



Industrial standard housing Ø58 mm

Up to 5000 ppr

Recessed hollow shaft

10 V ... 30 V with short-circuit-proof push-pull output

10 V ... 30 V with RS 422 interface

5 V with RS 422 interface

Error output*

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.

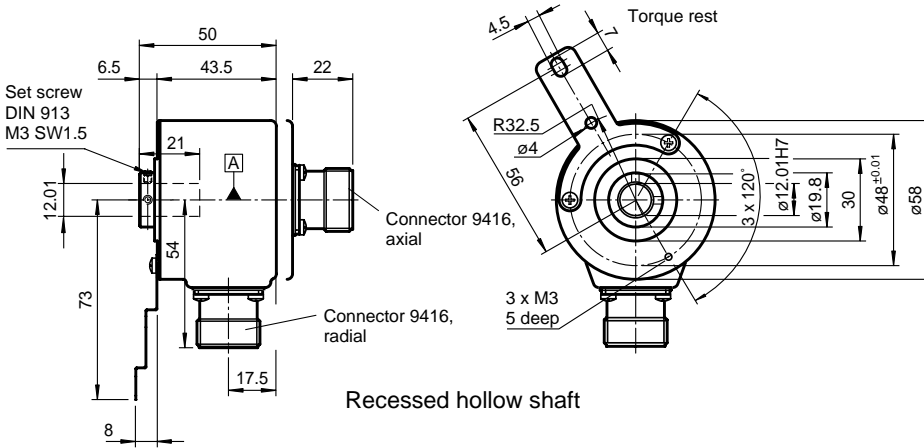
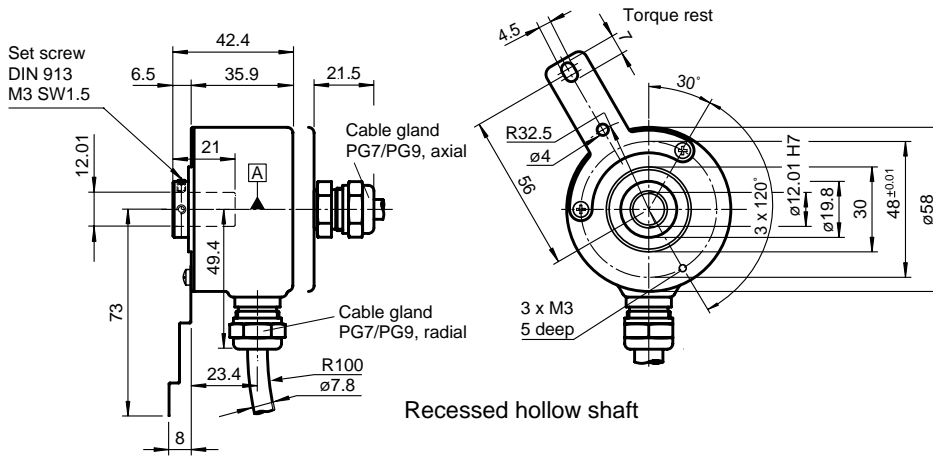
This incremental rotary encoder is available in recessed hollow shaft design with a shaft 10 mm in diameter x 20 mm or with a shaft 12 mm in diameter x 20 mm. The rotary encoder is held in place by an included torque rest.

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

* Error signal at light beam failure, break of leads or overloading of the output driver.



Dimensions



Electrical connection

Signal	Cable Ø7.8 mm, 12-core	Connector 9416, 12-pin
GND	White	10
U _b	Brown	12
A	Green	5
B	Grey	8
\bar{A}	Yellow	6
\bar{B}	Pink	1
0	Blue	3
$\bar{0}$	Red	4
U _b Sens	Violet	2
Alarm	Grey/Pink	7
Screen	–	Housing
NC	–	9
GND Sens	Black	11

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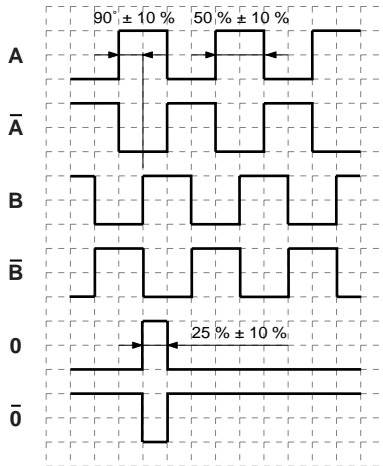


Technical data

	RSI 58N-□□□□□□□1	RSI 58N-□□□□□□□X	RSI 58N-□□□□□□□6
General specifications			
Pulse count (ppr)	max. 5000	max. 5000	max. 5000
Output			
Output type	Push-pull, incremental	RS 422, incremental	RS 422, incremental
Operating voltage	10 ... 30 V DC	10 ... 30 V DC	5 V DC ±5 %
No-load supply current	max. 50 mA	max. 50 mA	max. 70 mA
Load current	max. per channel 40 mA, short-circuit proof (not with U _b), reverse polarity protected	max. per channel 20 mA, conditionally short-circuit proof (not with U _b), reverse polarity protected	max. per channel 20 mA, conditionally short-circuit proof (not with U _b)
Voltage drop	< 3 V	-	-
Output frequency	max. 200 kHz	max. 200 kHz	max. 200 kHz
Rise time	400 ns	100 ns	100 ns
Error output			
Malfunction status	Low level	Low level	Low level
Kind of output	Open collector with pull-up resistor (5.6 kΩ against +U _b)	Open collector with pull-up resistor (5.6 kΩ against +U _b)	Open collector with pull-up resistor (5.6 kΩ against +U _b)
Load current	-40 mA	-40 mA	-40 mA
Connection type			
Connector	Type 9416, 12-pin	Type 9416, 12-pin	Type 9416, 12-pin
Cable	Ø7.8 mm, 6 x 2 x 0.14 mm ² , 1 m	Ø7.8 mm, 6 x 2 x 0.14 mm ² , 1 m	Ø7.8 mm, 6 x 2 x 0.14 mm ² , 1 m
Ambient conditions			
Operating temperature			
Glass disk	-5 ... +80 °C, cable movable -20 ... +80 °C, fixed cable	-5 ... +80 °C, cable movable -20 ... +80 °C, fixed cable	-5 ... +80 °C, cable movable -20 ... +80 °C, fixed cable
Plastic disk	-5 ... +60 °C, cable movable -20 ... +60 °C, fixed cable	-5 ... +60 °C, cable movable -20 ... +60 °C, fixed cable	-5 ... +60 °C, cable movable -20 ... +60 °C, fixed cable
Storage temperature			
Glass disk	-40 ... +100 °C	-40 ... +100 °C	-40 ... +100 °C
Plastic disk	-40 ... +70 °C	-40 ... +70 °C	-40 ... +70 °C
Standard conformity			
Climatic testing	DIN EN 60068-2-3, no moisture condensation	DIN EN 60068-2-3, no moisture condensation	DIN EN 60068-2-3, no moisture condensation
Emitted interference	DIN EN 50081-1	DIN EN 50081-1	DIN EN 50081-1
Interference rejection	DIN EN 61000-6-2	DIN EN 61000-6-2	DIN EN 61000-6-2
Shock resistance	DIN EN 60068-2-27, 100 g, 6 ms	DIN EN 60068-2-27, 100 g, 6 ms	DIN EN 60068-2-27, 100 g, 6 ms
Vibration resistance	DIN EN 60028-2-6, 10 g, 10 ... 2000 Hz	DIN EN 60028-2-6, 10 g, 10 ... 2000 Hz	DIN EN 60028-2-6, 10 g, 10 ... 2000 Hz
Protection degree	DIN EN 60529, IP54	DIN EN 60529, IP54	DIN EN 60529, IP54
Mechanical specifications			
Material			
Housing	Aluminium, powder-coated	Aluminium, powder-coated	Aluminium, powder-coated
Flange	Aluminium 3.1645	Aluminium 3.1645	Aluminium 3.1645
Shaft	Stainless steel 1.4305	Stainless steel 1.4305	Stainless steel 1.4305
Mass	approx. 280 g	approx. 280 g	approx. 280 g
Rotational speed	max. 12000 min ⁻¹	max. 12000 min ⁻¹	max. 12000 min ⁻¹
Moment of inertia	≤ 35 gcm ²	≤ 35 gcm ²	≤ 35 gcm ²
Starting torque	≤ 1 Ncm	≤ 1 Ncm	≤ 1 Ncm
Shaft load			
Angel offset	1°	1°	1°
Axial offset	max. 1 mm	max. 1 mm	max. 1 mm



Signal outputs



Order code



- RSI58N** Shaft version
- S** Recessed hollow shaft
- 5** Shaft dimension
- 8** Recessed hollow shaft Ø10 mm x 20 mm
- N** Recessed hollow shaft Ø12 mm x 20 mm
- Housing material
- A** Aluminium, powder coated
- Flange version
- A** Hollow shaft
- Connection type
- AA** Plug connector type 9416, 12-pin
- K1** Cable Ø7.8 mm, 6 x 2 x 0.14 mm², 1 m
- Exit position
- A** axial
- R** radial
- Signal output
- 3** A + B + 0
- 6** A + B + 0 and $\bar{A} + \bar{B} + \bar{0}$
- Output switching
- 1** 10 V ... 30 V, push-pull
- 6** 5 V, RS 422
- X** 10 V ... 30 V, RS 422
- Temperature
- N** normal
- Pulse count
- 100, 360, 500, 512, 1000, 1024, 1250, 2048, 2500, 3600, 4096, 5000

Incremental rotary encoder RSI 58