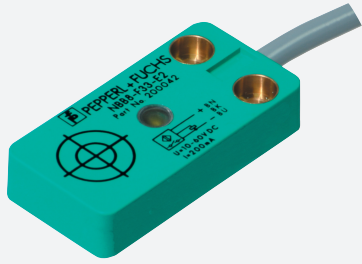


# Inductive sensor

## NBB8-F33-E2-M-150MM-3DT04

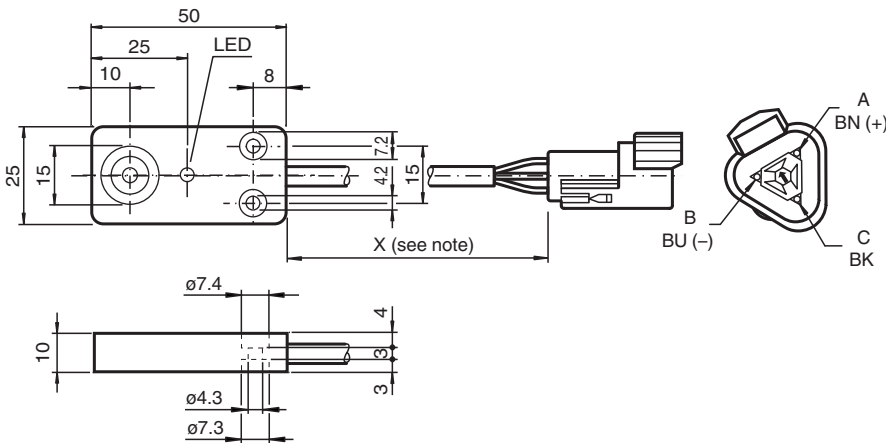


- 8 mm flush
- Increased operating distance
- Extended temperature range  
-40 ... +85 °C
- 3-pin Deutsch connector (DT04)
- 100 V/m radiated field immunity
- E1-Type approval

### Mobile Equipment Series



### 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
Output type			3-wire
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
Voltage drop	$U_d$		$\leq 2$ V

Release date: 2022-05-23 Date of issue: 2022-05-23 Filename: 913518\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

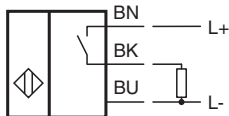
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PF** PEPPERL+FUCHS

## Technical Data

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
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		1140 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007
<b>Approvals and certificates</b>		
UL approval		cULus Listed, General Purpose
E1 Type approval		10R-04
<b>Ambient conditions</b>		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
Connection type		Cable connector Deutsch DT04 , 3-pin with PUR cable 150 mm
Core cross section		0.75 mm <sup>2</sup>
Housing material		PBT
Sensing face		PBT
Degree of protection		IP67 / IP69K
Note		Tightening torque: 5 Nm

## Connection



### Wire colors

A		BN
B		BU
C		BK

## 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