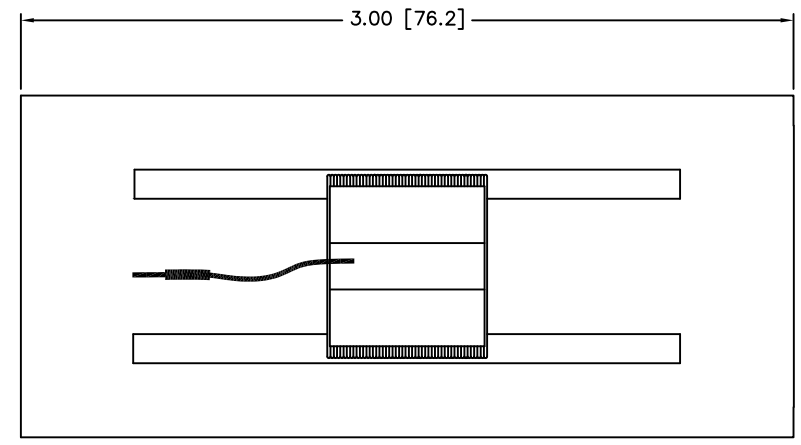
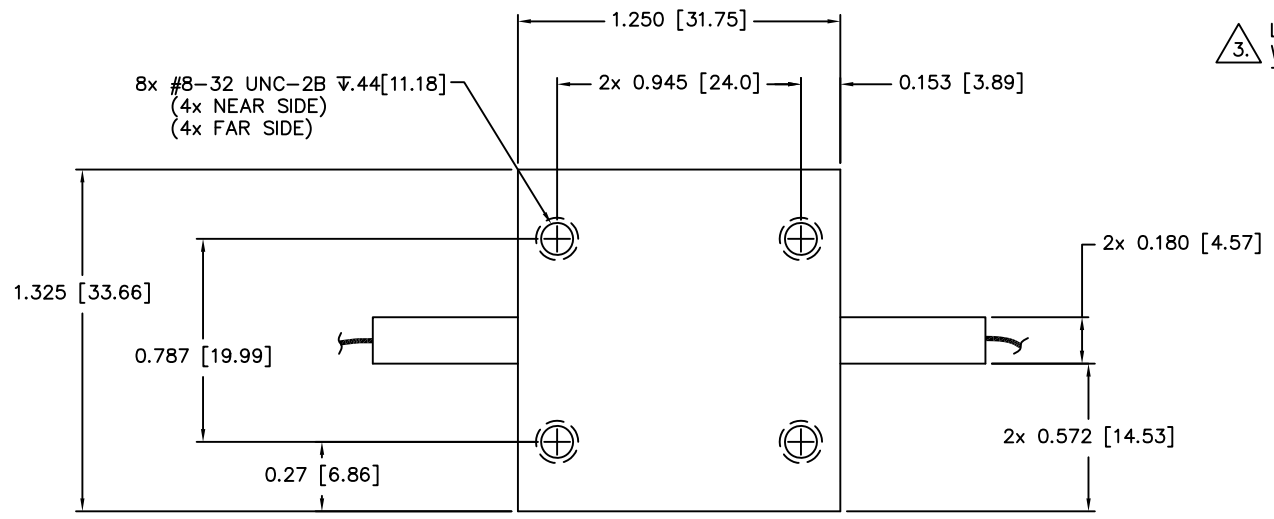
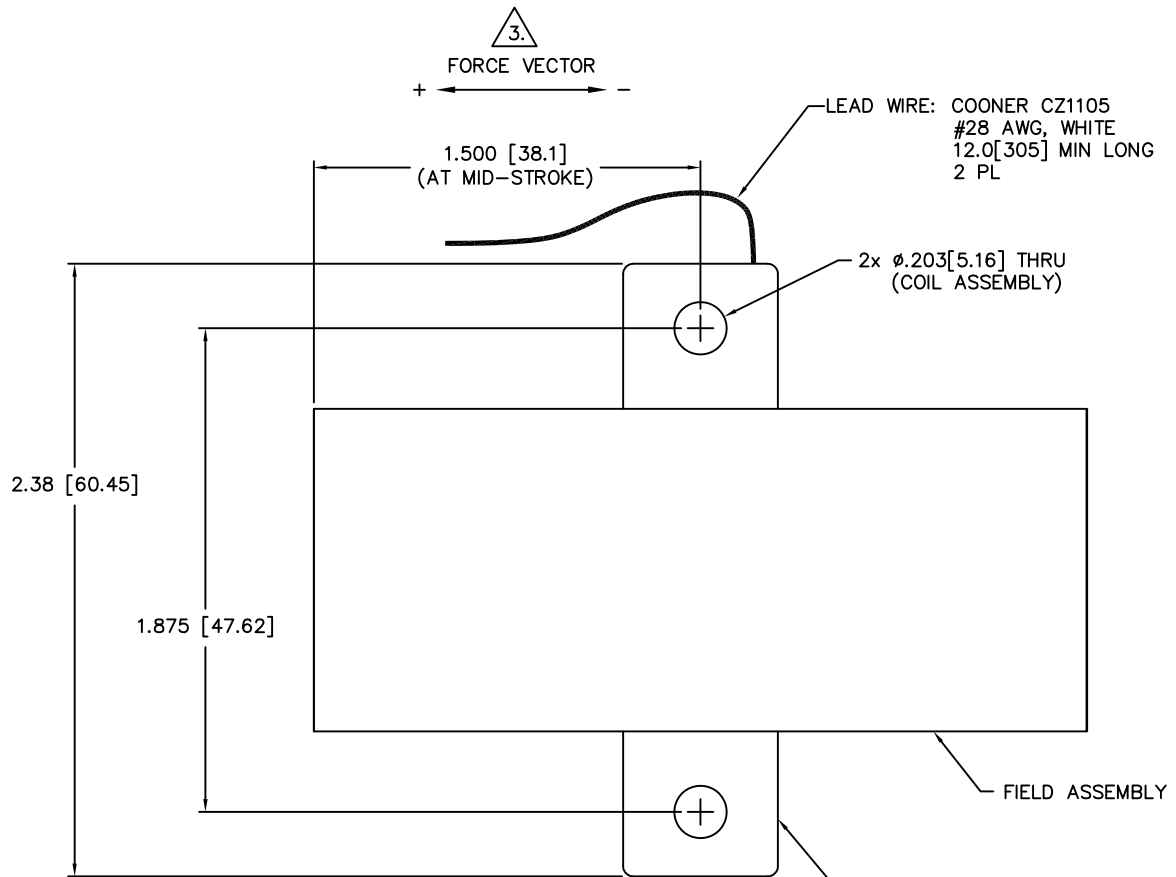


| WINDING CONSTANTS *      | UNITS       | TOL     | SYMBOL         | WDG A |
|--------------------------|-------------|---------|----------------|-------|
| DC RESISTANCE            | OHMS        | ±12.5%  | R              | 4.77  |
| VOLTAGE @ F <sub>p</sub> | VOLTS       | NOMINAL | V <sub>p</sub> | 17.2  |
| CURRENT @ F <sub>p</sub> | AMPERES     | NOMINAL | I <sub>p</sub> | 3.61  |
| FORCE SENSITIVITY        | LB/AMP      | ±10%    | K <sub>F</sub> | 0.83  |
|                          | N/AMP       | ±10%    |                | 3.69  |
| BACK EMF CONSTANT        | V/FT/SEC    | ±10%    | K <sub>B</sub> | 1.12  |
|                          | V/M/SEC     | ±10%    |                | 3.69  |
| INDUCTANCE ****          | MILLI-HENRY | ±15%    | L              | 3.0   |

| ACTUATOR PARAMETERS *                   | UNITS     | SYMBOL          | VALUE |
|---|-----------|-----------------|-------|
| PEAK FORCE **                           | LB        | F <sub>p</sub>  | 3.0   |
|   | N         |                 | 13.3  |
| CONTINUOUS STALL FORCE ***              | LB        | F <sub>cs</sub> | 1.24  |
|   | N         |                 | 5.53  |
| ACTUATOR CONSTANT                       | LB/√WATT  | K <sub>A</sub>  | 0.38  |
|   | N/√WATT   |                 | 1.69  |
| ELECTRICAL TIME CONSTANT                | MILLI-SEC | τ <sub>E</sub>  | 0.629 |
| MECHANICAL TIME CONSTANT                | MILLI-SEC | τ <sub>M</sub>  | 7.0   |
| POWER I <sup>2</sup> R @ F <sub>p</sub> | WATTS     | P <sub>p</sub>  | 73.6  |
| STROKE                                  | ± INCHES  |                 | 0.689 |
|   | ± MM      |                 | 17.5  |
| CLEARANCE ON EACH SIDE OF COIL          | IN        |                 | 0.020 |
|   | MM        |                 | 0.51  |
| THERMAL RESISTANCE OF COIL              | °C/WATT   | θ <sub>TH</sub> | 8.1   |
| MAX. ALLOWABLE COIL TEMP.               | °C        | TEMP            | 155   |
| WEIGHT OF COIL ASSEMBLY                 | LB        | WT <sub>C</sub> | 0.044 |
|   | G         |                 | 20    |
| WEIGHT OF FIELD ASSEMBLY                | LB        | WT <sub>F</sub> | 0.92  |
|   | G         |                 | 417.3 |

\* AT MID-STROKE & 25°C AMBIENT TEMPERATURE  
 \*\* 10 SECONDS AT 25°C AMBIENT & 155°C COIL TEMPERATURE  
 \*\*\* 25°C AMBIENT & 155°C WINDING TEMPERATURE  
 \*\*\*\* MEASURED AT 1000 Hz

| LTR | ECO NO. | DESCRIPTION                   | DRN | APP'D | DATE     |
|-----|---------|-------------------------------|-----|-------|----------|
| E   | 060120  | UPDATE TEST PARAMETERS        | SLM | MG    | 02/13/06 |
| F   | 070409  | UPDATE CONSTANTS & PARAMETERS | SLM | BD    | 07/10/07 |



3. A POSITIVE (+) VOLTAGE APPLIED TO THE MARKED 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 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

TOLERANCES:  
 DECIMALS ANGULAR  
 .X ± .03 ±0° 30'  
 .XX ± .01  
 .XXX ± .005  
 DO NOT SCALE DRAWING

**BEI KIMCO MAGNETICS DIVISION**  
 VISTA, CA 92081

|                                |                         |                          |
|--------------------------------|-------------------------|--------------------------|
| DRAWN<br>N. FRENCH             | DATE<br>01/16/97        | TITLE<br>LINEAR ACTUATOR |
| MECH CHECK<br>GUERRERO         | 02/13/06                |                          |
| APPD<br>A. MORCOS              | 01/16/97                |                          |
| FILE NO.<br>LI\TOPLEVEL\LA\... | SIZE<br>C               | FSCM NO.<br>55789        |
|                                | DWG NO.<br>LA13-30-000A | REV<br>F                 |
|                                | SCALE<br>2/1            | SHEET<br>1 OF 1          |



LA13-30-000A