

# SGB

## solar grid battery interactive sine wave inverter

# 15-40kW



robust powder coated zinc anneal housing

The **power solutions australia** Grid Interactive Inverters provide a means of directly connecting dc renewable sources such as solar photovoltaic arrays and small wind turbines to the electricity grid. Grid connection ensures that all renewable energy generated can be utilised. Surplus energy not used locally is exported to the grid to other electricity users.

Systems with batteries can operate in one of several configurations. Without local load input, the inverter starts and synchronises to the grid when renewable input becomes available and shuts down when renewables are too small to justify operation. This is useful to interface a wind turbine to the grid where the battery provides buffer storage against wind gusts and limits maximum DC input. With local load supplied from the grid during normal operation. If the grid fails the inverter disconnects and local load can be supplied from the battery. With local load supplied from the grid and renewables during normal operation. If the renewables exceed local load, excess power is exported, if they are less than local load the shortage will be supplied from the grid. If the grid fails the inverter disconnects from the grid, local load can be supplied from the battery and from renewable input. The battery will discharge if renewables are less than local load and be charged when they exceed local load. Reliable power solutions provide guaranteed supply should the grid fail, a generator is connected which automatically starts if the grid fails and the battery is discharged. It will shutdown when the battery is recharged, the grid is restored or is not required to support the load.

**power solutions australia**  
state of the art



## Model

Input voltages available	120VDC	110/120VDC	110/120VDC	110/120VDC	110/120VDC
Continuous output @40C	15kW	20kW	25kW	30kW	40kW
½ hour @ 40C ambient	19.5kW	26kW	32.5kW	39kW	52kW
1 hour 40C ambient	18kW	24kW	30kW	36kW	48kW
Surge	30kW	40kW	50kW	60kW	80kW
Maximum charge current	70-80A				
Peak efficiency/	>93%	>93%	>93%	>93%	>93%
Power factor range	0-1	0-1	0-1	0-1	0-1
Total harmonic distortion	<4%	<4%	<4%	<4%	<4%
Idle power	96W	110W	110W	110W	110W
Standby	30W	36W	36W	36W	36W
Autostart on demand	yes	yes	yes	yes	yes
Minimum start load	12 to 15W	12 to 15W	12 to 15W	12 to 15W	12 to 15W
Output isolation	cct breaker	cct breaker	cct breaker	cct breaker	cct breaker
Indicators	LED & LCD	LED & LCD	LED & LCD	LED & LCD	LED & LCD
Weight Kg	160 Kg	160 Kg	160 Kg	210 Kg	210 Kg
Cooling	5 x fans	5 x fans	5 x fans	5 x fans	5 x fans
Data Logging	yes	yes	yes	yes	yes
Internal/DC cct breaker	yes	yes	yes	yes	yes
Internal Gen contactor	30 kVA	40 kVA	no	no	no
External Gen contactor	no	no	yes	yes	yes
Remote access RS232	yes	yes	yes	yes	yes

	SGB-15-120	SGB-20-110	SGB-25-110	SGB-30-110	SGB-40-110
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Weight Kg	160 Kg	160 Kg	160 Kg	210 Kg	210 Kg
Cooling	5 x fans	5 x fans	5 x fans	5 x fans	5 x fans
Data Logging	yes	yes	yes	yes	yes
Internal/DC cct breaker	yes	yes	yes	yes	yes
Internal Gen contactor	30 kVA	40 kVA	no	no	no
External Gen contactor	no	no	yes	yes	yes
Remote access RS232	yes	yes	yes	yes	yes

### Common to all units

- Automatic Bypass: All load supply maintained by generator automatically if the inverter is off-line.
- Data Logging Remote Access: Standard data logging and remote access via modem, satellite, GSM, and CDMA technology.
- Cooling: Convection and thermostatically controlled fans.
- Enclosures: Electronics IP50, transformer and heatsink IP23. Weatherproof enclosures or rack mounting are available on request.
- Protection: Over current trip, over voltage, over temperature, reverse polarity, fast electronic trip, transient over voltage protection.

Standards: All Inverters are designed to AS3100/AS2604/AS61000.3.5 and the draft AS/NZ standard for grid connected inverters.



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