

**FOR IMMEDIATE RELEASE**

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**Tyco Electronics Presents Sensor for Detection of Neutral Position  
on Manual Transmissions  
Start-Stop-Application (Mild Hybrid)**

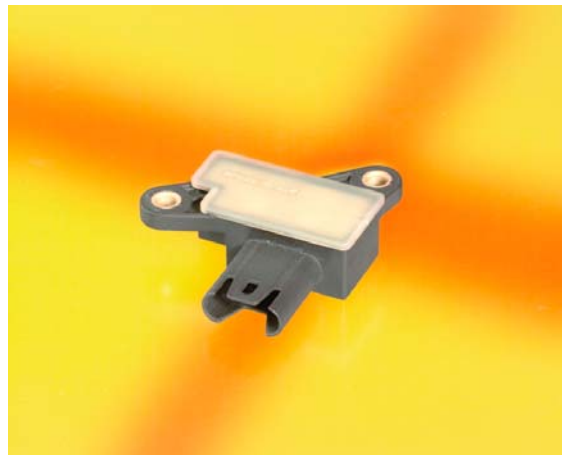
New legal requirements for fuel and CO<sub>2</sub> reduction also require appropriate optimizations in the powertrain. Various automobile manufacturers have developed and implemented Start-Stop systems for the market. Due to system requirements, it is necessary to detect the transmission neutral position as one of the controlling variables in such systems.

In collaboration with a leading automobile manufacturer and two gearbox suppliers, Tyco Electronics has developed a contact-less sensor for detecting the neutral position for various manual transmissions. This sensor is based on the Tyco Electronics' PLCD sensor technology (Permanentmagnetic-Linear-Contactless-Displacement). A permanent magnet, located at the shifting shaft, serves as the target object, whose position will reflect the neutral zone. The PLCD sensor is mounted on the outside of the gearbox and detects the neutral position of the transmission. Due to the functional principle of a non-contact system, mechanical wear is completely avoided and the system requirements of measurement performance, durability and reliability can be fulfilled.

The PLCD sensor technology will not only be used as neutral detection in manual transmissions. Due to the robustness, the possibility of large scale of integration and the high linear performance of PLCD, this technology is preferred for new generation transmission like automatic manual gearboxes (AMT) or dual clutch / power shift transmissions.

Information about Tyco Electronics – Automotive Sensors:

As a specialist for non-contact sensors (Position, Travel, Angle, Speed, Temperature) Tyco Electronics offers innovative



technologies and product solutions for automotive applications, as for example:

- Transmission (Neutral-, Drive Mode-, Gear/Shift position, Speed Sensors)
- Clutch (Position Sensors for Master-, Slave- and Concentric Slave Cylinder, Clutch Pedal)
- Seat (Seat Track Position, Seat-belt buckle)
- Steering (Torque, Steering- and Motor Angle Sensor, Rear Axle Steering Cylinder)
- Brake (Brake Light Switch, Wheel Speed Sensor, Brake Simulation Module or Brake Master Cylinder)
- Chassis (Chassis Level, Convertible Roofs, E-gas Modules)
- Engine and Exhaust Management (Throttle, Air Control, Turbocharger, EGR, Cam- and Crankshaft)
- Convenience Applications (Door Lock Units, Convertible Sun Roof)
- Fuel Level Management (Fuel Level Sensor, Filter Water Detection, Fuel Pump Control)

#### About Tyco Electronics

Tyco Electronics Ltd. is a leading global provider of engineered electronic components, network solutions, undersea telecommunication systems and wireless systems, with 2007 sales of US\$13.0 billion to customers in more than 150 countries. We design, manufacture and market products for customers in industries from automotive, appliance and aerospace, defense and marine to telecommunications, computers and consumer electronics. With over 7,000 engineers and worldwide manufacturing, sales and customer service capabilities, Tyco Electronics' commitment is our customers' advantage. More information on Tyco Electronics can be found at [www.tycoelectronics.com](http://www.tycoelectronics.com).

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