

Seismic accelerometer

Description

Model 374A is specifically designed to enable the detection of ultra-low level, low frequency vibrations associated with very large structures, foundations, and earth tremors. The sensor typically possess exceptional measurement resolution as the result of a comparatively large size, which furnishes a stronger output signal and a lower noise floor. Both ceramic and quartz sensing elements are utilized in seismic accelerometer designs. The 374A with ceramic sensing element, offers the best low frequency response. Build-in low noise signal conditioning circuitry offer the greatest measurement resolution. For the best measurement clarity, seismic accelerometers should be used with a unity gain, battery powered signal conditioner. The accelerometer offer rugged, laser welded, stainless steel housing with durable military style connectors. Electrical case isolation, hermetic sealing, RF, EMI, ESD, and overload protection all ensure tolerance against environmental influence and mishandling. All variations provide reliable measurements and long-term stability.

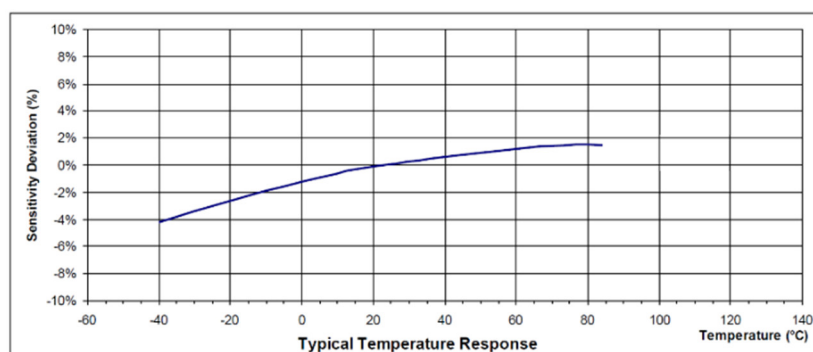
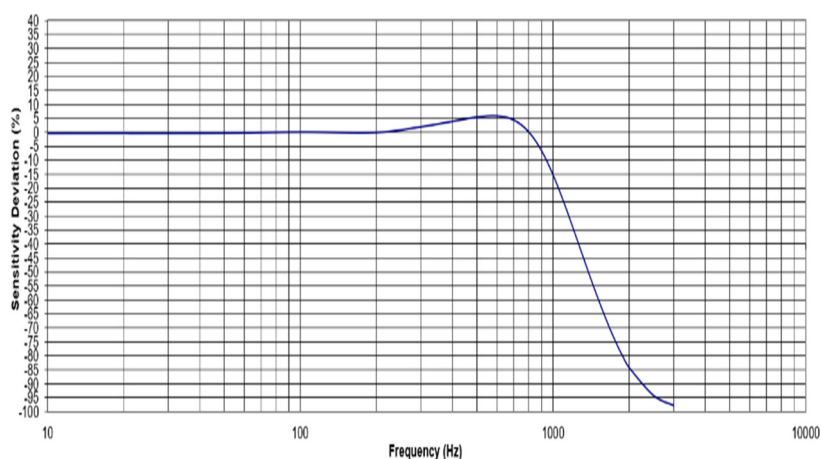
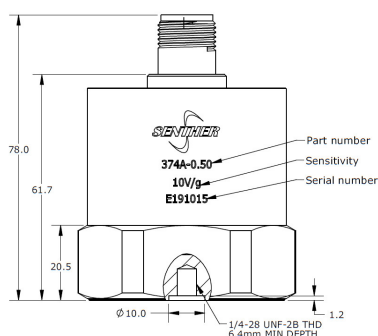
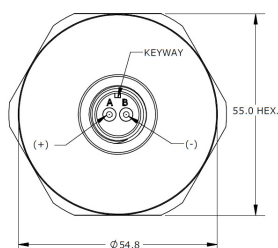


Features

- Ultra Low frequency
- Top connector
- High sensitivity
- Hermetic seal
- Case isolated
- EMI / RFI shielded

Application

- Building vibration monitoring
- Earthquake detection
- Bridge monitoring
- Foundation vibration studies
- Structural testing



Specification

Typical at +24°C (+75°F), 24Vdc, 4 mA and 100Hz, unless otherwise stated.

Part Number	374A-0.25-LF	374A-0.25	374A-0.50	374A-1	
Dynamic Range	±0.25	±0.25	±0.5	±1	g, peak
Sensitivity ±10%	20	20	10	5	V/g
Freq. Resp. ±5%	0.05-400	0.1-400	0.1-400	0.1-400	Hz
Freq. Resp. ±3dB	0.01-500	0.05-500	0.05-500	0.05-500	Hz
Resonant Frequency	2000	2000	2000	2000	Hz
Transverse Sensitivity	<5	<5	<5	<5	%
Temp. Resp., -55°C to +85°C	±10	±10	±10	±10	%
Non-Linearity	±1	±1	±1	±1	%FSO
Residual Noise	1.6	1.6	1.8	1.8	µg RMS
Shock Limit	100	100	100	100	g
Warm-up Time	<300	<30	<30	<30	second
Weight	920	920	920	920	Gram

SPECIFICATIONS	STANDARD	UNITS
Bias Voltage	10 to 14	Vdc
Supply Voltage	18 to 30	Vdc
Supply Current	2 to 10	mA
Output Impedance	<100	Ω
Case Insulation (@100Vdc)	>100	MΩ
Operating Temperature	-55°C to +85°C	°C
Humidity	Hermetically Sealed	
Case Material	316L Stainless Steel	
Sensing Element	Piezo Ceramic (Shear)	
Connector	2 Pin MIL-C-5015	

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0011	Mounting stud ¼-28 to ¼-28 thread	One stud Included
PM0008	Mounting stud ¼-28 to M6 thread	
PM0007	Mounting stud ¼-28 to M10 thread	Optional
16A-10	10 meter mating cable with MIL-C-5015 connector	Optional
16A-10-B	10 meter mating cable with MIL-C-5015 to BNC connector	Optional
IN-03	3 channels IEPE signal conditioner	Optional
IN-91	Portable vibration analyzer	Optional
IN-3062	8 channels data acquisition system	Optional

Measurement configuration

Sensor	Mating cable	Signal conditioner	BNC cable	Data acquisition	Computer
					

Ordering information

374	A	-	0.5	-	LF	-	A
Model	Output signal	-	Range	-	Low frequency option	-	Mounting stud
374	A=IEPE output	-	0.25=±0.25g 0.5=±0.5g 1=±1g	-	LF=Low frequency response Blank=Standard FR	-	A= ¼-28 to ¼-28 thread B= ¼-28 to M6 metric thread C*=Special

