

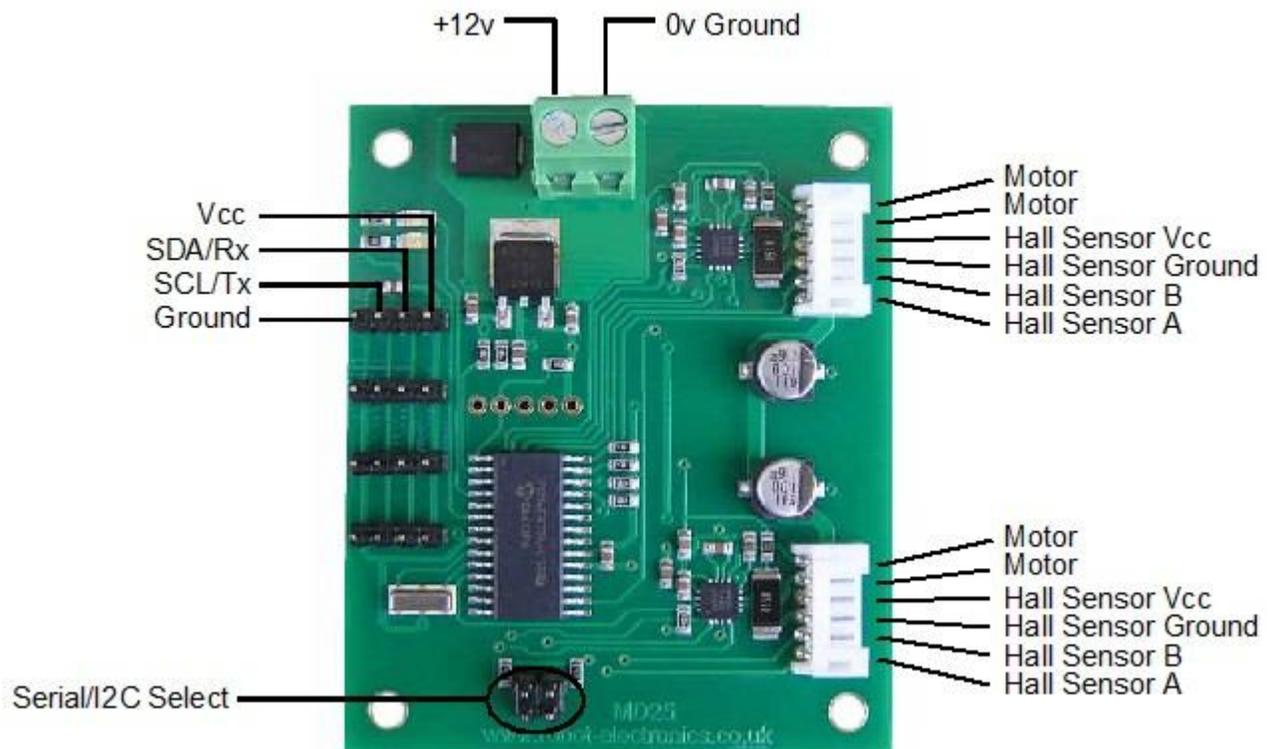
MD25 - Dual 12Volt 2.8Amp H Bridge Motor Drive

Overview

The MD25 is a robust I2C or serial, dual motor driver, designed for use with our EMG30 motors. Main features are:

1. Reads motors encoders and provides counts for determining distance traveled and direction .
2. Drives two motors with independent or combined control.
3. Motor current is readable.
4. Only 12v is required to power the module.
5. Onboard 5v regulator can supply up to 1A peak, 300mA continuously to external circuitry
6. Steering feature, motors can be commanded to turn by sent value.
7. Variable acceleration and power regulation also included

Connections



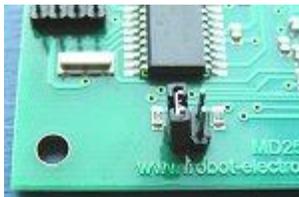
Jumper Selection



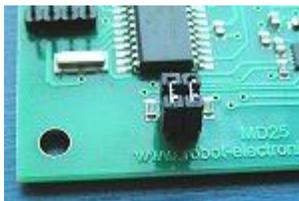
I2C mode with no jumpers installed, up to 100 khz clock.
[Full Details of I2C Mode is here](#)



Serial mode at 9600 bps, 1 start bit, 2 stop bits, no parity
[Full Details of Serial Mode is here](#)



Serial mode at 19200 bps, 1 start bit, 2 stop bits, no parity
[Full Details of Serial Mode is here](#)



Serial mode at 38400 bps, 1 start bit, 2 stop bits, no parity
[Full Details of Serial Mode is here](#)

Motor Voltage

The MD25 is designed to work with a 12v battery. In practical terms, this means the 9v-14v swing of a flat/charging 12v battery is fine. Much below 9v and the under-voltage protection will prevent any drive to the motors.

Motor Noise Suppression

When using our EMG30 encoded motors, you will find that a 10n noise suppression capacitor has already been fitted. Other motors may require suppression. This is easily achieved by the addition of a 10n snubbing capacitor across the motors. The capacitor should also be capable of handling a voltage of twice the drive voltage to the motor.

Leds

The Red Power Led indicates power is applied to the module.

A Green Led indicates communication activity with the MD25. In I2C mode the green led will also initially flash the address it has been set to. See I2C documentation for further details.

Board dimensions

