

# Inductive sensor

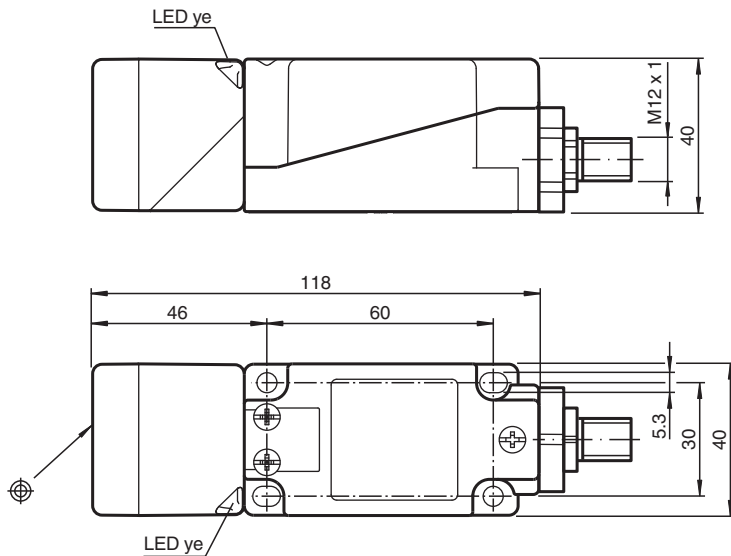
## NBB20-U4K-N0-V1



- Sensor head bidirectional and rotatable
- 20 mm flush
- 2 LEDs indicator for 360° visibility



### Dimensions



### Technical Data

#### General specifications

Switching function		Normally closed (NC)
Output type		NAMUR
Rated operating distance	$s_n$	20 mm
Installation		flush
Assured operating distance	$s_a$	0 ... 16.2 mm
Actual operating distance	$s_r$	18 ... 22 mm typ. 20 mm
Reduction factor $r_{Al}$		0.33
Reduction factor $r_{Cu}$		0.31
Reduction factor $r_{304}$		0.74
Output type		2-wire

#### Nominal ratings

Nominal voltage	$U_o$	8.2 V ( $R_i$ approx. 1 k $\Omega$ )
Switching frequency	$f$	0 ... 300 Hz
Hysteresis	$H$	typ. 5 %

Release date: 2024-05-28 Date of issue: 2024-06-02 Filename: 70133135\_eng.pdf

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

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## Technical Data

Reverse polarity protection	yes
Short-circuit protection	yes
Current consumption	
Measuring plate not detected	min. 2.2 mA
Measuring plate detected	≤ 1 mA
Switching state indicator	LED, yellow
<b>Functional safety related parameters</b>	
MTTF <sub>d</sub>	1697 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %
<b>Compliance with standards and directives</b>	
Standard conformity	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
Electromagnetic compatibility	NE 21:2007
Standards	EN IEC 60947-5-2
<b>Approvals and certificates</b>	
IECEX approval	
Equipment protection level Ga	IECEX PTB 11.0021X
Equipment protection level Gb	IECEX PTB 11.0021X
Equipment protection level Da	IECEX PTB 11.0021X
ATEX approval	
Equipment protection level Ga	PTB 00 ATEX 2032 X
Equipment protection level Gb	PTB 00 ATEX 2032 X
Equipment protection level Da	PTB 00 ATEX 2032 X
UL approval	
Ordinary Location	E87056
Hazardous Location	E501628
Control drawing	116-0451
CCC approval	
Hazardous Location	2020322315002303
NEPSI approval	
NEPSI certificate	GYJ16.1394X
CML approval	on request
<b>Ambient conditions</b>	
Ambient temperature	-25 ... 100 °C (-13 ... 212 °F)
Storage temperature	-40 ... 100 °C (-40 ... 212 °F)
<b>Mechanical specifications</b>	
Connection type	Connector plug
Housing material	PA/metal
Sensing face	PA
Degree of protection	IP67 / IP69K
Connector	
Threading	M12 x 1
Number of pins	4
Mass	225 g
Dimensions	
Height	40 mm
Width	40 mm
Length	118 mm
Note	Tightening torque: 1.8 Nm (housing)
<b>General information</b>	
Use in the hazardous area	see instruction manuals

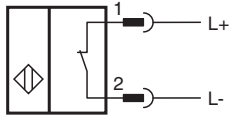
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Connection



Wire colors in accordance with EN 60947-5-6

1		BN	(brown)
2		BU	(blue)

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