

# Inductive sensor

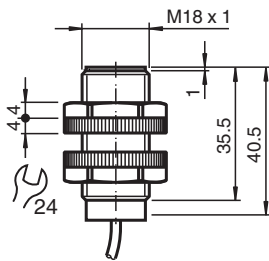
## NJ3-18GK-S1N-15M



- Nonferrous targets
- 3 mm flush in ST37 / 1.0037
- Usable up to SIL 3 acc. to IEC 61508
- Degree of protection IP68
- ATEX-/IECEX-approvals for zone 0/1/20/21 (Ex i)
- ATEX-/IECEX-approvals for zone 2/22 (Ex ec/tc)



### Dimensions



### Technical Data

General specifications		
Switching function		Normally open (NO)
Output type		NAMUR with safety function
Rated operating distance	$s_n$	3 mm
Installation		flush in mild steel
Assured operating distance	$s_a$	0 ... 2.4 mm
Actual operating distance	$s_r$	2.7 ... 3.3 mm typ.
Reduction factor $r_{AI}$		1
Reduction factor $r_{Cu}$		1
Reduction factor $r_{304}$		0
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 ... 200 Hz

Release date: 2023-01-27 Date of issue: 2023-01-27 Filename: 70155573\_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

Suitable for 2:1 technology	yes , Reverse polarity protection diode not required
Current consumption	
Measuring plate not detected	≤ 1 mA
Measuring plate detected	≥ 3 mA
<b>Functional safety related parameters</b>	
Safety Integrity Level (SIL)	SIL 3
MTTF <sub>d</sub>	7666 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %
<b>Compliance with standards and directives</b>	
Standard conformity	
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 Gc (ec)	IECEX TUR 21.0017X
Equipment protection level Da	IECEX PTB 11.0092X
Equipment protection level Dc (tc)	IECEX TUR 21.0018X
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 (ec)	TÜV 20 ATEX 8523 X
Equipment protection level Da	PTB 00 ATEX 2049 X
Equipment protection level Dc (tc)	TÜV 20 ATEX 8524 X
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	-25 ... 100 °C (-13 ... 212 °F)
<b>Mechanical specifications</b>	
Connection type	cable
Housing material	Crastin (PBT), black
Sensing face	Crastin (PBT), black
Degree of protection	IP68
Cable	
Cable diameter	6.8 mm ± 0.2 mm
Bending radius	> 10 x cable diameter
Material	silicone
Core cross section	0.75 mm <sup>2</sup>
Length	L 15 m
Note	only for non-ferrous metal
<b>General information</b>	
Use in the hazardous area	see instruction manuals

Release date: 2023-01-27 Date of issue: 2023-01-27 Filename: 70155573\_eng.pdf

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

 Pepperl+Fuchs Group  
www.pepperl-fuchs.com

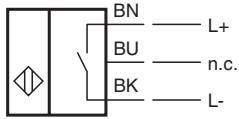
 USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

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


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

 **PEPPERL+FUCHS**

**Connection**



**Accessories**

	<p><b>BF 18</b></p>	<p>Mounting flange, 18 mm</p>
---	---------------------	-------------------------------

Release date: 2023-01-27 Date of issue: 2023-01-27 Filename: 70155573\_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.

Release date: 2023-01-27 Date of issue: 2023-01-27 Filename: 70155573\_eng.pdf

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

Pepperl+Fuchs Group  
[www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

USA: +1 330 486 0001  
[fa-info@us.pepperl-fuchs.com](mailto:fa-info@us.pepperl-fuchs.com)

Germany: +49 621 776 1111  
[fa-info@de.pepperl-fuchs.com](mailto:fa-info@de.pepperl-fuchs.com)

Singapore: +65 6779 9091  
[fa-info@sg.pepperl-fuchs.com](mailto:fa-info@sg.pepperl-fuchs.com)

 **PEPPERL+FUCHS**