



### Model Number

**NBB2-V3-E3-V3**

### Features

- 2 mm flush
- 3-wire DC

### Accessories

#### V3-WM

Female connector, M8, 3-pin, field attachable

#### V3-GM

Female connector, M8, 3-pin, field attachable

#### V3-WM-2M-PUR

Cable socket, M8, 3-pin, PUR cable

#### V3-GM-2M-PUR

Cable socket, M8, 3-pin, PUR cable

## Technical Data

### General specifications

Switching element function		PNP	NC
Rated operating distance	$s_n$	2 mm	
Installation		flush	
Output polarity		DC	
Assured operating distance	$s_a$	0 ... 1.62 mm	
Reduction factor $r_{Al}$		0.35	
Reduction factor $r_{Cu}$		0.33	
Reduction factor $r_{304}$		0.82	
Reduction factor $r_{Brass}$		0.5	

### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 1000 Hz
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3$ V
Operating current	$I_L$	0 ... 100 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
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	2300 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	Connector M8 x 1, 3-pin
Housing material	PBT
Sensing face	PBT
Degree of protection	IP67

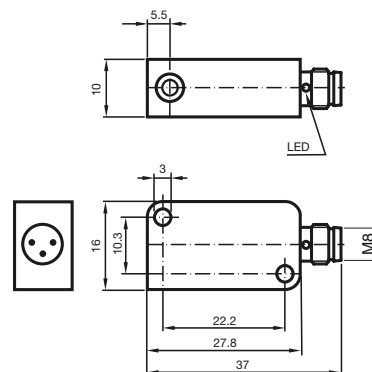
### Compliance with standards and directives

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

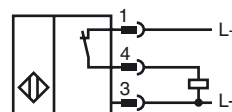
### Approvals and certificates

UL approval	cULus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated $\leq 36$ V

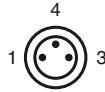
## Dimensions



## Electrical Connection



## Pinout



Wire colors in accordance with EN 60947-5-2

1		BN	(brown)
3		BU	(blue)
4		BK	(black)