Baumer
Passion for Sensors

Incremental encoders

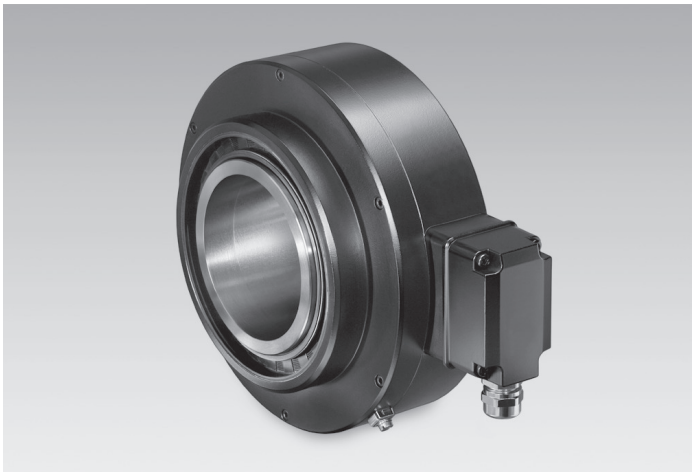
HOG 22

Through hollow shaft ø80...115 mm

720...4000 pulses per revolution

Overview

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



HTL TTL®

HÜBNER BERLIN
A Baumer Brand

Technical data

Technical data - electrical ratings	
Voltage supply	9...30 VDC 5 VDC ±5 %
Consumption w/o load	≤100 mA
Pulses per revolution	720 … 4000
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/E217823
Technical data - mechanical design	
Size (flange)	ø227 mm
Shaft type	ø80...115 mm (through hollow shaft)
Admitted shaft load	≤450 N axial ≤700 N radial

Technical data - mechanical design	
Protection DIN EN 60529	IP 54 IP 56 (option)
Operating speed	≤3800 rpm (mechanical)
Operating torque typ.	50 Ncm
Rotor moment of inertia	102 kgcm² (ø100)
Material	Housing: aluminium Shaft: stainless steel
Operating temperature	-30...+85 °C
Resistance	IEC 60068-2-6 Vibration 10 g, 10...2000 Hz IEC 60068-2-27 Shock 200 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) Plug-in electronics with angle flange connector (option)
Weight approx.	8,6 kg (ø100)

Optional

- Redundant sensing (option M)
- Plug-in electronics with angle flange-connector
- Increased protection IP 56
- Protection against induced shaft currents

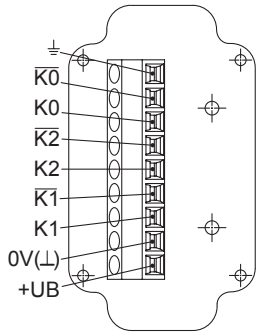
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2020-03-11

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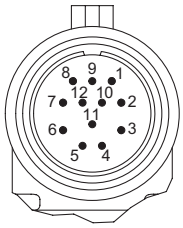
Through hollow shaft ø80...115 mm
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Terminal assignment

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



View B *(see dimension)*
Assignment angle flange connector



Angle flange socket M23
(male, 12-pin),
CW

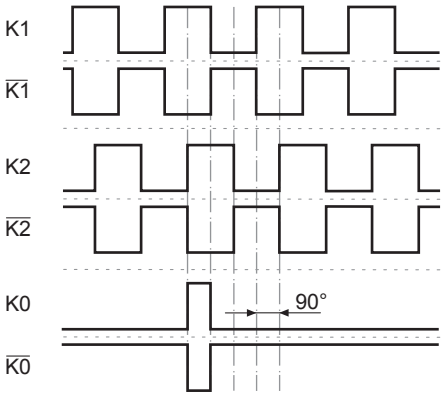
Pin	Assignment
1	$\overline{K2}$
2	dnu
3	K0
4	$\overline{K0}$
5	K1
6	$\overline{K1}$
7	dnu
8	K2
9	dnu
10	⊥
11	dnu
12	+UB

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
dnu	Do not use

Output signals

HTL/TTL
At positive rotating direction *(see dimension)*



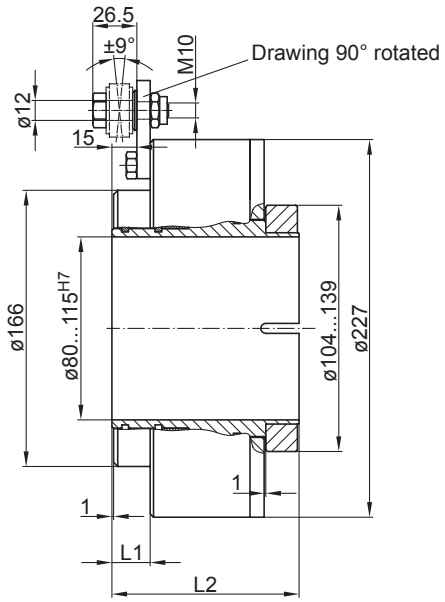
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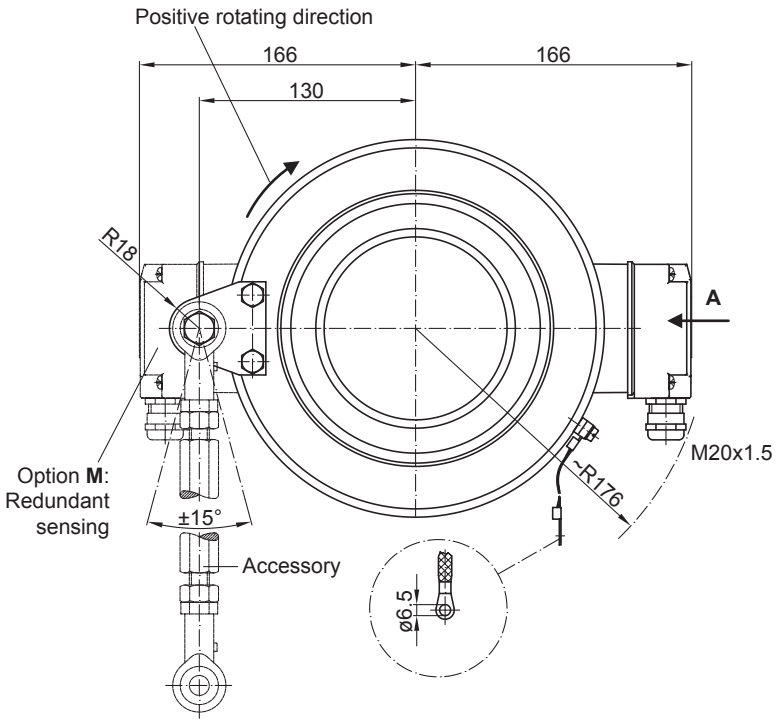
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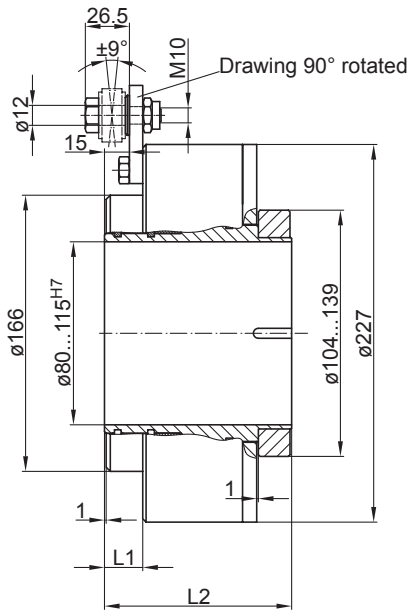
Dimensions



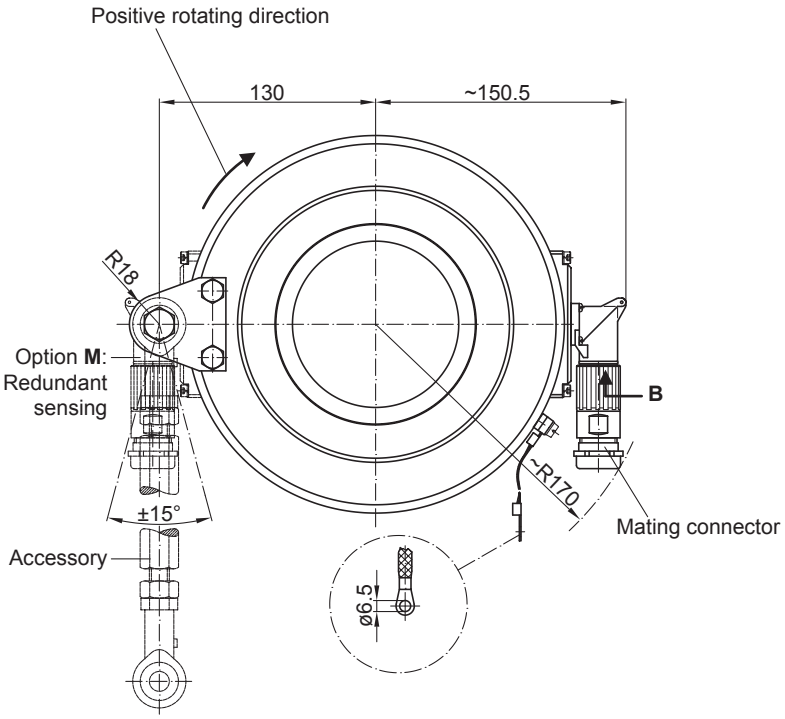
L1	L2	Protection
23	112.5	IP54
24	114.5	IP56



Version with radial terminal box



L1	L2	Protection
23	112.5	IP54
24	114.5	IP56



Version with plug-in electronics and angle flange connector

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HOG 22

Through hollow shaft ø80...115 mm
720...4000 pulses per revolution

Ordering reference

	HOG22	#	DN	####	###	######	######	####	#
Product									
Incremental encoder	HOG22								
Redundant sensing									
Without redundant sensing									
With redundant sensing		M							
Output signals									
K1, K2, K0			DN						
Pulse number(1)									
720				720					
1800				1800					
2048				2048					
4000				4000					
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 ø80 mm						80H7			
Through hollow shaft ø85 mm						85H7			
Through hollow shaft ø90 mm						90H7			
Through hollow shaft ø93 mm						93H7			
Through hollow shaft ø95 mm						95H7			
Through hollow shaft ø100 mm						100H7			
Through hollow shaft ø105 mm						105H7			
Through hollow shaft ø110 mm						110H7			
Through hollow shaft ø115 mm						115H7			
Connection									
Terminal box, radial							KLK		
Plug-in electronics with angle flange-connector							W-ST		
Protection									
IP 54								IP54	
IP 56								IP56	
Insulation									
Without									
Protection against induced shaft currents									isol.

(1) Other pulse numbers on request.

Accessories

Mounting accessories

11054922	Torque arm M12, length 145...170 mm
11054921	Torque arm M12, length 180...205 mm
11072741	Torque arm M12, length 480...540 mm (≥200 mm)
11054924	Torque arm M12 insulated, length 145...170 mm
11072723	Torque arm M12 insulated, length 480...540 mm (≥200 mm)
11069336	Mounting kit for torque arm size M12 and an 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 B

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