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**7 CABLE TOLERANCES**

ENGLISH		[METRIC]	
≥ 1 FT	+1/-0 IN	≥ 0.3 m	+25 mm -0 mm
>1 FT - 5 FT	+2/-0 IN	> 0.3 m- 1.5 m	+50 mm -0 mm
>5 FT - 10 FT	+4/-0 IN	>1.5 m -3 m	+100 mm -0 mm
>10 FT - 25 FT	+6/-0 IN	> 3 m -7.5 m	+150 mm -0 mm
>25 FT	+5%/-0%	> 7.5 m	+5%/-0%

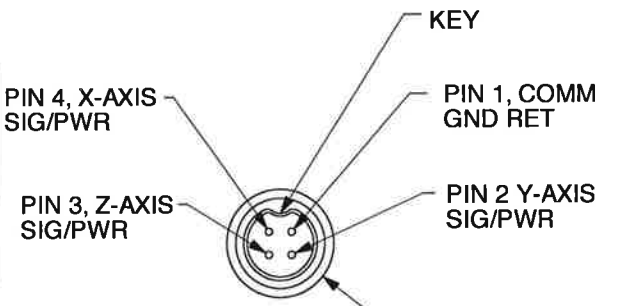
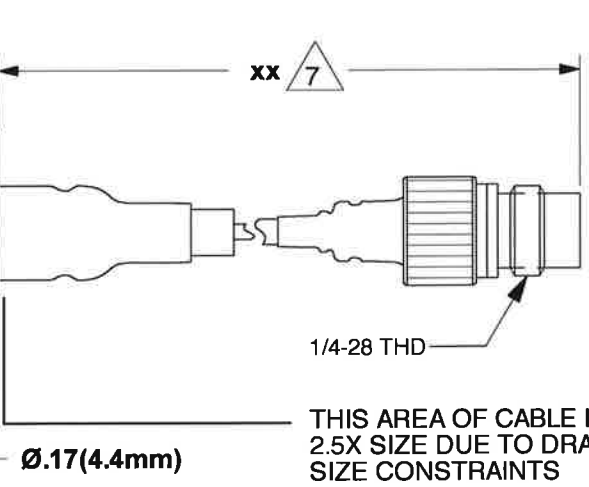
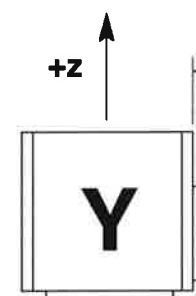
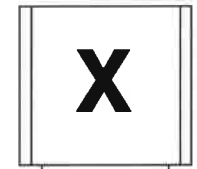
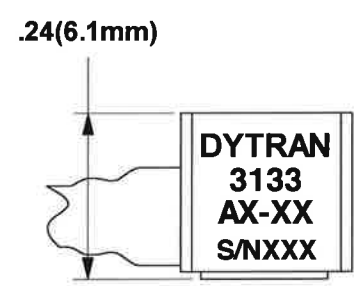
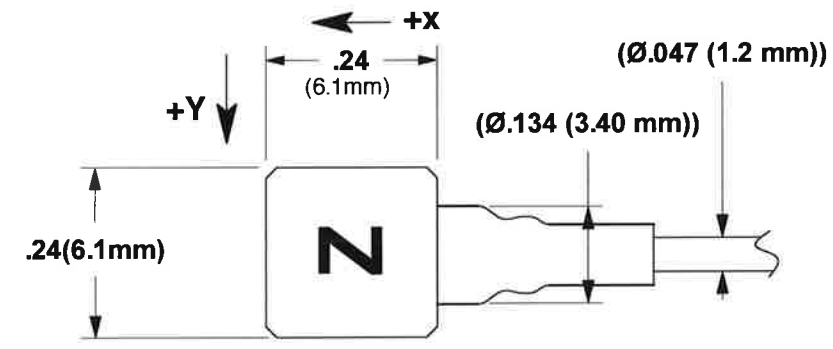
**7 4-WIRE CABLE**

WIRE	36 AWG, 7/44 SILVER PLATED COPPER
WIRE INSULATION	PFA, .006 NOMINAL WALL
SHIELD	44 AWG DILVER PLATED SOFT COPPER BRAID
JACKET	PFA, WHITE, .006 INCH NOMINAL WALL
DIAMETER	Ø.045 NOMINAL
TEMP	-196°C TO +200° C
VOLTAGE	150 VOLTS AC

REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
H	12409	UPDATED VIEW OF CONNECTOR (KNURLING)	JS 12/15/15	LA	LN
J	12992	3133A5 SENSITIVITY WAS: 0.25 Mv/g (+/-25%)	JS 10/07/16	LA	LN
K	13061	REVISED "DYTRAN" TO REFLECT MARKING, AS SHIPPED	JS 10/07/16	RA	LN
L	13832	SEE ECN	RA 11/13/17	Sp	RS

**VARIATION CHART**

MODEL	SENSITIVITY	LENGTH <b>7</b>
3133A1	10 mV/g (±15%)	36 IN
3133A2	2 mV/g (±25%)	36 IN
3133A3	5 mV/g (±20%)	36 IN
3133A4	0.7 mV/g (±25%)	36 IN
3133A5	0.2 mV/g (±25%)	36 IN
3133A1-05	10 mV/g (±15%)	5 FT
3133A2-05	2 mV/g (±25%)	5 FT
3133A3-05	5 mV/g (±20%)	5 FT



**7** LENGTH OF CABLE ASSEMBLY IS DESIGNATED BY XX IN NUMBER (3133AX-XX). XX EQUALS CABLE LENGTH (SEE CHART) (I.E. 3133A1-05 IS A 5 FT LENGTH CABLE ASSEMBLY)

6. MODEL 6298 PETRO MOUNTING WAX IS INCLUDED.

**5** MATING CABLES ARE MODELS 6824AXX (SANTOPRENE), OR 6811AXX, (TEFLON) 4-PIN CONNECTOR TO 3 BNC'S. "XX" IS THE CABLE LENGTH IN FEET. EX. :CABLE MOD. 6811A3 (3 FT. NOM.).

4. HOUSING MATERIAL: TITANIUM.

3. THE LETTERS "X", "Y", & "Z" INDICATE THE DIRECTION OF ACCELERATION OF EACH AXIS FOR POSITIVE GOING OUTPUT VOLTAGE (AS THE MARKED SURFACE ACCELERATES TOWARD THE VIEWER.) SEE DIRECTIONAL ARROWS ON FACE OF DRAWING.

**2** FOR BEST FREQUENCY RESPONSE, PREPARE FLAT MOUNTING SURFACE OF AT LEAST .20 DIAMETER, FLAT TO .0001 TIR. APPLY ONE DROP OF CYANOACRYLATE ADHESIVE TO MOUNT THE ACCELEROMETER.

1. WEIGHT, LESS CABLE: 0.8 GRAMS.

**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.

APPROVALS		DATE
DRAWN	N.C.	11-10-08
DESIGN	N.C.	11-10-08
CHK	D.V.	05-18-09
APP	ANS	05-26-09

DO NOT SCALE DRAWING

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

Chattsworth, CA

**TITLE:** OUTLINE/INSTALLATION DRAWING, MODEL SERIES 3133A TRIAXIAL ACCELEROMETERS

SIZE	CAGE CODE	DWG NO	REV
B	2W033	127-3133A	L

SCALE: NONE ASHLAR GRAPHITE SHEET 1 OF 1

Model Number	PERFORMANCE SPECIFICATION		DOC NO
			PS3133A5
3133A5	Accelerometer, Triaxial, IEPE		REV G, ECN 14713, 11/21/18



- ULTRA MINIATURE SIZE
- IDEAL LOW FREQUENCY RESPONSE

**PHYSICAL**

Weight		0.03	oz	0.8	grams
Size	Width	0.24	inch	6.1	mm
	Height	0.24	inch	6.1	mm
Mounting		Adhesive		Adhesive	
Integral Cable	Length	3	ft	914	mm
	Type	TFE		TFE	
Connector	Type	4-pin		4-pin	
Housing	Material	Titanium		Titanium	
	Isolation	Case Ground		Case Ground	
Sensing Element	Material	Quartz		Quartz	
	Mode	Shear		Shear	

ENGLISH		SI	
Weight	0.03 oz	0.8	grams
Size Width	0.24 inch	6.1	mm
Size Height	0.24 inch	6.1	mm
Mounting	Adhesive	Adhesive	
Integral Cable Length	3 ft	914	mm
Connector Type	TFE	TFE	
Connector Type	4-pin	4-pin	
Housing Material	Titanium	Titanium	
Isolation	Case Ground	Case Ground	
Sensing Element Material	Quartz	Quartz	
Sensing Element Mode	Shear	Shear	

**PERFORMANCE**

Sensitivity [1], [2], ± 25%	0.2	mV/g	0.020	mV/m/s <sup>2</sup>
Acceleration Range	20,000	Gpeak	196200	m/s <sup>2</sup> peak
Frequency Range, ±5%	0.7 to 6000	Hz	0.7 to 6000	Hz
Frequency Range, ±10%	0.7 to 10000	Hz	0.7 to 10000	Hz
Linearity [4]	± 1	% F.S.	± 1	% F.S.
Resonance Frequency	>35	kHz	>35	kHz
Transverse Sensitivity	6	%	6	%
Bias Voltage	+7 to +9	VDC	+7 to +9	VDC
Output Impedance	100	Ω	100	Ω
Noise floor	0.35	Grms	3.43	m/s <sup>2</sup> rms
Discharge Time Constant	.5 to 4	seconds	.5 to 4	seconds
Spectral Noise	160,000	μGrms/sqr(Hz)	1569600	μm/s <sup>2</sup> rms/sqr(Hz)
	10Hz	80,000	784800	μm/s <sup>2</sup> rms/sqr(Hz)
	100Hz	20,000	196200	μm/s <sup>2</sup> rms/sqr(Hz)
	1000Hz	8,000	78480	μm/s <sup>2</sup> rms/sqr(Hz)
	10000Hz	3,600	35316	μm/s <sup>2</sup> rms/sqr(Hz)

**ENVIRONMENTAL**

Maximum Shock	25,000	Gpeak	245250	m/s <sup>2</sup>
Maximum Vibration	22,000	Gpeak	215820	m/s <sup>2</sup>
Operating Temperature	-67 to +320	°F	-55 to +160	°C
Seal	Epoxy		Epoxy	
Magnetic Sensitivity at 100 Gauss	0.00004	g/Gauss	0.00039	m/s <sup>2</sup> /Gauss
Base Strain Sensitivity	0.15	g/με	1.47	m/s <sup>2</sup> /με

**POWER**

Compliance Voltage	+18 to +30	VDC	+18 to +30	VDC
Current Range	2 to 20	mA	2 to 20	mA

**This family also includes:**

Model	Sensitivity (mV/g)	Range (Gpeak)	Resolution (Grms)	Oper. Temp(°F)	TC
3133A1	10	500	0.02	-67 to 320	1.0 to 2.5
3133A2	2	2500	0.15	-67 to 320	0.3 to 2.5
3133A3	5	1000	0.06	-67 to 320	1.0 to 2.5
3133A4	0.7	5000	0.15	-67 to 320	0.5 to 2.5

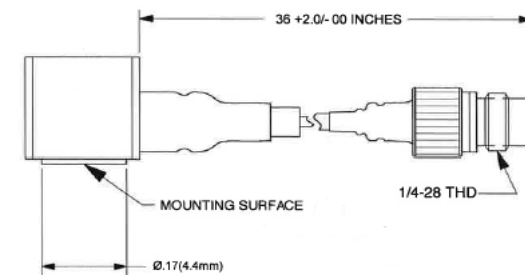
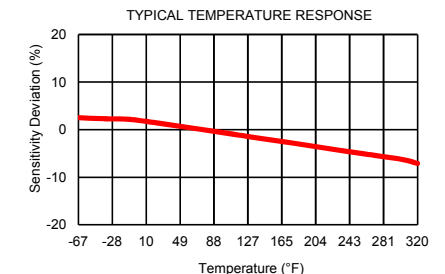
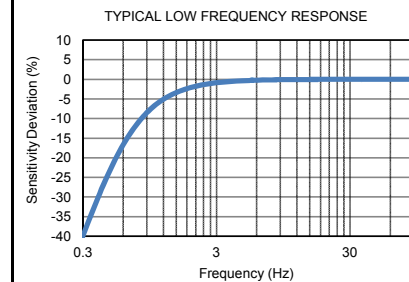
Please, refer to the performance specifications of the products in this family for detailed description

**Supplied Accessories:**

- 1) Model 6298 small petro wax
- 2) Model 6741 removal tool
- 3) Accredited calibration certificate (ISO 17025)

**Notes:**

- [1] Measured at 100 Hz, 10 Grms
- [2] Actual sensitivity is given on a calibration certificate
- [3] Do not apply power to this device without current limiting, 20mA max, to do so will destroy the integral IC amplifier
- [4] Measured using zero-based straight line method, % of F.S. or any lesser range.



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-3133A for more information.



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