

Overview

- For safety-relevant applications according SIL2
- 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

Technical data - electrical ratings

Voltage supply	5 VDC ± 10 % 7...30 VDC
Consumption w/o load	≤ 90 mA
Sinewave cycles per revolution	1024 ... 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	≤ 20 mV
Harmonics typ.	-50 dB
DC offset	≤ 20 mV
Bandwidth	250 kHz (-3 dB)
Function safety	SS1, SS2, SOS, SLS, SDI, SLI according to EN 61800-5-2:2007
Safety operating figures	Service life: 20 a PFH: $1,75 \cdot 10^{-7}$ 1/h
Interference immunity	EN 61000-6-2 EN 61326-3-1
Emitted interference	EN 61000-6-3
EMC requirements	EN 61800-3
Approval	CE PL d / SIL2 approval according to EN ISO 13849-1 and EN 62061 UL approval / E217823

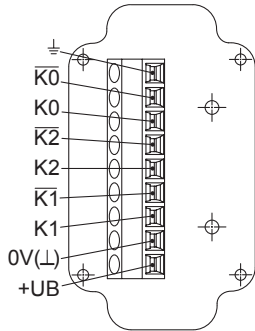
Technical data - mechanical design

Size (flange)	$\varnothing 105$ mm
Shaft type	$\varnothing 16$ mm (blind hollow shaft) $\varnothing 17$ mm (cone shaft 1:10)
Admitted shaft load	≤ 250 N axial ≤ 400 N radial
Motor shaft tolerance	0.2 mm axial (≤ 6000 rpm) 0.03 mm axial (> 6000 rpm)
Protection EN 60529	IP 66
Operating speed	≤ 10000 rpm (mechanical)
Operating torque typ.	6 Ncm
Rotor moment of inertia	180 gcm ²
Material	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-20...+85 °C
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 100 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.	1.8 kg

Terminal assignment

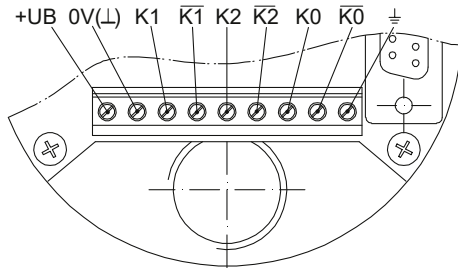
View A (see dimension)

Connecting terminal terminal box, radial



View B (see dimension)

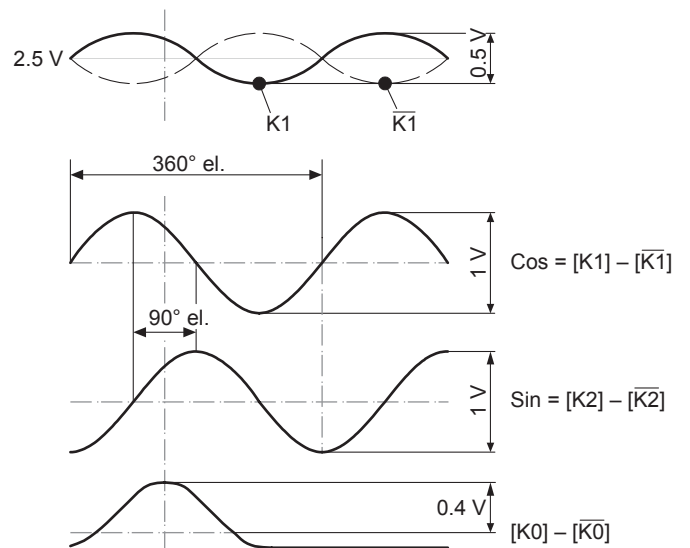
Connecting terminal terminal cover, axial



Output signals

SinCos

At positive rotating direction (see dimension)



Terminal significance

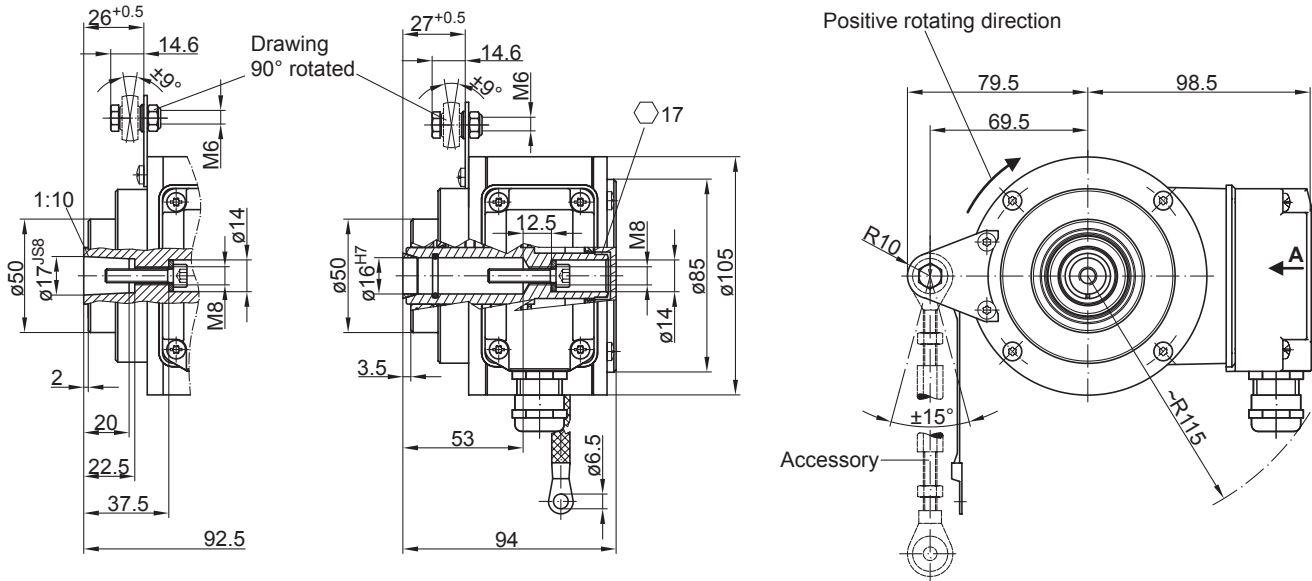
+UB	Voltage supply
0V (⊥)	Ground
⊥	Earth ground (housing)
K1	Output signal channel 1
$\bar{K}1$	Output signal channel 1 inverted
K2	Output signal channel 2 (offset by 90° to channel 1)
$\bar{K}2$	Output signal channel 2 inverted
K0	Zero pulse (reference signal)
$\bar{K}0$	Zero pulse inverted

HOGS 100 S

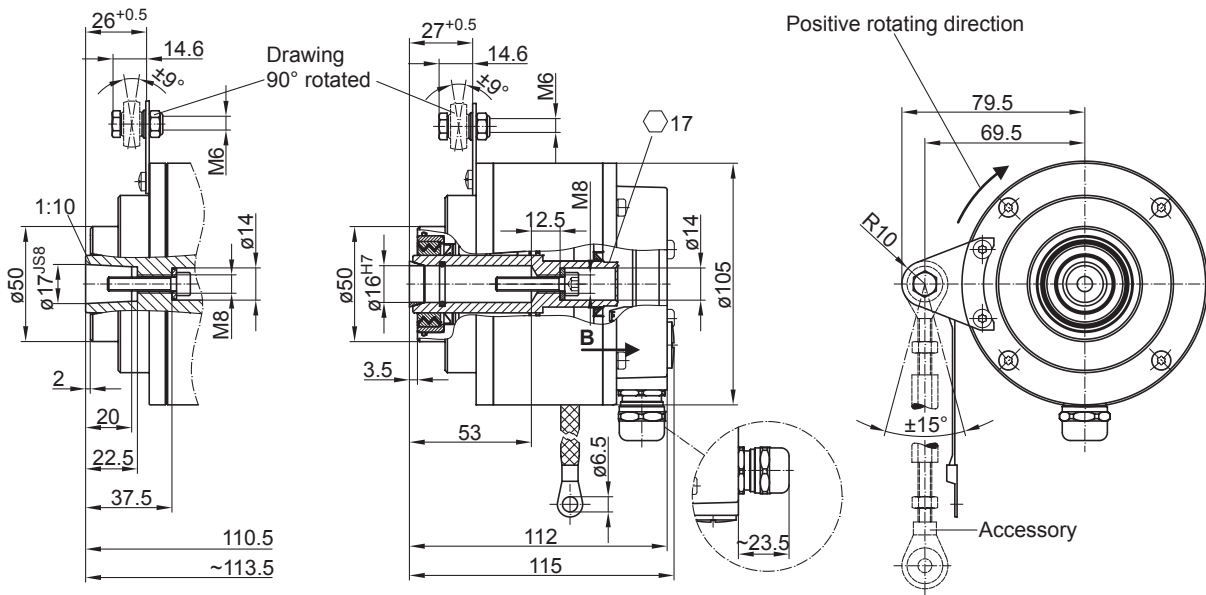
SIL2 approval

Blind hollow shaft $\varnothing 16$ mm or cone shaft $\varnothing 17$ mm (1:10) / 1024...5000 sinewave cycles per turn

Dimensions



Version with radial terminal box



Version with axial terminal cover

HOGS 100 S

SIL2 approval

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Ordering reference

	HOGS100S	-	B	#	6	.	#	#	#	.	#####	.	1
Product	HOGS100S												
Sine encoder													
Shaft type													
Blind hollow/cone shaft													B
Sealing system													
Dust protection = LR													6
Damp protection = SR													7
Protection													
IP 66													6
Shaft diameter													
\varnothing 16 mm, central screw													6
\varnothing 17 mm cone 1:10, central screw													7
Connection													
Terminal cover, axial													1
1x terminal box with cable gland M20, radial													2
Voltage supply / output stages													
7...30 VDC, SinCos (1 Vpp), 6 channel													5
5 VDC \pm 10 %, SinCos (1 Vpp), 6 channel													6
Sinewave cycles													
01024													01024
02048													02048
05000													05000
Operating temperature													
-20...+85 °C													1

Accessories

Mounting accessories

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