

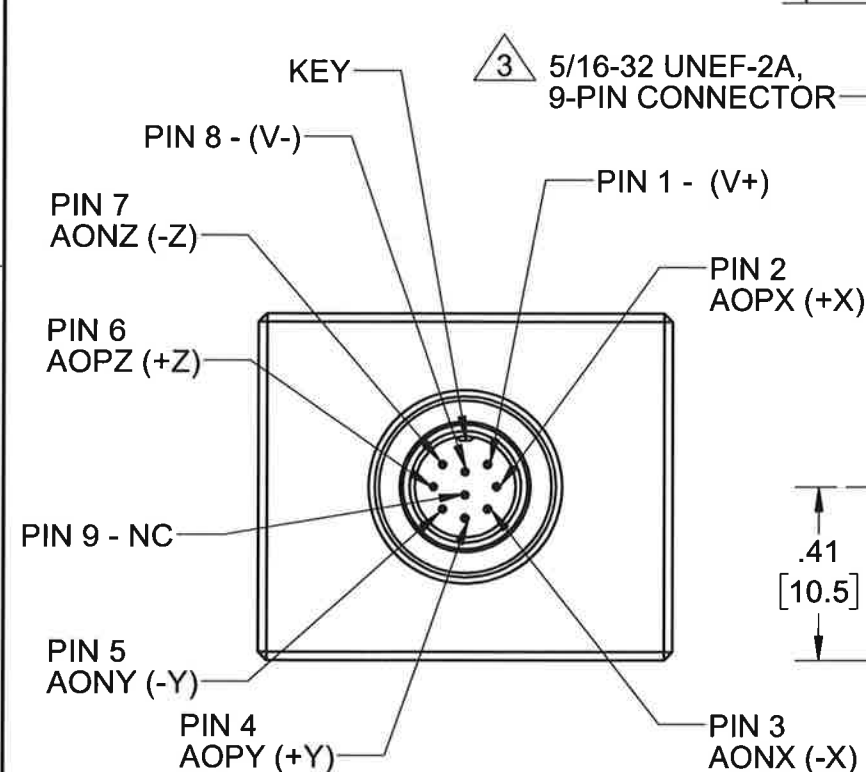
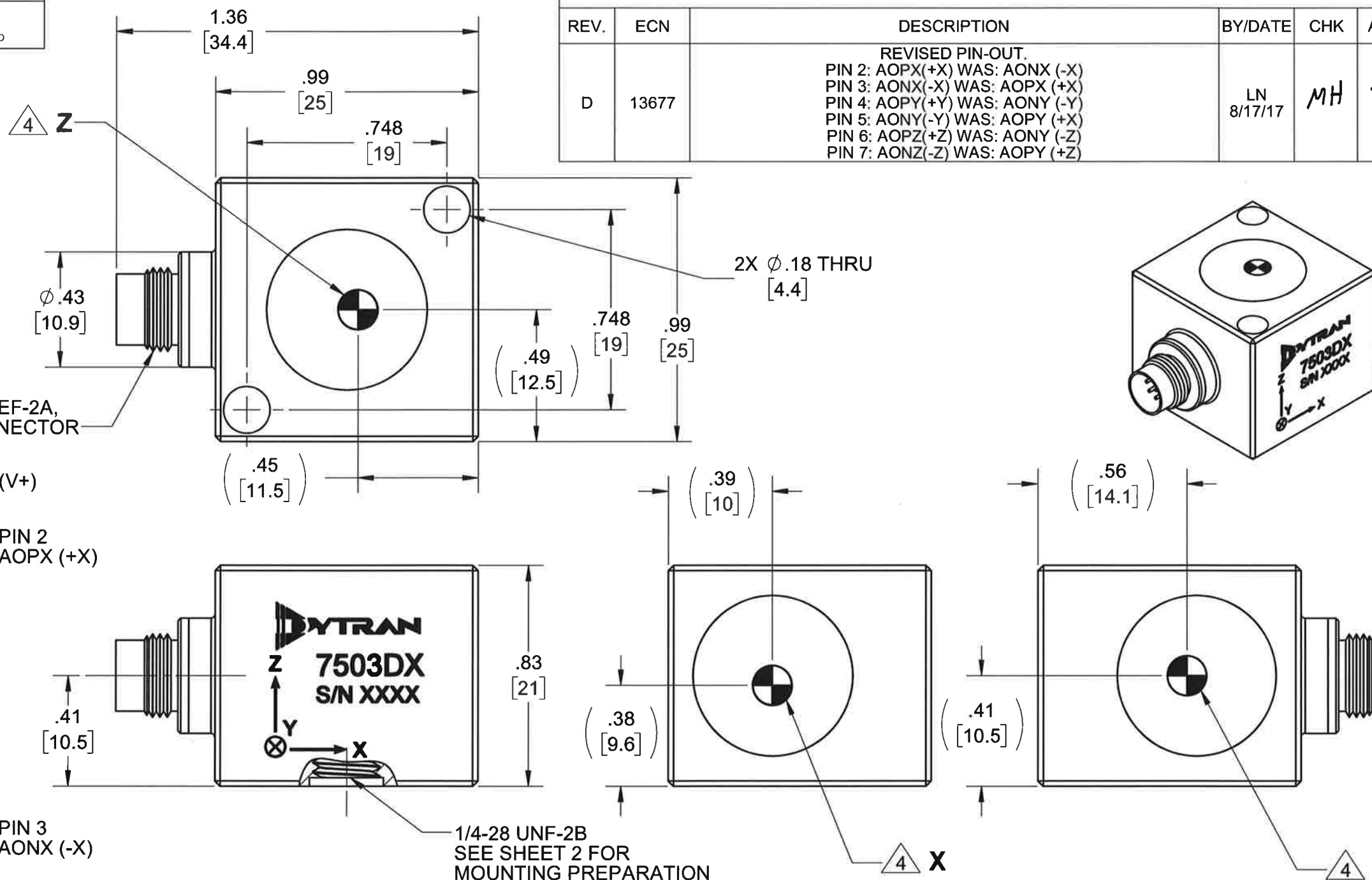
PROPRIETARY AND CONFIDENTIAL

REVISIONS

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| REV. | ECN | DESCRIPTION | BY/DATE | CHK | APPR |
|------|-------|--|---------------|-----|------|
| D | 13677 | REVISED PIN-OUT. PIN 2: AOPX(+X) WAS: AONX (-X) PIN 3: AONX(-X) WAS: AOPX (+X) PIN 4: AOPY(+Y) WAS: AONY (-Y) PIN 5: AONY(-Y) WAS: AOPY (+X) PIN 6: AOPZ(+Z) WAS: AONY (-Z) PIN 7: AONZ(-Z) WAS: AOPY (+Z) | LN 8/17/17 | MH | |

| MODEL | INPUT RANGE, X & Y AXES | INPUT RANGE, Z AXIS |
|---------|-------------------------|---------------------|
| 7503D1 | ±2g | ±2g |
| 7503D2 | ±5g | ±5g |
| 7503D3 | ±10g | ±10g |
| 7503D4 | ±25g | ±25g |
| 7503D5 | ±50g | ±50g |
| 7503D6 | ±100g | ±100g |
| 7503D7 | ±200g | ±200g |
| 7503D8 | ±400g | ±400g |
| 7503D9 | ±5g | ±25g |
| 7503D10 | ±5g | ±50g |



5. MINOR VOIDS, SCARS, SCRATCHES AND MOUNTING BLEMISH/WITNESS MARKS ON EXTERIOR SURFACES ARE ALLOWED DUE TO RESTRAINING AND HANDLING DURING TESTING, TRANSPORT OR PROCESSING. THESE APPEAR AS INDICATORS THAT DO NOT AFFECT FORM, FIT OR FUNCTION AS INTENDED BY DESIGN OR APPLICATION

4 MARKING DENOTES LOCATION OF SENSING ELEMENT'S CENTER OF MASS

3 MATES WITH DYTRAN 6964AXX CABLE (XX DENOTES LENGTH IN FT)

2. WEIGHT: 38 GRAMS, MAX.

1. MATERIAL: TITANIUM ALLOY.

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.
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.

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

| APPROVALS | | DATE |
|-----------|----|----------|
| ORIG | LN | 12/01/14 |
| CHK | JS | 02/12/15 |
| APP | DV | 02/16/15 |

DO NOT SCALE DRAWING

DYTRAN MASTER
INSTRUMENTS, INC. Chatsworth, CA

TITLE: **OUTLINE/INSTALLATION DWG, TRIAXIAL DC ACCELEROMETER, 7503D SERIES**

| | | | |
|------|-----------|-----------|-----|
| SIZE | CAGE CODE | DWG NO | REV |
| B | 2W033 | 127-7503D | D |

SCALE: 1:1 SHEET 1 OF 2

PROPRIETARY AND CONFIDENTIAL

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D

D

C

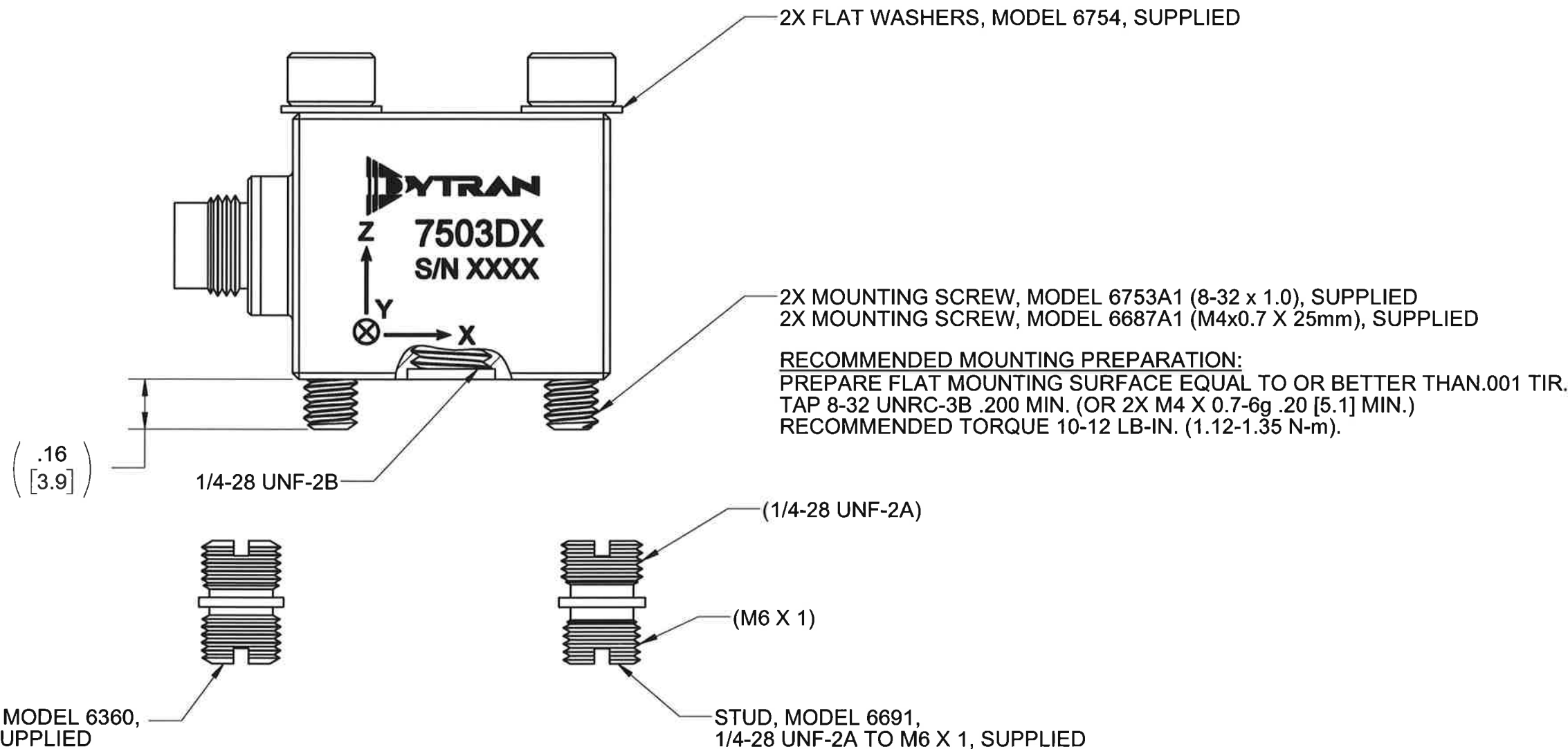
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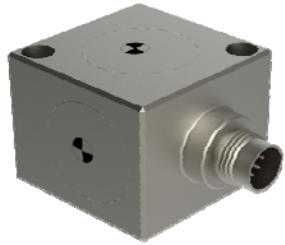


RECOMMENDED MOUNTING PREPARATION: MODEL 6360
PREPARE MOUNTING SURFACE, ϕ 1.25 [31.2] MIN, FLAT TO .001 TIR.
TAP 1/4-28 UNF-2B ∇ .200 [5.1] MIN. TORQUE TO 12-15 Lb-in.

RECOMMENDED MOUNTING PREPARATION: MODEL 6691
PREPARE MOUNTING SURFACE, ϕ 1.25 [31.2] MIN, FLAT TO .001 TIR.
TAP M6 X 1 ∇ .200 [5.1] MIN. TORQUE TO 12-15 Lb-in.

| | | | |
|---|---------------------------|----------------------------|-----------------|
| | | MASTER | |
| Chatsworth, CA | | ONLY IF IN RED | |
| TITLE: OUTLINE/INSTALLATION DWG, TRIAxIAL DC ACCELEROMETER, 7503D SERIES | | | |
| SIZE B | CAGE CODE 2W033 | DWG NO 127-7503D | REV D |
| SCALE: 2:1 | | SHEET 2 OF 2 | |

| | | |
|------------------------|--|----------------------------|
| Model Number 7503D9 | PERFORMANCE SPECIFICATION | DOC NO PS7503D9 |
| | TRIAxIAL VARIABLE CAPACITANCE ACCELEROMETER | REV G, ECN 14203, 05/29/18 |



- VARIABLE CAPACITANCE TECHNOLOGY
- ± 4V DIFFERENTIAL OUTPUT
- HERMETICALLY SEALED
- DC RESPONSE

PHYSICAL

| | ENGLISH | | SI | |
|--------------------|------------------------|------|------------------------|-------|
| Weight, Max | 1.3 | oz | 38 | grams |
| Connector | 9-pin, 5/16-32 UNEF-2A | Type | 9-pin, 5/16-32 UNEF-2A | |
| Material | Titanium Alloy | | Titanium Alloy | |
| Sensing Technology | MEMS | | MEMS | |

PERFORMANCE

| | | ENGLISH | | SI | |
|--------------------------------------|------------|---------|------------|---------|------------------------|
| Input Range | X & Y Axes | ±5 | g | ±49.1 | m/s ² |
| | Z Axis | ±25 | g | ±196.2 | m/s ² |
| Frequency Response (3dB), Nom | X & Y Axes | 0 - 400 | Hz | 0 - 400 | Hz |
| | Z Axis | 0 - 900 | Hz | 0 - 900 | Hz |
| Resonant Frequency | | >3000 | Hz | >3000 | Hz |
| Sensitivity Differential, ±5% [1] | X & Y Axes | 800 | mV/g | 82 | mV/m/s ² |
| | Z Axis | 160 | mV/g | 16 | mV/m/s ² |
| Output Noise, Differential, Typ | X & Y Axes | 12 | μg rms/√Hz | 118 | μm/s ² /√Hz |
| | Z Axis | 25 | μg rms/√Hz | 245 | μm/s ² /√Hz |
| Non-Linearity, Max [2] | | 0.5 | % F.S | 0.5 | % F.S |
| Cross Axis Sensitivity, Max | | 3 | % | 3 | % |
| Scale Factor Calibration Error, Max. | | 1 | % | 1 | % |
| Zero Measured Output | | ±50 | mV | ±50 | mV |

ENVIRONMENTAL

| | ENGLISH | | SI | |
|------------------------------------|--------------|------------------|--------------|-----------------------|
| Maximum Mechanical Shock (0.1 ms) | ±2000 | gpk | ±19620 | m/s ² peak |
| Bias Temperature Shift, Max [3] | 111 | (ppm of span)/°F | 200 | (ppm of span)/°C |
| Bias Calibration Error, Max | 0.5 | % of span | 0.5 | % of span |
| Operating Temperature Range | -40 to +257 | °F | -40 to +125 | °C |
| Scale Factor Temperature Shift [3] | -111 to +111 | ppm/°F | -200 to +200 | ppm/°C |
| Seal | Hermetic | | Hermetic | |

ELECTRICAL

| | ENGLISH | | SI | |
|---|-----------|-------|-----------|-------|
| Output Common Mode Voltage, Typ | 2.5 | VDC | 2.5 | VDC |
| Output Impedance | <10K | Ω | <10K | Ω |
| Operating Voltage | +9 to +36 | VDC | +9 to +36 | VDC |
| Operating Current (AOP & AON open), Max | 35 | mA Dc | 35 | mA Dc |
| Power Supply Rejection Ratio | >65 | dB | >65 | dB |
| Ground Isolation | >30 | MΩ | >30 | MΩ |

This family also includes:

| Model | Input Range (g) | Frequency response (Hz) | Sensitivity Differential, ±5% (mV/g) | Max.Shock (0.1ms) | Noise Differential (μg/√Hz) |
|---------|-----------------|-------------------------|--------------------------------------|-------------------|-----------------------------|
| 7503D1 | ±2 | 0-300 | 2,000 | 2000 | 7 |
| 7503D2 | ±5 | 0-400 | 800 | 2000 | 12 |
| 7503D3 | ±10 | 0-600 | 400 | 5000 | 18 |
| 7503D4 | ±25 | 0-900 | 160 | 5000 | 25 |
| 7503D5 | ±50 | 0-1200 | 80 | 5000 | 50 |
| 7503D6 | ±100 | 0-1400 | 40 | 5000 | 100 |
| 7503D7 | ±200 | 0-1750 | 20 | 5000 | 200 |
| 7503D8 | ±400 | 0-2000 | 10 | 5000 | 400 |
| 7503D10 | ±5(X&Y), ±50(Z) | 0-400(X&Y), 0-1200(Z) | 800(X&Y), 80(Z) | 2000 | 12(X&Y), 50(Z) |

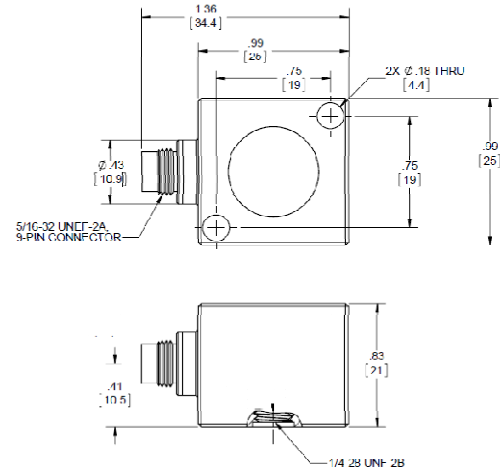
Refer to the performance specifications of the products in this family for detailed description.

Supplied Accessories:

- 1) Accredited calibration certificate (ISO 17025)
- 2) Mounting stud, Model 6360, 1/4-28 UNF-2A, Qty 1
- 3) Mounting stud, Model 6691, 1/4-28 UNF-2A to M6 X 1, Qty 1
- 4) Mounting screws, Model 6753A1, 8-32 x 1.0, Qty. 2
- 5) Mounting screws, Model 6687A1, M4x0.7 x 25mm, Qty. 2
- 6) Flat washers, Model 6754, Qty. 2

Notes:

- [1] Single ended sensitivity is half of values shown. (Ref. at 100 Hz)
- [2] -90% to +90% of Full Scale.
- [3] Over the rated temperature range.
- [4] In the interest of constant product improvement, we reserve the right to change specifications without notice.



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-7503D for more information.

