



## 9234S005

Lo-Cog® DC Servo Motor

Assembly Data	Symbol	Units	Value	
Reference Voltage	E	V	12	
No-Load Speed	S <sub>NL</sub>	rpm (rad/s)	6,151	(644)
Continuous Torque (Max.) <sup>1</sup>	T <sub>C</sub>	oz-in (N-m)	6.1	(4.3E-02)
Peak Torque (Stall) <sup>2</sup>	T <sub>PK</sub>	oz-in (N-m)	41	(2.9E-01)
Weight	W <sub>M</sub>	oz (g)	13	(371)
Motor Data				
Torque Constant	K <sub>T</sub>	oz-in/A (N-m/A)	2.58	(1.82E-02)
Back-EMF Constant	K <sub>E</sub>	V/krpm (V/rad/s)	1.91	(1.82E-02)
Resistance	R <sub>T</sub>	Ω	0.83	
Inductance	L	mH	0.63	
No-Load Current	I <sub>NL</sub>	A	0.33	
Peak Current (Stall) <sup>2</sup>	I <sub>P</sub>	A	14.49	
Motor Constant	K <sub>M</sub>	oz-in/√W (N-m/√W)	3.01	(2.13E-02)
Friction Torque	T <sub>F</sub>	oz-in (N-m)	0.60	(4.2E-03)
Rotor Inertia	J <sub>M</sub>	oz-in-s <sup>2</sup> (kg-m <sup>2</sup> )	5.9E-04	(4.2E-06)
Electrical Time Constant	τ <sub>E</sub>	ms	0.85	
Mechanical Time Constant	τ <sub>M</sub>	ms	9.3	
Viscous Damping	D	oz-in/krpm (N-m-s)	0.039	(2.6E-06)
Damping Constant	K <sub>D</sub>	oz-in/krpm (N-m-s)	6.7	(4.5E-04)
Maximum Winding Temperature	θ <sub>MAX</sub>	°F (°C)	311	(155)
Thermal Impedance	R <sub>TH</sub>	°F/watt (°C/watt)	62.8	(17.1)
Thermal Time Constant	τ <sub>TH</sub>	min	12.0	
Gearbox Data				
Encoder Data				
Channels			3	
Resolution		CPR	500	

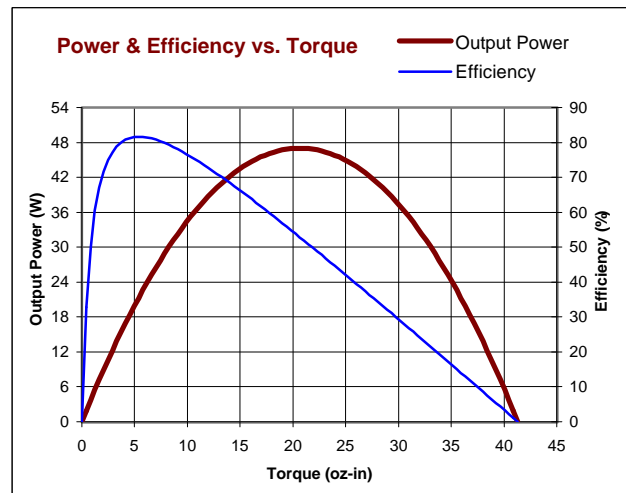
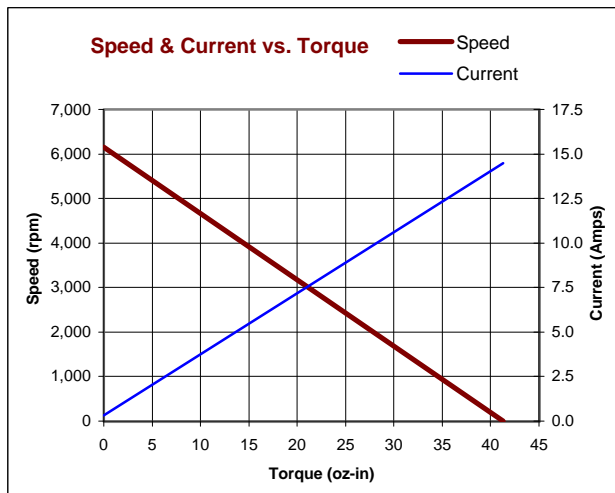
1 - Specified at max. winding temperature at 25°C ambient without heat sink. 2 - Theoretical values supplied for reference only.

### Included Features

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

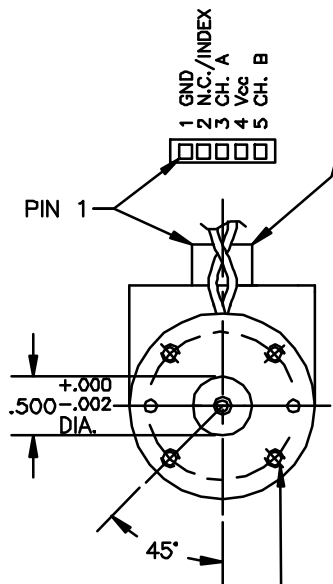
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# UNCONTROLLED

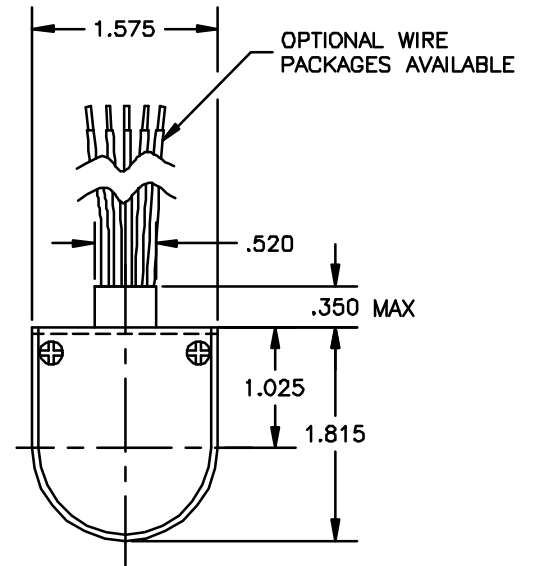
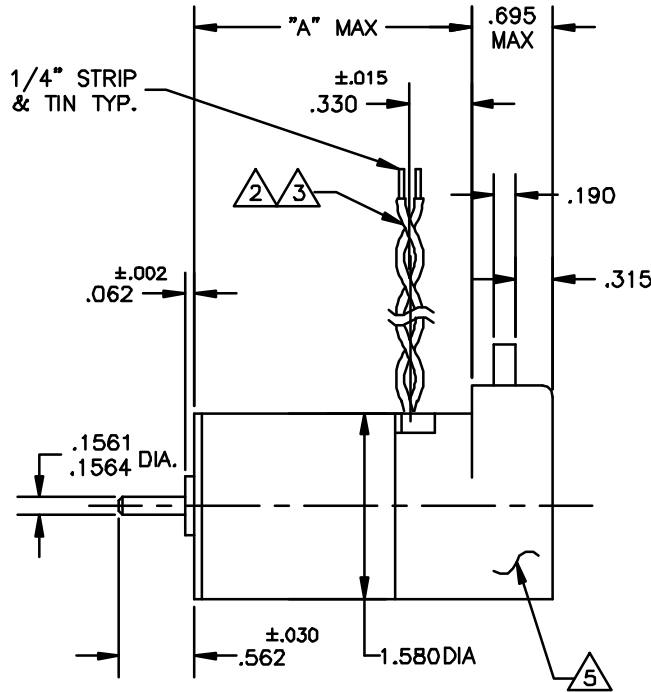
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REVISIONS				
LTR	DESCRIPTION	DRFT/ENGR	DATE	APPR
D	REDRAWN, UPDATED TO CURRENT STDS	KUH/KUH	5/12/98	JRM
E	.330 WAS .315	TMG/DLF	4/3/01	JRM
F	SPECIFIED TOLERANCE FOR DIM. .562	TMG/TMG		

MOLEX CENTER CRIMP TERMINAL HOUSING 2695 WILL ACCEPT MOLEX MATING TERMINALS 2759



#6-32 UNC-2B,  
.350 DP. MAX.  
4 HOLES EQ. SP.  
ON A 1.000 DIA. B.C.



92X6	3.021
92X5	2.671
92X4	2.371
92X3	2.171
92X2	1.796
MODEL NO.	"A" MAX

**NOTES:**

1. SHAFT ROTATION IS CW WHILE VIEWING MOUNTING END WITH POSITIVE (+) VOLTAGE APPLIED TO THE RED LEAD.
2. LEADS ARE 22 AWG (7X30), PVC INSULATED, UL STYLE 1569/1007. ONE LEAD IS RED, THE OTHER IS BLACK.
3. STANDARD LEAD LENGTH IS 18 ±1/2 INCHES.
4. BALL BEARINGS ARE PRELOADED PER P-107.
5. ENCLOSED IS A HP HEDS-91X0 OPTICAL ENCODER MODULE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		FILE: 150\402		
TOLERANCES ARE:		DRAFTED BY: KUH		
FRACTION ±1/64	DECIMAL .XX ±.015	ENGINEERED BY: KUH	5/11/98	<b>TITLE: OUTLINE &amp; MOUNTING DIMENSIONS</b> 9200 SERIES MOTOR WITH 9100 H.P. ENCODER MODULE
	ANGLES ±°	APPROVED BY: JR MELA	5/12/98	
BREAK ALL SHARP EDGES		NEXT ASSY:	DWG. NO. <b>B-150-402</b>	
MATERIAL:	FINISH:	USED ON:	SCALE: DNS	REV. <b>F</b>
			SHEET 1 OF 1	