

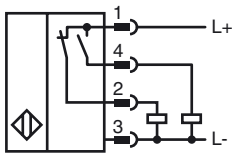
Model Number

NBB20-L3M-A2-C3-V1

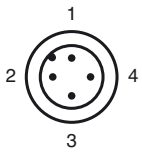
Features

- **20 mm flush**
- **4-wire DC**
- **Weld Immune**
- **Active surface thermoset**
- **2-way LED indicator**

Connection



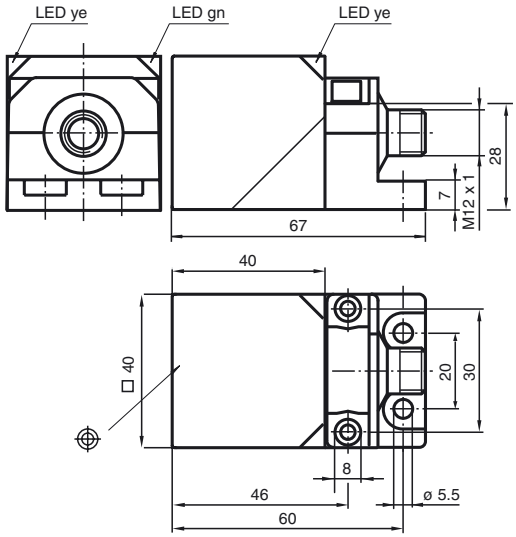
Pinout



Wire colors in accordance with EN 60947-5-2

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

Dimensions



Technical Data

General specifications		
Switching element function		PNP NO/NC
Rated operating distance	s_n	20 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 16.2 mm
Reduction factor r_{Al}		0.42
Reduction factor r_{Cu}		0.38
Reduction factor r_{304}		0.75
Reduction factor r_{Brass}		0.49
Nominal ratings		
Operating voltage	U_B	10 ... 30 V DC
Switching frequency	f	0 ... 5 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 3 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
Alternating magnetic field	B	200 mT
Operating voltage display		LED, green
Indication of the switching state		LED, yellow
Functional safety related parameters		
$MTTF_d$		1420 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Ambient conditions		
Ambient temperature		-25 ... 85 °C (-13 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		Device connector M12 x 1 , 4-pin
Housing material		GD-ZnAl4Cu1, Coated metal fixing flange, coated.
Sensing face		Duroplast
Protection degree		IP67
Compliance with standards and directives		
Standard conformity		
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007
Approvals and certificates		
UL approval		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
CCC approval		Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

Release date: 2012-11-28 10:28 Date of issue: 2012-11-28 187558_eng.xml

Copyright Pepperl+Fuchs