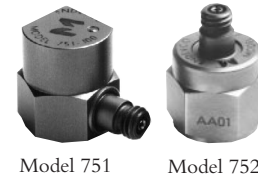


# ISOTRON<sup>®</sup> Accelerometer

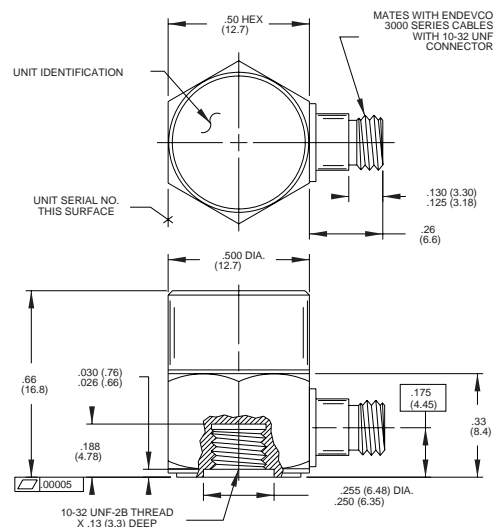
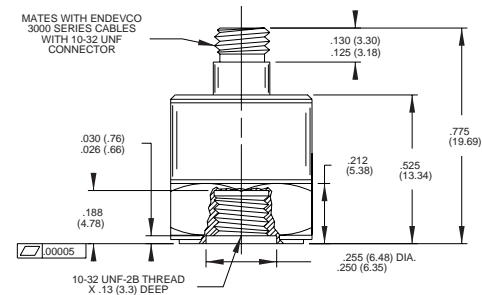
## Model 751-10, -100, -500 752-10, -100, -500

- Low Cost, High Performance
- Low Impedance Output
- Outstanding Dynamic Range
- Light Weight (7.8 gm to 11.6 gm)
- Wide Bandwidth, Annular Shear
- Hermetically Sealed, Rugged

**ENDEVCO  
MODEL  
751, 752  
-10  
-100  
-500**



Actual size



STANDARD TOLERANCE  
INCHES (MILLIMETERS)  
XX = +/- .03 (X = +/- .02)  
.XXX = +/- .010 (XX = +/- .25)

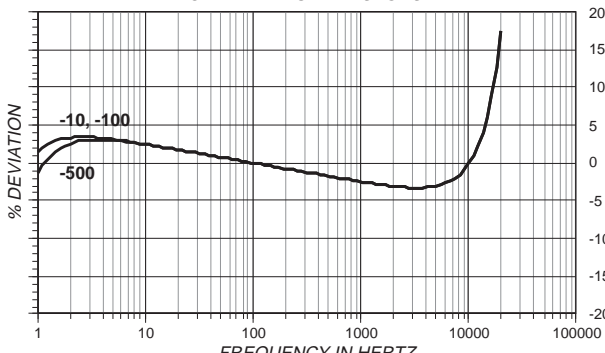
### DESCRIPTION

The ENDEVCO<sup>®</sup> Models 751/752 are low-cost, light-weight piezoelectric accelerometers with integral electronics, designed specifically for measuring vibration on small structures. These units are hermetically sealed against environmental contamination. They feature high output sensitivity, high signal-to-noise ratio, and wide bandwidth. Model 751/752 are the best value in accelerometers on the market today.

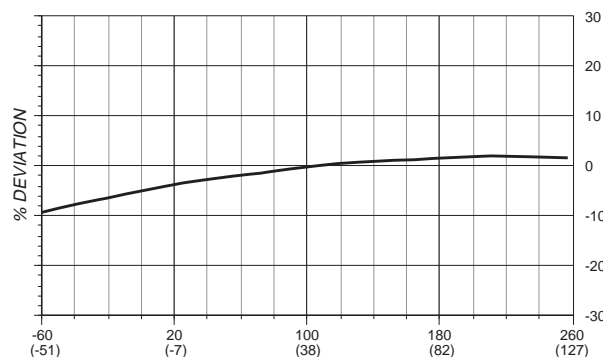
The Model 751/752 feature ENDEVCO's PIEZITE<sup>®</sup> Type P-8 crystal element, operating in annular shear mode, which exhibits low base strain sensitivity and excellent output stability over time. This line of accelerometer incorporates an internal hybrid signal conditioner in a two-wire system, which transmits its low impedance voltage output through the same cable that supplies the constant current power. Signal ground is connected to the outer case of the unit. When used with an isolated mounting stud, it can be electrically isolated from ground. Models 751 and 752 offer side and top connector configurations respectively. A model number suffix indicates acceleration sensitivity in mV/g; i.e., 751-100 features output sensitivity of 100 mV/g.

ENDEVCO Signal Conditioner Models 133, 2792B, 2793, 2775A, 2776, or 4416B are recommended for use with these accelerometers.

TYPICAL AMPLITUDE RESPONSE



TYPICAL TEMPERATURE RESPONSE



**ENDEVCO  
MODEL  
751, 752  
-10  
-100  
-500**

# ISOTRON® Accelerometer

## 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	-500
RANGE	g	±500	±50	±10
VOLTAGE SENSITIVITY, ±10% [1]	mV/g	10	100	500
FREQUENCY RESPONSE				
Resonance Frequency	kHz	50	50	25
Amplitude Response				
±5%	Hz	1 to 15 000	1 to 15 000	1 to 7000
±1dB	Hz	.5 to 17 000	.5 to 17 000	.5 to 9000
TRANSVERSE SENSITIVITY	%	≤ 5		
TEMPERATURE RESPONSE		See Typical Curve		
AMPLITUDE NONLINEARITY, to F.S. [2]	%	1		

## OUTPUT CHARACTERISTICS

OUTPUT POLARITY	Acceleration directed into base produces positive output			
DC OUTPUT BIAS VOLTAGE	Vdc	+8.5 to +11.5		
OUTPUT IMPEDANCE	Ω	≤ 120		
FULL SCALE OUTPUT VOLTAGE	V	±5		
RESIDUAL NOISE	equiv. g rms	0.0005	0.0003	0.0001
OVERLOAD RECOVERY	μs	≤ 10		
GROUNDING	Signal ground connected to case			

## POWER REQUIREMENT

COMPLIANCE VOLTAGE	Vdc	+18 to +24
SUPPLY CURRENT	mA	+2 to +10
WARM-UP TIME	sec	< 2

## ENVIRONMENTAL CHARACTERISTICS

TEMPERATURE RANGE	-67°F to +257°F (-55°C to +125°C)		
HUMIDITY	Hermetically sealed		
SINUSOIDAL VIBRATION LIMIT	g pk	500	200
SHOCK LIMIT	g pk	5000	1000
BASE STRAIN SENSITIVITY	equiv. g pk/μ strain	0.0005	
THERMAL TRANSIENT SENSITIVITY	equiv. g pk/°F (°C)	0.01 (0.02)	
ELECTROMAGNETIC SENSITIVITY	equiv. g rms/gauss	0.0002	

## PHYSICAL CHARACTERISTICS

DIMENSIONS	See Outline Drawing		
WEIGHT	gm (oz)	7.8 (0.25)	11.6 (0.41)
CASE MATERIAL	Titanium alloy		
CONNECTOR	10-32 receptacle (751 - side, 752 - top)		
MOUNTING TORQUE	lbf-in (Nm)	18 (2)	

## CALIBRATION

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

## ACCESSORIES

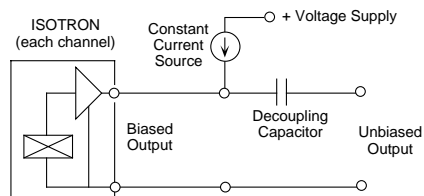
Model 2981-3 MOUNTING STUD, 10-32 to 10-32  
 Model 3061-120 (10 ft) CABLE ASSEMBLY

## OPTIONAL ACCESSORIES

Model 2980M4 INSULATED MOUNTING STUD, 10-32 to 10-32  
 Model 2950 TRIAXIAL MOUNTING BLOCK

## NOTES

- ±5% sensitivity on special order.
- 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.
- 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.



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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