

## Unparalleled Performance

Satcon enables you to closely match array capacities to achieve maximum energy throughput.



### Edge™ MPPT

Features a proprietary maximum power point tracking (MPPT) system

Provides rapid and accurate control

Improves performance by up to 20%, even in challenging climate conditions

Boosts overall PV plant kilowatt yield

Provides a wide range of operation across all photovoltaic cell technologies, including thin film, monocrystalline, and polycrystalline PV panels

### Power Efficiency

Full array nameplate power rating maintained throughout the entire MPPT DC voltage range

Superior dynamic performance in cloudy conditions

### 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

## 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

No clearance required for sides and back

Convenient access to all components

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

### Rugged Construction

Engineered for outdoor environments

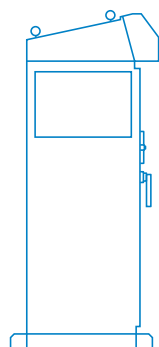
### Output Transformer

Provides galvanic isolation

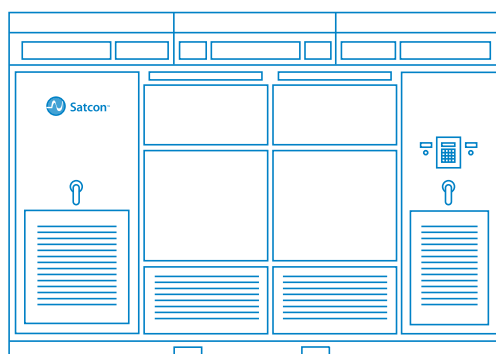
Matches the output voltage of the PV inverter to the grid

Includes high-speed anti-islanding algorithm

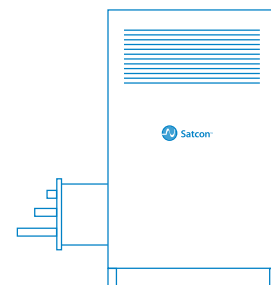
## PowerGate® Plus 500 kW Commercial Solar PV Inverter



Side



Front



Integrated Transformer  
(NA and Asia Models Only)

### PowerGate Plus 500 kW Specifications

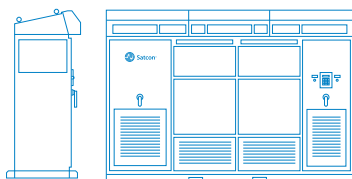
#### Input Parameters

Maximum Array Input Voltage	600V DC (UL)	o	o	
	900V DC (CE)	o	o	o
Input Voltage Range (MPPT; Full Power)	320–600V DC	o	o	
	430–850V DC	o	o	o
Low Voltage Tap Line <sup>1</sup>	20%	o	o	
Maximum Input Current	1,682A DC	o	o	o

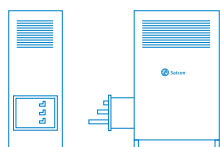
#### Output Parameters

Output Voltage Range (L-L)	422–528V AC	o		
Nominal Output Voltage	208V AC <sup>2</sup>		o	
	265V AC <sup>2</sup>	o	o	o
	480V AC	o		
Output Frequency Range	59.5–60.5 Hz	o	o	
	49.5–50.5 Hz			o
AC Voltage Range Set Points	+/- 10%	o	o	o
Nominal Output Frequency	60 Hz	o	o	
	50 Hz			o
Number of Phases	3	o	o	o
Maximum Output Current per Phase	602A	o	o	o
Maximum Overcurrent Protection per Phase	753A	o	o	o
CEC-Weighted Efficiency	96%	o		
	97% <sup>2</sup>		o	o
Maximum Continuous Output Power	500 kW (500 kVA)	o	o	o
Tare Losses	-138.12 W	o	o	o
Power Factor at Full Load	>0.99	o	o	o
Harmonic Distortion	<3% THD	o	o	o

o Standard   o Optional



**PowerGate Plus 500 kW PV Inverter**



**PowerGate Plus 500 kW  
Integrated External Transformer<sup>1</sup>**

<sup>1</sup> Standard on the North American model only; custom transformer solutions are also available

#### Models

North America	480V AC Output
Asia	380V AC Output
European Union	265V AC Output

#### 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 4 compliant

Built-in DC and AC disconnect switches

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

Built-in isolation transformer

Protective cover over exposed power connections

PowerGate Plus 500 kW Specifications		NA	Asia	EU
<b>Temperature</b>				
Operating Temperature Range (Full Power)	-20° C to +50° C	o	o	o
Storage Temperature Range	-30° C to +70° C	o	o	o
Cooling	Forced Air	o	o	o
<b>Noise</b>				
Noise Level	<65 dB(A)	o	o	o
	55 dB(A) (Opt.)	o	o	o
<b>Combiner</b>				
Number of Inputs and Fuse Rating	20 (160A DC) (Opt.)	o	o	o
	30 (100A DC) (Opt.)	o	o	o
<b>Transformer</b>				
Integrated External Transformer		o	o	
<b>Inverter and Integrated External Transformer Cabinets</b>				
Enclosure Rating (Outdoor) (IEC Grade)	NEMA 3R	o	o	o
Enclosure Finish (16-Gauge, Powder-Coated Steel)	RAL-7032	o	o	o
Base and Door Finish (14-Gauge, Powder-Coated Steel)	RAL-7032	o	o	o
Cabinet Dimensions (Height x Width x Depth)	Inverter	93.47" x 138.75" x 42.47" (235.5 cm x 352.43 cm x 107.87 cm)		
	Transformer	77" x 49" x 30.5"		
Cabinet Weight	Inverter	5,900 lbs.	2,676 kg	2,676 kg
	Transformer	3,200 lbs.		
<b>Testing and Certification</b>				
UL1741, CSA 107.1-01, IEEE 1547, IEEE C62.41.2		o	o	
CE Certification				o
Zone 4 Seismic Rating		o	o	o
<b>Warranty</b>				
Five Years		o	o	o
Extended Warranty (10, 15, or 20 years) (Optional)		o	o	o
Extended Service Agreement (Optional)		o	o	o
<b>Intelligent Monitoring</b>				
Satcon PV View® Plus (Optional)		o	o	o
Satcon PV Zone (Optional)		o	o	o
Third-Party Compatibility		o	o	o

o **Standard**

o **Optional**

<sup>1</sup> Accommodates low solar array voltages by reducing minimum input voltage requirements by 20%.

<sup>2</sup> External transformer

Note: Specifications are subject to change

**Satcon Corporate**  
27 Drydock Avenue  
Boston, MA 02210  
P 617.897.2400  
F 617.897.2401  
E [sales@satcon.com](mailto:sales@satcon.com)

**Satcon West**  
2925 Bayview Drive  
Fremont, CA 94539  
P 510.226.3800  
F 510.226.3801  
E [sales@satcon.com](mailto:sales@satcon.com)

**Satcon Canada**  
835 Harrington Court  
Burlington, ON L7N 3P3  
Canada  
P 905.639.4692  
F 905.639.0961  
E [sales@satcon.com](mailto:sales@satcon.com)

**Satcon Spain**  
Príncipe de Vergara 93 - 1º  
28006 Madrid, Spain  
P 34 917610275  
F 34 915612987  
E [sales@satcon.com](mailto:sales@satcon.com)