

OEM Accelerometer

**ENDEVCO
MODEL
52M1/M2
-XX**

Model 52M1/M2-XX

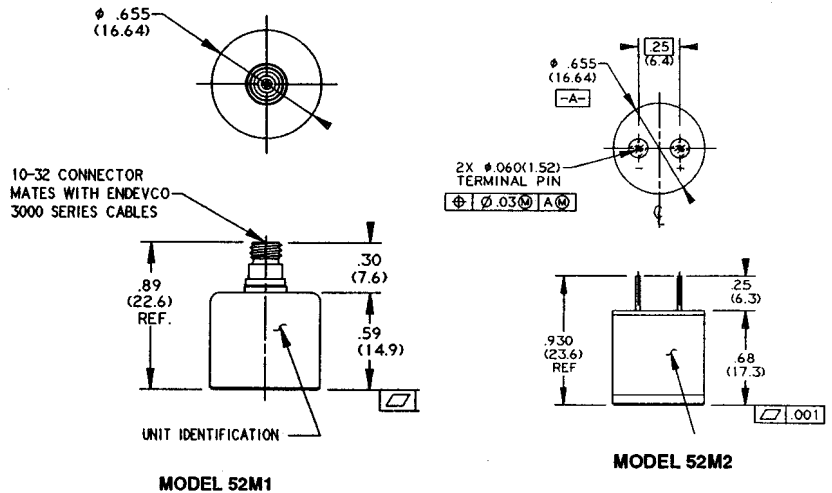
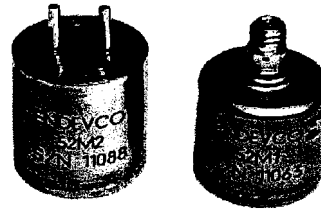
- Low Cost, OEM Applications
- Low Impedance Output
- 2nd Order Low Pass Filter
- Adhesive or Stud Mounting

DESCRIPTION

The ENDEVCO® Model 52M1/M2 series ISOTRON® Accelerometers are designed for high volume multi-channel vibration measurement in a variety of applications. These accelerometers offer high output, wide bandwidth and high dynamic range, and are hermetically sealed for use in extreme environments. The Model 52M1 features a standard 10-32 coax connector while the 52M2 provided solder for use with twisted pair cables.

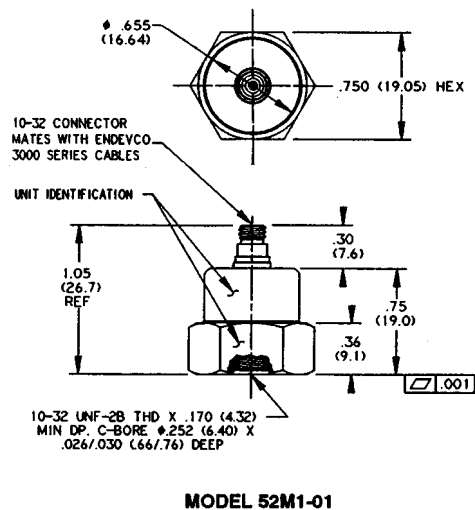
The Model 52M1/M2 features ENDEVCO's PIEZITE® Type P-8 crystal element, operating in annular shear mode. This accelerometer incorporates an internal hybrid signal conditioner in a two-wire system, which transmits its low impedance voltage output through the same cable that supplies the constant current power. A 2-pole low-pass filter provides resonance suppression. Signal ground is connected to the outer case of the unit and, when used with the optional isolated mounting stud, is electrically isolated from ground. A model number suffix (-XX) indicates the mounting stud adapter to be used; i.e., 52M1-01 features a 10-32 coax connector with a 3/4" Hex isolated mounting adapter and 10-32 threaded stud (see Accessories).

ENDEVCO Signal Conditioner Models 133, 2792B, 2793, or CCAS™ can be used with this accelerometer.

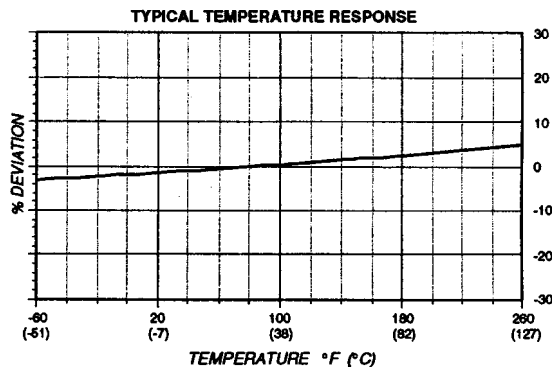
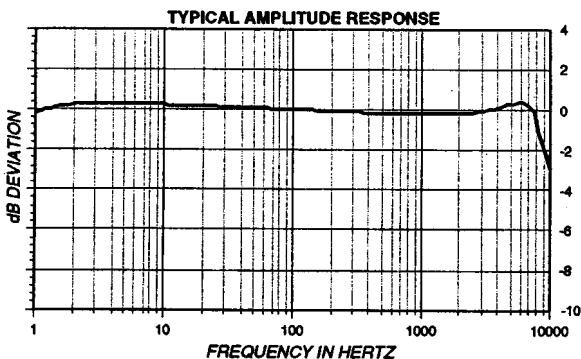


MODEL 52M1

MODEL 52M2



MODEL 52M1-01



OEM 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	mV/g	100
±10%		
FREQUENCY RESPONSE		See Typical Amplitude Response
RESONANCE FREQUENCY (Typical)	kHz	25
AMPLITUDE RESPONSE [1]	Hz	
± 10%		
± 3 dB		
TEMPERATURE RESPONSE		See Typical Curve
TRANSVERSE SENSITIVITY	%	≤ 5
AMPLITUDE LINEARITY, to F.S.	%	1

OUTPUT CHARACTERISTICS

OUTPUT POLARITY		Acceleration directed into base of unit produces positive output
DC OUTPUT BIAS VOLTAGE	V _{dc}	11.5 to 12.5
OUTPUT IMPEDANCE	Ω	50
FULL SCALE OUTPUT VOLTAGE	V	± 8
RESIDUAL NOISE	equiv. g rms	0.0005
2 Hz to 30 kHz		
GROUNDING		Signal ground connected to case. Isolation achieved via isolated mounting washer isolated adapter.

POWER REQUIREMENT

SUPPLY VOLTAGE	V _{dc}	+22 to +30
SUPPLY CURRENT	mA	+2 to +10
WARM-UP TIME	sec	< 1
To within 10% of final bias		

ENVIRONMENTAL CHARACTERISTICS

TEMPERATURE RANGE		-67°F to +257°F (-55°C to +125°C)
HUMIDITY		Hermetic sealed
SINUSOIDAL VIBRATION LIMIT	g pk	500
SHOCK LIMIT [1]	g pk	5000
BASE STRAIN SENSITIVITY	equiv. g rms pk/m strain	.002

PHYSICAL CHARACTERISTICS

DIMENSIONS		See Outline Drawing
WEIGHT		
Without Adapter Stud	gm (oz)	22.5 (0.8)
With Adapter Stud	gm (oz)	30 (1.06)
CASE MATERIAL		304 Cres
CONNECTOR		(52M1) Coaxial, 10-32 thread (52M2) Solder pins

CALIBRATION

SUPPLIED:	
SENSITIVITY	mV/g

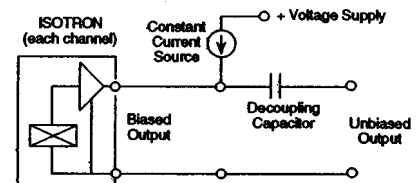
OPTIONAL ACCESSORIES

-01 ASSEMBLY

MODEL 32673	Adapter 3/4" Hex with 10-32 Tapped Hole
MODEL 2981-1	Mounting Stud, 10-32 to 10-32

NOTES

1. Circuit incorporates a 2nd order LP filter for resonance suppression.
2. Maintain high levels of precision and accuracy using Endeveco's factory calibration services. Call Endeveco'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 Endeveco reserve the right to modify these specifications without notice. Endeveco 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 Endeveco synonymous with reliability.