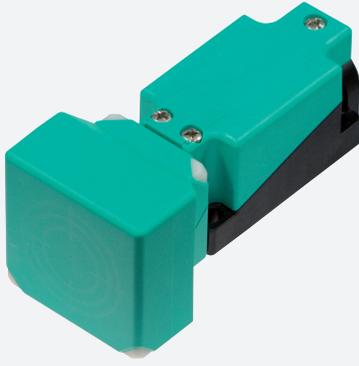


# Inductive sensor

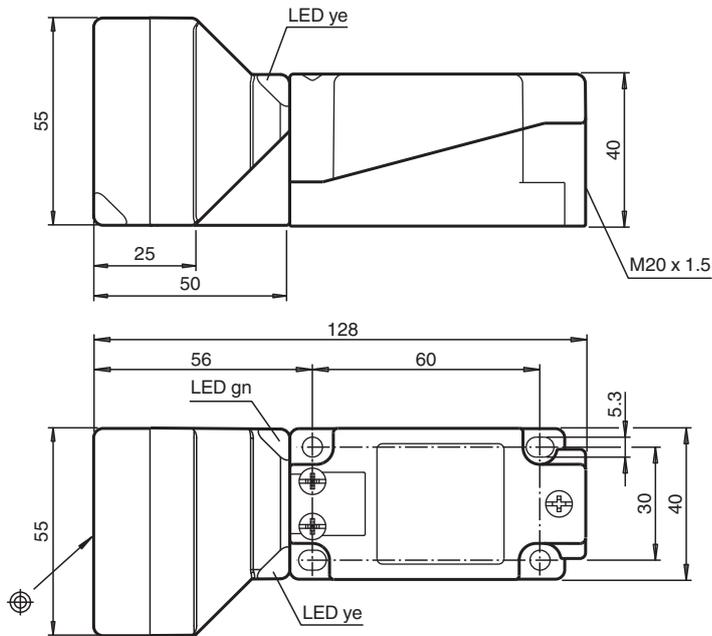
## NBN40-U1L-UU



- Sensor head bidirectional and rotatable
- NO/NC selectable
- Comfort series



### Dimensions



### Technical Data

#### General specifications

Switching function		Normally open/closed (NO/NC)
Output type		Two-wire
Rated operating distance	$s_n$	40 mm
Installation		non-flush
Output polarity		AC/DC
Assured operating distance	$s_a$	0 ... 32.4 mm
Actual operating distance	$s_r$	36 ... 44 mm typ. 40 mm
Reduction factor $r_{Al}$		0.37
Reduction factor $r_{Cu}$		0.3
Reduction factor $r_{304}$		0.73
Reduction factor $r_{Fe}$		1

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

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## Technical Data

Reduction factor $r_{\text{Brass}}$		0.4
Output type		2-wire
<b>Nominal ratings</b>		
Switching frequency	f	0 ... 25 Hz
Hysteresis	H	1 ... 10 % typ. 5 %
Reverse polarity protection		reverse polarity tolerant
Short-circuit protection		pulsing
Voltage drop	$U_d$	≤ 5 V (typ. 2V) DC operation ≤ 8 V (typ. 3 V) AC operation
Momentary current (20 ms, 0.1 Hz)		0 ... 3000 mA
Operating current	$I_L$	5 ... 500 mA
Rated operating current	$I_e$	500 mA 50/60 Hz
Lowest operating current	$I_m$	5 mA
Off-state current	$I_r$	≤ 1.5 mA
Usage category		AC12 , AC140 , DC12 , DC13
Time delay before availability	$t_v$	≤ 300 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
Error indicator		flashes when overcurrent
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		550 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Electrical specifications</b>		
Rated operating voltage	$U_e$	24 ... 250 V DC / 24 ... 230 V AC
Operating voltage	$U_B$	20 ... 275 V DC / 20 ... 253 V AC
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN IEC 60947-5-2
<b>Approvals and certificates</b>		
Protection class		II
Rated insulation voltage	$U_i$	230 V
Rated impulse withstand voltage	$U_{\text{imp}}$	2.5 kV
UL approval		cULus Listed Load Type: General Purpose Enclosure Type Rating: Type 1 Supply/Switching Voltage: 250 V AC / 273 V DC Output Switching Current: 500 mA Further UL information see section "Additional Information"
CCC approval		Ue 75 V DC - 250 V DC Ue 75 V AC - 230 V AC
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 85 °C (-13 ... 185 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
Pollution degree		3
<b>Mechanical specifications</b>		
Connection type		terminal compartment
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 6.6 / metal
Sensing face		PA 6.6
Housing base		plastic

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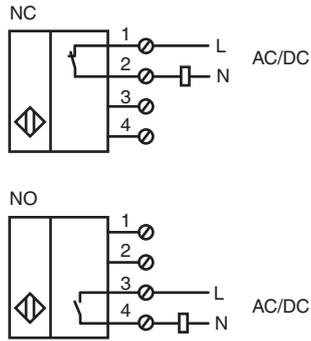
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**PEPPERL+FUCHS**

## Technical Data

Degree of protection	IP67
Mass	255 g
Dimensions	
Height	55 mm
Width	55 mm
Length	128 mm
Note	Tightening torque: 1.8 Nm (housing)

## Connection Assignment



## Additional Information

**Additional UL Information**

Various: These devices shall be protected by an external fuse in accordance with UL 248, rated 3 A fuse suitable 300 V AC and DC.

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## Connection

### Note

The sensor is designed for individual operation. A series or parallel connection of sensors is not permissible.