

TRIAxIAL ACCELEROMETER

ST703-3C Capacitive Accelerometer

The ST703-3C Series Triaxial accelerometer sensor is used to measure acceleration, motion or vibration. The sensor element functions on the principle of differential capacitance, whereas an analog output voltage is proportional to acceleration. The sense element design utilizes common mode cancellation to decrease errors from process variation and environmental stress. Both deliver a very low noise and low distortion signal with excellent bandwidth, dynamic range, stability and robustness.

KEY FEATURES

- ◆ Well suited for industrial applications
- ◆ Very low noise
- ◆ Excellent performance over temperature
- ◆ Compact, rugged, stainless steel body
- ◆ Bolt-on or magnetic mounting
- ◆ Hermetically sealed components

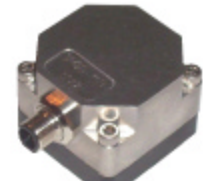
| SPECIFICATIONS | | | | | |
|----------------------------|--------------|-------------------------------|----------------------|---------------------|----------------------|
| Performance | Units | /7 | /6 | /5 | /4 |
| Sensitivity ($\pm 20\%$) | mV/g | 1500 | 1333 | 1333 | 750 |
| Measuring Range | \pm g pk | 2.5 | 1.5 | 1.5 | 2.7 |
| Frequency Response (-3dB) | Hz | 0 to 7000 | 0-400 ⁽¹⁾ | 0-50 ⁽¹⁾ | 0-400 ⁽¹⁾ |
| Environmental | | | | | |
| Shock Limit | \pm g pk | 1500 | 20000 | | |
| Temperature range | $^{\circ}$ C | -40 to +85 | -55 to +125 | | |
| Electrical | | | | | |
| Supply Voltage | V | ± 6 to 12 | +5 | | |
| Voltage Output | \pm V | ± 3.5 | 2.5 \pm 2 | | |
| Mechanical | | | | | |
| Size (L x W x H) | inch | 2 x 2 x 1.75 | | | |
| Sensing Element Material | Type | MEMS | | CAP | |
| Housing Material | Type | Stainless Steel, encapsulated | | | |
| Electrical Connector | Type | 8 Pin, M12 thread | | | |
| Mounting thread | Type | 1/4 x 20 UNC (x4) | | | |
| Optional magnetic base | ST705 | Flat surface, 85 lb force | | | |

Note 1. (-3dB point), the output has true DC (0Hz) response.

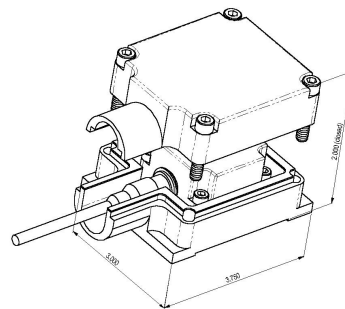
ST703-3C Triaxial accelerometer



Stud mount style



Magnetic mount style



ST706 Protective Enclosure Protects sensor from extreme conditions



ST705-3F Magnetic base

BENEFITS

- ◆ Outstanding overload & shock durability
- ◆ Exceptional reliability, unprecedented accuracy
- ◆ Very low noise – ideal for slow speed applications
- ◆ Measure wide range of frequencies with one sensor
- ◆ Rugged design to withstand harsh conditions

OPTIONAL ACCESSORIES

- ◆ ST706 Protective enclosure
- ◆ ST705-3F Magnetic base
- ◆ Cables (custom lengths)

