ZONE	REV.	REVISION DESCRIPTION	ECN NO.	DATE
	X3			

Winding Constants *	Units	Tol	Symbol	Wdg A
DC Resistance	Ohms	± 12.5%	R	1.3
Voltage @ F_{PS}	Volts	Nominal	V_{PS}	14.04
Current @ F_{PS}	Amps	Nominal	I_{PS}	10.8
Current @ Fcs	Amps	Nominal	Ics	4.2
Force Sensitivity @ F_{PS}	N/Amp	± 10%	K_{FPS}	7.74
	lb/Amp	± 10%		1.74
Force Sensitivity @ No-Load	N/Amp	± 10%	K_{FNL}	7.74
	lb/Amp	± 10%		1.74
Back EMF Constant	V/(m/sec)	± 10%	K_B	7.74
	V/(ft/sec)	± 10%		2.36
Inductance ****	milli-Henry	± 15%	L	0.24

Linear Actuator Parameters *	Units	Symbol	Value
Peak Stall Force**	N	F_{PS}	82.48
	lb		18.54
Continuos Stall Force ***	N	F_{CS}	31.36
	lb		7.05
Friction Force*****	N	F_F	1.11
	lb		0.25
Actuator Constant	N/√(Watt)	K_A	6.79
	lb/√(Watt)		1.53
Electrical Time Constant	milli-sec	τ_E	0.185
Mechanical Time Constant	milli-sec	τ_M	5.36
Theoretical Acceleration	m/s^2	a_T	333.9
	ft/s^2		1,096
Max Theoretical Frequency @ Full Stroke and Sinusoidal / Triangular Motion	Hz	f_{max}	36.5/40.6
Power I^2R @ Fp_S	Watts	P_{PS}	151.6
Stroke	± mm	S_A	6.35
	± in		0.25
Moving Magnet Assembly Mass	kg	M_{CA}	0.247
	lb		0.545
Thermal Resistance of Coil	°C/Watt	Θ_{TH}	3.8
Maximum Allowable Coil Winding Temp	°C	T_W	155
Total Mass	kg	M_T	0.534
	lb		1.18

DISCLAIMERS

* AT MID-STROKE & 25 °C AMBIENT TEMPERATURE

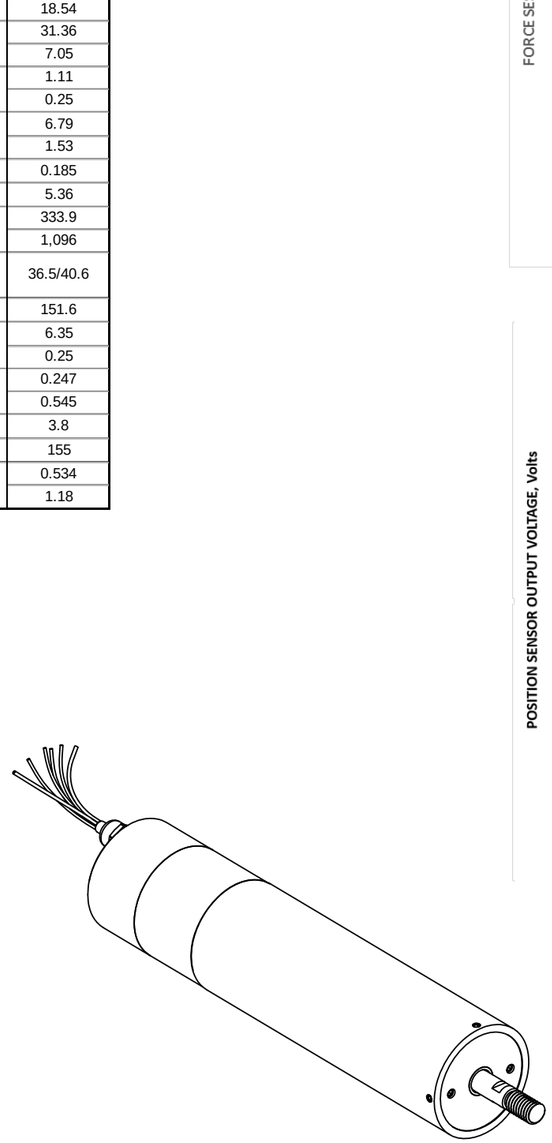
** 10 SEC AT 25°C AMBIENT & 155°C WINDING TEMPERATURE

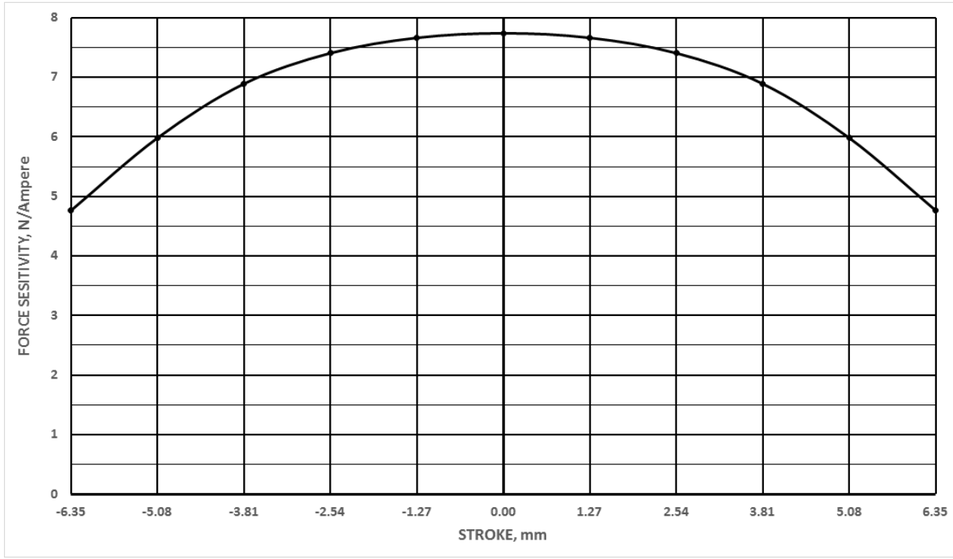
*** AT 25°C AMBIENT & 155°C WINDING TEMPERATURE

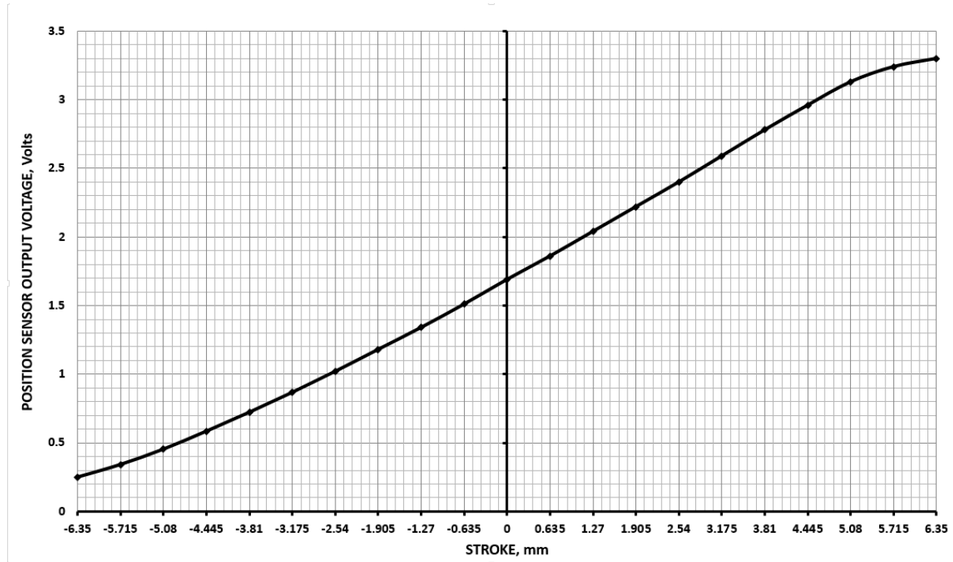
**** MEASURED AT 1000 Hz

***** FOR EACH LOAD, $F_L = K_F * I_L - F_F$

POSITION SENSOR		
LEAD WIRE	INDENTIFICATION	DESCRIPTION
YELLOW	V_{CC}	INPUT VOLATAGE (5 VOLTS)
GRAY	GND	GROUND
BROWN	V_O	OUTPUT VOLTAGE
WHITE	V_{PP}	VOLTAGE FOR PROGRAMMING ONLY, NOT TO BE USED BY CUSTOMER







RoHS

SOLIDWORKS

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.

DRAWN

DATE

ENGINEER

DATE

APPROVED M. GODKIN

DATE 05/31/19

APPROVED

DATE

INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5-2009. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.

TOLERANCES

DECIMALS	ANGLES
X.X ± 0.03	X.X° ± 0°30'
X.XX ± 0.01	
X.XXX ± 0.005	

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

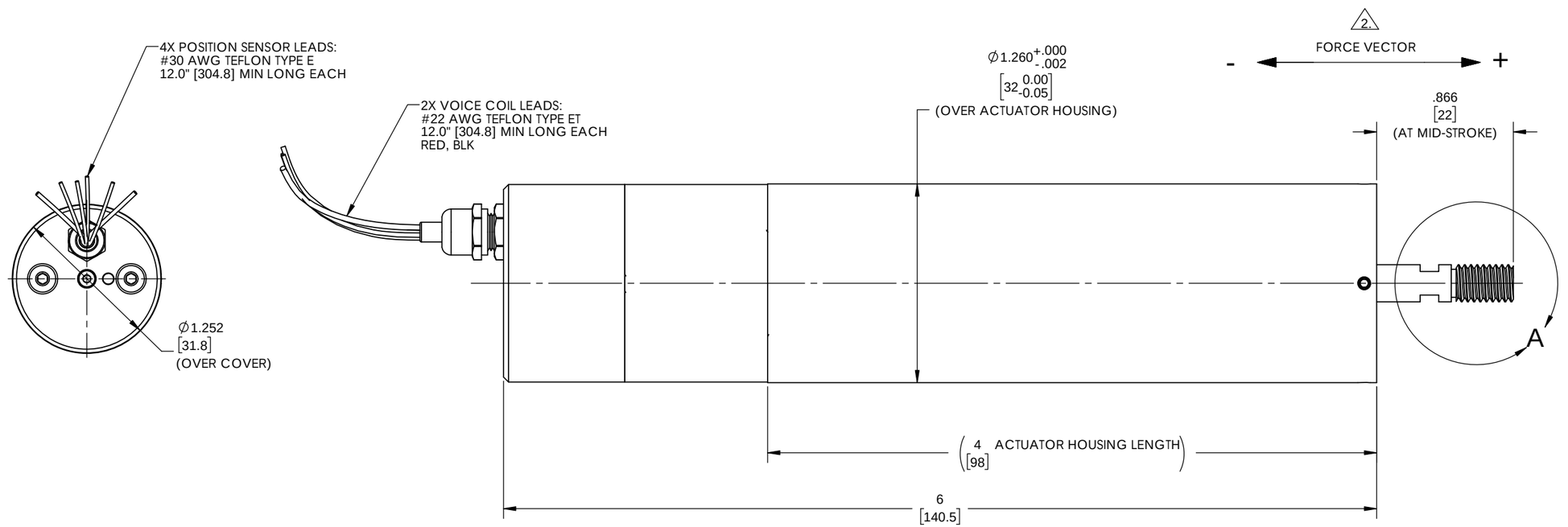
Sensata Technologies
529 PLEASANT STREET
P.O. BOX 2964
ATTLEBORO, MA 02703

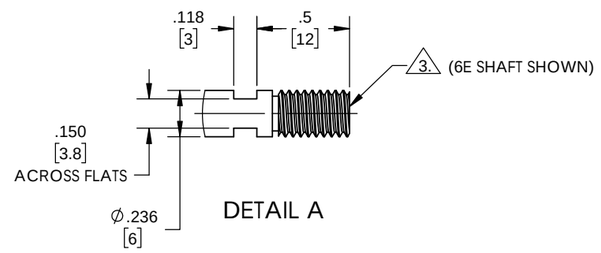
TITLE

LINEAR ACTUATOR SYSTEM

SIZE	DWG NO.	REV.
C	LAS13-56-000A-P01-DASH	X3

SCALE 1:1 SHEET 1 OF 2





(DASH)	SHAFT END CONFIGURATION
6I	6mm Diameter,Internal Thread M4x0.7 X 10 mm Deep
6E	6mm Diameter,External Thread M6x1.0 X 10mm Long

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 (SHAFT) IN THE POSITIVE (+) DIRECTION.
3. -6E SHAFT CONFIGURATION SHOWN.

RoHS

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

SIZE	DWG NO.	REV.
C	LAS13-56-000A-P01-DASH	X3
SCALE 2:1	SOLIDWORKS	SHEET 2 OF 2