



## Micro Metal Geared motor w/Encoder - 6V 310RPM 50:1 SKU:FIT0482



### **INTRODUCTION**

A new micro metal gear motor with a difference! This motor comes with a built-in encoder which measures the motor's speed in real time. The average output number of pulses can reach up to  $7 \times 2 \times 50$  pulses per revolution. The motor has a long (0.354"/9.0 mm) D profile metal output shaft that is compatible with the 42x19mm and 32x7mm dimensions of the Pololu wheel. The brass faceplate has two mounting holes threaded for M1.6 screws (1.6mm diameter, 0.35mm thread pitch), or you can use the mounting bracket or extended mounting bracket which are specifically designed to securely mount the gear motor while enclosing the exposed gears. We recommend the extended mounting bracket for wheels with recessed hubs, such as the 42x19mm wheel. The hall sensor of new version has 7 pole pairs, so the encoder resolution will be increased by 7-fold. Compatible with 2WD miniQ Robot Chassis.

## **SPECIFICATION**

- Rated Voltage: 6.0 V
- Motor Speed: 15000 RPM
- Gear Reduction Ratio: 50:1
- Reducer Length: 9.0 mm
- No-Load Speed: 310 rpm@6v
- No-Load Current: 60 mA
- Rated Torque: 0.35 kg.cm
- Rated Speed: 180 rpm@6V
- Current Rating: 170 mA
- Instant Torque: 0.8 kg.cm
- Hall Feedback Resolution: 700
- Weight: 18g

## **DOCUMENTS**

- Motor Interface [https://github.com/Arduinolibrary/DFRobot\\_Micro\\_Metal\\_Gearmotor\\_with\\_Encoder/raw/master/Interface.png](https://github.com/Arduinolibrary/DFRobot_Micro_Metal_Gearmotor_with_Encoder/raw/master/Interface.png)
- Motor Dimension [https://github.com/Arduinolibrary/DFRobot\\_Micro\\_Metal\\_Gearmotor\\_with\\_Encoder/raw/master/Dimension.jpg](https://github.com/Arduinolibrary/DFRobot_Micro_Metal_Gearmotor_with_Encoder/raw/master/Dimension.jpg)

## **SHIPPING LIST**

- Micro Metal Gearmotor 50:1 w/Encoder x1
- 6-pin connection cable x1
- 2-pin 1.5 mm JST connector x1
- 4-pin 1.5 mm JST connector x1