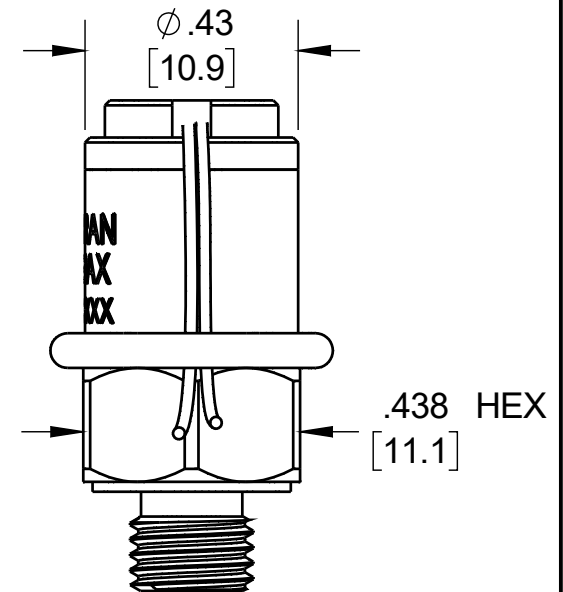
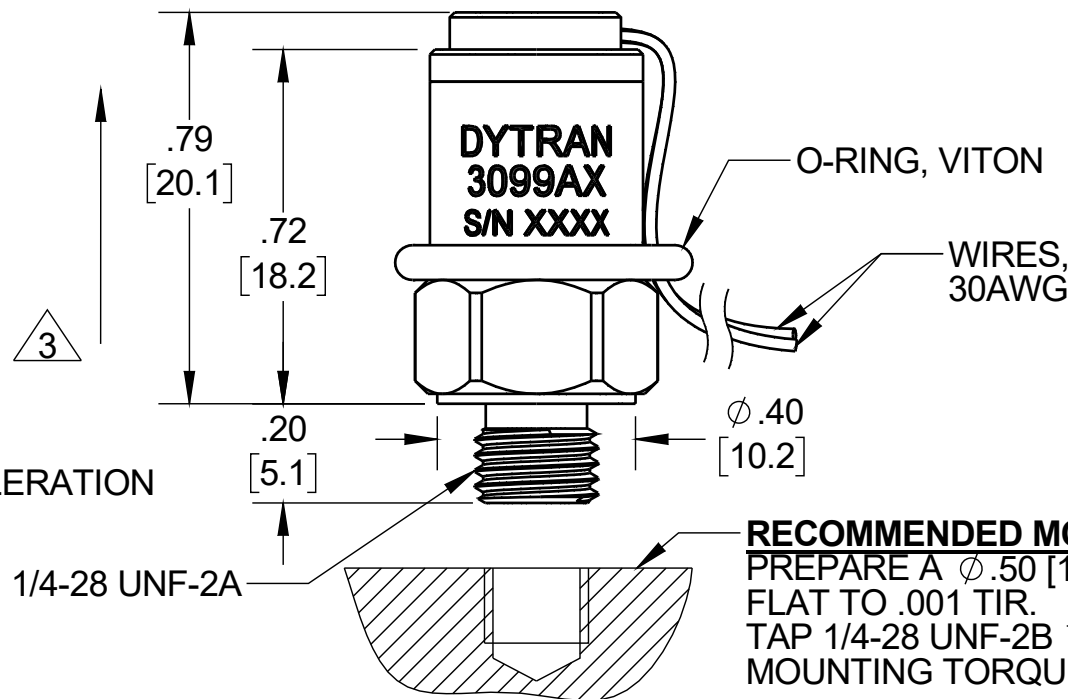
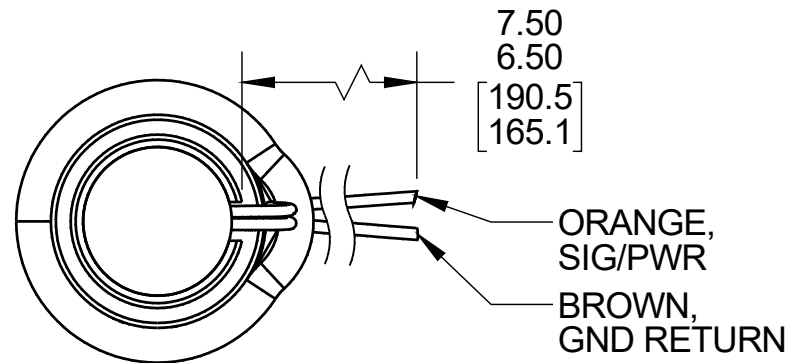
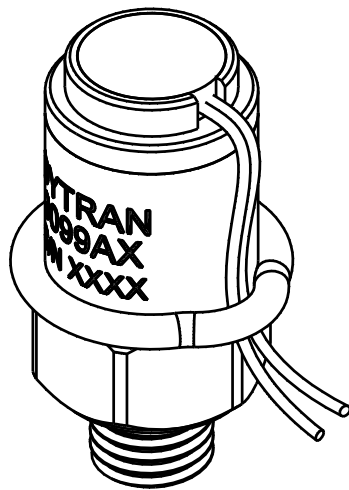


**PROPRIETARY AND CONFIDENTIAL**

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

MODEL	SENSITIVITY	RANGE
3099A1	0.05 mV/g	±60,000 g
3099A2	0.1 mV/g	±50,000 g
3099A3	0.2 mV/g	±25,000 g

REVISIONS					
REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
A	14148	INITIAL RELEASE, SAME AS REV X2	EM 04/06/18	MH	DV
B	15846	REDESIGNED FOR PERFORMANCE IMPROVEMENT, SAME AS REV A3	KG 07/16/20	AM	RA- SEE PDM



3 ARROW INDICATES DIRECTION OF ACCELERATION FOR POSITIVE OUTPUT

2. HOUSING MATERIAL: TITANIUM

1. WEIGHT: 8 GRAMS, MAX.

NOTES: UNLESS OTHERWISE SPECIFIED

**RECOMMENDED MOUNTING PREPARATION:**  
 PREPARE A Ø.50 [12.7] MIN SURFACE, FLAT TO .001 TIR.  
 TAP 1/4-28 UNF-2B ∇.25 [6.4]  
 MOUNTING TORQUE: 12-14 lb-in

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. 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		
ORIG	LN	DATE
CHK	MH	04/10/18
APP	DV	04/10/18
APP		

**DYTRAN INSTRUMENTS, INC.** Chatsworth, CA

TITLE: **OUTLINE/INSTALLATION DWG, HIGH SHOCK SENSOR, MECHANICALLY FILTERED, MODEL 3099AX**

SIZE	CAGE CODE	DWG. NO.	REV
<b>A</b>	<b>2W033</b>	<b>127-3099A1</b>	<b>B</b>

SCALE: NONE      SOLIDWORKS      SHEET 1 OF 1

<b>Model Number</b> 3099A3	<b>PERFORMANCE SPECIFICATION</b>	<b>DOC NO</b> PS3099A3
<b>SHOCK ACCELEROMETER, IEPE</b>		REV B, ECN 15846, 07/16/20



- MECHANICALLY & ELECTRICALLY FILTERED
- HERMETICALLY SEALED
- CASE ISOLATED

**This family also includes:**

Model	Sensitivity (mV/g)	Measurement Range(g pk)	Maximum Shock (g pk)	Temperature (°F)
3099A1	0.05	±60,000	±120,000	-10 to +250
3099A2	0.1	±50,000	±100,000	-10 to +250

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

**Supplied Accessories:**

- 1) Accredited calibration certificate (ISO 17025)

**Notes:**

- [1] Measured at 100Hz, 10 Grms per ISA RP 37.2
- [2] Measured using zero-based straight line method, % of F.S. or any lesser range.
- [3] Do not apply power to this system without current limiting, 20 mA MAX. To do so will destroy the IC amplifier
- [4] 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 overtime. All operating parameters, including typical parameters, must be validated for each customer application by the customer's I

**PHYSICAL**

Weight, Max.  
Mounting Provision  
Material  
Element Style

ENGLISH		SI	
0.28	oz	8	grams
1/4-28 UNF-2A		1/4-28 UNF-2A	
Titanium Alloy		Titanium Alloy	
Quartz		Quartz	
Planar Shear		Planar Shear	

**PERFORMANCE**

Sensitivity, ±20%[1]  
Measurement Range  
Frequency Range, ±3dB  
Resonant Frequency  
Linearity [2]  
Broadband Resolution  
Maximum Transverse Sensitivity  
Strain Sensitivity

0.2	mV/g	0.020	mV/m/s <sup>2</sup>
±25,000	g pk	±245,166	m/s <sup>2</sup>
10 to 10,000	Hz	10 to 10,000	Hz
> 10.5	kHz	> 10.5	kHz
> 120	kHz	> 120	kHz
± 1	%	± 1	%
0.50	G rms	4.91	m/s <sup>2</sup> rms
5	%	5	%
0.0005	g/μe	0.0049	m/s <sup>2</sup> /μe

**ELECTRICAL**

Supply Current Range [3]  
Compliance Voltage Range  
Output Impedance, Typ.  
Output Bias Voltage  
Discharge Time Constant  
Warm up time (within 10% of Bias)  
Electrical Filter  
Ground Isolation

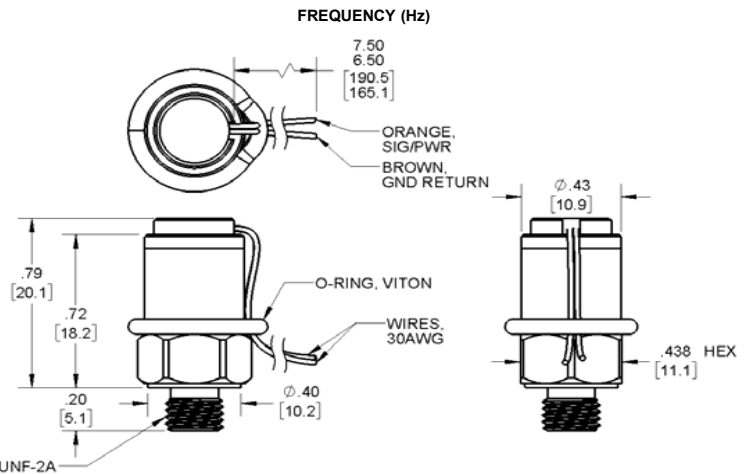
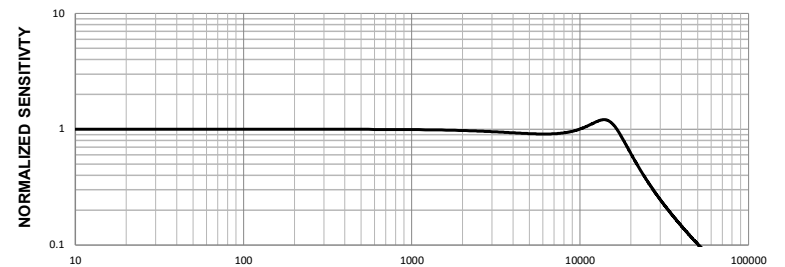
2 to 20	mA	2 to 20	mA
+18 to +30	VDC	+18 to +30	VDC
100	Ω	100	Ω
7.0 to 12.0	VDC	7.0 to 12.0	VDC
1.0 to 2.0	sec	1.0 to 2.0	sec
< 8	sec	< 8	sec
Two Pole		Two Pole	
7	kHz	7	kHz
>10	MΩ	>10	MΩ

**ENVIRONMENTAL**

Maximum Shock  
Temperature Range  
Coefficient of Thermal Sens.  
Seal

±50,000	g pk	±490,500	m/s <sup>2</sup> , pk
-10 to +250	°F	-12 to +121	°C
0.03	%F	0.05	%C
Hermetic		Hermetic	

**TYPICAL FREQUENCY RESPONSE**



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-3099A1 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