Vishay Intertechnology M2M Wireless Position Data Transfer Module Provides Remote Sensor Monitoring for Industrial Applications

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LoRa-Based Node Operates in License-Free 2.4 GHz ISM Band, Enables Communication Up to 2 km With Low Power Consumption for Long Battery Life

MALVERN, Pa., Nov. 24, 2026 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced a new LoRa-based, machine to machine (M2M) wireless position data transfer module designed to enable remote monitoring of analog precision sensors in industrial applications. Operating worldwide in the 2.4 GHz ISM band, the Vishay Sfernice WLMO wireless node supports long range communication while maintaining low power consumption for battery-powered operation.

The device released today powers, remotely acquires, and wirelessly transmits data from up to two analog position sensors to users' receiver / gateways for processing within the host system. It operates using a proprietary protocol layer over LoRa modulation, which must be implemented within customers' system and receiver / gateways. The node features a 12-bit internal ADC and sealed M8x1 three-pole connectors for reliable sensor interfacing. Supporting both potentiometric and contactless technologies, the device delivers actuator position data to communication infrastructures, serving as a key link in the end to end chain toward cloud-based monitoring, for enhanced operational visibility and informed decision making.

Operating on a private LoRa network, the WLMO does not require a radio license and supports communication up to 2 km in open-field environments. Optimized bandwidth utilization, with duty cycles up to 10 %, enables efficient, reliable communication, while high receiver sensitivity of -140 dBm delivers robust wireless performance. Low transmit power of 7.08 mW (8.5 dBm) supports autonomous battery-powered operation for up to two years on a single battery set. Battery level monitoring simplifies maintenance planning, while a sealed mechanical switch provides secure activation and pairing during commissioning.

The WLMO's radio architecture supports five selectable frequency bands, with independent transmission and reception channels featuring ± 200 kHz bandwidth each. Combined with six configurable spreading factor levels, this provides fine-grained tuning capabilities, ensuring modular integration within existing ecosystems of nodes, receiver / gateways, and sensors. The device also supports bidirectional communication for reliable data exchange within LoRa networks.

The node is ideal for industrial automation and infrastructure applications requiring IoT sensor integration for actuators, position data acquisition in low frequency systems, and predictive or condition-based maintenance in Industry 4.0 and smart factory environments. Additional uses include energy metering, precision farming, and agritech. In these applications, the WLMO simplifies deployment by eliminating the need for wiring, enhances safety through position verification, and reduces operating expenses through remote configuration via receiver / gateways.

Measuring 89 mm x 55.5 mm x 21.6 mm, the RoHS-compliant module is a compact and rugged outdoor-ready device. It features an IP67-rated sealed enclosure and UV-resistant housing compliant with ISO 4892-2 for reliable long term operation in harsh environments.

Samples and production quantities of the WLMO are available now, with lead times of 14 weeks.

Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech.**® Vishay Intertechnology, Inc. is a Fortune 1000 Company listed on the NYSE (VSH). More on Vishay at www.Vishay.com.

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Links to product datasheets:
http://www.vishay.com/ppg?50089 (WLMO)

Link to product photo:
https://www.flickr.com/photos/vishay/albums/72177720336832756

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