



Model 5220B-100 Isotron[®] accelerometer

Features

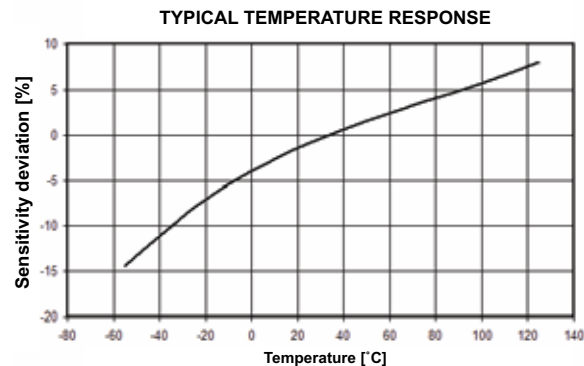
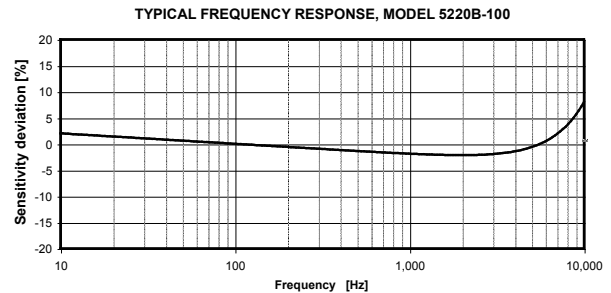
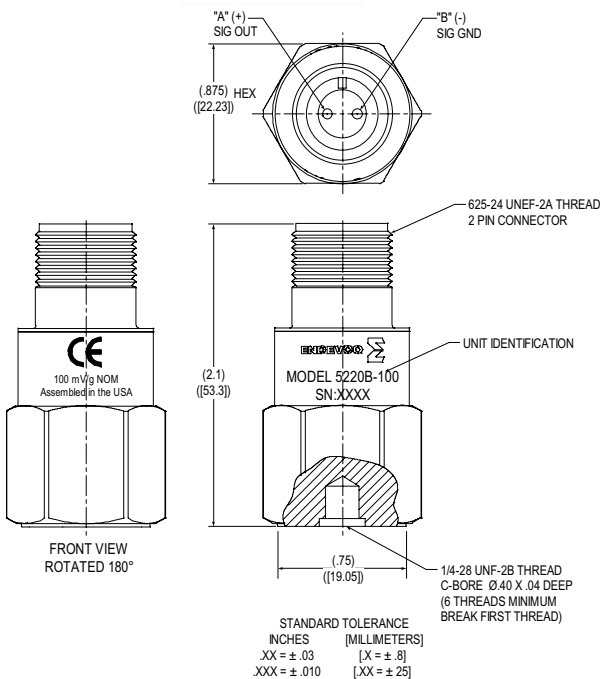
- Rugged, general purpose
- Ground isolated
- Isolated faraday shielding
- Hermetically sealed



Description

The Endevco model 5220B-100 is an industrial accelerometer designed specifically for vibration measurement in the rugged environments of plant machinery. This accelerometer incorporates a piezoelectric sensor driving an internal hybrid Isotron[®] signal conditioner in an insulated, double-shielded case. The 5220B-100 has a top integral two-pin receptacle MS3102-10SL-4P. The system transmits its low impedance voltage output through the same pin or twisted pair cable that supplies the required constant current power. The model 5220B-100 offers a very wide dynamic range and a low noise floor. The cable arrangement provides excellent resistance to electromagnetic noise pick-up. Signal ground is isolated from the mounting surface and outer case to prevent ground loops. The sensor is hermetically sealed to ensure long-term operation with excellent stability.

Operating in shear mode, the 5220B-100 is an electrically isolated sensor and charge amplifier unit. The following performance specifications conform to ISA-RP-37.2 [1-64] and are typical values referenced at +75°F (+24°C), 24 Vdc supply, 4 mA constant current and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.



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Endevco

Specifications

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C), 24 Vdc supply, 4 mA, and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics

	Units	5220B-100
Range	g pk (m/s ²)	80 (750)
Voltage sensitivity ±5%	mV/g (mV/ m/s ²)	100 (10.2)
Frequency response		
Resonance frequency, typical	kHz	30
Amplitude response, ±10%	Hz	1 to 9000
Temperature response		See typical curve
At -58°F (-50°C) to +257°F (+125°C)	%	-15% to +5%
Transverse sensitivity	%	≤ 5
Amplitude linearity	%	≤ 1% to 80 g peak

Output characteristics

Output polarity		Acceleration from the mounting surface into the body of the accelerometer produces positive output
DC output bias voltage at 75°F (24°C)	Vdc	12V
Output connection		See connection diagram
Output impedance	Ω	100
Full scale output voltage	V	±8
Residual noise		
1 Hz to 25 kHz	μg rms m/s ²	700 0.007
Grounding		Signal ground isolated from case and connected to faraday shield.
Isolation with 500 Vdc		
At -58°F to +257°F (-50°C to +125°C)	MΩ	100

Electrical characteristics

Power requirement		
Power supply voltage	Vdc	+18 to +30
Compliance voltage	Vdc	20 minimum
Supply current	mA	+2 to +10
Reversed polarity		Protected
Over voltage protection	Vdc	> 40
Warm-up time (to within 10% of final bias)	sec	< 1

Environmental characteristics

Temperature range		-58°F to +248°F [-50°C to +120°C]
Humidity		Hermetically sealed
Sinusoidal vibration limit	g pk (m/s ²)	500 (5000)
Shock limit	g pk (m/s ²)	5000 (50 000)
Base strain sensitivity	equiv. g pk /μ strain m/s ² /μ strain	0.0002 0.002

Physical characteristics

Dimensions		See outline drawing
Weight (without cable)	gm (lb)	90 (0.20)
Case material		316L Stainless steel
Connector receptacle		MS3102-10SL-4P
Mating connector plug		MS3456-10SL-4S, 2 sockets
Mounting torque	in-lbs (N-m)	24 (2.9)

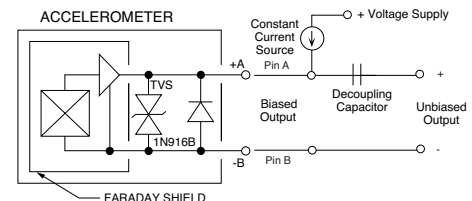
Calibration

Supplied:	
Sensitivity	mV/g

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.

Product	Description	5220B-100
2984-2	1/4-28 UNF adaptor stud	Included
2984-8	1/4-28 UNF/M8 x 1.25-6g adaptor stud	Included
6923M9	Cable assembly (MS3456L-10SL-4S connector one end, pigtail termination other end)	Optional
6923M18	Cable assembly (MS3456L-10SL-4S connector one end, BNC connector other end)	Optional



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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