

## HOG 60

Blind hollow shaft  $\varnothing 8$  mm,  $\varnothing 10$  mm and  $\varnothing 12$  mm  
200...10000 pulses per revolution

### Overview

- Blind hollow shaft  $\varnothing 8$ ...12 mm
- Optical sensing method
- Compact, robust housing
- Max. 10000 pulses per revolution
- Output stage HTL or TTL
- Output stage TTL with regulator UB 9...26 VDC
- Very high resistance to shock
- High protection IP 65



**HUBNER**  
BERLIN  
A Baumer Brand

### Technical data

#### Technical data - electrical ratings

Voltage supply	9...26 VDC 5 VDC $\pm 5$ %
Consumption w/o load	$\leq 100$ mA
Pulses per revolution	200 ... 10000
Phase shift	$90^\circ \pm 8^\circ$
Duty cycle	46...54 %
Reference signal	Zero pulse, width $90^\circ$
Sensing method	Optical
Output frequency	$\leq 250$ 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)	$\varnothing 58$ mm
Shaft type	$\varnothing 8$ ...12 mm (blind hollow shaft)

#### Technical data - mechanical design

Admitted shaft load	$\leq 30$ N axial $\leq 40$ N radial
Protection EN 60529	IP 65
Operating speed	$\leq 12000$ rpm (mechanical)
Operating torque typ.	1 Ncm
Rotor moment of inertia	22 gcm <sup>2</sup>
Material	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-30...+85 °C
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 300 g, 6 ms
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	Flange connector M23, 12-pin Mating connector Connecting cable (option)
Weight approx.	450 g

### Optional

- Connecting cable with cable gland

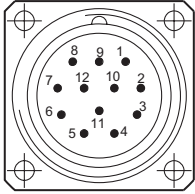
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## Terminal assignment

**View A** (see dimension)

Assignment flange connector



Flange connector M23,  
male, 12-pin,  
clockwise (CW)

Pin	Assignment
1	$\overline{K2}$
2	dnu
3	K0
4	$\overline{K0}$
5	K1
6	$\overline{K1}$
7	dnu
8	K2
9	dnu
10	0V ( $\perp$ )
11	dnu
12	+UB

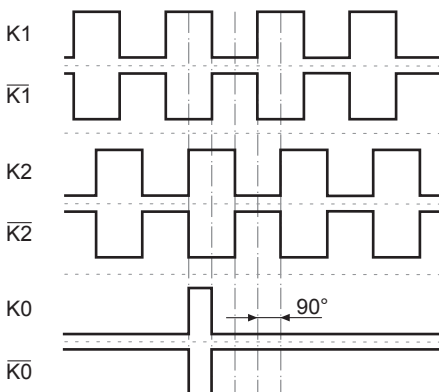
## Terminal significance

+UB	Voltage supply
0V ( $\perp$ )	Ground
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
dnu	Do not use

## Output signals

**HTL/TTL**

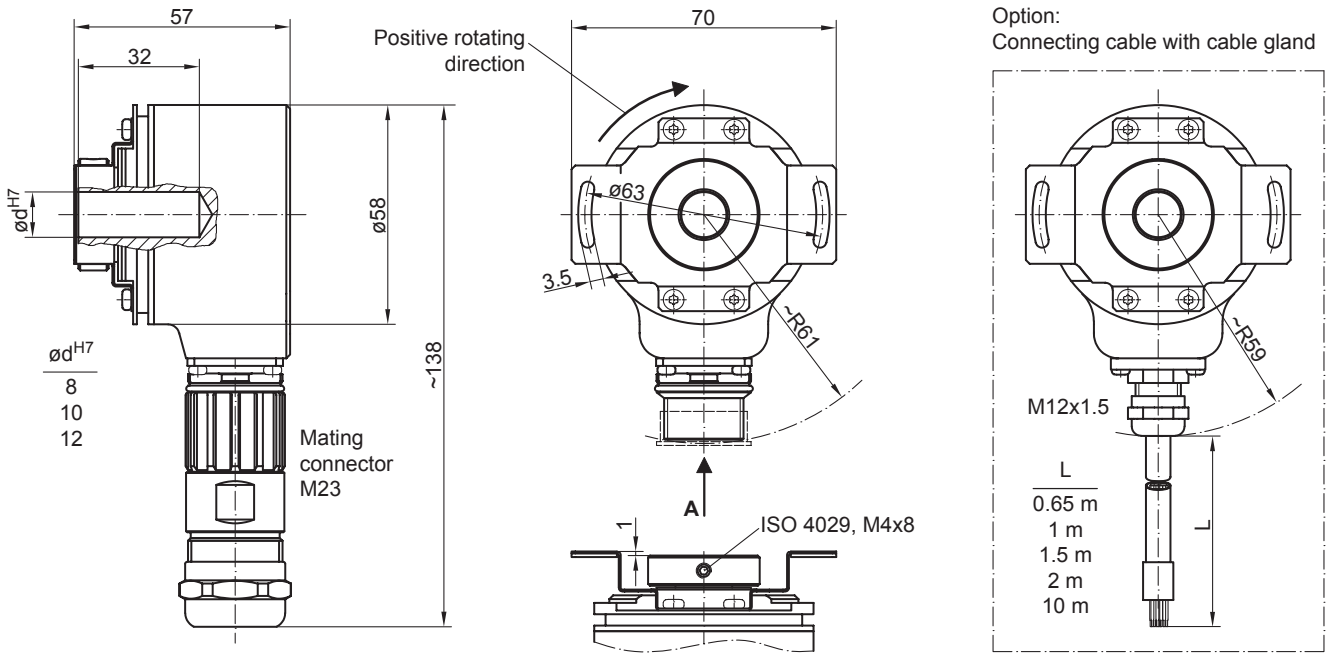
At positive rotating direction (see dimension)



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## Dimensions



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**Ordering reference**

	HOG60	DN	####	###	#####
<b>Product</b>					
Incremental encoder	HOG60				
<b>Output signals</b>					
K1, K2, K0		DN			
<b>Pulse number<sup>(1)</sup></b>					
200			200		
360			360		
512			512		
600			600		
720			720		
900			900		
1000			1000		
1024			1024		
1250			1250		
1800			1800		
2000			2000		
2048			2048		
2500			2500		
3000			3000		
3600			3600		
4096			4096		
5000			5000		
8192			8192		
10000			10000		
<b>Voltage supply / output stage</b>					
9...26 VDC / output stage HTL (C) with inverted signals					CI
5 VDC / output stage TTL with inverted signals					TTL
9...26 VDC / output stage TTL with inverted signals					R
<b>Shaft diameter</b>					
Blind hollow shaft $\varnothing 8$ mm					8H7
Blind hollow shaft $\varnothing 10$ mm					10H7
Blind hollow shaft $\varnothing 12$ mm					12H7

(1) Other pulse numbers on request.