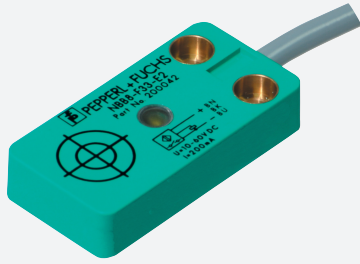


Inductive sensor

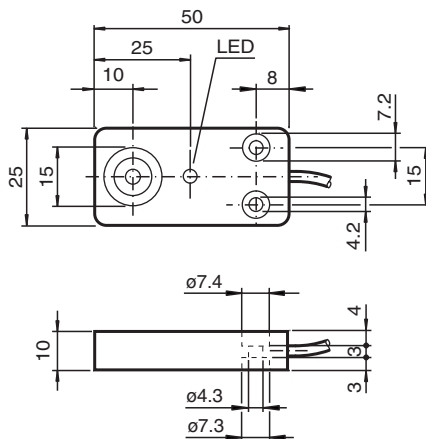
NBB8-F33-E2-M-Y278280



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



Dimensions



Technical Data

General specifications

Switching function		Normally open (NO)
Output type		PNP
Rated operating distance	s_n	8 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 6.48 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 ... 350 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing

Release date: 2020-03-24 Date of issue: 2020-03-30 Filename: 278280_eng.pdf

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

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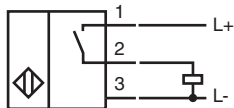
Singapore: +65 6779 9091
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 **PEPPERL+FUCHS**

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		1140 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		
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 , 2.5 m RADOX TENUIS-TW
Core cross-section		0.5 mm ²
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 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