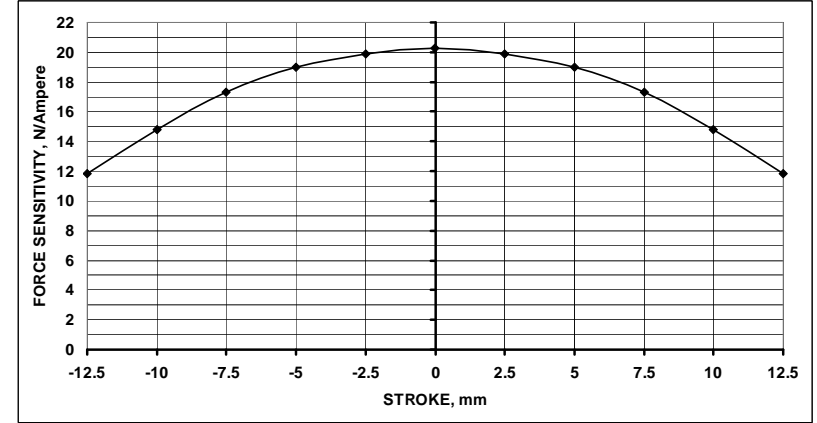


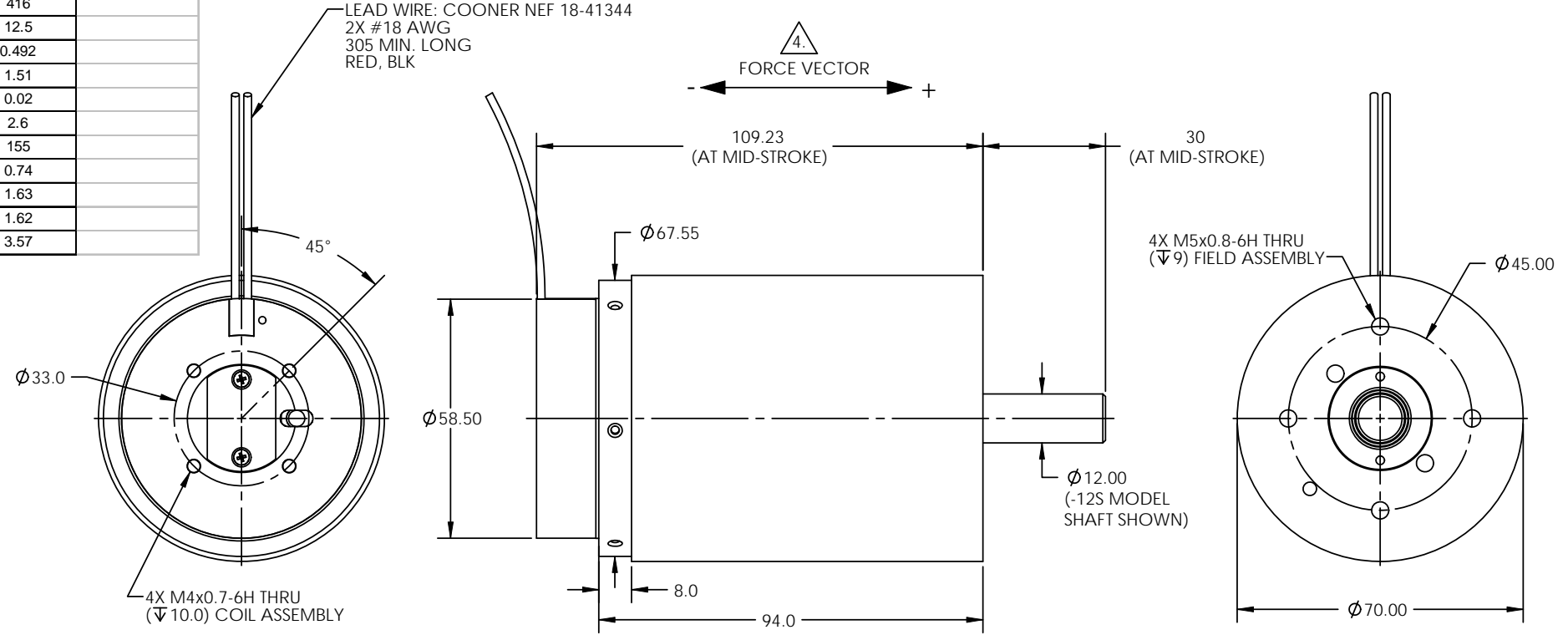
Winding Constants *	Units	Tol	Symbol	Wdg	A
DC Resistance	Ohms	± 12.5%	R	2.4	
Voltage @ F _P	Volts	Nominal	V _P	31.6	
Current @ F _P	Amps	Nominal	I _P	13.16	
Force Sensitivity	N/Amp	± 10%	K _F	20.28	
	LB/Amp	± 10%		4.56	
Back EMF Constant	V/(m/sec)	± 10%	K _B	20.28	
	V/(ft/sec)	± 10%		6.18	
Inductance ****	milli-henry	± 30%	L	3.15	

LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
X1	090107	INITIAL RELEASE	SLM	MG	04/23/09
X2	100328	REMOVE ANTI-ROTATION PIN	SLM	MG	11/11/10

Linear Actuator Parameters *	Units	Symbol	Value
Peak Force **	N	F _P	266.9
	LB		60
Continuous Stall Force ***	N	F _{CS}	75.6
	LB		17
Actuator Constant	N/√Watt	K _A	13.09
	LB/√Watt		2.94
Electrical Time Constant	milli-sec	τ _E	1.31
Mechanical Time Constant	milli-sec	τ _M	4.3
Theoretical Acceleration	m/sec ²	α _T	360.7
	ft/sec ²		1183.4
Max Theoretical Frequency @ Full Stroke & Sinusoidal/Triangular Motion	Hz	f _{max}	26.8/29.8
Power I ² R @ F _P	Watts	P _P	416
Stroke:	± mm		12.5
	± in		0.492
Clearance on Each side of Coil	mm		1.51
	in		0.02
Thermal Resistance of Coil in still air	°C/Watt	θ _{TH}	2.6
Maximum Allowable Coil Winding Temp	°C	Temp	155
Weight of Coil Assembly *****	Kg	WT _C	0.74
	LB		1.63
Weight of Field Assembly	Kg	WT _F	1.62
	LB		3.57



* 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
 ***** PARAMETERS ARE GIVEN FOR -12S MODEL



(DASH)#	DIA. OF SHAFT	SHAFT END CONFIGURATION
-12S	12mm	Standard (12mm)
-12E	12mm	External Thread M12x1.75 X 16mm Long
-12I	12mm	Internal Thread M8x1.0 X 16mm Deep

4. A POSITIVE (+) VOLTAGE APPLIED TO THE BLACK LEAD WIRE WILL PRODUCE A FORCE ON THE COIL ASSEMBLY 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 MILLIMETERS
 -BREAK SHARP EDGES 0.4 MAX
 -SURFACE ROUGHNESS 1.6 ✓
 -DIMENSIONS APPLY AFTER FINISH
 -MAX FILLET R0.25
 -DIAMETERS SHALL NOT EXCEED A RUNOUT OF 0.13 FIM

TOLERANCES:
 DECIMALS: X ±0.8, .X ±0.25, .XX ±0.13
 ANGULAR: ±0°30'
 DO NOT SCALE DRAWING

METRIC DRAWING



BEI KIMCO MAGNETICS DIVISION
 VISTA, CA 92081

DRAWN McGHEE	DATE 04/08/09	TITLE LINEAR ACTUATOR	
CHECK GUERRERO	DATE 04/23/09	SIZE C	REV X2
APPD M. GODKIN	DATE 04/23/09	FSCM NO. 55789	DWG NO. LA28-43-001A-DASH
FILE NO. L:\TOP LEVEL\LA\...	SCALE: NONE	SHEET: 1 OF 1	