

Incremental encoders

Solid shaft with EURO flange B10

25...5000 pulses per revolution

OG 9



OG 9

Features

- Encoder with solid shaft $\varnothing 11$ mm
- Optical sensing method
- EURO flange B10
- Output stage HTL with power linedriver
- Output stage TTL with regulator UB 9...26 VDC
- Operating temperature up to $+100$ °C

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC ± 5 % 9...26 VDC
Consumption w/o load	≤ 100 mA
Pulses per revolution	25...5000
Phase shift	$90^\circ \pm 20^\circ$
Duty cycle	40...60 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 120 kHz ≤ 300 kHz (on request)
Output signals	K1, K2, K0 + inverted
Output stages	HTL-P (power linedriver) TTL/RS422
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approvals	CE, UL approval / E256710

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 55
Operating speed	≤ 12000 rpm (mechanical)
Operating torque typ.	1 Ncm
Rotor moment of inertia	280 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 10 g, 10-2000 Hz IEC 60068-2-27 Shock 100 g, 6 ms
Corrosion protection	IEC 60068-2-52 Salt mist for ambient conditions C4 according to ISO 12944-2
Explosion protection	II 3 G Ex nA IIC T4 Gc (gas) II 3 D Ex tc IIIB T135°C Dc (dust)
Connection	Terminal box
Weight approx.	980 g

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Part number

Incremental encoder

OG9	DN				
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	Voltage supply / signals
I	9...30 VDC / output stage HTL with inverted signals
TTL	5 VDC / output stage TTL with inverted signals
R	9...26 VDC (<95 pulses), 9...30 VDC (≥95 pulses) / output stage TTL with inverted signals (for output signals DN)

Pulse number - see table

Output signals

DN K1, K2, K0

Pulse number

25	256	720	2048	5000
120	360	1000	2500	
128	500	1024	3072	
180	512	1250	4096	

Other pulse numbers on request.

Accessories

Connectors and cables

HEK 8 Sensor cable for encoders

Mounting accessories

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

K 50	Spring washer coupling for solid shaft $\varnothing 11 \dots 16$ mm
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K 60 Spring washer coupling
for solid shaft $\varnothing 11 \dots 22$ mm

Diagnostic accessories

11075858	Analyzer for encoders HENQ 1100
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Incremental encoders

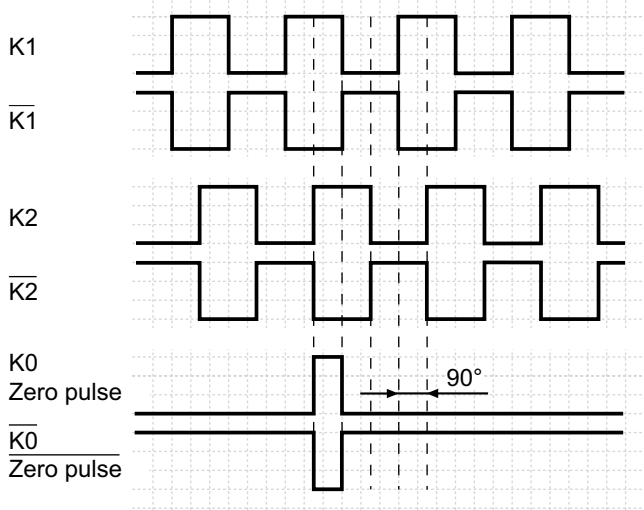
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Output signals

At positive rotating direction

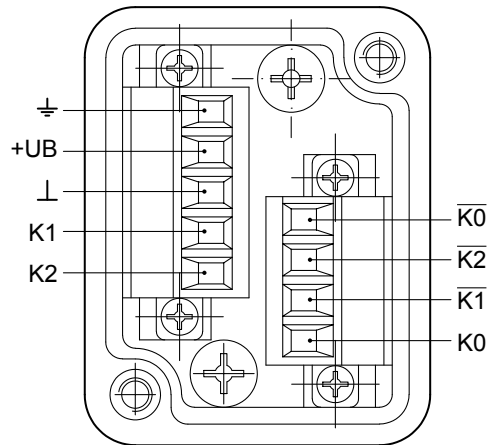


Terminal significance

+UB	Voltage supply (for the device)
⊥; ↓; GND; 0 V	Ground (for the signals)
⊥; ↗	Earth ground (housing)
K1; A; A+	Output signal channel 1
K1̄; Ā; A-	Output signal channel 1 inverted
K2; B; B+	Output signal channel 2 (offset by 90° to channel 1)
K2̄; B̄; B-	Output signal channel 2 (offset by 90° to channel 1) inverted
K0; C; R; R+	Zero pulse (reference signal)
K0̄; C̄; R̄; R-	Zero pulse (reference signal) inverted
dnu	Do not use

Terminal assignment

View A - Connecting terminal terminal box



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Dimensions

