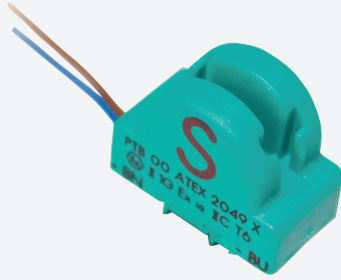


# Inductive slot sensor

## SJ2-SN



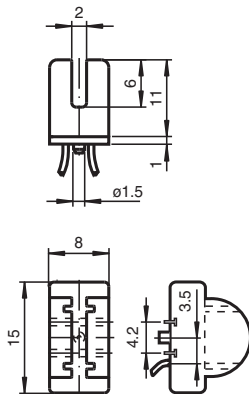
- 2 mm slot width
- Usable up to SIL 3 acc. to IEC 61508
- Ferrous targets



### 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	2 mm
Depth of immersion (lateral)	5 ... 7 typ. 6 mm
Reference target	5 x 8 x 0.5 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 ... 5000 Hz
Hysteresis	H	with NAMUR switch amplifier: 0.02 mm (e. g. Pepperl+Fuchs KCD2-SR-Ex1.LB) with safety switch amplifier 0.01 mm (e. g. Pepperl+Fuchs KFD2-SH-Ex1)

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

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## Technical Data

Suitable for 2:1 technology	yes , with reverse polarity protection diode
Rate of current rise	-11 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 Load Type: General Purpose Circuitry: Class 2 Power Source Enclosure Type Rating: Type 1 Supply/Switching Voltage: 8.2 V DC
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	-40 ... 100 °C (-40 ... 212 °F)
<b>Mechanical specifications</b>	
Connection type	flexible leads LIFYW
Housing material	PBT
Degree of protection	IP67
Cable	
Cable diameter	0.75 mm ± 0.15 mm
Bending radius	> 10 x cable diameter
Material	PVC
Core cross section	0.06 mm <sup>2</sup>
Length	L 500 mm
Mass	2.5 g
Dimensions	
Height	13 mm
Width	15 mm
Length	8 mm
Note	adjustable stop

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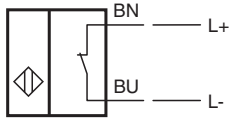
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## Technical Data

### General information

Use in the hazardous area	see instruction manuals
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## Connection Assignment



## Application

**Danger!**

In security applications, the sensor must be operated on a qualified safety switch amplifier from Pepperl+Fuchs (e.g., KFD2-SH-Ex1). Observe the "exida Functional Safety Assessment" document, which belongs to this sensor and is available as part of the product documentation from [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

**Attention!**

NAMUR-compliant switch amplifiers can, due to a low current consumption at the recorded measuring plate (0.2 mA ... 1 mA), incorrectly report cable breaks (required in accordance with EN 60947-5-6:2000: 0.4 mA ... 1 mA).