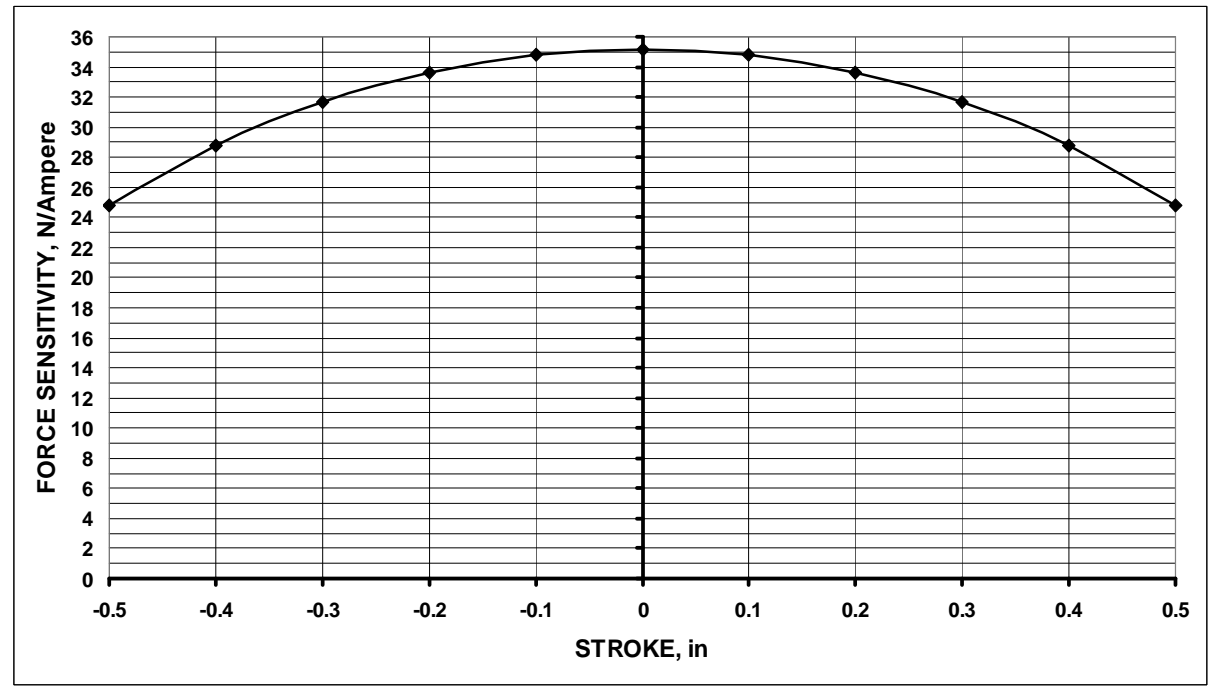
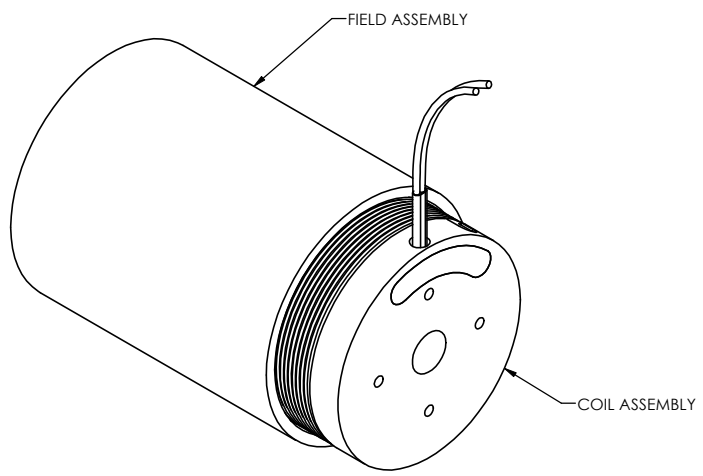


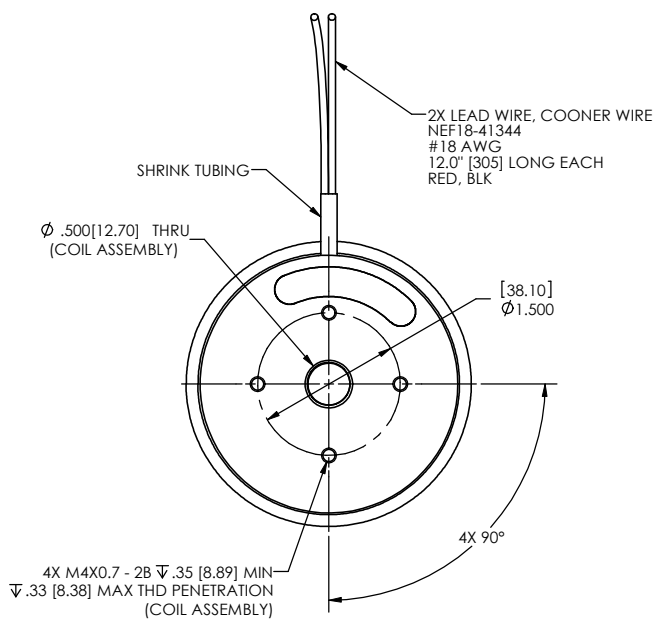
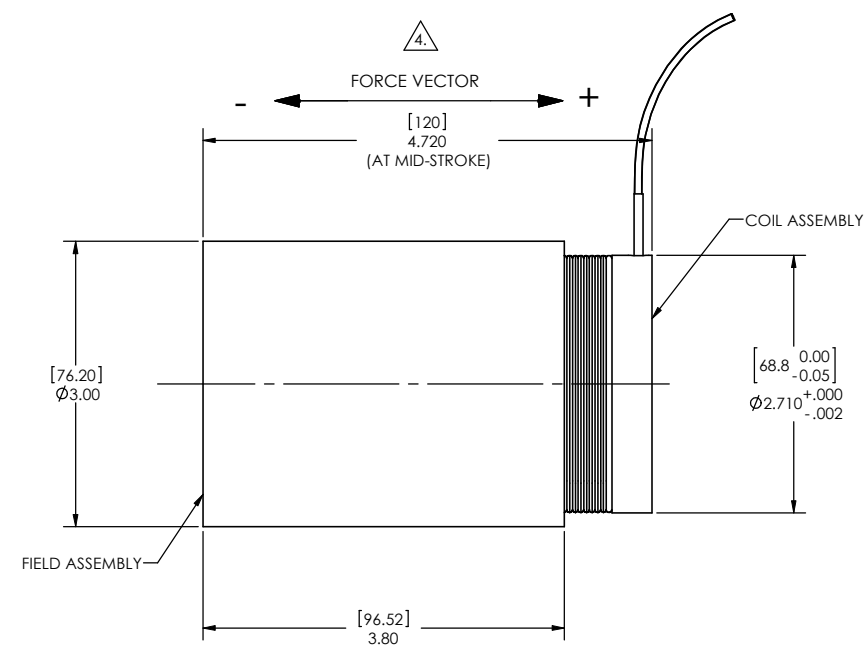
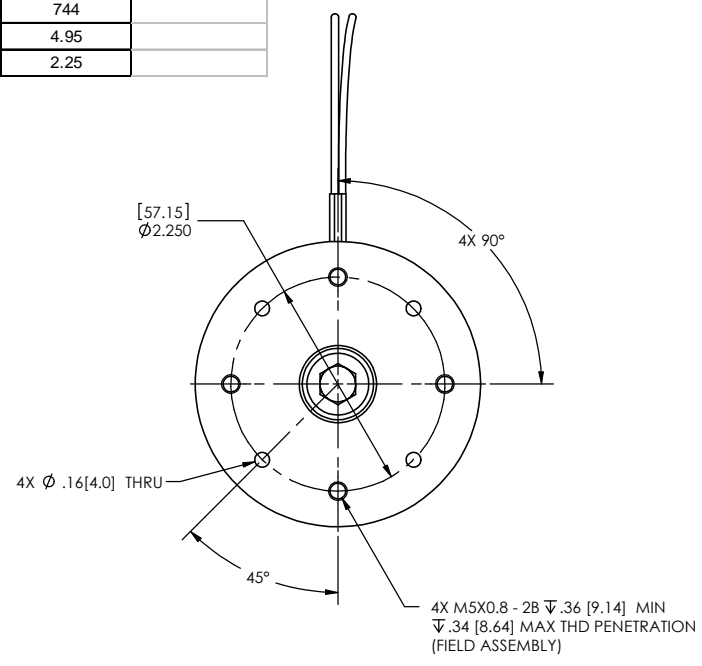
Winding Constants *	Units	Tol	Symbol	Wdg	A
DC Resistance	Ohms	± 12.5%	R	2.6	
Voltage @ F _P	Volts	Nominal	V _P	33.0	
Current @ F _P	Amps	Nominal	I _P	12.7	
Force Sensitivity	LB/Amp	± 10%	K _F	7.9	
	N/Amp	± 10%		35.14	
Back EMF Constant	V/(r/sec)	± 10%	K _B	10.71	
	V/(m/sec)	± 10%		35.14	
Inductance ****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

Linear Actuator Parameters *	Units	Symbol	Value
Peak Force **	LB	F _P	100
	N		445
Continuous Stall Force ***	LB	F _{CS}	41.6
	N		185.0
Actuator Constant	LB/√Watt	K _A	4.9
	N/√Watt		21.8
Electrical Time Constant	milli-sec	τ _E	1.12
Mechanical Time Constant	milli-sec	τ _M	1.57
Theoretical Acceleration	ft/sec ²	α _T	1962.2
	m/sec ²		598.1
Max Theoretical Frequency @ Full Stroke & Sinusoidal/Triangular Motion	Hz	f _{max}	34.5/38.4
Power I ² R @ F _P	Watts	P _P	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 _{TH}	1.2
Maximum Allowable Coil Winding Temp	°C	Temp	155
Weight of Coil Assembly	LB	WT _C	1.64
	G		744
Weight of Field Assembly	LB	WT _T	4.95
	KG		2.25

LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
X1	100134	INITIAL RELEASE	RG	MG	05/17/10



* 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.



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

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

BEI KIMCO MAGNETICS DIVISION
 VISTA, CA 92081

ROHS

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	X1
FILE NO.	L\TOP LEVEL\LA\		SCALE	1/1	SHEET 1 OF 1

LA30-48-000A X1