



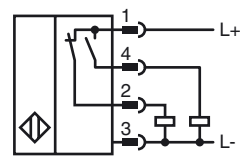
Model Number

NBB20-U1-A2-T-V1

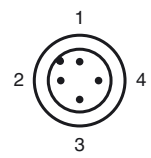
Features

- Temperature range -25 ... 100 °C (-13 ... 212 °F)
- 20 mm flush
- 4 LEDs indicator for 360° visibility

Connection



Pinout



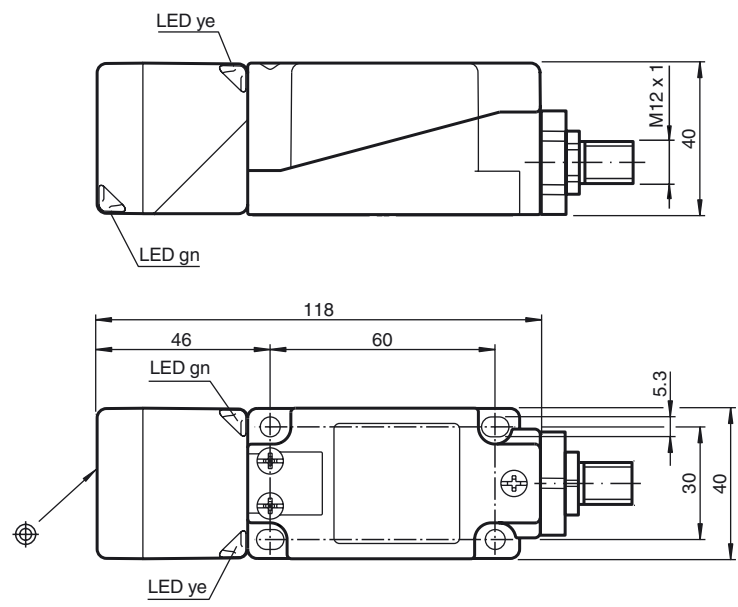
Wire colors in accordance with EN 60947-5-2

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

Accessories

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

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_{AI}		0.35	
Reduction factor r_{Cu}		0.3	
Reduction factor r_{304}		0.75	
Nominal ratings			
Operating voltage	U_B	10 ... 30 V	
Switching frequency	f	0 ... 300 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	
No-load supply current	I_o	≤ 20 mA	
Operating voltage display		LED, green	
Indication of the switching state		LED, yellow	
Functional safety related parameters			
MTTF _d		1480 a	
Mission Time (T_M)		20 a	
Diagnostic Coverage (DC)		0 %	
Ambient conditions			
Ambient temperature		-25 ... 100 °C (-13 ... 212 °F)	
Mechanical specifications			
Connection type		Device connector M12 x 1 , 4-pin	
Housing material		PA / LCP	
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		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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