



Incremental rotary encoder

MNI40N-0T01DY41N-01000

- Clear function verification via two-color LEDs (red/green)
- Simple installation and adjustment using assistance functions reduce costs
- Self-diagnostics including the magnetic wheel provide quality assurance
- Internal intelligence provides easy setup and reliable operation
- The elastomer coating of the magnetic wheel provides resistance to dirt as well as thermal and mechanical shock
- Long service life at high speeds and temperatures

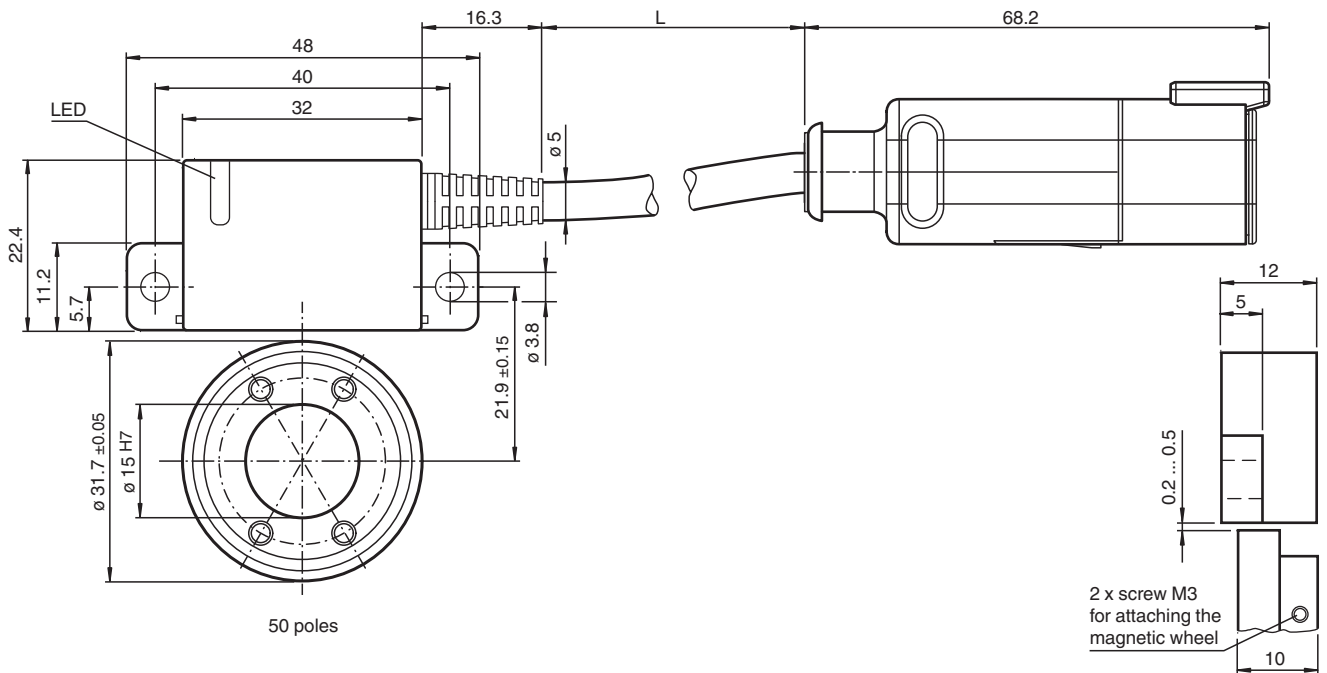
Magnetic, Non Contact



Function

The magnetic incremental encoder MNI40 combines an exceptionally robust measurement system with intelligent diagnosis and alignment functions in the smallest space. Its highly compact encapsulated housing gives the sensor its high resistance to harsh environmental conditions. The installation-friendly design and simple guided adjustment of the sensor using two-color status LED reduces the installation time considerably.

Dimensions



Release date: 2022-12-12 Date of issue: 2022-12-12 Filename: 301947_eng.pdf

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

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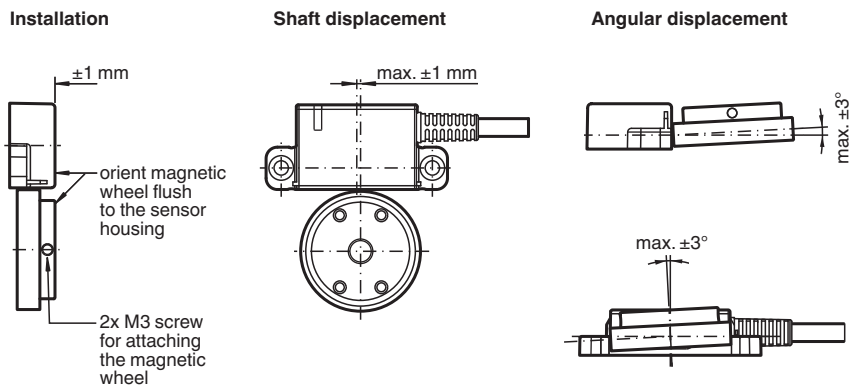
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Dimensions



Technical Data

General specifications			
Detection type	magnetic sampling		
Pulse count	1000		
UL File Number	E223176 "For use in NFPA 79 Applications only", if UL marking is marked on the product.		
Functional safety related parameters			
MTTF _d	942 a		
Mission Time (T _M)	20 a		
Diagnostic Coverage (DC)	0 %		
Indicators/operating means			
LED red/green	Operating display / Alignment aid		
Electrical specifications			
Operating voltage	U _B	10 ... 30 V DC	
No-load supply current	I ₀	max. 55 mA	
Output			
Output type	push-pull, incremental		
Voltage drop	U _d	< 2.5 V	
Load current	max. per channel 30 mA , short-circuit protected		
Output frequency	max. 1 MHz		
Connection			
Connector	L = 0.3 m fixed cable with Deutsch connector DTM04-6P		
Standard conformity			
Degree of protection	DIN EN 60529, IP67 , IP68 , IP69K		
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		
Approvals and certificates			
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)		
Ambient conditions			
Operating temperature	-40 ... 100 °C (-40 ... 212 °F)		
Storage temperature	-40 ... 100 °C (-40 ... 212 °F)		
Mechanical specifications			

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Technical Data

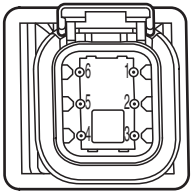
Material	
Housing	PA
Cable	PUR
Magnetic wheel	steel 1.4021 (AISI 420) ferrite filled cured rubber
Mass	approx. 190 g
Rotational speed	max. 30000 min ⁻¹

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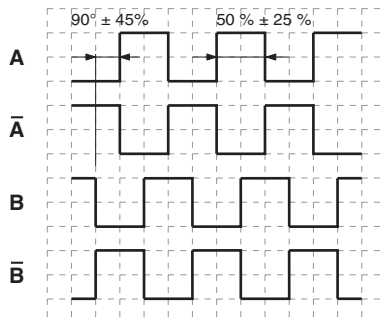
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Connection

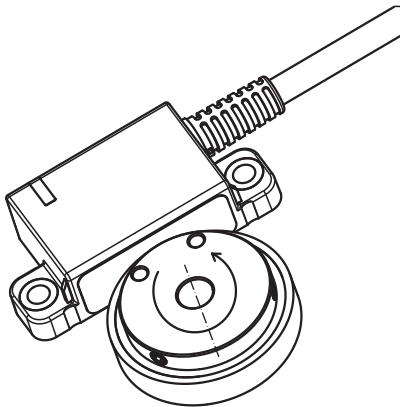
Signal	Deutsch connector DTM04-P6, 6-pin
+U _b	1
GND	2
A	3
\bar{A}	4
B	5
\bar{B}	6
Pinout	

Operation

Signal outputs



ccw - with top-view



Indication

LED-Indicators

LED status	Description
Green On	Sensor self test and magnetic wheel verification successfully completed.
Green Flashing	Sensor waiting to complete single magnetic revolution for code wheel verification process.
Red Flashing	Warning Alignment or wheel velocity detected as out of specified limits. Possible cause: improper alignment (large sensor-wheel gap, magnetic wheel misalignment, ...)
Red On	Error Possible reason: <ul style="list-style-type: none"> Supply voltage drop Magnetic wheel not detectable (e. g. too large gap) Broken magnetic wheel

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