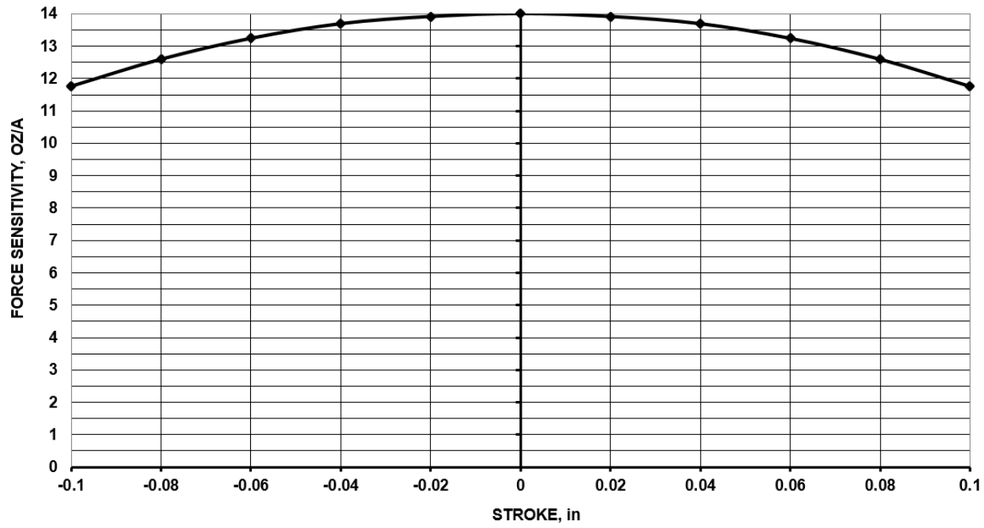
ZONE	REV.	REVISION DESCRIPTION	ECN NO.	DATE
	G			

WINDING CONSTANTS *	UNITS	TOL	SYMBOL	WDG A
DC RESISTANCE	OHMS	±12.5%	R	9.9
VOLTAGE @ F_P	VOLTS	NOMINAL	V_P	17.0
CURRENT @ F_P	AMPERES	NOMINAL	I_P	1.71
FORCE SENSITIVITY	oz/AMP	±10%	K_F	14.0
	N/AMP	±10%		3.89
BACK EMF CONSTANT	V/FT/SEC	±10%	K_B	1.19
	V/M/SEC	±10%		3.89
INDUCTANCE ****	MILLI-HENRY	±30%	L	1.18

ACTUATOR PARAMETERS *	UNITS	SYMBOL	VALUE
PEAK FORCE **	oz	F_P	24.0
	N		6.67
CONTINUOS STALL FORCE ***	oz	F_{CS}	10.5
	N		2.93
ACTUATOR CONSTANT	oz/ $\sqrt{\text{WATT}}$	K_A	4.45
	N/ $\sqrt{\text{WATT}}$		1.24
ELECTRICAL TIME CONSTANT	MICRO-SEC	τ_E	119.0
MECHANICAL TIME CONSTANT	MILLI-SEC	τ_M	4.58
THEORETICAL ACCELERATION	FT/SEC ^{2}	α_T	3126.1
	M/SEC ^{2}		952.9
MAX THEORETICAL FREQUENCY @ FULL STROKE & SINUSOIDAL/TRIANGULAR MOTION	Hz	f_{max}	97.5/108.3
POWER I^2R @ F_P	WATTS	P_P	29.1
STROKE	± INCHES		0.100
	± MM		2.54
CLEARANCE ON EACH SIDE OF COIL	IN		0.035
	MM		0.89
THERMAL RESISTANCE OF COIL	°C/WATT	Θ_{TH}	15.5
MAX. ALLOWABLE COIL TEMP.	°C	TEMP	155
WEIGHT OF COIL ASSEMBLY	oz	WT_C	0.247
	g		7.0
WEIGHT OF FIELD ASSEMBLY	oz	WT_F	1.16
	g		32.9

* 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



2. FORCE VECTOR

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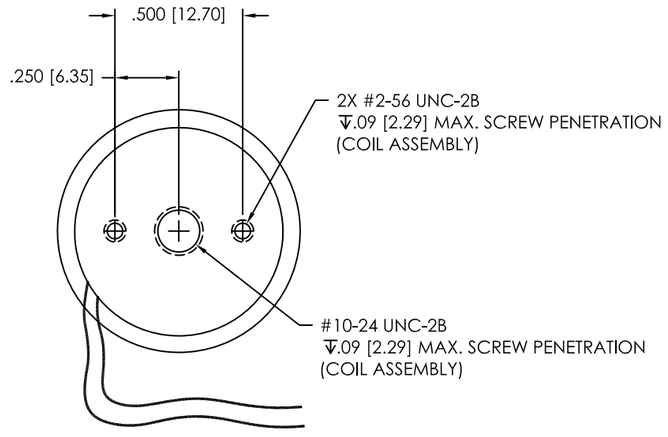

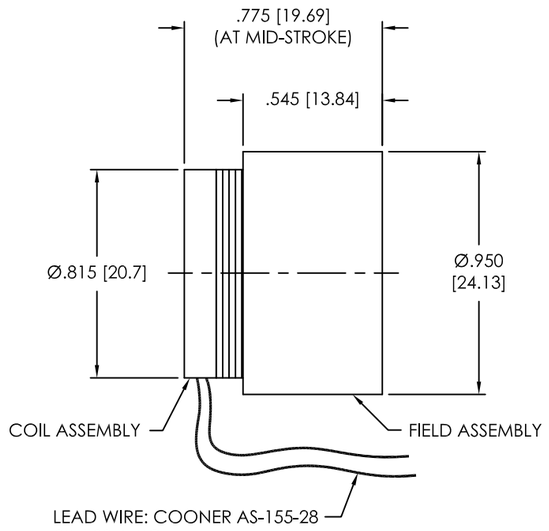

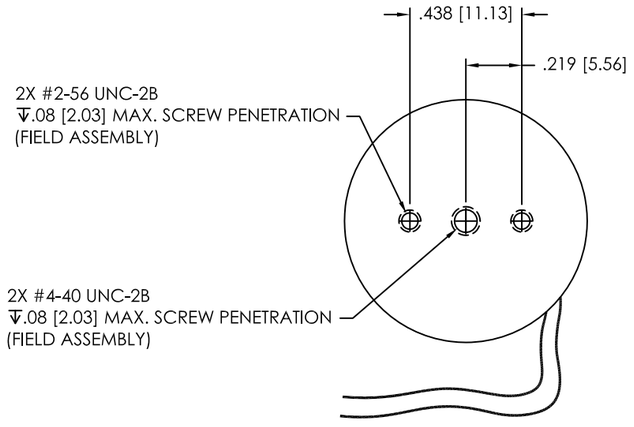

NOTES: UNLESS OTHERWISE SPECIFIED

1. INCH DRAWING, DIMENSIONS IN BRACKETS [ ] ARE IN MILLIMETERS AND ARE FOR REFERENCE ONLY.
2. A POSITIVE (+) VOLTAGE APPLIED TO THE RED LEAD WILL PRODUCE A FORCE ON THE COIL ASSEMBLY IN THE POSITIVE (+) DIRECTION.

RoHS

AUTOCAD

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.

DRAWN
DATE
ENGINEER
DATE
APPROVED
DATE
APPROVED
DATE

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INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5-2009. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES
DECIMALS: X.X ± 0.03; X.XX ± 0.01; X.XXX ± 0.005
ANGLES: X.X° ± 0°30'

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

Sensata Technologies
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P.O. BOX 2964
ATTLEBORO, MA 02703

TITLE: LINEAR ACTUATOR

SIZE	DWG NO.	REV.
C	LA10-08-000A	G

SCALE: NONE | SHEET: 1 OF 1