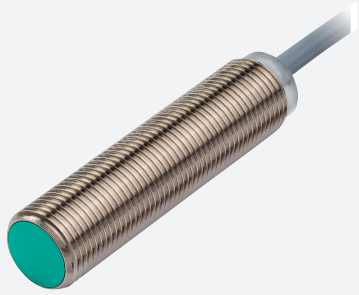


# Inductive sensor

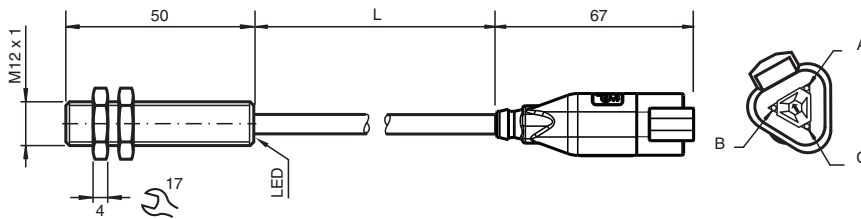
## NBB4-12GM50-E2-M1-150MM-3DT0-4



- 4 mm flush
- Increased operating distance
- Extended temperature range  
-40 ... +85 °C
- With increased sealing, protection class  
IP68 / IP69K



### Dimensions



### Technical Data

#### General specifications

Switching function		Normally open (NO)
Output type		PNP
Rated operating distance	$s_n$	4 mm
Installation		flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 3.24 mm
Actuating element		mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 12 mm x 12 mm x 1 mm
Reduction factor $r_{Al}$		0.4
Reduction factor $r_{Cu}$		0.3
Reduction factor $r_{304}$		0.75
Reduction factor $r_{Brass}$		0.45
Output type		3-wire

#### Nominal ratings

Operating voltage	$U_B$	7 ... 30 V
Switching frequency	f	0 ... 2200 Hz
Hysteresis	H	typ. 5%
Reverse polarity protection		reverse polarity protected

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

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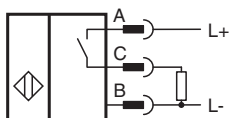
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**PF** PEPPERL+FUCHS

## Technical Data

Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 2 \text{ V}$
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA typ. 4 $\mu\text{A}$ at 25 °C
No-load supply current	$I_0$	$\leq 10 \text{ mA}$
Time delay before availability	$t_v$	$\leq 100 \text{ ms}$
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		1484 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 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
<b>Approvals and certificates</b>		
CCC approval		CCC approval / marking not required for products rated $\leq 36 \text{ V}$
<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		fixed cable with plug
Housing material		brass, nickel-plated
Sensing face		PBT
Degree of protection		IP68 / IP69K
Connector		
Connection assembly		Deutsch connector DT04-3P-CE02 Deutsch wedge W3P Deutsch contact 1060-16-0622
Cable		
Cable diameter		6 mm $\pm$ 0.2 mm
Bending radius		> 6 x cable diameter
Material		PUR
Color		black
Number of cores		3
Core cross section		0.75 mm <sup>2</sup>
Length	L	120 mm $\pm$ 10 mm
Mass		37 g
<b>General information</b>		
Scope of delivery		2 self locking nuts in scope of delivery

## Connection



Wire colors

A	BN
B	BU
C	BK

## Accessories

	<b>BF 12</b>	Mounting flange, 12 mm
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