

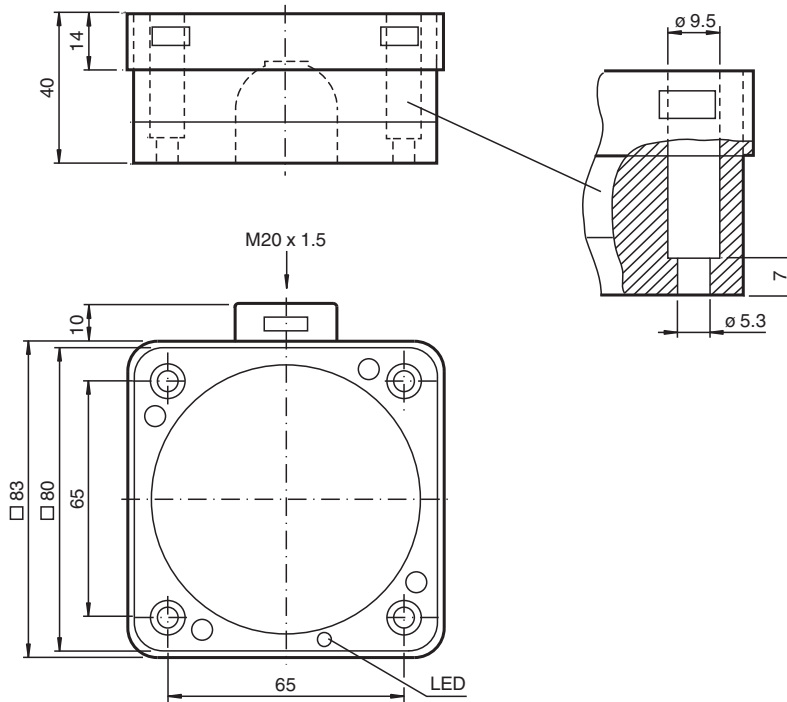


# Inductive sensor NCB40-FP-N0-P1

- 40 mm flush
- NAMUR output
- Polarity reversal protected



## Dimensions



## Technical Data

### General specifications

Switching function		Normally closed (NC)
Output type		NAMUR
Rated operating distance	$s_n$	40 mm
Installation		flush
Assured operating distance	$s_a$	0 ... 32 mm
Actual operating distance	$s_r$	36 ... 44 mm typ. 40 mm
Reduction factor $r_{AI}$		0.35
Reduction factor $r_{Cu}$		0.35
Reduction factor $r_{304}$		0.8

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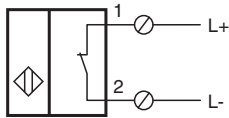
## Technical Data

Output type		2-wire
<b>Nominal ratings</b>		
Nominal voltage	U <sub>o</sub>	8.2 V (R <sub>i</sub> approx. 1 kΩ)
Switching frequency	f	0 ... 80 Hz
Hysteresis	H	0 ... 5 % typ. 3 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		yes
Current consumption		
Measuring plate not detected		≥ 3 mA
Measuring plate detected		≤ 1 mA
Time delay before availability	t <sub>v</sub>	≤ 20 ms
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		2360 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
NAMUR		EN 60947-5-6:2000 IEC 60947-5-6:1999
Electromagnetic compatibility		NE 21:2007
Standards		EN IEC 60947-5-2
<b>Approvals and certificates</b>		
IECEX approval		
Equipment protection level Ga		IECEX PTB 11.0021X
Equipment protection level Gb		IECEX PTB 11.0021X
Equipment protection level Da		IECEX PTB 11.0021X
Equipment protection level Mb		IECEX PTB 11.0021X
ATEX approval		
Equipment protection level Ga		PTB 00 ATEX 2032 X
Equipment protection level Gb		PTB 00 ATEX 2032 X
Equipment protection level Da		PTB 00 ATEX 2032 X
UL approval		
Ordinary Location		E87056
Hazardous Location		E501628
Control drawing		116-0451
CCC approval		
Hazardous Location		2020322315002304
CML approval		on request
ANZEX		19.3001X
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 100 °C (-13 ... 212 °F)
Storage temperature		-40 ... 100 °C (-40 ... 212 °F)
<b>Mechanical specifications</b>		
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 <sup>2</sup> , stripped insulation length: 7 mm
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>
Connection (system side)		screw terminals, M20 x 1.5 cable gland, usable thread length 10 mm, screw-in depth max. 10 mm
Housing material		PBT

## Technical Data

Sensing face	PBT
Housing base	PBT
Degree of protection	IP66 / IP67
Mass	427 g
Dimensions	
Height	40 mm
Width	83 mm
Length	83 mm
<b>General information</b>	
Use in the hazardous area	see instruction manuals

## Connection Assignment



## Installation Conditions

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.

