

PDS Design Solutions LTD

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

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500 WATT BATTERY CONVERTERS

OUTPUT	96V INPUT	110V INPUT	125V INPUT
5.0V at 90A (450W)	SM5170	SM5180	SM5190
9.0V at 55.0A	SM5171	SM5181	SM5191
12.0V at 41.7A	SM5172	SM5182	SM5192
15.0V at 33.3A	SM5173	SM5183	SM5193
18.0V at 27.8A	SM5174	SM5184	SM5194
21.0V at 23.8A	SM5175	SM5185	SM5195
24.0V at 20.8A	SM5176	SM5186	SM5196
48.0V at 10.5A	SM5177	SM5187	SM5197
13.8V at 36.2A	SM5178	SM5188	SM5198
27.6V at 18.1A	SM5179	SM5189	SM5199



- **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 96, 110 or 125V 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.

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: **96V or 110V or 125V** Battery by model.

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

Current, No Load: 0.1A, 0.09A, 0.07A across range.

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

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

OUTPUTS

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

Line Regulation: - $< \pm 0.05V$ 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%, $\pm 7\%$.

On/Off Control: - The unit will draw less than 0.1mA until voltage (3V to 150V) 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.