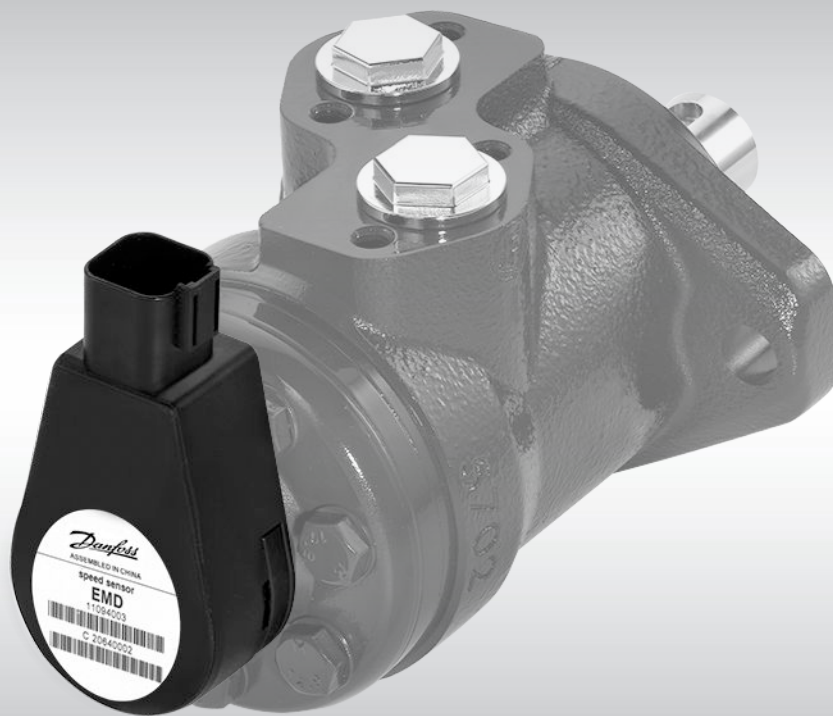




Electrical Installation

Sensor

EMD Speed Sensor



Revision history*Table of revisions*

Date	Changed	Rev
September 2015	Minor layout revision	AC
December 2014	Updated	AB
April 2014	Converted to Danfoss layout-DITA CMS; L1421007 replaces L121933 literature id.	AA

Electrical Installation EMD Speed Sensor

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Literature references**EMD Speed Sensor literature references***References*

Literature ID number	Title	Type
L1017287	EMD Speed Sensor	Technical Information (TI)
L1017396	EMD Speed Sensor	Data Sheet (DS)
11099628	LSHT Motors with EMD Speed Sensor Installation Guide	Instruction (I)
L1017819	Orbital Motor EMD Speed Sensor	Operational Manual (OM)

Latest version of technical literature

Danfoss product literature is online at: <http://powersolutions.danfoss.com/literature/>

Product overview
EMD Speed Sensor image
EMD Speed Sensor


F500186

EMD speed sensor ordering information
Standard sensor

Part number	Output	Parameter	Default setting
11094003	Pulse mode	Pulse/rev (PPR)	180
11101202	Quadrature mode	2 channels 90° phaseshift	90*
11101205	CAN mode	Node address	0x51 †
		Message transmission rate	50 ms
11114575	OEM configurable sensor	Pulse/rev (PPR)	180

* Fixed setting. Can not be changed

† Hexadecimal

Special sensor

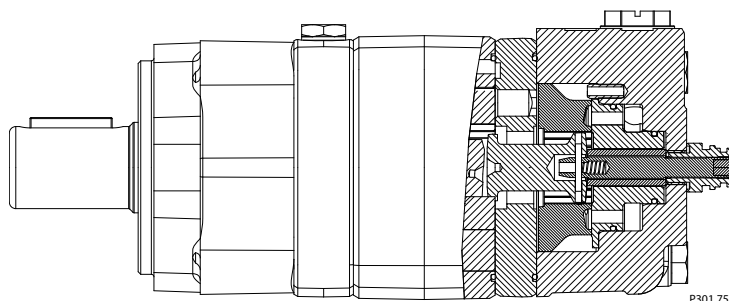
Part number	Output	Parameter	Default setting
11101182	Compatibility mode OMM	Pulse/rev (PPR)	22
11101186	Compatibility mode OMP/R	Pulse/rev (PPR)	35
11101188	Compatibility mode OMS	Pulse/rev (PPR)	55
11101189	Compatibility mode OMT	Pulse/rev (PPR)	84
11101191	Compatibility mode OMV	Pulse/rev (PPR)	102
11101204	Compatibility mode TMK	Pulse/rev (PPR)	70

If product is not seen in this table refer to Technical Information of the specific product.

EMD Speed Sensor description/theory of operation

Function of the speed sensor is to detect the shaft speed and the direction of rotation. The sensor is mounted to the endcover of a Danfoss motor and senses the speed from a magnet that is rotating inside the motor. Because of the digital output signals for speed and direction and a non speed dependent output voltage level, the sensor is ideal for high and low speed measurements.

The speed sensor is designed for rugged outdoor, mobile or heavy industrial speed sensing applications. The detection of the speed is contactless. It is a plug-and-perform device that does not need any calibration or adjustments.

Product overview
Sectional drawing

EMD Speed Sensor specifications
Specifications

Output signal *			D1	D2
	Pulse mode	Push-pull output. Direction = CCW: high, CW: low Configurable up to 180 pulse/revolutions	Square Wave	Direction
	Quadrature mode	2 channels with 90° phaseshift each with 90 pulses/revolution Push-pull output	Square Wave Phase A	Square Wave Phase B
	CAN mode	Supports CAN 2.0B with SAE J1939 Message Protocol with Proprietary Messages Baudrate: 250 kbaud (fixed) Shaft velocity: ± 2500 rpm		
Speed range		0 - 2500 rpm		
Supply voltage		9 - 36 Vdc		
Maximum power		0.8 W		
Temperature range (ambient)		-30 °C to 60 °C		
EMC-Immunity (EMI):		100 V/m ISO 13766		
Grade of enclosure †		IP 69 K		
Vibration		30 G (294 m/s ²)		
Shock		50 G (490 m/s ²)		

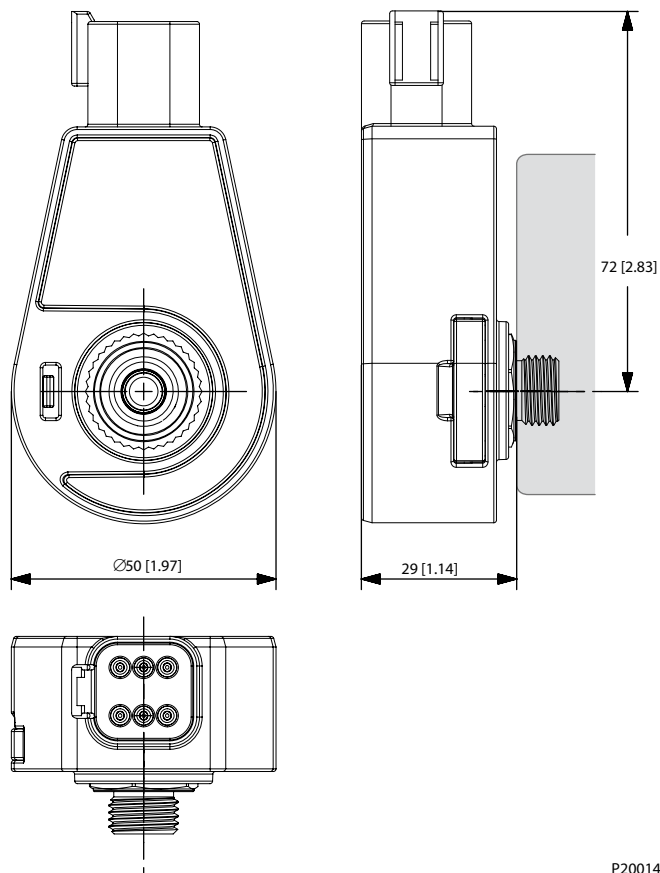
* Configurable with PLUS+1* Service Tool - Please contact Danfoss for further information.

† According to IEC 529.

Product overview

EMD Speed Sensor dimensions

mm [in]



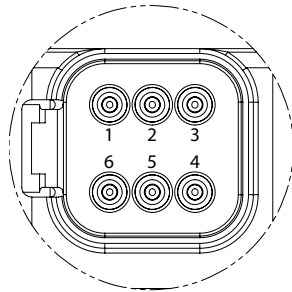
P200144

Electrical Installation EMD Speed Sensor

Electrical installation

EMD Speed Sensor pinout

Pin location



P301 314

Pinout

Pin	Description
1	Power supply 9 to 36 Vdc
2	Power ground -
3	D 1 (configurable output)
4	CAN L
5	CAN H
6	D 2 (configurable output)

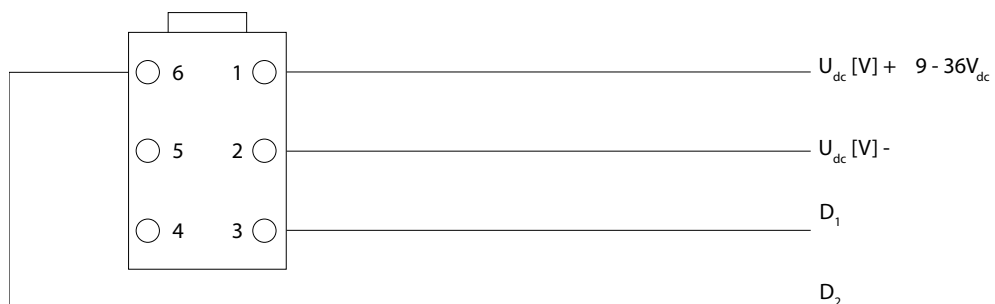
EMD Speed Sensor mating connector

Deutsch® DT connector 6 pin mating connector assembly: (Not offered by Danfoss)

Pcs	Description	Deutsch® part number	Color
1	Plug	DT06-6S-PO12	(black)
1	Wedgeloek	W6S-PO12	(green)
6	Solid contacts	0462-209-16141	(nickel)
Options			
1	Boot compl.	DT6S-BT-BK	(black)

EMD Speed Sensor wiring diagrams

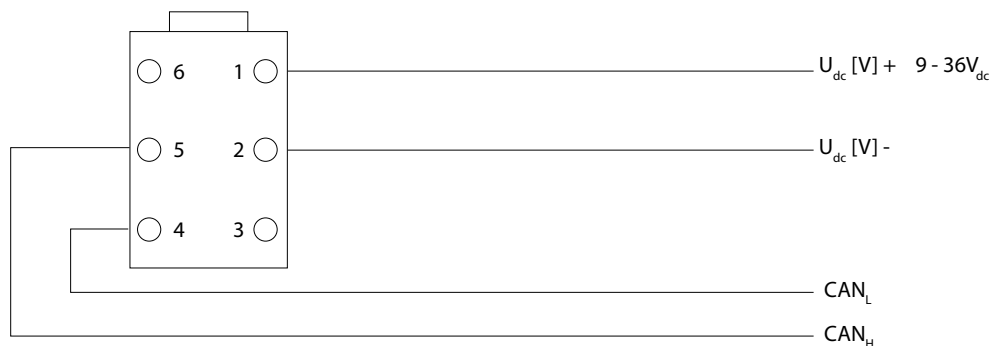
Wiring diagram: Pulse and quadrature mode



P301 400

Electrical installation

Wiring diagram: CAN mode



P301 401



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