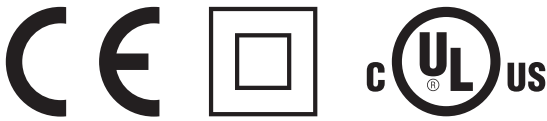
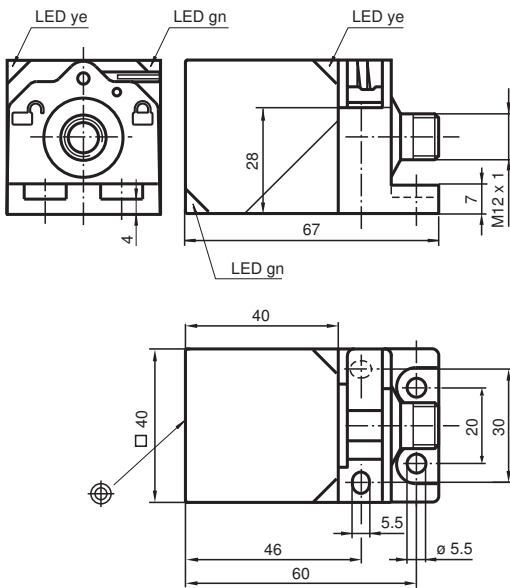


## Inductive sensor NBB20-L2-E0-V1

- Sensor head bidirectional and rotatable
- 20 mm flush
- 3-wire DC
- Quick mounting bracket
- IP69K Protected



### Dimensions



### Technical Data

#### General specifications

Switching function		Normally open (NO)
Output type		NPN
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
Reduction factor $r_{Al}$		0.33
Reduction factor $r_{Cu}$		0.31
Reduction factor $r_{304}$		0.74
Reduction factor $r_{Brass}$		0.41
Output type		3-wire

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

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 PEPPERL+FUCHS

## Technical Data

### Nominal ratings

Operating voltage	$U_B$	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	$U_d$	$\leq 2$ V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA
No-load supply current	$I_0$	$\leq 20$ mA
Time delay before availability	$t_v$	80 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	1510 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

### Compliance with standards and directives

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

### Approvals and certificates

Protection class		II
Rated insulation voltage	$U_i$	253 V
Rated impulse withstand voltage	$U_{imp}$	4000 V
UL approval		cULus Listed, General Purpose
CCC approval		CCC approval / marking not required for products rated $\leq 36$ V

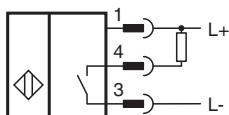
### Ambient conditions

Ambient temperature	-25 ... 85 °C (-13 ... 185 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

### Mechanical specifications

Connection type	Connector plug M12 x 1 , 4-pin
Housing material	PA
Sensing face	PA
Degree of protection	IP69K
Cable	
Cable diameter	3.3 mm $\pm$ 0.15 mm
Mass	130 g

## Connection







## Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

## Accessories

	<b>V1-G-2M-PUR</b>	Female cordset, M12, 4-pin, PUR cable
	<b>V1-W-2M-PUR</b>	Female cordset, M12, 4-pin, PUR cable
	<b>MHW 01</b>	Modular mounting bracket
	<b>MH 02-L</b>	Mounting aid

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