



Model Number

RSI58N-*****X

Features

- Industrial standard housing Ø58 mm
- Up to 5000 ppr
- Recessed hollow shaft
- 10 V ... 30 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.

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

This incremental rotary encoder is available in recessed hollow shaft design with a shaft 10 mm in diameter x 20 mm or with a shaft 12 mm in diameter x 20 mm. The rotary encoder is held in place by an included torque rest.

The electrical connection is made by a 8-pin or a 12-pin round plug connector. It is also possible to obtain a version with a cable connector.

Technical data

General specifications

| | |
|----------------|------------------------|
| Detection type | photoelectric sampling |
| Pulse count | max. 5000 |

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 I ₀ | max. 50 mA |

Output

| | |
|------------------|-------------------------------------------------------------------------------------------------------------------|
| Output type | RS 422, incremental |
| Load current | max. per channel 20 mA , conditionally short-circuit proof (not with U _B), reverse polarity protected |
| Output frequency | max. 200 kHz |
| Rise time | 100 ns |

Connection

| | |
|-----------|-------------------------------------------------|
| Connector | type 9416 (M23), 12-pin or M12 connector, 8-pin |
| Cable | Ø7.8 mm, 6 x 2 x 0.14 mm ² , 1 m |

Standard conformity

| | |
|----------------------|--------------------------------------------|
| Degree of protection | DIN EN 60529, IP54 |
| Climatic testing | DIN EN 60068-2-3, 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 | |
| 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 ... 100 °C (-40 ... 212 °F) |
| Plastic disk | -40 ... 70 °C (-40 ... 158 °F) |

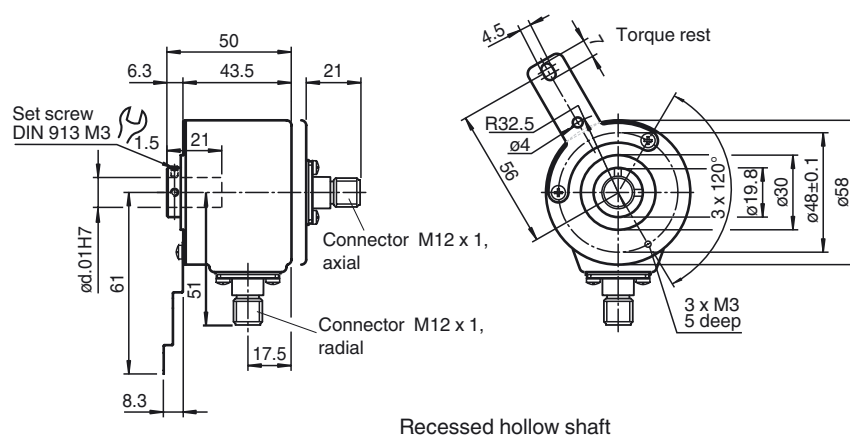
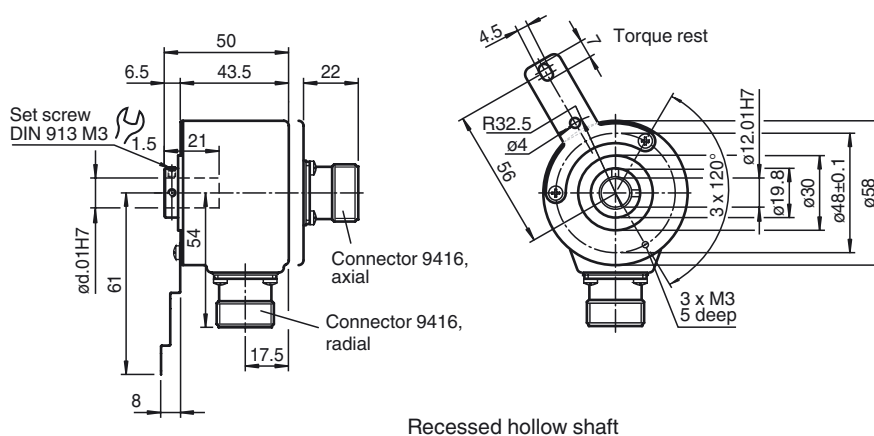
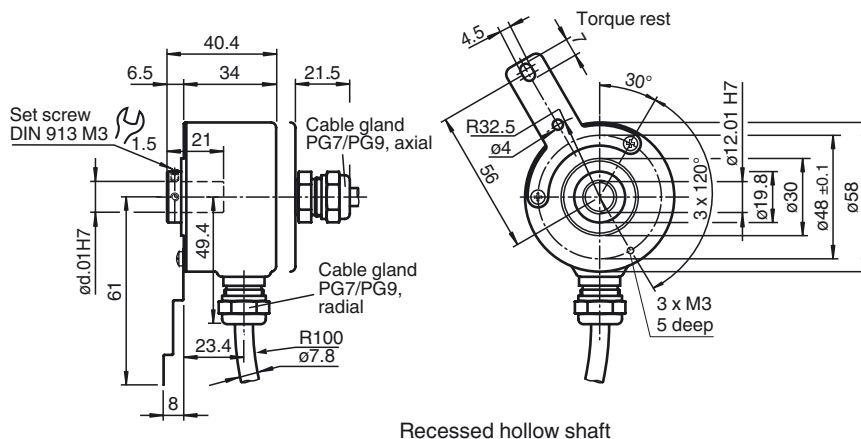
Mechanical specifications

| | |
|-------------------|-----------------------------------|
| Material | |
| Housing | powder coated aluminum |
| Flange | 3.1645 aluminum |
| Shaft | Stainless steel 1.4305 / AISI 303 |
| Mass | approx. 280 g |
| Rotational speed | max. 12000 min ⁻¹ |
| Moment of inertia | ≤ 35 gcm ² |
| Starting torque | ≤ 1 Ncm |
| Shaft load | |
| Angle offset | 1 ° |
| Axial offset | max. 1 mm |

Approvals and certificates

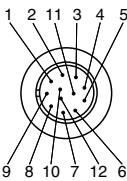
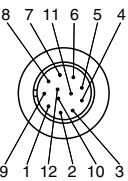
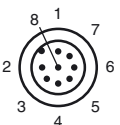
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| UL approval | cULus Listed, General Purpose, Class 2 Power Source |
|-------------|-----------------------------------------------------|

Dimensions



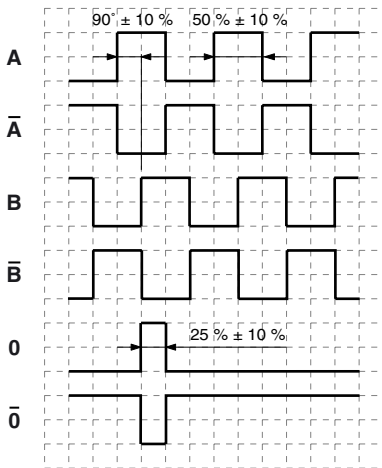
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Electrical connection

| Signal | Cable | Connector 9416 | Connector 9416L | Connector M12 x 1 |
|-----------------------------------|-----------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| GND | White | 10 | 10 | 1 |
| U _b | Brown | 12 | 12 | 2 |
| A | Green | 5 | 5 | 3 |
| B | Grey | 8 | 8 | 5 |
| \bar{A} | Yellow | 6 | 6 | 4 |
| \bar{B} | Pink | 1 | 1 | 6 |
| 0 | Blue | 3 | 3 | 7 |
| $\bar{0}$ | Red | 4 | 4 | 8 |
| U _b Sens ^{*)} | Violet | 2 | 2 | - |
| NC | Grey/Pink | 7 | 7 | - |
| Screen | - | Housing | Housing | Housing |
| NC | - | 9 | 9 | - |
| GND Sens ^{*)} | Black | 11 | 11 | - |
| | |  |  |  |

*) only for devices with 5 V supply and RS 422 interface (output circuit 6)

Signal outputs



↺ cw - with view onto the shaft clamping ring

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