Model 86
Seismic accelerometer

Features

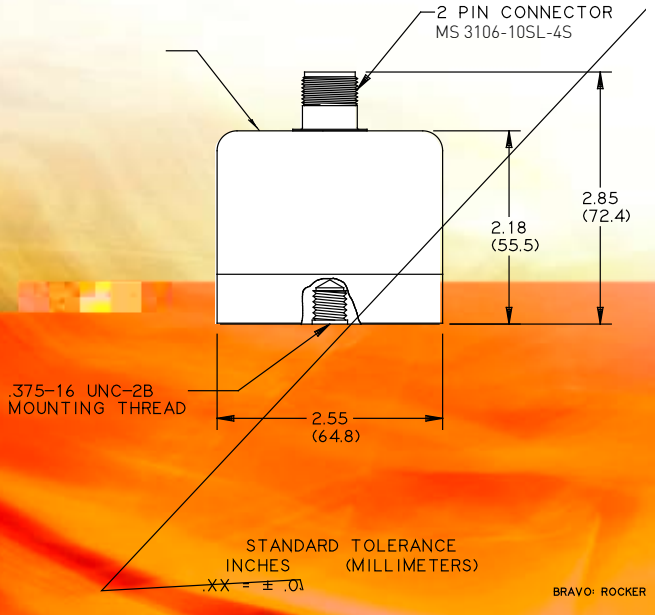
- Ultra low-coise
- Near-DC response, flat to 0.01 Hz
- Output sensitivity, 10 volt per g
- Overload protected to 1000 g's
- Low impedance output (‹10Ω)
- Ideal for floor isolation testing, photolithography applications, and high accuracy manufacturing environments.

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.



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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), 4 mA, and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

DYNAMIC CHARACTERISTICS	Units	-10V
RANGE	g pk	±0.5
VOLTAGE SENSITIVITY, ±10%	V/g	10
FREQUENCY RESPONSE (ref @20 Hz)		Typical
Resonance Frequency	Hz	370
Amplitude Response		
±1dB	Hz	0.005 to 100
±3dB	Hz	0.003 to 200
TRANSVERSE SENSITIVITY	%	≤ 1
TEMPERATURE RESPONSE	°F (°C)	See Typical Curve
AMPLITUDE NONLINEARITY, 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	.1
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)

SUPPLY REQUIREMENT		
COMPLIANCE VOLTAGE	Vdc	+24 to +30
SUPPLY CURRENT	mA	+2 to +10
WARM-UP TIME	minutes	4

ENVIRONMENTAL CHARACTERISTICS		
TEMPERATURE RANGE	°F (°C)	-23°F to +212°F (-10°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

INCLUDED ACCESSORIES

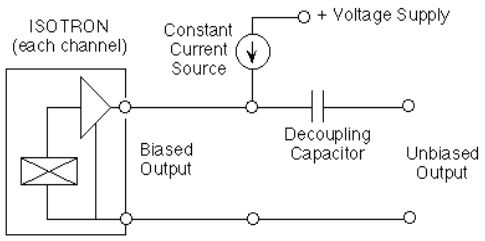
P/N 6923M9-120	MOUNTING, .375-16 UNC 28 THREAD, IN BASE OF UNIT CABLE ASSEMBLY (LOCATED IN BOTTOM OF ACCELEROMETER CASE)

OPTIONAL CALIBRATION

CS130UL	LOW FREQUENCY CALIBRATION FROM 0.1 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.



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.

APPLIES TO CALIFORNIA FACILITY

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