



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.
- 1 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.
 - 2 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.
 - 3 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.
 - 4 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.



Specifications

3-5 kW

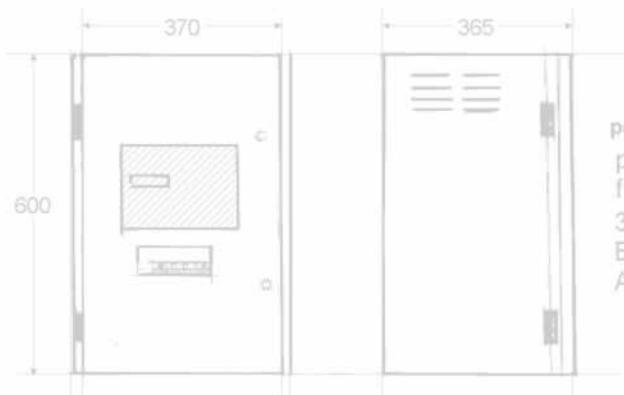
Model

	SGB-3-24	SGB-3-48	SGB-5-48	SGB-5-120
Input voltages available	24 VDC	48 VDC	48 VDC	120 VDC
Operating DC Voltage range	22-31.5	44-63	44-63	98-158
Output voltage and frequency	240V 50/60	240V 50/60	240V 50/60	240V 50/60
Continuous output @40C	2.7kW	3kW	5kW	5kW
½ hour @ 40C ambient	3.5kW	3.9kW	6.5kW	6.5kW
1 hour @40C ambient	3.2kW	3.6kW	6kW	6kW
Surge	5.4kW	6kW	10kW	10kW
Maximum charge current	90A	35A	83A	35A
Peak efficiency/	>94%	>94%	>94%	>94%
Power factor range	0-1	0-1	0-1	0-1
Idle power	35W	35W	50W	50W
Standby	<10W	<10W	<15W	<15W
Integrated output isolation	cct breaker	cct breaker	cct breaker	cct breaker
Indicators	LED & LCD	LED & LCD	LED & LCD	LED & LCD
Weight Kg	70 Kg	70 Kg	70 Kg	70 Kg
Internal Grid contactor	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.



power solutions australia
 p. 61 3 9762 0757
 f. 61 3 9762 0715
 3/6 Holloway Drive,
 Bayswater, Victoria
 Australia 3153

www.powersolution.com.au

power solutions australia
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