

## 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

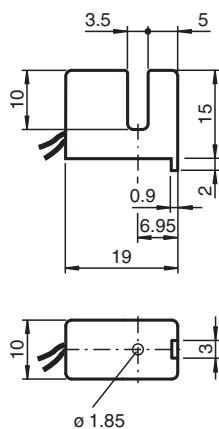


### Function

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

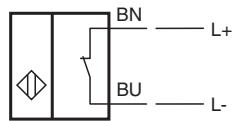
#### General specifications

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 <sup>3</sup> , Al	
Output type	2-wire	
<b>Nominal ratings</b>		
Nominal voltage	$U_o$	8.2 V ( $R_i$ approx. 1 k $\Omega$ )
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)
Suitable for 2:1 technology	yes, with reverse polarity protection diode	

## Technical Data

Rate of current rise	-4.5 mA / mm	
Current consumption		
Measuring plate not detected	≥ 3 mA	
Measuring plate detected	0.2 ... 1 mA	
<b>Functional safety related parameters</b>		
Safety Integrity Level (SIL)	SIL 3	
MTTF <sub>d</sub>	11800 a	
Mission Time (T <sub>M</sub> )	20 a	
Diagnostic Coverage (DC)	0 %	
<b>Compliance with standards and directives</b>		
Standard conformity		
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999	
Standards	EN IEC 60947-5-2	
<b>Approvals and certificates</b>		
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	
<b>Ambient conditions</b>		
Ambient temperature	-50 ... 100 °C (-58 ... 212 °F) Safety application: -40 ... 100°C	
<b>Mechanical specifications</b>		
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 <sup>2</sup>	
Length	L	500 mm
Dimensions		
Height	15 mm	
Width	10 mm	
Length	19.5 mm	
Note	adjustable stop Security relevant only up to -40°C	
<b>General information</b>		
Use in the hazardous area	see instruction manuals	

## Connection



## 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](http://www.pepperl-fuchs.com) as an integral part of this product's documentation.