Incremental encoders

POG 10 - stainless steel

Encoder made of stainless steel

Solid shaft with EURO flange B10, 300…5000 pulses per revolution

Overview

- Housing made of stainless steel
- TTL output driver for cable length up to 550 m
- High resistance to shock and vibrations
- EURO flange B10 / solid shaft ø11 mm
- Option: Second shaft end / Housing foot (B3)

Technical data

Technical data - electrical ratings	
Voltage supply	9...30 VDC 5 VDC ±5 %
Consumption w/o load	≤100 mA
Pulses per revolution	300 … 5000
Phase shift	90 ° ±20°
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
Transmission length	≤350 m at 100 kHz (HTL-P) ≤550 m at 100 kHz (TTL)
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE UL approval / E217823
Technical data - mechanical design	
Size (flange)	ø115 mm
Shaft type	ø11 mm solid shaft
Admitted shaft load	≤300 N axial ≤450 N radial
Flange	EURO flange B10

Technical data - mechanical design	
Protection EN 60529	IP 66
Operating speed	≤12000 rpm (mechanical)
Operating torque typ.	2 Ncm
Rotor moment of inertia	288 gcm²
Material	Housing: stainless steel Shaft: stainless steel
Operating temperature	-40...+80 °C (cable HEK 8 fixed) -20...+80 °C (cable HEK 8 moved) -40...+90 °C, UL up to +80 °C (cable ÖLFLEX) -40...+100 °C (terminal box) >3072 pulses: up to -25 °C
Resistance	IEC 60068-2-6 Vibration 20 g, 10-2000 Hz IEC 60068-2-27 Shock 200 g, 6 ms
Corrosion protection	IEC 60068-2-52 Salt mist for ambient conditions CX (C5-M) according to ISO 12944-2
Explosion protection	II 3 G Ex ec IIC T4 Gc (gas) II 3 D Ex tc IIIC T135°C Dc (dust) (only with option ATEX)
Connection	Cable HEK 8 Cable ÖLFLEX 2 m Terminal box
Weight approx.	4.7 kg (HEK8/ÖLFLEX without cable) 5.3 kg (terminal box)

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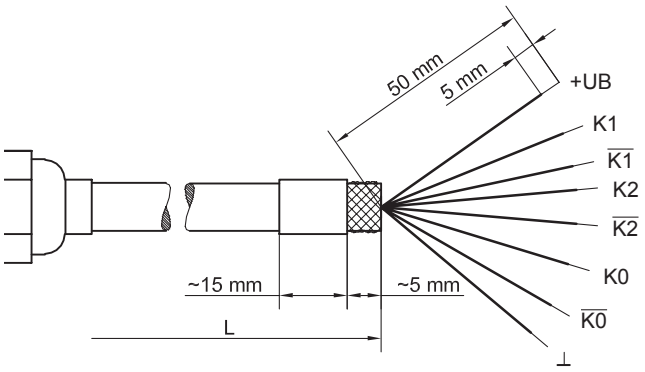
Terminal assignment

With sensor cable HEK 8

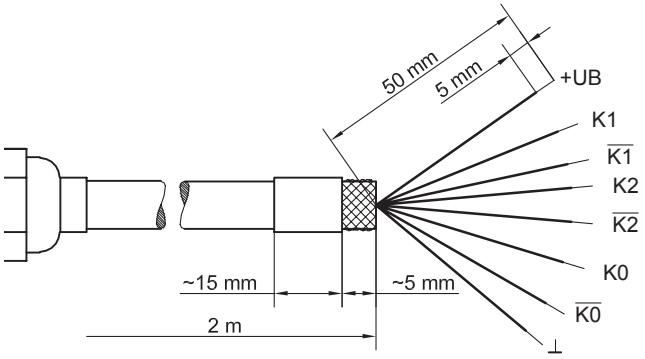
Wire colour	Assignment	Core cross-section
Red	+UB	0,5 mm²
White	K1	0,25 mm²
Brown	$\overline{K1}$	0,25 mm²
Green	K2	0,25 mm²
Yellow	$\overline{K2}$	0,25 mm²
Grey	K0	0,25 mm²
Pink	$\overline{K0}$	0,25 mm²
Blue	⊥	0,5 mm²



L = Cable length

With cable ÖLFLEX

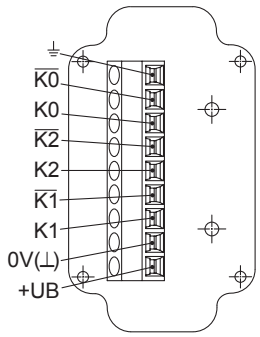
Wire colour	Assignment	Core cross-section
Brown	+UB	1 mm²
Brown	K1	0,25 mm²
Green	$\overline{K1}$	0,25 mm²
Grey	K2	0,25 mm²
Pink	$\overline{K2}$	0,25 mm²
Red	K0	0,25 mm²
Black	$\overline{K0}$	0,25 mm²
White	⊥	1 mm²



Terminal assignment

View A *(see dimension)*

Connecting terminal terminal box, radial



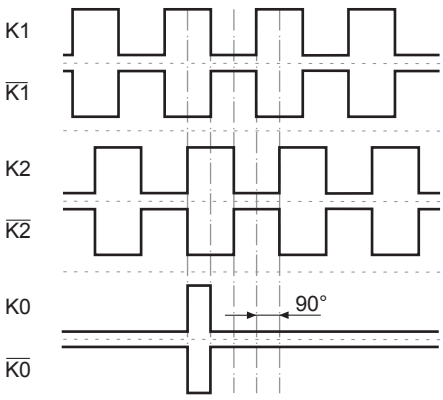
Terminal significance

+UB	Voltage supply
0V (⊥)	Ground
⏚	Earth ground (housing)
K1	Output signal channel 1
$\overline{K1}$	Output signal channel 1 inverted
K2	Output signal channel 2 (offset by 90° to channel 1)
$\overline{K2}$	Output signal channel 2 inverted
K0	Zero pulse (reference signal)
$\overline{K0}$	Zero pulse inverted

Output signals

HTL/TTL

At positive rotating direction *(see dimension)*



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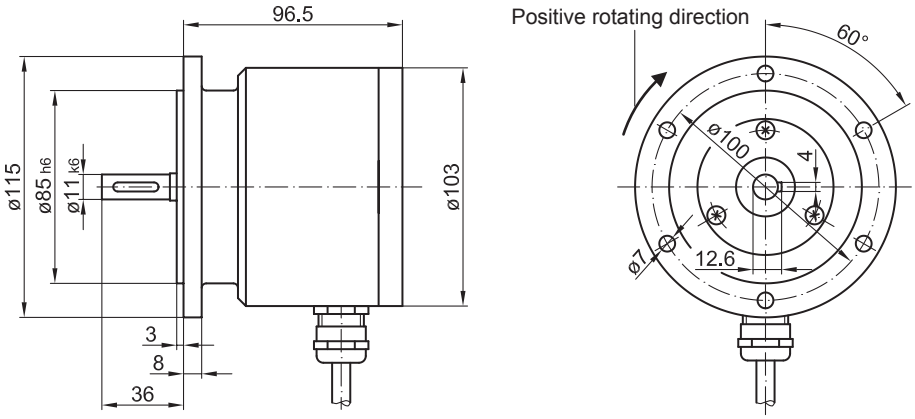
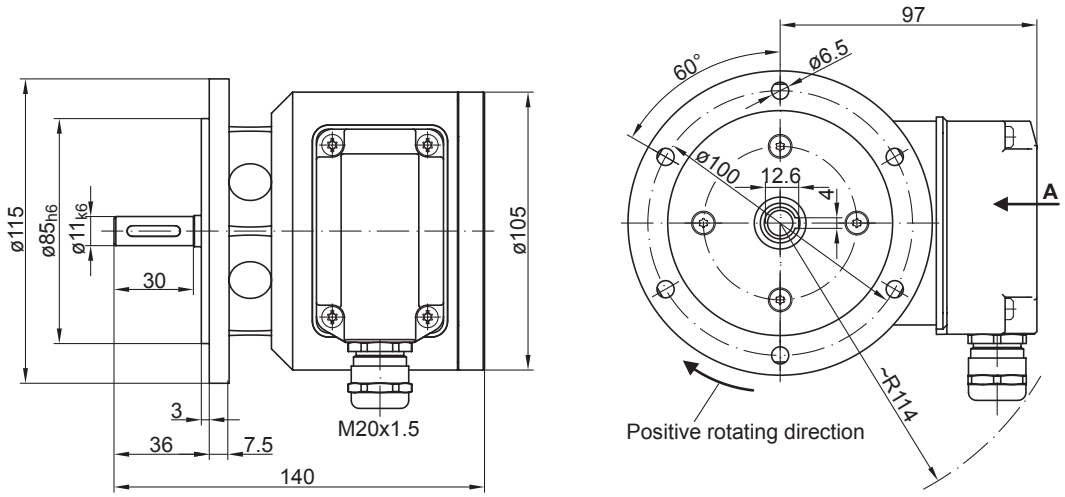
Dimensions



Version with connecting cable



Version with terminal box

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Ordering reference

	POG10	DN	####	###	Niro	##########
Product						
Incremental encoder	POG10					
Output signals						
K1, K2, K0		DN				
Pulse number						
300			300			
500			500			
512			512			
1000			1000			
1024			1024			
1200			1200			
2048			2048			
2500			2500			
3072			3072			
4096			4096			
5000			5000			
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		
Material						
Stainless steel					Niro	
Connection						
Sensor cable HEK 8, length 2 m						KAB HEK8 2m
Sensor cable HEK 8, length 3 m						KAB HEK8 3m
Sensor cable HEK 8, length 10 m						KAB HEK8 10m
Sensor cable HEK 8, length 16 m						KAB HEK8 16m
Sensor cable HEK 8, length 20 m						KAB HEK8 20m
Connecting cable ÖLFLEX, length 2 m						KAB PVC 2m
Terminal box, radial						KLK

Accessories

Mounting accessories
Spring disk coupling K 35 (shaft ø6...12 mm)
Spring disk coupling K 50 (shaft ø11...16 mm)
Spring disk coupling K 60 (shaft ø11...22 mm)