



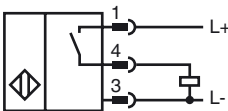
## Model Number

NBB5-18GM20-E2-V1

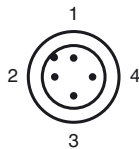
## Features

- 5 mm embeddable
- Extended temperature range

## Connection



## Pinout



Wire colors in accordance with EN 60947-5-2

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

## Accessories

### V1-G-2M-PUR

Cable socket, M12, 4-pin, PUR cable

### V1-W

4-pin, M12 female field-attachable connector

### V1-G

4-pin, M12 female field-attachable connector

### EXG-18

Quick mounting bracket with dead stop

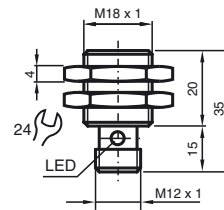
### V1-W-2M-PUR

Cable socket, M12, 4-pin, PUR cable

### BF 18-F

Mounting flange with dead stop, 18 mm

## Dimensions



## Technical Data

### General specifications

Switching element function	PNP	NO
Rated operating distance	$s_n$	5 mm
Installation		embeddable
Output polarity		DC
Assured operating distance	$s_a$	0 ... 4.05 mm ( -25 ... 70 °C (-13 ... 158 °F) ) 0 ... 3.8 mm ( -40 ... -25 °C (-40 ... -13 °F) )
Reduction factor $r_{AI}$		0.2
Reduction factor $r_{Cu}$		0.15
Reduction factor $r_{304}$		0.62

### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V
Switching frequency	$f$	0 ... 1000 Hz
Reverse polarity protected		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	≤ 3 V
Operating current	$I_L$	0 ... 100 mA
Off-state current	$I_r$	0 ... 0.5 mA typ. 0.1 µA at 25 °C
No-load supply current	$I_0$	≤ 20 mA
Indication of the switching state		Multihole-LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	2210 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	Device connector M12 x 1, 4-pin
Housing material	brass, nickel-plated
Sensing face	PBT
Protection degree	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
CSA approval	cCSAus Listed, General Purpose
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.