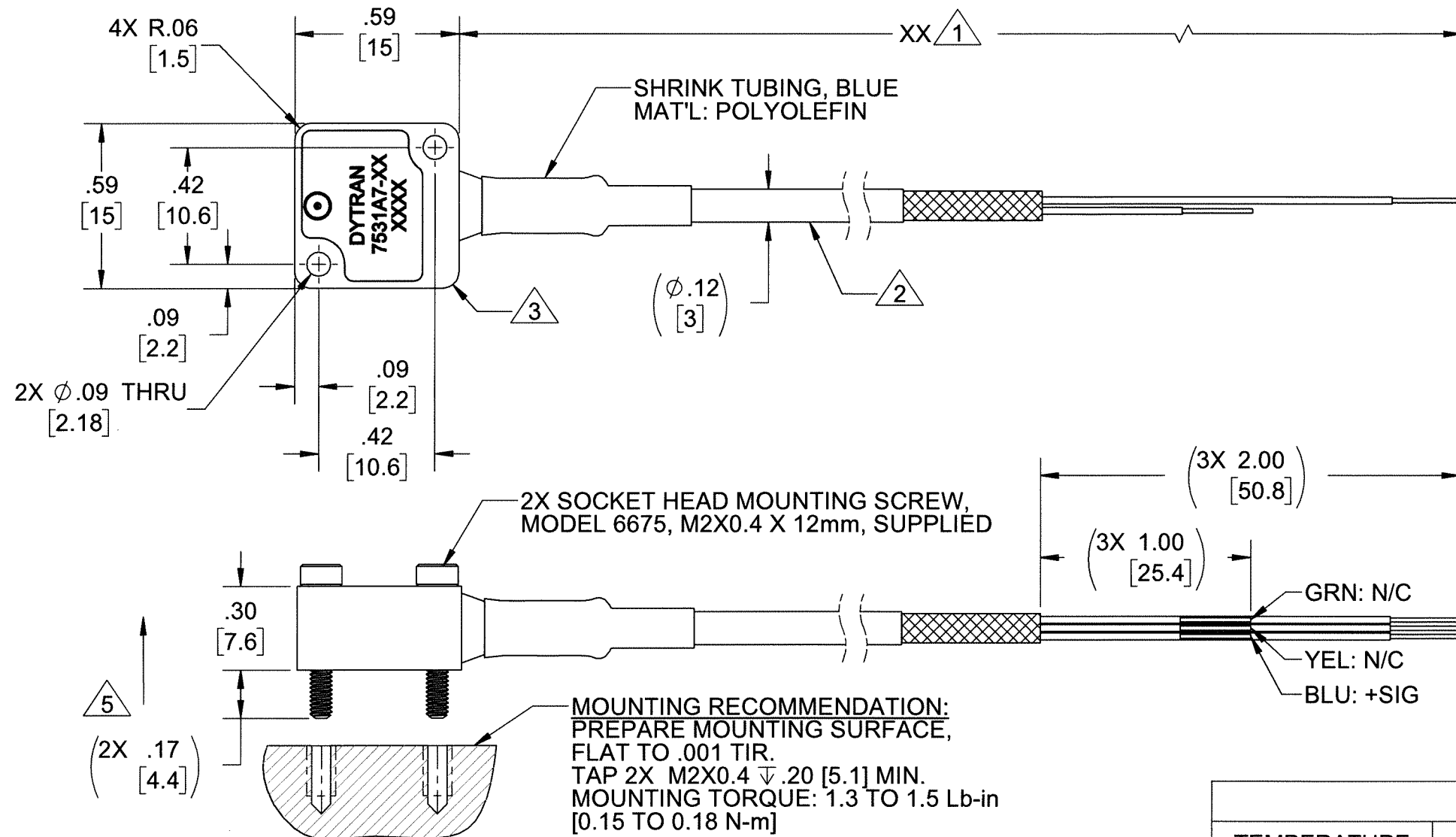


PROPRIETARY AND CONFIDENTIAL

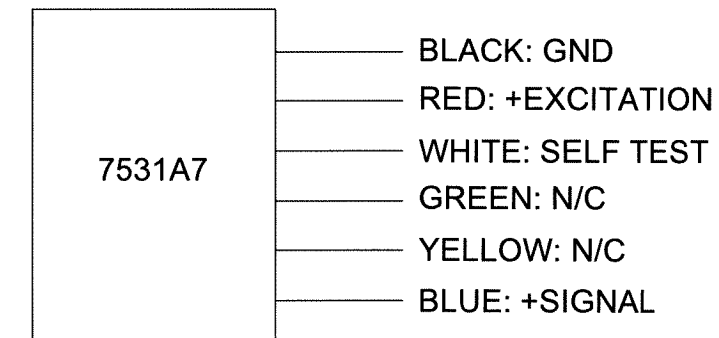
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| MODEL | INPUT RANGE | SENSITIVITY ($\pm 10\%$) |
|-----------|-------------|----------------------------|
| 7531A7-XX | $\pm 40g$ | 20 mV/g |

| REVISIONS | | | | | |
|-----------|-------|-----------------|----------------|-----|------|
| REV. | ECN | DESCRIPTION | BY/DATE | CHK | APPR |
| A | 15037 | INITIAL RELEASE | KG 10/24/19 | | |



| 1 CABLE LENGTH TOLERANCE | | | |
|--------------------------|------------|--------------|-------------|
| ENGLISH | | [METRIC] | |
| ≤ 1 FT | +1/ -0 IN | ≤ 0.3 m | +25mm -0mm |
| >1 FT - 5 FT | +2/ -0 IN | .03 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

| 2 CABLE SPECIFICATIONS | |
|------------------------|---|
| TEMPERATURE | -60°C TO 135°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 |

- 6. OPERATING TEMPERATURE: -40°F TO +257°F. (-40°C TO +125°C)
- 5. ARROW INDICATES DIRECTION OF ACCELERATION FOR POSITIVE OUTPUT
- 4. WEIGHT: 6.0 GRAMS, MAX. (LESS CABLE)
- 3. HOUSING MATERIAL: ALUMINUM ALLOY, ANODIZED, COLOR: BLACK
- 2. CABLE, 6-CONDUCTORS, 30AWG, SHIELDED, SANTOPRENE JACKET, COLOR: BLACK. SEE TABLE FOR SPECIFICATIONS.
- 1. MODEL NUMBER: 7531A7-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 IN BRACKETS [] ARE IN MILLIMETERS TOLERANCES ARE: DECIMALS METRIC ANGLES .XX ±.03 X ±0.8 ±1° .XXX ±.010 .XX ±0.25 | | MASTER ONLY IF IN RED Chatsworth, CA | |
| APPROVALS | | DATE | | TITLE: | |
| ORIG | NDC | 04/12/19 | | OUTLINE/INSTALLATION DWG, MODEL 7531A7-XX | |
| CHK | | 11/4/19 | | | |
| APP | | 11/4/19 | | | |
| DO NOT SCALE DRAWING | | THIRD ANGLE PROJECTION USA | | SIZE | REV |
| | | | | B | A |
| | | CAGE CODE | DWG NO | SHEET 1 OF 1 | |
| | | 2W033 | 127-7531A7-XX | | |
| | | SCALE: 2:1 | | | |

| | | |
|---|--------------------------------------|--------------------------------------|
| MODEL NUMBER 7531A7-XX | PERFORMANCE SPECIFICATIONS | DOC NO. PS7531A7-XX |
| | SINGLE AXIS, DC ACCELEROMETER | REV A, ECN 15037, 10/25/19 |



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

PHYSICAL

Weight, Max. (less cable)
Mounting
Cable
Housing

Type
Material
Material
Isolation

| ENGLISH | SI |
|--------------------|--------------------|
| 0.21 | 6.0 |
| oz | grams |
| 2X M2 Screws | 2X M2 Screws |
| 6-conductor | 6-conductor |
| Santoprene | Santoprene |
| 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 Density
Sensitivity Change Due to Temperature
Overload Recovery Time
Warm-Up Time

| | | | |
|-----------|-----------|-----------|---------------------------|
| 20 | mV/g | 2.0 | mV/m/s ² |
| ±40 | Gpeak | ±1962 | m/s ² peak |
| 0 to 1500 | Hz | 0 to 1500 | Hz |
| >4.5 | kHz | >4.5 | kHz |
| <0.5 | %F.S. | <0.5 | %F.S. |
| 5 | % | 5 | % |
| 200 | µGrms/√Hz | 1962 | µm/s ² rms/√Hz |
| ±0.008 | %/°F | ±0.01 | %/°C |
| 158 | µsec | 158 | µsec |
| 900 | µsec | 900 | µsec |

ELECTRICAL

Operating Current, Max.
Supply Voltage Range
Output Series Resistance
Output Bias Voltage
Self-Test Output [3]
Turn-On Time

| | | | |
|------------|-----|------------|-----|
| 250 | µA | 250 | µA |
| 4 to 28 | VDC | 4 to 28 | VDC |
| 32 | kΩ | 32 | kΩ |
| 0.8 to 1.0 | VDC | 0.8 to 1.0 | VDC |
| +25 | mV | +25 | mV |
| <10 | ms | <10 | ms |

ENVIRONMENTAL

Shock Max
Vibration Max
Operating Temperature
Seal
Magnetic Sensitivity @ 100 Gauss
Base Strain Sensitivity, Max

| | | | |
|-------------|---------|-------------|------------------|
| 5,000 | g pk | 49050 | m/s ² |
| 1000 | g pk | 9810 | m/s ² |
| -40 to +257 | °F | -40 to +125 | °C |
| Epoxy | | Epoxy | |
| 0.003 | g/Gauss | 0.003 | g/Gauss |
| 0.0008 | g/µε | 0.0008 | g/µε |

| Model | Sensitivity (mV/g) | Range (Gpeak) | Noise(µGrms/sqr(Hz)) | Oper. Temp(°F) |
|--------|--------------------|---------------|----------------------|----------------|
| 7531A1 | 420 | ±2 | 250 | -40 to 185 |
| 7531A2 | 300 | ±3 | 175(x,y); 300(z) | -40 to 185 |
| 7531A3 | 174 | ±5 | 250 | -40 to 185 |
| 7531A4 | 57 | ±16 | 300 | -40 to 185 |
| 7531A5 | 6.5 | ±200 | 4300 | -40 to 185 |

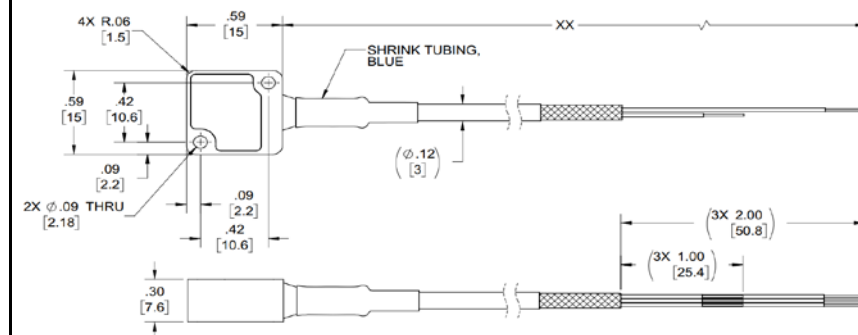
Refer to the performance specifications of the products in this family for detailed description

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
- [4] In the interest of constant product improvement, we reserve the right 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 127-7531A7-XX for more information.



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