# Slimmer and Lighter than Magnetic-Based Encoders, With Higher Rotational Speed and Lower Latency Time, New RAIK060 60 mm Inductive Position Sensor Delivers High Precision for Harsh Industrial and AMS Applications

## Product Benefits:

- Insensitive to magnetic environments
- Slim design with a 5 mm thickness
- Light weight (15.5 g)
- High rotational speeds up to 10 000 rpm
- Low latency time of ≤ 5 µs
- High accuracy > 13 bits, resolution of 18 bits, and repeatability ≥ 17 bits
- Maintains robustness against external magnetic fields, moisture, airborne pollution, vibration, mechanical shock, and changes in temperature
- Off-axis design for hollow shaft mounting
- Wide operating temperature range of -40 °C to +105 °C
- Available with multi-turn variants and SPI, SSI or Biss-C output signals
- Embedded self-calibration
- Built-in self-monitoring

## Market Applications:

- Robotics, motor drives, and other demanding industrial applications requiring accurate positioning, including conveyor belt control and automated guided vehicles
- Gimbal functionality for missile launchers and guidance systems
- Pitch and yaw position control in windmills
- Wheel position control in cleaning robots
- Actuator position control in telecom antennas and medical x-ray machines and hospital beds
- Design variants can be dedicated to actuator position control for drones and commercial, regional, and eVTOL aircraft

## The News:

Vishay Intertechnology introduces a new high precision position sensor built on inductive technology for industrial and AMS applications. Compared to solutions based on magnetic technology, the Vishay MCB RAIK060 absolute inductive kit encoder offers a smaller thickness of 5 mm, lighter weight of 15.5 g, higher rotational speeds to 10 000 rpm, and a lower latency time of ≤ 5 µs.

- The RAIK060 isn’t sensitive to magnetic environments, allowing it to be used close to electrical motors
- Simplifying set-up, the position sensor’s embedded self-calibration eliminates the need for external software
- The device’s tolerance on airgaps up to ± 0.2 mm and inclusion of LED status indicators in its frame allow for easier mounting and assembly
- For ease of use, the RAIK060 memorizes the last position before power-off, while its built-in self-monitoring provides improved safety

## The Key Specifications:

- Voltage power supply: 5 V (± 0.25 V)
- Accuracy at 25 °C: > 13 bits
- Resolution: 18 bits
- Repeatability: ≥ 17 bits
- Latency time: ≤ 5 µs
- Useful electrical angle: 360°
- Temperature range: −40 °C to +105 °C

**Availability:**
Samples and production quantities of the RAIK060 are available now, with lead times of 16 weeks.

### Contact Information:

**THE AMERICAS**
Paulo Adabo
paulo.adabo@vishay.com

**EUROPE**
Emmanuel Lemelle
emmanuel.lemelle@vishay.com

**ASIA/PACIFIC**
Vincent Ong
vincent.ong@vishay.com