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Speed Sensor Series V16

Valid for sensors 3722268 and 3722271

Effective: April, 2022

Supersedes: March, 2022





General Information

The sensor consists of a ferrostat differential (Dual Channel) speed sensor and a screw. The sensor installs in a threaded hole in the V16 bearing housing. The sensor output is a 2 phase shifted square wave signal within a frequency rang of 0 Hz to 15 kHz. The sensor detects both speed and direction of rotation. The sensor withstands high as well as low temperatures and is highly moisture protected (IP6K9K).



Technical Data

Power supply

24 VDC (10 - 30 VDC), protected against reverse

Current consumption
Max 20 mA. (without load)

Signal output

2 phase shifted square wave signals, minimum edge shift with an involute gear wheel: minimal 20° between output 1 and output 2

3722268:

NPN with pull-up resistor (for R=2200Ω): Ulow <1,5V, Uhigh >0,92*Usupply

3722271:

PNP with pull-down resistor (for R=560 Ω): Ulow <0,1V, Uhigh >0,92*Usupply 3,5V polarity

NOTE: The outputs are short circuit proof and protected against

reverse polarity.

Frequency Min 0 Hz max 15 kHz

Insulation

Housing and electronics galvanically separated (500V/50Hz/1 min)

Operating temperature Connector -40 to +85°C Cable -40 to +80°C Sensor head -40 to +125°C

Protection class
Connector IP67, sensor head IP6K9K

Sensor head Max 25 bar pressure

[360 psi]

Weight (incl. cable) 72 g (0.16 lb)

Sensing distance 0.1 to 2.0 mm; 1.0 recom. [0.004 to 0.08 in; 0.04 recom.]

Transistor: NPN, PNP

Frame Size	No. of pulses/rev.
V16 (ISO and SAE)	9

Amplifier variant Variant; .02 SHW Output 1: Speed Output 2: Speed Output type: Open Col.

CABLE

Material: PUR casting Length: 260 ± 10mm

No. of wires: 4 (plus screen; transparent)

Wire area 4 x 0.34 mm²

Screen: Stranded metal net (insulated from housing)

NOTE: Screen must be connected to 0 V (zero volt) power supply.

Bending radius Min 25 mm [1 in]

Installation Information

Only moutable in designated position. One possible solution showed in Fig. 1



Connector Specification

Connector:

Molded on cable, M12x1 Thread, Male,

Straight

Number of pins: 4

Coding: A

Protection class: IP67

Operating temperature:

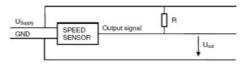
-40°C to +85°C.

Standards: IEC 61076-2-101

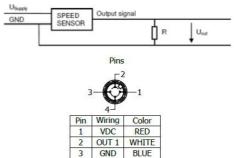
Contact Pump & Motor Divsion Europe for recommendations.

Connections:

Configuration with pull-up resistor (for each output channel):



Configuration with pull-down resistor (for each output channel):



Installation Procedure

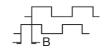
- Install the sensor in the threaded hole (M12x1) of the V16 bearing housing.
- Tightening the M6 screw; 14±1 Nm (124±12 lbf in).

Pulse diagram:

directions of rotation directions of rotation

OUT 2





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Position notification regarding Machinery Directive 2006/42/EC:

Products made by the Pump & Motor Division Europe (PMDE) of Parker Hannifin are excluded from the scope of the machinery directive following the "Cetop" Position Paper on the implementation of the Machinery Directive 2006/42/EC in the Fluid Power Industry.

All PMDE products are designed and manufactured considering the basic as well as the proven safety principles according to:

- ISO 13849-1:2015
- SS-EN ISO 4413:2010

so that the machines in which the products are incorporated meet the essential health and safety requirements.

Confirmations for components to be proven component, e. g. for validation of hydraulic systems, can only be provided after an analysis of the specific application, as the fact to be a proven component mainly depends on the specific application.

Dr. Hans Haas

General Manger Pump & Motor Division Europe



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