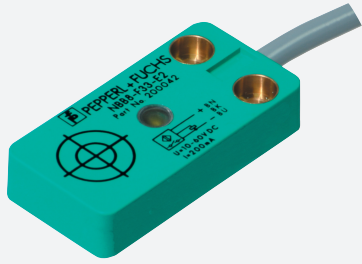


# Inductive sensor

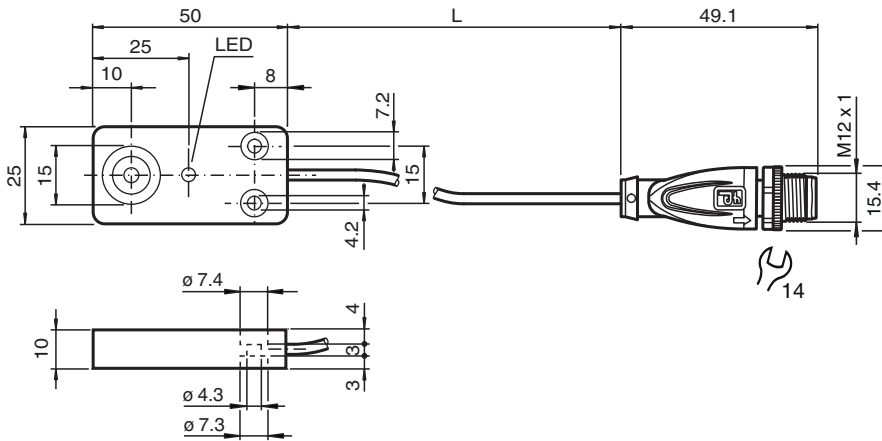
## NBB8-F33-A2-M1-Y293755



- 8 mm flush
- 4-wire DC
- Raised EMC resistance 36 V/m
- E1-Type approval



### Dimensions



### Technical Data

General specifications		
Switching function		complementary
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	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 350 Hz
Hysteresis	$H$	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing

Release date: 2024-01-02 Date of issue: 2024-01-02 Filename: 293755\_eng.pdf

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

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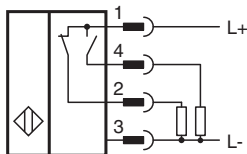
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**PF** PEPPERL+FUCHS

## Technical Data

Voltage drop	$U_d$	$\leq 3 \text{ V}$
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA
No-load supply current	$I_0$	$\leq 25 \text{ mA}$
Time delay before availability	$t_v$	$\leq 5 \text{ ms}$
Switching state indicator		LED yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		1240 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN IEC 60947-5-2
<b>Approvals and certificates</b>		
UL approval		cULus Listed, Class 2 Power Source, Type 1 enclosure
E1 Type approval		10R-04
<b>Ambient conditions</b>		
Ambient temperature		-35 ... 70 °C (-31 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
Connection type		fixed cable with plug
Housing material		PBT
Sensing face		PBT
Degree of protection		IP67 / IP69K
<b>Connector</b>		
Threading		M12 x 1
Tightening torque		0.6 Nm
Number of pins		4
<b>Cable</b>		
Cable diameter		4.8 mm ± 0.15 mm
Bending radius		> 10 x cable diameter
Material		PUR
Color		black
Number of cores		4
Core cross section		0.5 mm <sup>2</sup>
Length	L	0.3 m
<b>Dimensions</b>		
Height		25 mm
Width		50 mm
Length		10 mm
Note		Tightening torque: 5 Nm

## Connection



## Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)