

# High frequency integral cable accelerometer

## 712F

### SPECIFICATIONS

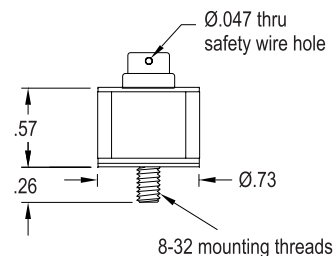
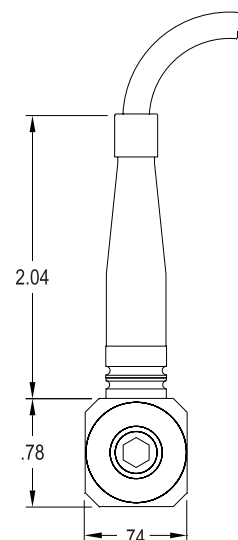
|                                                 |                  |                                                          |
|-------------------------------------------------|------------------|----------------------------------------------------------|
| <b>Sensitivity, <math>\pm 10\%</math>, 25°C</b> |                  | 100 mV/g                                                 |
| <b>Acceleration range</b>                       |                  | 60 g peak                                                |
| <b>Amplitude nonlinearity</b>                   |                  | 1%                                                       |
| <b>Frequency response:</b>                      | $\pm 5\%$        | 9.0 - 15,000 Hz                                          |
|                                                 | $\pm 10\%$       | 6.0 - 20,000 Hz                                          |
|                                                 | $\pm 3$ dB       | 3.0 - 25,000 Hz                                          |
| <b>Resonance frequency, mounted</b>             |                  | >45 kHz                                                  |
| <b>Transverse sensitivity, max</b>              |                  | 3% of axial                                              |
| <b>Temperature response:</b>                    | -50°C            | -10%                                                     |
|                                                 | +120°C           | +10%                                                     |
| <b>Power requirement:</b>                       |                  |                                                          |
| Voltage source                                  |                  | 18 - 30 VDC                                              |
| Current regulating diode                        |                  | 2 - 10 mA                                                |
| <b>Electrical noise, equiv. g, nominal:</b>     |                  |                                                          |
| Broadband                                       | 2.5 Hz to 25 kHz | 1,000 $\mu$ g                                            |
|                                                 | 10 Hz            | 25 $\mu$ g/ $\sqrt{\text{Hz}}$                           |
|                                                 | 100 Hz           | 10 $\mu$ g/ $\sqrt{\text{Hz}}$                           |
|                                                 | 1,000 Hz         | 8 $\mu$ g/ $\sqrt{\text{Hz}}$                            |
| <b>Output impedance, max</b>                    |                  | 100 $\Omega$                                             |
| <b>Bias output voltage, nominal</b>             |                  | 12 VDC                                                   |
| <b>Grounding</b>                                |                  | case isolated, internally shielded                       |
| <b>Temperature range</b>                        |                  | -50° to +120°C                                           |
| <b>Vibration limit</b>                          |                  | $\pm 1,000$ g                                            |
| <b>Shock limit, max</b>                         |                  | 5,000 g peak                                             |
| <b>Sealing</b>                                  |                  | hermetic                                                 |
| <b>Base strain sensitivity, max</b>             |                  | 0.03 g/ $\mu$ strain                                     |
| <b>Sensing element design</b>                   |                  | PZT ceramic / shear                                      |
| <b>Weight</b>                                   |                  | 35 grams                                                 |
| <b>Case material</b>                            |                  | 316L stainless steel                                     |
| <b>Mounting</b>                                 |                  | 8-32 captive screw with 0.047" diameter safety wire hole |
| <b>Integral cabling</b>                         |                  | J9T2AK, 16 ft., blunt cut                                |

Accessories supplied: 8-32 captive screw; calibration data (level 2)



### Key features

- Compact size, lightweight
- High frequency detection (25 kHz)
- Available with M4 mounting thread
- Manufactured in ISO 9001 facility



| Connections  |                       |
|--------------|-----------------------|
| Function     | Cable conductor color |
| power/signal | white                 |
| common       | black                 |
| case         | shield                |



Note: Due to continuous process improvement, specifications are subject to change without notice.  
This document is cleared for public release.