



A/163-1 High Shock IEPE Accelerometer – 50,000g

0.1 mV/g $\pm 10\%$

10gm

121°C Max

Developed for demanding applications requiring the measurement of high amplitude, short duration transient events such as pyrotechnic shock or high energy impacts, the A/16X range of stainless steel IEPE accelerometers have a range from 10,000g up to 50,000g.

The design of our more standard accelerometers have limitations when used for shock applications, these can either be due to the short duration of the transient event or due to the high level of the shock amplitude, either of these elements can cause issues for the standard sensor and electronics used in the IEPE accelerometers. To overcome these issues the A/16X range has integrated filters which ensure the response is linear across a wide frequency band (1Hz to 15kHz) and up to a peak amplitude measurement of 50,000g.

The A/16X range is also designed to withstand over testing, the accelerometers have a physical built in protection up to 60,000g, (depending on version) this is necessary due to the highly variable and sometimes unpredictable nature of pyrotechnic events.

		A/163-1	
Sensitivity $\pm 10\%$	0.1mV/g	0.01mV/(m/s ²)	
Range \pm	50000g	490000m/s ²	
Resolution	0.3grms		
Typical Frequency Response $\pm 5\%$ $\pm 10\%$	1Hz - 15kHz 0.7Hz – 16kHz		
Resonant Frequency	≥ 40 kHz		
Horizontal Sensitivity	$\leq 7\%$		
Physical Shock Limit	60000g	588000m/s ²	
Temperature Range	-40 to +121°C	-40 to +482°F	
Excitation Voltage	+18 to +28 V DC		
Excitation Current	2 - 20 mA		
Output Impedance	<150 Ω		
Output Bias Voltage	+8 to +12 V DC		
Isolation Installation	No		
Sensing element	Ceramic Shear		
Dimensions	$\varnothing 13.2\text{mm} \times 26\text{mm}$	$\varnothing 0.52" \times 1.02"$	
Weight	10grams	0.35oz	
Installation	M5		
Connection	Integral cable		
Case material	Stainless Steel		

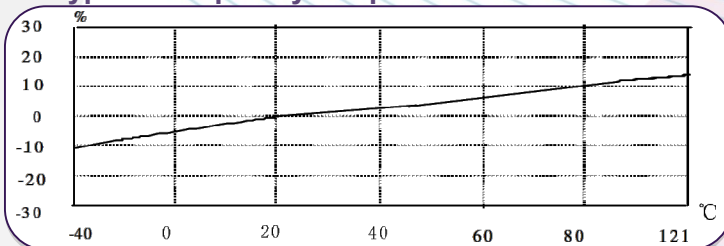
Other applications requiring high transient acceleration measurements can include:

- Pile Driver Monitoring
- Simulated Pyroshock Event
- Recoil & Penetration
- Impact Press Monitoring
- Explosive Studies
- Armour Piercing

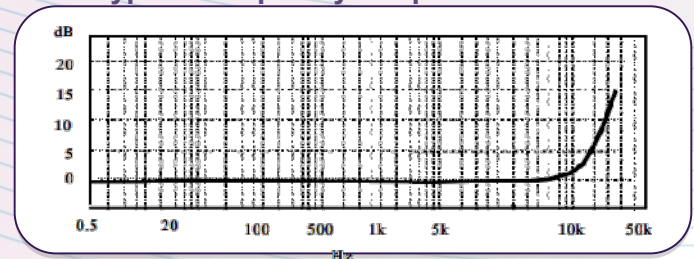
Options:

- A/161 – M5 Microdot connector
- A/161-1 – Integral Cable
- A/162 – M5 Microdot connector
- A/162-1 – Integral cable
- A/163-1 – Integral cable

Typical Frequency Response



Typical Frequency Response



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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