

# PS1

## Grid-Interactive Solar System

**OutBack**  
Power Systems

### Battery-based Power Back-up

### True Sinewave Output

CEC certified  
91% Efficiency Inverter

Zero AC Watts  
Consumed at Night

Proven Maximum  
Power Point Tracking

16 Millisecond  
AC Transfer Switch

Type 3R Rainproof

Multiple Anti-Islanding  
Safeguards

Standard 5-year Warranty



The PS1 is advanced engineering and refinement that you have come to expect from OutBack Power in a next generation grid-interactive solar electric system. The system's battery back-up is a silent and hands-off alternative to noisy and maintenance intensive generators. Designed with an emphasis on performance, the PS1 system operates similarly to standard solar inverters but with the unique benefit of uninterrupted power during utility outages.

In side-by-side "real world" testing, the PS1 system performs within 5% of the industry leading battery-less grid-tie inverter. This translates into more money savings when using net metering. The same field proven MPPT technology found in the MX60 solar charge

controller is featured in the PS1. This technology gives the system the ability to use your PV array at its peak output. Uninterrupted AC power is provided by the system's true sinewave inverter that has an industry leading, California Energy Commission (CEC) certified, efficiency of 91% – thus guaranteeing that your household appliances run seamlessly while utilizing all available solar power. Your recommended AGM batteries are maintained and charged by an innovative OutBack multi-stage charging process, this valuable feature assists in providing reliable back-up power and a battery life up to 10 years.

Like every OutBack Power product, the PS1 is rugged. All components are protected within an aluminum type 3R rainproof enclosure. An ultra-fast 16 millisecond AC transfer switch guarantees that even sensitive back-up loads, like computers, never know when a grid outage occurs. The ETL listed system is pre-wired by OutBack engineers to ensure that the PS1 system works reliably for years to come. A standard 5-year warranty provides peace of mind and satisfies state rebate requirements.

High performance, battery back-up, and proven OutBack engineering makes the PS1 system the only choice for a premium grid interactive solar power system.



## Specifications

		Vented <b>PS1-3000</b>	Sealed <b>PS1-2500</b>
Continuous Power Rating	At 40° C	3000 VA	2500 VA
	At 25° C	3600 VA	3000 VA
AC Voltage / Frequency Output		120 VAC 60 Hz	120 VAC 60 Hz
AC Input Current Maximum	AC Transfer Switch / System Bypass	50 amps AC	50 amps AC
	Battery Charger	20 amps AC with automatic back-off	16 amps AC with automatic back-off
Maximum AC Surge Current	Peak (1 millisecond)	70 amps AC	70 amps AC
	RMS (5 seconds)	50 amps AC	50 amps AC
Maximum PV Array Wattage		3300 watts DC stc rating	3300 watts DC stc rating
PV Open Circuit Voltage		Maximum 150 VDC	150 VDC
MPPT Input Voltage Range		44 to 135 VDC	44 to 135 VDC
PV Array Ground Fault Protection		Standard - 80 amp DC	Standard - 80 amp DC
Inverter Efficiency	Typical	91% (CEC Certified)	91% (not CEC Certified)
	Peak	93%	93%
MPPT Efficiency		98%	98%
Overall System Efficiency	Typical	89%	89%
	Peak	92%	92%
Battery Voltage - Nominal		48 VDC	48 VDC
Minimum / maximum operating range		40 to 60 VDC	40 to 60 VDC
Battery Charge Rate	Inverter	45 amps DC	35 amps DC
	MX60	60 amps DC	60 amps DC
AC Output Voltage Regulation	Typical	5%	5%
	Nominal	120 VAC	120 VAC
AC Output Current	Inverting	30.0 amps AC	25.0 amps AC
	Selling	25.0 amps AC	20.8 amps AC
Total Harmonic Distortion	Inverting	2% VAC THD	2% VAC THD
	Selling	< 5% current THD per UL1741 conditions	< 5% current THD per UL1741 conditions
AC Transfer Switch Speed		Typical < 16 Milliseconds	< 16 Milliseconds
Battery Temperature Sensor		Included	Included
Operating Temperature Range		-40° C to 60° C (power derated above 25° C)	-40° C to 60° C (power derated above 25° C)
Recommended Minimum Energy Storage		4 kWhRS at 80% discharge	4 kWhRS at 80% discharge
Recommended Batteries		Four AGM type 31 or type 27 sealed VRLA	Four AGM type 31 or type 27 sealed VRLA
Communications		Optional MATE system display with RS232 port	Optional MATE system display with RS232 port
Enclosure Materials		Powdercoated aluminum with stainless steel hardware	Powdercoated aluminum with stainless steel hardware
Mounting		Wall mount, 16-inch on center studs	Wall mount, 16-inch on center studs
Recommended Mounting Hardware		5/16 x 2.5" Lag Bolts - three per side minimum	5/16 x 2.5" Lag Bolts - three per side minimum
System Enclosure Dimensions (HxWxD)	Unit	31.3 x 17.25 x 12.9" (80 x 44 x 33 cm)	31.3 x 17.25 x 12.9" (80 x 44 x 33 cm)
	Shipping	40.5 x 20.5 x 17.25" (103 x 52 x 44 cm)	40.5 x 20.5 x 17.25" (103 x 52 x 44 cm)
Battery Enclosure Dimensions (HxWxD)	Unit	36.25 x 17.25 x 12.55" (92 x 44 x 32 cm)	36.25 x 17.25 x 12.55" (92 x 44 x 32 cm)
	Shipping	43.25 x 20.25 x 16.75" (110 x 51 x 43 cm)	43.25 x 20.25 x 16.75" (110 x 51 x 43 cm)
System Weight	Unit	107 lbs (49 kg)	107 lbs (49 kg)
	Shipping	117 lbs (53 kg)	117 lbs (53 kg)
Battery Enclosure Weight (without batteries)	Unit	29 lbs (13 kg)	29 lbs (13 kg)
	Shipping	47 lbs (21 kg)	47 lbs (21 kg)
Certifications		ETL certified to the UL1741 standard	ETL certified to the UL1741 standard
Anti-Islanding Measures		UL1741 compliant	UL1741 compliant
Warranty		5 year limited repair warranty standard	5 year limited repair warranty standard
Field Installable Options		MATE or MATE2 remote system display	MATE or MATE2 remote system display
		OBAC breakers for additional AC load circuits	OBAC breakers for additional AC load circuits
		OBPV breakers for PV array series string protection	OBPV breakers for PV array series string protection

**OutBack**  
Power Systems

19009 62nd Avenue NE, Arlington, WA 98223  
Phone: 360-435-6030 Fax: 360-435-6019 www.outbackpower.com

Available From: