Incremental encoders

Hollow shaft ø38 to ø75 mm

Resolution 250...5000 pulses

HOG 163

HOG 163

Features

- **Encoder with hollow shaft ø38-75 mm**
- **Insulated constitution**
- **Optical sensing**
- **Robust light-metal housing**
- **Logic level TTL with regulator UB 9...26 VDC**
- **Logic level HTL with power linedriver**
- **Special protection against corrosion**
- **Big terminal box, turn by 180°**

Optional

- **Redundant version**
- **Heating for applications of min. -50 °C (no explosion protection)**

Technical data - electrical ratings

Voltage supply	5 VDC ±5 % 9...26 VDC 9...30 VDC
Consumption w/o load	≤100 mA
Resolution (steps/turn)	250...5000
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)	ø158 mm
Shaft	ø38...75 mm hollow shaft
Shaft loading	≤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)
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 100 g, 6 ms
Explosion protection	II3G Ex nA IIC T4 Gc (gas) II3D Ex tc IIIB T135°C Dc (dust)
Weight approx.	4.3 kg (ø48), 3.2 kg (ø75)

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Part number

HOG 163 [ ][ ][ ][ ][ ]

Voltage supply / signals
- I: 9...30 VDC / output circuit HTL with inverted signals
- TTL: 5 VDC / output circuit TTL with inverted signals
- R: 9...26 VDC / output circuit TTL with inverted signals (for output signals DN)

See part number (pulses)

Output signals
- D: K1, K2
- DN: K1, K2, K0

Part number (pulses)

250	600	1080	2048
500	1000	1200	4096
512	1024	1250	5000

Other pulse numbers upon request.

Accessories

Connectors and cables

HEK 8	Sensor cable for encoders

Mounting accessories

DMS 6	Torque arm size M6

Diagnostic accessories

HENQ 1100	Analyzer for encoders

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Resolution 250...5000 pulses

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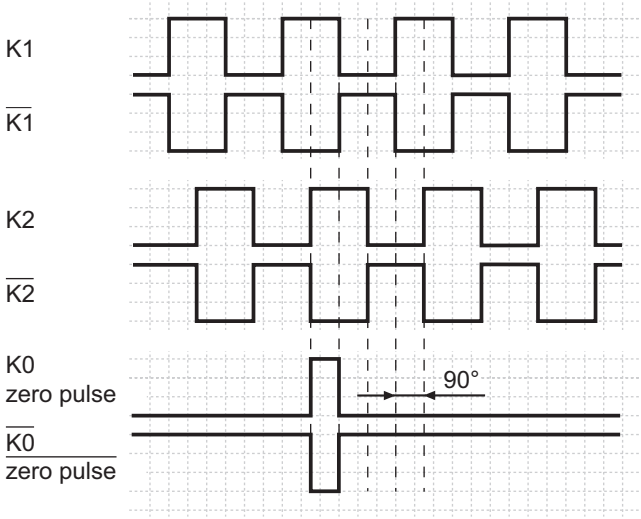
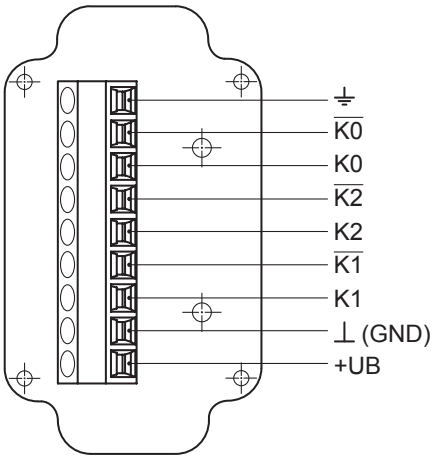
Output signals

at positive rotating direction



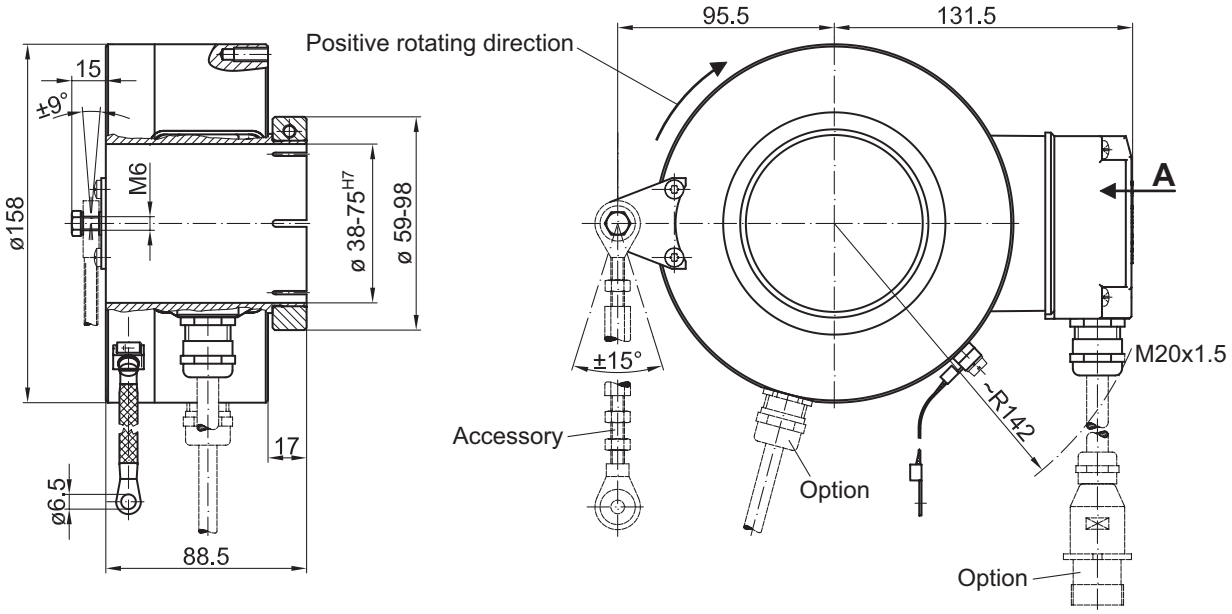
Terminal assignment

View A - Connecting terminal in terminal box



Dimensions

HOG 163 - single sensing



HOG 163 - redundant sensing