

Watertight Type Accelerometer

DETAILS

B00Y54 B00Y55 B01Y53 type three-axis watertight 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, double shielding design to ensure low noise, better sensitivity temperature response and other characteristics. One-piece vulcanized cable longitudinal and transverse pressure resistance greater than 3MPa, moisture and corrosion resistance. The shell is made of titanium alloy with lower density and laser welding.

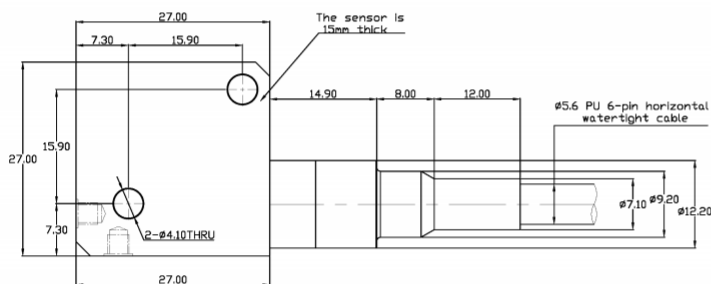
FEATURES

- Double-layer shielding structure, strong anti-interference ability
- Memory Alloy Fasteners
- Wide bandwidth response
- Vulcanized for moisture and corrosion resistance

TYPICAL APPLICATIONS

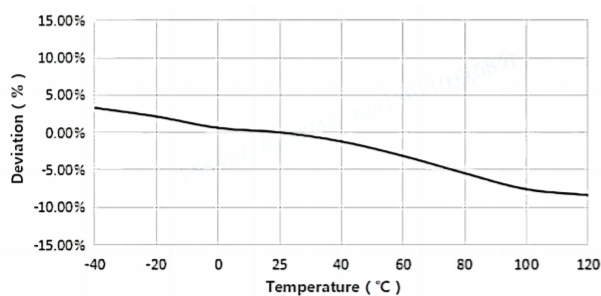
- Underwater vibration testing
- Tested under humid conditions

Fig_1 Dimensions of B00Y54 B00Y55 B01Y53

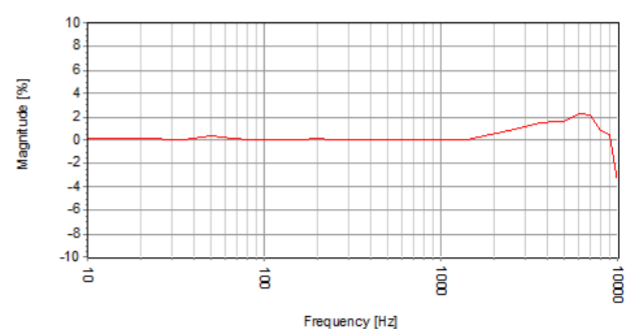


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B01Y53

Fig_2 Typical Temperature Response



Fig_3 Typical Frequency Response



Specifications-BXXY5X

MODEL NUMBER		UNIT	B00Y54	B00Y55	B01Y53
PERFORMANCE					
Sensitivity ¹		mV/g	1(±10%)	2.5(±10%)	5(±10%)
		mV/(m/s²)	0.1	0.25	0.5
Measurement Range		g	±5000	±2000	±1000
Broadband Resolution ²		g rms	0.01	0.004	0.002
Non-Linearity ³		%	1		
Frequency Range	± 5%	Hz	-	-	2-8k
	±10%		10-10k	5-10k	1-10k
Resonance Frequency ²		Hz	≥30k	≥30k	≥50k
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	≥1×10 ⁸		
Spectral Noise ²	10Hz	μg/√Hz	1500	600	300
	100Hz		400	160	80
	1000Hz		100	80	40
ENVIRONMENTAL					
Sinusoidal Vibration Limit ⁴		g rms	6000	5000	2500
Shock Limit ⁴		g pk	10000	8000	6000
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	27×27×15			
	in	1.063×1.063×0.591			
Electrical Connector		-	Watertight connected cable		
Mounting Thread		-	2×M4 THRU		
Weight ²	g	60	60	60	
	oz	2.116	2.116	2.116	
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

BXXY5X

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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