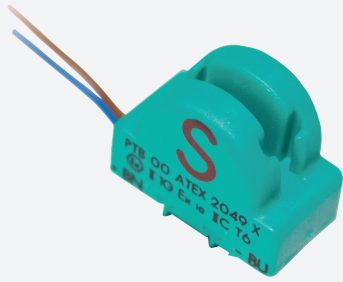


Inductive slot sensor

SJ2-SN



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

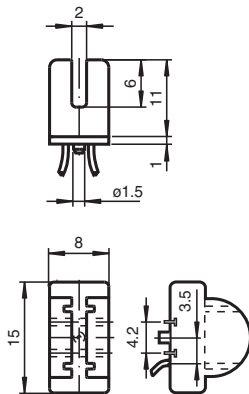


Function

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 ³ , Al
Output type	2-wire

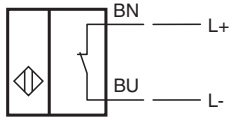
Nominal ratings

Nominal voltage	U _o	8.2 V (R _i 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)

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	
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 IEC 60947-5-2	
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		
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	-40 ... 100 °C (-40 ... 212 °F)	
Mechanical specifications		
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 ²	
Length	L	500 mm
Mass	2.5 g	
Dimensions		
Height	13 mm	
Width	15 mm	
Length	8 mm	
Note	adjustable stop	
General information		
Use in the hazardous area	see instruction manuals	

Release date: 2025-06-18 Date of issue: 2025-06-18 Filename: 70133004_eng.pdf

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.

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).