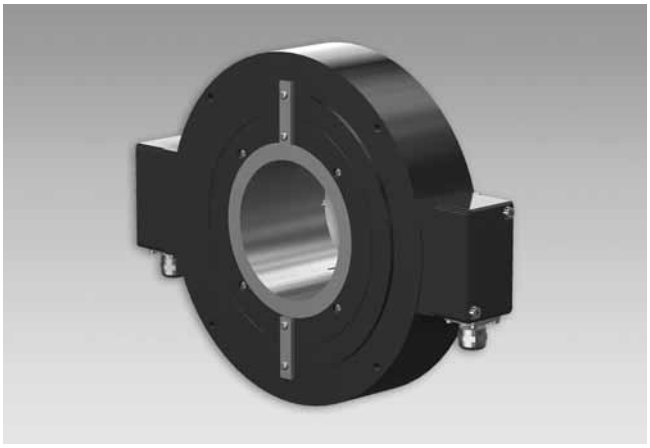
Encoders without bearings - incremental

Incremental encoder with optical sensing
Through hollow shaft ø90...120 mm
720…4000 pulses per revolution

HG 22



HG 22 M

Features

- **Large axial and radial displacement of the shaft permitted**
- **Fit for high operating speed**
- **Robust and wearless**
- **Max. 4000 pulses per revolution**
- **Logic level TTL with regulator UB 9...26 VDC**

Optional

- **Electrical connection with flange connector and mating connector**
- **Redundant sensing (version M)**

Technical data - electrical ratings

Voltage supply	9...26 VDC 5 VDC ±5 %
Consumption w/o load	< 100 mA
Sensing method	Optical
Pulses per revolution	720...4000
Output stages	HTL TTL/RS422
Output signals	K1, K2, K0 + inverted
Reference signal	Zero pulse, width 90°
Output frequency	≤120 kHz
Phase shift	90° ±20°
Scan ratio	40...60 %
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approvals	CE, RoHS, UL approval / E256710

Technical data - mechanical design

Size (flange)	ø227 mm
Axial tolerance	-0.5...1.5 mm (with zero pulse) -0.5...2.5 mm (without zero pulse)
Radial tolerance	±0.05 mm (with zero pulse) ±0.2 mm (without zero pulse)
Shaft type	ø90...120 mm (through hollow shaft)
Protection DIN EN 60529	IP 44
Operating temperature	-30...+70 °C
Operating speed	≤12000 rpm
Rotor moment of inertia	67.3 kgcm²
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 100 g, 6 ms
Materials	Housing: aluminium Shaft: stainless steel
Connection	Terminal box (2x with option M) Flange connector M23, 12-pin (2x with option M)
Weight approx.	5.8 kg

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HG 22

Part number

HG 22 [ ][ ][ ][ ][ ][ ][ ]

Voltage supply / signals
- 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 (for output signals DN)

Pulse number - see table

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

Redundant sensing
- Without redundant sensing
- M With redundant sensing

Pulse number

720	1800	2400	4000

Other pulse numbers on request.

Accessories

Connectors and cables

HEK 8	Sensor cable for encoders

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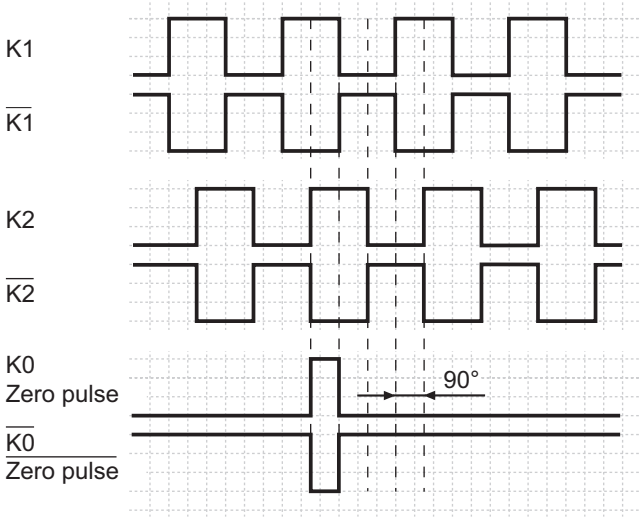
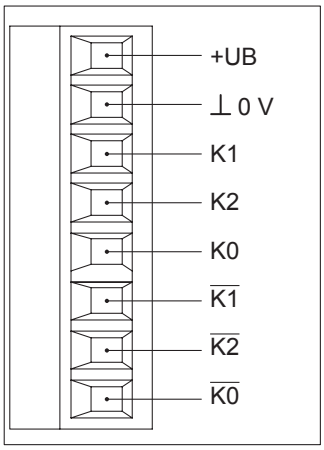
Output signals

At positive rotating direction



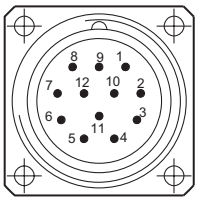
Terminal assignment

View A - Connecting terminal in terminal box



View B - Option: Flange connector M23, 12 pin, male contacts, CW

Pin	Assignment
1	$\overline{K2}$ (K2 inv.)
2	Do not use
3	K0 (Zero pulse)
4	$\overline{K0}$ (Zero pulse inv.)
5	K1
6	$\overline{K1}$ (K1 inv.)
7	Do not use
8	K2
9	Do not use
10	0 V
11	Do not use
12	+UB



Dimensions