

### VSR FEATURES

- Charge your Auxiliary Battery without the risk of discharging Start Battery
- Fully automatic operation

### SPECIFICATIONS

**Continuous:** 50 Amps

**Sense:** Single (Only senses Start Battery (main battery) voltage)

**Voltage System:** 12 Volt DC

**Cut In Voltage (Connect Voltage):** 13.20V with 15 second delay

**Cut Out Voltage (Disconnect Voltage):** 12.80V with 15 second delay

### VSR OPERATION

The purpose of a Voltage Sensitive Relay (VSR) is to isolate the Auxiliary Battery from the Start Battery when there is no charge from the alternator.

*In simple terms the VSR will automatically disconnect the Auxiliary Battery from your Starter Battery when the engine is not running, and then reconnects it when Starter Battery is charged.*

### HOW THE VSR WORKS?

When the vehicle's engine is running, the alternator will charge the Start Battery.

Once the Start Battery has reached 13.20V the isolator will wait 15 seconds then connect the Start and Auxiliary Batteries enabling them to charge simultaneously.

When the vehicle's engine is not running, the alternator is no longer charging so the Start Battery voltage will drop. Once the Start Battery voltage is below 12.8V after 15 seconds the VSR will disconnect the Start Battery from the Auxiliary Battery. This means the Auxiliary Battery can NOT drain the Start Battery.

### INSTALLING THE VSR

1. Connect the (+) positive wire from the Start Battery to the terminal on the VSR marked Main.
2. Connect the (+) positive wire going to the Auxiliary Battery's positive terminal to the other terminal on the VSR.
3. Connect the thin black earth wire to either the vehicle chassis or the Start Battery's negative terminal.
4. Secure the VSR in place.

### IMPORTANT NOTES

It is recommended that a 50 Amp fuse is installed between the Starter Battery and the VSR.

The negative wire will run from the Starter Battery terminal through to the Auxiliary Battery either directly or via the vehicles chassis.

There is a delay built in to the VSR which means it can take up to 15 seconds for the VSR to connect or disconnect.

The VSR has a light built in which will illuminate when the VSR is engaged (both batteries are connected).

If the VSR does not disconnect when you switch the vehicles engine off try turning your high beam lights on for a few minutes.

