









INTRODUCTION

In the automotive industry, development time is a key factor for successful market positioning. TE Connectivity's answer is a platform strategy for non-contact travel, angle and speed sensors.

Standardized designs and production processes offer short-term availability of fully functional sensors for system testing and low-volume production. Depending on the field of application, different technologies will be used.

The first platform is the PLCD travel sensor for measurement ranges up to 55mm. Thanks to the system's robustness, the possibility of large-scale integration and the high linear performance of PLCD in high-vibration and high-temperature applications, this technology is preferred for harsh environment systems (e.g. transmission, clutch).

The second platform TE Connectivity can offer is the hall technology based travel and angular sensor for measurement ranges up to 40mm or angle up to 360°. Travel and angle measurement can be realized within one sensor package. The hall technology used is a 2D/3D measurement principle that results in a significant measurement performance increase compared to existing hall sensors.

This sensor exhibits high performance related to linearity error and temperature drift. It also enables the opportunity to incorporate 12V board net supply, safety level B according ISO 26262 and up to three outputs, which can operate as programmable linear or switch outputs.

Compared to inductive systems, TE Connectivity's hall sensor platform needs a minimum of space and makes more cost-effective production possible. Our platform sensors are all suitable for IP class applications of 69K, which makes them suitable for harsh automotive environments. At the same time, the hall platform sensors can be programmed to suit customer specifications regarding measurement range and electrical interface (PWM or analog).

Our third platform is the speed sensor for gear speed measurement. This back-biased hall sensor is triggered by ferromagnetic gear or tone wheel. Thanks to its compact and robust packaging with integrated sealed connector interface (IP69K), it can be used for all kinds of application (e.g. transmission). The sensor also provides diagnostic functionality, thanks to two-wire technology, and is validated for a temperature range from -40°C to +150°C.

Sensor Technologies for the Automotive Industry Platform Sensors - Travel Sensors

PLCD-15M



Industry
Application

Functions
Technology

Features

Automotive

Transmission, Chassis, Engine Measuring travel or angle position

Active PLCD (moving magnet)

- Measurement range 5-18mm
- · Highly insensitive to vibration
- Temperature up to 150°C
- Redundancy possible
- · Analog or PWM interface
- Supply 5V (optional 12V)
- 4-way MQS sealed contact
- Wide range of magnet design

PLCD-25M



Industry

Application

Functions

Technology Features Automotive

Transmission, Brake, Clutch, Steering, Engine

Measuring travel or angle position

ology Active PLCD (moving magnet)

- Measurement range 15-28mm
- Highly insensitive to vibration
- Temperature up to 150°C
- Redundancy possible
- Analog or PWM interface
- Supply 5V (optional 12V)
- 4-way MQS sealed contact
- Wide range of magnet design

PLCD-50M



Industry

Application

Functions Technology

Features

Automotive

Transmission, Brake, Clutch, Steering, Engine

Measuring travel or angle position

Active PLCD (moving magnet)

- Measurement range 25-53mm
- Highly insensitive to vibration
- Temperature up to 150°C
- Redundancy possible
- Analog or PWM interface
- Supply 5V (optional 12V)
- 4-way MQS sealed contact
- Wide range of magnet design

Hall Sensor R360MC2



Industry

Automotive

Industrial & Commercial Transportation

Application Transmission, Chassis, Engine, Steering,

Clutch, Brake

Functions

Technology Features Measuring angle position

Hall (moving magnet)

- Non-contact measurement up to 360°
- Highly insensitive to vibration
- Temperature up to +150°C
- Analog or PWM interface
- Small geometry
- Redundancy possible
- Supply 5V (optional 12V)
- 4-way MCON connector interface