Greetings!

Welcome to Issue #68

Welcome to the May edition of "Dynamic Sensors & Calibration Tips." Last week, we observed World Metrology Day, signed into effect by seventeen representatives on May 20, 1875, at the Meter Convention. This set the framework for global collaboration in the science of measurement and its industrial, commercial and societal applications. The Modal Shop and the PCB Group of companies are proud to continue developing and supporting the metrology framework of dynamic sensing critical science, technology and commerce of virtually every field touched by mechanical design.

Join Our Mailing List!

View our profile on LinkedIn

Follow us on twitter

Like us on Facebook

Tip of the Month: Calibrating Proximity Probes

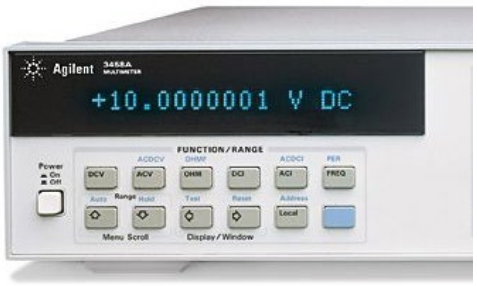
When mounting a proximity probe, one must know the specified case thread, not the tip diameter. The tip diameter is the number specified in the model number.

Common case sizes are 1/4 inch, 3/8 inch, M8 and M10.

Technical Exchanges

Sensors Expo - Rosemont, IL
June 4-6, 2013
IRIS - Novi, MI
June 25, 2013
NCSLi - Nashville, TN
July 14-18, 2013
Dynamic Sensors & Calibration Seminar - Nashville, TN
July 19, 2013

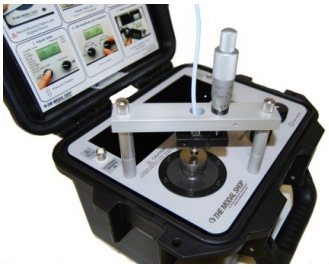
How Low Can Your Digital Volt Meter (DVM) Go?



Recently, we have had a few follow-on reader questions regarding low frequency vibration calibration. The questions mostly stem from the misconception that traditional digital volt meters cannot measure accurately below 20 Hz. While this is true for inexpensive, entry-level digital volt meters, there are a number of other models which will work quite well in the low frequency range.

Click to read full article
modalshop.com/calibration.asp?ID=831

Non-Contact Displacement Sensor Calibration



Non-contact displacement sensors, also known as proximity probes, eddy current probes or simply displacement probes, can be checked for accuracy, linearity and frequency response. With a proximity probe adaptor fixture, some portable vibration calibrators can be adapted for a quick and easy calibration. The following excerpt details the procedure for performing linearity and frequency response checks on a non-contact displacement sensor.

Quick Links

PTB
NIST
ISO TC 108 - Mechanical vibration, shock and condition monitoring
ISO TC 108/SC 3 - Use and calibration of vibration and shock measuring instruments
ISO TC 108/SC 6 - Vibration and shock generating systems
SAVE (Formerly SAVIAC)
Vibration Institute
Equipment Reliability Institute (ERI)
TMS Video Vault
Learn More Calibration

Previous Newsletters

Dynamic Sensor & Calibration Tips #67 -
NIST to Reaffirm Vibration Calibration; Low Frequency Calibration Needs Support Standard ISO 8041:2005

Dynamic Sensor & Calibration Tips #66 -
Does a Manufacturer's Nominal Spec Matter?; Technology Fundamentals of Microphone Types

Select Newsletter Articles by Topic

Function and Structure of Accelerometers

Similarities Between Charge and ICP Operation

Selecting Accelerometers for Mechanical Shock

Master List of Topics (T.O.C.)

PCB Group Companies

The Modal Shop Systems & Service Website
PCB Piezotronics Sensor Website
IMI Monitoring Website
Larson Davis Acoustics Website
PCB Load & Torque Website
SimuTech FEA Website

Click to read full article
modalshop.com/calibration.asp?ID=832

Blast From The Past: Accelerometer Application Focus On Seismic Sensors

As you may remember from your studies (or maybe you read the first newsletter in this series), ideal sensors provide straight line performance. That is to say, they treat amplitudes proportionally (straight line linearity), frequencies of interest the same (flat amplitude frequency response), and do not appreciably delay the signal (flat phase frequency response). Hence, the frequency response output plot from an accelerometer and on a calibration system should be a flat line. In the real world, however, things are not perfect...

Click to read full article
modalshop.com/calibration.asp?ID=212

Thanks for joining us for another issue of "Dynamic Sensors & Calibration Tips." As always, please, speak up and let us know what you like. We appreciate all feedback: positive, critical or otherwise. Take care!

Sincerely,

Michael J. Lally
The Modal Shop
A PCB Group Company
mike.lally@modalshop.com