



# Product Catalog 2004



*Your Predictive Maintenance Partner since 1972*

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# Vibra•Metrics®

**Designing and manufacturing quality vibration sensing instrumentation for over 30 years.**

## **The Highest Quality Products, Services and Support**

For over thirty years Vibra-Metrics has manufactured innovative and patented solutions for the predictive maintenance community, even in the most advanced or demanding applications. Since our inception, we have grown to offer hundreds of quality products including vibration accelerometers, data delivery systems and a comprehensive assortment of ancillary products. Additionally, we feature a broad array of engineering, design and support services for our customers. As always, these products and services are supported by the knowledge, experience and professional assistance that have kept Vibra-Metrics at the forefront of the vibration monitoring industry. No company understands better than Vibra-Metrics the value of predictive maintenance in improving uptime and throughput, and eliminating costly machinery downtime.

## **An Efficient and Cost-Effective Partnership**

Vibra-Metrics' products are designed to measure accurately and repeatably, providing the most consistent data possible for trending, prediction and prevention. We manufacture products designed to locate machinery deficiencies before they become problems. Our Conditions-Based Monitoring Systems (CBMS) automatically collect data, giving our customers more time to focus on maximizing productivity by helping them avert unscheduled or unnecessary downtime as a result of machinery failure.

Through our customer-centered philosophy of designing unique solutions to suit individual needs, Vibra-Metrics will optimize the effectiveness of any PdM program. A partnership with Vibra-Metrics provides our customers with the opportunity to increase uptime and maximize the total return on investment of a company's equipment and assets. Vibra-Metrics commits to proactive PdM solutions and supports that commitment with continuous innovations and knowledgeable people, while maintaining a steady hand on the pulse of the PdM community.

## **The Most Advanced Technology in The Industry**

Vibra-Metrics has introduced numerous innovations, several of which have been built into many accelerometer designs in use today, including:

- Isoshield™ internal electrical isolation and Faraday shielding providing the highest level of EMI/FRI noise rejection
- Integral cable, composite molded sensors that resist the effects of chemicals, and other severe conditions
- Ultra-sensitive technology for seismic and structural applications, space vehicles and avionics
- Subminiature, high output, and low noise circuitry

As a direct result of these innovations, Vibra-Metrics' sensors perform better and last longer- even in the harshest, most demanding environments - than any other sensors available.

## Customer Service

Vibra-Metrics, a Member of Mistras Holdings Group ([www.mistrasholdings.com](http://www.mistrasholdings.com)) is dedicated to providing our customers with timely assistance with any questions or concerns that arise. Please refer to the list below, so that we can direct your inquiry to the right person.

For assistance with hardware systems, including troubleshooting, technical support, or to order additional components for your system, please contact a Vibra-Metrics Product Manager at **609-716-4130** or email [sales@vibrametrics.com](mailto:sales@vibrametrics.com).

To place, change, or cancel an order, or to check on the status of your order, please contact your authorized Vibra-Metrics sales representative at **609-716-4130**, or email [sales@vibrametrics.com](mailto:sales@vibrametrics.com).

Returns or RMA's Research Inquiries: For equipment to be returned for repair, calibration, modification, etc, contact the Customer Service Dept. at our sister company **609-716-4000 x4044** or email [customerservice@vibrametrics.com](mailto:customerservice@vibrametrics.com).

Other Questions or concerns: For any other questions or concerns, please contact a Vibra-Metrics sales representative **609-716-4130**, or email [sales@vibrametrics.com](mailto:sales@vibrametrics.com).

## Affiliate Companies

**PAC, Physical Acoustics Corporation** designs and manufactures acoustic emission sensors and acoustic emission measurement instruments. Visit their website at [www.pacndt.com](http://www.pacndt.com) or call 609-716-4000.

**NDT Automation** is a complete source for ultrasonic test and inspection products and systems. A truly unique company, NDT Automation designs, produces and integrates virtually every major and all critical components of its immersion, gantry, custom and automated UT systems. From individual UT boards (Pulser/Receiver, A/D and motion control) to scanners through complete, fully integrated systems, NDT Automation is a single-source supplier providing full responsibility for all aspects of our product's performance and quality. Visit their website at [www.ndtautomation.com](http://www.ndtautomation.com) or call 609-716-4123.

**QSL, Quality Services Laboratories** offers a wide variety of testing services for equipment and materials. Inspection techniques includes; Traditional Nondestructive Testing as GPR, PMI, MP, Radiography and Advance Testing such as Acoustic Emission, Automated UT, and ACFM. QSL also provides specialized solutions for Power Equipment Testing (power transformers, load tap changers, circuit breakers, cables), Transportation Vehicles (aerial lift, fire apparatus) and Pulp and Paper Industry; offering a broad range of services and support. Visit their website at [www.qslplus.com](http://www.qslplus.com).

**CONAM Inspection;** For over 40 years, CONAM has provided comprehensive quality control services to a broad range of industries. CONAM's Nondestructive Testing and Inspection group provides a complete range of inspection, training, QA/QC services and proprietary inspection software (PCMS). This expands CONAM's service range beyond any other quality services company. With nationwide laboratories employing over 500 technicians, our staff has experience with your industry's testing requirements; from nondestructive and mechanical testing through chemical, metallurgical and lubricant analysis.

## Partnership Warranty Policy

Limited Partnership Warranty: Vibra-Metrics warrants that for a period of twelve (12) months from date of shipment (or 90 days for repairs), it will repair or at its option replace, any new accelerometer or electronic equipment which proves defective in materials or workmanship, or which does not conform to applicable drawings and specifications approved by the manufacturer. Cables, connectors, magnets, adapters, and machined parts are similarly warranted for a period of 90 days from date of shipment. Series 7002 accelerometers are warranted for a period of twenty-four (24) months from date of shipment. All repairs and replacements shall be F.O.B. factory. All claims must be made in writing to the manufacturer. In no event and under no circumstance shall manufacturer be liable for (a) damages in shipment; (b) failures or damage due to misuse, abuse, improper installation or abnormal conditions of temperature, dirt, or corrosives; (c) failures due to operation, intentional or otherwise, beyond rated capacities, and (d) expenses for removal, inspection, transportation, repair or rework. Nor shall manufacturer ever be liable for consequential and incidental damages, or in any amount greater than the purchase price of this apparatus.

This Partnership Warranty is in LIEU OF OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE TERMS OF THIS PARTNERSHIP WARRANTY CONSTITUTE ANY BUYER'S AND/OR USER'S SOLE AND EXCLUSIVE REMEDY, AND ARE IN LIEU OF ANY RIGHT TO RECOVER FOR NEGLIGENCE, BREACH OF PARTNERSHIP WARRANTY, STRICT TORT LIABILITY OR UPON ANY OTHER THEORY. Any legal proceedings arising out of the sale or use of this apparatus must be commenced within eighteen (18) months of the date of shipment.

LIFETIME PARTNERSHIP WARRANTY: In addition to the provisions of the Limited Partnership Warranty as described above, Vibra-Metrics will repair or replace at no charge {except shipping and handling} any 8002 Series accelerometer purchased after October 1, 2001 for a period of two years from the date of shipment. For Years 3-5 Vibra-Metrics will repair or replace the accelerometer for half the current price of a new unit. For Year 6 and beyond, Vibra-Metrics will repair/replace for 70% of the current price of a new unit. Determination to repair/replace is at Vibra-Metrics option. Customer is responsible for obtaining return authorization number from Vibra-Metrics and shipping the non-operable unit to Vibra-Metrics prior to replacement. Chemical resistance for 8002 Series is warranted for chemicals, temperatures, & environmental conditions listed in AN130. For others, contact VMI in writing prior to installation.

Please read the *Accelerometer Installation Guide* or the appropriate *Operators Manual* thoroughly regarding equipment installation, operation, and maintenance. Should you require additional assistance in servicing this equipment, please contact the Vibra-Metrics factory directly. Returned products will not be accepted at the factory without a Return Authorization (RMA) number, obtainable from the factory (609) 716-4000.

## Numerical Model Number Index

1000 .....	page 6	6050 .....	page 20
1000A .....	page 6	7002 .....	page 21
1000B .....	page 6	7002HG .....	page 22
1018 .....	page 7	8002 .....	page 23
1019 .....	page 7	8002C .....	page 24
1020S .....	page 8	8002CFM .....	page 24
1024-4 .....	page 9	8002HS .....	page 25
1030 .....	page 10	9001A .....	page 26
1136 .....	page 11	9002A .....	page 27
1136T .....	page 11	LP24-1 .....	page 28
1800 .....	page 12	LP24-3 .....	page 28
1801 .....	page 12	LP241-12 .....	page 28
CBM2000 .....	page 13	P1000 .....	page 28
3000 .....	page 14	P3000 .....	page 28
5102 .....	page 15	P5000 .....	page 28
5300 .....	page 16	SB06 .....	page 29
6036 .....	page 17	SB12 .....	page 29
6036FM .....	page 17	SB24 .....	page 29
6036LB .....	page 17	SB48 .....	page 29
6036C .....	page 18	VM500 .....	page 30
6045 .....	page 19		

## Model Number Prefix/Suffix Key

<b>CBM</b>	-	Condition Based Maintenance
<b>LP</b>	-	Line Powered (power supply)
<b>P</b>	-	Battery Powered (power supply)
<b>SB</b>	-	Switch Box
<b>VM</b>	-	Vibration Monitor
<b>- A</b>		Adhesive Mount, or Armored cable
<b>- B</b>		High Shock Version or BNC termination
<b>- C</b>		Century series extended temperature capability
<b>- CFM</b>		Certified intrinsically safe and Century series extended temperature capability
<b>- FM</b>		Certified intrinsically safe
<b>- HG</b>		High g level
<b>- HS</b>		High sensitivity for low g levels
<b>- P</b>		Pigtail termination
<b>- T</b>		Top exit integral cable
<b>- LB</b>		Low Bias Voltage Unit

## Custom Models

The products shown in this catalog represent our standard products. Vibra-Metrics also custom manufactures sensors based on your specific needs. V-M has designed specialty sensors for high temperatures, special high g filtered units, as well as ultra sensitive units for seismic monitoring applications. Contact our sales department for more information, 609-716-4130, or [sales@vibrametrics.com](mailto:sales@vibrametrics.com).



## Miniature High Frequency Accelerometer

### Features

- 10 mV/g and high shock version 1.5 mV/g
- Small size/mass
- Integral coaxial strain-relieved cable
- Broad frequency range

### Applications

- Dry Industrial
- Motors/Generators
- Pumps
- Gears/Bearings
- Rollers
- Experimental
- Aerospace
- Military
- Machining Centers
- Impact Testing (1000B)

### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	1000, 1000A	10 mV/g	1.02 mV/(m/s <sup>2</sup> )
	1000B	1.5 mV/g	0.15 mV/(m/s <sup>2</sup> )
Frequency Range			
±5%		3 Hz - 15 kHz	
±10%		2 Hz - 18 kHz	
±3 dB		1 Hz - 40 kHz	
Turn-on Time		<5 seconds	
Amplitude Range			
1000, 1000A		±500 g	
1000B		±2500 g	
Mounted Resonance		>90 kHz	
Transverse Sensitivity		<5%	

#### Electrical

Noise (typical)			
Broadband	2.5 Hz to 25 kHz	1500 µg rms	
Spectral	10 Hz	100 µg/√Hz	
	100 Hz	25 µg/√Hz	
	1000 Hz	10 µg/√Hz	
Output Impedance		<1000 Ω	
Isolation		Isolated, >100 Meg Ω	

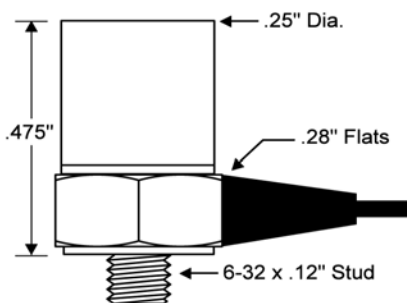
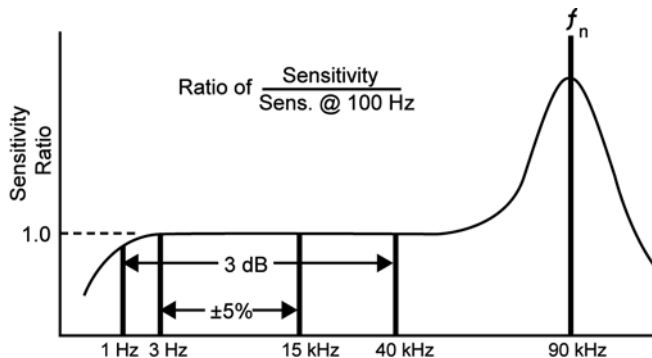
Bias Volts (nominal)	7 VDC
Power Requirements	15-30 VDC @ 2-10 mA cc

#### Environmental

Temperature Range	-40 to 250°F	-40 to 121°C
Base Strain	.005 g peak/µstrain	
Thermal Shock	4 g/°C	
Shock Limit	5,000 g	

#### Physical

Physical Dimensions	.45" h x .28" flats (1.1 x .7 cm)
Weight	2 grams
Case Material	Titanium
Design	Isolated Compression
Seal	Epoxy
Mounting	
1000, 1000B	6-32 integral stud
1000A	Adhesive
Mounting Torque	10 in-lb (1.1 N-m)
Cable/Connector	6' integral cable / 10-32



### Ordering Information:

Model 1000 (Isolated, 6-32 stud)	9353018
Model 1000A (Isolated, no stud)	9353026
Model 1000B (Shock, 1.5 m V/g)	9353066
Power Supplies, 2 mA output	
10-32/BNC connectors	
Model P1000, battery, 15 VDC	9353527
Model LP24-1, 110 VAC line input, 24 VDC	9356451
BNC/BNC connectors	
Model P5000, rechargeable battery, 24 VDC	9356559
BNC/10-32 adapter	CN2-0006
Cable, Extension, 10-32(F)/10-32(M)	9354054

#### Sensors include:

NIST Traceable Calibration, 6' Integral Cable Assembly, Thermal Boot, User Manual, 1-Year Warranty

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## High Frequency, Low Noise Accelerometers

### Features

- 10 mV/g
- Compact size
- Broad frequency range

### Applications

- Industrial
- Motors/Generators
- Lab Shakers
- Gears/Bearings
- Experimental
- Rollers
- Compressors

### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	10 mV/g	1.02 mV/(m/s <sup>2</sup> )
Frequency Range	±5%	3 Hz - 10 kHz
	±10%	2 Hz - 12 kHz
	±3 dB	1 Hz - 30 kHz
Turn-on Time		<5 seconds
Amplitude Range		±500 g
Mounted Resonance		>50 kHz
Transverse Sensitivity		<5%
Amplitude Linearity		<2%

#### Electrical

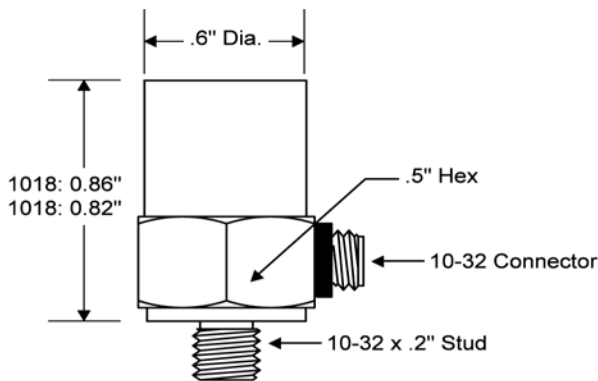
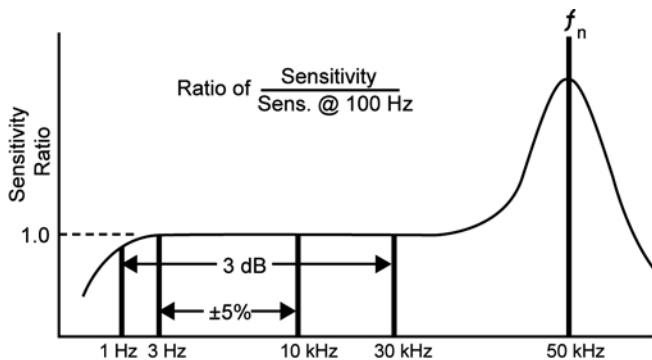
Noise (typical)		
Broadband	2.5 Hz to 25 kHz	1500 µg (rms)
Spectral	10 Hz	100 µg/√Hz
	100 Hz	25 µg/√Hz
	1000 Hz	10 µg/√Hz
Output Impedance		1000 Ω
Isolation	1018	Isolated, >100 Meg Ω
	1019	Case Grounded
Bias Volts (nominal)		7 VDC
Power Requirements		15-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F	-40 to 121°C
Base Strain	.003 g peak/µstrain	
Thermal Shock	3 g/°C	
Shock Limit	5000 g	

#### Physical

Physical Dimensions		
	1018	.86" h x .5" hex (2.2 x 1.3 cm)
	1019	.82" h x .5" hex (2.1 x 1.3 cm)
Weight		.56 oz / 16 grams
Case Material		303 stainless steel
Design		Compression
Seal		Splashproof epoxy
Mounting	1018	10-32 integral stud
	1019	10-32 removable stud
Mounting Torque		20 in-lb (2.2 N-m)
Connector		side 10-32



Model 1018 has an integral stud and is isolated.  
Model 1019 has a removable stud and is case grounded.

### Ordering Information:

Model 1018	9353173
Model 1019	9353174
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC	9353528
Model LP24-1B, 110 VAC line input, 24 VDC	9356120
Model P5000, rechargeable battery, 24 VDC	9356559
Cable, 10-32(M)/BNC(M), 6', 15' std. lengths	9353442
Magnetic holder, 16 lb holding force, 10-32	9356816
Magnetic holder, 35 lb holding force, 10-32	9353449

#### Sensors include:

NIST Traceable Calibration, Mounting Stud, User Manual, 1-Year Warranty

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## High Output Low Noise Accelerometer

### Features

- 100 mV/g
- Low noise
- Broad frequency range

### Applications

- General Industrial
- Motors/Generators
- Pumps
- Gearboxes
- Rollers
- Experimental
- Fans/Cooling Towers
- Bearing Housings
- Compressors

### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	100 mV/g	10.2 mV/(m/s <sup>2</sup> )
Frequency Range		
±5%	3 Hz - 10 kHz	
±10%	2 Hz - 11 kHz	
±3 dB	1 Hz - 12 kHz	
Turn-on Time	<5 seconds	
Amplitude Range	±50 g	
Mounted Resonance	25 kHz	
Transverse Sensitivity	<5%	

#### Electrical

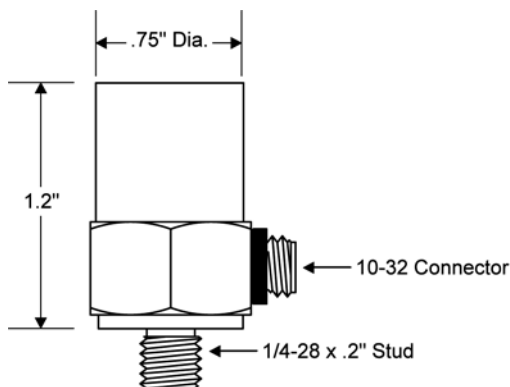
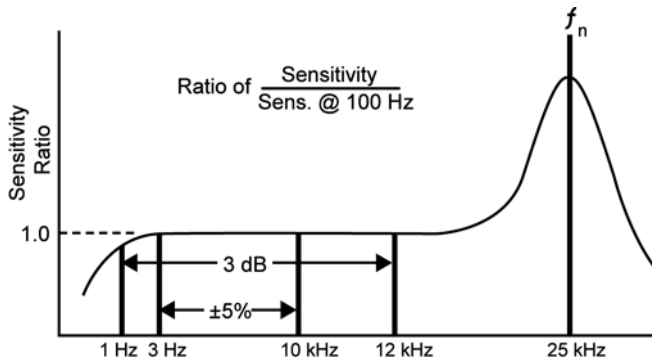
Noise (typical)		
Broadband	2.5 Hz to 25 kHz	250 µg rms
Spectral	10 Hz	14 µg/√Hz
	100 Hz	4 µg/√Hz
	1000 Hz	3 µg/√Hz
Output Impedance		1000 Ω
Isolation		Isolated, >100 Meg Ω
Bias Volts (nominal)		7 VDC
Power Requirements		15-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F	-40 to 121°C
Base Strain	.008 g peak/µstrain	
Thermal Shock	.5 g/°C	
Shock Limit	5000 g	

#### Physical

Physical Dimensions	1.2" h x .75" hex base (3 x 1.9 cm)
Weight	1.2 oz / 35 grams
Case Material	Titanium
Design	Isolated compression
Seal	Splashproof epoxy
Mounting	¼-28 removable stud
Mounting Torque	35 in-lb (3.9 N-m)
Connector	Side 10-32 coaxial



#### Ordering Information:

Model 1020S .....	9353205
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC .....	9353528
Model LP24-1B, 110 VAC line input, 24 VDC .....	9356120
Model P5000, rechargeable battery, 24 VDC .....	9356559
Cable, 10-32(M)/BNC(M), 6', 15' std. lengths .....	9353442
Magnetic holder, 16 lb holding force, 1/4-28 .....	9356809
Magnetic holder, 35 lb holding force, 1/4-28 .....	9353448

#### Sensors include:

NIST Traceable Calibration, Mounting Stud, Thermal Boot, User Manual, 1-Year Warranty

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## Underwater Accelerometer

### Features

- 100 mV/g
- Superior sealing for underwater operation
- Integral underwater rated cable
- Titanium construction resists galvanic corrosion
- ISOSHIELD internal electrical shielding

### Applications

- Seawater Exposure
- Underwater Motors
- Deep Draft Pumps
- Experimental

### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	100 mV/g	10.2 mV/(m/s <sup>2</sup> )
Frequency Range	±5%	3 Hz – 5 kHz
	±10%	2 Hz – 8 kHz
	±3 dB	1 Hz – 10 kHz
Turn-on Time		<1.5 seconds
Amplitude Range		±60 g
Mounted Resonance		>20 kHz
Transverse Sensitivity		<5%

#### Electrical

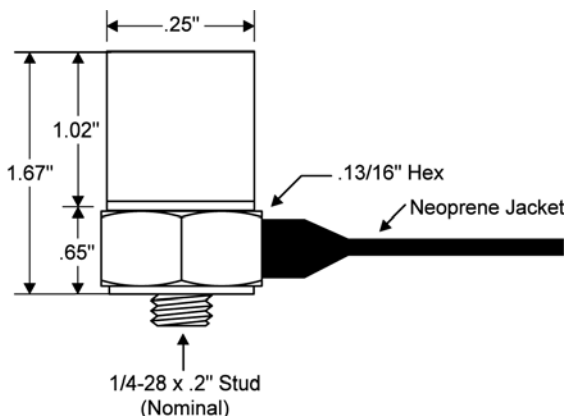
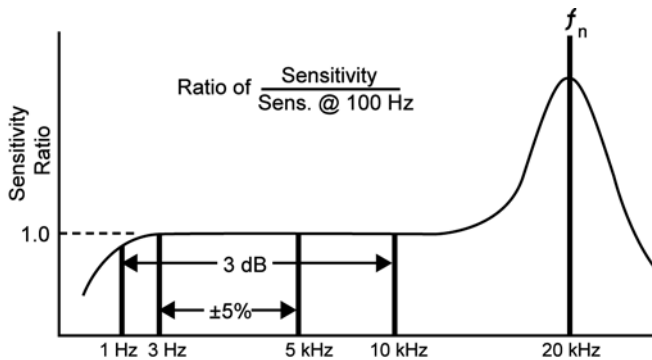
Noise (typical)		
Broadband	2.5 Hz to 25 kHz	250 µg rms
Spectral	10 Hz	12 µg/√Hz
	100 Hz	5 µg/√Hz
	1000 Hz	2 µg/√Hz
Output Impedance		<100 Ω
Isolation		Isolated, >100 Meg Ω
Noise Rejection (EMI/RFI)		>80dB, IsoShield™
Bias Volts (nominal)		10 VDC
Power Requirements		24-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F	-40 to 121°C
Base Strain		.005 g peak/µstrain
Thermal Shock		.1 g/°C
Shock Limit		5000 g
Pressure Limit		1000 psi

#### Physical

Physical Dimensions	1.67" h x .82" hex base (4.2 x 2.1 cm)
Weight (without cable)	60 grams
Case Material	Titanium
Design	Compression
Seal	Welded
Mounting	1/4-28 removable stud
Mounting Torque	35 in-lb (40 cm-kg)
Cable/Connector	15' Integral Neoprene cable to pigtail



### Ordering Information:

Model 1024-4	9354291
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC	9353528
Model LP24-1B, 110 VAC line input, 24 VDC	9356120
Model P5000, rechargeable battery, 24 VDC	9356559
Magnetic holder, 16 lb holding force, 1/4-28	9356809
Magnetic holder, 35 lb holding force, 1/4-28	9353448

#### Sensors include:

NIST Traceable Calibration, 15' Integral Cable Assembly, Mounting Stud, User Manual, 1-Year Warranty

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## High Output Seismic Accelerometer

### Features

- 5000 mV/g minimum output
- Ultra-low noise
- Ultra-low frequency
- Removeable ¼-28 mounting stud

### Applications

- Seismic/Mining
- Building/Structural
- Bridges
- Experimental
- Wafer Fabrication
- Precision Printing
- Microscopes

### Operating Specifications

#### Dynamic

Sensitivity, minimum @ 50 Hz	5,000 mV/g	510 mV/(m/s <sup>2</sup> )
Frequency Range	±5%	.1 Hz – 180 Hz
	±10%	.07 Hz – 200 Hz
	±3 dB	.03 Hz – 240 Hz
Turn-on Time		<120 seconds
Amplitude Range		±0.7 g
Mounted Resonance		600 Hz
Transverse Sensitivity		<5%

#### Electrical

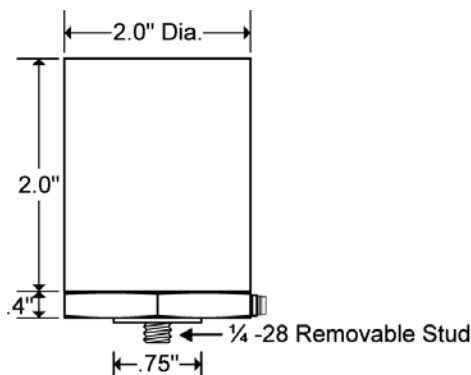
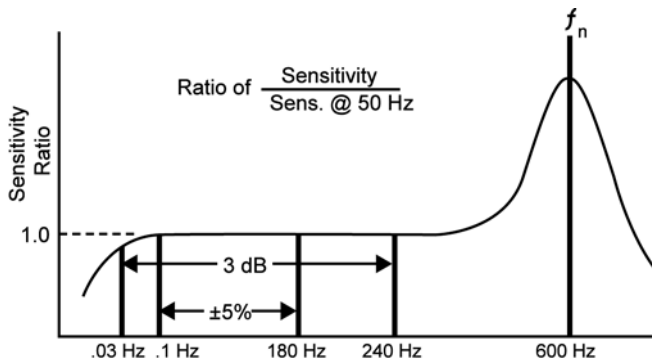
Noise		
Broadband	2.5 Hz to 25 kHz	2.8 µg (rms)
Spectral	10 Hz	.09 µg/√Hz
	100 Hz	.03 µg/√Hz
Output Impedance (nominal)		1000 Ω
Isolation		Isolated, >100 Meg Ω
Bias Volts (nominal)		7 VDC
Power Requirements		15-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F	-40 to 121°C
Base Strain		.001 g peak/µstrain
Shock Limit		80 g

#### Physical

Physical Dimensions	2.5" h x 2" flats (6.4 x 5.1 cm)
Weight	430 grams
Case Material	Hard anodized aluminum
Design	Proprietary Mechanical
Seal	Epoxy
Mounting	¼-28 removable stud
Mounting Torque	35 in-lb (3.9 N-m)
Connector	Side coaxial (SMA)



### Ordering Information:

Model 1030 .....	9353370
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery powered, 15 VDC .....	9353528
Model LP24-1B, 110 VAC line input, 24 VDC .....	9356120
Model P5000, rechargeable battery, 24 VDC .....	9356559
Cable, SMA/BNC, 6' .....	9354049

#### Sensors include:

NIST Traceable Calibration, Mounting Stud, User Manual, 1-Year Warranty

For more information about **Vibra-Metrics** accelerometers, call us today at **609-716-4130**, or visit us on-line at **www.vibrametrics.com**



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## High Reliability Industrial Accelerometer

### Features

- Integral strain-relieved cable with top or side exit configuration
- Low profile design
- Thermal boot

### Applications

- General Industrial
- Motors/Generators
- Pumps
- Gearboxes
- Rollers
- Fans/Cooling Towers
- Bearing Housings
- Compressors

### Operating Specifications

#### Dynamic

Sensitivity	±12% @ 100 Hz	100 mV/g	10.2 mV/(m/s <sup>2</sup> )
Frequency Range	±10%	3 Hz - 5 kHz	1 Hz - 10 kHz
	±3 dB	<2 seconds	
Turn-on Time		±70 g	
Amplitude Range		18 kHz	
Mounted Resonance		<5%	
Transverse Sensitivity			

#### Electrical

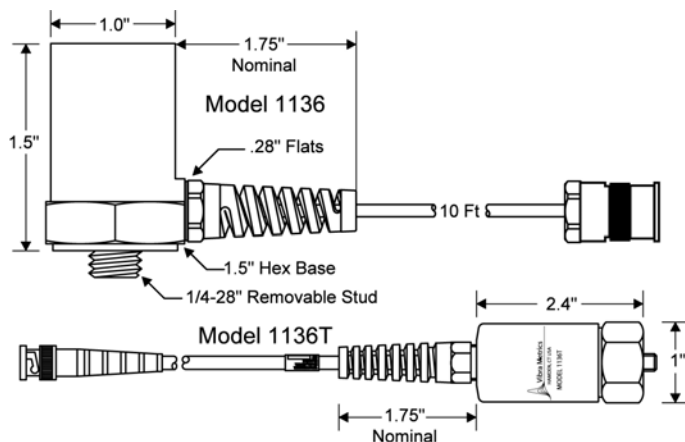
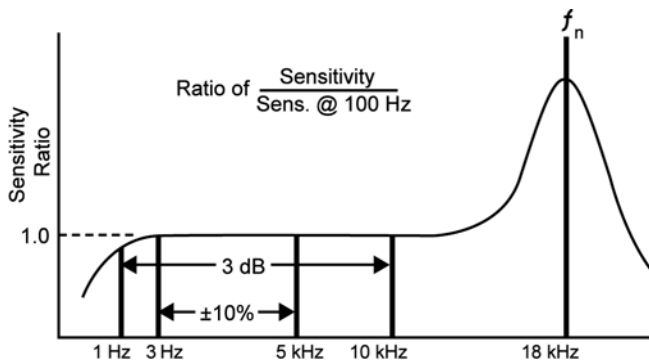
Noise (typical)			
Broadband	2.5 Hz to 25 kHz	250 µg rms	
Spectral	10 Hz	12 µg/√Hz	
	100 Hz	5 µg/√Hz	
	1000 Hz	2 µg/√Hz	
Output Impedance		100 Ω	
Noise Rejection		>52 dB	
Isolation		Isolated, >100 Meg Ω	
Bias Volts (nominal)		12 VDC	
Power Requirements		24-30 VDC	
Current Regulating Diode		1-6 mA cc	

#### Environmental

Temperature Range	-10 to 200°F	-20 to 95°C
Base Strain	.008 g peak/µstrain	
Shock Limit	5000 g	

#### Physical

Physical Dim.	1136	1.5" h x 1" hex (3.8 x 2.5 cm)
	1136T	2.25" h x 1" hex (5.8 x 2.5 cm)
Weight	1136	1.7 oz / 50 grams plus cable
	1136T	3.2 oz / 90 grams plus cable
Case Material	6061 AL with AL-O <sub>2</sub> chemical resistant coating	
Design	Isolated compression	
Seal	Waterproof	
Mounting	¼-28 removable stud	
Mounting Torque	35 in-lb (3.9 N-m)	



### Ordering Information:

Model 1136 (Pigtail, side)	9356378
Model 1136B (BNC, side)	9356528
Model 1136T (Pigtail, top)	9356575
Model 1136TB (BNC, top)	9356574
Model 1136FM (Pigtail, side, FM approved)	9356825
Model 1136BFM (BNC, side, FM approved)	9356871
Model 1136TBFM (BNC, top, FM approved)	9357064
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC	9353528
Model LP24-1B, 110 VAC line input, 24 VDC	9356120
Model P5000, rechargeable battery, 24 VDC	9356559
Magnetic holder, 16 lb holding force	9356809
Magnetic holder, 35 lb holding force	9353448

#### Sensors include:

NIST Traceable Calibration, 10' Integral Cable Assembly, Mounting Stud, Thermal Boot, User Manual, 1-Year Warranty

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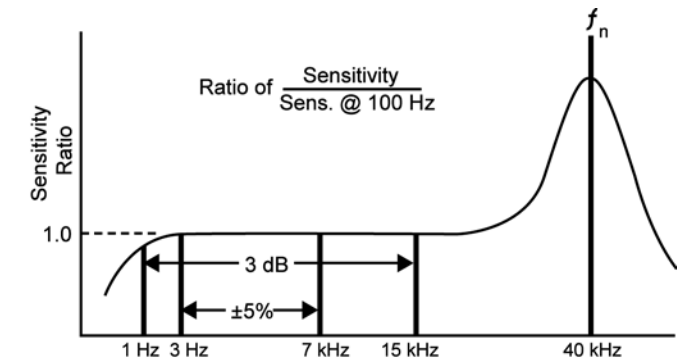
## General Purpose Industrial Accelerometers

### Features

- 100 mV/g
- Integral cable
- Waterproof to 100 feet

### Applications

- General Industrial
- Motors/Generators
- Pumps
- Gearboxes
- Rollers
- Experimental
- Fans/Cooling Towers
- Bearing Housings
- Compressors



### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±20%	100 mV/g	10.2 mV/(m/s <sup>2</sup> )
Frequency Range	±5%	3 Hz - 7 kHz
	±10%	2 Hz - 10 kHz
	±3 dB	1 Hz - 15 kHz
Turn-on Time		≤2.5 seconds
Amplitude Range		±75 g
Mounted Resonance		>40 kHz
Transverse Sensitivity		<5%
Amplitude Linearity		<2%

#### Electrical

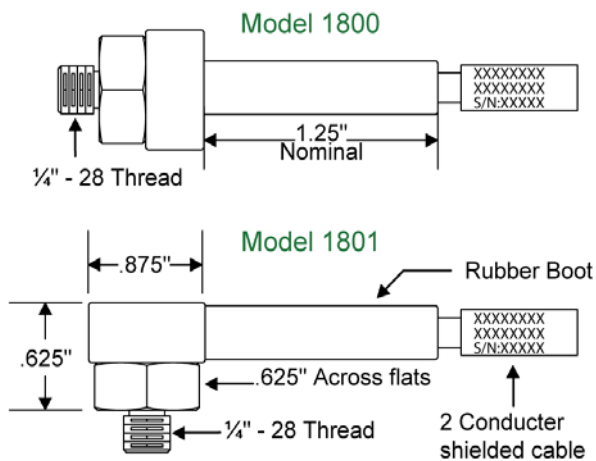
Noise (typical)		
Broadband	1 Hz to 10 kHz	50 µg rms
Spectral	10 Hz	10 µg/√Hz
	100 Hz	2.7 µg/√Hz
	1000 Hz	1.0 µg/√Hz
Output Impedance		<150 Ω
Isolation		Isolated, >100 Meg Ω
Bias Volts (nominal)		10 VDC
Power Requirements		18-28 VDC @ 1-6 mA cc

#### Environmental

Temperature Range	-65 to 250°F	-54 to 121°C
Base Strain	<.00007 g peak/µstrain	
Shock Limit	7000 g	

#### Physical

Physical Dim.	1800	2.25" h x 13/16" diameter (5.7 x 2.1 cm)
	1801	.625" h x .812" across flats (1.6 x 1.6 cm)
Weight		1.1 oz / 30 grams plus cable
Case Material		Stainless steel
Design		Isolated shear
Seal		Epoxy
Mounting		¼-28 stud
Mounting Torque		35 in-lb (3.9 N-m)
Cable		Teflon jacketed twisted pair



### Ordering Information:

Model 1800BW (BNC)	9357150
Model 1800PW (Pigtail)	9357154
Model 1800BA (BNC, armored)	9357149
Model 1800PA (Pigtail, armored)	9357153
Model 1801BW (BNC)	9357152
Model 1801PW (Pigtail)	9357156
Model 1801BA (BNC, armored)	9357151
Model 1801PA (Pigtail, armored)	9357155
Power Supplies, 2.2 mA output, BNC/BNC, 24 Vdc	
Model P5000, 24 Vdc (Ni-Cad)	9356559
Model LP24-1B, 110 vac line input, 24 Vdc	9356120
Magnetic holder, 16 lb holding force, 1/4-28	9356809
Magnetic holder, 35 lb holding force, 1/4-28	9353448

#### Sensors include:

NIST Traceable Calibration, 15' Cable Assembly, ¼-20 Mounting Stud, User Manual, 1-Year Warranty

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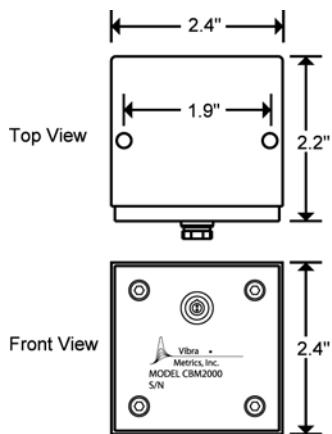
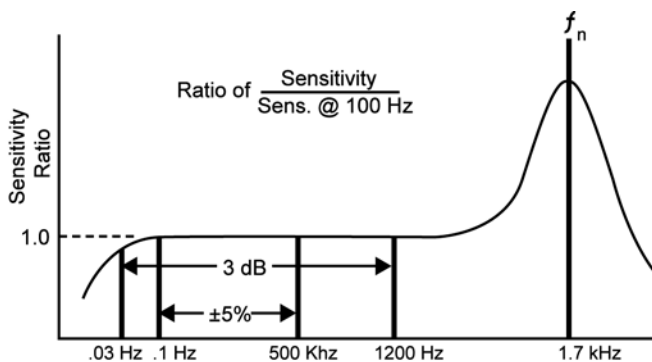
## Accelerometer for Large Outdoor Structures

### Features

- 1500 mV/g
- Low, accurate frequency response
- Rugged construction for outdoor use
- Splashproof
- Low impedance signal suitable for long cable lengths (up to 1000 ft)

### Applications

- Bridges
- Buildings
- Low speed rollers/bearings



### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	1500 mV/g	153 mV (m/s <sup>2</sup> )
Frequency Range	±5%	0.1 Hz – 500 Hz
	±10%	.06 Hz – 700 Hz
	±3 dB	.03 Hz – 1200 Hz
Turn-on Time (2% of final bias)		<90 seconds
Amplitude Range (at 72°F)		±3 g
Mounted Resonance		1.7 kHz
Transverse Sensitivity		<5%

#### Electrical

Noise (typical)		
Broadband	2.5 Hz to 25 kHz	50 µg rms
Spectral	10 Hz	1.0 µg/√Hz
	100 Hz	0.2 µg/√Hz
	1000 Hz	0.08 µg/√Hz
Output Impedance		1000 Ω
Isolation		Isolated, > 100 Meg Ω
Bias Volts (nominal)		7 VDC
Power Requirements		15-30 Vdc
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F / -40 to 121°C
Base Strain	.0003 g peak/µstrain
Shock Limit	50 g

#### Physical

Physical Dimensions	2.44" h x 2.25" w x 2.25" d (6.2 x 5.7 x 5.7 cm)
Weight	44 oz / 1250 grams
Case Material	303 stainless steel
Design	Isolated Shear
Seal	Splashproof
Mounting	(2) 10-32 throughbolts
Mounting Torque	20 in-lb (2.2 N-m)
Connector	2-Pin, water-tight

### Ordering Information:

Model CBM-2000 .....	9356700
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC .....	9353528
Model P5000, rechargeable battery, 24 VDC .....	9356559
Cable, 2-Pin/BNC(M) .....	9356708
Magnetic holder, 160 lb holding force .....	9356707

#### Sensors include:

NIST Traceable Calibration, Mounting Throughbolts, User Manual, 1-Year Warranty

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## Miniature Triaxial Accelerometer

### Features

- 10 mV/g per axis
- Exceptionally low 10 micro-volt noise floor
- .35 oz / 10 gram total weight
- Titanium construction

### Applications

- For single point monitoring in three axis
- Any location where small size and weight are important
- Aircraft, space vehicles, laboratories

### Operating Specifications (per axis)

#### Dynamic

Sensitivity @ 100 Hz, ±5%	10 mV/g	1.02 mV / (m/s <sup>2</sup> )
Frequency Range	±5%	3 Hz – 7 kHz
	±10%	2 Hz – 8 kHz
	±3 dB	1 Hz – 10 kHz
Turn-on Time (2% of final bias)		<5 seconds
Amplitude Range (at 72°F)		±500 g
Mounted Resonance		>25 kHz
Transverse Sensitivity		<5%

#### Electrical

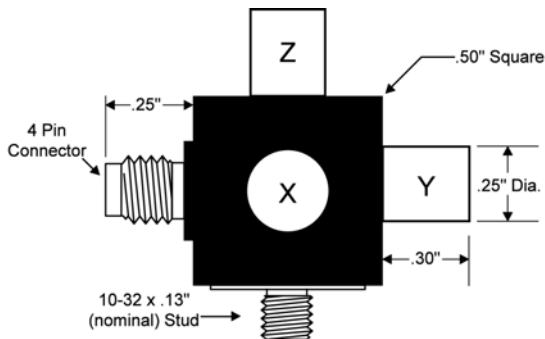
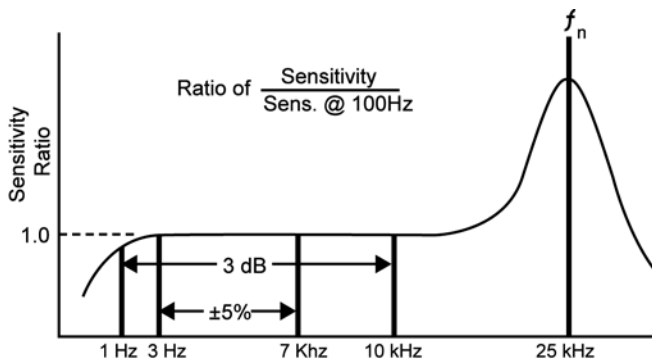
Noise (typical)		
Broadband	2.5 Hz to 25 kHz	1500 µg (rms)
Spectral	10 Hz	100 µg/√Hz
	100 Hz	25 µg/√Hz
	1000 Hz	10 µg/√Hz
Output Impedance		1000 Ω
Isolation		Isolated, >100 Meg Ω
Noise Rejection (EMI/RFI)		>52 dB
Bias Volts (nominal)		7 VDC
Power Requirements		15-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F / -40 to 121°C
Base Strain	<.005 g peak/µstrain
Shock Limit	5000 g

#### Physical

Physical Dimensions	.8" h x .8" w x 1.05" d 2 cm x 2 cm x 2.7 cm
Weight	.35 oz / 10 grams
Case Material	Titanium
Design	Isolated Compression
Seal	Splashproof epoxy
Mounting	10-32 removable stud
Mounting Torque	20 in-lb (2.2 N-m)
Connector	Side 4-Pin



### Ordering Information:

Model 3000 .....	9353354
Power Supplies, 2 mA output	
Model P3000, battery, 15 VDC 4-Pin/(3) BNC ....	9353530
Model LP24-3, 110VAC, 24VDC, (3)BNC/(3)BNC	9353515
Cable, 4-Pin/4-Pin, 6' three conductor shielded ...	9353444
Cable, 4-Pin/(3)BNC, 6' .....	9354086
Magnetic holder, 16 lb holding force, 10-32 .....	9356816
Magnetic holder, 35 lb holding force, 10-32 .....	9353449

#### Sensors include:

NIST Traceable Calibration, Mounting Stud, User Manual and 1-Year Warranty

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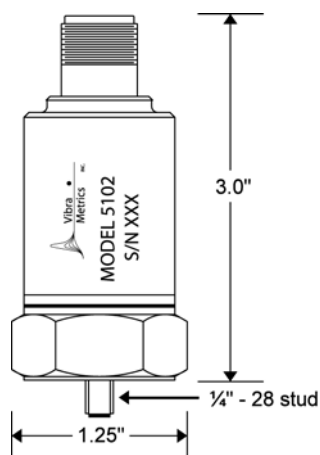
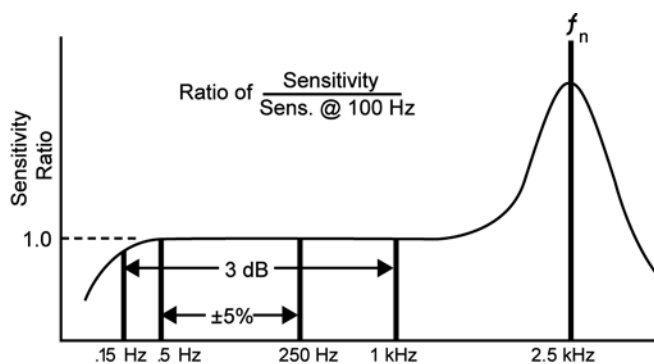
## High Output Shear Design Accelerometer

### Features

- 500 mV/g
- Splashproof
- 2-Pin MIL style connector
- Shear mode design
- ISOSHIELD Internal electrical isolation

### Applications

- Low RPM rollers/machinery
- Low amplitude vibration values
- Where low noise is desirable



### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	500 mV/g	51 mV (m/s <sup>2</sup> )
Frequency Range		
±5%	.5 Hz – 250 Hz	
±10%	.3 Hz – 400 Hz	
±3 dB	.15 Hz – 1 kHz	
Turn-on Time (2% of final bias)	<10 seconds	
Amplitude Range (at 72°F)	±10 g	
Mounted Resonance (nominal)	2.5 kHz	
Transverse Sensitivity	<5%	

#### Electrical

Noise (typical)		
Broadband 2.5 Hz to 25 kHz	40 µg rms	
Spectral 10 Hz	1.0 µg/√Hz	
100 Hz	.35 µg/√Hz	
1000 Hz	.065 µg/√Hz	
Output Impedance	1000 Ω	
Grounding	Isolated, > 100 Meg Ω	
Noise Rejection (EMI/RFI)	>52 dB	
Bias Volts (nominal)	7 VDC	
Power Requirements	15-30 VDC	
Current Regulating Diode	1-6 mA cc	

#### Environmental

Temperature Range	-40 to 250°F / -40 to 121°C
Base Strain	.005 g peak/µstrain
Shock Limit	500 g

#### Physical

Physical Dimensions	3" h x 1.25" diameter (7.6 x 3.2 cm)
Weight	10.7 oz / 303 grams
Case Material	303 stainless steel
Design	Isolated shear
Seal	Welded
Mounting	1/4-28 removable stud
Mounting Torque	35 in-lb (40 cm-kg)
Cable/Connector	Top 2-Pin MIL style

#### Ordering Information:

Model 5102 .....	9356875
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC .....	9353528
Model LP24-1B, 110 VAC line input, 24 VDC .....	9356120
Model P5000, rechargeable battery, 24 VDC .....	9356559
Cable, 2-Pin MIL/BNC 6' molded splashproof .....	9356686
Cable, 2-Pin MIL/Pigtail 6' high temperature .....	9354084
Cable, 2-Pin MIL/BNC 6' high temperature .....	9356381
Magnetic holder, 16 lb holding force, 1/4-28 .....	9356809
Magnetic holder, 35 lb holding force, 1/4-28 .....	9353448

#### Sensors include:

NIST Traceable Calibration, Mounting Stud, User Manual and 1-Year Warranty

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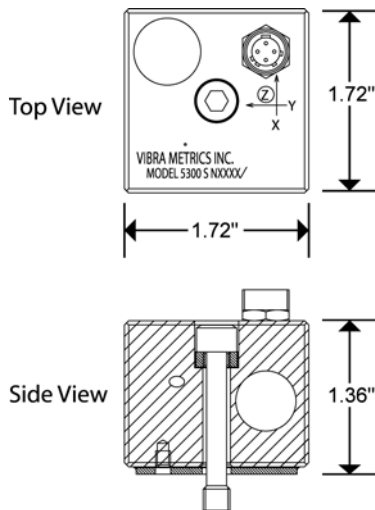
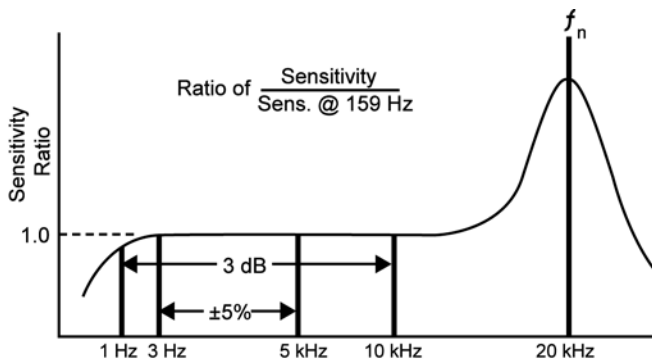
## Standard Triaxial Accelerometer

### Features

- 100 mV/g per axis
- Rugged aluminum construction
- Center throughbolt mounting

### Applications

- Gearboxes
- General Industrial
- Motors/Generators
- Pumps
- Rollers
- Experimental
- Military
- Fans/Cooling Towers
- Bearing Housings
- Compressors



### Operating Specifications (per axis)

#### Dynamic

Sensitivity @ 100 Hz, ±5%	100 mV/g	10.2 mV (m/s <sup>2</sup> )
Frequency Range	±5%	3 Hz – 5 kHz
	±10%	2 Hz – 7 kHz
	±3 dB	1 Hz – 10 kHz
Turn-on Time (2% of final bias)		<2 seconds
Amplitude Range (at 72°F)		±80 g
Mounted Resonance		>20 kHz
Transverse Sensitivity		<5%

#### Electrical

Noise (typical)		
Broadband	2.5 Hz to 25 kHz	250 µg
Spectral	10 Hz	12 µg/√Hz
	100 Hz	5 µg/√Hz
	1000 Hz	2 µg/√Hz
Output Impedance		100 Ω
Isolation		Isolated, >100 Meg Ω
Noise Rejection (EMI/RFI)		>52 dB
Bias Volts (nominal)		12 VDC
Power Requirements		24-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F / -40 to 121°C
Base Strain	<.001 g peak/µstrain
Shock Limit	5000 g

#### Physical

Physical Dimensions	1.36" h x 1.72" w x 1.72" d (3.5 x 4.4 x 4.4 cm)
Weight	7 oz / 200 grams
Case Material	Hard anodized aluminum
Design	Isolated compression
Seal	Splashproof epoxy
Mounting	¼-28 center throughbolt
Mounting Torque	35 in-lb (3.9 N-m)
Connector	Top 4-Pin

### Ordering Information:

Model 5300 .....	9356320
Power Supplies, 2.2 mA output, BNC/BNC	
Model LP24-3B, 110 vac line input, 24 Vdc .....	9356460
Model P5000, 24 Vdc (Ni-Cad) (single channel) ..	9353528
Cable, 4-Pin/(3) BNC .....	9354086

#### Sensors include:

NIST Traceable Calibration, Mounting Stud, User Manual and 1-Year Warranty

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## Premium Industrial Accelerometer

### Features

- 100 mV/g
- Splashproof
- ISOSHIELD internal electrical shielding
- Optional intrinsically safe FM certification
- Optional 7 VDC low bias

### Applications

- General Industrial
- Motors/Generators
- Pumps
- Gearboxes
- Rollers
- Experimental
- Fans/Cooling Towers
- Bearing Housings
- Compressors

### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	100 mV/g	10.2 mV/(m/s <sup>2</sup> )
Frequency Range	±5%	3 Hz - 5 kHz
	±10%	2 Hz - 7 kHz
	±3 dB	1 Hz - 10 kHz
Turn-on Time (2% of final bias)		<2 seconds
Amplitude Range (at 72°F)	6036/6036FM	±75 g
	6036LB	±30 g
Mounted Resonance		>25 kHz
Transverse Sensitivity		<5%

#### Electrical

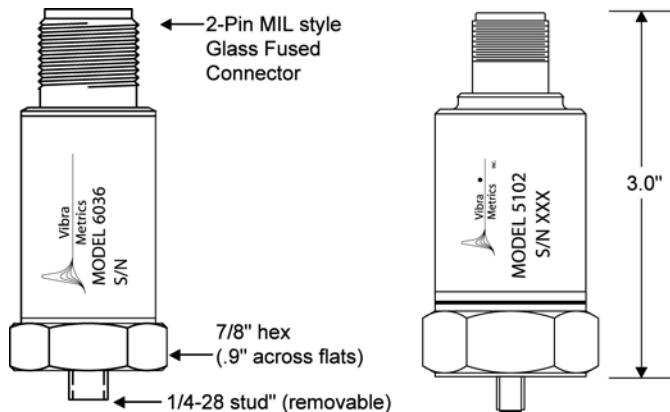
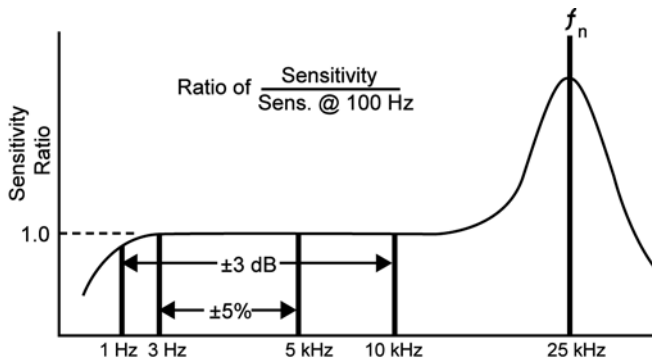
Noise (typical)		
Broadband	2.5 Hz to 25 kHz	250 µg rms
Spectral	10 Hz	12 µg/√Hz
	100 Hz	5 µg/√Hz
	1000 Hz	2 µg/√Hz
Output Impedance		<100 Ω
Isolation		Isolated, >100 Meg Ω
Noise Rejection (EMI/RFI)		>80 dB, Isoshield
Bias Volts (nominal)		12 VDC
Power Requirements		24-30 VDC @ 1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F / -40 to 121°C
Base Strain	.003 g peak/µstrain
Shock Limit	5000 g

#### Physical

Physical Dimensions	2.3" h x .87" hex base (5.8 x 2.2 cm)
Weight	3.2 oz / 90 grams
Case Material	304 stainless steel
Design	Isolated compression
Seal	Welded
Mounting	¼-28 removable stud
Mounting Torque	35 in-lb (3.9 N-m)
Cable/Connector	2-Pin MIL style, glass fused



### Ordering Information:

Model 6036 .....	9356289
Model 6036FM .....	9356826
Model 6036LB .....	9356939
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC .....	9353528
Model LP24-1B, 110 VAC line input, 24 VDC .....	9356120
Model P5000, rechargeable battery, 24 VDC .....	9356559
Cable, 2-Pin MIL/BNC 6' molded splashproof .....	9356686
Cable, 2-Pin MIL/Pigtail 6' high temperature .....	9354084
Cable, 2-Pin MIL/BNC 6' high temperature .....	9356381
Magnetic holder, 16 lb holding force, 1/4-28 .....	9356809
Magnetic holder, 35 lb holding force, 1/4-28 .....	9353448

#### Sensors include:

NIST Traceable Calibration, Mounting Stud, User Manual and 1-Year Warranty

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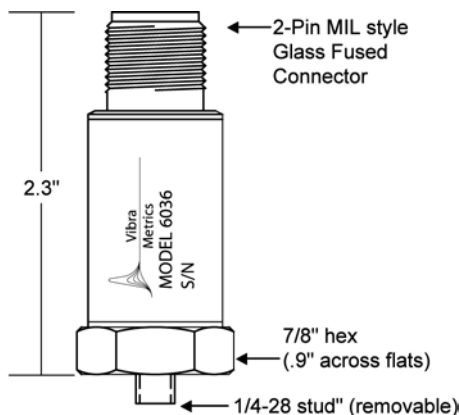
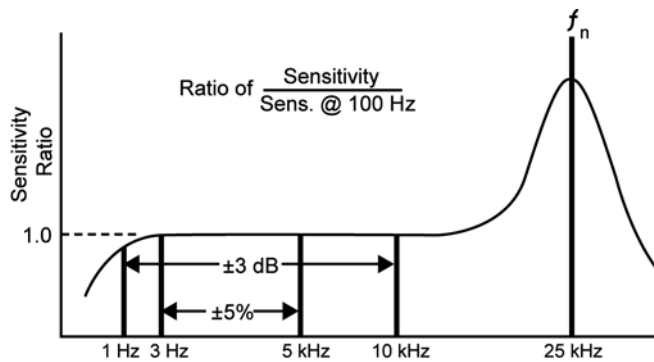
## High Temperature Premium Industrial Accelerometer

### Features

- 100 mV/g
- Extended temperature range (to 350 F)
- 2-Pin MIL style connector
- ISOSHIELD internal electrical shielding

### Applications

- General Industrial
- Motors/Generators
- Pumps
- Gearboxes
- Rollers
- Experimental
- Fans/Cooling Towers
- Bearing Housings
- Compressors



### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz ±5%:	72°F	100 mV/g	10.2 mV/(m/s <sup>2</sup> )
	350°F	87 mV/g	
Frequency Range			
±5%		3 Hz - 5 kHz	
±10%		2 Hz - 7 kHz	
±3 dB		1 Hz - 10 kHz	
Turn-on Time (2% of final bias)		<2 seconds	
Amplitude Range (at 72°F)		±70 g	
Mounted Resonance		>25 kHz	
Transverse Sensitivity		<5%	

#### Electrical

Noise (typical)			
Broadband	2.5 Hz to 25 kHz	250 µg rms	
Spectral	10 Hz	12 µg/√Hz	
	100 Hz	5 µg/√Hz	
	1000 Hz	2 µg/√Hz	
Output Impedance		1000 Ω	
Isolation		Isolated, >100 Meg Ω	
Noise Rejection (EMI/RFI)		>80 dB, Isoshield	
Bias Volts (nominal)		10 VDC	
Power Requirements		24-30 VDC	
Current Regulating Diode		1-6 mA cc	

#### Environmental

Temperature Range	-40 to 350°F / -40 to 177°C
Base Strain	.003 g peak/µstrain
Thermal Shock	.1 g/°C
Shock Limit	5000 g

#### Physical

Physical Dimensions	2.3" h x .87" hex base (5.8 x 2.2 cm)
Weight	3.2 oz / 90 grams
Case Material	304 stainless steel
Design	Isolated compression
Seal	Welded
Mounting	1/4-28 removable stud
Mounting Torque	35 in-lb (3.9 N-m)
Cable/Connector	2-Pin MIL style

#### Ordering Information:

Model 6036C Century	9356580
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC	9353528
Model LP24-1B, 110 VAC line input, 24 VDC	9356120
Model P5000, rechargeable battery, 24 VDC	9356559
Cable, 2-Pin MIL/Pigtail 6' high temperature	9354084
Cable, 2-Pin MIL/BNC 6' high temperature	9356381
Magnetic holder, 16 lb holding force, 1/4-28	9356809
Magnetic holder, 35 lb holding force, 1/4-28	9353448

#### Sensors include:

NIST Traceable Calibration, Mounting Stud, User Manual and 1-Year Warranty

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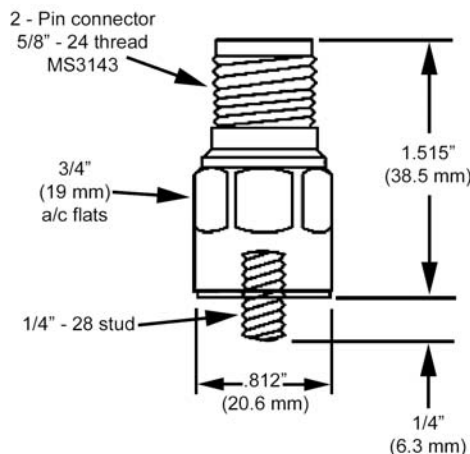
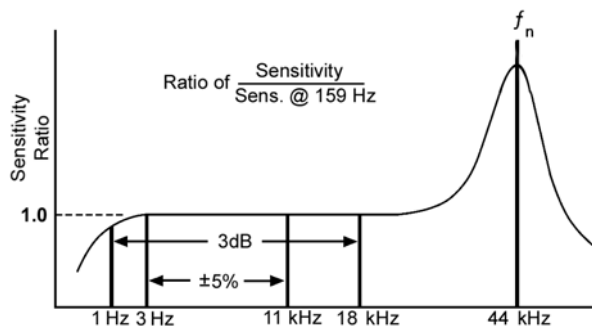
## Economy General Purpose Industrial Accelerometer

### Features

- 100 mV/g
- Splashproof
- 2-Pin MIL style connector

### Applications

- General Industrial
- Motors/Generators
- Pumps
- Gearboxes
- Rollers
- Experimental
- Fans/Cooling Towers
- Bearing Housings
- Compressors



### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±20%	100 mV/g
Frequency Range	
±5%	3 Hz - 11 kHz
±10%	2 Hz - 14 kHz
±3 dB	1 Hz - 18 kHz
Turn-on Time	≤2.5 seconds
Amplitude Range	±75 g peak
Mounted Resonance	>44 kHz
Transverse Sensitivity	≤5%
Amplitude Linearity	<2%

#### Electrical

Noise (typical)		
Broadband	2.5 Hz to 18 kHz	50 µg
Spectral	10 Hz	10.0 µg/√Hz
	100 Hz	2.7 µg/√Hz
	1000 Hz	1.0 µg/√Hz
Output Impedance		<150 Ω
Grounding		Isolated
Bias Volts		10
Power Requirements		18-28 Vdc
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-65 to 250° F
Shock Limit	7000 g peak

#### Physical

Physical Dimensions	1.515" h x .75" across flats
Weight	48 grams
Case Material	303 stainless steel
Design	Piezoelectric - ring shear
Seal	Hermetic
Mounting	1/4-28 stud
Mounting Torque	25 inches/pound

### Ordering Information:

Model 6045	9357224
2-Pin Mil style connector	
1/4-28 mounting thread	
Power Supplies, 2.2 mA output, BNC/BNC, 24 Vdc	
Model P5000 (Ni-Cad)	9356559
Model LP24-1B (AC)	9356120
Magnetic holder, 16 lb (for curved surfaces)	9356809
2-Pin MIL/BNC 6' molded splashproof cable	9356686
2-Pin MIL/Pigtail 6' high temperature cable	9354084
2-Pin MIL/BNC 6' high temperature cable	9356381

#### Sensors include:

NIST Calibration, 1/4-28 Mounting Stud, User Manual and 1-Year Warranty

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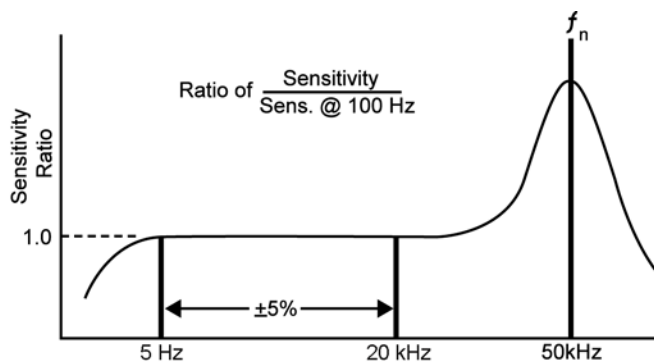
## Economy General Purpose Industrial Accelerometer

### Features

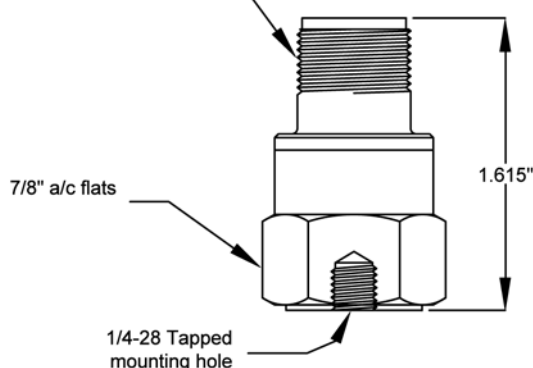
- 100 mV/g
- Splashproof
- 2-Pin MIL style connector

### Applications

- General Industrial
- Motors/Generators
- Pumps
- Gearboxes
- Rollers
- Experimental
- Fans/Cooling Towers
- Bearing Housings
- Compressors



2-Pin connector  
5/8" - 24 thread  
MS3143



### Operating Specifications

#### Dynamic

Sensitivity @ 100Hz, ±10%	100 mV/g
Frequency Range	5 Hz - 20 kHz
±5%	2 Hz - 20 kHz
±3dB	≤5 seconds
Turn-on Time	±75 g peak
Amplitude Range	>50 kHz
Mounted Resonance	≤5%
Transverse Sensitivity	<2%
Amplitude Linearity	

#### Electrical

Noise (typical)		
Broadband	2.5 Hz to 20 kHz	350 µg
Spectral	10 Hz	30 µg/√Hz
	100 Hz	8 µg/√Hz
	1000 Hz	3 µg/√Hz
Output Impedance		1000 Ω
Grounding		Isolated
Bias Volts		12 VDC
Power Requirements		24-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F
Base Strain	.005 g peak/µstrain
Shock Limit	5000 g peak

#### Physical

Physical Dimensions	1.515" h x .875" across flats
Weight	68 grams
Case Material	Type 3166 stainless steel
Design	Piezoelectric - ring shear
Seal	Welded - Hermetic
Mounting	¼-28 stud
Mounting Torque	25 in - lb.

### Ordering Information:

Model 6050	9357242
Power Supplies, 2 mA output, BNC/BNC, 24 VDC	
Model P5000 (rechargeable battery)	9356559
Model LP24-1B (110 VAC Line Input)	9356120
Cable, 2-Pin MIL/BNC 6' molded splashproof	9356686
Cable, 2-Pin MIL/Pigtail 6' high temperature	9354084
Cable, 2-Pin MIL/BNC 6' high temperature	9356381
Magnetic holder, 16 lb (for curved/flat surfaces)	9356809

#### Sensors include:

NIST Traceable Calibration, ¼-28 Mounting Stud, User Manual and 1-Year Warranty

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## Standard Industrial Accelerometer

### Features

- 100 mV/g
- Integral cable
- Exclusive injection molded composite body
- Unique throughbolt mounting design
- Isolated symmetrical shear mode sensing

### Applications

- General Industrial
- Motors/Generators
- Gears/Bearings
- Rollers
- Machining Centers
- Experimental
- Fans/Cooling Towers
- Pumps
- Compressors

### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±10%	100 mV/g	10.2 mV/(m/s <sup>2</sup> )
Frequency Range		
±5%	5 Hz – 5 kHz	
±10%	3.5 Hz – 7 kHz	
±3 dB	2 Hz – 8 kHz	
Turn-on Time (2% of final bias)	<0.3 seconds	
Amplitude Range (at 72°F)	±65 g	
Mounted Resonance	18 kHz	
Transverse Sensitivity	<5%	
Amplitude Linearity	<1%	

#### Electrical

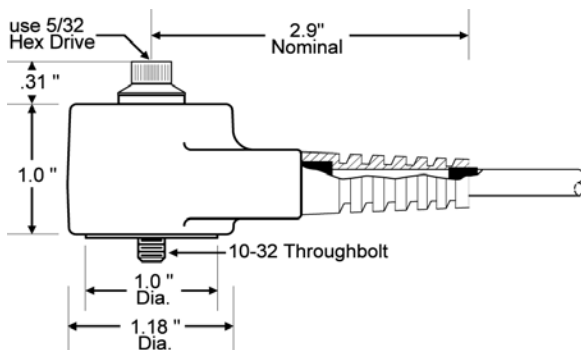
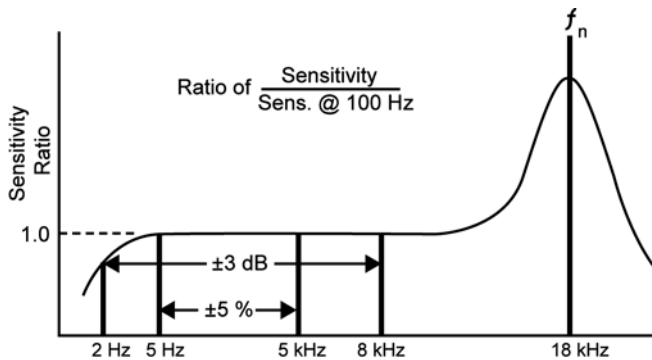
Noise (typical)		
Broadband	2.5 Hz to 25 kHz	300 µg rms
Spectral	10 Hz	28 µg/√Hz
	100 Hz	8 µg/√Hz
	1000 Hz	4 µg/√Hz
Output Impedance		<1000 Ω
Isolation		Isolated, >100 Meg Ω
Noise Rejection (EMI/RFI)		>52 dB
Bias Volts (nominal)		12 VDC
Power Requirements		24-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-10 to 200°F / -20 to 95°C
Base Strain	.001 g peak/µstrain
Thermal Shock	<.0002 g peak/°C
Shock Limit	5000 g

#### Physical

Physical Dimensions	1.0" h x 1.2" dia. (2.5 x 3 cm)
Weight	1.6 oz / 45 grams plus cable
Case Material	Welded stainless steel with composite polymer
Design	Isolated shear
Seal	Injection molded encapsulant
Mounting	10-32 captive throughbolt
Mounting Torque	20 in-lb (2.2 N-m)
Cable/Connector	PVC to BNC or Pigtail



### Ordering Information:

Model 7002P (Pigtail) .....	9356888
Model 7002B (BNC) .....	9356887
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC .....	9353528
Model LP24-1B, 110 VAC line input, 24 VDC .....	9356120
Model P5000, rechargeable battery, 24 VDC .....	9356559
Magnetic holder, 16 lb holding force, 10-32 .....	9356816
Magnetic holder, 35 lb holding force, 10-32 .....	9353449

#### Sensors include:

NIST Traceable Calibration, 15' Cable Assembly, Mounting Throughbolt, Adhesive Mounting Pad, User Manual and 2-Year Warranty

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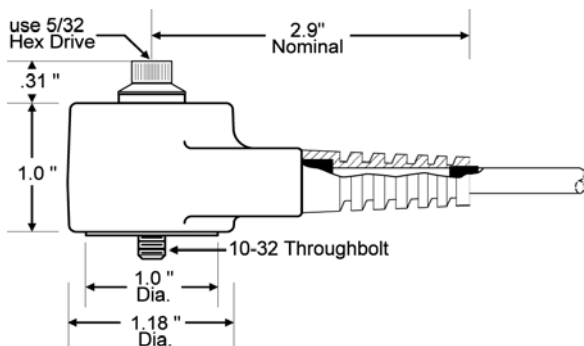
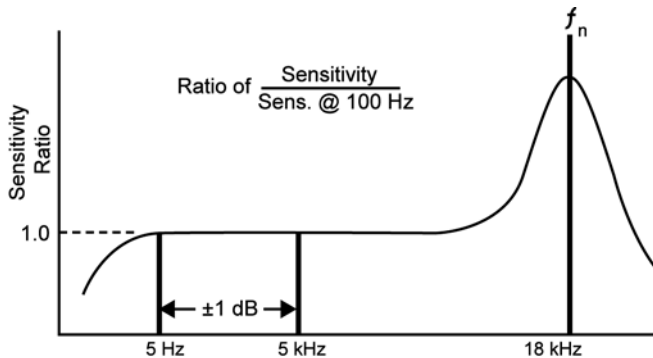
## Standard High g Accelerometer

### Features

- 10 mV/g for high acceleration measurements
- Integral cable
- Exclusive injection molded composite body
- Unique throughbolt mounting design
- Isolated symmetrical shear mode sensing

### Applications

- General Industrial
- Motors/Generators
- Pumps
- Gears/Bearings
- Rollers
- Experimental
- Fans/Cooling Towers
- Wayside (Railroad)
- Compressors
- Machining Centers



### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±1 dB	10 mV/g	1.0 mV/ (m/s <sup>2</sup> )
Frequency Range ±1 dB	5 Hz - 5.5 kHz	
Turn-on Time (2% of final bias)	0.3 seconds	
Amplitude Range	±500 g	
Mounted Resonance	>18 kHz	
Transverse Sensitivity	<5%	
Amplitude Linearity	<1%	

#### Electrical

Noise (typical)		
Broadband	1 Hz to 10 kHz	3000 µg rms
Spectral	10 Hz	280 µg/√Hz
	100 Hz	80 µg/√Hz
	1000 Hz	40 µg/√Hz
Output Impedance		<1000 Ω
Isolation		Isolated, >100 Meg Ω
Noise Rejection (EMI/RFI)		>52 dB
Bias Volts (nominal)		12 VDC
Power Requirements		24-30 VDC
Current Regulating Diode		1-8 mA cc

#### Environmental

Temperature Range	-10 to 200°F / -20 to 95°C
Base Strain	.001 g peak/µstrain
Thermal Shock	<.0002 g peak/°C
Shock Limit	5000 g

#### Physical

Physical Dimensions	1.0" h x 1.2" dia. (2.5 x 3 cm)
Weight	1.6 oz / 45 grams plus cable
Case Material	Inner Housing: Stainless steel (welded) Molded Jacket: Composite polymer
Design	Isolated shear
Seal	Electron-beam welded plus injection molded encapsulant
Mounting	10-32 captive throughbolt
Mounting Torque	20 in-lb (2.2 N-m)
Cable/Connector	PVC to BNC or Pigtail
Cable Pull Strength	40 lb.

### Ordering Information:

Model 7002HGP (Pigtail)	9356962
Model 7002HGB (BNC)	9356961
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC	9353528
Model LP24-1B, 110 VAC line input, 24 VDC	9356120
Model P5000, rechargeable battery, 24 VDC	9356559
Magnetic holder, 16 lb holding force, 10-32	9356816
Magnetic holder, 35 lb holding force, 10-32	9353449

#### Sensors include:

NIST Traceable Calibration, 15' Cable Assembly, Mounting Throughbolt, Adhesive Mounting Pad, User Manual and 2-Year Warranty

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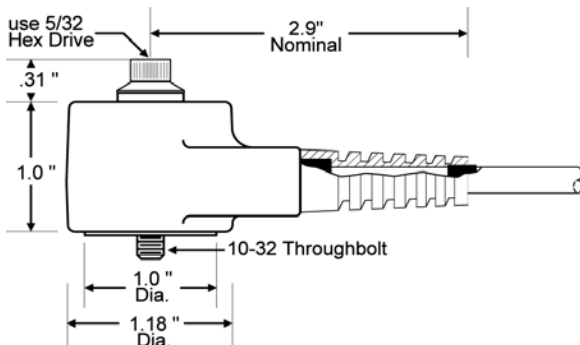
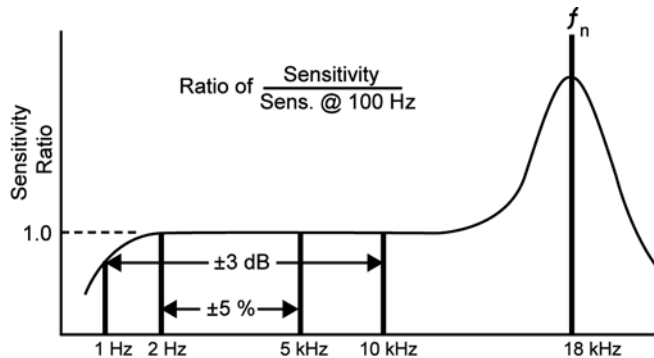
## Premium Accelerometer for Permanent Installation

### Features

- 100 mV/g
- Integral TUFKEM chemical resistant cable
- Exclusive injection molded composite body
- Unique throughbolt mounting design
- Excellent signal-to-noise ratio
- Isolated symmetrical shear mode sensing

### Applications

- Severe Chemical Presence
- Heavy Industrial
- Cooling Towers
- Gears/Bearings
- Machining Centers



### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	100 mV/g	10.2 mV/(m/s <sup>2</sup> )
Frequency Range	±5%	2 Hz - 5 kHz
	±10%	1.7 Hz - 7 kHz
	±3 dB	1 Hz - 10 kHz
Turn-on Time (2% of final bias)		≤0.3 seconds
Amplitude Range (at 72°F)		±65 g
Mounted Resonance		18 kHz
Transverse Sensitivity		<5%
Amplitude Linearity		<1%

#### Electrical

Noise (typical)		
Broadband	2.5 Hz to 25 kHz	200 µg rms
Spectral	10 Hz	20 µg/√Hz
	100 Hz	4 µg/√Hz
	1000 Hz	2 µg/√Hz
Output Impedance		<1000 Ω
Isolation		Isolated, >100 Meg Ω
Noise Rejection (EMI/RFI)		>52 dB
Bias Volts (nominal)		12 VDC
Power Requirements		24-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F / -40 to 121°C
Base Strain	.001 g peak/µstrain
Thermal Shock	<.0002 g peak/°C
Shock Limit	5000 g

#### Physical

Physical Dimensions	1.0" h x 1.2" dia. (2.5 x 3 cm)
Weight	45 grams plus cable
Case Material	Welded stainless steel with composite polymer
Design	Isolated shear
Seal	Injection molded encapsulant
Mounting	10-32 captive throughbolt
Mounting Torque	20 in-lb (2.2 N-m)
Cable/Connector	TUFKEM® cable to BNC or Pigtail

### Ordering Information:

Model 8002P (Pigtail)	9356901
Model 8002B (BNC)	9356900
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC	9353528
Model LP24-1B, 110 VAC line input, 24 VDC	9356120
Model P5000, rechargeable battery, 24 VDC	9356559
Magnetic holder, 16 lb holding force, 10-32	9356816
Magnetic holder, 35 lb holding force, 10-32	9353449

#### Sensors include:

NIST Traceable Calibration, 15' Cable Assembly, Mounting Throughbolt, Adhesive Mounting Pad, User Manual and Lifetime Partnership Warranty

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## High Temperature Accelerometer for Permanent Installation

### Features

- 100 mV/g
- Integral TUFKEM chemical resistant cable
- Exclusive injection molded composite body
- Unique throughbolt mounting design
- Extended temperature range (to 350F)
- Optional intrinsically safe FM certification

### Applications

- Severe, High Temperature Chemical Presence
- Atomizers
- Gears/Bearings
- Heavy Industrial
- Cooling Towers

### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	100 mV/g	10.2 mV/ (m/s <sup>2</sup> )
Frequency Range	±5%	5 Hz - 5 kHz
	±10%	4 Hz - 6 kHz
	±3 dB	2 Hz - 10 kHz
Turn-on Time (2% of final bias)		≤0.3 seconds
Amplitude Range (at 72°F)		±65 g
Mounted Resonance		>18 kHz
Transverse Sensitivity		<5%
Amplitude Linearity		<1%

#### Electrical

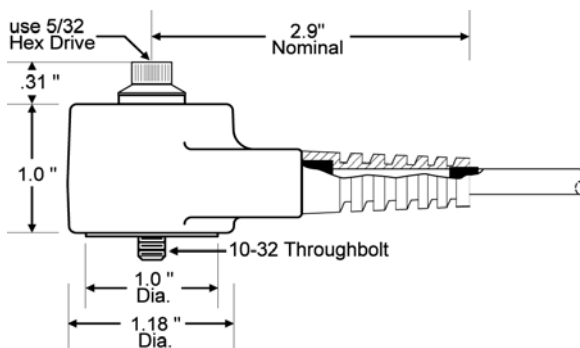
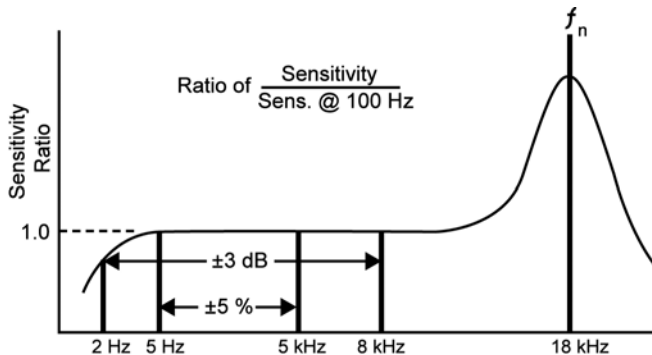
Noise (typical)		
Broadband	2.5 Hz to 25 kHz	380 µg rms
Spectral	10 Hz	32 µg/√Hz
	100 Hz	8 µg/√Hz
	1000 Hz	3.5 µg/√Hz
Output Impedance		<1000 Ω
Isolation		Isolated, >100 Meg Ω
Noise Rejection (EMI/RFI)		>52 dB
Bias Volts (nominal)		8 VDC
Power Requirements		24-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 300°F / -40 to 149°C
Base Strain	.001 g peak/µstrain
Thermal Shock	<.0002 g peak/°C
Shock Limit	5000 g

#### Physical

Physical Dimensions	1.0" h x 1.2" dia. (2.5 x 3 cm)
Weight	1.6 oz / 45 grams plus cable
Case Material	Welded stainless steel with composite polymer
Design	Isolated shear
Seal	Injection molded encapsulant
Mounting	10-32 captive throughbolt
Mounting Torque	20 in-lb (2.2 N-m)
Cable/Connector	TUFKEM® cable to BNC or Pigtail
Cable Pull Strength	60 lb.



### Ordering Information:

Model 8002CP (Pigtail)	9356999
Model 8002CB (BNC)	9356998
Model 8002CFMP (Pigtail)	9356931
Model 8002CFMB (BNC)	9356930

#### Power Supplies, 2 mA output, BNC/BNC

Model P1000B, battery, 15 VDC	9353528
Model LP24-1B, 110 VAC line input, 24 VDC	9356120
Model P5000, rechargeable battery, 24 VDC	9356559

Magnetic holder, 16 lb holding force, 10-32	9356816
Magnetic holder, 35 lb holding force, 10-32	9353449

#### Sensors include:

NIST Traceable Calibration, 15' Cable Assembly, Mounting Throughbolt, Adhesive Mounting Pad, User Manual and Lifetime Partnership Warranty

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## High Sensitivity Premium Accelerometer

### Features

- High Sensitivity of 500 mV/g
- Integral TUFKEM chemical resistant cable
- Exclusive injection molded composite body
- Unique throughbolt mounting design
- Isolated symmetrical shear mode sensing

### Applications

- Low Amplitude Focus
- Severe Chemical Presence
- Heavy Industrial
- Rollers
- Gears/Bearings

### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	500 mV/g	51 mV/(m/s <sup>2</sup> )
Frequency Range	±5%	1.5 Hz – 5 kHz
	±10%	.7 Hz – 6 kHz
	±3 dB	.4 Hz – 7 kHz
Turn-on Time (2% of final bias)		≤0.3 seconds
Amplitude Range (at 72°F)		±10 g
Mounted Resonance		>18 kHz
Transverse Sensitivity		<5%
Amplitude Linearity		<1%

#### Electrical

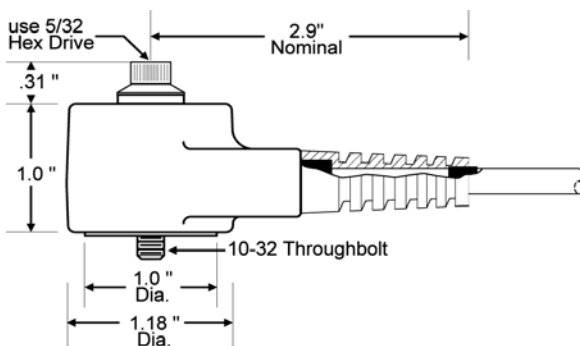
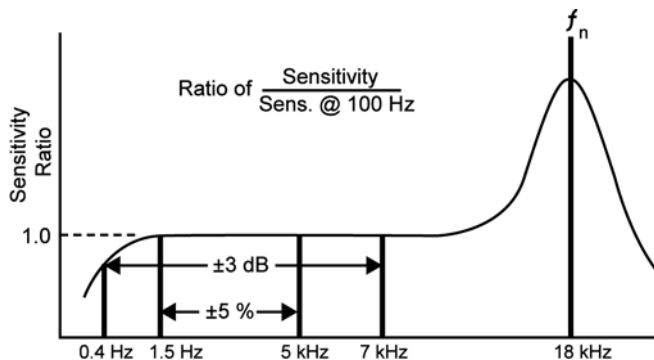
Noise (typical)		
Broadband	2.5 Hz to 25 kHz	60 µg rms
Spectral	10 Hz	1.0 µg/√Hz
	100 Hz	.4 µg/√Hz
	1000 Hz	.1 µg/√Hz
Output Impedance		2000 Ω
Isolation		Isolated, >100 Meg Ω
Noise Rejection (EMI/RFI)		>52 dB
Bias Volts (nominal)		12 VDC
Power Requirements		24-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F / -40 to 121°C
Base Strain	.001 g peak/µstrain
Thermal Shock	<.0002 g peak/°C
Shock Limit	5000 g

#### Physical

Physical Dimensions	1.0" h x 1.2" dia. (2.5 x 3 cm)
Weight	1.6 oz / 45 grams plus cable
Case Material	Welded stainless steel with composite polymer exterior
Design	Isolated Shear
Seal	Injection molded encapsulant
Mounting	10-32 captive throughbolt
Mounting Torque	20 in-lb (22 N-m)
Cable/Connector	TUFKEM® cable to BNC or Pigtail



### Ordering Information:

Model 8002HSP (Pigtail) .....	9356934
Model 8002HSB (BNC) .....	9356933
Power Supplies, 2 mA output, BNC/BNC	
Model P1000B, battery, 15 VDC .....	9353528
Model LP24-1B, 110 VAC line input, 24 VDC .....	9356120
Model P5000, rechargeable battery, 24 VDC .....	9356559
Magnetic holder, 16 lb holding force, 10-32 .....	9356816
Magnetic holder, 35 lb holding force, 10-32 .....	9353449

#### Sensors include:

NIST Traceable Calibration, 15' Cable Assembly, Mounting Throughbolt, Adhesive Mounting Pad, User Manual and Lifetime Partnership Warranty

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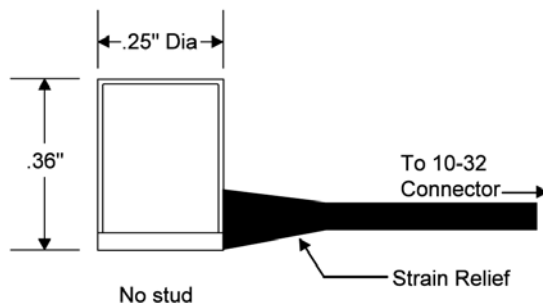
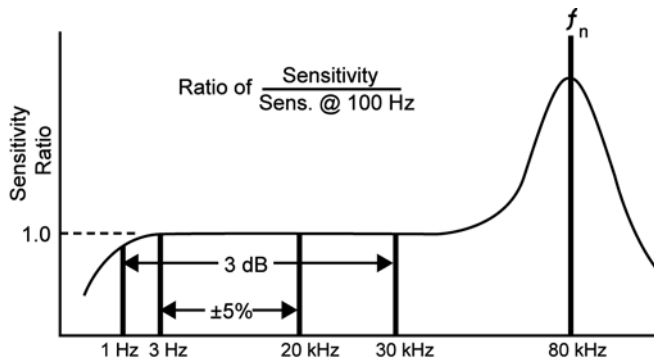
## Sub-Minature Low-Impedance Accelerometer

### Features

- 8.5 mV/g
- Sub-miniature size / lightweight
- Internal signal conditioning
- Broad frequency range
- Integral coaxial strain-relieved cable

### Applications

- Dry Industrial
- Motors/Generators
- Pumps
- Gears/Bearings
- Rollers
- Experimental
- Aerospace
- Military
- Machining Centers



### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±5%	8.5 mV/g	1.0 mV/(m/s <sup>2</sup> )
Frequency Range		
±5%	3 Hz - 20 kHz	
±10%	2 Hz - 25 kHz	
±3 dB	1 Hz - 30 kHz	
Turn-on Time	<5 seconds	
Amplitude Range	±550 g	
Mounted Resonance	>80 kHz	
Transverse Sensitivity	<5%	

#### Electrical

Noise (typical)		
Broadband	2.5 Hz to 25 kHz	1500 µg rms
Spectral	10 Hz	100 µg/√Hz
	100 Hz	25 µg/√Hz
	1000 Hz	10 µg/√Hz
Output Impedance		1000 Ω
Isolation		Case ground
Bias Volts (nominal)		7 VDC
Power Requirements		15-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 250°F	-40 to 121°C
Base Strain		.005 g peak/µstrain
Thermal Shock		9.7 g/°C
Shock Limit		5000 g

#### Physical

Physical Dimensions	.36" h x .25" dia. (.9 x .6 cm)
Weight	.027 oz / .75 grams
Case Material	Titanium
Design	Compression
Seal	Epoxy
Mounting	Adhesive (no stud)
Cable/Connector	Integral cable to 10-32

### Ordering Information:

Model 9001A .....	9353031
Power Supplies, 2 mA output	
10-32/BNC connectors	
Model P1000, battery, 15 VDC .....	9353527
Model LP24-1, 110 VAC line input, 24 VDC .....	9356451
BNC/BNC connectors	
Model P5000, rechargeable battery, 24 VDC .....	9356559
BNC/10-32 adapter .....	CN2-0006
Cable, Extension, 10-32(F)/10-32(M) .....	9354054

#### Sensors include:

NIST Traceable Calibration, Integral 6' Cable Assembly, User Manual, 1-Year Warranty

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## Sub-Minature High Frequency Accelerometer

### Features

- 100 mV/g
- Sub-miniature size / lightweight
- Internal signal conditioning
- Broad frequency range
- Integral coaxial strain-relieved cable

### Applications

- Dry Industrial
- Motors/Generators
- Pumps
- Gears/Bearings
- Rollers
- Experimental
- Aerospace
- Military
- Machining Centers

### Operating Specifications

#### Dynamic

Sensitivity @ 100 Hz, ±20%	100 mV/g	10.2 mV/(m/s <sup>2</sup> )
Frequency Range	±5%	10 Hz – 15 kHz
	±10%	8 Hz – 18 kHz
	±3 dB	4 Hz – 25 kHz
Turn-on Time		<5 seconds
Amplitude Range		±50 g peak
Mounted Resonance		>50 kHz
Transverse Sensitivity		<5%

#### Electrical

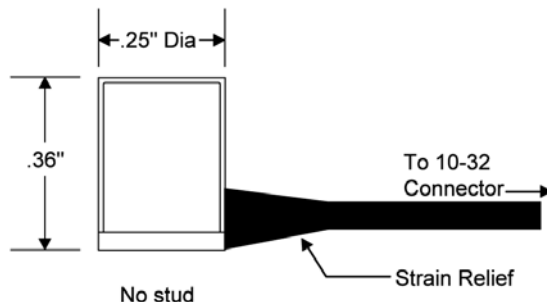
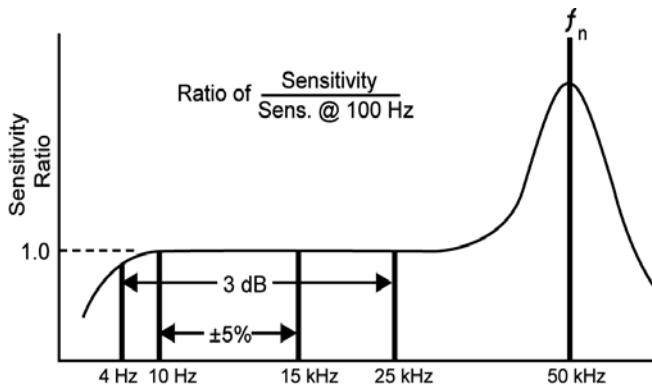
Noise (typical)		
Broadband	2.5 Hz to 25 kHz	550 µg (rms)
Spectral	10 Hz	130 µg/√Hz
	100 Hz	10 µg/√Hz
	1000 Hz	3 µg/√Hz
Output Impedance		1000 Ω
Isolation		Case ground
Bias Volts (nominal)		10 VDC
Power Requirements		24-30 VDC
Current Regulating Diode		1-6 mA cc

#### Environmental

Temperature Range	-40 to 230°F	-40 to 110°C
Base Strain	.005 g peak/µstrain	
Shock Limit	5,000 g peak	

#### Physical

Physical Dimensions	.36" h x .25" dia. (.91 x .64 cm)
Weight (without cable)	.03 oz. / .75 grams
Case Material	Titanium
Design	Compression
Seal	Epoxy
Mounting	Adhesive (no stud)
Cable	Integral cable to 10-32



### Ordering Information:

Model 9002A .....	9356748
Power Supplies, 2 mA output	
10-32/BNC connectors	
Model P1000, battery, 15 VDC .....	9353527
Model LP24-1, 110 VAC line input, 24 VDC .....	9356451
BNC/BNC connectors	
Model P5000, rechargeable battery, 24 VDC .....	9356559
BNC/10-32 adapter .....	CN2-0006
Cable, Extension, 10-32(F)/10-32(M) .....	9354054

#### Sensors include:

NIST Traceable Calibration, Integral 6' Cable Assembly, User Manual, 1-Year Warranty

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## Accelerometer Power Supplies



### Features

#### P1000/3000 Series

- Disposable battery
- Portable use
- Battery test light
- One/three channels
- BNC or 10-32 I/P

#### P5000 Series

- Ni-Cad battery
- Charger
- 3 position gain
- LED indicators for low battery, clipping and fault

#### LP24 Series

- Line-powered
- One/three channels
- BNC or 10-32 I/P

#### LP241 Series

- Rack mount
- Low profile
- Line-powered
- Twelve channels

Operating Specifications:	P1000	P3000	P5000	LP24-1	LP24-3	LP241-12
<b>Number of Channels</b>	1	3	1	1	3	12
<b>Accel. Excitation, Vdc</b>	15	15	24	24	24	24
<b>Excitation Current, mA</b>	2	2	2	2	2	2
<b>Voltage Gain (+/- %2)</b>	Unity	Unity	x1, x10, x100	Unity	Unity	Unity
<b>Frequency Response, Hz</b>	.5-100 K	.5-100 K	.5-100 K	.5-100 K	.5-100 K	.5-100 K
<b>Output Signal F.S., Pk., V</b>	10	10	10	10	10	10
<b>Noise(rms) (0-10Khz), mV</b>	.002	.002	.002	.2	.2	.2
<b>Linearity</b>	1%	1%	1%	1%	1%	1%
<b>Power Required</b>	(1) 15 V battery	(3) 15 V battery	(3) 9 V battery*	115 V ac or 220 V ac	115 V ac or 220 V ac	115 V ac or 220 V ac
<b>Accel. Connector</b>	10-32 or BNC	10-32 or BNC or 4 pin	BNC <sup>A</sup>	10-32 or BNC	BNC <sup>A</sup>	BNC <sup>A</sup>
<b>Output Connector</b>	BNC	BNC	BNC	BNC	BNC	BNC
<b>Dimensions(HxWxD) in.</b>	1.4x2.25x1.1	2.6 x 3 x 1.6	5.25 x 2.6 x 1.75	2.6 x 5.3 x 1.7	2.6 x 5.3 x 1.7	3.5 x 19 x 5.25
<b>Weight, oz.</b>	3	9	25	22	22	76

<sup>A</sup>A BNC - 10-32 adaptor is available \*Specify 110 or 220 V charger

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## General Purpose Industrial Switchboxes

### Features

- Nema 4 Enclosure
- Fully sealed rotary switch (internal on SB06)
- Capped BNC output connector (internal on SB06)
- Sealed electrical connections with door closed

### Applications

- Where reduced time for multiple point monitoring is required
- For permanently mounted accelerometers with multiple points of interest
- When more accurate/repeatable data is required
- In dangerous locations that present a hazard for manual monitoring
- In locations that are difficult or inconvenient to reach

### Operating Specifications

Enclosure	NEMA 4 <sup>A</sup>
Door Closure	Clamps (Latch on SB06)
Inputs	Terminal Block
Output	BNC Jack (and 2-Pin MIL on SB06)
Channels	6, 12, 24 or 48
Enclosure Material	Fiberglass/Steel/Stainless



### Ordering Information:

Model Number	Part Number	Number of Channels	Output Connectors	Enclosure Material	Dimensions W x H x D	Weight (lbs.)
SB06WP	9361037	6	(1) BNC, (1) 2 Pin Mil	Fiberglass	7.7" x 9.6" x 4.6"	6
SB12WP	9361030	12	(1) BNC	Steel	12" x 12" x 6"	25
SB12WPSS	9361030	12	(1) BNC	Stainless Steel	12" x 12" x 6"	25
SB24WP	9361025	24	(1) BNC	Steel	12" x 12" x 6"	25
SB24WPSS	9361025	24	(1) BNC	Stainless Steel	12" x 12" x 6"	25
SB48WP <sup>B</sup>	9361020	48	(2) BNC	Steel	12" x 12" x 6"	25
SB48WPSS <sup>B</sup>	9361020	48	(2) BNC	Stainless Steel	12" x 12" x 6"	25

<sup>A</sup> No knockouts on enclosure – Cable entry hole (3" max diameter) and connections to be supplied by customer

<sup>B</sup> Models SB48 have (2) twenty-four channel position select switches with separate BNC output for each switch

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## General Purpose Industrial Monitor

### Features

- Versatile acceleration, velocity, displacement or temperature monitor
- Interface with accelerometer, proximity probe or "J" type thermocouple
- Two programmable alarm levels with delay on make/break relays
- 4-20 mA fully scalable output for interface with PLC, DCS, alarm and SCADA systems
- RMS (standard) or peak readings
- Small NEMA 4, 1/8 DIN package
- High/low pass filters available
- Adjustable sampling time
- Signal output: raw, filtered, rep. DC value

### Applications

- Any application where immediate display of machine PdM data or 4-20 mA output is required

### Operating Specifications

#### Dynamic

Accuracy ±5%	Acceleration	3 Hz - 10 kHz
	Velocity	3 Hz - 10 kHz
	Displacement	6 Hz - 10 kHz
Optional Filtering		
	High Pass:	2, 5, 10, 20, 50, 100, 200, 500, 5k Hz
	Low Pass:	none, 50, 70, 100, 200, 500, 1k, 2k Hz
Accelerometer Input, mV/g		100 (standard) 10 or 500

#### Electrical

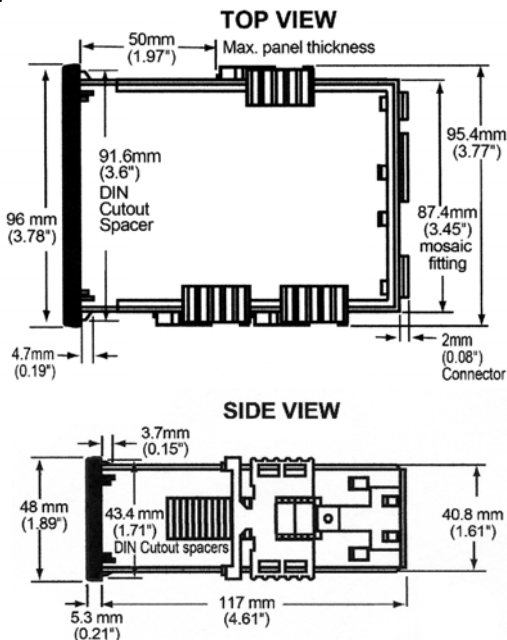
Power Requirements, Auto-sensing AC-DC	
85-265 VAC, 95-370 VDC (standard)	
15-48 VAC, 10-72 VDC	
Relays	(2) Form C

#### Environmental

Operating Temperature Range	32°F to 140°F / 0°C to 60°C
Acceleration Limit	20 g
Velocity Limit	20 ips
Displacement Limit	200 mils
Temperature Limit	1400°F / 760°C

#### Physical

Display	.56 inch bright red LED
Weight	6.5 ounces / 184 grams
Front Panel	NEMA 4
Connectors	MSTB



### Ordering Info      Vibra-Metrics Part Number:

**VM500 X-XXX-X-HPXXXX-LPXXXX-X**

#### Type

A - Acceleration  
V - Velocity  
D - Displacement  
F - Temperature, F  
C - Temperature, C

#### Accelerometer Input

010 - 10 mV/g  
100 - 100 mV/g\*  
500 - 500 mV/g

#### Mode

R - RMS\*  
P - Peak

#### High Pass Filtering

0002 - 3 Hz\*  
0005 - 5 Hz  
0010 - 10 Hz  
0020 - 20 Hz  
0050 - 50 Hz  
0100 - 100 Hz  
0200 - 200 Hz  
0500 - 500 Hz  
2000 - 2000 Hz

#### Low Pass Filtering

0000 - None  
0050 - 50 Hz  
0070 - 70 Hz  
0100 - 100 Hz  
0200 - 200 Hz  
0500 - 500 Hz  
1000 - 1000 Hz  
2000 - 2000 Hz\*  
5000 - 5000 Hz

#### Power Supply

1 - 85-265 VAC, 95-370 DCV\*  
2 - 15-48 VAC, 10-72 VDC

\* Standard

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