



Model PS Series

SINE WAVE INVERTER CHARGER

Whatever your application—stand-alone alternative energy, utility tie, generator support, or backup power—Trace's new PS Series Sine wave Inverter/Charger will provide unparalleled value at a surprisingly low price. PS Series inverters produce the same type of microprocessor controlled, sinusoidal power which has made their SW series cousins world famous for quality and reliability.

The PS Series has a continuous output of up to 2.5 kW; UL, cUL and CE certification or compliance, PS Series models are available with 12 or 24 VDC input and 120 VAC/60 Hz or 230 VAC/50 Hz output (see specifications on reverse). We offer two "stacking" options for the PS Series for installations which have larger power requirements than can be met by a single inverter.

Features

Sine wave Output

PS inverters produce sine wave power—the same type made by utilities and generators. The power output from this inverter is so clean that in many parts of the world it is accepted for utility interconnection.

Built-in Battery Charger

PS inverters include a powerful 3-stage battery charger which is designed to recharge most types of batteries in as short a time as possible. When the batteries are fully charged, the charger automatically switches to Float mode which then maintains the batteries in a fully charged condition.

Automatic AC Transfer Relay

The built-in, AC Transfer Relay automatically switches AC power output from utility or generator to inverter, making for virtually instantaneous inverter performance. Settings for the AC Input/Pass through are user selectable at 30 amps for generator input and 50 amps for utility power. (15 or 30 amps on E models.)

Expandable

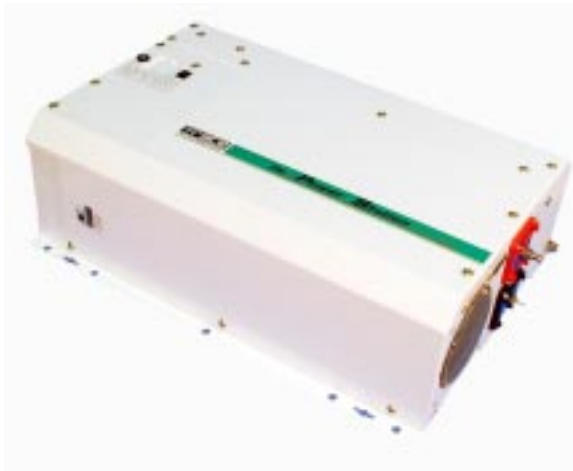
A pair of PS inverters may be "stacked" either in series (SWI) or parallel (SWI/PAR) to increase the output of your system. In series, the output of the inverters becomes 3-wire 120/240 VAC. In parallel, the output power of the inverters is doubled while the voltage remains the same. The paralleling kit is also available for export models of the PS (SWI/PAR/E).

Simplicity

The PS is simple to operate, all inverter and battery charger functions are factory preset—this inverter comes ready to produce power and recharge batteries. A simple four-position switch controls basic user functions—Off, Search, On and Battery Charger Only. Adjustments to factory defaults such as Search mode settings or battery charging parameters can be made through optional SWRC Remote Control Panel or SWCA Communications Adapters.

Low Power Consumption

PS inverters have extremely low current requirements. In Search Mode (idling with no load) they use less than one watt of power. In the On Mode the PS uses less than 20 watts of power—almost one third of the power that our nearest competitors products require to operate.



Applications

Stand-alone Power

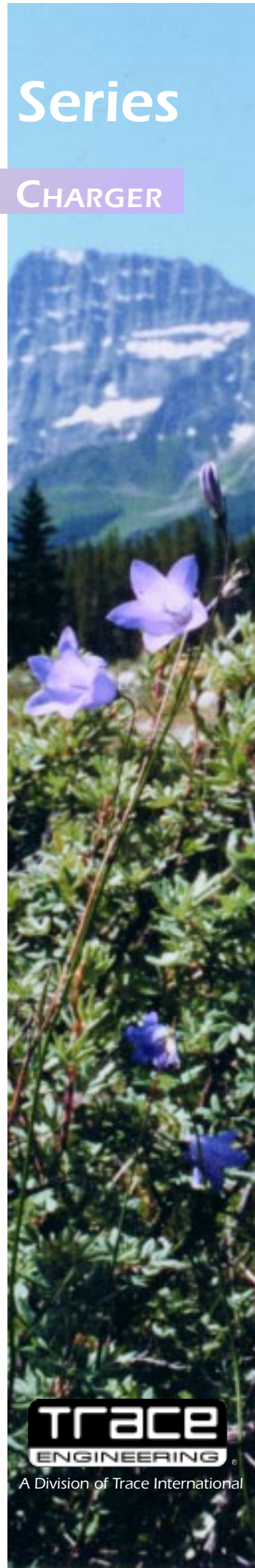
A PS inverter/charger comes factory ready to electrify your home or cabin. Simply connect a PS inverter/charger to batteries, hook up your AC loads, AC generator input and turn it on. (Fuses and/or circuit breakers are required for complete installation). Add solar PV or wind power to your battery charging system and become truly independent. The PS will convert this clean energy into useful household electricity.

Power Security

The PS is designed to provide an instantaneous and secure supply of electricity to all the essential circuits in your home or business. When utility power fails, the PS automatically begins to supply electricity to all the appliances, lights, pumps, etc. which are connected to it. When power is restored, the PS can quickly recharge your batteries.

Utility Tie PV

The PS is also capable of turning your home into a micro generating station. Simply add a renewable energy charging source—solar PV, wind, etc.—to your backup power system and the PS will automatically convert your solar or wind power to utility grade electricity. In many locations your local utility will buy your excess renewable energy. (Adjustments to factory default settings will be required and can be made through optional SWRC or SWCA adapters.)



MODEL PS SERIES SINE WAVE INVERTER /CHARGER SPECIFICATIONS

PS Series	PS2512	PS2524	PS2212E	PS2524E
Continuous Power @ 25 °C	2500 VA	2500 VA	2200 VA	2500 VA
Continuous output @ 25 °C	21 amps AC	21 amps AC	9.5 amps AC	11 amps AC
Nominal DC Input Voltage	12 VDC	24 VDC	12 VDC	24 VDC
AC Output (RMS)	120 VAC / 60 Hz		230 VAC / 50 Hz	
Surge Capability	Light bulb (1)	5000 Watts	6000 Watts	4000 Watts
	1 mSec (2)	90 amps peak	108 amps peak	40 amps peak
	100 mSec (3)	50 amps RMS	75 amps RMS	20 amps RMS
Peak Efficiency	90%	92%	90%	92%
Maximum AC Input / AC Pass Through	30 or 50 amps AC (via selector switch)		15 or 30 amps AC (via selector switch)	
Battery Charger				
Charger Type	3 stage charger with temperature compensation (adjustable setpoints via SWRC or SWCA)			
Charger Power Requirement	20 amps AC	20 amps AC	8 amps AC	10 amps AC
Charger Power Factor	Power Factor Corrected / Low current distortion - 1.00 to 0.95 PF typical			
Bulk Voltage (default)	14.4 VDC	28.8 VDC	14.4 VDC	28.8 VDC
Float Voltage (default)	13.4 VDC	26.8 VDC	13.4 VDC	26.8 VDC
Absorption Time (default)	2 hours	2 hours	2 hours	2 hours
Maximum Charging Rate	130 amps DC	65 amps DC	100 amps DC	65 amps DC
DC Input Requirements				
Search Mode	less than 1/2 watt			
On Mode (no load)	20 watts typical			
At Full Rated Power	275 amps @ 12.6 VDC	140 amps @ 25.2 VDC	240 amps @ 12.6 VDC	140 amps @ 25.2 VDC
Input Voltage Range	11.8 to 16.5 VDC	22 to 33 VDC	11.8 to 16.5 VDC	22 to 33 VDC
AC Output Characteristics				
AC Waveform	Sinewave, 34 to 52 steps per cycle			
Voltage Regulation	+/- 5%			
Total Harmonic Distortion	3 to 5% (stand-alone operation)			
Power Factor Allowed	-1 to 1			
Frequency Regulation	+/- 0.04% (crystal regulated)			
Load Sensing Range	16 watts Default (adjustable from 16 to 240 watts - requires SWRC or SWCA)			
Standard Features				
	Adjustable low battery protection			
	Battery Temperature Sensor			
	Variable brushless DC cooling fan			
	Grid interactive capable - requires SWRC or SWCA to enable the inverter to "sell" power			
Options				
SWRC/50	Full Function remote control with LCD display - 50 foot (15 meter) cable			
SWCA	Communications Adapter, allows PC or modem connection			
RC8/50	On/Off remote with status LED indicator - 50 foot (15 meter) cable			
SWI	Series stacking cable for dual PS series inverter systems for 120/240 VAC 60 Hz output			
SWI/PAR SWI/PAR/E	Paralleling kit for double power at 120 VAC 60 Hz or 230 VAC 50 Hz			
PSCB	Conduit wiring box for DC connections for all PS series inverter/chargers			
Physical				
Enclosure Type	Indoor, ventilated, aluminum chassis, with powdercoat finish and screened openings			
Specified Temperature Range	32 °F to 104 °F (0 °C to 40 °C) output will meet specified tolerances			
Allowed Temperature Range	-40 °F to 140 °F (-40°C to 60 °C) output may not meet specification			
Dimensions:	Inverter Only: (4) 15.25" (38.7 cm) H x 22.5" (57.1 cm) W x 6.5" (16.5 cm) D			
	Shipping: 20" (50.8 cm) H x 26" (66 cm) W x 12.75" (32.3 cm) D			
Weight:	Inverter Only: 80 lbs. (36.4 kg)			
	Shipping: 88 lbs. (40 kg)			
Approvals	UL1741 / cUL to CSA 107.1		CE compliance	

NOTES:

- (1) Surge "light bulb" - Maximum total nameplate light bulb wattage started from a cold start and powered for at least 1 minute
- (2) Surge "1 mSec" - Maximum 1 ms peak output amps measured when starting AC loads
- (3) Surge "100 mSec" - Maximum 100 ms peak output amps measured when starting AC loads
- (4) Includes 2" (5 cm) H for mounting rails and 1.5" (3.8 cm) W for DC terminals. May be mounted in any position.

All Specifications subject to change without notice
Specifications @ 25 °C

Warranty

All PS Series inverter/chargers are warranted for two years against defects in workmanship or materials.

Available From:

Options

SWRC/50 or SWRC/25—Sine Wave Remote Control, allows field monitoring and adjustment of all settings in the PS inverter, 50 ft. (15 m) or 25 ft. (8 m) cable included.

SWCA—Sine Wave Communications Adapter. Allows the PS inverter to be connected directly to a PC for monitoring and adjustment. May be operated remotely with the addition of a modem.

RC8/50 or RC8/100—On/Off remote control with status LED indicator, 50 ft. (15 m) or 100 ft. (30 m) cable included.

SWI/PAR—Paralleling kit connects two PS inverters together for twice the power at the same voltage (i.e. 5,000 Watts @ 120 VAC)

SWI/PAR/E—Paralleling kit as above for E (export) models

SWI—Stacking interface for two PS inverters. Provides 3-wire 120/240 VAC at twice the power (i.e. 5,000 Watts @ 120/240 VAC)

PSCB—Conduit box for DC end of the inverter.