VSR WITH OVERRIDE

SKU: KAVSROVER

VSR Features

- Charge your Auxiliary Battery without the risk of discharging Start Battery
- Protect electronics on Auxiliary Battery circuit from engine start up spikes
- Fully automatic operation
- Override Switch (Engages Relay regardless of sense voltage)
- Indication Light Wire (Active when VSR engaged)
- Override Wire (Activated by + Positive Ignition Feed)
- Dual Sense (Senses voltage of start and auxiliary batteries)

Specifications

Continuous	140 Amps
Voltage System	12 Volt DC
Dual Sense Cut In Voltage (Connect Voltage)	13.20V with 15 second delay
Dual Sense 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 reconnect 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 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 the VSR will disconnect from the Auxiliary Battery. This means the Auxiliary Battery can NOT drain the Start Battery.

The Override Switch:

By switching the override switch to the ON position the voltage sensing feature of the VSR is overridden and the unit will connect both batteries. The override function can be used when the Start Battery is flat but the Auxiliary Battery is still charged.

Wait some time before attempting to start the vehicle as this will allow the start battery to charge from the auxiliary battery.

It is extremely important that the override switch is not left in the ON position as the batteries will remain connected.

Dual Sensing

This premium VSR senses both the Start and Auxiliary Batteries voltage.
The advantage of a dual sensing VSR is that when the Auxiliary battery is being charged by Solar or an AC Battery Charger and it is above 13.2V the VSR will engage enabling the Start Battery to also be charged.

Installing The VSR

Cable Sizing

When Installing the VSR into your vehicle we recommend using wire that is 8 B&S or larger to ensure proper power supply. Such as that included in our vehicle wiring kit (KADBWK8MMPP).

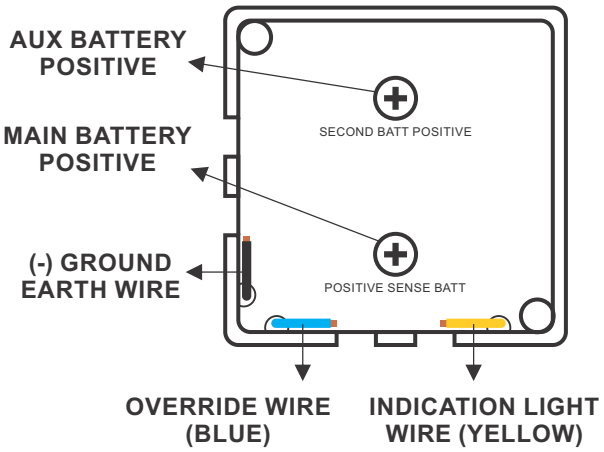
Override Wire (Blue)

The blue override wire not generally used but in some cases the user may want to engage the VSR via a switch or an ignition feed. When this wire is connected to a + Positive feed the relay will engage. If not needed ignore this wire.

Indication Light Wire (Yellow)

This wire is active (+ Positive) when the relay is engaged. It can be connected to an external 12V light (not supplied) to indicate remotely when the VSR is engaged.
Important: As this wire is active + when the VSR is engaged, ensure it is cut off or insulated to ensure that it does not go to - earth if it is not being used.

1) Connect the (+) positive wire from the Start Battery to the terminal on the VSR marked with Positive + Sense Batt.
2) Connect the (+) positive wire going to the Auxiliary Battery's positive terminal to terminal on the VSR marked with Second Batt Positive +.
3) Connect the thin black earth wire to either the vehicle chassis or the Start Battery's negative terminal.
4) Place the plastic cover on the back of the VSR then fix the VSR into place.



Important Notes:

It is recommended that a 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.