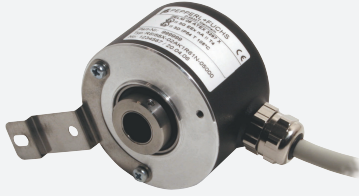


# Incremental rotary encoder

## RSI58X-\*\*\*\*\*6



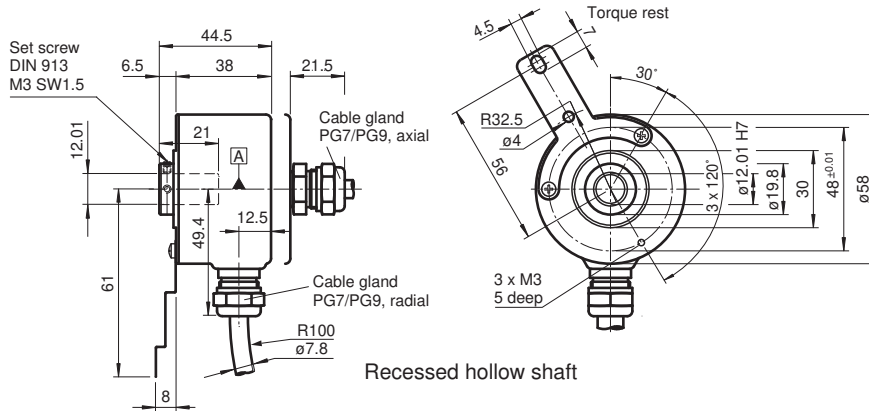
- Industrial standard housing  $\varnothing 58$  mm
- ATEX approval
- Up to 5000 ppr
- Recessed hollow shaft
- 5 V with RS-422 interface



### Function

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.

### Dimensions



### 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>10</sub>	70 E+9 at 6000 rpm
Diagnostic Coverage (DC)	0 %
Electrical specifications	
Operating voltage	U <sub>B</sub> 5 V DC $\pm$ 5 %

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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**PF** PEPPERL+FUCHS

## Technical Data

No-load supply current	$I_0$	max. 70 mA
<b>Output</b>		
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
<b>Connection</b>		
Cable		Ø7.8 mm, 6 x 2 x 0.14 mm <sup>2</sup> , 1 m
<b>Standard conformity</b>		
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
<b>Approvals and certificates</b>		
UL approval		cULus Listed, General Purpose, Class 2 Power Source
<b>Ambient conditions</b>		
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 ... 60 °C (-22 ... 140 °F)
Plastic disk		-30 ... 60 °C (-22 ... 140 °F)
<b>Mechanical specifications</b>		
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
<b>Data for application in connection with hazardous areas</b>		
ATEX marking		Ⓜ II 3G Ex nA IIB T4 Gc X Ⓜ II 3D Ex tc IIIC T105°C Dc X
Certificate		PF 18 CERT 4775 X
Directive conformity		
Directive 2014/34/EU		EN IEC 60079-0:2018 , EN 60079-15:2010 , EN 60079-31:2014

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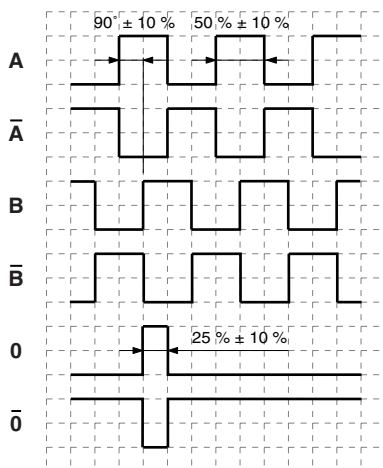
**Connection**

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

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

**Operation**

**Signal outputs**



↻ cw - with view onto the shaft

**Type Code**

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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 und  $\bar{A} + \bar{B} + \bar{0}$

**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 hazardous areas

**Shaft version**

S Recessed hollow shaft