

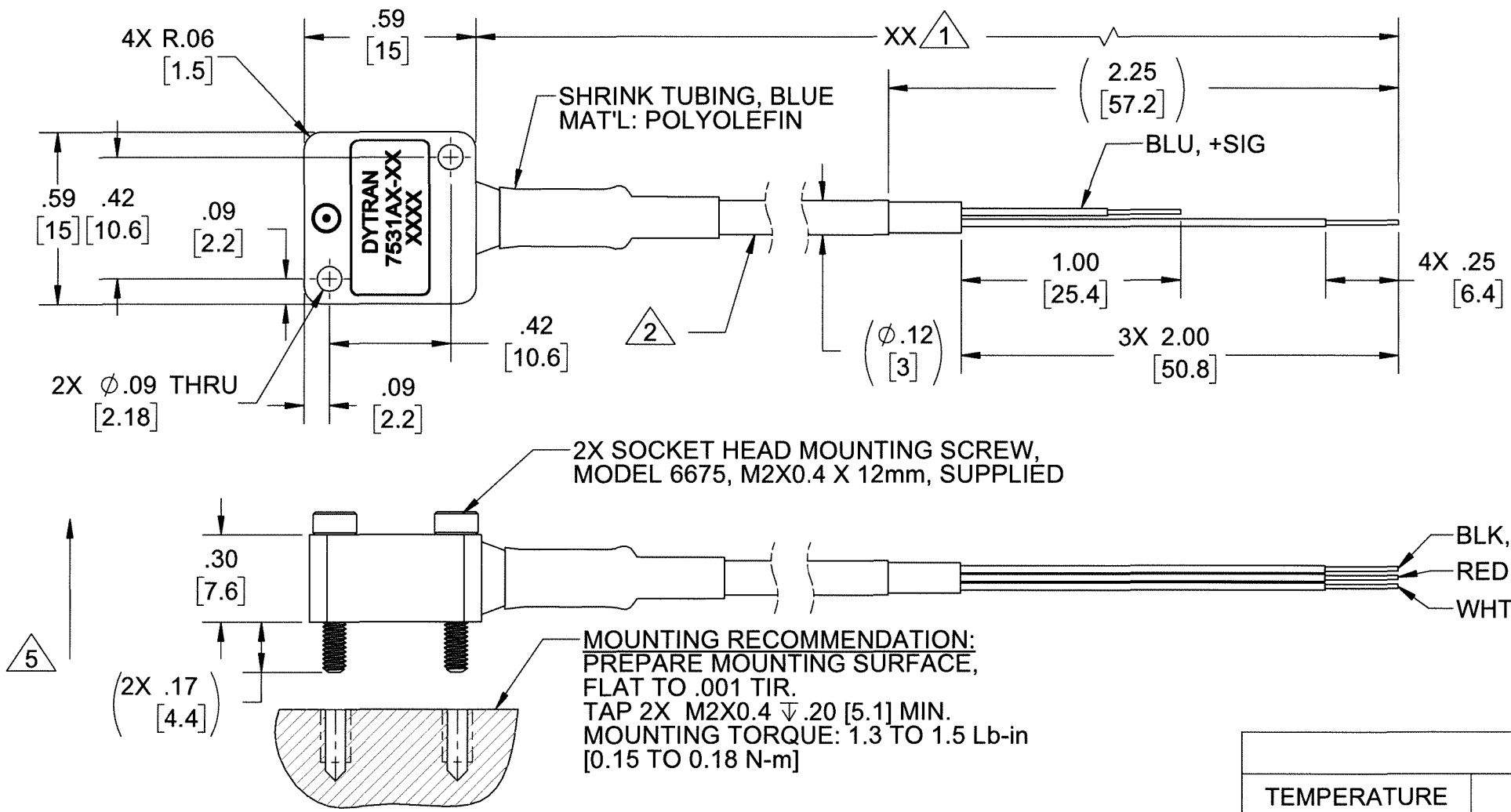
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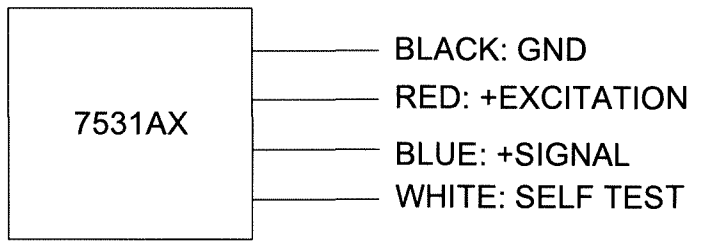
MODEL	INPUT RANGE	SENSITIVITY ($\pm 10\%$)
7531A1-XX	$\pm 2g$	420 mV/g
7531A2-XX	$\pm 3g$	300 mV/g
7531A3-XX	$\pm 5g$	174 mV/g
7531A4-XX	$\pm 16g$	57 mV/g
7531A5-XX	$\pm 200g$	6.5 mV/g

REVISIONS

REV.	ECN	DESCRIPTION	BY/DATE	CHK	APPR
C	13226	ADDED SENSING LOCATIONS, NOTE 7	RA, 01/17/17	MH	LN
D	13702	ADDED WIRING DIAGRAM	RA, 08/25/17	MH	LN
E	15400	REVISED CABLE ASSY	KG 11/11/19	AM	LN



CABLE LENGTH TOLERANCE			
ENGLISH		[METRIC]	
≤ 1 FT	+1/ -0 IN	≤ 0.3 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%



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, ϕ .118 MAX

- 7 SYMBOL DENOTES REFERENCE LOCATION OF SENSING ELEMENT (UNIT NOT MARKED).
 - 6. OPERATING TEMPERATURE: -40°F TO +185°F. (-40°C TO +85°C)
 - 5 ARROW INDICATES DIRECTION OF ACCELERATION FOR POSITIVE OUTPUT
 - 4. WEGHT: 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.

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

DECIMALS .XX \pm .03	METRIC .X \pm 0.8	ANGLES $\pm 1^\circ$
.XXX \pm .010	.XX \pm 0.25	

APPROVALS: ORIG LN 07/03/13, CHK EP 02/19/16, APP LN 02/18/16

DATE: 07/03/13, 02/19/16, 02/18/16

THIRD ANGLE PROJECTION USA

DO NOT SCALE DRAWING

DYTRAN INSTRUMENTS, INC. Chatsworth, CA

MASTER ONLY IF IN RED

TITLE: OUTLINE/INSTALLATION DWG, 7531AX SERIES

SIZE B, CAGE CODE 2W033, DWG NO 127-7531A1-XX, REV E

SCALE: 2:1, SHEET 1 OF 2

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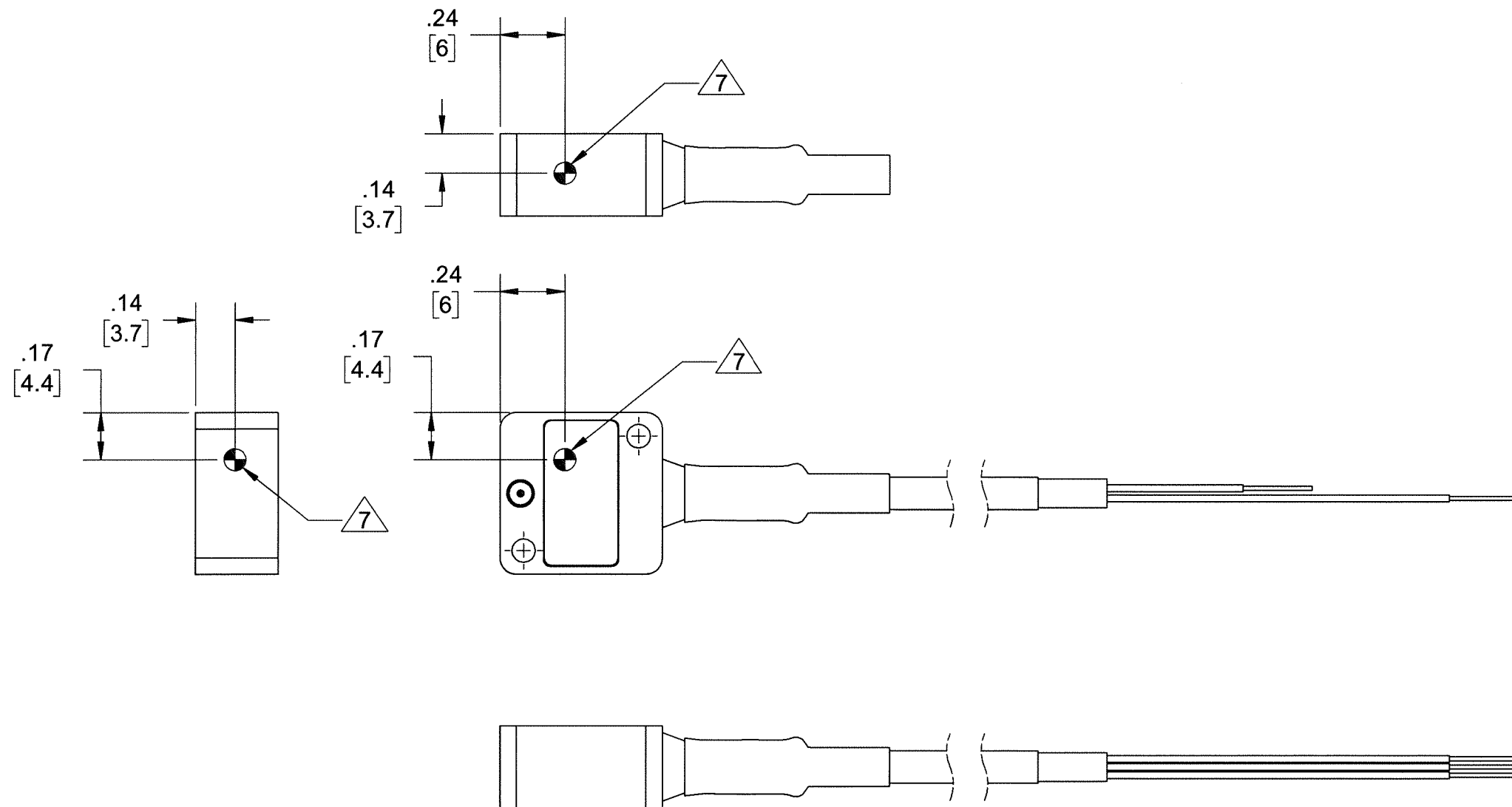
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SENSOR LOCATIONS 7

		MASTER ONLY IF IN RED	
TITLE: OUTLINE/INSTALLATION DWG, 7531AX SERIES			
SIZE B	CAGE CODE 2W033	DWG NO 127-7531A1-XX	REV E
SCALE: 2:1	PART NO: 7531AX	SHEET 2 OF 2	

MODEL NUMBER 7531A1	PERFORMANCE SPECIFICATIONS			DOC NO. PS7531A1
	SINGLE AXIS, DC ACCELEROMETER			REV E ECN 15839, 07/28/20



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

PHYSICAL

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

PERFORMANCE

Sensitivity, +/-10% [1]	420	mV/g	42.8	mV/m/s ²
Acceleration Range	±2	g pk	±19.6	m/s ² pk
Frequency Range, -3dB	0 to 1600	Hz	0 to 1600	Hz
Resonance Frequency	>5.5	kHz	>5.5	kHz
Linearity [2]	±0.21	%F.S.	±0.21	%F.S.
Transverse Sensitivity Max	5	%	5	%
Spectral Noise	250	µg RMS/√Hz	2453	µm/s ² RMS/√Hz
Sensitivity Change Due to Temperature	±0.006	%/°F	±0.01	%/°C

ELECTRICAL

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	1.3 to 1.7	VDC	1.3 to 1.7	VDC
Output Range	±0.95	VDC	±0.95	VDC
Self-Test Output [3]	-210 to +850	mV	-210 to +850	mV
Turn-On Time	1	ms	1	ms
Electrical Isolation (Case)	> 100	MΩ	> 100	MΩ

ENVIRONMENTAL

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

Model	Sensitivity (mV/g)	Range (g pk)	Noise(µg RMS/sqr(Hz))	Oper. Temp(°F)
7531A2	300	±3	175	-40 to 185
7531A3	174	±5	250	-40 to 185
7531A4	57	±16	300	-40 to 185
7531A5	6.5	±200	2700	-40 to 185

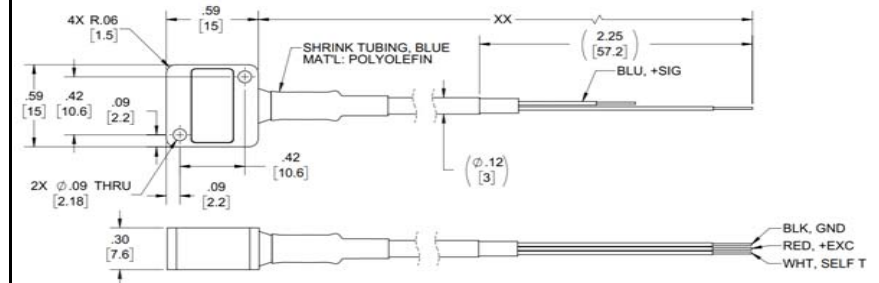
Please, refer to the performance specifications of the products in this family for detailed description

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, 1 g RMS 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
- [4] In the interest of constant product improvement, we reserve the rights to change specifications without notice. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary overtime. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.



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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