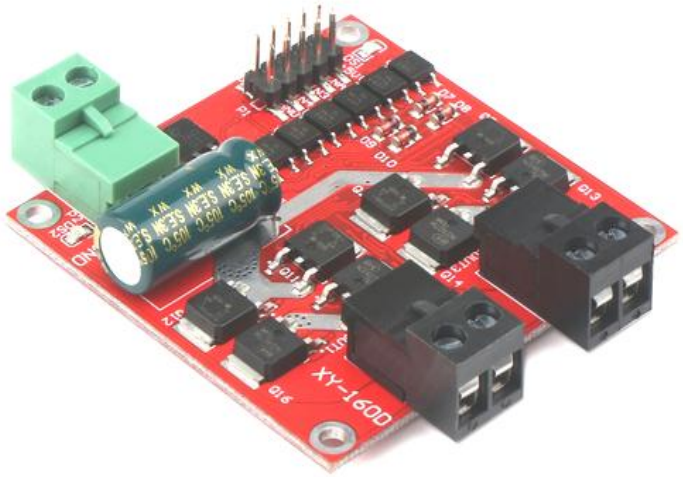
Data Specs

7A/160W Dual H-Bridge Motor Controller

This is an ultra-small low profile dual DC motor driver for space constraint projects, capable of deliver high power of up to 7A per output channel. It uses similar logic as the L298 motor driver, where you control the driver with 3 signal pins (IN1, IN2, ENABLE). This motor driver is driven by high power MOSFET, with the control signals opto-coupler isolated to protect any delicate circuitry and ground loop issues. You can drive this driver with both 3.3V and 5V logic.



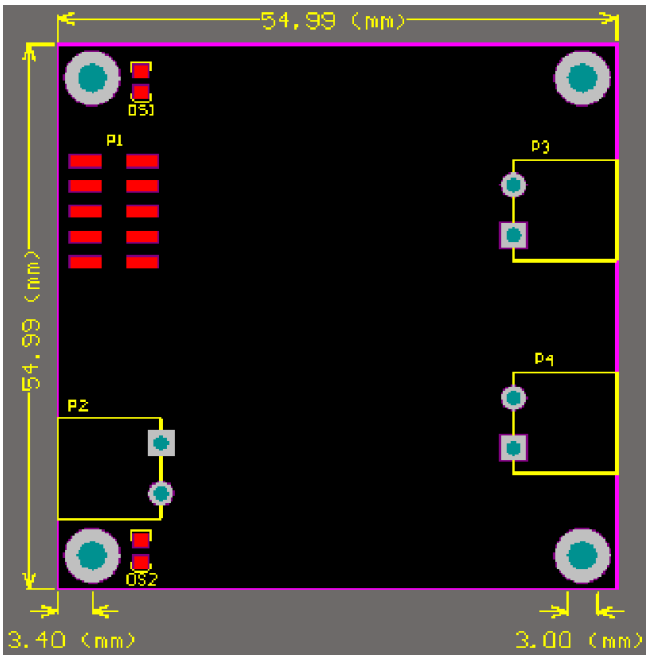
SKU: DRV-1011

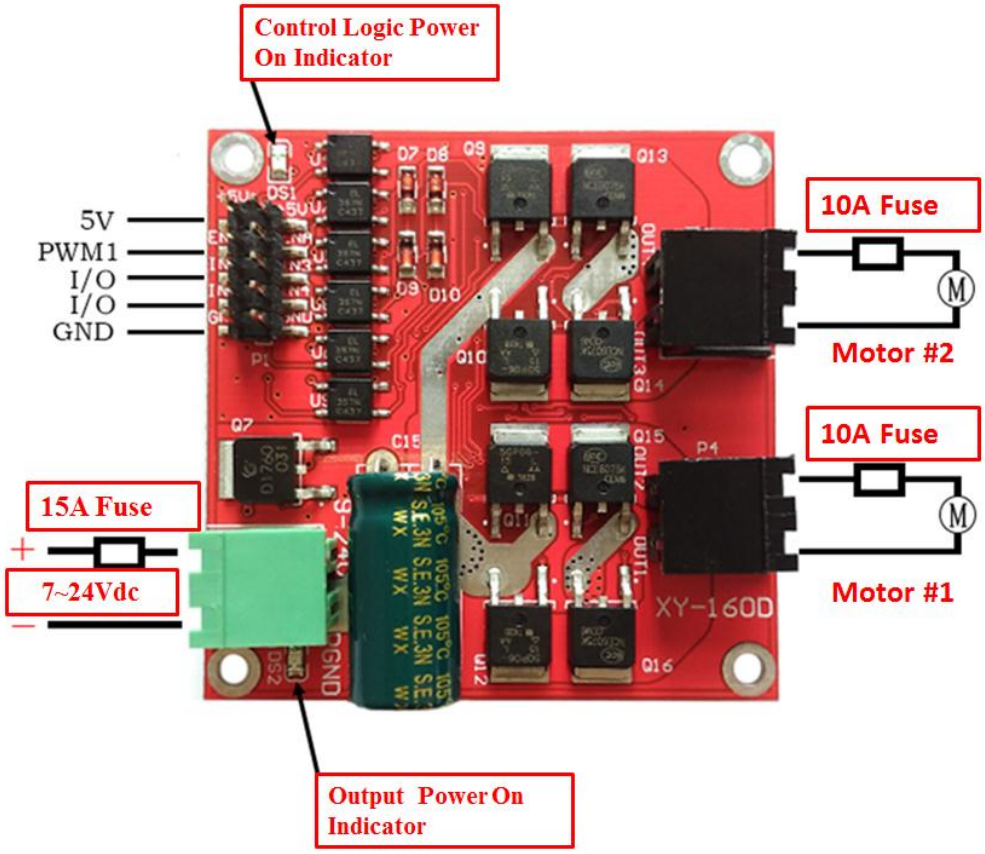
Specifications:

- Supply Voltage: 7 ~ 24 VDC. (Limit: 6.5 ~ 27VDC).
- Control signal Level (Compatible 3.3V/5V)
  - Logic High (H): DC 3.0 ~ 6.5V
  - Logic Low (L): DC0 ~ 0.8V
- Output Channel: 2.
- Control signal current: 3 ~ 11 mA (Each route).
- Maximum continuous operating current: 7A.
- Peak current: 50A.
- PWM Speed Control: 0~10KHz.
- Minimum valid Pulse Width: 5us.
- Working Temperature: -25 ~ 85 ℃
- Mounting Hole: M3.
- Dimension (LxWxH): 55 x 55 x 13(mm).
- Weight: 32g.

Mechanical Dimension:

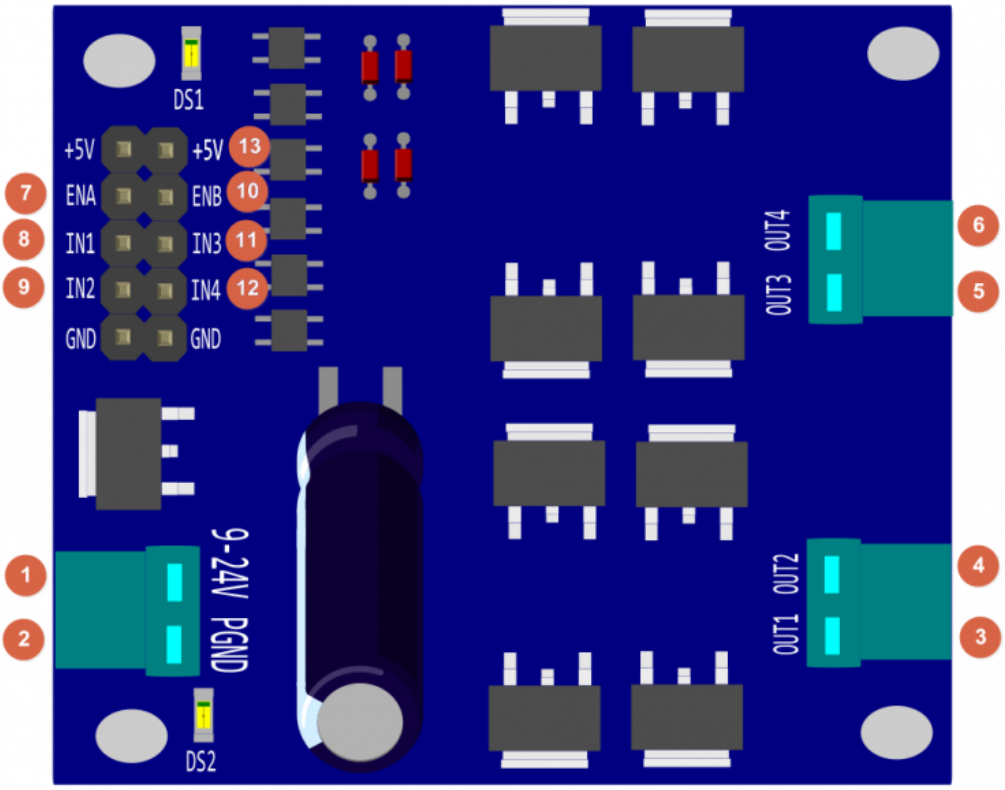
Unit: mm





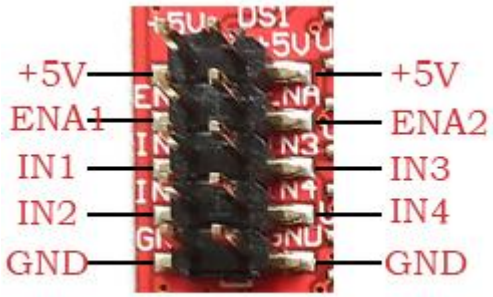
Please use suitable fuses at motor output to prevent accidental short circuit and damage the driver board!

Terminal Connector Function:



Label	Function	Description
1	9~24VDC	Load Power Supply Positive
2	PGND	Load Power Supply Ground
3	OUT1	Motor 1 Output +
4	OUT2	Motor 1 Output -
5	OUT3	Motor 2 Output +
6	OUT4	Motor 2 Output -
7	ENA	Motor 1 Enable/PWM Control Input
8	IN1	Motor 1 Control Input
9	IN2	Motor 1 Control Input
10	ENB	Motor 2 Enable/PWM Control Input
11	IN3	Motor 2 Control Input
12	IN4	Motor 2 Control Input
13	13	+5V Power Supply for Logic Control Circuit
	GND	Power Supply Ground for Logic Control Circuit

Control Logic Function:



Motor-1 Control Logic Table:

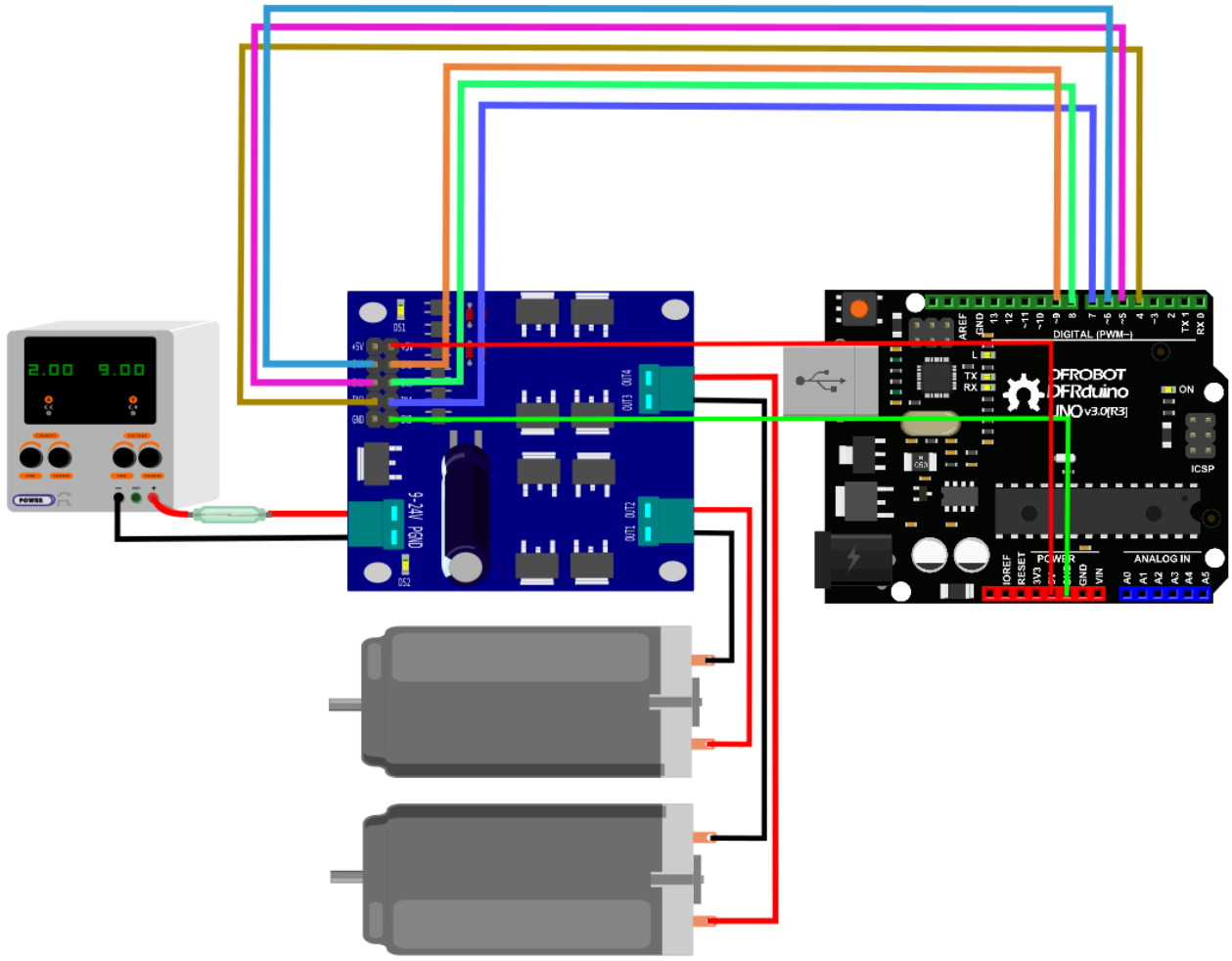
IN1	IN2	ENA1	OUT1-OUT2 (Motor-1)
0	0	X	Motor Braking
1	1	X	Floating
1	0	PWM	Forward + Speed Control
0	1	PWM	Reverse + Speed Control
1	0	1	Full Speed Forward
0	1	1	Full Speed Reverse

Motor-2 Control Logic Table:

IN3	IN4	ENA2	OUT3-OUT4 (Motor-2)
0	0	X	Motor Braking
1	1	X	Floating
1	0	PWM	Forward + Speed Control
0	1	PWM	Reverse + Speed Control
1	0	1	Full Speed Forward
0	1	1	Full Speed Reverse

Application Example with Arduino:

Connect up the driver module to Arduino Control board as shown in schematic below:



Upload the below sketch to the Arduino Uno Board:

```
/*=============================================================================
//  Author      : Handson Technology
//  Project     : Arduino Uno with H-Bride 7A Motor Driver
//  Description : XY160D 7A high Power H-Bridge motor Driver Module
//  Source-Code : H-Bride-7A-Motor-CTR.ino
//  Program: Control 2 DC motors using L298N H Bridge Driver
//=============================================================================
*/

const int IN1=5;
const int IN2=4;
const int ENA=6;

const int IN3=8;
const int IN4=7;
const int ENB=9;

void setup() {
     pinMode(IN1, OUTPUT);
     pinMode(IN2, OUTPUT);
     pinMode(ENA, OUTPUT);

     pinMode(IN4, OUTPUT);
```

```
      pinMode(IN3, OUTPUT);
      pinMode(ENB, OUTPUT);
}

void loop() {
 Motor1_Brake();
 Motor2_Brake();
 delay(100);
 Motor1_Forward(200);
 Motor2_Forward(200);
 delay(1000);
 Motor1_Brake();
 Motor2_Brake();
 delay(100);
 Motor1_Backward(200);
 Motor2_Backward(200);
 delay(1000);
}

void Motor1_Forward(int Speed)
{
      digitalWrite(IN1,HIGH);
      digitalWrite(IN2,LOW);
      analogWrite(ENA,Speed);
}

void Motor1_Backward(int Speed)
{
      digitalWrite(IN1,LOW);
      digitalWrite(IN2,HIGH);
      analogWrite(ENA,Speed);
}
void Motor1_Brake()
{
      digitalWrite(IN1,LOW);
      digitalWrite(IN2,LOW);
}
void Motor2_Forward(int Speed)
{
      digitalWrite(IN3,HIGH);
      digitalWrite(IN4,LOW);
      analogWrite(ENB,Speed);
}

void Motor2_Backward(int Speed)
{
      digitalWrite(IN3,LOW);
      digitalWrite(IN4,HIGH);
      analogWrite(ENB,Speed);
}
void Motor2_Brake()
{
      digitalWrite(IN3,LOW);
      digitalWrite(IN4,LOW);
}
```

You should notice the two DC motor turn forward and reverse with braking action.

Web Resources:

- SMPS Power Supply Module
- 775 Ball Bearing DC Motor
- A58SW-555 Worm Gear Motor
- JGB37-3530 Metal Gear Motor
- Motor Bracket

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