



# CUSTOM POWER DESIGN

ELECTRONICS CONSULTANTS PROVIDING CUSTOM DESIGN, DEVELOPMENT, TEST & SUPPORT



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## 200W INVERTERS, HIGH VOLTAGE INPUT, 115V OR 230V AC OUTPUT.

ISOLATED INPUT FOR USE WITH POSITIVE OR NEGATIVE EARTHED SYSTEMS.

CONFIG (OUTLET)	36V I/P	48V I/P	60V I/P	72V I/P	84V I/P	96V I/P	110V I/P	125V I/P
230V 50Hz UK	SM2740	SM3040	SM2880	SM2883	SM2886	SM3030	SM3035	SM2980
230V 50Hz IEC	SM2741	SM3041	SM2881	SM2884	SM2887	SM3031	SM3036	SM2981
230V 50Hz SHUKO	SM2742	SM3043	SM2882	SM2885	SM2888	SM3032	SM3037	SM2982
230V 50Hz CABLE IEC	SM2743	SM3042	-----	-----	-----	SM3033	SM3038	SM2983
230V 50Hz CABLE	-----	SM3045	-----	-----	-----	-----	-----	-----
115V 50Hz UK	SM2750	SM3048	-----	-----	-----	SM2970	SM2975	SM2990
115V 50Hz IEC	SM2751	SM3049	SM2890	SM2893	SM2896	SM2971	SM2976	SM2991
115V 60Hz IEC	SM2752	SM3044	SM2891	SM2894	SM2897	SM2972	SM2977	SM2992
115V 50Hz SHUKO	SM2753	SM3046	-----	-----	-----	SM2973	SM2978	SM2993
115V 50Hz CABLE	-----	SM3047	-----	-----	-----	-----	-----	-----



**GENERAL.** These economic power adaptors convert battery voltage to mains level voltage, for powering computers, printers, etc. The units have an output power of 250 watts short term, with surge handling up to 500 watts. Continuous available power, quoted as 200W, is limited automatically by case temperature.

Actual continuous power depends on imponderables such as mounting attitude, ventilation and ambient temperature, but 160 watts is guaranteed in a 45C ambient. Output, indicated by a neon, is by standard IEC, SHUKO or UK 13A socket. SM3045 and SM3047 have a 1.5 metre flying lead which must be terminated in a junction box complying with safety rules.

These UNITS are designed to be permanently installed with direct connection to the battery. A yellow control wire is provided to turn the unit on/off by connection to positive input. The unit may be mounted using mounting kit **SM 2791.**

**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. Maximum live to neutral capacitance is 0.5uF for 230V units and 1.0uF for 115V units.

**CONNECTION:** The supply must be fused at source. The case of the unit and the output socket Earth pin are connected to the Green/Yellow Protective Earth wire. MODELS SM3045/SM3047 have an unterminated output cable. Brown = Live, Blue = Neutral, Green/Yellow = Earth. Fully terminate before switching the unit on.

### SPECIFICATION

**115V AC UNITS:** 115VAC RMS Nominal, 48Hz – 53Hz or 58Hz – 63Hz, 108V - 127V RMS over load range up to 2.2 amps. Maximum load capacitance 1.0uF.

**230V AC UNITS:** 230VAC RMS Nominal, 48Hz – 53Hz, 216 - 255 V RMS over load range up to 1.1 amps. Maximum load capacitance 0.5uF.

The output is a quasi sine wave. Minimum output power available is 160 watts up to 45C ambient temperature, with 200 watts available if care is taken with mounting, ventilation etc. The units can supply 250W short term, with a surge capability of 500W.

**INPUT:** Nominal battery voltage, -8.3% to +16.7% continuous, -12% to +31% for 10 seconds. Efficiency is typically 85%. The unit will draw about 6W unloaded.

**SELF PROTECTION SYSTEM:** Over-current protection is provided, so that if plugged into unsuitable equipment, the HANDY MAINS will not be damaged. The HANDY MAINS when used in accordance with these instructions cannot damage any appliance.

**WARNING:-** These units only support the use of 2 wire RCD protectors (non-ground-seeking).

**TEMPERATURE:** -40 to +45C operating, -40 to +70C storage.

We reserve the right to change the specification without notice

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