

DC-COUPLED STORAGE SYSTEMS

PVS-500 (500 kWAC) AND PVS-375 (375 kWAC)

SMART and SGIP Ready

Yaskawa Solectria Solar's PVS-375 and PVS-500 provide the most robust and reliable Utility-Scale DC-Coupled Energy Storage System in the industry. The Solectria PVS DC-Coupled Energy Storage System comes with 3 Solectria XGI 1500 Inverters, a Plant Master Controller and a bi-directional Dynapower DPS 375 or DPS 500 DC/DC converter. Having the energy storage and the PV array on the same inverter allows this DC-coupled system to put the excessive PV production in storage and discharge to the grid at select times and conditions to maximize the value of the system.

MODELS AND KEY FEATURES

Model	Features
PVS-500	Three Solectria XGI 1500-166/166 inverters with a combined rating of 498 kWac
	DC Re-combiner with up to 5 PV Array inputs, allowing up to 1.25 MWdc and a DC/AC ratio of 2.5
	Dynapower DPS-500 DC/DC converter with a rating of 500 kWdc
	Heila Edge controller to optimize energy utilization
PVS-375	Three Solectria XGI 1500-125/125 inverters with a combined rating of 375 kWac
	DC Re-combiner with up to 5 PV Array inputs, allowing up to 1.25 MWdc and a DC/AC ratio of 3.3
	Dynapower DPS-375 DC/DC converter with a rating of 375 kWdc
	Heila Edge controller to optimize energy utilization

ADVANTAGES OF DC-COUPLED STORAGE

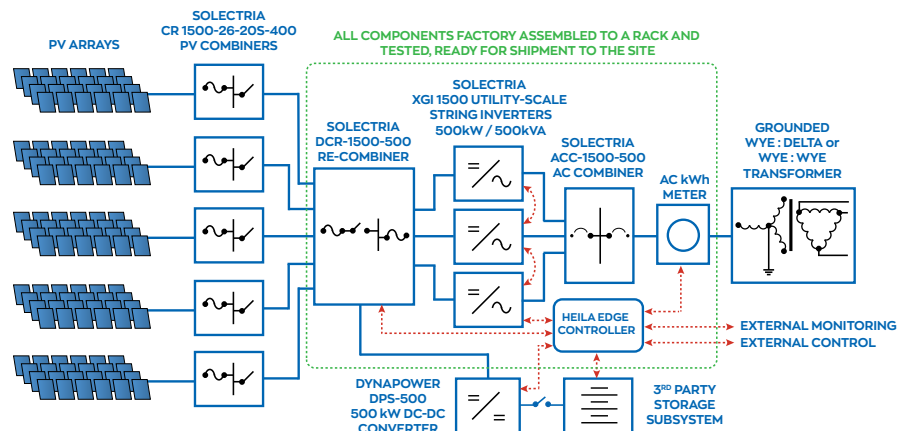
- Solar Peak Energy Re-capture
- Low-Voltage Harvesting
- Demand Charge Management
- Energy Time-Shifting
- Capacity Firming
- Ramp-Rate Control

SYSTEM DESCRIPTION

The PVS System includes:

- Solectria XGI 1500 utility-scale string inverters with switching synchronization, operating in parallel from the DC bus
- Optional: Solectria 1500VDC PV Source-Circuit Combiners with 400A switch
- Solectria DC Re-combiner that serves as the overall DC Bus in the system
- Heila Edge controller, provides control and communications to optimize the system
- Dynapower's advanced DPS-500 DC/DC converter that interfaces a storage subsystem*

* Storage subsystem not included. Contact sales@solectria.com for assistance with compatible storage subsystem



XGI 1500 Utility-Scale String Inverters

- Two inverter models: 166 kW/166 kVA and 125 kW/125 kVA
- 99% peak efficiency
- 1500 Vdc; 600 Vac 3-Phase
- CA Rule 21 & HI 14H, UL 1741SA

DPS Bi-Directional DC/DC Converters

- Two DC/DC Converter models: DPS-500 (500 kWdc) and DPS-375 (375 kWdc)
- 98.2% average efficiency
- 1500 Vdc
- Integrated fusing and switchgear
- Optimized for the Solectria XGI 1500 inverters

PVS-500 / PVS-375 DC COUPLED STORAGE SYSTEMS

TECHNICAL DATA

SPECIFICATIONS

Solectria Inverter Specifications	XGI 1500-166	XGI 1500-125	3 x XGI 1500-166	3 x XGI 1500-125
Absolute Max Input Voltage	1500 Vdc			
Max Power Voltage Range (MPPT)	860 – 1250 Vdc			
Max. PV Rated Power (STC)	1.25 MWdc			
Operating Voltage Range	860 – 1450 Vdc			
Max Operating Input Current	197.7 A	148.3 A	593.1 A	444.9 A
Nominal Output Voltage	600 Vac			
Continuous Real / Apparent Power Output	166 kW / 166 kVA	125 kW / 125 kVA	498 kW / 498 kVA	375 kW / 375 kVA
Maximum AC Output Current	160 A	120 A	480 A	360 A
CEC Avg / Peak Efficiency	98.5% / 99.0%	98.5% / 98.9%	98.5% / 99.0%	98.5% / 98.9%
Certifications	CA Rule 21 & HI 14H, UL 1741SA			
Warranty	5 Years			
For more information, please visit www.solectria.com				



Dynapower Converter Specifications	DPS-500	DPS-375
DC Input Voltage Range (Battery Port)	550 – 1500 Vdc	
DC Input Voltage Range (PV Port)	550 – 1500 Vdc	
Max Continuous Power Rating	500 kWdc	375 kWdc
Max Continuous Current Rating	+/- 500 A	+/- 312.5 A
Avg Efficiency	98.2%	
Operating Temperature Range	-25 to +50°C	
For more information, please visit www.dynapower.com		

PV Combiner Specifications	CR1500-26P-20S-400 1500V PV Combiners
Input Wire Compatibility	14 – 4 AWG
Output Wire Compatibility	Compression Terminal, 1 or 2 cond, 1/0 – 500 kcmil, 1 cond, 750 kcmil
Fuse Rating, Positions	20A, 26 Positions
Fuse Configuration	Positive Polarity Fused
Integrated DC Disconnect	400A, 2-pole
For more information, please visit www.solectria.com	

Re-Combiner Specifications	DCR-1500-500 1500V Re-Combiner
PV Output Circuits Connections	5 Positions, 400A Fuse and Disconnect (NEC 690.8 PV Output Circuit Current ≤ 320A)
DC/DC Converter Connection	625A Fuse
XGI 1500 Inverters Connections	3 Positions, 250A Fuse
For more information, please visit www.solectria.com	

HEILA Edge Controller Specifications	HEILA Edge Controller
Grid Integration Capabilities	DNP3, Multi-speak, IEEE-2030.5, IEC-61850, OpenADR
Battery, Meter and Sensor Integration Capabilities	Modbus TCP/RTU, CAN bus, BACnet, analog/digital signals
Operational Capabilities	Cloud-based access, data and event logs visualization, archival, reporting, and exporting
Autonomous Operational Capabilities	Local network, all metrics acquired and stored locally
For more information, please visit www.solectria.com	

IT'S PERSONAL

YASKAWA
SOLECTRIA SOLAR

Yaskawa Solectria Solar 1-978-683-9700 | Email: inverters@solectria.com | solectria.com
Document No. FL.PVS500.01 | 03/12/2021 | © 2021 Yaskawa America, Inc.