

Model Number

NBN10-F33-E0-M

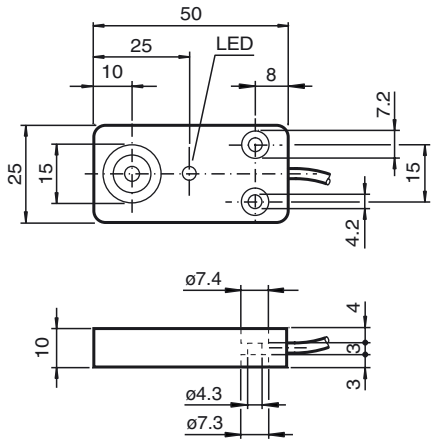
Features

- **10 mm non-flush**
- **E1-Type approval**
- **Extended temperature range -40 ... +85 °C**
- **Increased operating distance**
- **Increased noise immunity 100 V/m**

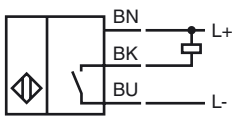
Technical Data

General specifications		
Switching element function		NPN NO
Rated operating distance	s_n	10 mm
Installation		non-flush
Output polarity		DC
Assured operating distance	s_a	0 ... 8.1 mm
Reduction factor r_{Al}		0.3
Reduction factor r_{Cu}		0.2
Reduction factor r_{304}		0.6
Nominal ratings		
Operating voltage	U_B	5 ... 60 V DC
Switching frequency	f	0 ... 200 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 2 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0 ... 0.1 mA
No-load supply current	I_0	≤ 10 mA
Time delay before availability	t_v	≤ 80 ms
Switching state indicator		LED yellow
Functional safety related parameters		
$MTTF_d$		1150 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Ambient conditions		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		cable PUR , 2 m
Core cross-section		0.5 mm^2
Housing material		PBT
Sensing face		PBT
Degree of protection		IP67 / IP69K
Note		Tightening torque: 5 Nm
Compliance with standards and directives		
Standard conformity		
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007
Approvals and certificates		
CCC approval		Certified by China Compulsory Certification (CCC)
E1 Type approval		10R-04

Dimensions



Electrical Connection



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Installation Hint

Emitted interference and interference immunity in accordance with motor vehicle directive 2006/28/EG (e1 Type approval)
Interference immunity in accordance with DIN ISO 11452-2: 100 V/m
Frequency band 20 MHz up to 2 GHz

Mains-borne interference in accordance with ISO 7637-2:

Pulse	1	2a	2b	3 a	3b	4	5
Severity level	III	III	III	III	III	III	IV
Failure criterion	C	A	C	A	A	A	C

EN 61000-4-2:	CD: 8 kV /	AD: 15 kV
Severity level	IV	IV
EN 61000-4-3:	30 V/m (80...2500 MHz)	
Severity level	IV	
EN 61000-4-4:	2 kV	
Severity level	III	
EN 61000-4-6:	10 V (0.01...80 MHz)	
Severity level	III	
EN 55011:	Class A	

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