



Congratulations on purchasing your new GSL Electronics Microprocessor Controlled Voltage Reducer. This innovative microcontroller based design features a stable high output current fully protected against overload, short circuit, overvoltage and overtemperature. The unit has input and out status indications via LEDs and a convenient output enable wire. This product has been designed to suit most applications where high efficiency and accurately controlled 12V supply are required.

**Installation & Safety Precautions:**

- 1.The following connection sequence is to be followed: Ground (BLACK), Input (BLUE), Output (RED) and Control (WHITE).
- 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.
- 6.Never smoke or light cigarettes near a battery.
- 7.Do not place tools on top of battery or allow tools to fall on battery.
- 8.Always wear eye protection during connection process.
- 9.Ensure a "well" ventilated area is used when testing or re-charging batteries.
- 10.Ensure ventilation is adequate and venting holes are not obstructed. Inadequate ventilation may over-heat the unit and cause inefficient operation.
- 11.If skin or clothing comes into contact with acid, flush the area(s) with water immediately. Seek medical attention if necessary.

**Should product require service, return it to your place of purchase for Warranty Advice.**

**If the unit is in one of the following conditions, reset as follows:-**

- **Output Over Voltage** : If the output over voltage protection has been tripped then there will be no operation from the unit. Contact supplier or GSL Electronics for Warranty Advice.
- **Thermal Protection** : For your safety and for the longevity of your purchase, the unit will shut down to protect itself and your batteries when the unit exceeds it nominal operating temperature. To reset this condition the unit must be disconnected from the battery for at least one minute to allow cooling and for the microprocessor to reset.

**Where the unit does not reset, contact your Supplier or GSL Electronics for Warranty Advice.**

**LED Indicators:**

Your new reducer is fitted with a microprocessor which evaluates the state of the operation of the unit and displays this via two LED indicators.

**Input LED:** Nominal operation is indicated by the Input LED remaining solid.

Flashing Input LED indicates that input is below 25V. If the input voltage drops below 22V charger will switch off.

When the voltage returns to above 23V the unit will return to normal operation.

**Output LED:** This LED indicates the power output of the Reducer.

**When the LED is flashing this indicates that the Reducer either:-**

**A)** Current output less than 1 Amp

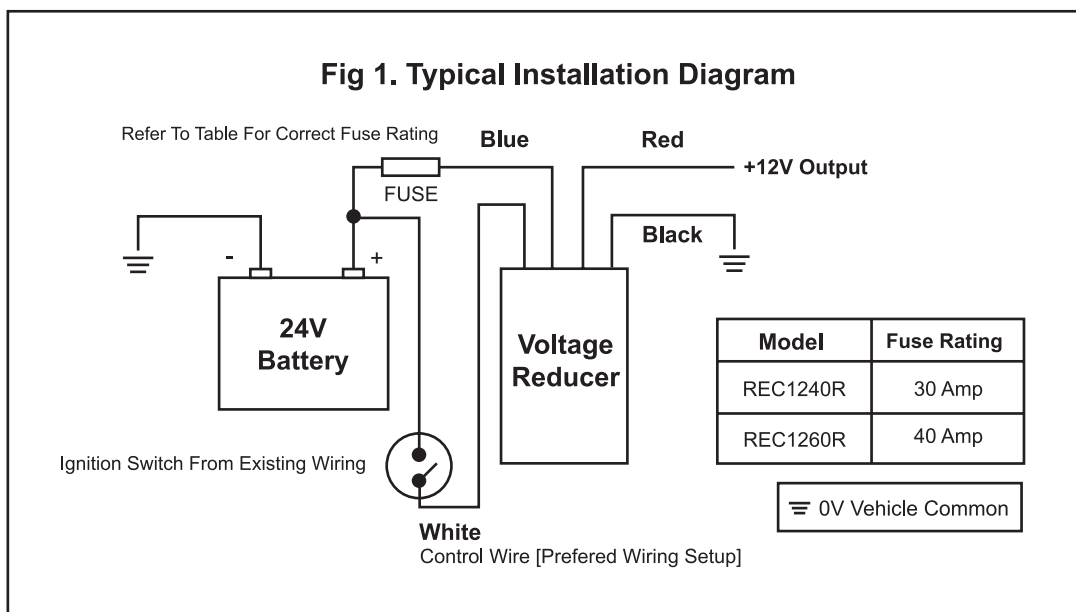
**B)** Or the unit has just entered current limit

A solid output LED indicates that the unit is operating within the nominal range.

**The LED will remain off when either:**

**A)** The Ignition Wire is disconnected

**B)** Output Over Voltage or Thermal Protection



Specifications	REC-1240R	REC-1260R
Input Voltage	23VDC to 30VDC	23VDC To 30VDC
Output Voltage	13.5VDC $\pm$ 1%	13.5VDC $\pm$ 1%
Typical Efficiency	Greater Than 85%	Greater Than 85%
Max Output Current	40A (Continuous)	60A (Continuous)
Stand - By Current	20mA	20mA
Features	Short Circuit Protection Reverse Input Protection Over Voltage and Thermal Protection	
Dimensions mm [L x W x H]	285x175x65	285x175x65
Weight	2.5Kg	2.5Kg

**Warranty Conditions:** The product is warranted to be free from defects in materials and workmanship under normal use and service for a period of 24 months from the date of sale. This warranty covers defective parts and workmanship provided that the product is shipped prepaid to the seller within 24 months of purchase of goods. This warranty is limited to the repair or replacement (at the manufacturers' discretion) of parts and shipping prepaid to the original despatch destination. We regret that no liability can be accepted for consequential or special damages of any kind howsoever arising in connection with products supplied by the seller. This warranty is in lieu of all other warranties expressed or implied. No representative is authorised to assume for the seller any other liability in connection with the seller's products.