

## 12 Amp Panel Mounted Bi-Directional Speed Regulator RS Stock No: 8347584

### Product Description

The controller is a bi-directional motor speed regulator that can deliver a current of up to 12 Amps when supplied by a voltage in the range 9 V to 15 V DC. Figures 1 and 2 show the controller assembly. The controller is normally used with a battery supply to adjust the speed and direction of a DC motor, with screw terminals to allow easy connections. The controller is protected by a fast-acting fuse to reduce the chance of damage caused by a short-circuit motor. A soft-start feature is built into the control function to progressively apply the output voltage upon switch-on, thereby reducing the characteristically large surge of current that can occur if the output is initially set too high with a motor load. Additional features include supply-reversal protection and the ability to incorporate thermal protection if required by the customer.

### Particular Features

- Smooth, bipolar (+ or -) output current control up to 12 A continuous, 16 A non-continuous (supply and load dependent)
- 9 V to 15 V DC input voltage range (12 V nominal)
- Incorporates short-circuit, overcurrent and accidental supply-reversal protection
- Pulse-width modulation frequency of 1 kHz (+/- 5%)
- Operating temperature range of 0 to 40 °C (0 to 60 °C with a maximum current de-rating of 0.2 A per °C above 40 °C)
- Storage temperature range of -10 °C to 70 °C
- Dimensions: 110 mm x 85 mm x 30 mm
- Weight: 160 gramme

### Assembly Instructions

1. Drill a 9.5 mm diameter hole in the fixing panel to accommodate the potentiometer spindle prior to fixing the controller. Remove the knob, nut and metal washer, leaving the nylon spacers to act as an insulator. Insert the potentiometer spindle through the hole in the panel and re-assemble the removed parts in the reverse order.
2. Prepare suitable input and output cables with appropriate connectors attached (observe Precaution 1).
3. Securely connect the input and output leads to the screw terminals shown in Figure 3. The control knob marker should be initially set to the 12 o'clock (vertical) position to prevent the motor starting when the supply connection is made.
4. Connect the power cable to the DC supply, ensuring the correct polarity. Please note, the motor should be connected before the supply is applied to the controller and only removed after the supply has been disconnected.

After completing the assembly, the unit will be set up to control the motor speed in the forward or reverse direction.

### Precautions that MUST be observed when Assembling and Using the Controller

1. The DC supply cable (+V, 0V terminals) and the motor output cable (M1, M2 terminals) **should not individually exceed 60 cm** in length in order to comply with Electromagnetic Compatibility requirements.
2. If the controller is connected directly or indirectly (e.g. via auxiliary equipment) to an external network or system, including mobile systems, then the installer shall be responsible for ensuring that the connection does not create or introduce levels of electromagnetic interference that contravene the Electromagnetic Compatibility regulations in force at the place where the controller is used.
3. The controller will normally get hot in operation and care should be taken to avoid injury if it is touched during, or soon after, it is used.

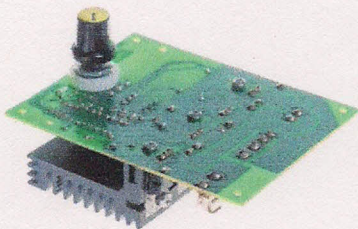


Figure 1

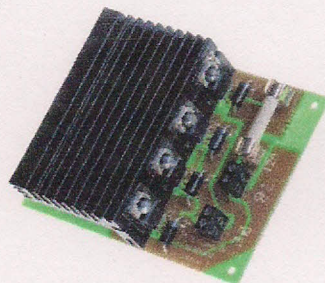


Figure 2

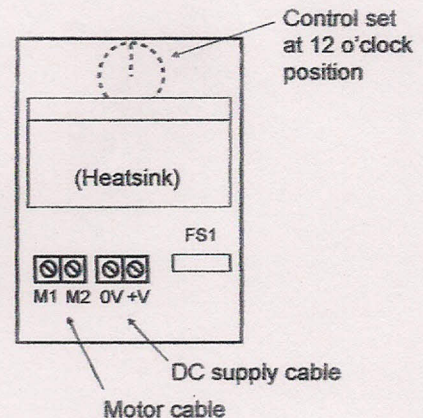


Figure 3