ISOTRON® Accelerometer

ENDEVCO MODEL 7752-1000

Model 7752-1000

- **Low Impedance Output**
- **Designed for Modal Analysis**
- **High Output (1 V/g)**
- **Low Noise Floor, Flat To 0.2 Hz**
- **Minimum Phase Response Deviation**
- **Hermetically Sealed**
- **Ground Isolated**



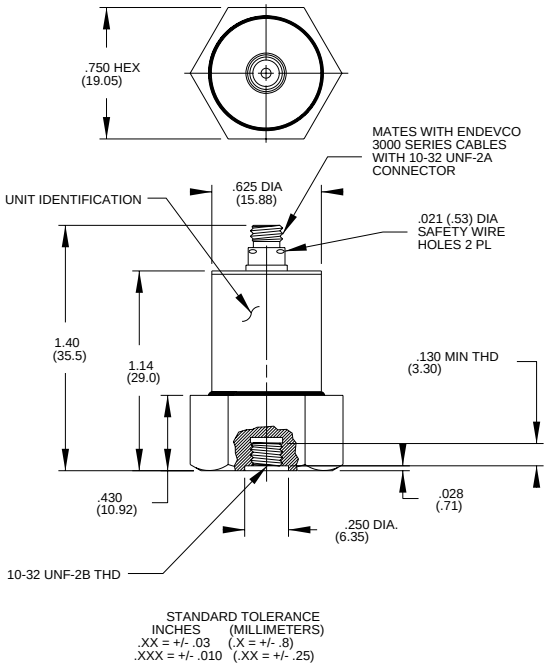
Actual size

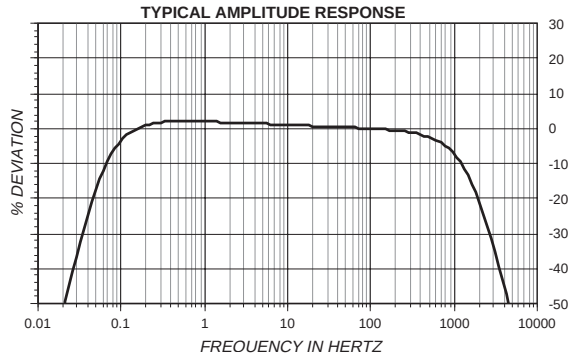
DESCRIPTION

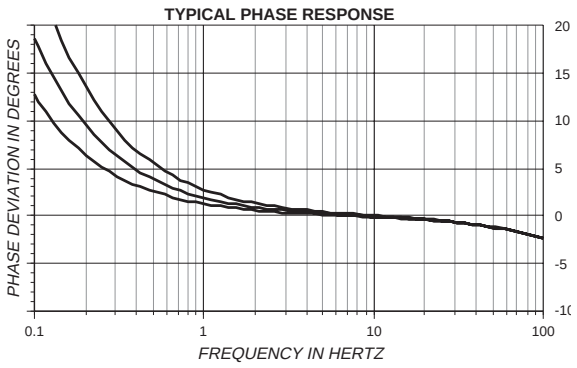
The ENDEVCO® Model 7752-1000 is a high output, ISOSHEAR® piezoelectric accelerometer with integral electronics, designed for low-g, low frequency measurement. Unit-to-unit phase response deviation is kept to a minimum as demanded in modal analysis. The ISOSHEAR design is extremely stable and virtually insensitive to environmental inputs such as base bending and thermal transients. This accelerometer is hermetically sealed against external contamination, as required in most aerospace applications.

The Model 7752-1000 features ENDEVCO's PIEZITE® Type P-8 crystal element, operating in shear mode, which exhibits low base strain sensitivity, high resonance frequency, 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 constant current power. Signal ground is isolated from the mounting surface. The accelerometer features a 10-32 top-connector.

ENDEVCO Signal Conditioner Models 4416BM1, 133, 2792B, 2793, 2775A or OASIS 2000 Computer-Controlled System are recommended for use with this accelerometer.







ENDEVCO MODEL 7752-1000

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	±5
VOLTAGE SENSITIVITY ±20%	mV/g	1000
FREQUENCY RESPONSE		See Typical Amplitude Response
RESONANCE FREQUENCY	kHz	24
AMPLITUDE RESPONSE [1]		
±5%	Hz	0.2 to 500
±1dB	Hz	0.05 to 1000
PHASE RESPONSE, @ 1Hz	deg	2, ±1
TEMPERATURE RESPONSE		See Typical Curve
TRANSVERSE SENSITIVITY	%	≤ 5
AMPLITUDE LINEARITY, to F.S.	%	1

OUTPUT CHARACTERISTICS		
OUTPUT POLARITY		Acceleration into base of unit produces positive output.
DC OUTPUT BIAS VOLTAGE	Vdc	+7.5 to +14
OUTPUT IMPEDANCE	Ω	≤ 250
FULL SCALE OUTPUT VOLTAGE	V	±5
RESIDUAL NOISE		
broadband, 0.1 Hz to 100 Hz, typical	equiv. g rms	0.00005
narrow band, per √PSD, @ 10 Hz	equiv. g rms/√Hz	0.000002
OVERLOAD RECOVERY After two times full scale input	µ sec	≤ 10
GROUNDING		Signal return is isolated from mounting surface

POWER REQUIREMENT		
SUPPLY VOLTAGE	Vdc	+18 to +24
SUPPLY CURRENT	mA	+2 to +10
WARM-UP TIME	sec	< 10
OVERLOAD PROTECTION		2000 g input will not damage internal electronics

ENVIRONMENTAL CHARACTERISTICS		
TEMPERATURE RANGE		-4°F to +185°F (-20°C to +85°C)
HUMIDITY		Hermetically sealed
SINUSOIDAL VIBRATION LIMIT	g pk	1000
SHOCK LIMIT	g pk	2000
BASE STRAIN SENSITIVITY	equiv. g pk/µ strain	0.0003
THERMAL TRANSIENT SENSITIVITY	equiv. g pk/°F (/°C)	0.03 (0.55)
ELECTROMAGNETIC SENSITIVITY	equiv. g rms/gauss	0.00021

PHYSICAL CHARACTERISTICS		
DIMENSIONS		See Outline Drawing
WEIGHT	gm (oz)	33 (1.16)
CASE MATERIAL		Stainless Steel Case, Titanium Hex
CONNECTOR		10-32 case grounded top connector mates with Model 3000 Series Cable
MOUNTING TORQUE	lbf-in (Nm)	18 (2)

CALIBRATION		
SUPPLIED:		
VOLTAGE SENSITIVITY	mV/g	
MAXIMUM TRANSVERSE SENSITIVITY	%	
FREQUENCY RESPONSE	%	20 Hz to 1 kHz

ACCESSORIES

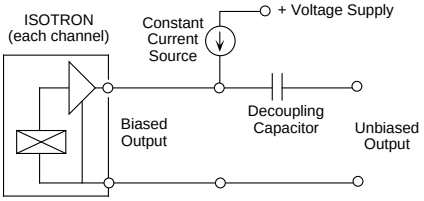
Model 2981-12	MOUNTING STUD, 10-32 to 10-32
Model 3061-120	CABLE ASSEMBLY (10 ft)

OPTIONAL ACCESSORIES

MODEL 2988M7	MAGNETIC MOUNTING ADAPTOR
MODEL 2950	TRIAXIAL MOUNTING BLOCK

NOTES

1. A special version is available with extended response flat to 10 kHz.
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.



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