

IEPE Triaxial Accelerometer

DETAILS

BXXY41 series three-axis acceleration sensor, using piezoelectric ceramic shear structure, with a wide-band frequency response, high-quality piezoelectric ceramic 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 shell is made of titanium alloy with lower density and laser welding. Each of the three axial directions is equipped with calibration holes for easy calibration and mounting, and an insulated mounting kit is standard.

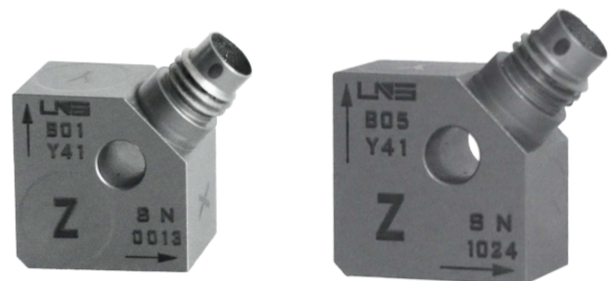
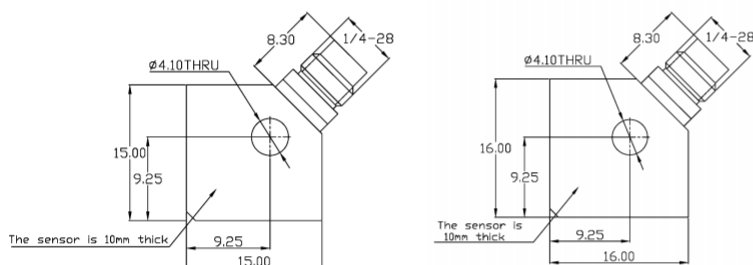
FEATURES

- Integrated Microminiature Built-in
- One-point multi-axial measurement
- 360° mounting
- Insulated mounting base as standard

TYPICAL APPLICATIONS

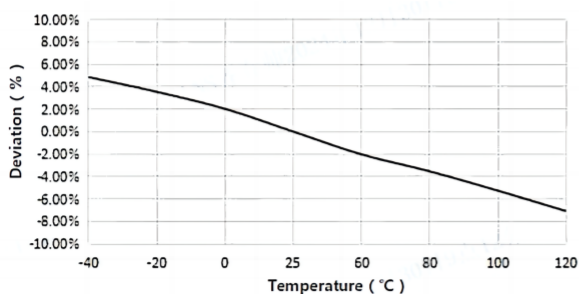
- Powertrain NVH
- HASS/HALT
- Universal vibration monitoring

Fig_1 Dimensions of BXXY41

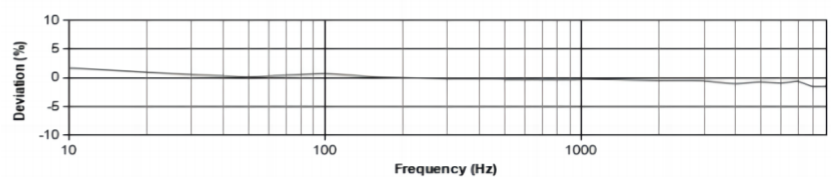


BXXY41

Fig_2 Typical Temperature Response



Fig_3 Typical Frequency Response



Specifications-BXXY41

MODEL NUMBER		UNIT	B01Y41	B02Y41	B03Y41	B05Y41	B06Y41
PERFORMANCE							
Sensitivity(±5%) ¹		mV/g	5(±10%)	10(±10%)	20	50	100
		mV/(m/s²)	0.5	1	2	5	10
Measurement Range		g	±1000	±500	±250	±100	±50
Broadband Resolution²		g rms	0.002	0.001	0.0005	0.0002	0.0001
Non-Linearity³		%	1				
Frequency Range	± 5%	Hz	2-9k	1-9k	1-9k	1-8k	1-8k
	±10%		1-11k	0.5-11k	0.5-11k	0.5-10k	0.5-10k
Resonance Frequency²		Hz	≥70k	≥70k	≥60k	≥40k	≥37k
Discharge Time Constant²		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 Noise²	10Hz	μg/√Hz	300	150	75	30	15
	100Hz		80	40	20	8	4
	1000Hz		40	20	10	4	2
ENVIRONMENTAL							
Sinusoidal Vibration Limit⁴		g rms	2500	2000	1200	800	400
Shock Limit⁴		g pk	6000	5000	3000	2000	1000
Temperature Range		°C	-50-120				
		°F	-58-248				
Temperature Response²		%/°C	-0.07				
PHYSICAL							
Sealing		-	Laser welding IP68				
Sensing Element		-	Piezoelectric ceramics				
Housing Material		-	Titanium Alloy				
Size	mm	15×15×10					16×16×11
	in	0.591×0.591×0.394					0.630×0.630×0.433
Electrical Connector		-	1/4-28 4-pin Side				
Mounting		-	φ4.1 THRU				
Weight²	g	7.6	8	8	8.5	12	
	oz	0.268	0.282	0.282	0.300	0.423	
TEDS Optional⁵		-	Yes				

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

BXXY41

Supplied Accessories:

- Product Verification Report
- Install Screws

OPTIONAL VERSIONS

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

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