

### Technical Data

For detailed data and product description refer to the data sheets at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

#### General Data

Installation	flush
Type of voltage	DC
Operating current	2 ... 100 mA
Short-circuit protection	pulsing
Indication of the switching state	LED, yellow
Protection degree	IP67

#### Model Number

Rated operating distance	2 mm	green = preferred type	NBB2-12GM40-Z0	NCB2-12GM40-Z0	NCB2-12GM40-Z1	NCB4-12GM35-Z4	NCB4-12GM35-Z5	NBB2-12GM40-Z0-V1	NCB2-12GM40-Z0-V1	NCB2-12GM40-Z1-V1	NCB4-12GM40-Z4-V1	NCB4-12GM40-Z5-V1
Switching element function	DC NO		●	●	●	●	●	●	●	●	●	●
	DC NC											
Operating voltage	3.5 ... 30 V		●	●	●	●	●	●	●	●	●	●
	5 ... 60 V											
Reverse polarity protection	conducting tolerant		●	●	●	●	●	●	●	●	●	●
Switching frequency	0 ... 800 Hz		●	●	●	●	●	●	●	●	●	●
	0 ... 1000 Hz											
Pre-fault indication	LED, red											
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)		●	●	●	●	●	●	●	●	●	●
	-40 ... 70 °C (-40 ... 158 °F)											
Housing material	Stainless steel 1.4305 / AISI 303			●	●	●	●		●	●	●	●
	brass, nickel-plated		●			●	●	●			●	●
Connection type	Device connector M12 x 1, 4-pin							●	●	●	●	●
	cable PUR, 2 m		●									
	cable PVC, 2 m			●	●	●	●					

### Properties

- Ø12 mm housing
- 2 mm and 4 mm, flush mountable versions
- DC, 2-wire switching output
- Cable and connector versions

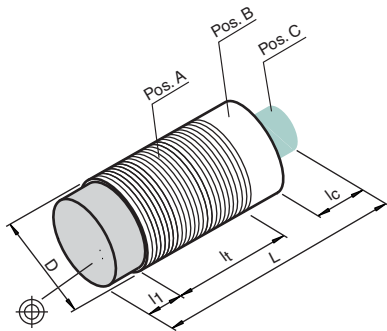
#### Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●	●	●	●	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●	●	●	●	●	●	●	●
CCC approval	Certified by China Compulsory Certification (CCC)	●	●	●	●	●	●	●	●	●	●	●

Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

#### Dimensions

Length L [mm]	40	35	55
Diameter D [mm]		12	
Thread length l <sub>t</sub> [mm]	37	32	39
Cap length l <sub>1</sub> [mm]		0	
Connector area l <sub>c</sub> [mm]	0		6
LED position		Pos. C	



### Accessories

This and more accessories can be found in chapter 10

See pages from 972 ... for cordsets

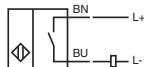
See pages 1068 ... for mounting aids

<b>BF 12</b>	Mounting flange, 12 mm
<b>EXG-12</b>	Quick mounting bracket with dead stop
<b>V1-W-BK</b>	4-pin, M12 female field-attachable connector
<b>V1-G-BK</b>	4-pin, M12 female field-attachable connector
<b>V1-G-2M-PUR</b>	Cable socket, M12, 4-pin, PUR cable
<b>V1-W-2M-PUR</b>	Cable socket, M12, 4-pin, PUR cable

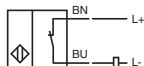
### Electrical Connection



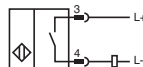
NBB2-12GM40-Z0  
NCB2-12GM40-Z0  
NCB4-12GM35-Z4



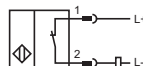
NCB2-12GM40-Z1  
NCB4-12GM35-Z5



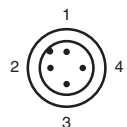
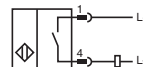
NBB2-12GM40-Z0-V1  
NCB2-12GM40-Z0-V1



NCB2-12GM40-Z1-V1  
NCB4-12GM40-Z5-V1



NCB4-12GM40-Z4-V1



Wire colors in accordance with EN 60947-5-2

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