

Large Sensitivity Accelerometer

DETAILS

B1XA0X single-axis acceleration sensor, using piezoelectric ceramic shear structure, with a broadband frequency response, small size and high sensitivity, high-quality piezoelectric ceramics with long-term stability to ensure years of accurate measurement. The internal circuit is characterized by low noise and high resolution over a wide frequency band. The housing is laser welded stainless steel with high sealing grade and strength, and is equipped with M5 mounting threads at the bottom.

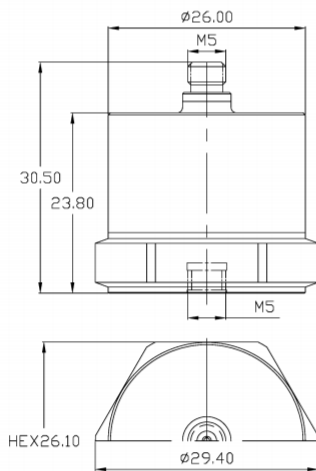
FEATURES

- Low noise
- High sensitivity
- Small size and light weight
- Broadband response

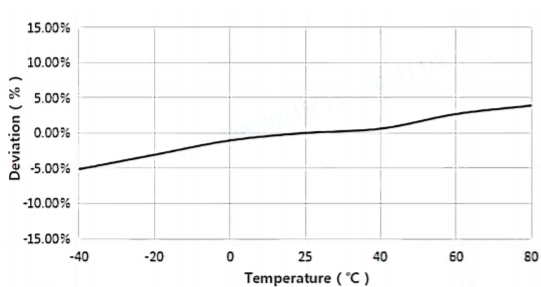
TYPICAL APPLICATIONS

- Low frequency measurement
- Structural testing of bridge buildings

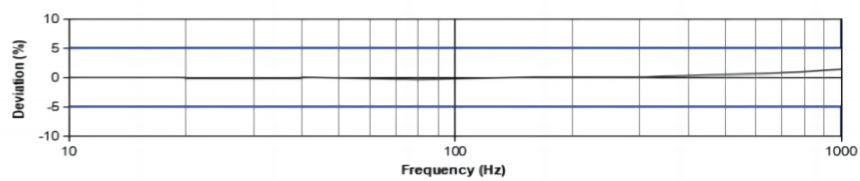
Fig_1 Dimensions of B1XA0X



Fig_2 Typical Temperature Response



Fig_3 Typical Frequency Response



Specifications-B1XA0X

MODEL NUMBER	UNIT	B11A00	B11A03	B12A00	B13A00	B14A00
PERFORMANCE						
Sensitivity ¹	mV/g	5000	2000	10000	20000	50000
	mV/(m/s ²)	500	200	1000	2000	5000
Measurement Range	g	±1	±2.5	±0.5	±0.25	±0.1
Broadband Resolution ²	g rms	0.000004	0.000002	0.000006	0.000005	0.00003
Non-Linearity ³	%	1				
Frequency Range	± 5%	0.5-1k	0.5-1k	0.5-1k	0.5-1k	0.5-1k
	±10%	0.3-1.5k	0.3-1.5k	0.3-1.5k	0.3-1.5k	0.3-1.5k
Resonance Frequency ²	Hz	≥8k	≥8k	≥8k	≥8k	≥8k
Discharge Time Constant ²	s	≥10				
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	-				
Spectral Noise ²	μg/√Hz	0.6	0.5	0.16	0.45	0.9
		0.08	0.07	0.12	0.3	0.75
		0.03	0.02	0.05	0.15	0.35
ENVIRONMENTAL						
Sinusoidal Vibration Limit ⁴	g	80	80	80	4	40
Shock Limit ⁴	g	200	200	200	10	100
Temperature Range	°C	-40~120	-40~80	-40~120	-40~80	
	°F	-40~248	-40~176	-40~248	-40~176	
Temperature Response ²	%/°C	0.1				
PHYSICAL						
Sealing	-	Laser welding IP68				
Sensing Element	-	Piezoelectric ceramics				
Housing Material	-	Stainless steel				
Size	mm	HEX 26.1×32.5				
	in	HEX 1.028×1.280				
Electrical Connector	-	M5 Top (Opt. 10-32)				
Mounting Thread	-	M5 (Opt. 10-32)				
Weight ²	g	132	132	132	132	132
	oz	4.656	4.656	4.656	4.656	4.656
TEDS Optional ⁵	-	Yes				

Additional Information

Note:

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

B1XA0X

Supplied Accessories:

- Product Verification Report
- Install Screws

OPTIONAL VERSIONS

- A: 10-32 Output Connector
- E: 10-32 Mounting Threads

COMPLIANCE WITH STANDARDS



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