



Model Number

RSI58N-*****1

Features

- Industrial standard housing Ø58 mm
- Up to 50,000 ppr
- Recessed hollow shaft
- 10 V ... 30 V with short-circuit proof push-pull output

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 in a recessed hollow shaft version with a Ø10 mm x 20 mm shaft or a Ø12 mm x 20 mm shaft. The rotary encoder must be mounted using a torque support. The torque support supplied with the unit or provided by the customer can be used.

The electrical connection is made via a 8-pin or a 12-pin round connector. A version with a cable connection is also available.

Technical data

General specifications

Detection type	photoelectric sampling
Pulse count	max. 50000

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. 60 mA

Output

Output type	push-pull, incremental
Voltage drop U _d	< 3 V
Load current	max. per channel 40 mA, short-circuit protected (not with U _b), reverse polarity protected
Output frequency	max. 200 kHz
Rise time	400 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 60068-2-78, 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)

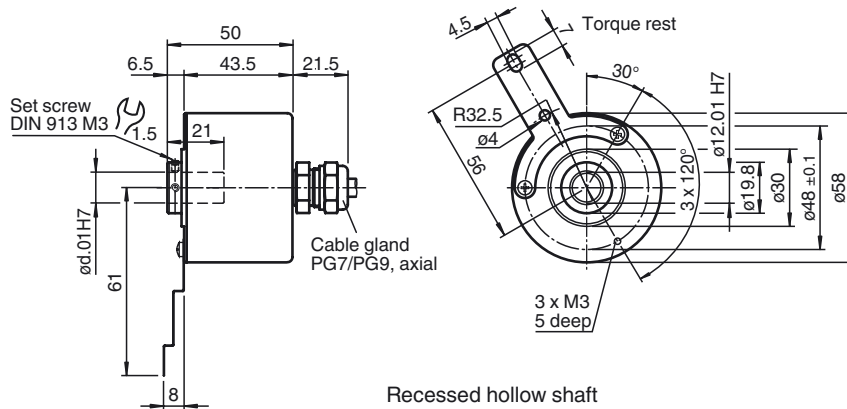
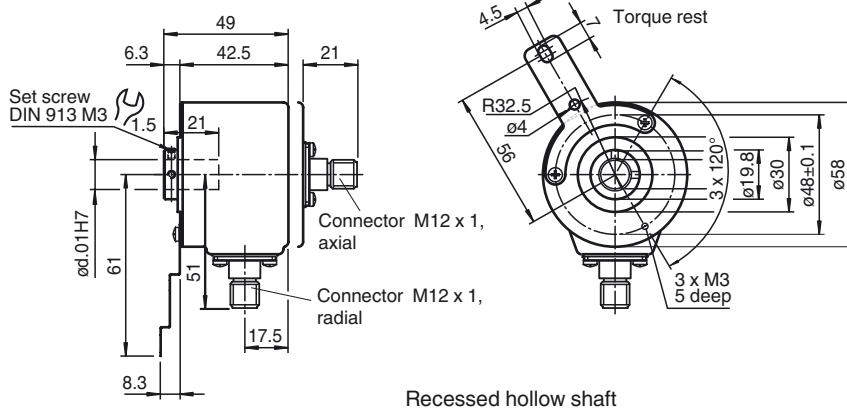
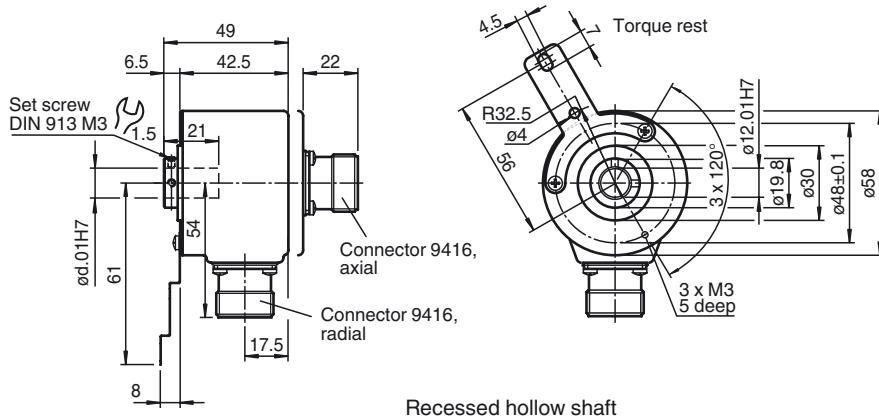
Mechanical specifications

Material	
Housing	powder coated aluminum
Flange	3.1645 aluminum
Shaft	Stainless steel 1.4305 / AISI 303
Mass	approx. 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

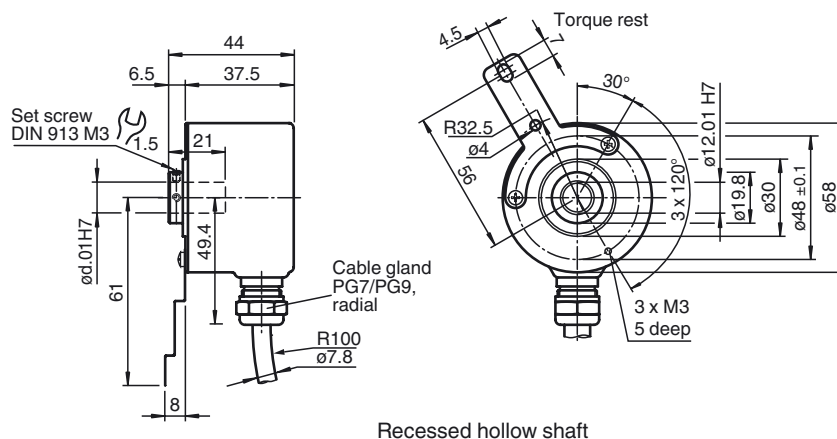
Approvals and certificates

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



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Recessed hollow shaft

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)

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