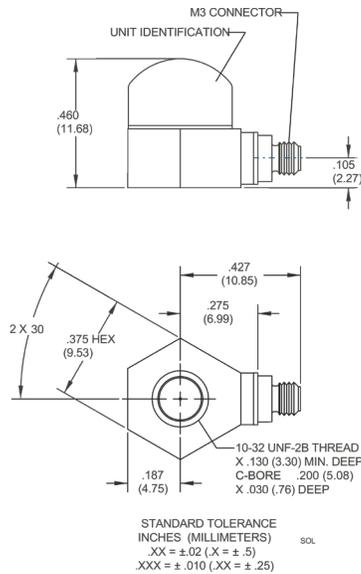


# Isotron<sup>®</sup> accelerometer

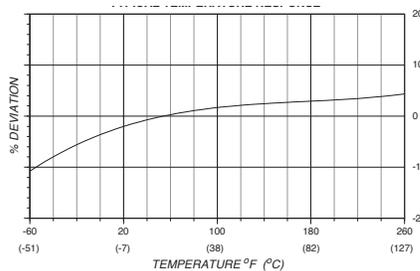
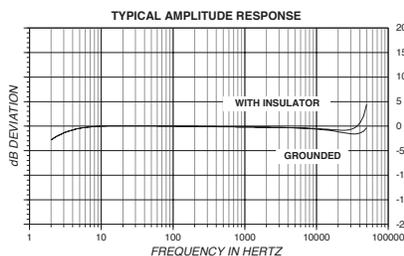
## Model 7259B



Model 7259B is a miniature, light weight piezoelectric accelerometer with integral electronics, designed specifically for high frequency vibration measurement on structures and objects. Its unique sensor design allows for high seismic resonance and ruggedness. The unit is hermetically sealed against environmental contamination, and its light weight (4.6 gm) effectively minimizes mass loading effects.

7259B features Endevco's Piezite<sup>®</sup> type P-8 crystal element, operating in annular shear mode, which exhibits low base strain sensitivity, wide bandwidth, and excellent output stability over time. This accelerometer incorporates a low noise internal hybrid signal conditioner in 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 connected to the outer case of the unit which acts as a shield for its low impedance output. When used with one of the supplied isolated mounting studs, the accelerometer is electrically isolated from ground. A specially designed, low-noise coaxial cable is supplied for error-free operation. A model number suffix indicates acceleration sensitivity in mV/g; i.e., 7259B-10 features output sensitivity of 10 mV/g.

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



### Key features

- High frequency measurement
- Wide bandwidth (flat to 30 kHz)
- Light weight (4.6 gm)
- Outstanding S/N
- Hermetically sealed
- Low-profile

# Isotron<sup>®</sup> accelerometer

## Model 7259B

### Specifications

The following performance specifications conform to ISA-RP-37.2 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	-25	-100
Range	g	±500	±200	±50
Voltage sensitivity				
Typical	mV/g	10.0	25.0	100.0
Frequency response			See Typical Amplitude Response	
Resonance frequency	kHz		90	
Amplitude response (typical)				
±1dB	Hz		5 to 10 000	
±2dB	Hz		1 to 30 000	
Transverse sensitivity	%		≤ 5	
Amplitude linearity [1]	%		1 to full scale	
<b>Output characteristics</b>				
Output polarity		Acceleration directed into base of unit produces positive output		
DC output bias voltage	Vdc	+8.5 to +11.5	+8.5 to +11.5	+12.3 to +13.5
Output impedance	Ω		≤ 200	
Full scale output voltage	V		±5	
Residual noise (typical)	equiv. g rms	0.0015	0.0015	0.0002
1 Hz to 10 kHz				
Overload recovery	μ sec	≤ 10		
Grounding			Signal ground connected to case	
Isolation			Case may be isolated from structure by adhesive or use of supplied isolation adaptors	
<b>Power requirement</b>				
Supply voltage	Vdc		+23 to +30	
Supply current	mA		+2 to +20	
Warm up time	Sec		≤ 5	
To within 10% of final bias				
<b>Environmental characteristics</b>				
Temperature range	°F (°C)		-67 to +257 (-55 to +125)	
Humidity			Hermetically sealed	
Sinusoidal vibration limit	g pk	1000	800	500
Shock limit	g pk	5000	5000	2000
Base strain sensitivity				
With 2980M12 & 2980M13	equiv. g pk/μ strain		0.001	
With 2981-11 mounting stud	equiv. g pk/μ strain		0.01	
Thermal transient sensitivity	equiv. g pk/°F (°C)		0.2	
Electromagnetic sensitivity	equiv. g rms/gauss	0.003	0.0015	0.0001
<b>Physical characteristics</b>				
Dimensions			See Outline Drawing	
Weight	gm (oz)		4.6 (1.6)	
Case material			Stainless steel	
Connector			M3 x 0.5 6H thread, glass	
Mounting torque	lbf-in (Nm)		18 (2)	
With Model 2981-11				
<b>Calibration</b>				
Voltage sensitivity	mV/g			
Frequency response	dB		20 Hz to 50 kHz	
Maximum transverse sensitivity	%			

# Isotron<sup>®</sup> accelerometer

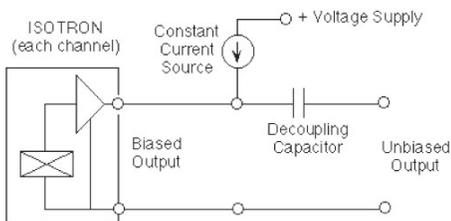
## Model 7259B

### Accessories

Product	Description	7259B	7259B-R
3053VM1-120	Cable assembly, TPE, 10 ft	Included	Optional
2980M13	Adapter, isolated, adhesive	Included	Optional
2980M12	Adapter, isolated, 10-32 thread	Included	Optional
2981-11	Stud, 10-32 thread	Included	Optional

### Notes

1. 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.
2. 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

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