Incremental encoders

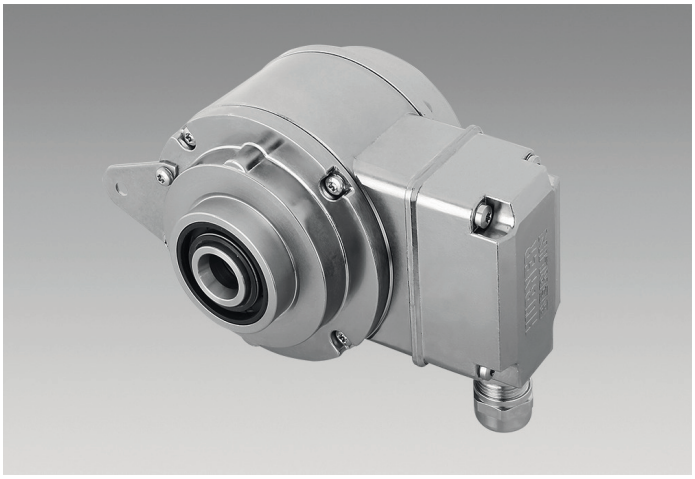
HOG 11 - DNV GL

Blind hollow shaft ø16 mm

300…2500 pulses per revolution

Overview

- Approval DNV GL
- Suitable for offshore, salt water firm
- High protection IP 67
- TTL output driver for cable length up to 550 m
- Very high resistance to shock and vibrations
- Hybrid bearing for extended service life
- Earthing brush for capacitive shaft currents
- 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	300 … 2500
Phase shift	90 ° ±20°
Duty cycle	30…70 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤120 kHz
Output signals	K1, K2, K0 + inverted
Output stages	HTL-P (power linedriver) TTL/RS422
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/E217823 DNV GL
Location classes DNV GL	Temperature: D Humidity: B Vibration: B EMC: B Enclosure: C

Technical data - mechanical design

Size (flange)	ø105 mm
Shaft type	ø16 mm (blind hollow shaft)
Admitted shaft load	≤250 N axial ≤400 N radial
Protection DIN EN 60529	IP 67
Operating speed	≤6000 rpm (mechanical)
Operating torque typ.	6 Ncm
Rotor moment of inertia	340 gcm²
Material	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-40...+100 °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 CX (C5-M) according to ISO 12944-2
Connection	Terminal box
Weight approx.	1,6 kg

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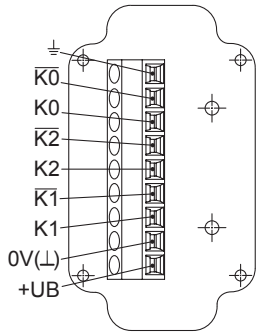
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Terminal assignment

View A *(see dimension)*
Connecting terminal terminal box, radial

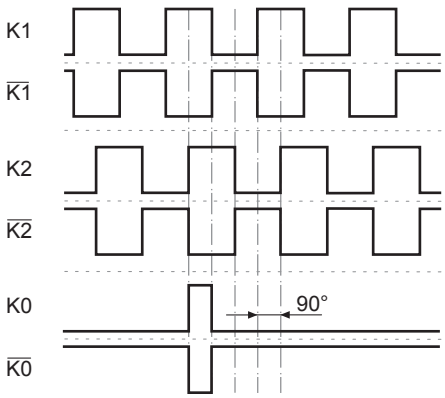


Terminal significance

+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)*



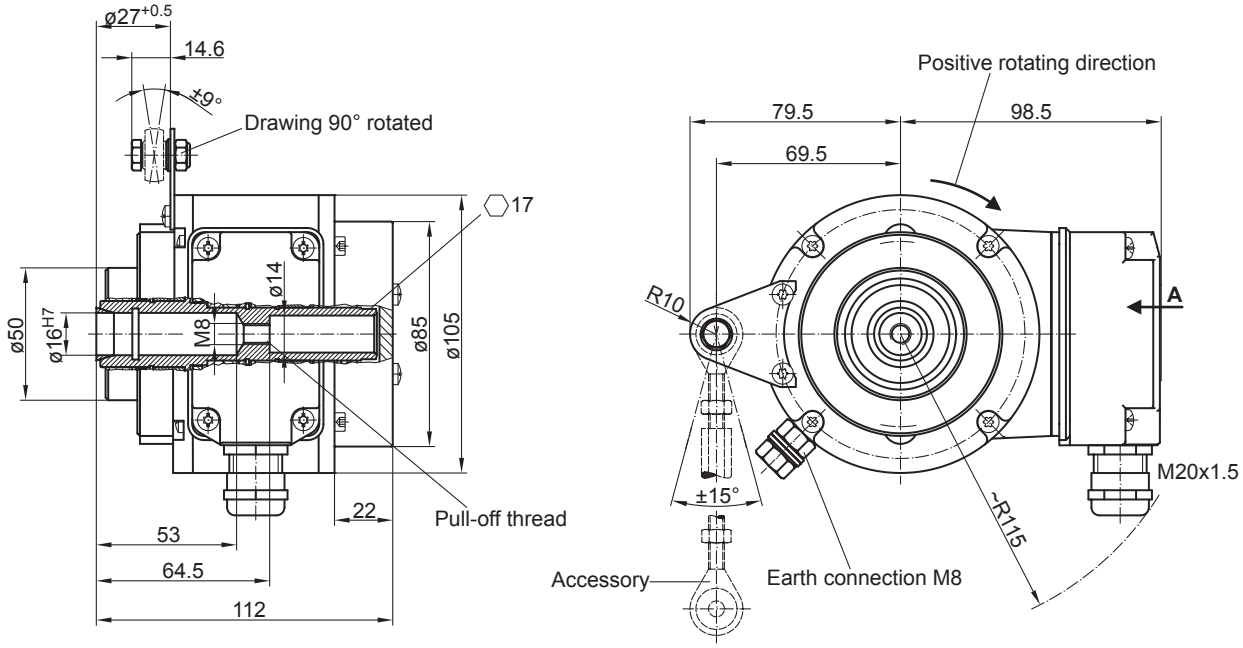
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HOG 11 - DNV GL

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Dimensions



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HOG 11 - DNV GL

Blind hollow shaft ø16 mm

300…2500 pulses per revolution

Ordering reference

	HOG11	DN	####	###	16H7	SR	KLK	ERD	(DNV)
Product									
Incremental encoder	HOG11								
Output signals									
K1, K2, K0		DN							
Pulse number(1)									
300			300						
500			500						
512			512						
1000			1000						
1024			1024						
1200			1200						
2048			2048						
2500			2500						
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					
Shaft diameter									
Blind hollow shaft ø16 mm					16H7				
Sealing system									
Damp protection						SR			
Connection									
Terminal box, radial							KLK		
Earthing									
With earthing brushes								ERD	
Approval									
DNV-GL approval									(DNV)

(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

Connectors and cables	
	Sensor cable for encoders HEK 8

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

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