

8222S003

Lo-Cog® DC Servo Motor



Assembly Data	Symbol	Units	Value
Reference Voltage	E	V	24
No-Load Speed	S _{NL}	rpm (rad/s)	7,847 (822)
Continuous Torque (Max.) ¹	T _C	oz-in (N-m)	1.6 (1.1E-02)
Peak Torque (Stall) ²	T _{PK}	oz-in (N-m)	7.4 (5.2E-02)
Weight	W _M	oz (g)	7.7 (218)
Motor Data			
Torque Constant	K _T	oz-in/A (N-m/A)	3.88 (2.74E-02)
Back-EMF Constant	K _E	V/krpm (V/rad/s)	2.87 (2.74E-02)
Resistance	R _T	Ω	12.1
Inductance	L	mH	6.27
No-Load Current	I _{NL}	A	0.12
Peak Current (Stall) ²	I _P	A	1.99
Motor Constant	K _M	oz-in/√W (N-m/√W)	1.12 (7.91E-03)
Friction Torque	T _F	oz-in (N-m)	0.35 (2.5E-03)
Rotor Inertia	J _M	oz-in-s ² (kg-m ²)	1.4E-04 (9.9E-07)
Electrical Time Constant	τ _E	ms	0.52
Mechanical Time Constant	τ _M	ms	15.6
Viscous Damping	D	oz-in/krpm (N-m-s)	0.015 (1.0E-06)
Damping Constant	K _D	oz-in/krpm (N-m-s)	0.92 (6.2E-05)
Maximum Winding Temperature	θ _{MAX}	°F (°C)	311 (155)
Thermal Impedance	R _{TH}	°F/watt (°C/watt)	75.9 (24.4)
Thermal Time Constant	τ _{TH}	min	7.8
Gearbox Data			
Encoder Data			
Channels			3
Resolution		CPR	500

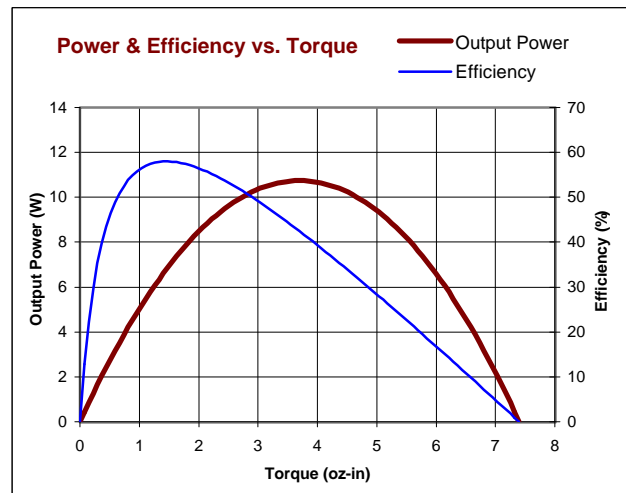
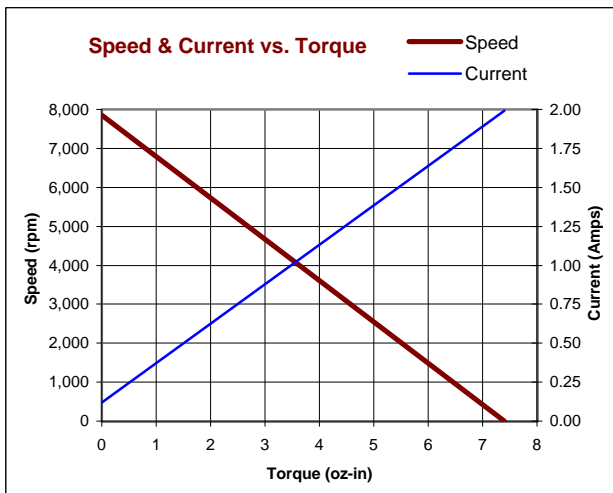
1 - Specified at max. winding temperature at 25°C ambient without heat sink. 2 - Theoretical values supplied for reference only.

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.

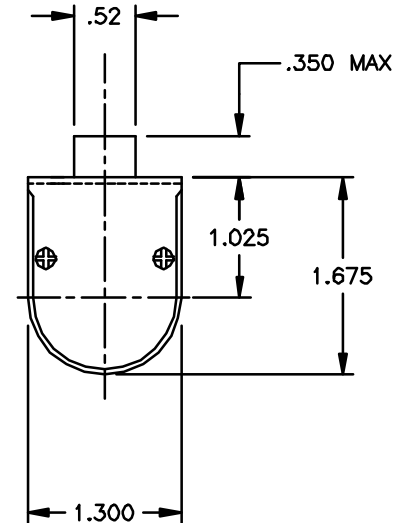
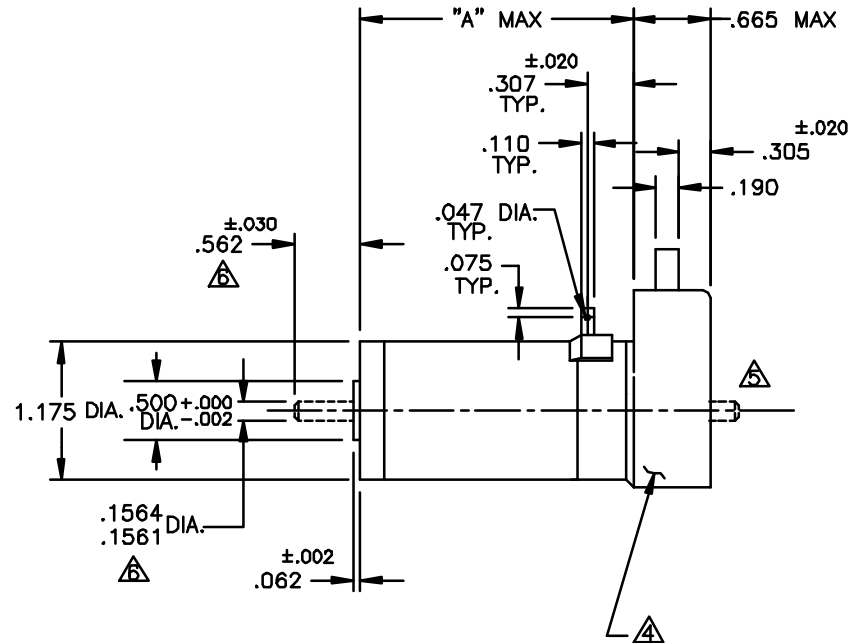
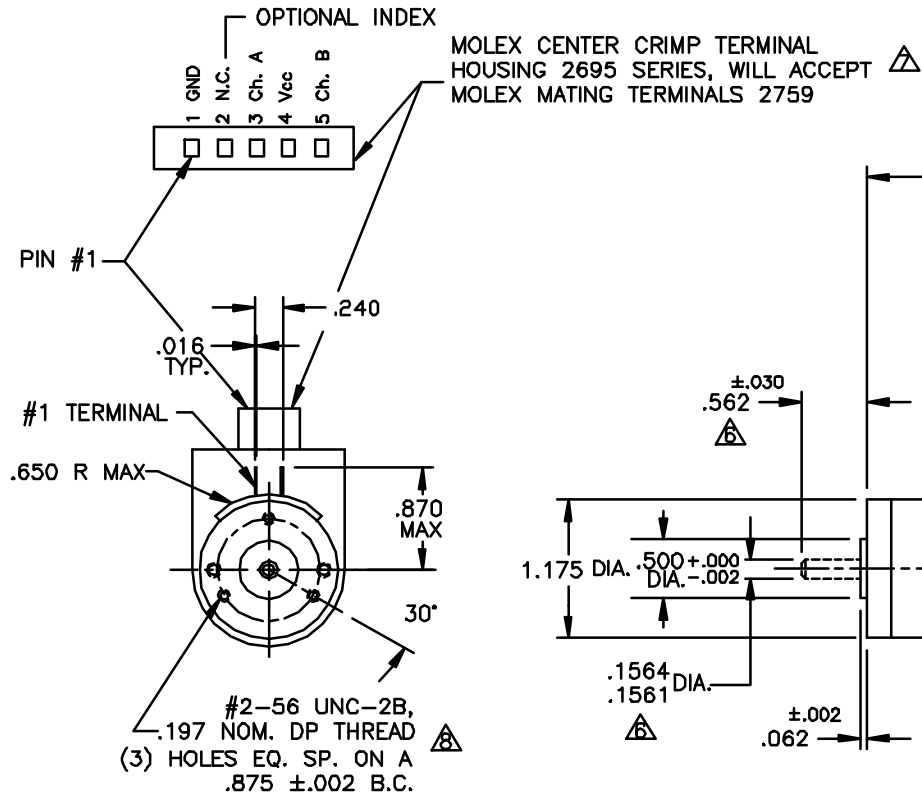
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REVISIONS				
LTR	DESCRIPTION	DRFT/ENGR	DATE	APPR
B	REDRAWN & REVISED	RJS/RJS	12/30/96	JRM
C	REVISED NOTE 1	DLF/DLF	1/2/98	JRM
D	DIM. .016 WAS .020	TMG/TMG		

*Actual motor will ship with 18 inch leads and not terminals as shown below



- NOTES:
1. SHAFT ROTATION IS CW WHILE VIEWING MOUNTING END, WITH POSITIVE (+) VOLTAGE APPLIED TO #1 TERMINAL.
 2. MOTOR HAS PRELOADED BALL BEARINGS PER P-107.
 3. TERMINALS ARE PLATED FOR SOLDERING AND WILL MATE WITH .110 PUSH-ON RECEPTACLE.
- △ ENCLOSED IS A HEDS-91X0 OPTICAL ENCODER.
 - △ OPTIONAL REAR SHAFT EXTENSIONS ARE AVAILABLE.
 - △ ALL SHAFT DIMENSIONS NOTED ARE STANDARD, (13-706-00 □). FOR ALL OTHER CONFIGURATIONS REFER TO DATA SHEET.
 - △ OPTIONAL WIRE PACKAGES AVAILABLE, SEE WORK ORDER FOR P/N.
 - △ OPTIONAL MTG. PATTERN: #4-40 UNC-2B, (3) HOLES LOCATED AS SHOWN ON MTG. END.

83X4	2.323
83X3	2.073
83X2	1.948
MODEL	"A" MAX

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTION ±1/64 DECIMAL .XX ±.015 ANGLES ±1° BREAK ALL SHARP EDGES		FILE: 150\307		
MATERIAL:		DRAFTED BY: RJS	DATE: 12/20/96	TITLE: OUTLINE AND MOUNTING DIMENSIONS 83XX W/91X0 ENCODER
FINISH:		ENGINEERED BY: RJS	12/20/96	
		APPROVED BY: JRM	12/30/96	
		NEXT ASSY:		DWG. NO. B- 150-307
		USED ON:		REV. D
				SCALE: NONE SHEET 1 OF 1