14204S006

Lo-Cog® DC Servo Motor

Assembly Data	Symbol	Units	Value	
Reference Voltage	E	V	24	
No-Load Speed	S_{NL}	rpm (rad/s)	3,702	(388)
Continuous Torque (Max.)[1]	T_C	oz-in (N-m)	26	(1.8E-01)
Peak Torque (Stall)[2]	T_{PK}	oz-in (N-m)	204	(1.4E+00)
Weight	W_M	oz (g)	38	(1083)
Motor Data				
Torque Constant	K_T	oz-in/A (N-m/A)	8.67	(6.12E-02)
Back-EMF Constant	K_E	V/krpm (V/rad/s)	6.41	(6.12E-02)
Resistance	R_T	Ω	1.01	
Inductance	L	mH	1.6	
No-Load Current	I_{NL}	A	0.26	
Peak Current (Stall)[2]	I_P	A	23.8	
Motor Constant	K_M	oz-in/√W (N-m/√W)	8.63	(6.09E-02)
Friction Torque	T_F	oz-in (N-m)	1.6	(1.1E-02)
Rotor Inertia	J_M	oz-in-s^2 (kg-m^2)	3.7E-03	(2.6E-05)
Electrical Time Constant	τ_E	ms	1.58	
Mechanical Time Constant	τ_M	ms	7.0	
Viscous Damping	D	oz-in/krpm (N-m-s)	0.18	(1.2E-05)
Damping Constant	K_D	oz-in/krpm (N-m-s)	55	(3.7E-03)
Maximum Winding Temperature	θ_{MAX}	ºF (ºC)	311	(155)
Thermal Impedance	R_{TH}	ºF/watt (ºC/watt)	45.9	(7.70)
Thermal Time Constant	τ_{TH}	min	28.8	
Gearbox Data				
Encoder Data				
Channels			3	
Resolution		CPR	500	

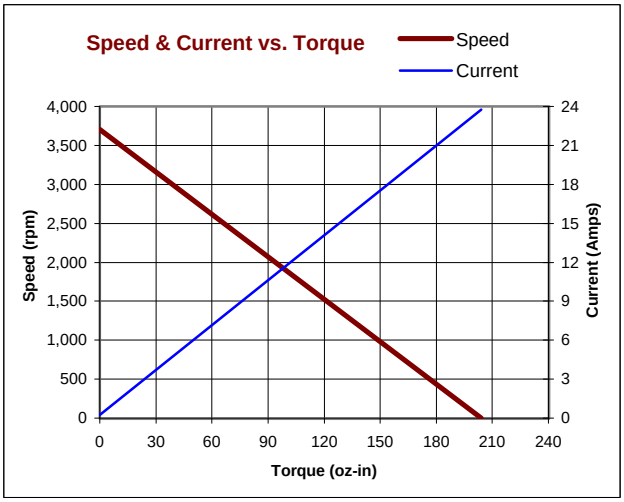
1 - Specified at max. winding temperature at 25ºC ambient without heat sink. 2 - Theoretical values supplied for reference only.

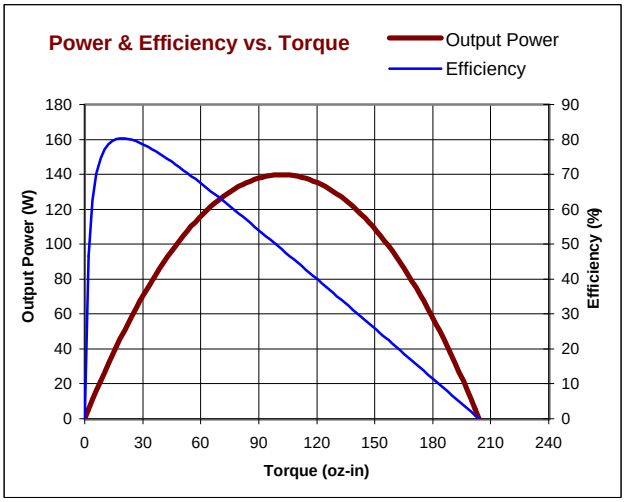
Included Features

2-Pole Stator
Ceramic Magnets
Heavy-Guage 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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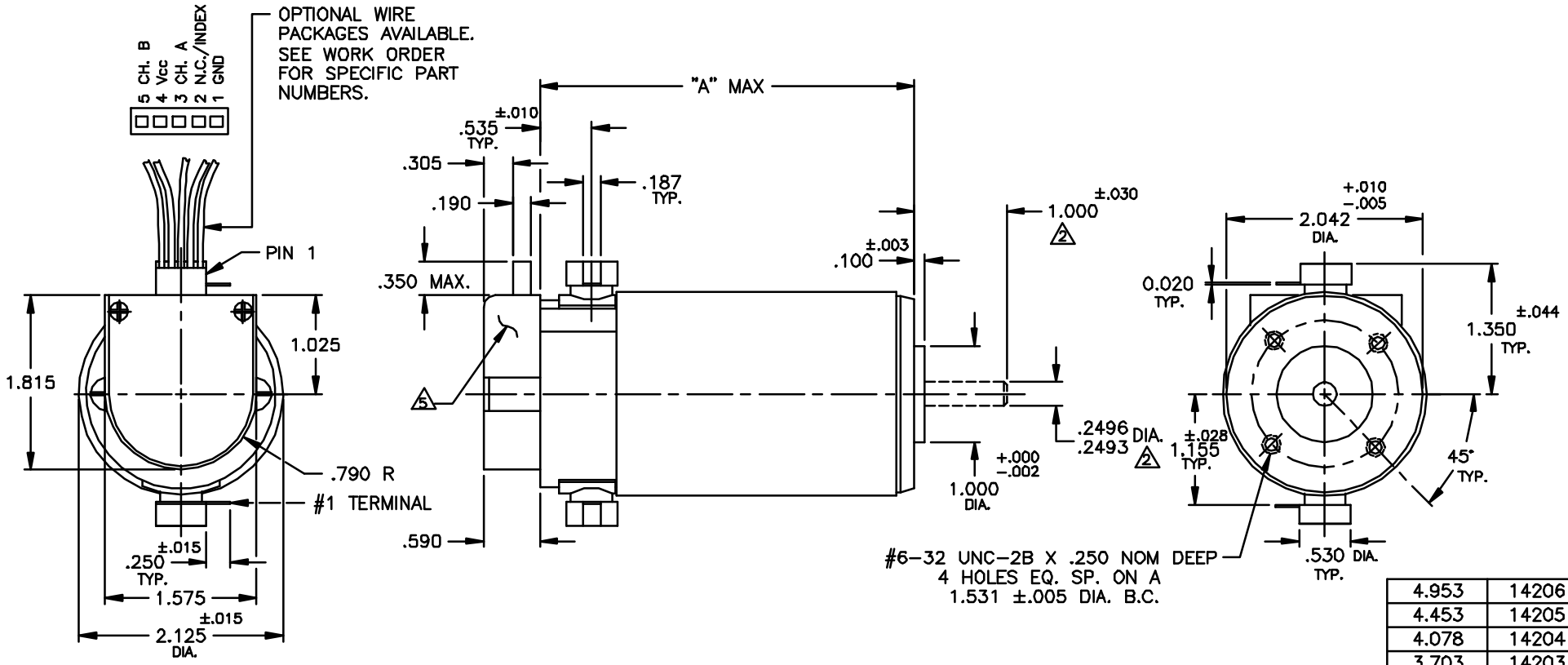
UNCONTROLLED

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		



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

NOTES:

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

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTION ±1/64 DECIMAL .X ±.016 .XX ±.010 .XXX±.005 ANGLES ±1°
BREAK ALL SHARP EDGES

MATERIAL:

FINISH:

FILE: 150\229

DRAFTED BY	KUH	DATE 12 SEP 95
ENGINEERED BY	KUH	12 SEP 95
APPROVED BY	JR MELA	9-13-95

NEXT ASSY:

USED ON.

PITTMAN

TITLE: OUTLINE AND MOUNTING DIMS. 142XX W/ 91X0 ENCODER

DWG. NO. B- 150-229 REV. F

SCALE: NONE SHEET 1