

Inductive sensor

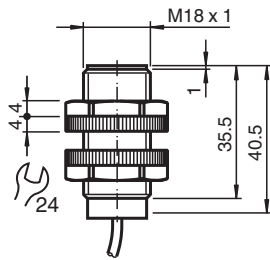
NJ3-18GK-S1N



- 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 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 k Ω)
Switching frequency	f	0 ... 200 Hz
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

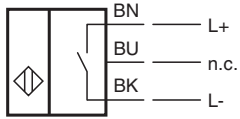
Functional safety related parameters

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Technical Data

Safety Integrity Level (SIL)		SIL 3
MTTF _d		7666 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Compliance with standards and directives		
Standard conformity		
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 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 2024322315005947 2024322315005860
Ambient conditions		
Ambient temperature		-25 ... 100 °C (-13 ... 212 °F)
Mechanical specifications		
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 ²
Length	L	2 m
Dimensions		
Length		39 mm
Diameter		18 mm
Note		only for non-ferrous metal
General information		
Scope of delivery		Supplied with 2 nuts
Use in the hazardous area		see instruction manuals

Connection Assignment



Application

**Danger!**

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