**RB-Phi-210**
**12V, 1.7A, 416 oz-in Geared Bipolar Stepper Motor**

This NEMA-17 motor has an integrated Planetary gearbox with a 26 103/121 :1 ratio. It comes with the rear shaft exposed, so you can mount an encoder or shaft coupler. At 1.7 Amps (maximum current), this stepper motor can produce a maximum torque of 77 kg-cm. However, the gearbox is only rated for 30 kg-cm of continuous torque, and 80 kg-cm for brief overloads. Loading this gearbox stepper beyond the torque rating of the gearbox will shorten its useful life.

**Features**

- High Torque
- 0.067° Step Angle
- Motor can produce 30 kg-cm holding torque @ 1.7A
- NEMA-17 Bipolar 4-wire
- Rear shaft exposed for compatibility with encoders

**Specifications**
**Motor Properties**

- Motor Type: Bipolar Stepper
- Manufacturer Part Number: 42STH38-1684B / 36JXS60K26
- Step Angle: 0.067°
- Step Accuracy: 5 %
- Holding Torque: 30 kg·cm
- Rated Torque: 30 kg·cm
- Maximum Speed (w/1063 Motor Controller): 21 RPM
- Maximum Speed (w/1067 Motor Controller): 174 RPM
- Acceleration at Max Speed (w/1067 Motor Controller): 600000 1/16 steps/sec²

**Electrical Properties**

- Recommended Voltage: 12 V DC
- Rated Current: 1.7 A
- Coil Resistance: 1.7 Ω

**Physical Properties**

- Shaft Diameter: 8 mm
- Rear Shaft Diameter: 3.8 mm
- Mounting Plate Size: NEMA - 17
- Weight: 503 g
- Number of Leads: 4
- Wire Length: 300 mm

**Gearbox Properties**

- Gearbox Type: Planetary
- Gear Ratio: 26 103⁄121 : 1
- Backlash Error: 1 1⁄2°
- Maximum Strength of Gears: 30 kg·cm
- Shaft Maximum Axial Load: 49.1 N
- Shaft Maximum Radial Load: 98.1 N