CUSTOM POWER DESIGN

ELECTRONICS CONSULTANTS PROVIDING CUSTOM DESIGN, DEVELOPMENT, TEST & SUPPORT

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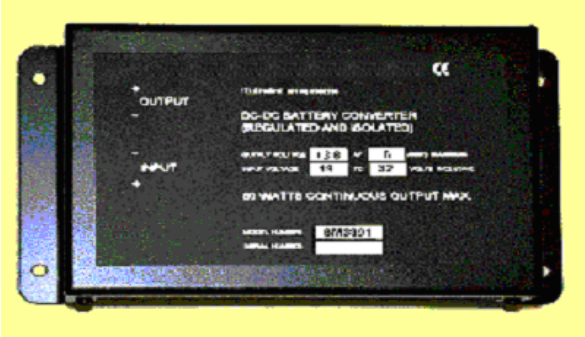
WIDE RANGE DC-DC HYDROGEN STACK CONVERTERS.

UP TO 200W INPUT, WITH WIDE PERMISSABLE VOLTAGE RANGE.

Model Number Selection (other input and output voltages available).

OUTPUTS	INPUT: 12-36V	18-48V	24-60V	30-84V
5.0V at 33A	SM5460	SM5470	SM5480	SM5490
9.0V at 19.2A	SM5461	SM5471	SM5481	SM5491
12.0V at 16.7A	SM5462	SM5472	SM5482	SM5492
15.0V at 13.4A	SM5463	SM5473	SM5483	SM5493
18.0V at 11.2A	SM5464	SM5474	SM5484	SM5494
21.0V at 9.5A	SM5465	SM5475	SM5485	SM5495
24.0V at 8.4A	SM5466	SM5476	SM5486	SM5496
48.0V at 4.2A	SM5467	SM5477	SM5487	SM5497
13.8V at 14.3A	SM5468	SM5478	SM5488	SM5498
27.6V at 7.2A	SM5469	SM5479	SM5489	SM5499

- **HIGH OUTPUT POWER IN COMPACT SIZE.**
- **REMOTE ON / OFF CONTROL FACILITY.**
- **FEATURES 'STACKLIMIT'© CONTROL.**
- **MANUAL OR PROCESSOR BASED VERSIONS.**



TEMPORARY PICTURE REPRESENTATIVE OF SHAPE AND SIZE.

GENERAL DESCRIPTION. A small converter handling up to 200W from a hydrogen stack, with various dc outputs, model dependent. The input and output are ohmically isolated, making installation very simple. The output has a constant current limit and the unit can be turned on/off remotely, via a logic compatible / stack voltage control input. Note that connection spade terminals are on one end.

The unit is intended for use with fuel cell stacks, where maximum power is available at a well defined stack voltage, typically 45% of the stack's open circuit voltage. By setting the **'STACKLIMIT'©** of the converter to this voltage, the unit will start to fold back with high load, balancing the stack at maximum possible stack output.

Note: New models, with processor control of the proprietary 'STACKLIMIT'©, will be available soon, correcting for stack variation. Please discuss this option with sales.

A fixed output current limit applies, but normally the stack will limit before the current limit is reached.

Units may be used for battery charging.

The output impedance of the unit is deliberately degraded to permit parallel use, with reasonable load sharing.

Power input and output is by 6.35mm 'Fast-on' spade terminals, positioned at one end of the unit.

SPECIFICATION.

INPUT VOLTAGE: See model listing above.
The **'STACKLIMIT'©** is variable by potentiometer, from minimum input voltage to 55% of maximum input, see text.

OUTPUT:

Voltage (10% Load): -	Nominal + 100mV ±50mV.
Line Regulation: -	< ± 0.05V for a 10% input change.
Load Regulation: -	<-0.1V for a 10% to 90% change.
Low Frequency Ripple: -	Less than 100mV pp.
Current Limit: -	Nominal plus 10%, ± 7%.
On/Off Control: -	The unit will draw less than 0.1mA until voltage (3V to 84V) is applied to the control input.

GENERAL:

Protection:	Over-current output limit with input fusing.
Size:	226mm x 94mm x 49mm.
Weight:	1100 grams.
Storage Temp Range:	-40 to +70C.
Operating Temp Range:	-40 to +40C.
Manufacturer	Made in UK.

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.

Made in the UK

We reserve the right to change the specification without notice. Document 5460-993