

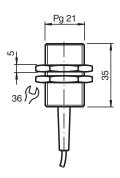
Inductive sensor

NJ6-22-SN-G-10M

- 6 mm 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

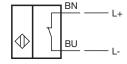


Technical Data

General specifications		
Switching function		Normally closed (NC)
Output type		NAMUR with safety function
Rated operating distance	Sn	6 mm
Installation		flush
Assured operating distance	Sa	0 4.86 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
Switching frequency	f	0 2000 Hz

Suitable for 2:1 technology Current consumption Measuring plate not detected Measuring plate of tected ≤ 3 mA Measuring plate detected ≤ 1 mA Functional safety related parameters Safety Integrity Level (SIL) MTTFd 11850 a Mission Time (T _M) 20 a Diagnostic Coverage (DC) 0% Compliance with standards and directives Standard conformity NAMUR EN 60947-5-6:2000 EEC 60947-5-6:1999 Standards EN 60947-5-2:2007 EEC 6094	Technical Data	
Current consumption ≥ 3 mA Measuring plate detected ≥ 1 mA Functional safety related parameters Functional safety related parameters Safety Integrity Level (SIL) SIL 3 MTTFq 11850 a Mission Time (Trµ) 20 a Diagnostic Coverage (DC) 0 % Compliance with standards and directives Standard conformity EN 60947-5-6:2000 [EC 60947-5-6:1999] Standards EN 60947-5-2:2007 [EC 60947-5-2:2007] EN 60947-5-2:2007 [EC 60947-5-2:2007] EC 60947-5-2:2007 EN 60947-5-2:2007 [EC 60947-5-2:2007]		
Measuring plate not detected ≤ 1 mA Functional safety related parameters Safety Integrity Level (SIL) SIL 3 MTTFd 11850 a Mission Time (Tw) 20 a Diagnostic Coverage (DC) 0 % Compliance with standards and directives Standard conformity NAMUR EN 60947-5-6:2000 [EC 60947-5-6:1999] Standards EN 60947-5-6:2000 [EC 60947-5-6:1999] Standards EN 60947-5-2-2007 [EC 60947-5-2:2007] EN 60947-5-2-2007 [EC 60947-5-2:2007] EN 60947-5-2-2007 [EC 60947-5-2:2007]	Suitable for 2:1 technology	yes, with reverse polarity protection diode
Measuring plate detected	Current consumption	
Functional safety related parameters Safety Integrity Level (SIL) SIL 3 MTTFa 11850 a Mission Time (T _M) 20 a Diagnostic Coverage (DC) 0 % Compliance with standards and directives Standard conformity NAMUR EN 60047-5-6:2000 [EC 60947-5-2:2000] Standards EN 60947-5-2:2007 Ren 60947-5-2:2007 EN 60947-5-2:2007 Jec 60947-5-2:2007	Measuring plate not detected	≥ 3 mA
Safety Integrity Level (SIL) SIL 3 MTTF _d 11850 a Mission Time (T _M) 20 a Diagnostic Coverage (DC) 0% Compliance with standards and directives Value Standard conformity In 60947-5-6:2000 NAMUR EN 60947-5-6:2007 EN 60947-5-6:1999 EN 60947-5-2:2007 Standards EN 60947-5-2:2007 EN 60947-5-2:2012 EN 60947-5-2:2012 EC 60947-5-2:2012 EN 60947-5-2:2012 EN 60947-5-2:2012	Measuring plate detected	≤1 mA
MTTF _d 11850 a Mission Time (T _M) 20 a Diagnostic Coverage (DC) 0 % Compliance with standards and directives Standard conformity NAMUR EN 60947-5-6:2000 [EC 80947-5-6:2000] Standards EN 60947-5-2:2007 EN 60947-5-2:2007 EN 60947-5-2:2007 [EC 80947-5-2:2007] EN 60947-5-2:2007 EN 60947-5-2:2007 EN 60947-5-2:2007 [EC 80947-5-2:2007] UL approval CULus Listed, General Purpose Ordinary Location E87056 Hazardous Location E501628 Control drawing 116-0454 CCC approval CCC approval / marking not required for products rated ≤36 V Ambient conditions Ambient temperature -40 100 °C (-40 212 °F) Mechanical specifications Connection type Conection type cable silicone , 10 m Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable diameter 6 mm ± 0.2 mm Cable diameter 6 mm ± 0.2 mm	Functional safety related parameters	
Mission Time (T _M) 20 a Diagnostic Coverage (DC) 0 % Compliance with standards and directives Standard conformity EN 60947-5-6:2000 EC 60947-5-6:1999 EN 60947-5-2:2007 EN 60947-5-2:2000 EN 60947-5-2:2007 EN 60947-6-2:2007	Safety Integrity Level (SIL)	SIL 3
Diagnostic Coverage (DC) 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 60947-5-2:2007 EN 60947-5-2:2007 IEC	MTTF _d	11850 a
Standard conformity NAMUR EN 60947-5-6:2000 [EC 60947-5-6:1999] Standards EN 60947-5-2:2007 EN 60	Mission Time (T _M)	20 a
Standard conformity IEN 60947-5-6:2000 NAMUR EN 60947-5-6:1999 Standards EN 60947-5-2:2007 EN 60947-5-2:2007 EN 60947-5-2:2007 EN 60947-6-2:2007 EN 60947-6-2:2007 EN 60947-6-2:2007 EN 60947-6-2:2007 EN 60947-6-2:2007 EN 60947-6-2:2007 EN 60947-5-2:2007 EN 60947-6-2:2007	Diagnostic Coverage (DC)	0 %
NAMUR	Compliance with standards and directives	
EC 60947-5-6:1999	Standard conformity	
EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2007 IEC 60947-5007 IEC 60947-5007 IEC 60947-5007 IEC 60947-5007 IEC 60947-5007 IEC 60947-5007 IEC 60947-500	NAMUR	
UL approval cULus Listed, General Purpose Ordinary Location E87056 Hazardous Location E501628 Control drawing 116-0454 CCC approval CCC approval / marking not required for products rated ≤36 V Ambient conditions Ambient temperature -40 100 °C (-40 212 °F) Mechanical specifications Connection type cable silicone , 10 m Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Standards	EN 60947-5-2/A1:2012 IEC 60947-5-2:2007
Ordinary Location E87056 Hazardous Location E501628 Control drawing 116-0454 CCC approval CCC approval / marking not required for products rated ≤36 V Ambient conditions -40 100 °C (-40 212 °F) Mechanical specifications Connection type Connection type cable silicone , 10 m Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable diameter Gable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Approvals and certificates	
Hazardous Location E501628 Control drawing 116-0454 CCC approval CCC approval / marking not required for products rated ≤36 V Ambient conditions Ambient temperature -40 100 °C (-40 212 °F) Mechanical specifications Connection type cable silicone , 10 m Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	UL approval	cULus Listed, General Purpose
Control drawing 116-0454 CCC approval CCC approval / marking not required for products rated ≤36 V Ambient conditions Ambient temperature -40 100 °C (-40 212 °F) Mechanical specifications Connection type cable silicone , 10 m Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Ordinary Location	E87056
CCC approval CCC approval / marking not required for products rated ≤36 V Ambient conditions Ambient temperature -40 100 °C (-40 212 °F) Mechanical specifications Connection type cable silicone , 10 m Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Hazardous Location	E501628
Ambient conditions Ambient temperature -40 100 °C (-40 212 °F) Mechanical specifications Connection type cable silicone , 10 m Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Control drawing	116-0454
Ambient temperature -40 100 °C (-40 212 °F) Mechanical specifications Connection type cable silicone , 10 m Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	CCC approval	CCC approval / marking not required for products rated ≤36 V
Connection type cable silicone , 10 m Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Ambient conditions	
Connection type cable silicone , 10 m Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Ambient temperature	-40 100 °C (-40 212 °F)
Core cross-section 0.75 mm² Housing material stainless steel (303/1.4305) Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable diameter Bending radius > 10 x cable diameter General information Sensing face	Mechanical specifications	
Housing material stainless steel (303/1.4305) Sensing face Valox (PBT), green Degree of protection IP68 Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Connection type	cable silicone , 10 m
Sensing face Valox (PBT) , green Degree of protection IP68 Cable Cable diameter Bending radius > 10 x cable diameter General information	Core cross-section	0.75 mm ²
Degree of protection IP68 Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Housing material	stainless steel (303/1.4305)
Cable Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Sensing face	Valox (PBT), green
Cable diameter 6 mm ± 0.2 mm Bending radius > 10 x cable diameter General information	Degree of protection	IP68
Bending radius > 10 x cable diameter General information	Cable	
General information	Cable diameter	6 mm ± 0.2 mm
	Bending radius	> 10 x cable diameter
Use in the hazardous area see instruction manuals	General information	
	Use in the hazardous area	see instruction manuals

Connection



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.

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