

TECHNICAL SPECIFICATION

ACCELEROMETER

Application: The accelerometer shall be used for condition monitoring and measurement of vibrations for low speed and high speed gear boxes. Accelerometers with integral electronics or integrated circuit design are only considered.

- Sensitivity : 10 mv/g
- Measurement range : $\pm 500g$
- Hermetic seal • ESD protection • Reverse wiring protection

1 Dynamic

Sensitivity ($\pm 5\%$) : 10 mV/g

Acceleration range 500 g peak

Amplitude nonlinearity 1%

Frequency response:

($\pm 5\%$) ----- 1 - 7000 Hz
 ($\pm 10\%$) ----- 0.7 - 11000 Hz
 (± 3 dB) ----- 0.35 - 20000 Hz
 (± 1 dB) ----- 0.4 - 14000

Resonance frequency ----- ≥ 38 kHz

Transverse sensitivity, max 5% of axial

Broadband Resolution (1 to 10000 Hz)

Non-Linearity

Transverse Sensitivity

0.003 g rms

$\leq 1\%$

$\leq 5\%$

(SI system)

2 Environmental

Overload Limit (Shock)

Temperature Range (Operating)

± 10000 g pk

-65 to +250 °F

± 98100 m/s² pk

-54 to +121 °C

3 Electrical

Excitation Voltage

Constant Current Excitation

Output Bias Voltage

Discharge Time Constant

Settling Time (within 10% of bias)

Sensing Element

Housing Material

Electrical Connector

Electrical Connection Position

Mounting Thread

18 to 30 VDC

2 to 20 mA

8 to 12 VDC

0.5 to 2.6 sec

<15 sec

Quartz

Titanium

10-32 Coaxial Jack

Top

10-32 Female

2 to 20 mA

8 to 12 VDC

0.5 to 2.6 sec

<15 sec

Quartz

Titanium

10-32 Coaxial Jack

Side

10-32 Female

Scope of supply: All accelerometer must be supplied with mounting magnetic bases.