



### Model Number

NBB2-12GM50-E2-V1

### Features

- 2 mm flush
- Extended temperature range

### Accessories

#### BF 12

Mounting flange, 12 mm

#### EXG-12

Quick mounting bracket with dead stop

#### V1-G

Female connector, M12, 4-pin, field attachable

#### V1-W

Female connector, M12, 4-pin, field attachable

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

Female cordset, M12, 4-pin, PUR cable

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

Female cordset, M12, 4-pin, PUR cable

## 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	$U_d$	≤ 3 V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA typ. 0.1 μA at 25 °C
No-load supply current	$I_0$	≤ 17 mA
Switching state indicator		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)
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### Mechanical specifications

Connection type	Connector M12 x 1, 4-pin
Housing material	brass, nickel-plated
Sensing face	PBT
Degree of protection	IP67

### General information

Scope of delivery	2 self locking nuts in scope of delivery
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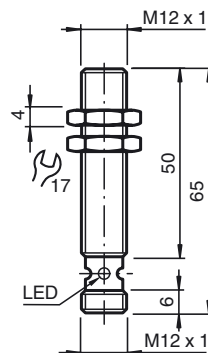
### Compliance with standards and directives

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

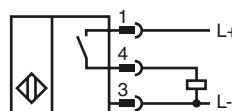
### Approvals and certificates

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated ≤36 V

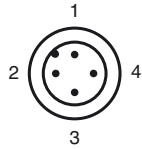
## Dimensions



## Electrical Connection



Pinout



Wire colors in accordance with EN 60947-5-2

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