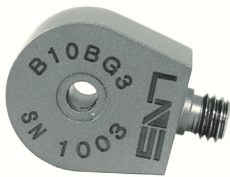




BXXBG3 SERIES

IEPE Isolated Through-Hole Uniaxial Accelerometer



- B02BG3
- B06BG3
- B09BG3
- B10BG3

10 - 1000 mV/g · ±5 ... ±500 g · 1 Hz ... 8 kHz · 9 - 11 g · M5 side connector · Isolated

The BXXBG3 series is a miniature electrically isolated IEPE accelerometer with a built-in miniature impedance converter that conditions the piezoelectric charge signal to a low-impedance voltage output. The sensors offer excellent long-term output stability and repeatability. The laser-welded titanium alloy housing is compact and light, and a central through-hole permits 360° rotational positioning on a stud mount.

FEATURES

- Central through-hole for 360° orientation on a stud mount
- Electrically isolated from the mounting surface
- Multiple full-scale ranges across the series
- Shear sensing element with wide frequency bandwidth

TYPICAL APPLICATIONS

- Modal analysis
- Vibration control systems
- General-purpose vibration measurement

SPECIFICATIONS

MODEL	B02BG3	B06BG3	B09BG3	B10BG3	UNIT
PERFORMANCE					
Sensitivity (±5%) ¹	10 (±10%)	100	500	1000	mV/g
	1	10	50	100	mV/(m/s ²)
Measurement range	±500	±50	±10	±5	g
Frequency range, ±5%	1-8k	1-7k	1-8k	1-8k	Hz
Frequency range, ±10%	0.5-10k				Hz
Resonance frequency ²	≥40k				Hz
Broadband resolution ²	0.001	0.0001	0.00002	0.00001	g rms
Spectral noise ² @ 10 Hz	—	25	—	5	µg/√Hz
	@ 100 Hz	—	7	1.6	µg/√Hz
	@ 1 kHz	—	5	1.2	µg/√Hz
Non-linearity ³	≤1				%
Transverse sensitivity	≤5				%
Discharge time constant ²	1				s

Specifications continued on next page

SPECIFICATIONS (CONTINUED)

MODEL	B02BG3	B06BG3	B09BG3	B10BG3	UNIT
ENVIRONMENTAL					
Sine vibration limit ⁴	3000	400	3000	3000	g rms
Shock limit ⁴	5000	1000	5000	5000	g pk
Temperature range	-50 ~ 120	-50 ~ 120	-50 ~ 80	-50 ~ 80	°C
	-58 ~ 248	-58 ~ 248	-58 ~ 176	-58 ~ 176	°F
Temperature response ²	See Fig. 3				—
Sealing	Laser welded, IP68				—
ELECTRICAL					
Excitation voltage	20 - 30				VDC
Constant current excitation	2 - 20				mA
Output impedance	≤100				Ω
Output bias voltage	8 - 12				V
Electrical isolation	≥1 × 10 ⁸				Ω
PHYSICAL					
Sensing element	Piezoelectric ceramic				—
Housing material	Titanium alloy				—
Size	22.7 × 15.4 × 10				mm
	0.893 × 0.606 × 0.394				in
Weight ²	10	9	11	11	g
	0.353	0.317	0.388	0.388	oz
Electrical connector	M5 side (opt. 10-32)				—
Mounting thread	ø3.1 through-hole (Opt. M3)				—
Mounting torque	1.6				N·m
TEDS available ⁵	No				—

1 Measured at 160 Hz, 24 VDC, 4 mA excitation.

2 Typical value.

3 Per JB/T 6822-2018 §7.12.1 vibration testing method.

4 Limit of the mechanical structure in a non-powered state, not a working limit.

5 TEDS (IEEE 1451.4) is not offered on this series.

— Not specified.

TYPICAL RESPONSE

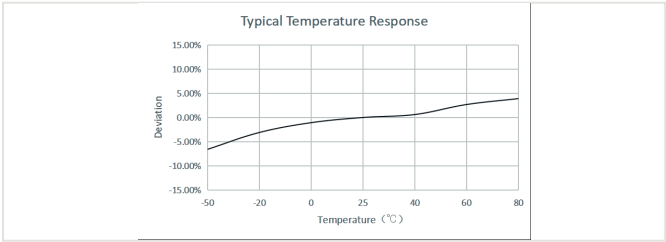


Fig. 3 – Typical temperature response

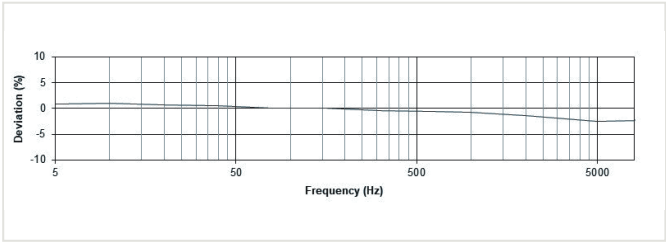


Fig. 4 – Typical frequency response

DIMENSIONS

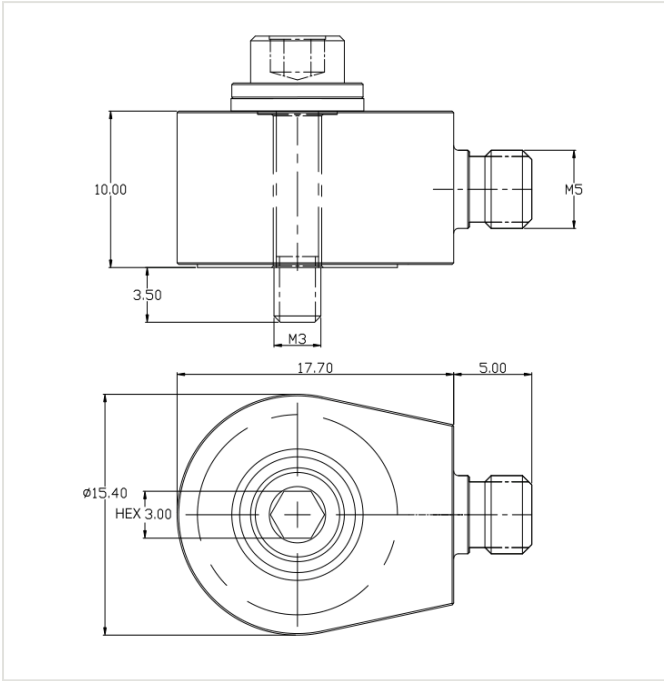


Fig. 2 – Dimensions, mm (all models)

ORDERING INFORMATION

ORDER	SENSITIVITY	RANGE	FREQUENCY ±5%	SHOCK LIMIT
B02BG3	10 mV/g	±500 g	1-8k Hz	5000 g pk
B06BG3	100 mV/g	±50 g	1-7k Hz	1000 g pk
B09BG3	500 mV/g	±10 g	1-8k Hz	5000 g pk
B10BG3	1000 mV/g	±5 g	1-8k Hz	5000 g pk

SUPPLIED ACCESSORIES

- Product calibration certificate
- Adapter screw
- M3 isolated washer

RECOMMENDED ACCESSORIES

Cable K01AB02 (M5) / K14AB02 (10-32)
Mounting base H01D13

CALIBRATION & COMPLIANCE

Every sensor is calibrated at 160 Hz (24 VDC, 4 mA) before shipment and ships with a product calibration certificate documenting measured sensitivity.

Vibration testing per JB/T 6822-2018. LNS Intelligent Technology is an ISO 9001:2015 certified manufacturer.



In the interest of continuous product improvement, LNS reserves the right to change specifications without notice. Values shown are typical unless stated otherwise.