



WIDE RANGE DC-DC HYDROGEN STACK CONVERTERS.

UP TO 1500W INPUT, WITH WIDE STACK VOLTAGE RANGE.

OUTPUT	INPUT: 12-36V	18-48V	25-60V	30-84V
27.6V (24V Bat.) at 54.3A	SM5510	SM5520	SM5530	SM5540
41.4V (36V Bat.) at 36.0A	SM5511	SM5521	SM5531	SM5541
55.2V (48V Bat.) at 27.2A	SM5512	SM5522	SM5532	SM5542
69.0V (60V Bat.) at 21.8A	SM5513	SM5523	SM5533	SM5543
82.8V (72V Bat.) at 17.8A	SM5514	SM5524	SM5534	SM5544
96.6V (84V Bat.) at 15.6A	SM5515	SM5525	SM5535	SM5545
110.4V (96V Bat.) at 13.6A	SM5516	SM5526	SM5536	SM5546
124.2V (108V Bat.) at 12.1A	SM5517	SM5527	SM5537	SM5547
138.0V (120V Bat.) at 10.9A	SM5518	SM5528	SM5538	SM5548
220.8V (192V Bat.) at 6.8A	SM5519	SM5529	SM5539	SM5549

- HIGH OUTPUT POWER IN COMPACT SIZE.
- 3KW BOOST MODE VERSIONS AVAILABLE.
- FEATURES 'STACKLIMIT'© CONTROL.
- REMOTE ON / OFF CONTROL FACILITY.



Library picture representative of the range.

GENERAL DESCRIPTION. A small converter handling up to 1500W 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 input.

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.

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

Connection is by 5mm female terminals, under the raised base.

SPECIFICATION.

INPUT VOLTAGE: See model listing above.

The 'STACKLIMIT'© is variable by potentiometer, from lowest input voltage to 55% of maximum input, see text.

OUTPUT:

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

GENERAL:

Protection: O/P Current Limit and input fuse.
Size: 295mm x 133mm x 88mm.
Weight: 2400 grams.
Storage Temp Range: -40 to +70C.
Operating Temp Range: -40 to +45C.
Manufacturer: Made in UK by SMET Ltd.

CAUTION: This adaptor is supplied based on 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. We reserve the right to change the specification without notice.

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We manufacture a wide range of DC-DC converters, DC-AC (mains) inverters and many other power systems.

We specialise in the custom design of Hydrogen Stack converters up to 10KW.