

**CONTROL
COMPONENTS**
NCB50-FP-A2-P1
Inductive Sensor



Control Components NCB50-FP-A2-P1 Inductive Sensor Owner's Manual

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**CONTROL
COMPONENTS**

Control Components NCB50-FP-A2-P1 Inductive Sensor



Product Usage Instructions

- These sensors are designed for embeddable mounting in conveyor floors.
- The sensor is placed in metal base plates for mechanical protection.
- No clearance is needed between the sensor and the base plate to prevent foot injury.
- Once the metal screening is removed, the sensor can no longer be embeddable mounted.

Installation

- Ensure the sensor is securely mounted in the desired location.
- Connect the sensor's wires according to the provided connection information.
- Check the sensor's LED indicators to verify proper function.

Operation

- Apply the operating voltage within the specified range (10 – 60 V DC) to the sensor for it to function correctly.
- The sensor has a rated operating distance of 50 mm. Ensure the target object falls within this range for accurate detection.

Maintenance

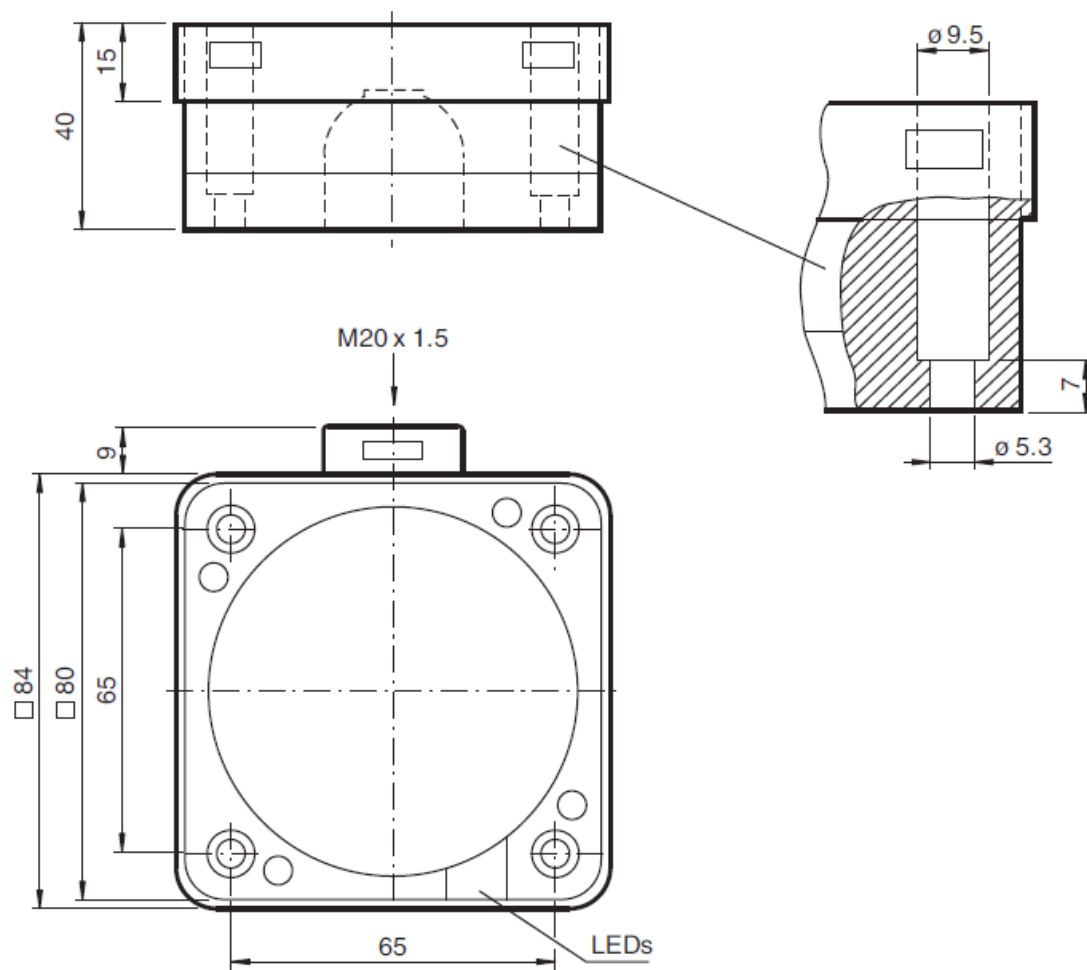
- Regularly inspect the sensor for any damage or obstructions that may affect its performance.
- Ensure the sensor's connections are secure to prevent any electrical issues.

FAQ

- **Q: What should I do if the sensor's LED indicators do not light up?**
 - **A:** Check the power supply and connections to ensure proper voltage is reaching the sensor. If the issue persists, contact customer support for further assistance.
- **Q: Can the sensor be used in environments with high temperatures?**
 - **A:** The ambient temperature range for this sensor is not specified for high-temperature environments.

Operating the sensor within its specified temperature range is recommended for optimal performance.

Dimensions



Technical Data

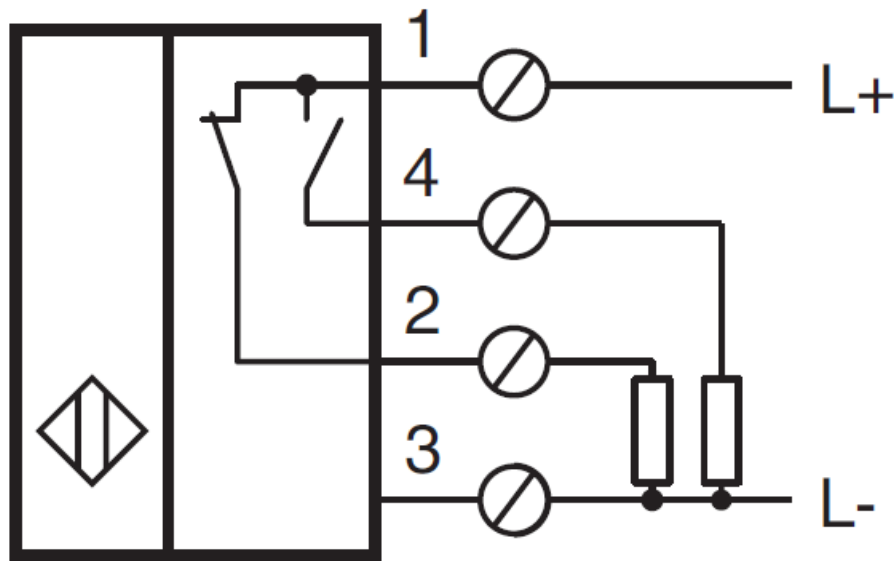
General specifications		
Switching function	complementary	
Output type		PNP
Rated operating distance	s_n	50 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0.... 40.5 mm
Reduction factor r_{Al}		0.38
Reduction factor r_{Cu}		0.35
Reduction factor r_{304}		0.83

Output type		4-wire
Nominal ratings		
Operating voltage	U_B	10 ... 60 V DC
Switching frequency	f	0 ... 80 Hz
Hysteresis	H	typ. 3 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 3 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0.... 0.5 mA
No-load supply current	I_0	≤ 20 mA
Time delay before availability	t_v	≤ 300 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
Functional safety-related parameters		
MTTF _d		670 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		
UL approval		cULus Listed, General Purpose
CCC approval		Certified by China Compulsory Certification (CCC)
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °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		PBT
Sensing face		PBT
Housing base		PBT
Degree of protection		IP68
Mass		445 g
Dimensions		
Height		40 mm
Width		84 mm

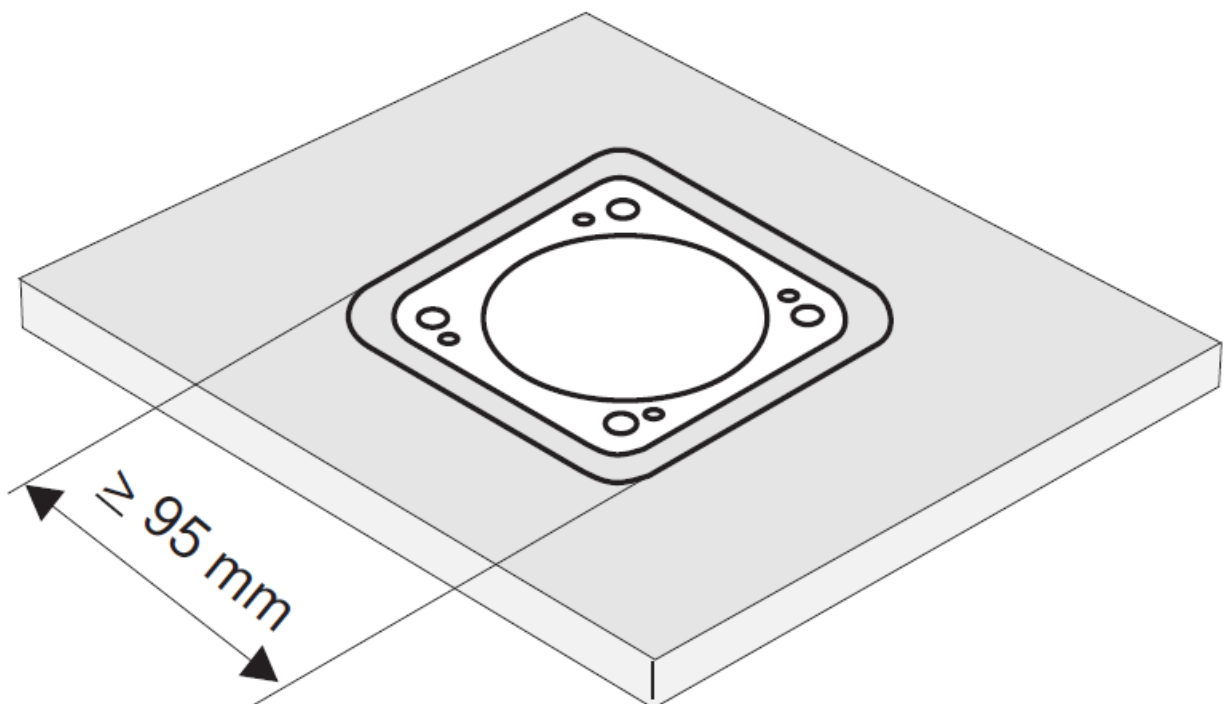
Length	84 mm
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Connection



Mounting

- These sensors are specially 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.



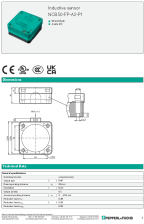
Warning!

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

CONTACT

- Refer to "General Notes Relating to Pepperl+Fuchs Product Information".
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Documents / Resources

	Control Components NCB50-FP-A2-P1 Inductive Sensor [pdf] Owner's Manual NCB50-FP-A2-P1 Inductive Sensor, NCB50-FP-A2-P1, Inductive Sensor, Sensor
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References

- [Pepperl+Fuchs International. Industrial Sensors, Factory Automation, Process Automation, Intrinsic Safety, Explosion Protection](#)
- [User Manual](#)

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