



Model Number

MNI40N-2BA1K266N-03200

Part. No.: 230515

Features

- **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**

Description

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.

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Technical data

General specifications

Pulse count 3200

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 5 V ± 10 % DC for RS-422

No-load supply current I₀ max. 55 mA

Output

Output type RS 422, incremental

Voltage drop U_d ≤ 2.5 V

Load current max. 20 mA per channel, short-circuit protected

Output frequency max. 1 MHz

Connection

Cable Ø4.7 mm, 8 x 0.128 mm², 2 m

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

Ambient conditions

Operating temperature -40 ... 100 °C (-40 ... 212 °F)

Storage temperature -40 ... 100 °C (-40 ... 212 °F)

Mechanical specifications

Material

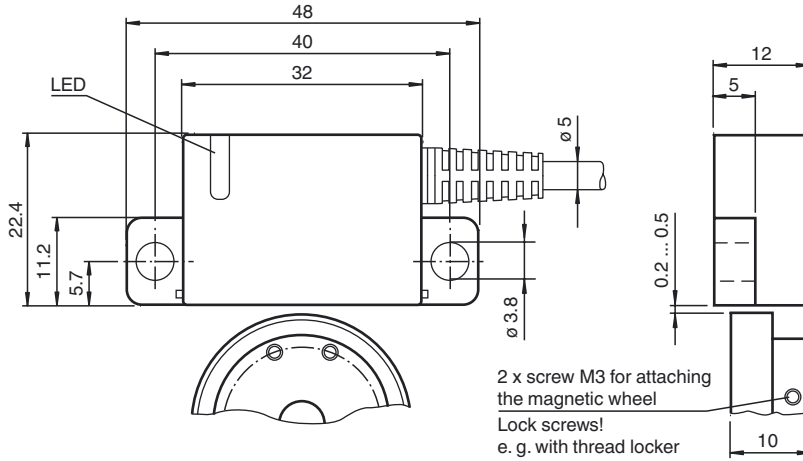
Housing PA

Cable PUR

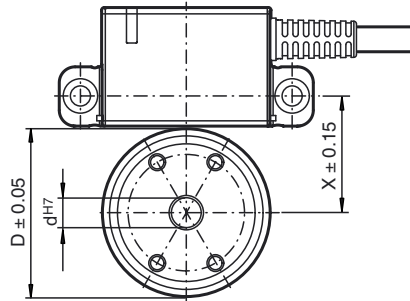
Mass approx. 190 g

Rotational speed max. 30000 min⁻¹

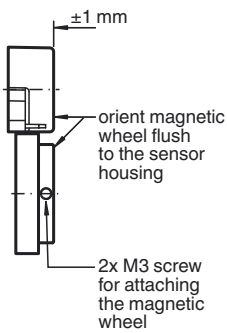
Dimensions



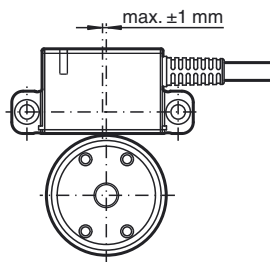
Poles	Ø d [mm]	Ø D [mm]	X [mm]
64	19.05	40.6	26.35



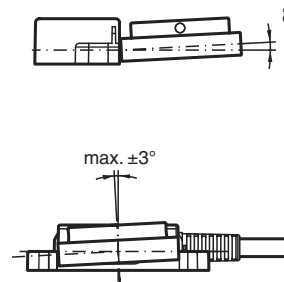
Installation



Shaft displacement



Angular displacement

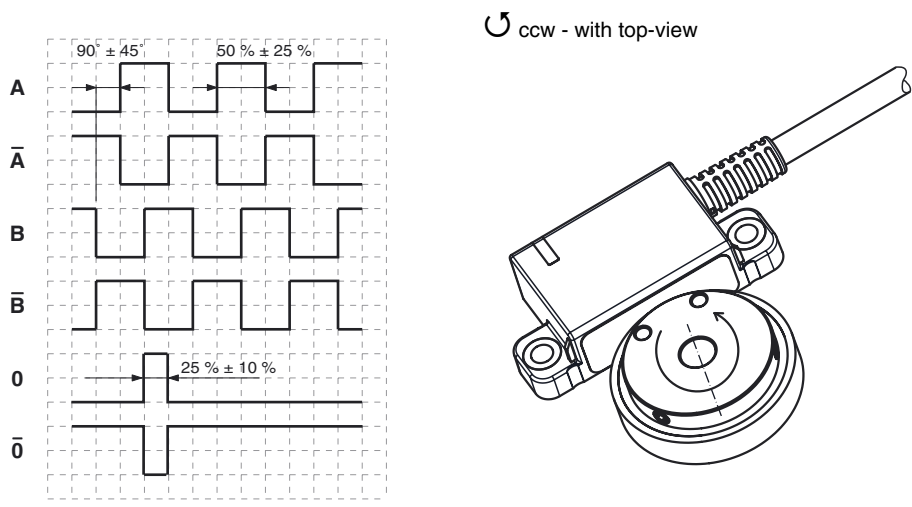


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Electrical connection

Signal	Cable, 8-core
GND	White
+U _b	Brown
A	Green
B	Grey
\bar{A}	Yellow
\bar{B}	Pink
0	Blue
$\bar{0}$	Red
Screen	-

Signal outputs



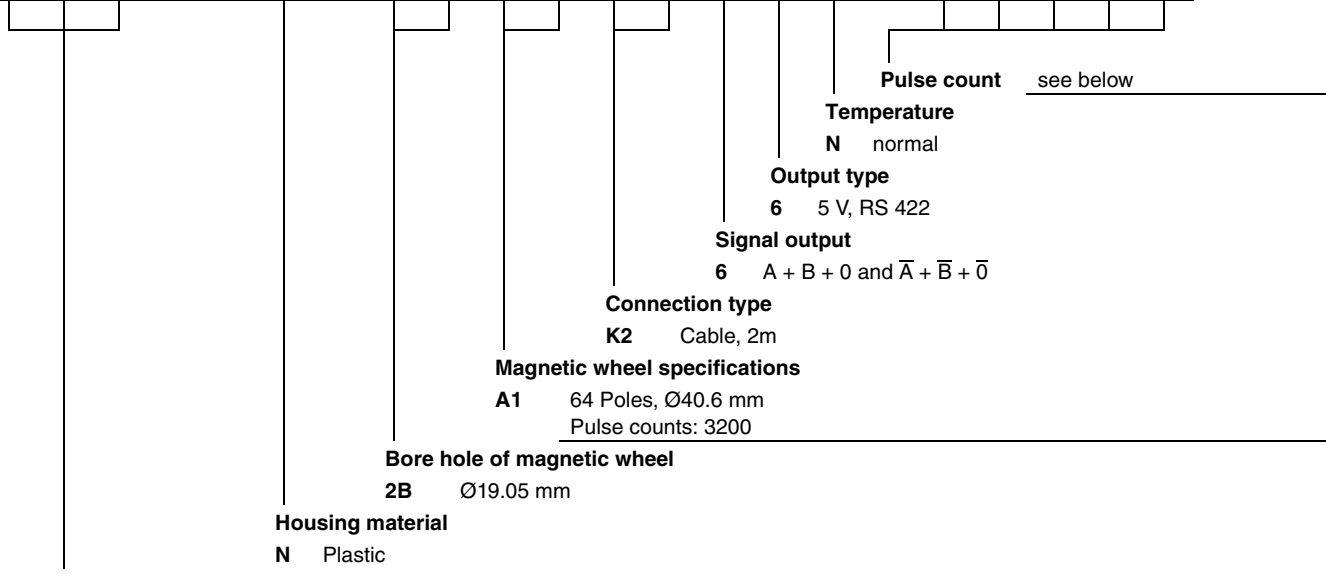
LED-Indicators

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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Order code

M N I 4 0 N - 2 B A 1 K 2 6 6 N - 0 3 2 0 0



Version
MNI Magnetic principle, Non-contact, Incremental

Housing material
N Plastic

Bore hole of magnetic wheel
2B Ø19.05 mm

Magnetic wheel specifications
A1 64 Poles, Ø40.6 mm
 Pulse counts: 3200

Connection type
K2 Cable, 2m

Signal output
6 A + B + 0 and \bar{A} + \bar{B} + $\bar{0}$

Output type
6 5 V, RS 422

Temperature
N normal

Pulse count see below