

Universal Testing Type Accelerometer

DETAILS

BXXY91 series uniaxial acceleration sensor, using piezoelectric ceramic shear structure, has a wide band frequency response, low lateral sensitivity, thermal transients corresponding to low and other characteristics. Internal with high temperature low impedance circuit, low noise, better sensitivity temperature response and other characteristics, the maximum operating temperature of +160 °C. The shell is made of titanium alloy with lower density and laser welding. Each of the three axial direction is equipped with calibration holes for easy calibration and installation, standard with insulation mounting components.

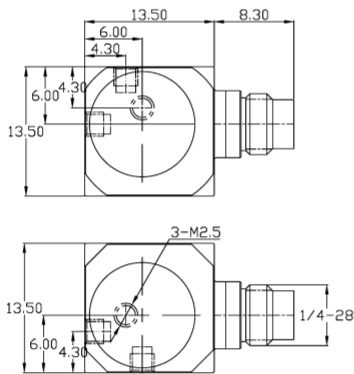
FEATURES

- Built-in high temperature circuit
- One-point multi-axial measurement
- Shear structure, stable and reliable
- Insulated mounting base as standard

TYPICAL APPLICATIONS

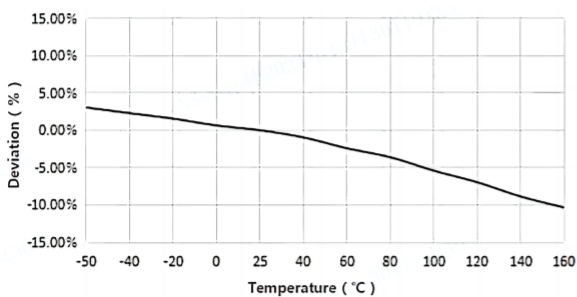
- Powertrain NVH
- HASS/HALT
- Modal structure and analysis

Fig_1 Dimensions of BXXY91

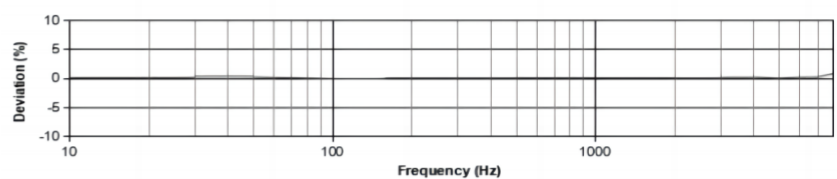


BXXY91

Fig_2 Typical Temperature Response



Fig_3 Typical Frequency Response



Specifications-BXXY91

MODEL NUMBER	UNIT	B01Y91	B02Y91	B05Y91	B06Y91
PERFORMANCE					
Sensitivity ¹	mV/g	5(±10%)	10(±10%)	50	100
	mV/(m/s ²)	0.5	1	5	10
Measurement Range	g	±1000	±500	±100	±50
Broadband Resolution ²	g rms	0.002	0.001	0.0002	0.0001
Non-Linearity ³	%	1			
Frequency Range	± 5%(Hz)	1-8k	1-8k	1-8k	1-8k
	±10%(Hz)	0.5-10k	0.5-10k	0.5-10k	0.5-10k
Resonance Frequency ²	Hz	≥70k	≥70k	≥45k	≥38k
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	-			
Spectral Noise ²	μg/√Hz	120	60	12	6
		48	24	4.8	2.4
		32	16	3.2	1.6
ENVIRONMENTAL					
Sinusoidal Vibration Limit ⁴	g	2500	2000	800	400
Shock Limit ⁴	g	8000	5000	2000	1000
Temperature Range	°C	-50~160			
	°F	-58~320			
Temperature Response ²	%/°C	-0.07			-0.08
PHYSICAL					
Sealing	-	Laser welding IP68			
Sensing Element	-	Piezoelectric ceramics			
Housing Material	-	Titanium Alloy			
Size	mm	13.50 Cube			
	in	0.531 Cube			
Electrical Connector	-	1/4-28 4-pin Side			
Mounting Thread	-	M2.5/Adhesive			
Weight ²	g	7	9	9	9.5
	oz	0.247	0.317	0.317	0.335
TEDS Optional ⁵	-	No			

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

BXXY91

Supplied Accessories:

- Product Verification Report
- Install Screws

COMPLIANCE WITH STANDARDS



LNS Intelligent Technology Co., Ltd

NO.3 Building
Qilu High-Tech District, Qihe,Dezhou
Shandong Province, China 251100
+86-534-2150417

International:

9620 NE Tanasbourne Dr Ste 300
Hillsboro, OR, USA 97124
+1-503-208-5512
info@lnsdynamics.com