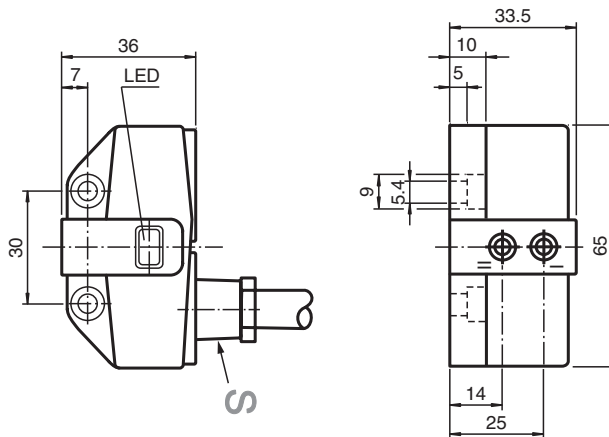


Inductive sensor NBN3-F31-Z8-K

- Direct mounting on standard actuators
- Fixed setting



Dimensions



Technical Data

General specifications		
Switching function		2 x normally open (NO)
Output type		Two-wire
Rated operating distance	s_n	3 mm
Installation		flush mountable
Output polarity		DC
Assured operating distance	s_a	0 ... 2.43 mm
Actual operating distance	s_r	2.7 ... 3.3 mm typ. 3 mm
Reduction factor r_{Al}		0.5
Reduction factor r_{Cu}		0.4
Reduction factor r_{304}		1
Reduction factor r_{St37}		1.1
Output type		4-wire
Nominal ratings		
Operating voltage	U_B	6 ... 60 V DC
Switching frequency	f	0 ... 500 Hz
Hysteresis	H	typ. 5 %

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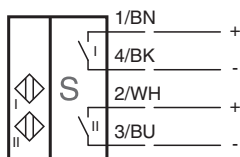
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Technical Data

Reverse polarity protection		reverse polarity tolerant
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 5.5 V
Operating current	I_L	4 ... 100 mA
Lowest operating current	I_m	4 mA
Off-state current	I_r	0.5 ... 0.9 mA typ. 0.65 mA
Time delay before availability	t_v	≤ 40 ms
Switching state indicator		LED, yellow
Limit data		
Tightening torque, fastening screws		0.4 Nm
Functional safety related parameters		
MTTF _d		570 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Compliance with standards and directives		
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
Approvals and certificates		
UL approval		cULus Listed, General Purpose, Class 2 Power Source
CCC approval		Certified by China Compulsory Certification (CCC)
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Mechanical specifications		
Connection (system side)		PVC cable 5 m
Core cross section (system side)		0.75 mm ²
Housing material		PBT
Sensing face		PBT
Degree of protection		IP67
Cable		
Cable diameter		6.8 mm ± 0.2 mm
Bending radius		> 10 x cable diameter
Mass		196 g
Tightening torque, fastening screws		4 Nm ... 5 Nm

Connection



Matching System Components

	BT115A	Activator for F31 series
	BT115X	Activator for F31 series

Accessories

	BT65B	Activator for F31 series
	BT115B	Activator for F31 series
	BT65A	Activator for F31 series
	BT65X	Activator for F31 series

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