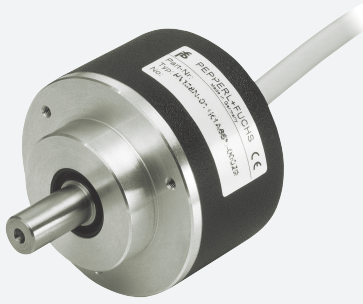


# Incremental rotary encoder

## RVS58N-\*\*\*\*\*Z



- Industrial standard housing  $\varnothing 58$  mm
- 1024 or 2048 signal periods
- Servo or clamping flange
- Temperature compensated, interpolateable voltage signals



### Function

Compatibility says it all for this incremental rotary encoder.

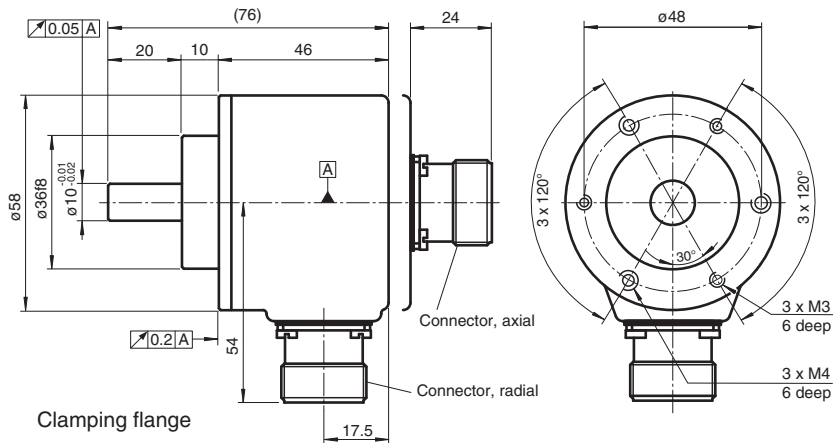
The RVS58 provides sinusoidal / cosinusoidal signals at a resolution of up to 2.048 signal periods per revolution. All six output channels are fitted for this incremental rotary encoder. It can thus be used universally in many different applications.

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 either in clamping flange design with a shaft 10 mm in diameter x20 mm or in servo flange design with a shaft 6 mm in diameter x10 mm.

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

### Dimensions



Release date: 2025-01-22 Date of issue: 2025-01-22 Filename: t48582\_eng.pdf

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

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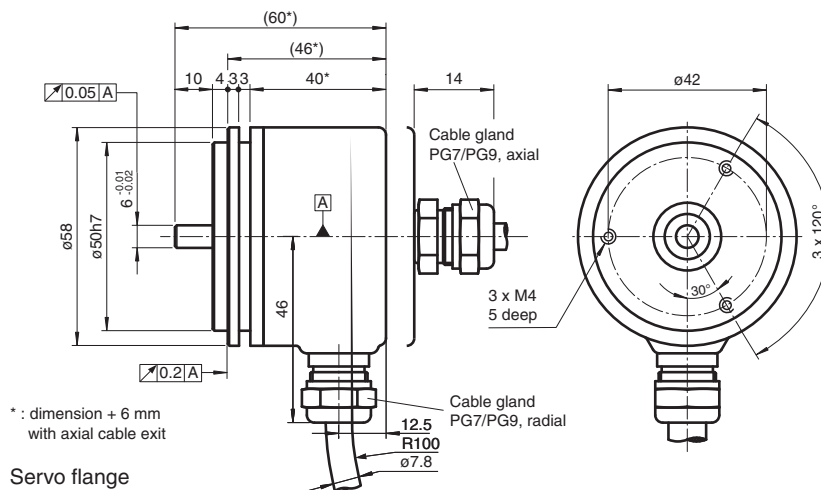
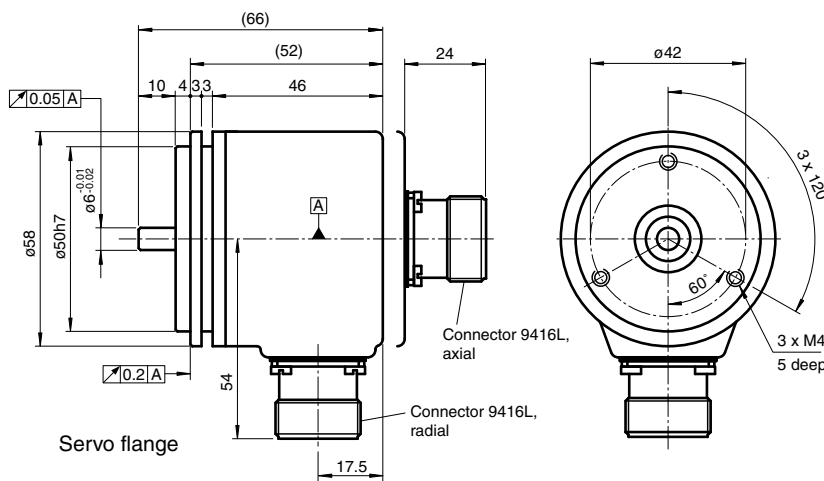
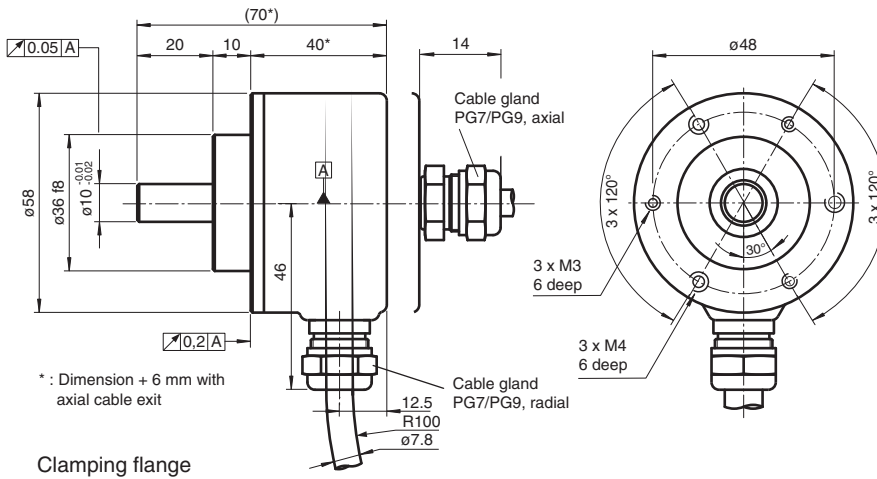
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PEPPERL+FUCHS

Dimensions



Technical Data

<b>General specifications</b>	
Detection type	photoelectric sampling
Pulse count	1024 and 2048
<b>Functional safety related parameters</b>	
MTTF <sub>d</sub>	1060 a
Mission Time (T <sub>M</sub> )	20 a
L <sub>10</sub>	70 E+9 at 6000 rpm
Diagnostic Coverage (DC)	0 %

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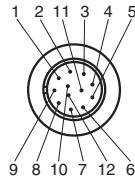
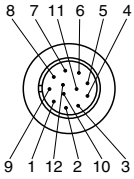
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## Technical Data

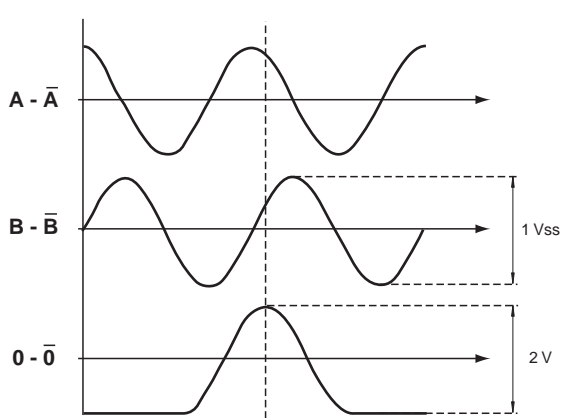
Electrical specifications		
Operating voltage	$U_B$	5 V $\pm$ 5 %
No-load supply current	$I_0$	max. 70 mA
Output		
Output type		sine / cosine
Amplitude		1 $V_{SS} \pm 10$ %
Load current		max. per channel 20 mA , short-circuit protected, reverse polarity protected
Output frequency		max. 200 kHz (3 dB limit)
Connection		
Connector		type 9416 (M23), 12-pin, type 9416L (M23), 12-pin
Cable		$\varnothing$ 7.8 mm, 6 x 2 x 0.14 mm <sup>2</sup> , 1 m
Standard conformity		
Degree of protection		DIN EN 60529, IP65
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
Approvals and certificates		
UL approval		cULus Listed, General Purpose, Class 2 Power Source
Ambient conditions		
Operating temperature		-5 ... 80 °C (23 ... 176 °F) , cable, movable installation -20 ... 80 °C (-4 ... 176 °F), cable, fixed installation
Storage temperature		-40 ... 100 °C (-40 ... 212 °F)
Mechanical specifications		
Material		
Housing		powder coated aluminum
Flange		Aluminum
Shaft		Stainless steel
Mass		approx. 350 g
Rotational speed		max. 12000 min <sup>-1</sup>
Moment of inertia		$\leq 25$ gcm <sup>2</sup>
Starting torque		$\leq 1.5$ Ncm
Shaft load		
Axial		40 N at max. 6000 min <sup>-1</sup> 10 N at max. 12000 min <sup>-1</sup>
Radial		60 N at max. 6000 min <sup>-1</sup> 20 N at max. 12000 min <sup>-1</sup>
Dimensions		
Diameter		58 mm

**Connection**

Signal	Cable	Connector 9416	Connector 9416L
GND	White	10	10
$U_b$	Brown	12	12
A	Green	5	5
B	Grey	8	8
$\bar{A}$	Yellow	6	6
$\bar{B}$	Pink	1	1
0	Blue	3	3
$\bar{0}$	Red	4	4
$U_b$ Sens	Violet	2	2
NC	Grey/Pink	7	7
Screen	-	Housing	Housing
NC	-	9	9
GND Sens	Black	11	11
			

**Operation**

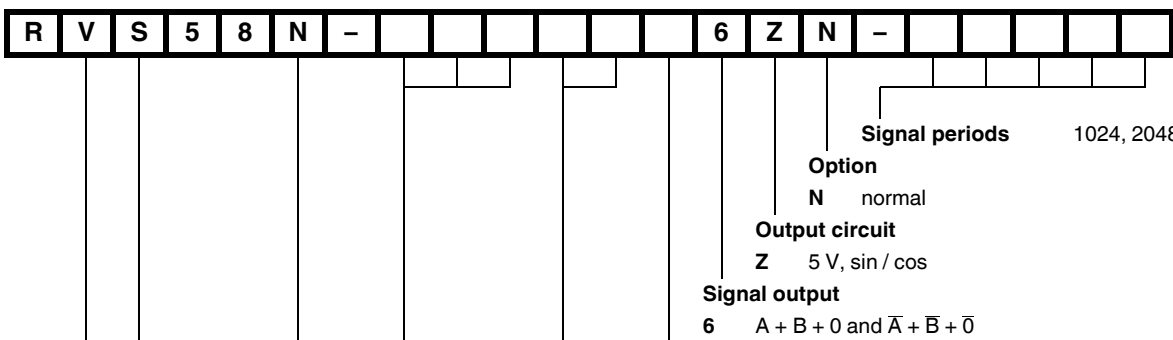
**Signal outputs**



↻ cw - flange view

measured in difference mode

**Type Code**



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Signal periods 1024, 2048

**Option**

N normal

**Output circuit**

Z 5 V, sin / cos

**Exit position**

A axial

R radial

**Connection type**

AA Plug connector type 9416, 12 pin

AB Plug connector type 9416L, 12 pin

K1 Cable Ø7.8 mm, 6 x 2 x 0,14 mm<sup>2</sup>, 1 m

**Shaft dimension / Flange design**

011 Shaft Ø10 mm x 20 mm with clamping flange

032 Shaft Ø6 mm x 10 mm with servo flange

041 Shaft Ø10 mm x 20 mm with clamping flange, flattening 1 mm x 20 mm

282 Shaft Ø6 mm x 10 mm with servo flange, flattening 0,5 mm x 10 mm

**Housing material**

N Aluminium, powder coated

**Version**

S Sine/Cosine encoder

**Shaft version**

V Solid shaft