Vishay Intertechnology 45 mm Inductive Position Sensor Encoder Enables Reliable Operation Near Electric Motors

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Single-Turn Device Combines 16-Bit Resolution, Repeatability of ≥ 14 Bits, and Rotation Speeds to 10 000 rpm in a Compact, Lightweight Design

MALVERN, Pa., Sept. 08, 2026 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced a new medium precision position sensor built on inductive technology for industrial applications. Compared to solutions based on magnetic technology, the Vishay MCB RAIK045I MP absolute inductive kit encoder is immune to external magnetic fields, allowing it to be used close to electric motors. Designed as a cost-effective alternative to higher performance encoder solutions, the device combines 16-bit resolution, repeatability of ≥ 14 bits, and rotation speeds up to 10 000 rpm in a compact, lightweight design.

The position sensor released today is ideal for robotics, motor drives, and other demanding industrial applications requiring reliable and accurate positioning — including conveyor belt control and automated guided vehicles — as well as off-road vehicles and agricultural equipment. In addition, the RAIK045I MP will provide pitch and yaw position control in windmills; wheel position control in cleaning robots; and actuator position control in solar panels, hospital beds and surgical tables, drones, and missile launchers.

For these applications, the RAIK045I MP delivers absolute accuracy of ≥ 10 bits (0.35°) while maintaining reliable operation in the presence of external magnetic fields, which can reduce the accuracy of traditional magnetic encoders. The device's inductive technology enables consistent actuator performance in these environments while also providing robustness against moisture, airborne pollution, vibration, mechanical shock, and changes in temperature.

With its high resolution and repeatability, the encoder enables servo-controlled systems to accurately return to previously defined positions, making repeatability a key parameter for precision motion control. The single-turn device combines a compact 45 mm diameter with a thickness of only 6.6 mm and a lightweight construction of approximately 13 g, including a rotor weighing just 4.3 g for very low inertia. The encoder's thin profile and light weight simplify mechanical integration, save space, and reduce system inertia.

Offering an off-axis design for hollow shaft mounting, the position sensor features a useful electrical angle of 360° and a wide temperature range of -40 °C to +125 °C. Heat generated by electric motors can reduce the accuracy of magnetic encoders. With its wide operating temperature range, the RAIK045I MP maintains accurate operation even when installed close to electric motors. The RoHS-compliant device features SPI output, with Sin / Cos output available on request.

Samples and production quantities of the RAIK045I MP are available now, with lead times of 16 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?32647 (RAIK045I MP)

Link to product photo:
https://www.flickr.com/photos/vishay/albums/72177720335434498

For more information please contact:
Vishay Intertechnology
Peter Henrici, +1 408 567-8400
peter.henrici@vishay.com
or
Redpines
Bob Decker, +1 415 409-0233
bob.decker@redpinesgroup.com