

IEPE Accelerometer

DETAILS

The model adopts piezoelectric ceramic shear structure, with wide band frequency response, resistant to large impact damage, high-quality piezoelectric ceramic with long-term stability can ensure years of accurate measurement. Built-in low impedance circuit, characterized by low noise, good low frequency response, small size and high sensitivity. The housing 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 installation, and an insulated mounting kit is standard.

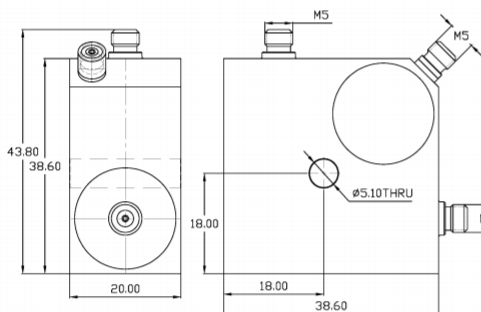
FEATURES

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

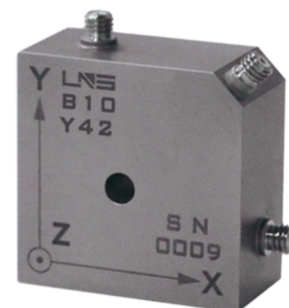
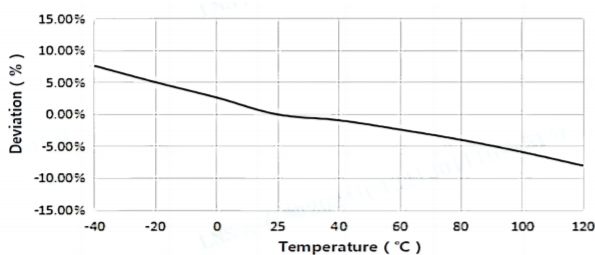
TYPICAL APPLICATIONS

- Bridge structural testing
- Building structural testing

Fig_1 Dimensions of B10Y42

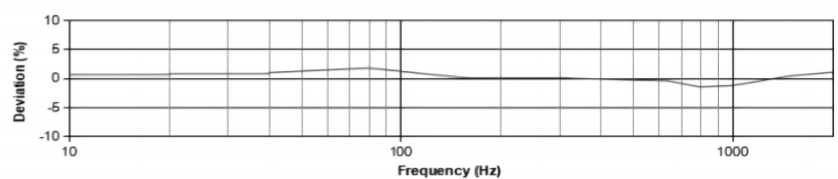


Fig_2 Typical Temperature Response



B10Y42

Fig_3 Typical Frequency Response



Specifications-B10Y42

MODEL NUMBER		UNIT	B10Y42
PERFORMANCE			
Sensitivity ¹		mV/g	1000
		mV/(m/s²)	100
Measurement Range		g	±5
Broadband Resolution ²		g rms	0.00001
Non-Linearity ³		%	1
Frequency Range	± 5%	Hz	0.1-2k
	±10%		0.07-3k
Resonance Frequency ²		Hz	≥13k
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	10Hz	μg/√Hz	0.6
	100Hz		0.24
	1000Hz		0.16
ENVIRONMENTAL			
Sinusoidal Vibration Limit ⁴		g rms	40
Shock Limit ⁴		g pk	100
Temperature Range		°C	-40-120
		°F	-40-248
Temperature Response ²		%/°C	-0.1
PHYSICAL			
Sealing		-	Laser welding IP68
Sensing Element		-	Piezoelectric ceramics
Housing Material		-	Titanium alloy
Size	mm		38.6×38.6×20
	in		1.520×1.520×0.787
Electrical Connector		-	M5×3
Mounting		-	φ5.1 THRU
Weight ²	g		176
	oz		6.208
TEDS Optional ⁵		-	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

B10Y42

Supplied Accessories:

- Product Verification Report
- Install Screws

OPTIONAL VERSIONS

-A: 10-32 Output Connector

COMPLIANCE WITH STANDARDS



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