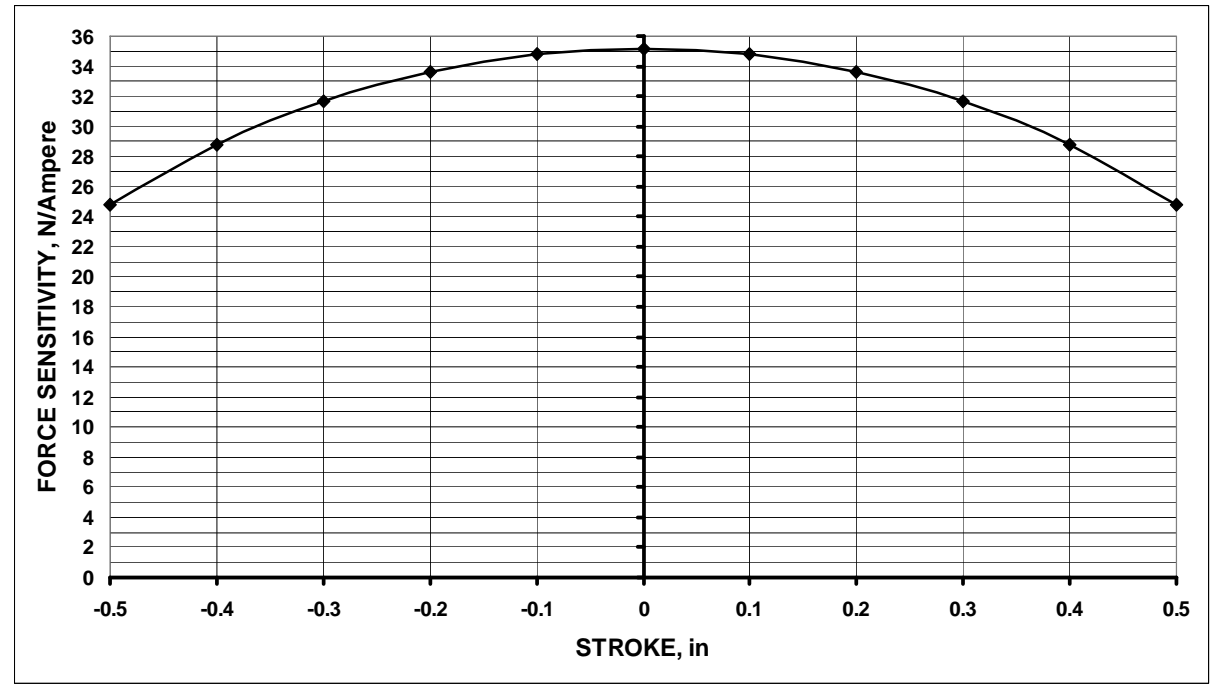
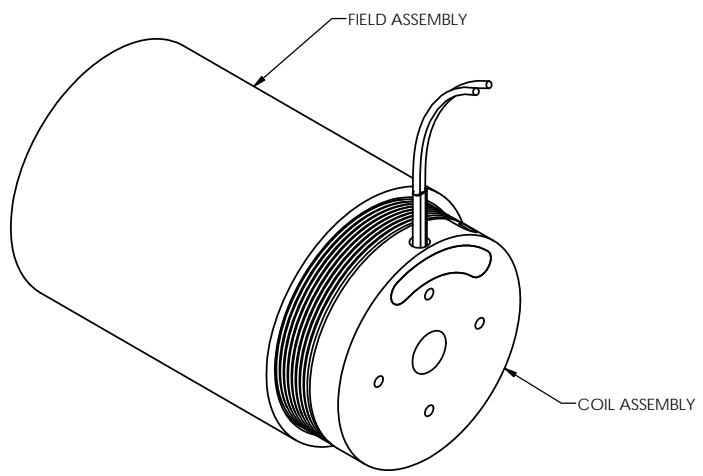


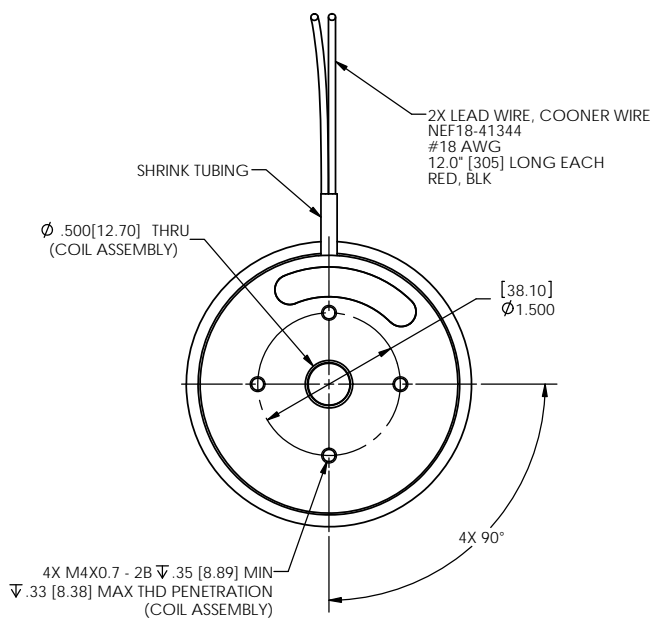
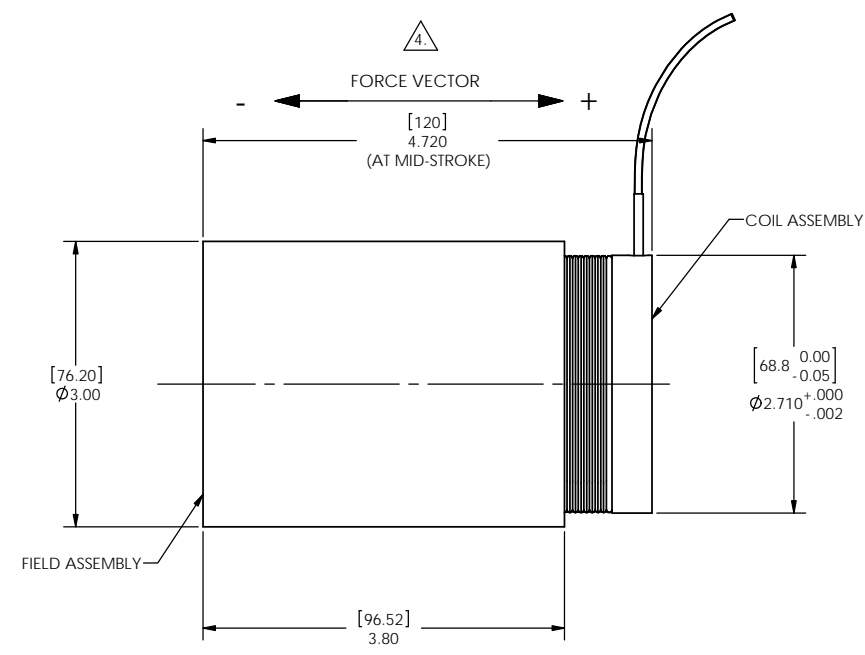
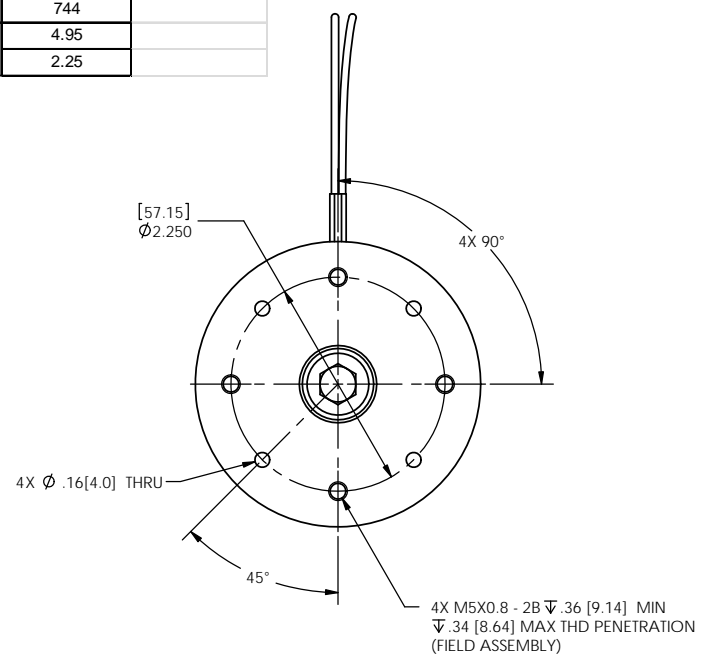
LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
X1	100134	INITIAL RELEASE	RG	MG	05/17/10
X2	130169	UPDATED PARAMETERS TO AS BUILT CONDITION	RG	MG	06/05/13

Winding Constants *	Units	Tol	Symbol	Wdg	A
DC Resistance	Ohms	± 12.5%	R	2.6	
Voltage @ F <sub>P</sub>	Volts	Nominal	V <sub>P</sub>	33.0	
Current @ F <sub>P</sub>	Amps	Nominal	I <sub>P</sub>	12.7	
Force Sensitivity	LB/Amp	± 10%	K <sub>F</sub>	7.9	
	N/Amp	± 10%		35.14	
Back EMF Constant	V/(ft/sec)	± 10%	K <sub>B</sub>	10.71	
	V/(m/sec)	± 10%		35.14	
Inductance ****	milli-henry	± 30%	L	2.9	

Linear Actuator Parameters *	Units	Symbol	Value
Peak Force **	LB	F <sub>P</sub>	100
	N		445
Continuous Stall Force ***	LB	F <sub>CS</sub>	30.1
	N		133.8
Actuator Constant	LB/√Watt	K <sub>A</sub>	4.9
	N/√Watt		21.8
Electrical Time Constant	milli-sec	τ <sub>E</sub>	1.12
Mechanical Time Constant	milli-sec	τ <sub>M</sub>	1.57
Theoretical Acceleration	ft/sec <sup>2</sup>	α <sub>T</sub>	1962.2
	m/sec <sup>2</sup>		598.1
Max Theoretical Frequency @ Full Stroke & Sinusoidal/Triangular Motion	Hz	f <sub>max</sub>	34.5/38.4
Power I <sup>2</sup> R @ F <sub>P</sub>	Watts	P <sub>P</sub>	419
Stroke:	± in		0.5
	± mm		12.7
Clearance on Each side of Coil	in		0.02
	mm		0.51
Thermal Resistance of Coil in still air	°C/Watt	θ <sub>TH</sub>	2.3
Maximum Allowable Coil Winding Temp	°C	Temp	155
Weight of Coil Assembly	LB	WT <sub>C</sub>	1.64
	G		744
Weight of Field Assembly	LB	WT <sub>T</sub>	4.95
	KG		2.25



\* 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



▲ A POSITIVE (+) VOLTAGE APPLIED TO THE BLACK LEAD WILL PRODUCE A FORCE ON THE COIL IN THE POSITIVE (+) DIRECTION.

- ALL ABBREVIATIONS IAW ASME Y14.38.
  - INTERPRET DRAWING IAW ASME Y14.100.
  - 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: X ±0.03, XX ±0.01, XXX ±0.005  
 ANGULAR: ±0°30'  
 DO NOT SCALE DRAWING

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

DRAWN	DATE	TITLE			
GUERRERO	05/14/10	LINEAR ACTUATOR			
MECH CHECK					
McGHEE	05/14/10				
APPD	DATE	SIZE	FSCM NO.	DWG NO.	REV
GODKIN	05/17/10	D	55789	LA30-48-000A	X2
FILE NO.	SCALE		SHEET		
L\TOP LEVEL\LA\	1/1		1 OF 1		



LA30-48-000A X2