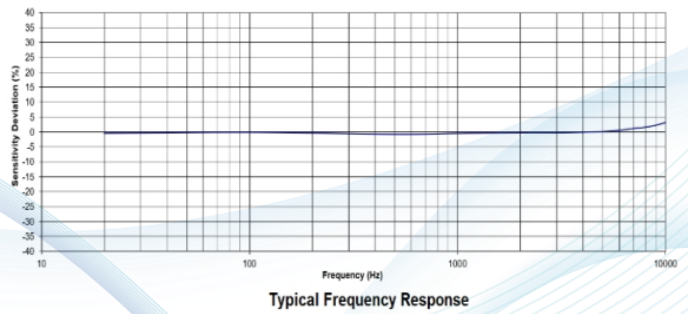




M51AS is an IEPE light-weight accelerometer permitting simultaneous shock and vibration measurements. M51AS features an annular shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit in a two wire IEPE system which transmits its low impedance voltage output through the same cable that supplies the constant current power. Signal ground is connected to the outer case of the unit. Isolated mounting screw or washer are available. Polarity inversion protection for the amplify circuit is inherent in the circuit design. The welded Titanium Alloy construction provides a lightweight hermetic housing. The miniature M3 glass insulated connector provides long term stability over the operating temperature range. In addition to adhesive mounting, M51AS has a through holes for screw mounting on the test object. The cable outgoing direction can be discretionary for install convenience. M51AS provides wide frequency response, which is ideal for dynamic vibration and shock measurement especially for lightweight structures and drop testing for the packaging industry. 12 is a M3 to BNC breakout cable for the sensor.

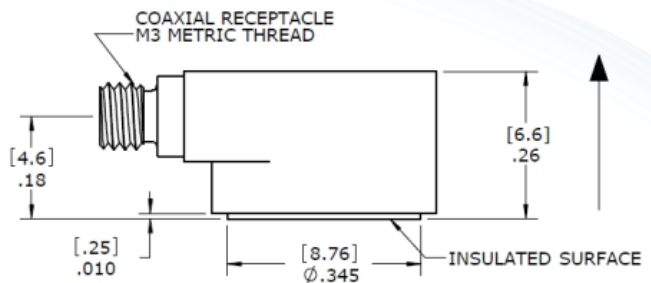
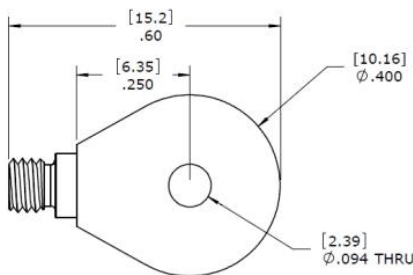
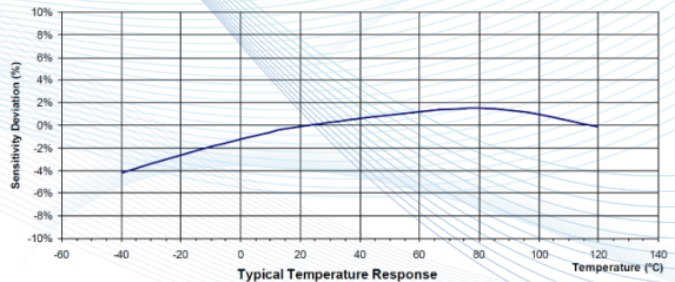
Features:

- Through hole mount
- Side connector output
- Adhesive or screw mounting
- Annular shear mode
- Wide temperature range
- Wide frequency response
- Light weight



Application:

- Vibration monitoring
- Shock testing
- Road testing
- Modal analysis
- Aircraft testing



Specification:

Dynamic performance	Unit							
Measurement Range	g	10	50	100	250	500	1000	5000
Sensitivity $\pm 10\%$	mV/g	500	100	50	20	10	5	1
Frequency Range $\pm 5\%$	Hz	2~4000		1~7000				
Frequency Range $\pm 3\text{dB}$	Hz	1.5~10000		1~10000				
Resonant Frequency	Hz	0.6~12000		0.5~15000				
Transverse Sensitivity	kHz	38						
Non-Linearity	%	<5						
Shock Limit	% FSO	± 1						
Measurement Range	g pk	± 10000						

Environmental parameters

Temperature response -55 ~ +125°C	%/max.	± 10
Operating and Storage Temperature	°C	-50~125
Bias Voltage (Room Temp.)	Vdc	8 ~ 12
Bias Voltage (-50~125) °C	Vdc	6 ~ 13

Electrical characteristics

Output Impedance	Ω	< 100
Full Scale Output Voltage	V	± 5
Insulation Resistance	M Ω	> 100
Supply Voltage	Vdc	18 ~ 30
Supply Current	mA	2 ~ 10

Physical properties

Weight (Excluding Cable)	Piezo Ceramic
Sensing Element	Shear
Sensing Geometry	Titanium Alloy
Housing Material	Welded Hermetic
Sealing	Signal return connected to case
Grounding	IEPE output

Random accessories

HS020	M2x10 socket head cap mounting screw	Included
AM003	3 channels IEPE signal conditioner	Optional
AM004	Portable vibration analyzer	Optional
AM005	8 channels data acquisition system	Optional

Optional cables

12 cable	Single Axis Accelerometer Cable, M3 to BNC, Low Noise	Optional
14 cable	Single Axis Accelerometer Cable, M3 to 10-32 Header, Low Noise	Optional

Ordering information:

M51AS	GGGG	ZZZ
Range		
0010=10g		
0050=50g		
0100=100g		
0250=250g		
0500=500g		
1000=1000g		
5000=5000g		
A=IEPE output		

E.G:

M51AS-50

Model M51AS, 0050, Connector, No Options

The data contained in this document is intended for the use of technical trainers only. The customer's technical department is responsible for assessing the suitability of the product for the intended application and the completeness of the product information given in this document in relation to such application. For further information on products, technology, terms and conditions of delivery and prices, please contact our nearest office (www.senstechxyz.com).

中国大陆
西安鑫源宇通电子科技有限公司
陕西省西安市高新区锦业路70号航天恒宇园区1号厂房一层南
Tel: 400-780-9688
sales@senstechxyz.com

中国香港
深大实业有限公司
香港新界沙田安平街6号新贸易中心B座13楼06室
Tel: +86 17792099916
info@caltropinstruments.com

新加坡
深大实业有限公司
香港新界沙田安平街6号新贸易中心B座13楼06室
Tel: +86 17792099919
info@senstechxyz.com

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西安鑫源宇通电子科技有限公司 | 400-780-9688
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