



Model 86 Seismic accelerometer

Features

- Ultra low-noise
- Near-DC response, flat to 0.01 Hz
- Output sensitivity, 10 volt per g
- Overload protected to 250 g's
- Low impedance output (<10Ω)
- Ideal for floor isolation testing, photolithography applications, and high accuracy manufacturing environments.

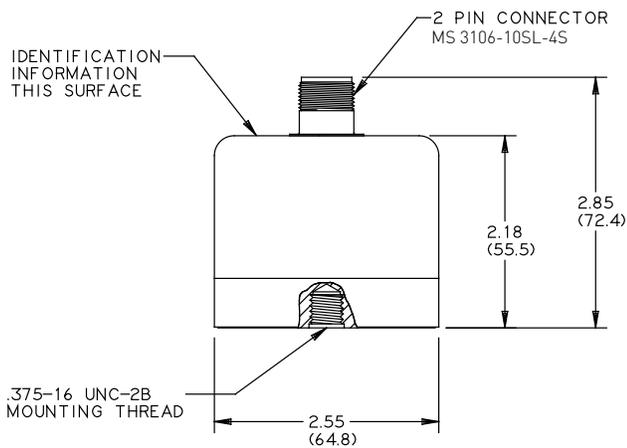


Description

The Endevco® model 86 is a piezoelectric accelerometer with integral electronics, designed specifically for measuring ultra-low level, seismic events and low frequency vibration on structures and objects. The unit is hermetically sealed against environmental contamination, features a 10 V/g sensitivity, state-of-the-art signal-to-noise ratio, and near-DC frequency response.

The model 86 incorporates an advanced ultra low-noise hybrid circuit operating in a constant current mode. A simple two-wire system transmits its low-impedance voltage output and the required power. Signal ground is isolated from the outer case and mounting surface to prevent ground loops. A specially designed low-noise cable assembly is provided as a standard accessory.

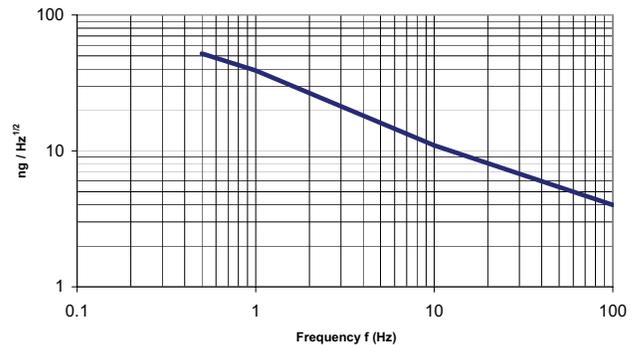
Model 86 features a sensitivity of 10 V/g.



STANDARD TOLERANCE	
INCHES	(MILLIMETERS)
.XX = ± .03	(X = ± .8)
.XXX = ± .010	(.XX = ± .25)

BRAVO-ROCKER

Spectral Noise



Model 86 Seismic accelerometer

Endevco

Specifications

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.

Dynamic characteristics

	Units	
Range	g pk	±0.5
Voltage sensitivity, ±10%	V/g	10
Frequency response (ref @ 20 Hz)		Typical
Resonance frequency (typical)	Hz	370
Amplitude response		
±1 dB	Hz	0.005 to 100
±3 dB	Hz	0.003 to 200
Transverse sensitivity	%	≤ 1
Temperature response	%	±5 from -10°C to 100°C
Amplitude non-linearity, to full scale	%	±1

Output characteristics

Output polarity		Acceleration directed into base produces positive output
DC output bias voltage	Vdc	+9 to +13 @ 75°F (24°C)
Output impedance	Ω	≤ 10
Full scale output voltage	V	±5
Residual noise		
broadband, 0.1 Hz to 1 k Hz, typical	equiv. ng rms	100
spectral, 0.5 Hz	equiv. ng/√Hz	52
spectral, 1 Hz	equiv. ng/√Hz	39
spectral, 10 Hz	equiv. ng/√Hz	11
spectral, 100 Hz	equiv. ng/√Hz	4
Grounding		Signal ground electrically isolated from case (>50MΩ)

Power requirement

Supply voltage	Vdc	+24 to +30
Supply current	mA	+2 to +10
Warm-up time	minutes	4

Environmental characteristics

Temperature range	°F (°C)	-4°F to +212°F (-20°C to +100°C)
Humidity		Hermetically sealed
Base strain sensitivity at 250 μstrain	eq. g/μstrain	0.0001
Sinusoidal vibration limit	g pk	10
Shock limit	g pk	250

Physical characteristics

Dimensions		See outline drawing
Weight	gm (lb)	771 (1.70)
Case material		Stainless Steel
Connector		Top mounted 2-pin MS 3106-10SL-4S

Calibration

Supplied:		
Voltage sensitivity @ 10 Hz	V/g	
Maximum transverse sensitivity	%	
Frequency response	%	1 Hz to 100 Hz

Notes:

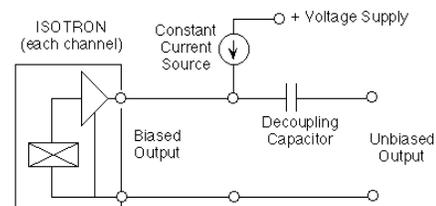
1. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 800-982-6732 for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.

Included accessories

P/N 6923M9-120	Mounting, .375-16 UNC 28 thread, in base of unit Cable assembly (located in the bottom of accelerometer case)
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Optional accessories

CS130UL	Low frequency calibration from 0.1 Hz
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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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