



SM263 MOTOR CONTROLLER INFORMATION BRIEF

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Manufactured in Australia by Alian Electronics Pty. Ltd.
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Introduction

The SM263 is a compact, general purpose DC motor controller. It is available in 12V and 24V versions, with a steady output of up to 80 Amps. It has a range of features to suit different situations that may be selected by the installer.

Standard features include:

- Low battery warning
- Dampened acceleration
- On-board Forward/Reverse/Brake control
- Stall & over-current protection
- Simple 2-wire control circuit manages speed, direction and On/Off
- Reduced speed in reverse
- Self-test & safety checks upon power up
- Supports Dynamic (resistive load) Braking

An optional backlit Liquid Crystal Display (SM267) can be fitted to give the operator information on battery condition, drive status and system integrity



Protection Features

Four levels of protection from stalled motor events. Should a full locked-rotor stall occur, a rapid beep will warn the operator that a brief power reduction down to 30% drive will occur if they persist. Additional safety software monitors the integrity of the power semiconductors when the throttle is at rest. The software which will automatically isolate the motors should any drive fault conditions be detected, making it a very safe controller to use.

When first activated, the throttle must be *at-rest in the Forward direction*, or warning beeps will sound and the controller is disabled until this is done. This safety feature guards against the possibility of a runaway vehicle if the throttle was rotated before battery power was first applied.

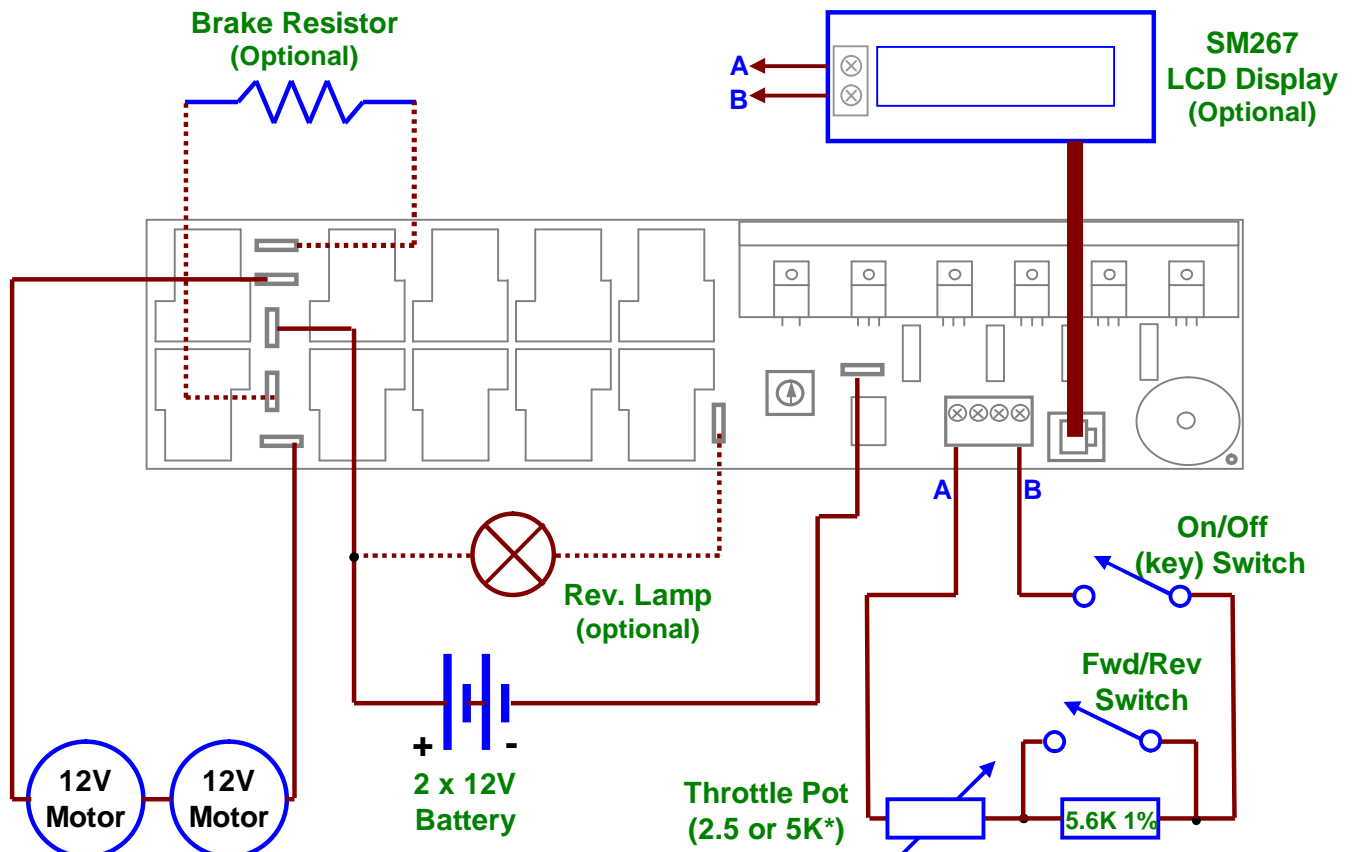
Direction Control

Motor rotation activity is monitored by the microprocessor to prevent the user going into hard reverse while still moving or rolling forwards. This protects both the user from experiencing sudden changes in acceleration and protects a gearbox and drive components from mechanical stress damage.

Simple Connections

The controller supports one or two 12V motors, or one 24V motor. Throttle Potentiometer, Key switch, Forward/Reverse switch all connect via a single wire loop circuit. The display connects via a common RJ12 (telephone style) patch cable.

SM263 MODULE – ELECTRICAL CONNECTIONS (24V system)



- A 5K linear pot may be used where mechanical backstops limit pot rotation to 150°
- Throttle connection points **A B** indicate wiring may connect via the Display, or direct to the controller.

Specifications:

Motor Type supported:

Supply Voltage:

Output current:

Dimensions:

Weight (controller)

Power connections:

Direction Control

Speed Control:

Current Sensing:

Throttle Control

D.C. Permanent Magnet

12 or 24VDC

80 Amps

288 x 70 x 34mm

124g

6.3mm vertical tab

Relay switched 'H' bridge

0-100% PWM via 5 MOSFETS

Hall Effect

0 - 2,500 Ohms spread required