



A/107/F

Industrial Piezoelectric Accelerometer

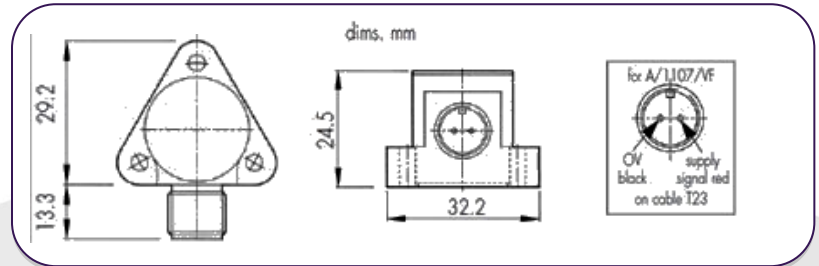
80gm 2 pole connector, lightweight version
100pC/g nom 260°C max (F)

Industrial grade vibration transducers. Signal output is floating, via 2 pole hermetic connector, thus minimizing common mode interference. Ingress of contaminants into the transducer and/or connector will degrade data. Transducers and cables can be supplied proof pressure tested to 80bar, individually and as assemblies.

Pressure tested assemblies may be disconnected for ease of installation, subsequently replacing the sealing ring between the connector shells. The HT is proof to 400°C Exposure and is therefore suitable for gas turbine bearing vibration monitoring, with the proviso that a low pass inline filter may be needed to minimize blade passing frequency modulation, which gives rise to spurious phantom low frequency signal generation.

High temperature operation of the HT may be subject to degradation due to increased pyro-electric charge generation, together with significant fall in insulation resistance. Instrumentation bandwidth should be constrained to the minimum needed for measurement integrity. A/107's comprise isolated welded hermetic case. Internal electrical connections are welded. Pressure and thermal cycle tests are recommended for hostile environment applications.

A/107/F, A/107/F/HT



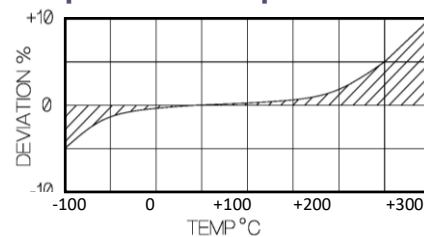
Typical Spectral Noise (100mV/g)

1Hz	732 $\mu\text{g}/\sqrt{\text{Hz}}$
10Hz	82.1 $\mu\text{g}/\sqrt{\text{Hz}}$
100Hz	16.2 $\mu\text{g}/\sqrt{\text{Hz}}$
1kHz	4.2 $\mu\text{g}/\sqrt{\text{Hz}}$
10kHz	3.1 $\mu\text{g}/\sqrt{\text{Hz}}$

Options:

- Temperature calibration to 260°C
- Proof pressure testing to 80bar
- A/107/F (100pC/g)
- A/107/FHT – High temperature version (10pC/g)
- Voltage O/P version: A/1107/VF (100mV/g)

Temperature Responses A/107/F



	Metric	Imperial
Charge Sensitivity pC/g nom.	10.20 pC/(m/s ²)	100 pC/g nom.
Capacitance	1400 / 2400pF	
Resonant Frequency	18kHz	
Typical Frequency Response $\pm 5\%$ $\pm 10\%$	1Hz – 3kHz 0.7Hz – 4kHz	
Cross Axis Error	$\leq 5\%$	
Temperature Range	-50/ +260°C	-58/ +500°F
Charge Sensitivity Deviation re 20°C/68°F	-5% @ -50°C +15% @ +260°C	-5% @ -58°F +15% @ +500°F
Pyro-electric Output,	0.2 g/°C	
Pyro-electric corner frequency	0.002Hz	
Base strain sensitivity/ strain	$\leq 5\%$	
Max continuous accn. g sine	9,807m/s ²	1000g
Case material	s/steel 303 s31	
Mounting	3 x 3.2mm holes, 25.4mm PCD	3 x 0.13in holes, 1inch PCD
Weight	80gm	2.82oz
Case seal	Welded, hermetic	
Size	29.2 x 29.2 x 24.5mm	1.15 x 1.15 x 0.96in
Connector	2 pole connector 7/16 UNS	2 pole connector 7/16 UNS

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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