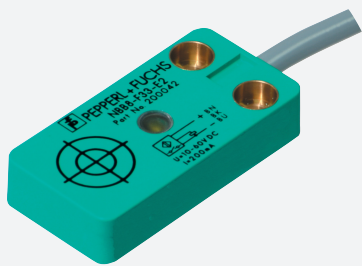


Inductive sensor

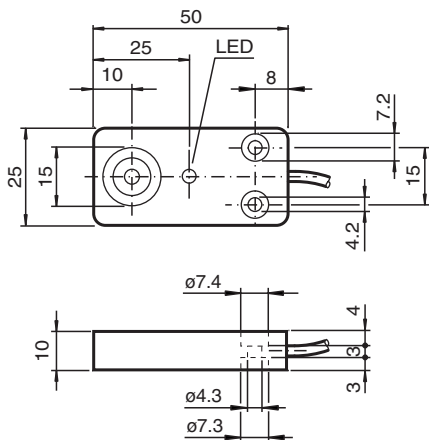
NBB8-F33-E1-M



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



Dimensions



Technical Data

General specifications		
Switching function		Normally closed (NC)
Output type		NPN
Rated operating distance	s_n	8 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 6.48 mm
Reduction factor r_{AI}		0.3
Reduction factor r_{Cu}		0.2
Reduction factor r_{304}		0.6
Nominal ratings		
Operating voltage	U_B	5 ... 60 V
Switching frequency	f	0 ... 350 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing

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

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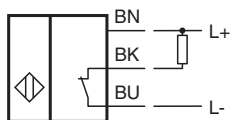
Singapore: +65 6779 9091
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PEPPERL+FUCHS

Technical Data

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 %	
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	
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 mm²	
Housing material	PBT	
Sensing face	PBT	
Degree of protection	IP67 / IP69K	
Note	Tightening torque: 5 Nm	

Connection



Mounting

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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