

Prism MVP 1

Two-piece, pre-packaged MV system for grounded 900 VDC arrays:

2 x PVS-500 kW NEMA 1 inverters

Prefabricated weather-tight outdoor enclosure with dual entrances houses inverters

Corresponding 1000 kVA transformer with dual low voltage-side windings and integral MV disconnect switch

Transformer configurable to meet any voltage up to 43.8 kV

Two-piece installation allows for separation of the inverter and transformer to suit site requirements

Prism MVP 2

One piece, factory integrated MV system for grounded 900 VDC arrays:

2 x PVS-500 kW NEMA 1 inverters

Prefabricated weather-tight outdoor enclosure with dual entrances houses inverters

Corresponding 1000 kVA transformer with dual low voltage-side windings and integral MV disconnect switch

Transformer configurable to meet any voltage up to 43.8 kV

One piece design with inverter and transformer on same transportable chassis allows for “ship and drop” installation with minimal site preparation

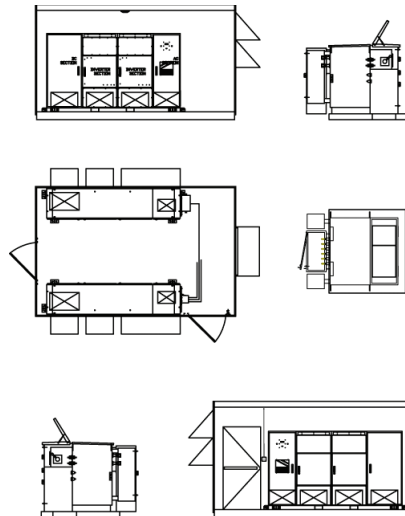
Satcon Prism 1 MW Medium Voltage Solution



Satcon™ Prism™ a fully integrated one megawatt medium voltage (MV) solution optimized for utility scale solar PV installations. Leveraging Satcon’s industry standard setting PowerGate® Plus 500kW solar PV inverters, Prism is a utility grade one megawatt platform, complete with factory integrated step-up transformers, MV disconnect switches, and power conversion electronics.

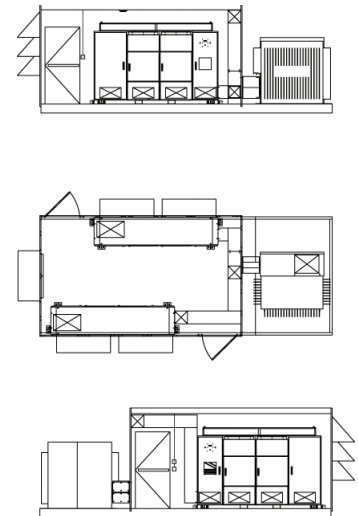
The solution is delivered in two configurations; both complete with an all-weather outdoor enclosure and ready to connect to the PV array and utility grid, enabling rapid installation through a modular prepackaged design.

Satcon Prism MVP 1



Two-Piece, pre-packaged MV system for grounded 900 VDC array systems

Satcon Prism MVP 2



Pre-packaged, 1MW, integrated, one – piece MV solution for grounded, 900 VDC PV array systems



Edge™ MPPT

Provides rapid and accurate control that boosts PV plant kilowatt yield

Provides a wide range of operation across all photovoltaic cell technologies

Printed Circuit Board Durability

Wide thermal operating range: -40° C (-40° F) to 85° C (185° F)

Conformal coated to withstand extreme humidity and air-pollution levels

Proven Reliability

Rugged and reliable, PowerGate Plus PV inverters are engineered from the ground up to meet the demands of large-scale installations.

Low Maintenance

Modular components make service efficient

Dual cooling fans

Safety

Seismic Zone Compliant (IBC, ASCE 7, ICC ES AC156 seismic acceptance criteria)

Integrated DC two-pole disconnect switch isolates the inverter (with the exception of the GFDI circuit) from the photovoltaic power system to allow inspection and maintenance

Isolation provided by MV transformer

Protective covers over exposed power connections

Prism - 1,000 kW MV System Electrical Specifications		UL/CSA
Input Parameters		
PV Array Configuration	Positive Ground	○
	Negative Ground	●
Maximum Array Input Voltage	900 VDC	●
Input Voltage Range (MPPT; Full Power)	420 VDC to 850 VDC	●
Maximum Input Current	1,228A (per 500 kW power block)	●
	2,456A Total	
Combiner Option	15 inputs @ 200 A per 500 kW power block (30 inputs total per 1 MW)	○
Output Parameters		
Inverter Output Voltage Range	265 VAC 233 VAC - 292 VAC	●
Transformer - High Voltage Side (nominal)	To be specified by Customer	
Output Frequency Range	59.3Hz - 60.5Hz	●
Maximum Output Current per Phase	265 VAC 1,090 A per 500 kW power block (2,180 A total)	●
	Typical @ 12.47 kV = 46.32 A per 1 MW power block	
	46.32 A total	
CEC-Weighted Efficiency	96%	●
Maximum Continuous Output Power	1,000 kW	●
Power Factor at Full Load	>0.99	●
Harmonic Distortion	<3% THD	●
Temperature		
Operating Ambient Temperature Range (Full Power)	-20° C to +50° C	●
Cooling	Forced Air	●
Heater		○
Auxiliary Transformers		
480V, 120V		○
Warranty		
Five Years		●
Extended Warranty (Up to 10, 15 or 20 Years)		○
Extended Service Agreement		○
Uptime Guarantee		○
Intelligent Monitoring		
Satcon PV View® Plus		○
Satcon PV Zone®		○
Third-Party Compatibility		●

- Standard
- Optional

Note: Specifications are subject to change.



Streamlined Design

With all components encased in a single, space-saving enclosure, PowerGate Plus PV inverters are easy to install, operate, and maintain.

Single Cabinet with Small Footprint

Convenient access to all components

Large in-floor cable glands make access to DC and AC cables easy

Rugged Construction

Engineered for outdoor environments

Medium Voltage Transformer

Provides galvanic isolation

Steps up output voltage of the PV inverter to the grid

Quiet Operation

65 dB(A) standard

E-House Enclosure Specifications:

Satcon Prism is housed in a NEMA 3R outdoor rated enclosure which is designed and constructed to ensure a robust package capable of maintaining weather-tightness over a wide range of environmental conditions in addition to security for the power conditioning system.

Baseframe:

Base frame is constructed of structural steel, shop welded, and in full conformance with ASTM A 36 standards. It is designed to handle uniform and concentrated loads during shipping, handling, and rigging, with strategically located lifting lugs.

Flooring:

The flooring is made up of tightly fitting, non-conducting, of $\frac{3}{4}$ " Fire Rated plywood covered with a non-skid surface

Walls:

Wall posts are 14 gauge galvanized (minimum), shop welded to both the structural steel base frame and roof z-bracket to form a rigid framework which is capable of transmitting full roof load into the base frame. All walls are insulated with CertainTeed Fiber Glass Duct Board System for an R value 4.3.

Steel Doors and Hardware:

The two steel doors are 20 gauge with R 2.4 insulation. They each have an interior panic bar and door closer as standard.

Siding:

Siding panels are tight fitting, full length, panels that provide a continuous weathertight, waterproof exterior. The panels are made of 22 gauge Factory Painted Stucco Aluminum, fastened to the vertical wall posts with zinc plated fasteners that resist galvanic reaction. The siding is designed to exceed a wind load of 90mph.

Roof:

The enclosure roof is comprised of tight fitting, robust, weathertight, waterproof, EPDM membrane. The roof has a minimum pitch of 1" across the enclosure width for best water run-off. The roof is insulated to an R value of 4.3.

Lighting:

Standard interior fluorescent lighting is 4'T8 High Output light fixtures.



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