

## Off-Grid Power Made Simple

The Satcon PowerGate 100 kW Hybrid PV inverter converts DC power from a solar array or a battery into AC power, and supplies it to an off-grid load. When the sun has set or the battery needs charging, the PowerGate 100 kW Hybrid can continue to supply power through a generator, ensuring the load is always powered.

## Unparalleled Performance

### 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

## Proven Reliability

### 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® 100 kW Commercial Hybrid PV Inverter



### PowerGate 100 kW Hybrid Specifications

#### Input Parameters

Maximum Input Voltage	PV	600V DC	•
	Battery	325V DC	•
Input Voltage Range	PV	330–600V DC	•
	Battery	210–325V DC	•
Low Voltage Tap Line <sup>1</sup>		10%	•
Maximum Input Current	PV	319A DC	•
	Battery	400A DC	•
Input Current Ripple	Battery	<2% rms	•

#### Generator Output Parameters (to Inverter)

Output Voltage Range (L-L)	432–528V AC	•
Nominal Output Voltage	480V AC	•
Nominal Output Frequency	60 Hz	•
Output Frequency Range	56–64 Hz	•
Number of Phases	3	•
Maximum Output Current per Phase	120A	•

#### Inverter Output Parameters

Output Voltage Range (L-L)	432–528V AC	•
Nominal Output Voltage	480V AC	•
Nominal Output Frequency	60 Hz	•
Output Frequency Range	59.5–60.5 Hz	•
AC Voltage Range Set Points	+/- 10%	•
Number of Phases	3	•
Maximum Output Current per Phase	121A	•
Maximum Overcurrent Protection per Phase	145A	•
Overload Capability (Continuous)	110%	•
Power Conversion Efficiency	93.4%	•

• Standard ○ Optional



## Components

### PowerGate 100 kW Hybrid

PV Inverter	480V AC Output
Generator	480V AC Output
Battery	400A DC Input

## Streamlined Design

With all components encased in a single, space-saving enclosure, the PowerGate 100 kW Hybrid inverter is easy to install, operate, and maintain.

### Single Cabinet with Small Footprint

Top-lifting eye bolts and fork lift-ready base make installation easy

Convenient access to all components

### Rugged Construction

Engineered for outdoor environments

### Output Transformer

Provides galvanic isolation

Matches the output voltage of the PV inverter to the grid

## PowerGate 100 kW Hybrid Specifications

Maximum Continuous Output Power	100 kW (100 kVA)	●
Power Factor at Full Load	>0.99	●
Harmonic Distortion	≤3% THD	●
<b>Temperature</b>		
Operating Ambient Temperature Range (Full Power)	-20° C to +50° C	●
Storage Temperature Range	-30° C to +70° C	●
Cooling	Forced Air	●
<b>Humidity</b>		
Relative Humidity (Non Condensing)	15% to 95%	●
<b>Combiner (Optional)</b>		
Number of Inputs and Fuse Rating	6 (100A DC) (Opt.)	○
<b>Cabinet</b>		
Enclosure Rating (Outdoor) (IEC Grade)	NEMA 3R	●
Enclosure Finish (11-Gauge, Powder-Coated Steel)	RAL-7032	●
Base and Door Finish (11-Gauge, Powder-Coated Steel)	RAL-7032	●
Cabinet Dimensions (Height x Width x Depth)		84" x 82" x 30"
Cabinet Weight		4,700 lbs.
<b>Transformer</b>		
Integrated Internal Transformer		●
<b>Testing and Certification</b>		
ANSI 62.41, IEEE 1547-2003		●
Zone 4 Seismic Rating		●
<b>Warranty</b>		
Five Years		●
Extended Warranty (10, 15, or 20 years) (Optional)		○
Extended Service Agreement (Optional)		○
<b>Intelligent Monitoring</b>		
Third-Party Compatibility		○

- Standard
- Optional

<sup>1</sup> The 10% boost tap on the isolation transformer increases the AC voltage output range for applications where the solar array DC operating voltage is at or near the lower end of the DC input range. This boost allows for continued inverter operation at lower DC voltage input levels.

Note: Specifications are subject to change.

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