

## Automotive Sensor Products

### Transmission Shifter Position Sensor – Hall



#### General Description

The Transmission shifter position sensor is a Hall Effect based angular position sensor that can be designed to detect specific transmission positions such as P-R-N-D-S.

#### Operation

##### Basic Principle

The Transmission Shifter Position sensor is assembled to a shaft with a defined angle position. When the shaft rotates, the magnet in the sensor rotates simultaneously interacting with the Hall Effect sensor which outputs a voltage proportional to the angle of rotation to match the PRNDS position (Park, Reverse, Neutral, Drive, Sport).

##### Packaging Options

Custom packaging can be provided to meet any need, please contact Littelfuse Engineering for details.

#### Features

- ♦ Magnetically operated position sensor
- ♦ Absolute rotary position sensor
- ♦ Analog and PWM outputs available
- ♦ Programmable angular range – custom option
- ♦ Choice of clockwise or counterclockwise versions available
- ♦ Choice of connectors and terminals

#### Benefits

- ♦ Robust construction makes this sensor well suited to harsh environments
- ♦ Magnetically operated non-contact sensing gives excellent life and reliability
- ♦ Ability to customize output states to customer needs

#### Applications

- ♦ Transmission PRNDS position

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### Functional Characteristics

Parameter			
Type			
Hall Effect Sensor			Programmable
Output			Analog/PWM Duty Cycle
Electrical			
Supply Voltage	Max.		5.2V
	Min.		4.8V
Supply Current	Max.		15mA
Analog Output			
Output Voltage@5VDC	Max.		4.75 V
	Min.		0.25 V
PWM Output			
PWM Output Signal Voltage	Low		≤0.5 V
	High		≥4.5 V
PWM Frequency	Max.		165 Hz
	Min.		135 Hz
Environmental/Mechanical			
Temperature	Operating	Celsius	-40° to +150°
	Storage	Celsius	-40° to +150°
Shock	10ms ½ Sine	Max.	30g
Random Vibration	20 – 2500Hz	Max.	RMS40m/s²

### Littelfuse

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