



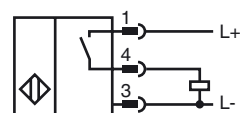
Model Number

NBB20-U2-E2-V1

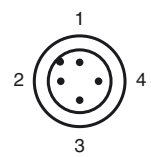
Features

- 20 mm embeddable
- 3-wire DC
- 4 LEDs indicator for 360° visibility

Connection



Pinout



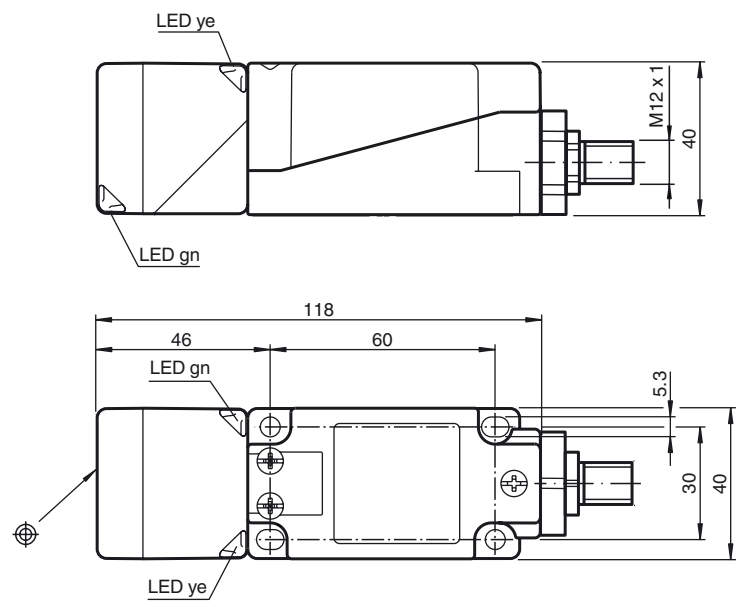
Wire colors in accordance with EN 60947-5-2

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

Accessories

- V1-G**
4-pin, M12 female field-attachable connector
- V1-W**
4-pin, M12 female field-attachable connector
- V1-G-2M-PUR**
Cable socket, M12, 4-pin, PUR cable
- V1-W-2M-PUR**
Cable socket, M12, 4-pin, PUR cable
- MHW 01**
Modular mounting bracket
- MH 04-2681F**
Mounting aid for VariKont, +U1+ and +U9*

Dimensions



Technical Data

General specifications	
Switching element function	PNP NO
Rated operating distance	s_n 20 mm
Installation	embeddable
Output polarity	DC
Assured operating distance	s_a 0 ... 16.2 mm
Reduction factor r_{Al}	0.33
Reduction factor r_{Cu}	0.31
Reduction factor r_{303}	0.74
Reduction factor r_{Brass}	0.41
Nominal ratings	
Operating voltage	U_B 10 ... 30 V DC
Switching frequency	f 0 ... 150 Hz
Hysteresis	H typ. 5 %
Reverse polarity protected	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 typ. 0.01 mA
No-load supply current	I_0 ≤ 20 mA
Operating voltage display	LED, green
Indication of the switching state	LED, yellow
Functional safety related parameters	
MTTF _d	1460 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %
Ambient conditions	
Ambient temperature	-25 ... 85 °C (-13 ... 185 °F)
Mechanical specifications	
Connection type	Device connector M12 x 1, 4-pin
Housing material	PA/metal with epoxy powder coating
Sensing face	PA
Housing base	plastic
Protection degree	IP68 / IP69K
Mass	225 g
Note	Tightening torque: 1.8 Nm (housing)
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.

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