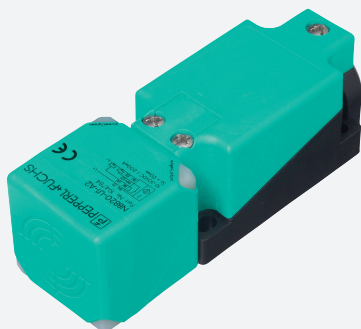


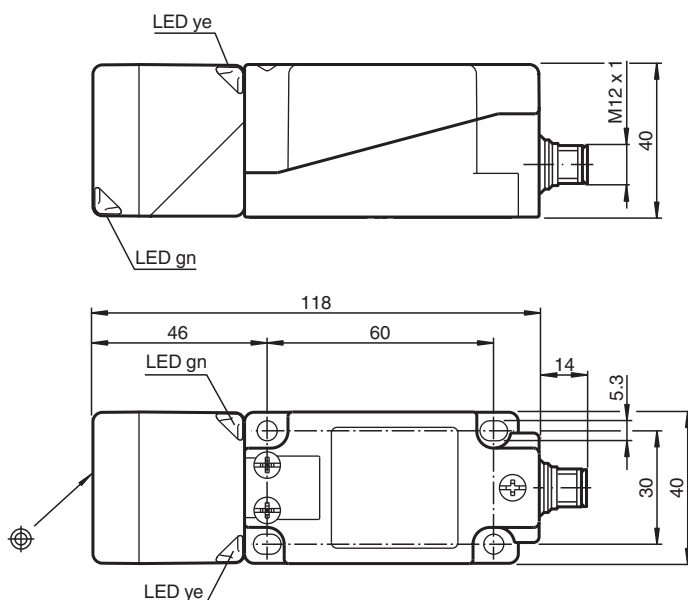


Inductive sensor NBB20-U1-A2-V1

- Sensor head bidirectional and rotatable
- 20 mm flush
- 4-wire DC
- 4 LEDs indicator for 360° visibility



Dimensions



Technical Data

General specifications

Switching function		complementary
Output type		PNP
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
Output type		4-wire

Nominal ratings

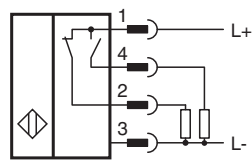
Operating voltage	U_B	10 ... 30 V DC
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Technical Data

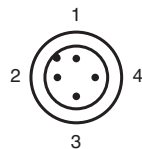
Switching frequency	f	0 ... 440 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U _d	≤ 2 V
Operating current	I _L	0 ... 200 mA
Off-state current	I _r	0 ... 0.5 mA
No-load supply current	I ₀	≤ 20 mA
Time delay before availability	t _v	80 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
Functional safety related parameters		
MTTF _d		1289 a
Safety-relevant product characteristics		
MTTF _d		1289 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2
Approvals and certificates		
UL approval		cULus Listed Load Type: General Purpose Circuitry: Class 2 Power Source Enclosure Type Rating: Type 1 Supply/Switching Voltage: 30 V DC Output Switching Current: 200 mA
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-25 ... 85 °C (-13 ... 185 °F)
Mechanical specifications		
Connection type		Connector plug
Housing material		PA/metal with epoxy powder coating
Sensing face		PA
Housing base		plastic
Degree of protection		IP68 / IP69K
Connector		
Threading		M12 x 1
Number of pins		4
Mass		225 g
Dimensions		
Height		40 mm
Width		40 mm
Length		118 mm
Note		Tightening torque: 1.8 Nm (housing)

Release date: 2026-03-03 Date of issue: 2026-03-03 Filename: 203042_eng.pdf

Connection Assignment



Connection Assignment



Wire colors in accordance with EN 60947-5-2

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