



# CUSTOM POWER DESIGN

ELECTRONICS CONSULTANTS PROVIDING CUSTOM DESIGN, DEVELOPMENT, TEST & SUPPORT



Tel: +44 (0)118 930 2299

A DIVISION OF SMET LTD

Fax: +44 (0)118 930 2206

www.custompsdesign.com

Unit 19, The Markham Centre, Station Road, Theale, Berks. RG7 4PE.

custom@custompsdesign.com

## 200 WATT 'MAINS DC' INVERTERS ('Handy Mains' Series).

### MODEL NUMBERS ALLOCATED:

MAINS CONVERSION	12V - '230V'	24V - '230V'	12V - '115V'	24V - '115V'
Cigar input, IEC outlet	SM2840	SM2846	SM2850	SM2856
3 wire input, IEC outlet	SM2841	SM2847	SM2851	SM2857
Cigar input, IEC Cable outlet	SM2842	SM2848	SM2852	SM2858
3 wire input, IEC Cable outlet	SM2843	SM2849	SM2853	SM2859
3 wire input, Cable outlet	SM4992	Special for Parity Medical (SM2843 with defined connections).		

**GENERAL.** These units produce 'MAINS DC' power, ONLY suitable for equipment employing switched mode conversion, where the incoming AC is first rectified to 300/150V DC (no mains transformer used). 12 and 24 volt battery systems are covered dependent on model. All units are fitted with IEC output sockets, either chassis mounted or cable ended (1.5M). All models have an output power of 250 watts short term, and a continuous power available of 200 watts.

The unit is fitted with an audible warning indicating that the battery is becoming discharged. The tone gets louder as the battery voltage falls, prompting battery charge. Cigar plug versions are fitted with a plug for direct connection to a cigar lighter socket. A rating for the cigar lighter socket of more than 20 amps (12V input) or 10 amps (24V input) is required for full output, reduced in proportion to the actual load.

'3 wire' versions are designed to be permanently installed with direct connection to the battery. A third low current signal lead taken to the battery positive via a switch turns the unit on and off. The unit may be mounted on a flat surface using the mounting bracket kit SM 2791.

**TEST FOR MAINS DC COMPATIBILITY.** Equipment may be checked for compatibility by measuring the resistance between the live and neutral connections of the equipment to be powered (mains switch on). If the resistance exceeds more than say 10K then there is not a mains transformer primary winding and the equipment is probably compatible.

**BATTERY DRAIN:** A figure of 1 amp (12V input) or 0.5amp (24V input) for every 10 watts of output load is a good guide. Intermittently used power tools will not significantly drain the battery, but anything used continuously could.

**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. The negative input lead is connected to case and output ground making the unit suitable only for negative earth systems.



Temporary picture showing UK socket, not IEC.

### SPECIFICATION:

#### INPUT

	12V TYPES	24V TYPES
Battery:	12V nominal.	24V nominal.
Voltage Range:	11V - 15V.	22V - 30V.
Current, No Load:	0.4A	0.2A
Per 10W loading:	1 A	0.5A
Remote On/Off:	The units draw <1mA until the on/off control input is connected to battery positive.	

#### OUTPUT

'230V' Output Voltage:	270V to 330VDC (230VAC Peak)
'115' Output Voltage:	135V to 165VDC (115VAC Peak)
Output Wave Form:	MAINS DC Equivalent. Only for use with 'switched mode'

#### PSUs.

Capacitive load:	Unlimited.
Power, Nominal:	200 Watts continuous.
Power, Short term:	250 Watts for 5 minutes.
Protection:	Current and temperature limit.

#### GENERAL

Size:	45mm x 141mm x 94mm.
Weight:	0.8 Kg.
Storage Temperature:	-40 to +70C.
Operating Temperature:	-40 to +35C.

**WARNING:** RCD protectors will not operate with these units.

Do not use output in remote locations.

We reserve the right to change the specification without notice

Document 2840-993