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## SNDH-T4P-G01



Actual product appearance may vary.

### Quadrature speed and direction sensor

#### Features

Hall-effect magnetic sensing technology  
 Advanced performance dynamic offset self calibration  
 Air gap up to 2 mm [0.08 in]  
 Near zero speed  
 Automotive under-the-hood packaging integrity  
 EMI hardened  
 High frequency switching capability (up to 15 kHz)  
 -40 °C to 150 °C [-40 °F to 302 °F] continuous operating temperature  
 Multiple connector options  
 Short circuit protection  
 Reverse voltage protection  
 Open collector output  
 Low jitter output  
 O-ring seal

#### Potential Applications

Steering position  
 Tachometers/counter  
 Encoders  
 Speed and direction of gears and shafts in transmissions, hydraulic motors, pumps and gear boxes

#### Description

The SNDH Series is a dual differential hall sensor that provides speed and direction information using a quadrature output with signals 90 degree phase shifted from each other. Target direction is determined by output lead/lag phase shifting. This product is designed for applications where extremely high resolution is required at wide frequency ranges, 0 kHz to 15 kHz, and large air gaps. BiCMOS (bipolar complementary metaloxide-semiconductor) Hall-effect technology, using advanced digital signal processing for dynamic off-set cancellation, provides enhanced air gap performance and phase shift accuracy over most conditions. Unique patented (pending) IC (integrated circuit) packaging provides output phase shift tolerancing with enhanced accuracy. The robust package is automotive under-the-hood grade for most environmental conditions as well as EMI (electromagnetic interference) hardened. Multiple connection options, including wire harness and integral connector versions using AMP super seal or AMP Jr. Timer connectors, are available. Package design includes an o-ring seal for pressure applications and a fixed mounting flange.

#### Supporting Documentation

[Installation Instructions](#)

[Product Sheet](#)

[Engineering Drawing](#)

Product Specifications	
Sensing Type	Quadrature speed and direction
Housing Diameter	15 mm [0.6 in]
Barrel Length	45 mm [1.77 in]
Vdc Supply	4.5 Vdc to 18 Vdc
Operating Frequency Range	0 Hz to 15 kHz
Operating Temperature	-40° to 150° C [ -40 °F to 302 °F]
Connections	AMP 4 - pin connector
Availability	Global
UNSPSC Code	411121
UNSPSC Commodity	411121 Transducers
Series Name	SNDH

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All Sensing and Control

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