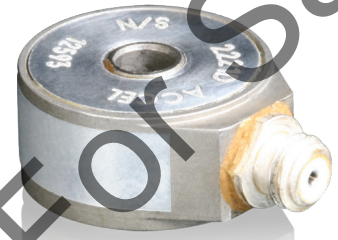
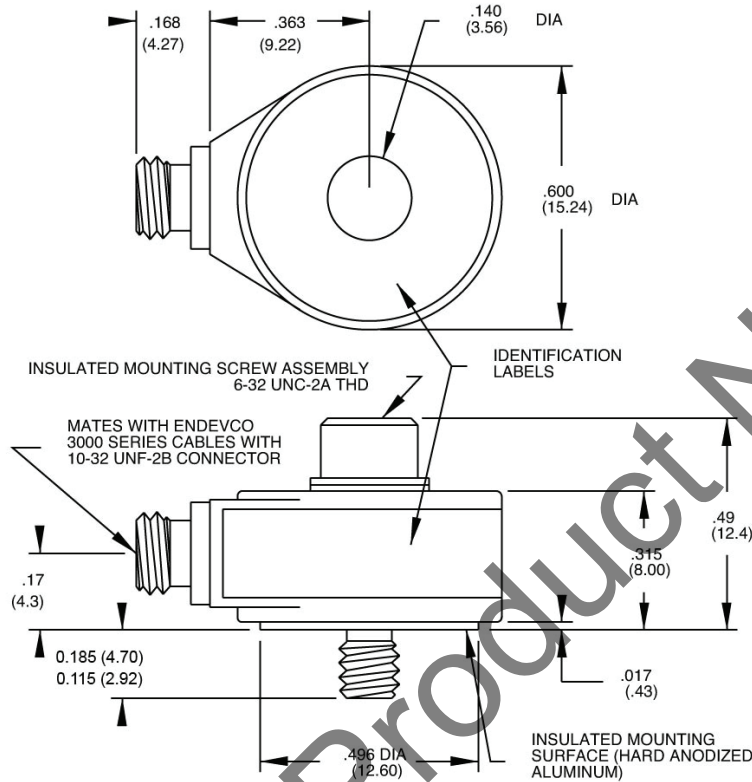


Piezoelectric accelerometer

Model 2221D



STANDARD TOLERANCE
INCHES (MILLIMETERS)
.XX = +/- .02 (.X = +/- .5)
.XXX = +/- .010 (.XX = +/- .25)

Key features

- High output, 17 pC/g
- Light weight (12 gm)
- 360° cable orientation
- Low profile
- Vibration measurement on small structures

Description

The Endevco® model 2221D is a piezoelectric accelerometer designed specifically for vibration measurement on small structures and objects. The unit is epoxy sealed and it is ideal for use in a controlled environment. Its light weight (12 gm) effectively minimizes mass loading. The accelerometer is a self-generating device that requires no external power source for operation.

The model 2221D features Endevco's Piezite® type P-8 crystal element operating in annular shear mode. This device exhibits excellent output sensitivity stability over time. Signal ground is connected to the outer case of the unit. When used with an isolated mounting screw, the accelerometer is electrically isolated from ground. A low-noise coaxial cable is supplied for error-free operation. The transducer has a centrally located thru bolt, allowing for 360° cable orientation. The unit may also be adhesive mounted if the application permits.

Piezoelectric accelerometer | Model 2221D

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Specifications		
Dynamic characteristics	Units	Value
Charge Sensitivity		
Typical	pC/g	17.0
Minimum	pC/g	13.5
Frequency response		See typical amplitude response
Resonance frequency (typical)	kHz	32
Amplitude response (1)		
±5%	Hz	10 to 6000
±1 dB (typical)	Hz	5 to 10000
Temperature response		See typical curve
-67°F (-55°C) max/min	%	-17 / 3
-350°F (+177°C) max/min	%	+19 / -1
Transverse sensitivity	%	≤ 3
Amplitude linearity	%	1
Per 250 g, 0 to 2500 g		
Electrical characteristics		
Output polarity		Acceleration into the base of the unit produces positive output
Resistance	GΩ	≥ 10
+350°F (+177°C)	GΩ	≥ 1
Isolation	MΩ	10
Capacitance	pF	900
Grounding		Signal return connected to case. Case isolated from mounting surface by insulated screw assembly
Environmental characteristics		
Temperature range		-67°F to +350°F (-55°C to +177°C)
Humidity		Epoxy sealed, non-hermetic
Sinusoidal vibration limit	g pk	1000
Shock limit [2]	g pk	5000
Base strain sensitivity	eq. g/μ strain	0.01
Thermal transient sensitivity	eq. g pk/°F (/ °C)	0.004 (0.007)
Acoustic sensitivity 140db SPL	g	0.007
Physical characteristics		
Dimensions		See outline drawing
Weight	gm (oz)	12 (0.42)
Case material		Stainless Steel
Connector		Coaxial 10-32 thread
Mounting torque	lbf-in (Nm)	8 (1)
Calibration data		
Supplied:		
Charge sensitivity	pC/g	
Maximum transverse sensitivity	%	
Capacitance	pF	
Frequency response	%	20 Hz to 8000 kHz
	db	8000 Hz to 40 kHz

Piezoelectric accelerometer | Model 2221D

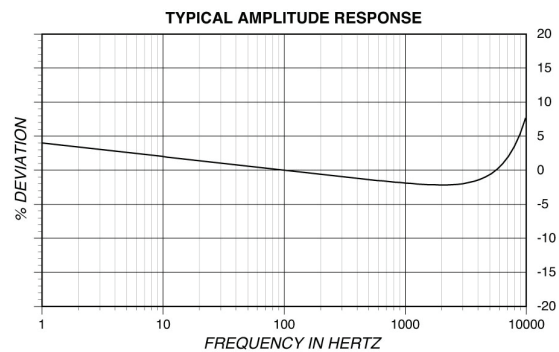
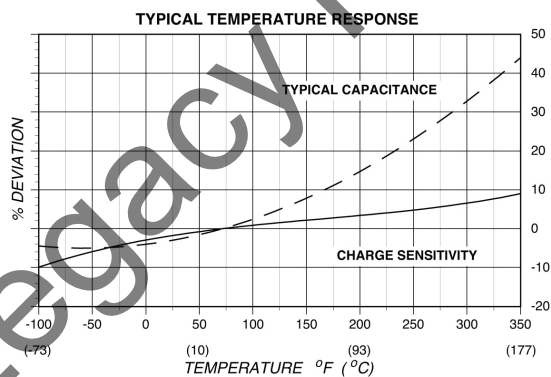
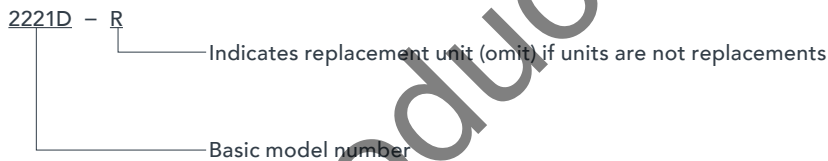
Accessories			
Product	Description	2221D	2221D-R
3090C-120	Cable assembly, 10 ft	Included	Optional
EHM49	Allen wrench 7/64 inch	Included	Optional
2987	Cementing stud	Included	Optional
10207	Mounting screw assembly	Included	Included
2984M3	Adapter stud 10-32	Optional	Optional
2984M4	Insulated adapter stud 10-32	Optional	Optional
2771C	In-line charge converter	Optional	Optional

Ordering information

- Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.

Notes

- Low-end response of the transducer is a function of its associated electronics.
- Short duration shock pulses, such as those generated by metal-to-metal impact, may excite transducer resonance and cause linearity errors. Read TP290 for more details.
- Model number definition:



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