# 55140 Flange Mount Hall Effect Sensor Features and Benefits

查询"55140-2L-04-A"供应商

INTELLIGENCE BY MICRONAS

## Features

- Magnetically operated position sensor
- Digital, latching or programmable analogue types available
- Medium, high or programmable sensitivities
- 3 wire (voltage output) or 2 wire (current output) versions
- Vibration 50g max. @ 50-2,000Hz
- Shock 150g max. @ 11ms 1/2 Sine
- EMC to DIN 40839 (Consult Hamlin)
- Reverse/Over Voltage Protection
- Built in temperature compensation

## Benefits

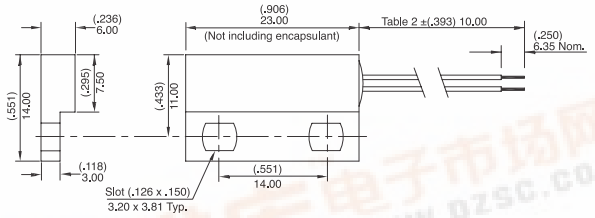
- High switching speed up to 10kHz
- Long life; up to 20 billion operations
- Unaffected by harsh environments
- Operates in static or dynamic magnetic field
- Customer selection of cable length and connector type

## Applications

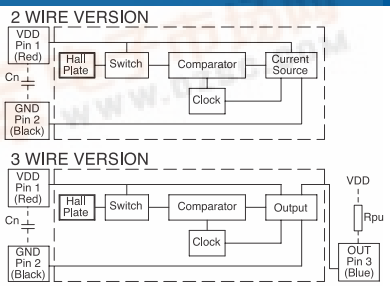
- Position and limit sensing
- RPM measurement
- Flow metering
- Commutation of brushless dc motors
- Angle sensing
- Magnetic encoders

## DIMENSIONS (in) mm

2 WIRE VERSION ILLUSTRATED




## BLOCK DIAGRAMS




Notes

1) Add capacitor Cn as shown, close to the sensor, for transient suppression if required
2) Add resistor Rpu as shown for sinking output

## CUSTOMER OPTIONS - Switching Specifications

| SPECIFICATIONS | | | Digital Switch or Digital Latch | | A - Analogue (Programmable Only) (Note 2) |
|---|---|---|---|---|---|
| Hall Type | | | 3 Wire (Voltage output) | 2 Wire (Current Output) | |
| Supply Voltage (Note 1) | Absolute Ratings | Vdc | -15 to +28 | -15 to +28 | 8.5 |
| | Operate | Vdc | +3.8 to +24 | +3.75 to +24 | 4.5-5.5 |
| | Overvoltage Protection | Vdc-max | 32 | 32 | 19.5 |
| Output High Voltage | | Vdc | 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 | mA | 1.6 - 5.2 | 5-6.9 | 2 - 10 |
| | High | mA | 1.6 - 5.2 | 12-17 | 2 - 10 |
| Switching Speed | | kHz-max | 10 | 10 | 2 |
| Temperature | Operating | °C | -40 to +100 | -40 to +100 | -40 to +100 |
| | Storage | °C | -65 to +105 | -65 to +105 | -65 to +150 |

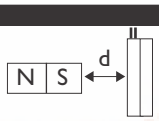
Note 1 - As long as Tj (Junction Temperature) max. is not exceeded
Note 2 - Preprogrammed by Hamlin or Customer pending agreement

## CUSTOMER OPTIONS - Sensitivity, Cable Length and Termination Specification

### TABLE 1

**HALL OPTIONS**

ACTIVATE DISTANCES ARE APPROXIMATE USING NEFEB MAGNET (.827L x .276W x .185H) 21 x 7 x 4.7
HAMLIN P/N 5812334000




| Select Hall Option | Hall Type | Sensitivity Gauss (Typ.) | Activate - d (in) mm |
|---|---|---|---|
| 2M | 2 Wire Switch | 120 | (.531) 13.5 |
| 2H | 2 Wire Switch | 57 | (.728) 18.5 |
| 2L | 2 Wire Latch | 40 | (.827) 21.0 |
| 3M | 3 Wire Switch | 130 | (.492) 12.5 |
| 3H | 3 Wire Switch | 59 | (.709) 18.0 |
| 3L | 3 Wire Latch | 86 | (.394) 10.0 |
| AP | Analogue | Programmable | Consult Hamlin |

### TABLE 2

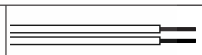
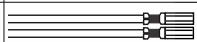
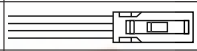
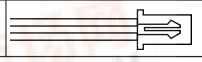
**Cable Length:-**
(Cable Type 24 AWG 7/32 PVC 105°C UL1430/UL1569)

Standard Lengths

| SELECT OPTION | CABLE LENGTH (in) mm |
|---|---|
| 01 | (3.94) 100 |
| 02 | (11.81) 300 |
| 03 | (19.69) 500 |
| 04 | (29.53) 750 |
| 05 | (39.37) 1000 |

### TABLE 3

**Termination Options:-**

| SELECT OPTION | DESCRIPTION (2 WIRE VERSION ILLUSTRATED) | |
|---|---|---|
| A | Tinned leads |  |
| | | |
| C | 6.35mm fastons |  |
| D | AMP MTE 2.54mm pitch |  |
| E | JST XHP 2.5mm pitch |  |

## ORDERING INFORMATION

55140 – XX – XX – X

- Series 55140
- Hall option — Table 1
- Cable Length — Table 2
- Termination — Table 3

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