



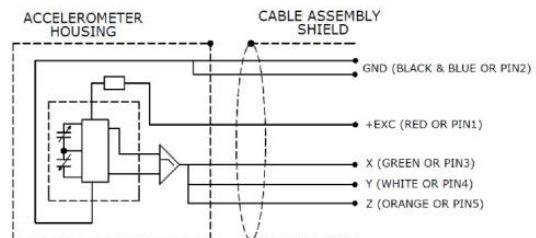
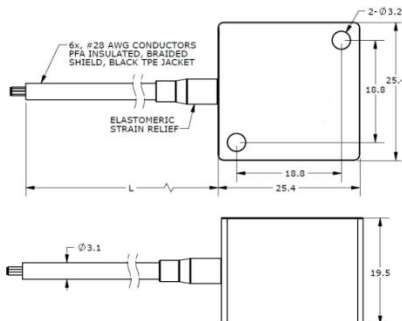
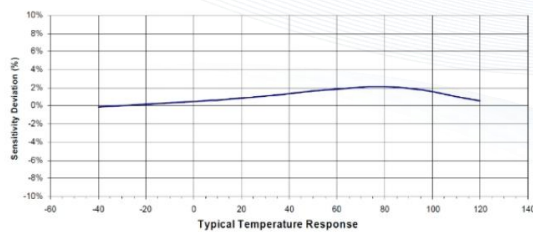
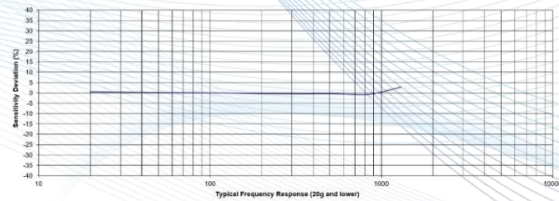
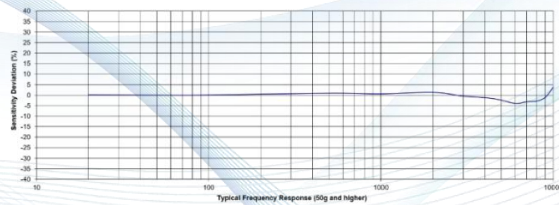
Features:

- DC response
- 2 to 500g full scale
- Extreme low noise
- High frequency response
- Excellent thermal stability
- Motion, low frequency, tilt
- 5K g shock survivability

Application:

- Flight test
- Automotive road testing
- Civil engineering structures
- Railway comfort
- Aviation and aerospace

Model P83AT is a high-sensitivity, low noise triaxial accelerometer which simultaneously measures acceleration and low-frequency vibration in three mutually perpendicular axial. P83AT is triaxial capacitive accelerometer family utilizes a silicon Micro-Electro-Mechanical System (MEMS) variable capacitance sensing element. The sensing element of each axis consists of a very small inertial mass and a flexure element cantilever positioned between two plates. As the mass deflects under acceleration, the capacitance between these plate changes. AC excitation and synchronous amplitude demodulation circuitry contained in the accelerometer's internal signal conditioner provides an analog output signal proportional to the applied acceleration. This output signal is scaled as a voltage which is proportional to the applied acceleration. The output signal format is single-ended $2.5 \pm 2V$. The accelerometer is powered by a single regulated supply between 8 to 36 Vdc. Thermal drift has been compensated by internal circuit for the best environment stability. The sensing element and electronics are contained in a lightweight housing with an integral cable terminated by pigtails or specified connector. Signal ground is isolated from the test object that benefit from the anodized aluminum housing. The accelerometer can be mounted by M3 metric screw or adhesive. P83AT is well-suited for a wide variety of R&D applications requiring precision measurements and packaging for demanding application and handling needs.



Specification:

Dynamic Performance	Unit									
Measurement Range	g	±2	±5	±10	±20	±30	±50	±100	±500	
Sensitivity ±10%	mV/g	1000	400	200	100	67	40	20	4	
Noise Density	ug/√Hz	20	80	80	160	160	25	30	150	
Residual Noise	μVrms	650	1000	550	550	550	250	300	300	
Frequency Range ±5%	Hz	0 ~ 800					0 ~ 4500		0 ~ 7000	
Frequency Range ±3dB	Hz	0 ~ 1300					0 ~ 10000			
Transverse Sensitivity	%	<2								
Non-Linearity	% FSO	±1								
Shock Limit	g	5000								
Environmental Parameters										
Temperature Sensitivity Coefficient -40 ~ +125°C	%	±2								
Operating And Storage Temperature	°C	-40~125								
Bias Voltage	Vdc	2.5								
Electrical Characteristics										
Output Impedance	Ω	< 100								
Full Scale Output Voltage	Vpk	±2								
Insulation Resistance (@100vdc)	MΩ	> 100								
Excitation Voltage	Vdc	8 ~ 36								
Excitation Current	mA	< 15								
Physical Properties										
Weight (Cable Not Included)	Grams	17								
Mounting Torque	lb-in (Nm)	6 (0.7)								
Turn On Time	mSEC	<100								
Housing Material	Al Alloy Anodized Black									
Humidity	Epoxy Sealed									
Output Method	Amplifying Voltage									

Random Accessories

HS002	M3x16 Socket Head Cap Screws	2pcs Included
HS003	Ø3 SST Washer	2pcs Included
CR001	LEMO FGG-1B-307 Connector	Optional
AM005	8 Channels Data Acquisition System	Optional

Ordering information:

P83AT

GGGG

Range

0002=2g

0005=5g

0010=10g

0020=20g

0030=30g

0050=50g

0100=100g

0500=500g

E.G :

P83AT-2

Model P83AT, 0002, 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).

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