



Model Number

NBB20-L2-Z0-V1

Features

- Sensor head bidirectional and rotatable
- 20 mm flush
- 2-wire DC
- Quick mounting bracket

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 function	Normally open (NO)
Output type	Two-wire
Rated operating distance	s_n 20 mm
Installation	flush
Output polarity	DC
Assured operating distance	s_a 0 ... 16.2 mm
Actual operating distance	s_r 18 ... 22 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
Output type	2-wire

Nominal ratings

Operating voltage	U_B	5 ... 30 V DC
Switching frequency	f	0 ... 30 Hz
Reverse polarity protection		reverse polarity tolerant
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 5 V
Voltage drop at I_L		
Voltage drop $I_L = 100$ mA, switching element on U_d		... 5 V
Operating current	I_L	2 ... 100 mA
Off-state current	I_r	0 ... 0.5 mA
Switching state indicator		LED, yellow

Functional safety related parameters

MTTF _d	1210 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)

Mechanical specifications

Connection type	Connector plug M12 x 1, 4-pin
Housing material	PA
Sensing face	PA
Degree of protection	IP69K
Mass	130 g

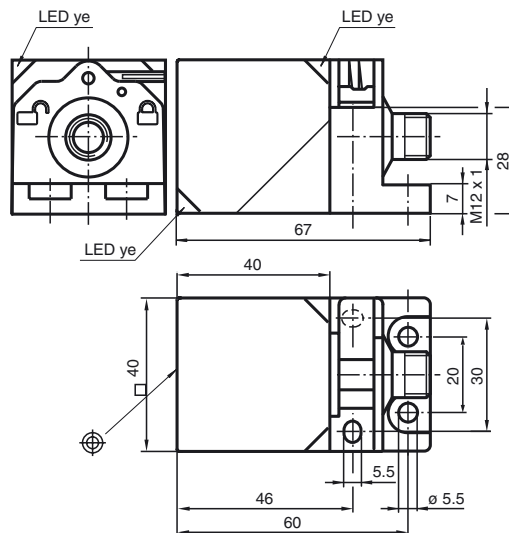
Compliance with standards and directives

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

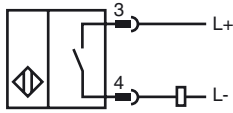
Approvals and certificates

UL approval	cULus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated ≤ 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)