

12V/3.0Kg-cm/78RPM 51:1 DC Gear Motor w/Encoder



Product Description

The 3263E is a 12 volt gear motor, generating 3.06 Kg-cm of torque at 78 RPM. This motor is quite compact considering the amount of power it can output.

This motor comes equipped with an E4P US Digital Encoder, which keeps track of the motor's rotation, allowing you to control your motor precisely.

The planetary gearbox on this motor is more sophisticated than a typical spur gearbox and will provide greater efficiency, higher torque, and quieter motor operation.

Motor Controller and Connection

The 3263E DC motor connects to either of the following controllers:

- 1064 – PhidgetMotorControl HC
- 1065 – PhidgetMotorControl 1-Motor

If you decide to use the 1065, you can connect the encoder directly into its encoder input. If you decide to use the 1064, you'll also need one of the following devices to read your encoder:

- 1047 – PhidgetEncoder HighSpeed 4-Input
- 1057 – PhidgetEncoder HighSpeed

You'll need to solder wires to the contacts of the motor in order to connect it to a controller.

Comes packaged with

- 3032 – E4P Encoder Cable

Related Products

- 3263 – 12V/3.0Kg-cm/78RPM 51:1 DC Gear Motor
- 3261E – 12V/0.2Kg-cm/1080RPM 3.7:1 DC Gear Motor w/ Encoder
- 3262E – 12V/0.9Kg-cm/285RPM 14:1 DC Gear Motor w/ Encoder
- 3264E – 12V/8.4Kg-cm/28RPM 139:1 DC Gear Motor w/ Encoder

Resources

- DC Motor and Controller Primer
- Encoder Primer
- Mechanical Drawing

Product Specifications

Motor Properties

Motor Type	DC Motor with Encoder
Output Power (Mechanical)	2.9 W
Maximum Speed at Rated Voltage	78 RPM
Rated Torque	3.1 kg·cm
Stall Torque	18.2 kg·cm

Electrical Properties

Rated Voltage	12 V DC
Rated Current	410 mA
Stall Current	1.5 A

Physical Properties

Shaft Diameter	6 mm
Weight	196 g
Recommended Wire Size (Motor)	20 – 25 AWG

Gearbox Specifications

Gearbox Type	Planetary
Gear Ratio	$50^{801}_{895} : 1$
Number of Gear Trains	3
Maximum Strength of Gears	30 kg·cm
Shaft Maximum Axial Load	35 N
Shaft Maximum Radial Load	25 N

Encoder Specifications

Encoder Resolution	360 CPR
Connector Type	E4P
Current Consumption Min	27 mA
Supply Voltage Min	4.5 V DC
Supply Voltage Max	5.5 V DC