

Watertight Type Accelerometer

DETAILS

BXXY70 series three-axis watertight acceleration sensor, using piezoelectric ceramic shear structure, with a wide band frequency response, high-quality piezoelectric ceramics with long-term stability can ensure years of accurate measurement. Built-in low impedance circuit, low noise, better sensitivity temperature response and other characteristics. One-piece waterproof polyurethane cable, unique waterproof technology, multi-layer protection measures, pressure resistance up to 2MPa, the shell is made of titanium alloy with lower density, laser welding. Each of the three axial direction is equipped with calibration holes for easy calibration and installation, with insulation mounting kit as standard.

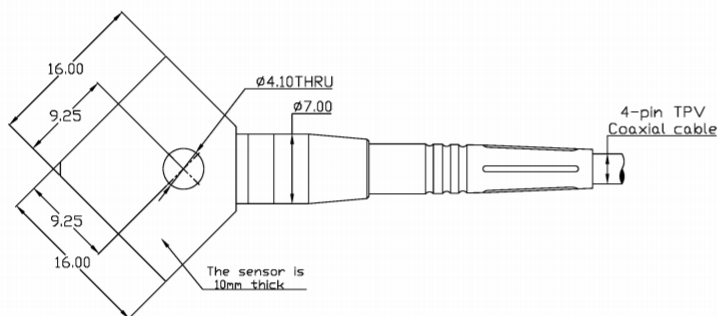
FEATURES

- Resistant to water pressure up to 2MPa
- Yi-alloy fasteners, stable and reliable
- Three-axis through-hole design for quick and easy installation
- Multiple ranges available

TYPICAL APPLICATIONS

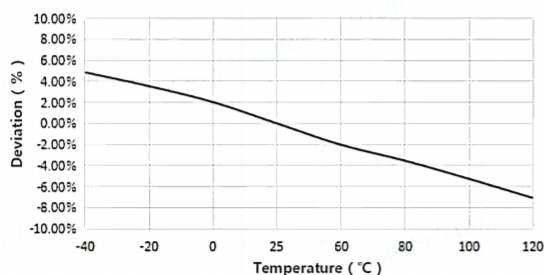
- Powertrain NVH
- Component/system testing
- Structure response testing where sensors must fit within devices

Fig_1 Dimensions of BXXY70

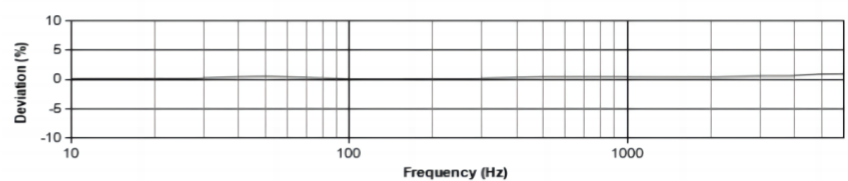


BXXY70

Fig_2 Typical Temperature Response



Fig_3 Typical Frequency Response



Specifications-BXXY70

MODEL NUMBER		UNIT	B03Y70	B05Y70	B06Y70
PERFORMANCE					
Sensitivity ¹		mV/g	20	50	100
		mV/(m/s²)	2	5	10
Measurement Range		g	±250	±100	±50
Broadband Resolution ²		g rms	0.0005	0.0002	0.0001
Non-Linearity ³		%	1		
Frequency Range	± 5%	Hz	1-6k	1-6k	1-5k
	±10%		0.5-7k	0.5-7k	0.5-6k
Resonance Frequency ²		Hz	≥30k	≥28k	≥25k
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	10Hz	μg/√Hz	75	30	15
	100Hz		20	8	4
	1000Hz		10	4	2
ENVIRONMENTAL					
Sinusoidal Vibration Limit ⁴		g rms	1200	800	400
Shock Limit ⁴		g pk	3000	2000	1000
Temperature Range		°C	-50-120		
		°F	-58-248		
Temperature Response ²		%/°C	-0.07		
PHYSICAL					
Sealing		-	Laser welding IP68		
Sensing Element		-	Piezoelectric ceramics		
Housing Material		-	Titanium Alloy		
Size	mm	15×15×10			16×16×10
	in	0.591×0.591×0.394			0.630×0.630×0.394
Electrical Connector		-	Connected cable 4-pin Side		
Mounting Thread		-	φ4.1 THRU		
Weight ²	g	18	18	18	
	oz	0.635	0.635	0.635	
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

BXXY70

Supplied Accessories:

- Product Verification Report
- Install Screws

OPTIONAL VERSIONS

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

COMPLIANCE WITH STANDARDS



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