



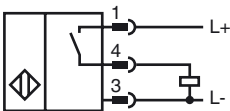
### Model Number

NBB2-12GM50-E2-V1

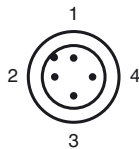
### Features

- 2 mm flush
- Extended temperature range

### 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

#### V1-G

4-pin, M12 female field-attachable connector

#### V1-W

4-pin, M12 female field-attachable connector

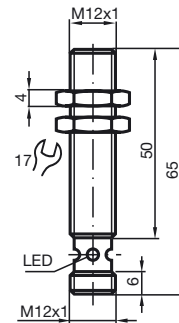
#### V1-G-2M-PUR

Cable socket, M12, 4-pin, PUR cable

#### V1-W-2M-PUR

Cable socket, M12, 4-pin, PUR cable

### 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 ( -25 ... 70 °C ( -13 ... 158 °F ) ) 0 ... 1.52 mm ( -40 ... -25 °C ( -40 ... -13 °F ) )
Reduction factor $r_{Al}$		0.3
Reduction factor $r_{Cu}$		0.2
Reduction factor $r_{304}$		0.7

#### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V
Switching frequency	$f$	0 ... 1500 Hz
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3$ 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	$I_0$	$\leq 17$ mA
Indication of the switching state		Multihole-LED, yellow

#### Functional safety related parameters

MTTF <sub>d</sub>	1060 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

#### Ambient conditions

Ambient temperature	-40 ... 70 °C ( -40 ... 158 °F )
---------------------	----------------------------------

#### Mechanical specifications

Connection type	Device connector M12 x 1 , 4-pin
Housing material	brass, nickel-plated
Sensing face	PBT
Protection degree	IP67

#### General information

Scope of delivery	2 self locking nuts in scope of delivery
-------------------	--

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