

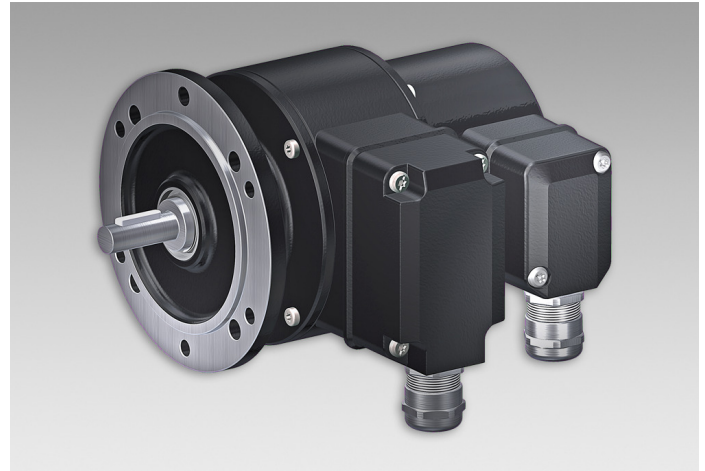
## POG 90 + FSL

Encoder with integrated centrifugal switch

Solid shaft with EURO flange B10 / 1024... 10000 pulses per revolution

### Overview

- Max. 10000 pulses per revolution
- Mechanical speed monitoring based on centrifugal force
- EURO flange B10 / solid shaft  $\varnothing$ 11 mm
- Terminal boxes, turn by 180°



### Technical data

#### Technical data - electrical ratings

Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE

#### Technical data - electrical ratings (encoder)

Voltage supply	9...30 VDC 5 VDC $\pm$ 5 %
Consumption w/o load	$\leq$ 100 mA
Pulses per revolution	1024 ... 10000
Phase shift	90° $\pm$ 8°
Duty cycle	44...56 %
Reference signal	Zero pulse, width 90°
Output frequency	$\leq$ 250 kHz
Output signals	K1, K2, K0 + inverted
Output stages	HTL TTL/RS422

Sensing method Optical

#### Technical data - electrical ratings (centrifugal switch)

Switching accuracy	$\pm$ 4 % ( $\Delta n = 2$ rpm/s); 20 % ( $\Delta n = 1500$ rpm/s)
Switching deviation	$\leq$ 3 % (cw-ccw rotation)
Switching hysteresis	40 % of switching speed
Switching outputs	1 output, speed control
Output switching capacity	$\leq$ 6 A / 230 VAC $\leq$ 1 A / 125 VDC (EAC: $<$ 50 VAC / 75 VDC)

#### Technical data - electrical ratings (centrifugal switch)

Minimum switching current 50 mA

#### Technical data - mechanical design

Size (flange)	$\varnothing$ 115 mm
Shaft type	$\varnothing$ 11 mm solid shaft
Admitted shaft load	$\leq$ 250 N axial $\leq$ 350 N radial
Flange	EURO flange B10
Protection EN 60529	IP 66
Speed (n)	$\leq$ 1.25 · ns
Range of switching speed (ns)	850...4500 rpm ( $\Delta n = 2$ rpm/s)
Operating torque typ.	3 Ncm
Rotor moment of inertia	320 gcm <sup>2</sup>
Material	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-20...+85 °C
Resistance	IEC 60068-2-6 Vibration 5 g, 10-2000 Hz IEC 60068-2-27 Shock 50 g, 11 ms
Corrosion protection	IEC 60068-2-52 Salt mist for ambient conditions C4 according to ISO 12944-2
Connection	2x terminal box
Weight approx.	2.6 kg

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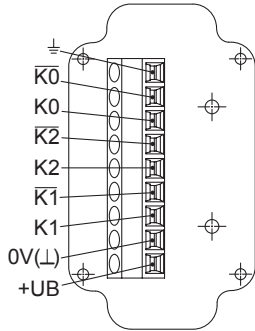
## General information

The constructive design of the centrifugal switch is its use as a switch with positive break function. It must not be used as a continuous switch (switching cycles greater than 500 during service life).

## Terminal assignment

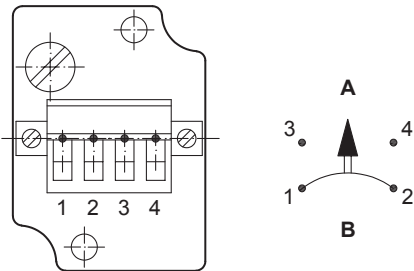
### View A (see dimension)

Connecting terminal terminal box encoder



### View B (see dimension)

Connecting terminal centrifugal switch



**A** = make contact, **B** = break contact

## Terminal significance

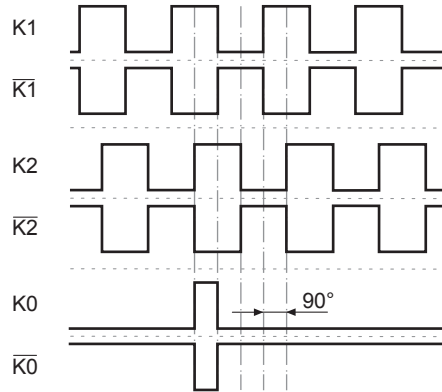
### Encoder incremental

+UB	Voltage supply
0V (L)	Ground
$\perp$	Earth ground (housing)
K1	Output signal channel 1
$\overline{K1}$	Output signal channel 1 inverted
K2	Output signal channel 2 (offset by 90° to channel 1)
$\overline{K2}$	Output signal channel 2 inverted
K0	Zero pulse (reference signal)
$\overline{K0}$	Zero pulse inverted

## Output signals

### HTL/TTL

At positive rotating direction (see dimension)

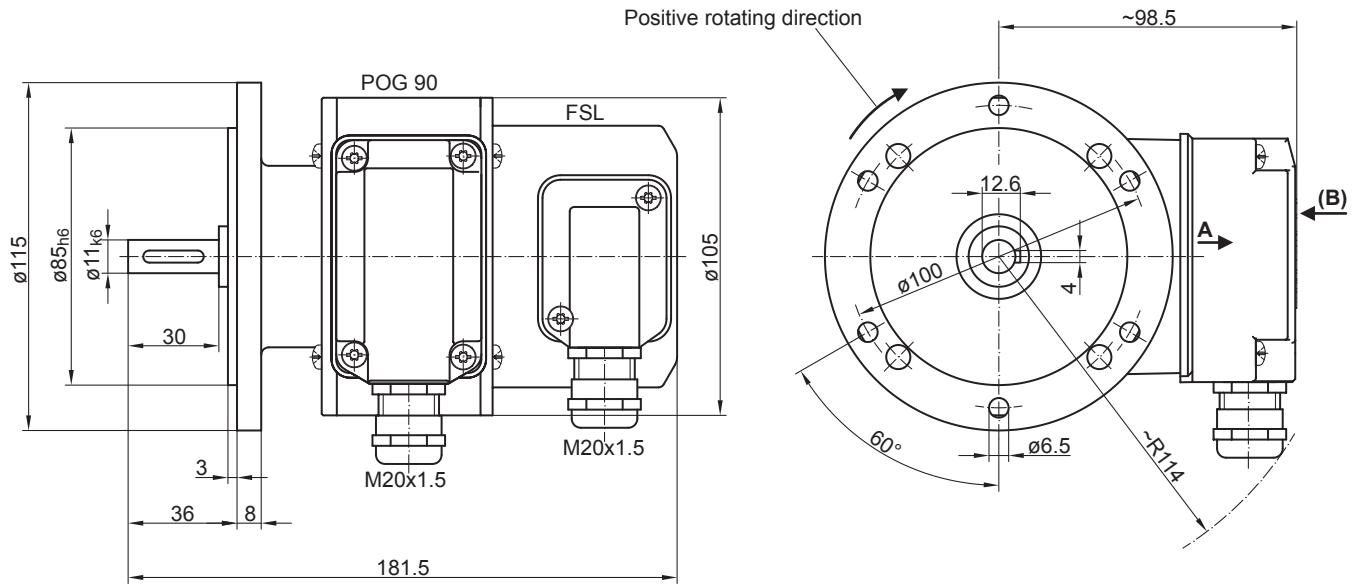


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## Dimensions



# POG 90 + FSL

Encoder with integrated centrifugal switch

Solid shaft with EURO flange B10 / 1024...10000 pulses per revolution

## Ordering reference

	POG90	DN	####	###	+ FSL	#####
<b>Product</b>						
Incremental encoder + Centrifugal switch	POG90					
<b>Output signals</b>						
K1, K2, K0		DN				
<b>Pulse number<sup>(1)</sup></b>						
1024			1024			
2000			2000			
2048			2048			
2500			2500			
3072			3072			
3600			3600			
4096			4096			
5000			5000			
10000			10000			
<b>Voltage supply / output stage</b>						
9...30 VDC / output stage HTL with inverted signals					I	
5 VDC / output stage TTL with inverted signals					TTL	
9...30 VDC / output stage TTL with inverted signals					R	
<b>Version speed switch</b>						
Mechanical centrifugal switch						+ FSL
<b>Switching speed (ns)</b>						
850...949 rpm ( $\Delta n = 2$ rpm/s) <sup>(2)</sup>						6 ...
950...1099 rpm ( $\Delta n = 2$ rpm/s) <sup>(2)</sup>						5 ...
1100...1299 rpm ( $\Delta n = 2$ rpm/s) <sup>(2)</sup>						4 ...
1300...1799 rpm ( $\Delta n = 2$ rpm/s) <sup>(2)</sup>						3 ...
1800...2499 rpm ( $\Delta n = 2$ rpm/s) <sup>(2)</sup>						2 ...
2500...4500 rpm ( $\Delta n = 2$ rpm/s) <sup>(2)</sup>						1 ...

(1) Other pulse numbers on request.

(2) Please specify the exact switching speed in addition to the part number (factory setting).

## Accessories

### Mounting accessories

Spring disk coupling K 35 (shaft  $\varnothing 6...12$  mm)

Spring disk coupling K 50 (shaft  $\varnothing 11...16$  mm)

Spring disk coupling K 60 (shaft  $\varnothing 11...22$  mm)