

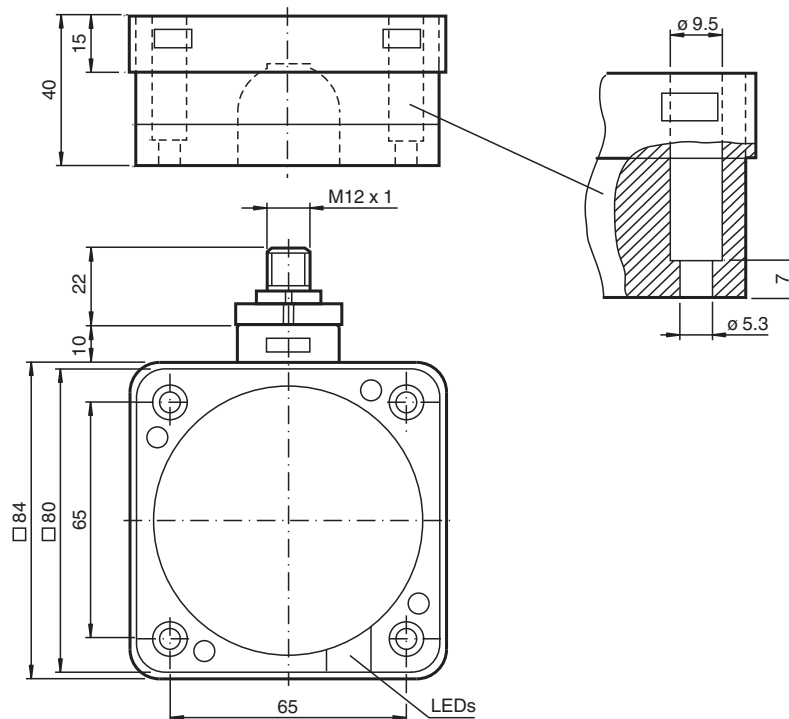


# Inductive sensor NRB50-FP-A2-C-P3-V1

- 50 mm flush
- Reduction factor = 1
- Weld Immune



## Dimensions



## Technical Data

### General specifications

Switching function		complementary
Output type		PNP
Rated operating distance	$s_n$	50 mm
Installation		flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 40.5 mm
Reduction factor $r_{Al}$		1
Reduction factor $r_{Cu}$		1
Reduction factor $r_{304}$		1
Reduction factor $r_{St37}$		1

### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 1 Hz

Release date: 2020-03-23 Date of issue: 2020-03-30 Filename: 187795\_eng.pdf

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

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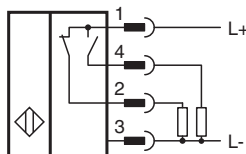
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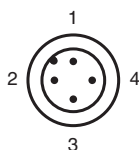
## Technical Data

Hysteresis	H	typ. 3 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3 \text{ V}$
Rated insulation voltage	$U_{BIS}$	50 V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA
No-load supply current	$I_0$	$\leq 20 \text{ mA}$
Time delay before availability	$t_v$	$\leq 300 \text{ ms}$
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		854 a
Mission Time ( $T_M$ )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007
<b>Approvals and certificates</b>		
UL approval		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
CCC approval		CCC approval / marking not required for products rated $\leq 36 \text{ V}$
<b>Ambient conditions</b>		
Ambient temperature		0 ... 50 °C (32 ... 122 °F) ( $\pm 10 \%$ changing operating distance) -25 ... 70 °C (-13 ... 158 °F) ( $\pm 20 \%$ changing operating distance)
<b>Mechanical specifications</b>		
Connection type		Connector M12 x 1 , 4-pin
Housing material		PBT/metal
Sensing face		PBT, PTFE coated
Housing base		PBT
Degree of protection		IP68

## Connection



## Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

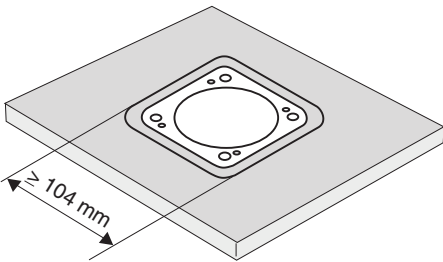
Mounting

These sensors are particularly suitable for embedded installation in floor conveyor systems. The installation of the switch in a metal base plate provides it with considerable protection against mechanical damage.

Care should be taken to ensure that the cut out in the base plate is at least 104 mm x 104 mm and that the sensor is positioned centrally within this cut out.



The active surface of the sensor must not be recessed with respect to the front face of the base plate.

The high switching distance guarantees safe detection and thus control of the floor conveyor system.



**Caution!**  
After removal of the metal screen the proximity switch can no longer be mounted as an embedded installation.

Accessories

	<b>V1-G-2M-PUR</b>	Female cordset, M12, 4-pin, PUR cable
	<b>V1-W-2M-PUR</b>	Female cordset, M12, 4-pin, PUR cable

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