

IEPE Double-Shielded Triaxial Accelerometer

DETAILS

BXXYG1 type three-axis acceleration sensor, using piezoelectric ceramic shear structure, with a wide-band frequency response, high-quality piezoelectric ceramics with long-term stability can ensure years of accurate measurement. Built-in low impedance circuit, low noise, better sensitivity temperature response and other characteristics. The housing is made of less dense titanium alloy, laser welded, one-piece insulation design.

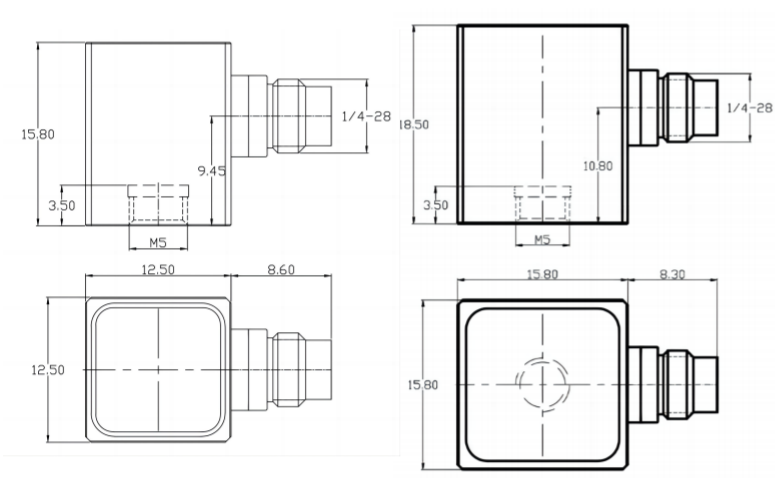
FEATURES

- IEPE built-in circuit, strong anti-interference ability
- Compact design with double shielding
- Titanium alloy shell, high strength, light weight
- Mini 4-pole connector output, with 4-pole cable, easy to use

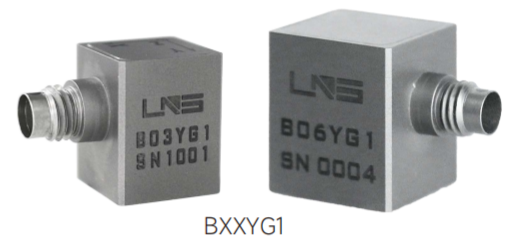
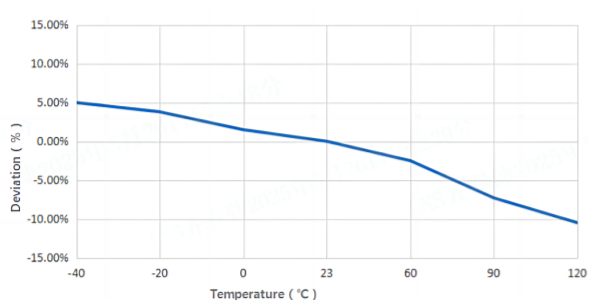
TYPICAL APPLICATIONS

- HASS/HALT
- Automotive NVH testing
- Modal structure and analysis
- Universal vibration monitoring
- General-purpose triaxial vibration measurement

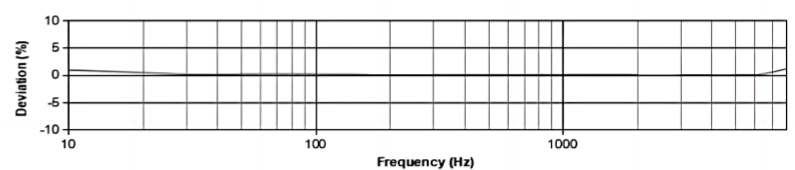
Fig_1 Dimensions of BXXYG1



Fig_2 Typical Temperature Response



Fig_3 Typical Frequency Response



Specifications-BXXYG1

MODEL NUMBER		UNIT	B02YG1	B03YG1	B06YG1
PERFORMANCE					
Sensitivity ¹		mV/g	10(±10%)	20	100
		mV/(m/s²)	1	2	10
Measurement Range		g	±500	±250	±50
Broadband Resolution ²		g rms	0.001	0.0005	0.0001
Non-Linearity ³		%	≤1		
Frequency Range	± 5%(Hz)	Hz	1-8k	1-8k	1-8k
	±10%(Hz)		0.5-10k	0.5-10k	0.5-9k
Resonance Frequency ²		Hz	≥50k	≥50k	≥30k
Discharge Time Constant ²		s	≤1		
Transverse Sensitivity		%	≤5		
ELECTRICAL					
Excitation Voltage		VDC	20-30		
Constant Current Excitation		mA	2-20		
Output Impedance		Ω	≤100		
Output Bias Voltage		V	8-12		
Electrical Isolation		Ω	≥1×10 ⁸		
Spectral Noise ²	10Hz	μg/√Hz	150	75	120
	100Hz		40	20	30
	1000Hz		20	10	8
ENVIRONMENTAL					
Sinusoidal Vibration Limit ⁴		g	2000	1200	500
Shock Limit ⁴		g	5000	3000	1000
Temperature Range		°C	-40-120		
		°F	-40-248		
Temperature Response ²		%/°C	See Graph		
PHYSICAL					
Sealing		-	Laser welding IP68		
Sensing Element		-	Piezoelectric Ceramics		
Housing Material		-	Titanium Alloy		
Size	mm		12.5×12.5×15.8		15.8×15.8×18.5
	in		0.492×0.492×0.622		0.622×0.622×0.728
Electrical Connector		-	1/4-28 4-pin		
Mounting Thread		-	M5 (Opt 10-32)/Adhesive		
Weight ²	g		9.5	9.5	18
	oz		0.335	0.335	0.635
TEDS Optional ⁵		-	No		

Additional Information

Note:

1. @ 160Hz, 24VDC, 4mA conditions
2. Typical values
3. JBT 6822-2018 7.12.1 Vibration Testing Method
4. References the mechanical structure of the sensor not being damaged in a non powered state, rather than in a working state
5. Some products may have changes in size after adding TEDS

BXXYG1

Supplied Accessories:

- Product Verification Report
- Install Screws

OPTIONAL VERSIONS

-E: 10-32 Mounting Threads

COMPLIANCE WITH STANDARDS



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