



9237S011

Lo-Cog® DC Servo Motor

Assembly Data	Symbol	Units	Value	
Reference Voltage	E	V	24	
No-Load Speed	S_{NL}	rpm (rad/s)	5,331	(558)
Continuous Torque (Max.) ¹	T_C	oz-in (N-m)	11.5	(8.1E-02)
Peak Torque (Stall) ²	T_{PK}	oz-in (N-m)	77	(5.4E-01)
Weight	W_M	oz (g)	19	(524)
Motor Data				
Torque Constant	K_T	oz-in/A (N-m/A)	6.00	(4.24E-02)
Back-EMF Constant	K_E	V/krpm (V/rad/s)	4.44	(4.24E-02)
Resistance	R_T	Ω	1.85	
Inductance	L	mH	1.97	
No-Load Current	I_{NL}	A	0.18	
Peak Current (Stall) ²	I_P	A	13.0	
Motor Constant	K_M	oz-in/ \sqrt{W} (N-m/ \sqrt{W})	4.41	(3.11E-02)
Friction Torque	T_F	oz-in (N-m)	0.80	(5.6E-03)
Rotor Inertia	J_M	oz-in-s ² (kg-m ²)	1.2E-03	(8.5E-06)
Electrical Time Constant	τ_E	ms	1.06	
Mechanical Time Constant	τ_M	ms	8.9	
Viscous Damping	D	oz-in/krpm (N-m-s)	0.055	(3.7E-06)
Damping Constant	K_D	oz-in/krpm (N-m-s)	14	(9.7E-04)
Maximum Winding Temperature	θ_{MAX}	$^{\circ}F$ ($^{\circ}C$)	311	(155)
Thermal Impedance	R_{TH}	$^{\circ}F/watt$ ($^{\circ}C/watt$)	52.2	(11.2)
Thermal Time Constant	τ_{TH}	min	13.8	
Gearbox Data				
Encoder Data				
Channels			3	
Resolution		CPR	500	

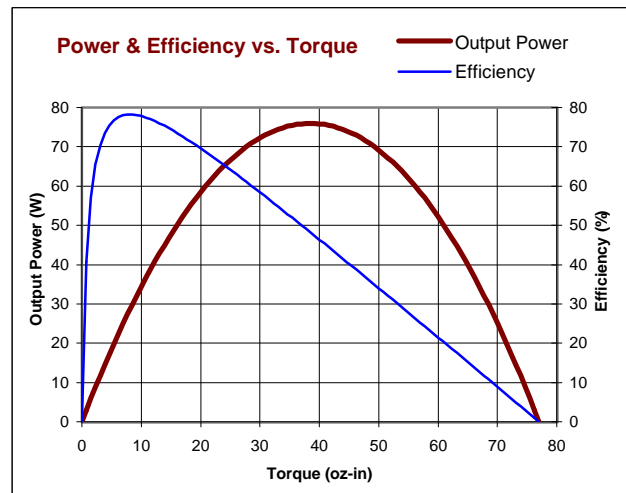
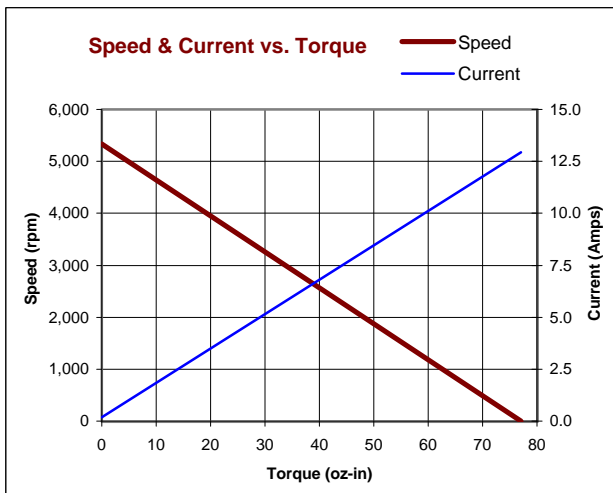
1 - Specified at max. winding temperature at 25°C ambient without heat sink. 2 - Theoretical values supplied for reference only.

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

Customization Options

- Alternate Winding
- Sleeve or Ball Bearings
- Modified Output Shaft
- Custom Cable Assembly
- Special Brushes
- EMI/RFI Suppression
- Spur or Planetary Gearbox
- 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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