PROPRIETARY AND CONFIDENTIAL

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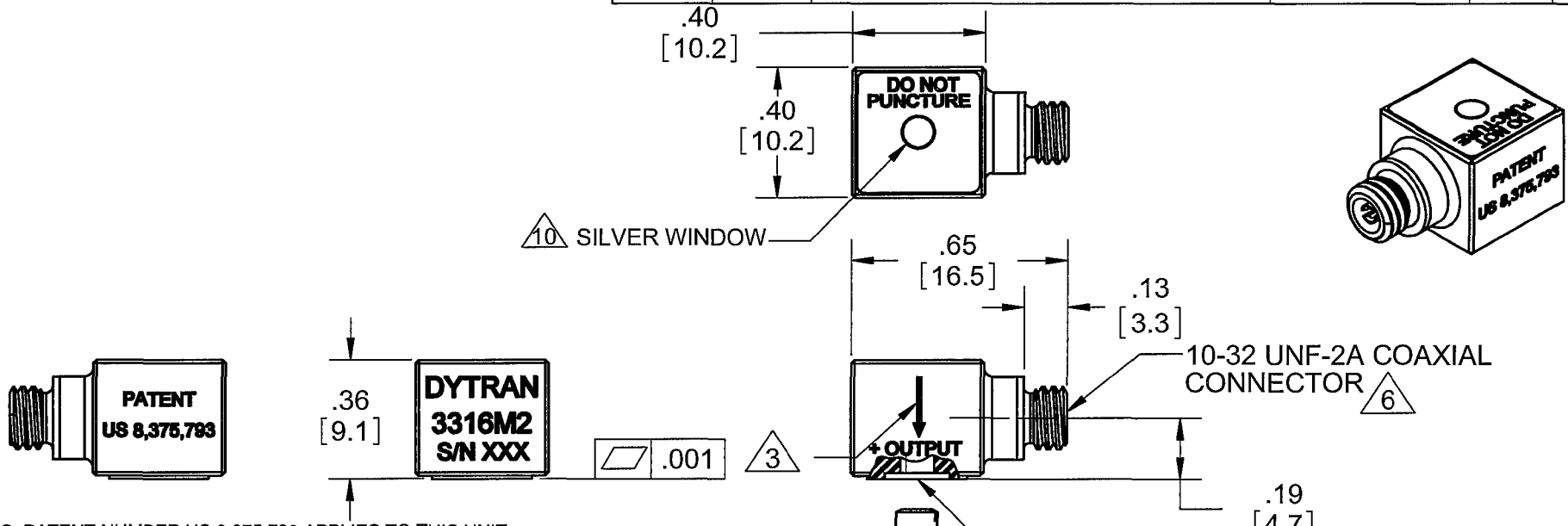
REVISIONS

REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
B	9749	NOTE 10 WAS: DESIGN IS PATENT PENDING	AB 03/18/13	JCS	PG



RECOMMENDED MOUNTING PREPARATION:
TAP 10-32 X .140 MIN DEEP. ASSURE THE SURFACE FLATNESS BETTER THAN .001 TIR.
MOUNTING TORQUE: 6-8 Lb-in

10 U.S. PATENT NUMBER US 8,375,793 APPLIES TO THIS UNIT.
9. ISOLATION BASE MODEL 6998 & 6959 AVAILABLE
8. RECOMMENDED CHARGE AMP: DYTRAN MODEL 4752B
7. MAXIMUM OPERATING TEMPERATURE: 900°F (482°C)
6 MATES WITH DYTRAN MODEL 6946AXX HARDLINE CABLE & 6979AXX HARDLINE INSULATED CABLE
5. HOUSING MATERIAL: ALLOY 600
CONNECTOR MATERIAL: UNS K94610, ASTM F-15
4. WEIGHT: 5 GRAMS MAX
3 ARROW DESIGNATES ACCELERATION DIRECTION FOR POSITIVE OUTPUT
2 MOUNTING STUD 6584 (5-40 TO 10-32) SUPPLIED
1. SENSITIVITY: .5 TO 2 pC/g
NOTES: UNLESS OTHERWISE SPECIFIED

USED ON	NEXT ASSY
APPLICATION	

THIRD ANGLE PROJECTION
USA

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.
ALL MACHINED SURFACES. 63
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.

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	

MATERIAL

FINISH

DO NOT SCALE DRAWING

CONTRACT NO.

APPROVALS		DATE
ORIG	AB	09/25/12
CHK	JS	09/26/12
APP	DV	09/28/12
APP		

DYTRAN INSTRUMENTS, INC.
Chatsworth, CA

MASTER
ONLY IF IN RED

TITLE:
OUTLINE/INSTALLATION DRAWING, 3316M2

SIZE	CAGE CODE	DWG. NO.	REV
A	2W033	127-3316M2	B

SCALE: NONE | SOLIDWORKS | SHEET 1 OF 1

172-0081, REV C

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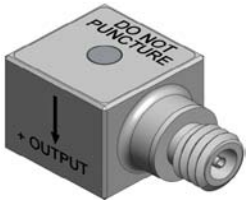
Model Number 3316M2	PERFORMANCE SPECIFICATION	DOC NO PS3316M2
	SINGLE AXIS CHARGE MODE ACCELEROMETER	REV C, ECN 11246, 09/05/14



- **MINIATURE SIZE**
- **HERMETICALLY SEALED**
- **HIGH TEMPERATURE OPERATION**

		ENGLISH		SI	
PHYSICAL					
Weight, Max		0.21	oz	6.0	grams
Size	Square x Height	.40 x .36	Inches	10.16 x 9.10	mm
Connector [3]	Type	10-32 Coaxial		10-32 Coaxial	
Mounting Provision : Tapped Hole		5-40 UNC-2B		5-40 UNC-2B	
Material	Housing	Alloy 600		Alloy 600	
	Connector	UNS K94610		UNS K94610	
Element Style	Material	Single Crystal		Single Crystal	
	Type	Planar Shear		Planar Shear	
PERFORMANCE					
Sensitivity [1]		.5 to 2	pC/g	0.10 to 0.20	$pC/m/s^2$
Range F.S for ± 5 Volts Output		±5000	G's	±49050	m/s^2
Frequency Range, ±10%		[4] to 10000	Hz	[4] to 10000	Hz
Resonant Frequency		> 45	kHz	> 45	kHz
Capacitance		70	pF	70	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	%
Strain Sensitivity		0.002	g/με	0.02	$m/s^2/\mu\varepsilon$
Insulation resistance, (Connector pin to case)		at 75°F > 5	MΩ	at 75°F > 5	Ω
		at 900°F > 0.25	MΩ	at 900°F > 0.25	Ω
Coefficient of Thermal Sens.		0.02	%F	0.02	%F
Ground Isolation		Case Ground		Case Ground	
ENVIRONMENTAL					
Maximum Vibration		±6000	G, peak	±58860	m/s^2, peak
Maximum Shock		±10000	G, peak	±98100	m/s^2, peak
Temperature Range		-60 to+900	°F	-51 to+482	°C
Seal		Hermetic		Hermetic	

This family also includes:

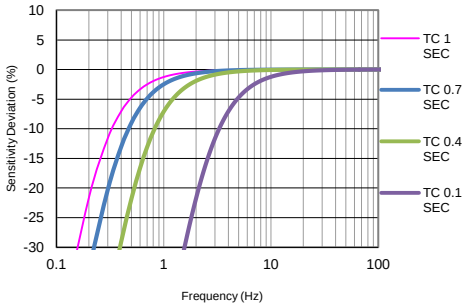
Model	Sensitivity (pC/g)	Range F.S (G's)	Output Polarity	Temperature (°F)
3316C	1 to 2	± 5000	Positive when mounted on its base	-60 to+900
3316C1	1 to 2	± 5000	Negative when mounted on its base	-60 to+900

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

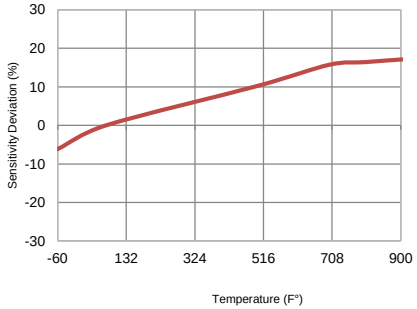
Supplied Accessories:
1) Accredited calibration certificate (ISO 17025)
2) Model 6584 mounting stud (5-40 to 10-32), qty 1

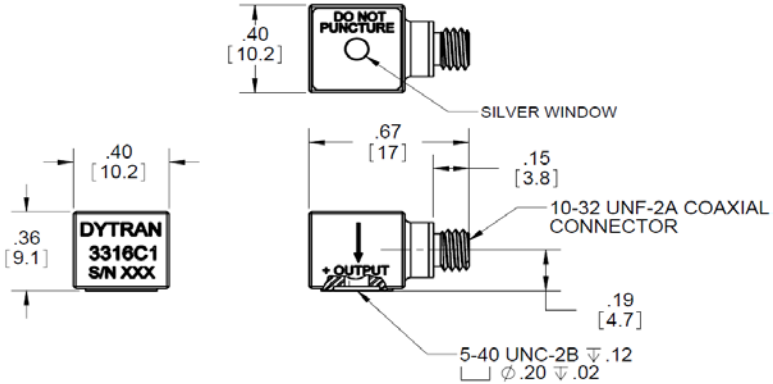
Notes:
[1] Measured at 100Hz, 1 Grms per ISA RP 37.2
[2] Measured using zero-based straight line method, % of F.S. or any lesser range.
[3] Mates with Dytran cable 6946AXX hardline cable and 6979AXX hardline insulated cable.
[4] Low frequency response and phase response is function of charge amplifier. 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] Isolation mounting base model 6959 (triaxial) and 6998 (uniaxial) are available.
[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 127-3316M2 for more information.

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