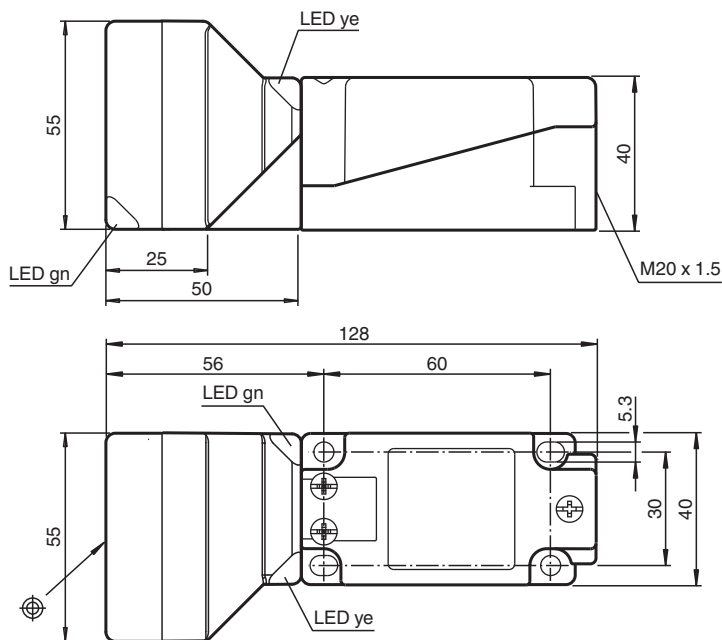


Inductive sensor NBN40-U1L-A2-M

- 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_{AI}		0.39

Release date: 2020-05-14 Date of issue: 2020-05-14 Filename: 214115_eng.pdf

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com

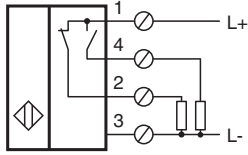
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

 PEPPERL+FUCHS


Technical Data

Reduction factor r_{Cu}		0.37
Reduction factor r_{304}		0.75
Reduction factor r_{Brass}		0.45
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 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	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 ferrule 0.5 mm ² , with connector sleeves 0.34 mm ²
Maximum core cross-section		without wire end ferrule 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
Note		Tightening torque: 1.8 Nm (housing)

Connection



Accessories

	<p>MHW 01</p>	<p>Modular mounting bracket</p>
---	----------------------	---------------------------------

Release date: 2020-05-14 Date of issue: 2020-05-14 Filename: 214115_eng.pdf

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	2	2	3	3	4	5
		a	b	a	b		
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			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						