

# PDS Design Solutions LTD

THE CUSTOM POWER SPECIALISTS . DESIGN . DEVELOPMENT . TEST . MANUFACTURE

Greenway Business Centre, Harlow Business Park, Harlow, Essex CM19 5QE Tel: 01279 406960 Fax: 01279 406961  
Web: <http://www.whatpowersupply.com> e-mail: [sales@whatpowersupply.com](mailto:sales@whatpowersupply.com)

## 500 WATT BATTERY CONVERTERS

OUTPUT	12V INPUT	24V INPUT	36V INPUT	48V INPUT
5.0V at 100A (450W)	SM5100	SM5110	SM5120	SM5130
9.0V at 55.0A	SM5101	SM5111	SM5121	SM5131
12.0V at 41.7A	SM5102	SM5112	SM5122	SM5132
15.0V at 33.3A	SM5103	SM5113	SM5123	SM5133
18.0V at 27.8A	SM5104	SM5114	SM5124	SM5134
21.0V at 23.8A	SM5105	SM5115	SM5125	SM5135
24.0V at 20.8A	SM5106	SM5116	SM5126	SM5136
48.0V at 10.5A	SM5107	SM5117	SM5127	SM5137
13.8V at 36.2A	SM5108	SM5118	SM5128	SM5138
27.6V at 18.1A	SM5109	SM5119	SM5129	SM5139



- **VERY HIGH CONVERSION EFFICIENCY.**
- **HIGH OUTPUT POWER IN COMPACT SIZE.**
- **REMOTE ON / OFF CONTROL.**
- **PROGRAMABLE OUTPUT VOLTAGE.**
- **PROGRAMABLE BACK-OFF FOR FUEL CELL USE.**

**GENERAL DESCRIPTION:** A rugged converter, generating a range of DC outputs when supplied from 12, 24, 36 or 48V DC.

The unit has a high impedance input for remote on/off control.

The input and output are ohmically isolated, making installation very simple. The converter is isolated from chassis to 100V.

The unit is packaged in a powder coated folded metal box. Input and output is by 5mm studs on the underside of the unit. Flanges at each end raise the unit for cooling and ease of mounting.

**CAUTION:** This adaptor is supplied on the basis of the user determining the suitability for the purpose for which it is to be used. Do not use in a moving vehicle without the consent of the vehicle manufacturer. Do not use for aviation or marine applications without our written agreement. Do not use for life dependent applications.

### SPECIFICATION:

#### INPUTS

Nominal Voltage: **12V or 24V or 36V or 48V** Battery by model.

Input Voltage Range: Nominal – 11.7% to +16.7%

Current, No Load: 0.5A, 0.4A, 0.3A and 0.25A across range.

Efficiency (approximate): >90%, 12V output and above.

Low Battery back-off: Nominal – 20%, but programmable.

#### OUTPUTS

Voltage (10% Load): - Nominal + 100mV ±50mV.

Line Regulation: - < ± 0.05V for a 10% input change.

Load Regulation: - < 0.1V for a 10% to 90% load change.

Low Frequency Ripple: - Less than 10mV pp.

Current Limit: - Nominal plus 10%, ± 7%.

On/Off Control: - The unit will draw less than 0.1mA until voltage (3V to 72V) is applied to the control input.

#### GENERAL

Protection: Over-current and short circuit output limit plus input fusing.

Size: 247mm x 103mm x 63mm.

Weight: 1200 grams.

Storage Temp Range: -40 to +70C.

Operating Temp Range: -40 to +40C.

Manufacturer: Made in UK.

We reserve the right to change this specification without notice.

Document 5100-993 Issue 1, September 2007.