

OHG101DC Hall-Effect Gear Tooth Sensor

1. General Description

OHG101DC Hall-effect gear tooth sensors utilize a magnetically biased hall-effect IC to accurately measure the movement of ferrous metal targets.

Optimum sensor performance is dependent on the following variables which must be considered in combination:

- Target material, geometry, and speed
- Sensor/target gap
- Ambient temperature
- Magnetic material

2. Features

- 4.5-24VDC power supply
- Digital current-sinking output (open collector)
- Output amplitude not dependent on RPM
- Sense ferrous metal targets.
- The output voltage level is out of relation to rotating speed
- Reverse polarity protection and transient protection (integrated into Hall IC)
- Simple installation and maintenance
- Wide continuous operating temperature range (-40°C to 135°C)
- EMI resistant

3. Applications

- Camshaft Position Sensor
- Active Crankshaft Position Sensor
- Pulse Speed and Mile Sensor
- Wheel Speed Sensor
- Tachometers

4. Order information

Part number	Supply Voltage	Output Saturation Voltage	sensing gap Reference	Cross Reference
OHG101DC	4.5V ~ 24V	0.4V (when Sinking 20mA)	1mm ~ 2mm (-40°C ~ +135°C 10 ~ 6000rpm)	1GT101DC (HONEYWELL)



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

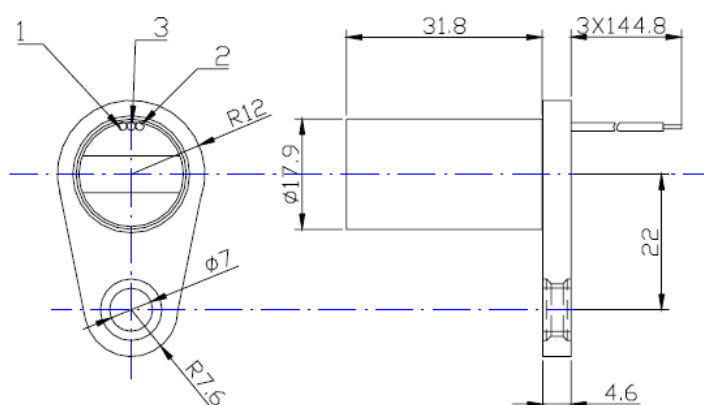
Parameter	Symbol	Value	Unit
Supply Voltage	V _{cc}	-30 ~ +30	V
Voltage Extremally Applied to Output (Output High)	V _{out}	-0.5~+30	V
Output current	I _{out} ((Sinking))	50	mA
Operating temperature range	T _A	-40°C~+135°C	°C

6. Electrical Characteristics (T_A=25°C)

Parameter	Symbol	Value			Unit
		Min	Typ	Max	
Supply Voltage	V _{cc}	4.5	-	24	V
Supply Current	I _{cc}	-	17	26	mA
Output Voltage (output low)	V _{OL}	-	400	-	mV
Output Current (output high, leakage into sensor)	I _o	-	-	10	μA
Output Rise Time (10 to 90%)	t _r	-	-	1.0	μS
Output Falling Time (90 to 10%)	t _f	-	-	1.0	μS

7. Reference Target Dimensions

Tooth Height	Tooth Width	Tooth Spacing	Target Thickness	Teeth Number
.200 in (5.06mm)	.100 in (2.54mm)	.400 in (10.16 mm)	.25 in (6.35mm)	25

8. Mounting dimensions


- 1) Red: supply voltage
- 2) Black: GND
- 3) White: Vout



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!

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NOTICE:

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

