

Grid connect GC Inverters - medium/large power

BP Solar's Grid Connect (GC) inverters by SMA are one of the world's most popular grid connect inverters. The range made for BP Solar incorporate several outstanding features making these one of the most robust, user friendly inverters for grid connect applications on the market today.

Widely used

Due to their outstanding features, thousands of GC inverters have been used by BP Solar in projects around the world. With the introduction of several new models, the range has now become even larger and now includes higher levels of performance and even more features.

Technically outstanding

These inverters are intended for medium to large scale solar power systems and are ideally suited for use where efficiency, safety, ease of connection and a high degree of environmental protection is required.

These inverters are the next generation of technology, housed in an attractive water and dust proof, heavy duty cast aluminium chassis, allowing installation in a variety of outdoor locations, providing maximum flexibility in system configuration. The OptiCool® active cooling system results in outstanding temperature management providing maximum yields from your solar power system, with maximum power up to an ambient temperature of 45°C. Improved safety has been incorporated with a built in DC disconnect.

The range is available with a wide input voltage window, allowing solar arrays from 3kW to 7kW to be connected in a variety of configurations. The inverters feature an LCD display, which provides a wealth of information on solar system and inverter performance.

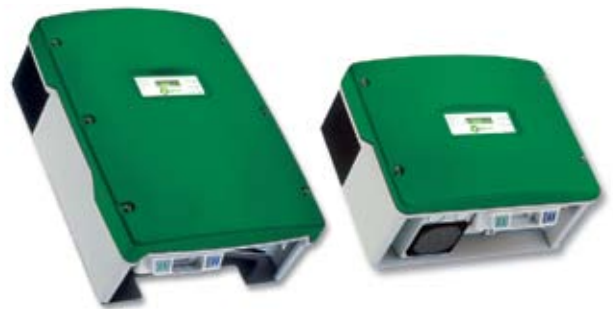
Key features:

Standard features

- IP65 (electronics) aluminium housing
- OptiCool® active cooling system
- Advanced Maximum Power Point Tracking
- Extended temperature range (-25°C to +60°C)
- Integrated diagnostic functions
- MC® plug and socket DC connectors
- Electronic Solar Switch (ESS) for DC disconnection
- Efficiency >96%
- Backlit 2-line display lid
- 10-year warranty

Options include:

- SolarSight remote wireless display
- RS232 or RS485 communications interface
- Multiple inverter data acquisition/logger and control interface (Sunny Boy Controller or Sunny WebBox) for up to 50 inverters
- Free PC software to communicate direct to the inverter or a Sunny Boy Controller.



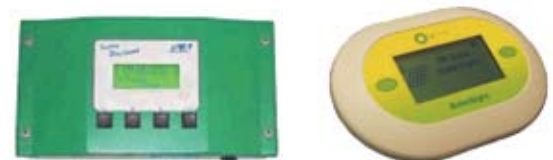
GC range of inverters.



Medium-sized system using multiple inverters.



Large-sized system using multiple inverters.



View data via Sunny Boy Controller or SolarSight.

Grid connect GC Inverters - technical specifications - medium/large power

Model	SB3300	SB3800	SMC5000A	SMC6000A
Electrical input values				
Recommended maximum array (Wp) ⁽¹⁾ :	4225	4490	6390	7000
Maximum input DC power (W):	3800	4040	5750	6300
Maximum DC voltage (V DC):	500	500	600	600
MPPT DC voltage range (V _{mpp}) ⁽²⁾ :	200-400	200-400	246-480	246-480
DC voltage threshold to begin exporting (V DC):	250	250	300	300
Maximum input current (I _{p max}) (A):	20	20	26	26
DC disconnect:	Electronic Solar Switch (ESS)			
DC cable connection:	Safe to touch MC [®] connectors			
Surge protection:	Thermally monitored varistors on DC side			
Earth fault monitoring:	Standard feature			
Reverse polarity protection:	Short circuit diode			
Electrical output values				
Nominal output power P _{AC} (W):	3300	3800	5000	6000
Peak AC power at 45°C (W) ⁽³⁾ :	3600	3800	5500	6000
Total harmonic distortion of output current ⁽⁴⁾ :	< 4%	< 4%	< 4%	< 4%
Grid AC voltage default range (V AC):	205 to 265			
Grid AC voltage programmable range (V AC):	180 to 265			
Grid frequency range (Hz):	49.8 to 50.2			
Grid frequency programmable range (Hz):	45.5 to 54.5 (50 Hz) 55.5 to 64.5 (60 Hz)			
AC connection method:	AC plug		Screw terminal	
General data				
Maximum efficiency:	95.2%	95.6%	96.1%	96.1%
Weight (approximate) (kg):	41	41	62	63
Size (W x H x D) (mm):	450 x 352 x 236	450 x 352 x 236	468 x 613 x 242	468 x 613 x 242
Ambient temperature:	- 25°C to 60°C			
Ambient humidity (non-condensing):	0 to 100%			
Environmental protection classification:	IP65 (electronics) IP54 (OptiCool [®] cooling system)			
Display/communication options ⁽⁵⁾ :	LCD display cover is standard, options of RS 485, RS 232			
Certifications/compliances (Australia only) ⁽⁶⁾ :	AS 4777, Certificate of Suitability, C-Tick			
Standard warranty:	10 years			

Notes

1. Maximum array size may result in AC power clipping with high isolation conditions.
2. Lower limit dependant on grid AC voltage.
3. AC power output derating can occur with higher temperatures as a protective function of the inverter.
4. Total harmonic distortion of output current (with $K_{Vgrid} AC < 2\%$, and $P_{AC} > 0.5 P_{AC nom}$).
5. One other communication option can be combined with the standard display cover.
6. Contact BP Solar for international equivalents.

This publication summarises product warranty and specifications, which are subject to change without notice and should not be used as the definitive source of information for the final system design. Additional warranty and technical information may be obtained from your local BP Solar representative or by calling 1800 802 762 in Australia.