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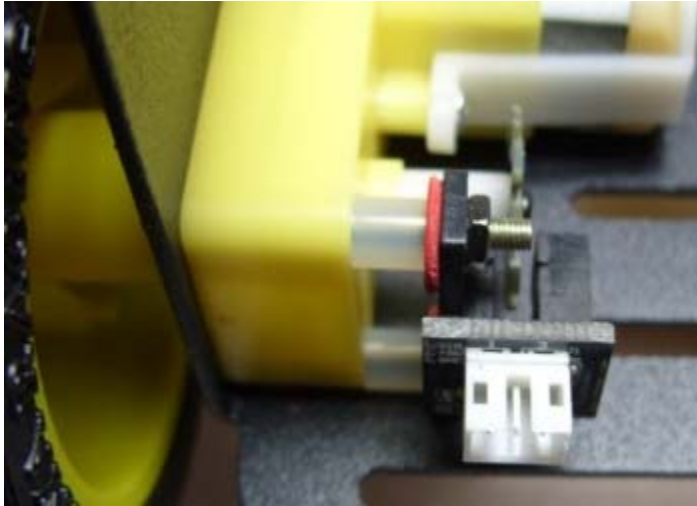
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Wheel Encoders for DFRobot 3PA and 4WD Rovers (SKU:SEN0038)

Contents

Introduction

This encoders are designed for DFRobot 3PA and AWD Rovers. It can give you the rotation degree of the wheels. Encoder uses non-contact method to convert the angular displacement signals. Best fit with Micro DC Geared Motor.
It includes encoders, plastic tube, paper-mediated gasket etc.

Specification

Voltage:+5V
Current:<20mA
Resolution:20 PPR
Weight:20g

Sample Code

```
// #
// # Editor     : Lauren from DFRobot
// # Date       : 17.01.2012

// # Product name: Wheel Encoders for DFRobot 3PA and 4WD Rovers
// # Product SKU : SEN0038

// # Description:
// # The sketch for using the encoder on the DFRobot Mobile platform

// # Connection for Uno or other 328-based:
// #        left wheel encoder  -> Digital pin 2
// #        right wheel encoder -> Digital pin 3
// # Note: If your controller is not 328-based, please check https://www.ardu
ino.cc/en/Reference/AttachInterrupt for proper digital pins.


#define LEFT 0
#define RIGHT 1


long coder[2] = {
  0,0};
int lastSpeed[2] = {
  0,0};



void setup(){


  Serial.begin(9600);                        //init the Serial port to pr
int the data
  attachInterrupt(LEFT, LwheelSpeed, CHANGE);    //init the interrupt mode fo
r the digital pin 2
  attachInterrupt(RIGHT, RwheelSpeed, CHANGE);   //init the interrupt mode fo
r the digital pin 3
```

```cpp
}


void loop(){

  static unsigned long timer = 0;                    //print manager timer

  if(millis() - timer > 100){
    Serial.print("Coder value: ");
    Serial.print(coder[LEFT]);
    Serial.print("[Left Wheel] ");
    Serial.print(coder[RIGHT]);
    Serial.println("[Right Wheel]");

    lastSpeed[LEFT] = coder[LEFT];    //record the latest speed value
    lastSpeed[RIGHT] = coder[RIGHT];
    coder[LEFT] = 0;                   //clear the data buffer
    coder[RIGHT] = 0;
    timer = millis();
  }

}



void LwheelSpeed()
{
  coder[LEFT] ++;  //count the left wheel encoder interrupts
}



void RwheelSpeed()
{
  coder[RIGHT] ++; //count the right wheel encoder interrupts
```
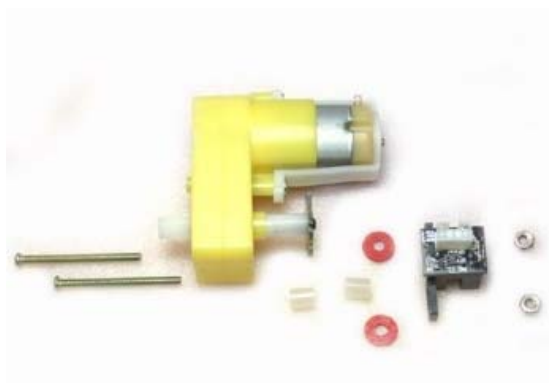
```
}
```
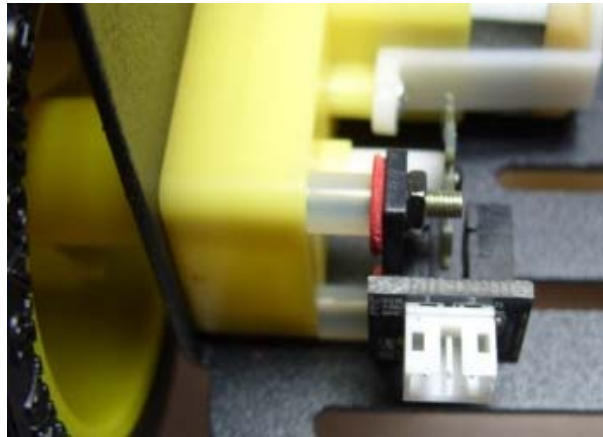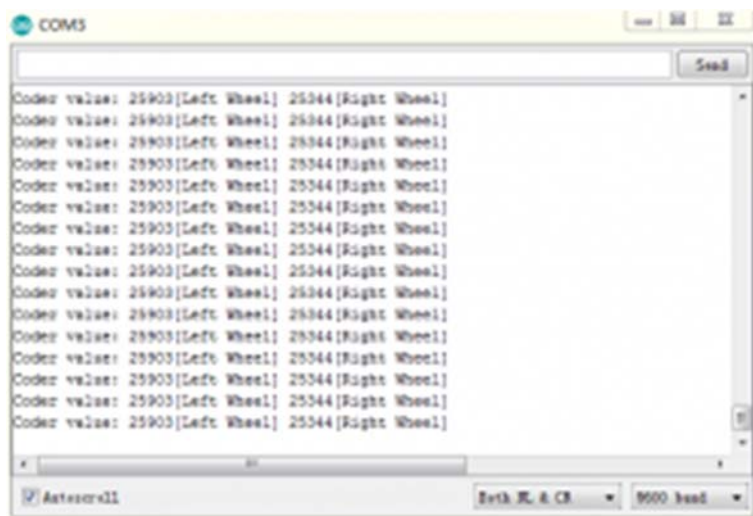
Assembly Guide

Step1:

Step2:

Step3:

FAQ

Serial monitor

> **Q.** The feedback value is full that the Serial monitor is always printing value around 25903 and 25344, no matter of the motor running or not.

> **A.** The first parameter in the interrupt function ' attachInterrupt ' means the interrupt number that is just number 0 and 1, not the interrupt pin number.read more

Encoder Schematics