

HOG 163

Through hollow shaft $\varnothing 38...75$ mm
250...5000 pulses per revolution

Overview

- Insulated constitution
- Optical sensing method
- Robust light-metal housing
- Output stage HTL or TTL
- Output stage TTL with regulator UB 9...26 VDC
- Special protection against corrosion
- Large terminal box, turn by 180°



HUBNER
BERLIN
A Baumer Brand

Technical data

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC $\pm 5\%$ 9...26 VDC
Consumption w/o load	≤ 100 mA
Pulses per revolution	250 ... 5000
Phase shift	$90^\circ \pm 20^\circ$
Duty cycle	40...60 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 120 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)	$\varnothing 158$ mm
Shaft type	$\varnothing 38...75$ mm (through hollow shaft)
Admitted shaft load	≤ 350 N axial, ≤ 500 N radial

Technical data - mechanical design

Protection EN 60529	IP 56
Operating speed	≤ 6000 rpm (mechanical)
Operating torque typ.	17 Ncm
Rotor moment of inertia	28.5 kgcm ² ($\varnothing 50$)
Material	Housing: aluminium alloy Shaft: stainless steel
Operating temperature	$-40...+85^\circ\text{C}$
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 IIIB T135°C Dc (dust) (only with option ATEX)
Connection	Terminal box 2x terminal box (with option M)
Weight approx.	5.4 kg ($\varnothing 48$) 3.5 kg ($\varnothing 75$) 3.9 kg ($\varnothing 75$ with option M)

Optional

- Redundant sensing with two terminal boxes
- Heating for applications up to -50°C (no explosion protection)

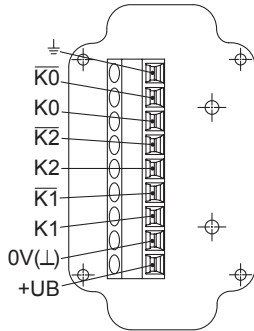
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Terminal assignment

View A (see dimension)

Connecting terminal terminal box, radial



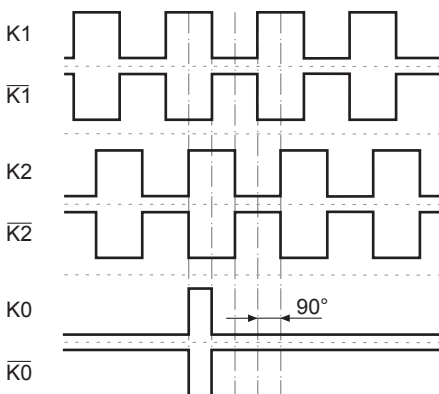
Terminal significance

+UB	Voltage supply
0V (L)	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

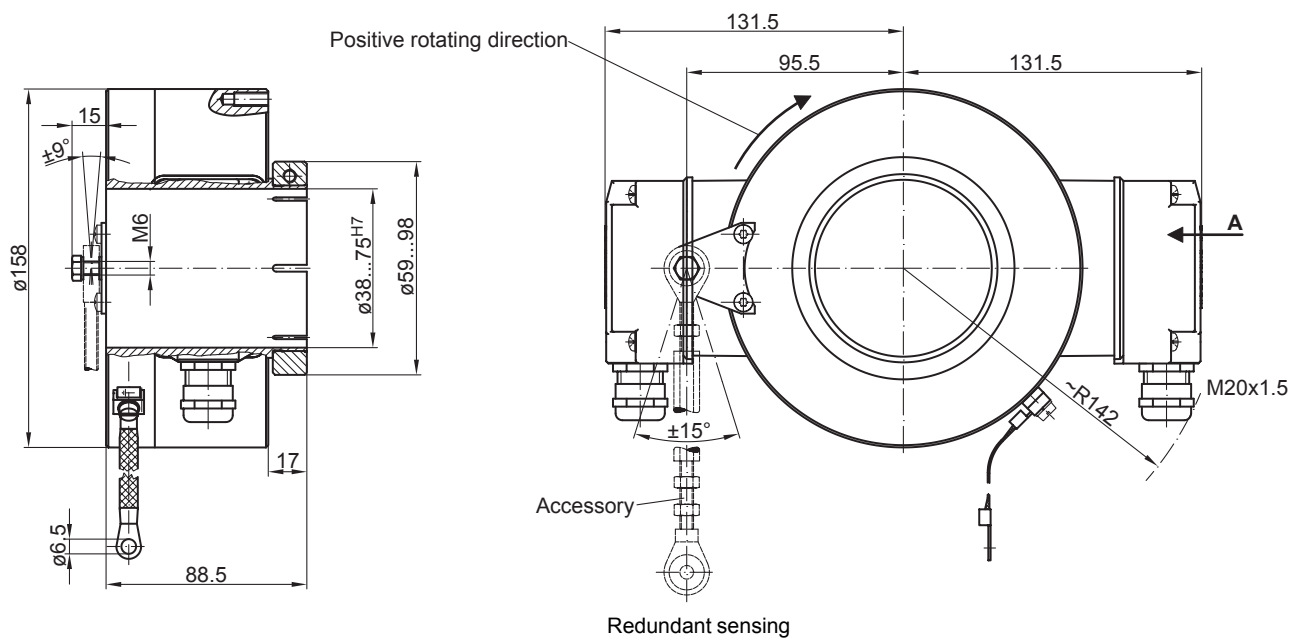
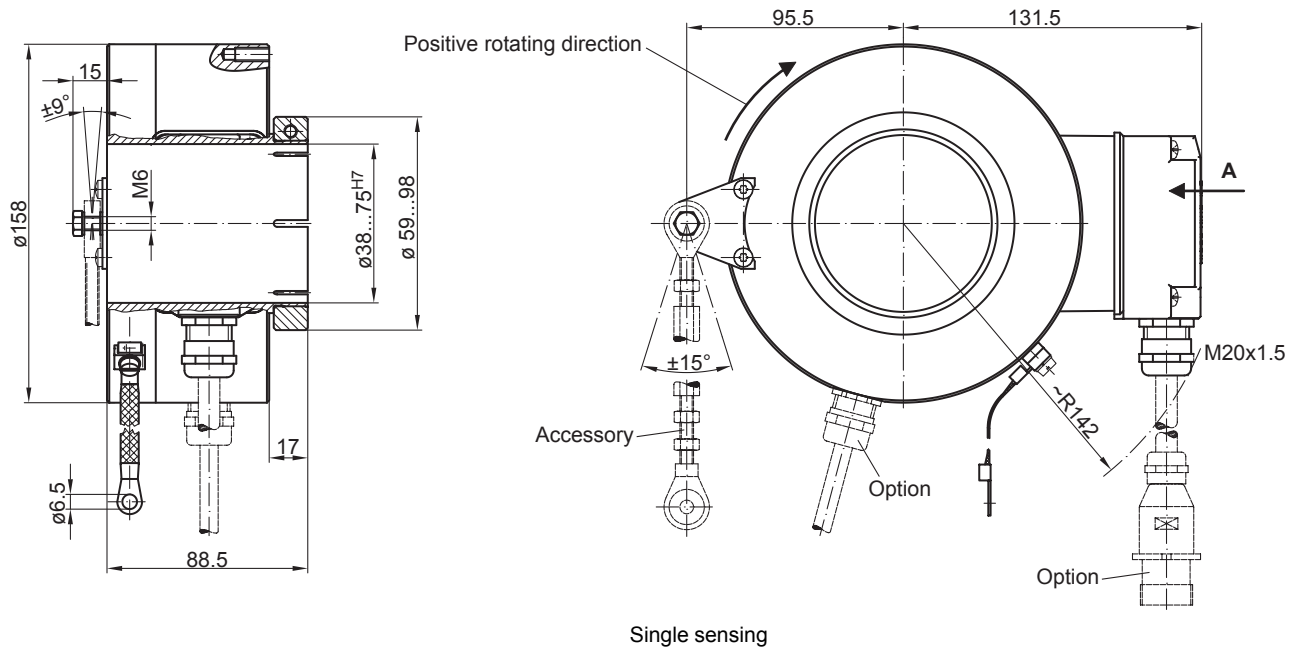
At positive rotating direction (see dimension)



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Dimensions



HOG 163

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Ordering reference

		HOG163	#	DN	####	###	#####
Product		HOG163					
Incremental encoder		HOG163					
Redundant sensing							
Without redundant sensing							
With redundant sensing				M			
Output signals							
K1, K2, K0				DN			
Pulse number⁽¹⁾							
250						250	
500						500	
512						512	
1000						1000	
1024						1024	
1080						1080	
1200						1200	
2048						2048	
2500						2500	
4096						4096	
5000						5000	
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							
Through hollow shaft ø38 mm							38H7
Through hollow shaft ø50 mm							50H7
Through hollow shaft ø55 mm							55H7
Through hollow shaft ø56 mm							56H7
Through hollow shaft ø60 mm							60H7
Through hollow shaft ø65 mm							65H7
Through hollow shaft ø70 mm							70H7
Through hollow shaft ø75 mm							75H7

(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