

Incremental encoders

Shaft $\varnothing 11$ mm with EURO flange B10
Resolution 1...2500 pulses

POG 10, POG 10 + FSL



POG 10

Technical data - electrical ratings

Voltage supply	5 VDC ± 5 % 9...26 VDC 9...30 VDC
Consumption w/o load	≤ 100 mA
Resolution (steps/turn)	1...2500
Phase shift	$90^\circ \pm 20^\circ$
Scan ratio	40...60 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 120 kHz
Output signals	K1, K2, K0 + inverted
Output circuit	TTL (RS422) HTL (power line driver)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4

POG 10

Approval	UL approval / E256710
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POG 10 + FSL

Output switching capacity	6 A / 230 VAC 1 A / 125 VDC
Range of switching speed (ns)	850...4900 rpm ($\Delta n = 2$ rpm/s)

Features

- Logic level TTL or HTL
- High resistance to shock and vibrations
- Big terminal box, pivotable through 180°
- Also in conjunction with centrifugal force switch FSL (no explosion protection)

Optional

- Twin-encoder featuring two separate systems
- Second shaft end
- Version with heating (up to -50°C , no explosion protection)

Technical data - mechanical design

Housing	$\varnothing 105$ mm
Shaft	$\varnothing 11$ mm
Admitted shaft load	≤ 300 N axial ≤ 450 N radial
Flange	EURO flange B10
Protection DIN EN 60529	IP 66
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	$-40...+100^\circ\text{C}$ $-50...+100^\circ\text{C}$ (optional)
Connection	Terminal box

POG 10

Operating speed	≤ 12000 rpm (mechanical)
Operating torque typ.	2 Ncm
Rotor moment of inertia	200 gcm ²
Resistance	DIN EN 60068-2-6 Vibration 20 g, 10-2000 Hz DIN EN 60068-2-27 Shock 200 g, 6 ms
Explosion protection	II3G Ex nA T4 X (gas) II3D Ex tD IP66 A22 T135°C X (dust)
Weight approx.	1.6 kg

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Speed (n)	$\leq 1.25 \cdot ns$
Operating torque typ.	4 Ncm
Rotor moment of inertia	220 gcm ²
Resistance	DIN EN 60068-2-6 Vibration 10 g, 10-2000 Hz DIN EN 60068-2-27 Shock 100 g, 6 ms
Weight approx.	3.2 kg

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Part number

Incremental encoder

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	Voltage supply / signals
I	9...30 VDC / output level HTL with inverted signals
TTL	5 VDC / output level TTL with inverted signals (for output signals DN)
R	9...26 VDC / output level TTL with inverted signals (for output signals DN)
<u>See part number (pulses)</u>	
<u>Output signals</u>	
D	K1, K2
DN	K1, K2, K0

Incremental encoder with centrifugal force switch FSL

POG 10 + FSL

	Voltage supply / signals
I	9...30 VDC / output level HTL with inverted signals
TTL	5 VDC / output level TTL with inverted signals (for output signals DN)
R	9...26 VDC / output level TTL with inverted signals (for output signals DN)
<u>See part number (pulses)</u>	
<u>Output signals</u>	
D	K1, K2
DN	K1, K2, K0

Part number (pulses)

1	11	62	192	512
2	12	64	200	600
3	15	72	250	720
4	25	80	256	900
5	30	100	300	1000
6	40	120	360	1024
8	50	128	400	2048
10	60	180	500	2500

Other pulse numbers upon request.

Please indicate the required switching rotation speed when ordering with centrifugal force switch (permanent parameter defined at works).

Accessories

Connectors and cables

HEK 8 Sensor cable for encoders

Mounting accessories

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

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

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

Diagnostic accessories

HENQ 1100 Analyzer for encoders

Incremental encoders

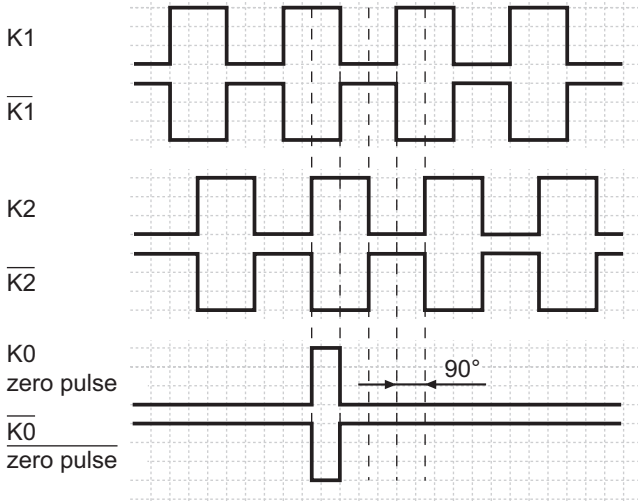
Shaft $\varnothing 11$ mm with EURO flange B10

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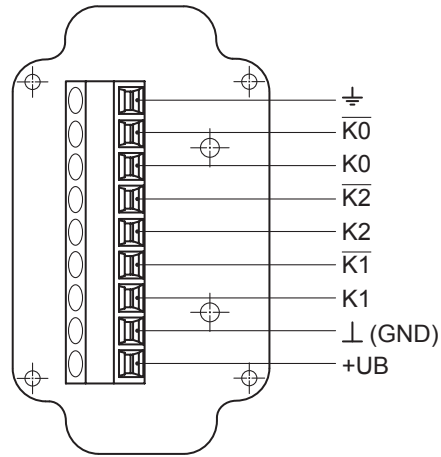
Output signals

at positive direction of rotation

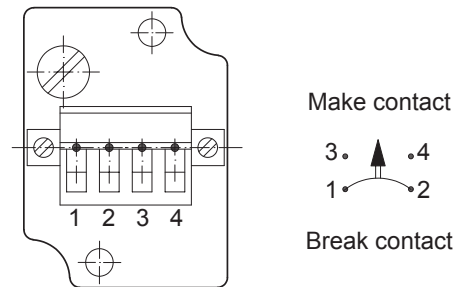


Terminal assignment

View A - Connecting terminal in terminal box



View B - Connecting terminal mechanical speed switch



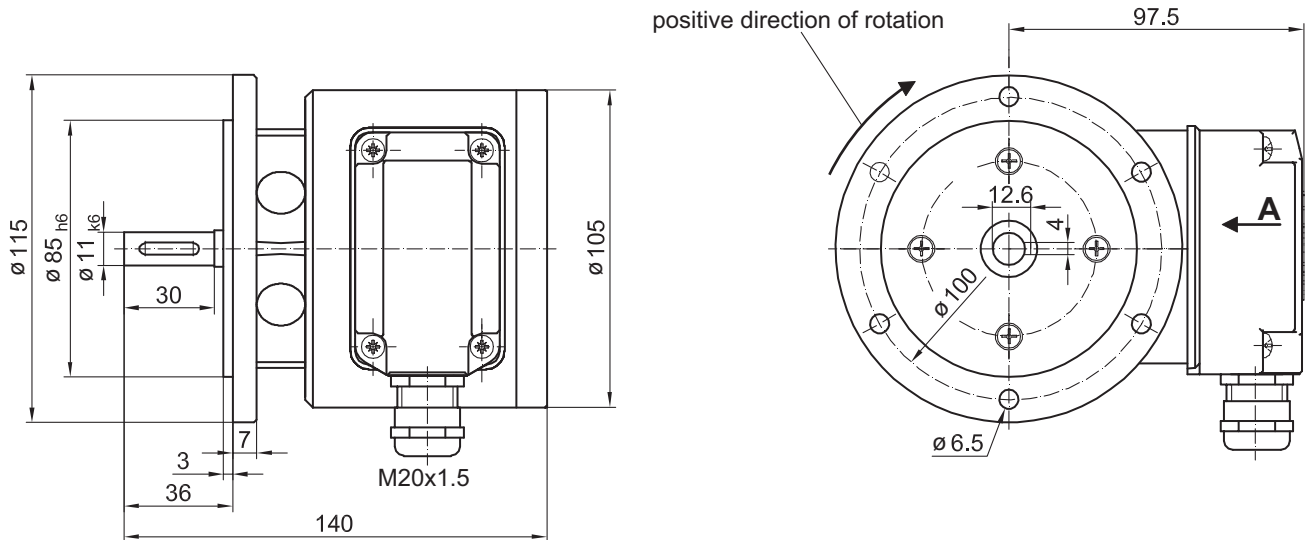
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Dimensions

POG 10 - incremental encoder



POG 10 + FSL - incremental encoder with centrifugal force switch FSL

