



GM8724S013

Lo-Cog® DC Gearmotor

Assembly Data	Symbol	Units	Value
Reference Voltage	E	V	24
No-Load Speed	S _{NL}	rpm (rad/s)	455 (47.6)
Continuous Torque (Max.) ¹	T _C	oz-in (N-m)	21 (1.5E-01)
Peak Torque (Stall) ²	T _{PK}	oz-in (N-m)	60 (4.2E-01)
Weight	W _M	oz (g)	8.3 (235)
Motor Data			
Torque Constant	K _T	oz-in/A (N-m/A)	6.18 (4.36E-02)
Back-EMF Constant	K _E	V/krpm (V/rad/s)	4.57 (4.36E-02)
Resistance	R _T	Ω	17.0
Inductance	L	mH	9.35
No-Load Current	I _{NL}	A	0.09
Peak Current (Stall) ²	I _P	A	1.41
Motor Constant	K _M	oz-in/√W (N-m/√W)	1.49 (1.05E-02)
Friction Torque	T _F	oz-in (N-m)	0.35 (2.5E-03)
Rotor Inertia	J _M	oz-in-s ² (kg-m ²)	2.3E-04 (1.6E-06)
Electrical Time Constant	τ _E	ms	0.54
Mechanical Time Constant	τ _M	ms	14.7
Viscous Damping	D	oz-in/krpm (N-m-s)	0.020 (1.4E-06)
Damping Constant	K _D	oz-in/krpm (N-m-s)	1.6 (1.1E-04)
Maximum Winding Temperature	θ _{MAX}	°F (°C)	311 (155)
Thermal Impedance	R _{TH}	°F/watt (°C/watt)	70.5 (21.4)
Thermal Time Constant	τ _{TH}	min	10.7
Gearbox Data			
Reduction Ratio			9.9
Efficiency ³			0.87
Maximum Allowable Torque		oz-in (N-m)	175 (1.24)
Encoder Data			

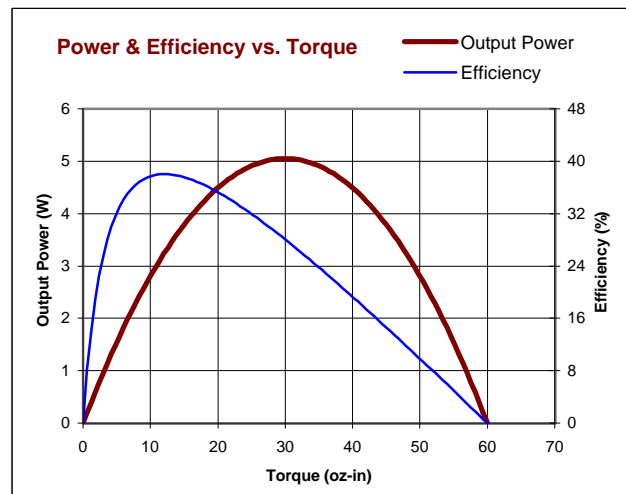
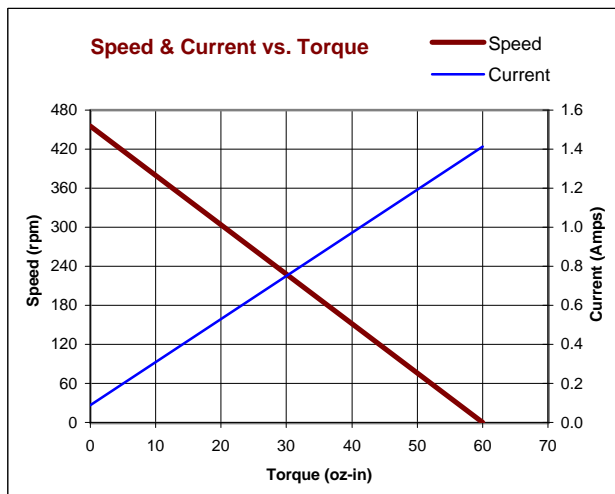
1 - Specified at max. winding temperature at 25°C ambient without heat sink. 2 - Theoretical values supplied for reference only.
3 - Effective gearbox efficiency for this unit improved by use of ball bearings.

Included Features

- 2-Pole Stator
- Ceramic Magnets
- Heavy-Gauge Steel Housing
- 7-Slot Armature
- Silicon Steel Laminations
- Stainless Steel Shaft
- Copper-Graphite Brushes
- Diamond Turned Commutator
- Motor Ball Bearings
- Output Ball Bearing
- Wide Face Gears

Customization Options

- Alternate Winding
- Sleeve or Ball Bearings
- Modified Output Shaft
- Custom Cable Assembly
- Special Brushes
- EMI/RFI Suppression
- Alternate Gear Material
- Special Lubricant
- Optional Encoder
- Fail-Safe Brake



All values are nominal. Specifications subject to change without notice. Graphs are shown for reference only.

© 2001 Pittman.

