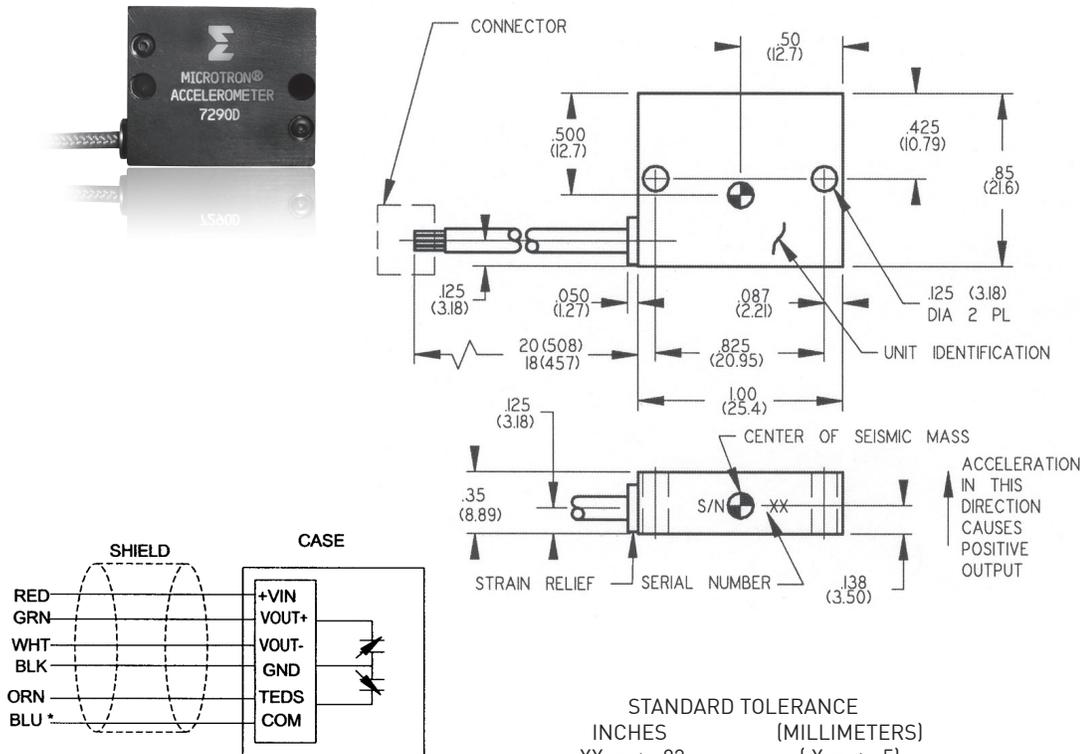


Variable capacitance accelerometer

Model 7290D



* No connection used for factory programming

The Endevco model 7290D accelerometer is designed to provide very high thermal stability and global accuracy as is typically required for flight test and similarly challenging test environments.

The accelerometer utilizes a patented variable capacitance sensing element (patents 4,574,327; 4,609,968; and 4,999,735). Gas damping and internal overrange stops enable the anisotropically etched silicon-sensing element to withstand high shock and acceleration loads.

Included in each accelerometer is a custom signal conditioner enabling the device to operate with a nominal excitation of 8.0 Vdc to 30.0 Vdc and provides a high level, low impedance output. The ± 2.25 volt differential output (single-ended output optional) is DC coupled at a DC bias of approximately 2.5 V. In order to maintain stringent thermal characteristics and high accuracy, a custom ASIC provides factory programmable temperature compensation. All compensation and adjustments are incorporated within the accelerometer and no post-processing is required. The compensation is accomplished via a five point linear fit algorithm for both Thermal Sensitivity Shift and Thermal Zero Shift. Each 7290D includes a Transducer Electronic Data Sheet (TEDS) conforming to IEEE 1451.4. The TEDS stores the serial number and calibration information.

Key features

- DC response
- 2 to 100 g full scale
- 2.5% total dynamic accuracy
- Electronic compensation
- Gas damping
- Up to 10 000 g shock survivability
- TEDS

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Model 7290D

Specifications cont

Calibration

Sensitivity	Measured at 1g and 5 Hz for -2 Measured at 10g and 100 Hz for -10, -30, -50, and -100
Frequency response	Measured at 1g, 1 to 100 Hz for -2 Measured at 10g, 20 to 10 kHz for -10, -30, -50, and -100
Zero measurand output	Measured at room temperature
Transverse sensitivity	Measured at 1 g

Accessories

Product	Description	7290D
EHW265	(2) flat washers, size 4	Included
EH517	(2) 4-40 x 1/2 inch cap screws	Included
EHM464	(1) wrench, hex key	Included
7990	Triax mounting block	Optional

Notes

1. See calibration data supplied for details.
2. Additional compensation process required for higher g ranges.
3. Total dynamic accuracy is the root sum squared of thermal sensitivity shift, non-linearity and hysteresis, and transverse sensitivity.
4. At 100 Gauss, 60 Hz.
5. Maintain high levels of precision and accuracy using Endeveco's factory calibration services. Call Endeveco'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.

Contact

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