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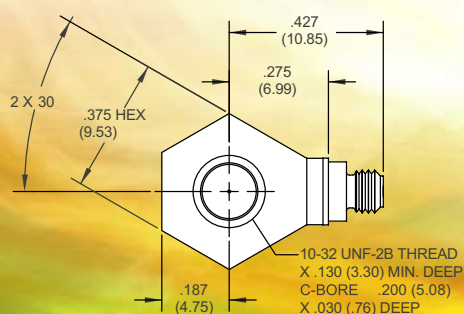
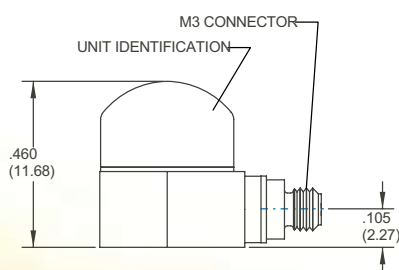
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Model 7259B Isotron® accelerometer

Features

- High frequency measurement
- Wide bandwidth (flat to 30 kHz)
- Light weight (4.6 gm)
- Outstanding S/N
- Hermetically sealed
- High frequency, low-profile vibration and shock application



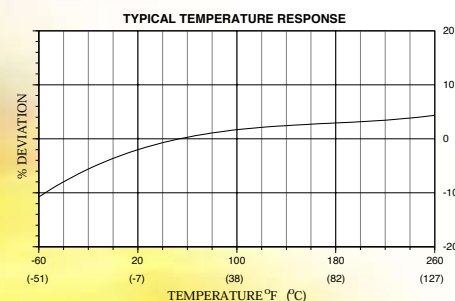
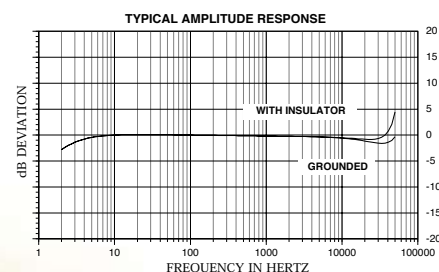
STANDARD TOLERANCE
INCHES (MILLIMETERS)
XX = ±.02 (X = ±.5)
XXX = ±.010 (XX = ±.25)

Description

The Endevco® 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.

The model 7259B features Endevco's Piezite® 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, 133, 2792B, 2793, 2775B or Oasis 2000 computer-controlled system are recommended for use with this accelerometer.



Model 7259B 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	-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		
TEMPERATURE RESPONSE		See Typical Curve		
TRANSVERSE SENSITIVITY	%	≤ 5		
AMPLITUDE LINEARITY [1]	%	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	+12.3 to +13.5	
OUTPUT IMPEDANCE	Ω	≤ 200		
FULL SCALE OUTPUT VOLTAGE	V	±5		
RESIDUAL NOISE 1 Hz to 10 kHz	equiv. g rms (typ.)	0.0015	0.0015	0.0002
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			

POWER REQUIREMENT

SUPPLY VOLTAGE	Vdc	+23 to +30
SUPPLY CURRENT	mA	+2 to +20
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		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

PHYSICAL CHARACTERISTICS

DIMENSIONS		See Outline Drawing
WEIGHT	gm (oz)	4.6 (.16)
CASE MATERIAL		Stainless steel
CONNECTOR		M3 x 0.5 6H thread, glass
MOUNTING TORQUE	lbf-in (Nm)	18 (2)
With Model 2981-11		

CALIBRATION

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

INCLUDED ACCESSORIES

Model 3053VM1-120 (10 ft.) CABLE ASSEMBLY, versaFlex
 Model 2980M13 ADAPTER, ISOLATION
 Model 2980M12 ADAPTER, ISOLATION 10-32 Thd
 Model 2981-11 STUD, 10-32 Adapter

OPTIONAL ACCESSORIES

Model 3053HM1-120 CABLE ASSEMBLY, hyperFlex

2. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 800-982-6732 for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.

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.

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.

