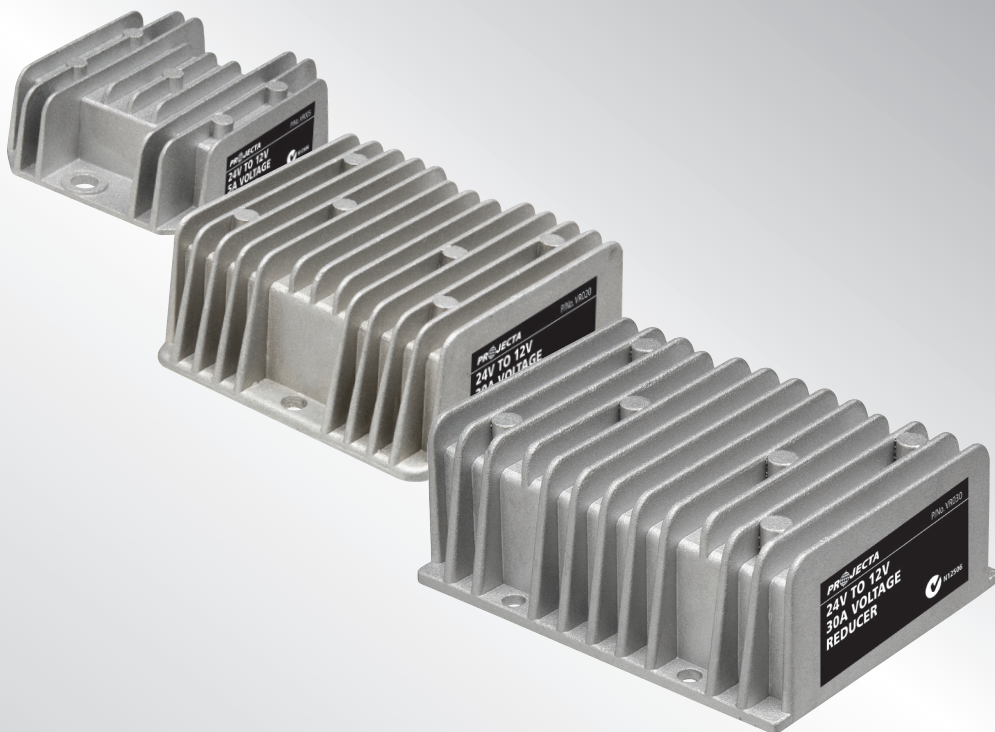


VOLTAGE REDUCER

User Manual



WARNING

- PLEASE READ THESE INSTRUCTIONS COMPLETELY PRIOR TO INSTALLATION.
- BATTERIES PRODUCE EXPLOSIVE GASES – Ensure no sparks or flames are present
- Wear eye protection
- Follow all vehicle manufacturer's instructions
- Beware of moving parts
- Projecta Voltage Reducers are designed for negative ground alternator systems

FEATURES

- Constant voltage output for radio memory (only on VR005 & VR010)
- Ignition switch output
- Wide input voltage range 15–40V with a stable 13.6V output
- Highly efficient 92–95%
- Extremely low operating power when turned on.
- Fully sealed to protect against water, dust and vibration (IP68)

Protection

- Over and under voltage protection
- Overload protection
- Short circuit protection
- Over temperature protection
- Reverse Polarity protection via the fuse on the input wire

INSTALLATION

The reducer can be mounted in or outside the vehicle. Securely mount and ensure adequate ventilation.

WIRING

VR005, VR010

Function	Colour	Label
24V Input (Fused)	Red	24V (IN)
24V Ignition	Blue	IGNITION
13.6V Constant Power	Orange	13.6V (OUT) CONSTANT
13.6V Ignition switched Power	Yellow	13.6V (OUT) IGN. SWITCHED
Ground	Black	GROUND

VR020, VR030

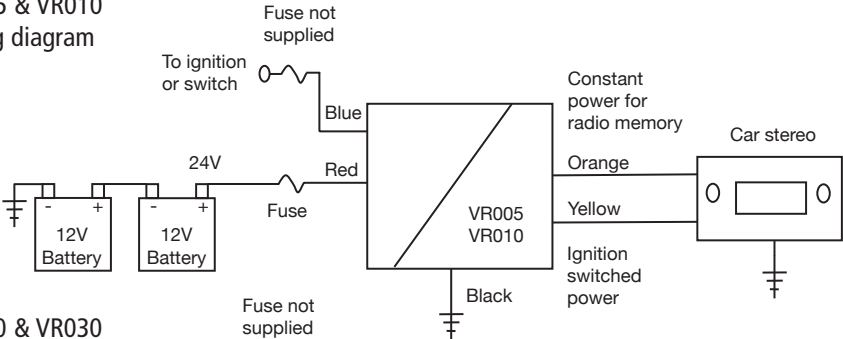
Function	Colour	Label
24V Input (Fused)	Red	24V (IN)
24V Ignition	Blue	IGNITION
13.6V Ignition switched Power	Yellow	13.6V (OUT) IGN. SWITCHED
Ground	Black	GROUND

FUSES

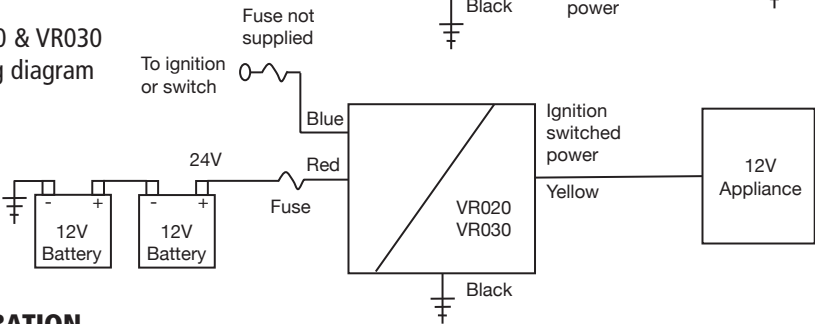
Model	Fuse Size
VR005	5A
VR010	10A
VR020	20A
VR030	30A

TYPICAL WIRING DIAGRAMS

VR005 & VR010
wiring diagram



VR020 & VR030
wiring diagram



OPERATION

In the event of an overload the output voltage will diminish until the overload is removed.

SPECIFICATIONS

	VR005	VR010	VR020	VR030
Input Voltage	15-40V	15-40V	15-40V	15-40V
Output Voltage	13.6V	13.6V	13.6V	13.6V
Constant Output Current	5A	10A	N/A	N/A
Ignition Switched Output Current	5A (Total output is 5A)	10A	20A	30A
Standby operating current	15mA	0.015mA	0.03mA	0.05mA
Operational current draw	20mA	60mA	70mA	240mA
Efficiency	92%	95%	95%	94%
Over temperature Shut down	80°C	80°C	80°C	80°C
Size (mm)	66 x 56 x 21	66 x 56 x 21	74 x 74 x 31	100 x 79 x 37.5
Weight	110g	110g	280g	560g
Fuse	5A	10A	20A	30A

WARRANTY STATEMENT

Applicable only to product sold in Australia

Brown & Watson International Pty Ltd of 1500 Ferntree Gully Road, Knoxfield, Vic., telephone (03) 9730 6000, fax (03) 9730 6050, warrants that all products described in its current catalogue (save and except for all bulbs and lenses whether made of glass or some other substance) will under normal use and service be free of failures in material and workmanship for a period of one (1) year (unless this period has been extended as indicated elsewhere) from the date of the original purchase by the consumer as marked on the invoice. This warranty does not cover ordinary wear and tear, abuse, alteration of products or damage caused by the consumer.

To make a warranty claim the consumer must deliver the product at their cost to the original place of purchase or to any other place which may be nominated by either BWI or the retailer from where the product was bought in order that a warranty assessment may be performed. The consumer must also deliver the original invoice evidencing the date and place of purchase together with an explanation in writing as to the nature of the claim.

In the event that the claim is determined to be for a minor failure of the product then BWI reserves the right to repair or replace it at its discretion. In the event that a major failure is determined the consumer will be entitled to a replacement or a refund as well as compensation for any other reasonably foreseeable loss or damage.

This warranty is in addition to any other rights or remedies that the consumer may have under State or Federal legislation.

IMPORTANT NOTE

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Distributed by

AUSTRALIA

Brown & Watson International Pty Ltd

Knoxfield, Victoria 3180

Telephone (03) 9730 6000

Facsimile (03) 9730 6050

National Toll Free 1800 113 443

NEW ZEALAND

Griffiths Equipment Ltd.

19 Bell Avenue,

Mount Wellington,

Auckland 1060, New Zealand

Telephone (09) 525 4575

Facsimile (09) 579 1192