

Automotive Sensor Products

Transmission Speed Sensor



General Description

The speed sensor detects a gear or target wheel in the transmission and generates an electric digital signal proportional to the speed of rotation. The transmission controls use this information to modify various transmission functions such as shift points and perform diagnostic tests.

Operation

Basic Principle

Hall Effect sensors operate on the change in an external magnetic field which results in a change in the output voltage of the sensor.

Packaging Options

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

Features

- ◆ Operates when target wheel speed (ferrous or magnet encoder) rotates
- ◆ Simple flush and recessed mounting options available
- ◆ Choice of connector and terminals
- ◆ Choice of circuitry for outputs
- ◆ Option to monitor target direction
- ◆ Zero speed detection available

Benefits

- ◆ Robust construction makes this sensor well suited to harsh environments
- ◆ If required, hermetically sealed
- ◆ Magnetically operated non-contact sensing gives excellent life and reliability

Applications

- ◆ Transmission speed and direction

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Functional Characteristics

Parameter			
Type			
Speed and Speed with Direction Sensor			
Ferrous Wheel Detection			
Electrical			
Operating Power Input	Voltage	Min-Max.	4 – 24 V
Max Power Input	Voltage	Max.	26 V
Low State Output	Current	Min-Max.	4-12mA
High State Output	Current	Min-Max.	12-24mA
Operating Signal Range	GPK-PK	Min-Max.	50 - 1500
Operating Air Gap	MM	Min-Max.	0.5 -3.0
Duty Cycle Variation (Direction Sensor)			+/- 10%
Bandwidth	Hz	Max	20kHz
Environmental/Mechanical			
Temperature	Operating	Celsius	-40° to +150°
	Storage	Celsius	-65° to 150°
Shock	11ms ½ Sine	Max.	100g
Vibration	20 – 2000Hz	Max.	30g
Sealing	IP6K7K Standard		Available Up to IP6K9K
Connections Available	Pigtail or Integrated Connector		Molex, Delphi, TE, and many more

Custom electrical and environmental specifications can be designed to meet any need, please contact Littelfuse Engineering for details.

Littelfuse

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