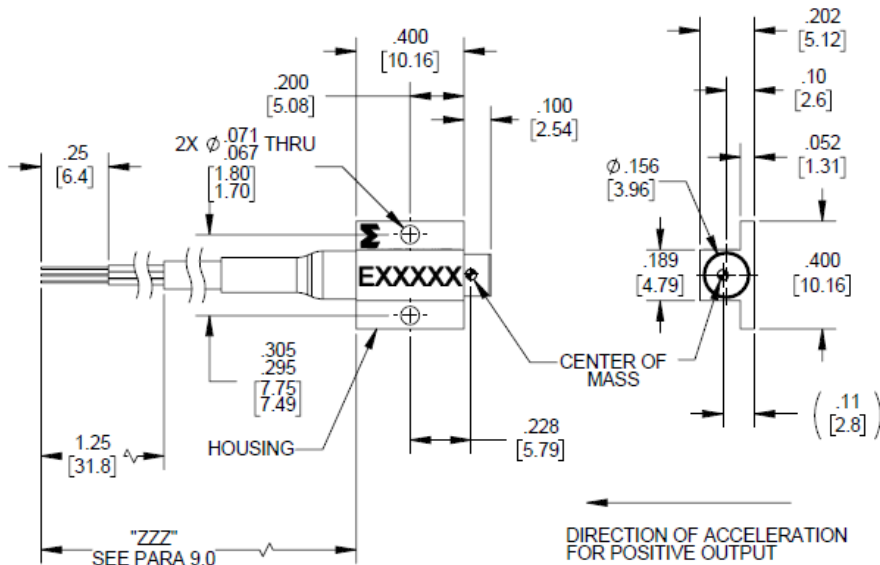


Piezoresistive accelerometer

Model 726CH



STANDARD TOLERANCE
INCHES [MILLIMETERS]
XX = ± .02 [X = ± .5]
XXX = ± .010 [XX = ± .25]

Key features

- High sensitivity 600mV FSO
- Multi-mode damping
- DC response and wide bandwidth
- Mechanical stops
- In-dummy application
- SAE J211/J2570 compliant

Description

Model 726CH is a very low mass accelerometer weighing only 1.4 grams. This accelerometer is designed for automotive safety testing applications that require, broad frequency response, and minimum zero shift following the event. Model 726CH utilizes a unique and advanced micro-machined piezoresistive sensor, which includes multi-mode damping for exceptional bandwidth with no significant resonance response in the usable range. This monolithic sensor incorporates the latest MEMS technology for ruggedness, stability and reliability over previous designs. With a frequency response extending down to dc (steady state acceleration), this accelerometer is ideal for measuring long duration transient shocks.

726CH has a full scale range of 2000 g and gas damping. It is available with less than 1% transverse sensitivity and less than ± 25 mV Zero Measurand Output as the "TZ" option. 726CH comes standard with calibration data for 2V, 5V and 10V excitation.

US patent 6,988,412 applies.

Piezoresistive accelerometer | Model 726CH

All specifications are referenced at +75°F (+24°C) and 10 Vdc, unless otherwise noted. Sensitivity and zero measureand offset are provided at 2V, 5V and 10V excitation. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

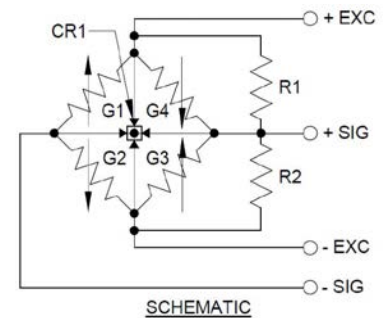
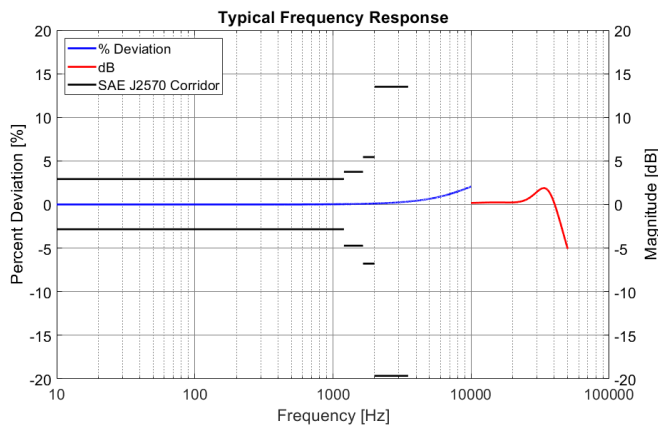
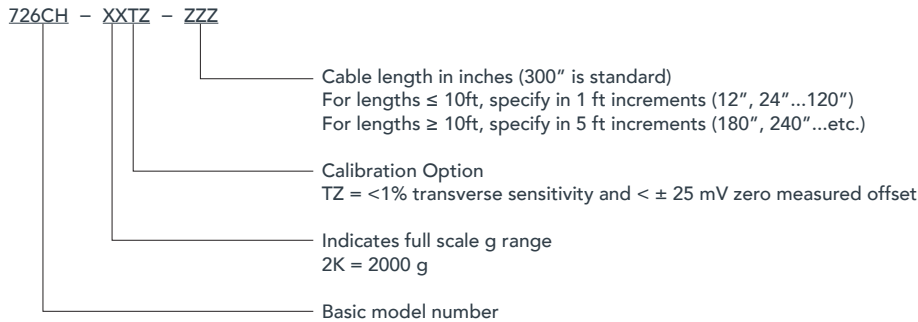
| Specifications | | |
|---|---------|---|
| Dynamic characteristics | Units | -2K |
| Range | g | ± 2000 |
| Sensitivity (at 100Hz and 10g) | | |
| Minimum/Nominal/Maximum | mV/V/g | .015 / .030 / .060 |
| Frequency response (Referenced to 100 Hz) | | |
| + 2.92%/-2.84% maximum | Hz | 0 to 1200 |
| + 3.75%/-4.72% maximum | Hz | 1200 to 1650 |
| ± 5% maximum | Hz | 1650 to 5000 |
| Non-linearity | %FSO | ±1 |
| Zero Measurand Output | mV | ±50 maximum (±25 optional) |
| Transverse sensitivity | % max | 3 (1 optional) |
| Resonance Frequency [1] | Hz | 25,000 |
| Thermal zero shift | | |
| 0° to 50°C | %FSO/°C | 0.04 |
| 32° to 122°F | %FSO/°F | 0.02 |
| Thermal sensitivity shift | | |
| 0° to 50°C | %/°C | 0.2 |
| 32° to 122°F | %/°F | 0.1 |
| Electrical characteristics | | |
| Warm-up time | min | 2 |
| Excitation | Vdc | 2.0, 5.0, 10.0 |
| Input Resistance | ohms | 6500 +/- 2000 |
| Output Resistance | ohms | 6500 +/- 2000 |
| Insulation resistance | Mohms | 100 min @ 50 Vdc |
| Residual Noise [2] | µV RMS | <10 |
| Physical characteristics | | |
| Case material | | Hard anodized aluminum alloy, color black |
| Electrical connections | | Integral 4 conductor, # 32 AWG ETFE insulated leads, shielded with white polyurethane jacket, 0.105 inch OD |
| Mounting torque | | 2.6 in-lbf (0.29 N.m) recommended/3.0 in-lbf (0.34 N.m) maximum |
| Weight | | 0.06 oz (1.8 gm); cable 0.12 oz/ft (11 gm/m), typical |
| Environmental | | |
| Acceleration limits | | |
| Shock (half-sine pulse duration) | | 10,000 g, 80 µsec or longer |
| Temperature | | |
| Operating | | - 40 to +100°C (-40 to +212°F) |
| Storage | | Room temperature |
| Humidity | | IP65 |
| Calibration | | |
| Each sensor includes an ISO 17025 calibration with the below information: | | |
| Sensitivity (ref 10g, 100Hz) @ 2V, 5V and 10V | | |
| ZMO @ 2V, 5V and 10V | | |
| Frequency Response (20 to 5000Hz, ref 100Hz) | | |
| Input and Output Resistance | | |

Piezoresistive accelerometer | Model 726CH

| Accessories | | |
|-------------|--|----------|
| Options | Description | 726CH |
| EHM35 | Allen wrench | Included |
| EHW196 | Size-0 flat washers (x2) | Included |
| EH828 | 0-80 x3/16 inch socket head cap screw (x2) | Included |
| 7953A | Triaxial mounting block | Optional |

Notes

- The primary resonance (25kHz) and the secondary resonance (36kHz) are both heavily damped. Using our proprietary multi-mode damping technique, these resonance peaks are completely suppressed or minimized to a significant degree, leaving the sensor virtually resonance free in practice. See the chart below for typical frequency response.
- Theoretical noise floor measured using a low-noise Op-amp. In practice, noise performance is dominated by the characteristics of the interfacing bridge amplifier.
- Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.
- Model number definition:



10869 NC Highway 903, Halifax, NC 27839 USA

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