



### Model Number

RHI58N-\*\*\*\*\*6

### Features

- Industrial standard housing Ø58 mm
- Up to 50,000 ppr
- Hollow shaft
- 5 V with RS-422 interface

### Description

High performance are key words for this rotary encoder. Its outstanding feature is the-high resolution angle.

Usually all six output channels of this incremental rotary encoder are assigned to ensure flexible use of the encoder in a wide range of applications.

This incremental rotary encoder is available as hollow shaft design with a shaft Ø10 mm, Ø12 mm or Ø15 mm.

The rotary encoder is held in place by an included torque rest.

The electrical connection is made with a cable connector.

## Technical data

### General specifications

Detection type	photoelectric sampling
Pulse count	max. 50000

### Functional safety related parameters

MTTF <sub>d</sub>	140 a
Mission Time (T <sub>M</sub> )	20 a
L <sub>10h</sub>	70 E+9 at 6000 rpm
Diagnostic Coverage (DC)	0 %

### Electrical specifications

Operating voltage U <sub>B</sub>	5 V DC ± 5 %
No-load supply current I <sub>0</sub>	max. 70 mA

### Output

Output type	RS 422, incremental
Load current	max. per channel 20 mA , conditionally short-circuit proof (not with U <sub>b</sub> )
Output frequency	max. 200 kHz
Rise time	100 ns

### Connection

Cable	Ø6.5 mm, 4 x 2 x 0.14 mm <sup>2</sup> , 1 m
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### Standard conformity

Degree of protection	DIN EN 60529, IP54
Climatic testing	DIN EN 60068-2-78 , no moisture condensation
Emitted interference	EN 61000-6-4:2007/A1:2011
Noise immunity	EN 61000-6-2:2005
Shock resistance	DIN EN 60068-2-27, 100 g, 3 ms
Vibration resistance	DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz

### Ambient conditions

Operating temperature	-5 ... 80 °C (23 ... 176 °F) , movable cable -20 ... 80 °C (-4 ... 176 °F), fixed cable
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

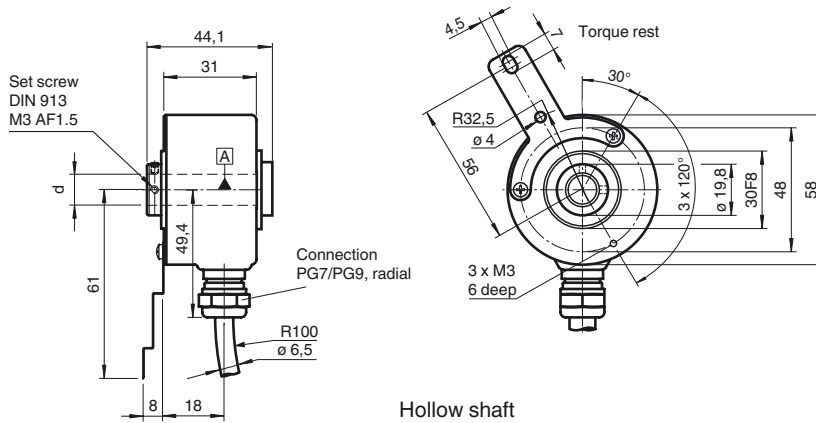
### Mechanical specifications

Material	
Housing	powder coated aluminum
Flange	3.1645 aluminum
Shaft	Stainless steel 1.4305 / AISI 303
Mass	approx. 290 g
Rotational speed	max. 6000 min <sup>-1</sup>
Moment of inertia	≤ 40 gcm <sup>2</sup>
Starting torque	≤ 1.5 Ncm
Shaft load	
Angle offset	1 °
Axial offset	max. 1 mm

### Approvals and certificates

UL approval	cULus Listed, General Purpose, Class 2 Power Source
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**Dimensions**



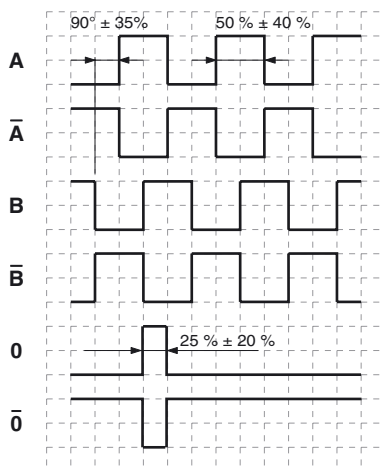
Hollow shaft

**Electrical connection**

Signal	Cable
GND	White
U <sub>b</sub>	Brown
A	Green
B	Grey
$\bar{A}$	Yellow
$\bar{B}$	Pink
0	Blue
$\bar{0}$	Red
U <sub>b</sub> Sens <sup>*)</sup>	Violet <sup>*)</sup>
GND Sens <sup>*)</sup>	Black <sup>*)</sup>
Screen	-

<sup>\*)</sup> only for devices with 5 V supply and RS 422 interface

**Signal outputs**



↻ cw - with view onto the shaft clamping ring

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