

OH3020 Unipolar Hall-effect IC

1. General Description

OH3020 is a unipolar Hall-Effect IC, which is for contactless switching applications. The device includes an on-chip Hall voltage generator for magnetic sensing, an amplifier that amplifies the Hall voltage, a Schmitt trigger to provide switching hysteresis for noise rejection, and open-collector output.

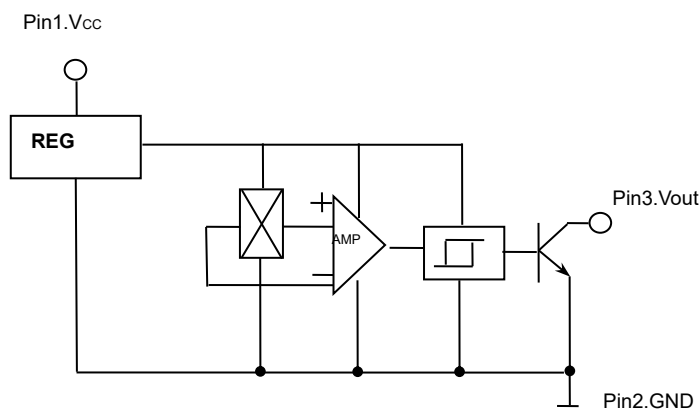
2. Features

- Respond to a South pole
- 4V to 24V DC operation voltage
- 25mA maximum sinking output current.
- Open-Collector pre-driver
- Reverse Polarity Protection

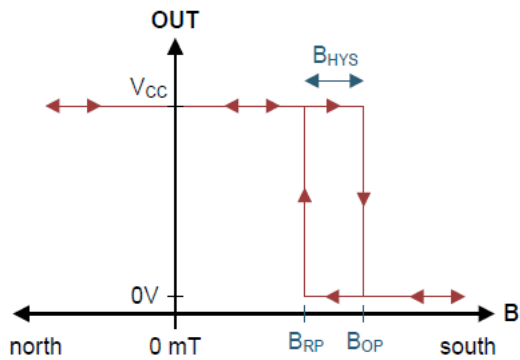
3. Applications

- Speed measurement
- Home appliances
- Position detection
- Flow measurement

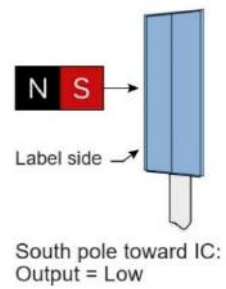
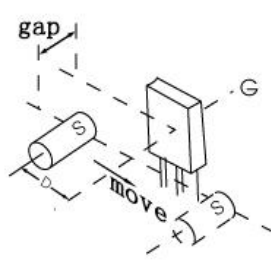
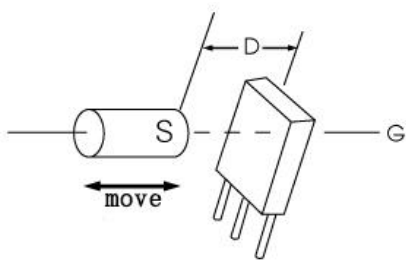
4. Functional Block Diagram



5. Magnetic-electrical Transfer Characteristics



6. Typical Working Mode



7. Order information

Part number	Response pole	Operate temperature	Package Type	Quantity/package
OH3020	S	-40 ~ 125℃	TO-92S	Bulk, 1000 pcs/ bag



8. Absolute Maximum Ratings (T_A=25°C)

Parameter	Symbol	Value	Unit
Supply Voltage	V _{CC}	4.5 to 28	V
Output current	I _{out}	25	mA
Operating temperature range	T _A	-40 to 150	°C
Storage temperature range	T _{stg}	-55 to 150	°C

9. Electrical Characteristics (T_A = 25°C)

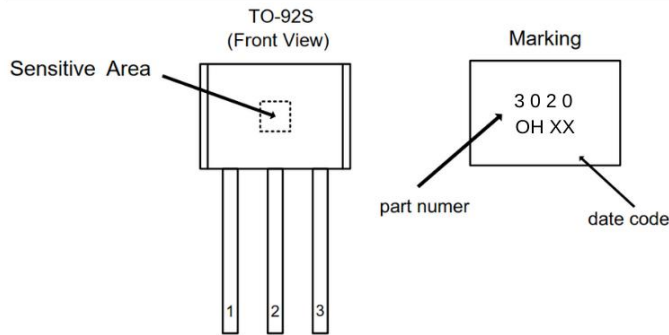
Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Supply Voltage	V _{CC}		4.5	-	24	V
Output Saturation Voltage	V _{OL}	V _{CC} =4.5V, I _{out} =20mA, B≥B _{OP}	-	200	400	mV
Output Leakage Current	I _{OH}	V _{out} =24V, B≤B _{RP}	-	1.0	10	μA
Supply Current	I _{CC}	V _{CC} =V _{CCmax} OC output	-	5	-	mA
Output Rise Time	t _r	V _{CC} =12V, R _L =820Ω, C _L =20pF	-	0.2	2.0	μS
Output Falling Time	t _f		-	0.18	2.0	μS

10. Magnetic Characteristics (T_A = 25°C) (1mT = 10 Gauss)

Parameter	symbol	Value			Unit
		Min	Typ	Max	
Operate Point	B _{OP}	-	-	20	mT
Release Point	B _{RP}	3	-	-	mT
Hysteresis	B _H	-	6	-	mT



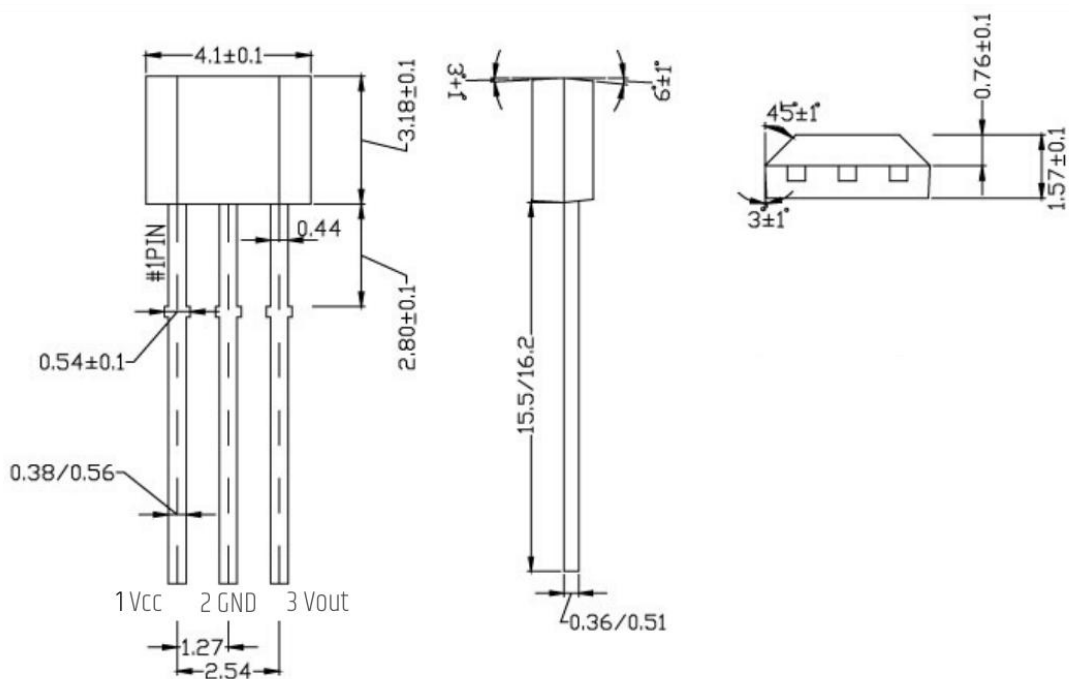
11. Pin configuration



Pin Name	PIN	Function description
Vcc	1	Supply Voltage
GND	2	Ground
Vout	3	Output

12. Dimension (Unit: mm)

TO-92S



Nanjing Ouzhuo Technology Co., Ltd

Tel: 86-25-52312738, 83247886

Fax: 86-25-52312738

Website: www.zbling.com

E-mail: ouzhuo@zbling.com

www.ohhallsensor.com

sale@ohhallsensor.com



For more information:

Ouzhuo Technology service you through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing, or the nearest Authorized Distributor, you could reach us the way you are convenient, thank you for your support!

www.ohhallsensor.com

sale@ohhallsensor.com

China headquarters: 86-25-52312738

Canada Office: 1-514-995-5788

NOTICE:

The information presented in this datasheet is for reference only. Specifications may change without notice.

