

55140 Hall Effect Flange Mount Sensor



Features

- Magnetically operated position sensor
- Digital, latching or programmable analog 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 ½ Sine
- EMC to DIN 40839 (Consult Hamlin)
- Reverse/Over voltage protection
- Built in temperature compensation

Benefits

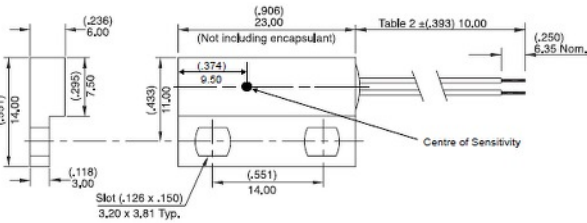
- High switching speed up to 10kHz
- Long life; up to 20 billion operations
- Unaffected by harsh environment
- Operates in static or dynamic magnetic field
- Customer selection of cable length and connector type

Applications

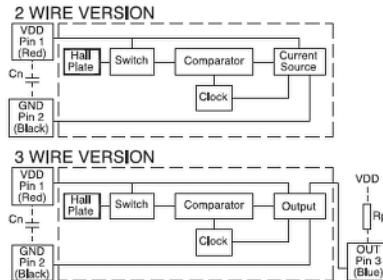
- Position and limit sensing
- RPM measurement
- Flow metering
- Commutation of brushless dc motors
- Angle sensing
- Magnetic encoders

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	Digital Switch or Digital Latch	A - Analog
Hall Type			3 Wire (Voltage output)	2 Wire (Current output)	(Programmable Only) (Note 2)
Supply Voltage (Note1)	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

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	Analog	Programmable	Consult Hamlin

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

SELECT OPTION	DESCRIPTION (2 WIRE VERSION ILLUSTRATED)
A	Tinned Leads
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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