

4

3

2

RA29-11-002A

K

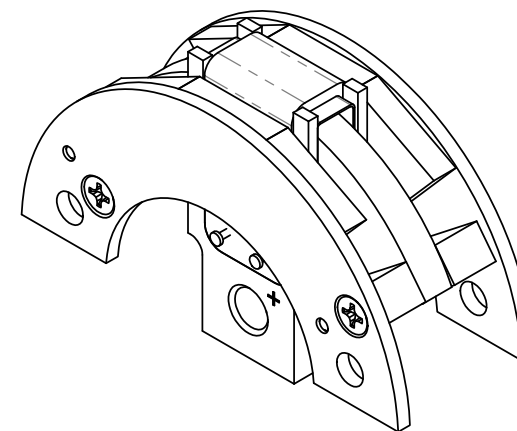
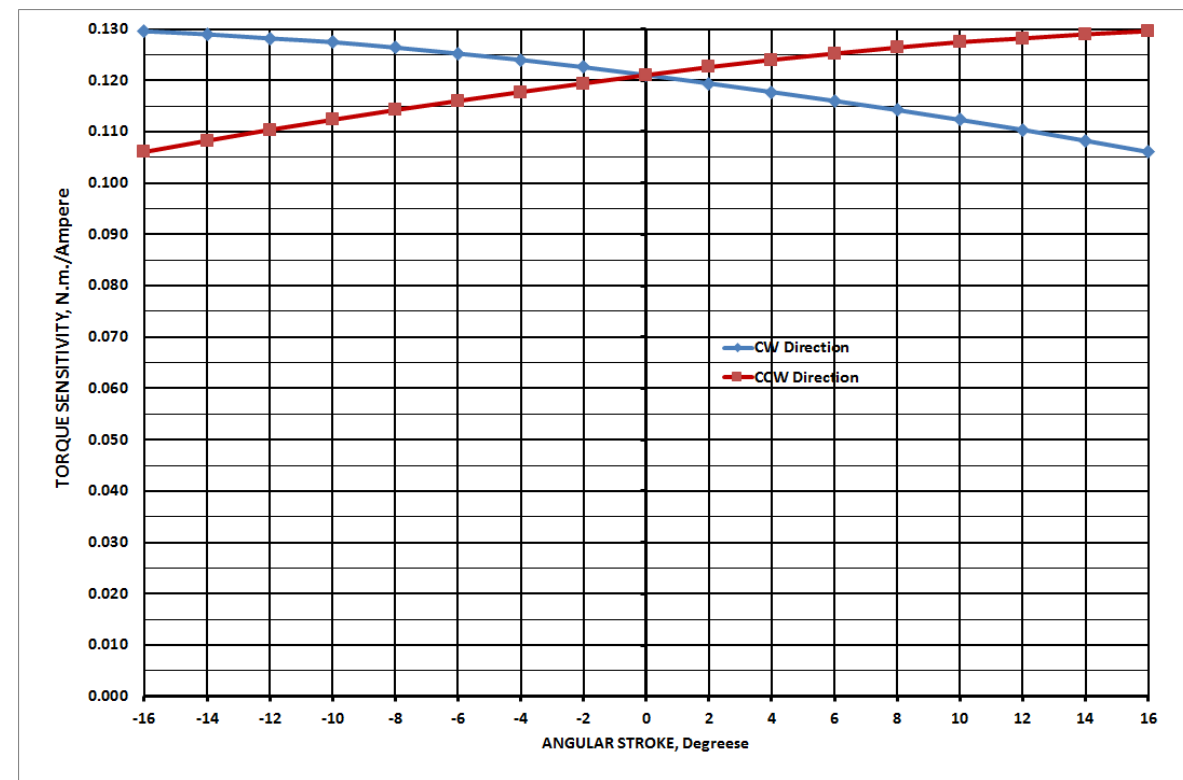
1

Winding Constants *	Units	Tol	Symbol	Wdg	A
DC Resistance	Ohms	+ 12.5%	R	13	
Voltage @ T <sub>PS</sub>	Volts	Nominal	V <sub>PS</sub>	26	
Current @ T <sub>PS</sub>	Amps	Nominal	I <sub>PS</sub>	2	
Current @ T <sub>CS</sub>	Amps	Nominal	I <sub>CS</sub>	0.64	
Force Sensitivity @ T <sub>PS</sub>	N.m/Amp	+ 10%	K <sub>T<sub>PS</sub></sub>	0.121	
	oz.in/Amp	+ 10%		17.14	
Force Sensitivity @ No-Load	N.m/Amp	+ 10%	K <sub>TNL</sub>	0.123	
	oz.in/Amp	+ 10%		17.4	
Back EMF Constant	V/(rad/sec)	+ 10%	K <sub>B</sub>	0.123	
Inductance ****	mH	+ 15%	L	10	

LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
K	170130	UPDATE FORMAT AND PARAMETERS	RG	MG	05/10/17

Rotary Actuator Parameters *	Units	Symbol	Value
Peak Stall Torque**	N.m	T <sub>PS</sub>	0.242
	oz.in		34.28
Continuous Stall Torque ***	N.m	T <sub>CS</sub>	0.0776
	oz.in		11
Actuator Constant	N.m/√Watt	K <sub>A</sub>	0.0336
	oz.in/√Watt		4.75
Electrical Time Constant	ms	τ <sub>E</sub>	0.77
Mechanical Time Constant	ms	τ <sub>M</sub>	11
Theoretical Acceleration	rad/s <sup>2</sup>	α <sub>T</sub>	19,206
Max Theoretical Frequency @ Full Stroke and Sinusoidal / Triangular Motion	Hz	f <sub>max</sub>	41.8/46.4
Power I <sup>2</sup> R @ T <sub>PS</sub>	Watts	P <sub>PS</sub>	52
Angular Stroke	± degrees	S <sub>A</sub>	16
Clearance on Each Side of Coil	mm	D <sub>C</sub>	0.635
	in		0.025
Moving Coil Assembly Inertia	kg.m <sup>2</sup>	J <sub>CA</sub>	1.26 x 10 <sup>-5</sup>
	oz.in.s <sup>2</sup>		0.0018
Thermal Resistance of Coil in still air	°C/Watt	Θ <sub>TH</sub>	16.2
Maximum Allowable Winding Temp	°C	T <sub>W</sub>	155
Mass, Total	kg	M <sub>T</sub>	0.163
	oz		5.73

DISCLAIMERS  
 \* AT MID-STROKE & 25°C AMBIENT TEMPERATURE  
 \*\* 10 SEC AT 25°C AMBIENT & 155°C WINDING TEMPERATURE  
 \*\*\* AT 25°C AMBIENT & 155°C WINDING TEMPERATURE  
 \*\*\*\* MEASURED AT 1000 Hz



SCALE: 1:1



THESE COMMODITIES, TECHNOLOGY OR SOFTWARE IF EXPORTED FROM THE UNITED STATES SHALL BE IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW IS PROHIBITED

THIRD ANGLE PROJECTION

Proprietary rights of BEI Kimco are involved in the subject matter of this material and all manufacturing, reproduction, use, and sales pertaining to such subject matter are expressly reserved. This confidential and proprietary document is submitted for a specified purpose, and the recipient by accepting this material agrees that this material will not be used, copied, or reproduced in whole or in part nor its contents revealed in any manner or to any person except to meet the purpose for which it was delivered.

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



DRAWN JDM	DATE 04/10/90	TITLE ROTARY ACTUATOR			
CHECK THOMPSON	DATE 10/07/06	SIZE C	FSCM NO. 55789	DWG NO. RA29-11-002A	REV K
APPD A. MARCOS	DATE 04/13/90	SCALE: NONE EWIF-015-01 REV. A SHEET: 1 OF 2			
FILE NO. L\TOP LEVEL\RA\					

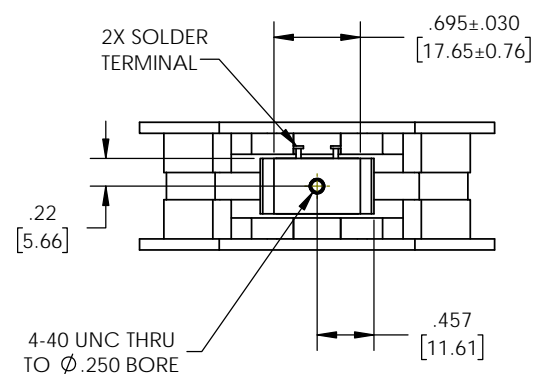
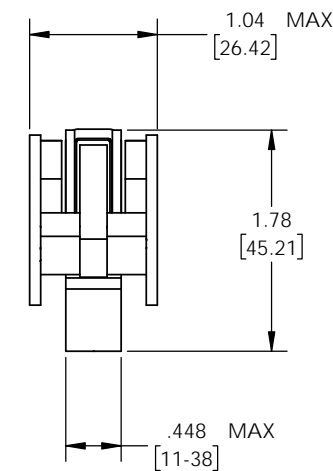
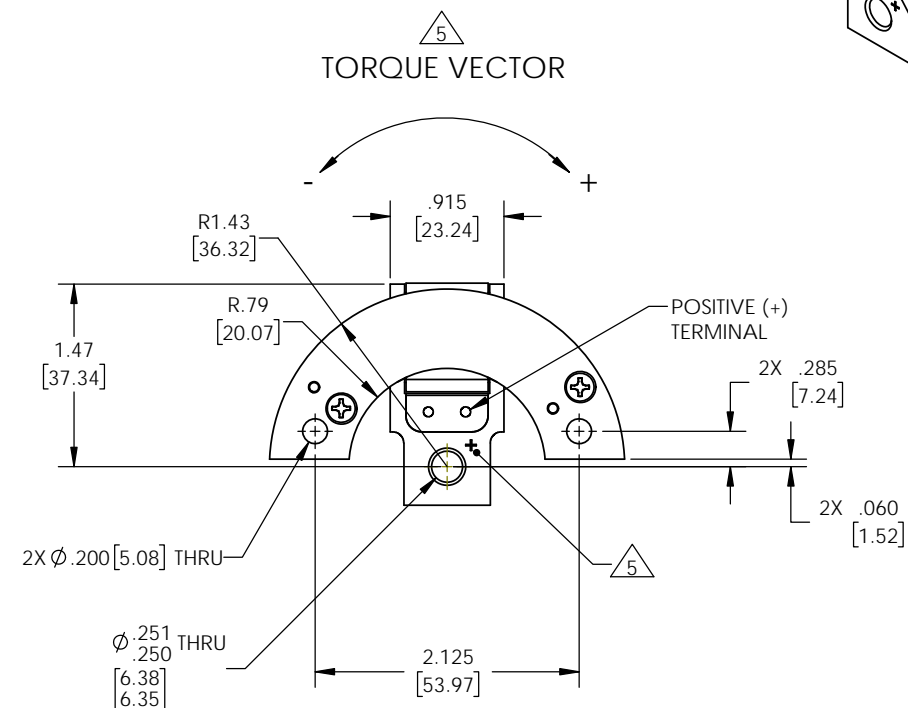
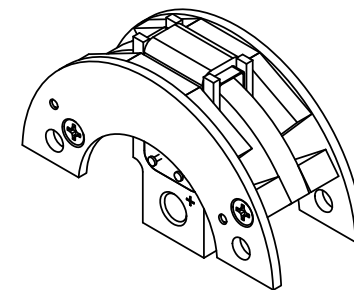
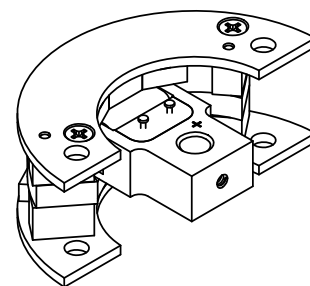
4

3

2

1

REVISION HISTORY
SEE PAGE 1



NOTES: UNLESS OTHERWISE SPECIFIED

1. INTERPRET DIMENSIONING AND TOLERANCING IAW ASME Y14.5M-1994.
2. INTERPRET DRAWING IAW ASME Y14.100.
3. ALL ABBREVIATIONS IAW ASME Y14.38.
4. INCH DRAWING. DIMENSIONS IN BRACKETS [ ] ARE IN MILLIMETERS AND ARE FOR REFERENCE ONLY.

5. A POSITIVE (+) VOLTAGE APPLIED TO THE + TERMINAL WILL PRODUCE A TORQUE ON THE COIL ASSEMBLY IN THE CW DIRECTION AS SHOWN.

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE IF EXPORTED FROM THE UNITED STATES SHALL BE IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW IS PROHIBITED



THIRD ANGLE PROJECTION 	SIZE <b>C</b>	FSCM NO. 55789	DWG NO. RA29-11-002A	REV K
FILE NO: L\TOP LEVEL\RA\	SCALE: NONE	EWIF-015-01 REV. A	SHEET: 2 OF 2	