

VOLTAGE SENSITIVE RELAY USER MANUAL

FEATURES

Projecta's Voltage Sensitive Relays (VSRs) are suitable for a wide variety of 12V DC applications.

VSRs sense the input voltage and automatically connect/disconnect the appliance or circuit at the set voltages. The cut-out has an 8 sec. delay preventing the relay from disconnecting during a momentary drop in voltage.

Manual override

Manual override is activated by connecting the override wire to 12V DC. This bypasses the automatic voltage sensor allowing the relay to be engaged below the set voltages.

Surge protected

Weatherproof (IP66)

L.E.D Indicator (on/contact closed)

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 manufacturer's instructions.
- Beware of moving parts.
- Voltage Sensitive Relays (VSR) are designed for negative ground alternator systems with batteries of the same nominal voltage.
- Batteries of differing voltages cannot be used.

SPECIFICATIONS

P/No.	VSR100	VSR200
VOLTAGE	12V	12V
CHARGING CURRENT	100A Continuous, 200A Peak	200A Continuous, 400A Peak
CUT-IN VOLTAGE	13.4V	13.4V
CUT-OUT VOLTAGE	12.8V	12.8V
CUT-OUT DELAY	8 sec.	8 sec.
CHARGE TYPE	Parallel	Parallel
CONTROL	MCU	MCU
MOUNTING	Surface/Firewall	Surface/Firewall
CURRENT DRAW	Charging 550mA (standby 10mA)	Charging 680mA (standby 10mA)
VOLTAGE DROP	Nil	Nil
SURGE PROTECTION	Built-in	Built-in
ENVIRONMENTAL PROTECTION	IP66	IP66
OVERRIDE	Requires minimum 10V	Requires minimum 10V
RECOMMENDED FUSE	150A	250A
MINIMUM CABLE SIZE	14mm ² (6 B&S)	32mm ² (2 B&S)
TORQUE SETTINGS	3.75Lb/ft, 5Nm	3.75Lb/ft, 5Nm

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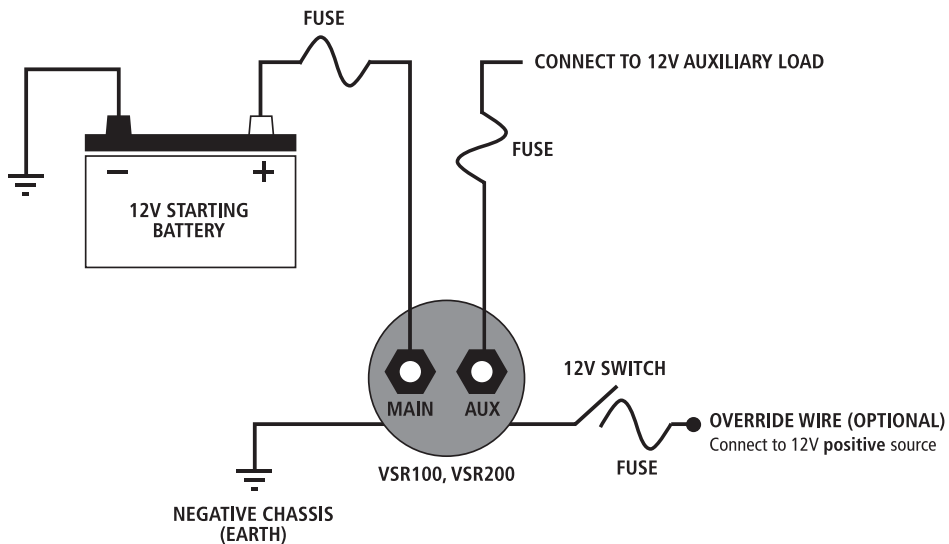
INSTALLATION

1. Disconnect the negative battery cable (Earth) from the starting battery.
Note: To prevent the loss of the vehicle's electronic memory, preset radio and security codes it is recommended that an 'Electrical System Memory Protector' (P/No. IPS700) be used.
2. Securely mount the VSR 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 the engine.
3. Connect the VSR 'MAIN' (+) terminal to the starting battery.
Warning: For safety reasons it is important to install a fuse (recommended 100A) close to the starting battery. When tightening the input and output bolts ensure you lock the bottom nut first so as not to damage the unit.
4. Connect the VSR 'AUX' (+) terminal to the auxiliary load or battery.
Warning: If connected to an auxiliary battery, it is important for safety reasons to install a fuse (recommended 100A) close to the auxiliary battery.
5. 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.
6. Reconnect the main/starting battery's negative cable (Earth).

MANUAL OVERRIDE (OPTIONAL)

Connect the override wire to a switch connected to 12V (1 amp fuse is required).

It is recommended to use a switch fitted with an LED to indicate when the override function is activated.



TESTING FOR NORMAL OPERATION

1. With the installation complete and the engine 'Off' the 'Engaged' LED should be off.
2. Start the vehicle's engine. Once the starting battery reaches 13.4V the VSR will activate and the 'Engaged' LED will illuminate. If the LED 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 LED illuminates, turn the engine 'Off' and switch the headlights and other accessories 'On'. When the starting battery voltage falls below 12.8V, the LED will turn off and the VSR will disconnect the auxiliary load.