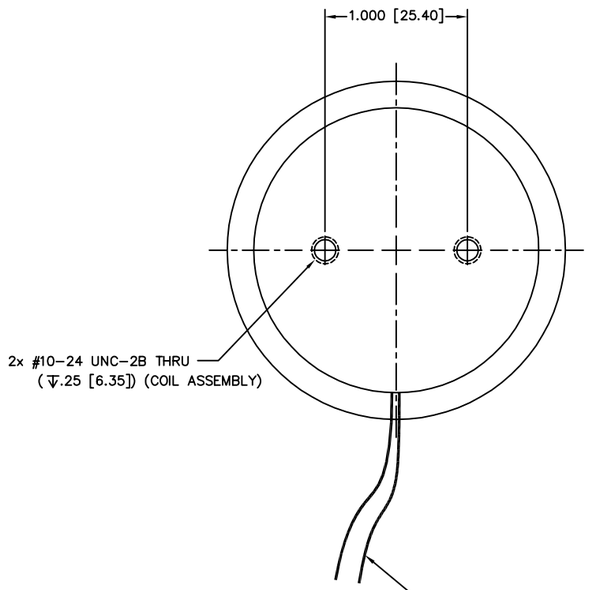
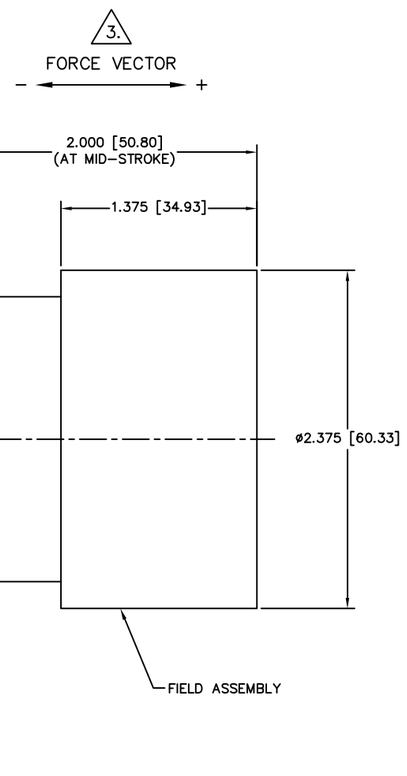
| LTR | ECN NO. | DESCRIPTION | DRN | APP'D | DATE |
|---|---|---|---|---|---|
| B | 030858 | UPDATE TO CURRENT STANDARD | RG | SH | 09/11/03 |
| C | 044910 | MATCHED REVISION TO AVANTE REV. | JJC | SH | 12/3/04 |

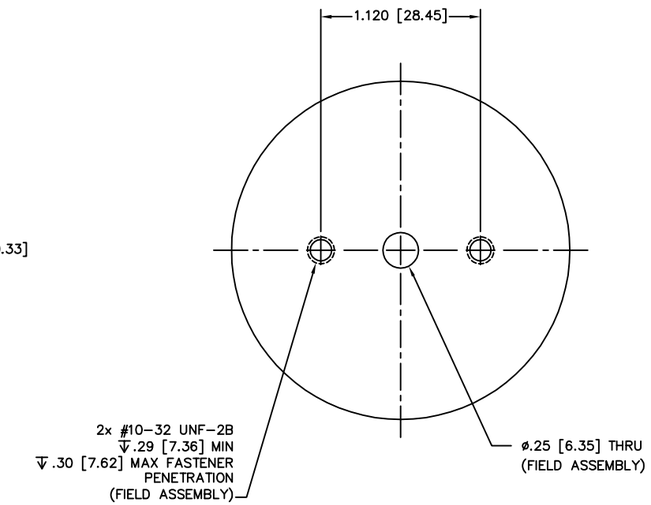
| WINDING CONSTANTS | UNITS | TOL | SYMBOL | WDG A |
|---|---|---|---|---|
| DC RESISTANCE | OHMS | ±12.5% | R | 2.2 |
| VOLTAGE @ $F_P$ | VOLTS | NOMINAL | $V_P$ | 22.0 |
| CURRENT @ $F_P$ | AMPERES | NOMINAL | $I_P$ | 10.0 |
| FORCE SENSITIVITY | LB/AMP | ±10% | $K_F$ | 2.5 |
| | N/AMP | ±10% | | 11.12 |
| BACK EMF CONSTANT | V/FT/SEC | ±10% | $K_B$ | 3.4 |
| | V/M/SEC | ±10% | | 11.15 |
| INDUCTANCE | MILLI-HENRY | ±30% | L | 2.05 |

| ACTUATOR PARAMETERS | UNITS | SYMBOL | VALUE |
|---|---|---|---|
| PEAK FORCE * | LB | $F_P$ | 25 |
| | N | | 111.21 |
| CONTINUOUS STALL FORCE ** | LB | $F_{CS}$ | 10.1 |
| | N | | 44.93 |
| ACTUATOR CONSTANT | LB/ $\sqrt{WATT}$ | $K_A$ | 1.69 |
| | N/ $\sqrt{WATT}$ | | 7.52 |
| ELECTRICAL TIME CONSTANT | MILLI-SEC | $\tau_E$ | 932 |
| MECHANICAL TIME CONSTANT | MILLI-SEC | $\tau_M$ | 2.9 |
| POWER $I^2R$ @ $F_P$ | WATTS | $P_P$ | 220 |
| STROKE | ± INCHES | | 0.325 |
| | ± MM | | 8.26 |
| CLEARANCE ON EACH SIDE OF COIL | IN | | 0.015 |
| | MM | | 0.38 |
| THERMAL RESISTANCE OF COIL | °C/WATT | $\theta_{TH}$ | 2.4 |
| MAX. ALLOWABLE COIL TEMP. | °C | TEMP | 155 |
| WEIGHT OF COIL ASSEMBLY | LB | $WT_C$ | 0.365 |
| | KG | | 0.17 |
| WEIGHT OF FIELD ASSEMBLY | LB | $WT_F$ | 1.25 |
| | KG | | 0.57 |

* 10 SECONDS AT 25°C AMBIENT, 155°C COIL TEMP
** 25°C AMBIENT & 155°C WINDING TEMPERATURE




4. MECHANICAL OVERTRAVEL IN THE POSITIVE (+) DIRECTION IS .015 [.38] MIN.

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 INCHES
-BREAK SHARP EDGES .015 MAX.
-SURFACE ROUGHNESS √125
-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**
**SAN MARCOS, CA 92069**

| | | |
|---|---|---|
| DRAWN | N. FRENCH | DATE 4/6/98 |
| MECH CHECK | PHIL STAHL | 12/3/04 |
| APPD | A. MARCOS | 4/6/98 |
| FILE NO. | L\TOP\LA | |

TITLE: LINEAR ACTUATOR

| SIZE | FSCM NO. | DWG NO. | REV |
|---|---|---|---|
| D | 55789 | LA24-20-000A | C |

SCALE 2/1 SHEET 1 OF 1

LA24-20-000A C