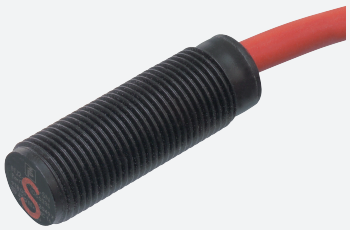
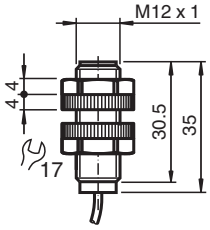


Inductive sensor

NJ2-12GK-SN-0,3M

- 2 mm flush
- Usable up to SIL 3 acc. to IEC 61508

Dimensions



Technical Data

General specifications		
Switching function		Normally closed (NC)
Output type		NAMUR with safety function
Rated operating distance	s_n	2 mm
Installation		flush
Assured operating distance	s_a	0 ... 1.62 mm
Reduction factor r_{Al}		0.4
Reduction factor r_{Cu}		0.3
Reduction factor r_{304}		0.85
Safety Integrity Level (SIL)		up to SIL3 acc. to IEC 61508 **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 as an integral part of this product's documentation.
Output type		2-wire
Nominal ratings		
Nominal voltage	U_o	8.2 V (R_i approx. 1 kΩ)
Operating voltage	U_B	5 ... 25 V [1)]
Switching frequency	f	0 ... 2000 Hz

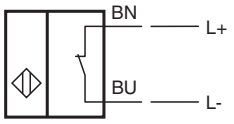
Release date: 2024-05-28 Date of issue: 2024-06-02 Filename: 70133165_eng.pdf

Technical Data

Suitable for 2:1 technology		yes , with reverse polarity protection diode
Current consumption		
Measuring plate not detected		≥ 3 mA at nominal voltage
Measuring plate detected		≤ 1 mA at nominal voltage
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 3
$MTTF_d$		7660 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		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
Ambient conditions		
Ambient temperature		-40 ... 100 °C (-40 ... 212 °F)
Mechanical specifications		
Connection type		cable
Housing material		PP
Sensing face		PP
Degree of protection		IP68
Cable		
Cable diameter		4.8 mm ± 0.2 mm
Bending radius		> 10 x cable diameter
Material		silicone
Core cross section		0.34 mm^2
Length	L	0.3 m
Dimensions		
Length		34 mm
Diameter		12 mm
General information		
Use in the hazardous area		see instruction manuals

Release date: 2024-05-28 Date of issue: 2024-06-02 Filename: 70133165_eng.pdf

Connection



Release date: 2024-05-28 Date of issue: 2024-06-02 Filename: 70133165_eng.pdf

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 as an integral part of this product's documentation.

Release date: 2024-05-28 Date of issue: 2024-06-02 Filename: 70133165_eng.pdf