

4

3

DWG NO

127-3091A

SH

1

REV

B

2

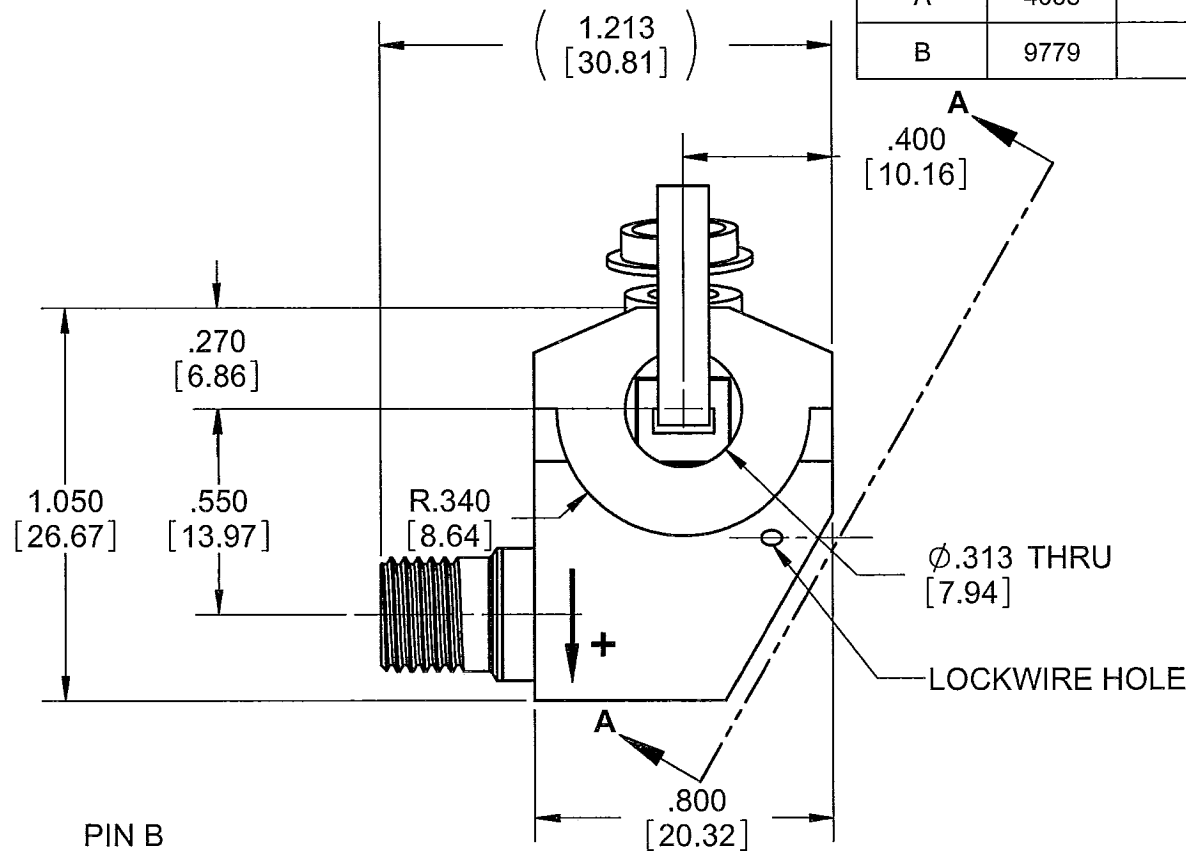
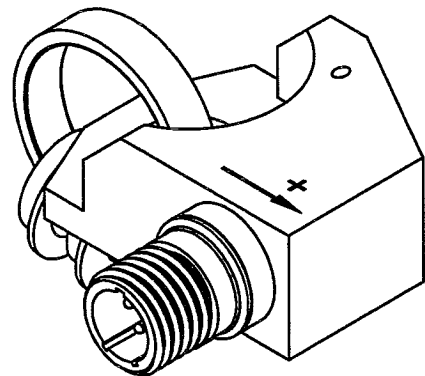
1

PROPRIETARY AND CONFIDENTIAL

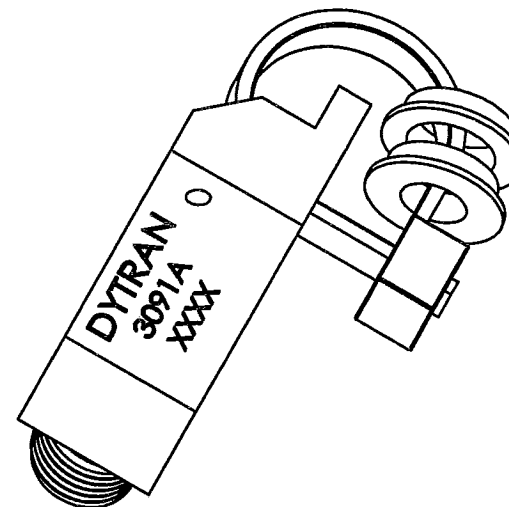
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF
DYTRAN INSTRUMENTS INC. ANY REPRODUCTION IN PART OR AS A WHOLE
WITHOUT THE WRITTEN PERMISSION OF DYTRAN INSTRUMENTS INC. IS PROHIBITED

REVISIONS

REV.	ECN	DESCRIPTION	BY/DATE	CHK	APPR
A	4668	INITIAL RELEASE	RA 5/30/07	CES	PML
B	9779	SEE ECN	AB 03/28/13	4/	✓

PIN A
SIGNAL/POWERPIN B
SIGNAL GROUNDPIN C
CONNECTED
TO HOUSING

MOUNTING SURFACE

5/16-28 UN-2A
3 PIN CONNECTORDYTRAN
3091A
XXXX

4. ADAPTOR BUSHING SUPPLIED:
6555A (Ø .250 THRU HOLE)
6555A1 (Ø .188 THRU HOLE)

3. ARROWS SHOW DIRECTION OF ACCELERATION FOR POSITIVE OUTPUT SIGNAL.

2. WEIGHT: 30 GRAMS MAX.

1. HOUSING MATERIAL: 300 SERIES SS.
CONNETOR MATERIAL: 300 SERIES SS.

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.

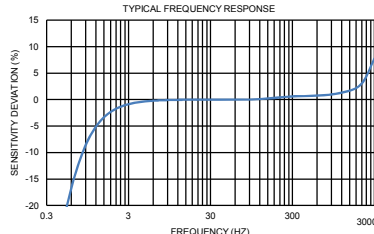
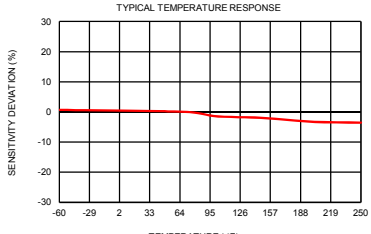
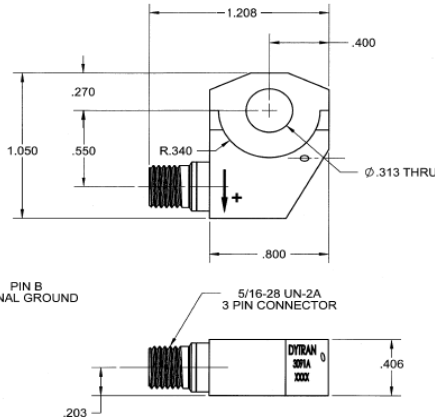
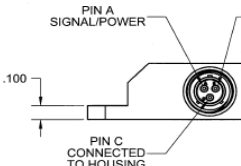
UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES.
DIMENSIONS IN BRACKETS [] ARE IN
MILLIMETERS TOLERANCES ARE:

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

APPROVALS		DATE
ORIG	RA	5/28/07
CHK	CES	06/04/07
APP	PML	06/04/07
DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION USA

**MASTER
ONLY IN RED**TITLE:
**OUTLINE/INSTALLATION,
MODEL 3091A**

SIZE B	CAGE CODE 2W033	DWG NO 127-3091A	REV B
SCALE: 1:1		SOLIDWORKS	SHEET 1 of 1

Model Number 3091A		PERFORMANCE SPECIFICATION				DOC NO PS3091A																																								
		IEPE QUARTZ SHEAR ACCELEROMETER				REV C, ECN 14311, 06/26/18																																								
		• EXCELLENT LINEARITY • ELECTRICALLY ISOLATED • HERMETICALLY SEALED				This family also includes: <table><tr><th>Model</th><th>Sensitivity</th><th>Range F.S ± 5 Volts</th><th>Max Vibration/Shock</th><th>Resonant Frequency</th></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>		Model	Sensitivity	Range F.S ± 5 Volts	Max Vibration/Shock	Resonant Frequency																																		
Model	Sensitivity	Range F.S ± 5 Volts	Max Vibration/Shock	Resonant Frequency																																										
		Refer to the performance specifications of the products in this family for detailed description																																												
PHYSICAL Weight, Max Connector Type Mounting Provision, Integral Bracket Material, Accelerometer Element Style		<table><tr><th colspan="2">ENGLISH</th><th colspan="2">SI</th></tr><tr><td>1.05</td><td>oz</td><td>30</td><td>grams</td></tr><tr><td>3-Pin</td><td></td><td>3-Pin</td><td></td></tr><tr><td>5/16-28 UN-2A</td><td></td><td>5/16-28 UN-2A</td><td></td></tr><tr><td>Ø .312 Thru Hole With 2 Bushings</td><td>Inches</td><td>Ø 7.924 Thru Hole With 2 Bushings</td><td>mm</td></tr><tr><td>300 Series SS</td><td></td><td>300 Series SS</td><td></td></tr><tr><td>Quartz Shear</td><td></td><td>Quartz Shear</td><td></td></tr></table>	ENGLISH		SI		1.05	oz	30	grams	3-Pin		3-Pin		5/16-28 UN-2A		5/16-28 UN-2A		Ø .312 Thru Hole With 2 Bushings	Inches	Ø 7.924 Thru Hole With 2 Bushings	mm	300 Series SS		300 Series SS		Quartz Shear		Quartz Shear				Supplied Accessories: 1) Accredited calibration certificate (ISO 17025) 2) Adaptor bushing (Ø .250 thru hole), model # 6555A, qty 1 3) Adaptor bushing (Ø .188 thru hole), model # 6555A1, qty 1 Notes: [1] Measure at 100Hz, 1 Grms per ISA RP 37.2 [2] Measure 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 charge amplifier. [4] Frequency response is referenced to nominal sensitivity [5] Lock wire holes are included in the base [6] Typical. Not to exceed 0.010 Grms [0.10 m/s²].													
ENGLISH		SI																																												
1.05	oz	30	grams																																											
3-Pin		3-Pin																																												
5/16-28 UN-2A		5/16-28 UN-2A																																												
Ø .312 Thru Hole With 2 Bushings	Inches	Ø 7.924 Thru Hole With 2 Bushings	mm																																											
300 Series SS		300 Series SS																																												
Quartz Shear		Quartz Shear																																												
PERFORMANCE Sensitivity, ±5% [1] Range F.S for ± 5 Volts Output Frequency Range [4] Resonant Frequency Equivalent Electrical Noise Floor [6] Linearity [2] Maximum Transverse sensitivity Strain Sensitivity @ 250µε		<table><tr><td>10</td><td>mV/g</td><td>1</td><td>mV/m/s²</td></tr><tr><td>±500</td><td>g</td><td>±4905</td><td>m/s²</td></tr><tr><td>1 to 10</td><td>Hz</td><td>1 to 10</td><td>Hz</td></tr><tr><td>10 to 1000</td><td>Hz</td><td>10 to 1000</td><td>Hz</td></tr><tr><td>1000 to 3000</td><td>Hz</td><td>1000 to 3000</td><td>Hz</td></tr><tr><td>>26</td><td>kHz</td><td>>26</td><td>kHz</td></tr><tr><td>0.007</td><td>Grms</td><td>0.069</td><td>m/s² rms</td></tr><tr><td>± 1%</td><td>% F.S.</td><td>± 1%</td><td>% F.S.</td></tr><tr><td>5</td><td>%</td><td>5</td><td>%</td></tr><tr><td>0.012</td><td>g/µε</td><td>0.12</td><td>m/s²/µε</td></tr></table>	10	mV/g	1	mV/m/s²	±500	g	±4905	m/s²	1 to 10	Hz	1 to 10	Hz	10 to 1000	Hz	10 to 1000	Hz	1000 to 3000	Hz	1000 to 3000	Hz	>26	kHz	>26	kHz	0.007	Grms	0.069	m/s² rms	± 1%	% F.S.	± 1%	% F.S.	5	%	5	%	0.012	g/µε	0.12	m/s²/µε			 	
10	mV/g	1	mV/m/s²																																											
±500	g	±4905	m/s²																																											
1 to 10	Hz	1 to 10	Hz																																											
10 to 1000	Hz	10 to 1000	Hz																																											
1000 to 3000	Hz	1000 to 3000	Hz																																											
>26	kHz	>26	kHz																																											
0.007	Grms	0.069	m/s² rms																																											
± 1%	% F.S.	± 1%	% F.S.																																											
5	%	5	%																																											
0.012	g/µε	0.12	m/s²/µε																																											
ENVIRONMENTAL Maximum Vibration Maximum Shock Temperature Range Seal, Hermetic		<table><tr><td>±600</td><td>Gpeak</td><td>±5886</td><td>m/s² peak</td></tr><tr><td>±3000</td><td>Gpeak</td><td>±29430</td><td>m/s² peak</td></tr><tr><td>-60 to +250</td><td>°F</td><td>-54 to 121</td><td>°C</td></tr><tr><td>Welded/GTM Header</td><td></td><td>Welded/GTM Header</td><td></td></tr></table>	±600	Gpeak	±5886	m/s² peak	±3000	Gpeak	±29430	m/s² peak	-60 to +250	°F	-54 to 121	°C	Welded/GTM Header		Welded/GTM Header																													
±600	Gpeak	±5886	m/s² peak																																											
±3000	Gpeak	±29430	m/s² peak																																											
-60 to +250	°F	-54 to 121	°C																																											
Welded/GTM Header		Welded/GTM Header																																												
ELECTRICAL Supply Current Range [3] Compliance Voltage Range Output Impedence, Typ Bias Voltage Discharge Time Constant, Nom Acceleration Along Arrow On The		<table><tr><td>2 to 20</td><td>mA</td><td>2 to 20</td><td>mA</td></tr><tr><td>+ 18 to +30</td><td>Volts</td><td>+ 18 to +30</td><td>Volts</td></tr><tr><td>100</td><td>Ω</td><td>100</td><td>Ω</td></tr><tr><td>+7 to +9</td><td>VDC</td><td>+7 to +9</td><td>VDC</td></tr><tr><td>0.3 to 1.5</td><td>Sec</td><td>0.3 to 1.5</td><td>Sec</td></tr><tr><td>Positive</td><td></td><td>Positive</td><td></td></tr></table>	2 to 20	mA	2 to 20	mA	+ 18 to +30	Volts	+ 18 to +30	Volts	100	Ω	100	Ω	+7 to +9	VDC	+7 to +9	VDC	0.3 to 1.5	Sec	0.3 to 1.5	Sec	Positive		Positive																					
2 to 20	mA	2 to 20	mA																																											
+ 18 to +30	Volts	+ 18 to +30	Volts																																											
100	Ω	100	Ω																																											
+7 to +9	VDC	+7 to +9	VDC																																											
0.3 to 1.5	Sec	0.3 to 1.5	Sec																																											
Positive		Positive																																												
Electrical Isolation, Case Ground To Mounting Surface		<table><tr><td>10</td><td>GΩ,min</td><td>10</td><td>GΩ,min</td></tr></table>	10	GΩ,min	10	GΩ,min			Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-3091A for more information.																																					
10	GΩ,min	10	GΩ,min																																											



21592 Marilla Street, Chatsworth, California 91311 Phone: 818.700.7818 Fax:818.700.7880 www.dytran.com
For permission to reprint this content, please contact info@dytran.com



21592 Marilla Street, Chatsworth, California 91311 Phone: 818.700.7818 Fax: 818.700.7880 www.dytran.com
 For permission to reprint this content, please contact info@dytran.com