



GM8724S024

Lo-Cog® DC Gearmotor

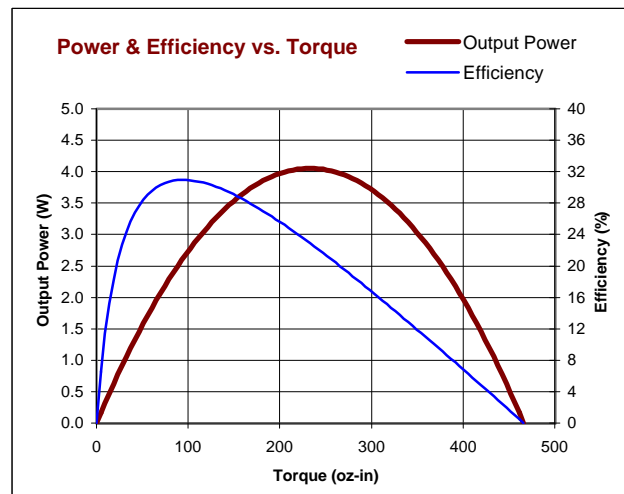
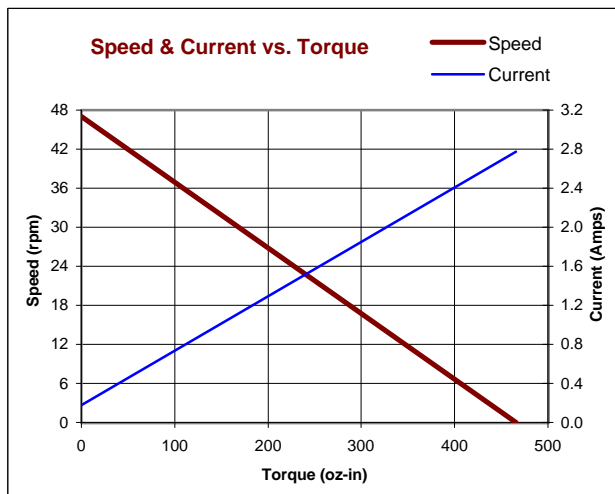
| Assembly Data | Symbol | Units | Value | |
|---|------------------|---|---------|------------|
| Reference Voltage | E | V | 12 | |
| No-Load Speed | S _{NL} | rpm (rad/s) | 47 | (4.9) |
| Continuous Torque (Max.) ¹ | T _C | oz-in (N-m) | 173 | (1.2E+00) |
| Peak Torque (Stall) ² | T _{PK} | oz-in (N-m) | 466 | (3.3E+00) |
| Weight | W _M | oz (g) | 8.6 | (243) |
| Motor Data | | | | |
| Torque Constant | K _T | oz-in/A (N-m/A) | 3.09 | (2.18E-02) |
| Back-EMF Constant | K _E | V/krpm (V/rad/s) | 2.29 | (2.18E-02) |
| Resistance | R _T | Ω | 4.33 | |
| Inductance | L | mH | 2.34 | |
| No-Load Current | I _{NL} | A | 0.18 | |
| Peak Current (Stall) ² | I _P | A | 2.77 | |
| 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 | | | 95.9 | |
| Efficiency ³ | | | 0.74 | |
| Maximum Allowable Torque | | oz-in (N-m) | 175 | (1.24) |
| Encoder Data | | | | |
| | | | | |
| | | | | |
| | | | | |
| <small>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.</small> | | | | |

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.

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