

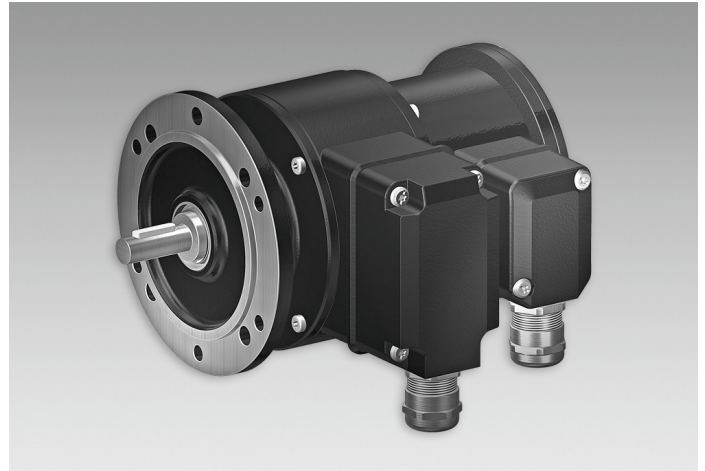
POG 90 + ESL 90

Encoder with integrated electronic speed switch

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

Overview

- Max. 10000 pulses per revolution
- Electronic speed monitoring
- Circuit breaker with one selectable threshold speed
- 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 (speed switch)

Switching accuracy	\pm 4 % (\leq 1500 rpm) \pm 2 % ($>$ 1500 rpm)
Switching hysteresis	= 30 % of switching speed
Switching outputs	1 output, speed control
Output switching capacity	\leq 6 A / 250 VAC; \leq 1 A / 48 VDC (EAC: $<$ 50 VAC / 75 VDC)
Minimum switching current	100 mA

Technical data - electrical ratings (speed switch)

Switching delay time	\leq 40 ms
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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
Operating speed	\leq 6000 rpm
Range of switching speed (ns)	650...6000 rpm
Operating torque typ.	3 Ncm
Rotor moment of inertia	320 gcm ²
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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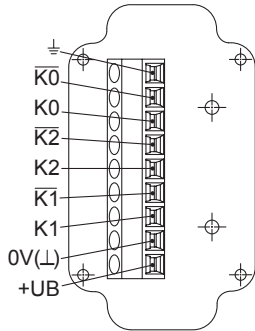
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Terminal assignment

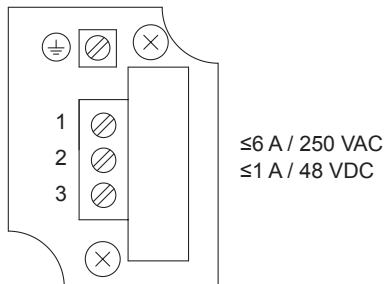
View A (see dimension)

Connecting terminal terminal box encoder



View B (see dimension)

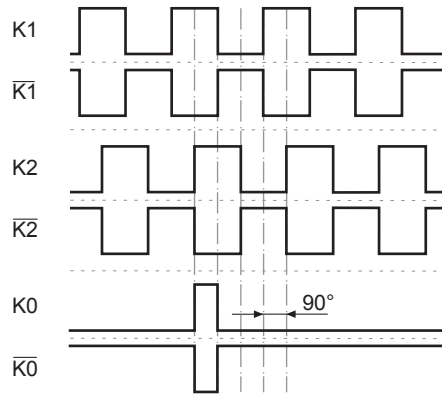
Connecting terminal speed switch ESL 90



Output signals

HTL/TTL

At positive rotating direction (see dimension)

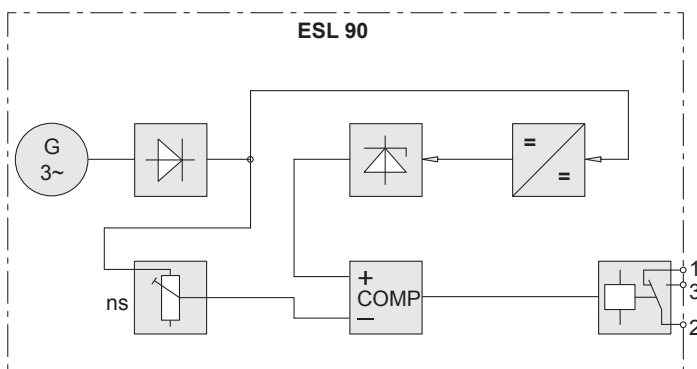


Terminal significance

Encoder incremental

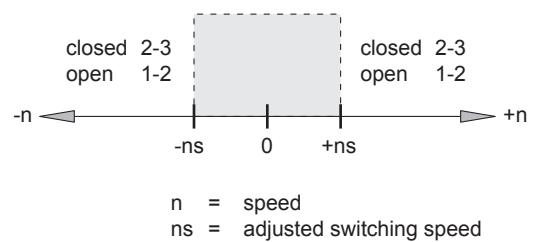
+UB	Voltage supply
0V (L)	Ground
⊥	Earth ground (housing)
K1	Output signal channel 1
K1̄	Output signal channel 1 inverted
K2	Output signal channel 2 (offset by 90° to channel 1)
K2̄	Output signal channel 2 inverted
K0	Zero pulse (reference signal)
K0̄	Zero pulse inverted

Block circuit diagram



Speed switch ESL 90

Switching characteristics

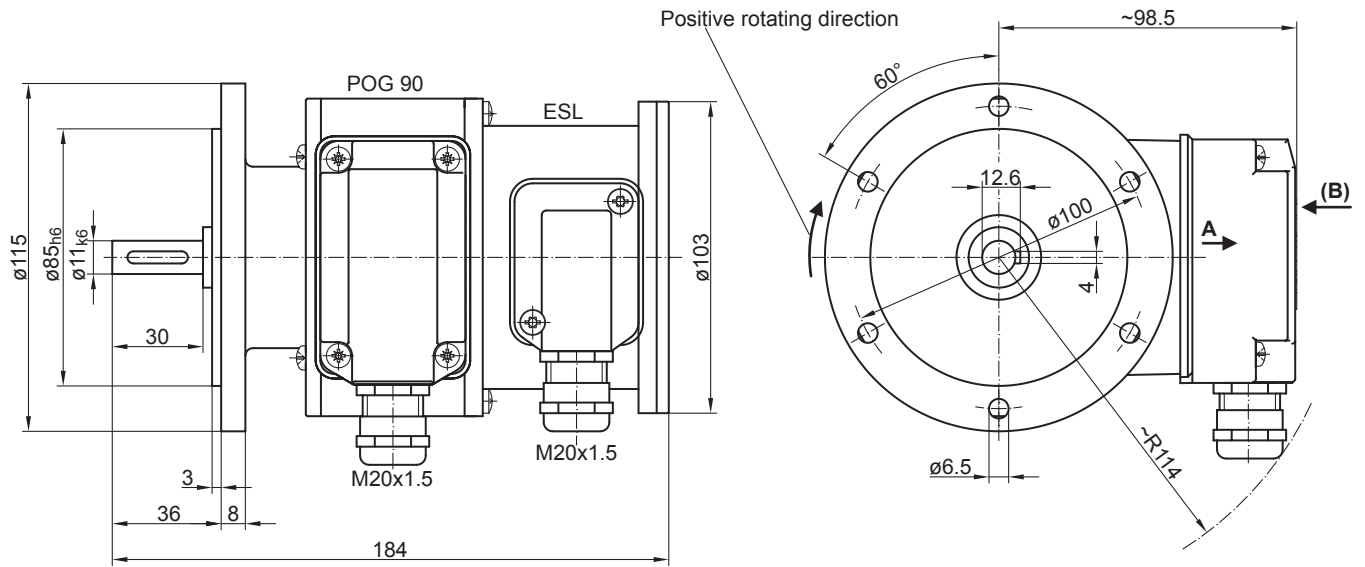


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Dimensions



POG 90 + ESL 90

Encoder with integrated electronic speed switch

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Ordering reference

	POG90	DN	####	###	+ESL90	...
Product						
Incremental encoder + Speed 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						
Electronic speed switch, 1 output, speed control						+ESL90
Switching speed (ns)						
650...6000 rpm ⁽²⁾						

(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)