Piezoresistive Accelerometers Are Designed for Legislative and Safety Testing

Meggitt Sensing Systems has introduced the Endevco model 7264C Series, a low-mass piezoresistive shock accelerometer family. Featuring a frequency response extending down to DC (steady state), the series is designed to measure the long duration transient shocks associated with automotive crash testing, anthropomorphic device testing (ATDs), aircraft and automotive seat belt testing and other legislative and safety applications in which minimal mass loading and a broad frequency response are absolute requirements. The series meets both SAE J211 impact testing and SAE J2570 anthropomorphic testing standards and features an advanced monolithic MEMS sensor design with integral mechanical stops for ruggedness, stability and reliability (US patents 4,498,229 and 4,605,919), incorporating a full bridge circuit with fixed resistors for shunt calibration. Featuring a small footprint and with a total weight of 1.4 g, the series is available in two versions: a 2,000 g model, with minimum 300 mV full-scale output and a frequency response from 0 to 5,000 g; and a 500 g model, with 200 mV minimum full-scale output and a frequency response from 0 to 3,000 g (±500 g).

The series is also optionally available with <1% transverse sensitivity (“T” option) and <±25 mV zero measurand output (“Z” option). Units are undamped for minimal phase shift over the useful frequency range. They also feature integral protection against electrostatic discharge (ESD) for the reduction of handling errors. In addition, multiple calibration and connector variations are available. Please contact the factory for details.

Triaxial measurement capabilities may be achieved via the optional model 7953A triaxial mounting block or use of an alternative accelerometer product, the Endevco® model 7268C. Other recommended accessories for the model 7264C series include the model 126 three-channel DC bridge amplifier; the model 136 three-channel signal conditioner; and the model 436 DC differential voltage amplifier.

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[1] http://www.meggitt.com