

## Voltage Sensors

### VS12 & VS24 Over Voltage/ Under Voltage Sensors.

#### FUNCTION

The Redarc Voltage Sensors are used to monitor the 12V or 24V supply in a negative earth automotive system. Depending on the voltage, the internal relay switches its common contact to either the normally closed contact or the normally open contact. These contacts are connected to the WHITE, GREEN and BLUE wires respectively. When the voltage rises above the set point, the 10A internal relay is energized. This disconnects the WHITE wire from the GREEN wire and connects it to the BLUE wire. When the voltage falls below the set point the internal relay is de-energised. This disconnects the WHITE wire from the BLUE wire and connects it to the GREEN wire.



#### OVER VOLTAGE

To use the Voltage Sensors to disconnect equipment from over voltage (E.g. to prevent equipment damage), the supply should be connected to the WHITE wire and the equipment should be connected to the GREEN wire. Alternatively, an alarm could be connected to the BLUE wire to indicate over voltage. If required, both of these options could be used.

#### UNDER VOLTAGE

To use the Voltage Sensors to disconnect equipment from under voltage (E.g. to prevent battery over-discharge), the supply should be connected to the WHITE wire and the equipment should be connected to the BLUE wire. Alternatively, an alarm could be connected to the GREEN wire to indicate under voltage. If required, both of these options could be used.

#### ADJUSTMENT

The set point can be adjusted by gently turning, with a small screwdriver, the "pot" visible inside the unit. To increase the voltage, turn the adjustment clockwise.

The VS12 has a hysteresis of approx. 0.7V. (E.g. if it is set to de-energise the relay at 11V, it will energise it at approx. 11.7V). The turn on (energise) voltage can be adjusted between 9.0V and 16.0V.

Please note standard factory setting is to energise at 12.5V.

The VS24 has a hysteresis of approx. 1.5V. (E.g. if it is set to de-energise the relay at 22V, it will energise it at approx. 23.5V). The turn on (energise) voltage can be adjusted between 18.0V and 35.0V.

Please note standard factory setting is to energise at 25V.

#### CONNECTIONS

The Voltage Sensors have five connecting wires, connected as shown below:

RED WIRE	SUPPLY/MONITORING INPUT
BLACK WIRE	NEGATIVE GROUND
WHITE WIRE	RELAY COMMON
GREEN WIRE	RELAY NORMALLY CLOSED
BLUE WIRE	RELAY NORMALLY OPEN

#### SPECIFICATIONS

MODEL	VS12	VS24
Supply Voltage	12V	24V
Sensing Range	9.0-16.0V	18.0-35.0V
Output Current Rating	10A	10A
Dimensions	75x30x24mm	75x30x24
Weight	70g	70g
Warranty	2 years	2 years
Factory Settings	12.7V ON, 12V OFF $\pm$ 0.2V	25.2V ON, 24V OFF $\pm$ 0.2V

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*Specifications are subject to change without notification.*