



# Incremental rotary encoder

## MNI20N-0H02DY41N-00100:02

- Cost-effective, bearing-free rotary encoder for rotational speed measurement
- Simple installation
- Operating display verifies function
- High degree of protection (IP67)
- Magnetic ring with 50 poles

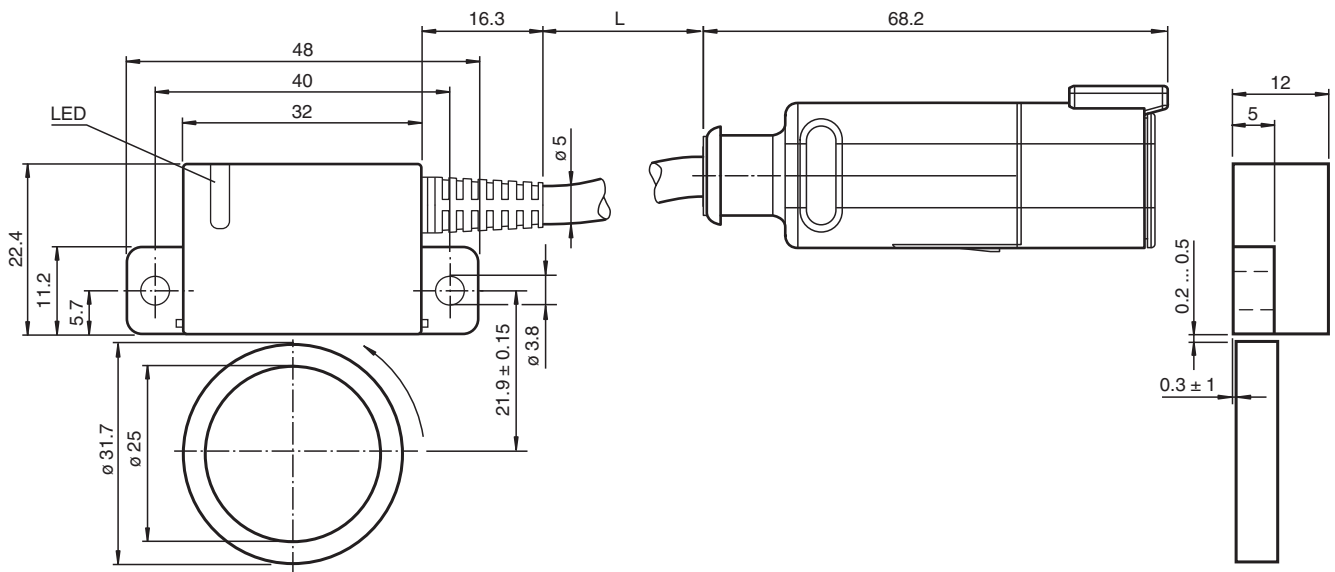
Magnetic, non Contact



### Function

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.

### Dimensions



### Technical Data

#### General specifications

Detection type	magnetic sampling
Pulse count	100
UL File Number	E223176 "For use in NFPA 79 Applications only", if UL marking is marked on the product.

#### Functional safety related parameters

MTTF <sub>d</sub>	1093 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

#### Indicators/operating means

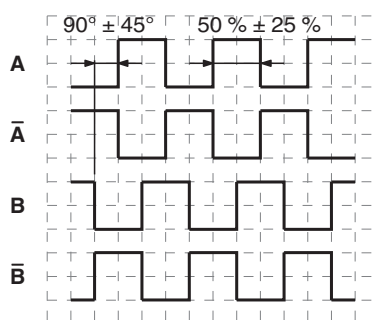
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## Technical Data

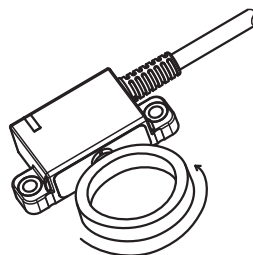
LED green	Operating display	
<b>Electrical specifications</b>		
Operating voltage	$U_B$	10 ... 30 V DC
No-load supply current	$I_0$	max. 55 mA
<b>Output</b>		
Output type		push-pull, incremental
Voltage drop	$U_d$	< 2.5 V
Load current		max. per channel 30 mA , short-circuit protected (max. per channel 20 mA, conditionally short-circuit proof)
Output frequency		max. 800 kHz
<b>Connection</b>		
Cable		Ø4,7 mm, 4 x 2 x 0,128 mm <sup>2</sup> cable with Deutsch connector DTM04-6P L = 1,15 m
<b>Standard conformity</b>		
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
<b>Approvals and certificates</b>		
UL approval		cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure , if UL marking is marked on the product. adapters providing field wiring on request
Maximum permissible ambient temperature		max. 80 °C (max. 176 °F)
<b>Ambient conditions</b>		
Operating temperature		-25 ... 85 °C (-13 ... 185 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
<b>Mechanical specifications</b>		
Material		
Housing		PA
Cable		PUR
Magnetic ring		PA , Plastic-coated ferrite 50 poles
Mass		approx. 190 g
Rotational speed		max. 20000 min <sup>-1</sup>
Dimensions		
Width		22.4 mm
Length		32 mm

## Operation

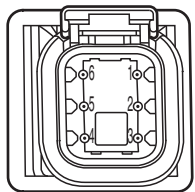
### Signal outputs



ccw- with top view



**Connection**

Signal	Deutsch connector DTM04-P6, 6-pin
+U <sub>b</sub>	6
GND	5
A	1
$\bar{A}$	3
B	2
$\bar{B}$	4
Pinout	

**Indication**

**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"> <li>• Supply voltage drop or no supply voltage</li> <li>• Magnetic wheel not detectable (e. g. too large gap)</li> </ul>

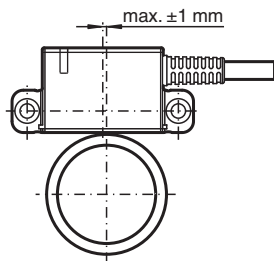
**Mounting**

**Mounting information**

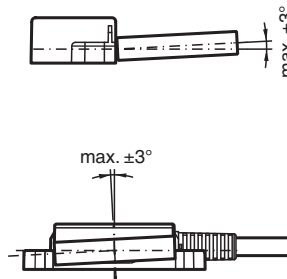
Installation



Shaft displacement



Angular displacement



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