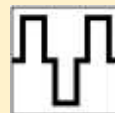


CUSTOM POWER DESIGN

ELECTRONICS CONSULTANTS PROVIDING CUSTOM DESIGN, DEVELOPMENT, TEST & SUPPORT



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HYDROGEN STACK DC-DC BOOST CONNECTED CHARGERS. UP TO 3KW OUTPUT, WITH WIDE STACK VOLTAGE RANGE.

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

OUTPUT	INPUT:	12-36V	18-48V	24-60V	30-84V
27.6V, 1.09A (24V Bat.)		SM5720	-----	-----	-----
41.4V, 72.0A (36V Bat.)		SM5721	-----	-----	-----
55.2V, 54.3A (48V Bat.)		SM5722	SM5732	-----	-----
69.0V, 43.5A (60V Bat.)		-----	SM5733	SM5743	-----
82.8V, 36.2A (72V Bat.)		-----	SM5734	SM5744	SM5754
96.6V, 31.1A (84V Bat.)		-----	SM5735	SM5745	SM5755
110.4V, 27.2A (96V Bat.)		-----	-----	SM5746	SM5756
124.2V, 24.2A (108V Bat.)		-----	-----	SM5747	SM5757
138.0V, 21.7A (120V Bat.)		-----	-----	-----	SM5758

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



Library picture representative of range. Boost connection allows up to 3KW input'

GENERAL DESCRIPTION. A small converter converting up to 1500W from a hydrogen stack, with various dc outputs, model dependent. By 'riding' the output on top of the battery voltage, about half the output power comes direct from the battery. In this 'BOOST' mode, the output adds to the stack voltage, allowing up to 3KW output. The voltage between stack negative and output positive is regulated for charging.

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.

Units are designed for battery charging, (N x 12V steps).

Power input and output is via 5mm female terminal posts, underneath the raised base of the unit.

SPECIFICATION.

INPUT VOLTAGE: See model listing above.

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

OUTPUT:

Voltage (10% Load): - Nominal + 100mV ±50mV.
Line Regulation: - < ± 0.05V / 10% input change.
Load Regulation: - <-0.1V for 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 a 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.