

Incremental encoders

Through hollow shaft $\varnothing 80...115$ mm
1024 pulses per revolution

HOG 220



HOG 220

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC ± 5 % 9...26 VDC
Consumption w/o load	≤ 100 mA
Pulses per revolution	1024
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

- Through hollow shaft $\varnothing 80...115$ mm
- 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

- Isolated through hollow shaft (≥ 500 VDC)
- Redundant sensing with two terminal boxes

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 56
Operating speed	≤ 3800 rpm (mechanical)
Operating torque typ.	50 Ncm
Rotor moment of inertia	102 kgcm ² ($\varnothing 100$)
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 terminal box (with option M)
Weight approx.	10.3 kg ($\varnothing 100$)

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Part number

Incremental encoder

HOG220 **DN** **1024**

Shaft diameter

80H7	Through hollow shaft $\varnothing 80$ mm
85H7	Through hollow shaft $\varnothing 85$ mm
90H7	Through hollow shaft $\varnothing 90$ mm
95H7	Through hollow shaft $\varnothing 95$ mm
100H7	Through hollow shaft $\varnothing 100$ mm
105H7	Through hollow shaft $\varnothing 105$ mm
106H7	Through hollow shaft $\varnothing 106$ mm
110H7	Through hollow shaft $\varnothing 110$ mm
115H7	Through hollow shaft $\varnothing 115$ mm

Voltage supply / signals

I	9...30 VDC / output stage HTL with inverted signals
TTL	5 VDC / output stage TTL with inverted signals
R	9...26 VDC / output stage TTL with inverted signals

Pulse number

1024

Output signals

DN K1, K2, K0

Redundant sensing

Without redundant sensing

M With redundant sensing

Other pulse numbers on request.

Incremental encoders

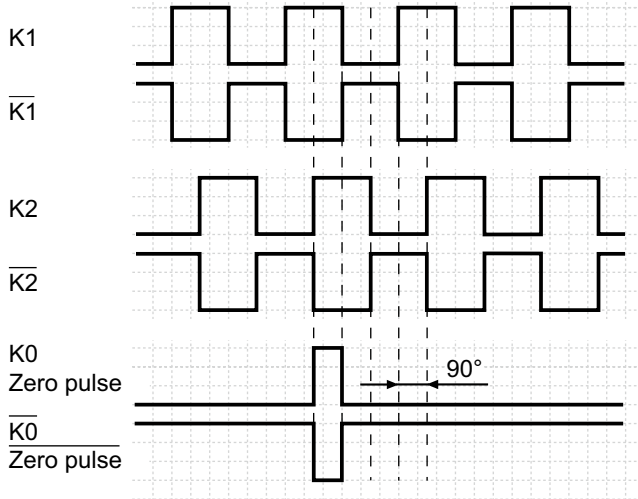
Through hollow shaft $\varnothing 80...115$ mm

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Output signals

At positive rotating direction

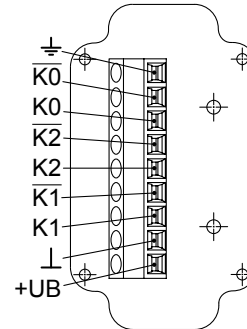


Terminal significance

+UB	Voltage supply (for the device)
⊥; ↓; GND; 0 V	Ground (for the signals)
⊕; ↗	Earth ground (housing)
K1; A; A+	Output signal channel 1
K1̄; Ā; A-	Output signal channel 1 inverted
K2; B; B+	Output signal channel 2 (offset by 90° to channel 1)
K2̄; B̄; B-	Output signal channel 2 (offset by 90° to channel 1) inverted
K0; C; R; R+	Zero pulse (reference signal)
K0̄; C̄; R̄; R-	Zero pulse (reference signal) inverted
dnu	Do not use

Terminal assignment

View A - Connecting terminal terminal box



Accessories

Connectors and cables

HEK 8 Sensor cable for encoders

Mounting accessories

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

Diagnostic accessories

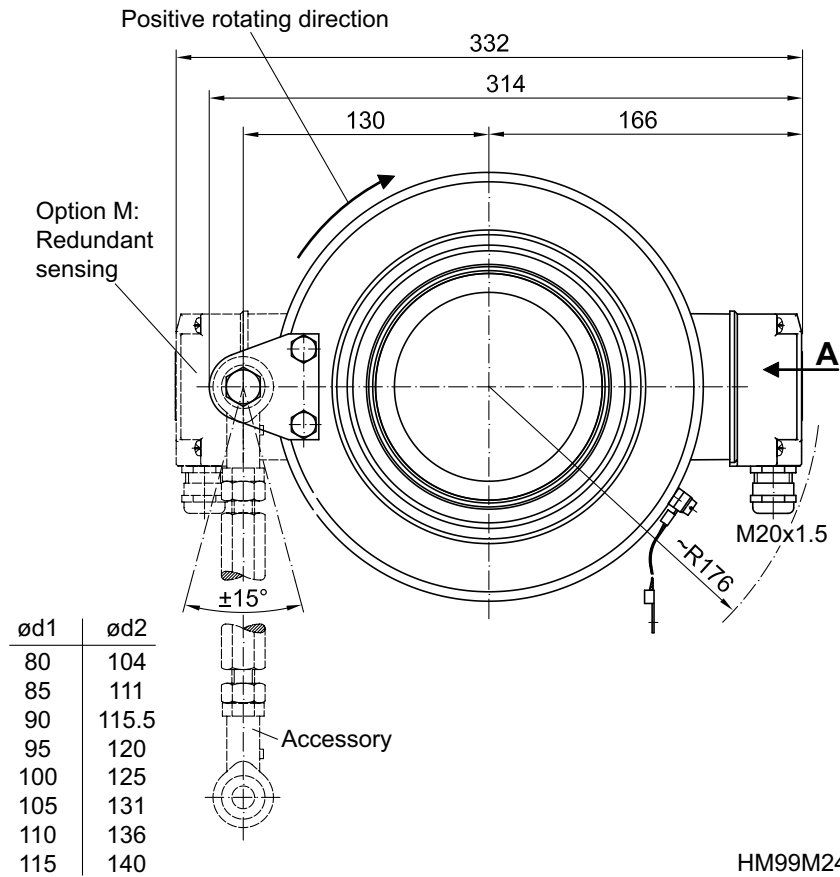
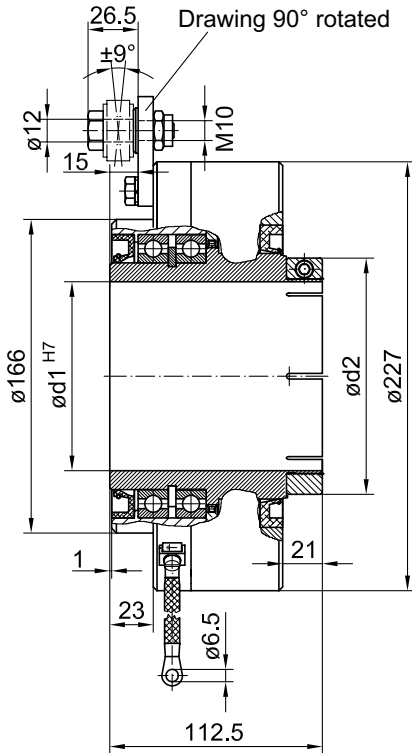
11075858 Analyzer for encoders HENQ 1100

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Dimensions



$\varnothing d1$	$\varnothing d2$
80	104
85	111
90	115.5
95	120
100	125
105	131
110	136
115	140

HM99M24995

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