

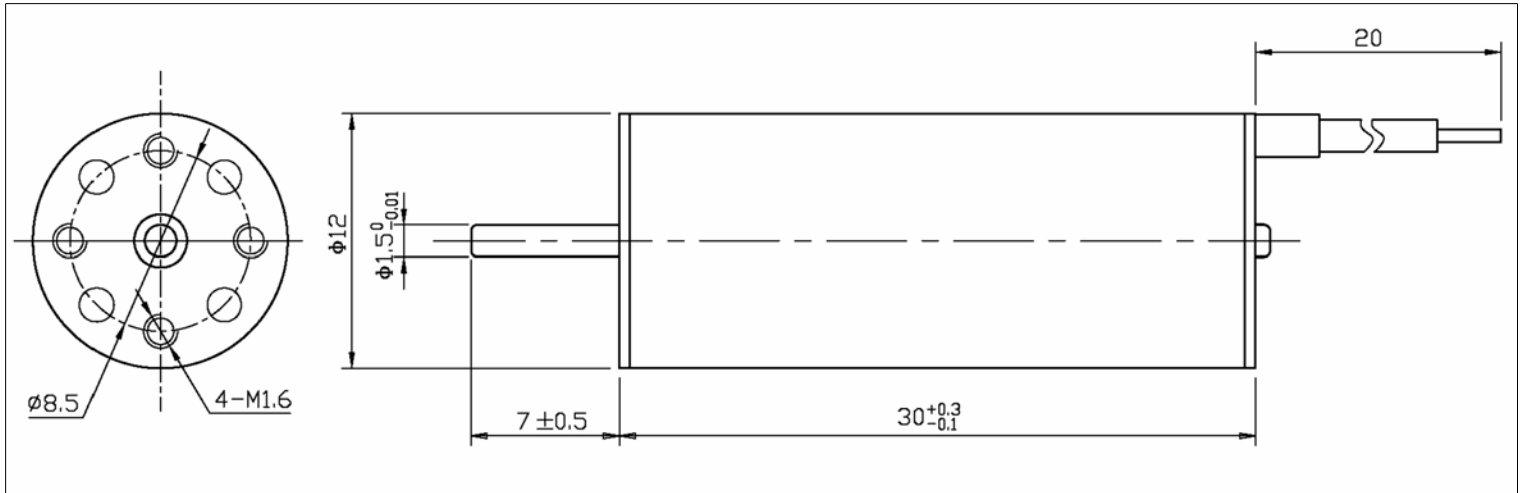
# BLDC Slotless Motor - 12 mm Ø

B12E24SG000

42.6 Watts Peak Power



Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	24.0 Volts	24.0 Volts	24.0 Volts
No-Load Speed	42,000 rpm	42,000 rpm	42,000 rpm
Stall Torque	39.8 mNm	406.0 gcm	5.64 oz-in
No-Load Current	0.200 Amps	0.200 Amps	0.200 Amps
Peak Output Power	42.6 Watts	42.6 Watts	42.6 Watts
Torque Constant	5.31 mNm/A	54.16 gcm/A	0.75 oz-in/A
Terminal Resistance	3.20 Ohms	3.20 Ohms	3.20 Ohms
Back-EMF Constant	0.56 V/krpm	0.56 V/krpm	0.56 V/krpm
Inductance			
Rotor Inertia			
Mechanical Time Constant			
Slope of Speed/Torque Curve	1,054.4 rpm/mNm	103.4 rpm/gcm	7,445.5 rpm/oz-in
Speed Constant	1,798 rpm/Volt	1,798 rpm/Volt	1,798 rpm/Volt
Motor Constant	2.97 mNm/√Watt	30.28 gcm/√Watt	0.42 oz-in/√Watt

**Zero Cogging High Speed Capable 3 Phase Brushless DC Motor featuring Neodymium Iron Boron Magnets.**

Part Number: How to Order	B12E24SG000	Characteristics - Specifications at	22 °C
Radial Load Rating	Radial Play	Max Temperature	45 °C
Radial Load Distance	Thrust Play	Min Temperature	-15 °C
Axial Load	Magnet Type NdFeB	Max Winding Temp	130 °C
Press Fit Force - Max	Bearing Type Sleeve Bearings	Mass	18.0 grams
Gearbox Options	Metal Planetary Gearbox. 12 mm diameter.		
Encoder Options			
Options - Other	Winding Changes. Lead length and connectors. Shaft Length and flat options. POM Pinions.		

Global Motion Products  
 Distributed by:  
 Precision Motion Distributors: (925) 803-9565  
 Technical Support: (760) 451-2723  
<http://www.gmpwebsite.com> Email: [info@gmpwebsite.com](mailto:info@gmpwebsite.com)

Commutation Type: **Manufactured under a Certified ISO 9001 Quality System and ISO 14001 Environmental Management System.**  
 Electronic - Sensorless

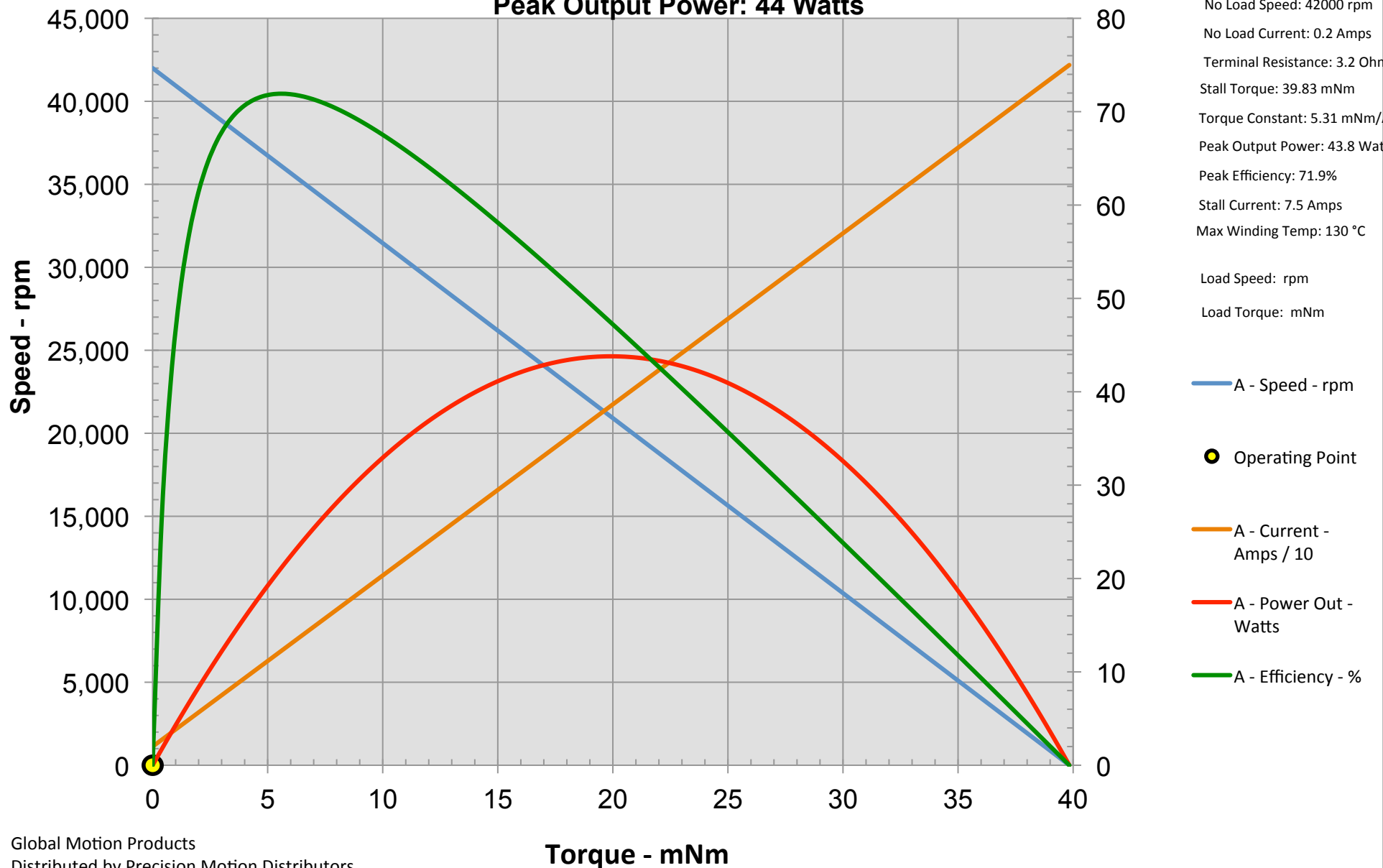
**RoHS Compliant**

Preliminary - 11/23/2012 Specifications Subject to change without notice

**BLDC Slotless Motor - 12 mm Ø - 42 Watts**  
**B12E24SG000 - - - 24 Volts**  
**Peak Output Power: 44 Watts**

**B12E24SG000**

Voltage: 24 Volts  
 No Load Speed: 42000 rpm  
 No Load Current: 0.2 Amps  
 Terminal Resistance: 3.2 Ohm  
 Stall Torque: 39.83 mNm  
 Torque Constant: 5.31 mNm/A  
 Peak Output Power: 43.8 Watts  
 Peak Efficiency: 71.9%  
 Stall Current: 7.5 Amps  
 Max Winding Temp: 130 °C



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**IT IS NOT TEST DATA.** Stall Torque ignores motor coulomb and viscous torque losses. Voltage divided by Resistance multiplied by Torque Constant equals Stall Torque for motor only simulations. **CAUTION:** Peak Output Power is NOT a RATING. This is merely a calculated value and does not address Thermal Issues.

November 30, 2012

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