

# Sine encoders

Blind hollow shaft  $\varnothing 16$  mm or cone shaft  $\varnothing 17$  mm (1:10)

720...5000 sinewave cycles per turn

## HOGS 100



HOGS 100 with radial terminal box

### Features

- Blind hollow shaft  $\varnothing 16$  mm or cone shaft  $\varnothing 17$  mm (1:10)
- Up to 5000 sinewaves cycles per turn
- Low harmonic content (patented LowHarmonics technology)
- Top-quality SinCos output-signals
- Protection against inductive shaft current
- Large terminal box, turn by 180° or axial terminal cover

### Technical data - electrical ratings

Voltage supply	5 VDC $\pm 10$ % 9...30 VDC
Consumption w/o load	$\leq 90$ mA
Sinewave cycles per turn	720...5000
Phase shift	90°
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output signals	K1, K2, K0 + inverted
Output stages	SinCos 1 Vpp
Difference of SinCos amplitude	$\leq 20$ mV
Harmonics typ.	-50 dB
DC offset	$\leq 20$ mV
Bandwidth	250 kHz (-3 dB)
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approvals	CE, UL approval / E256710

### 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	$\leq 250$ N axial $\leq 400$ N radial
Protection DIN EN 60529	IP 66
Operating speed	$\leq 10000$ rpm (mechanical)
Operating torque typ.	6 Ncm
Rotor moment of inertia	180 gcm <sup>2</sup>
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-20...+85 °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 complies to ambient conditions C4 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	Terminal box Terminal cover
Weight approx.	1.8 kg

· Subject to modification in technic and design. Errors and omissions excepted.

# Sine encoders

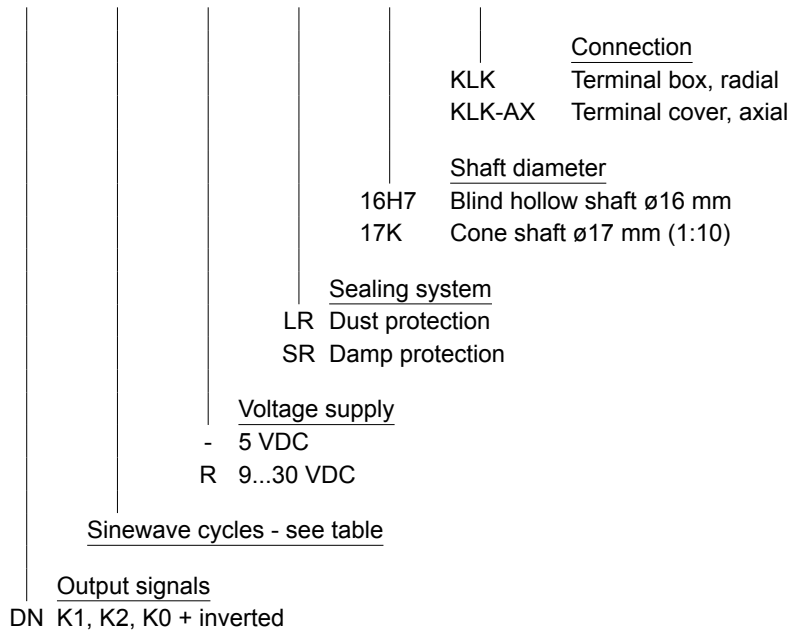
Blind hollow shaft  $\varnothing 16$  mm or cone shaft  $\varnothing 17$  mm (1:10)  
720...5000 sinewave cycles per turn

HOGS 100

## Part number

HOGS100 **DN**

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## Sinewave cycles

720	800	1024	2048	5000
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## Accessories

### Connectors and cables

HEK 8	Sensor cable for encoders
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### Mounting accessories

11043628	Torque arm M6, length 67-70 mm
11004078	Torque arm M6, length 120-130 mm (shortenable $\geq 71$ mm)
11002915	Torque arm M6, length 425-460 mm (shortenable $\geq 131$ mm)
11054917	Torque arm M6 insulated, length 67-70 mm
11072795	Torque arm M6 insulated, length 120-130 mm (shortenable $\geq 71$ mm)
11082677	Torque arm M6 insulated, length 425-460 mm (shortenable $\geq 131$ mm)

### Diagnostic accessories

11075858	Analyzer for encoders HENQ 1100
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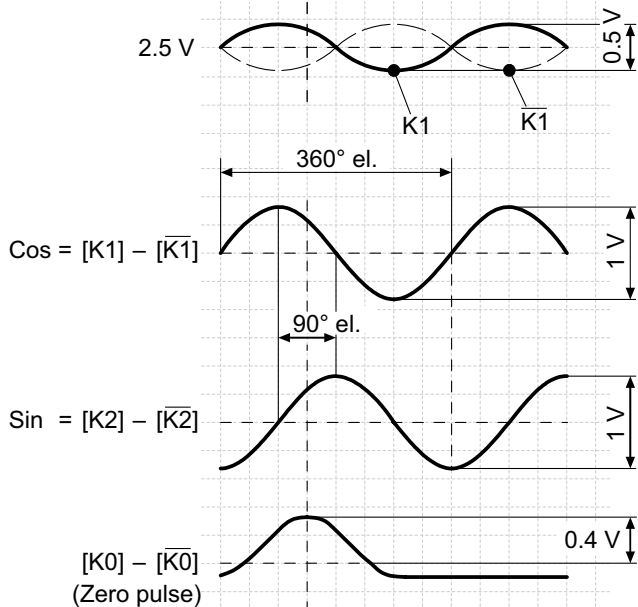
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### Output signals

At positive rotating direction



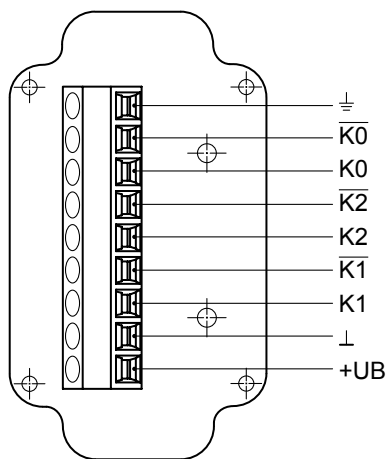
### Terminal significance

+UB	Voltage supply (for the encoder)
$\perp$ ; $\downarrow$ ; GND; 0 V	Ground (for the signals)
$\perp$ ; $\nearrow$	Earth ground (chassis)
K1; A; A+	Output signal channel 1
$\overline{\text{K1}}$ ; $\overline{\text{A}}$ ; A-	Output signal channel 1 inverted
K2; B; B+	Output signal channel 2 (offset by 90° to channel 1)
$\overline{\text{K2}}$ ; $\overline{\text{B}}$ ; B-	Output signal channel 2 (offset by 90° to channel 1) inverted
K0; C; R; R+	Zero pulse (reference signal)
$\overline{\text{K0}}$ ; $\overline{\text{C}}$ ; $\overline{\text{R}}$ ; R-	Zero pulse (reference signal) inverted

### Terminal assignment

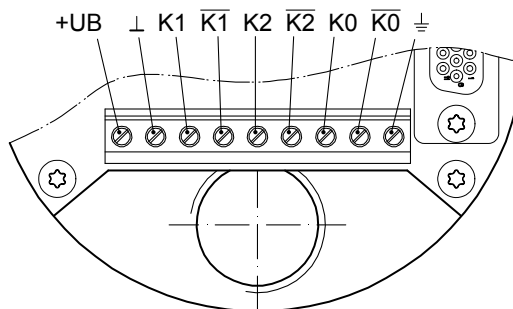
#### View A

Connecting terminal terminal box, radial



#### View B

Connecting terminal terminal cover, axial



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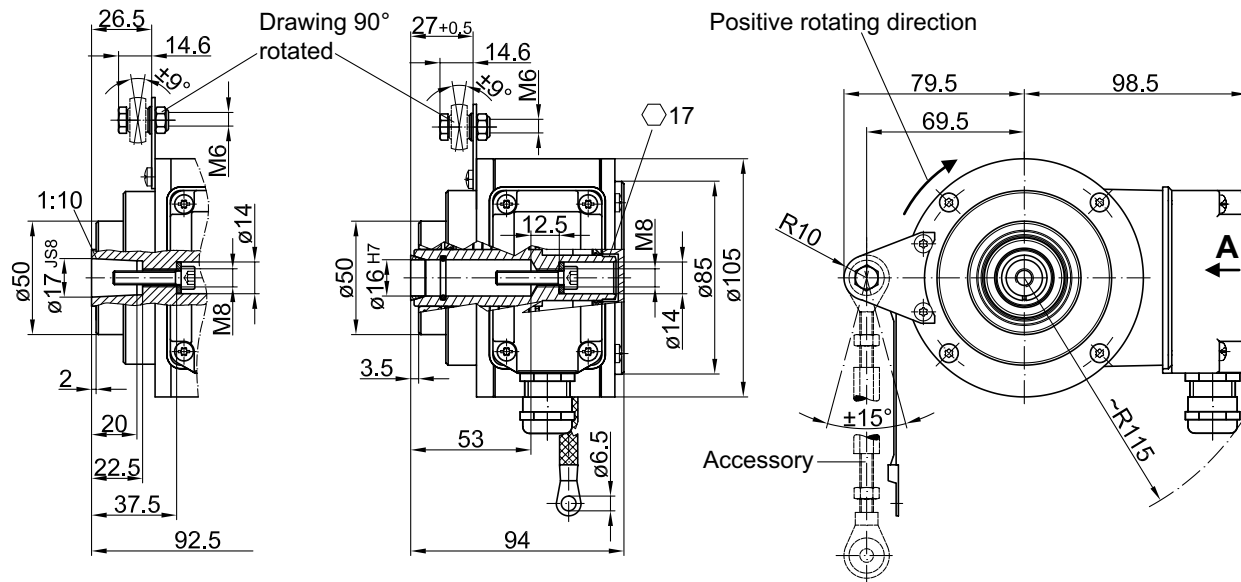
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720...5000 sinewave cycles per turn

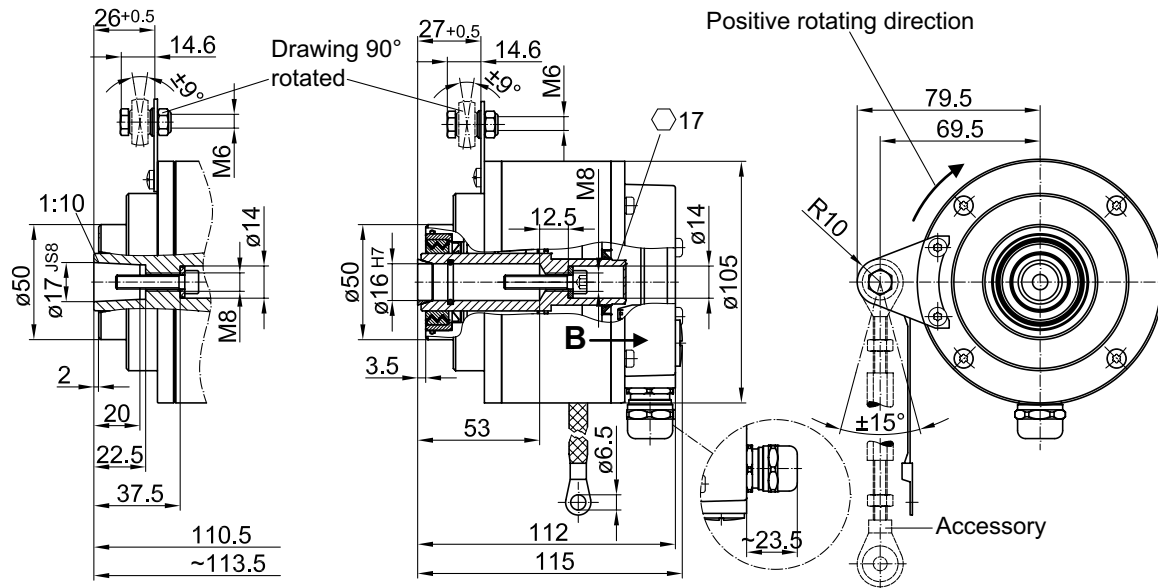
HOGS 100

## Dimensions

### HOGS 100 - Version with radial terminal box



### HOGS 100 - Version with axial terminal cover



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