



## 9232S002

Lo-Cog® DC Motor

Assembly Data	Symbol	Units	Value	
Reference Voltage	E	V	24	
No-Load Speed	$S_{NL}$	rpm (rad/s)	7,015	(735)
Continuous Torque (Max.) <sup>1</sup>	$T_C$	oz-in (N-m)	2.4	(1.7E-02)
Peak Torque (Stall) <sup>2</sup>	$T_{PK}$	oz-in (N-m)	14	(9.7E-02)
Weight	$W_M$	oz (g)	7	(198)
Motor Data				
Torque Constant	$K_T$	oz-in/A (N-m/A)	4.40	(3.11E-02)
Back-EMF Constant	$K_E$	V/krpm (V/rad/s)	3.25	(3.11E-02)
Resistance	$R_T$	$\Omega$	7.38	
Inductance	L	mH	4.64	
No-Load Current	$I_{NL}$	A	0.16	
Peak Current (Stall) <sup>2</sup>	$I_P$	A	3.25	
Motor Constant	$K_M$	oz-in/ $\sqrt{W}$ (N-m/ $\sqrt{W}$ )	1.62	(1.14E-02)
Friction Torque	$T_F$	oz-in (N-m)	0.50	(3.5E-03)
Rotor Inertia	$J_M$	oz-in-s <sup>2</sup> (kg-m <sup>2</sup> )	2.7E-04	(1.9E-06)
Electrical Time Constant	$\tau_E$	ms	0.63	
Mechanical Time Constant	$\tau_M$	ms	14.4	
Viscous Damping	D	oz-in/krpm (N-m-s)	0.027	(1.8E-06)
Damping Constant	$K_D$	oz-in/krpm (N-m-s)	1.9	(1.3E-04)
Maximum Winding Temperature	$\theta_{MAX}$	$^{\circ}F$ ( $^{\circ}C$ )	311	(155)
Thermal Impedance	$R_{TH}$	$^{\circ}F/watt$ ( $^{\circ}C/watt$ )	72.9	(22.7)
Thermal Time Constant	$\tau_{TH}$	min	7.2	
Gearbox Data				
Encoder Data				

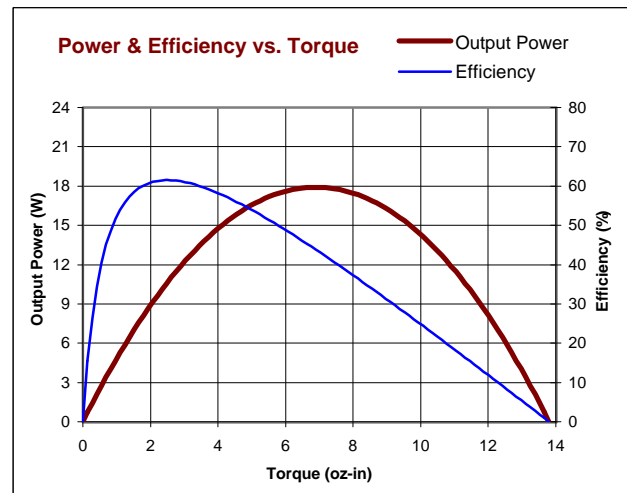
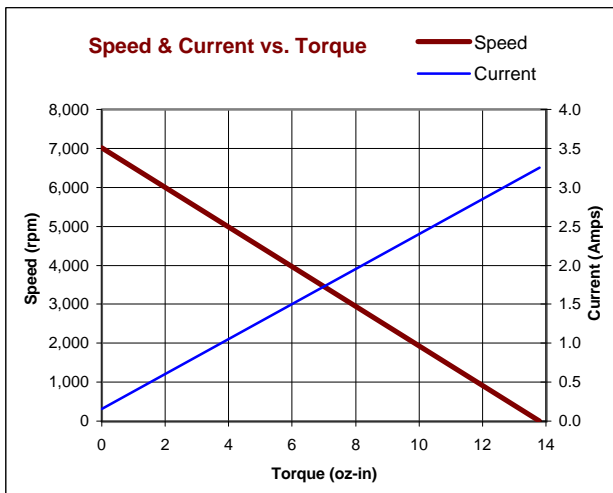
### Included Features

- 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

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

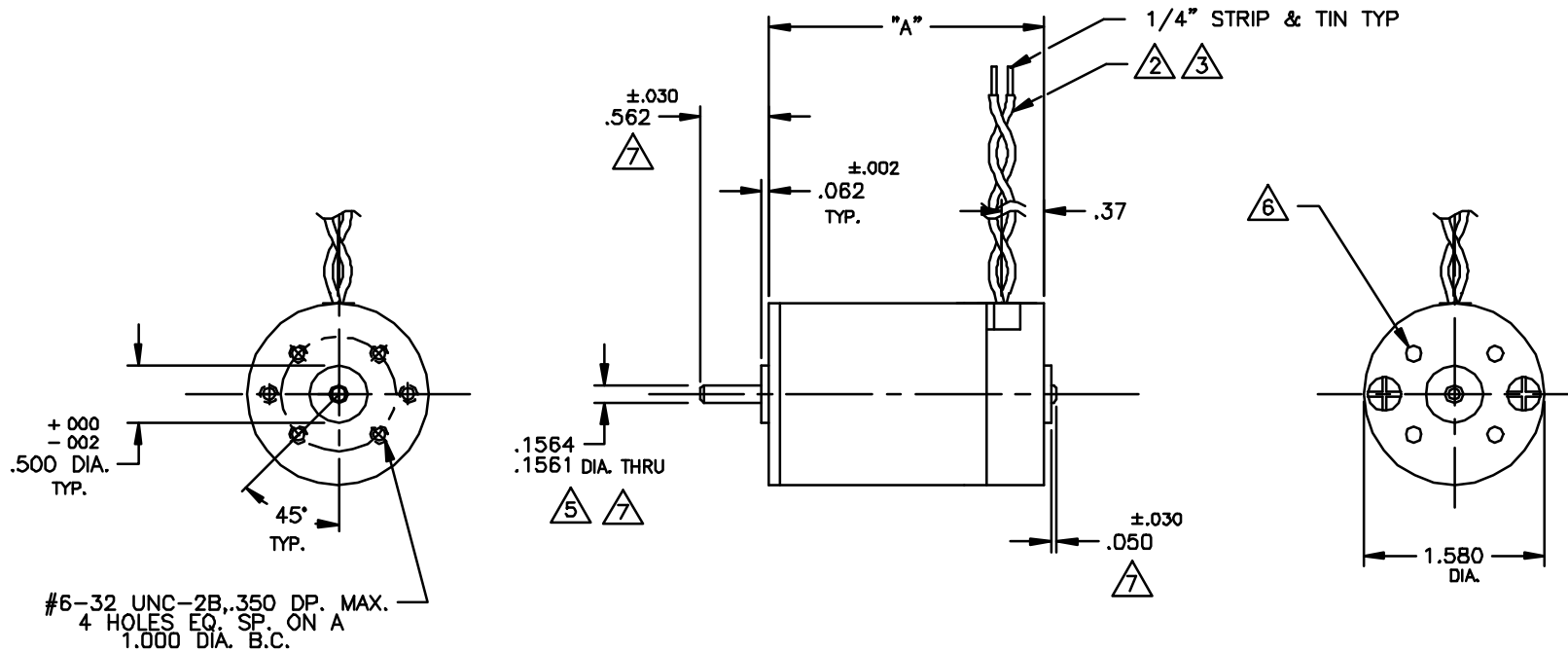


All values are nominal. Specifications subject to change without notice. Graphs are shown for reference only.

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REVISIONS				
LTR	DESCRIPTION	DRFT/ENGR	DATE	APPR
D	REDRAWN & REVISED	RJS/RJS	3/20/96	JRM
E	1/4" STRIP & TIN WAS "STRIP"	KUH/KUH		



3.053	92X6
2.703	92X5
2.403	92X4
2.203	92X3
1.828	92X2
"A" MAX	MODEL No.

NOTES:

- SHAFT ROTATION IS CW VIEWING MOUNTING END WITH POSITIVE (+) VOLTAGE APPLIED TO RED LEAD.
- LEADS ARE 22 AWG (7X30) PVC INSULATION, UL STYLE 1569/1007. RED AND BLACK
- STANDARD LEAD LENGTH IS  $18" \pm 1/2"$
- ENDPLAY-.015 MAX. FOR SLEEVE BEARING MOTORS. BALL BEARING MOTORS ARE PRE-LOADED PER SPEC. P-107
- OPTIONAL SHAFT DIA.  $.1246/.1243$  IS AVAILABLE ONLY WITH THE 94X2 AND 94X3 MOTOR LENGTHS.
- OPTIONAL REAR ENDBELL MOUNTING PATTERN #6-32 UNC-2B,  $.180$  MAX THREAD PENETRATION, 4 HOLES EQ. SP. ON A  $1.000$  DIA B.C.
- ALL SHAFT DIMENSIONS NOTED ARE STANDARD (10-631-00); FOR ALL OTHER SHAFT CONFIGURATIONS REFER TO DATA SHEET FOR PART #'S

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTION DECIMAL ANGLES $\pm 1/84$ $\pm .015$ $\pm 1^\circ$ $\pm .010$ $\pm .005$ BREAK ALL SHARP EDGES		FILE:	DATE: 3/20/95	
MATERIAL:		DRAFTED BY: RJS	ENGINEERED BY: RJS	
FINISH:		APPROVED BY:	NEXT ASSY:	
USED ON:		TITLE: OUTLINE AND MTG. DIMS. 92XX SERIES MOTOR		
SCALE: NONE		DWG. NO. B-150-409		REV. E
SHEET 1				