

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 1.25MWdc 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

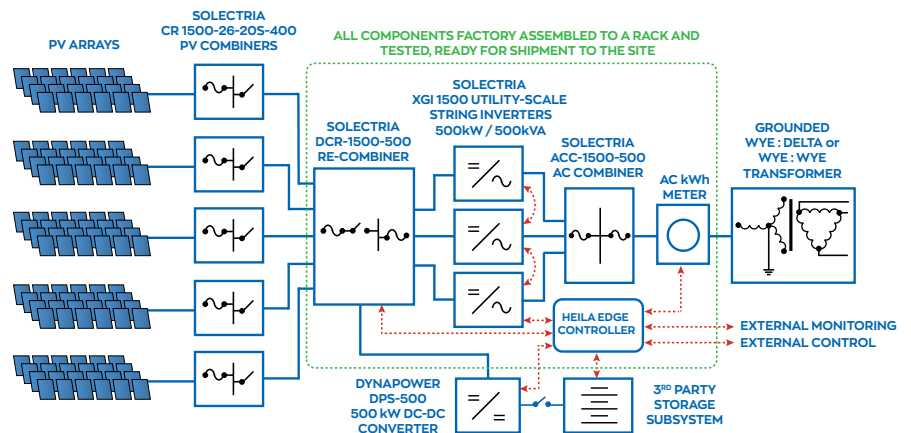
- Solar Peak Energy Re-capture
- Low-Voltage Harvesting
- Demand Charge Management
- Energy Time-Shifting
- Capacity Firming
- Ramp-Rate Control

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

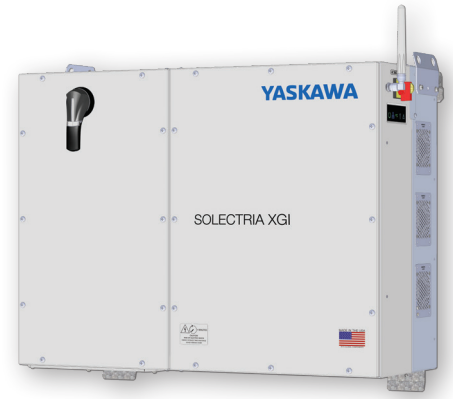
- Two DC/DC Converter models: DPS-500 (500 kWdc) and DPS-375 (375 kWdc)
- 98.2% average efficiency
- 1500 Vdc
- Integrated fusing and switchgear
- Optimized for the Solectria XGI 1500 inverters

PVS-500 / PVS-375 DC COUPLED STORAGE SYSTEMS

TECHNICAL DATA

SPECIFICATIONS

| Solectria Inverter Specifications | XGI 1500-166 | XGI 1500-125 | PVS-500 3 x XGI 1500-166 | PVS-375 3 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 |
| 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 | |

