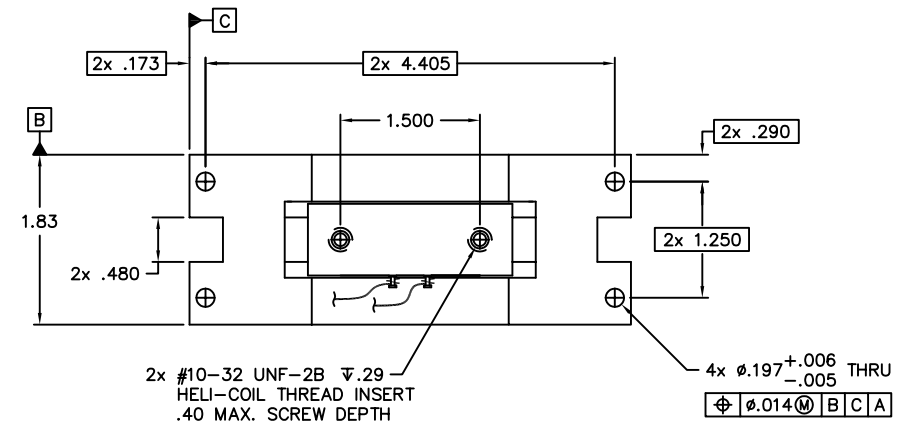
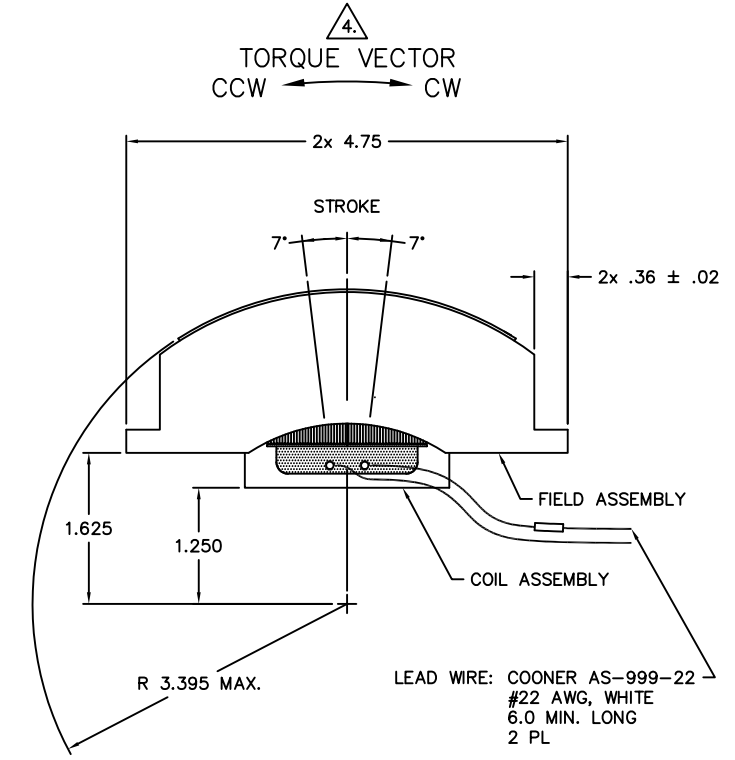
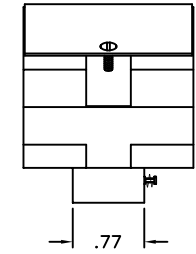
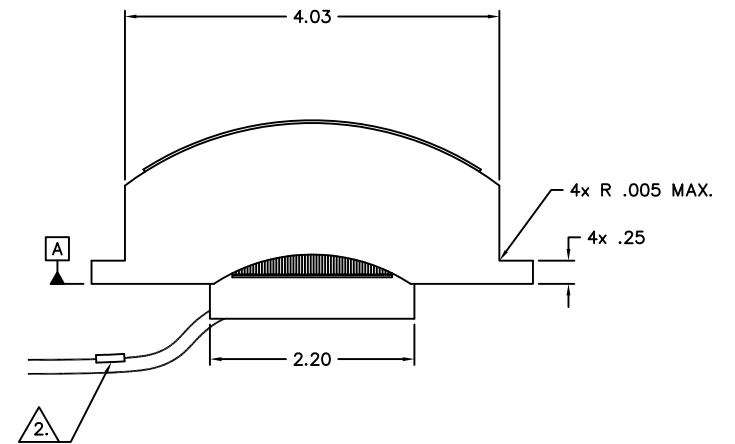
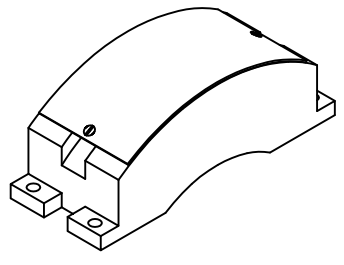


LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
-		INITIAL RELEASE	RLE	MG	5/26/00
A	050110	MATCH REVISION TO BOM IN AVANTE	JJC	M.G	2/18/05

WINDING CONSTANTS *	UNITS	TOL	SYM	WDG A
DC RESISTANCE	OHMS	±12.5%	R	5.5
VOLTAGE @ T <sub>p</sub>	VOLTS	NOMINAL	V <sub>c</sub>	44.0
CURRENT @ T <sub>p</sub>	AMPERES	NOMINAL	I <sub>c</sub>	8.0
TORQUE SENSITIVITY (AT MID STROKE)	OZ-IN/AMP	±10%	K <sub>T</sub>	125
BACK EMF CONSTANT	VOLTS/RAD/SEC	±10%	K <sub>B</sub>	0.88
INDUCTANCE ****	MILLI-HENRY	±30%	L	15.0

ROTARY ACTUATOR PARAMETERS *	UNITS	SYM	VALUE
PEAK TORQUE **	OZ-IN	T <sub>p</sub>	1000
CONTINUOUS STALL TORQUE ***	OZ-IN	T <sub>cs</sub>	250
ACTUATOR CONSTANT	OZ-IN/√WATT	K <sub>A</sub>	53.3
ELECTRICAL TIME CONSTANT	MICRO-SEC	t <sub>E</sub>	2700
MECHANICAL TIME CONSTANT	MILLI-SEC	t <sub>M</sub>	3.5
POWER I <sup>2</sup> R @ T <sub>p</sub>	WATTS	P <sub>p</sub>	352
STROKE (ANGULAR)	± DEGREES		7.0
COIL CLEARANCE	IN		0.015
THERMAL RESISTANCE OF COIL	°C/WATT	θ <sub>th</sub>	4.0
MAX ALLOWABLE TEMP OF COIL	°C	TEMP	155
WEIGHT OF COIL ASSEMBLY	OZ	WT <sub>c</sub>	4.0
TOTAL WEIGHT	OZ	WT <sub>t</sub>	39.5

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



4. A POSITIVE (+) VOLTAGE APPLIED TO COIL ASSEMBLY LEAD MARKED WITH SHRINK TUBING WILL PRODUCE A TORQUE ON THE COIL ASSEMBLY IN THE CCW DIRECTION WHEN VIEWED FROM THE LEAD WIRE SIDE.

- ALL ABBREVIATIONS IAW MIL-STD-12.
- INTERPRET DRAWING IAW MIL-STD-100.
- 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 UNITS  
 -BREAK SHARP EDGES .015 MAX.  
 -SURFACE ROUGHNESS √63  
 -DIMENSIONS APPLY AFTER FINISH  
 -MAX FILLET R FILLET  
 TOLERANCES:  
 DECIMALS ANGULAR  
 .X ± .X ANGTDL  
 .XX ± .XX  
 .XXX ± .XXX  
 DO NOT SCALE DRAWING

DRAWN R. ELLIOTT		DATE 5/24/00		TITLE ROTARY ACTUATOR	
MECH CHECK PHIL STAHL		DATE 2/17/05		REV A	
APPD M. GODKIN		DATE 5/26/00		SCALE 1/1	
FILE NO. L:\TOP LEVEL\RA\...		SIZE D 55789		DWG NO. RA68-19-000A	
		FSCM NO.		SHEET 1 OF 1	

US PATENT NO.  
5,677,963

RA68-19-000A A