

Micro g piezo-electric accelerometer

A/600 A/600/T



1.2nC/g nom. • 110gm wt.
250°C max. temp.

Ultra high output, multiple shear plate vibration transducer. Shear plate construction provides near total isolation from mechanical inputs other than acceleration, thus safeguarding measurement integrity in applications where vibration is accompanied by high dynamic strain levels. Generalising, these conditions are prevalent where modal frequencies are low, and are thus associated with vibration surveys of large structures.

Transducers exhibiting significant strain response may operate more akin to strain gauges at low frequency excitation and their use is thus to be discouraged! System noise level of 10^{-3} pC is equivalent to $1\mu\text{g}$.

This should be realizable with bandwidth restricted to 1kHz.

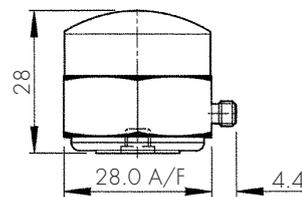
Charge amplifier noise level is a function of source capacitance.

A number of parallel shear plates equivalent in total thickness to a single plate of charge sensitivity Q and capacitance C , generates charge nQ and has capacitance n^2C . Clearly, taken to the limit, noise degradation overrides signal increase, hence these products are largely a compromise between signal/noise and mass/size.

options

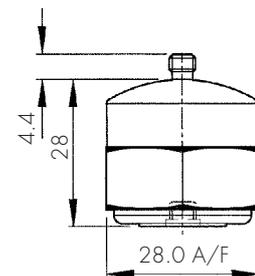
- > wideband temperature calibration
-50/+250°C

A/600

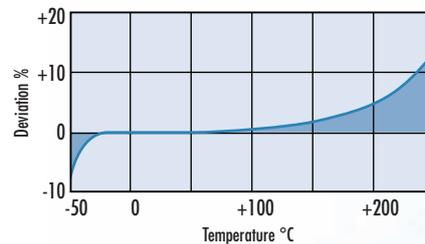


A/600/T

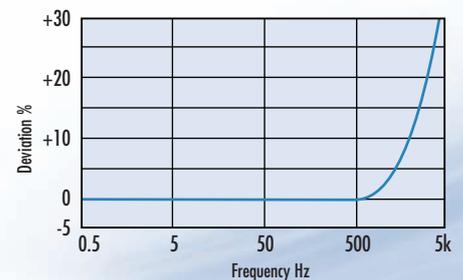
dims. mm



TEMPERATURE RESPONSE



FREQUENCY RESPONSE



CONVERSION MODE	SHEAR PLATE
Charge sensitivity nC/g	0.9/1.4
Capacitance nF	6/9
Resonant frequency kHz	8
Cross axis error % max	5
Temperature range °C	-50/+250
Charge sensitivity deviation re 20°C	-5% @ -50°C +15% @ +250°C
Pyro-electric output, g/°C	0.2
Pyro-electric corner freq. Hz	0.001
Base strain sens. g/μ strain	10^{-4}
Max continuous accn. g sine	700
Case material	s/steel 303 S31
Mounting	base tapped 10/32 UNF x 4mm deep
Weight gm	110
Connector	Microdot skt. 10/32 UNF thd.
Construction	welded