



Operating Instruction 385E-64672	Double Hall Effect Speed Sensor Y12AD
Function	The Y12AD hall sensor is suitable, in conjunction with a pole wheel , for generating square wave signals propor- tional to rotary speeds. It has a static behaviour, so that pulse generation is guaranteed down to a speed corre- sponding to a frequency of 0Hz. The monitoring element consists of a magnetically biased hall effect semiconductor. The internal two channel structure means that the sensor must be oriented. The sensors have a special orientation sleeve with pin for ease of installation.
	These sensors can also be used as proximity swiches.
Supply voltage	1132 VDC
Current consumption	Max. 20mA (without load)
Signal outputs	1 square wave signal and 1 direction signal Open Collector outputs with 10KΩ pull-up, Imax = -20mA The sensor is able to drive the coil of a relay by using a simple current limiting resistor. No additional protection against voltage peaks are needed. Limit values: I sink<70mA, L<800mH
Frequency range	0 Hz15 kHz
Insulation	Housing, cable shield and electronic galvanically isolated. (500V/50Hz/1Min.)
Operating temperature	- 20+100°C.
Housing	Stainless steel 1.4305. Dimensions according dimensional drawing. Max. allowable pressure applied to the front face: 100 bar
Cable / Connector	With Euro M12 thread 4 pin connector
Protection class	Sensor head IP 68, cable / entrance IP 67 , connector IP68 (mated)
Vibration immunity	30 g in the range 52000 Hz.
Shock immunity	50 g during 20 ms, half-sine wave
Weight	~ 120 g , including 1m cable.
Air gap	For pole wheel M1 (DP 25.4): 0.1 0.5 mm, for pole wheel M2 (DP 12.7): 0.1 1.5 mm
Pole wheel	Ferromagnetic toothed wheel, i.e. B. USt37-2, type 1018 CRS, preferred involute gear form Module \geq 1 (DP 25.4), min. tooth width 10 mm, side offset with min. tooth width: < 0.2 mm, eccentricity <0.2mm.
Installation	The sensor wires must be laid as far as possible from large electrical machines. They must not be run parallel in the vicinity of power cables. The maximum permissible cable length is 20m (65 feet).
\wedge	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 sensor location, the sensor would normally be mounted over the centre. Dependent upon the wheel width a degree of axial movement is permissible.

A solid and vibration free mounting of the sensor is important.

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Y12AD : 385Z-05335





Mounting holes



pulse diagram



