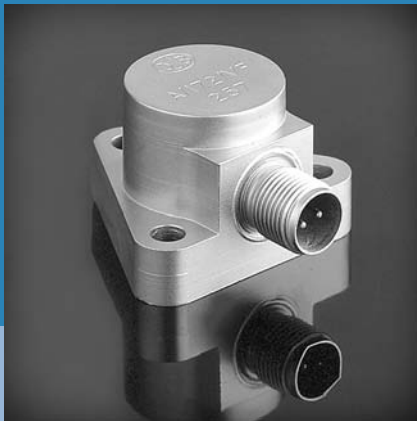


Industrial piezo-tronic voltage source accelerometer

A/172/VF



100mV/g $\pm 5\%$ • 130gm wt.
125°C max. temp. • 2 pole connector

Robust, industrial grade accelerometer with integral two wire charge/voltage converter (QVC) providing standardised 100mV/g output, and suitable for use in hostile environments, including fluid immersion.

The transducer will withstand a 7 joule axial impact (1kg x 0.7m drop onto the cap). Convuluted and braided armoured cable assemblies offer supplementary protection.

For submersible operation, proof leak testing is essential. The A/172/VF connector has provision for a seal; transducer/cable assembly should be leak tested as a whole and the connector seal replaced should the connector joint be subsequently broken.

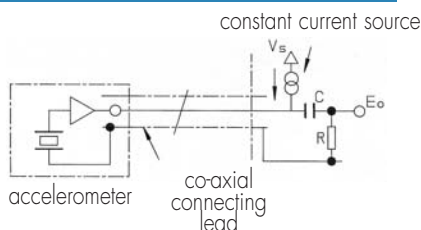
Leak testing is carried out by submersion in pressurised water. This is a rapid means of weld/metallurgical defect detection water ingress correlates to insulation loss and usually manifests with in an hour or two of commencement. A 24 hour test virtually guarantees survivability.

The A/172/VF requires a constant current supply and generates an output signal superimposed on the supply line. Fig 1 shows the minimum interface for energisation and signal extraction. We provide two standard modular interface amplifiers, VV/04 and V4/04 the latter being a four channel unit offering gain options up to 1V/g and transducer fault detection.

CONSTRUCTION

KONIC sensor/hybrid thick film QVC, electrically isolated with output via two pole hermetic connector. All welded case, suitable for immersible applications.

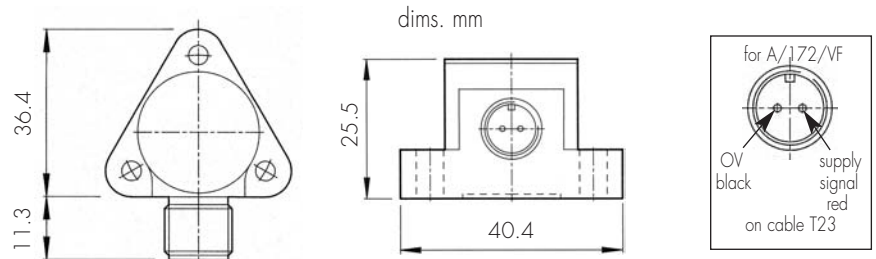
FIG. 1



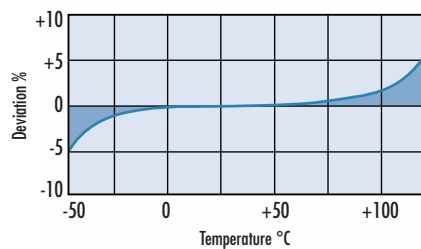
options

- > temperature calibration to 125°C
- > proof pressure testing to 80bar.

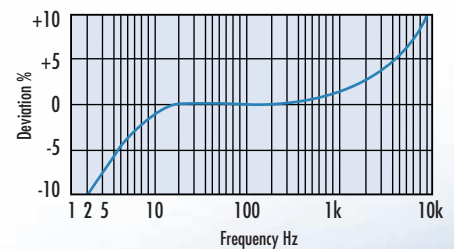
A/172/VF



TEMPERATURE RESPONSE



FREQUENCY RESPONSE



CONVERSION MODE

KONIC/2 WIRE QVC

Voltage sensitivity mV/g $\pm 5\%$ @ 20°C	100
Resonant frequency kHz	11
Cross axis error % max	5
Temperature range °C	-50/+125
Output sensitivity deviation re 20°C	-5% @ -50°C +5% @ +125°C
Pyro-electric output, g/°C	0.02
Pyro-electric corner freq. Hz	0.002
Base strain sens. g/ μ strain	0.01
Max continuous accn. g sine pk.	1000
Supply voltage, V	15/35
Supply current, mA	2/15
Bias voltage, V @ 20°C	8.5/9.5
Settling time, secs to 90% final val.	<5
Noise level, equiv. mg	0.7
L.F. corner frequency, Hz	0.7
Saturation limit, equiv. pk. g	45/50
Case material	s/steel 303 S31,
Mounting	3 x 5mm ϕ holes on 34.3 PCD
Weight gm	130
Connector	2 pole, 7/16 UNS thd., hermetic
Case seal	welded