

Combination

Encoder with integrated centrifugal switch

Solid shaft with EURO flange B10

300...5000 pulses per revolution

POG 9 + FSL



POG 9 + FSL

Features

- TTL output driver for cable length up to 500 m
- Mechanical speed monitoring based on centrifugal force
- EURO-flange B10 / solid shaft $\varnothing 11$ mm
- Terminal boxes, turn by 180°

Optional

- Function control with EMS (Enhanced Monitoring System)

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	300...5000
Phase shift	90° ± 20 °
Scan ratio	40...60 %
Reference signal	Zero pulse, width 90°
Output frequency	≤ 120 kHz ≤ 300 kHz (on request)
Output signals	K1, K2, K0 + inverted Error output (only EMS)
Output stages	HTL-P (power linedriver) TTL/RS422
Sensing method	Optical

Technical data - electrical ratings (centrifugal switch)

Switching accuracy	± 4 % ($\Delta n = 2$ rpm/s); $\leq +20$ % ($\Delta n = 1500$ rpm/s)
Switching deviation cw-ccw rotation	≤ 3 %
Switching hysteresis	≈ 40 % of switching speed
Switching outputs	1 output, speed control
Output switching capacity	≤ 6 A / 230 VAC ≤ 1 A / 125 VDC
Minimum switching current	50 mA

Technical data - mechanical design

Size (flange)	$\varnothing 115$ mm
Shaft type	$\varnothing 11$ mm solid shaft
Admitted shaft load	≤ 250 N axial ≤ 350 N radial
Flange	EURO flange B10
Protection DIN EN 60529	IP 56
Speed (n)	$\leq 1.25 \cdot ns$
Range of switching speed (ns)	850...4500 rpm ($\Delta n = 2$ rpm/s)
Operating torque typ.	3 Ncm
Rotor moment of inertia	220 gcm ²
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-30...+100 °C -25...+100 °C (>3072 pulses per revolution)
Resistance	IEC 60068-2-6 Vibration 5 g, 10-2000 Hz IEC 60068-2-27 Shock 150 g, 1 ms
Connection	2x terminal box
Weight approx.	1.9 kg

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Part number

Incremental encoder with centrifugal force switch FSL

POG9 **DN** **+ FSL**

- Switching speed (ns)
- 6 850...949 rpm ($\Delta n = 2$ rpm/s)*
 - 5 950...1099 rpm ($\Delta n = 2$ rpm/s)*
 - 4 1100...1299 rpm ($\Delta n = 2$ rpm/s)*
 - 3 1300...1799 rpm ($\Delta n = 2$ rpm/s)*
 - 2 1800...2499 rpm ($\Delta n = 2$ rpm/s)*
 - 1 2500...4500 rpm ($\Delta n = 2$ rpm/s)*

Voltage supply / signals

- I 9...30 VDC / output circuit HTL with inverted signals
- TTL 5 VDC / output circuit TTL with inverted signals
- R 9...30 VDC / output circuit TTL with inverted signals

Pulse number - see table

Output signals

DN K1, K2, K0

EMS - Enhanced Monitoring System

Without EMS

.2 With EMS

Pulse number

300	1000	2048	4096
500	1024	2500	5000
512	1200	3072	

Other pulse numbers on request.

* Please specify the exact switching speed in addition to the part number (factory setted threshold).

Combination

Encoder with integrated centrifugal switch

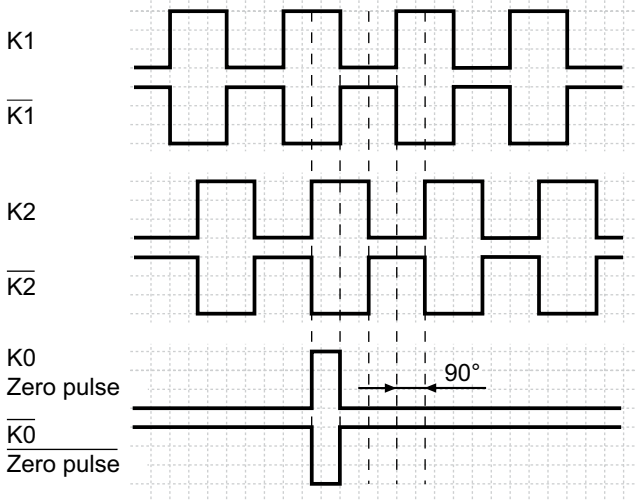
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Output signals

At positive rotating direction



Option EMS: LED status / Error output

Flash light red*	Error of signal sequence, zero pulse or pulses (Error output = HIGH-LOW alternation)
Red	Overload output driver (Error output = LOW)
Flash light green	Encoder o.k., rotating (Error output = HIGH)
Green	Encoder o.k., stopped (Error output = HIGH)
No light	No output voltage connection or wrong connection (Error output = LOW)

* Only at rotating encoder

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

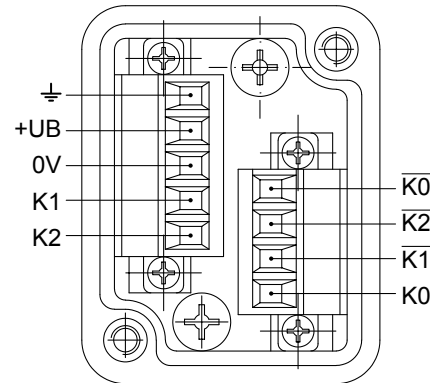
Diagnostic accessories

HENQ 1100 Analyzer for encoders

Terminal assignment

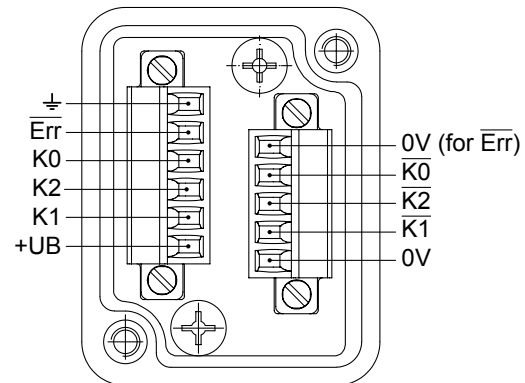
View A

Connecting terminal in terminal box POG 9



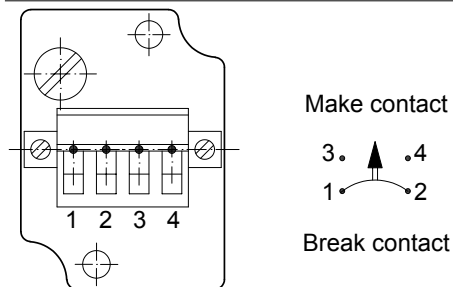
Option EMS: View A

Connecting terminal in terminal box POG 9.2



View B

Connecting terminal mechanical centrifugal switch FSL



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Dimensions

