

PROPRIETARY AND CONFIDENTIAL

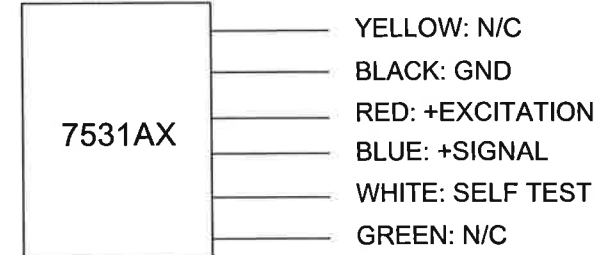
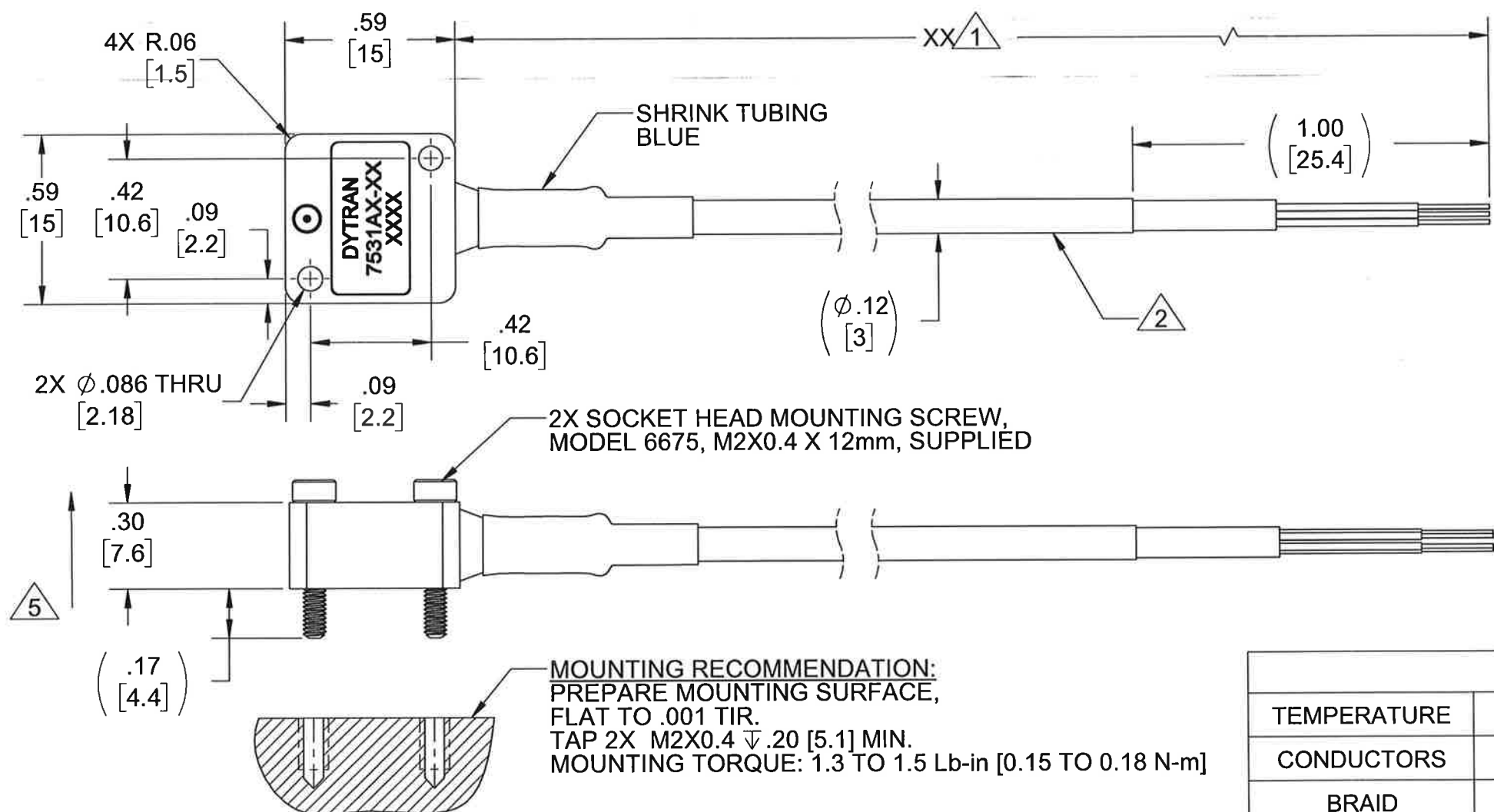
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REVISIONS

REV.	ECN	DESCRIPTION	BY/DATE	CHK	APPR
B	12745	REVISED MARKING TO DENOTE CABLE LENGTH	EM 06/08/16	AS	W

MODEL	INPUT RANGE	SENSITIVITY ( $\pm 10\%$ )
7531A1-XX	$\pm 2g$	420 mV/g
7531A2-XX	$\pm 3g$	300 mV/g
7531A3-XX	$\pm 5g$	174 mV/g
7531A4-XX	$\pm 16g$	57 mV/g
7531A5-XX	$\pm 200g$	6.5 mV/g

CABLE LENGTH TOLERANCE			
ENGLISH		[METRIC]	
$\leq 1\text{ FT}$	+1/ -0 IN	$\leq 0.3\text{ m}$	+25mm -0mm
> 1 FT - 5 FT	+2/ -0 IN	0.3 m-1.5m	+50mm -0mm
> 5 FT - 10 FT	+4/ -0 IN	>1.5m-3m	+100mm -0mm
>10 FT - 25FT	+6 / -0 IN	>3m-7.5m	+150mm -0mm
>25 FT	+5% / -0%	>7.5m	+5%/-0%



WIRING DIAGRAM

CABLE SPECIFICATIONS	
TEMPERATURE	-55°C TO 120°C
CONDUCTORS	AWG 30 - 7/38 TIN PLATED COPPER, SANTOPRENE .007 WALL
BRAID	40 AWG TIN PLATED COPPER BRAID, 90% COVERAGE
JACKET	BLACK, SANTOPRENE, .013 NOM. WALL, Ø .118 MAX

6. OPERATING TEMPERATURE: -40°F TO +185°F. (-40°C TO +85°C)

- 5 ARROW INDICATES DIRECTION OF ACCELERATION FOR POSITIVE OUTPUT
- 4. WEIGHT: 6.0 GRAMS, MAX. (LESS CABLE)
- 3. MATERIAL: ALUMINUM ALLOY, ANODIZED, COLOR: BLACK

2 CABLE, 6-CONDUCTORS, 30AWG, SHIELDED, SANTOPRENE JACKET, COLOR: BLACK. SEE TABLE FOR SPECIFICATIONS.

1 MODEL NUMBER: 7531AX-XX. "XX" DENOTES CABLE LENGTH IN FEET (MAXIMUM CABLE LENGTH 50 FT.). SEE TABLE FOR CABLE LENGTH TOLERANCE.

NOTES: UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED:  
 INTERPRET DIM & TOL PER ASME Y14.5M - 1994.  
 REMOVE BURRS.  
 COUNTERSINK INTERNAL THDS 90° TO MAJOR DIA.  
 CHAM EXT THDS 45° TO MINOR DIA.  
 THD LENGTHS AND DEPTHS ARE FOR MIN FULL THDS.  
 DIMENSIONS APPLY AFTER FINISHING.

ALL MACHINED SURFACES 63  
 TOTAL RUNOUT WITHIN .005.  
 BREAK SHARP EDGES .005 TO .010.  
 MACHINED FILLET RADII .005 TO .015.  
 WELDING SYMBOLS PER AWS A2.4.  
 ABBREVIATIONS PER MIL-STD-12.

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES.  
 DIMENSIONS IN BRACKETS [ ] ARE IN MILLIMETERS TOLERANCES ARE:

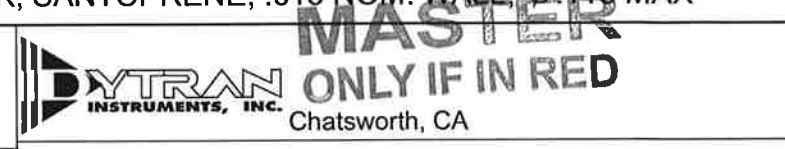
DECIMALS	METRIC	ANGLES
.XX ±.03	X ± 0.8	±1°
.XXX ±.010	.XX ±0.25	

APPROVALS

ORIG	LN	DATE
CHK	EP	07/03/13
APP	LN	02/19/16
APP	LN	02/18/16

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION USA



TITLE: OUTLINE/INSTALLATION DWG, 7531AX SERIES

SIZE B	CAGE CODE 2W033	DWG NO 127-7531A1-XX	REV B
SCALE: 2:1		SHEET 1 OF 1	

<b>MODEL NUMBER</b> 7531A4	<b>PERFORMANCE SPECIFICATIONS</b>	<b>DOC NO.</b> PS7531A4
	<b>SINGLE AXIS, DC ACCELEROMETER</b>	REV B ECN 12745, 06/08/16



- **LOW COST**
- **WIDE SUPPLY VOLTAGE RANGE**
- **LOW CURRENT CONSUMPTION**

**PHYSICAL**

Weight, Max. (less cable)  
Mounting  
Cable  
Housing

Type  
Material  
Isolation

ENGLISH		SI	
Weight, Max. (less cable)	0.21 oz	6.0 grams	
Mounting	2X M2 Screws	2X M2 Screws	
Cable	6-conductor	6-conductor	
	Santoprene	Santoprene	
Housing	Aluminum, Anodized	Aluminum, Anodized	
	Case Isolated	Case Isolated	

**PERFORMANCE**

Sensitivity, +/-10% [1]  
Acceleration Range  
Frequency Range, -3dB  
Resonance Frequency  
Linearity [2]  
Transverse Sensitivity Max  
Spectral Noise  
Sensitivity Change Due to Temperature

Sensitivity, +/-10% [1]	57 mV/g	5.8 mV/m/s <sup>2</sup>
Acceleration Range	±16 Gpeak	±157 m/s <sup>2</sup> peak
Frequency Range, -3dB	0 to 1600 Hz	0 to 1600 Hz
Resonance Frequency	>5.5 kHz	>5.5 kHz
Linearity [2]	±0.3 %F.S.	±0.3 %F.S.
Transverse Sensitivity Max	5 %	5 %
Spectral Noise	300 µGrms/√Hz	2943 µm/s <sup>2</sup> rms/√Hz
Sensitivity Change Due to Temperature	±0.006 %/°F	±0.01 %/°C

**ELECTRICAL**

Supply Current  
Supply Voltage Range  
Output Impedance, Typ.  
Output Bias Voltage  
Output Range  
Self-Test Output [3]  
Turn-On Time

Supply Current	350 µA	350 µA
Supply Voltage Range	4 to 28 VDC	4 to 28 VDC
Output Impedance, Typ.	100 Ω	100 Ω
Output Bias Voltage	1.35 to 1.65 VDC	1.35 to 1.65 VDC
Output Range	±1.0 VDC	±1.0 VDC
Self-Test Output [3]	-29 to +114 mV	-29 to +114 mV
Turn-On Time	1 ms	1 ms

**ENVIRONMENTAL**

Shock Max  
Vibration Max  
Operating Temperature  
Seal

Shock Max	10,000 g pk	98100 m/s <sup>2</sup>
Vibration Max	5000 g pk	49050 m/s <sup>2</sup>
Operating Temperature	-40 to +185 °F	-40 to +85 °C
Seal	Epoxy	Epoxy

Model	Sensitivity (mV/g)	Range (Gpeak)	Noise(µGrms/sqr(Hz))	Oper. Temp(°F)
7531A1	420	±2	250	-40 to 185
7531A2	300	±3	175	-40 to 185
7531A3	174	±5	250	-40 to 185
7531A5	6.5	±200	2700	-40 to 185

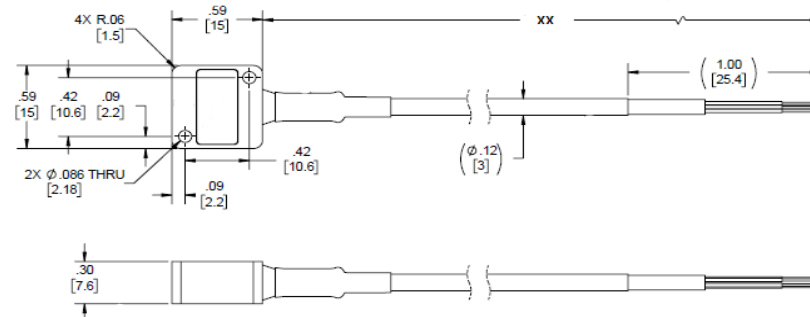
Please, refer to the performance specifications of the products in this family for detailed description

**Supplied Accessories:**

- 1) Accredited calibration certificate (ISO 17025)
- 2) Mounting Screw, Model 6675, M2x0.4 x 12mm, qty. 2

**Notes:**

- [1] Measured at 100 Hz, 5 Grms per ISA RP 37.2
- [2] Linearity is % of specified full scale (or any less full-scale range), zero-based best fit straight line method.
- [3] Refer to the Operating Guide for instructions on how to use Self-Test feature



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-7531A1-XX for more information.



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