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DWG NO 127-3184F SH 1 REV A

REVISIONS

REV.	ECN	DESCRIPTION	BY/DATE	CHK	APPR
A	14399	INITIAL RELEASE	DP 08/13/18	PA	LN

D

D

C

C

B

B

A

A

KEY

$\phi 1.10$  [27.94]

1.00 HEX [25.4]

PIN B GND 5

PIN A SIGNAL/PWR

4

3

1.97 [49.9]

1.37 [34.7]

DYTRAN 3184F XXXX

1/4-28 UNF-2B THREAD

6176 MOUNTING STUD (SUPPLIED)

$\phi .688$  [17.48]

**MOUNTING PREPARATION**  
PREPARE FLAT SURFACE (TO .001 TIR)  
TAP 1/4-28 UNF-2B  $\nabla .25$  [6.35]  
RECOMMENDED TORQUE: 12-15 LB-IN

MOUNTING SURFACE

IEPE CHARGE AMPLIFIER

PIEZO ELEMENT

EMI/RFI PROTECTION

A SIG/PWR

B GND

**SCHEMATIC**

5 GND PIN IS ISOLATED FROM CASE.

4 MS3102A10-4P CONNECTOR.

3 ARROW INDICATES DIRECTION OF ACCELERATION FOR POSITIVE OUTPUT.

2. HOUSING AND CONNECTOR MATERIAL: 300 SERIES S.S.

1. WEIGHT: 135 GRAMS, MAX

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

ORIG	DP	DATE
		07/26/18
CHK	PA	08/14/18
APP	LN	8/14/18

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION  
USA

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

TITLE: **OUTLINE/INSTALLATION DWG, MODEL 3184F**

SIZE	CAGE CODE	DWG NO	REV
B	2W033	127-3184F	A

SCALE: 3:2

SHEET 1 OF 1

172-0186 REV A

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<b>MODEL NUMBER</b> <b>3184F</b>	<b>PERFORMANCE SPECIFICATION</b>	<b>DOC NO.</b> <b>PS3184F</b>
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**SINGLE AXIS ACCELEROMETER, IEPE**

REV A, ECN 14399, 08/06/18



- INTERNALLY CASE ISOLATED
- EMI/RFI PROTECTION

**PHYSICAL**

Weight, Max  
Mounting Provision  
Connector (Mighty Mouse), side exit  
Material Body

	ENGLISH		SI	
Weight, Max	4.73	oz	135	grams
Mounting Provision	1/4-28		1/4-28	
Connector (Mighty Mouse), side exit	2 PIN	Type	2 PIN	
Material Body	300 SERIES S.S.	Material	300 SERIES S.S.	

**PERFORMANCE**

Sensitivity +/- 10% [1]  
Range F.S. For ± 5 Volts Output  
Frequency Range, ± 5%  
Frequency Range, ± 10%  
Element Resonant Frequency  
Equivalent Electrical Noise Floor  
Linearity [2]  
Transverse Sensitivity, Max.  
Strain Sensitivity @250µε

Sensitivity +/- 10% [1]	100	mV/g	10	mV/ m/s <sup>2</sup>
Range F.S. For ± 5 Volts Output	± 50	g pk	± 490.5	m/s <sup>2</sup> pk
Frequency Range, ± 5%	5 to 2000	Hz	5 to 2000	Hz
Frequency Range, ± 10%	3.3 to 2500	Hz	3.3 to 2500	Hz
Element Resonant Frequency	>15	kHz	>15	kHz
Equivalent Electrical Noise Floor	0.0005	g rms	0.005	m/s <sup>2</sup> rms
Linearity [2]	± 1	%F.S	± 1	%F.S
Transverse Sensitivity, Max.	5%		5%	
Strain Sensitivity @250µε	0.001	g/µε	0.01	m/s <sup>2</sup> /µε

**ENVIRONMENTAL**

Maximum Vibration  
Maximum Shock  
Temperature Range  
Seal  
Coefficient Of Thermal Sensitivity

Maximum Vibration	500	±gpk	4900	± m/s <sup>2</sup> pk
Maximum Shock	5000	±gpk	49000	± m/s <sup>2</sup> pk
Temperature Range	-40 to +160	°F	-40 to 71	°C
Seal	Hermetic		Hermetic	
Coefficient Of Thermal Sensitivity	0.002	%/°F	0.004	%/°C

**ELECTRICAL**

Supply Current [3]  
Compliance Voltage Range  
Output Impedance TYP  
Bias Voltage  
Discharge Time Constant  
Electrical Isolation [4]

Supply Current [3]	2 to 20	mA	2 to 20	mA
Compliance Voltage Range	+18 to +30	V	+18 to +30	V
Output Impedance TYP	100	Ω	100	Ω
Bias Voltage	10 to 11.5	VDC	10 to 11.5	VDC
Discharge Time Constant	0.1 to 0.4	sec	0.1 to 0.4	sec
Electrical Isolation [4]	10	GΩ	10	GΩ

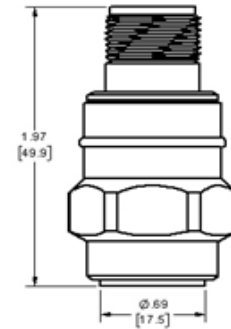
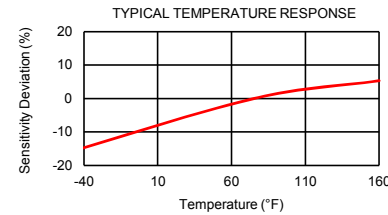
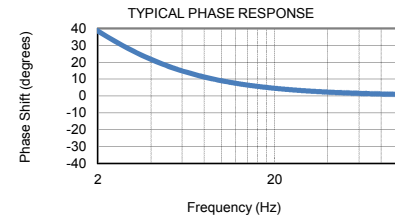
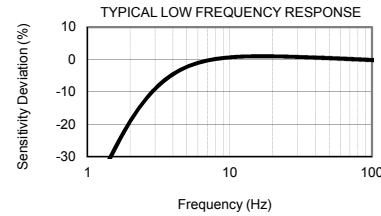
**This family also includes:**

Model	Sensitivity (mV/g)	Range (Gpeak)	Resolution (Grms)	Oper. Temp(°F)	TC

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

**Notes:**

- [1] Measured at 100Hz +/-1Hz, 1 grms per ISA RP 37.2.
- [2] Measured using zero-based best straight-line method, % of F.S. or any lesser range.
- [3] Do not apply power to this device without current limiting, 20 mA MAX. To do so will destroy the integral IC amplifier
- [4] Electrical ground isolated from sensor case.
- [5] In the interest of constant product improvement, we reserve the right to change specifications without notice.



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-3184F for more information.



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