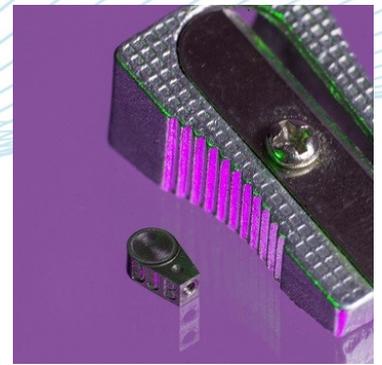


A/28/E Micro-miniature Piezoelectric Accelerometer

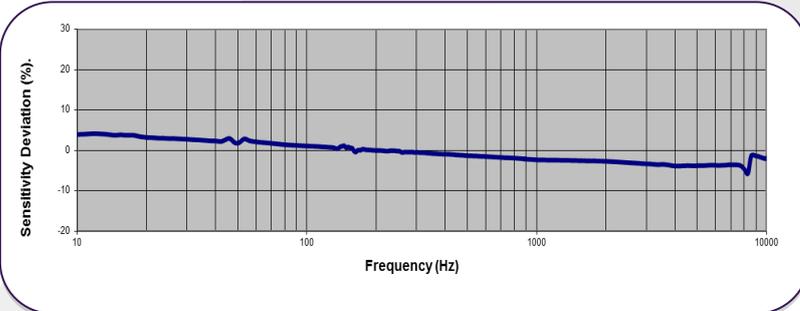
0.4pC/g nom. 0.19gm 200°C Max



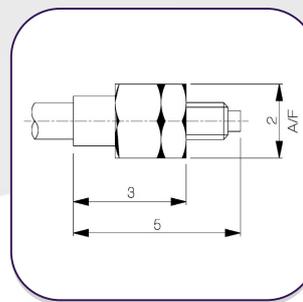
The A/28/E is the world's smallest piezoelectric fully welded stainless steel accelerometer. This ultra-miniature piezoelectric vibration transducer provides virtual transparency when applied to the lightweight structures, allied to relative freedom from strain induced error. A/28/E incorporates a mechanically pre-loaded shear plate sensing element. Good practice in use of A/28/E will maximize service life. Removal from a structure involves shearing an adhesive bond, shock means are not advisable, use the detachment tool provided. Abrasive cleaning of the attachment face will reduce base thickness over time; sparing use of adhesive will aid longevity and data accuracy. Signal outlet is via a surface contact socket.

A 0.8mm dia. soft line cable is available specifically for the A/28/E. although graded anti-microphonic a certain amount of triboelectric induced noise will be generated. This together with cable induced strain may be minimized by anchoring the cable adjacent to the transducer, which should reduce measurement uncertainty around 5% @ 10g. Minimum g threshold is determined by instrumentation noise and environmental factors. A typical instrumentation (charge amplifier) noise spectral density (nsd) is around 0.02fC / $\sqrt{\text{Hz}}$ above 100Hz increasing by 3dB/octave below 100Hz. Wideband noise is nsd x $\sqrt{\text{bandwidth}}$, i.e. 0.006pC/100 kHz and assumes zero input capacitance, increasing by a further 0.006pC/nF input capacitance (assuming 1nF charge amplifier transfer capacitance).

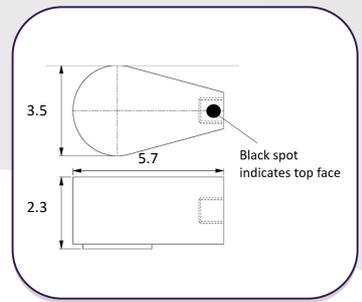
Typical Frequency Response



L8 Connector

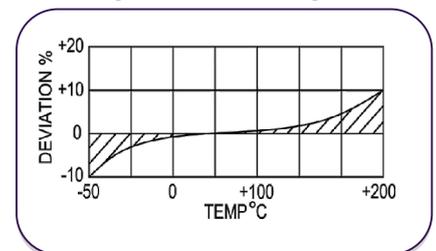


A/28/E



	Metric	Imperial
Charge sensitivity nom.	0.04pC/(m/s ²)	0.4pC/g
Resonant Frequency	≥45kHz	
Typical Frequency Response	1Hz- 12kHz	
	±5%	0.7Hz- 14kHz
	±10%	
Cross Axis error	≤5%	
Capacitance nom.	335 pF	
Temperature Range	-50/ +200°C	-58/ +392°F
Charge sensitivity deviation (20°C/68°F)	-5% @ - 50°C +10% @ +200°C	-5% @ - 58°F +10% @ +392°F
Base strain sensitivity	≤ 5%	
Maximum Shock g level, rise time μs	98100m/s ² , 20	10000g, 20
Case Material	s/steel 303 S31	
Mounting	Adhesive	
Weight	0.19gm	0.007oz
Case Seal	Welded	
Size	5.7 x \varnothing 3.5 x 2.3mm	.022 x \varnothing 0.14 x 0.09in
Connector	L8	

Temperature Response



Options

A/28/E-1: Includes 1m integral cable

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

DJB Instruments (UK) Ltd

Finchley Avenue,
Mildenhall, Suffolk IP28 7BG

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

Tel +44 (0)1638 712 288
Email sales@djbinstruments.com
Web www.djbinstruments.com

DJB Iss.6 2020



ISO 9001 – 00025363