Triaxial piezo-tronic accelerometer

A/134/V
A/134/V-3

10mV/g • 19gm wt.
125°C max. temp.

Lightweight triaxial vibration transducer comprising three KONIC all welded inserts, each with hybrid QVC, bonded orthogonally into a hard anodised aluminium housing. The inserts are electrically insulated, individually and from the housing, thus eliminating ground loop interference. Low impedance O/P provides a high degree of noise immunity (80dB improvement vs. equiv. charge source device @ 50Hz) and allows use with low cost coaxial cable. The additional mechanical isolation implicit in the construction provides also near elimination of strain induced error. All the 3x10/32 Microdot connectors are exiting in the same direction.

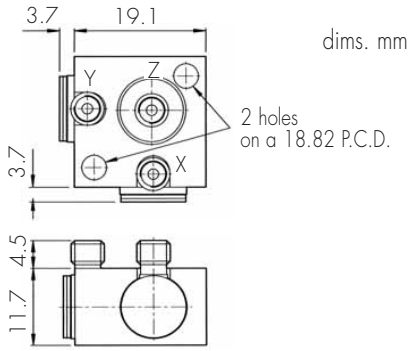
The spatial response of a structure to dynamic forcing, may lead to erroneous single axis vibration or shock measurement due to the inherent directional property of the transducer. In cases where this is deemed to be a problem, an orthogonal three axis measurement, allowing computation of absolute value and direction offers a solution.

The d33 component suppression property of the KONIC design, resulting in minimisation of cross axis error, is particularly advantageous for three axis measurement integrity.

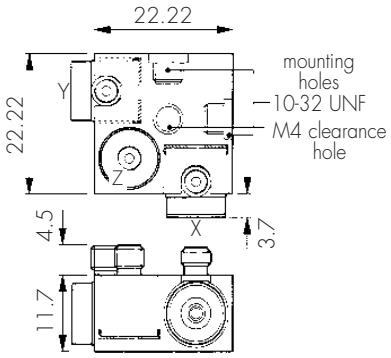
options

- wideband temperature calibration
- low frequency QVC version (/L)
- 100mV/g sensitivity with constraint on low frequency response

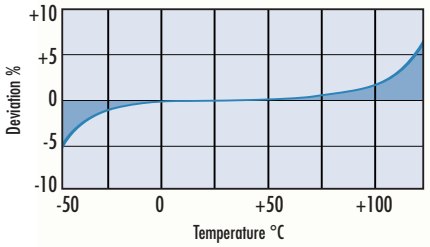
A/134/V



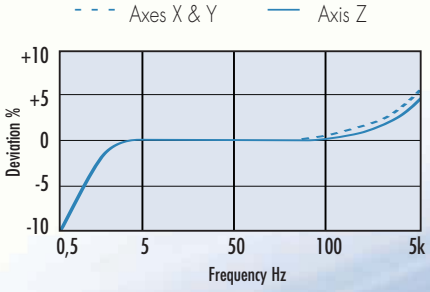
A/134/V-3



TEMPERATURE RESPONSE



FREQUENCY RESPONSE



CONVERSION MODE	KONIC/2 WIRE QVC
Voltage sens., ±5% @ 20°C, mV/g (X, Y, Z)	10
Resonant frequency kHz	25 ; 25 ; 28
Cross axis error % max	5
Temperature range °C	-50 / +125
Voltage sens. deviation re 20°C	-5% @ -50°C ; +5% @ +125°C
Pyro-electric output, g/°C	0.15
Pyro-electric corner freq. Hz	0.005
Base strain sens. g/μ strain	< 0.01
Max continuous accn. g sine	1000
Supply voltage, V	15/35
Supply current, mA	2/15
Bias voltage V (20°C)	8.5/9.5
Settling time to 90% final val. secs	5/8 (/L)
L.F. corner frequency, Hz	0.7 ; 0.3 (/L)
Noise level, equiv. mg	3
Saturation limit, equiv. g	450
Output resistance, ohms	50
Supply ripple reject. @ 50Hz, dB	60
Case seal	transducer inserts welded bonded into hard anodised al. block
Insert/block insul. resce, Mohms	1000 @ 100V, 20°C
Materials	inserts s/steel 303 S31, mtg. block al. alloy
Mounting	2 x 3.57 mm ø through holes
Weight gm	19/22 (A/134/V-3)
Connector	Microdot skt. 10/32 UNF thd.