



### Model Number

NBB20-L2-E2B-C-V1

### Features

- Sensor head bidirectional and rotatable
- Basic series
- 20 mm flush
- Quick mounting bracket
- 4-way LED indicator
- Weld Immune
- Bistable version
- Set and Reset function

### Accessories

#### V1-G

Female connector, M12, 4-pin, field attachable

#### V1-W

Female connector, M12, 4-pin, field attachable

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

Female cordset, M12, 4-pin, PUR cable

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

Female cordset, M12, 4-pin, PUR cable

#### MHW 01

Modular mounting bracket

#### MH 02-L

Mounting aid

## Technical Data

### General specifications

Switching element function	PNP	NO
Rated operating distance	$s_n$	20 mm
Installation		flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 16.2 mm
Reduction factor $r_{Al}$		0.33
Reduction factor $r_{Cu}$		0.31
Reduction factor $r_{304}$		0.74
Reduction factor $r_{Brass}$		0.41

### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V
Switching frequency	$f$	0 ... 50 Hz
Hysteresis	$H$	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3$ V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA
No-load supply current	$I_0$	$\leq 25$ mA
Time delay before availability	$t_v$	300 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	580 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

### Input

Input type	Set / Reset
Signal level	0 ... 30 V, max. $U_B$

### Ambient conditions

Ambient temperature	0 ... 50 °C (32 ... 122 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)

### Mechanical specifications

Connection type	Connector M12 x 1, 4-pin
Housing material	PA 6 Grivory GVN-35H
Sensing face	PA 6 Grivory GVN-35H
Degree of protection	IP69K

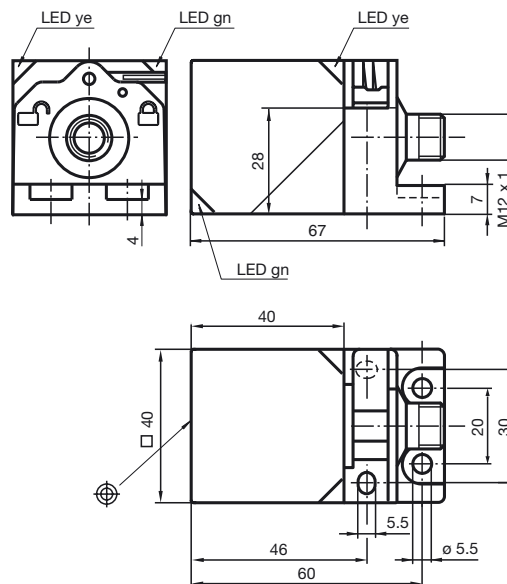
### Compliance with standards and directives

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

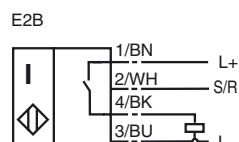
### Approvals and certificates

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	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)

Function output/input

