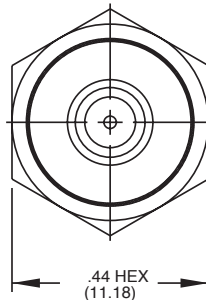
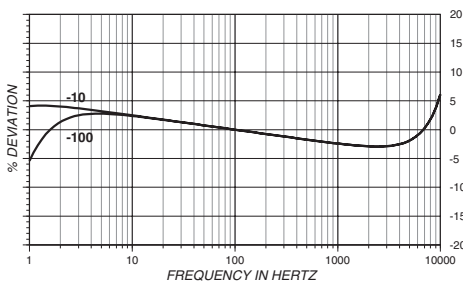


# Isotron<sup>®</sup> accelerometer

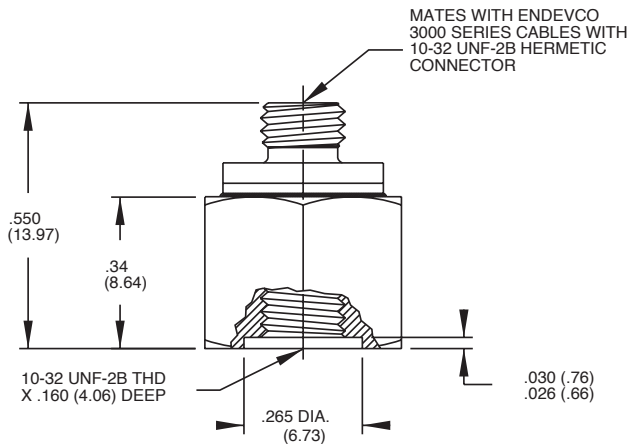
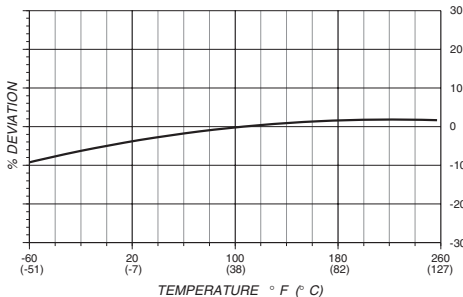
## Model 256HX -10,-100



TYPICAL AMPLITUDE RESPONSE



TYPICAL TEMPERATURE RESPONSE



### Key features

- Light weight (4 gm)
- Hermetically sealed
- Milli-g's resolution
- Low cost, modal ready
- Stud mount capability for vibration measurements on small structure vibration

The Endevco<sup>®</sup> model 256HX is a small piezoelectric accelerometer with integral electronics, designed specifically for making modal and other vibration measurements on small structures. The transducer is designed for stud mounting and its case ground is isolated from the mounting surface. The hermetically sealed top connector and welded housing provide long-term reliability even in harsh environment. Its light weight (4 gm) effectively minimizes mass loading effects.

The model 256HX features Endevco's unique Piezite<sup>®</sup> Type P-8 crystal element, operating in annular shear mode, which exhibits excellent thermal transients stability. This accelerometer uses a built-in low noise microelectronic amplifier which transmits its low impedance voltage output through the same two-wire cable that supplies the required constant current power. A model suffix indicates output sensitivity in mV/g, i.e., 256HX-10 features output sensitivity of 10 mV/g.

Endevco signal conditioner models 4416B, 133, 2793, 2775B, 4999, 6634C or Oasis 2000 Computer-Controlled System are recommended for use with this accelerometer (4990A-X with cards 428 and/or 433).

# Isotron<sup>®</sup> accelerometer

## Model 256HX -10,-100

### Specifications

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C), 24 Vdc supply, 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 (±10%)	mV/g	10	100
Frequency response		See typical amplitude response	
Resonance frequency (typical)	kHz	25	25
Amplitude response (±10%)	Hz	1 to 10 000	1 to 10 000
Temperature response		See typical curve	
-67°F (-55°C) max	%	-15	-15
+257°F (+125°C) max	%	+5	+5
Transverse sensitivity	%	≤ 5	≤ 5
Amplitude linearity	%	≤ +1 to full scale	≤ +1 to full scale
<b>Output characteristics</b>			
Output polarity		Acceleration directed inot base of unit produces positive output	
DC output bias voltage, typical	Vdc	+12.3 to +13.5	+12.3 to +13.5
-67°F to +257°F (-55°C to +125°C)	Vdc	+7.0 to +16.0	+7.0 to +16.0
Output impedence	Ω	≤ 200	≤ 200
Output connection		See connection diagram	
Full scale output voltage	V	±5	±5
Residual noise [5 Hz to 10 kHz, broadband]			
typical	equiv. g rms	0.001	0.0003
maximum	equiv. g rms	≤ 0.002	≤ 0.0005
Overload recovery	μsec	≤ 45	≤ 45
Grounding		Signal ground connects to inner case, and isolated from outer housing	
<b>Power requirement</b>			
Supply voltage	Vdc	+23 to +30	+23 to +30
Supply current	mA	+2 to +20	+2 to +20
Warm-up time [to within 10% of final bias]	sec	8	8
Stray voltage output [with 10 V rms at 100 Hz applied to the mounting surface]	equiv. g	≤ 0.001	≤ 0.001
<b>Environmental characteristics</b>			
Temperature range		-67°F to +257°F (-55°C to +125°C)	
Humidity		Hermetically sealed	
Sinusoidal vibration limit	g	1000	1000
Shock limit	g	2000	2000
Base strain sensitivity	equiv. g / μ strain	0.0008	0.0008
Thermal transient sensitivity	equiv. g /°F [ /°C]	0.5 [0.9]	0.5 [0.9]
Electromagnetic sensitivity	equiv. g rms/gauss	0.0001	0.00001
<b>Physical characteristics</b>			
Dimensions		See outline drawing	
Weight	oz [gm]	0.14 [4.0]	0.14 [4.0]
Case material		Titanium alloy connector, stainless steel inner housing, anodized aluminum outer case	
Connector		Coaxial, 10-32 thread mates with Endevco 3000 series cable	
Mounting		Internal 10-32 UNF-2B for stud mounting	
Maximum mounting torque	lbf-in [Nm]	12 [1.4]	12 [1.4]
<b>Supplied calibration</b>			
Sensitivity	mV/g		
Maximum transverse sensitivity	%		
Frequency response	%	20 Hz to 10 kHz	20 Hz to 10 kHz
	dB	10 kHz to 40 kHz	10 kHz to 40 kHz

# Isotron® accelerometer

## Model 256HX -10,-100

### Accessories

Product	Description	256HX-10-100
2981-12	Mounting stud, 10-32, Hex ID	Included
EHM464	Wrench, Hex key	Included
3061A-120	Cable assembly, 10 ft	Included
2981-3	Stud, 10-32 adapter	Optional
133	Signal conditioner	Optional
2775B	Signal conditioner	Optional
2793	Isotron signal conditioner	Optional
4416B	Signal conditioner	Optional
4999	Signal conditioner	Optional
6634C	Signal conditioner	Optional
4990A-X	OASIS 2000 computer-controlled system with cards 428 and/or 433	Optional

### Notes:

1. Maintain high levels of precision and accuracy using Endeveco's factory calibration services. Call Endeveco'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.

### Contact

#### ENDEVCO

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