



Model Number

RHI58N-0BAK1R6XN-Y1024

Features

- **Sturdy and compact design**
- **Up to 1500 ppr**
- **Hollow shaft**
- **10 V ... 30 V with short-circuit proof push-pull output**
- **RS 422 functionality**
- **Loadable metal disc**

Description

The Pepperl+Fuchs encoder line is extended by the RHI58, an economical hollow shaft encoder. With its outside diameter of 58 mm, the device is fully mechanical compatible to the usual industry standard.

The technology of the rotary encoder is optimally adapted to the requirements of the rotary encoder market. Innovative fast technology with Opto-ASIC forms the central basis of the device. The rotary encoder is available with a pulse count of up to 1500 pulses per revolution.

The rotary encoder is equipped with a metal disk that can accept a high load. It provides the ideal combination of non-sensitivity to temperature and high resolution.

Technical data

General specifications

Pulse count (ppr) max. 1500

Functional safety related parameters

MTTF_d 140 a

Mission Time (T_M) 20 a

L_{10h} 70 E+9 at 6000 rpm

Diagnostic Coverage (DC) 0 %

Electrical specifications

Operating voltage U_B 10 ... 30 V DC

No-load supply current I₀ max. 55 mA

Output

Output type push-pull, incremental (RS 422, incremental)

Voltage drop U_d ≤ 2.5 V (< 2.5 V)

Operating current max. per channel 30 mA , short-circuit proof (max. per channel 20 mA, conditionally short-circuit proof)

Output frequency max. 100 kHz (max. 100 kHz)

Rise time 980 ns (225 ns)

De-energized delay t_{off} 980 ns (225 ns)

Connection

Cable Ø7.8 mm, 6 x 2 x 0.14 mm², 1 m

Standard conformity

Protection degree DIN EN 60529, IP65 (continuous operation, max. 3000 rpm, ventilated)

Climatic testing DIN EN 60068-2-3, no moisture condensation

Emitted interference DIN EN 61000-6-4

Interference rejection DIN EN 61000-6-2

Shock resistance DIN EN 60068-2-27, 100 g, 6 ms

Vibration resistance DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz

Ambient conditions

Operating temperature

Nickel disk -20 ... 80 °C (253 ... 353 K)

Storage temperature

Nickel disk -40 ... 80 °C (233 ... 353 K)

Mechanical specifications

Material

Housing aluminium, powder coated

Flange aluminium 3.1645

Shaft stainless steel 1.4305

Mass

approx. 290 g

Rotational speed

max. 3000 min⁻¹

Moment of inertia

≤ 40 gcm²

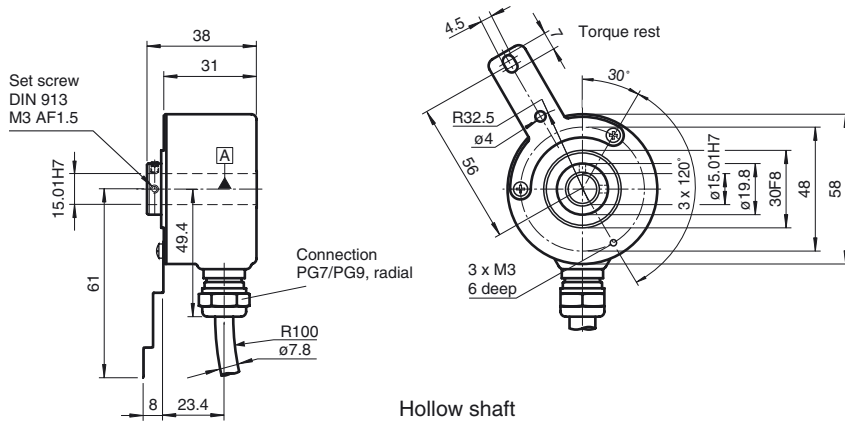
Starting torque

≤ 2.5 Ncm

Shaft load

Angle offset 1 °

Axial offset max. 1 mm

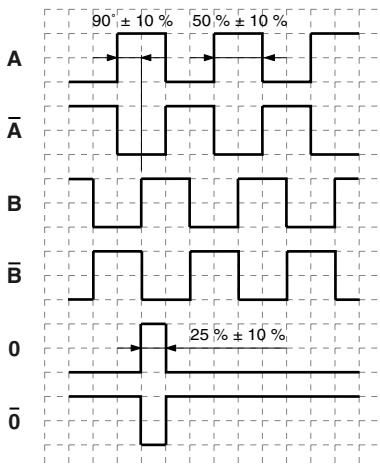


Hollow shaft

Electrical connection

Signal	Cable Ø7.8 mm, 12-core
GND	White
U _b	Brown
A	Green
B	Grey
\bar{A}	Yellow
\bar{B}	Pink
0	Blue
$\bar{0}$	Red
Screen	-

Signal outputs



↻ cw - with view onto the shaft

Order code

R	H	I	5	8	N	-	0	B	A	K	1	R	6	X	N	-	Y	1	0	2	4
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