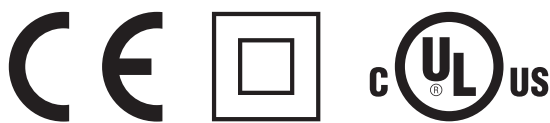




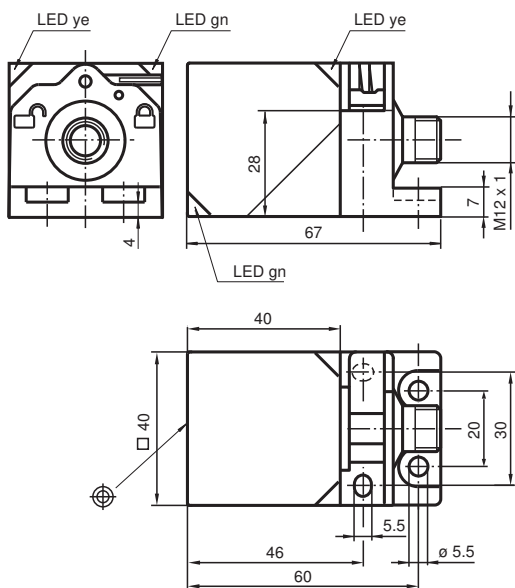
Inductive sensor

NBB20-L2-E0-V1

- Sensor head bidirectional and rotatable
- 20 mm flush
- 3-wire DC
- Quick mounting bracket
- IP69K Protected



Dimensions



Technical Data

General specifications			
Switching function		Normally open (NO)	
Output type		NPN	
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		3-wire	

Technical Data

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		1510 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %

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

Protection class		II
Rated insulation voltage	U_i	253 V
Rated impulse withstand voltage	U_{imp}	4000 V
UL approval		cULus Listed, General Purpose
CCC approval		CCC approval / marking not required for products rated ≤ 36 V

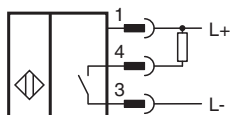
Ambient conditions

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

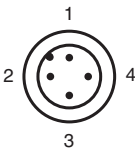
Mechanical specifications

Connection type		Connector plug M12 x 1 , 4-pin
Housing material		PA
Sensing face		PA
Degree of protection		IP69K
Cable		
Cable diameter		3.3 mm $\pm$ 0.15 mm
Mass		130 g

Connection



Connection Assignment



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	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

Release date: 2020-03-20 Date of issue: 2020-03-30 Filename: 120983_eng.pdf