



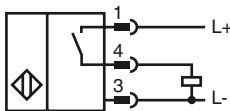
**Model Number**

NRB20-L3-E2-V1

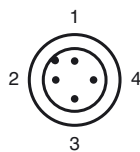
**Features**

- 20 mm flush
- Reduction factor = 1
- Magnetic field resistant
- Quick mounting bracket
- 4-way LED indicator

**Connection**



**Pinout**



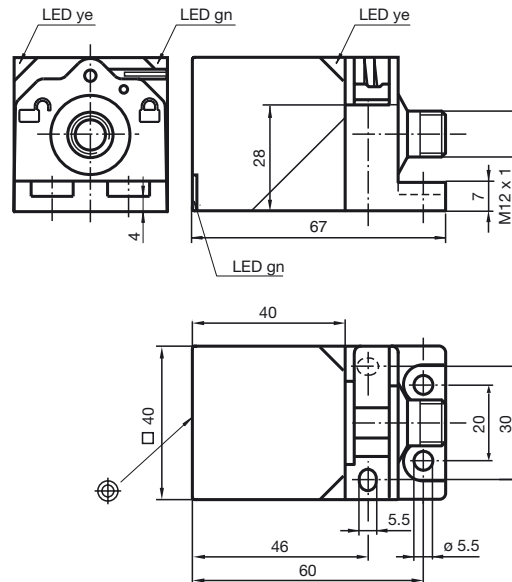
Wire colors in accordance with EN 60947-5-2

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

**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 02-L**

**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 $r_{Al}$		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 DC
Switching frequency	$f$	0 ... 100 Hz
Hysteresis	$H$	3 ... 15 %
Reverse polarity protected		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 2.5$ 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	$I_0$	$\leq 25$ 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 <sub>d</sub>	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	GD-ZnAl4Cu1, coated mounting flange PA6-GF35
Sensing face	PA 6 Grivity GVN-35H
Protection degree	IP67
Mass	180 g

**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 $\leq 36$ V do not bear a CCC marking because they do not require approval.

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