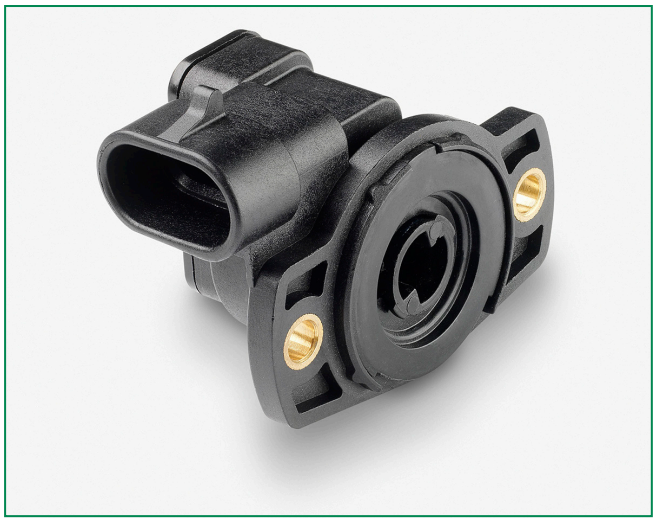
55250 Angular Displacement Sensor

RoHS



Description

The Littelfuse 55250 Series of rotary absolute position sensors provide angular measurement between 0 and 105 degrees with the option of a full 360 degrees of movement. The internal design of the sensor uses non-contact magnetic Hall Effect technology as opposed to more common wiper-based resistive products. This unit is immune to the performance limitations of the wiper-based products that are associated with mechanical wear or contamination.

The 55250's package design commonly finds applications within all types of vehicle and industrial segments. It has been designed to operate in the harsh environments of the inudstrial and commercial vehicle and the sensor has an operating temperature range between -40°C and 125°C. This unit incorporates automotive grade EMI/EMC and reverse polarity protection and mates with a Delphi type sealed connector.

Features

- 105° Angular sensing range
- Absolute rotary position sensor
- Analog output
- Non-contact measuring
- EMC protection
- Integral connector

Benefits

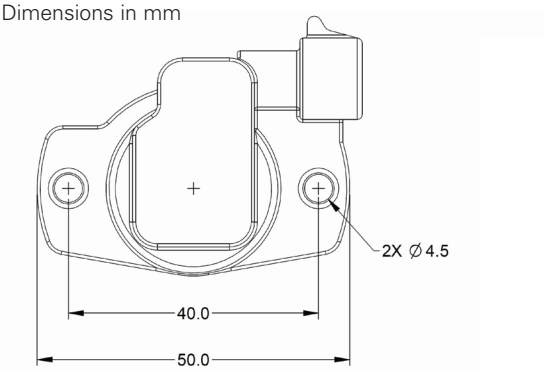
- Long life - no wear components
- High speed
- Unaffected by harsh environments
- Small robust package

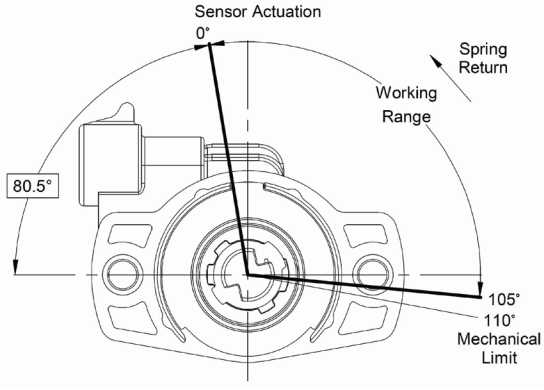
Applications

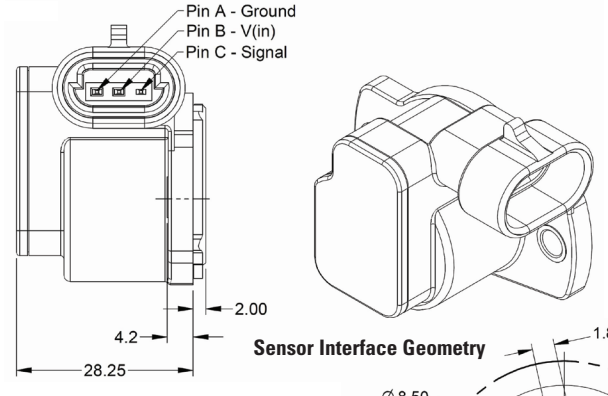
- Pedal position
- Automotive pedal position
- Absolute rotary encoder
- Shaft position
- Lever position
- Float level sensor
- Non-contacting potentiometer

Dimensions

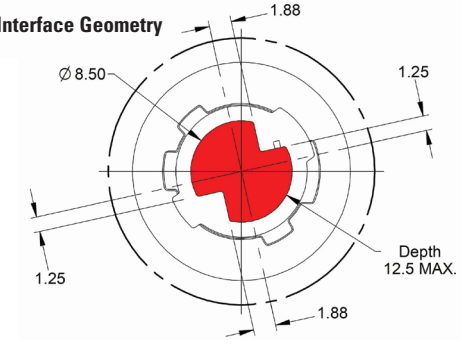
Dimensions in mm







Sensor Interface Geometry



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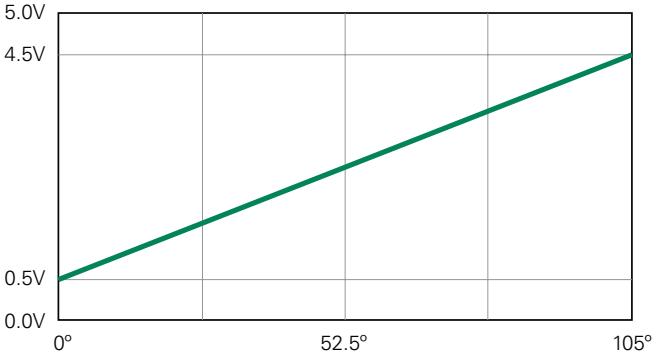
Specifications

Hall Effect Device			Rotational Analog Output
Operating Voltage	Recommended	Vdc	4.5 to 5.5
Over Voltage	Absolute Max [1]	Vdc	20
Reverse Voltage	Absolute Max [1]	Vdc	-10
Supply Current		mA - max.	16
Output Current		mA - max.	-8 to +8
Programmed Output Voltage Range		Vdc	0.5 to 4.5
Programmed Sensing Range		Degrees	105
Resolution		Degrees	0.11
Accuracy		Degrees	±4
Response Time		ms-Max	4
Start-up Time		ms-Max	15
Temperature	Operating	°C	-40 to +125
Mating Connector		Delphi	12162181
Pin Out		Pin A Pin B Pin C	Ground V(in) Signal

Note:
1. This is a stress rating only. Functional operation is not implied for additional load/life information.

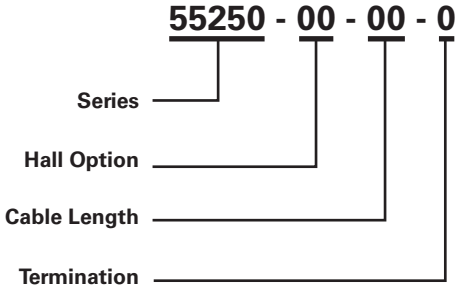
Output Signal



Customization Options

Customized versions available. Contact Littelfuse for details.
- Angular sensing range
- Output type: Analog, PWM or SPI

Part Numbering System



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
Bulk	Bulk	500	N/A	N/A

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