios for PTs*	Yes	Yes	Yes
Direct measure of RMS voltage	1-1000 Vrms	1-1000 Vrms	1-1000 Vrms
Peak voltage measurement	1500 V	1500 V	1500 V
DC voltage	1-1000 Vdc	1-1000 Vdc	1-1000 Vdc
Direct voltage measurement with standard and optional medium voltage probes*	1-15,000 Vrms	1-15,000 Vrms	1-15,000 Vrms
Voltage measurement with input ratios	1.0-999 MVrms	1.0-999 MVrms	1.0-999 MVrms
Voltage measurement accuracy*	+/-0.1%	+/-0.2%	+/-0.5%
Log resolution	Max/min/avg of cycles when logging at 1 second interval, max/min/avg of seconds when logging in longer periods	Max/min/avg of cycles when logging at 1 second interval, max/min/avg of seconds when logging in longer periods	max/min/avg of seconds
Display resolution (100-400V)	0.1V	0.1V	1V

Current Measurement	PS5000 / PS4550	PS3550	PS2500
AC/DC current measurement*	Yes	Yes	Yes
Neutral current measurement	Yes	Yes	Yes
Provision for input ratios for CTs*	Yes	Yes	Yes
AC Amp direct measurement with accessories*	0.005 - 6000 ARMS	0.005 - 6000 ARMS	0.005 - 6000 ARMS
DC Amp direct measurement with accessories*	5 - 2000 ADC	5 - 2000 ADC	10 - 600 ADC
Amp measurement with input ratios	1 ma - 999 MArms	1 ma - 999 MArms	1 ma - 999 MArms
Current measurement accuracy*	+/-0.1%	+/-0.2%	+/-0.5%

Current Measurement (cont'd)	PS5000 / PS4550	PS3550	PS2500
Log resolution	Max/min/avg of cycles when logging at 1 second interval, max/min/avg of seconds when logging in longer periods	Max/min/avg of cycles when logging at 1 second interval, max/min/avg of seconds when logging in longer periods	max/min/avg of seconds
Display resolution (100-400A)	0.1 A	0.1 A	1 A
Automatic current probe identification and scaling	Yes	Yes	Yes
Flex, DC, and all other probes do not require batteries	Yes	Yes	Yes

True, VA, & VAR Power	PS5000 / PS4550	PS3550	PS2500
True power measurement (W)	Yes	Yes	Yes
Apparent power measurement (VA)	Yes	Yes	Yes
Reactive power measurement (VAR)	Yes	Yes	Yes
Power measurement accuracy*	<b>+/-0.25%</b>	+/-0.5%	+/-1.0%
W, VA, & VAR measurement range with input ratios	1.0-999 M	1.0-999 M	1.0-999 M
Log resolution: True Power (W)	Max/min/avg of cycles when logging at 1 second interval, max/min/avg of seconds when logging in longer periods	Max/min/avg of cycles when logging at 1 second interval, max/min/avg of seconds when logging in longer periods	max/min/avg of seconds
Log resolution: VA	1 second	1 second	1 second
Log resolution: VAR	<b>PS5000: 1 second</b> PS4550: No	No	No
Log Net, Positive, & Negative True Power (W) separately	<b>PS5000: Yes</b> PS4550: No	No	No
Log Net, Positive, & Negative VAR separately	<b>PS5000: Yes</b> PS4550: No	No	No

True, VA, & VAR Power (cont'd)	PS5000 / PS4550	PS3550	PS2500
Display elapsed energy consumed (KWH)	Yes	Yes	Yes, via PC
Estimated KWH/Month KWH/Year	Yes	Yes	Yes, via PC
Display elapsed cost	Yes	Yes	No
Estimated \$/Month, \$/Year	Yes	Yes	No
Display Duty Cycle, Est. "On" time, power cycles	PS5000: No PS4550: Yes	Yes	No

Power Factor & Phasors	PS5000 / PS4550	PS3550	PS2500
Display True power factor (TPF)	Yes	Yes	Yes
Log TPF	Yes	Yes	Yes
Display Displacement Power Factor (DPF)	Yes	Yes	Yes, via PC
Log Displacement Power Factor (DPF)	PS5000: Yes PS4550: No	No	No
Display phase angles & magnitudes	PS5000: Color phasors on screen with measurements PS4550: Displacement angles and Vrms / Arms	Displacement angles and Vrms / Arms magnitudes	Yes, via PSM software
Phasor diagram display	PS5000: Color phasors on screen with measurements PS4550: Yes, via PSM-A software	Yes, via PSM-A software	Yes, via PSM-A software

Unbalance	PS5000 / PS4550	PS3550	PS2500
Display Vpn unbalance	Yes	Yes	Yes, via PC
Display Vpp unbalance	Yes	Yes	Yes, via PC
Display current (A) unbalance	Yes	Yes	Yes, via PC
Log Vpn unbalance	PS5000: Yes PS4550: No	No	No
Log Vpp unbalance	PS5000: Yes PS4550: No	No	No
Log Current (A) Unbalance	PS5000: Yes PS4550: No	No	No

Operating Modes	PS5000 / PS4550	PS3550	PS2500
Vpn, Vpp, Vdc modes	Yes	Yes	Yes
<b>Positive Power mode</b> (where current probes are automatically corrected in software, if installed backwards)	Yes	Yes	Yes
<b>Negative Power Allowed mode</b> (for regenerative loads)	Yes	Yes	No
<b>Quad single phase power mode</b>	Yes	Yes	No
<b>2-wattmeter (2-current) mode</b>	Yes	Yes	No
<b>Low and high fundamental frequency ranges</b>	Yes, 22-200Hz & 360-440Hz	Yes, 45-66Hz & 360-440Hz	No, 45-66Hz only
<b>Start/Stop Logging at programmed time</b>	Yes	Yes	Yes

Other Key Features	PS5000 / PS4550	PS3550	PS2500
<b>Redundant Log Memory (Internal &amp; SD card)</b>	<b>PS5000: 16M internal, compressed</b> PS4550: 4M or 16M (with MEM2 option)	4M or 16M internal, compressed (with MEM2 option)	4M internal, compressed
<b>Removable memory</b>	Yes, SD (SDHC) card up to 32GB	Yes, SD (SDHC) card up to 32GB	Yes, SD (SDHC) card up to 32GB
<b>High frequency power-line noise spectrum analysis*</b>	PS5000: not implemented yet <b>PS4550: 5KHz - 100KHz (with FAO option)</b>	No	No
<b>Detection of errors in connections and wiring*</b>	<b>SureStart™</b> errors in plain English	<b>SureStart™</b> errors in plain English	<b>SureStart™</b> errors in plain English
<b>Connections AI Wizard (SureStart™)*</b>	Yes, with key press	Yes, with key press	<b>Yes, automatic</b>
<b>Test Plan Creation &amp; Integration (TestPlan Manager™)*</b>	<b>Fully integrated in meter and software</b>	<b>Fully integrated in meter and software</b>	Test plan creation in software, but not integrated into meter
<b>Data Setup Wizard</b>	Yes, via PSM-A software program	Yes, via PSM-A software program	Yes, via PSM-A software program



Other Key Features (cont'd)	PS5000 / PS4550	PS3550	PS2500
Changing the Data Setup from the keypad	<b>PS5000: Almost all settings</b> PS4550: Yes, most basic settings	Yes, most basic settings	No
Automated Report Writer (ReportWriter™)	Yes, via PSM-A software program	Yes, via PSM-A software program	Yes, via PSM-A software program
Auto-Detection of New Software and Firmware	Yes, via PSM-A software program	Yes, via PSM-A software program	Yes, via PSM-A software program
Firmware update via email	Yes	Yes	Yes
Export data to Excel Spreadsheet	one step	one step	one step

Input / Output	PS5000 / PS4550	PS3550	PS2500
Display	<b>PS5000: Color graphics, 1/4 VGA</b> PS4550: Backlit Text, hi res graphics on PC	Backlit Text, hi res graphics on PC	text characters, hi res graphics on PC
Display update rate	1 second	1 second	1 second
Redundant communications (USB, Bluetooth, SD)	Yes	Yes	No USB
Wireless Communications	Bluetooth (Wi-Fi optional)	Bluetooth (Wi-Fi optional)	Bluetooth wireless
Wireless Communications speed*	<b>460.8 kbps (BT)</b>	57.6 kbps (BT)	9600 bps (BT)
Internet connection	via Wi-Fi option	via Wi-Fi option	No
Integration with automated systems	Yes	Yes	Yes
Analysis software	PSM-A included	PSM-A included	PSM-A included
Scope Mode	<b>PS5000: Yes, color graphics</b> PS4550: Yes, on PC	Yes, on PC	No
Manual waveform capture (sets of 7 signals)*	<b>Up to 100 via keypad and PC</b>	4 via keypad and PC	via PC
Screen snapshot mode	unlimited via software	unlimited via software	unlimited via software
Printing*	Yes, via PC	Yes, via PC	Yes, via PC



Input / Output (cont'd)	PS5000 / PS4550	PS3550	PS2500
Multi-lingual	PS5000: No PS4550: Yes	Yes	No
Keyboard	<b>Yes, 24 keys</b>	<b>Yes, 24 keys</b>	1 button
Real-time clock	Yes	Yes	Yes

Power Requirements	PS5000 / PS4550	PS3550	PS2500
Rechargeable battery type	Li-ion	Li-ion	NIMH
Run-time on Battery	6-10 hours (depending on probes attached)	8-12 hours (depending on probes attached)	8-12 hours (depending on probes attached)
Charging Time Required	7 hours max.	7 hours max.	12 hours max
Display of battery capacity	<b>Yes</b>	No	No
Power requirement	12VDC @ 500ma	12VDC @ 500ma	12VDC @ 200ma
Power itself from the line	Yes (with Line-to-DC converter option)	Yes (with Line-to-DC converter option)	Yes (with Line-to-DC converter option)

Environmental/Safety	PS5000 / PS4550	PS3550	PS2500
Size	3.85" x 7.6" x 1.60" to 2.07"	3.85" x 7.6" x 1.60" to 2.07"	4" x 7.75" x 1.75"
Weight	PS5000: 1.2 lb (0.6kg) PS4550: 1.1 lb (0.5kg)	1.1 lb (0.5kg)	1.1 lb (0.5kg)
Operating temperature	0 - 50 C (32 - 122 F)	0 - 50 C (32 - 122 F)	0 - 50 C (32 - 122 F)
Operating humidity limit	70% non-condensing	70% non-condensing	70% non-condensing
Vibration Testing	PS5000: standard industry <b>PS4550: MIL-PRF-28800F</b>	standard industry	standard industry
Designed to meet safety standard	EN 61010 1000V CAT III, 600V CAT IV	EN 61010 1000V CAT III, 600V CAT IV	EN 61010 1000V CAT III, 600V CAT IV



## Choosing the Right PowerSight Model



Included Accessories	PS5000 / PS4550	PS3550	PS2500
<b>Advanced Analysis Software</b>	PSM-A included	PSM-A included	PSM-A included
<b>Voltage probes*</b>	4 included, jumbo alligator type	4 included, jumbo alligator type	4 included, jumbo alligator type
<b>Current probes</b>	choose separately	choose separately	choose separately
<b>Carrying case*</b>	many options	many options	<b>soft case included</b>
<b>Communications cable</b>	none required	none required	none required
<b>Wall charger</b>	120 or 240V included	120 or 240V included	120 or 240V included

Price / Warranty	PS5000 / PS4550	PS3550	PS2500
<b>Deluxe Warranty (at time of purchase)</b>	Yes, 1 year (2 or 3 optional)	Yes, 1 year (2 or 3 optional)	Yes, 1 year (2 or 3 optional)
<b>Deluxe Warranty (renewal)</b>	Yes, 1 or 2 years	Yes, 1 or 2 years	1 year Limited Warranty
<b>Calibration(s) Included in warranty</b>	Yes, 1 per year	Yes, 1 per year	Yes, 1
<b>Cost of analyzer, without current probes, hard shell carrying case, or options</b>	PS5000: US\$5745	US\$2495	<b>US\$1495</b>
	PS4550: US\$4995		
<b>Cost of "Standard" system (including current probes &amp; carrying case)*</b>	PS5000: US\$7540	US\$4290	US\$3075
	PS4550: US\$6995		
<b>Cost of "PRO" system*</b>	PS5000: US\$7810	US\$4560	define your own system
	PS4550: US\$7295		
<b>Cost of "PRO+" system*</b>	PS5000: US\$8295	US\$4995	define your own system
	PS4550: US\$7750		

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### Notes and Explanations of the Comparison Table\*\*

**Basic sampling rate.** This is the basic rate at which inputs are sampled. However, most samples are not needed for most measurements so many may not be used except for transient detection, depending on the model. The PS5000 & PS4550 continuously uses its 8 microsecond rate to simultaneously measure transients, swells, dips, harmonics, and power measurements on all channels, using over 2000 samples per cycle (at 60Hz) on its power quality measurements. The PS2500 uses samples sufficient to do RMS measurements of voltage and current including the components of the first 25 harmonics. All models use samples sufficient to analyze harmonics to the 50<sup>th</sup> harmonic of a 60 Hz fundamental when creating waveforms.

**Basic RMS measurement rate.** The PS5000, PS4550, and PS3550 do complete RMS measurements of every cycle of every channel, regardless of the recording rate. Therefore, the PS5000/PS4550/PS3550 miss nothing in their measurements. The PS2500 looks at 2 cycles of each channel every second and does complete measurements of relevant parameters during normal operating modes. Thus one measurement is generated every second, regardless of the recording (logging) rate. All models are inherently more accurate than competing logger products that only do measurements when they are about to create a new record in their log.

**True 3-phase.** PowerSight is a true 3-phase analyzer. This means that all three phases and totals are accurately measured, regardless of the shape of the waveform. Voltage, current, power, and power factor are not estimated. Instruments with only one voltage and one current channel cannot measure 3-phase power without making assumptions that are usually not true in the real world.

**Works with all power systems.** PowerSight models are meant to be used on any power system anywhere in the world. They can accurately measure single phase, split-phase, three phase wye, three phase delta, 4-wire delta, grounded delta, open delta, 2CT/2PT, 3CT/3PT, regenerative, 50Hz, 60Hz, 400Hz, DC, variable frequency, phase-phase, phase-neutral, 69/120V, 120/208V, 200V, 240V, 277/480V, 600V, 1000V systems. Medium voltage probe accessories are available for direct connection to 4160V (the 5KVPSet) and 12.47kV (the 15KVPSet). Higher voltage is in process. Wide range of current probes allow monitoring bus bars and multiple cable pairs.

**Voltage measurement accuracy.** Accuracy for the PS5000, PS4550, and PS3550 is stated as a percent of reading +/-0.3V. Accuracy for PS2500 is stated as a percent of reading +/- 0.2V between 0.5-399.9V, +/-2V between 400-3,999V.

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**Current measurement accuracy.** Accuracy for the PS5000, PS4550, and PS3550 is stated as a percent of reading +/- the accuracy of the probe (other than an HA1000). Accuracy for PS2500 is stated as a percent +/- 0.2A between 0.1-399.9A, +/-2A between 400-3,999A for an HA1000. Add to the stated accuracy the percentage for any other probe that is used.

**Power measurement accuracy.** Add to the stated accuracy the percentage for any probe used, other than the HA1000. Accuracy derates below power factor of 0.5.

**Trending.** Trending is similar to logging except it is intended for short-term in-hand measurement. While logging or not, the user can begin a trend session and see just the measurements that have occurred during the trend session, viewing real-time measurements as either a graph or a table as they are occurring. The maximum, minimum, and average of the measurements are also updated and displayed so the user can get a good sense of how the circuit is operating.

**Swell (surge) triggering/capture.** Triggering on voltage and current swells occurs when a trigger threshold is exceeded. The voltage threshold can be set manually or automatically by the meter. Automatic voltage triggering occurs when the RMS voltage exceeds a set percent greater than the nominal supply voltage. A wide range of standard voltages are programmed into the analyzer. This automatic “percent to standard” trigger point can be adjusted by the user. The user sets the trigger point for current directly. Individual voltage and current channels can be enabled or disabled for triggering. The PS5000 and PS4550 detect swells lasting as little as  $\frac{1}{2}$  cycle and measure every  $\frac{1}{2}$  cycle of every channel. When detected, the swell event can be recorded to a file, can have its RMS profile captured and graphed for every  $\frac{1}{2}$  cycle for the length of the swell (up to 10 seconds), and/or can have 12 cycles of the waveform captured for the swell. The PS3550 and PS2500 are not good choices for detecting brief swells, since they have no triggering or capture ability. Longer swells can be detected in the data log when looking at the maximum voltage or current graphs. The PS5000, PS4550, and PS3550 will record the maximum RMS cycle of voltage and current in the data log if the logging period is 1 second. This resolution is helpful for easy viewing of peak voltage swells.

**Sag (dip) triggering/capture.** Triggering on voltage and current sags occur when a half cycle RMS measurement is less than the trigger threshold. The voltage threshold can be set manually or automatically by the meter. Automatic voltage triggering occurs when the RMS voltage sags below a set percent less than the nominal supply voltage. A wide range of standard voltages are programmed into the analyzer. This automatic “percent to standard” trigger point

can be adjusted by the user. The user sets the trigger point for current directly. Individual voltage and current channels can be enabled or disabled for triggering. The PS5000 and PS4550 detect sags lasting as little as  $\frac{1}{2}$  cycle and measure every  $\frac{1}{2}$  cycle of every channel. When detected, the sag event can be recorded to a file, can have its RMS profile captured and graphed for every  $\frac{1}{2}$  cycle for the length of the sag (up to 10 seconds), and/or can have 12 cycles of the waveform captured for the sag. The PS3550 and PS2500 are not good choices for detecting brief sags, since they have no triggering or capture ability. Longer sags can be detected in the data log when looking at the minimum voltage or current graphs. The PS5000, PS4550, and PS3550 will record the minimum RMS cycle of voltage and current in the data log if the logging period is 1 second. This is helpful for determining viewing of lowest full-cycle voltage sags.

**Inrush current capture.** Triggering on current inrush occurs when a current RMS measurement exceeds the trigger threshold. The user sets the trigger point directly. Typically, it is a number slightly above the normal “on” current being monitored. Individual current channels can be enabled or disabled for triggering. The PS5000 and PS4550 detect inrush lasting as little as  $\frac{1}{2}$  cycle and measure every  $\frac{1}{2}$  cycle of every channel. When detected, the inrush event can be recorded to a file, can have its RMS profile captured and graphed for every  $\frac{1}{2}$  cycle for the length of the inrush (up to 10 seconds), and/or can have 12 cycles of the waveform captured for the inrush. The PS3550 and PS2500 are not good choices for detecting inrush current, since they have no triggering or capture ability. Typically the peak inrush is much higher than the average RMS for the second, so it does not show up well in a data log.

**High speed transient capture.** The PS5000 and PS4550 detect high speed transients on all channels simultaneously, while doing all other measurement functions simultaneously. The transient threshold can be set in 1V increments and can be set to detect absolute values or relative values (where the fundamental periodic waveform is removed). When a transient is detected, the transient information of time/date, maximum value, and duration can be added to a log and a waveform can be captured to a file. Transients of at least 16 usec can be measured in 8usec increments.

**Simultaneous measurement of power / harmonics / swell / dip / transients.** The PS5000 and PS4550 perform power, harmonic, swell, dip, and transient analysis simultaneously on all channels. The PS3550 and PS2500 perform power measurement on all channels simultaneously. The PS2500 pauses to do harmonics during logging.

**AC/DC voltage and current measurement.** All PowerSight models use the same probes interchangeably. This includes AC current measurement and direct voltage measurement up to 15,000 Vrms with the 15KVP. The PS2500 is not

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compatible with the DC2000 current probe, so is limited to 600 VDC (whereas the other models can directly measure up to 2000 ADC).

**Fundamental frequency measurement.** All models can operate in fixed 50Hz, fixed 60Hz. All but the PS2500 can operate in fixed 400Hz, and 360-440Hz frequency modes. The PS3550 and PS2500 can also track frequencies between 45 and 66 Hz, whereas the PS5000 and PS4550 can also track frequencies between 22 and 200 Hz, for tracking the output of variable speed drives and generators. In the 400 Hz mode, the PS5000 and PS4550 calculate harmonics to the 31<sup>st</sup>.

**Duty cycle / on-off cycles.** The PS4550 and PS3550 can determine the duty cycle of operation. This is the proportion of time that a unit under test is “on”. The user sets the value of current considered to be the “on” value. In addition, estimates of number of on-off cycles per hour, per week, and per month are continually estimated during monitoring.

**Provisions for input ratios for PTs and CTs.** PowerSight automatically identifies each current probe when it is connected and assigns the correct input ratios for correct measurements. In addition, the user can enter ratios to be used for specific measurement sessions. These ratios can be entered via our PSM-A software or entered directly using the keypad with the PS5000, PS4550, and PS3550.

**Voltage measurement with accessories.** Special “medium” voltage probes can be used for direct measurement of voltages to 15,000Vrms. However, these probes require the user to enter an input ratio into the analyzer.

**Current measurement with accessories.** A wide range of current probes are available for measuring AC currents from 5 ma to 6,000A and DC currents from 5A to 2,000A. They are interchangeable and self-identifying so no input ratio needs to be entered into the meter. New current probes are added as the need arises.

**High Frequency Spectrum Analysis.** This option for the PS4550 (eventually for the PS5000) allows detecting very small magnitudes of voltage and current frequencies up to 100,000 Hz. This is useful for seeing effectiveness of power line filters and detecting potential interfering frequencies on the power line.

**Detection of errors in connection.** All PowerSight analyzers have our patented SureStart™ feature that uses artificial intelligence to analyze the connections, wiring, and setup parameters in order to report what problems are likely to exist before you begin monitoring. This rule-based AI feature examines the inputs to the meter to determine what sort of power system is attached. It then judges





## Choosing the Right PowerSight Model



what possible errors in the connections and setup there may be and presents these possible errors to the user to correct. This minimizes the chance of having incorrect data when the test is done, a month later.

**Integrated TestPlan Manager.** This exclusive feature allows formulating a multi-point test plan for power or process monitoring in our software. Conflicts in time and resources can be spotted and corrected up front. Then the entire plan is downloaded into all the analyzers to be used in the study. Since the analyzers “know the plan”, when they are attached to a test point, the test point is identified and all data is assigned to that point. Retrieval of data becomes dramatically more time efficient and the risk of data misidentification is eliminated.

**Carrying cases.** There are various carrying case options including soft cases, hard cases, and weather-resistant cases. The meter may be both transported and operated in the weather-resistant carrying case and in the SCAS2 soft case.

**Deluxe Warranty.** The best value for long-term ownership. Deluxe warranty includes calibrations, battery replacement, firmware and software upgrades to the latest features and enhancements, plus free warranty repair. Traditionally, we offer reinstated warranties for the lifetime of the product.

**Comparable cost.** The base price of each analyzer is shown, plus the most popular standard system configurations.

“Standard” systems include a hard shell carrying case, a set of four eFX6000 flexible current probes, and an SD memory card. Power quality analyzers also include extended memory.

“PRO” systems add on a line-to-DC converter (to power the analyzer off the power it is monitoring), a Bluetooth adapter, and a USB cable.

“PRO+” systems add an extra year of our Deluxe Warranty and swaps from the standard hard-shell carrying case to the weather-resistant carrying/operating case (the CASW).

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\*\*Specifications and features are subject to change without notice.

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