



DSD 1205.22 SHV

Type series DSD dynamic with connected cable

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Туре #	Product #	Drawing #
DSD1205.22 SHV (2m)	374Z-03781	110428d

General

Function	The Ferrostat speed sensor DSD xx05.22 is suitable for use with a pole wheel (toothed wheel made of steel, preferred evolvent gear wheel) to generate speed proportional impulse frequency signals. It exhibits dynamic function, whereby pulse generation down to 5 Hz is guaranteed. The sensing element is a magnetically biased Differential Hall device followed by an amplifier short-circuit proof (Suffix V). The sensor characteristic is not rotational symmetric.
Technical data	
Supply voltage	830 VDC, max. superimposed AC-voltage of 25 mVpp protected against false polarity
Current consumption	max 15mA (without load)

Current consumption	max. TSIMA (without load)				
Signal output	Square wave signals from push-pull stage, DC-coupled to the supply (negative pole = reference voltage), max. load 25 mA, Output voltage HI: > supply voltage -2.5 Volt at I = 25 mA Output voltage LO: < 1.5 Volt at I = 25 mA Short-circuit proof and protected against false polarity.				

Frequency range	5 Hz 20 kHz
Electromagnetic compatibility (EMC):	 With cable shield connected to the supply negative pole. Noise generator between housing and electronics 1.5 kV/1.5 µs/max.5Hz (Source resistance 500 Ohm) 2.0 kV/HF-Bursts (Level 4 in accordance with IEC 801-4)

FERROSTAT SPEED PROBE

TYPE SERIES DSD DYNAMIC WITH CONNECTED CABLE

	 ◆ 2.5 kV/1 MHz 	damped resonance (Class	s III in accordance with IEC 255-4)
Housing	Stainless steel 1.4305 splashing water, oil, co components potted in pressure on sensor he Dimensions according Tightening moment	, front side sealed hermetic onducting carbon- or ferrou chemical and age proof sy ead: 10 bar to list and drawing. max.:	cally and resistant against s dust and salt mist. Electronic nthetic resin. Max. allowable
	12 Nm for M12x1 50 Nm for M18x1	25 Nm for M14x1 75 Nm for M22x1	35 Nm for M16x1

Cable and operating Temperature

	Туре			Weight		Cable	Operating
		Part No.	Housing thread	Sensor	Cable	length	temperature °C
	DSD1205.22 SHV	374Z-03781	M12x1	35gr	45gr/m	2m	-40+125
Cable type:		324L-35053: EP cable, 4-wird nax. 4.2 mm, be Operating tempe	e (brown wire is not nding radius min. 60 rature: -100°C to +1	connected) mm, scree 50 °C), 0.2 mm² ened (meta	(AWG 24 al net), wh	l), outer-Ø hite
Requirements for pol wheel		Ferromagnetic to Nodule 0.5, min. eccentricity <0.2	oothed wheel, i.e. US tooth width 6 mm, s mm,	6t37-2, pref ide offset v	ferred evol vith min. to	vent gea oth width	r wheel : < 0.2 mm,
Air gap between sensor and		Air gap between pole wheel and sensor housing:					
		Aodule 0.5: 0 Aodule 1.0: 0 Aodule 2.0: 0	.10.3 mm .11.5 mm .12.0 mm				
Insulation		Housing, cable shield and electronics galvanically isolated. (500V/50Hz/1Min.)					
Protection class		IP68 (head) and IP67 (cable outlet)					
Vibration immunity		5 g in the range of 5 2000 Hz Shock					
Shock immunity		50 g for 20 ms, half sine wave					

FERROSTAT SPEED PROBE TYPE SERIES DSD DYNAMIC WITH CONNECTED CABLE

Further Information

Safety	All mechanical installations must be carried out by an expert. General safety requirements have to be met.					
Connection	The sensor wires are susceptible to radiated noise. For this reason note the following points:					
	 A screened 3 core must be used. The screen must be connected to the appropriate instrument terminal provided. 					
	 The sensor wires must be laid as far as possible from large electrical ma- chines. They must not be run parallel in the vicinity of power cables. 					
	The maximum permissible cable length is dependent upon the sensor voltage, the cable run, along with cable capacitance and inductance. However, it is advantages to keep the distance between sensor and instrument as short as possible. The sensor cable may be lengthened via a terminal box located in an IP20 connection area in accordance with DIN40050 resp. IEC529. We recommend JAQUET extension cable part number 824L-31081					
Installation	This sensor has built in a Differential Hall device. Therefore, the housing has to be aligned to the pole wheel according to the drawing/sensor alignment, mind the slot, flash or the marked hole on the housing. ("Sack- loch"). Deviations in positioning of the sensor may disturb the proper function and they reduce the EMC.					
	The sensor should be mounted with the middle of the face side over the middle of the pole wheel. Where the pole wheel has teeth or slots and with radial sen- sor location, the sensor should normally be mounted over the center. Dependent upon the wheel width a degree of axial movement is permissible. The middle of the sensor must however be a minimum of 3mm from the edge of the pole wheel under all operating conditions.					
	A solid and vibration free mounting of the sensor is important.					
	Eventual sensor vibration relative to the pole wheel can induce additional output pulses.					
	The sensors are insensitive to oil, grease etc and can be installed in arduous conditions. Should the cable be subjected to aggressive materials then Teflon cable should be specified. During installation, the smallest possible pole wheel to sensor gap should be set. The gap should however be set to prevent the face of the sensor ever touching the pole wheel. The overall system calibration is not influenced by the sensor / pole wheel gap.					
Maintenance	Product cannot be repaired					
Transport	Product must be handled with care to prevent damage of the front face.					
Storage	Product must be stored in dry conditions. The storage temperature corresponds to the operation temperature.					
Disposal	Product must be disposed of properly; it must not be disposed as domestic waste.					

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