

Incremental encoders

Blind hollow shaft $\varnothing 8$ mm, $\varnothing 10$ mm and $\varnothing 12$ mm

200...10000 pulses per revolution

HOG 60



HOG 60

Technical data - electrical ratings

Voltage supply	9...26 VDC 5 VDC ± 5 %
Consumption w/o load	≤ 100 mA
Pulses per revolution	200...10000
Phase shift	$90^\circ \pm 8^\circ$
Duty cycle	46...54 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 250 kHz
Output signals	A+, B+, R+, A-, B-, R-
Output stages	HTL TTL/RS422
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approvals	CE, UL approval / E256710

Features

- Blind hollow shaft $\varnothing 8$... 12 mm
- Optical sensing method
- Compact, robust housing
- Max. 10000 pulses per revolution
- Output stage HTL or TTL
- Output stage TTL with regulator UB 9...26 VDC
- Very high resistance to shock
- High protection IP 65

Optional

- Connecting cable with cable gland

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 8$... 12 mm (blind hollow shaft)
Admitted shaft load	≤ 30 N axial ≤ 40 N radial
Protection DIN EN 60529	IP 65
Operating speed	≤ 12000 rpm (mechanical)
Operating torque typ.	1 Ncm
Rotor moment of inertia	22 gcm ²
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-30...+85 °C
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 300 g, 6 ms
Explosion protection	II 3 G Ex nA IIC T4 Gc (gas) II 3 D Ex tc IIIC T135°C Dc (dust)
Connection	Flange connector M23, 12-pin Mating connector Connecting cable (option)
Weight approx.	450 g

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Part number

Incremental encoder

HOG60 **DN**

Shaft diameter
 8H7 Blind hollow shaft ø8 mm
 10H7 Blind hollow shaft ø10 mm
 12H7 Blind hollow shaft ø12 mm

Voltage supply / signals
 CI 9...26 VDC / output stage HTL (C) with inverted signals
 TTL 5 VDC / output stage TTL with inverted signals
 R 9...26 VDC / output stage TTL with inverted signals

Pulse number - see table

Output signals
 DN A, B, R + inverted

Pulse number

200	720	1250	2500	5000
360	900	1800	3600	8192
512	1000	2000	3000	10000
600	1024	2048	4096	

Other pulse numbers on request.

Accessories

Connectors and cables

HEK 8 Sensor cable for encoders

Diagnostic accessories

11075858 Analyzer for encoders HENQ 1100

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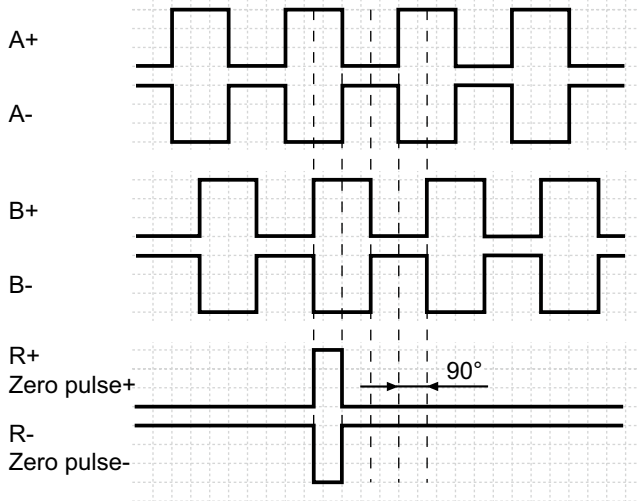
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Output signals

At positive rotating direction



Terminal assignment

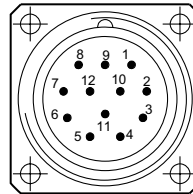
View A

Flange connector M23, 12-pin, male, CW

Pin	Assignment
1	B-
2	dnu
3	R+
4	R-
5	A+
6	A-
7	dnu
8	B+
9	dnu
10	⊥
11	dnu
12	+UB

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
$\overline{K1}$; \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



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Dimensions

