Baumer
Passion for Sensors

Incremental encoders

HOG 28

Through hollow shaft ø120...150 mm
1024...2048 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...26 VDC 5 VDC ±5 %
Consumption w/o load	≤100 mA
Pulses per revolution	1024 … 2048
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)	ø287 mm
Shaft type	ø120...150 mm (through hollow shaft)
Admitted shaft load	≤550 N axial ≤800 N radial

Technical data - mechanical design

Protection EN 60529	IP 54
Operating speed	≤3600 rpm (mechanical)
Operating torque typ.	50 Ncm
Rotor moment of inertia	240 kgcm² (ø150)
Material	Housing: aluminium alloy 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 ec IIC T4 Gc (gas) II 3 D Ex tc IIIB T135°C Dc (dust) (only with option ATEX)
Connection	Terminal box (2x with option M) Flange connector M23, 12-pin (2x with option M)
Weight approx.	20 kg (ø150)

Optional

- With earthing brushes (no explosion protection)
- Plug-in electronics
- Redundant sensing with two terminal boxes

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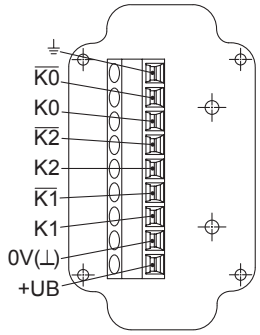
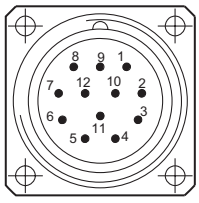
Terminal assignment

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



View B *(see dimension)*
Assignment flange connector



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

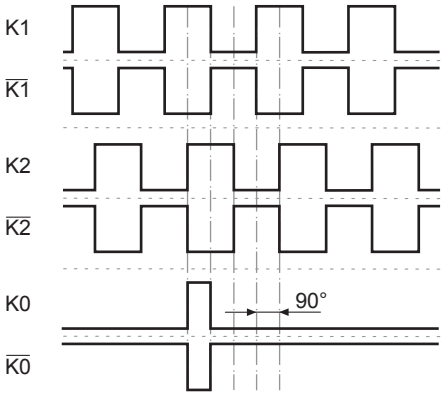
Pin	Assignment
1	$\overline{K2}$
2	dnu
3	K0
4	$\overline{K0}$
5	K1
6	$\overline{K1}$
7	dnu
8	K2
9	dnu
10	0V (⊥)
11	dnu
12	+UB

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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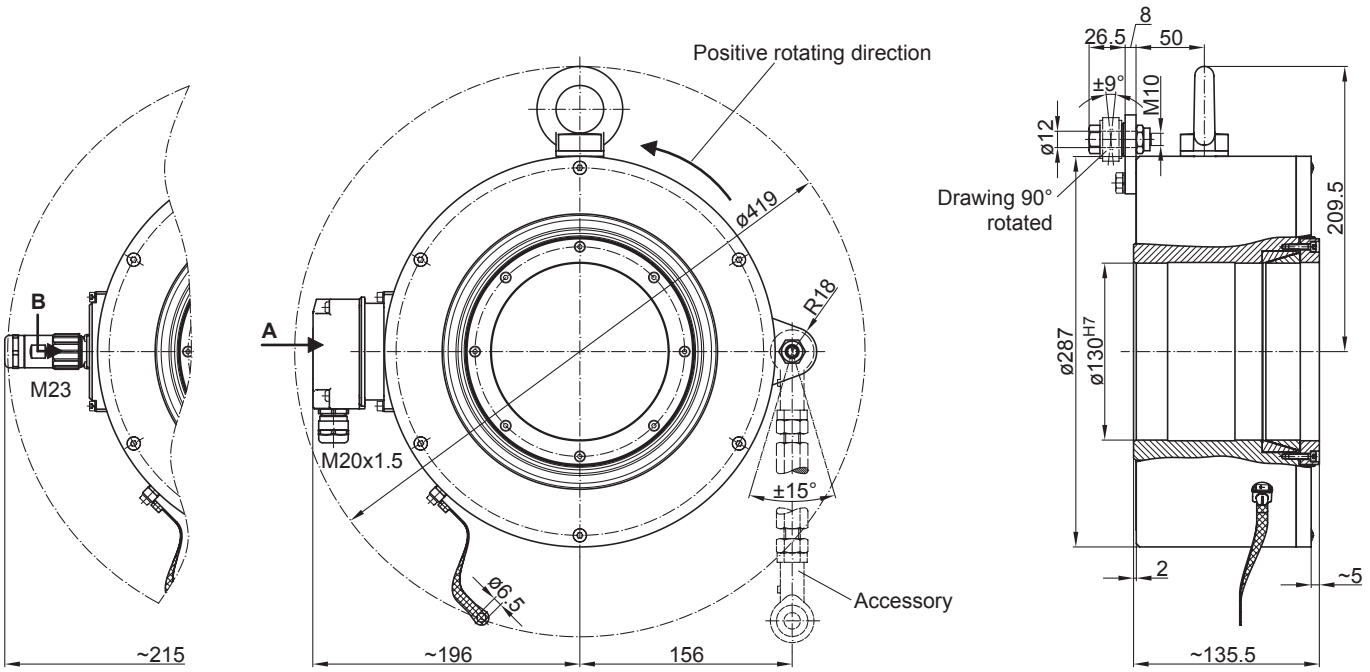
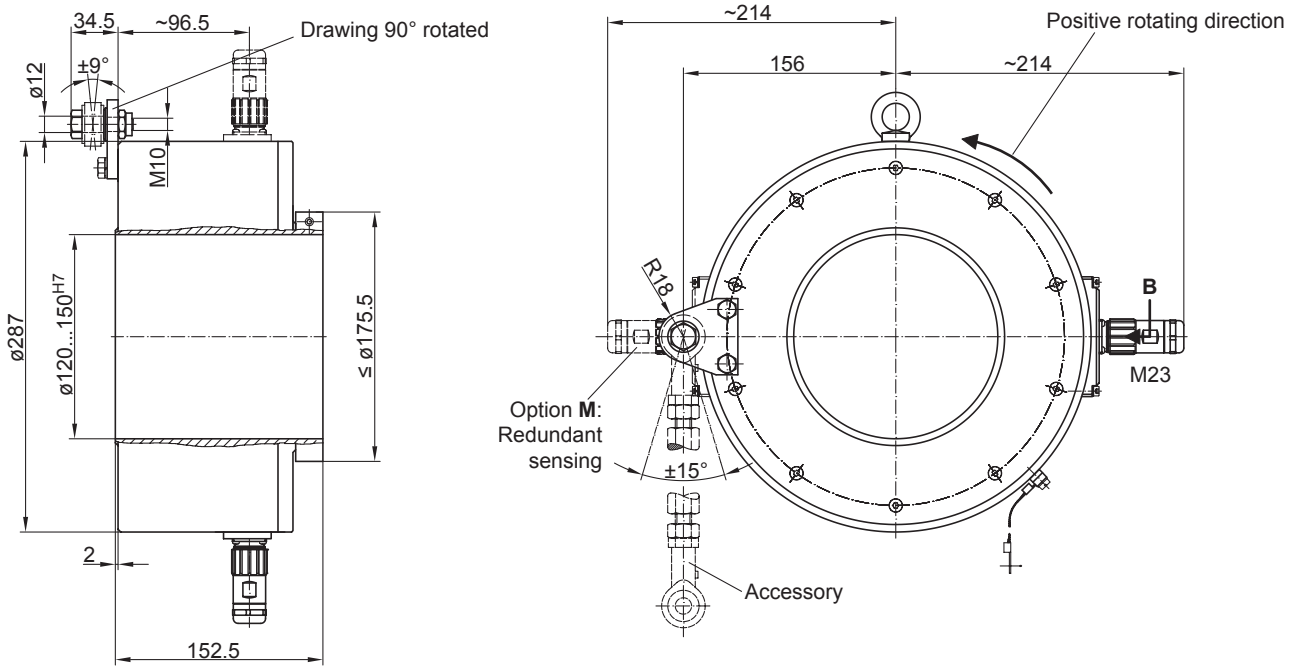
Dimensions



Version with clamping set



Version with clamping ring

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Ordering reference

	HOG28	#	DN	####	###
Product					
Incremental encoder	HOG28				
Redundant sensing					
Without redundant sensing					
With redundant sensing		M			
Output signals					
K1, K2, K0			DN		
Pulse number(1)					
1024				1024	
1800				1800	
2048				2048	
Voltage supply / output stage					
9...26 VDC / output stage HTL (C)					C
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

(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