

# Incremental encoders

Through hollow shaft  $\varnothing 120...150$  mm  
1024...2048 pulses per revolution

## HOG 28



HOG 28 - Version with terminal box

### Technical data - electrical ratings

Voltage supply	9...26 VDC 5 VDC $\pm 5$ %
Consumption w/o load	$\leq 100$ mA
Pulses per revolution	1024...2048
Phase shift	$90^\circ \pm 20^\circ$
Duty cycle	40...60 %
Reference signal	Zero pulse, width $90^\circ$
Sensing method	Optical
Output frequency	$\leq 120$ kHz
Output signals	K1, K2, K0 + inverted
Output stages	HTL TTL/RS422
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approvals	CE, UL approval / E256710

### Features

- 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  $180^\circ$

### Optional

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

### Technical data - mechanical design

Size (flange)	$\varnothing 287$ mm
Shaft type	$\varnothing 120...150$ mm (through hollow shaft)
Admitted shaft load	$\leq 550$ N axial $\leq 800$ N radial
Protection DIN EN 60529	IP 54
Operating speed	$\leq 3600$ rpm (mechanical)
Operating torque typ.	50 Ncm
Rotor moment of inertia	240 kgcm <sup>2</sup> ( $\varnothing 150$ )
Materials	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 nA IIC T4 Gc (gas) II 3 D Ex tc IIIB T135°C Dc (dust)
Connection	Terminal box (2x with option M) Flange connector M23, 12-pin (2x with option M)
Weight approx.	20 kg ( $\varnothing 150$ )

Subject to modification in technic and design. Errors and omissions excepted.



# Incremental encoders

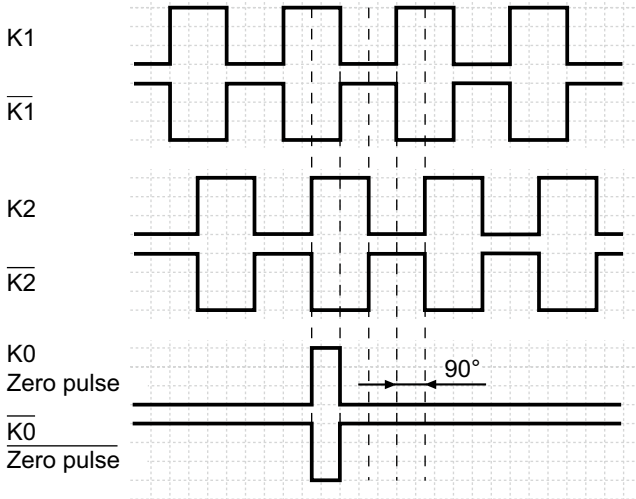
Through hollow shaft  $\varnothing 120 \dots 150$  mm

1024...2048 pulses per revolution

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### Output signals

At positive rotating direction



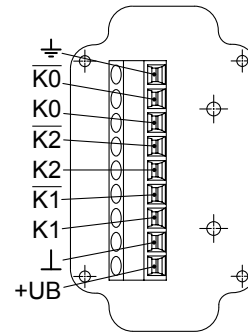
### Terminal significance

+UB	Voltage supply (for the device)
⊥; ⚡; GND; 0 V	Ground (for the signals)
⊕; ⚡	Earth ground (housing)
K1; A; A+	Output signal channel 1
$\overline{K1}$ ; $\overline{A}$ ; A-	Output signal channel 1 inverted
K2; B; B+	Output signal channel 2 (offset by 90° to channel 1)
$\overline{K2}$ ; $\overline{B}$ ; B-	Output signal channel 2 (offset by 90° to channel 1) inverted
K0; C; R; R+	Zero pulse (reference signal)
$\overline{K0}$ ; $\overline{C}$ ; $\overline{R}$ ; R-	Zero pulse (reference signal) inverted
dnu	Do not use

### Terminal assignment

#### View A

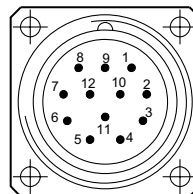
Connecting terminal terminal box



#### View B

Flange connector M23, 12-pin, male, 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



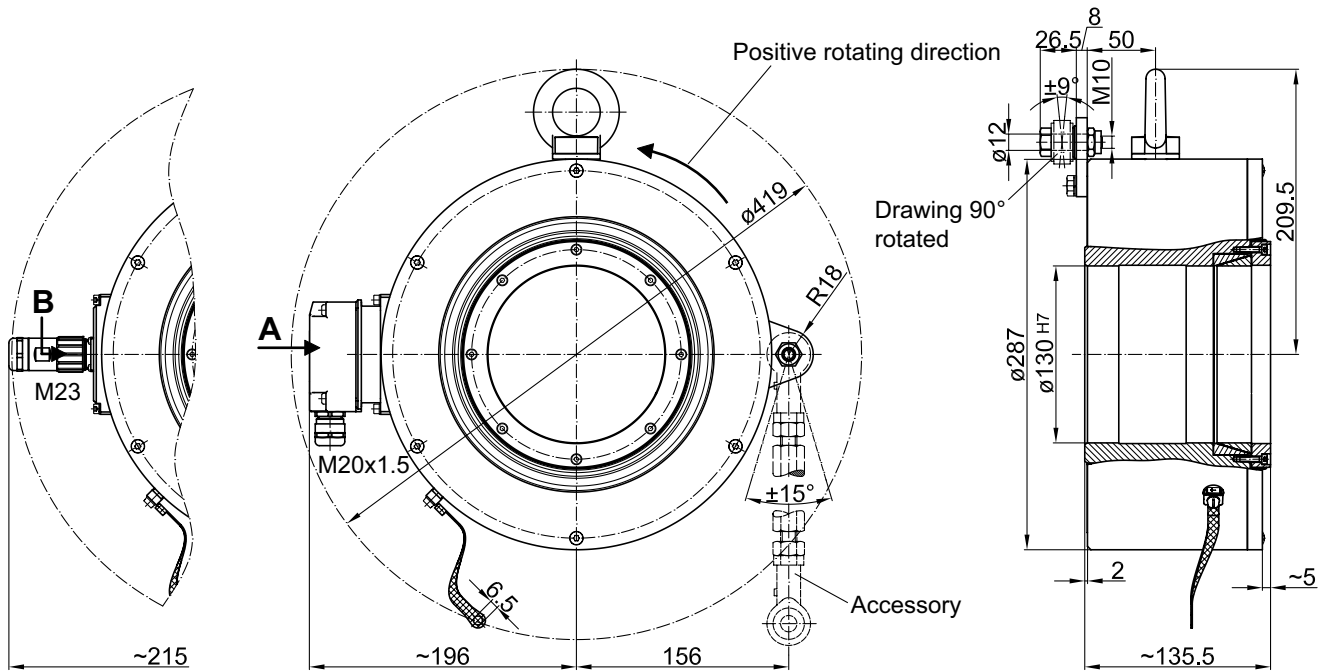
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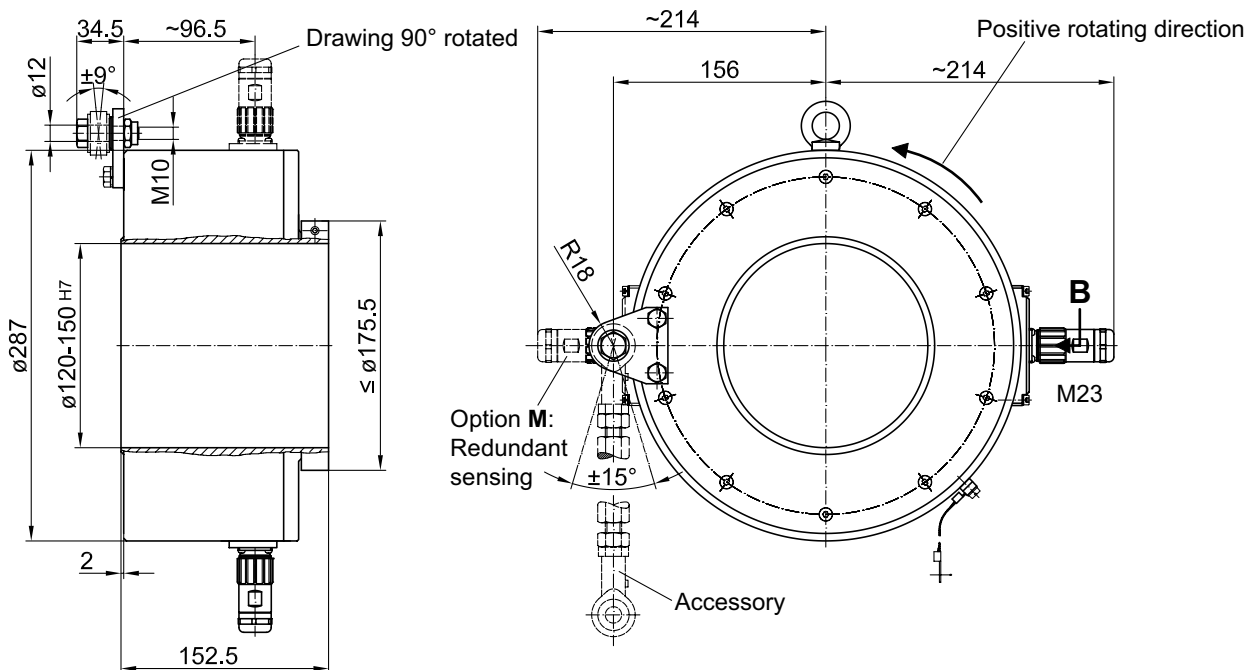
HOG 28

## Dimensions

### Version with clamping set



### Version with clamping ring



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