Baumer
Passion for Sensors

Incremental encoder - combination

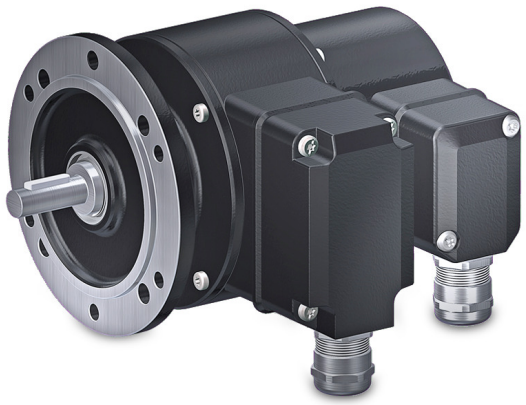
POG 90 + FSL

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 ø11 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 ±5 %
Consumption w/o load	≤100 mA
Pulses per revolution	1024 … 10000
Phase shift	90 ° ±8°
Duty cycle	44…56 %
Reference signal	Zero pulse, width 90°
Output frequency	≤250 kHz
Output signals	K1, K2, K0 + inverted
Output stages	HTL TTL/RS422
Sensing method	Optical
Technical data - electrical ratings (centrifugal switch)	
Switching accuracy	± 4 % (Δn = 2 rpm/s), 20 % (Δn = 1500 rpm/s)
Switching deviation	≤3 % (cw-ccw rotation)
Switching hysteresis	40 % of switching speed
Switching outputs	1 output, speed control
Output switching capacity	≤6 A / 230 VAC ≤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)	ø115 mm
Shaft type	ø11 mm solid shaft
Admitted shaft load	≤250 N axial ≤350 N radial
Flange	EURO flange B10
Protection EN 60529	IP 66
Speed (n)	≤1.25 · ns
Range of switching speed (ns)	850...4500 rpm (Δn = 2 rpm/s)
Operating torque typ.	3 Ncm
Rotor moment of inertia	320 gcm²
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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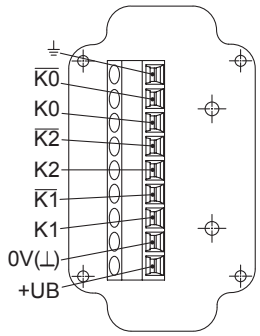
General information

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

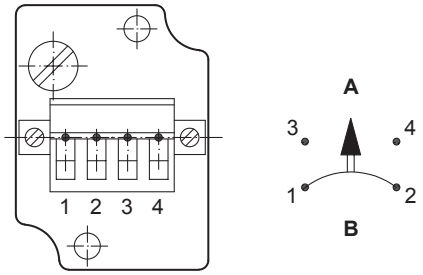
View A *(see dimension)*

Connecting terminal terminal box encoder



View B *(see dimension)*

Connecting terminal centrifugal switch



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

Terminal significance

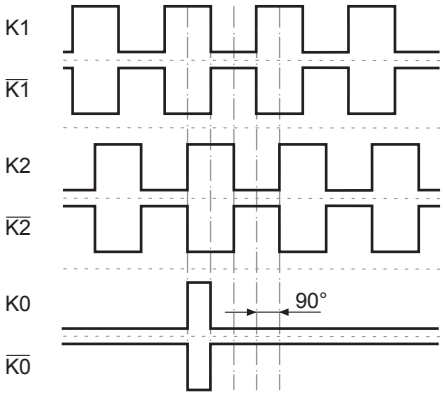
Encoder incremental

+UB	Voltage supply
0V (⊥)	Ground
⏚	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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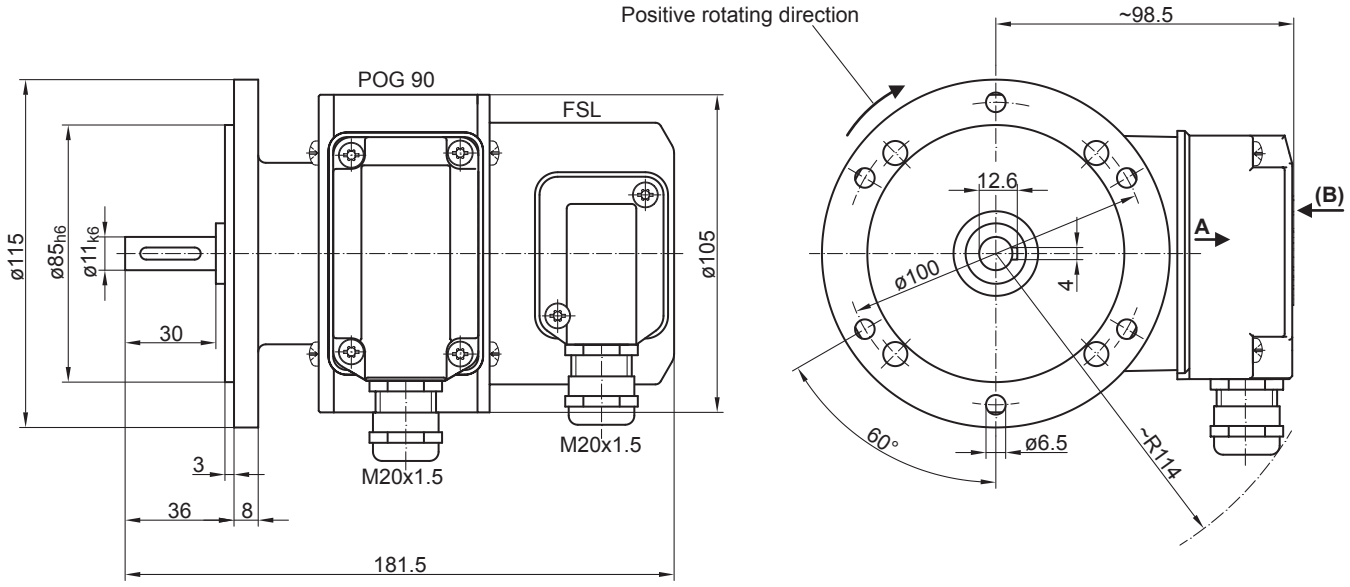
Dimensions



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Ordering reference

	POG90	DN	####	###	+ FSL	#####
Product						
Incremental encoder + Centrifugal switch	POG90					
Output signals						
K1, K2, K0		DN				
Pulse number(1)						
1024			1024			
2000			2000			
2048			2048			
2500			2500			
3072			3072			
3600			3600			
4096			4096			
5000			5000			
10000			10000			
Voltage supply / output stage						
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		
Version speed switch						
Mechanical centrifugal switch					+ FSL	
Switching speed (ns)						
850...949 rpm (Δn = 2 rpm/s)(2)						6 ...
950...1099 rpm (Δn = 2 rpm/s)(2)						5 ...
1100...1299 rpm (Δn = 2 rpm/s)(2)						4 ...
1300...1799 rpm (Δn = 2 rpm/s)(2)						3 ...
1800...2499 rpm (Δn = 2 rpm/s)(2)						2 ...
2500...4500 rpm (Δn = 2 rpm/s)(2)						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 K35 (shaft ø6...12 mm)
	Spring disk coupling K 50 (shaft ø11...16 mm)
11064874	Spring disk coupling K60 WD 11PF4 + 12PF4

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