

Tensitron Uses Micro-Measurements Strain Gage Sensors to Maximize Accuracy of Tension Measurements



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Advanced Sensors strain gages from Micro-Measurements, a brand of Vishay Precision Group (VPG), are being used by Tensitron in its new ACX-1 Digital Aircraft Cable Tension Meter to provide a high degree of accuracy while preserving battery life.

Company/Institute: Tensitron, Inc.

Industry/Application Area: Aerospace, textile, shipping

Products Used:

- [N5K-13-S5054K-50C/DG/E3](#) Advanced Sensors 5 k Ω strain gage
- [M-Bond 610 Adhesive](#)
- [CEG-25C TERMINALS](#)
- [M-Coat D Protective Coating](#)

The Challenge

From aircraft control cables to thread for the textile industry, proper tension is key to product function, quality, and safety. Devising a simple, reliable, and portable tool for checking tension on this wide range of items is no small challenge. The device must be stable, reliable, simple to use, and accurate. It must also be battery powered for use in every situation, including confined spaces.

The Solution

Tensitron introduced the fifth generation of its digital aircraft cable tension meters, using the latest technology from Micro-Measurements, to provide unsurpassed accuracy and resolution for numerous material sizes and tension ranges. The ACX-1 Digital Aircraft Cable Tension Meter is a portable, battery-powered device that meets the exacting requirements of this application. At the heart of these tension meters are 5 k Ω Advanced Sensors strain gages. These high-accuracy, high-resistance devices allow the tension meters to perform with a high degree of accuracy, while prolonging battery life.



The User Explains

Micro-Measurements' Advanced Sensors high-resistance gages are designed to reduce power consumption by reducing current through the bridge circuit which extends battery life, allowing the end user to make a large number of measurements on one battery charge. The high resistance of the gages results in reduced current flow through the bridge circuit to extend battery life, while the improved resistance matching, linearity, and stability provide unmatched repeatability and accuracy. Advanced Sensors technology provides extremely accurate, repeatable, and stable measurements, making our products the gold standard in the industry.



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Acknowledgement:

Micro-Measurements thanks Mike Brokman for this article and the permission to share it with our customers and colleagues.

Founded in 1935, Tensitron manufactures and designs digital, mechanical, and electronic tension measuring instrumentation. Its products are used in many different industries and companies for a variety of quality control purposes. Tensitron is recognized as the leading provider of superior precision tension meters and tension measuring instrumentation used worldwide in manufacturing and test facilities.

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