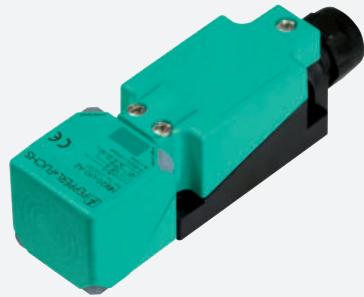


# Inductive sensor

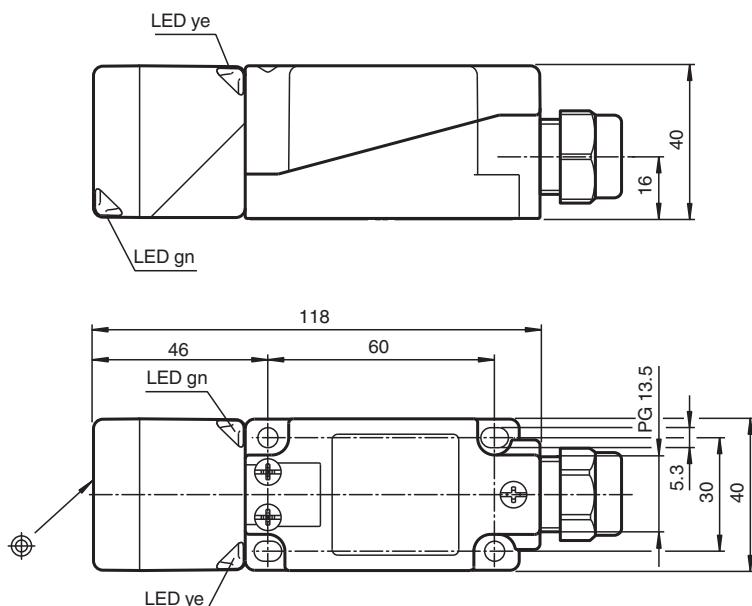
## NBB20-U10-E2



- Sensor head bidirectional and rotatable
- 20 mm flush
- 3-wire DC
- 4 LEDs indicator for 360° visibility
- With cable gland for cable diameters from 7 to 10.5 mm (extendable with different gasket)



### Dimensions



### Technical Data

Release date: 2024-05-27 Date of issue: 2024-05-30 Filename: 203038\_eng.pdf

#### General specifications

Switching function	Normally open (NO)	
Output type	PNP	
Rated operating distance	$s_n$	20 mm
Installation	flush	
Output polarity	DC	
Assured operating distance	$s_a$	0 ... 16.2 mm
Actual operating distance	$s_r$	18 ... 22 mm typ. 20 mm
Reduction factor $r_{AI}$	0.33	
Reduction factor $r_{Cu}$	0.31	
Reduction factor $r_{304}$	0.74	
Reduction factor $r_{Brass}$	0.41	
Output type	3-wire	

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

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 PEPPERL+FUCHS

## Technical Data

### Nominal ratings

Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Switching frequency	f	0 ... 440 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U <sub>d</sub>	≤ 2 V
Operating current	I <sub>L</sub>	0 ... 200 mA
Off-state current	I <sub>r</sub>	0 ... 0.5 mA typ. 0.01 mA
No-load supply current	I <sub>0</sub>	≤ 20 mA
Time delay before availability	t <sub>v</sub>	80 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	1289 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

### Compliance with standards and directives

Standard conformity	
Standards	EN IEC 60947-5-2

### Approvals and certificates

UL approval	cULus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated ≤36 V

### Ambient conditions

Ambient temperature	-25 ... 85 °C (-13 ... 185 °F)
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### Mechanical specifications

Connection type	screw terminals
Information for connection	A maximum of two conductors with the same core cross section may be mounted on one terminal connection! tightening torque 1.2 Nm + 10 %
Core cross section	up to 2.5 mm <sup>2</sup>
Minimum core cross-section	without wire end ferrules 0.5 mm <sup>2</sup> , with connector sleeves 0.34 mm <sup>2</sup>
Maximum core cross-section	without wire end ferrules 2.5 mm <sup>2</sup> , with connector sleeves 1.5 mm <sup>2</sup>
Housing material	PA/metal with epoxy powder coating
Sensing face	PA
Housing base	plastic
Degree of protection	IP68 / IP69K
Mass	225 g
Dimensions	
Height	40 mm
Width	40 mm
Length	118 mm
Note	Tightening torque: 1.8 Nm (housing)

## Connection

