



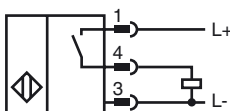
**Model Number**

NRB2-12GM45-E2-C-V1

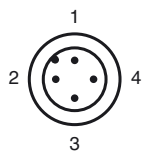
**Features**

- 2 mm flush
- Reduction factor = 1
- Weld Immune

**Connection**



**Pinout**



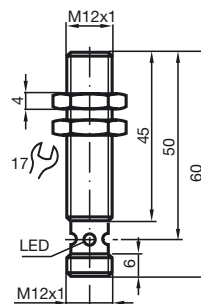
Wire colors in accordance with EN 60947-5-2

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

**Accessories**

- BF 12**  
Mounting flange, 12 mm
- EXG-12**  
Quick mounting bracket with dead stop
- AB-12**  
Mounting aid
- V1-G**  
4-pin, M12 female field-attachable connector
- V1-W**  
4-pin, M12 female field-attachable connector
- V1-G-OR2M-POC**  
Female cordset, M12, 4-pin, TPE cable, welding-bead resistant

**Dimensions**



**Technical Data**

General specifications		
Switching element function		PNP NO
Rated operating distance	$s_n$	2 mm
Installation		flush
Output polarity		switched high
Assured operating distance	$s_a$	0 ... 1.62 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 ... 200 Hz
Hysteresis	$H$	typ. 10 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3$ V
Rated insulation voltage	$U_{BIS}$	60 V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA typ. 0.1 $\mu$ A at 25 °C
No-load supply current	$I_0$	$\leq 15$ mA
Switching state indication		Multihole-LED, yellow
Mag. Field strength, AC fields		200 mT
Mag. Field strength, DC fields		200 mT

Functional safety related parameters	
MTTF <sub>d</sub>	1230 a
Mission Time (T <sub>M</sub> )	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	Brass, PTFE coated
Sensing face	PPS
Protection degree	IP67

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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