SOLAR STIK®

Category: Power Management

24VDC PRO-Verter S 2000-120

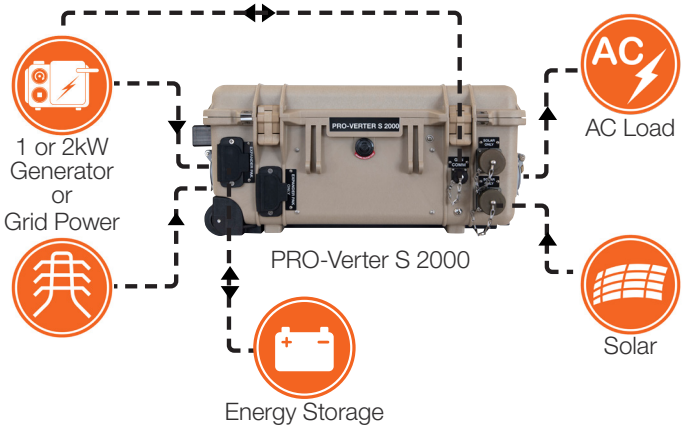
Item # 20-0104025

Power with an Extra Boost

A Portable Remote Operation Inverter/Charger (PRO-Verter) provides a single point of power management, control, and distribution to a battery-based electrical circuit. The PRO-Verter S 2000 has internal solar charge controllers capable of accepting up to 480 watts of DC input power from photovoltaic panels. The inverter function can provide 1200 watts of continuous, pure sine wave AC power. The PRO-Verter S 2000 is designed to operate with a 1 or 2 kW fuel-driven generator in a hybrid power system and can automatically start or stop the generator based on the battery bank's state of charge.

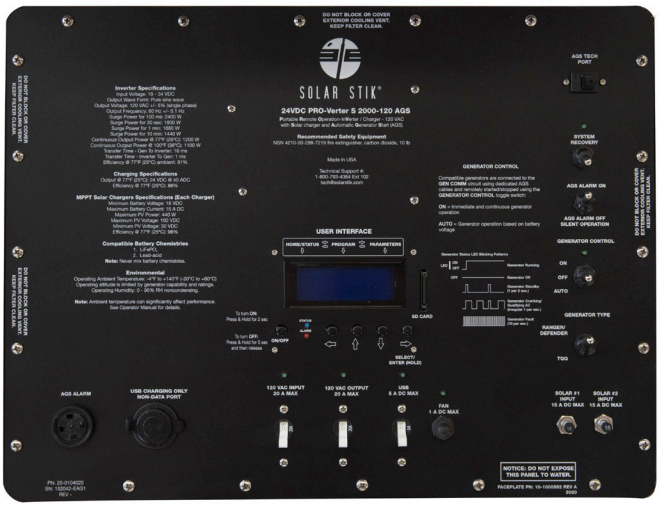
How a PRO-Verter Works

A PRO-Verter is the primary power management component in a hybrid power system. It handles load prioritization, manages generator functions, records system status, charges the battery bank, and powers AC loads using energy stored in the batteries. Additionally, the PRO-Verter S 2000 is capable of accepting DC input power from photovoltaic panels. When any PRO-Verter is used with a generator, it increases system performance by maximizing generator output and minimizing generator runtime.



Features

- High-efficiency circuits for inverting and charging
  - 1200 W continuous power output
  - 2400 W surge power output
- Solar input up to 880 W
- Compatible with 1.0–2.0 kW generators
  - Auto Generator Start/Stop
- Programmable LCD user interface with built in remote monitoring capability
- Open architecture



PRO-Verter S 2000 Faceplate

SS20220628

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General

Nominal Operating Voltage	24 VDC
Input Battery Voltage Range	18.1–34VDC
Internal cooling	Forced convection
User Interface	Color Graphical User Interface
Case	Pelican 1560
Warranty	1-year materials and workmanship

Inverter Specifications (@ 77 °F/25 °C)

Nominal AC Output Voltage	120 VAC ± 5%
Rated Current	10 A
Output Frequency and Accuracy	60 Hz ± 0.1 Hz
Continuous Output Power	1200 W
Peak Current	20 A
Efficiency	0.91
Transfer time	• Generator to Inverter: 16 ms • Inverter to Generator: 1 ms
Waveform	Pure Sine Wave
Surge Power for 100 msec	2400 VA (20A)

AC Charger Specifications (@ 77 °F/25 °C)

AC Input Frequency	60 Hz
AC Input Voltage	60–140 VAC +/- 5% (programmable)
Charging Stages	Bulk, Absorb, Float, Equalize
Continuous Output Current	40 A
Charging Efficiency	86%
Compatible Battery Chemistries	$LiFePO_4$, Lead-Acid
Auto Generator Start Conditions	Voltage

Charge Controller Specifications (@ 77 °F/25 °C)

Maximum PV Input Voltage	100 V
Maximum PV Input Current	(2) 15 A
Maximum PV Input Power	(2) 440 W
Efficiency	96%
Charging Stages	Bulk, Absorb, Float, Equalize

Safety

Breaker(s)	(1) AC Input 20 A, (1) AC Output 20 A, (1) Fan 5 A, (1) USB 5 A, (2) Solar Input 15 A
Emergency Stop	None
Fuse(s)	(1) AGS 1 A, (1) Novatio E-Start 5 A, (1) CCGX 1 A
Overcurrent Protection	20 A Input built into inverter/charger
Overtemperature Protection	• Transformer Shut Down at 150 °C; Auto Reset at 80 °C • Heat Sink Shut Down at 70 °C; Auto Reset at 40 °C • Transformer: >130 °C, BULK CURRENT reduced by 0.2% every 20 s • Heat Sink: >90 °C charging current is reduced by 0.2% every 20 s
Certifications	Safety Certified and EMC Compliant ETL safety listed to stringent UL standards & CSA. EMC Compliant to FCC requirements.

Connections

Input(s)	• (1) 120 VAC 15 A (NEMA 5-15P) • (2) PV (24 VDC Amphenol bayonet CB2-22-2SC)
Output(s)	• (1) 120 VAC 20 A (NEMA 5-20R)
Input/Output(s)	• (1) 24 VDC 100 A In/Out Inter-connect Port* • (1) 24 VDC 100 A Expander Pak Inter-connect Port* • (1) 24 VDC 100 A Power Management Inter-connect Port* • (2) Tech Ports (RJ45) for Remote Monitoring and Expansion

*Deltran 224-0061-BK

Environmental

Operating Temperature	-4 °F to 140 °F (-20 °C to +60 °C)
Storage Temperature	-40 °F to 158 °F (-40 °C to +70 °C)
Operating Humidity	0 to 95% RH non condensing
Standards	• Designed for MIL-STD-810G Drop Test • Designed for MIL-STD-810G Loose Cargo Test
Intrusion	Designed for IP56

Weights and Dimensions (L x W x H)

Weight	65 lb (29 kg)
Dimensions	22.1 x 17.9 x 10.4 in. (56.1 x 45.5 x 26.4 cm)

Recommended Components and Accessories

Solar Expedition 450W
Item # 11-1000020

Li Expander Pak 1300
24VDC – Item # 21-0202316

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