

## EPISENSOR

### Force Balance Accelerometer

#### The EpiSensor ES-T: A Flexible, Versatile Value

Kinematics announces its latest line of earthquake sensors – EpiSensor force balance accelerometers. Model FBA ES-T is a triaxial surface package useful for many types of earthquake recording applications. The unit consists of three EpiSensor force balance accelerometer modules mounted orthogonally in one small convenient package. With fullscale recording ranges of  $\pm 0.25$  to  $\pm 4g$  (user selectable) the EpiSensor provides on-scale recording of earthquake motions even at nearfault locations and in a wide variety of structure types.

The significantly improved bandwidth of DC to 200 Hz allows engineers and scientists to study motions at higher frequencies while maintaining the very important DC response that allows simple field calibration and reduces post-processing confusion.

Output circuitry is also significantly enhanced. Several types of outputs can be field-selected by the user:  $\pm 2.5V$  single-ended output for use with traditional Kinematics earthquake recording instruments:  $\pm 10V$  single-ended or  $\pm 20V$  differential output for use with Kinematics digital recorders and other 24-bit digital recorders currently on the market.

EpiSensor force balance accelerometers are also available in uniaxial (the FBA ES-U) and borehole (the FBA ES-SB shallow and FBA ES-DH deep) packages.



#### FEATURES

- Low noise
- Extended bandwidth - DC to 200Hz
- User-selectable full-scale range
- Calibration coil (standard)
- Single-end or differential output (user selectable)
- Double-stage transient protection



## SPECIFICATIONS

<b>Dynamic range:</b>	155 dB+
<b>Bandwidth:</b>	DC to 200Hz
<b>Calibration coil:</b>	Standard
<b>Full-scale range:</b>	User selectable at $\pm 0.25g$ , $\pm 0.5g$ , $\pm 1g$ , $\pm 2g$ or $\pm 4g$
<b>Outputs:</b>	User selectable at: $\pm 2.5V$ single-ended $\pm 10V$ single-ended $\pm 5V$ differential $\pm 20V$ differential
<b>Zero adjust:</b>	Three user-friendly access holes for simple, safe, efficient adjustment
<b>Linearity:</b>	$< 1000 \mu g/g^2$
<b>Hysteresis:</b>	$< 0.1\%$ of full scale
<b>Cross-axis sensitivity:</b>	$< 1\%$ (including misalignment)
<b>Zero point thermal drift:</b>	$< 500 \mu g/^{\circ}C$ (1g sensor)
<b>ESD, RF, EMI protection:</b>	Double stage transient protection with gas arrester elements
<b>Power consumption:</b>	12mA from $\pm 12V$ (Standard Amp) 35mA from $\pm 12V$ (Low Noise Amp) Single supply option available
<b>Physical size:</b>	13.3 cm diameter (cylinder), 6.2 cm high
<b>Mounting:</b>	Single bolt mounting, three adjustable leveling feet and bubble level
<b>Connection:</b>	Single military-style metal connector
<b>Operating Temperature:</b>	$-20^{\circ}$ to $70^{\circ}C$ ( $0^{\circ}$ to $160^{\circ}F$ )
<b>Housing:</b>	Watertight enclosure



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