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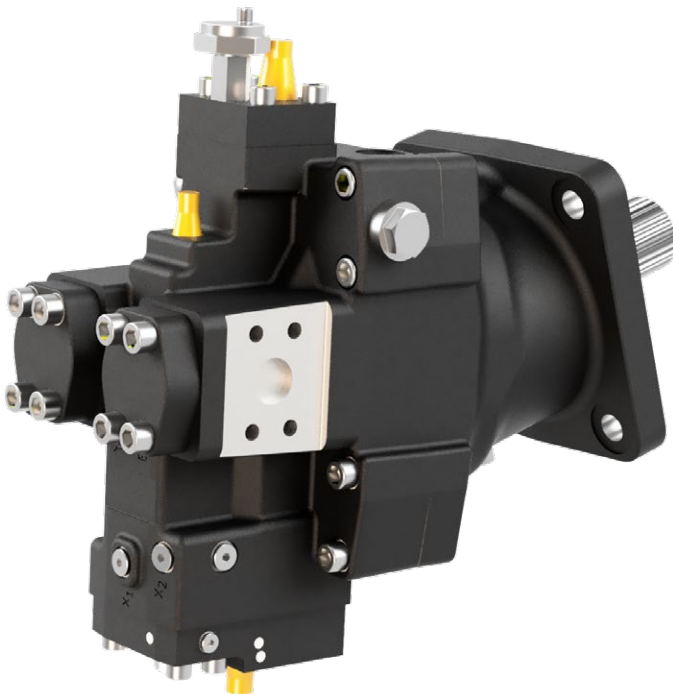
MSG30-5525-M1/UK

## Speed Sensor Series V16

Valid for sensors  
**3722268 and 3722271**

Effective: March, 2023

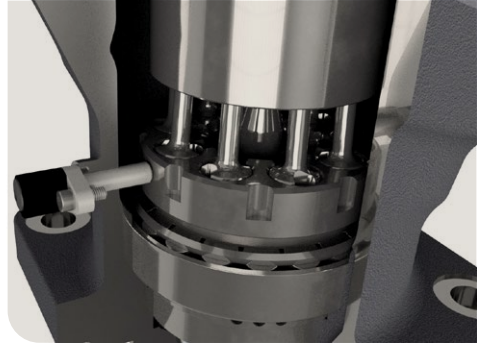
Supersedes: April, 2022



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## 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=560Ω): Ulow < 0,1V, Uhigh > 0,92\*Usupply 3,5V polarity

**NOTE:** The outputs are short circuit proof and protected against reverse polarity.

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

### 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

### 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 × 0.34 mm<sup>2</sup>

*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

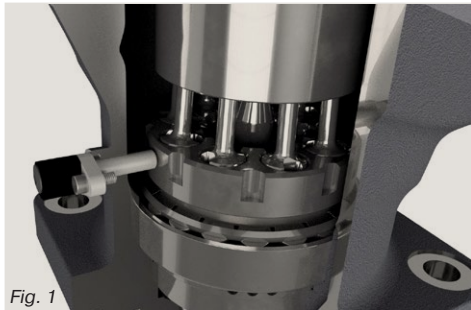


Fig. 1



Watch our “installation guide speed sensor” video for additional support.

**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).

**Connector Specification**

*Connector:*

Molded on cable, M12x1 Thread, Male, Straight

*Number of pins:* 4

*Coding:* A

*Protection class:* IP67

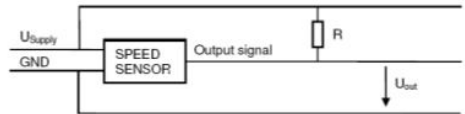
*Operating temperature:*  
 -40°C to +85°C.

*Standards:* IEC 61076-2-101

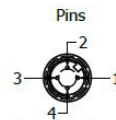
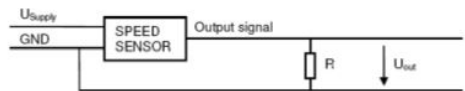
Contact Pump & Motor Division Europe for recommendations.

**Connections:**

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



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



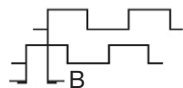
Pin	Wiring	Color
1	VDC	RED
2	OUT 1	WHITE
3	GND	BLUE
4	OUT 2	BLACK

**Pulse diagram:**

directions of rotation



directions of rotation



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

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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.

### Christian Jäger

General Manger

Pump & Motor Division Europe



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