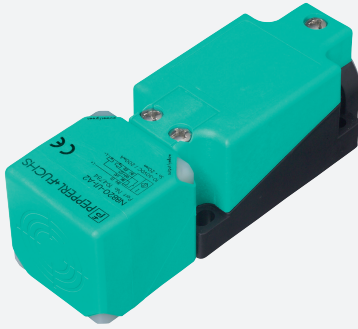


# Inductive sensor

## NRB20-U1-A2

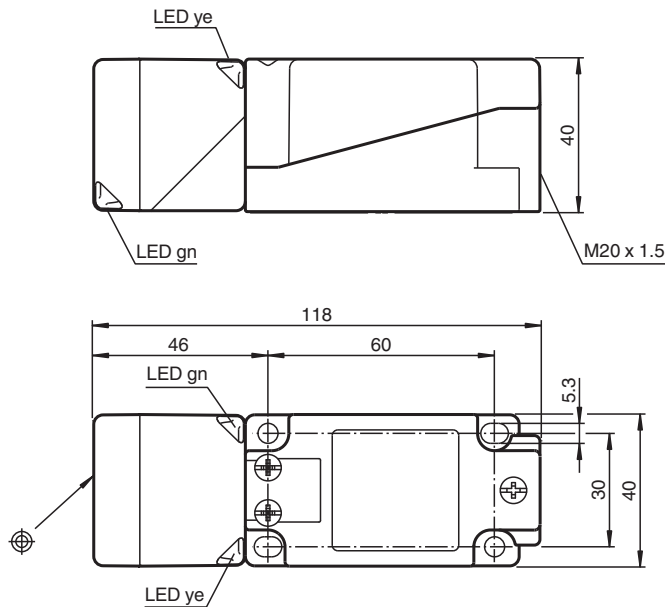


- Sensor head bidirectional and rotatable
- 20 mm flush
- Reduction factor = 1
- Magnetic field resistant
- 4 LEDs indicator for 360° visibility

### Inductive sensor



### 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
Actual operating distance	$s_r$	18 ... 22 mm typ. 20 mm
Reduction factor $r_{Al}$		1
Reduction factor $r_{Cu}$		1
Reduction factor $r_{304}$		1
Reduction factor $r_{St37}$		1
Output type		4-wire

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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## Technical Data

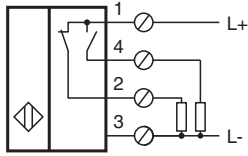
Nominal ratings		
Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 440 Hz
Hysteresis	$H$	3 ... 15 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 2.5$ V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA typ. 0.01 mA
No-load supply current	$I_0$	$\leq 25$ mA
Time delay before availability	$t_v$	15 ms
Constant magnetic field	$B$	200 mT
Alternating magnetic field	$B$	200 mT
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
Functional safety related parameters		
MTTF <sub>d</sub>		1123 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		
Protection class		II
Rated insulation voltage	$U_i$	60 V
Rated impulse withstand voltage	$U_{imp}$	800 V
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 $\leq 36$ V
Ambient conditions		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		screw terminals
Information for connection		A maximum of two conductors with the same core cross section may be mounted on one terminal connection! tightening torque 1.2 Nm + 10 %
Core cross section		up to 2.5 mm <sup>2</sup>
Minimum core cross-section		without wire end ferrules 0.5 mm <sup>2</sup> , with connector sleeves 0.34 mm <sup>2</sup>
Maximum core cross-section		without wire end ferrules 2.5 mm <sup>2</sup> , with connector sleeves 1.5 mm <sup>2</sup>
Housing material		PA/metal with epoxy powder coating
Sensing face		PA 6 Grivory GVN-35H
Housing base		plastic
Degree of protection		IP67
Mass		225 g
Dimensions		
Height		40 mm
Width		40 mm
Length		118 mm
Note		Tightening torque: 1.8 Nm (housing)

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## Connection



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