



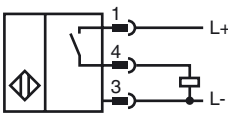
Model Number

NBB20-U1-E2-C-V1

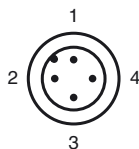
Features

- 20 mm embeddable
- 4 LEDs indicator for 360° visibility
- For use in direct- and alternating-field welding systems

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

V1-M20-80

Receptacles, M12/M20; plastic version

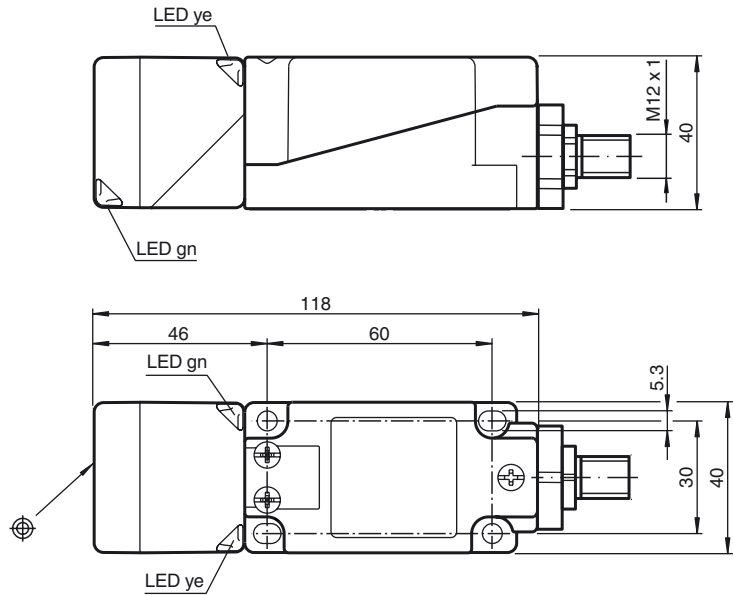
V1-G

4-pin, M12 female field-attachable connector

V1-W

4-pin, M12 female field-attachable connector

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 ... 5 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protected		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
Constant magnetic field	B	150 mT
Alternating magnetic field	B	150 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)
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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

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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