

Hall Effect Sensor Flatpack

multicomp **PRO**

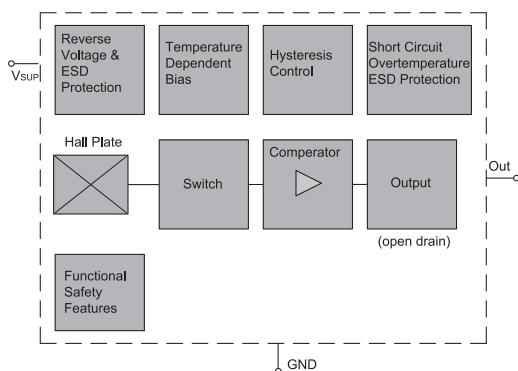
RoHS
Compliant



Features

- Compact size
- Various switching sensitivities
- Various switching points available
- Customized types available

Block Diagram



Absolute Maximum Ratings

Stresses beyond those listed in the “Absolute Maximum Ratings” may cause permanent damage to the device. Functional operation of the device at these conditions is not implied. Exposure to the absolute rating conditions for extended periods will affect device reliability.

Symbol	Parameter	Wire colour	Min.	Max.	Unit	Conditions
V _{SUP}	Supply voltage	Red	-18		V	t < 1000 h ¹⁾
			--	28		t < 96 h ¹⁾
			--	32		t < 5 min ¹⁾
			--	40		t < 5 x 400 ms ¹⁾ with series resistor R _V > 100Ω
V _{OUT}	Output voltage	White	- 0.5		V	t < 1000 h ¹⁾
			--	28		t < 96 h ¹⁾
			--	32		t < 5 min ¹⁾
			--	40		t < 5 x 400 ms ¹⁾ with series resistor R _V > 100Ω
I _O	Output current		--	65	mA	
I _{OR}	Reverse output current		- 50			

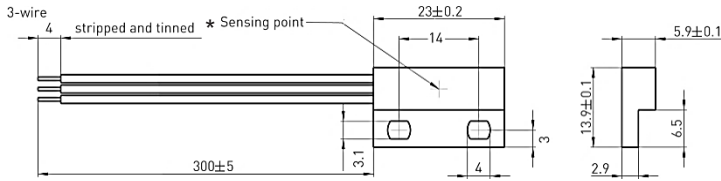
1) No cumulative stress. All voltages listed are referenced to ground (GND).

Newark.com/multicomp-pro
Farnell.com/multicomp-pro
sg.element14.com/b/multicomp-pro

multicomp **PRO**

Hall Effect Sensor Flatpack

Dimensions



* other positions on request

Dimensions : Millimetres

Environmental Characteristics

Operating temperature - 20°C to + 85°C

Wire Assignment		
Name	Function	Cable colour
VSUP	Supply voltage	Red
OUT	Output	white
GND	Ground	Black

Material Information		
	Material	Colour
Housing	ABS	Black
Cable	UL1007/1569, AWG 24	Red, White, Black
Potting compound	Epoxy	Black

Characteristics

At recommended operation conditions if not otherwise specified in the column "Conditions".

Typical characteristics for $T_J = 25^\circ\text{C}$ and $V_{SUP} = 12\text{ V}$

Symbol	Parameter	Wire colour	Min.	Typ.	Max.	Unit	Conditions
Supply							
I_{SUP}	Supply current	Red		1.6	2.4	mA	for $V_{SUP} = -18\text{ V}$
I_{SUPhi}	Reverse current		1				
Output							
V_{ol}	Port low output voltage	white		0.13	0.4	V	$I_o = 20\text{ mA}$
					0.5		$I_o = 25\text{ mA}$
t_f	Output fall time ¹⁾	--			1	μs	¹⁾ $V_{SUP} = 12\text{ V};$ $R_L = 820; C_L = 20\text{ pF}$
t_r	Output rise time				1		
t_d	Delay time ¹⁾			16	--		
t_{samp}	Output refresh period		1.6	2	2.66		
t_{en}	Enable time of output after settling of V_{SUP}			50			

Recommended Operating Conditions

Symbol	Parameter	Wire colour	Min.	Max.	Unit
V_{SUP}	Supply voltage	Red	2.7	24	V
V_{OUT}	Output voltage	white			
I_{OUT}	Output current			25	mA

Hall Effect Sensor Flatpack

Magnetic Characteristics Overview

Symbol	Parameter	Min.	Typ.	Max.	Unit
B _{ONth}	ON threshold range ¹⁾	-30		30	mT
B _{OFFth}	OFF threshold range ¹⁾	-30		30	
B _{th}	Adjustable step size ²⁾		0.5		
T _C	Temperature compensation of magnetic thresholds ³⁾	0		-3000	ppm/K

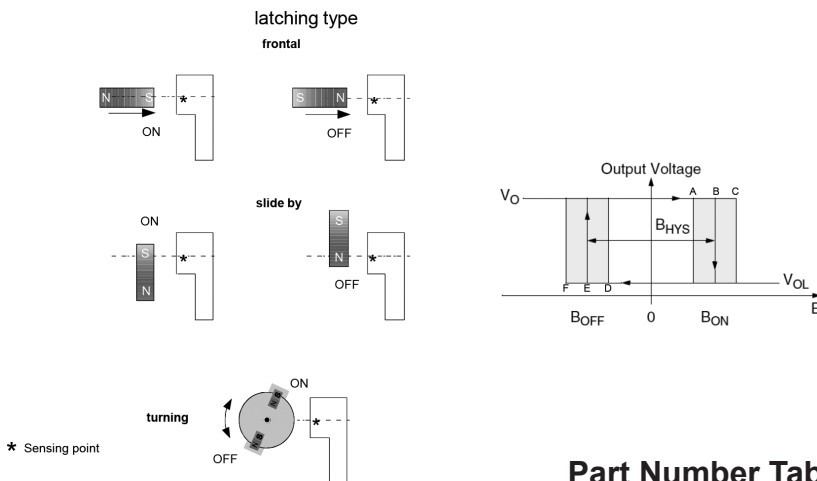
1) Available range
 2) Small steps at small values, bigger steps at higher values. May not be undercut
 3) Different temperature compensation available on request

Magnetic Characteristics

SwitchingType	Temp. coeff. of magnetic thresh. TC [ppm/K]	On point B _{ON} [mT]			Off point B _{OFF} [mT]			Hysteresis B _{HYS} ¹⁾ [mT]		
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.
latching	-1000	tbd.	2.5	tbd.	tbd.	-2.5	tbd.	-	5	-
		A	B	C	D	E	F			

¹⁾The hysteresis is the difference between the switching points B_{HYS} = B_{ON} - B_{OFF}

Magnetic Approach (for example)



Part Number Table

Description	Part Number
3 Wire, Flat Pack Hall Effect Sensor, Latching	MP-HS-324-02-0300

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.