



Model Number

NBN10-F33-E2-M

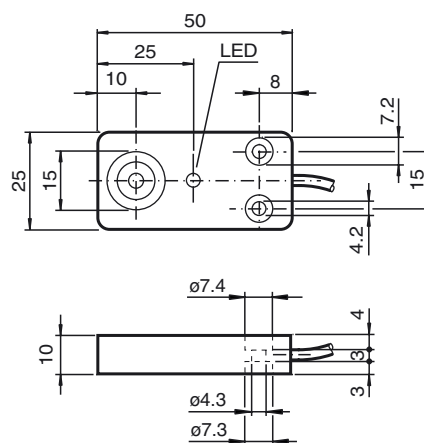
Features

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

Technical Data

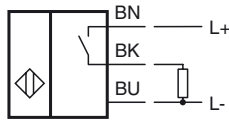
General specifications	
Switching function	Normally open (NO)
Output type	PNP
Rated operating distance	s_n 10 mm
Installation	non-flush
Output polarity	DC
Assured operating distance	s_a 0 ... 8.1 mm
Reduction factor r_{AI}	0.3
Reduction factor r_{CU}	0.2
Reduction factor r_{304}	0.6
Output type	3-wire
Nominal ratings	
Installation conditions	
B	2.5 mm
C	1 mm
F	40 mm
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	1140 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
Cable	
Cable diameter	4.8 mm \pm 0.2 mm
Bending radius	> 10 x cable diameter
Note	Tightening torque: 5 Nm
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	
CCC approval	Certified by China Compulsory Certification (CCC)
E1 Type approval	10R-04

Dimensions

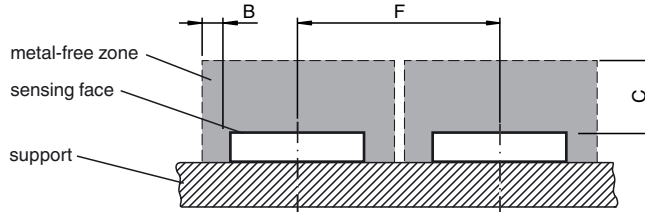


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Electrical Connection



Installation Conditions



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	3a	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