12V/8.4Kg-cm/28RPM 139:1 DC Gear Motor

Product Description

The 3264 is a 12 volt gear motor, generating 8.46 Kg-cm of torque at 28 RPM. This motor is quite compact considering the amout of power it can output.

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 3264 DC motor connects to either of the following controllers:

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

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

Related Products

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

Resources

- DC Motor and Controller Primer
- Mechanical Drawing

Warnings

The torque this motor produces when it stalls exceeds the rated strength of the gearbox. This means that stalling or very heavily loading this motor can cause serious damage to the gearbox. To avoid damage, avoid sudden loads or any load higher than the Maximum Strength of Gears spec.

Product Specifications

Motor Properties

Motor Type	DC Motor
Output Power (Mechanical)	2.9 W
Maximum Speed at Rated Voltage	28 RPM
Rated Torque	8.5 kg·cm
Stall Torque	50 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	192 g

Recommended Wire Size (Motor)	20 – 25 AWG

Gearbox Specifications

Gearbox Type	Planetary
Gear Ratio	$139\ ^{184}?_{1221}$: 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