

# Encoder Adapter FIT0324

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## 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

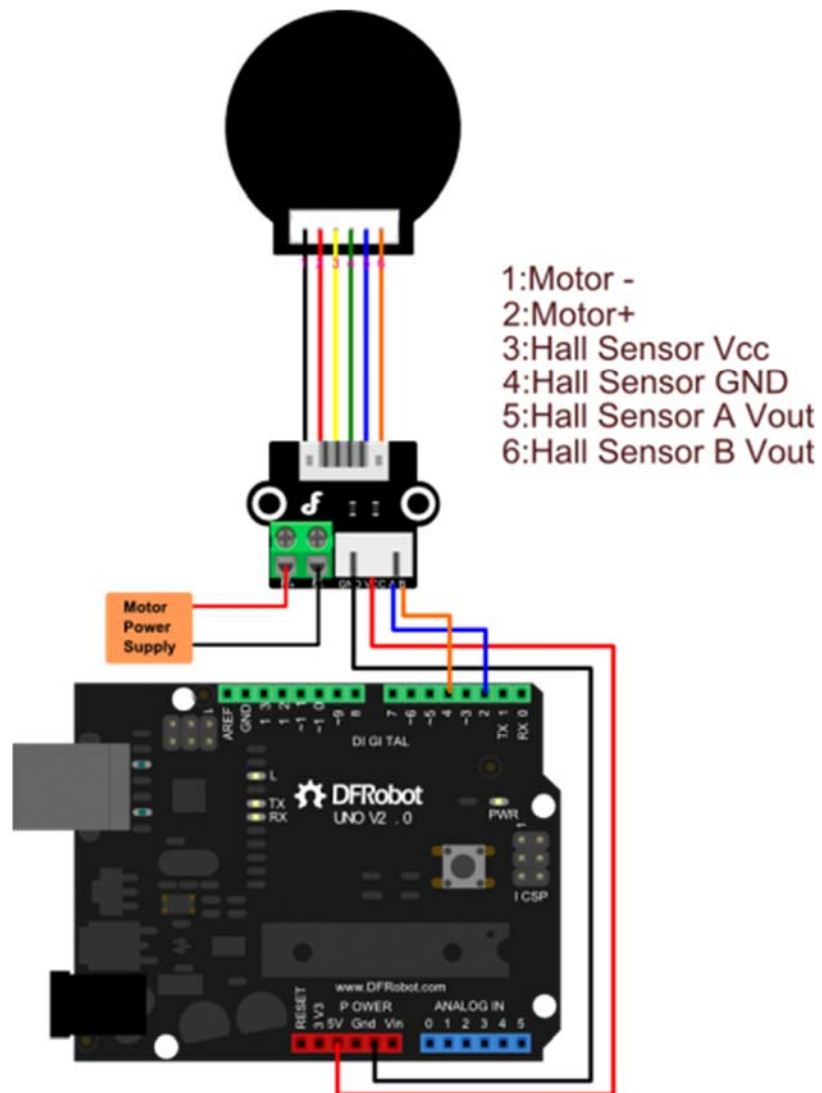


Diagram for using encoder with Encoder Adapter

## 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--;
}
```