ZONE	REV.	REVISION DESCRIPTION	ECN NO.	DATE

Winding Constants *	Units	Tol	Symbol	Wdg A
DC Resistance	Ohms	± 12.5%	R	8.85
Voltage @ F_{PS}	Volts	Nominal	V_{PS}	27
Current @ F_{PS}	Amps	Nominal	I_{PS}	3.05
Current @ Fcs	Amps	Nominal	Ics	0.88
Force Sensitivity @ F_{PS}	N/Amp	± 10%	K_{FPS}	8.85
	lb/Amp	± 10%		1.99
Force Sensitivity @ No-Load	N/Amp	± 10%	K_{FNL}	8.85
	lb/Amp	± 10%		1.99
Back EMF Constant	V/(m/sec)	± 10%	K_B	8.85
	V/(ft/sec)	± 10%		2.7
Inductance ****	milli-Henry	± 15%	L	3.04

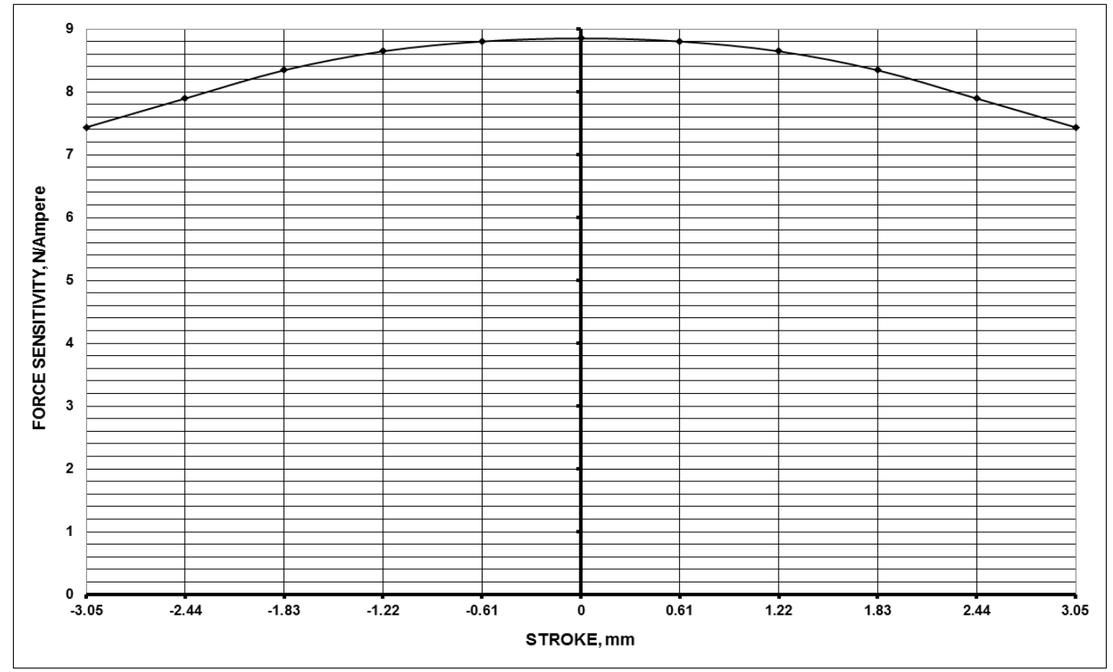
Linear Actuator Parameters *	Units	Symbol	Value
Peak Stall Force**	N	F_{PS}	27
	lb		6.07
Continuous Stall Force ***	N	F_{CS}	7.79
	lb		1.75
Actuator Constant	N/sqrt (Watt)	K_A	2.97
	lb/sqrt (Watt)		0.67
Electrical Time Constant	milli-sec	τ_E	0.344
Mechanical Time Constant	milli-sec	τ_M	4.72
Theoretical Acceleration	m/s^2	a_T	646.2
	ft/s^2		2,120
Max Theoretical Frequency @ Full Stroke and Sinusoidal / Triangular Motion	Hz	f_{max}	73.3/81.4
Power I^2R @ Fp_S	Watts	P_{PS}	83.3
Stroke	± mm	S_A	3.05
	± in		0.12
Clearance on Each Side of Coil	mm	D_C	0.381
	in		0.015
Moving Coil Assembly Mass	g	M_{CA}	41.78
	oz		1.46
Thermal Resistance of Coil in still air	ºC/Watt	Θ_{TH}	12.6
Maximum Allowable Coil Winding Temp	ºC	T_W	155
Field assembly Mass	g	M_T	139.7
	oz		4.93

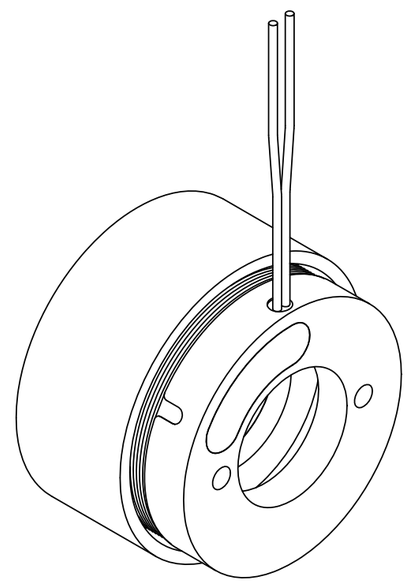
DISCLAIMERS

* AT MID-STROKE & 25 °C AMBIENT TEMPERATURE

** 10 SEC AT 25°C AMBIENT & 155°C WINDING TEMPERATURE

*** AT 25°C AMBIENT & 155°C WINDING TEMPERATURE





SCALE: 2:1

SOLIDWORKS

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		ANGLES
X	± 0.8	X.X° ± 0°30'
X.X	± 0.25	
X.XX	± 0.13	

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

RoHS

METRIC DRAWING

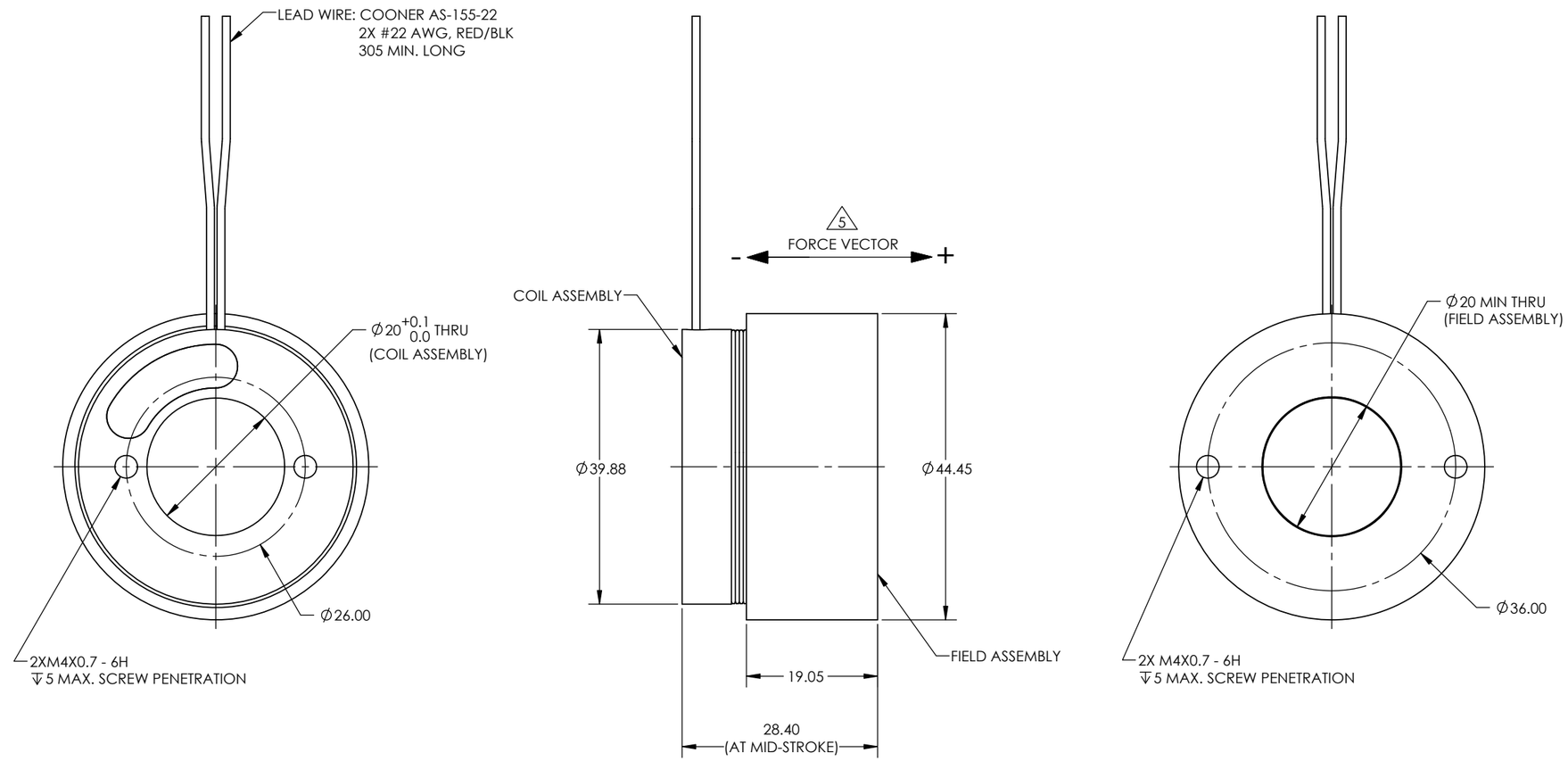
Sensata Technologies
BEI KIMCO
529 PLEASANT STREET
P.O. BOX 2964
ATTLEBORO, MA 02703

TITLE

LINEAR ACTUATOR

SIZE	DWG NO.	REV.
C	LA18-12-002A	

SCALE 2:1 SHEET 1 OF 2



NOTES: UNLESS OTHERWISE SPECIFIED

1. INTERPRET DIMENSIONING AND TOLERANCING IAW ASME Y14.5M-1994.
2. INTERPRET DRAWING IAW ASME Y14.100.
3. ALL ABBREVIATIONS IAW ASME Y14.38.
4. METRIC DRAWING, DIMENSIONS IN BRACKETS [ ] ARE IN INCHES AND ARE FOR REFERENCE ONLY.
5. A POSITIVE (+) VOLTAGE APPLIED TO THE RED LEAD WIRE WILL PRODUCE A FORCE ON THE COIL ASSEMBLY IN THE POSITIVE (+) DIRECTION.

METRIC DRAWING

RoHS

Sensata Technologies
BEI KIMCO

529 PLEASANT STREET
P.O. BOX 2964
ATTLEBORO, MA 02703

SIZE	DWG NO.	REV.
C	LA18-12-002A	
SCALE 2:1	SOLIDWORKS	SHEET 2 OF 2