sensor & calibration tips

Greetings!

Welcome to issue #13-

If you are new to our newsletter, please enjoy this short communication, share it with a colleague and have a look at the archive links below where you'll find all the back issues with their wealth of information. We're glad to have you on board!

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Tip of the Month

Cable connection

As simple as it may sound, always remember to turn the floating clamp on an accelerometer cable connector rather than turning the sensor to screw on the cable. While it might feel more comfortable spinning the larger sensor and holding the fixed cable end, this causes the sensor connector to rotate about the cable signal pin which can shear off fragments of the signal pin risking a short circuit across to the connector ground.

Quick Links

NCSL August 3-7, Orlando, FL
IMEKO
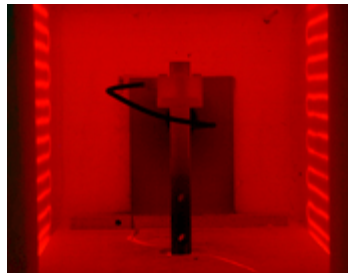NIST
PTB

NIST uncertainty guideline
Wiki on uncertainty
Wiki on ESS

The Modal Shop website
PCB Piezotronics website

Newsletter Archive

sensor & cal tips #10 - Facts about Triax; Uncertainty Redux

sensor & cal tips #11 - Mechanical Shock Accelerometer; More Uncertainty Contributors

Accelerometer considerations for ESS, HALT & HASS

Environmental Stress Screening (ESS), Highly Accelerated Life Testing (HALT) and Highly Accelerated Stress Screening (HASS) each involve long duration cycling in terms of vibration, often accompanied by cycled temperatures and/or pressures. These extremes of vibration, temperature and/or pressure, which are physically taxing and are intended to prove, degrade or terminate the functioning of the product or structure under test, can be just as taxing on the monitor accelerometers providing feedback to the vibration controller...

Click to read more about ESS accelerometer considerations
(http://www.modalshop.com/test_calibration.asp?ID=223)

Relative motion in calibration

In the back to back calibration method, the known sensitivity of the reference accelerometer combined with its measured output is used to determine the acceleration level of the shaker. This information combined with the measured output of the Sensor-Under-Test (SUT) is used to determine the SUT sensitivity thus completing the calibration. The obvious, yet sometimes overlooked assumption in this method is that both sensors are subjected to the same acceleration input, bringing up the topic of this month's column...
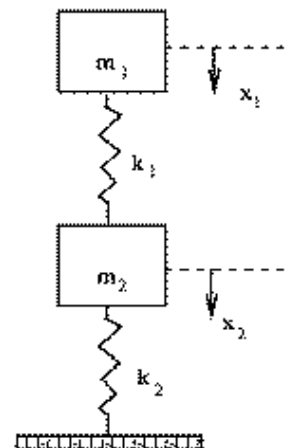
Click to read more about relative motion
(http://www.modalshop.com/test_calibration.asp?ID=224)

We appreciate your interest and are glad to be providing you regular information to help with your dynamic testing and calibration needs. If you have any questions you would like answered or have a topic you would like to see covered, please contact us and we'll be glad to help out.

Sincerely,

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Forward email