

## Inductive slot sensor SJ3,5-SN-Y70185031

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

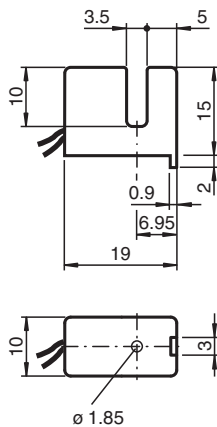


### Function

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

#### Nominal ratings

Nominal voltage	U <sub>o</sub>	8.2 V (R <sub>i</sub> 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)
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
Housing material		PBT
Degree of protection		IP67
Cable		
Wire end ferrules		yes
Cable diameter		1.1 mm ± 0.1 mm
Bending radius		> 10 x cable diameter
Material		PVC
Number of cores		2
Core cross section		0.14 mm <sup>2</sup>
Length	L	180 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>		

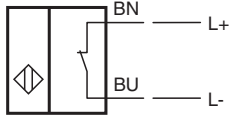
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## Technical Data

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.