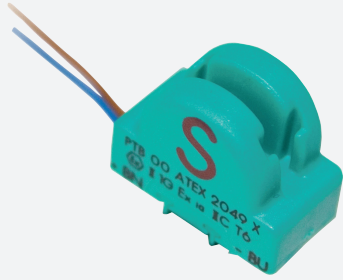


# Inductive slot sensor

## SJ2-SN-Y89620



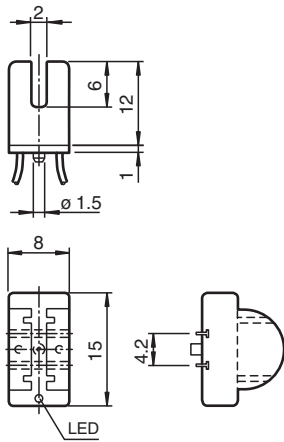
- 2 mm slot width
- Usable up to SIL 3 acc. to IEC 61508
- Ferrous targets



### 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)

Release date: 2023-01-27 Date of issue: 2023-01-27 Filename: 70133006\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

## Technical Data

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 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
<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		
Ordinary Location		E87056
Hazardous Location		E501628
Control drawing		116-0454
<b>Ambient conditions</b>		
Ambient temperature		-40 ... 100 °C (-40 ... 212 °F)
<b>Mechanical specifications</b>		
Connection type		flexible leads LiY
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	20 mm
Mass		2.5 g
Note		adjustable stop
<b>General information</b>		
Use in the hazardous area		see instruction manuals

Release date: 2023-01-27 Date of issue: 2023-01-27 Filename: 70133006\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.comUSA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.comGermany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.comSingapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PEPPERL+FUCHS**

## Connection



Release date: 2023-01-27 Date of issue: 2023-01-27 Filename: 70133006\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

 **PEPPERL+FUCHS**

## 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).