



## Model Number

**NBB4-12GM30-E2**

## Features

- 4 mm flush
- Increased operating distance

## Accessories

### BF 12

Mounting flange, 12 mm

### EXG-12

Quick mounting bracket with dead stop

## 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
Reduction factor $r_{AI}$		0.45
Reduction factor $r_{CU}$		0.35
Reduction factor $r_{304}$		0.7
Output type		3-wire

### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V
Switching frequency	$f$	0 ... 500 Hz
Hysteresis	$H$	typ. 5%
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3$ V

### Design data

Operating current	$I_L$	0 ... 150 mA
Off-state current	$I_r$	0 ... 0.5 mA typ. 0.1 $\mu$ A
Off-state current $T_{U=40^\circ\text{C}}$ , switching element off		$\leq$
No-load supply current	$I_0$	$\leq 15$ mA
Time delay before availability	$t_v$	$\leq 20$ ms
Switching state indicator		Multihole-LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	1770 a
Mission Time ( $T_M$ )	20 a
Diagnostic Coverage (DC)	0 %

### Ambient conditions

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

Connection type	cable PVC, 2 m
Core cross-section	0.14 mm <sup>2</sup>
Housing material	brass, nickel-plated
Sensing face	PBT
Degree of protection	IP67
Cable	
Cable diameter	3.5 mm $\pm$ 0.2 mm
Bending radius	> 10 x cable diameter
Mass	30 g

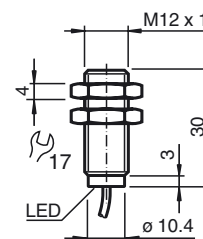
### Compliance with standards and directives

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

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

