



### Model Number

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

### Features

- Industrial standard housing Ø58 mm
- Up to 5000 ppr
- Hollow shaft
- 5 V with RS-422 interface

### Description

Compatibility says it all for this incremental rotary encoder.

All six output channels are fitted for this incremental rotary encoder. It can thus be used universally in many different applications.

Focussing on the designs that are most often required has allowed us to offer rapid availability at an attractive price.

Usually the pulse disk is designed in plastic up to 1500 pulses. Beyond that, glass is used.

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

Pulse count max. 5000

### 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 Ø7.8 mm, 6 x 2 x 0.14 mm<sup>2</sup>, 1 m

### Standard conformity

Protection degree DIN EN 60529, IP54

Climatic testing DIN EN 60068-2-78, no moisture condensation

Emitted interference EN 61000-6-4:2007

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

Glass disk -5 ... 80 °C (23 ... 176 °F), movable cable

-20 ... 80 °C (-4 ... 176 °F), fixed cable

Plastic disk -5 ... 60 °C (23 ... 140 °F), movable cable

-20 ... 60 °C (-4 ... 140 °F), fixed cable

Storage temperature

Glass disk -40 ... 85 °C (-40 ... 185 °F)

Plastic disk -40 ... 70 °C (-40 ... 158 °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

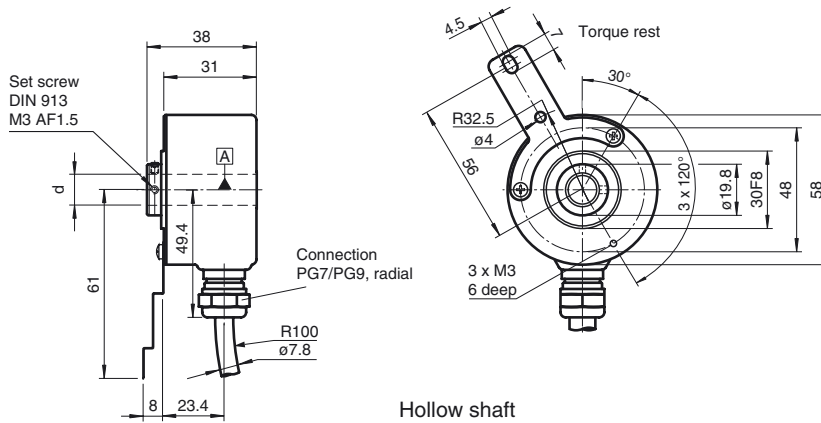
Angle offset 1 °

Axial offset max. 1 mm

### Approvals and certificates

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

**Dimensions**

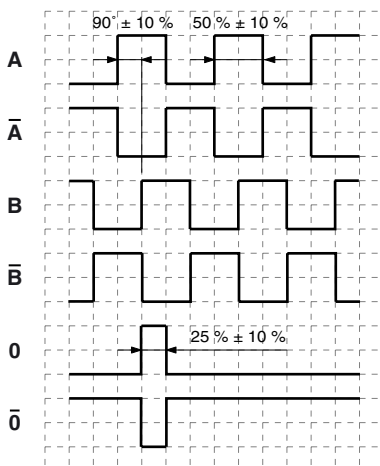


**Electrical connection**

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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Order code

**R H I 5 8 N - A K 1 R 6 N -**

