# Encoder Adapter FIT0324
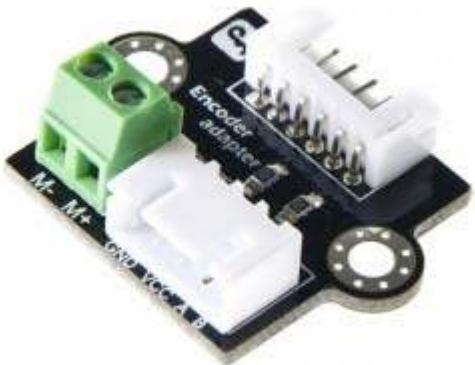


## Contents

## Introduction

This adapter is especially designed for DFRobot 12V DC Motors. This adapter comprises an external pull-up resistor, which raises the output voltage when the transistor is turned off. This board has two build-in pull-up resistors.

## Specification

- Compatible with open collector output encoder
- Size:31x24mm
- Hall Sensor Voltage： 5v

# Encoder Diagram



1:Motor -
2:Motor+
3:Hall Sensor Vcc
4:Hall Sensor GND
5:Hall Sensor A Vout
6:Hall Sensor B Vout
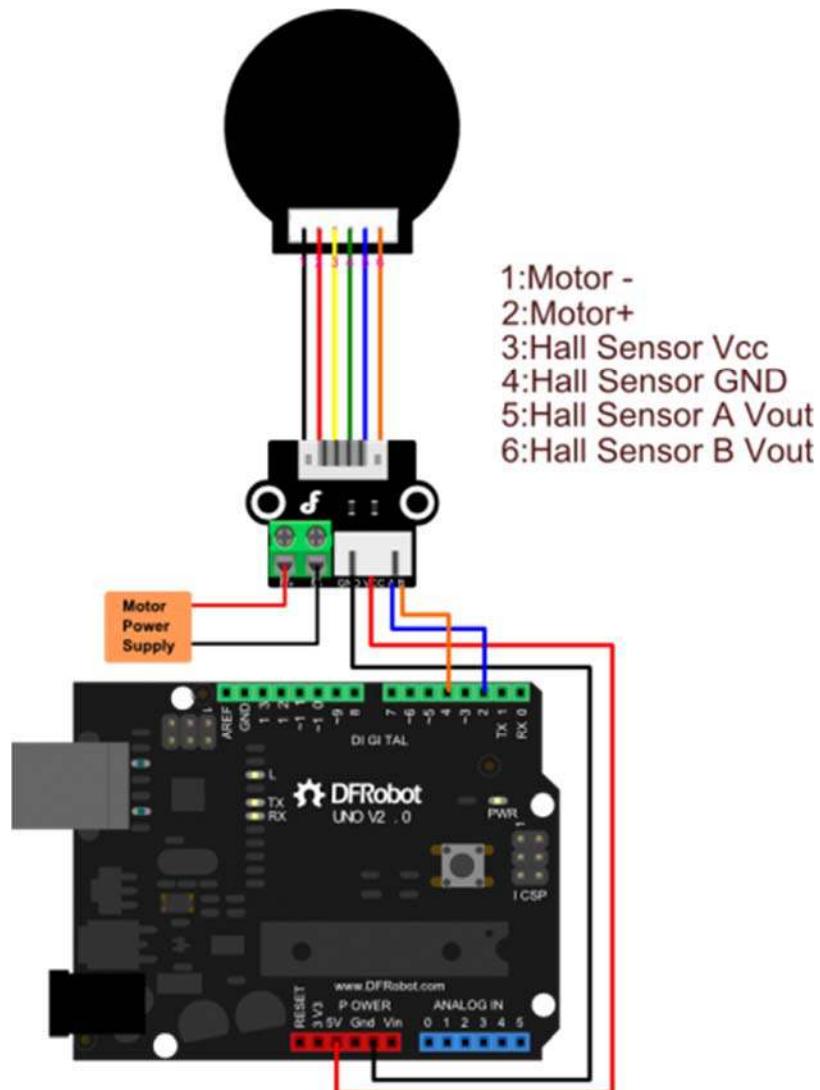
Diagram for using encoder with Encoder Adapter

# Encoder Sample Code

```
/*
Pay attention to the interrupt pin,please check which microcontroller you use
.
http://arduino.cc/en/Reference/AttachInterrupt
*/


//The sample code for driving one way motor encoder
```

```
const byte encoder0pinA = 2;//A pin -> the interrupt pin 2

const byte encoder0pinB = 4;//B pin -> the digital pin 4

byte encoder0PinALast;

int duration;//the number of the pulses

boolean Direction;//the rotation direction


void setup()
{
  Serial.begin(57600);//Initialize the serial port

  EncoderInit();//Initialize the module

}


void loop()
{
  Serial.print("Pulse:");

  Serial.println(duration);

  duration = 0;

  delay(100);

}


void EncoderInit()
{
  Direction = true;//default -> Forward

  pinMode(encoder0pinB,INPUT);

  attachInterrupt(0, wheelSpeed, CHANGE);//int.0

}


void wheelSpeed()
{
  int Lstate = digitalRead(encoder0pinA);

  if((encoder0PinALast == LOW) && Lstate==HIGH)

  {
    int val = digitalRead(encoder0pinB);
```

```
    if(val == LOW && Direction)
    {
      Direction = false; //Reverse
    }
    else if(val == HIGH && !Direction)
    {
      Direction = true;  //Forward
    }
  }
  encoder0PinALast = Lstate;


  if(!Direction)  duration++;
  else  duration--;
}
```