

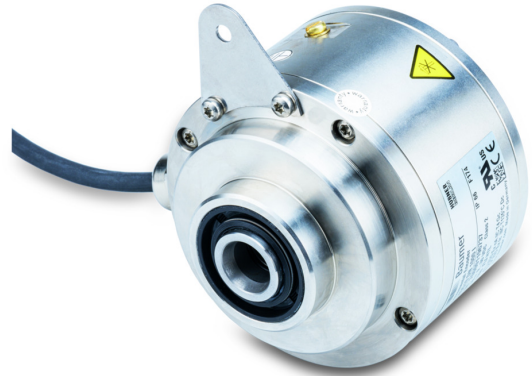
## HOG 10 - stainless steel

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



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**BERLIN**  
A Baumer Brand

### Technical data

#### Conformity

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
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)	ø105 mm
Shaft type	ø16 mm (blind hollow shaft) ø17 mm (cone shaft 1:10)
Admitted shaft load	≤450 N axial ≤600 N radial

#### Technical data - mechanical design

Protection EN 60529	IP 66
Operating speed	≤6000 rpm (mechanical)
Operating torque typ.	6 Ncm
Rotor moment of inertia	360 gcm <sup>2</sup>
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 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.	3.2 kg (HEK8/ÖLFLEX without cable) 3.9 kg (terminal box)

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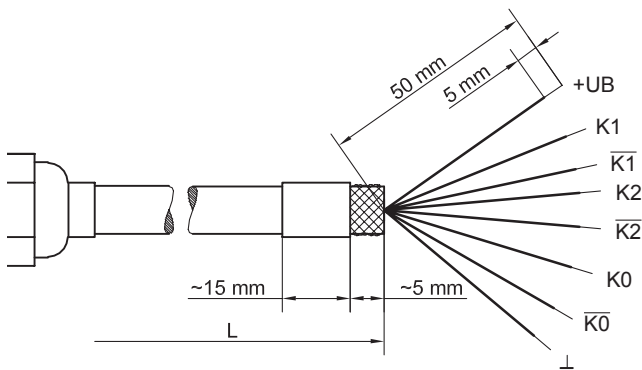
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## Terminal assignment

### With sensor cable HEK 8

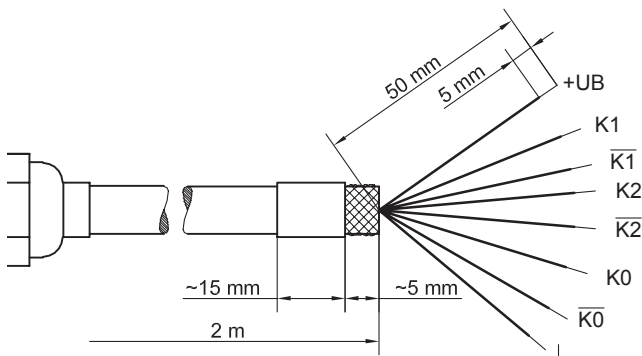
Wire colour	Assignment	Core cross-section
Red	+UB	0,5 mm <sup>2</sup>
White	K1	0,25 mm <sup>2</sup>
Brown	$\overline{K1}$	0,25 mm <sup>2</sup>
Green	K2	0,25 mm <sup>2</sup>
Yellow	$\overline{K2}$	0,25 mm <sup>2</sup>
Grey	K0	0,25 mm <sup>2</sup>
Pink	$\overline{K0}$	0,25 mm <sup>2</sup>
Blue	⊥	0,5 mm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



L = Cable length

### With cable ÖLFLEX

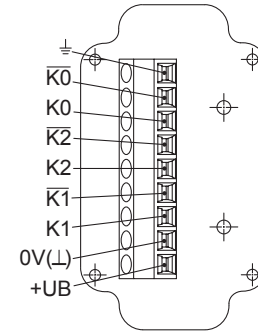
Wire colour	Assignment	Core cross-section
Brown	+UB	1 mm <sup>2</sup>
Brown	K1	0,25 mm <sup>2</sup>
Green	$\overline{K1}$	0,25 mm <sup>2</sup>
Grey	K2	0,25 mm <sup>2</sup>
Pink	$\overline{K2}$	0,25 mm <sup>2</sup>
Red	K0	0,25 mm <sup>2</sup>
Black	$\overline{K0}$	0,25 mm <sup>2</sup>
White	⊥	1 mm <sup>2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



## Terminal assignment

### View A (see dimension)

Connecting terminal terminal box, radial



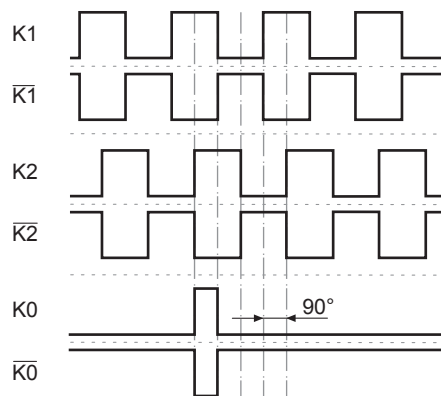
## Terminal significance

+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)

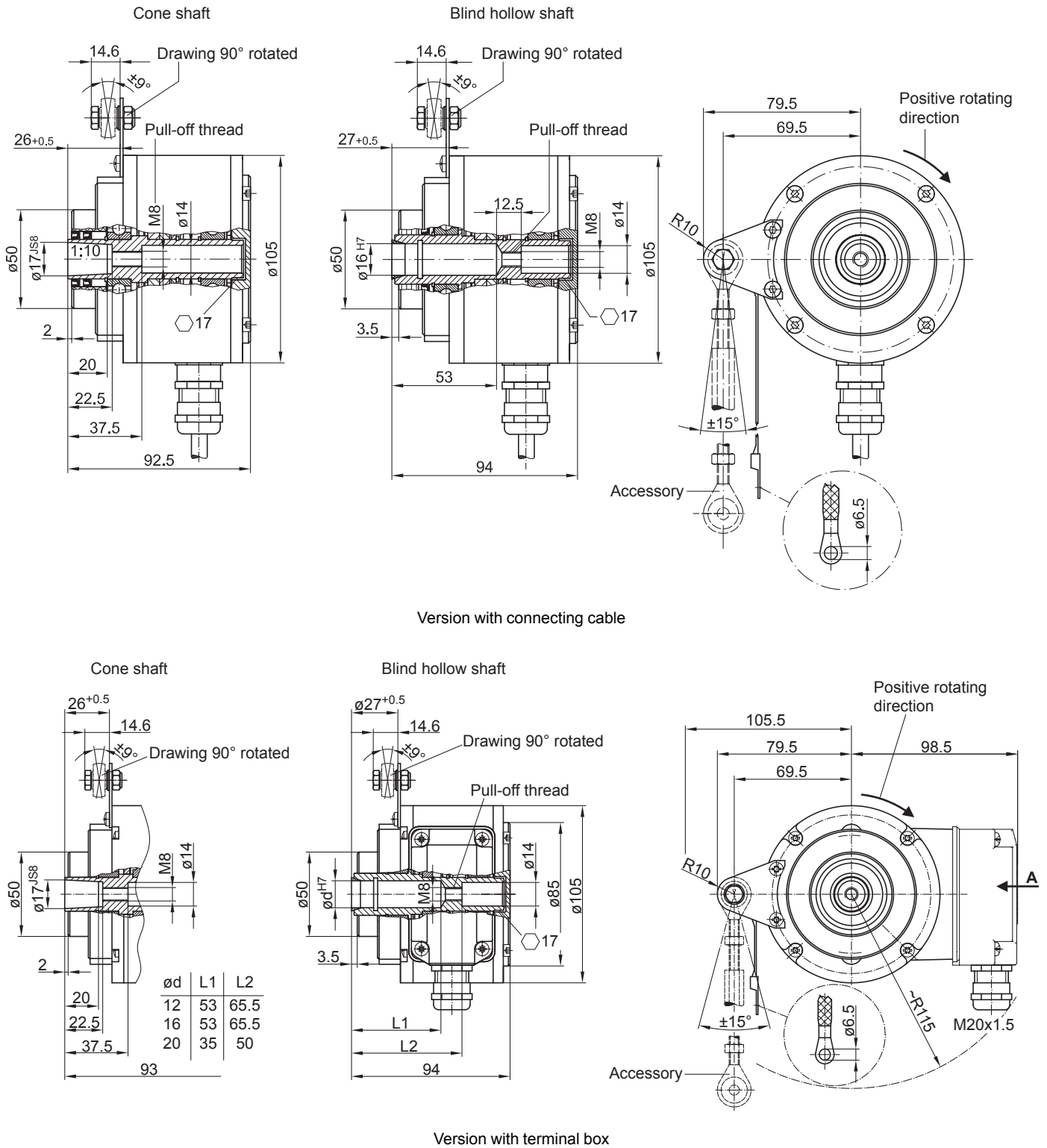


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## Dimensions



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## Ordering reference

	HOG10	DN	####	###	SR	#####	Niro	#####
<b>Product</b>	Incremental encoder	HOG10						
<b>Output signals</b>	K1, K2, K0	DN						
<b>Pulse number</b>								
	300		300					
	500		500					
	512		512					
	1000		1000					
	1024		1024					
	1200		1200					
	2048		2048					
	2500		2500					
	3072		3072					
	4096		4096					
	5000		5000					
<b>Voltage supply / output stage</b>								
	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			
<b>Sealing system</b>								
	Damp protection				SR			
<b>Shaft diameter</b>								
	Blind hollow shaft $\varnothing$ 16 mm					16H7		
	Cone shaft $\varnothing$ 17 mm (1:10)					17K		
<b>Material</b>								
	Stainless steel						Niro	
<b>Connection</b>								
	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 ( $\geq$ 71 mm)
11072737	Torque arm M6 stainless, length 425...460 mm ( $\geq$ 131 mm)
11077197	Mounting kit for torque arm size M6 and earthing strap
11077087	Mounting and dismantling set

### Diagnostic accessories

11075858	Analyzer for encoders HENQ 1100
11075880	Analyzer for encoders HENQ 1100 B