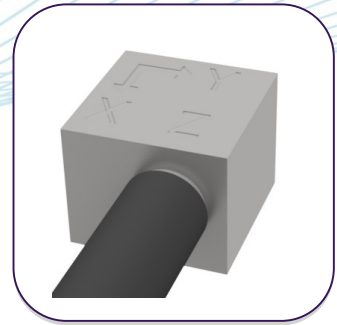


AT/18 Ultra Miniature Triaxial IEPE Accelerometer

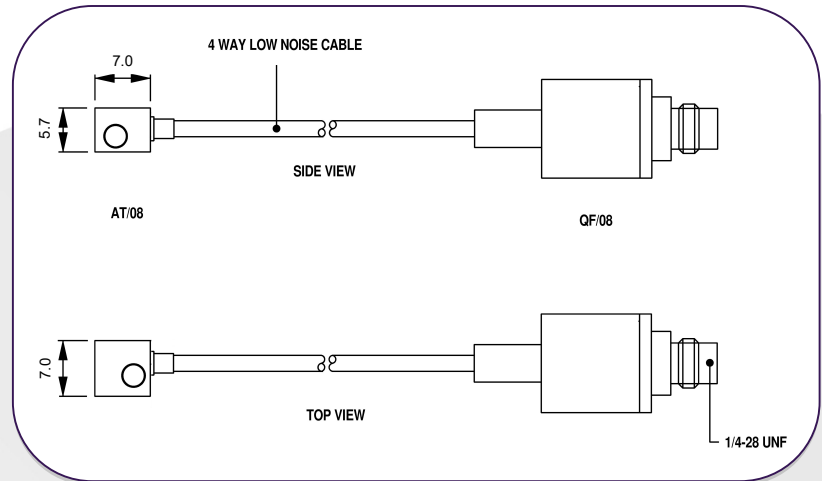
1mV/g up to 10mV/g $\pm 10\%$ 1.2gm 200°C Max Temp



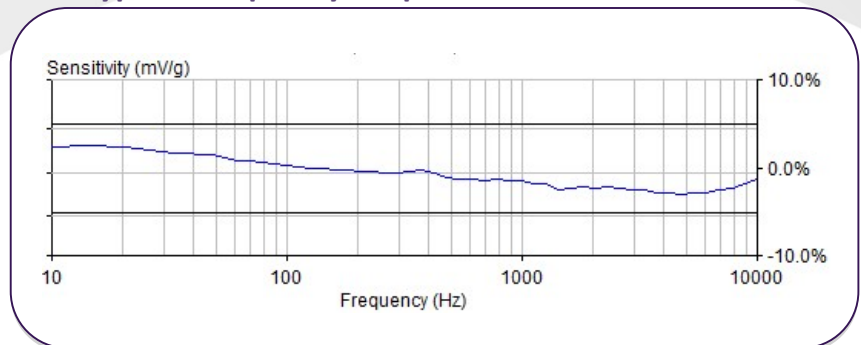
An Ultra-lightweight miniature triaxial IEPE vibration transducer comprising of three voltage output piezo-electric accelerometer elements mounted orthogonally within a stainless steel block. The use of independent shear sensing elements ensures a rugged and repeatable triaxial measurement under the most extreme conditions. This design will outperform single element devices. The AT/18 uses high temperature piezo-ceramics as standard to ensure thermal stability. The accelerometer features a 1m integral cable which terminates with the industry standard 1/4-28 UNF plug. Extension cable assemblies of any length can be provided breaking out to 3 BNC plugs.

Standard sensitivity options are from 1mV/g up to 10mV/g.

The AT/18 triaxial IEPE accelerometer may also include additional optional features such as TEDS, a ground isolated base and low outgassing for use in vacuum applications.



Typical Frequency Response:



Optional Extras

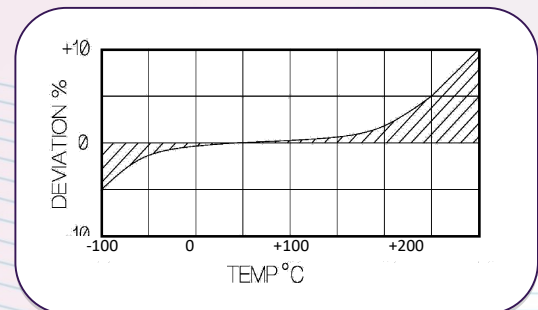
- TEDS
- Ground isolated base
- Low outgassing

Typical Spectral Noise

(10mV/g)

1Hz	987 μ g/ \sqrt Hz
10Hz	282 μ g/ \sqrt Hz
100Hz	84.3 μ g/ \sqrt Hz
1kHz	39.2 μ g/ \sqrt Hz
10kHz	39.1 μ g/ \sqrt Hz

Temperature Response



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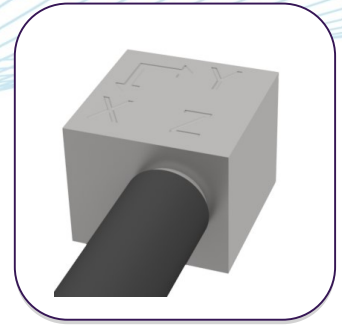
ISO 9001 – 00025363

AT/18 Ultra Miniature Triaxial IEPE Accelerometer

1mV/g up to 10mV/g $\pm 10\%$

1.2gm

200 °C Max Temp



	Metric		Imperial	
	Voltage Sensitivity @ 20°C $\pm 10\%$	0.1mV/(m/s ²)	1.02mV/(m/s ²)	1mV/g
Resonant Frequency	$\geq 58\text{kHz}$			
Typical Frequency Response $\pm 5\%$ $\pm 10\%$	1Hz – 12kHz 0.7Hz – 14kHz	2Hz – 12kHz 1Hz – 14kHz	1Hz – 12kHz 0.7Hz – 14kHz	2Hz – 12kHz 1Hz – 14kHz
Cross Axis Error	$\leq 5\%$ max			
Temperature Range	Sensor -50 / +200°C Connector -50 / +125°C		Sensor -58 / +392°F Connector -58 / +257°F	
Voltage Sensitivity deviation (20°C / 68°F)	-5% @ -50°C +10% @ +200°C		-5% @ -58°F +10% @ +392°F	
Supply Voltage	15V _{DC} to 35V _{DC} standard			
Supply Current	2-20mA			
Bias Voltage (20°C / 68°F)	10V _{DC} to 14V _{DC}			
Broadband resolution (g _{rms})	0.005		0.005	
Amplitude linearity (%FS)	$\leq 2\%$		$\leq 2\%$	
Shock limit	98066m/s ²		10000g	
Saturation limit (equiv. g)	49033m/s ²	4903m/s ²	5000g	500g
Case Material	Stainless Steel			
Mounting	Adhesive			
Electrical isolation @ 100V	$1 \times 10^9 \Omega$ (isolated base only)			
Weight [†] $\pm 5\%$	1.2g		0.04oz	
Case Seal	Welded			
Size [†] $\pm 0.1\text{mm}$	7 x 7 x 5.6mm		0.275 x 0.275 x 0.220in	
Connector	1m low noise Integral Cable with 1/4-28 UNF plug			

The AT/18 triaxial IEPE accelerometer is an ultra-lightweight and miniature accelerometer and by its nature should be handled with care and suitable consideration made by the user to the cable positioning and fixing. For best results the cable should be fixed to avoid noise issues and once installed minimal handling of the cable during testing. The human body can generate significant static electrical charge, handling of the cable can cause spurious signals, ensure the system is correctly earthed.

Removal should be done carefully and excess adhesive removed without damaging the surface of the accelerometer.

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