## 24 to 12 Volt Switchmode Reducers

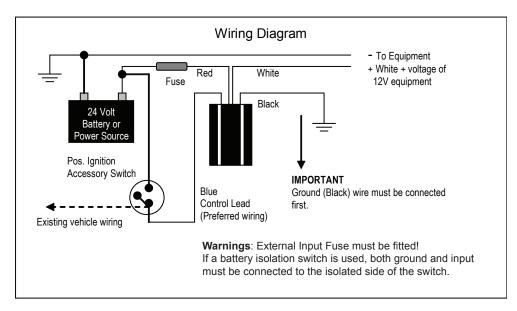
Operating Instructions
Please read these instructions before use



## When Installing Please Note:

- 1. The following connection sequence is to be followed: Ground (Black), Input (Red), Output (White), Control (Blue).
- **2.** Preferably mount the unit inside the vehicle. Avoid locations where external heat is produced e.g. exhaust system or where the batteries are located.
- 3. Choose a position with good ventilation where air can pass freely around the unit.
- 4. Ensure the unit is protected from water spray and other sources of contamination e.g. oil, grease and dust.
- **5.** Ensure that unit is installed away from any flammable fumes, liquids or materials.

**Note:** A large spark can sometimes be generated during the connection, due to the current required to charge the capacitors in the reducer.



Part No.	Fuse
SM-110	10 amp
SM-120	20 amp
SM-130	30 amp
SM-150	40 amp

The reducer is protected against over voltage, under voltage (during cranking of vehicle), over current (overload) and voltage spikes or surges. Under any of the above conditions the converter will shut down.

**Notes:** The SM110 is fitted with an internal re-settable fuse. To reset the reducer, disconnect power and wait 5 minutes before reconnecting

- a) Where BLUE control wire is connected via ignition switch (preferred wiring), simply switch ignition switch 'off' and 'on' again.
- b) Where BLUE control wire is hard wired to battery, simply disconnect wire (blue) and reconnect.
- The unit will continue to shut down if the fault recurs. If this is the case then the fault should be located and rectified.

Warranty Conditions: Our products come with guarantees that cannot be excluded under the Australian Consumer Law.

The customer is entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. The customer is also entitled to have the products repaired or replaced if the products fail to be of acceptable quality and the failure does not amount to a major failure.

GSL Electronics (GSL) warrants that its products will, under normal use and service, be free of defects in material and workmanship for a period of two (2) years from the date of the original purchase by the customer as marked on the customer's original invoice. Please refer to our website for full warranty and return information which can be found at http://www.gsl.com.au/faq.html