

New VPG Video Highlights Accuracy and Stability of Precision Resistors in Strain Gage Calibration

Vishay Precision Group, Inc.

Malvern, PA — [Vishay Precision Group, Inc.](#) [1] [[NYSE: VPG](#) [2]] has announced that its Vishay Foil Resistors brand (VFR) has released a new video that demonstrates the shunt calibration of strain gages using Bulk Metal Foil resistors. Providing long-term accuracy and stability regardless of the operating environment, foil resistors provide a cost-effective and convenient alternative to using certified weight standards for calibration.

Link to video: <http://www.vishaypg.com/foil-resistors/videos/?video=51> [3]

Used extensively in structural testing and monitoring applications, strain gages are fundamental sensing devices that function as the building blocks in transducers, including pressure, load, and torque transducers. For calibration, it is especially useful to utilize shunt resistors when the location of the strain gage beam makes it impractical or extremely difficult to periodically check the accuracy of the bridge circuit using a weight standard.

To illustrate how strain gage measurement systems can be calibrated electronically using VFR Bulk Metal Foil precision resistor shunts, the video introduced today employs a demonstration setup utilizing a half bridge connected to a Micro-Measurements 350 Ω /350 Ω strain gage beam.

To detect any change in resistance when under load, the bridge is deflected by a precisely known amount using a VFR precision resistor in parallel with one side of the strain gage. The amount to be deflected corresponds to the deflection caused by a specific weight standard and is calculated using the well-known parallel resistance formula: "product over the difference."

VFR Bulk Metal Foil precision resistors are the perfect solution for shunt calibration because they are readily available with non-standard values in any order quantity. With any conceivable ohmic value to six digits available with tight tolerances, a foil resistor of the exact value calculated for the equivalent deflection can be used to accurately detect any changes in the strain gage bridge circuit.

Furthermore, VFR foil resistors offer extremely low TCR of less than 1 ppm/ $^{\circ}$ C with long-term stability of a couple of ppm per year, ensuring very accurate shunt calibration for years to come.

For more information visit www.vishayfoilresistors.com [1].

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<http://www.wirelessdesignmag.com/news/2013/09/new-vpg-video-highlights-accuracy-and-stability-precision-resistors-strain-gage-calibration>

Links:

[1] <http://www.vishayfoilresistors.com>

[2] <http://www.google.com/finance?q=NYSE%3A+VPG&ei=ZD5CUuD0Hcy0qAHYPQ>

[3] <http://www.vishaypg.com/foil-resistors/videos/?video=51>