SM106 DC-DC CONVERTER UNIT

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Manufactured in Australia by Alian Electronics Pty. Ltd.
408 Old Sale Rd. Drouin West 3818 Ph. (613) 5625 2545
contact: sales@alianelectronics.com.au

DESCRIPTION:

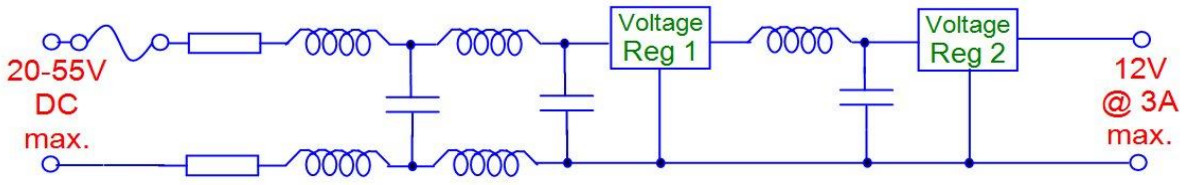
The **SM106** DC.-DC. Converter module has been designed to filter and extend a voltage range of 20V to 50VDC vehicle battery source to a filtered 12VDC output. It is suitable for a wide range of sensitive electronic equipment being used in harsh electrical environments. This includes appliances such as surveillance cameras, flat screen monitors, and GPS navigation equipment. Its size is 75mm high (including terminals), 114mm wide (including heatsink) and 145mm long (including the flange mount) The enclosure features a rubber seal to prevent water ingress.

The three stage filtering system provides protection against high voltage transients that are present in electric forklifts and large trucks.

A blend of switch-mode and linear voltage regulation ensures low power dissipation and low output noise.

Output is fixed at 12V with a 3 amp output. Input and Output fuses provide over-current, over-voltage and reverse polarity protection. A red LED lamp is present next to the output terminal to shows normal operation when a 20-50V source of the correct polarity is provided to the input. The typical Idle current drawn from the 20-50V source is 15ma with no load on the output.

INTERNAL BLOCK DIAGRAM OF FILTER



INSTALLATION

The unit is flange mounted and has a two-way screw terminal that should be connected to the + and – of the vehicle battery. Ideally this should be a cable running directly to the battery terminals to further reduce noise and voltage drop problems. The 12VDC output appears at the second screw terminal strip.

IMPORTANT – Where possible, the chassis or negative rail of equipment connected to the output should not be earthed to the vehicle body. This is for noise reduction purposes as the negative output of the module has also been filtered within the SM106 unit.