



**Ebbett Automation Ltd (SPS)**

# **INVERTER-CHARGER**

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**Power conversion / battery storage  
for quiet, efficient generator use or mains-failure supply**



3000VA model

- \* Industrial-quality design
- \* Robust, lightweight, construction
- \* Completely enclosed
- \* Ready for use, no installation extras
- \* Ideal for unattended operation



1500VA model

- \* Quiet 230V power from batteries
- \* Fast battery recharge
- \* Intelligent three stage charge regime
- \* Automatic load changeover mains/inverter

Marine and Remote Area Power Systems (RAPS) often use diesel or petrol generators as a source of power. Units are comparatively noisy and inefficient on light loads. Maintenance costs are high.

Many industrial processes require mains-failure back-up.

The Ebbett Standby Power Supply (SPS), inverter-charger, connects in-line between the mains (or generator) and load. When power is available it supplies the load and charges a battery. When not, the battery feeds the load.

For RAPS, generators need only be run for short periods but power is available 24 hours per day.

Hybrid systems are made possible with additional solar, wind and micro-hydro sources also charging the batteries.

## Main Features

- \* **Soft Start**
- \* **Constant Voltage**
- \* **Presetable Current Limit**
- \* **Auto Boost/Hold/Float Charge**
- \* **Reverse Polarity Protection**
- \* **Short-Circuit Protection**
- \* **Floating Battery**
- \* **Portable or Permanent Instaltn**
- \* **Conservative Rating**
- \* **RFI Suppression**
- \* **Filter for Reduced Battery Current-Ripple and Increased Battery Life**
- \* **Optional Output Power-Limit to Prevent Small Gen Overload**

### **Technical Specification: Ebbett 03 Series SPS**

Load:	0.3 hour	1500VA (6.5A)	3000VA (13A)
	4 hours plus	1000VA (4.2A)	1700VA (7.4A)
	Surge(motor)	2000VA (8.5A)	4000VA (17.3A)
	Peak	4000VA (17.3A)	6000VA (26A)
Battery:	Voltage	12V 24V	24V
	Current N L	600mA 400mA	400mA
	Current F L	150A 75A	150A
Recharge (cont):		35A 18A	40A
Enclosure:	Mild steel epoxy powdercoated.		
Size:	(H X W X D)	150 x 490 x 350	360 x 340 x 190
Weight:		24 kg	27 kg
Permanent Instaltn:	6mm threaded holes for mounting from rear.		
Circuit:	PWM, FET-driven inverter, brought on line by 3kVA load-transfer contactor. Battery on standby, & thyristor-driven, phase-angle controlled charger.		
Mains Input:	Two metre 3 core flex and standard 3 pin plug.		
Input: Voltage	230V AC plus or minus 10%.		
Frequency	50-60 Hz.		
Waveform	Quasi sine-wave.		
Battery Charger:	Current-limited. Factory set for float voltage charge of lead acid batteries.		
Output: Voltage	230V AC plus or minus 5%, filtered inverter output.		
Frequency	50 Hz plus or minus 0.5 Hz.		
Waveform	Step-voltage driven, impulse phase corrected waveform. (Current sine-wave, inductive loads).		
Efficiency:	> 90% for all loads, inverter or charger mode.		
Dynamic Response:	For full load step-change, voltage deviation less than plus or minus 10%, 1 cycle.		
Load Transfer:	20 msec approx (3 cycles with soft-start ramp).		
Operating Temp:	0 - 40 deg C normal mount heat sinks vertical. Above 20 deg C derate duty cycle 1% per deg C. Horizontal mount, derate 15%.		
Inverter Protection:	Overcurrent trip, current-limited output, thermal overload, low output voltage trip, soft-start load-protection.		
On-off-reset:	Mech circuit-breaker. Terminals for remote control switch.		
Power Outlet:	1500VA model double switch, 3000VA model single outlet.		
Indication:	Led indication for inverter on, overload and low battery trip. 1500VA model, mains-on LED. Charge ammeter.		
Battery:	External batteries, customer care.		
Leads:	2m battery leads plus lugs.		
Elec Safety:	Manufactured to NZSS 6200. Output wired to MEN system.		
	Complies with NZECP 4:1989, Generating Systems; NZECP 29:1989, Boat Mariners & Pleasure Craft; NZECP 1:1988, Caravans & Caravan Parks.		
Elec Interference:	RFI emission less than 60 microvolts.		
Options:	Rack or gear plate mounting. Other input and output voltages, frequencies & battery charge rates etc. Voltmeter. Input-limiting link to protect undersized generators from overload. Mounting brackets.		

#### **Note:**

For correct performance, leads should be kept less than 2m. For generator applications higher charge voltage settings must be specified and an external increased load transfer unit is required for loads larger than 3kVA. Reduced current-limit settings should be specified for small sealed batteries. Short break change-over not suitable for digital clocks, computers without auto backup/reboot. A few appliances (capacitive loads) may need an extra filter.

#### **Applications Guide:**

Industrial standby power systems, marine generator-sets, emergency lighting, communications, point-of-sale equipment, security systems and remote area power supply.

Manufactured by Ebbett Automation Ltd, 70-72 Victoria St, Petone, Wellington, New Zealand. Ph 00-64-4-568-6377. Fx 00-64-4-568-2374. Email [ebbett.automation@clear.net.nz](mailto:ebbett.automation@clear.net.nz)

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