Baumer
Passion for Sensors

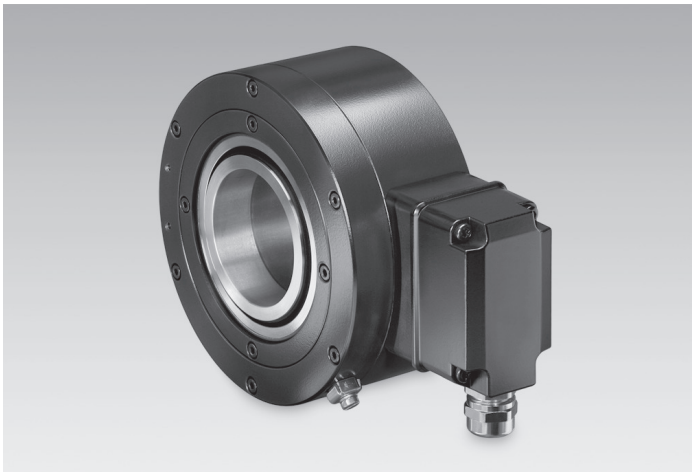
Incremental encoders

HOG 163

Through hollow shaft ø38...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°



HTL TTL® HUBNER BERLIN A Baumer Brand

Technical data

Technical data - electrical ratings	
Voltage supply	9...30 VDC 5 VDC ±5 % 9...26 VDC
Consumption w/o load	≤100 mA
Pulses per revolution	250 … 5000
Phase shift	90 ° ±20°
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)	ø158 mm
Shaft type	ø38...75 mm (through hollow shaft)

Technical data - mechanical design	
Admitted shaft load	≤350 N axial, ≤500 N radial
Protection DIN EN 60529	IP 56
Operating speed	≤6000 rpm (mechanical)
Operating torque typ.	17 Ncm
Rotor moment of inertia	28,5 kgcm² (ø50)
Material	Housing: aluminium alloy Shaft: stainless steel
Operating temperature	-40...+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 nA IIC T4 Gc (gas) II 3 D Ex tc IIIB T135°C Dc (dust)
Connection	Terminal box 2x terminal box (with option M)
Weight approx.	5,4 kg (ø48) 3,5 kg (ø75) 3,9 kg (ø75 with option M)

Optional

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

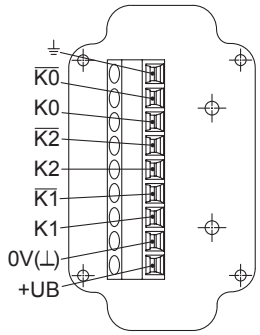
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2020-02-24

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Terminal assignment

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

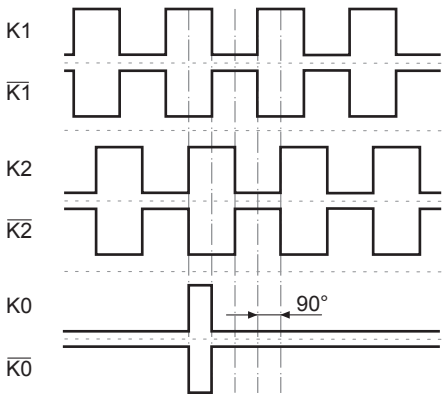


Terminal significance

+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)*

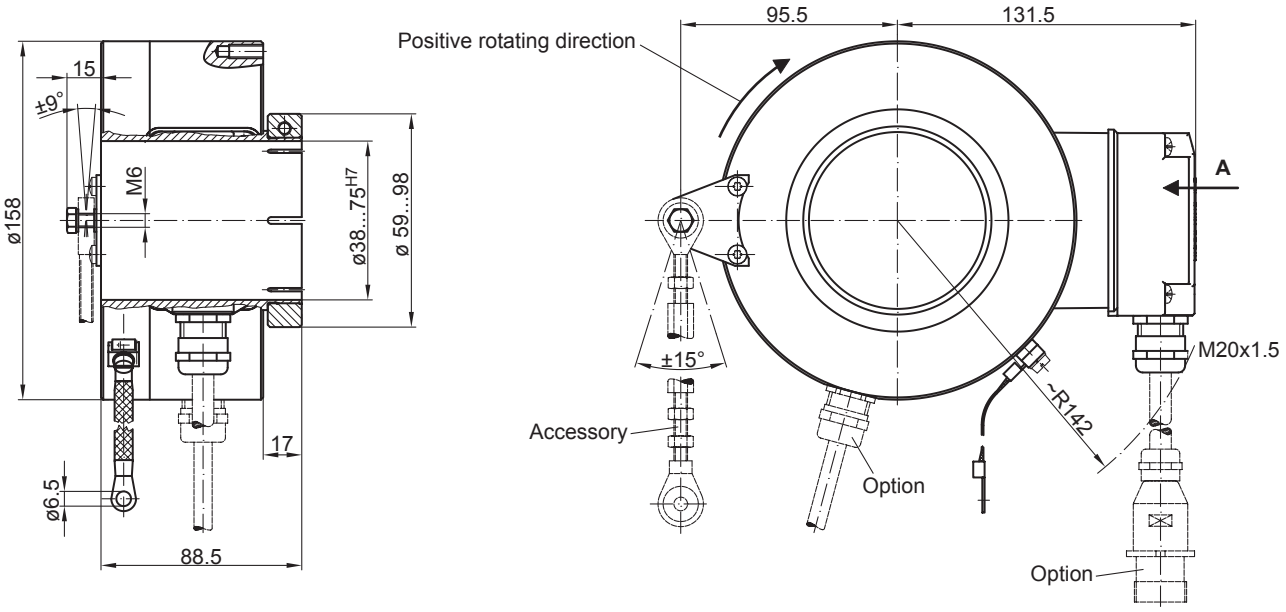


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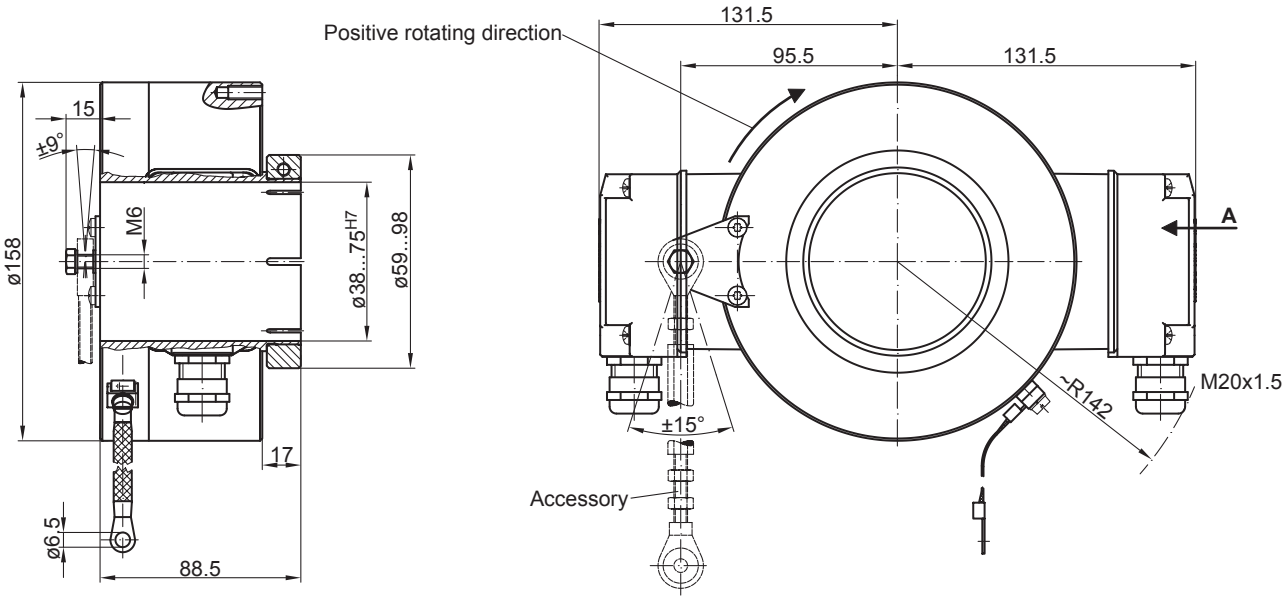
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Dimensions



Single sensing



Redundant sensing

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Ordering reference

	HOG163	#	DN	####	###	######
Product						
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						
Blind 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

Connectors and cables

	Sensor cable for encoders HEK 8

Accessories

Diagnostic accessories

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

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