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RA68-12-001(LTR)

S

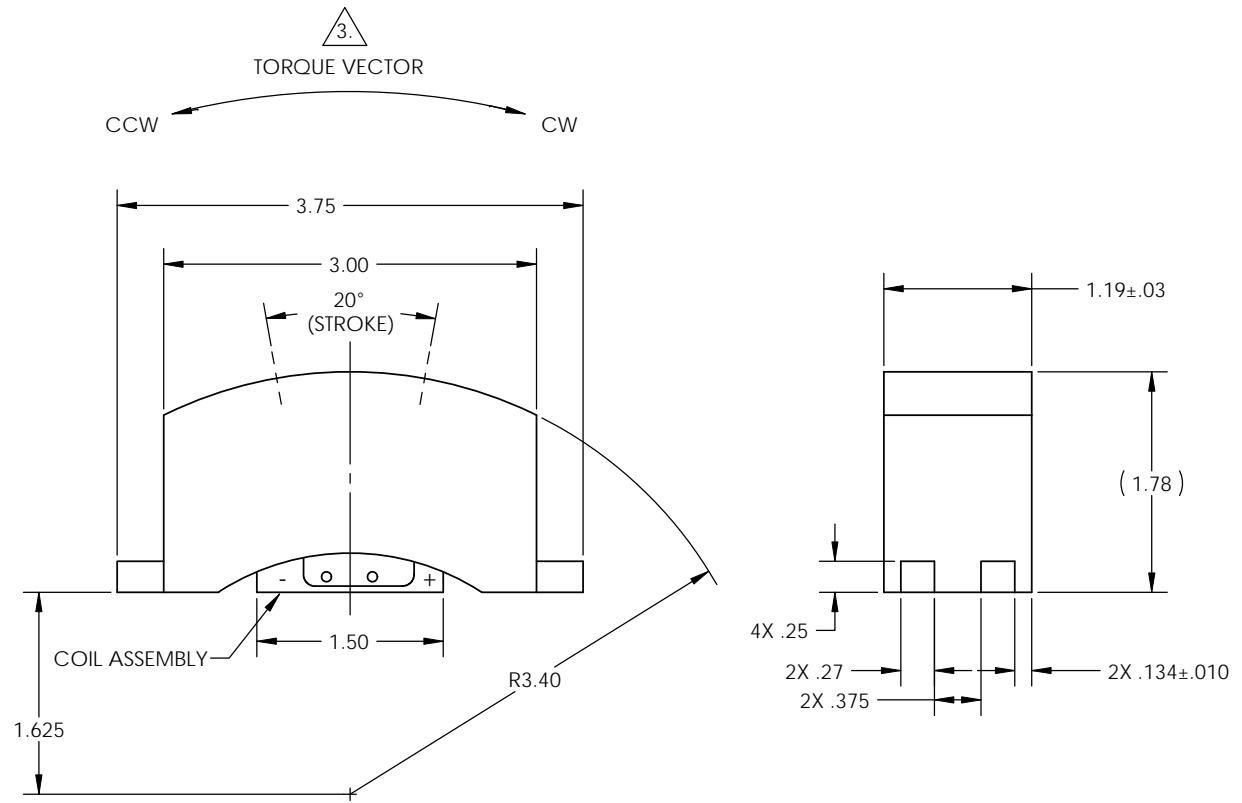
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Winding Constants *	Units	Tol	Symbol	Wdg A	Wdg B
DC Resistance	Ohms	± 12.5%	R	5	.15
Voltage @ T <sub>P</sub>	Volts	Nominal	V <sub>P</sub>	15.2	2.6
Current @ T <sub>P</sub>	Amps	Nominal	I <sub>P</sub>	3.04	17.4
Toeque Sensitivity	Oz-in/Amp	± 10%	K <sub>T</sub>	56	9.77
	Nm/Amp	± 10%		.395	.069
Back EMF Constant	V/Rad/Sec	± 10%	K <sub>B</sub>	.395	.069
Inductance ****	milli-Henry	± 15%	L	4.2	.13

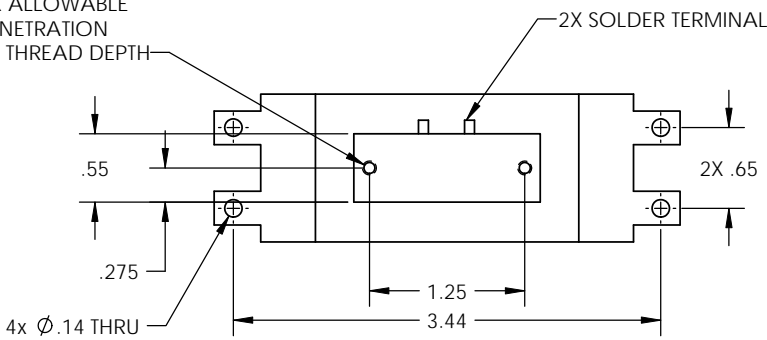
LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
S	100308	UPDATE PERFORMANCE TABLE	RG	MG	10/22/10

Rotary Actuator Parameters *	Units	Symbol	Value
Peak Torque **	Oz-in	T <sub>P</sub>	170
	Nm		1.2
Continuos Stall Torque ***	Oz-in	F <sub>CS</sub>	103
	Nm		.73
Actuator Constant	Oz-in/√Watt	K <sub>A</sub>	25
	Nm/√Watt		.177
Electrical Time Constant	milli-sec	τ <sub>E</sub>	.84
Mechanical Time Constant	milli-sec	τ <sub>M</sub>	4.52
Theoretical Angular Acceleration	rad/sec <sup>2</sup>	α <sub>T</sub>	8510
Max Theoretical Frequency @ Full Stroke and Sinusoidal / Triangular Motion	Hz	f <sub>max</sub>	35.1/39
Power I <sup>2</sup> R @ F <sub>p</sub>	Watts	P <sub>P</sub>	46.2
Angular Stroke	+/- Degrees		10
Moving Coil Inertia	Oz-in-sec <sup>2</sup>	J <sub>CA</sub>	.02
	Kgm <sup>2</sup>		1.41x10 <sup>-4</sup>
Thermal Resistance of Coil	°C/Watt	θ <sub>TH</sub>	5.1
Maximum Allowable Coil Winding Temp	°C	Temp	155
Total Weight	Oz	Wt	18
	G		510

\* AT MID-STROKE POSITION AND @ 25°C AMBIENT TEMPERATURE.  
 \*\* 10 SECONDS @ 25°C AMBIENT & 155°C COIL TEMPERATURE.  
 \*\*\* @25°C AMBIENT & 155°C COIL TEMPERATURE.  
 \*\*\*\* MEASURED AT 1000 Hz.



2x 4-40 UNC -2B  
 THREADED INSERT  
 √.31 MAX ALLOWABLE  
 SCREW PENETRATION  
 √.15 FREE THREAD DEPTH



3. A POSITIVE (+) VOLTAGE APPLIED TO THE POSITIVE (+) TERMINAL WILL PRODUCE A TORQUE ON THE COIL ASSEMBLY IN THE CLOCKWISE (CW) DIRECTION, AS VIEWED FROM THE TERMINAL SIDE.

- 2. INTERPRET DRAWING IAW Y14.100.
  - 1. INTERPRET DIMENSIONING AND TOLERANCING IAW ASME Y14.5M-1994.
- NOTES: UNLESS OTHERWISE SPECIFIED

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THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED:  
 -ALL DIMENSIONS ARE IN INCHES  
 -BREAK SHARP EDGES .015 MAX  
 -SURFACE ROUGHNESS 63 ✓  
 -DIMENSIONS APPLY AFTER FINISH  
 -MAX FILLET R.010  
 -DIAMETERS SHALL NOT EXCEED A RUNOUT OF .005 FIM

TOLERANCES:  
 DECIMALS ANGULAR  
 .X ±.03 ±0°30'  
 .XX ±.01  
 .XXX ±.005  
 DO NOT SCALE DRAWING

**BEI KIMCO MAGNETICS DIVISION**  
**VISTA, CA 92081**

DRAWN	DATE	TITLE
ELLOITT	09/09/88	ROTARY ACTUATOR
CHECK GUERRERO	12/13/04	
APPD HA PHAM	09/12/88	SIZE C
FILE NO. L\TOP LEVEL\RA\		FSCM NO. 55789
		DWG NO. RA68-12-001(LTR)
		REV S
		SCALE: NONE
		SHEET: 1 OF 1



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