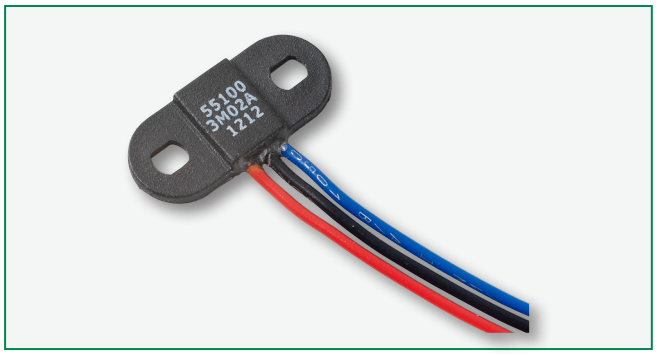
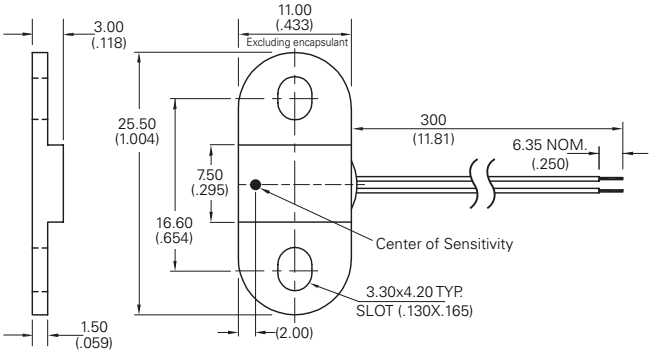
55100 Miniature Flange Mounting Proximity Sensor

RoHS



Dimensions

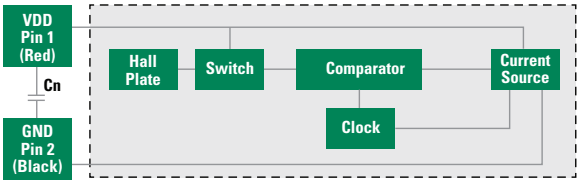
Dimensions in mm (inch)



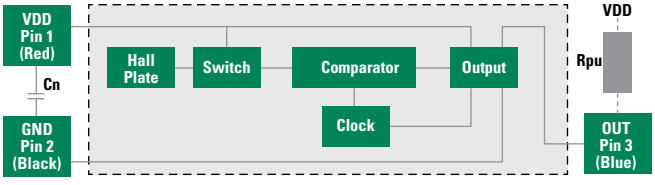
Note: Two-wire version illustrated.

Block Diagram

Two-wire Version



Three-wire Version



Notes:

1. Add capcitor **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. Rpu = VDD/Io;
   Rpu = 12Vdc/10mA = 1.2kOhm

Description

The 55100 is a miniature flange mounting hall effect sensor 25.5mm (1.004") x 11.00m (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.

Features

- 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

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

 Revised: 11/02/15
Specifications are subject to change without notice.

55100 Miniature Flange Mounting Proximity Sensor

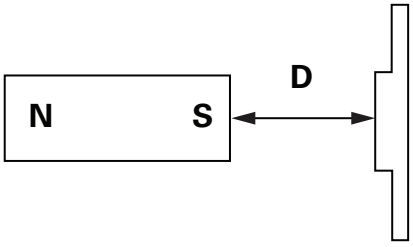
Electrical Ratings

Hall Type				Digital Switch Three-Wire (Voltage Output)	Digital Switch Two-Wire (Current Output)	A - Analogue (Programmable Only) [2]
Supply Voltage [1]	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:
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 (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 (.827l x .276W x .185H) LITTELFUSE P/N H-58

 Revised: 11/02/15

Littelfuse
Expertise Applied | Answers Delivered

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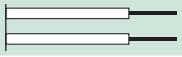
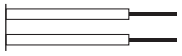
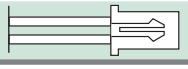
Cable Length Specification

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

55100 - XX - XX - X

- **Series**
- **Hall Option** 2M, 2H, 3M, 3H, or AP
- **Cable Length** 02
- **Termination** A, E, or F

Packaging

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

 Revised: 11/02/15