



### Model Number

NBB4-12GM50-E2-V1

### Features

- 4 mm flush
- Increased operating distance
- 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 function	Normally open (NO)
Output type	PNP
Rated operating distance	$s_n$ 4 mm
Installation	flush
Output polarity	DC
Assured operating distance	$s_a$ 0 ... 3.24 mm ( -25 ... 70 °C (-13 ... 158 °F) ) 0 ... 3.04 mm ( -40 ... -25 °C (-40 ... -13 °F) )
Reduction factor $r_{Al}$	0.39
Reduction factor $r_{Cu}$	0.35
Reduction factor $r_{304}$	0.75
Reduction factor $r_{Brass}$	0.49
Output type	3-wire

### Nominal ratings

Operating voltage	$U_B$ 10 ... 30 V
Switching frequency	$f$ 0 ... 800 Hz
Hysteresis	$H$ typ. 5%
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	$I_0$ $\leq$ 15 mA
Time delay before availability	$t_v$ $\leq$ 5 ms
Switching state indicator	Multihole-LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	1820 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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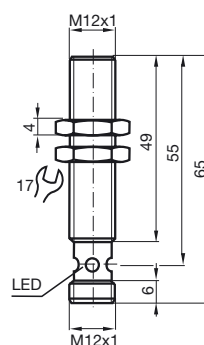
### Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012

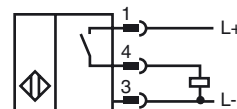
### Approvals and certificates

EAC conformity	TR CU 020/2011
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated $\leq$ 36 V

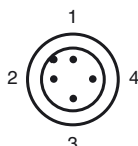
## Dimensions



## Electrical Connection



## Pinout



Wire colors in accordance with EN 60947-5-2

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