



### Model Number

**NBB5-18GM20-E2-V1**

### Features

- 5 mm flush
- Extended temperature range

### Accessories

#### V1-G-2M-PUR

Female cordset, M12, 4-pin, PUR cable

#### V1-W

Female connector, M12, 4-pin, field attachable

#### V1-G

Female connector, M12, 4-pin, field attachable

#### EXG-18

Quick mounting bracket with dead stop

#### V1-W-2M-PUR

Female cordset, M12, 4-pin, PUR cable

#### BF 18-F

Mounting flange with dead stop, 18 mm

## Technical Data

### General specifications

Switching function		Normally open (NO)
Output type		PNP
Rated operating distance	$s_n$	5 mm
Installation		flush
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 $r_{Al}$		0.2
Reduction factor $r_{Cu}$		0.15
Reduction factor $r_{304}$		0.62
Output type		3-wire

### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V
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	$I_0$	$\leq 20$ mA
Switching state indicator		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 )
---------------------	----------------------------------

### Mechanical specifications

Connection type	Connector M12 x 1, 4-pin
Housing material	brass, nickel-plated
Sensing face	PBT
Degree of protection	IP67

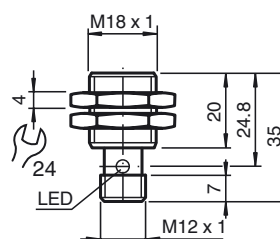
### Compliance with standards and directives

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

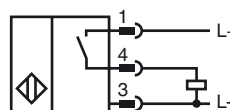
### Approvals and certificates

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



Pinout



Wire colors in accordance with EN 60947-5-2

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