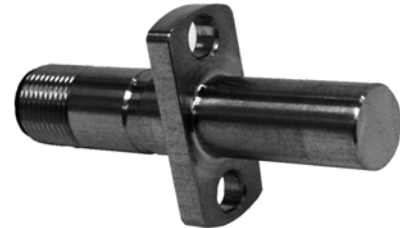


## SNDJ-D3\*-G01 Series

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### Differential Hall-Effect Speed Sensors



#### DESCRIPTION

The Hall-effect speed sensors are designed for use with a ferromagnetic gear or pole wheel to generate speed proportional impulse frequencies.

They exhibit dynamic function, whereby pulse generation down to 5 Hz is specified. The sensor must be oriented against the pole wheel as described in the orientation/mounting dimension drawings on page 3.

#### FEATURES

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- Back biased differential hall sensor
- Direct sensing of ferrous metal target
- Rugged 12 mm [0.47 in] stainless steel housing
- IP68 sealing
- 2,0 mm [0.08 in] sensing range
- Preleaded cable of connector versions available

#### POTENTIAL APPLICATIONS

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- High speed gear tooth sensing
- Over-speed detection
- Monitor shaft rotation
- Detect rotary position of gear or shaft

# SNDJ-D3\* -G01 Series

## SENSOR SPECIFICATIONS

Characteristic	Parameter
Supply voltage	8 Vdc to 32 Vdc, protected against reverse polarity
Current consumption	14 mA max. (without load)
Signal outputs	Square wave signal from push-pull stage, dc-coupled to the supply (negative pole = reference voltage) 30 mA max. load Output voltage HI: > power supply voltage 3.6 V (at I = 25 mA), 2.5 V (at I = 10 mA) Output voltage LO: < 2.2 V (at I = 25 mA), 1.4 V (at I = 10 mA) The output is short-circuit proof and protected against false polarity
Frequency range	5 Hz to 25 kHz
Insulation	Housing, cable shield, and electronic galvanically isolated (500 V/50 Hz/1 min.)
Operating temperature	-20 °C to 100 °C [-4 °F to 212 °F]
Housing	Stainless steel 1.4305
Cable/connector	P variant: with cable PUR, three wires 0.34 mm <sup>2</sup> (AWG 22) C variant: with connector 4-pins/M12 standard
Protection class	Sensor head IP68, cable/entrance IP67, connector IP68 (mated)
Vibration immunity	30 g in the range 5 Hz to 2000 Hz
Shock immunity	50 g during 20 ms, half-sine wave
Weight	D3C-G01: ~40 g D30-G01: ~60 g, including 0,35 m cable
Air gap	For pole wheel M 0.5 (DP 50.8): 0,1 mm to 0,3 mm [0.004 in to 0.012 in] For pole wheel M1 (DP 25.4): 0,1 mm to 1,5 mm [0.004 in to 0.06 in] For pole wheel M2 (DP 12.7): 1,0 mm to 2,0 mm [0.04 in to 0.08 in]
Pole wheel	Ferromagnetic toothed wheel, i.e. B. USt37-2, preferred involute gear form Module $\geq 1$ , min. tooth width 6 mm [0.24 in], side offset with min. tooth width: <0,2 mm [0.008 in], eccentricity <0,2 mm [0.008 in]

## NOTICE

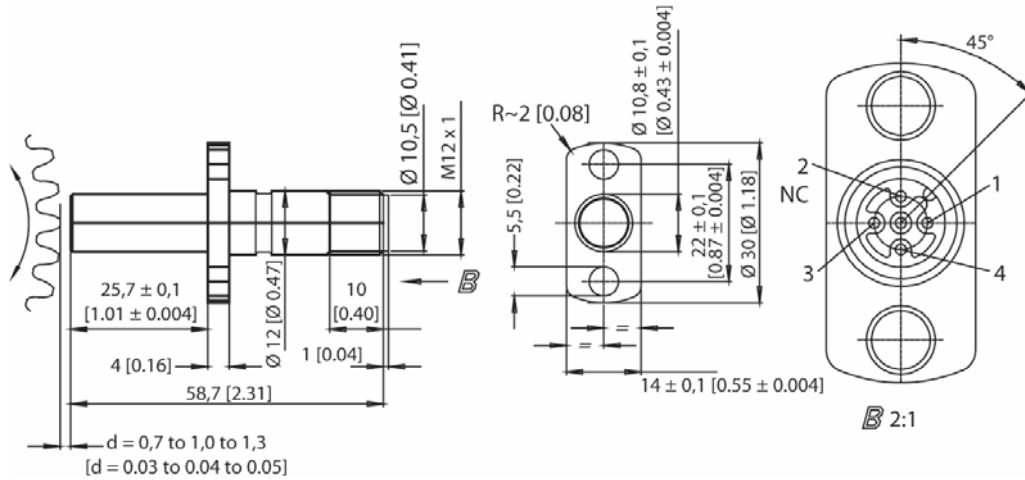
### INSTALLATION INFORMATION

- The sensor wires must be laid as far as possible from large electrical machines. They must not run parallel with power cables. The maximum permissible cable length is 20 m [65 ft].
- The sensor should be mounted with the middle of the face side over the middle of the pole wheel. Where the pole wheel has teeth or slots with radial sensor location, the sensor would normally be mounted over the center. Dependent upon the wheel width, a degree of axial movement is permissible.
- A solid and vibration-free mounting of the sensor is important.

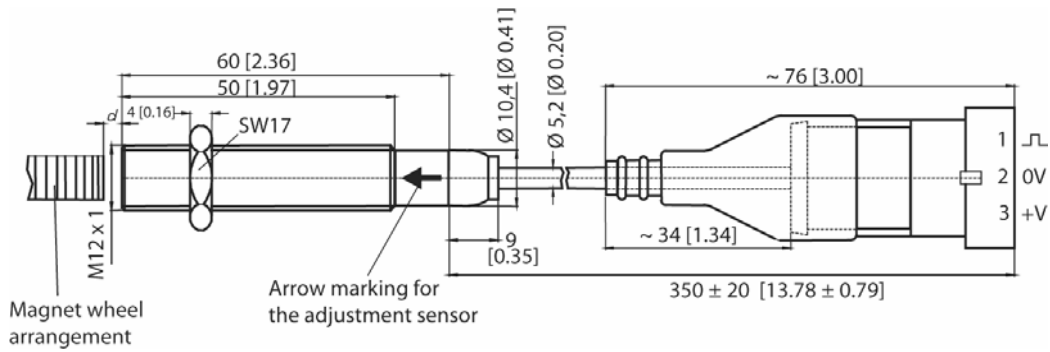
# Differential Hall-Effect Speed Sensors

## ORIENTATION/MOUNTING DIMENSIONS (For reference only) mm [in]

### D3C-G01

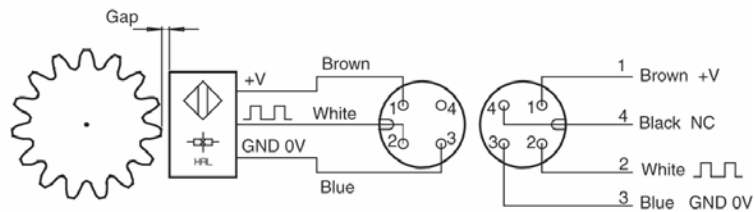


### D3P-G01

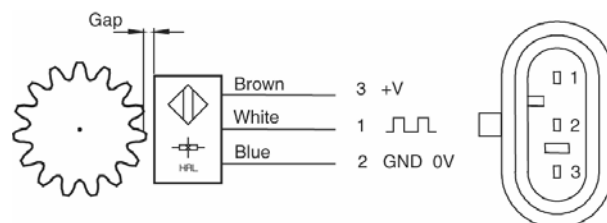


## WIRING DIAGRAMS

### D3C-G01



### D3P-G01



## **WARNING**

### **PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

## **WARNING**

### **MISUSE OF DOCUMENTATION**

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

### **WARRANTY/REMEDY**

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

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