



### Model Number

RSI58X-\*\*\*\*\*X

### Features

- Industrial standard housing Ø58 mm
- ATEX approval
- 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.

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 cable.

This incremental encoder is designed for operation in zone 2 and zone 22.

## Technical data

### General specifications

Detection type	photoelectric sampling
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>	10 ... 30 V DC
No-load supply current I <sub>0</sub>	max. 50 mA

### Output

Output type	RS 422, incremental
Load current	max. per channel 20 mA , conditionally short-circuit proof (not with U <sub>b</sub> ), reverse polarity protected
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
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### 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	-30 ... 60 °C (-22 ... 140 °F) , fixed cable
Plastic disk	-30 ... 60 °C (-22 ... 140 °F) , fixed cable
Storage temperature	
Glass disk	-30 ... 70 °C (-22 ... 158 °F)
Plastic disk	-30 ... 70 °C (-22 ... 158 °F)

### Mechanical specifications

Material	
Housing	powder coated aluminum
Flange	aluminum
Shaft	Stainless steel
Mass	approx. 280 g
Rotational speed	max. 6000 min <sup>-1</sup>
Moment of inertia	≤ 35 gcm <sup>2</sup>
Starting torque	≤ 1 Ncm
Shaft load	
Angle offset	1 °
Axial offset	max. 1 mm

### Data for application in connection with

#### Ex-areas

EC-Type Examination Certificate	
Group, category, type of protection	II 3G Ex nA IIB T4 Gc II 3D Ex tc IIIC T105°C Dc IP54

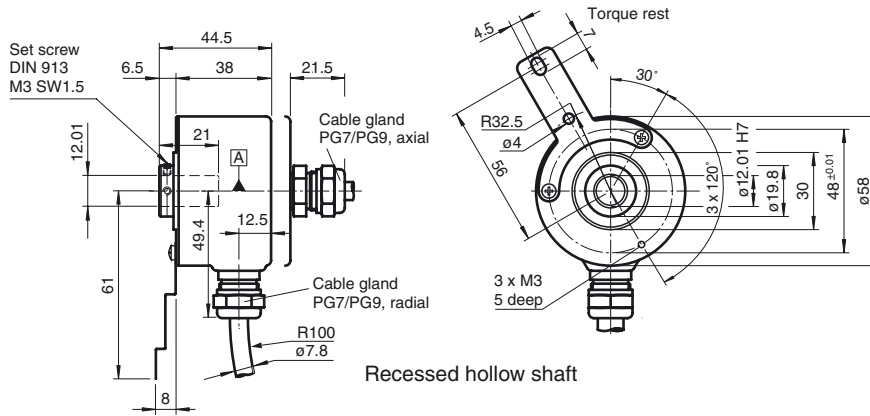
#### Directive conformity

Directive 94/9/EC	EN 60079-0:2012 , EN 60079-15:2010 , EN 60079-31:2009
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### Approvals and certificates

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



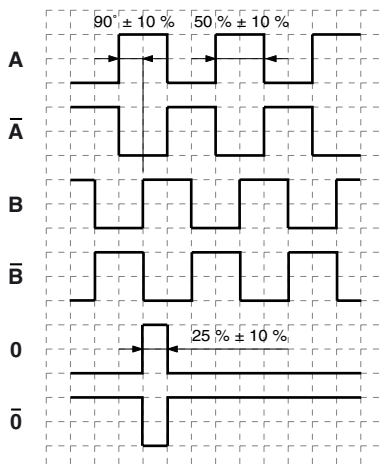
Release date: 2014-12-12 16:31 Date of issue: 2014-12-12 t31971\_eng.xml

## Electrical connection

Signal	Cable Ø7.8 mm, 12-core
GND	White
$U_b$	Brown
A	Green
B	Grey
$\bar{A}$	Yellow
$\bar{B}$	Pink
0	Blue
$\bar{0}$	Red
NC	Grey/Pink
$U_b$ Sens <sup>*)</sup>	Violet
GND Sens <sup>*)</sup>	Black
Screen	-

<sup>\*)</sup> only for devices with 5 V supply and RS 422 interface

## Signal outputs



↻ cw - with view onto the shaft

Order code

R	S	I	5	8	X	-			A	K	1		6		N	-				
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**Pulse count** 100, 360, 500, 512, 1000, 1024, 1250, 2048, 2500, 3600, 4096, 5000

**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**  
K1 Cable Ø7.8 mm, 6 x 2 x 0.14 mm<sup>2</sup>, 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

**Option**  
X design for hazzardous areas

**Shaft version**  
S Recessed hollow shaft