

ISOTRON® Accelerometer

**ENDEVCO
MODEL
750**

Model 750

- Low Impedance Output
- Outstanding Dynamic Range
- Hermetically Sealed, Rugged
- Low Cost, Best Value
- Wide Bandwidth Capability for General Purpose Vibration Measurements



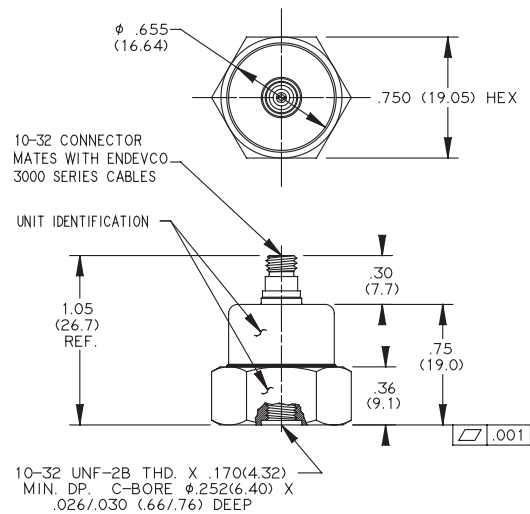
Actual size

DESCRIPTION

The ENDEVCO® Model 750 is a low-cost piezoelectric accelerometer with integral electronics, designed specifically for general purpose vibration measurements. The unit offers 100 mV/g output sensitivity, high signal-to-noise ratio, and wide bandwidth. To enhance reliability, the accelerometer is hermetically sealed against environmental contamination. Signal ground is electrically isolated from the mounting surface to prevent ground loop problems. The Model 750 ISOTRON accelerometer represents the best value in vibration sensor today.

The Model 750 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. A built-in low-pass filter in the microelectronics circuit suppresses most spurious output from the sensor in case of accidental seismic resonance.

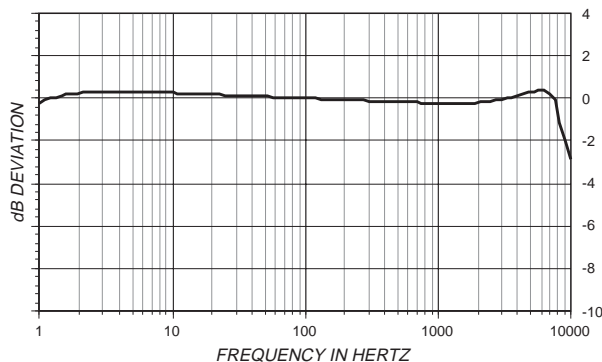
ENDEVCO Signal Conditioner Models 133, 2792B, 2793, 2775A, 2776, or 4416B are recommended for use with these accelerometers.



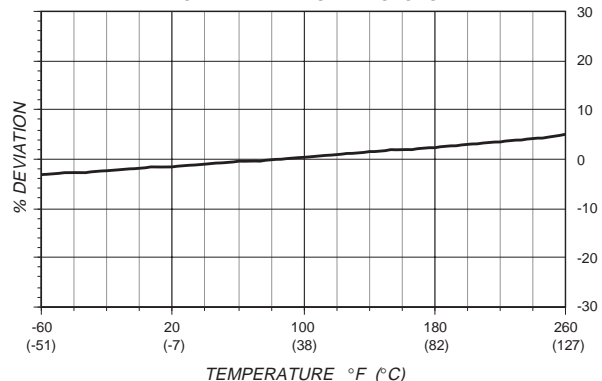
STANDARD INCHES	TOLERANCE (MILLIMETERS)
.XX = +/- .03	(X = +/- .8)
.XXX = +/- .010	(.xx = +/- .25)

CAD FILE: 8M

TYPICAL AMPLITUDE RESPONSE



TYPICAL TEMPERATURE RESPONSE



ENDEVCO MODEL 750

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	
RANGE	g	±80
VOLTAGE SENSITIVITY, ±20% [1]	mV/g	100
FREQUENCY RESPONSE		
Resonance Frequency	kHz	25
Amplitude Response		
±5%	Hz	5 to 4000
±1dB	Hz	3 to 6000
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	+12.5 to +13.5
OUTPUT IMPEDANCE	Ω	50
FULL SCALE OUTPUT VOLTAGE	V	±8
RESOLUTION 3 to 6 kHz	equiv. g rms	0.0005
OVERLOAD RECOVERY	μs	≤ 10
GROUNDING		Signal ground isolated from mounting surface

POWER REQUIREMENT

COMPLIANCE VOLTAGE	Vdc	+20 to +28
SUPPLY CURRENT	mA	+2 to +10
WARM-UP TIME	sec	< 1

ENVIRONMENTAL CHARACTERISTICS

TEMPERATURE RANGE		-58°F to +250°F (-55°C to +125°C)
HUMIDITY		Hermetically sealed
SINUSOIDAL VIBRATION LIMIT	g pk	500
SHOCK LIMIT	g pk	5000
BASE STRAIN SENSITIVITY	equiv. g pk/μ strain	0.002
THERMAL TRANSIENT SENSITIVITY	equiv. g pk/°F (°C)	0.08 (0.13)
ELECTROMAGNETIC SENSITIVITY	equiv. g rms/gauss	0.0001

PHYSICAL CHARACTERISTICS

DIMENSIONS	See Outline Drawing	
WEIGHT	gm (oz)	31 (1.1)
CASE MATERIAL	Stainless Steel Body, Titanium Base	
CONNECTOR	10-32 receptacle	
MOUNTING TORQUE	lbf-in (Nm)	18 (2)

CALIBRATION

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

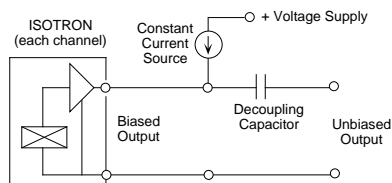
ACCESSORIES

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

- 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

- ±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.



Model 2793 Low Cost 16-Channel Isotron 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.

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