

Powerguard PS System • 5k0-230-48-112A

The Powerguard PS System consists of 4 main parts all housed in a single enclosure: -

- 1) Sine-wave Inverter
- 2) Charger
- 3) Changeover
- 4) Control

1) Sine-wave Inverter

Type	Twin channel microprocessor controlled ferro-resonant.		
Input	Voltage	48 VDC nominal	
	Voltage range	40 – 60 VDC	
	Current	full load \approx 122 Amps	
		half load \approx 61 Amps	
		no load \approx 6 Amps	
Output	Voltage	230 VAC	
	Voltage range	\pm 5%	
	Frequency	50 Hz	
	Waveform	Sinusoidal	
	THD	< 5% into a linear load.	
	Power	5000 VA	
	Rating	Continuous	
	Overload	125% for 30 mins -150% for 15 mins.	
	Short-circuit	Approx. 2 x full load current.	
	Short circuit duration	>5 seconds	
	Efficiency	full load	85 %
		half load	85 %
		quarter load	80 %
Protection:	Input fuse, inherent flux de-coupling, ultra fast electronic cycle by cycle current limit and ultra fast power module spike suppression.		
Human interface:	Full instrumentation and indicators as per the Technical Description.		
Connections:	Screw connections		

2) Automatic Battery Charger

Type	Microprocessor controlled switch-mode Constant current – constant voltage 5 x 105% discharge + 1 x 115% discharge + 1 x 3 hour constant current	
Input	Voltage	230 VAC
	Frequency	50 HZ

Output	Voltage	57 VDC
	Current	112 Amps
	Rating	Continuous
	The charger current automatically adjusts to make the best use of the available generator capacity.	
Protection	Input MCB – output fuses – automatic current limit	

3) Changeover

Type	2 x NO contactors - electrically and mechanically locked	
	Changeover time	≈ 60 mS
	Rated voltage	660 VAC
	Rated current	80 Amps - AC1 • 65 Amps - AC3

4) Control

Type

The Powerguard PS System has 6 micro-controllers analysing and controlling all the different parameters within the system.
 Software written by Powerguard - second generation PS System.
 The micro-controllers operate in a sophisticated way to increase efficiency and give maximum fuel economy commensurate with the requirements of our customers for the availability of electrical power 24/7.
 The Powerguard PS System is the best and most cost effective off-grid power system giving power 24/7 to mixed loads such as a domestic property.

Enclosure	Size	800mm w x 1750mm h x 400mm d
	Weight	≈ 190kgs
	Colour	RAL7035

