

# Inductive sensor

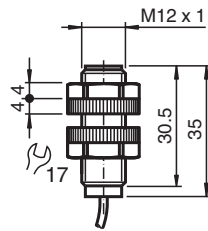
## NJ4-12GK-SN-15M



- 4 mm non-flush
- Usable up to SIL 3 acc. to IEC 61508
- ATEX approval Ex-i and Ex-nA/tc for zone 0-2 and zone 20-22
- Degree of protection IP68



### Dimensions



### Technical Data

#### General specifications

Switching function		Normally closed (NC)
Output type		NAMUR with safety function
Rated operating distance	$s_n$	4 mm
Installation		non-flush
Assured operating distance	$s_a$	0 ... 3.24 mm
Reduction factor $r_{AI}$		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 <b>Danger!</b> 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 <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> 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 k $\Omega$ )
Switching frequency	$f$	0 ... 1500 Hz
Current consumption		

Release date: 2020-12-15 Date of issue: 2020-12-15 Filename: 250928\_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

Measuring plate not detected	≥ 3 mA
Measuring plate detected	≤ 1 mA
<b>Functional safety related parameters</b>	
Safety Integrity Level (SIL)	SIL 3
MTTF <sub>d</sub>	10660 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 Gc (ic)	PF13CERT2895 X
Equipment protection level Gc (nA)	PF15CERT3754X
Equipment protection level Da	PTB 00 ATEX 2049 X
Equipment protection level Dc (tc)	PF15CERT3774X
EAC conformity	TR CU 012/2011
FM approval	
Control drawing	116-0165
UL approval	
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	cable silicone , 15 m
Core cross-section	0.34 mm <sup>2</sup>
Housing material	Crastin (PBT), black
Sensing face	Crastin (PBT), black
Degree of protection	IP68
Cable	
Cable diameter	4.8 mm ± 0.2 mm
Bending radius	> 10 x cable diameter
Note	Security relevant only up to -40°C
<b>General information</b>	
Use in the hazardous area	see instruction manuals

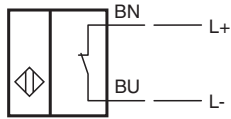
Release date: 2020-12-15 Date of issue: 2020-12-15 Filename: 250928\_eng.pdf

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



## Accessories

	<b>BF 12</b>	Mounting flange, 12 mm
	<b>EXG-12</b>	Quick mounting bracket with dead stop

Release date: 2020-12-15 Date of issue: 2020-12-15 Filename: 250928\_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](http://www.pepperl-fuchs.com) as an integral part of this product's documentation.