

## GEARTOOTH SPEED AND DIRECTION SENSOR

# SD1002 – SD1012 Series



Hall-effect geartooth speed and direction sensor with adjustable aluminum or flange-mount plastic housing.

### Features

- Sense speed and direction of ferrous geartooth targets
- Plastic flange mount sensor rated to 125°C
- Near zero speed sensing capability
- Capable of 8000+Hz target speed
- Locating mark provided to assure correct rotational alignment
- 10 bit dynamic threshold detection offers:
  - Automatically adjusting magnetic range
  - Self compensating to target geometry
  - Immune to target run out
- Compatible with unregulated power supply
- Reverse battery protected to -30VDC
- Internal circuit protection to IEC529 1000
  - EMI resistant to 10V/m, 30MHz to 1GHz
  - ESD resistant to 4kV (Contact discharge)
- Fast transient resistant to 2kV
- Conducted immunity resistant to 10VRMS @ 150kHz to 80MHz
- EMC compatible 30A/m @ 50 Hz
- Meets IEC529 IP67 for dust and water protection
  - Integral Connector version: 4-pin Delphi Metri Pack 150.2 No. 12162833. Mates with Terminal No. 12124075.
  - Discrete wire version: 20 AWG, PVC insulation, UL1007/1569

### Application

- Wheel speed and direction
- Transmission speed and direction
- Hoist speed and direction

### Specifications

Part Number	Operating Voltage Range (VDC)	Supply Current (mA max.)	Output	Output Saturation Voltage (mV max.)	Output Current (mA max.)	Operating Temp Range (°C)	Storage Temp Range (°C)	Housing Material
SD100203	4.75 – 24	20	sink	1000	20	-40 to 85	-40 to 85	Aluminum
SD101201	4.75 – 24	20	sink	1000	20	-40 to 125	-40 to 125	Plastic

Notes: SD101201 uses Delphi Metri-Pack 150.2 Series Part No. 12162833. Mating terminal: Delphi Part No. 12124075.

A pull up resistor is required between power and each output. Resistor value is dependent upon input voltage. See page 18 for recommendations.

### Dimensions inches (mm)

All tolerances  $\pm 0.005$  (0.13) unless otherwise noted.

