

# 55300 Flat Pack Rotary Hall Sensor

RoHS



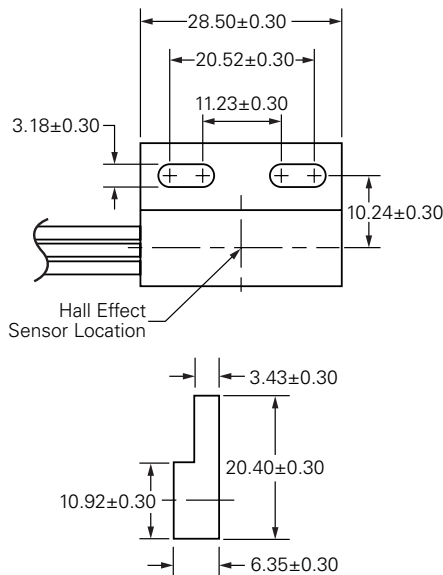
## Description

The Littelfuse 55300 Series of rotary absolute position sensors provide angular measurement between 0 and 360 degrees. This unit is activated by a remote magnet, thus allowing a larger stack up of mechanical tolerances that are not feasible with the integral magnet version 55250. The internal design of the sensor uses non-contact magnetic Hall effect technology with options of analog or PWM output signals. This sensor is immune to the performance limitations of the wiper based products that are associated with mechanical wear or contamination.

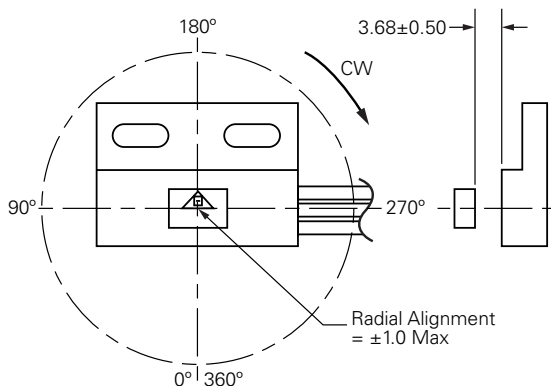
The 55300 package design commonly finds applications within all types of vehicle and industrial segments and designed to operate in the harsh environments of the industrial and commercial vehicle, the sensor has an operating temperature range between -40°C and 105°C. This unit incorporates automotive grade EMI/EMC and reverse battery polarity protection, as well as commercial grade 20 AWG-TXL automotive wire and the option of a Molex type sealed connector.

## Dimensions

Dimensions in mm

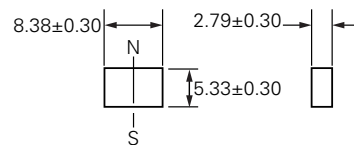


## Actuator Magnet Rotation



## Actuator Magnet

57300-000 (Supplied with Sensor)



## Features

- 360° Angular sensing range
- Absolute rotary position sensing
- Analog output
- Non-contact measuring
- EMC protection

## Benefits

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

## Applications

- Absolute rotary encoding
- Pedal position
- Shaft position
- Lever position
- Float level sensing
- Non-contact potentiometer

# 55300 Flat Pack Rotary Hall Sensor

## Specifications

| Hall Effect Device              |                               |           | Rotational Analog Output |
|---------------------------------|-------------------------------|-----------|--------------------------|
| Operating Voltage               | Recommended                   | Vdc       | 4.5 to 5.5               |
| Over Voltage                    | Absolute Max <sup>1</sup>     | Vdc       | 20                       |
| Reverse Voltage                 | Absolute Max <sup>1</sup>     | 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   | 360                      |
| Resolution                      |                               | Degrees   | 0.11                     |
| Accuracy <sup>2</sup>           |                               | Degrees   | ±4                       |
| Response Time                   |                               | ms-Max    | 4                        |
| Start-up Time                   |                               | ms-Max    | 15                       |
| Temperature                     | Operating                     | °C        | -40 to +105              |
| Actuator Positional Tolerances  | Air Gap <sup>3</sup>          | mm        | 3.68 ±0.50               |
|                                 | Radial Alignment <sup>3</sup> | mm        | ±1.0                     |
| Pin Out                         | Size                          | AWG       | 20                       |
|                                 | Insulation                    | SAE       | J-1128, Type TXL         |
|                                 | Length                        | mm        | 300                      |

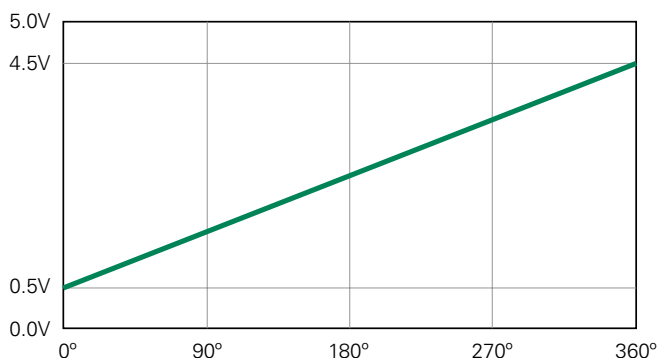
Notes:

1. This is a stress rating only. Functional operation is not implied.

2. When used in conjunction with the supplied 57300-000 actuator under typical conditions. Accuracy is affected by the sensor and actuator alignment, air gap and the presence of external magnetic fields or materials. Consult Littelfuse for details.

3. When used in conjunction with the supplied 57300-000 actuator.

## Output Signal



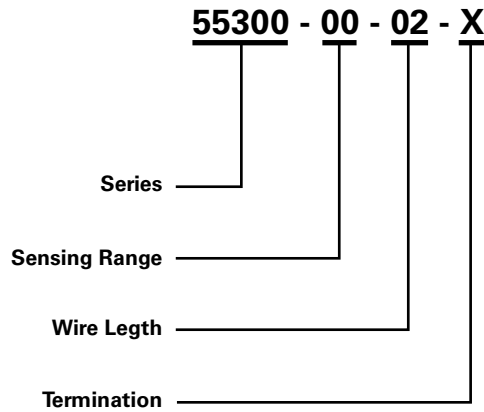
## Customization Options

Customized versions available. Contact Littelfuse for details.

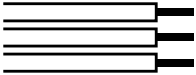

- Angular sensing range
- Output type: Analog, PWM, or SPI
- Connectors and terminals
- Wire type and length
- Magnetic actuators

## 55300 Flat Pack Rotary Hall Sensor

### Part Numbering System



### Termination Options

| Select Option | Description                          |                                                                                     | Color                 | Function                                                       |
|---------------|--------------------------------------|-------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------|
| A             | Stripped Leads                       |  | Black<br>White<br>Red | Ground<br>Signal<br>V (in)                                     |
| C             | Molex Connector MX 150<br>33481-0301 |  | Black<br>White<br>Red | Pin 1: Black/Ground<br>Pin 2: White/Signal<br>Pin 3: Red/V(in) |

### Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity and Packaging Code | Taping Width |
|------------------|-------------------------|----------|-----------------------------|--------------|
| Bulk             | Bulk                    | 500      | N/A                         | N/A          |

**Disclaimer Notice** - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at [www.littelfuse.com/disclaimer-electronics](http://www.littelfuse.com/disclaimer-electronics).

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Littelfuse:

[55320-30-02-A](#) [55320-30-02-C](#)