

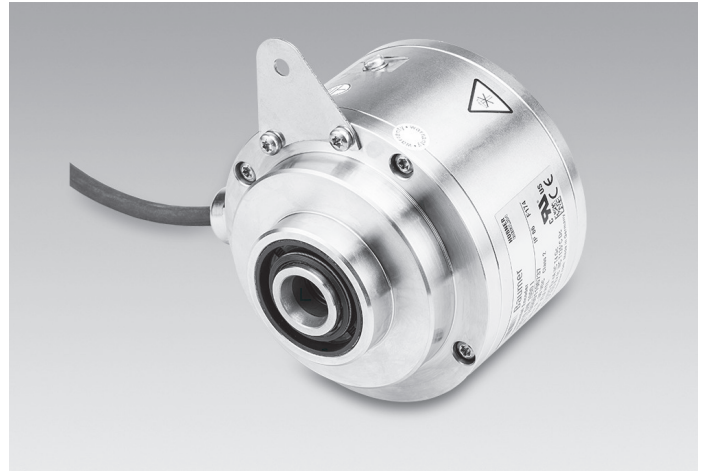
HOG 10 - stainless steel

Encoder made of stainless steel

Blind hollow shaft or cone shaft, 300...5000 pulses per revolution

Overview

- Housing made of stainless steel
- TTL output driver for cable length up to 550 m
- Very high resistance to shock and vibrations
- Hybrid bearing for extended service life



Technical data

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC $\pm 5\%$
Consumption w/o load	≤ 100 mA
Pulses per revolution	300 ... 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
Shaft insulation	Suitable up to 2.8 kV
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)	$\varnothing 105$ mm
Shaft type	$\varnothing 16$ mm (blind hollow shaft) $\varnothing 17$ mm (cone shaft 1:10)
Admitted shaft load	≤ 450 N axial ≤ 600 N radial

Technical data - mechanical design

Protection DIN EN 60529	IP 66
Operating speed	≤ 6000 rpm (mechanical)
Operating torque typ.	6 Ncm
Rotor moment of inertia	360 gcm ²
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 15 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 nA IIC T4 Gc (gas) II 3 D Ex tc IIIC T135°C Dc (dust)
Connection	Cable HEK 8 Cable ÖLFLEX 2 m Terminal box
Weight approx.	3,2 kg (HEK8/ÖLFLEX without cable) 3,9 kg (terminal box)

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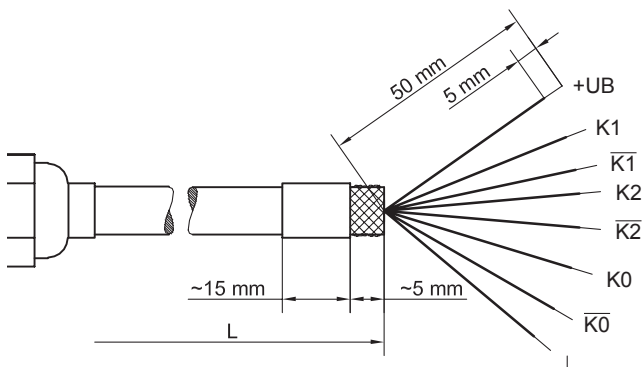
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Terminal assignment

With sensor cable HEK 8

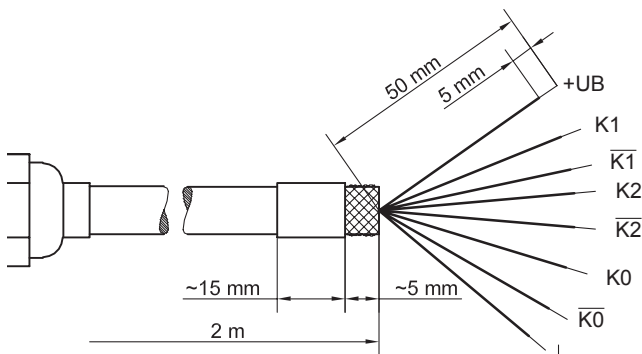
Wire colour	Assignment	Core cross-section
Red	+UB	0,5 mm ²
White	K1	0,25 mm ²
Brown	$\overline{K1}$	0,25 mm ²
Green	K2	0,25 mm ²
Yellow	$\overline{K2}$	0,25 mm ²
Grey	K0	0,25 mm ²
Pink	$\overline{K0}$	0,25 mm ²
Blue	$\perp$	0,5 mm ²



L = Cable length

With cable ÖLFLEX

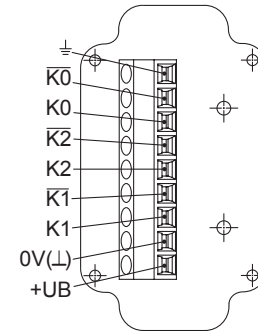
Wire colour	Assignment	Core cross-section
Brown	+UB	1 mm ²
Brown	K1	0,25 mm ²
Green	$\overline{K1}$	0,25 mm ²
Grey	K2	0,25 mm ²
Pink	$\overline{K2}$	0,25 mm ²
Red	K0	0,25 mm ²
Black	$\overline{K0}$	0,25 mm ²
White	$\perp$	1 mm ²



Terminal assignment

View A (see dimension)

Connecting terminal terminal box, radial



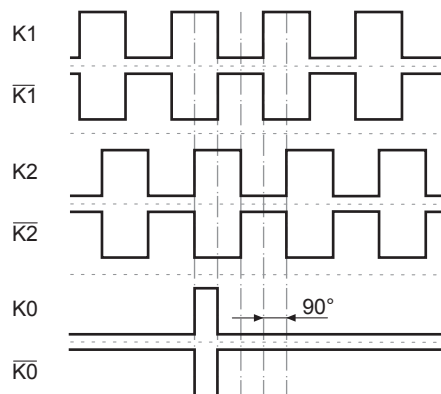
Terminal significance

+UB	Voltage supply
0V ($\perp$)	Ground
$\perp$	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)

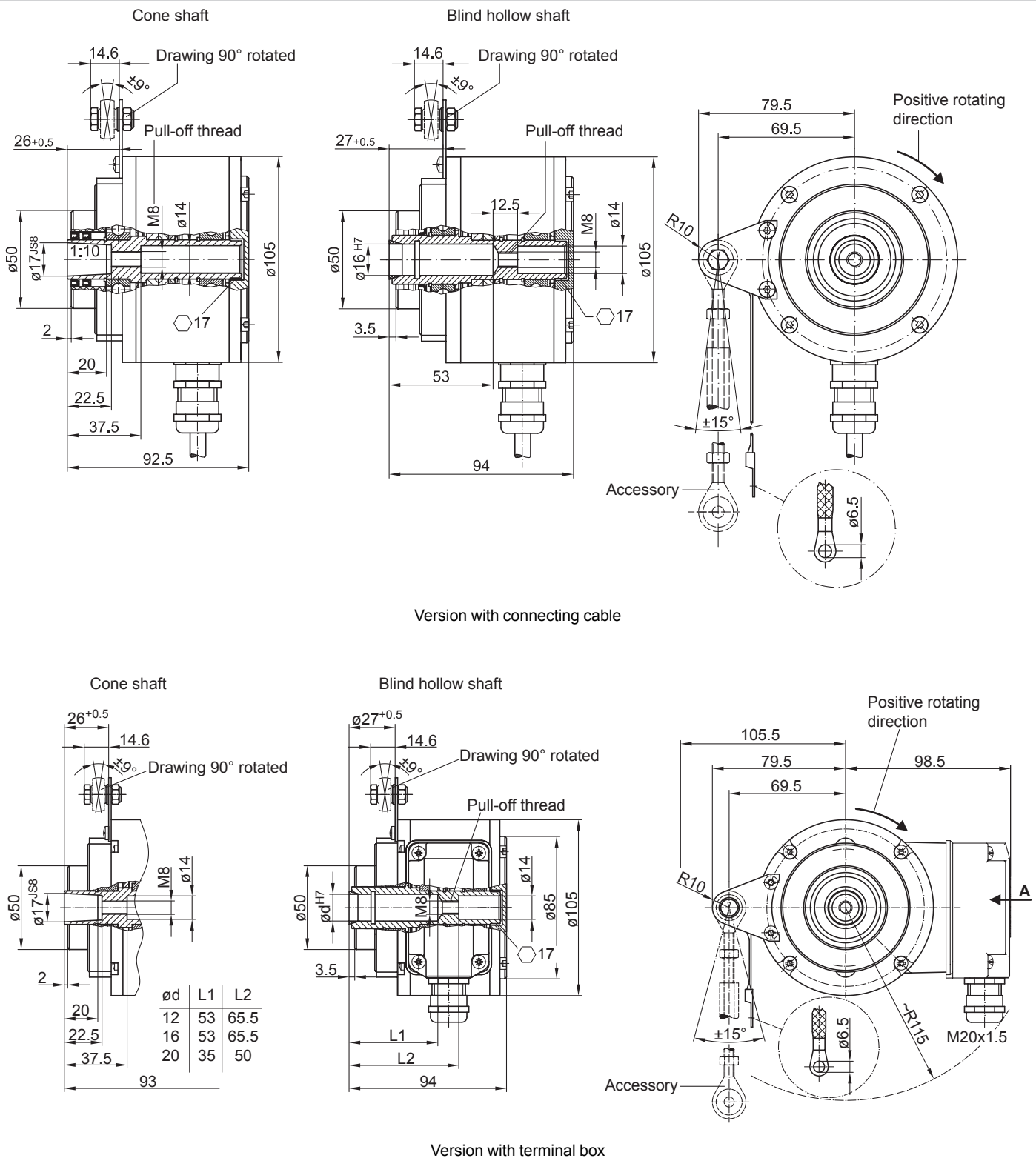


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Dimensions



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Ordering reference

	HOG10	DN	####	###	##	#####	Niro	#####
Product								
Incremental encoder	HOG10							
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			
Sealing system								
Dust protection					LR			
Damp protection					SR			
Shaft diameter								
Blind hollow shaft ø16 mm						16H7		
Cone shaft ø17 mm (1:10)						17K		
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

11054918	Torque arm M6 stainless, length 67...70 mm
11072787	Torque arm M6 stainless, length 120...130 mm (≥71 mm)
11072737	Torque arm M6 stainless, length 425...460 mm (≥131 mm)
11077197	Mounting kit for torque arm size M6 and earthing strap
11077087	Mounting and dismounting set

Connectors and cables

Sensor cable for encoders HEK 8

Accessories

Diagnostic accessories

11075858	Analyzer for encoders HENQ 1100
11075880	Analyzer for encoders HENQ 1100 with a power pack