

# Incremental rotary encoder

## 30-\*\*\*1



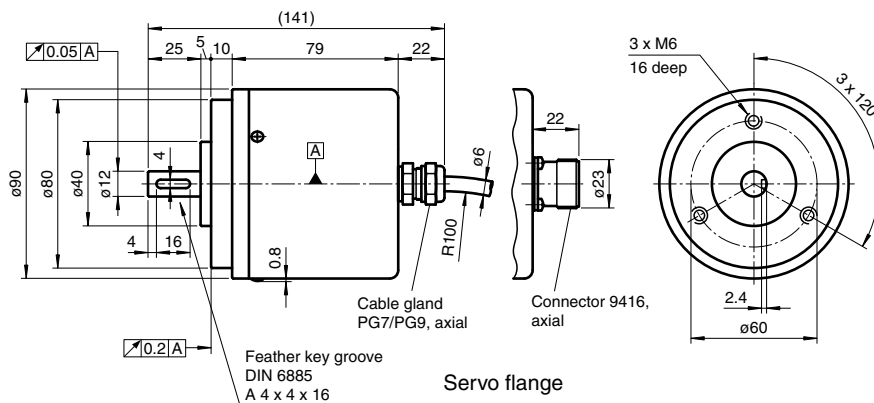
- For extreme mechanical loads
- Up to 5000 ppr
- Stainless steel version
- 10 V ... 30 V with short-circuit proof push-pull output



### Function

The series 30 incremental rotary encoders have been specially designed for use in areas with a high level of mechanical demand. Therefore, the housing is made of steel. The shaft is specially equipped with a feather key groove for attaching a belt pulley or similar device. The permissible radial force is 80 N, while the permissible axial force is 60 N. The pulse disk is designed in plastic up to 1500 pulses. Beyond that, glass is used.

### Dimensions



### Technical Data

General specifications			
Pulse count			max. 5000
Electrical specifications			
Operating voltage	$U_B$		10 ... 30 V DC
No-load supply current	$I_0$		max. 80 mA
Output			
Output type			push-pull, incremental
Voltage drop	$U_d$		< 4 V
Load current			max. per channel 40 mA , short-circuit protected, reverse polarity protected
Output frequency			max. 100 kHz
Rise time			250 ns
De-energized delay	$t_{off}$		250 ns

Release date: 2022-12-12 Date of issue: 2022-12-12 Filename: t2367\_eng.pdf

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

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**PF** PEPPERL+FUCHS

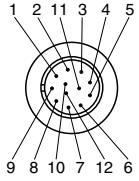
## Technical Data

Connection	
Connector	type 9416 (M23), 12-pin
Cable	Ø6 mm, 4 x 2 x 0.14 mm <sup>2</sup> , 2 m
Standard conformity	
Degree of protection	DIN EN 60529, IP65
Emitted interference	EN 61000-6-4:2007/A1:2011
Noise immunity	EN 61000-6-2:2005
Approvals and certificates	
UL approval	cULus Listed, General Purpose, Class 2 Power Source
Ambient conditions	
Operating temperature	
Glass disk	-20 ... 70 °C (-4 ... 158 °F)
Plastic disk	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	
Glass disk	-40 ... 70 °C (-40 ... 158 °F)
Plastic disk	-40 ... 60 °C (-40 ... 140 °F)
Mechanical specifications	
Material	
Combination 1	housing: stainless steel 1.4301 / AISI 304 flange: aluminum 3.1645 shaft: stainless steel 1.4305 / AISI 303
Combination 2 (Inox)	housing: stainless steel flange: stainless steel shaft: stainless steel
Mass	approx. 1250 g (combination 1) approx. 2200 g (combination 2)
Rotational speed	max. 6000 min <sup>-1</sup>
Moment of inertia	< 270 gcm <sup>2</sup>
Starting torque	≤ 5 Ncm
Shaft load	
Axial	60 N
Radial	80 N

## Accessories

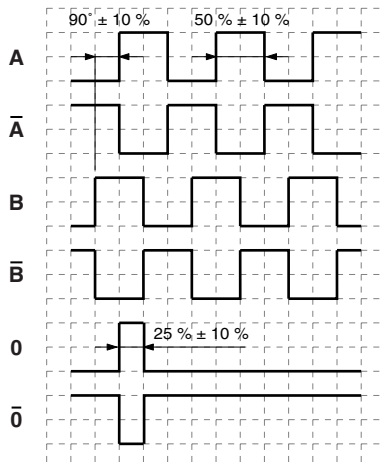
	<b>9301</b>	Angled flange
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**Connection**

Signal	Cable Ø6 mm, 8-core	Connector 9416, 12-pin
GND	White	1
+U <sub>b</sub>	Brown	2
A	Green	3
B	Grey	4
$\bar{A}$	Yellow	5
$\bar{B}$	Pink	6
0	Blue	7
$\bar{0}$	Red	8
		

**Operation**

**Signal outputs**



↻ cw - with view onto the shaft

**Type Code**

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**Pulse count** 60, 100, 120, 180, 200, 250, 256, 300, 314, 360, 400, 500, 512, 600, 720, 900, 1000, 1024, 1200, 1250, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 5000

**Exit position**

**A** Axial

**Material**

**I** INOX

**-** Aluminium

**Output switching**

**1** 10 V ... 30 V, push-pull

**6** 5 V, RS 422

**Connection type** (connector only axial)

**0** Cable Ø6 mm, 2 x 4 x 0.14 mm<sup>2</sup>, 2 m

**4** Plug connector type 9416, 12-pin

**Signal output**

**36** A + B + 0 and  $\bar{A} + \bar{B} + \bar{0}$

**42** A + B + 0