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# DID YOU KNOW?

## RAIK / RAIE

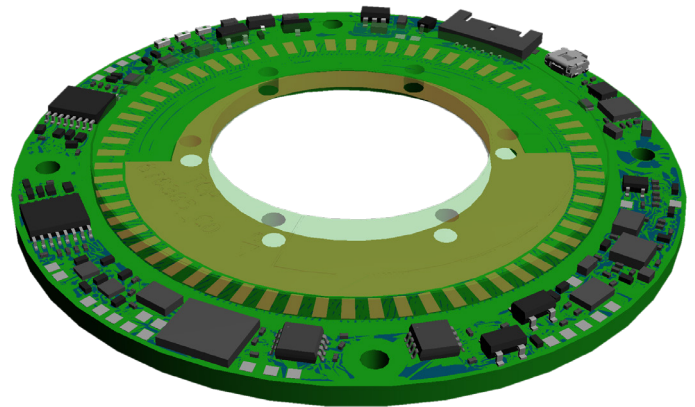
### High Resolution and High Accuracy for Multiple Applications

The purpose of an inductive encoder is to convert a mechanical angular position into a digital signal with very high precision. For that, Vishay MCB developed highly innovative technologies to address a large performance spectrum.

In both cases, the principle remains the same.

The rotor is composed of a mixing of several inductive tracks. The electrical fields are read by the inductive cells mounted on the stator, which allows the absolute position of the rotor to be determined (Fig 1).

The major advantage is the entire non-sensitivity of this design to hostile environments (electromagnetic fields, dust and liquids, high temperature, etc.) especially in drive control applications where electrical motors are used.

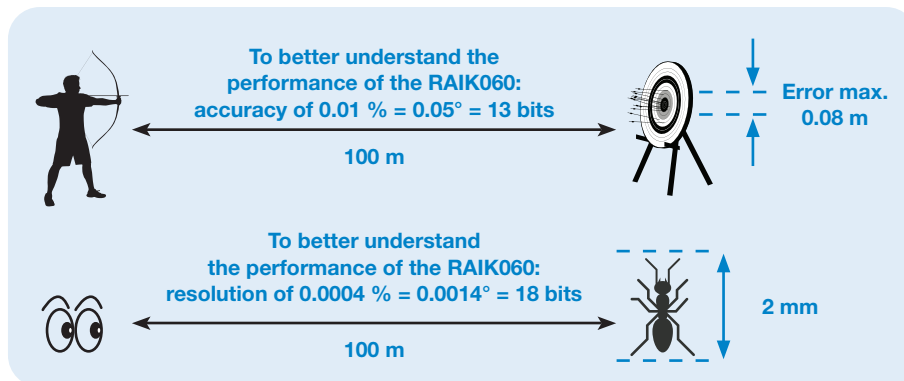


(Fig 1).

The resolution is a high real resolution. In addition, the repeatability of  $\geq 17$  bits is excellent for a RAIK060 and  $\geq 14$  bits for a RAIK045I MP!

This principle is patented.

Fig. 2 demonstrates the kind of accuracy and resolution that the technology can reach.



(Fig 2).

### Applications:

- Robotic devices: drive control for industrial robots, collaborative robots, and automated guided vehicles
- Industrial market: industrial machine automation, machine tools, and valves
- Off-road: lawnmower motor control
- Military devices: gimball and guidance functions in missiles, optronic devices, and missiles and launching equipment
- Medical devices: diagnosis and imaging / scanner devices, and medical beds / armchair actuators
- Aeronautic: dedicated design for side stick units, incidence probes (AOA), actuators for commercial airplanes, eVTOL, drones, and regional aircrafts