



INSTRUCTION SHEET
P/No.s 61092BL

VOLTAGE SENSITIVE RELAY

FEATURES

Narva's Voltage Sensitive Relays (VSRs) are suitable for a wide variety of DC applications. VSRs sense the input voltage and automatically connect/disconnect the appliance or circuit at the set voltages.

The cut-out has a 5 sec. delay preventing the relay from disconnecting during a momentary drop in voltage.

- **Surge Protected**
- **Weatherproof (IP65)**
- **L.E.D Indicator (on/contact closed)**
- **Microprocessor controlled**

WARNING

Please read these instructions completely prior to installation:

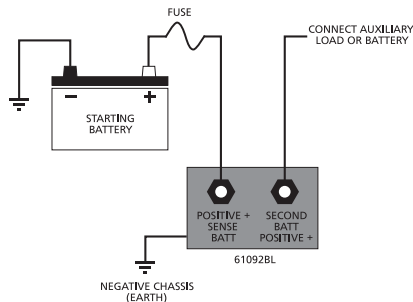
- Batteries produce explosive gases
 - ensure no sparks or flames are present
- Wear eye protection
- Vehicles must be in 'NEUTRAL' or 'PARK', park brakes 'ON'
- Follow all vehicle manufacturers instructions
- Beware of moving parts
- Voltage sensitive relays (VSRs) are designed for negative ground alternator systems with batteries of the same nominal voltage
- Batteries of differing voltages cannot be used



P/No.	61092BL
VOLTAGE	12V
CHARGING CURRENT	140A continuous, 160A peak
CUT-IN VOLTAGE	13.3V
CUT-OUT VOLTAGE	12.7V
CUT-OUT DELAY	5 second
CHARGE TYPE	Parallel
CONTROL	MCU
MOUNTING	Surface/firewall
CURRENT DRAW	Charging 0.25A (standby 5mA)
VOLTAGE DROP	Nil
SURGE PROTECTION	Built-in
ENVIRONMENTAL PROTECTION	IP65
RECOMMENDED FUSE	150A
MINIMUM CABLE SIZE	16 mm ²
TORQUE SETTINGS	6.5 N.m

INSTALLATION

- 1 Disconnect the negative battery cable (Earth) from the starting battery.
NOTE: To prevent the loss of the vehicles electronic memory, preset radio and security codes it is recommended that an 'Electrical System Memory Protector' is used.
- 2 Install the VSR mounting plate in a convenient location. Mount as far away as possible from the exhaust manifold, turbo or any other high temperature components. Do not mount on engine.
- 3 Connect the VSR 'POSITIVE + SENSE BATT' stud to the starting battery.
NOTE: For safety reasons it is recommended to install a fuse close to the starting battery.
- 4 Connect the VSR 'SECOND BATT POSITIVE +' stud to the auxiliary load or battery.
NOTE: If connected to an auxiliary battery, it is recommended for safety reasons to install a fuse close to the auxiliary battery.
- 5 Fit the VSR to the mounting plate.
- 6 Connect the VSR 'EARTH' (-) wire (small black wire with ring terminal) to a suitable chassis bolt or screw ensuring a good electrical connection is made.
- 7 Reconnect the main/starting battery's negative cable (Earth).



TESTING FOR NORMAL OPERATION

- 1 With the installation complete and the engine 'Off' the 'Engaged' L.E.D should be off.
- 2 Start the vehicle's engine. Once the battery reaches 13.3V (12V) or 26.8V (24V) the VSR will activate and the 'Engaged' L.E.D will illuminate. If the L.E.D does not illuminate within a few seconds, increase the engine RPM to a fast idle allowing the alternator to generate more current to charge the starting battery.
- 3 Once the L.E.D illuminates, turn the engine 'Off' and switch the headlights and other accessories 'On'. When the starting battery voltage falls below 12.7V (12V) or 25.6V (24V), the L.E.D will turn off and the VSR will disconnect the auxiliary load.

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.

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