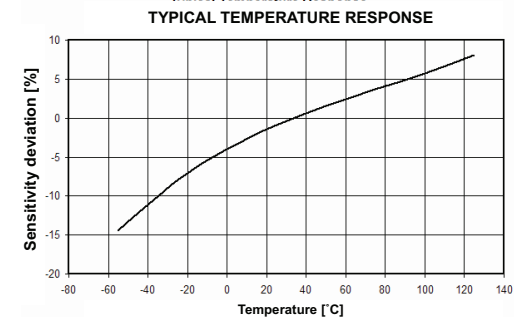
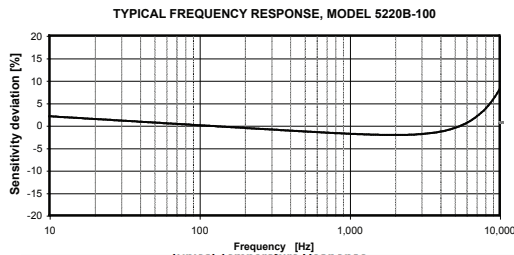
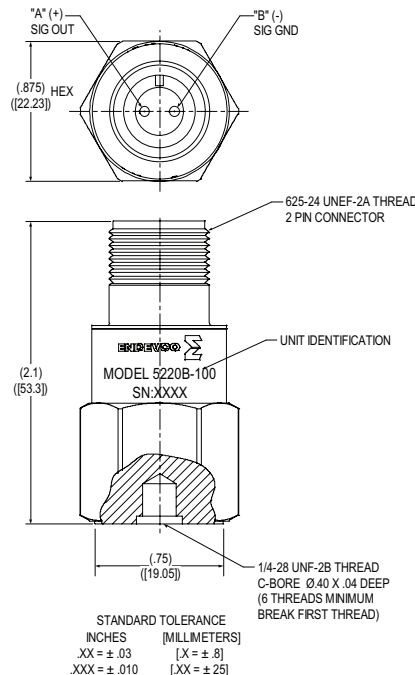


Isotron® accelerometer Model 5220B-100



Key features

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

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.

Isotron® accelerometer

Model 5220B-100

Specifications

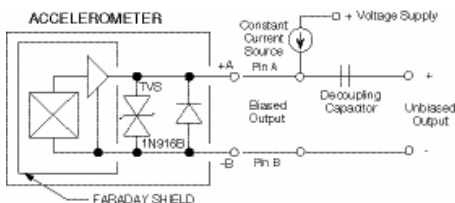
Specifications

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	

Isotron® accelerometer Model 5220B-100

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



1. 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.

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