

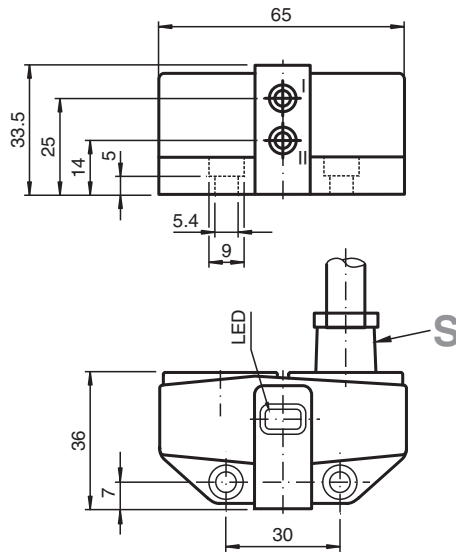


## Inductive sensor NCN3-F31-N4-K

- Direct mounting on standard actuators
- Fixed setting
- EC-Type Examination Certificate TÜV99 ATEX 1479X
- Usable up to SIL 2 acc. to IEC 61508



### Dimensions



### Technical Data

#### General specifications

Switching function		2 x normally closed (NC)
Output type		NAMUR
Rated operating distance	$s_n$	3 mm
Installation		flush mountable
Assured operating distance	$s_a$	0 ... 2.4 mm
Actual operating distance	$s_r$	2.7 ... 3.3 mm typ.
Actuating element		Stainless steel 1.4305 / AISI 303 8.5 mm x 8.5 mm x 0.5 mm
Reduction factor $r_{AI}$		0.5
Reduction factor $r_{Cu}$		0.4

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

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## Technical Data

Reduction factor $r_{304}$		1
Reduction factor $r_{317}$		1.3
Reduction factor $r_{Brass}$		0.6
Output type		2-wire
<b>Nominal ratings</b>		
Nominal voltage	$U_o$	8.2 V ( $R_i$ approx. 1 k $\Omega$ )
Switching frequency	f	0 ... 3 kHz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		yes
Suitable for 2:1 technology		yes , Reverse polarity protection diode not required
Current consumption		
Measuring plate not detected		$\geq 3$ mA
Measuring plate detected		$\leq 1$ mA
Time delay before availability	$t_v$	$\leq 1.1$ ms
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
Safety Integrity Level (SIL)		SIL 2
MTTF <sub>d</sub>		1470 a
Mission Time ( $T_M$ )		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
Electromagnetic compatibility		NE 21:2007
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 TUN 17.0021X
Equipment protection level Gb		IECEX TUN 17.0021X
Equipment protection level Da		IECEX TUN 17.0021X
Equipment protection level Mb		IECEX TUN 17.0021X
ATEX approval		
Equipment protection level Ga		TÜV 99 ATEX 1479 X
Equipment protection level Gb		TÜV 99 ATEX 1479 X
Equipment protection level Gc (ic)		PF13CERT2895 X
Equipment protection level Da		TÜV 99 ATEX 1479 X
EAC conformity		TR CU 012/2011
UL approval		
Ordinary Location		E87056
Hazardous Location		E501628
Control drawing		116-0456
CSA approval		cCSAus Listed, General Purpose
CCC approval		
Hazardous Location		2020322315002262
NEPSI approval		
NEPSI certificate		GYJ19.1410X
<b>Ambient conditions</b>		

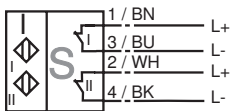
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Ambient temperature	-25 ... 100 °C (-13 ... 212 °F) <b>Note:</b> Under the same product name but with a different part no., this product has a predecessor with a restricted temperature range (up to +70 °C). The temperature range specified here (up to +100°C) only applies to sensors with part no. 2239**.
Storage temperature	-40 ... 100 °C (-40 ... 212 °F)
<b>Mechanical specifications</b>	
Connection (system side)	PVC cable , 5 m
Core cross-section (system side)	0.75 mm <sup>2</sup>
Housing material	PBT
Sensing face	PBT
Degree of protection	IP66 / IP67
<b>Cable</b>	
Cable diameter	6.8 mm ± 0.2 mm
Bending radius	> 10 x cable diameter
<b>General information</b>	
Use in the hazardous area	see instruction manuals

## Connection


N4-K



## Matching System Components

	<b>BT115A</b>	Activator for F31 series
	<b>BT115X</b>	Activator for F31 series

## Accessories

	<b>BT65B</b>	Activator for F31 series
	<b>BT115B</b>	Activator for F31 series
	<b>BT65A</b>	Activator for F31 series
	<b>BT65X</b>	Activator for F31 series

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