DJB Instruments
SENSING ENGINEERING INNOVATION

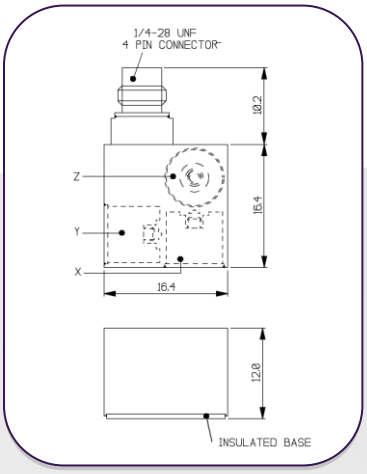
ATI/14 Triaxial Piezo-Tronic IEPE Accelerometer (Case Isolated)

1mV/g up to 200mV/g ±10% 13gm Std Temp 125°C (HT185 °C)

A lightweight general purpose triaxial vibration transducer comprising of three voltage output piezo-electric sensing elements mounted orthogonally within a titanium block with welded construction. The ATI/14 is based upon the unique DJB Konic shear design and maybe considered as an alternative to the A/131 or A/134. However, the latter by virtue of being a grouping of single axis devices, are repairable and in addition the physical separation of the cable leads to visible signal axis traceability.

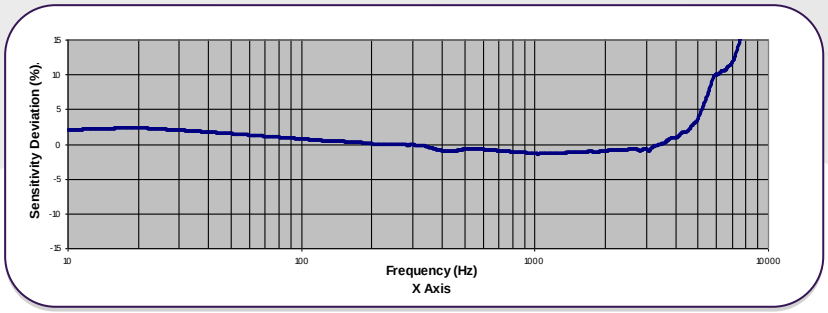
With a ¼-28 UNF 4 pin connector and ruggedized single cables with three BNC labelled breakout leads the ATI/14 is well suited to Automotive/Aerospace applications. The ATI/14 is a case isolated version to ensure measurement accuracy on structures where grounding needs to be considered.

ATI/14

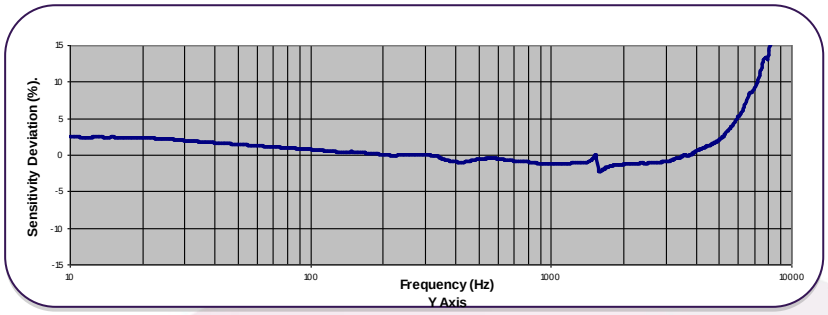


Typical Frequency Response

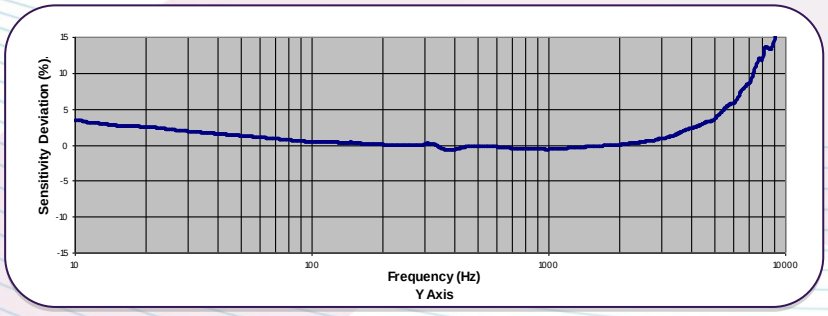
X



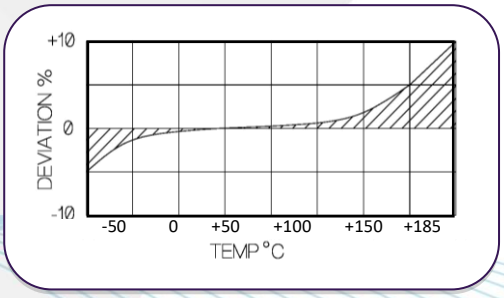
Y



Z



Temperature Response



Typical Spectral Noise (100mV/g):

1Hz	345µg/√Hz
10Hz	156µg/√Hz
100Hz	44µg/√Hz
1kHz	12.1µg/√Hz
10kHz	8.2µg/√Hz

Please note: For information and reference only. Data should not be used as pass / fail criteria for calibration purposes

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A UK company with UK-based manufacturing, assembly and calibration in-house.

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FM11310

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Piezo-Tronic IEPE Accelerometer
(Case Isolated)

1mV/g up to 200mV/g ±10% 13gm Std Temp 125°C (HT185 °C)

	Metric			Imperial		
Voltage Sensitivity @ 20°C ±10%	0.1mV/(m/s²)	1.02mV/(m/s²)	10.2mV/(m/s²)	1mV/g	10mV/g	100mV/g
Resonant Frequency	X/Y ≥20kHz Z ≥33kHz					
Typical Frequency range ±5% ±10%	1Hz – 6kHz 0.7Hz – 7kHz	1Hz – 6kHz 0.7Hz – 7kHz	5Hz – 6kHz 3Hz – 7kHz	1Hz – 6kHz 0.7Hz – 7kHz	1Hz – 6kHz 0.7Hz – 7kHz	5Hz – 6kHz 3Hz – 7kHz
Cross Axis Error	≤5% max					
Insulation Resistance	10^{10} Ω at 250V					
Temperature Range	-50/ +125°C (185°C HT)			-58/ +257°F (365°F HT)		
Voltage Sensitivity deviation (20°C/68°F)	-5% @ -50°C		+5% @ +125°C	-5% @ -58°F		+5% @ +257°F
Supply Voltage	15/35 V DC					
Supply current	2-20mA					
Bias Voltage (20°C/68°F)	9/10 V DC					
Base Strain Sensitivity	≤ 5%					
Max Continuous accn.g sine	49033m/s²			5000g		
Saturation limit equiv. g	49033m/s²	4903m/s²	490m/s²	5000g	500g	50g
Case Material	Titanium					
Mounting	Adhesive or 10-32 UNF tapped hole					
Weight	13gm			0.46oz		
Case Seal	Welded					
Size	16.4 x 16.4 x 12mm AT/14			0.65 x 0.65 x 0.47in		
Connector	¼ -28UNF, 4 Pin Connector					

Options:
AT/14, AT/14/TB, ATI/14, ATI/14/TB

Also available with DJB's unique high temperature IEPE solution capable of testing up to 185°C as an option.

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