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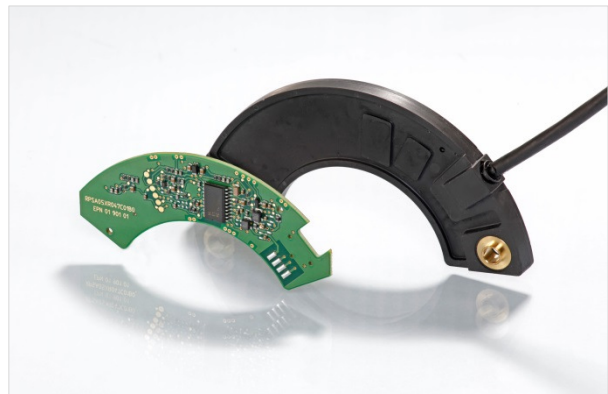
## **Eddy Current Rotor Position Sensor Helps to Save Weight and Assembly Effort on EVs**

### **DESCRIPTION:**

SUMIDA CORPORATION has developed an Eddy-Current Rotor Position Sensor (RPS) for the growing hybrid electric vehicle market.

Powerful, smooth and highly efficient operation of electric and hybrid vehicles depends on precise control of the traction motor.

For this purpose, the RPS delivers accurate signals to the control unit, representing the angular position of the rotor in synchronous motors at all speeds.



*RPS module and PCB assembly inside*

### **KEY FEATURES:**

Compared with existing ferromagnetic metal based sensors, the RPS sensor module offers significantly lighter weight, especially at larger rotor diameters. The utilization of eddy-current with absence of ferromagnetic material results in superb immunity to low-frequency magnetic fields and outstanding high speed capability.

Due to its highly flexible layout, the sensor can be configured to almost every motor concept and number of poles in the electric machine.

Thanks to its arc shape and wide assembly tolerances, the sensor module can be ideally mounted to the motor from outside by inserting it through an aperture in the motor housing, thus eliminating costly wire harness routing inside the motor.

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Planar coils using multilayer PCB technology contribute to the robustness of the sensor module in harsh environment.

**MARKET & APPLICATION:**

After the start of production with Daimler's S400 Hybrid sedan in 2009, the RPS was adopted to Europe's first mass production EVs of car maker Renault since 2011. Moreover the RPS was successfully introduced to the recently launched and well noticed EVs of the leading German car maker Volkswagen.

Currently Sumida is working on further RPS applications for upcoming hybrid passenger cars and commercial vehicles.