

Incremental encoders

Twin-encoder, end shaft $\varnothing 12-16$ mm or cone shaft $\varnothing 17$ mm (1:10)

Resolution 1...2500 pulses

HOG 9 G



HOG 9 G

Features

- Twin-encoder featuring two separate systems
- End shaft $\varnothing 12-16$ mm or cone shaft $\varnothing 17$ mm (1:10)
- Optical sensing
- Opto ASIC
- Logic level TTL or HTL
- Suitable to drive for lines max. 500 m (TTL)
- Protection against inductive shaft current by hybrid bearings

Technical data - electrical ratings

Voltage supply	5 VDC ± 5 % 9...26 VDC 9...30 VDC
Consumption w/o load	≤ 100 mA
Resolution (steps/turn)	1...2500
Phase shift	$90^\circ \pm 20^\circ$
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	HTL (power linedriver) TTL (RS422)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	UL approval / E256710

Technical data - mechanical design

Dimensions (flange)	$\varnothing 97$ mm
Shaft	$\varnothing 12...16$ mm end shaft $\varnothing 17$ mm cone shaft 1:10
Shaft loading	≤ 200 N axial ≤ 300 N radial
Motor shaft tolerance	0.2 mm radial
Protection DIN EN 60529	IP 56
Operating speed	≤ 10000 rpm (mechanical)
Operating torque typ.	6 Ncm
Rotor moment of inertia	160 gcm ²
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	$-30...+100$ °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)
Connection	Connector M23, 12-pin
Weight approx.	1.2 kg

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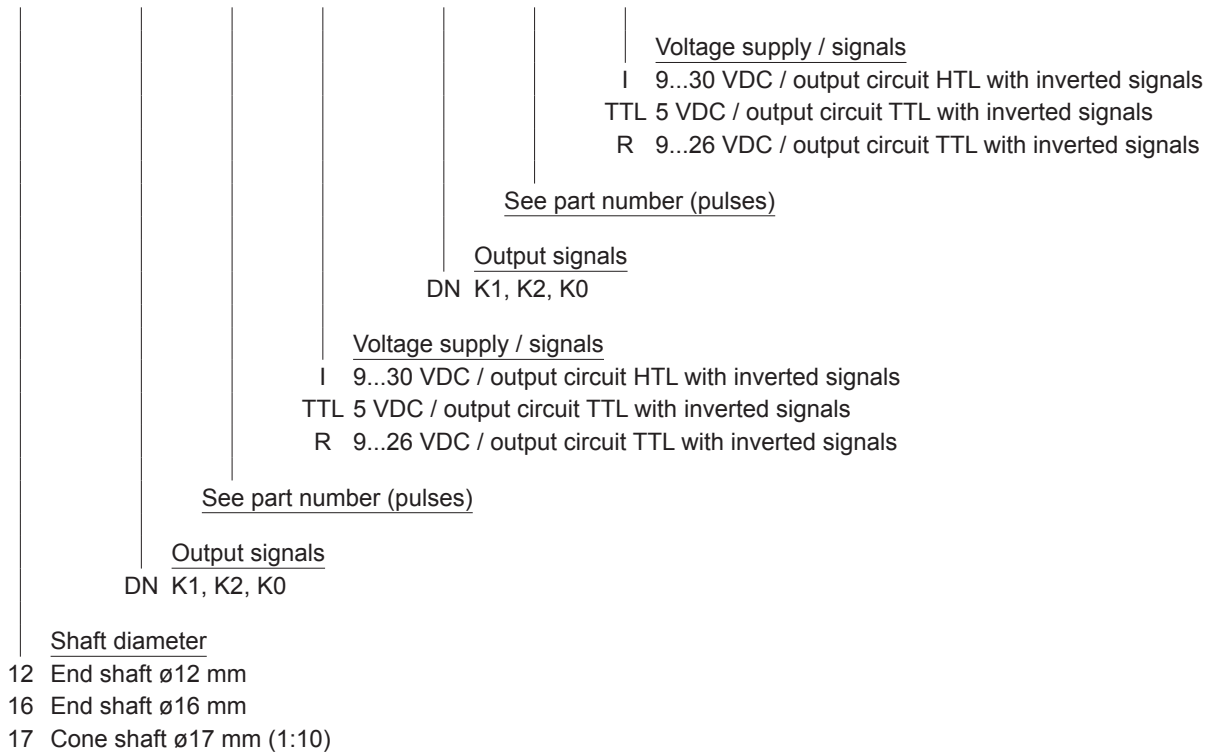
Resolution 1...2500 pulses

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Part number

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Other pulse numbers upon request.

Part number (pulses)

1	12	72	360	1042
2	15	80	400	1200
3	25	100	500	1250
4	30	120	512	2048
5	40	180	600	2500
6	50	192	720	
8	60	200	900	
10	62	250	1000	
11	64	300	1024	

Accessories

Connectors and cables

HEK 8	Sensor cable for encoders
11068577	Mating connector M23 counter-clockwise

Mounting accessories

DMS 6	Torque arm size M6
11081744	Mounting and dismounting set for end shaft
11084868	Mounting and dismounting set for cone shaft

Diagnostic accessories

HENQ 1100	Analyzer for encoders
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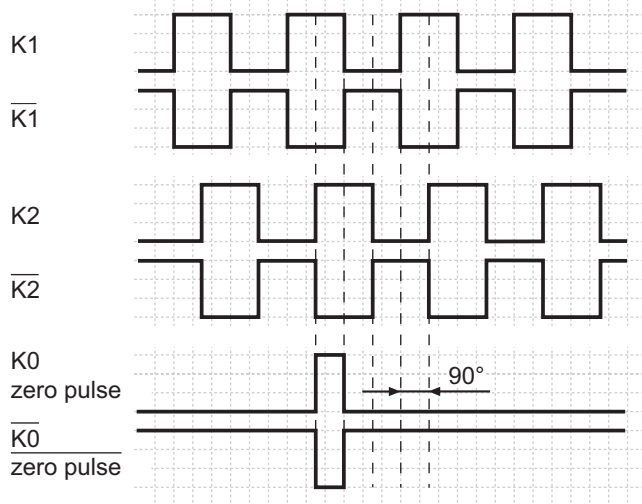
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Output signals

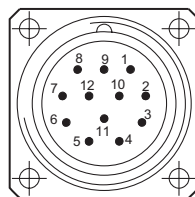
at positive rotating direction



Terminal assignment

View A - Flange socket, male contacts, clockwise

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



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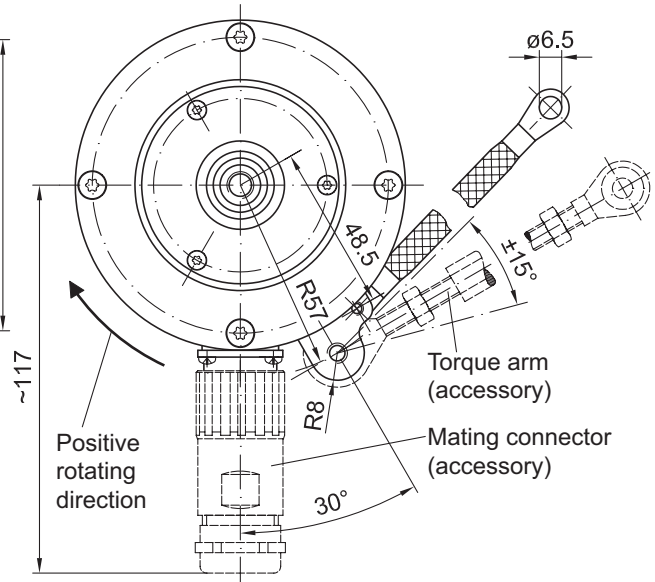
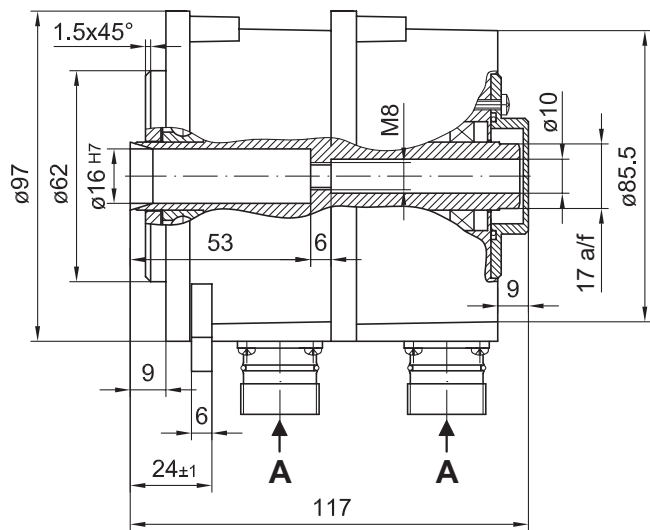
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Dimensions

HOG 9 G - version with end shaft



HOG 9 G - version with cone shaft

