

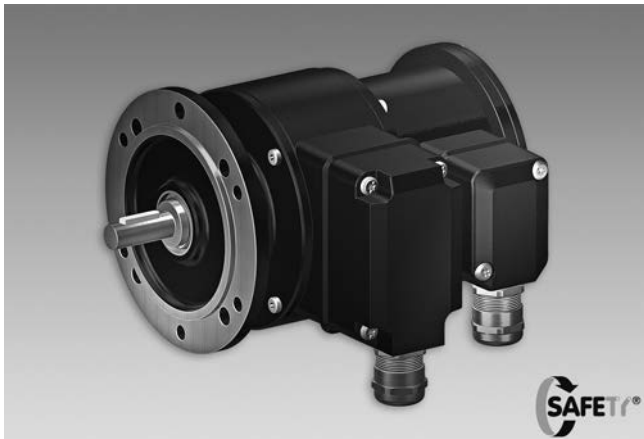
Combination

Encoder with integrated electronic speed switch

Solid shaft with EURO flange B10

1024...10000 pulses per revolution

POG 90 + ESL 93



POG 90 + ESL 93

Features

- Max. 10000 pulses per revolution
- Electronic speed monitoring
- Circuit breaker with up to three selectable threshold speeds
- EURO flange B10 / solid shaft \varnothing 11 mm
- Terminal boxes, turn by 180°

Technical data - electrical ratings

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

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 switches)

Voltage supply	12 VDC \pm 10 %
Consumption w/o load	\leq 5 mA
Switching accuracy	\pm 4 % (\leq 1500 rpm) \pm 2 % ($>$ 1500 rpm)
Switching hysteresis	\approx 30 % of switching speed
Switching outputs	3 outputs, speed control
Current each output	40 mA (DC)
Switching delay time	\leq 40 ms

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 DIN EN 60529	IP 66
Operating speed	\leq 5000 rpm
Range of switching speed (ns)	200...5000 rpm
Operating torque typ.	3 Ncm
Rotor moment of inertia	320 gcm ²
Materials	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
Approval	CE

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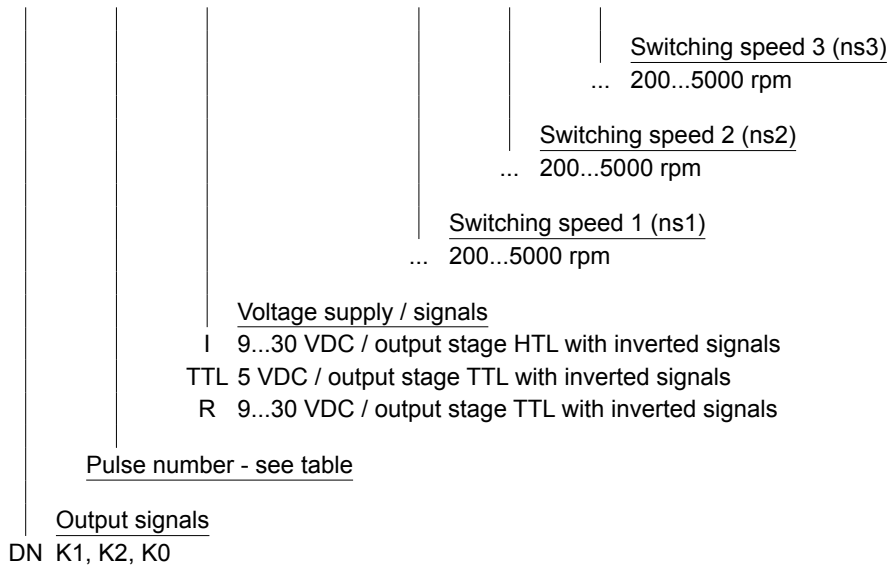
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Part number

POG90 DN [] [] [] [] + ESL93 [] [] [] []



Pulse number

1024	2048	3072	4096	10000
2000	2500	3600	5000	

Other pulse numbers on request.
Please indicate the exact switching rotation speeds (factory setting).

Accessories

Connectors and cables

HEK 8 Sensor cable for encoders

Mounting accessories

K 35 Spring washer coupling for solid shaft $\varnothing 6...12$ mm

K 50 Spring washer coupling for solid shaft $\varnothing 11...16$ mm

K 60 Spring washer coupling for solid shaft $\varnothing 11...22$ mm

Diagnostic accessories

11075858 Analyzer for encoders HENQ 1100

Relay module

11054943 Relay modul ES 93 R

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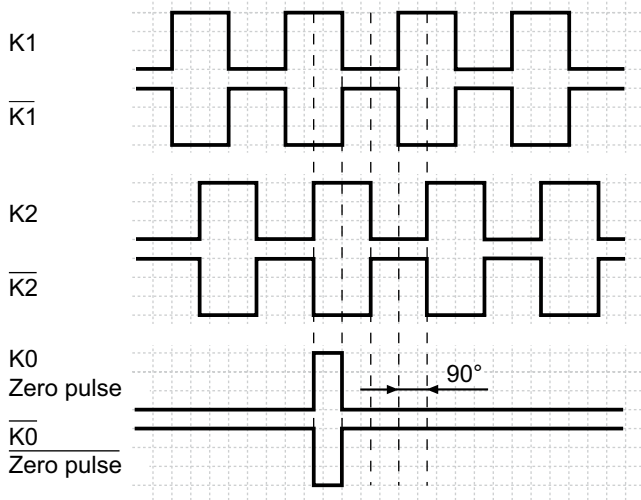
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Output signals

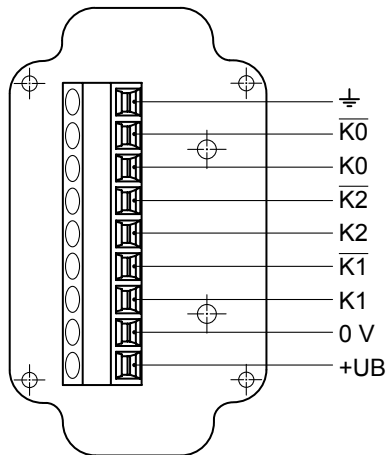
At positive rotating direction



Terminal assignment

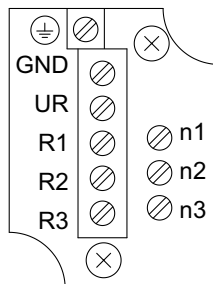
View A

Connecting terminal in terminal box POG 90



View B

Connecting terminal electronic speed switch ESL 93



3 transistor outputs
for connecting to a relay modul,
for example ES 93 R (accessory)

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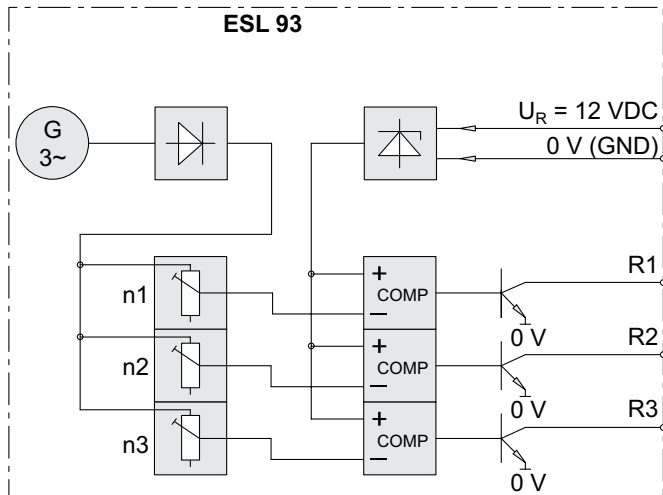
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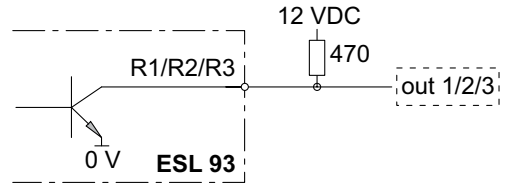
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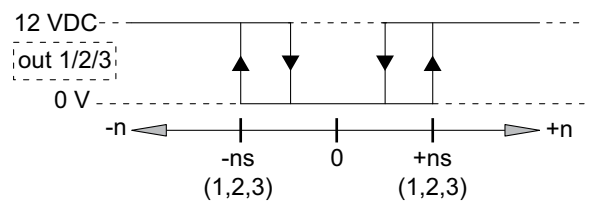
Block circuit diagram



Recommended output circuit



Switching characteristics



n = speed

n_s = adjusted switching speed

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Dimensions

