55140 Flange Mount Hall Effect Sensor Features and Benefits

查询"55140-3M-03-D"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

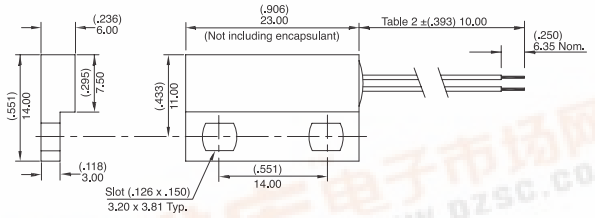
- High switching speed up to 10kHz
- Long life; up to 20 billion operations
- Unaffected by harsh environments
- Operates in static or dynamic magnetic field
- Customer selection of cable length and connector type

Applications

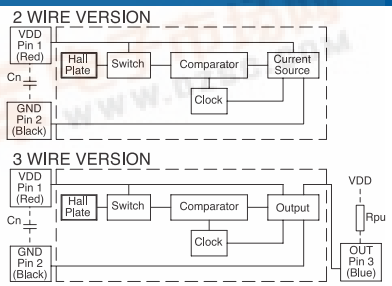
- Position and limit sensing
- RPM measurement
- Flow metering
- Commutation of brushless dc motors
- Angle sensing
- Magnetic encoders

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

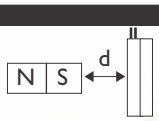
Note 1 - As long as Tj (Junction Temperature) max. is not exceeded
Note 2 - Preprogrammed by Hamlin or Customer pending agreement

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

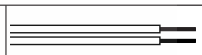
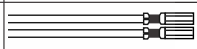
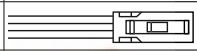
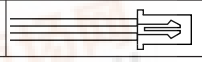
Cable Length:-
(Cable Type 24 AWG 7/32 PVC 105°C UL1430/UL1569)

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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