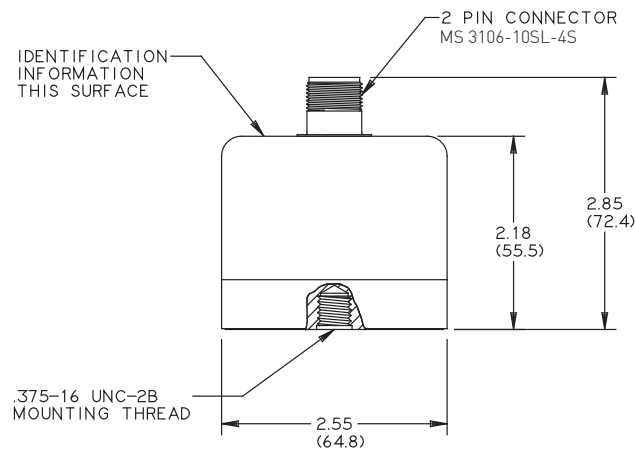


Piezoelectric accelerometer

Model 86



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

BRAVO® ROCKER

Key features

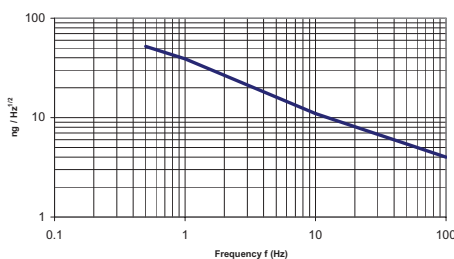
- Ultra low-noise
- Near-DC response, flat to 0.01 Hz
- Output sensitivity, 10 volt per g
- Overload protected to 250 g's
- Low impedance output ($<10\Omega$)
- Ideal for floor isolation testing, photolithography applications, and high accuracy manufacturing environments.

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.

Spectral Noise



Our measurement product competencies:

Piezoelectric accelerometers | Piezoresistive accelerometers | **Isotron accelerometers** | Variable capacitance accelerometers | Pressure transducers | Acoustic sensors | Electronic instruments | Calibration systems | Shakers | Modal hammers | Cable assemblies



Piezoelectric accelerometer

Model 86

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	86
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/VHz		52
spectral, 1 Hz	equiv. ng/VHz		39
spectral, 10 Hz	equiv. ng/VHz		11
spectral, 100 Hz	equiv. ng/VHz		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

Endevco®

Piezoelectric accelerometer

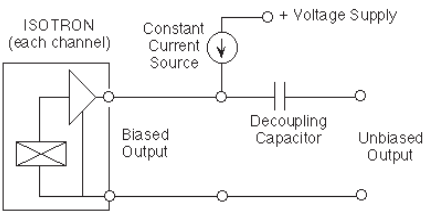
Model 86

Accessories

Product	Description	86
6923M9-120	Cable assembly (located in the bottom of accelerometer case)	Included
41018	Mounting, .375-16 UNC 28 thread, in base of unit	Included

Notes

1. Maintain high levels of precision and accuracy using Meggitt's factory calibration services. Call Meggitt'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.



Contact

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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. 112916