



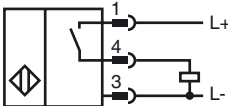
Model Number

NBB2-12GM50-E2-C3-V1

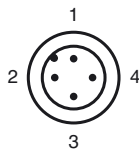
Features

- 2 mm flush
- 3-wire DC
- Weld Immune
- Slag repellent coatings

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

AB-12

Mounting aid

V1-G

4-pin, M12 female field-attachable connector

V1-W

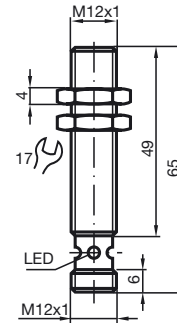
4-pin, M12 female field-attachable connector

V1-G-OR2M-POC

Female cordset, M12, 4-pin, TPE cable, welding-bead resistant

V1-W-OR2M-POC

Dimensions



Technical Data

General specifications

Switching element function		PNP	NO
Rated operating distance	s_n	2 mm	
Installation		flush	
Output polarity		DC	
Assured operating distance	s_a	0 ... 1.62 mm	
Reduction factor r_{A1}		0.3	
Reduction factor r_{Cu}		0.2	
Reduction factor r_{304}		0.7	

Nominal ratings

Operating voltage	U_B	10 ... 30 V DC	
Switching frequency	f	0 ... 1500 Hz	
Hysteresis	H	typ. 5 %	
Reverse polarity protection		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 typ. 0.1 μ A at 25 °C	
No-load supply current	I_0	≤ 15 mA	
Operating voltage display		LED, green	
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 _d	2430 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
---------------------	--------------------------------

Mechanical specifications

Connection type	Device connector M12 x 1 , 4-pin
Housing material	Brass, PTFE coated
Sensing face	Ceramic coated
Protection degree	IP67

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.