Wilcoxon Sensing Technologies Introduces Ultra-low Power Embedded Accelerometer

October 12, 2023 — Frederick, MD — Wilcoxon Sensing Technologies, an Amphenol company, has released the LVEP050-TO5 ultra-low power accelerometer designed to be embedded into wireless vibration sensors and other battery-powered vibration measurement applications. The compact sensor can also be embedded into motors, pumps, fans, and other production assets, to incorporate vibration monitoring built-in self-test (BIST) capabilities into common wearable machine components.

The LVEP050-TO5 has an ultra-low power consumption of 180 μ W, requiring a voltage source of 3.0 – 5.5 VDC, with a current draw of 60 μ A when taking measurements and no current draw in power down mode. The power-up and settling time is typically 350 μ s. For wireless sensing, battery-powered, and energy harvesting applications, the battery consumption is less than 5% of a standard industrial accelerometer and can take 4-10 times as many readings as other low-power piezoelectric accelerometers.

The TO-5 package is commonly used in embedded applications for its simplicity. The sensor is lightweight to preserve usable measurement bandwidth and hermetically sealed to ensure stable measurements over a long operational lifetime. The TO-5 housing provides rigid vibration coupling from the canister base into the vibration pellet, which is essential to effective machinery health monitoring in both wireless vibration monitoring and BIST applications. Because of the small size, the sensor is suitable for both single-axis or triaxial designs.

The LVEP050-TO5 was designed with the resolution (50 mV/g), frequency response (1 - 12,500 Hz, \pm 3 dB), and acceleration range (25 g) matching traditional industrial accelerometers. A 100 mV/g version of the sensor is also available, the LVEP100-TO5.

To learn more about the LVEP050-TO5 ultra-low power embedded accelerometer or to request a sample for evaluation, go to https://wilcoxon.com/newproducts/lvep050-to5-ultra-low-power-embedded-accelerometers/ or contact Wilcoxon Sensing Technologies at info@wilcoxon.com or +1 301 330 8811.

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