BXXA03

Low Noise Type Accelerometer

DETAILS

B10A03 B12A03 low-noise acceleration sensor, small size and large sensitivity, high-quality piezoelectric ceramics with long-term stability can ensure years of accurate measurement. The internal circuitry is characterised by low noise and high resolution over a wide frequency band. The housing is laser welded stainless steel with high sealing grade and strength, with 10-32 mounting threads at the bottom.

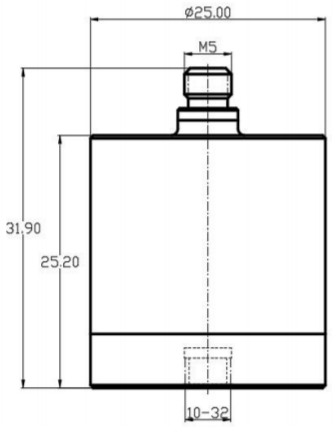
FEATURES

·Designed for low frequency test
·Multiple outputs and mounting options

TYPICAL APPLICATIONS

·Low-noise testing
·Low-frequency measurements
·Structural testing such as bridge construction

Fig_1 Dimensions of B10A03 B12A03



B10A03
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Fig_2 Typical Temperature Response

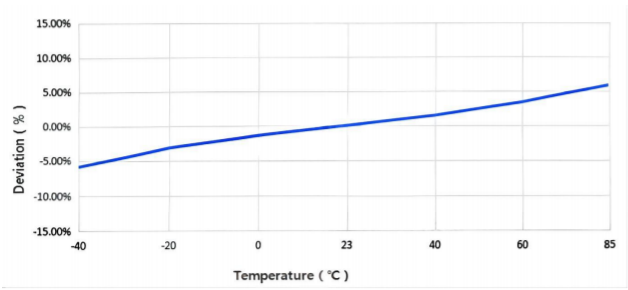
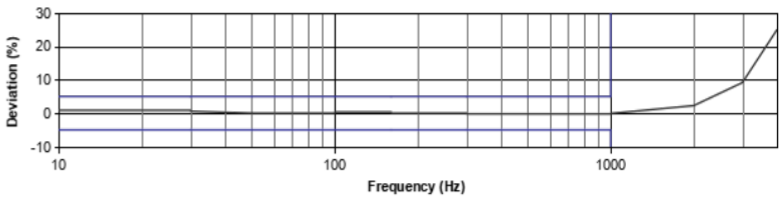


Fig_3 Typical Frequency Response



Specifications-BXXA03

MODEL NUMBER		UNIT	B10A03	B12A03
PERFORMANCE				
Sensitivity(±10%) [1]		mV/g	1000	10000
		mV/(m/s²)	100	1000
Measurement Range		g	±5	±0.5
Broadband Resolution [2]		g rms	0.000003	0.000004
Non-Linearity [3]		%	1	
Frequency Range	± 5%	Hz	0.1-1k	0.7-700
	±10%		0.05-4k(±3dB)	0.5-900
Resonance Frequency [2]		Hz	≥7k	≥7k
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]	1Hz	μg/√Hz	0.3	0.5
	10Hz		0.1	0.1
	100Hz		0.04	0.07
ENVIRONMENTAL				
Sinusoidal Vibration Limit [4]		g rms	40	40
Shock Limit [4]		g pk	100	100
Temperature Range		°C	-40~85	
		°F	-40~185	
Temperature Response [2]		%/°C	0.08	
PHYSICAL				
Sealing		-	Laser welding IP68	
Sensing Element		-	Piezoelectric ceramics	
Housing Material		-	Stainless steel	
Size		mm	φ25.00×31.90	
		in	φ0.984×1.256	
Electrical Connector		-	M5 Top (Opt. 10-32)	
Mounting Thread		-	10-32	
Weight [2]		g	135	135
		oz	4.762	4.762
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

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Supplied Accessories:

- Product Verification Report
- Install Screws

OPTIONAL VERSIONS

-A: 10-32 Output Connector

COMPLIANCE WITH STANDARDS

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