

Power

Solaris 3500XP

Solar UPS



- An integrated 3.5kW Grid Tied PV power solution in a single box
- 2 in 1 combination of PV inverter & UL certified UPS solution to provide the best power protection
- Factory pre-integrated and tested with no on-site calibration required
- Superior power performance with no power derating from -40 to 55°C
- Nema 3R rainproof enclosure ideal for outdoor installation
- Easy installations in hours instead of days
- Multiple operating modes for wide range of On or Off Grid applications

Setting a new standard in solar power conversion and power protection in the market, the Solaris 3500XP system is the only integrated solar power conversion and UL 1778 certified UPS solution in the market. This system provides the best critical load power protection and load security for the home and business. Multiple operating modes enable flexible applications for; utility grid-tied with critical load UPS, stand-alone solar inverter for remote installations, optional solar/utility interface enabling daily energy offset and solar recharge for extended outages. Optional generator interface enables auxiliary AC load extension and supplemental battery charging. Max Power Point Tracking (MPPT), high efficiency, and integral solar charge controlling provides optimum solar array performance regardless of PV module type.

An integrated user-friendly LCD display enables convenient readout of all operating and performance parameters. The Solaris 3500XP system benefits from reliable manufacturing techniques resulting from experience gained in over one million inverter power applications worldwide.

Solaris 3500XP

Electrical Specifications

AC Output

Continuous Power @ -40 to 55°C: (with no power derating)	3500W, 3500VA
Output Voltage (RMS):	120/240 or 208VAC
Output Voltage Regulation:	±2%
Frequency:	50/60Hz
Output Waveform:	Pure sine wave
Efficiency:	92% (peak) 91% (CEC rating)
Continuous Output @ 55°C:	24A @ 120VAC 15A @ 240VAC 17A @ 208VAC
Overload:	120% (or 4200W) for 3min 200% (or 7000W) for 10sec
Total Harmonic Distortion:	<3%

AC Input

AC Input Voltage:	240 or 208VAC
AC Input Voltage Range:	183 to 262VAC
AC Input Current:	24A AC (max.) @240 or 208VAC

Battery

DC Input Voltage (Nominal):	48VDC
DC Input Voltage Range:	42.5 to 56VDC
Battery Charger:	Multi-stage (bulk, absorption, trickle)
Max. Grid Battery Charger:	36ADC (programmable)
Max. MPPT Charger Output:	72A
Temperature Compensation:	Programmable -3 to -5mV/°C/Cell

System

Idle Consumption:	16W
Low Battery Protection (Enabled):	Auto adjust low battery shutdown

PV

PV Input Feed:	2 (70ATB with CB protection)
Voltage Range:	48 to 120VDC
Continuous Power:	4100W
Max. MPPT Output Current: (with no AC load)	72A DC

Interface

Remote Monitoring:	RS232 (incl. Solaris 3500XP user software)
Auxiliary Control Output Relays:	7
Auxiliary Inputs:	3

Solaris PV String Combiner Specifications

Max. Number of Strings:	8
Max. String Input Current:	15A
Max. Output Current:	80A
Operating Voltage:	0 to 600VDC*
Max. Voltage:	600VDC*
String Input Wire Size Range:	AWG 14 to 8
Output Wire Size Range:	AWG 18 to 2
Fuse Type/Size:	Midget/10 x 38mm, DC recognized**
Enclosure Rating:	NEMA3R
Operating Temperature:	-4 to 104°F (-20 to 40°C)

* Voltages apply to input and output circuits

** Per NEC 690, fuses must be rated at least 156% of the string short-circuit current (Isc)

Mechanical

Dimensions (in):	11.04H x 9.55W x 4.65D
(mm):	280.4H x 242.6W x 118.1D
Weight (lb/kg):	5/2.27

General Specifications

Specified Temperature Range:	-40 to 55°C
Humidity Range:	Up to 95% (non-condensing)
Altitude:	4500ft
Enclosure Type:	NEMA 3R (Indoor/Outdoor - rain & sprinkler proof)
Unit Weight (lb/kg):	130/59
Shipping Weight (lb/kg): (without batteries)	140/64
System Dimensions (in/mm):	43H x 32W x 18D (1092 x 813 x 457)
Mounting:	Pad Mount
Warranty:	3 year limited (3 year extended warranty available)

Features

- Configurable Input/Output voltages options: 120/240VAC or 208VAC
- Critical load back up with UL certified UPS (10msec typical transfer time)
- Intelligent battery management system with automatic charge control from PV and/or grid with temperature compensation.
- Scalable back up time with expandable battery configuration or generator backup.
- The factory pre-integrated, tested and calibrated package including all AC/DC disconnect breakers, wiring and electronics, makes the Solaris 3500XP an easy installation with very few components.
- No power derating from -40 to 55°C gives superior energy delivery performance

Regulatory Approvals

PV Inverter:	UL 1741
True UPS Certification:	UL 1778

Options

Intrusion Proof Alarm	Surge Protection Kit
Battery Heating Mat	PV String Combiner
Pedestal Mount Kit	Sliding Battery Tray

Alpha Solar Battery Options

Application

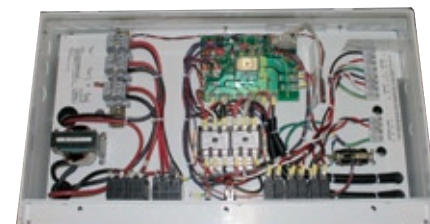
Grid Tie (Float) Temp Controlled:
Grid Tie (Float) Non-Temp Controlled:
Grid Tie (Float) Non-Temp Controlled:
Off Grid (Cycle) Temp Controlled:
Off Grid (Cycle) Non-Temp Controlled:

Alpha Battery Model

AlphaCell 225GXL-3FTA Front Terminal (AGM)
AlphaCell 195GXL-3FTA Front Terminal (Gel)
AlphaCell 85GXL, 180GXL Top Terminal (Gel Silver Alloy)
VR Solar 33, 50, 75 & 100AH (AGM Deep Cycle)
Solar 28, 45, 66, 78 & 88AH (Gel Deep Cycle)



The Solaris RS-232 interface shows graphically what power is being produced and where it is going (grid-tie shown).



Factory Pre-integrated System



Solaris PV String Combiner Box
021-509-20



Solaris 3500XP

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