

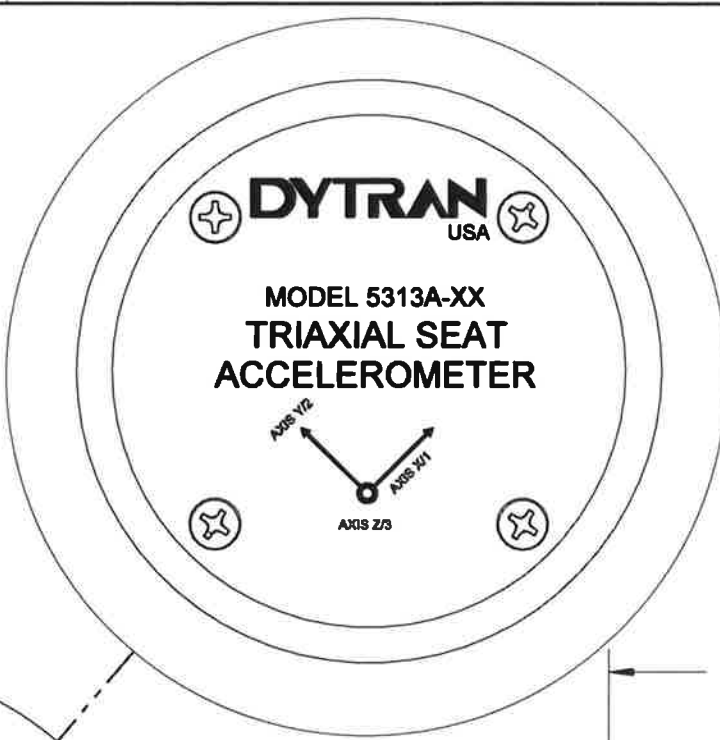
PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF DYTRAN INSTRUMENTS INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF DYTRAN INSTRUMENTS INC. IS PROHIBITED

2 CABLE LENGTH TOLERANCE

| ENGLISH        |            | [METRIC]    |             |
|----------------|------------|-------------|-------------|
| ≤1 FT          | +1/ -0 IN  | ≤0.3m       | +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%     |

| REVISIONS |       |                 |                 |     |      |
|-----------|-------|-----------------|-----------------|-----|------|
| REV.      | ECN   | DESCRIPTION     | BY/DATE         | CHK | APPR |
| A         | 13477 | INITIAL RELEASE | RA,<br>06/09/17 | MH  | W    |



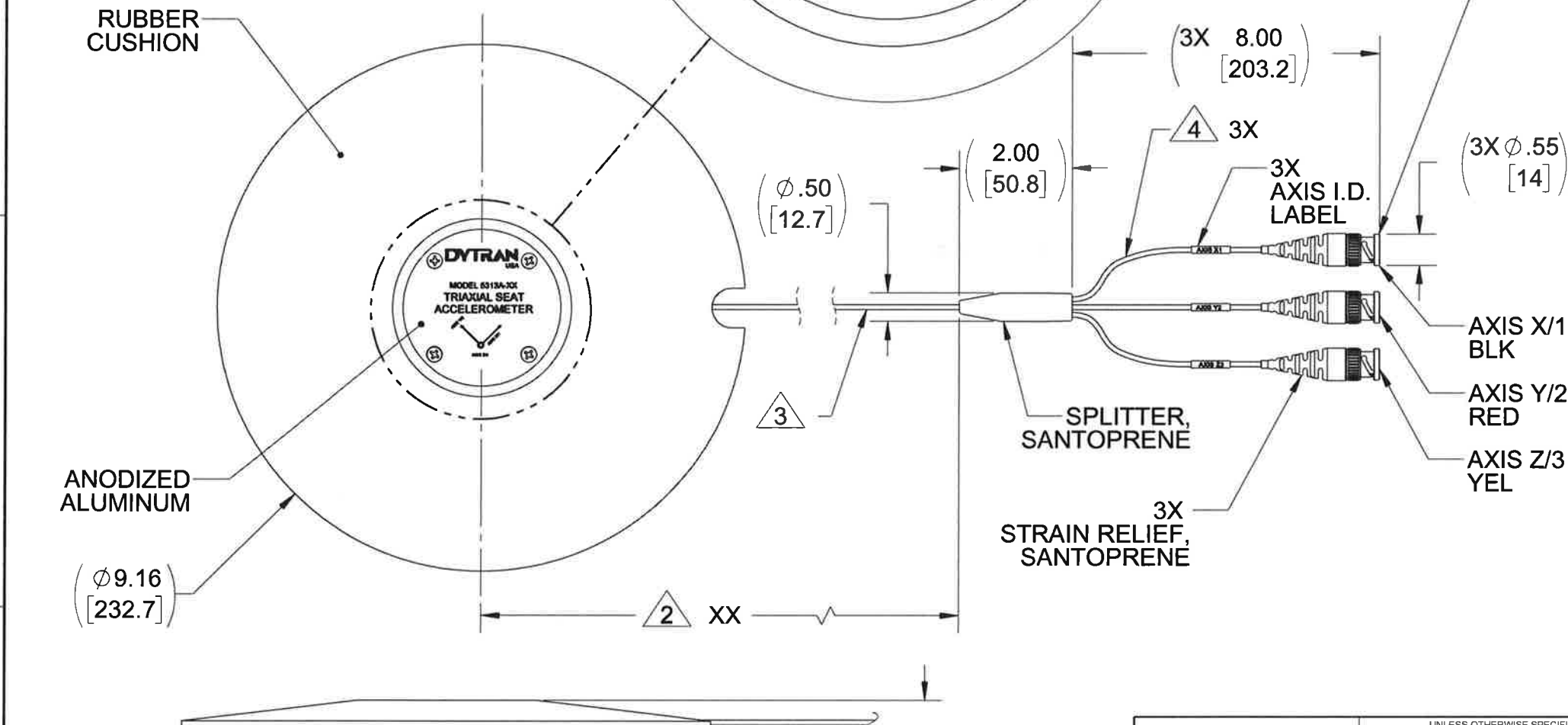
DETAIL A SCALE 1 : 1

| 3 4 CONDUCTOR SHIELDED CABLE |  |
|------------------------------|--|
| WIRE                         | 30 AWG 7/38 SILVER PLATED COPPER             |
| SHIELD                       | SILVER PLATED COPPER BRAID, 90% MIN COVERAGE |
| JACKET                       | FEP, BLACK, .006/.015 WALL                   |
| DIAMETER                     | .105 MAX                                     |
| TEMP                         | -65 °C (-85 °F) TO +200 °C (+392 °F)         |
| VOLTAGE                      | 250 VOLTS                                    |

C

B

A



| 4 SINGLE CONDUCTOR SHIELDED CABLE |  |
|-----------------------------------|--|
| WIRE                              | 30-7/38 SILVER PLATED COPPER                                   |
| WIRE INSULATION                   | EXTRUDED PTFE, NATURAL, Ø.033 ±.002                            |
| SHIELD                            | 38 AWG SILVER PLATED COPPER BRAID, 95% MIN COVERAGE, Ø.054 NOM |
| JACKET                            | WHT PTFE WRAP .005-.010 WALL                                   |
| DIAMETER                          | Ø.074±.006   |
| TEMP                              | 200 DEG C WIRE RATED   |
| VOLTAGE                           | 2000 VAC   |
| INDUCTANCE                        | .80 microH/FT  |
| MINIMUM BEND RADIUS               | .38 IN   |
| CAPACITANCE (SHIELD TO CONDUCTOR) | 32 pF/FT   |
| IMPEDANCE                         | 50 OHMS  |

- 4 SEE CABLE SPECIFICATION TABLE.
- 3 SEE CABLE SPECIFICATION TABLE.
- 2 MODEL NUMBER 5313A-XX. "XX" DENOTES LENGTH IN FEET. SEE TABLE FOR CABLE LENGTH TOLERANCE.

1. OPERATING TEMPERATURE RANGE: -60°F (-51.1°C) TO 160°F (71.1°C).

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.

|                                    |                                |               |
|------------------------------------|--------------------------------|---------------|
| DECIMALS<br>.XX ±.03<br>.XXX ±.010 | METRIC<br>.X ±0.8<br>.XX ±0.25 | ANGLES<br>±1° |
|------------------------------------|--------------------------------|---------------|

APPROVALS: ORIG RA, DATE 05/30/17, CHK MH, APP W, DATE 06/09/17

ALL MACHINED SURFACES: 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.

**DYTRAN INSTRUMENTS, INC.** MASTER COPY ONLY IF IN RED

TITLE: **OUTLINE/INSTALLATION, TRIAXIAL SEAT CUSHION ACCELEROMETER 100mV/G**

SIZE B, CAGE CODE 2W033, DWG NO 127-5313A-XX, REV A

SCALE: 1:2.5, SHEET 1 OF 1

|   |                                   |                             |
|---|-----------------------------------|-----------------------------|
| <b>Model Number</b><br>5313A-XX         | <b>PERFORMANCE SPECIFICATIONS</b> | <b>DOC NO</b><br>PS5313A-XX |
| <b>IEPE TRIAXIAL SEAT ACCELEROMETER</b> |                                   | REV C, ECN 16760, 07/11/22  |



- HERMETICALLY SEALED
- EXCELLENT LINEARITY

**PHYSICAL**

Weight, Max.  
 Size (Dia. X Thickness)  
 Material, Pad  
 Material, Central Housing Plates (Upper and Lower)  
 Cable Termination

| ENGLISH           |     | SI                |       |
|-------------------|-----|-------------------|-------|
| 0.5               | lb. | 227               | grams |
| 9.16 x .47        | in. | 232 x 12          | mm    |
| Rubber            |     | Rubber            |       |
| Anodized Aluminum |     | Anodized Aluminum |       |
| 3 BNC Connectors  |     | 3 BNC Connectors  |       |

**PERFORMANCE**

Sensitivity, ±5% [1] [2]  
 Range F.S. for ± 5 Volts Output  
 Frequency Response, ±5%  
 Resonant Frequency  
 Equivalent Electrical Noise Floor  
 Linearity [3]  
 Transverse Sensitivity, Max.  
 Strain Sensitivity @ 250µε

|              |        |              |                      |
|--------------|--------|--------------|----------------------|
| 100          | mV/g   | 10           | mV/m/s <sup>2</sup>  |
| ±50          | g pk   | ±491         | m/s <sup>2</sup> pk  |
| 0.45 to 3000 | Hz     | 0.45 to 3000 | Hz                   |
| > 25         | kHz    | > 25         | kHz                  |
| 0.0007       | g RMS  | 0.007        | m/s <sup>2</sup> RMS |
| ± 1          | % F.S. | ± 1          | % F.S.               |
| 6            | %      | 6            | %                    |
| 0.012        | g/µε   | 0.12         | m/s <sup>2</sup> /µε |

**ENVIRONMENTAL**

Maximum Shock  
 Operating Temperature Range  
 Survival Temperature Range  
 Seal, Accelerometer

|              |      |             |                     |
|--------------|------|-------------|---------------------|
| ±1500        | g pk | ±14715      | m/s <sup>2</sup> pk |
| -60 to +160  | °F   | -51 to +71  | °C                  |
| -100 to +275 | °F   | -73 to +135 | °C                  |
| Hermetic     |      | Hermetic    |                     |

**ELECTRICAL**

Supply Current Range [4]  
 Compliance Voltage Range  
 Output Impedance, Typ.  
 Bias Voltage  
 Discharge Time Constant  
 Electrical Isolation, Case Ground to Mounting Surface  
 Polarity in Direction of Arrows

|            |          |            |          |
|------------|----------|------------|----------|
| 2 to 20    | mA       | 2 to 20    | mA       |
| +18 to +30 | Volts    | +18 to +30 | Volts    |
| 100        | Ω        | 100        | Ω        |
| +11 to +13 | VDC      | +11 to +13 | VDC      |
| 0.8 to 2.0 | Sec      | 0.8 to 2.0 | Sec      |
| 10         | MΩ, min. | 10         | MΩ, min. |
| Positive   |          | Positive   |          |

**This family also includes:**

| Model | Sensitivity (mV/g) | Frequency Response (Hz) | Time Constant (Sec) | Operating Temp (°F) |
|-------|--------------------|-------------------------|---------------------|---------------------|
|       |                    |                         |                     |                     |
|       |                    |                         |                     |                     |
|       |                    |                         |                     |                     |

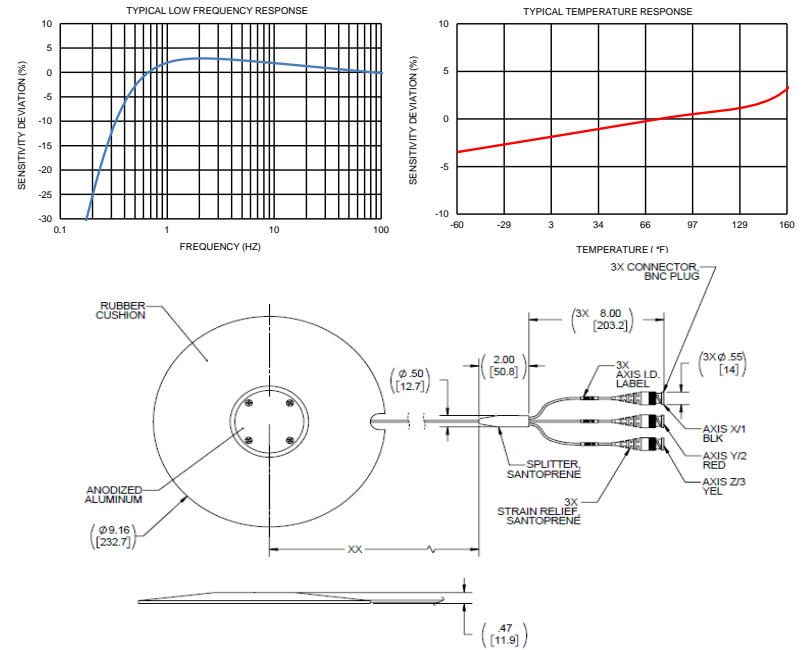
Refer to the performance specifications of the products in this family for detailed description

**Supplied Accessories:**

- 1) Accredited calibration certificate (ISO 17025)

**Notes:**

- [1] All specifications are measured at room temperature unless otherwise specified.
- [2] Measured at 100Hz, 1 g RMS per ISA RP 37.2.
- [3] Measured using zero-based straight line method, % of F.S. or any lesser range.
- [4] Do not apply power to this system without current limiting, 20 mA MAX. To do so will destroy the amplifier.
- [5] This product conforms to ISO 8041.
- [6] 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 over time. 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 127-5313A-XX for more information.



21592 Marilla Street, Chatsworth, California 91311 Phone: 818.700.7818 Fax: 818.698.0362 www.dytran.com  
 For permission to reprint this content, please contact info@dytran.com