

55140 Flange Mount Hall Effect Sensor Features and Benefits



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

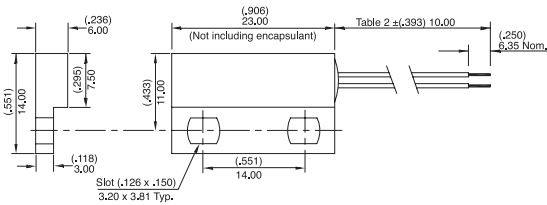
- High switching speed up to 10kHz
- Long life; up to 20 billion operations
- Unaffected by harsh environments
- Operates in static or dynamic magnetic field
- Customer selection of cable length and connector type

Applications

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

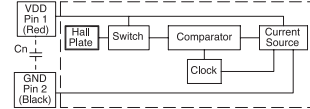
DIMENSIONS (in) mm

2 WIRE VERSION ILLUSTRATED

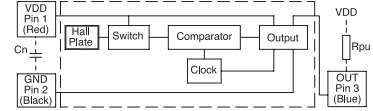


BLOCK DIAGRAMS

2 WIRE VERSION



3 WIRE VERSION



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

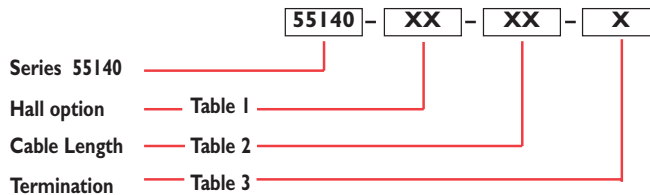
SPECIFICATIONS		Digital Switch or Digital Latch		
		3 Wire (Voltage output)	2 Wire (Current Output)	A - Analogue (Programmable Only) (Note 2)
Supply Voltage (Note 1)	Absolute Ratings	Vdc	-15 to +28	8.5
	Operate	Vdc	+3.8 to +24	4.5-5.5
	Overvoltage Protection	Vdc-max	32	19.5
Output High Voltage	Vdc	sinking 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	2 - 10
	High	mA	1.6 - 5.2	2 - 10
Switching Speed	kHz-max	10	10	2
Temperature	Operating	°C	-40 to +100	-40 to +100
	Storage	°C	-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				TABLE 2		TABLE 3	
ACTIVATE DISTANCES ARE APPROXIMATE USING NeFeB MAGNET (.827L x .276W x .185H) 21 x 7 x 4.7 HAMLIN P/N 5812334000				Cable Length:- (Cable Type 24 AWG 7/32 PVC 105°C UL1430/UL1569)		Termination Options:-	
				Standard Lengths		SELECT OPTION	DESCRIPTION (2 WIRE VERSION ILLUSTRATED)
Select Hall Option	Hall Type	Sensitivity Gauss (Typ.)	Activate - d (in) mm	SELECT OPTION	CABLE LENGTH (in) mm	A	Tinned leads
2M	2 Wire Switch	120	(.531) 13.5	01	(3.94) 100		
2H	2 Wire Switch	57	(.728) 18.5	02	(11.81) 300	C	6.35mm fastons
2L	2 Wire Latch	40	(.827) 21.0	03	(19.69) 500	D	AMP MTE 2.54mm pitch
3M	3 Wire Switch	130	(.492) 12.5	04	(29.53) 750	E	JST XHP 2.5mm pitch
3H	3 Wire Switch	59	(.709) 18.0	05	(39.37) 1000		
3L	3 Wire Latch	86	(.394) 10.0				
AP	Analogue	Programmable	Consult Hamlin				

ORDERING INFORMATION



Hamlin USA Tel: +1 920 648 3000 • Fax: +1 920 648 3001 • Email: sales.us@hamlin.com
 Hamlin UK Tel: +44 (0)1379 649700 • Fax: +44 (0)1379 649702 • Email: sales.uk@hamlin.com
 Hamlin Germany Tel: +49 (0) 6142 923920 • Fax: +49 (0) 6142 923921 • Email: sales.de@hamlin.com
 Hamlectrol France Tel: +33 (0) 1 4687 0202 • Fax: +33 (0) 1 4686 6786 • Email: sales.fr@hamlin.com

Issue No: AE Date: 16/07/09 DCR B6301

INFORMATION PROVIDED ON THIS DATA SHEET IS PROVIDED FOR INFORMATION PURPOSES ONLY AND SHOULD NOT BE RELIED UPON AS BEING ACCURATE FOR ANY PARTICULAR PURPOSE. Product performance may be affected by the application to which the product is put. Upon request, HAMLIN will assist purchasers by providing information specific to any particular application. HAMLIN disclaims any and all liability whatsoever for any purchaser's reliance upon the information contained on this data sheet without further consultation with authorised representatives of HAMLIN.