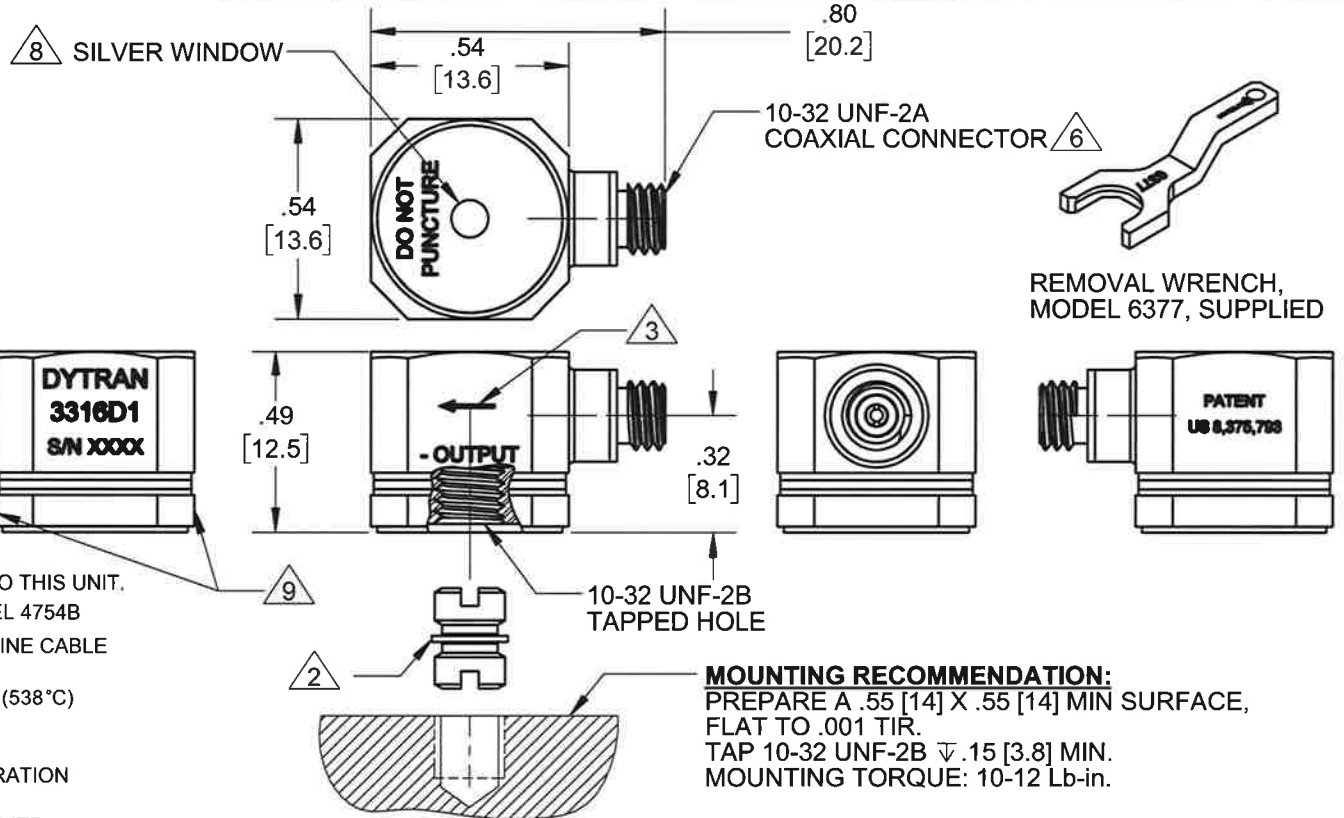


**PROPRIETARY AND CONFIDENTIAL**

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**REVISIONS**

REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
A	12740	INITIAL RELEASE SAME AS REV X1	LN 06/06/16	EP	DV
B	13509	NOTE 4: CONNECTOR MATERIAL: WAS: 304L PASSIVATED IS: ALLOY X-750	AM 6/14/17	W	AS



- 9 APPLY TORQUE ONLY ON BOTTOM FLATS FOR INSTALLATION & REMOVAL.
- 8 U.S. PATENT NUMBER US 8,375,793 APPLIES TO THIS UNIT.
- 7. RECOMMENDED CHARGE AMP: DYTRAN MODEL 4754B
- 6 MATES WITH DYTRAN MODEL 6946AXX HARDLINE CABLE & 6979AXX HARDLINE INSULATED CABLE
- 5. MAXIMUM OPERATING TEMPERATURE: 1000°F (538°C)
- 4. HOUSING MATERIAL: ALLOY 600  
CONNECTOR MATERIAL: ALLOY X-750
- 3 ARROW DESIGNATES DIRECTION OF ACCELERATION FOR NEGATIVE OUTPUT
- 2 MOUNTING STUD 6200S (10-32 TO 10-32) SUPPLIED
- 1. WEIGHT: 13 GRAMS MAX

NOTES: UNLESS OTHERWISE SPECIFIED

CONTRACT NO.



TITLE:

**OUTLINE/INSTALLATION DWG,  
MODEL 3316D1, X-AXIS**

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. THDS PER MIL-S-7742. DIMENSIONS APPLY AFTER FINISHING.		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. DIMENSIONS IN BRACKETS [ ] ARE IN MILLIMETERS TOLERANCES ARE: INCHES    METRIC    ANGLES .XX ± .03    .X ± 0.8    ± 1° .XXX ± .010    .XX ± 0.25	
USED ON	NEXT ASSY	MATERIAL	FINISH
APPLICATION		DO NOT SCALE DRAWING	
THIRD ANGLE PROJECTION USA		APPROVALS    DATE ORIG    LN    02/12/16 CHK    EP    6/8/16 APP    DV    6/9/16 APP	
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.		SIZE    CAGE CODE    DWG. NO.    REV <b>A</b> 2W033    127-3316D1 <b>B</b>	
SCALE: NONE		SOLIDWORKS	
SHEET 1 OF 1			

Model Number 3316D1	<b>PERFORMANCE SPECIFICATION</b>			DOC NO PS3316D1
	<b>SINGLE AXIS CHARGE MODE ACCELEROMETER</b>			REV C, ECN 14095, 03/14/18



- X-AXIS DIRECTIONAL OUTPUT
- BASE ISOLATED
- HERMETICALLY SEALED
- HIGH TEMPERATURE OPERATION
- LOW BASE STRAIN SENSITIVITY

**PHYSICAL**

Weight, Max.	Type	10-32 Coaxial
Connector [3]	Tapped Hole	10-32 UNF-2B
Mounting Provision	Housing	Alloy 600
Material	Connector	Alloy X-750
Element Style	Material	Single Crystal
	Type	Planar Shear

ENGLISH		SI	
0.46	oz	13	grams
10-32 Coaxial		10-32 Coaxial	
10-32 UNF-2B		10-32 UNF-2B	
Alloy 600		Alloy 600	
Alloy X-750		Alloy X-750	
Single Crystal		Single Crystal	
Planar Shear		Planar Shear	

**PERFORMANCE**

Sensitivity [1]	1 to 2	pC/g	0.10 to 0.20	pC/m/s <sup>2</sup>
Range F.S for ± 5 Volts Output	[7]	g	[7]	m/s <sup>2</sup>
Frequency Range, ±10%	[4] to 5000	Hz	[4] to 5000	Hz
Resonant Frequency	> 17	kHz	> 17	kHz
Capacitance	120	pF	120	pF
Linearity [2]	± 1%	% F.S.	± 1%	% F.S.
Phase Response (±5°)	[4] to 3000	Hz	[4] to 3000	Hz
Maximum Transverse Sensitivity	5	%	5	%
Base Strain Sensitivity, Max.	0.0005	g/με	0.005	m/s <sup>2</sup> /με
Insulation Resistance, (Connector pin to case)	at 75°F >1.0	MΩ	at 24°C >1.0	MΩ
	at 1000°F >0.25	MΩ	at 538°C >0.25	MΩ
Insulation Resistance (Case to Base)	at 75°F >10	MΩ	at 24°C >10	MΩ
	at 1000°F >1.0	MΩ	at 538°C >1.0	MΩ
Ground Isolation	Base Isolated		Base Isolated	
Output Polarity	X- Negative		X- Negative	

ENGLISH		SI	
1 to 2	pC/g	0.10 to 0.20	pC/m/s <sup>2</sup>
[7]	g	[7]	m/s <sup>2</sup>
[4] to 5000	Hz	[4] to 5000	Hz
> 17	kHz	> 17	kHz
120	pF	120	pF
± 1%	% F.S.	± 1%	% F.S.
[4] to 3000	Hz	[4] to 3000	Hz
5	%	5	%
0.0005	g/με	0.005	m/s <sup>2</sup> /με
at 75°F >1.0	MΩ	at 24°C >1.0	MΩ
at 1000°F >0.25	MΩ	at 538°C >0.25	MΩ
at 75°F >10	MΩ	at 24°C >10	MΩ
at 1000°F >1.0	MΩ	at 538°C >1.0	MΩ
Base Isolated		Base Isolated	
X- Negative		X- Negative	

**ENVIRONMENTAL**

Maximum Vibration	±6000	G, peak	±58860	m/s <sup>2</sup> , peak
Maximum Shock	±10000	G, peak	±98100	m/s <sup>2</sup> , peak
Temperature Range	-60 to +1000	°F	-51 to +538	°C
Seal	Hermetic		Hermetic	
Radiation Exposure Limit (Integrated Neutron Flux)	1.0E+10	N/cm <sup>2</sup>	1.0E+10	N/cm <sup>2</sup>
Radiation Exposure Limit (Integrated Gamma Flux)	1.0E+08	rad	1.0E+08	rad

±6000	G, peak	±58860	m/s <sup>2</sup> , peak
±10000	G, peak	±98100	m/s <sup>2</sup> , peak
-60 to +1000	°F	-51 to +538	°C
Hermetic		Hermetic	
1.0E+10	N/cm <sup>2</sup>	1.0E+10	N/cm <sup>2</sup>
1.0E+08	rad	1.0E+08	rad

**This family also includes:**

Model	Sensitivity (pC/g)	Range F.S (G's)	Output Polarity	Temperature (°F)
3316D2	1 to 2	[4] to 5000	Y- Negative	-60 to +1000
3316C2	1 to 2	[4] to 5000	Z- Negative	-60 to +1000

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

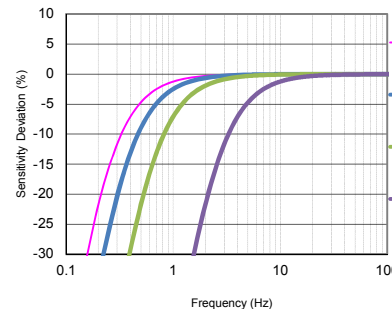
**Supplied Accessories:**

- 1) Accredited calibration certificate (ISO 17025)
- 2) Model 6200S mounting stud (10-32 to 10-32), Qty. 1
- 3) Model 6377 Removal wrench, Qty. 1

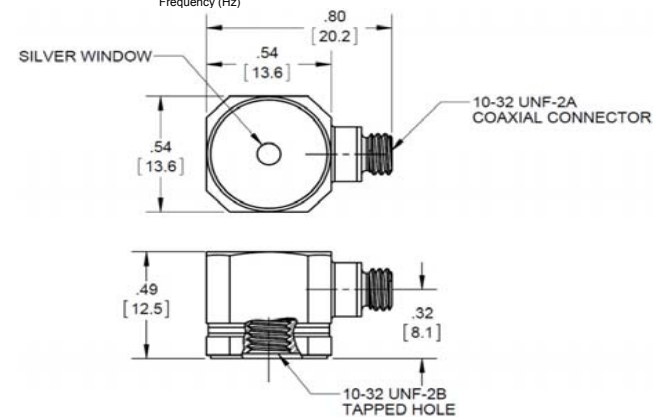
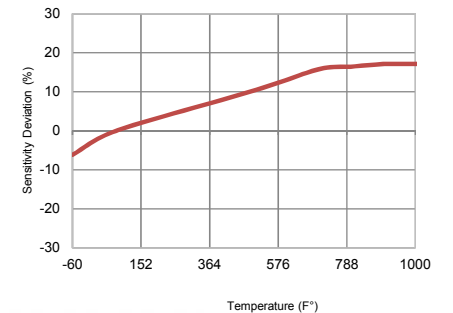
**Notes:**

- [1] Measured at 100Hz, 1 Grms per ISA RP 37.2
- [2] Measured using zero-based straight line method, % of F.S. or any lesser range.
- [3] Mates with Dytran cable 6946AXX hardline cable and 6979AXX hardline insulated cable.
- [4] Low frequency response and phase response is function of charge amplifier. See graph below for example.
- [5] In the interest of constant product improvement, we reserve the right to change specifications without notice.
- [6] Recommended charge amplifier: Dytran model 4754B Series.
- [7] This parameter depends on the gain settings of charge amplifier used
- [8] U.S. Patent number US 8,375,793 B2 applies to this unit.

TYPICAL LOW FREQUENCY RESPONSE



TYPICAL TEMPERATURE RESPONSE



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-3316D1 for more information.



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