BXXY54T

Industrial Accelerometer

DETAILS

BXXY54T two-axis low-frequency acceleration sensor, using piezoelectric ceramic shear structure, has a wide-band frequency response, high-quality piezoelectric ceramics with long-term stability can ensure years of accurate measurement. The internal IEPE two-wire circuit provides constant current source excitation and low impedance voltage signal output at the same time, and the signal ground is isolated from the housing. The housing is made of stainless steel with laser welded seals to ensure corrosion resistance and good sealing, and the output connector adopts M12 five-core output.

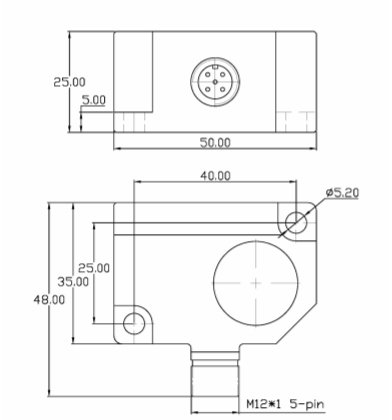
FEATURES

- Temperature and vibration
- Double layer shielding
- Shear structure
- Broadband response

TYPICAL APPLICATIONS

- Wind turbines
- Rapid transit
- Construction machinery

Fig_1 Dimensions of BXXY54T



BXXY54T

Fig_2 Typical Temperature Response

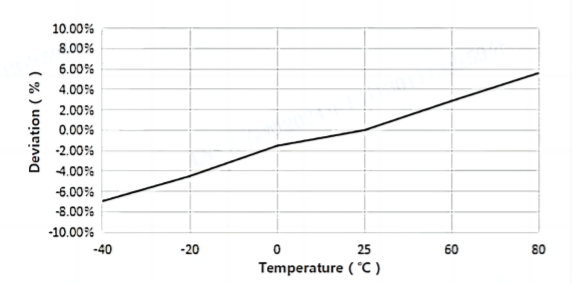
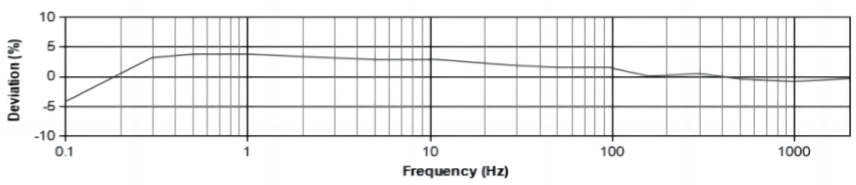


Fig_3 Typical Frequency Response



Specifications-BXXY54T

MODEL NUMBER		UNIT	B09Y54T	B10Y54T
PERFORMANCE				
Sensitivity [1]		mV/g	500	1000
		mV/(m/s²)	50	100
Measurement Range		g	±10	±5
Broadband Resolution [2]		g rms	0.00002	0.00001
Non-Linearity [3]		%	1	
Frequency Range	± 5%	Hz	0.3-2k	0.3-2k
	±10%		0.3-3k	0.3-3k
Resonance Frequency [2]		Hz	≥14k	≥14k
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	10-14	
Electrical Isolation		Ω	≥1×10⁸	
Spectral Noise [2]	10Hz	μg/√Hz	1.2	0.6
	100Hz		0.48	0.24
	1000Hz		0.32	0.16
ENVIRONMENTAL				
Sinusoidal Vibration Limit [4]		g rms	400	400
Shock Limit [4]		g pk	1000	1000
Temperature Range		℃	-40~120	
		℉	-40~248	
Temperature Response [2]		%/℃	0.1	
PHYSICAL				
Sealing		-	Laser welding IP68	
Sensing Element		-	Piezoelectric ceramics	
Housing Material		-	Stainless steel	
Size		mm	50×48×25	
		in	1.969×1.890×0.984	
Electrical Connector		-	M12×1 5-pin	
Mounting Thread		-	2×M5	
Weight [2]		g	232	232
		oz	8.184	8.184
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

BXXY54T

Supplied Accessories:

- Product Verification Report
- Install Screws

OPTIONALVERSIONS

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

COMPLIANCE WITH STANDARDS

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