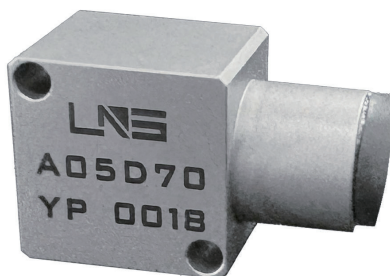


MEMS Waterproof Though-Hole Accelerometer

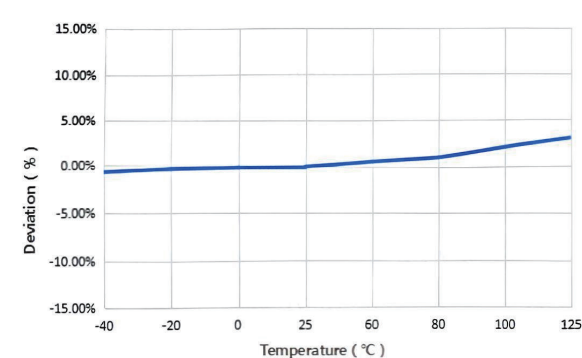
DETAILS

The AXXD70 uniaxial capacitive accelerometer uses variable-capacitance MEMS sensing elements. The mass deflects under acceleration, changing capacitance accordingly. The internal AC excitation and demodulation circuitry outputs a voltage signal proportional to acceleration. Enclosed in a titanium alloy housing with an integrated vulcanized waterproof four-core cable, waterproof to 3 MPa, signal ground isolated from housing. Two through-hole mounting for secure installation.

Fig_1 Picture of AXXD70



Fig_3 Typical Temperature Response



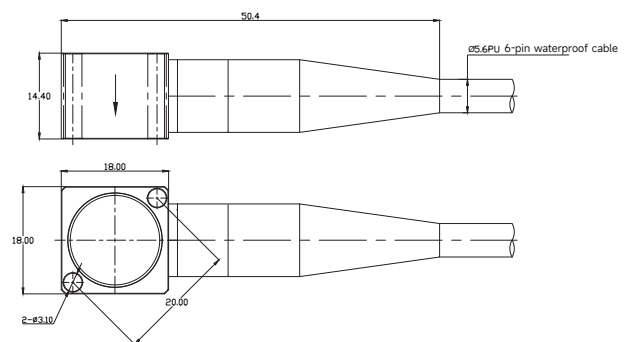
FEATURES

- Industry-leading capacitive DC-response MEMS chip
- Low power consumption, low noise, high resolution
- Titanium alloy housing, through-hole mounting
- Special cable structure, longitudinal & transverse waterproof pressure resistance >3 MPa
- Integrated vulcanized cable, moisture and corrosion resistant

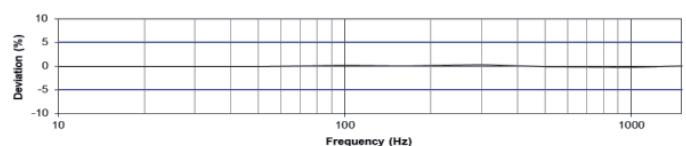
TYPICAL APPLICATIONS

- Road load data acquisition
- Overload testing
- Civil structural testing
- Low-frequency testing
- Underwater testing

Fig_2 Dimensions of AXXD70



Fig_4 Typical Frequency Response



Specifications-AXXD70

MODEL NUMBER		UNIT	A05D70	A06D70
PERFORMANCE				
Sensitivity ¹		mV/g	40	80
		mV/(m/s²)	4	8
Measurement Range		g	±100	±50
Broadband Resolution		g rms	4.9	2.45
Non-Linearity (Typical) ²		%	0.1	
Non-Linearity (Max) ²		%	0.3	
Frequency Range	± 5%	Hz	0-1.5k	0-1.5k
	±10%	Hz	-	-
Resonance Frequency ³		Hz	8.5k	5.8k
Transverse Sensitivity		%	≤2	
Output Mode		-	Single-ended	
ELECTRICAL				
Excitation Voltage		V DC	6-30	
Full Range Voltage		V	±4	
Output Impedance		Ω	≤90	
Noise 0-100 Hz, typ		μg/√Hz	339	169
ENVIRONMENTAL				
Sinusoidal Vibration Limit ⁴		g rms	5000	5000
Shock Limit ⁴		g pk	5000	5000
Temperature Range		°C	-40~120	
		°F	-40~248	
PHYSICAL				
Sealing		-	Laser Welding IP68	
Sensing Element		-	MEMS Chip	
Housing Material		-	Titanium alloy	
Size		mm	18×18×14.4	
		in	0.709×0.709×0.567	
Electrical Connector		-	Waterproof Cable	
Mounting Thread		-	2*M3 THRU	
Weight ³		g	10	
		oz	0.353	
Mounting Torque		-	0.6N·m	
Recommended Accessories	Cable	-	BF	
	Mounting Base	-	-	

Additional Information

Note:

1. @ 160Hz, under the condition of 23 °C± 5 °C
2. JBT 6822-2018 7.12.1 Vibration Testing Method
3. Typical values
4. It refers to the mechanical structure of the sensor not being damaged in a non powered state, rather than in a working state

AXXD70

Supplied Accessories:

- Product Verification Report
- M3*16 Mounting Screws

COMPLIANCE WITH STANDARDS

