

TWO YEAR WARRANTY

REDARC Electronics warrants to the original purchaser that the product(s) on the reverse side of this sheet ("Product") will be free, under normal use and maintenance, from defects in material and workmanship for a period of TWO YEARS from the date of purchase, subject to the conditions shown below.

1. Warranty

Unless otherwise stated in this warranty, Redarc Electronics will at its sole discretion either replace or repair any of the Product that is defective in material or workmanship within the abovementioned period without charge to the original purchaser.

2. Other Warranty

Subject to any terms implied by law, this warranty contains the whole of the Redarc Electronics' obligations and any distributor and the agents, officers and employees of such distributor and of Redarc Electronics are not authorised to vary or extend the terms of the warranty. The benefits conferred by this warranty are in addition to the conditions and warranties implied by applicable legislation conferring rights upon consumers, which apply only to the extent to which they may not by law be excluded.

3. Exclusions

This warranty shall not apply to, or include, any of the following:

- 3.1 Any defect or failure due to accident, misuse, abuse, movement of the Product to a new site, negligence, non-observance of any of the instructions supplied with the Product including the instructions on the reverse side of this sheet ("Operating Instructions") or local regulations on the part of any user, choice of location, improper installation, configuration or connection, or faulty power supply.
- 3.2 If the Product is installed, repaired or serviced by a person who is not a qualified auto electrician or electronics technician, or if non-approved parts have been fitted.
- 3.3 Failure to obtain proper maintenance for the Product or any associated equipment or machinery.
- 3.4 Failure to pay for the products in full or comply with Redarc Electronics' Trading Terms.
- 3.5 If the Product is used other than for any reasonable purpose for which it was manufactured, or is used in a way not specified by Redarc Electronics.
- 3.6 If the original purchaser sells, leases or otherwise parts with possession of the Product.
- 3.7 Deterioration due to normal use and exposure, including abnormal environmental conditions such as lightning strike, flood and extreme heat.
- 3.8 Any freight, packing and insurance expenses relating to transportation of the Product.
- 3.9 Any expenses relating to installation and/or removal of the Product.
- 3.10 Any damage, indirect or incidental, of whatever nature.

4. Limitations

- 4.1 Redarc Electronics is not liable for any consequential, indirect or accidental loss or damage or for any service not expressly provided herein (including without limitation liability for any loss or damage caused by a fault in the Product or its external wiring connections) and the liability of Redarc Electronics under this warranty is limited to the repair or replacement of defective material or workmanship by a qualified auto electrician or electronics technician, provided such person and work is approved by Redarc prior to commencement. Subject to **clause 2**, Redarc Electronics is hereby excluded to the maximum extent permitted by law from all other liability in respect of the Product.
- 4.2 While Redarc Electronics warrants, where applicable, that the Product is free from defects in materials and workmanship under normal use at the time of delivery, Redarc Electronics does not warrant that the Product will meet any user specific requirements or that the operation of the Product will be uninterrupted or error-free.

5. Owner's Responsibilities

- 5.1 Maintenance of the Product and associated equipment and/or machinery is the responsibility of the owner. The owner must retain evidence that proper maintenance has been performed on the Product by Redarc Electronics or a qualified auto electrician or electronics technician. Claims made during the warranty term will not be accepted if resulting from lack of maintenance rather than faulty material or workmanship.
- 5.2 The owner must operate the Product in accordance with all of the Operating Instructions.
- 5.3 Upon discovery of a fault the owner must return the Product to the distributor with full details of the nature of the fault. Removal of the Product must be done by a qualified auto electrician or electronics technician to ensure that the warranty remains valid. A written report describing the circumstances of failure must accompany the returned Product with proof of purchase which clearly shows the date of such purchase by the original purchaser.
- 5.4 If the Product is found to be working satisfactorily on return to Redarc Electronics a reasonable charge will be made for the cost of testing, packing and freight. The Product will be returned on receipt of the amount charged.

FREE TECHNICAL ASSISTANCE

REDARC

THE POWER CONVERSION SPECIALISTS
23 Brodie Road North
Lonsdale
South Australia 5160
Phone: 08 8322 4848
Fax: 08 8387 2889
Email: power@redarc.com.au
Web: www.redarc.com.au



SMF Series

24V-12V Compact Switchmode Voltage Reducers.



FUNCTION

The compact SMF series supplies 13.6V (+/-5%) from a 24V negative ground automotive electrical system. It is suitable for lamps, small motors and electronic loads to a maximum of 2, 5 or 8 AMPS continuous rating depending on the unit. In addition to the ignition switched output, there is also a constant output which may be used E.g. for radio memory.

PROTECTION

The compact SMF series inputs are protected against voltage spikes and surges often encountered in automotive electrical systems. The SMF5 & SMF8 models are also protected against reverse/swapped connections. The output is protected against short circuits and overloads.

CONNECTIONS

There are five connecting wires, to be connected as shown:

VIOLET WIRE	24V SUPPLY INPUT
PINK WIRE	CONSTANT 13.6V OUTPUT
BLUE WIRE	24V FROM IGN SWITCH
ORANGE WIRE	IGN SWITCHED 13.6V OUTPUT
BLACK WIRE	NEGATIVE GROUND

The metal case is internally connected to GROUND (BLACK wire).

During installation, fuses or circuit breakers (not provided) must be fitted to the input side of the unit. The recommended sizes are outlined in the table below.

SPECIFICATIONS

MODEL	SMF2	SMF5	SMF8
Supply Range	19-33VDC	15-33VDC	16-33VDC
O/P Current Rating	2 Amps	5 Amps	8 Amps
O/P Voltage	13.6VDC	13.6VDC	13.6VDC
I/P Fuse Size	2A	5A	5A
Operating Temperature	-10°C to +50°C	-10°C to +50°C	-10°C to +50°C
Conversion Efficiency	>85%	>85%	>85%
Standby Current Draw	15mA	25mA	19mA
Dimensions	90x45x30mm	100x45x30mm	125x45x30mm
Weight	185g	210kg	270kg
Warranty	2 years	2 years	2 years

PRECAUTIONS

The unit should be mounted in a sheltered location inside the vehicle. Steam cleaning and water spray must be avoided.

FREE TECHNICAL ASSISTANCE, contact Redarc Electronics
Ph (08) 8322 4848, Fax (08) 8387 2889
or Email power@redarc.com.au
Specifications are subject to change without notification.

SMF Series

24V-12V Switchmode Voltage Reducers.



FUNCTION

The compact SMF series supplies 13.7V (+/-5%) from a 24V negative ground automotive electrical system. It is suitable for lamps, small motors, computer and communications equipment, fridges, pumps, TV's and electronic loads to a maximum of 10, 20, 30, 40 or 60 AMPS continuous rating depending on the unit. The reducers are ideally suited to applications that require a low noise output and are designed to operate sensitive radio and communication equipment.

CONNECTIONS

The SMF series converters have four connecting wires:

Violet Wire	+24VDC Supply POSITIVE TERMINAL
Blue Wire	+24VDC Control Input TO IGNITION POWER (Connect BLUE wire to VIOLET wire if continuous output is required)
Brown Wire	+13.7VDC OUTPUT
Green Wire	Ground (internally connected to case). EARTHED TO CHASSIS

These wires may be connected in any order. The VIOLET wire can be permanently connected to 24V (the fuse should be removed for long term storage), as the SMF series converters draw less than 10 mA when the BLUE ignition wire is switched off. When installing the SMF Voltage Converter the heatsink must be grounded.

SPECIFICATIONS

MODEL	SMF10	SMF20	SMF30	SMF40	SMF60
I/P Volts Nominal	16-33V	16-33V	16-33V	16-33V	16-33V
I/P Volts Max.	36V	36V	36V	36V	36V
I/P Fuse Rating	7.5A	15A	20A	25A	40A
Output Current Rating	10A	20A	30A	40A	60A
Max. O/P Current	11A	22A	33A	44A	66A
Output Voltage	13.7V	13.7V	13.7V	13.7V	13.7V
Conversion Efficiency	>85%	>85%	>85%	>85%	>85%
Temp. above ambient	32°C	40°C	42°C	56°C	55°C
Line Regulation	<0.1V	<0.1V	<0.1V	<0.1V	<0.1V
Load Regulation	<0.5V	<0.5V	<0.5V	<0.5V	<0.5V
Dimensions	100x135x50mm	160x135x50mm	160x135x60mm	160x135x60mm	220x135x67mm
Weight	600g	900g	1.1kg	1.1kg	1.3kg
Warranty	2 years	2 years	2 years	2 years	2 years

PROTECTION

The SMF converters are not harmed by voltage spikes, continuous overload, short circuit or any incorrect connection. In the event of an overload or short circuit, CONVERTER WILL REDUCE OUTPUT VOLTAGE OR SWITCH OFF, resetting automatically when the overload or short is removed. The internal electronics are fully potted in silicone to protect against water and dust ingress as well as vibration and shock. The load is protected by an independent over-voltage protection circuit. All protection is fully electronic and does not rely on relays or fuses.

NOTE: This product is not designed to be used as a Battery Charger.

INSTALLATION

