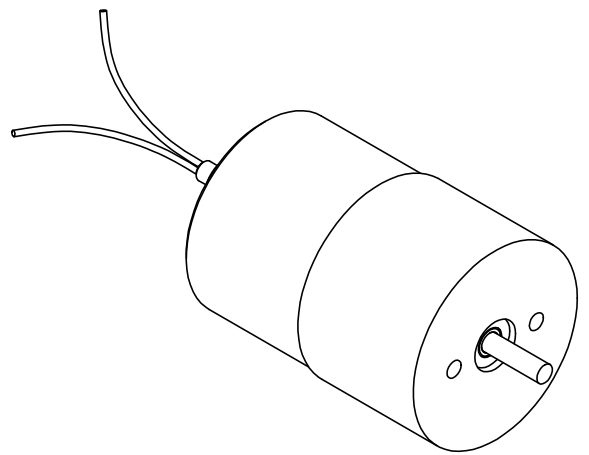


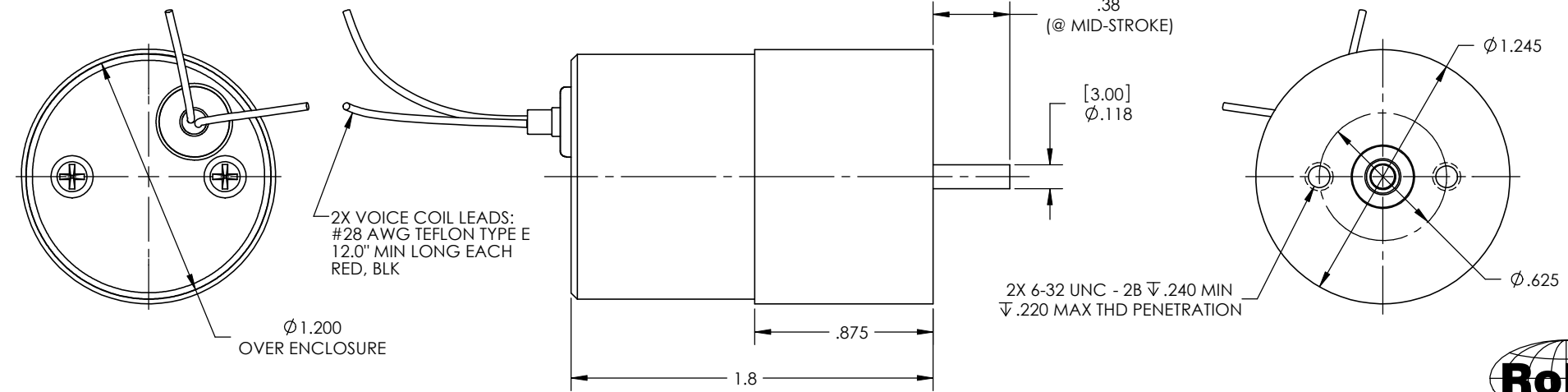
LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
X1	090305	INITIAL RELEASE	RG	MG	01/14/10

Winding Constants *	Units	Tol	Symbol	Wdg	Z
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>	2.84
Theoretical Acceleration	ft/sec <sup>2</sup>	α <sub>T</sub>	3212.6
	m/sec <sup>2</sup>		979.2
Max Theoretical Frequency @ Full Stroke and Sinusoidal / Triangular Motion	Hz	f <sub>max</sub>	88.4/98.2
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 in still air	°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>	0.035
	g		15.9
Total Weight	LB	WT <sub>T</sub>	0.27
	g		122.5



\* 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. MECHINAL OVERTRAVEL IN THE POSITIVE (+) DIRECTION IS .025 MINIMUM.
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

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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

DRAWN	DATE	TITLE
GUERRERO	12/01/09	LINEAR ACTUATOR HOUSED
CHECK	DATE	
McGHEE	01/14/10	
APPD	DATE	
GODKIN	01/14/10	
FILE NO.	SIZE	FSCM NO.
L\TOP L\LAH\	C	55789
	DWG NO.	REV
	LAH13-18-000A	X1
SCALE: NONE	SHEET: 1 OF 1	