



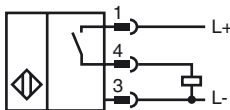
Model Number

NRB20-U1-E2-V1

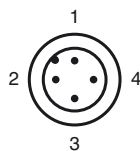
Features

- 20 mm flush
- Reduction factor = 1
- 4 LEDs indicator for 360° visibility
- Magnetic field resistant

Connection



Pinout



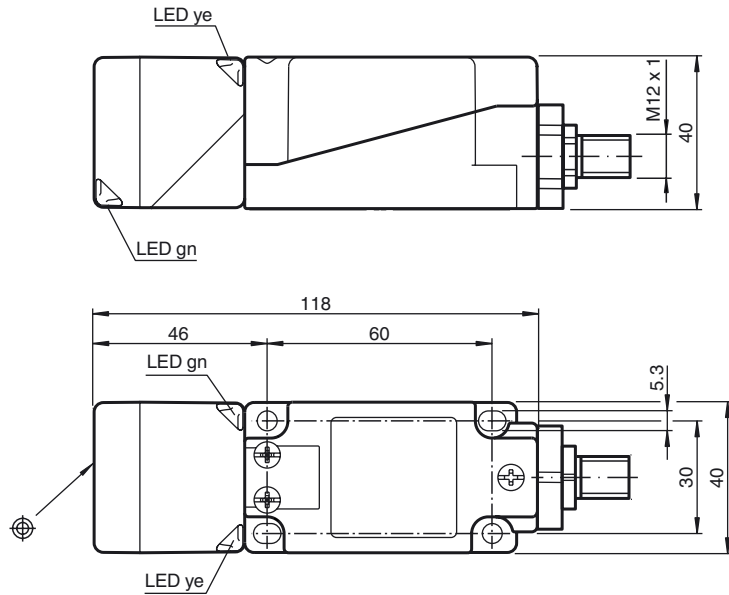
Wire colors in accordance with EN 60947-5-2

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

Accessories

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

Dimensions



Technical Data

General specifications

Switching element function	PNP	NO
Rated operating distance	s_n	20 mm
Installation		flush
Output polarity		switched high
Assured operating distance	s_a	0 ... 16.2 mm
Reduction factor r_{AI}		1
Reduction factor r_{Cu}		1
Reduction factor r_{304}		1
Reduction factor r_{Si37}		1

Nominal ratings

Operating voltage	U_B	10 ... 30 V
Switching frequency	f	0 ... 100 Hz
Hysteresis	H	3 ... 15 %
Reverse polarity protected		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 2.5 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	≤ 25 mA
Constant magnetic field	B	200 mT
Alternating magnetic field	B	200 mT
Operating voltage display		LED, green
Indication of the switching state		LED, yellow

Functional safety related parameters

MTTF _d	995 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

Mechanical specifications

Connection type	Device connector M12 x 1, 4-pin
Housing material	PA/metal with epoxy powder coating
Sensing face	PA 6 Grivory GVN-35H
Housing base	plastic
Protection degree	IP67
Mass	225 g
Note	Tightening torque: 1.8 Nm (housing) Tightening torque: 1.0 Nm (Screw terminal)

Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates

Protection class	II
Rated insulation voltage	U_i 60 V
Design-impulse-voltage withstand	U_{imp} 800 V
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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