

# Bipolar Stepper Motor with Planet Gear Box (18kg.cm)

**Product Code: FIT0349**

**Supplier: DFRobot**

## Introduction

This bipolar stepper motor with planet gear box (gear ratio: 5.18) uses a standard 8mm-diameter D type output shaft, and has a 1.8° step angle (200 steps/revolution). Each phase draws 1.6 A at 2.78 V, allowing for a holding torque of 18kg·cm (176N·cm). The motor has a body dimension of 42mm square and 40mm in length, while the planet gear box is 36mm in diameter and 27mm in length. The motor has four color-coded wires terminated with bare leads: black and green connect to one coil; red and blue connect to the other. It can be easily mounted with 4 M3 threaded holes.

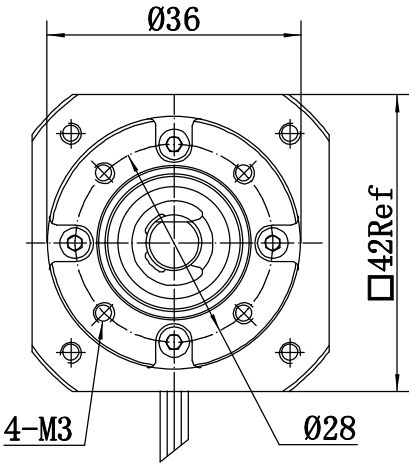
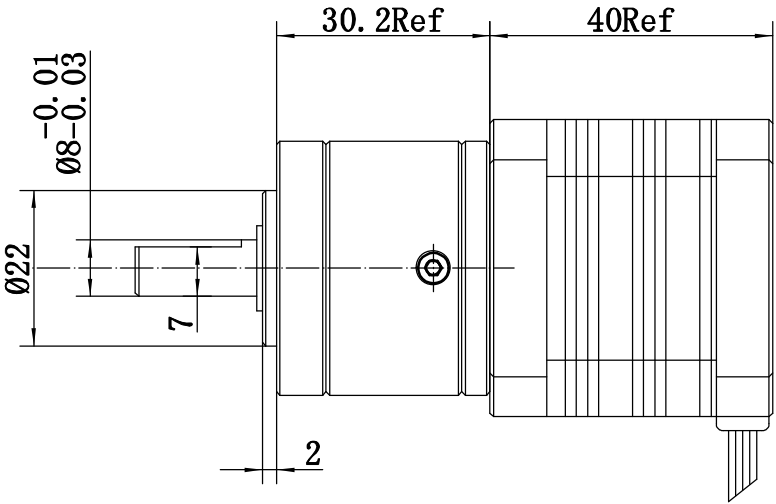
## Specifications:

- Model No:42BYGH40-170-4A
- Step Angle (degrees) :1.8
- 2 Phase
- Rated Voltage : 12V
- Rated Current : 1.6A@2.78V ,0.37A@12V Holding Torque : 3.5kg\*cm (48.6 oz/in)
- Hold Torque with Gearbox: 18kg·cm (176N·cm)
- Gear Ratio: 5.18:1
- Winding resistance: 1.5  $\Omega$
- Winding inductance: 2.5 mH
- Max flux linkage: 1.8 Vs
- Step Angle Accuracy :  $\pm 5\%$  (full step, no load)
- Resistance Accuracy:  $\pm 10\%$
- Inductance Accuracy:  $\pm 20\%$
- Temperature Rise: 80°C Max.(rated current,2 phase on)
- Ambient Temperature: -20°C~+50°C
- Insulation Class: B
- Dimension: 42×42×40mm
- Mounting: 4 x M3
- Mounting Hole Diameter  $\Phi 28$



# 36PA5. 2G/42BYG40-160-4A

Measurements are in mm



## Gear motor parameters

Step angle	步距角	1.8°
Motor Length	机身长度	40mm
Phase voltage	相电压	2.78V
Phase current	相电流	1.6A
Phase Resistance	相电阻	1.73Ω
Phase Inductance	相电感	3.2mH
Holding Torque	静力矩	3600g.cm
Lead Wire	引线数	4
Reduction ratio	减速比	5.2

			GEAR PLANET STEPPER MOTOR		
Design	盛培明	2011.02.25	36PA5. 2G/42BYG40-160-4A		
Drawing	盛培明	2011.02.25			
Inspection					
Approver			material		superficial treatment

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Edition		SCALE	1:1	A4
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