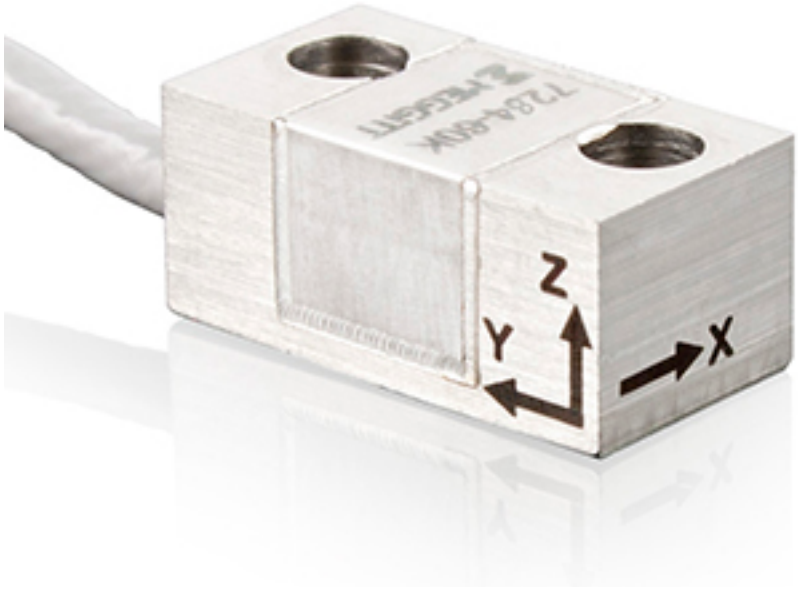
Piezoresistive shock accelerometer designed for weapons testing



Meggitt Sensing Systems has introduced the Endevco model 7284 series, a family of lightly damped, high-g, triaxial, piezoresistive shock accelerometers designed for weapons testing, high-g data recorders, missile fuzes and other extreme-g applications. These very rugged sensors, available in 20,000 g and 60,000 g ranges, offer superior survivability and low power consumption.

The Endevco model 7284 series is the triaxial version of the companys popular single-axis 7280A series. It shares the same footprint, bolt pattern and highly survivable sensing system, while making high-g shock measurements across three mutually perpendicular axes. And, with a frequency response extending down to dc (steady state), the model 7284 can measure long duration transient shocks.

The robust design of the model 7284 incorporates three sensors mounted in a triaxial arrangement within a single housing. Each axis features a unique piezoresistive MEMS sensor with light gas damping to attenuate resonant amplitudes and prevent breakage in overload conditions. Because units are only lightly damped, they still accurately respond to fast rise times and short duration shock motion. All sensing elements are manufactured in-house at the Meggitt

ISO9001-certified MEMS facility in Sunnyvale, California, USA.

Simple screw-mount installation with factory controlled and tested cross-axis performance makes the model 7284 much easier and more cost effective to install than three single-axis accelerometers with a mounting block. The sensor also features a robust, eight-conductor cable designed to repeatedly withstand high-g shock acceleration inputs. Input voltage of 5V and cable length of 48 inches are standard, but both are easily configured to customer requirements.

Recommended accessories for the Endevco model 7284 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.

For more information on the complete Endevco product line, visit www.endevco.com [1]. For full details on all Meggitt Sensing Systems products, visit www.meggittsensingsystems.com [2].

Source URL (retrieved on *08/27/2014 - 6:56am*):
http://www.ecnmag.com/product-releases/2013/12/piezoresistive-shock-accelerometer-designed-weapons-testing

Links:
[1] http://www.endevco.com
[2] http://www.meggittsensingsystems.com