

Incremental encoders

Through hollow shaft $\varnothing 80...115$ mm
720...4000 pulses per revolution

HOG 22



HOG 22

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	$90^\circ \pm 20^\circ$
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
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°

Optional

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

Technical data - mechanical design

Size (flange)	$\varnothing 227$ mm
Shaft type	$\varnothing 80...115$ mm (through hollow shaft)
Admitted shaft load	≤ 450 N axial ≤ 700 N radial
Protection DIN EN 60529	IP 54, IP 56 (option)
Operating speed	≤ 3800 rpm (mechanical)
Operating torque typ.	50 Ncm
Rotor moment of inertia	102 kgcm ² ($\varnothing 100$)
Materials	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 ($\varnothing 100$)

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

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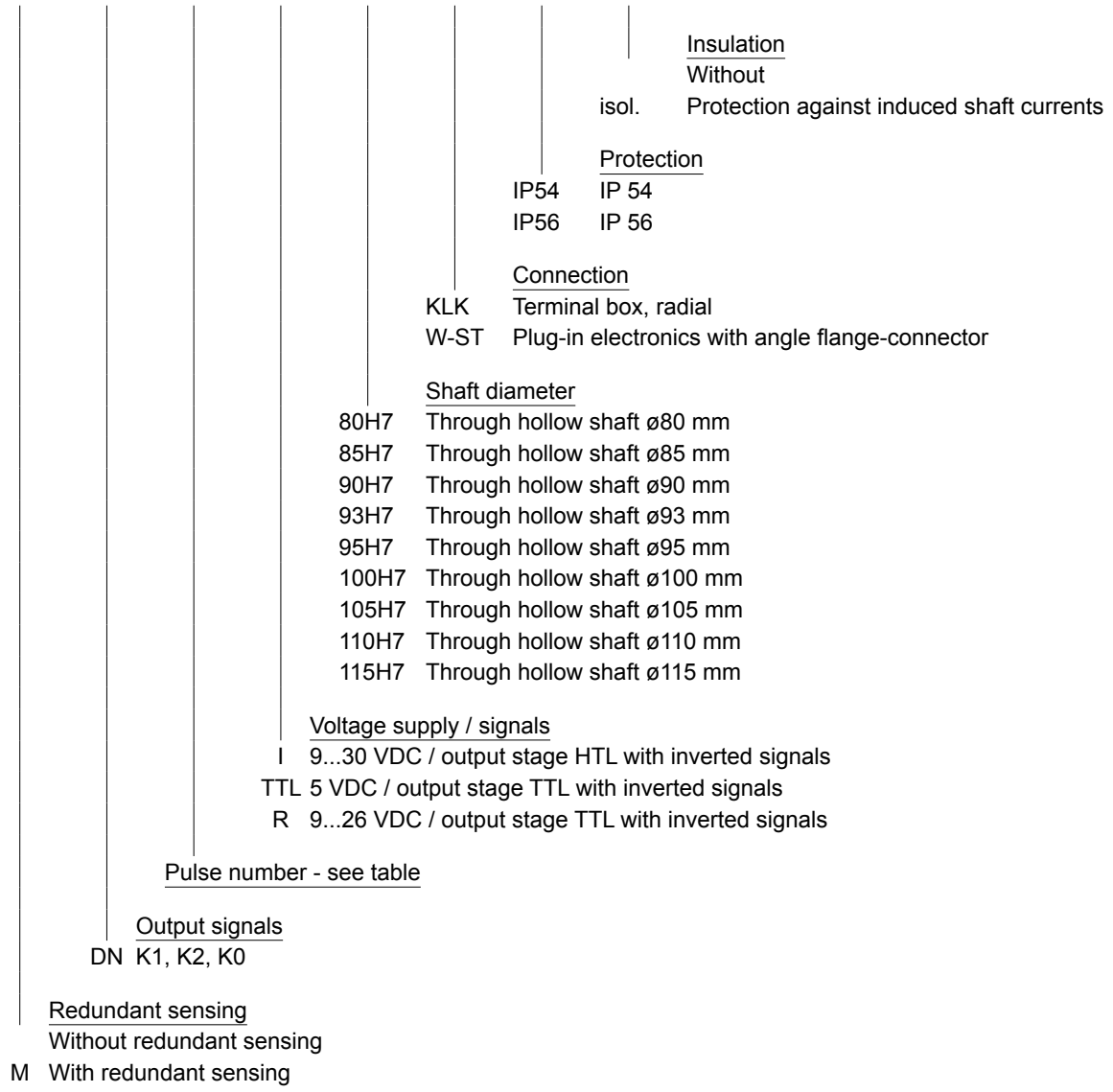
HOG 22

Part number

Incremental encoder

HOG22

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Pulse number

720 | 1800 | 4000
Other pulse numbers on request.

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Incremental encoders

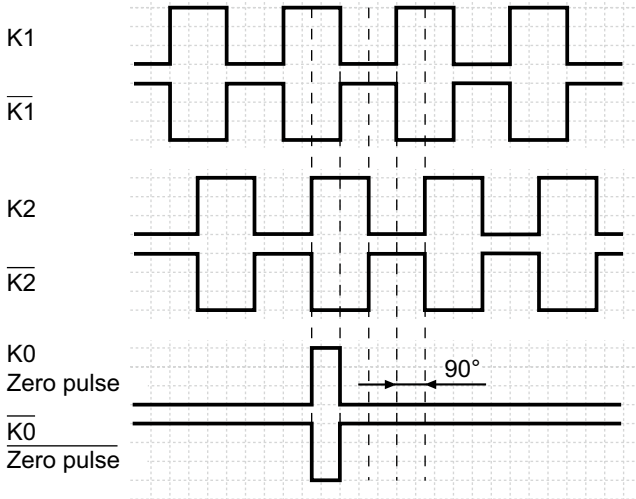
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Output signals

At positive rotating direction



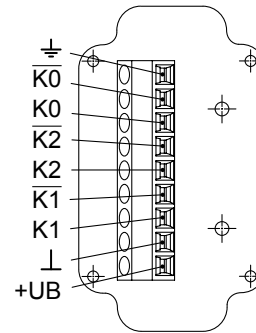
Terminal significance

+UB	Voltage supply (for the device)
\perp ; \downarrow ; GND; 0 V	Ground (for the signals)
\perp ; \nearrow	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

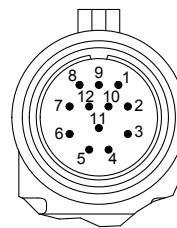
Connecting terminal terminal box



View B

Angle 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	\perp
11	dnu
12	+UB



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Accessories

Connectors and cables

HEK 8	Sensor cable for encoders
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Mounting accessories

11054922	Torque arm M12, length 155 (-10/+15) mm
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11054921	Torque arm M12, length 190 (-10/+15) mm
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11072741	Torque arm M12, length 480-540 mm (shortenable ≥ 200 mm)
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11054924	Torque arm M12 insulated, length 155 (-10/+15) mm
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11072723	Torque arm M12 insulated, length 480-540 mm (shortenable ≥ 200 mm)
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11069336	Mounting kit for torque arm size M12 and an earthing strap
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Diagnostic accessories

11075858	Analyzer for encoders HENQ 1100
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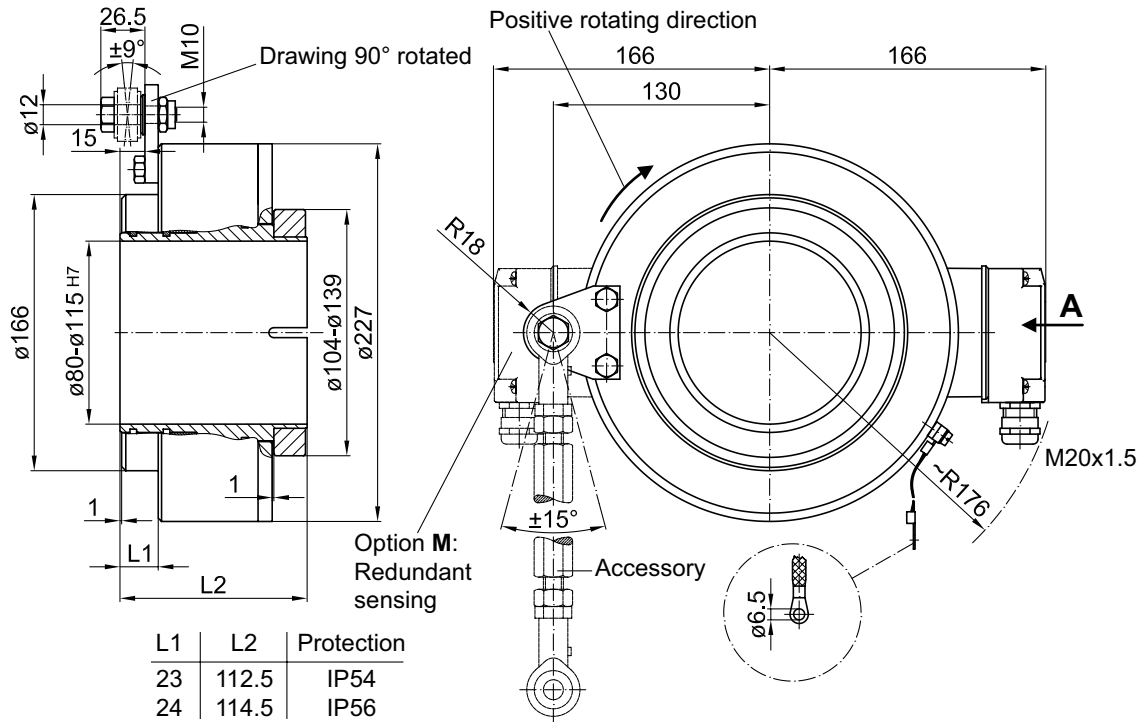
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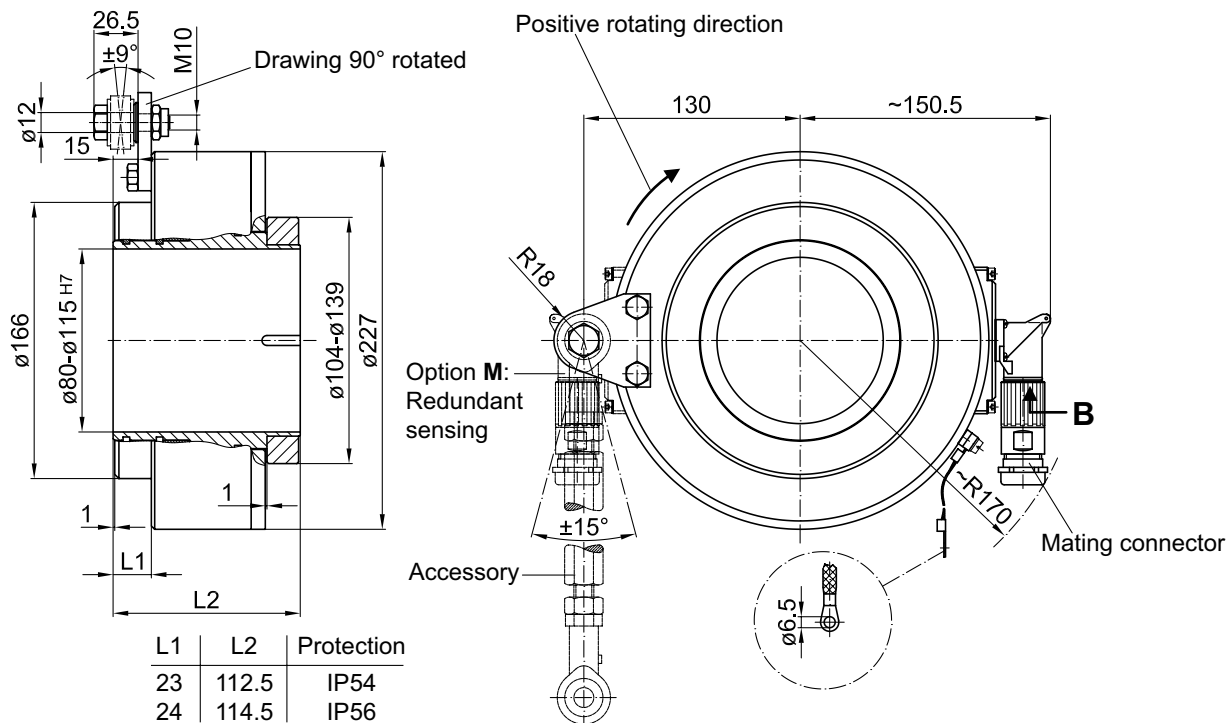
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Dimensions

Version with radial terminal box



Version with plug-in electronics and angle flange connector (option)



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