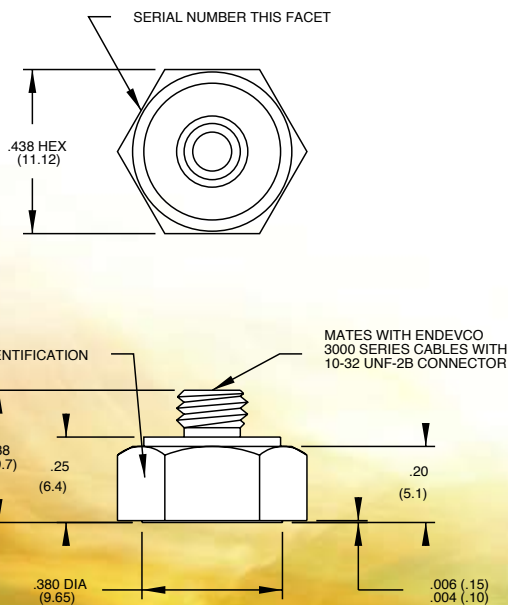


Model 2256A Isotron[®] accelerometer

Features

- Low impedance output
- Light weight (5 gm)
- Hermetically sealed
- Milli-g's resolution
- Adhesive mounting
- Ground isolated



STANDARD TOLERANCE
INCHES (MILLIMETERS)
.XX = +/- .02 (X = +/- .5)
.XXX = +/- .010 (XX = +/- .25)

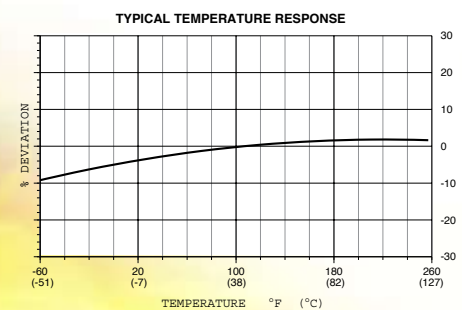
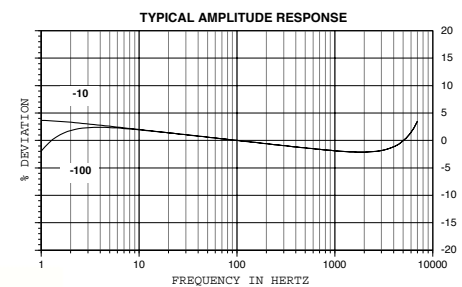
Description

The Endevco[®] Model 2256A is a small, hermetically sealed piezoelectric accelerometer with integral electronics, designed specifically for measuring vibration on small structures. The transducer features a hermetically sealed 10-32 top connector, and has a titanium hex base designed for adhesive mounting. Its light weight (5 gm) effectively minimizes mass loading effects.

The Model 2256A features Endevco's Piezite[®] Type P-8 crystal element, operating in annular shear mode, which exhibits excellent output sensitivity stability over time. The Model 2256A features Endevco's Piezite[®] Type P-8 crystal element, operating in annular shear mode, which exhibits excellent output sensitivity stability over time.

This accelerometer incorporates an internal low noise hybrid signal conditioner, using a two-wire system, which transmits its low impedance voltage output through the same cable that supplies the required constant current power. Signal ground is isolated from the mounting surface of the unit. A model number suffix indicates acceleration sensitivity in mV/g; i.e., 2256A-10 features output sensitivity of 10 mV/g.

Endevco signal conditioner Models 4416B, 133, 2792B, 2793, 2775A or Oasis 2000 computer-controlled system are recommended for use with this accelerometer.



Model 2256A Isotron[®] accelerometer

Endevco

SPECIFICATIONS

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C), 4 mA, and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

DYNAMIC CHARACTERISTICS	Units	-10	-100
RANGE	g	±500	±50
VOLTAGE SENSITIVITY	mV/g	10	100
±10%			
FREQUENCY RESPONSE	See Typical Amplitude Response		
RESONANCE FREQUENCY	kHz	25	
AMPLITUDE RESPONSE	Hz	1 to 10K	
±1 dB			
TEMPERATURE RESPONSE	See Typical Curve		
TRANSVERSE SENSITIVITY	%	≤ 5	
AMPLITUDE LINEARITY	%	≤ 1 to full scale	

OUTPUT CHARACTERISTICS

OUTPUT POLARITY	Acceleration directed into base of unit produces positive output		
DC OUTPUT BIAS VOLTAGE	Vdc	+8.5 to +11.5	
OUTPUT IMPEDANCE	Ω	≤ 200	
FULL SCALE OUTPUT VOLTAGE	V	±5	
RESIDUAL NOISE	equiv. g rms	0.002	0.0008
2 Hz to 30 kHz, broadband			
OVERLOAD RECOVERY	μ sec	≤ 10	
GROUNDING	Signal ground connected to inner case but isolated from outer housing		

POWER REQUIREMENT

SUPPLY VOLTAGE	Vdc	+18 to +24
SUPPLY CURRENT	mA	+2 to +10
WARM-UP TIME	sec	< 5
To within 10% of final bias		

ENVIRONMENTAL CHARACTERISTICS

TEMPERATURE RANGE	-67°F to +257°F (-55°C to +125°C)		
HUMIDITY	Hermetic		
SINUSOIDAL VIBRATION LIMIT	g pk	1000	1000
SHOCK LIMIT [1]	g pk	2000	2000
BASE STRAIN SENSITIVITY	equiv. g pk/μstrain	0.0008	
THERMAL TRANSIENT SENSITIVITY	equiv. g pk/°F (°C)	0.1 (0.180)	
ELECTROMAGNETIC SENSITIVITY	equiv. g rms/gauss	0.0001	

PHYSICAL CHARACTERISTICS

DIMENSIONS	See Outline Drawing		
WEIGHT	gm (oz)	5 (0.18)	
CASE MATERIAL	Stainless steel case, titanium hex housing		
CONNECTOR	Coaxial, 10-32 thread, mates with Endevco 3000 Series Cable		
MOUNTING [3]	Flat finish provided for adhesive mounting		

CALIBRATION

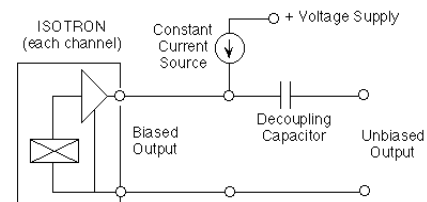
SUPPLIED:			
SENSITIVITY	mV/g		
MAXIMUM TRANSVERSE SENSITIVITY	%		
FREQUENCY RESPONSE	%	20 Hz to 10 kHz	10 kHz to 50 kHz
	dB		

ACCESSORY

Model 3061A-120 (10 ft) CABLE ASSEMBLY [2]

NOTES

- Short duration shock pulses, such as those generated by metal-to-metal impacts, may excite transducer resonance and cause linearity errors. Send for TP290 for more details.
- Flexible cable, such as the supplied 3060A, should be used to minimize cable-strain errors.
- Depending on the dynamic and environmental requirements, adhesives such as petro-wax, hot-melt glue, and cyanoacrylate epoxy (super glue) may be used to mount the accelerometer temporarily to the test structure. An adhesive mounting kit (P/N 31849) is available as an option from Endevco.



Continued product improvement necessitates that Endevco reserve the right to modify these specifications without notice. Endevco maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. These measures, together with conservative specifications have made the name Endevco synonymous with reliability.

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extreme environments