ISOTRON® Accelerometer

Model 7254A-10, -100 and -500

- **Outstanding Dynamic Range**
- **Wide Bandwidth, Annular Shear**
- **Hermetically Sealed, Rugged**
- **Best Value in Accelerometers**
- **General Purpose Vibration Measurements**

ENDEVCO
MODEL
7254A-10
-100
-500



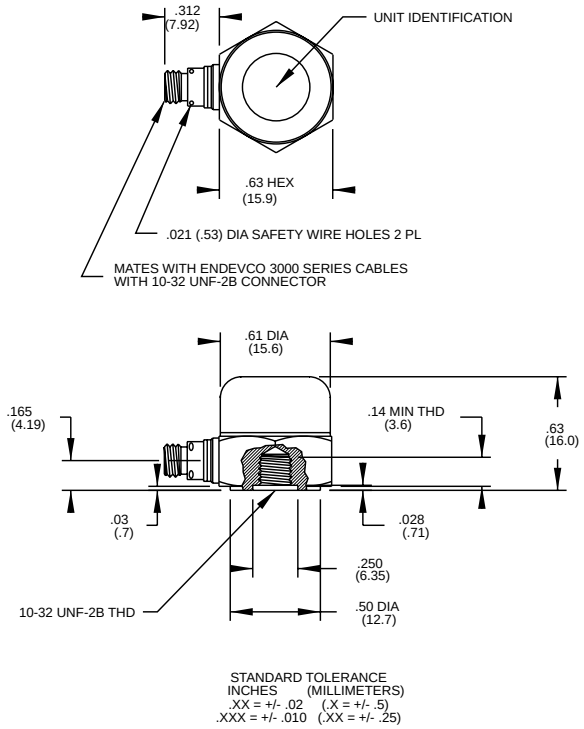
Actual size

DESCRIPTION

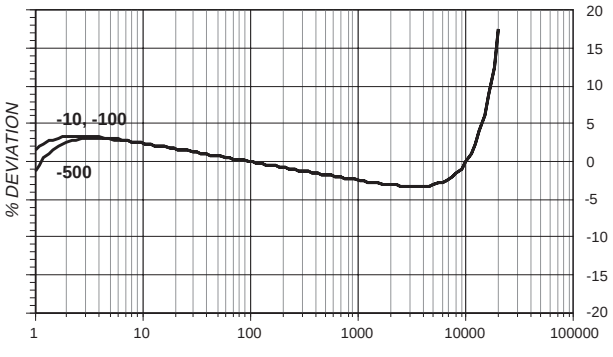
The ENDEVCO® Model 7254A is a small and rugged piezoelectric accelerometer with integral electronics, designed specifically for measuring vibration on structures and objects. The unit is hermetically sealed against environmental contamination, features high output sensitivity, high signal-to-noise ratio, and wide bandwidth. It offers outstanding value at a very reasonable price.

The Model 7254A features ENDEVCO's PIEZITE® Type P-8 crystal element, operating in annular shear mode, which exhibits low base strain sensitivity and excellent output stability over time. This 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. A model number suffix indicates acceleration sensitivity in mV/g; i.e., 7254A-100 features output sensitivity of 100 mV/g.

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

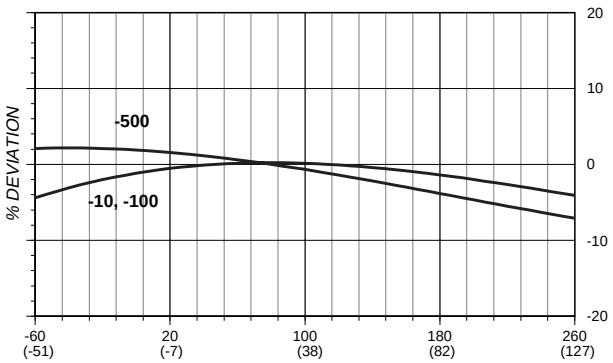


TYPICAL AMPLITUDE RESPONSE



FREQUENCY IN HERTZ

TYPICAL TEMPERATURE RESPONSE



TEMPERATURE ºF (ºC)

ENDEVCO
MODEL
7254A-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, Typical [1]	mV/g	10	100	500
FREQUENCY RESPONSE				
Resonance Frequency	kHz		45	
Amplitude Response, [2]				
±5%	Hz		1 to 10 000	
±1dB	Hz		.5 to 15 000	
TRANSVERSE SENSITIVITY	%		≤ 5	
TEMPERATURE RESPONSE			See Typical Curve	
AMPLITUDE NONLINEARITY, to F.S. [3]	%	1	1	2

OUTPUT CHARACTERISTICS				
OUTPUT POLARITY			Acceleration directed into base produces positive output	
DC OUTPUT BIAS VOLTAGE	Vdc		+11.3 to +12.7	
OUTPUT IMPEDANCE	Ω		≤ 100	
FULL SCALE OUTPUT VOLTAGE	V		±5	
RESOLUTION .5 to 15kHz	equiv. g rms	0.002	0.0005	0.0003
OVERLOAD RECOVERY	µs		≤ 10	
GROUNDING			Signal ground connected to case	

POWER REQUIREMENT		
COMPLIANCE VOLTAGE	Vdc	+20 to +24
SUPPLY CURRENT	mA	+2 to +10
WARM-UP TIME	sec	< 5

ENVIRONMENTAL CHARACTERISTICS				
TEMPERATURE RANGE			-67°F to +257°F (-55°C to +125°C)	
HUMIDITY			Hermetically sealed	
SINUSOIDAL VIBRATION LIMIT	g pk	500	200	50
SHOCK LIMIT	g pk	5000	5000	1000
BASE STRAIN SENSITIVITY	equiv. g pk/µ strain		0.005	
THERMAL TRANSIENT SENSITIVITY	equiv. g pk/°F (/°C)		0.02 (0.036)	
ELECTROMAGNETIC SENSITIVITY	equiv. g rms/gauss		0.00004	

PHYSICAL CHARACTERISTICS		
DIMENSIONS		See Outline Drawing
WEIGHT	gm (oz)	20 (0.7)
CASE MATERIAL		Stainless Steel
CONNECTOR		10-32 receptacle, side mounted, mates with Endevco 3000 Series Cable
MOUNTING TORQUE	lbf-in (Nm)	18 (2)

CALIBRATION	
SUPPLIED:	
VOLTAGE SENSITIVITY	mV/g
MAXIMUM TRANSVERSE SENSITIVITY	%
FREQUENCY RESPONSE	%

ACCESSORIES

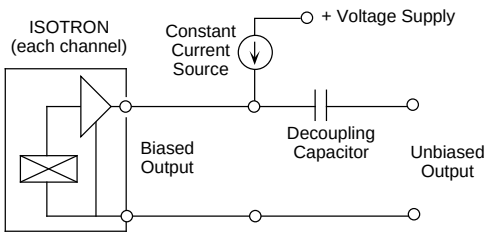
Model 2981-12	MOUNTING STUD, 10-32 TO 10-32
Model 3061-120 (10 ft)	CABLE ASSEMBLY
EHM 464	WRENCH, HEX KEY

OPTIONAL ACCESSORIES

Model 2950	TRIAXIAL MOUNTING BLOCK
Model 2980M9	INSULATED MOUNTING STUD, 10-32 to 10-32

NOTES

1. ±5% sensitivity on special order.
2. ±5% to 1 Hz available with special orders.
3. 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.
4. 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.





Model 133
3-Channel Signal
Conditioner

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.

INTERTECHNOLOGY INC.
1-800-465-1600
1 Scarsdale Road
Don Mills, ON M3B 2R2
Tel: 416-445-5500
Fax: 416-445-1170
E-Mail: sales@intertechnology.com