

DC-COUPLED STORAGE SYSTEMS

PVS-500 (500 KWAC), PVS-375 (375 KWAC) AND PVS-250 (250 KWAC)

SMART and SGIP Ready

Yaskawa Solectria Solar's PVS-500, PVS-375 and PVS-250 provide the most robust and reliable Utility-Scale DC-Coupled Energy Storage Systems in the industry. A Solectria PVS DC-Coupled Energy Storage System comes with Solectria XGI 1500 inverters, a Heila Edge Plant Master Controller and a bi-directional Dynapower 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	3 Solectria XGI 1500-166/166 Inverters rated at 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
PVS-375	3 Solectria XGI 1500-125/125 Inverters rated at 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
PVS-250	2 Solectria XGI 1500-125/125 Inverters rated at 250 kWac DC Re-combiner with up to 5 PV Array Inputs, allowing up to 1.25 MWdc and a DC/AC ratio of 5.0
ALL MODELS	Dynapower DPS-500 DC/DC converter to interface the battery system Heila Edge controller to optimize energy utilization

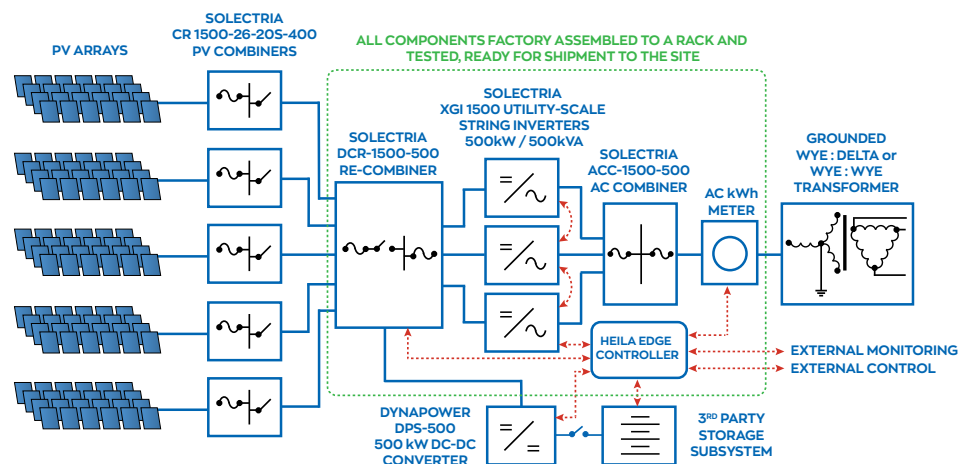
ADVANTAGES OF DC-COUPLED STORAGE

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

SYSTEM DESCRIPTION

The PVS Systems include:

- Optional: Solectria 1500 VDC PV Source-Circuit Combiners with 400 A switch
- Solectria XGI 1500 utility-scale string inverters with synchronized switching, operating in parallel from the DC bus
- Solectria DC Re-combiner that serves as the overall DC Bus in the system
- Solectria AC Combiner with fusing for the inverter AC outputs, a combined output fuse and master switch
- 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 subsystems.



Dynapower Bi-Directional DC/DC Converters

- DPS-500 (500 kWdc) used in all DC-Coupled Storage systems
- 98.2% average efficiency
- 1500 Vdc
- Integrated fusing and switchgear
- Optimized for the Solectria XGI 1500 Inverters

PVS-500 / PVS-375 / PVS-250

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	2 x XGI 1500-125
Absolute Max Input Voltage	1500 Vdc				
Max Power Voltage Range (MPPT)	860 - 1250 Vdc				
Max. PV Rated Power (STC)	332 kWdc		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	296.6 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	250 kW / 250 kVA
Maximum AC Output Current	160 A	120 A	480 A	360 A	240 A
CEC Avg / Peak Efficiency	98.5% / 99.0%	98.5% / 98.9%	98.5% / 99.0%	98.5% / 98.9%	98.5% / 98.9%
Certifications	CA Rule 21 & HI 14H, UL 1741SA				
Warranty	5 Years				

For more information, please visit www.solectria.com. *XGI 1500-250/250 available in Q1 2022



Dynapower Converter Specifications	DPS-500
DC Input Voltage Range (Battery Port)	550 - 1500 Vdc
DC Input Voltage Range (PV Port)	550 - 1500 Vdc
Max Continuous Power Rating	500 kWdc
Max Continuous Current Rating	+/- 500 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	400 A, 2-pole

For more information, please visit www.solectria.com

DC Re-Combiner Specifications	DCR-1500-500 (3 x XGI 1500-166)	DCR-1500-375 (3 x XGI 1500-125)	DCR-1500-250 (2 x XGI 1500-125)	AC Re-Combiner Specifications	ACC-1500-3-200A	ACC-1500-3-150	ACC-1500-2-150
PV Output Circuit Connections	5 positions, 400 A fuse and Disconnect	5 positions, 400 A fuse and Disconnect	5 positions, 400 A fuse and Disconnect	DC-Coupled Storage System Compatibility	PVS-500	PVS-375	PVS-250
DC/DC Converter Connection	1 position, 800 A fuse	1 position, 800 A fuse	1 position, 800 A fuse	XGI 1500 Inverter Connections	3 positions, 200 A fuse	3 positions, 150 A fuse	2 positions, 150 A fuse
XGI 1500 Inverter Connections	3 positions, 315 A fuse	3 positions, 250 A fuse	3 positions, 250 A fuse	Main Fuse and Switch Rating	600 A fuse, 600 A switch	500 A fuse, 600 A switch	300 A fuse, 600 A switch

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

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