



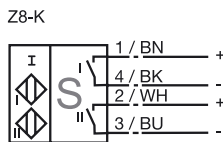
**Model Number**

NBN3-F31-Z8-K-10M

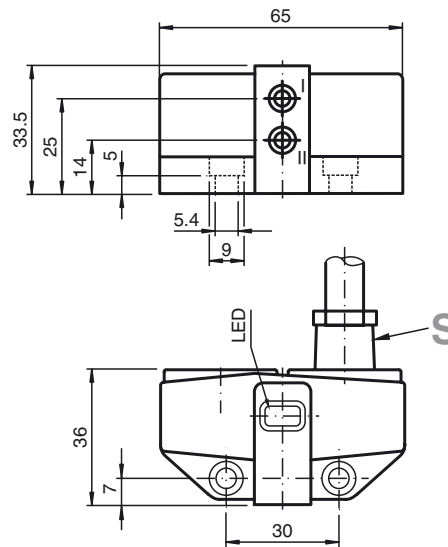
**Features**

- Direct mounting on standard actuators
- Compact and stable housing
- Fixed setting
- Satisfies machinery directive

**Connection**



**Dimensions**



**Technical Data**

**General specifications**

Switching element function	PNP	Dual NO
Rated operating distance	$s_n$	3 mm
Installation	flush mountable	
Output polarity	DC	
Assured operating distance	$s_a$	0 ... 2.43 mm
Reduction factor $r_{AI}$	0.5	
Reduction factor $r_{Cu}$	0.4	
Reduction factor $r_{304}$	1	
Reduction factor $r_{S137}$	1.1	

**Nominal ratings**

Operating voltage	$U_B$	6 ... 60 V
Switching frequency	$f$	0 ... 500 Hz
Hysteresis	$H$	typ. 5 %
Reverse polarity protected	tolerant	
Short-circuit protection	no	
Voltage drop	$U_d$	$\leq 6$ V
Operating current	$I_L$	4 ... 100 mA
Lowest operating current	$I_m$	4 mA
Off-state current	$I_r$	0 ... 1 mA typ. 0.7 mA
Indication of the switching state	LED, yellow	

**Limit data**

Tightening torque, fastening screws	0.4 Nm
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**Functional safety related parameters**

MTTF <sub>d</sub>	590 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Ambient conditions**

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
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**Mechanical specifications**

Connection (system side)	10 m, PVC cable
Core cross-section (system side)	0.75 mm <sup>2</sup>
Housing material	PBT
Sensing face	PBT
Protection degree	IP67

**Compliance with standards and directives**

Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

**Approvals and certificates**

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Certified by China Compulsory Certification (CCC)

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