



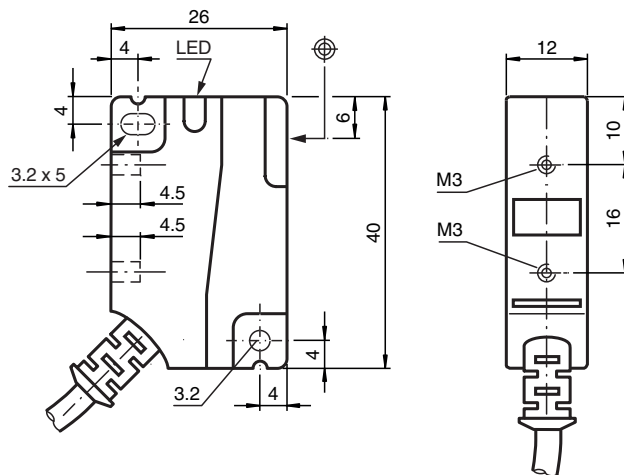
## Inductive sensor

### NBB4-F1-E2

- 4 mm flush
- 3-wire DC



## 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
Reduction factor $r_{Al}$		0.4
Reduction factor $r_{Cu}$		0.45
Reduction factor $r_{304}$		0.8
Reduction factor $r_{Brass}$		0.55

Release date: 2022-05-18 Date of issue: 2022-05-18 Filename: 184367\_eng.pdf

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

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## Technical Data

Output type	3-wire	
<b>Nominal ratings</b>		
Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	f	0 ... 1400 Hz
Hysteresis	H	typ. 5%
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 2.5$ V
Rated insulation voltage	$U_{BIS}$	60 V
Operating current	$I_L$	0 ... 250 mA
Off-state current	$I_r$	0 ... 0.01 mA typ. 0.1 $\mu$ A at 25 °C
No-load supply current	$I_o$	$\leq 15$ mA
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		1640 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>		
Protection class		II
Rated insulation voltage	$U_i$	60 V
Rated impulse withstand voltage	$U_{imp}$	800 V
UL approval		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
CCC approval		CCC approval / marking not required for products rated $\leq 36$ V
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
<b>Mechanical specifications</b>		
Connection type		cable PVC , 2 m
Core cross section		0.5 mm <sup>2</sup>
Housing material		PA
Sensing face		PA
Degree of protection		IP67
Cable		
Cable diameter		5.2 mm $\pm$ 0.2 mm
Tightening torque, fastening screws		Threading M3 max: 1.1 Nm

## Connection

