

## **DC to DC VOLTAGE REGULATOR/CONVERTER**

**This type of device is known in the electronics industry as a Buck - Boost Regulator**

**It has a fixed output voltage of 13.8 volts**

**Any applied input voltage (within the specifications) above 13.8 volts will be reduced to 13.8 volts**

**Any applied input voltage below 13.8 volts (within the specifications) will be increased to 13.8 volts**

### **INSTALLATION**

**\*\* THIS UNIT CAN BECOME VERY WARM WITH NORMAL OPERATION \*\* THIS UNIT IS NOT WATERPROOF \*\***

Mount the unit in an area with some natural air flow and with easy access for the wiring and mounting screws. Secure to a flat rigid surface with suitable fasteners through the holes in the base flange of the unit.

The Input and Output wires (inc negative), are completely isolated from each other, and from the Regulator case

Connect the INPUT voltage to the Yellow and Black wires exiting the unit via the grommet marked 9 to 36v.

A 10 AMP rated Fuse and Switch must be included in the Yellow (positive) Input Voltage wire.

**OBSERVE CORRECT POLARITY - YELLOW INPUT WIRE IS TO POSITIVE +**

Connect the OUTPUT via an appropriate connector and fuse to your chosen 12 volt appliance. A switch is optional.

The Fuse in the RED wire must be rated to suit your appliance, but in any case it must not exceed 5 AMPS

**OBSERVE CORRECT POLARITY - RED OUTPUT WIRE IS TO POSITIVE +**

Ensure that all cables, connections, fuse-holders and switches are properly rated, and do not exhibit voltage drop.

### **SPECIFICATIONS**

Model SR13860

Input Voltage Allowable 9 to 36 volts, DC only

Output Voltage Fixed at 13.8 volts DC,  $\pm 2\%$

Over-Voltage Output Protection Circuit - if circuit failure causes output voltage to rise, output voltage turned off

Maximum Output Current 4Amps

Current Limiting will occur at 4 Amps - do not use with a device attempting to draw greater than 4 amps

Over Temperature Protection

Output Voltage Ripple Factor  $< .7\%$

Output and Input Short Circuit Protection

Input/Output Isolation 500 volts

Ambient Temperature allowable from -20 to +80 degrees C (-4 to +176 F)

Standby Current (no output load)  $< 50\text{mA}$

Conversion Efficiency Approx. 85%

Dimensions 125 x 70 x 50 mm (4.9 x 2.75 x 2 in)

Weight 330 Grams (.75 lb)

All specifications subject to change or design improvements without notice

### **WARRANTY**

***In the event of malfunction or failure Cruising Electronics will, at their sole discretion, either repair or replace the unit, providing that:***

Malfunction has occurred within 12 months from the date of purchase

Any or all of the above listed ratings of the unit have not been exceeded

The unit has been properly and permanently installed, with correctly rated cables, fuses, switches and any other ancillary items which could reasonably be regarded as necessary to effect a safe and workmanlike installation.

The unit has not been exposed to any fluid, corrosive or hazardous substance, or excessive airborne particles

The unit is returned freight paid to Cruising Electronics or their nominated agent

Proof of purchase is provided.

### **DISCLAIMER**

**Please note that under no circumstances can Cruising Electronics be held responsible or accept liability for any consequential damages or loss whatsoever, incurred as a result of installing and/or operating this device in any situation, with or without any other device attached.**

**CRUISING ELECTRONICS**

**17 MOREY ROAD**

**CABLE BAY 0420**

**NORTHLAND NEW ZEALAND**

**TELEPHONE (09) 4062020 (027) 2552852 (+64 27 2552852)**

**don@cruisingelectronics.com**

**www.cruisingelectronics.com**