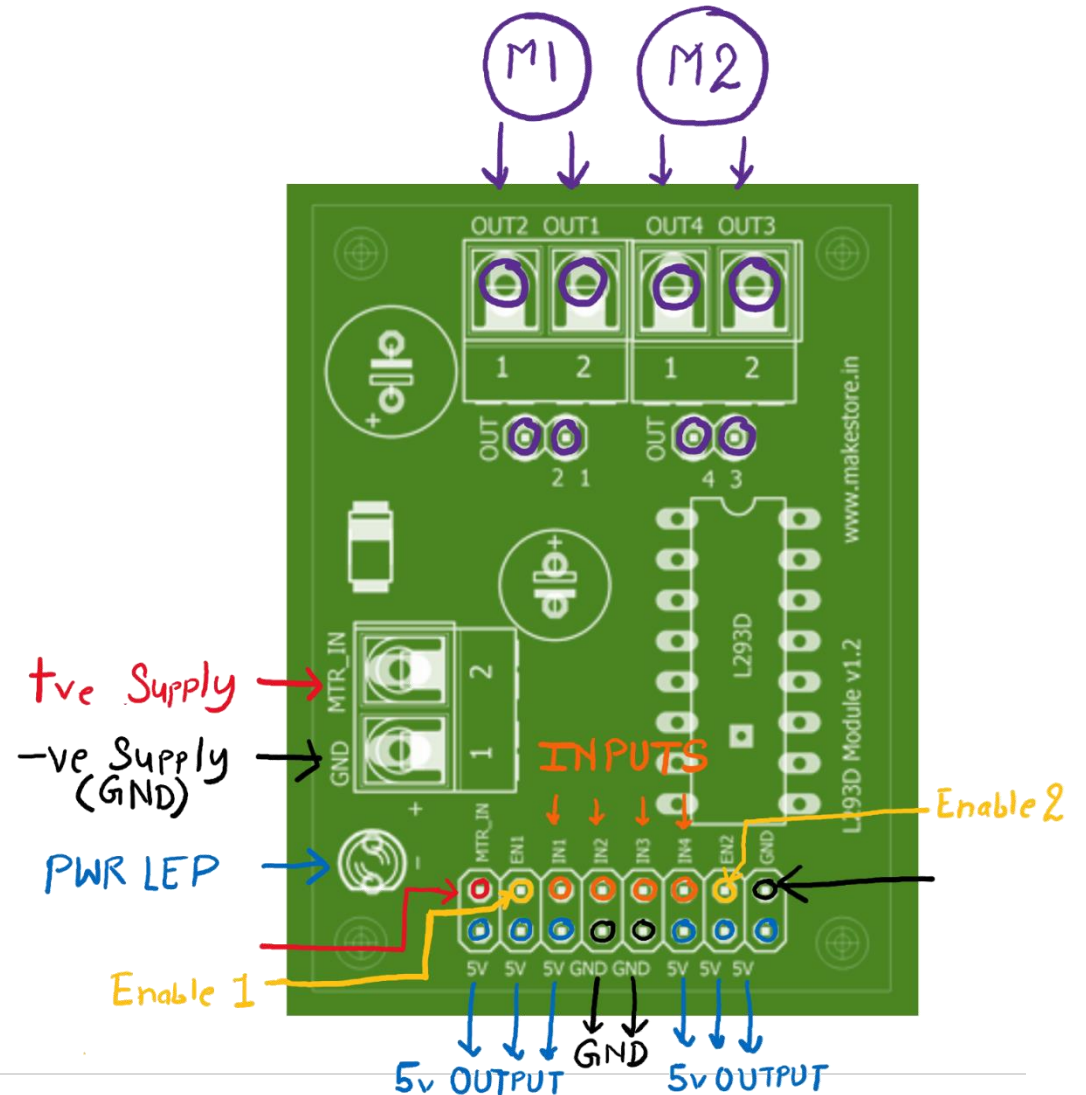
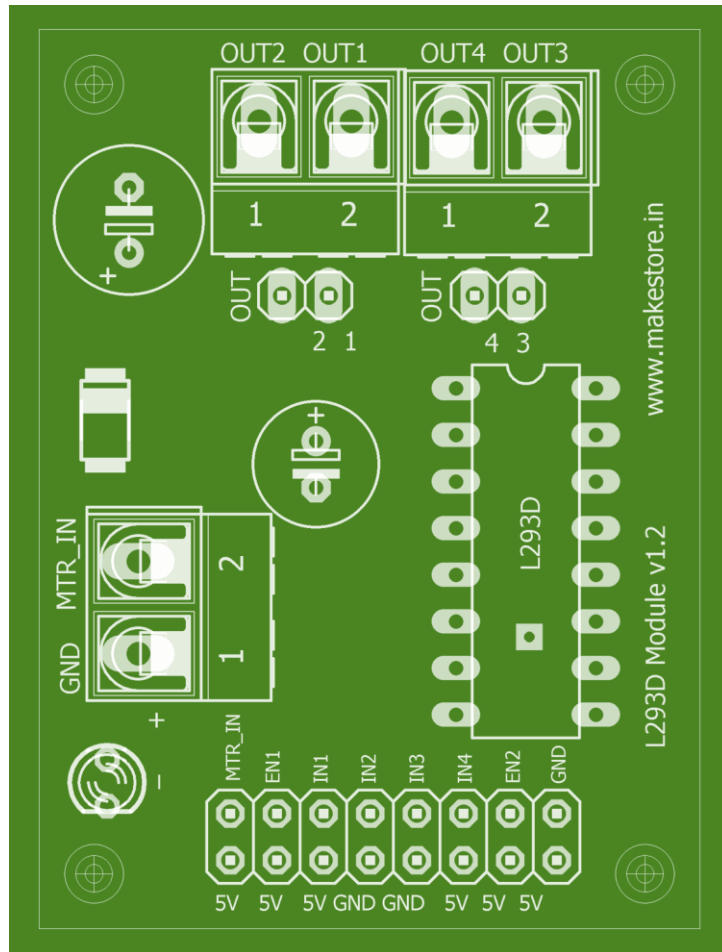


Makestore's L293D Motor Driver Manual

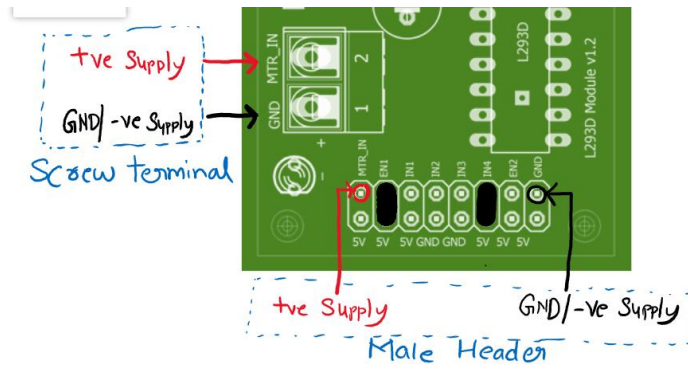
L293D is a typical Motor driver or Motor Driver IC which allows DC motor to drive on either direction. L293D is a 16-pin IC which can control a set of two DC motors simultaneously in any direction. It means that you can control two DC motor with a single L293D IC.



Connections:

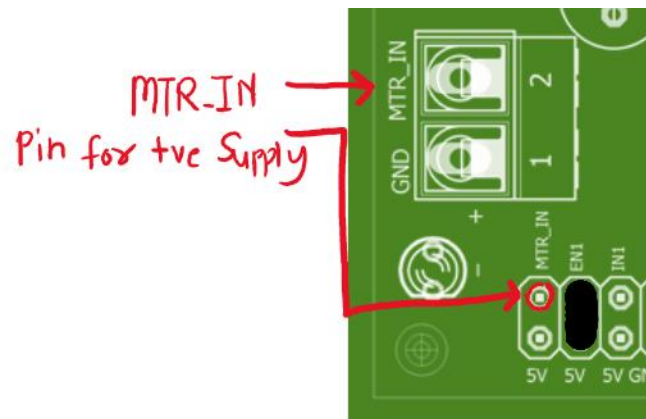
There are two options to provide power supply to the driver.

1. Using Screw Terminal MTR_IN and GND, which is easy to use when using battery or adapter having wires as connector.
2. Using Male Header MTR_IN and GND, Which is easy to use when using battery or adapter having jumper Cables.



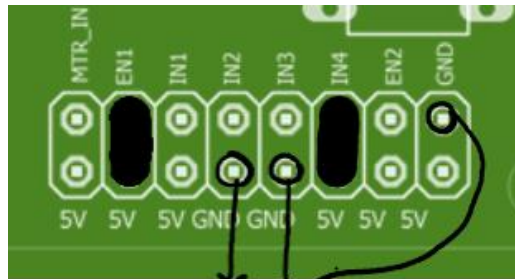
- **MTR_IN:**

To this pin provide the Positive supply voltage for motor. This Voltage will be available to the motor. It can be from 7v to 12v. While using voltage greater than 12v proper heat sinks should be used for safe operations.



- GND :

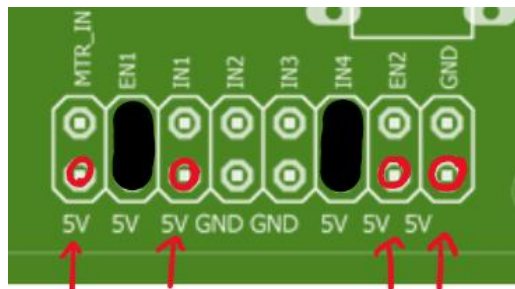
Connect this pin to ground/ Negative supply voltage.



GND PINS
to be used with 5v

- 5v :

This L293D Module has on-board voltage regulator AMS1117-5v. Which converts the input voltage to 5v, which is provided to the L293D IC and taken out as 5v pins. These 5v Pins provide 5v and max total current that it can provide is 500mA which is good enough to power Arduino and few sensors.

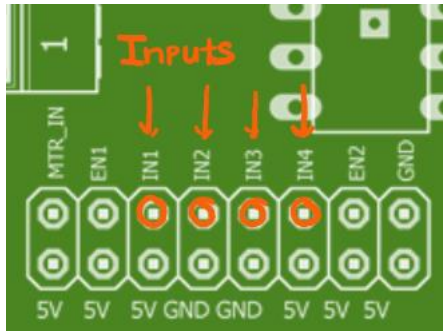


5v O/P Available for
for Controllers & Sensors

- IN1 IN2 IN3 IN4 :

These are the input pins to control the motors, whose output corresponds to OUT1 OUT2 OUT3 and OUT4 pins respectively.

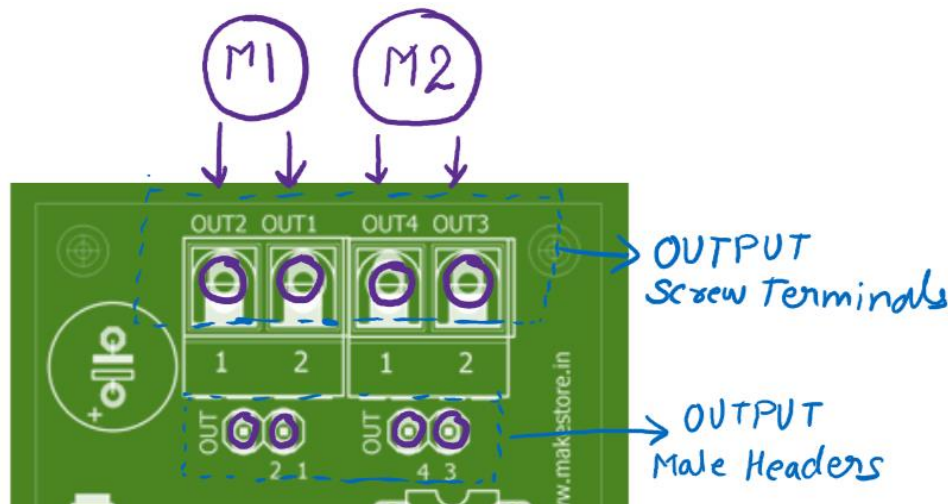
These input pins can have logic voltage of 3.3v or 5v. PWM signals can be applied on these pins to control the speed of Motor.



- OUT1 OUT2 OUT3 OUT4 :

These are the output pins where motors needs to be connected. Two options are given to connected motors.

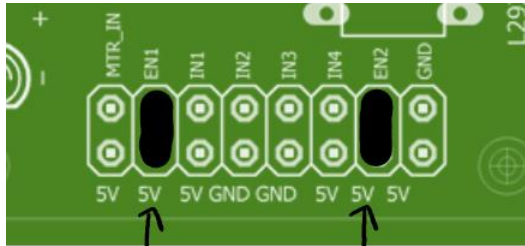
1. Screw terminals when motors have bare wires as connector
2. Male Headers, when motors have female jumper cable as connector.



- EN1 EN2 :

L293D motor driver has two Motor control options. To enable or disable one or both of them Enable pins are given. Applying 5v to these pins enable the respective control circuit and applying 0v/GND disables them.

By default both the enable pins are connected to 5v using jumper enabling both motor control circuit.



Enable & 5v
Shorted using Jumper

You can use the enable pins to control the speed of the motor by removing the jumper and connecting them to PWM pin.

Features:

- Wide Supply-Voltage Range: 4.5 V to 36 V for motor supply (safe Limit 5v to 12v for continuous operation).
- On-board voltage regulator IC to provide 5v to L293D. No need to provide extra 5v supply.
- Extra 5v and GND pins for supplying power to controllers and sensors.
- Enable pins taken out to control speed using single PWM pin.
- Output current 600mA per channel.
- Peak output current 1.2A per channel.
- Power Led to indicate the power status.
- Capacitors to rectify Back EMF from motors.

Do not Exceed Voltage limits. It may damage the Module.