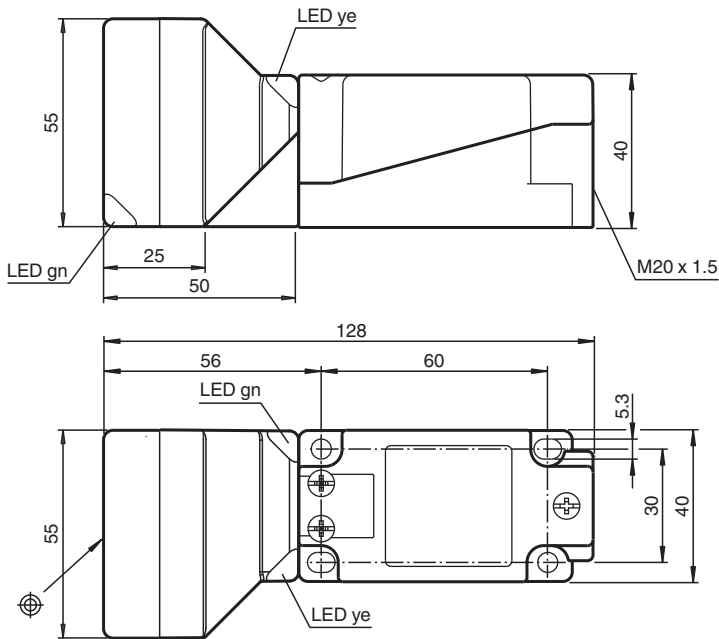


Inductive sensor NBN40-U1L-A2-M

- Sensor head bidirectional and rotatable
- 40 mm non-flush
- 4 LEDs indicator for 360° visibility
- Increased noise immunity 100 V/m
- e1-Type approval



Dimensions



Technical Data

General specifications

Switching function		complementary
Output type		PNP
Rated operating distance	s_n	40 mm
Installation		non-flush
Output polarity		DC
Assured operating distance	s_a	0 ... 32.4 mm
Actual operating distance	s_r	36 ... 44 mm
Reduction factor r_{Al}		0.39
Reduction factor r_{Cu}		0.37
Reduction factor r_{304}		0.75
Reduction factor r_{Brass}		0.45

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

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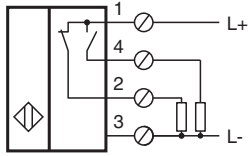
PEPPERL+FUCHS

Technical Data

Output type		4-wire
Nominal ratings		
Operating voltage	U_B	10 ... 60 V DC
Switching frequency	f	0 ... 100 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 typ. 0.01 mA
No-load supply current	I_0	≤ 20 mA
Time delay before availability	t_v	120 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
Functional safety related parameters		
MTTF _d		1030 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	230 V
Rated impulse withstand voltage	U_{imp}	2.5 kV
UL approval		cULus Listed, General Purpose
E1 Type approval		10R-047189
Ambient conditions		
Ambient 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 ²
Minimum core cross-section		without wire end ferrules 0.5 mm ² , with connector sleeves 0.34 mm ²
Maximum core cross-section		without wire end ferrules 2.5 mm ² , with connector sleeves 1.5 mm ²
Housing material		PA/metal
Sensing face		PA
Housing base		plastic
Degree of protection		IP68 / IP69K
Mass		225 g
Dimensions		
Height		55 mm
Width		55 mm
Length		128 mm
Note		Tightening torque: 1.8 Nm (housing)

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Connection



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Technical Features

EMC Properties

Interference immunity in accordance with DIN ISO 11452-2:

Frequency band 20 MHz up to 1 GHz 100 V/m

Frequency band 1 GHz up to 2 GHz 50 V/m

Mains-borne interference in accordance with ISO 7637-2:

Pulse	1	2a	2b	3a	3b	4	5
Severity level	III	III	III	III	III	III	III
Failure criterion	C	A	C	A	A	B	C

EN 61000-4-2: CD: 8 kV / AD: 15 kV

Severity level IV

EN 61000-4-3: 30 V/m (80...2500 MHz)

Severity level IV

EN 61000-4-4: 2 kV

Severity level III

EN 61000-4-6: 10 V (0.01...80 MHz)

Severity level III

EN 55011: Klasse A