



Model Number

RSI58N-*****6

Features

- Industrial standard housing Ø58 mm
- Up to 50,000 ppr
- Recessed 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 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	5 V DC ± 5 %
No-load supply current I ₀	max. 70 mA

Output

Output type	RS 422, incremental
Load current	max. per channel 20 mA , conditionally short-circuit proof (not with U _b)
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 60068-2-78 , 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)

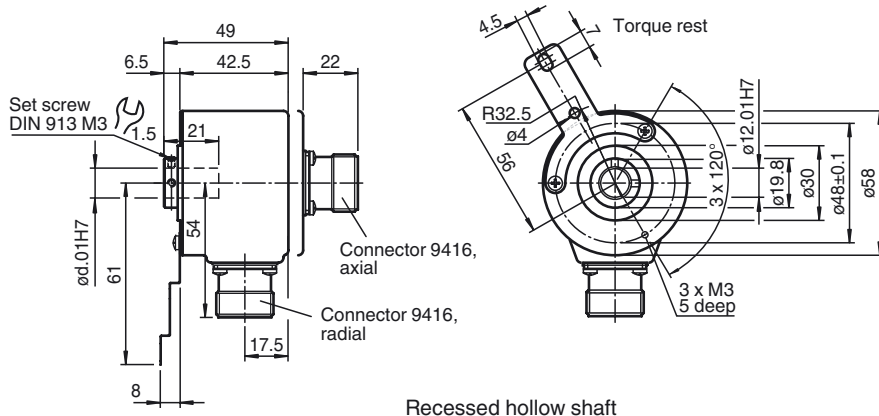
Mechanical specifications

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

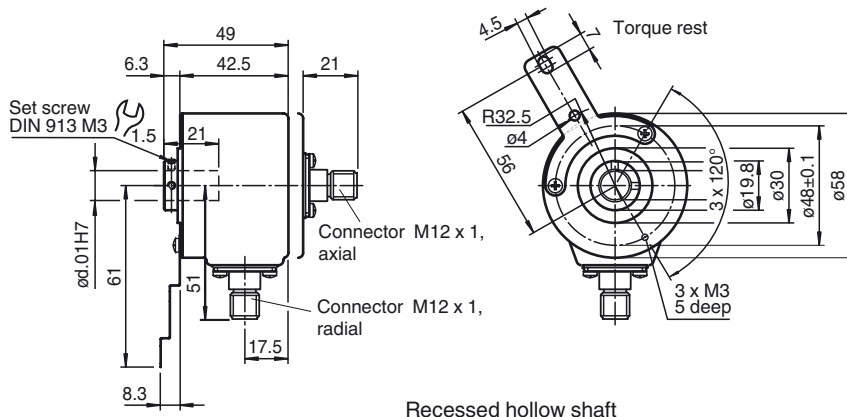
Approvals and certificates

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

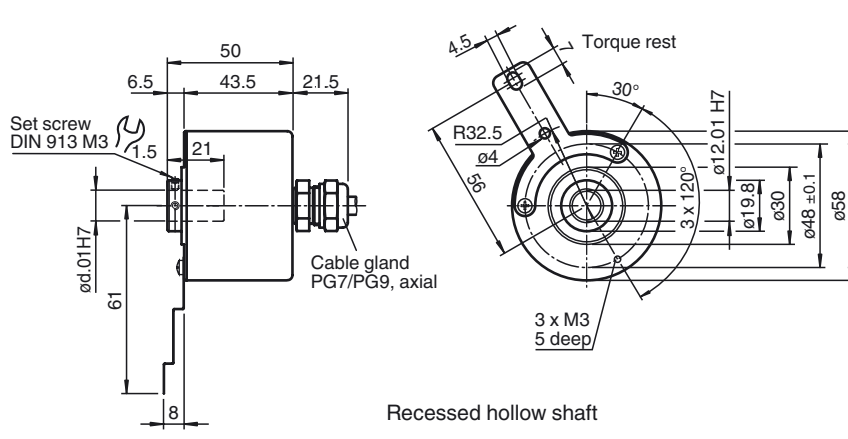
Dimensions



Recessed hollow shaft

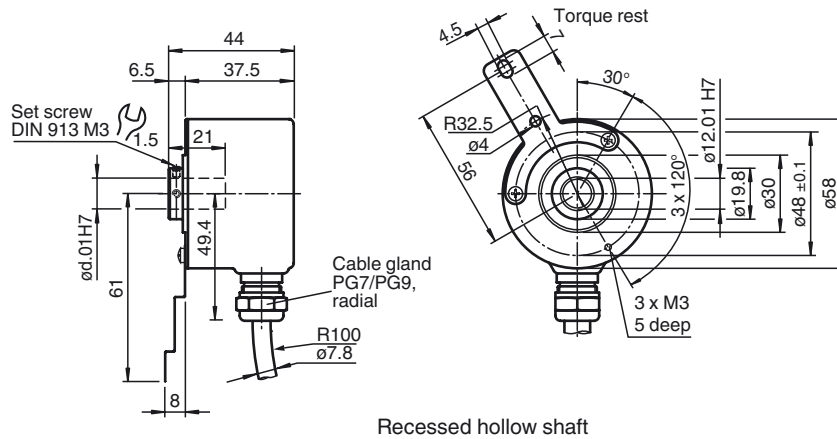


Recessed hollow shaft



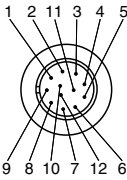
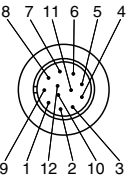
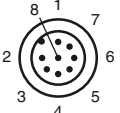
Recessed hollow shaft

Release date: 2014-12-11 08:50 Date of issue: 2016-01-26 t151827_eng.xml



Recessed hollow shaft

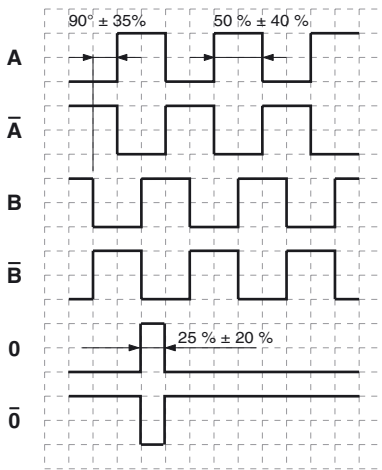
Electrical connection

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)

Release date: 2014-12-11 08:50 Date of issue: 2016-01-26 t151827_eng.xml

Signal outputs



cw - with view onto the shaft clamping ring

Order code

R	S	I	5	8	N	-		A				N	-							
---	---	---	---	---	---	---	--	---	--	--	--	---	---	--	--	--	--	--	--	--

													Pulse count	1024, 2048, 2500, 4096, 5000, 8192, 10000, 20000, 50000									
													Option	N Normal									
													Output switching	1 10 V ... 30 V, push-pull 6 5 V, RS 422 X 10 V ... 30 V, RS 422									
													Signal output	6 A + B + 0 and $\bar{A} + \bar{B} + \bar{0}$									
													Exit position	A Axial R Radial									
													Connection type	AA Plug connector type 9416, 12-pin AB Plug connector type 9416L, 12-pin BE Plug connector M12 x 1, 8-pin K1 Cable Ø7.8 mm, 6 x 2 x 0.14 mm ² , 1 m									
													Flange version	A Hollow shaft									
													Shaft dimension	01 Recessed hollow shaft Ø10 mm x 20 mm 02 Recessed hollow shaft Ø12 mm x 20 mm									
													Housing material	N Aluminium, powder coated									
													Shaft version	S Recessed hollow shaft									

Release date: 2014-12-11 08:50 Date of issue: 2016-01-26 t151827_eng.xml