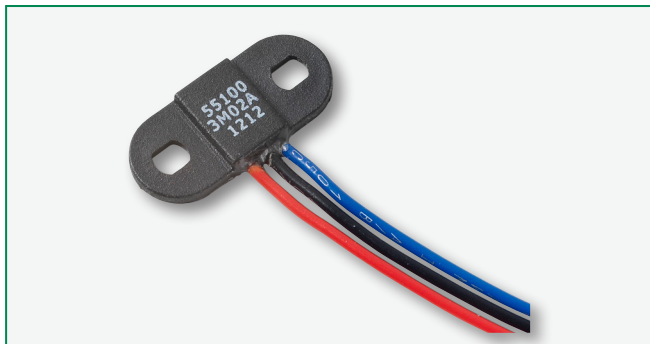
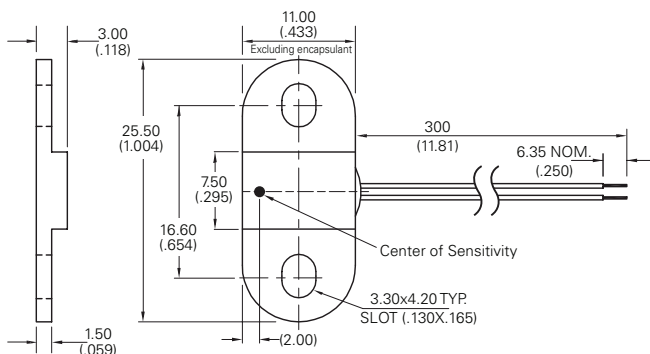


## RoHS



Dimensions in mm (inch)



## Description

The 55100 is a miniature flange mounting hall effect sensor 25.5mm (1.004") x 11.00mm (0.433") and only 3.00mm (0.118") high with a choice of digital or programmable analogue outputs. It is available as three-wire (voltage output) or two-wire (current output) versions. It's case design enables screw or adhesive mounting and capable of switching up to 28Vdc and 20mA. It comes with a range of sensitivity, cable length and connector options.

- Magnetically operated position sensor
- Digital or programmable analog types available
- Medium, high or programmable sensitivities
- Three-wire (voltage output) or two-wire (current output) versions

- Open Drain Output
- Reverse/Over voltage protection
- Built in temperature compensation
- Vibration 50g max. @ 50-2,000Hz
- Shock 150g max. @ 11ms ½ Sine

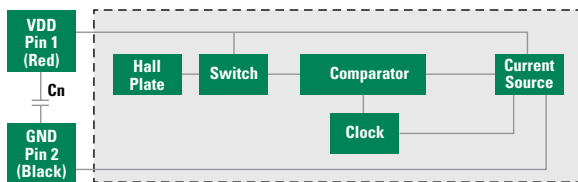
- High switching speed up to 10kHz
- Long life - up to 20 billion operations
- Unaffected by harsh environments

- Operates in static or dynamic magnetic field
- Customer selection of cable length and connector type

- Position and limit sensing
- RPM measurement
- Flow metering

- Commutation of brushless dc motors
- Angle sensing
- Magnetic encoders

## Two-wire Version



1. Add capacitor **Cn** as shown, close to the sensor , for transient suppression if required.
2. Add pull-up resistor **Rpu** as shown for sinking output. The Rpu value should be calculated using your supply voltage while keeping the ON state current at a level below the maximum.  $R_{pu} = VDD/I_o$ ;  
 $R_{pu} = 12Vdc/10mA = 1.2k\Omega$

## 55100 Miniature Flange Mounting Proximity Sensor

### Electrical Ratings

| Hall Type                                     |                                                       |                          | Digital Switch<br>Three-Wire<br>(Voltage Output) | Digital Switch<br>Two-Wire (Current<br>Output) | A - Analogue<br>(Programmable Only) <sup>2</sup> |
|-----------------------------------------------|-------------------------------------------------------|--------------------------|--------------------------------------------------|------------------------------------------------|--------------------------------------------------|
| Supply Voltage <sup>1</sup>                   | Absolute Ratings<br>Operate<br>Overvoltage Protection | Vdc<br>Vdc<br>Vdc - max. | -15 to +28<br>+3.8 to +24<br>32                  | -15 to +28<br>+3.75 to +24<br>32               | 8.5<br>4.5 - 5.5<br>19.5                         |
| Output High Voltage                           |                                                       | Vdc - min.               | Sinking output                                   | N/A                                            | 4.65                                             |
| Output Low Voltage                            |                                                       | Vdc - max.               | 0.4 @ 20mA                                       | N/A                                            | 0.35                                             |
| Output Current<br>(continuously on)           |                                                       | mA - max.                | 20                                               | N/A                                            | -1.0 to +1.0                                     |
| Current Consumption<br>Over Temperature Range | Low<br>High                                           | mA - min.<br>mA - max.   | 1.6 - 5.2<br>1.6 - 5.2                           | 5.0 - 6.9<br>12.0 - 17.0                       | 2.0 - 10.0<br>2.0 - 10.0                         |
| Switching Speed                               |                                                       | kHz - max                | 10                                               | 10                                             | 2                                                |
| Temperature                                   | Operating                                             | °C                       | -40 to +100                                      | -40 to +100                                    | -40 to +100                                      |

Notes:

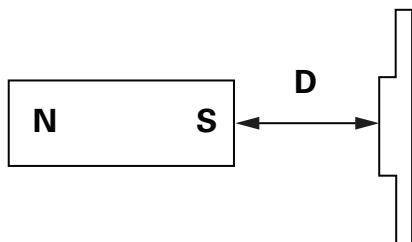
1. As long as Tj (Junction Temperature) is not exceeded. It is recommended to operate within the normal Operate Supply Voltage of +24Vdc maximum.  
Operating beyond Absolute Ratings may cause permanent damage to the Hall IC.

2. Preprogrammed by Littelfuse or Customer pending agreement.

3. For custom modifications to the wire length or size, or adding a special connector, please contact Littelfuse.

### Hall Options

| Select Option | Hall Type     | Sensitivity Gauss<br>(typ.) | Activate - D<br>mm (inch) |
|---------------|---------------|-----------------------------|---------------------------|
| 2M            | 2 Wire Switch | 120                         | 13.5 (.531)               |
| 2H            | 2 Wire Switch | 57                          | 18.5 (.728)               |
| 3M            | 3 Wire Switch | 130                         | 12.5 (.492)               |
| 3H            | 3 Wire Switch | 59                          | 18.0 (.709)               |
| AP            | Analog        | Programmable                | Consult Littelfuse        |



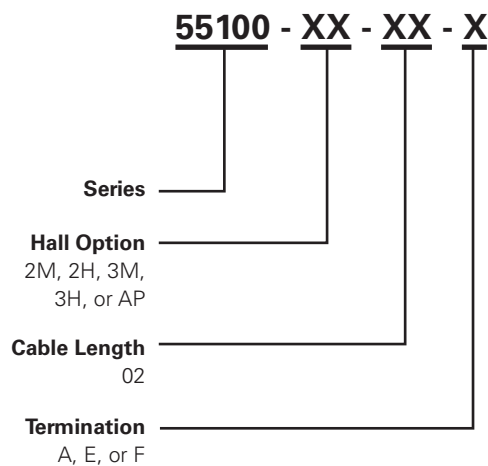
Note: Active distances are approximate using NEFEB Magnet 21 x 7 x 4.7 (.827) x .276W x .185H) LITTELFUSE P/N H-58

# 55100 Miniature Flange Mounting Proximity Sensor

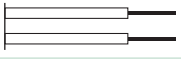
## Cable Length Specification

| Cable Type: 24 AWG 7/32 PVC 105°C UL1430/UL1569 |                           |
|-------------------------------------------------|---------------------------|
| Select Option                                   | Cable Length<br>mm (inch) |
| 02                                              | 300 (11.81)               |

## Part Numbering System



## Termination Specification

| Termination Options |                                                |                                                                                     |
|---------------------|------------------------------------------------|-------------------------------------------------------------------------------------|
| Select Option       | Description<br>(Two-wire versions illustrated) |                                                                                     |
| A                   | Tinned leads (6.4±0.76)mm                      |  |
| F                   | Untinned leads (6.4±0.76)mm                    |  |
| E                   | JST type XHP 2.5mm pitch                       |  |

## Packaging

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