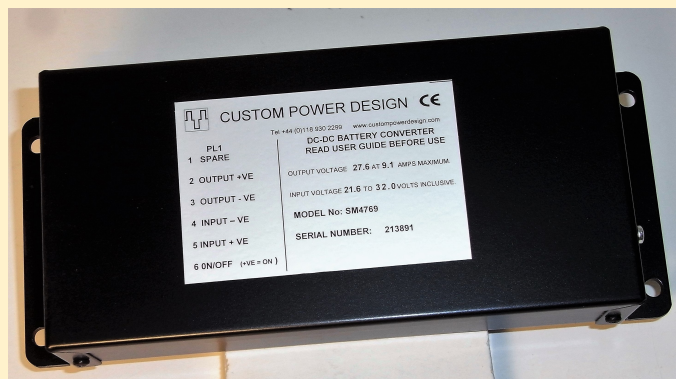


WIDE RANGE DC-DC HYDROGEN STACK CONVERTER.

200W STACK POWER INPUT, RANGE 12V TO 33V.

MODEL SM5372. OUTPUT 40V TO 60V, 4.0A MAXIMUM

- **HIGH OUTPUT POWER IN COMPACT SIZE.**
- **REMOTE ON / OFF CONTROL FACILITY.**
- **FEATURES 'STACKLIMIT'© CONTROL.**
- **VARIABLE BROWN-OUT (MAX STACK POWER).**



Library picture representative of the range.

GENERAL DESCRIPTION. A small converter producing UP TO 200W from a hydrogen stack, with a variable dc output of 50V to 60V, controlled by a 4V to 5V DC reference input. The input and output are ohmically isolated, making installation very simple. The output has a constant current limit and the unit can be turned it on/off remotely, via a logic compatible (and stack voltage) control 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 'brown-out' of the converter to this voltage, the unit will start to fold back with high load, balancing the stack at maximum possible stack output.

The unit uses an analogue DC signal to set its output voltage. The unit is scaled to 5V reference input equals 62V output, and output may be controlled down to 40V (c3.2V ref) subject to a 4A output current limit, independent of output voltage. At higher output voltages, the stack will limit before the current limit is reached.

The output impedance of the unit is deliberately degraded to permit units to be used in parallel, with load sharing. Power input and output is via 0.25" Fast-on tabs, on the end face of the unit. The unit is packaged in a metal box. measuring 49mm by 94mm by 226mm, including mounting flanges.

FIXING: - Four 3.5mm diameter-fixing holes are available on the mounting flanges, with centres of 70mm by 214mm, symmetrically placed.

The converter employs switched mode conversion, which generates some electrical noise. In sensitive installations, to minimise interference, it is advisable to ground the case of the unit directly to the system chassis.

SPECIFICATION.

INPUT: 12.0V to 33V.

Brown-out variable from 12V to 16V input level, see text.

VOLTAGE (10% LOAD, 5V ref): 62V+ $\pm$ 100mV.

LINE REGULATION: - Less than $\pm$ 0.1V for a 10% static input change.

LOAD REGULATION: - Less than 0.3V for a 10% to 90% static load change.

LOW FREQUENCY RIPPLE: - Less than 50mV pp.

CURRENT LIMIT : - 4.0A +10%, $\pm$ 7%.

ON/OFF CONTROL: -The unit will draw less than 0.1mA until a positive voltage (3V to 72V) is applied to this input. Units can be supplied set permanently 'on'.

GENERAL:

Protection:	O/P current limit and input fuse.
Size:	226mm x 49mm x 94mm.
Weight:	0.82Kg.
Storage Temp Range:	-40 to +70C.
Operating Temp Range:	-20 to +50C.
Manufacturer	Made in UK by SMET Limited.

CAUTION: This adaptor is supplied base 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 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

We reserve the right to change the specification without notice.

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