Incremental encoders

Hollow shaft ø120 to ø150 mm

Resolution 1024...2048 pulses

HOG 28

HOG 28 - Version with terminal box

Features

- **Encoder with hollow shaft ø120-150 mm**
- **Optical sensing**
- **Robust light-metal housing**
- **Logic level TTL with regulator UB 9...26 VDC**
- **Logic level HTL with power linedriver**
- **Big terminal box, turn by 180°**

Optional

- **Earthing brush (no explosion protection)**
- **Plug-in electronics**
- **Redundant sensing (version M)**

Technical data - electrical ratings

Voltage supply	5 VDC ±5 % 9...26 VDC
Consumption w/o load	≤100 mA
Resolution (steps/turn)	1024...2048
Phase shift	90° ±20°
Scan ratio	40...60 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤120 kHz
Output signals	K1, K2, K0 + inverted
Output circuit	TTL (RS422) HTL (power linedriver)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	UL approval / E256710

Technical data - mechanical design

Dimensions (flange)	ø287 mm
Shaft	ø120...150 mm hollow shaft
Shaft loading	≤250 N axial ≤320 N radial
Protection DIN EN 60529	IP 54
Operating speed	≤3600 rpm (mechanical)
Operating torque typ.	50 Ncm
Rotor moment of inertia	240 kgcm² (ø150)
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
Explosion protection	II3G Ex nA IIC T4 Gc (gas) II3D Ex tc IIIB T135°C Dc (dust)
Connection	Terminal box Connector M23, 12-pin
Weight approx.	20 kg (ø150)

HOG 28

Part number

HOG 28 **DN** | | | | |

Voltage supply / signals
- C 9...26 VDC / output circuit HTL (C)
- CI 9...26 VDC / output circuit HTL (C) with inverted signals
- TTL 5 VDC / output circuit TTL with inverted signals
- R 9...26 VDC / output circuit TTL with inverted signals

See part number (pulses)

Output signals
- DN K1, K2, K0

Part number (pulses)

1024	1800	2048

Other pulse numbers upon request.

Accessories

Connectors and cables

HEK 8	Sensor cable for encoders

Mounting accessories

DMS 12	Torque arm size M12

Diagnostic accessories

HENQ 1100	Analyzer for encoders

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Hollow shaft ø120 to ø150 mm

Resolution 1024...2048 pulses

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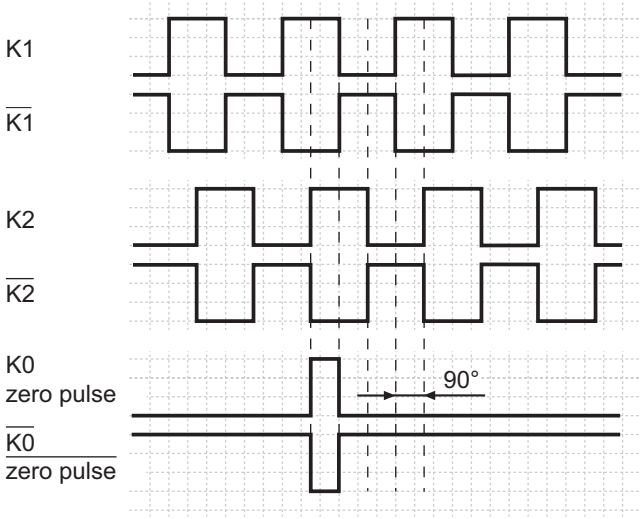
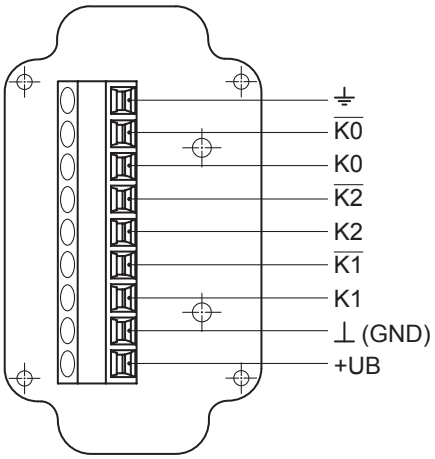
Output signals

at positive rotating direction



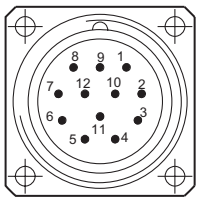
Terminal assignment

View A - Connecting terminal in terminal box



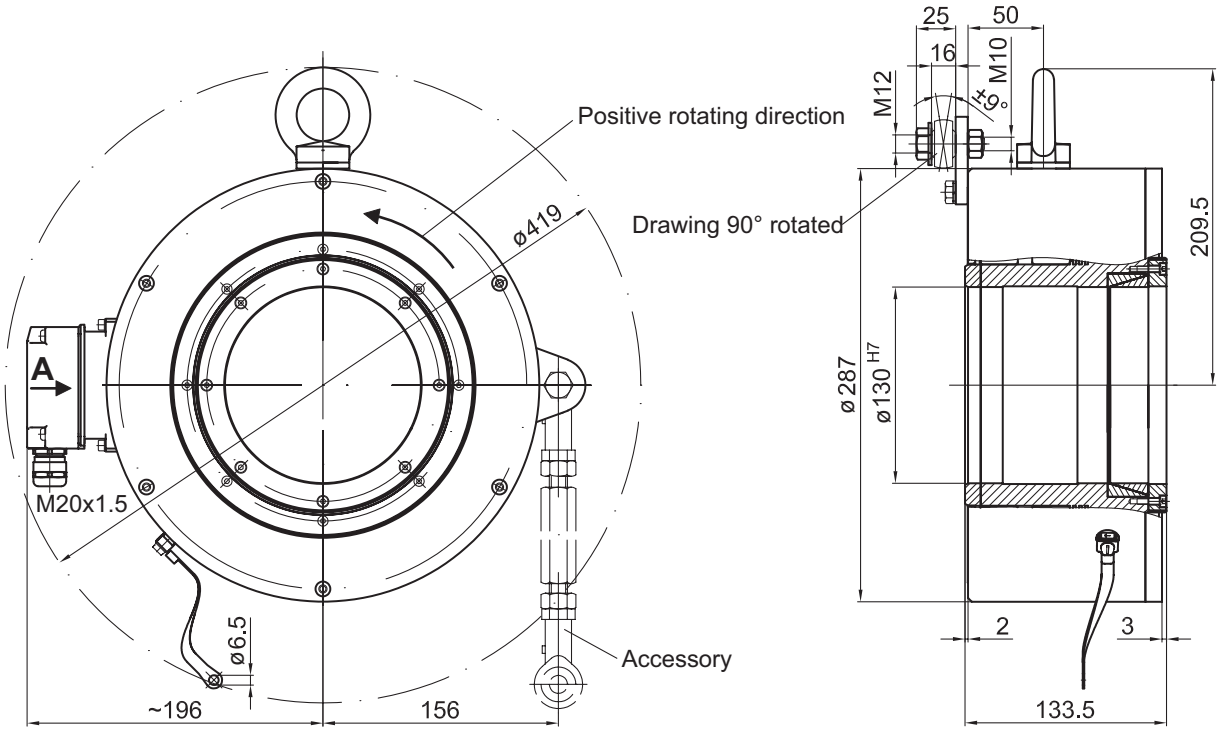
View B - Flange socket, male contacts, clockwise

Male	Assignment
Pin 1	$\overline{K2}$ (B- K2 inv.)
Pin 2	do not use
Pin 3	K0 (R+ zero pulse)
Pin 4	$\overline{K0}$ (R- zero pulse inv.)
Pin 5	K1 (A+)
Pin 6	$\overline{K1}$ (A- K1 inv.)
Pin 7	do not use
Pin 8	K2 (B+)
Pin 9	do not use
Pin 10	GND
Pin 11	do not use
Pin 12	+UB



Dimensions

Version with terminal box



Version with flange socket and mating connector