

Inductive slot sensor

SJ3,5-SN

- 3.5 mm slot width
- Usable up to SIL 3 acc. to IEC 61508
- Extended temperature range
- Ferrous targets

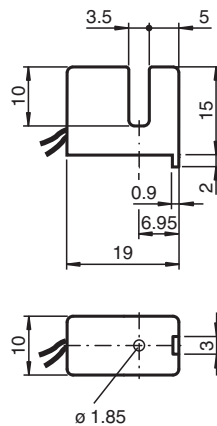


Function

The inductive slot sensors are suitable for use in particularly tight installation spaces, e.g. for limit detection in pointer instruments. In addition to the reference target, ferromagnetic metals can also be used as actuator elements. With a variety of approvals for use in hazardous areas, the sensors are equipped for global use.

In combination with a safety switch amplifier from Pepperl+Fuchs, e.g. KFD2-SH-EX1, use in safety-related applications up to SIL 3 is possible. The sensor can also be used in applications up to SIL 2 with safety-related NAMUR switch amplifiers.

Dimensions



Technical Data

General specifications

Switching function	Normally closed (NC)
Output type	NAMUR with safety function
Slot width	3.5 mm
Depth of immersion (lateral)	5 ... 7 typ. 6 mm
Reference target	10 x 7 x 0.3 mm ³ , Al
Output type	2-wire

Nominal ratings

Nominal voltage	U _o	8.2 V (R _i approx. 1 kΩ)
Switching frequency	f	0 ... 3000 Hz
Hysteresis	H	with NAMUR switch amplifier: 0.045 mm (e. g. Pepperl+Fuchs KCD2-SR-Ex1.LB) with safety switch amplifier 0.025 mm (e. g. Pepperl+Fuchs KFD2-SH-Ex1)

Technical Data

Suitable for 2:1 technology	yes , with reverse polarity protection diode
Rate of current rise	-4.5 mA / mm
Current consumption	
Measuring plate not detected	≥ 3 mA
Measuring plate detected	0.2 ... 1 mA
Functional safety related parameters	
Safety Integrity Level (SIL)	SIL 3
MTTF _d	11800 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %
Compliance with standards and directives	
Standard conformity	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
Standards	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
Approvals and certificates	
IECEX approval	
Equipment protection level Ga	IECEX PTB 11.0092X
Equipment protection level Gb	IECEX PTB 11.0092X
Equipment protection level Da	IECEX PTB 11.0092X
Equipment protection level Mb	IECEX PTB 11.0092X
ATEX approval	
Equipment protection level Ga	PTB 00 ATEX 2049 X
Equipment protection level Gb	PTB 00 ATEX 2049 X
Equipment protection level Da	PTB 00 ATEX 2049 X
UL approval	cULus Listed, General Purpose
Ordinary Location	E87056
Hazardous Location	E501628
Control drawing	116-0454
CCC approval	
Hazardous Location	2020322315002308
NEPSI approval	
NEPSI certificate	GYJ16.1392X
Ambient conditions	
Ambient temperature	-50 ... 100 °C (-58 ... 212 °F) Safety application: -40 ... 100°C
Mechanical specifications	
Connection type	flexible leads LiY
Housing material	PBT
Degree of protection	IP67
Cable	
Cable diameter	1.1 mm ± 0.1 mm
Bending radius	> 10 x cable diameter
Material	PVC
Core cross section	0.14 mm ²
Length	L 500 mm
Note	adjustable stop Security relevant only up to -40°C
General information	
Use in the hazardous area	see instruction manuals

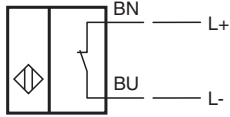
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".


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PEPPERL+FUCHS

Connection



Accessories

	F-KD-Ex2	Terminal module for NAMUR sensors
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Application

**Danger!**

In safety-related applications the sensor must be operated with a qualified fail safe interface from Pepperl+Fuchs, such as KFD2-SH-EX1.

Consider the "exida Functional Safety Assessment" document which is available on www.pepperl-fuchs.com as an integral part of this product's documentation.