



14201S003

Lo-Cog® DC Servo Motor

Assembly Data	Symbol	Units	Value	
Reference Voltage	E	V	24	
No-Load Speed	S _{NL}	rpm (rad/s)	4,230	(443)
Continuous Torque (Max.) ¹	T _C	oz-in (N-m)	10	(7.1E-02)
Peak Torque (Stall) ²	T _{PK}	oz-in (N-m)	63	(4.4E-01)
Weight	W _M	oz (g)	24	(675)
Motor Data				
Torque Constant	K _T	oz-in/A (N-m/A)	7.44	(5.25E-02)
Back-EMF Constant	K _E	V/krpm (V/rad/s)	5.50	(5.25E-02)
Resistance	R _T	Ω	2.79	
Inductance	L	mH	2.54	
No-Load Current	I _{NL}	A	0.26	
Peak Current (Stall) ²	I _P	A	8.6	
Motor Constant	K _M	oz-in/√W (N-m/√W)	4.45	(3.14E-02)
Friction Torque	T _F	oz-in (N-m)	1.2	(8.5E-03)
Rotor Inertia	J _M	oz-in-s ² (kg-m ²)	1.6E-03	(1.1E-05)
Electrical Time Constant	τ _E	ms	0.91	
Mechanical Time Constant	τ _M	ms	11.4	
Viscous Damping	D	oz-in/krpm (N-m-s)	0.17	(1.1E-05)
Damping Constant	K _D	oz-in/krpm (N-m-s)	15	(9.9E-04)
Maximum Winding Temperature	θ _{MAX}	°F (°C)	311	(155)
Thermal Impedance	R _{TH}	°F/watt (°C/watt)	49.8	(9.90)
Thermal Time Constant	τ _{TH}	min	22.0	
Gearbox Data				
Encoder Data				
Channels			3	
Resolution		CPR	500	

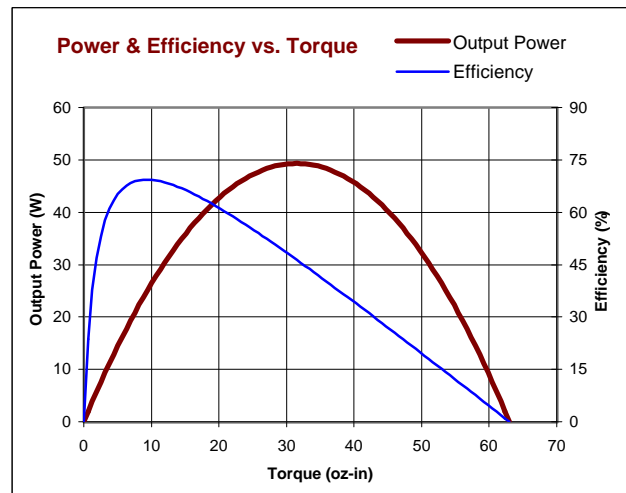
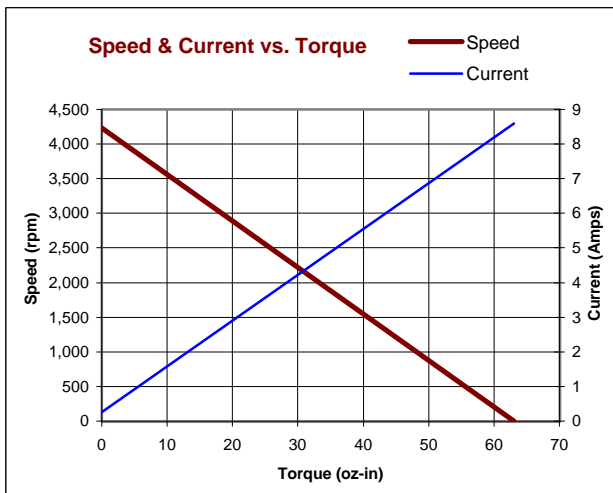
1 - Specified at max. winding temperature at 25°C ambient without heat sink. 2 - Theoretical values supplied for reference only.

Included Features

- 2-Pole Stator
- Ceramic Magnets
- Heavy-Gauge Steel Housing
- 11-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

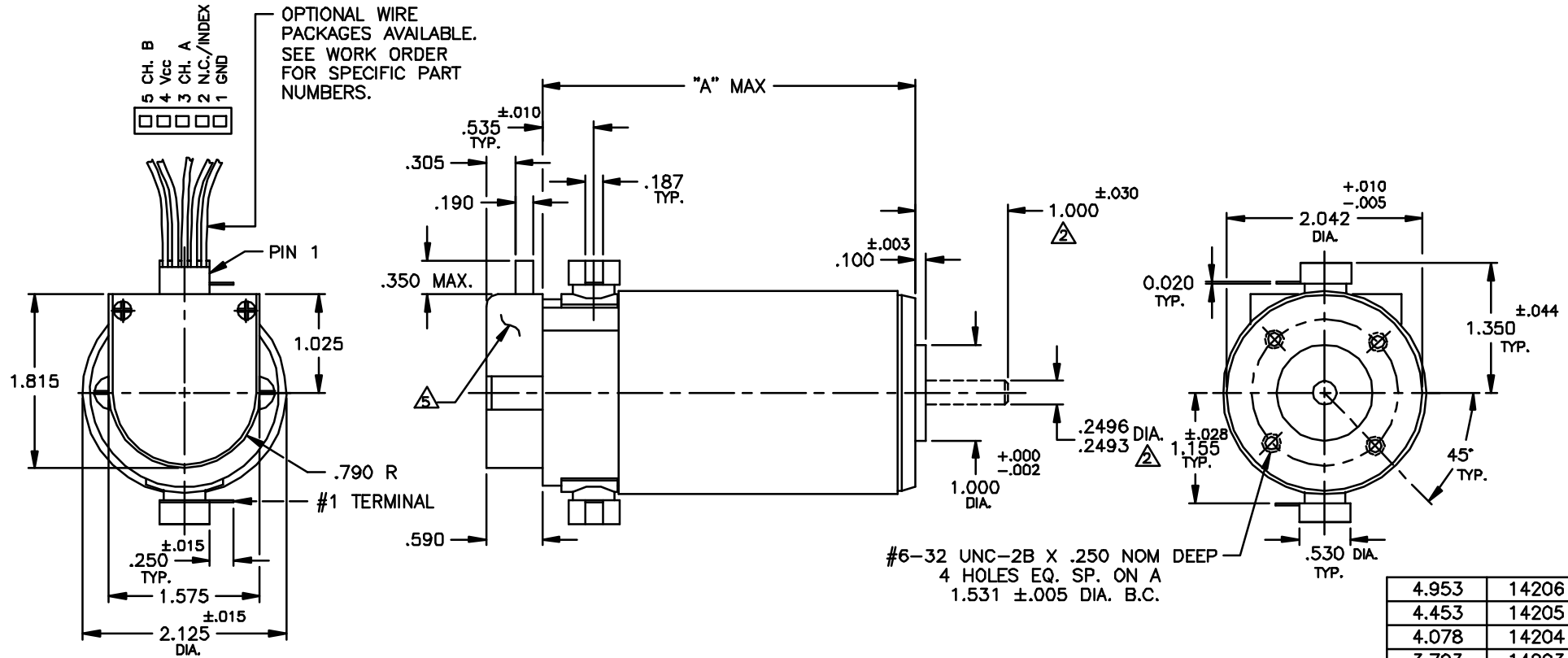


All values are nominal. Specifications subject to change without notice. Graphs are shown for reference only.

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REVISIONS				
LTR	DESCRIPTION	DRFT/ENGR	DATE	APPR
E	REDRAWN, UPDATED TO CURRENT STDS.	KUH/KUH	9-13-95	JRM
F	REVISED ENDBELL DIMS & BRUSH HOLDER DIMS	TMG/DLF		



4.953	14206
4.453	14205
4.078	14204
3.703	14203
3.203	14202
2.953	14201
"A" MAX	MODEL NO.

NOTES:

- SHAFT ROTATION IS CW WHILE VIEWING THE MOUNTING END, WITH POSITIVE VOLTAGE (+) APPLIED TO #1 TERMINAL.
- △ ALL SHAFT DIMENSIONS NOTED ARE STANDARD (13-407-00□). FOR ALL OTHER SHAFT CONFIGURATIONS, REFER TO DATA SHEET FOR SHAFT PART NUMBERS.
- BALL BEARINGS: PRELOAD PER P-107
- MOLEX HOUSING 2695 SERIES WILL ACCEPT MOLEX MATING TERMINALS 2759.
- △ ENCLOSED IS A H.P. HEDS-91X0 OPTICAL ENCODER MODULE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTION DECIMAL ANGLES ±1/84 ±.015 ±15		FILE: 150\229		
BREAK ALL SHARP EDGES		DRAFTED BY: KUH	DATE: 12 SEP 95	TITLE: OUTLINE AND MOUNTING DIMS. 142XX W/ 91X0 ENCODER
MATERIAL:		ENGINEERED BY: KUH	DATE: 12 SEP 95	
FINISH:		APPROVED BY: JR MELA	DATE: 9-13-95	DWG. NO. 150-229 B-
		NEXT ASSY:		
		USED ON:		SCALE: NONE SHEET 1