



Smart-Grid/PV Inverters

SGI 250
SGI 300

SGI 266
SGI 500

a breakthrough for utility PV



Best-in-class SGI 250, SGI 266, SGI 300 and SGI 500 inverters: exceptional quality and efficiency with advanced features.



UTILITY SCALE PV INVERTERS

- SmartGrid features for utilities.
- Fully integrated unit w/transformer.
- Low height, min array shade set back.
- User navigable LCD display.
- Preventative maintenance option.
- Premium efficiency.
- Smallest footprint.
- Ship in 1 or 2 pieces.
- Ethernet & RS485 standard.
- Uptime guarantee option.

The Sollectria Renewables SGI 250, SGI 266, SGI 300 and SGI 500 are rugged, DSP-controlled, premium efficient PV inverters for grid-connected commercial and utility 3-phase PV and storage systems. With peak inverter power electronics efficiency over 98.5% (over 97% including the transformer and filters) and fully integrated packaging, these inverters set a new industry standard for efficiency, ease of installation and use, reliability and installed cost. Made in USA.

APPLICATIONS

- 250-500kWAC, 60Hz/50hz, 480VAC (600VAC option), 3-phase, grid-tied commercial PV systems (200-600kWDC STC array).
- Multiple inverters can be used together in any combination for 750kW, 1MW and multi-MW PV systems.
- Designed for mounting as convenient, in full sun, driving rain and drifting snow: rooftop/ground or indoors. Low height.
- Can be used (in future versions) for other renewable and distributed generation applications such as battery storage, fuel cell, wind power, hydro, geothermal, and biomass.

FEATURES & OPTIONS

- Fully integrated design includes transformer, filters, integrated AC & DC disconnects (with optional DC sub-combiner fuses).
- Industry-leading overall efficiency including isolation transformer.
- Simple set-up and connections (connect DC from PV combiners and 3-phase AC connections).
- Precision DSP-controlled Maximum Power Tracking Algorithm.
- High-reliability design, based on 20 years of power electronics development, includes modular, sealed power and signal electronics unit and high-efficiency magnetics.
- Fused DC sub-combiner (6-32 fuses, 100-400A).
- Optional SOLZONE sub-array current monitoring.
- Optional integrated revenue-grade metering.
- Optional positive grounded version.

SMARTGRID FEATURES FOR ELECTRIC UTILITIES

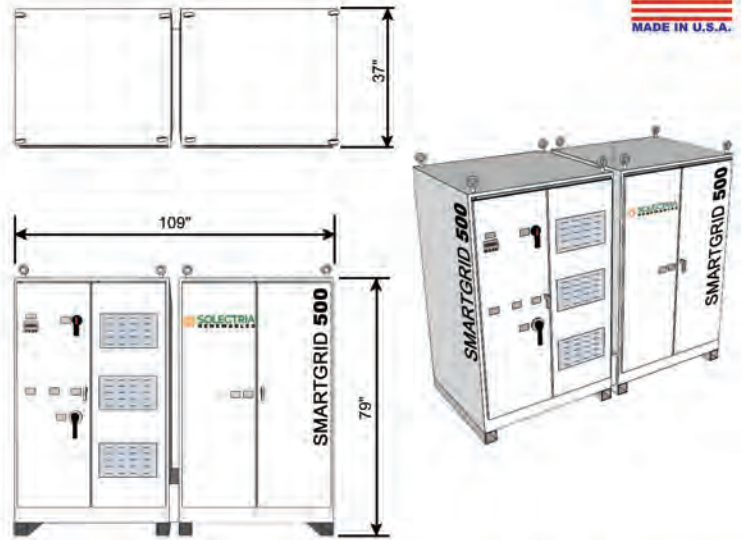
- VAR support to minimize transmission losses.
- Low-voltage ride-through capability.
- Remote control and command.

CONNECTIVITY

- RS485, MODBUS RTU standard for communication with SCADA system.
- User-navigable LCD display.
- SolrenView Inverter-Direct data monitoring option, Ethernet is standard. Compatible with other web-monitoring services.

SAFETY FEATURES

- Electronic temperature protection.
- DC ground-fault detection and interrupt.
- Current limit protections.
- Specifications: UL-1741, IEEE-1547, CSA 22.2 #107.1, IEEE62.45, FCC-15 Part A.



Specifications	SGI 250	SGI 266	SGI 300	SGI 500
Output				
Continuous AC Power	250 kW	266 kW	300 kW	500 kW
CEC Eligible AC Power (480VAC)	250 kW	266 kW	300 kW	500 kW
Power Factor	> 0.99			
Voltage (L-L), ±10%	480 VAC, 3-Ph (600VAC option)			
Rated Current (480VAC)	301A	320A	360A	600A
(600VAC)	241A	256A	288A	480A
Current Distortion	< 3% THD, Nom power			
Frequency	60 Hz / 50 Hz			
CEC Efficiency (estimated)	97.0%			
Overall Peak Efficiency ¹	97.4%			
Input				
Array Configuration:	Monopole, negative grounded (pos ground opt)			
Max V _{OC} ²	625 VDC			
Maximum DC Current	834A	886A	1,000A	1,667A
CEC Eligible DC Current	834A	886A	1,000A	1,667A
MPT Voltage Range	300-500 VDC (285VDC option)			
CEC Full Power Voltage Range	300-480 VDC			
Protection³				
AC Grid-connection (Standards Compliance: See "Safety Features")	Over/Under Voltage, Over Current, Over/Under Freq., DC Ground Fault (GFDI)			
AC Disconnect (Integral)	NEMA 3R, Integral			
DC Sub-Combiner w/Fuses	100A-400A fuses available, 6-32 pole, NEMA 3R, TVSS			
DC Disconnect (Integral)	Break load rated, NEMA 3R			
Environmental				
Ambient Temperature	-30 to 50 deg C (full power)			
Storage Temperature	-40 to 70 deg C			
Cooling	Automatic Forced Convection			
Enclosure	Rain Proof (UL1741)			
Electronics Enclosures	Sealed (IP62)			
General				
Weight lb [kg] (add 150 lb pallet)	5170 [2350]	5170 [2350]	5650 [2568]	6980 [3173]
Dimensions: inch [mm] (Height w/o lifting eyes)	79[2007] H x 109[2769] W x 37[940] D			
Communications, Optional Data Acquisition	RS485 Modbus RTU, Ethernet, SolrenView web-based monitoring & rev. grade metering			
Warranty	5 years. Optional extensions to 10, 15, 20yr, Preventative Maintenance and Uptime Guarantee			

¹ Fully Integrated Package: Includes premium efficient transformer, filters, high-efficiency smart brushless blower, AC & DC disconnects.

² Max Open circuit voltage (V_{OC}) of PV array (= 1.25 x V_{OC} rated per NEC 690-7).

³ Complies with grid connection and safety standards ("Safety Features")