



Model Number

NBB20-L2-A2-V1

Features

- Sensor head bidirectional and rotatable
- 20 mm flush
- 4-wire DC
- Quick mounting bracket
- 4-way LED indicator

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/NC
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	

Nominal ratings

Operating voltage	U_B	10 ... 30 V DC	
Switching frequency	f	0 ... 440 Hz	
Hysteresis	H	typ. 5 %	
Reverse polarity protection		reverse polarity protected	
Short-circuit protection		pulsing	
Voltage drop	U_d	≤ 2 V	
Operating current	I_L	0 ... 200 mA	
Off-state current	I_r	0 ... 0.5 mA	
No-load supply current	I_0	≤ 20 mA	
Time delay before availability	t_v	80 ms	
Operating voltage indicator		LED, green	
Switching state indicator		LED, yellow	

Functional safety related parameters

MTTF _d	1230 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-25 ... 85 °C (-13 ... 185 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

Mechanical specifications

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

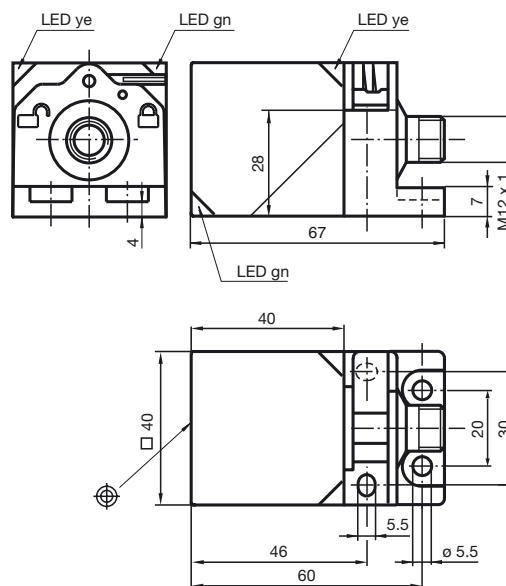
Compliance with standards and directives

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

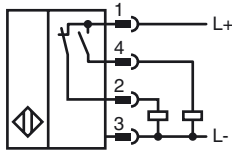
Approvals and certificates

EAC conformity	TR CU 020/2011
Protection class	II
Rated insulation voltage	U_i 253 V
Rated impulse withstand voltage	U_{imp} 4000 V
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus 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)