



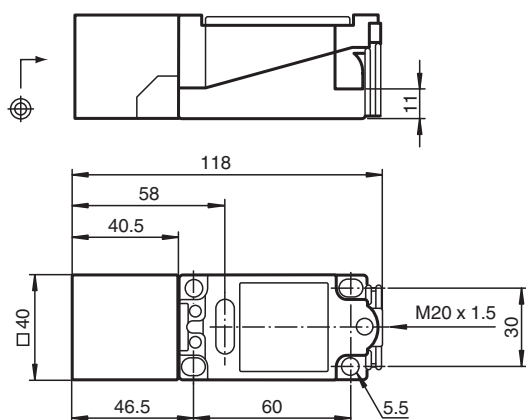
Inductive sensor

NJ20S+U1+N

- 20 mm non-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	20 mm
Installation		non-flush
Assured operating distance	s_a	0 ... 16.2 mm
Reduction factor r_{AI}		0.4
Reduction factor r_{Cu}		0.3
Reduction factor r_{304}		0.85
Output type		2-wire

Nominal ratings

Nominal voltage	U_o	8.2 V (R_i approx. 1 k Ω)
Switching frequency	f	0 ... 150 Hz
Current consumption		
Measuring plate not detected		≥ 3 mA
Measuring plate detected		≤ 1 mA

Functional safety related parameters

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

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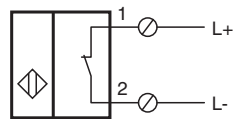
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PEPPERL+FUCHS




Technical Data

Safety Integrity Level (SIL)	SIL 3
MTTF _d	9191 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 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
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
EAC conformity	TR CU 012/2011
UL approval	cULus Listed, General Purpose
Ordinary Location	E87056
Hazardous Location	E501628
Control drawing	116-0454
CSA approval	cCSAus Listed, General Purpose
CCC approval	
Hazardous Location	2020322315002281
NEPSI approval	
NEPSI certificate	GYJ16.1392X
Ambient conditions	
Ambient temperature	-40 ... 100 °C (-40 ... 212 °F)
Mechanical specifications	
Connection type	screw terminals
Information for connection	A maximum of two conductors with the same core cross section may be mounted on one terminal connection! tightening torque 1.2 Nm + 10 %
Core cross-section	up to 2.5 mm ² , stripped insulation length: 7 mm
Minimum core cross-section	without wire end ferrule 0.5 mm ² , with connector sleeves 0.34 mm ²
Maximum core cross-section	without wire end ferrule 2.5 mm ² , with connector sleeves 1.5 mm ²
Connection (system side)	screw terminals, M20 x 1.5 cable gland, usable thread length 9.1 mm, screw-in depth max. 9.1 mm
Housing material	PBT
Sensing face	PBT
Degree of protection	IP68
General information	
Use in the hazardous area	see instruction manuals

Connection



Accessories

	MHW 01	Modular mounting bracket
	MH 04-2681F	Mounting aid for VariKont, +U1+ and +U9*
	MH 04-2057B	Mounting aid for VariKont and +U1+

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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.