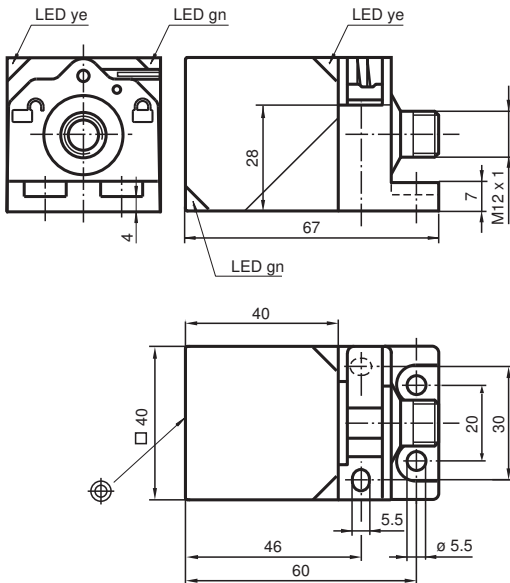


Inductive sensor NBB20-L2-A2-V1-3G-3D

- Sensor head bidirectional and rotatable
- 20 mm flush
- 4-wire DC
- Quick mounting bracket
- 4-way LED indicator
- ATEX-approval for zone 2 and zone 22



Dimensions



Technical Data

General specifications

Switching function		complementary
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
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		4-wire

Nominal ratings

Release date: 2020-12-14 Date of issue: 2020-12-14 Filename: 317341_eng.pdf

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

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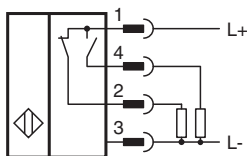
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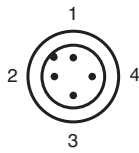
Technical Data

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	≤ 2 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA
No-load supply current	I_0	≤ 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 _d		1289 a
Mission Time (T _M)		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		
ATEX approval		
Equipment protection level Gc (nA)		PF15CERT3754X
Equipment protection level Dc (tc)		PF15CERT3774X
Protection class		II
Rated insulation voltage	U_i	253 V
Rated impulse withstand voltage	U_{imp}	4000 V
UL approval		cULus Listed, General Purpose
Marine approval		DNVGL TAA0000160
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
General information		
Use in the hazardous area		see instruction manuals

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

	MHW 01	Modular mounting bracket
	MH 02-L	Mounting aid
	MH 04-2681F	Mounting aid for VariKont, +U1+ and +U9*
	V1-W-2M-PUR	Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey
	V1-G-2M-PUR	Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey

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