

Solaron® 500 kW PV Inverter

500 kW PV inverter with high efficiency and better BoS for utility-scale, grid-tie photovoltaic installations

Benefits

Increase system ROI
Reduce balance-of-system (BoS) costs
Achieve higher energy harvests
Monitor and control with flexible, integrated communications
Rely on worldwide service and support

Features

500 kW, high-power, transformerless, bipolar design
Largest core engine in North America—with the industry's smallest footprint and lightest weight in its class
97.5% CEC efficiency
Integrated IDS™ data monitoring and communications
Remote PV Tie (RPT™) accessory
Nearly three decades of experience in solar PV industry
24 x 7 x 365 global service and support

Awards

2009 recipient of ECN Magazine Reader's Choice Tech Award in the Energy Efficiency category
2009 Solar Awards winner in the Energy Usage category
2009 recipient of EE Times ACE Award in the Most Innovative Renewable Energy category
2008 recipient of Frost & Sullivan North American Product Innovation Award

Achieve higher, faster PV system ROI and better BoS optimization with Advanced Energy's Solaron® 500 kW inverter model. The durable PV inverter is ideally suited for utility-scale or large commercial installations. In addition to innovative, high-power, high-efficiency technology, you receive advanced monitoring and control capabilities to provide greater performance insight. An optional Remote PV Tie (RPT™) accessory can cut your BoS costs even further, and our SafeGuard® program offers proactive service that goes far beyond the standard warranty.

Increase ROI with High Efficiency and Better BoS Optimization

The Solaron 500 kW PV inverter is ideally suited for utility-scale or large commercial PV installations. Higher power and 97.5% CEC efficiency translate to immediate out-of-pocket savings and greater returns on your investment—faster and at higher levels than previously possible.

Our field-proven, bipolar, transformerless PV architecture efficiently and reliably converts raw, solar DC power to high-quality AC grid electricity. The Solaron inverter has the largest core engine in North America—yet the industry's smallest footprint and lightest weight in its class. This innovative technology provides better balance-of-system (BoS) optimization, which means you can install fewer panels in your PV system for the same energy harvest. Or, alternatively, higher total system efficiency can contribute to years of higher kWh returns.

Monitor and Control Your System

A secure, integrated LCD and keypad provide unit operating data and interconnection set points on the front of the inverter cabinet. In addition, the on-board Integrated Data System (IDS™) software --included at no additional charge --provides Internet connectivity and collects and stores a wide range of real-time data, including

detailed unit configuration monitoring and control information.

Connect to any Solaron inverter with your web browser to view a suite of built-in graphical representations of minute-by-minute temperature, current, and voltage data --or gather data in Modbus® or CSV format to configure your own custom data and analysis reports.

IDS software also provides connectivity to many third-party data services like SEEDS™, Draker Labs, and DECK Monitoring.

Cut PV System Wiring Costs with Remote PV Tie (RPT™) Accessory

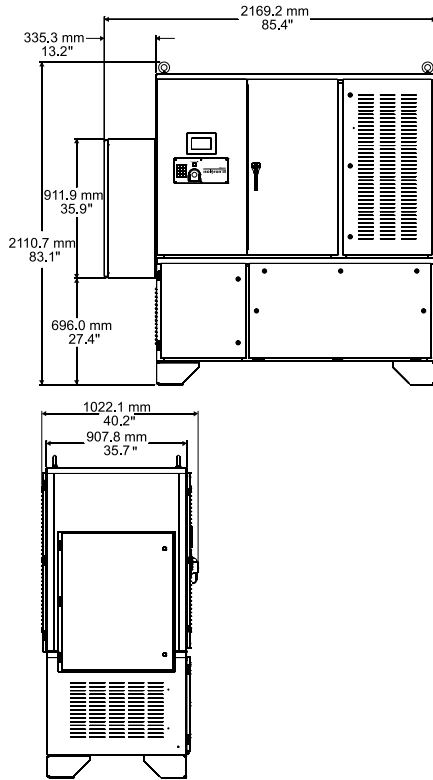
With the addition of an AE Solaron Remote PV Tie (RPT™) accessory, you can further reduce BoS installation costs and achieve even higher system efficiency. The RPT accessory reduces large-diameter copper cables as well as I²R losses for up to 4% more power output during operation. The RPT also offers flexibility in system design and inverter installation for large, utility-scale solar farms.

Rely on Our Worldwide Service and Support

The Solaron inverter is durable, robust, and reliable for ongoing, low-maintenance operation. If needed, AE's worldwide service organization is available 24 x 7 x 365 for support. We

also offer proactive services, including extended warranties (up to 20 years) and SafeGuard® service programs to help you maximize uptime and power generation. Our highly trained specialists can perform routine system queries, remote testing and diagnostics, and annual on-site inspections, all at a nominal cost.

Solaron® 500 kW Dimensional Drawing



For more information on Solaron PV inverters, visit: www.aesolaron.com. Specifications are subject to change without notice.

Solaron® 500 kW Summary Specifications

Physical	
Dimensions	83.1" (H) x 85.7" (W) x 39.9" (D)
	211.1 cm (H) x 217.7 cm (W) x 101.3 cm (D)
	Dimensions include cabinet handles and connection box.
Weight	3760 lb (1705.5 kg) unit weight
	4100 lb (1859.7 kg) shipping weight
Enclosure	Single cabinet design on sturdy steel frame for transportability and strength
Environmental Rating	NEMA3R
	NEMA 4 (electronics)
Connector and Cable Specifications	
Output Power Connectors	4 x 500 MCM wires (Cu or Al)
Input Power Connectors	4 x 500 MCM wires (Cu or Al)
User Display	Front panel LCD and keypad; security lock-outs; emergency shutdown button
Electrical	
Output Power	
Max Power	500 kW at 480 VAC
Voltage Range	432 to 528 VAC, 3 Φ, 60 Hz, grounded Wye connection
Frequency	60 Hz
Line Power Factor	> 0.99 typical
AC Current Distortion/TDD	< 5%
AC Line Current	600 A typical
	667 A max at 86°F (30°C) and low-line voltage; can be limited with field-adjustable settings
630 A max at 122°F (50°C)	
Peak Efficiency	98.6%
CEC Efficiency	97.5%
Input Power	
Array Configuration	Separable bipolar using standard PV modules
Voltage	± 330 to ± 600 VDC
MPP DC Current	750 ADC max
Open-Circuit Wake-Up Voltage	± 425 VDC default (configurable)
Standby Tare Losses	< 100 W
MPPT Window	± 330 to ± 550 VDC
Reactive Power Range	± 150 kVAR max
Factory-Installed Communication Interfaces	RS-232, RS-422, and RS-485
	Ethernet
	PCMCIA
Data Storage	> 10 years / 2 GB SD card (upgradeable)
Environmental	
Ambient Operating Temperature	-4°F to 122°F (-20°C to 50°C)
	Cold weather option to -31°F (-35°C)
Storage Temperature	-22°F to 158°F (-30°C to 70°C)
Relative Operating Humidity	0% to 95% non-condensing
Atmospheric Pressure	778 to 1060 mbar (78 to 106 kPa)
Elevation	6562' (2000 m) max
Cooling Requirements	
Cooling Medium	Combination air and liquid cooling (self-contained system)
Regulatory	
Directives and Standards	NRTL certified to UL 1741-2005 by CSA International
	IEEE 519, 929, 1547/1547.1
	NEC Article 690 (compatible)
	CEC eligible – 97.5%



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