Baumer
Passion for Sensors

Incremental encoders

HOG1070.X

Extremely performant, redundant, incremental HeavyDuty encoders for offshore and deck machinery

Overview

- Protection IP66, IP67, IP69K
- Shaft insulation 3.5 kV
- Extended corrosion protection larger CX with special coating and selected materials
- Extended operating temperature optional -50...+100 °C
- Signal outputs with automatic temperature compensation for stable signals up to 350 m (HTL-P) or 550 m (TTL)
- Sealed and user-friendly field termination
- Extended protection circuit
- Redundant design with two parameterizable output signals
- Status monitoring and display with Baumer Sensor Suite
- 4-fold sealing concept for protection against abrasive dust, humid and salty moisture and temperature changes
- Cable gland 2 x M20

Picture similar

HUBNER BERLIN
A Baumer Brand

LongLife

HeavyDuty
70 years of experience

1+1=1
Combination

Technical data

Technical data - electrical ratings

Voltage supply	4.75...30 VDC (Vin = Vout, HTL/TTL)
Consumption w/o load	≤100 mA
Pulses per revolution	1 … 32768
Further pulses per revolution	Pulse numbers parameterized ex works or freely parameterizable (SMART) with Baumer Sensor Suite
Phase shift	Typ. 90 °
Duty cycle	Typ. 50 %
Reference signal	Zero pulse, width 90° or 180°
Sensing method	Optical
Output frequency	≤200 kHz
Output signals	K1, K2, K0 + inverted
Output stages	HTL-P (power linedriver) TTL
Shaft insulation	Suitable up to 3.5 kV
Transmission length	≤350 m at 100 kHz (HTL-P) ≤550 m at 100 kHz (TTL)
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-4
Approval	CE UL approval / E217823 CSA

Technical data - mechanical design

Size (flange)	ø105 mm, length 94 mm

Technical data - mechanical design

Shaft type	ø16G7 mm (blind hollow shaft) ø11 x 30 mm (solid shaft with key)
Admitted shaft load	≤350 N axial ≤450 N radial
Mounting type	Hollow shaft: central screw Solid shaft: EURO flange B10
Protection EN 60529	IP 66 / IP 67 / IP 69K
Operating speed	≤6000 rpm (mechanical)
Operating torque	≤6 Ncm
Rotor moment of inertia	160 gcm²
Material	Housing: aluminium, anodised, powder-coated Shaft, screws, torque plate, cable glands: stainless steel
Operating temperature	-50...+100 °C
Resistance	IEC 60068-2-6 Vibration 20 g, 10-2000 Hz IEC 60068-2-27 Shock 300 g, 6 ms 1 Mio. brake shocks
Corrosion protection	IEC 60068-2-52 Salt mist for ambient conditions CX according to ISO 12944-2
Connection	Terminal box with pluggable push in terminal blocks and cable gland M20

Optional

- Parameterized pulse numbers can be ordered ex works
- ATEX
- DNV

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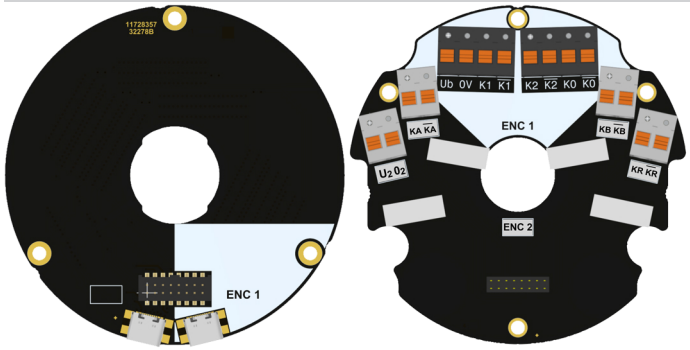
Terminal assignment

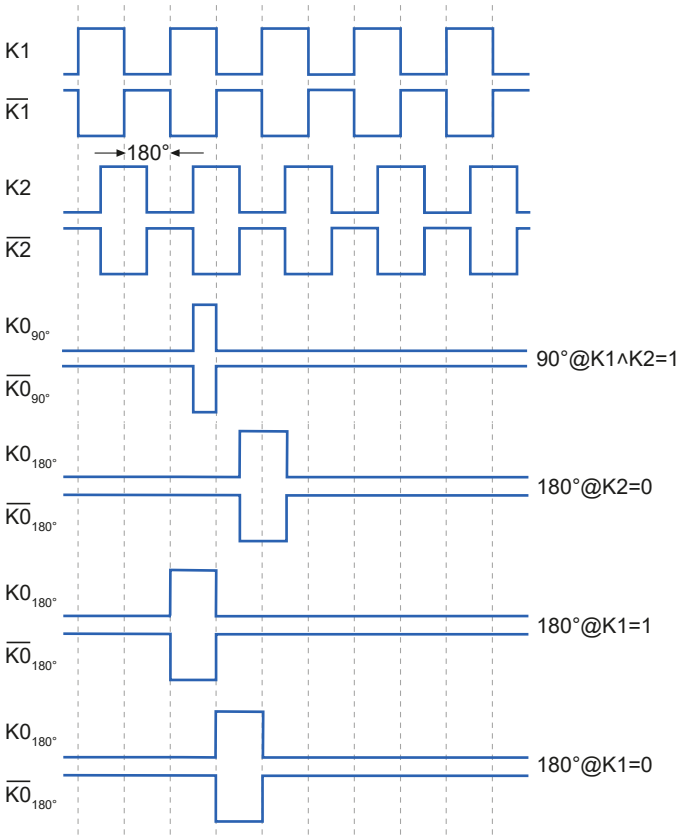


Terminal significance

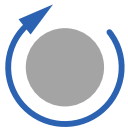
U_b	Voltage supply - encoder 1
0V	Ground - encoder 1
K0	Zero pulse (reference signal) - encoder 1
$\overline{K0}$	Zero pulse inverted - encoder 1
K1	Output signal channel 1 - encoder 1
$\overline{K1}$	Output signal channel 1 inverted - encoder 1
K2	Output signal channel 2 - encoder 1
$\overline{K2}$	Output signal channel 2 inverted - encoder 1
U2	Voltage supply - encoder 2
02	Ground - encoder 2
KR	Zero pulse (reference signal) - encoder 2
$\overline{KR}$	Zero pulse inverted - encoder 2
KA	Output signal channel 1 - encoder 2
$\overline{KA}$	Output signal channel 1 inverted - encoder 2
KB	Output signal channel 2 - encoder 2
$\overline{KB}$	Output signal channel 2 inverted - encoder 2
USB ENC1	USB-C for parameterization - encoder 1 (SMART)
USB ENC2	USB-C for parameterization - encoder 2 (SMART)

Output signals

Encoder 1



With positive direction of rotation / clockwise, with view on the encoder shaft



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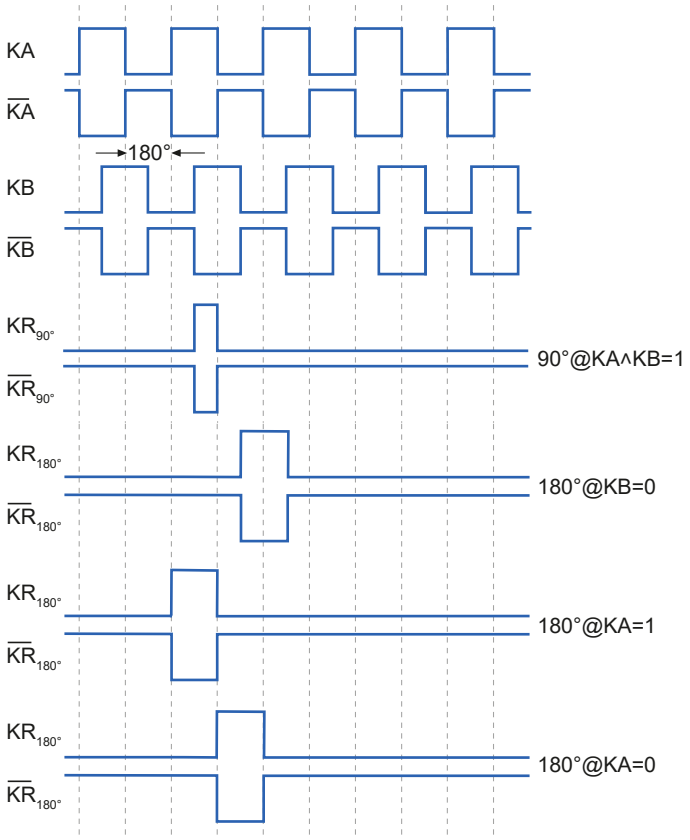
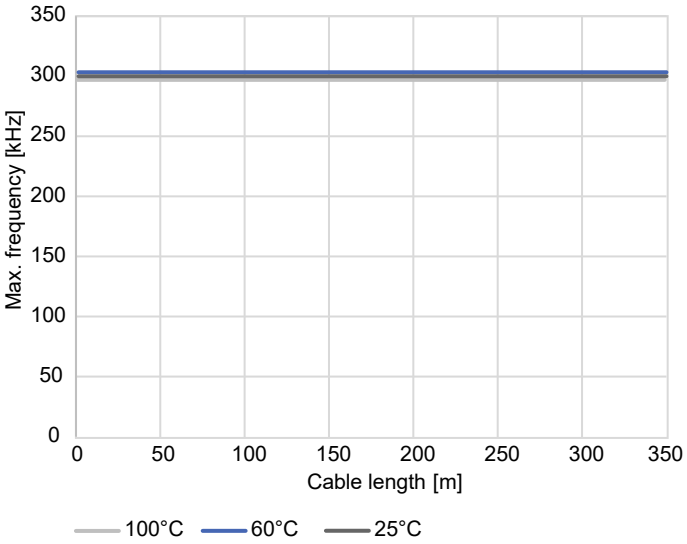
Output signals

Encoder 2



With positive direction of rotation / clockwise, with view on the encoder shaft

Derating



Max. frequency over cable length and temperature, Ub 24 V

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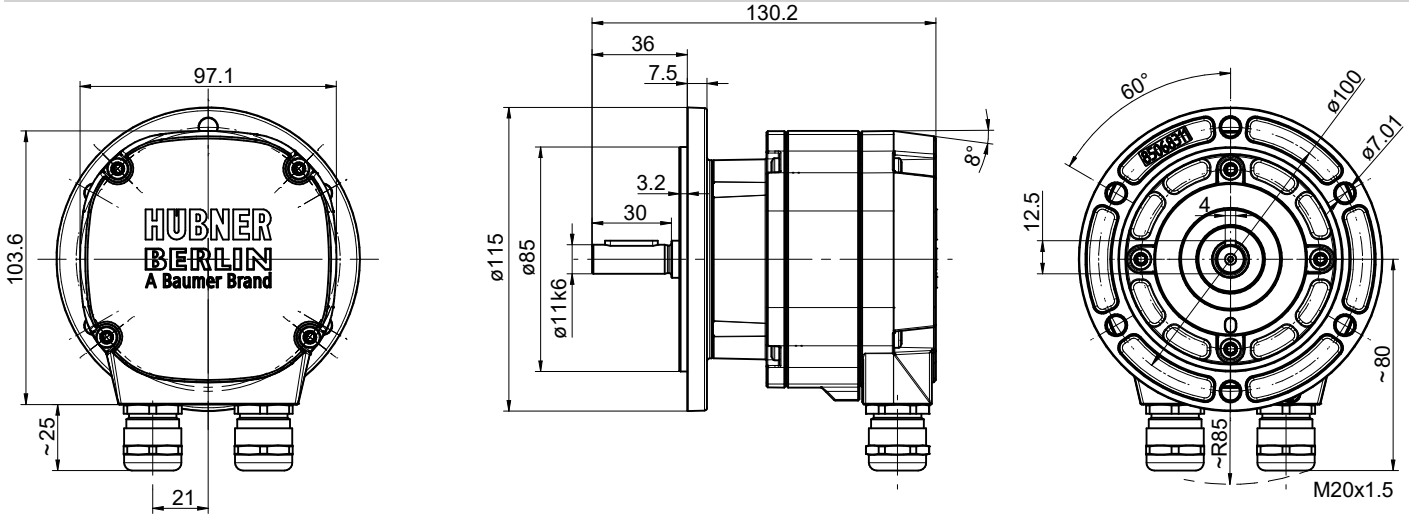
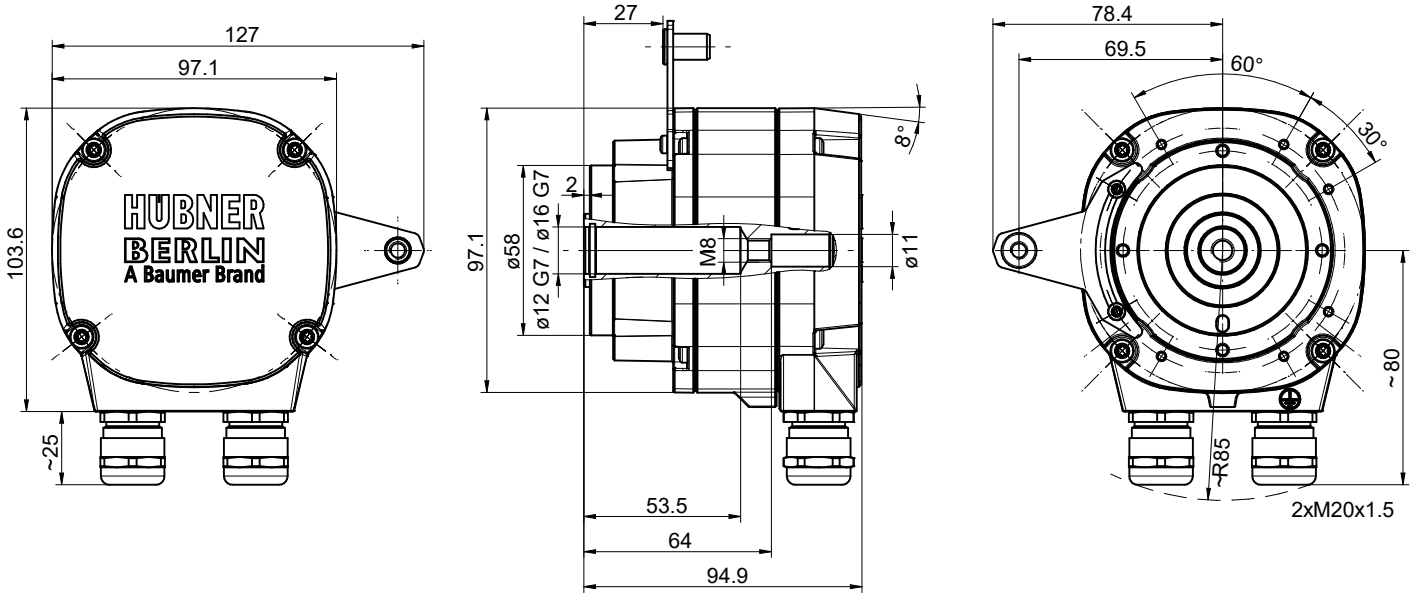
Dimensions



Solid shaft, 2 x cable gland



Blind hollow shaft, 2 x cable gland (torque plate can be mounted at different positions)

Ordering reference

Product	Shaft	Pulses per revolution, output	Connection	Comment	Material number
HOG1070.X	Solid shaft ø11 mm	Parameterization at factory[1)]	2 x Cable gland M20	Redundant – Manipulation proof	EHOG1070.X-11731308
		Parameterization & monitoring at customer	2 x Cable gland M20	SMART, redundant	EHOG1070.X-11731309
	Blind hollow shaft ø16G7 mm	Parameterization at factory[1)]	2 x Cable gland M20	Manipulation proof	EHOG1070.X-11731310
		Parameterization & monitoring at customer	2 x Cable gland M20	SMART	EHOG1070.X-11731311

1) Please choose 2x resolution, output stage and zero pulse (length and position) with your order
Resolution: 1...32768 ppr
Output stage: HTL-P or TTL
Zero pulse:
- 90°, K1=K2=1
- 180°, K1=0
- 180°, K2=0
- 180°, K1=1

Example for EHOG1070.X-11731308: encoder 1: 5000 ppr, TTL, 180°, K2=0 / encoder 2: 1024 ppr, HTL, 90°, K1=K2=1