

HOG 100

Blind hollow shaft $\varnothing 16$ mm or cone shaft $\varnothing 17$ mm (1:10)
1024...10000 pulses per revolution

Overview

- High resolution
- Blind hollow shaft $\varnothing 16$ mm or cone shaft $\varnothing 17$ mm (1:10)
- Optical sensing method
- Output stage HTL or TTL
- Output stage with regulator 9...30 VDC
- Hybrid bearing for extended service life
- Large terminal box, turn by 180° or axial terminal cover



Technical data

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC ± 5 %
Consumption w/o load	≤ 100 mA
Pulses per revolution	1024 ... 10000
Phase shift	$90^\circ \pm 8^\circ$
Duty cycle	44...56 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 250 kHz
Output signals	K1, K2, K0 + inverted
Output stages	HTL TTL/RS422
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)

Technical data - mechanical design

Admitted shaft load	≤ 450 N axial ≤ 600 N radial
Protection EN 60529	IP 66
Operating speed	≤ 10000 rpm (mechanical)
Operating torque typ.	6 Ncm
Rotor moment of inertia	320 gcm ²
Material	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	$-30...+85^\circ\text{C}$
Resistance	IEC 60068-2-6 Vibration 20 g, 10-2000 Hz IEC 60068-2-27 Shock 300 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 ec IIC T4 Gc (gas) II 3 D Ex tc IIIC T135°C Dc (dust) (only with option ATEX)
Connection	Terminal box Terminal cover
Weight approx.	1.5 kg

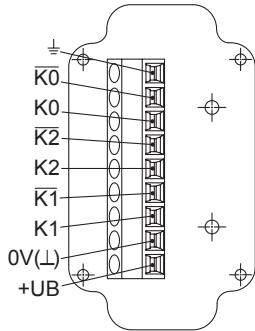
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Terminal assignment

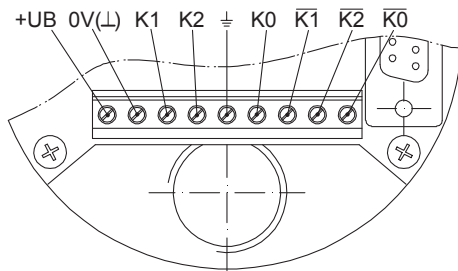
View A (see dimension)

Connecting terminal terminal box, radial



View B (see dimension)

Connecting terminal terminal cover, axial



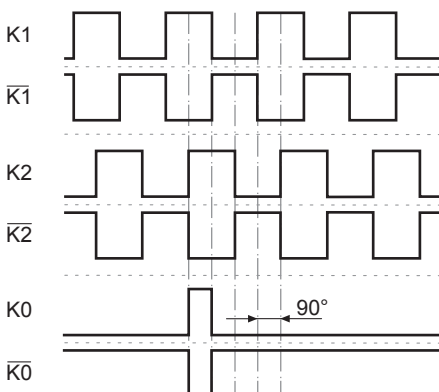
Terminal significance

+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)

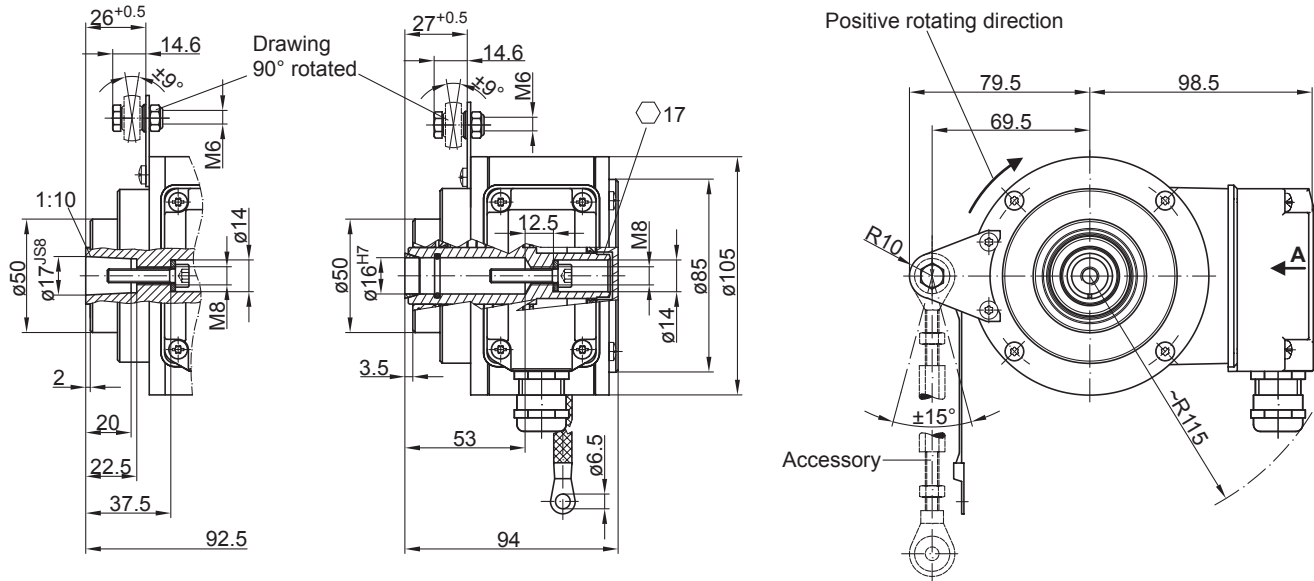


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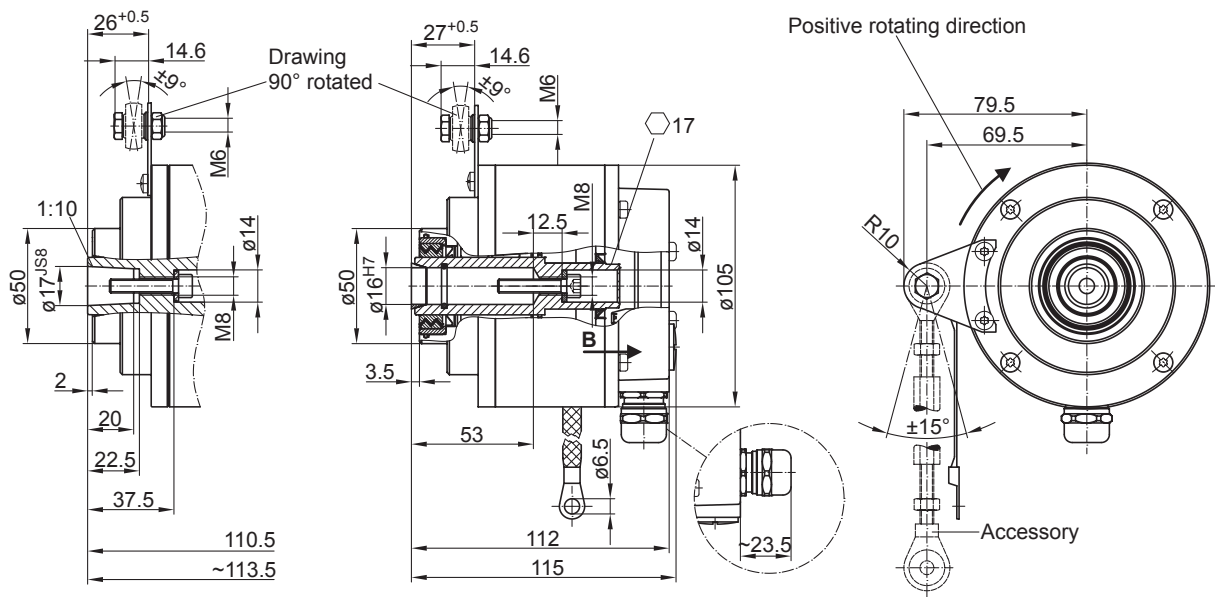
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Dimensions



Version with radial terminal box



Version with axial terminal cover

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Ordering reference

		HOG100	DN	####	###	##	#####	#####
Product								
Incremental encoder		HOG100						
Output signals								
K1, K2, K0		DN						
Pulse number⁽¹⁾								
1024		1024						
2000		2000						
2048		2048						
2160		2160						
2500		2500						
3072		3072						
4096		4096						
5000		5000						
10000		10000						
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 $\varnothing 16$ mm		16H7						
Cone shaft $\varnothing 17$ mm (1:10)		17K						
Connection								
Terminal box, radial		KLK						
Terminal cover, axial (not for option M redundant)		KLK-AX						

(1) Other pulse numbers on request.

Accessories

Mounting accessories

11043628	Torque arm M6, length 67...70 mm
11004078	Torque arm M6, length 120...130 mm (≥ 71 mm)
11002915	Torque arm M6, length 425...460 mm (≥ 131 mm)
11054917	Torque arm M6 insulated, length 67...70 mm
11072795	Torque arm M6 insulated, length 120...130 mm (≥ 71 mm)
11082677	Torque arm M6 insulated, length 425...460 mm (≥ 131 mm)
11077197	Mounting kit for torque arm size M6 and earthing strap
11077087	Mounting and dismounting set