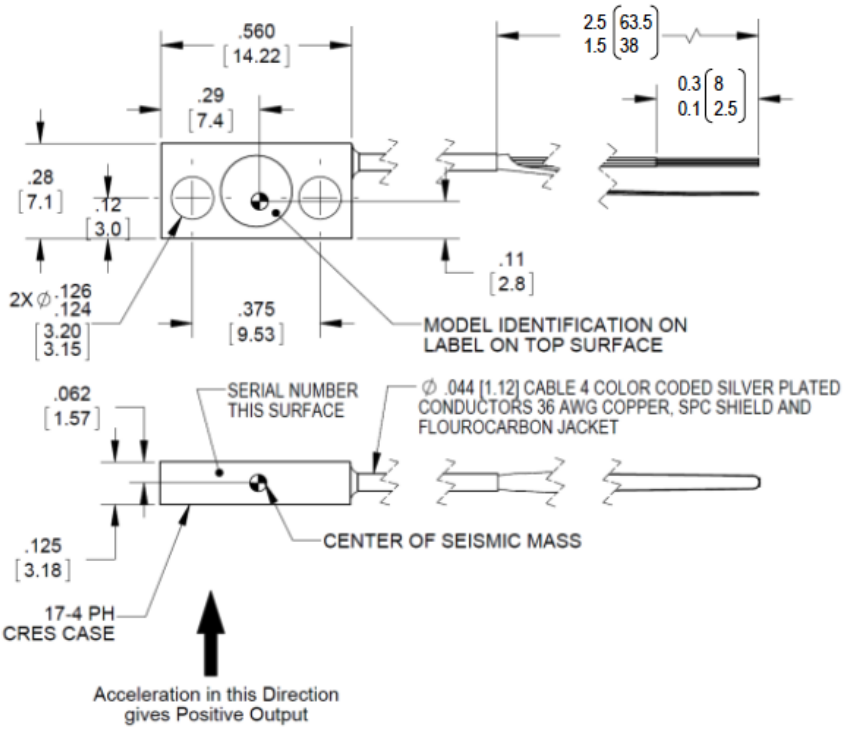
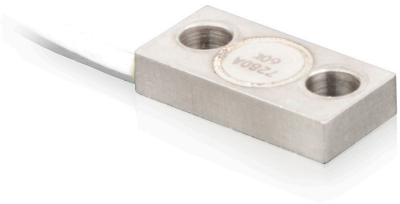
ENDEVCO
AN AMPHENOL COMPANY

Piezoresistive accelerometer

Model 7280A





STANDARD TOLERANCE

INCHES	[MILLIMETERS]
.XX = ± .03	[.X = ± .8]
.XXX = ± .010	[.XX = ± .25]

Key features

- 2k, 20k and 60k g ranges
- Damped for exceptional survivability
- DC response
- Low power consumption
- -55°C to +121°C operating temperature
- Minimal zero shift after shock

Description

Model 7280A is a family of rugged damped piezoresistive accelerometers designed for high amplitude acceleration, vibration and shock applications. The model 7280A features minimal mass loading, broad frequency response, and minimum zero shift during a shock event.

The model 7280A uses a unique micro-machined, piezoresistive sensor with gas damping to attenuate resonant amplitudes, and mechanical stops to reduce breakage under overload conditions. The monolithic sensor incorporates the latest MEMS technology for ruggedness, stability and reliability. The accelerometer features a four-active arm bridge circuit.

US patent 6,988,412 applies to this unit.

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All specifications are referenced at +75˚F (+24˚C) and 10 Vdc, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Specifications

Dynamic characteristics	Units	-2K	-20K	-60K
Range	g	±2000	±20,000	±60,000
Sensitivity (at 5000g)				
Minimum/Typ/Max at 10Vdc	µV/g	150 / 300 / 600	8.0 /1 6.0 / 24.0	2.5 / 5.0 / 7.5
Minimum/Typical/Maximum	µV/V/g	15 / 30 / 60	0.8 / 1.6 / 2.4	0.25 / 0.50 / 0.75
Frequency response				
± 1 dB	kHz	0 to 10	0 to 10	0 to 20
Natural frequency	kHz	25	100	130
Zero measurand output	mV/V	±20	±20	±20
Transverse sensitivity	%	3	3	3
Thermal zero shift (typ)				
-55 to 121°C	%FSO/°C	0.06	0.06	0.06
-67 to 250°F	%FSO/°F	0.033	0.033	0.033
Thermal sensitivity shift (typ)				
-55 to 121°C	%/°C	-0.2	-0.2	-0.2
-67 to 250°F	%/°F	-0.11	-0.11	-0.11
Electrical characteristics				
Excitation	Vdc	2 to 12 (10 standard)		
Resistance				
input	Ω	6500 ±2000	6500 ±2500	6500 ±2500
output	Ω	6500 ±2000	6500 ±2500	6500 ±2500
Isolation resistance		100 MΩ min at 50 VDC between leads (shorted together) and cable shield or case.		
Physical characteristcs				
Case material		17-4 CRES		
Weight (excluding cable)		1.4 grams		
Cable		(4) 36 AWG SPC, shield, FEP jacket; cable weight 0.04 oz/ft (1.13 g/ft)		
Mounting		4-40 high strength screws (x2) Recommended mounting torque, 8 ± 2 lbf-in (0.9 N-m)		
Environmental characteristics				
Shock Limit	g	±10,000	±80,000	±240,000
Temperature				
Operating	°C (F°)	- 55 to + 121 (- 67 to + 250)		
Storage	°C (F°)	- 55 to + 121 (- 67 to + 250)		
Calibration data				
		Data for sensitivity, ZMO, input and output resistance are supplied on the calibration certificate. Unless specified by the customer at time of order, the default calibration will be performed at 10.0 Vdc excitation.		

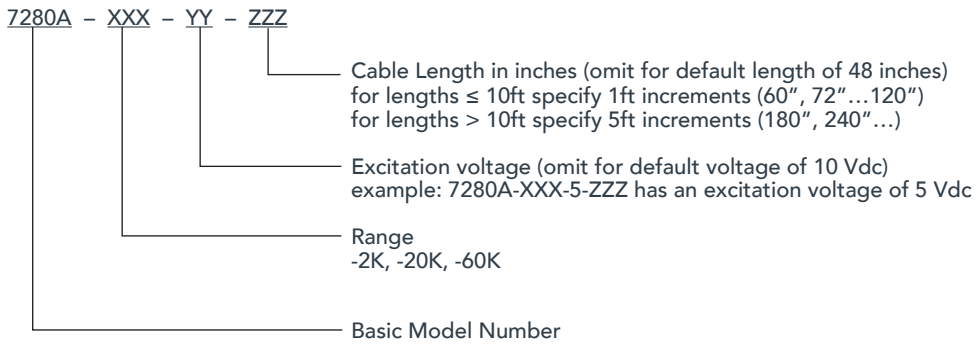
Accessories		
Options	**Description**	**7280A**
EH137	[2] 4-40 high high strength screws	Included
EHW265	[2] No. 4 washers	Included
7970	Triaxial mounting block	Optional
31167	Mounting plate (10-32 stud adaptor)	Optional

Options	
Options	**Description**
M4	1/4 - 28 stud mount package
M7	Ruggedized with low noise cable
-Z	Noise monitor with fixed resistors

Notes

1. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.

2. Model number definition:



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