

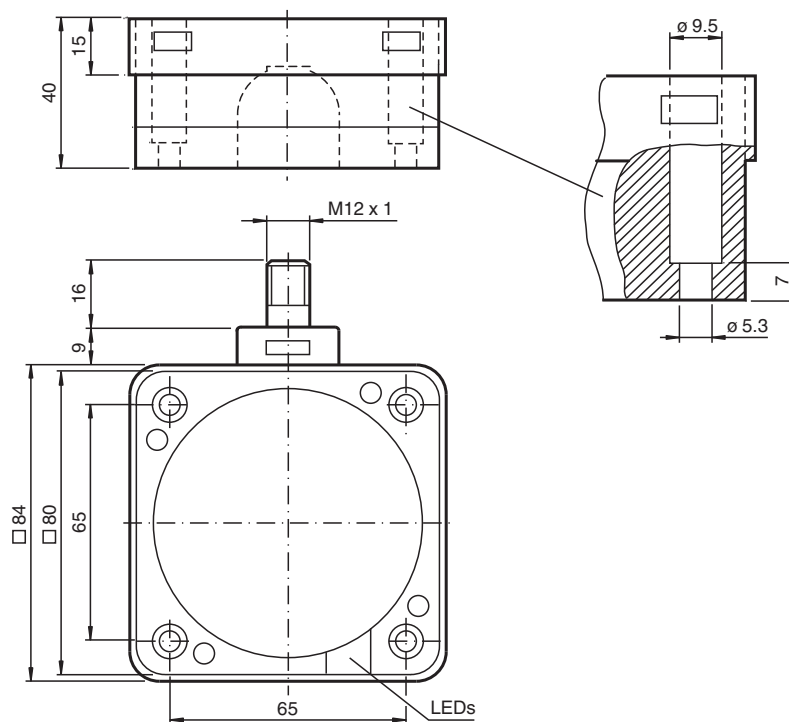
# Inductive sensor

## NCB50-FP-E2-C-P1-V1

- 50 mm flush
- 3-wire DC
- Weld Immune
- Optimum use at a distance >50 cm



### Dimensions



### Technical Data

#### General specifications

Switching function		Normally open (NO)
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 $r_{AI}$		0.38
Reduction factor $r_{Cu}$		0.35
Reduction factor $r_{304}$		0.83
Output type		3-wire

#### Nominal ratings

Operating voltage	$U_B$	10 ... 60 V DC
Switching frequency	$f$	0 ... 1 Hz

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

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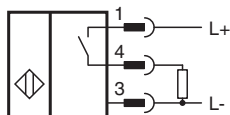
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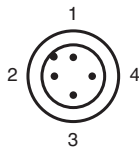
## Technical Data

Hysteresis	H	typ. 3 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3 \text{ V}$
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	$t_v$	$\leq 1 \text{ s}$
Tuning-out		$\geq 50 \text{ ms}$
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		960 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN IEC 60947-5-2
<b>Approvals and certificates</b>		
UL approval		cULus Listed Circuitry: Class 2 Power Source Enclosure Type Rating: Type 1 Supply/Switching Voltage: 60 V DC Output Switching Current: 200 mA
CCC approval		Certified by China Compulsory Certification (CCC)
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
<b>Mechanical specifications</b>		
Connection type		Connector plug
Housing material		PBT/metal
Sensing face		PBT, active surface PTFE coated
Housing base		PBT
Degree of protection		IP68
<b>Connector</b>		
Threading		M12 x 1
Number of pins		4
<b>Dimensions</b>		
Height		40 mm
Width		84 mm
Length		84 mm

## Connection



## Connection Assignment



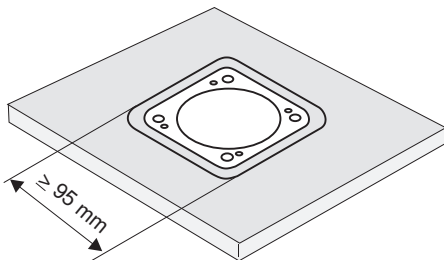
Wire colors in accordance with EN 60947-5-2

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

## Mounting

These sensors are especially designed for embeddable mounting in conveyor floors. Due to its precise location in metal base plates the sensor is afforded a high degree of mechanical protection. No clearance is required between the sensor and the base plate, avoiding the need for protective guarding to prevent possible foot injury.

The large sensing range ensures positive detection, and thus provides consistent control and monitoring of the conveyor.



### Warning!

Once the metal screening has been removed, the sensor can no longer be embeddable mounted.