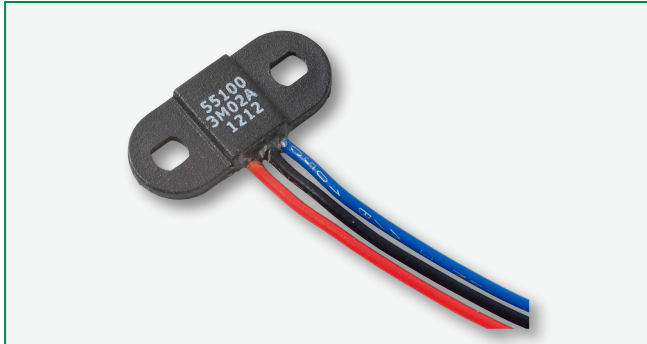


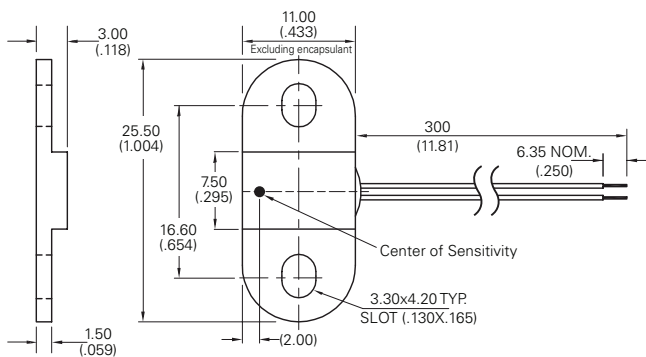
# 55100 Miniature Flange Mounting Proximity Sensor

RoHS



## Dimensions

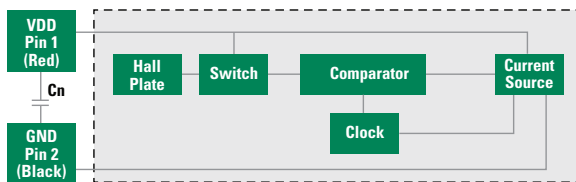
Dimensions in mm (inch)



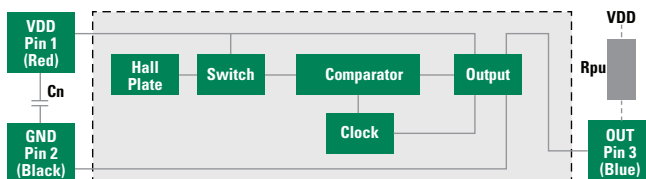
Note: Two-wire version illustrated.

## Block Diagram

### Two-wire Version



### Three-wire Version



Notes:

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.  $R_{pu} = VDD/I_o$ ;

$$R_{pu} = 12Vdc/10mA = 1.2k\Omega$$

## 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. Its 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.

## Features

- Magnetically operated position sensor
- Digital or programmable analogue 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 1/2 Sine

## Benefits

- 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

## Applications

- Position and limit sensing
- RPM measurement
- Flow metering

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

# 55100 Miniature Flange Mounting Proximity Sensor

## Electrical Ratings

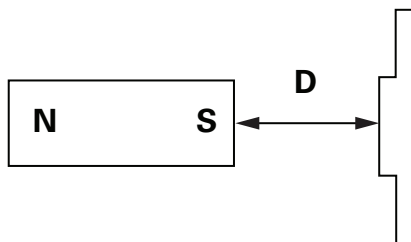
Hall Type		Digital Switch Three-Wire (Voltage Output)	Digital Switch Two-Wire (Current Output)	A - Analogue (Programmable Only) <sup>2</sup>	
Supply Voltage <sup>1</sup>	Absolute Ratings Operate Overvoltage Protection	Vdc Vdc Vdc - max.	-15 to +28 +3.8 to +24 32	-15 to +28 +3.75 to +24 32	8.5 4.5 - 5.5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

Notes:

- 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.
- Preprogrammed by Littelfuse or Customer pending agreement.
- 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 (typ.)	Activate - D 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




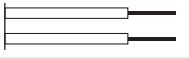

Note: Active distances are approximate using NEFEB Magnet 21 x 7 x 4.7 (.8271 x .276W x .185H) LITTELFUSE P/N H-58

# 55100 Miniature Flange Mounting Proximity Sensor

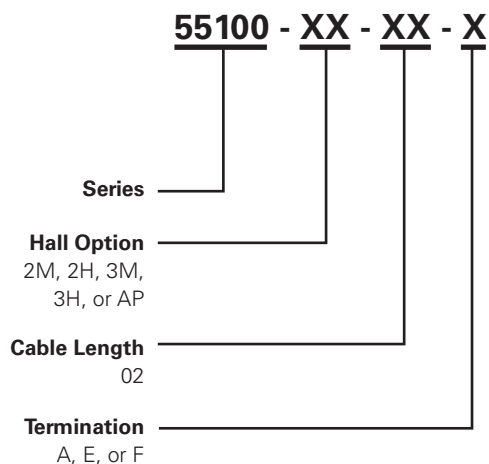
## Cable Length Specification

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

## Termination Specification

Termination Options		
Select Option	Description (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	

## Part Numbering System



## Packaging

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