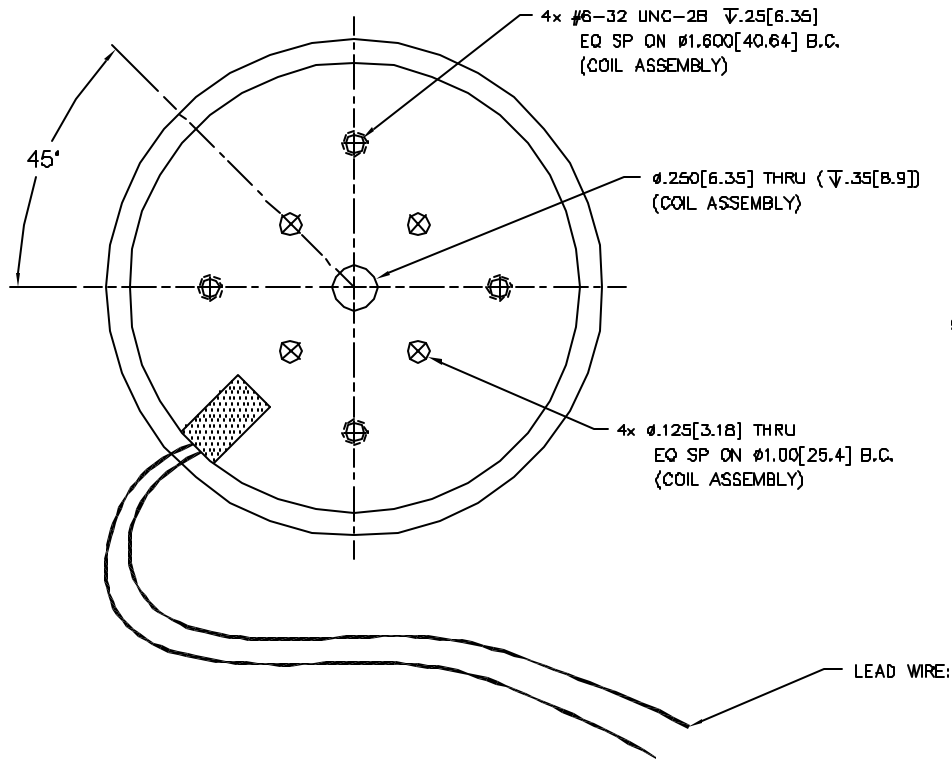
LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
F	044901	CHG LEAD WIRE TYPE UPDATE REV LEVEL	RG	MG	10/29/02
G	060341	UPDATE DRAWING ADDING Rohs LOGO	RG	MG	04/21/05
H	070200	CORRECT WEIGHT FOR COIL ASSEMBLY	JWT	MG	03/23/07

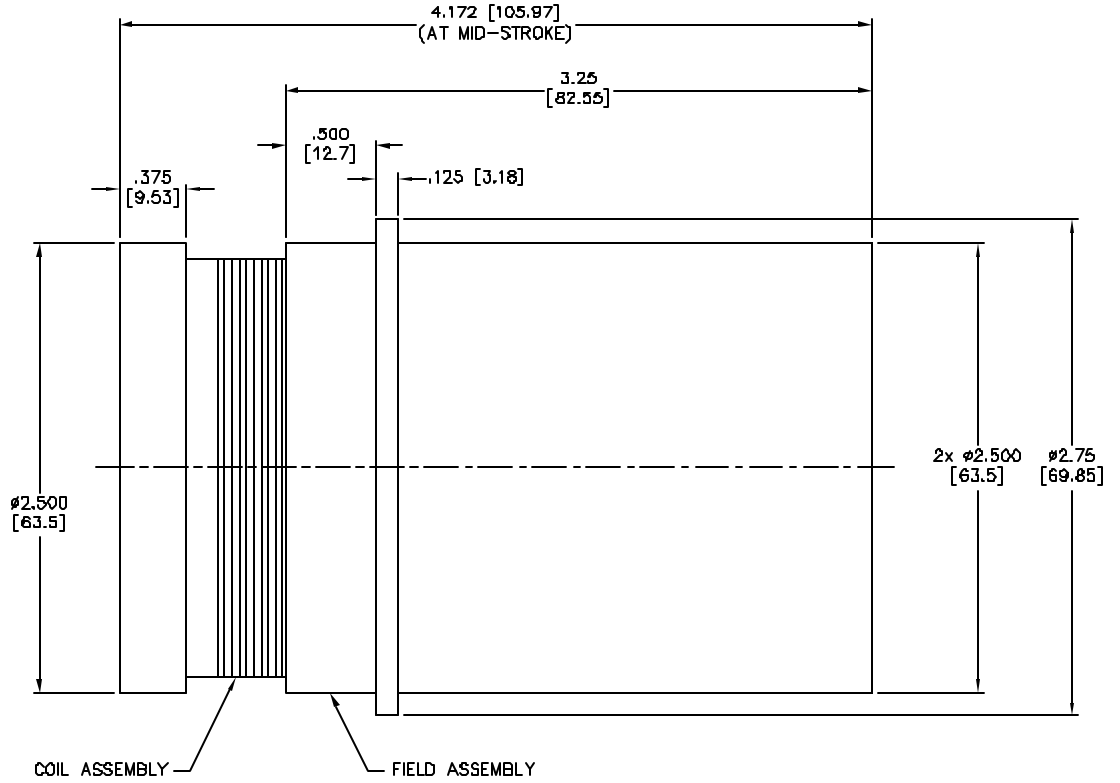
WINDING CONSTANTS *	UNITS	TOL	SYMBOL	WDG A
DC RESISTANCE	OHMS	±12.5%	R	2.4
VOLTAGE @ F_P	VOLTS	NOMINAL	V_P	30.0
CURRENT @ F_P	AMPERES	NOMINAL	I_P	12.5
FORCE SENSITIVITY	LB/AMP	±10%	K_F	4.8
	N/AMP	±10%		21.35
BACK EMF CONSTANT	V/FT/SEC	±10%	K_B	6.51
	V/M/SEC	±10%		21.36
INDUCTANCE ****	MILLI-HENRY	±30%	L	2.5

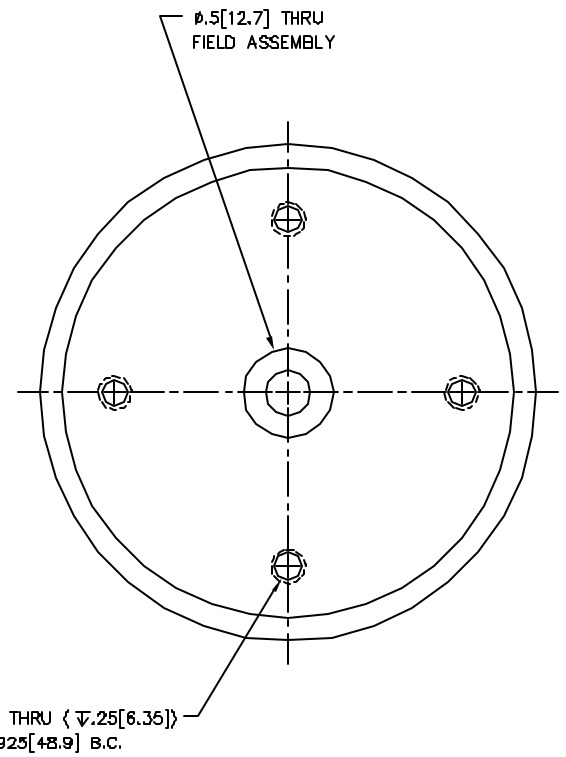
ACTUATOR PARAMETERS *	UNITS	SYMBOL	VALUE
PEAK FORCE **	LB	F_P	60
	N		266.89
CONTINUOUS STALL FORCE ***	LB	F_{CS}	19.4
	N		86.30
ACTUATOR CONSTANT	LB / √WATT	K_A	3.10
	N/ √WATT		13.79
ELECTRICAL TIME CONSTANT	MILLI-SEC	τ_E	1.04
MECHANICAL TIME CONSTANT	MILLI-SEC	τ_M	2.86
POWER I^2R @ F_P	WATTS	P_P	375
STROKE	± INCHES		0.500
	± MM		12.7
CLEARANCE ON EACH SIDE OF COIL	IN		0.02
	MM		1.51
THERMAL RESISTANCE OF COIL *****	°C/WATT	θ_{TH}	2.2
MAX. ALLOWABLE COIL TEMP.	°C	TEMP	155
WEIGHT OF COIL ASSEMBLY	LB	WT_C	1.20
	KG		0.54
WEIGHT OF FIELD ASSEMBLY	LB	WT_F	2.16
	KG		0.98

* AT MID-STROKE & 25°C AMBIENT TEMPERATURE
** 10 SECONDS AT 25°C AMBIENT & 155°C COIL TEMPERATURE
*** 25°C AMBIENT & 155°C COIL TEMPERATURE
**** MEASURED AT 1000 Hz
***** ACTUATOR MOUNTED ON TEST FIXTURE, COIL AT MIDSTROKE, IN STILL AIR.



3. FORCE VECTOR
+ ◄——► −





RoHS

5. MECHANICAL OVERTRAVEL OF COIL IN NEGATIVE (-) DIRECTION IS .047[1.19] MINIMUM.
4. INSULATION RESISTANCE IS 1,000 MEG OHMS AT 500V DC.
3. A POSITIVE (+) VOLTAGE APPLIED TO THE RED LEAD WILL PRODUCE A FORCE ON THE COIL ASSEMBLY IN THE POSITIVE (+) DIRECTION.
2. DIMENSION IN BRACKETS ARE MILLIMETERS [MM] AND ARE FOR REFERENCE ONLY.
1. INTERPRET DIMENSIONS & TOLERANCES PER ANSI Y14.5M-1982.

NOTES: UNLESS OTHERWISE SPECIFIED

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THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED
-ALL DIMENSIONS ARE IN UNITS
-BREAK SHARP EDGES .015 MAX.
-SURFACE ROUGHNESS ~125
-DIMENSIONS APPLY AFTER FINISH
-MAX FILLET R FILLET

TOLERANCES
DECIMALS ANGULAR
.X ± .X ANSITOL
.XX ± .XX
.XXX ± .XXX
DO NOT SCALE DRAWING

BEI *KIMCO MAGNETICS DIVISION*
VISTA, CA 92081

DRAWN: ELLIOTT	DATE: 07/27/94	TITLE: LINEAR ACTUATOR
MECH CHECK: S. HSIA	11/29/04	
APPD: A. MORCOS	07/27/94	SIZE: D · RSCN NO.: 55789 · DWG NO.: LA25-42-000A · REV: H
FILE NO.: P\TOP\LA		SCALE: 2/1 · SHEET 1 OF 1

LA25-42-000A | H