



Model Number

MNI20N

Magnetic, Non Contact

Features

- **Cost-effective, bearing-free rotary encoder for rotational speed measurement**
- **Simple installation**
- **Operating display verifies function**
- **Up to 7200 pulses**
- **High degree of protection (IP67)**
- **Robust and flexible magnetic rings**

Description

The magnetic incremental encoder MNI20 is an exceptionally robust measurement system in the smallest space. Its highly compact encapsulated housing gives the sensor its high resistance to harsh environmental conditions. The installation-friendly design reduces the installation time considerably.

Technical data

General specifications

Detection type	magnetic sampling
Pulse count	max. 5000

Functional safety related parameters

MTTF _d	1093 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

LED green	Operating display
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Electrical specifications

Operating voltage U _B	10 ... 30 V DC 5 V DC for RS-422
No-load supply current I ₀	max. 55 mA

Output

Output type	push-pull, incremental or RS-422, incremental
Voltage drop U _d	≤ 2.5 V (< 2.5 V)
Load current	max. per channel 30 mA , short-circuit protected (max. per channel 20 mA, conditionally short-circuit proof)
Output frequency	max. 800 kHz

Connection

Cable	Ø4.7 mm, 8 x 0.128 mm ² , 2 m
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Standard conformity

Degree of protection	DIN EN 60529, IP67
Climatic testing	DIN EN 60068-2-30
Emitted interference	EN 61000-6-4:2007/A1:2011
Noise immunity	EN 61000-6-2:2005
Shock resistance	DIN EN 60068-2-27, 200 g, 6 ms
Vibration resistance	DIN EN 60068-2-6, 40 g, 10 ... 2000 Hz

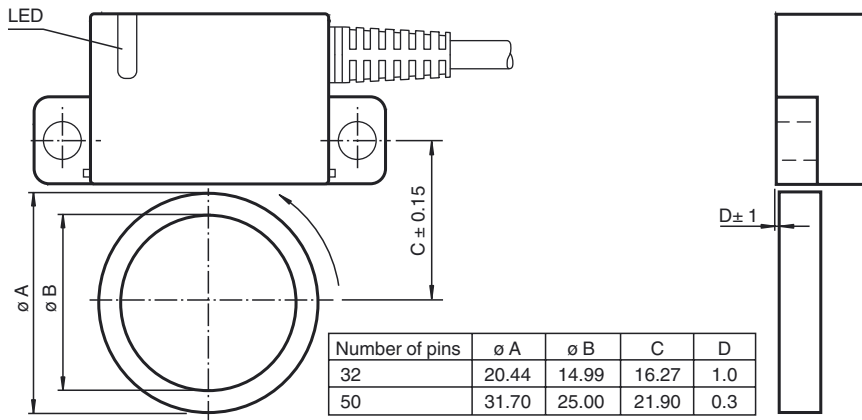
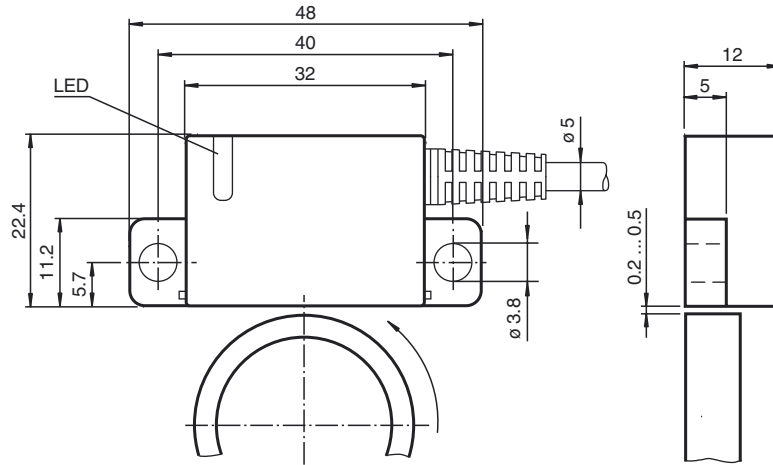
Ambient conditions

Operating temperature	-25 ... 85 °C (-13 ... 185 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)

Mechanical specifications

Material	
Housing	PA
Cable	PUR
Magnetic ring	PA , Plastic-coated ferrite
Mass	approx. 190 g
Rotational speed	max. 20000 min ⁻¹

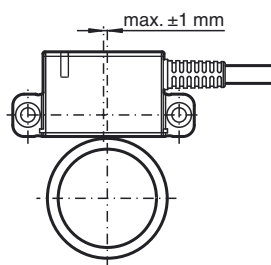
Dimensions



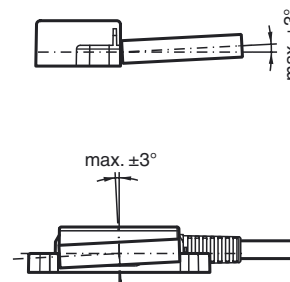
Installation



Shaft displacement



Angular displacement

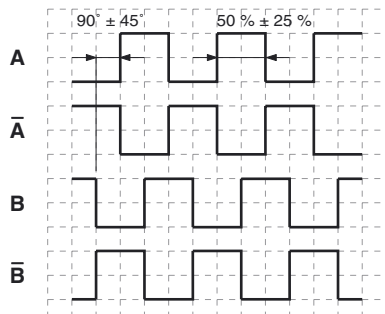


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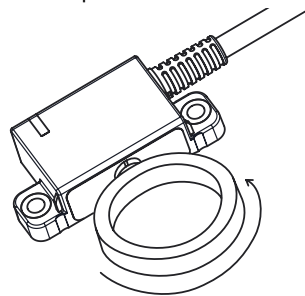
Electrical connection

Signal	Cable, 8-core
GND	White
+U _b	Brown
A	Green
B	Grey
\bar{A}	Yellow
\bar{B}	Pink
n. c.	Blue
n. c.	Red
Screen	-

Signal outputs



ccw - with top-view



LED-Indicators

LED status	Description
Green On	Sensor ready for operation. Supply voltage applied and magnetic wheel is detected.
LED Off	Possible reason: <ul style="list-style-type: none"> • Supply voltage drop or no supply voltage • Magnetic wheel not detectable (e. g. too large gap)

Order code

M N I 2 0 N - - - - - K 2 4 N - - - - -

<p>Version MNI Magnetic principle, Non-contact, Incremental</p>	<p>Housing material N Plastic</p>	<p>Magnetic ring specifications OTB2 Ø15 mm, 32 poles, pulse count: 32, 64, 128, 256, 512, 800, 1024, 1600, 3200 OH02 Ø25 mm, 50 poles, pulse count: 50, 100, 500, 1000, 1250, 1600, 2400, 2500, 5000</p>	<p>Connection type K2 PUR cable, 4 x 2 x 0.128 mm², 2m</p>	<p>Signal output 4 A + B and \bar{A} + \bar{B}</p>	<p>Output type 1 10 V ... 30 V, push-pull 6 5 V, RS 422</p>	<p>Temperature N normal</p>	<p>Pulse count see magnetic ring specifications</p>
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".