

Watertight Type Accelerometer

DETAILS

BXXY7X type 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.

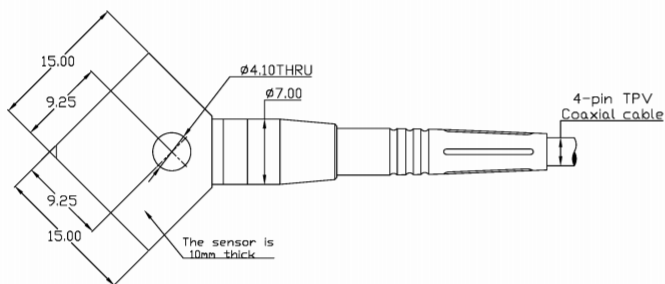
FEATURES

- 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

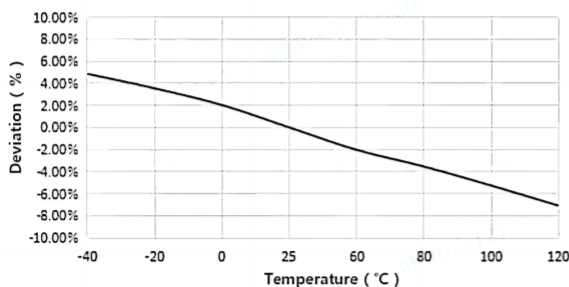
- Underwater Vibration Testing
- Underwater impact testing

Fig_1 Dimensions of BXXY7X

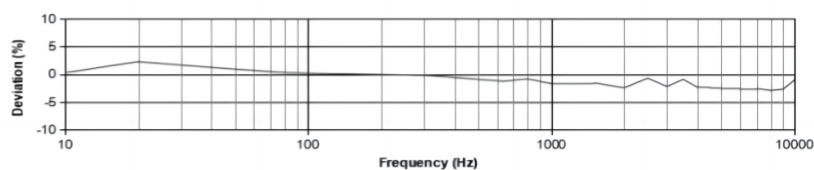


BXXY7X

Fig_2 Typical Temperature Response



Fig_3 Typical Frequency Response



Specifications-BXXY7X

MODEL NUMBER	UNIT	B00Y71	B01Y71	B02Y70
PERFORMANCE				
Sensitivity ¹	mV/g	0.5(±10%)	5(±10%)	10(±10%)
	mV/(m/s ²)	0.05	0.5	1
Measurement Range	g	±10000	±1000	±500
Broadband Resolution ²	g rms	0.02	0.002	0.001
Non-Linearity ³	%	3	1	
Frequency Range	± 5%(Hz)	-	2-9k	1-6k
	±10%(Hz)	10-11k	1-11k	0.5-7k
Resonance Frequency ²	Hz	≥70k	≥70k	≥30k
Discharge Time Constant ²	s	≤0.5	≤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	3000	300	150
		800	800	40
		400	40	20
ENVIRONMENTAL				
Sinusoidal Vibration Limit ⁴	g	-	2500	2000
Shock Limit ⁴	g	12000	6000	5000
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		
	in	0.591×0.591×0.394		
Electrical Connector	-	Connected cable 4-pin Side		
Mounting Thread	-	φ4.1 THRU		
Weight ²	g	6	10	18
	oz	0.212	0.353	0.635
TEDS Optional ⁵	-	Yes		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

BXXY7X

Supplied Accessories:

- Product Verification Report
- Install Screws

COMPLIANCE WITH STANDARDS



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