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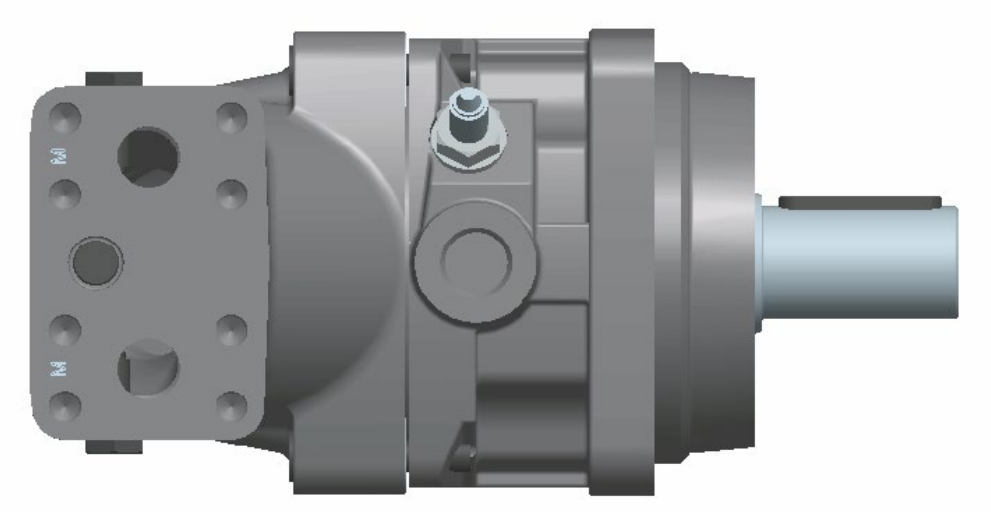
Bulletin MSG30-8304-INST/UK

Speed Sensor Series F10/F11/F12 and V12/V14

Valid for sensor 3722480

Effective: March, 2023
Supersedes: November, 2022



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General Information

The sensor consists of a ferrostat differential speed sensor and a seal nut. The sensor installs in a threaded hole in the housing. The sensor output is a square wave signal within a frequency rang of 0 Hz to 15 kHz. The sensor detects only speed. The sensor withstands high as well as low temperatures and is highly moisture protected (IP68).

Technical Data

Power supply	10V to 30V protected against reverse polarity.
Current consumption	Max 20 mA. (without load)
Signal output signals	• 1 phase square wave • Open collector outputs with 10 Kohm pull-up, Imax = -20 mA.

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	-40 to +125 °C [-40 to +255 °F]
Protection class	IP68 (DIN 40050) Sensor IP67 (DIN 40050) Connector
Sensor head pressure	Max 25 bar [360 psi]
Weight (incl. cable)	0.15 kg [0.33 lb]
Sensing distance	0.1 to 2.0 mm; 1.0 recom. [0.004 to 0.08 in; 0.04 recom.]
Transistor	NPN
Amplifier variant	Variant; .02 SHW Output 1: Speed Output type: Open Col.
CABLE	
Material	PUR casting
Length	338 mm
No. of wires	3-Wire area 3 x 0.34 mm^2
Connector	AMP Super Seal 1,5 series connector female
	Bending radius Min 25 mm [1 in]

Frame Size	No. of pulses/rev.
F10/F11-6, -10, -12, -14, -19	5
F10/F12 (30-125)	35
F12 (152-182)	40
F12-250 Up to serial no. 201602230409	64
F12-250 From serial no. 201602230410	36
V12/V14 (ISO, SAE and Cartridge)	36
V12 -060 Cartridge	9

Connection

Sensor wires are susceptible to radiated noise. Therefore, the following shoud be noted:

- The sensor wires must be installed as far away as possible from electrical machines and must not run in parallel with power cables in the vicinity.

The maximum cable length that can be utilized is dependent on sensor voltage, how the cable is installed, and cable capacitance and inductance. It is, however, always advantageous to keep the distance as short as possible. The sensor cable supplied can be lengthened via a terminal box located in an IP20 protected connection area (per DIN 40050).

Connections and Pulse Diagram:
3 pin AMP Super Seal connector

Pin 1 BLUE - GND
Pin 2 RED - VDC
Pin 3 WHITE - OUT I

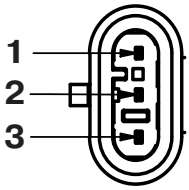
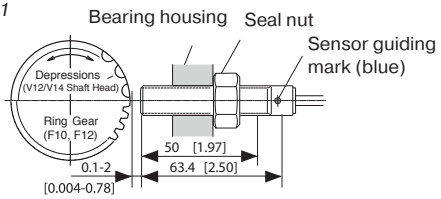


Fig. 1



Speed sensor installation, F10-30-125, F12, V12,V14

Installation Procedure

Install the sensor in the threaded hole (M12x1) of the **F10-30-125/V12/V14** bearing housing; turn the sensor until its head just touches the ring gear teeth (F10/F12) or the shaft head (F12-250/V12/V14); refer to the installation drawing above.

- On ***F10/F11-6-19 the pistons positions must be known** before mounting the sensor. Install the sensor in the threaded hole (M12x1) of the barre housing; turn the sensor until its head just touches the piston.
- When mounting the sensor in the threaded hole be sure that you also rotate the cable so the cable not get twisted.
- Back off the sensor one turn (counter clockwise).
- Tighten the seal nut; max 12 Nm (100 lb in).
- Connect the electrical wires as shown in the schematic.

F10/F11-6-19

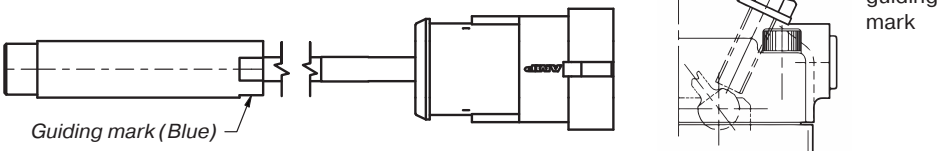


Fig. 2

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Pump & Motor Division Europe
Trollhättan, Sweden

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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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