

Model 731A

Ultra-Quiet, Ultra Low Frequency, Seismic Accelerometer



DYNAMIC

Sensitivity, ±10%, 25°C	10 V/g
Acceleration Range	0.5 g peak
Amplitude Nonlinearity	1%
Frequency Response:	
±10%	0.10 - 300 Hz
±3 dB	0.05 - 500 Hz
Resonance Frequency	950 Hz
Transverse Sensitivity, max.	1% of axial
Temperature Response	-10°C -12%
	+65°C +5%

ELECTRICAL

Power Requirement:	voltage source	18 - 30 VDC
	current regulating diode	2 - 10 mA
Electrical Noise, equiv. g:		
Broadband	2.5 Hz to 25 kHz	0.2 µg
Spectral	2 Hz	0.03 µg/√Hz
	10 Hz	0.01 µg/√Hz
	100 Hz	0.004 µg/√Hz
Output Impedance, max.		100Ω
Bias Output Voltage		9 VDC
Grounding		case isolated

ENVIRONMENTAL

Temperature Range	-10 to 65°C
Vibration Limit	10 g peak
Shock Limit	fragile
Electromagnetic Sensitivity @ 60 Hz.	20 µg/gauss
Sealing	Hermetic
Base Strain Sensitivity	0.0001 g/µstrain

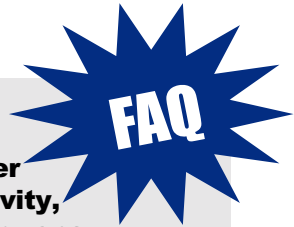
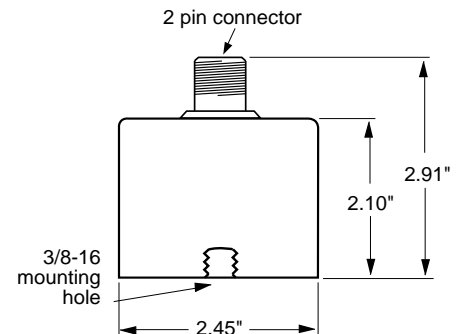
PHYSICAL

Sensing Element Design	PZT ceramic / flexure
Weight	670 grams
Case Material	316L stainless steel
Mounting	3/8 - 16 tapped hole
Output Connector	2 pin, MIL-C-5015 style
Mating Connector	R6 type
Recommended Cabling	J9 / J9T2A

CONNECTOR PIN	FUNCTION	CABLE CONDUCTOR COLOR
SHELL	ground	Shield
A	power/ signal	White
B	common	Black

FEATURES:

- Ultra high sensitivity
- Ultra low-noise electronics for clear signals at sub micro-g levels
- Low frequency capable
- Low pass filtered to eliminate high frequencies
- Miswiring protection



With the higher output sensitivity, won't a low frequency sensor overload easily?

With their high sensitivity output and consequently lower amplitude range, low frequency/ high output sensors are vulnerable to overload especially in the presence of significant high frequency vibration. For this reason, Wilcoxon includes a low-pass filter within the electronics of these sensors. This filter controls the high-end frequency cut-off and attenuates the high frequency signals. By not processing the high frequency (and often high vibration level) data, there is less chance of sensor overload.

- ACCESSORIES SUPPLIED:** SF7 mounting stud; Calibration data (level 3).
OPTIONS: Power unit/Amplifier P31 (page 68).
NOTE: Special handling required due to sensitivity.