

# HOG 11 - DNV

Blind hollow shaft  $\varnothing 16$  mm

300...2500 pulses per revolution

## Overview

- Approval DNV
- Suitable for offshore, salt water firm
- High protection IP 67
- TTL output driver for cable length up to 550 m
- 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 $\pm 5$ %
Consumption w/o load	$\leq 100$ mA
Pulses per revolution	300 ... 2500
Phase shift	$90^\circ \pm 20^\circ$
Duty cycle	30...70 %
Reference signal	Zero pulse, width $90^\circ$
Sensing method	Optical
Output frequency	$\leq 120$ kHz
Output signals	K1, K2, K0 + inverted
Output stages	HTL-P (power linedriver) TTL/RS422
Transmission length	$\leq 350$ m at 100 kHz (HTL-P) $\leq 550$ m at 100 kHz (TTL)
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE UL approval / E217823 DNV approval
Location classes DNV	Temperature: D Humidity: B Vibration: B EMC: B Enclosure: C

### Technical data - mechanical design

Size (flange)	$\varnothing 105$ mm
Shaft type	$\varnothing 16$ mm (blind hollow shaft)
Admitted shaft load	$\leq 250$ N axial $\leq 400$ N radial
Protection EN 60529	IP 67
Operating speed	$\leq 6000$ rpm (mechanical)
Operating torque typ.	6 Ncm
Rotor moment of inertia	340 gcm <sup>2</sup>
Material	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	$-40...+100^\circ\text{C}$
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 CX (C5-M) according to ISO 12944-2
Connection	Terminal box
Weight approx.	1.6 kg

## Terminal assignment

**View A** (see dimension)

Connecting terminal terminal box, radial



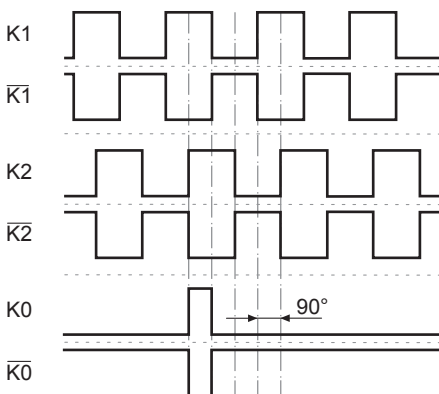
## Terminal significance

+UB	Voltage supply
0V (L)	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)

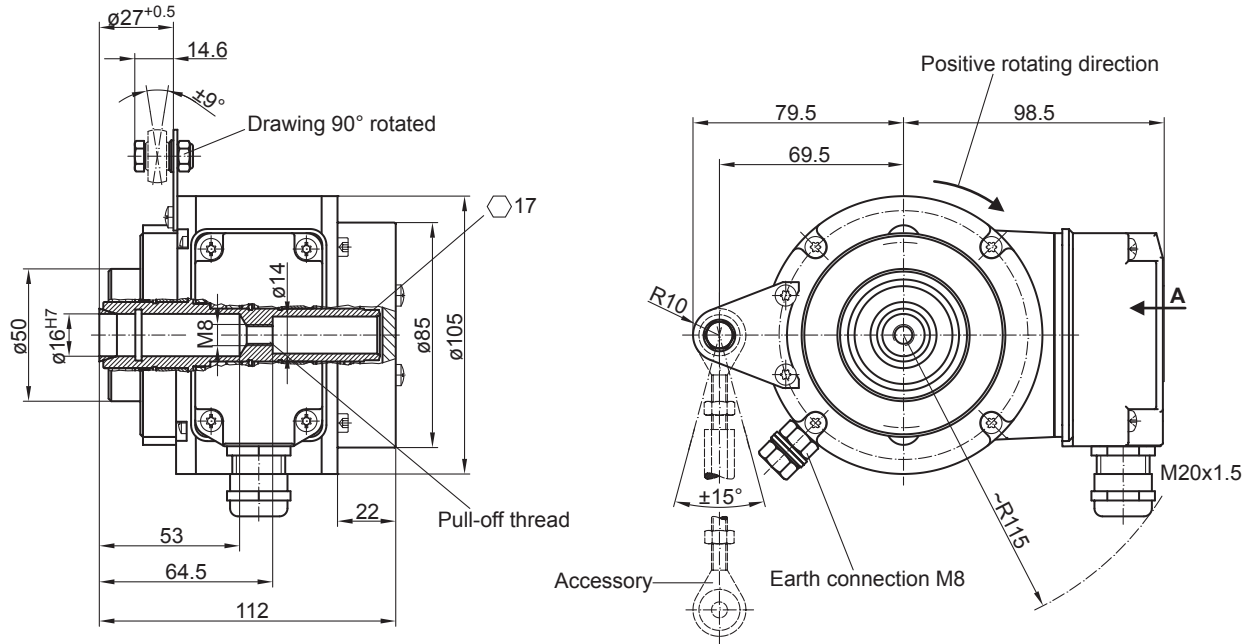


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## Dimensions



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**Ordering reference**

	HOG11	DN	####	###	16H7	SR	KLK	ERD	(DNV)
<b>Product</b>	Incremental encoder	HOG11							
<b>Output signals</b>	K1, K2, K0	DN							
<b>Pulse number<sup>(1)</sup></b>									
	300		300						
	500		500						
	512		512						
	1000		1000						
	1024		1024						
	1200		1200						
	2048		2048						
	2500		2500						
<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>Shaft diameter</b>	Blind hollow shaft $\varnothing 16$ mm				16H7				
<b>Sealing system</b>	Damp protection					SR			
<b>Connection</b>	Terminal box, radial						KLK		
<b>Earthing</b>	With earthing brushes							ERD	
<b>Approval</b>	DNV 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 ( $\geq 71$ 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)
11077197	Mounting kit for torque arm size M6 and earthing strap
11077087	Mounting and dismounting set