

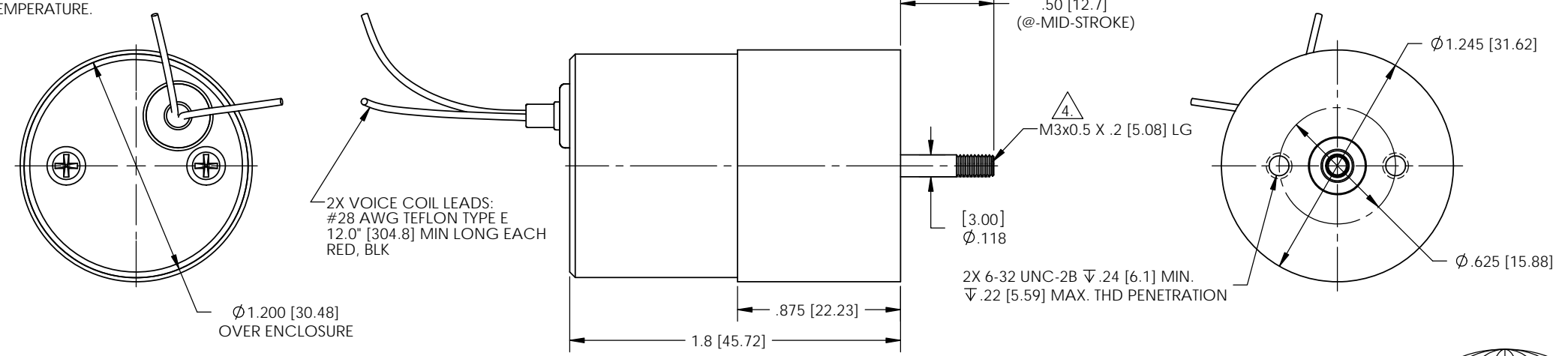
LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
X1	130092	INITIAL RELEASE	RG	MG	04/03/13

Winding Constants *	Units	Tol	Symbol	Wdg	A
DC Resistance	Ohms	± 12.5%	R	17.1	
Voltage @ F <sub>p</sub>	Volts	Nominal	V <sub>p</sub>	27.2	
Current @ F <sub>p</sub>	Amps	Nominal	I <sub>p</sub>	1.59	
Force Sensitivity	LB/Amp	± 10%	K <sub>F</sub>	2.2	
	N/Amp	± 10%		9.79	
Back EMF Constant	V/(ft/sec)	± 10%	K <sub>B</sub>	2.98	
	V/(m/sec)	± 10%		9.79	
Inductance ****	milli-Henry	± 15%	L	2.8	

Linear Actuator Parameters *	Units	Symbol	Value
Peak Force **	LB	F <sub>p</sub>	3.5
	N		15.57
Continuous Stall Force ***	LB	F <sub>CS</sub>	1.14
	N		5.07
Actuator Constant	LB/√Watt	K <sub>A</sub>	0.53
	N/√Watt		2.36
Electrical Time Constant	micro-sec	τ <sub>E</sub>	164
Mechanical Time Constant	milli-sec	τ <sub>M</sub>	3.16
Theoretical Acceleration	ft/sec <sup>2</sup>	α <sub>T</sub>	2886.1
	m/sec <sup>2</sup>		879.7
Max Theoretical Frequency @ Full Stroke and Sinusoidal / Triangular Motion	Hz	f <sub>max</sub>	83.8/93.1
Power I <sup>2</sup> R @ F <sub>p</sub>	Watts	P <sub>p</sub>	43.3
Stroke:	± in		0.125
	± mm		3.18
Clearance on Each side of Coil	in		0.015
	mm		0.38
Thermal Resistance of Coil	°C/Watt	θ <sub>TH</sub>	18.7
Maximum Allowable Coil Winding Temp	°C	Temp	155
Weight of Coil Assembly	LB	WT <sub>C</sub>	0.039
	g		17.7
Total Weight	LB	WT <sub>T</sub>	0.28
	g		127



\* 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.



(DASH)#	SHAFT END CONFIGURATION
-3S	3mm Diameter
-3E	3mm Diameter, External Thread M3x0.5 X .2 [5.08mm] Long

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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

RoHS

DRAWN	DATE	TITLE
GUERRERO	03/28/13	LINEAR ACTUATOR HOUSED
CHECK	DATE	
McGHEE	04/02/13	
APPD	DATE	SIZE
GODKIN	04/03/13	C
FILE NO.	FSCM NO.	DWG NO.
L\TOP L\LAH	55789	LAH13-18-000A-DASH
SCALE: NONE	REV	X1
	SHEET: 1 OF 1	

4. -3E CONFIGURATION SHOWN.
3. A POSITIVE (+) VOLTAGE APPLIED TO THE RED LEAD WILL PRODUCE A FORCE ON THE COIL ASSEMBLY (SHAFT) IN THE POSITIVE (+) DIRECTION.
2. INTERPRET DRAWING IAW Y14.100.
1. INTERPRET DIMENSIONING AND TOLERANCING IAW ASME Y14.5M-1994.
- NOTES: UNLESS OTHERWISE SPECIFIED