Baumer
Passion for Sensors

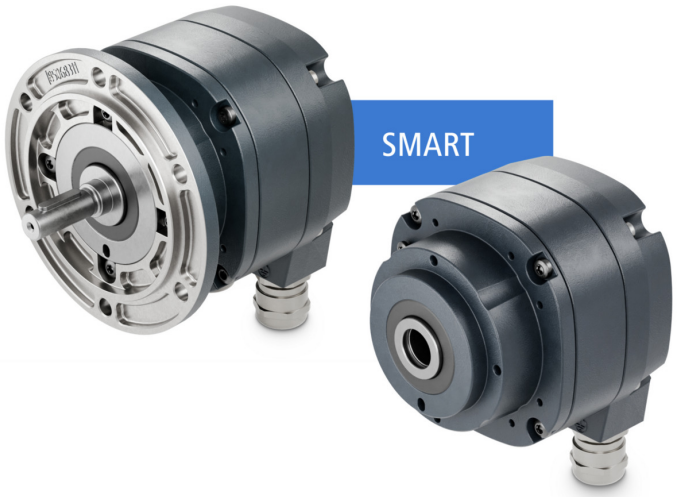
Incremental encoders

HOG1060

High-performant incremental HeavyDuty encoders for demanding machinery and asynchronous drives

Overview

- Protection IP66, IP67
- Shaft insulation 3.5 kV
- Corrosion protection CX
- Operating temperature -40...+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
- Parameterization
- 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 M20 or M25



Picture similar

HUBNER BERLIN
A Baumer Brand

LongLife

HeavyDuty
70 years of experience

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) ø20G7 mm (blind hollow shaft) ø11 x 30 mm (solid shaft with key) ø17 mm (cone shaft 1:10)
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
Operating speed	≤6000 rpm (mechanical)
Operating torque	≤6 Ncm
Rotor moment of inertia	160 gcm²
Material	Housing: aluminium, powder-coated Shaft: stainless steel
Operating temperature	-40...+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 or M25 (for connecting wires up to 1.5 mm²)

Optional

- Parameterized pulse numbers can be ordered ex works
- ATEX

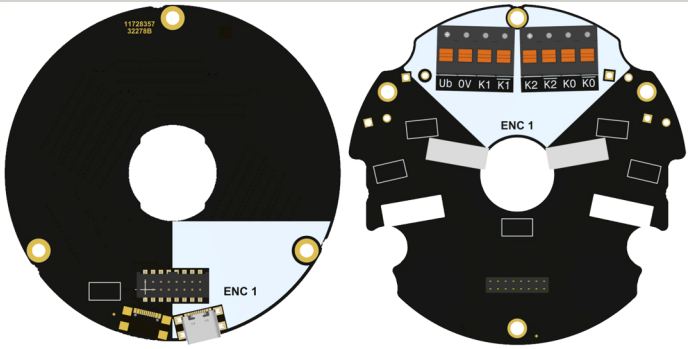
Possible combinations

- Redundant sensing with second output (HOG1070)
- Speed monitoring (HOG1090)
- Centrifugal switch FSL (HOG1095)

HOG1060

High-performant incremental HeavyDuty encoders for demanding machinery and asynchronous drives

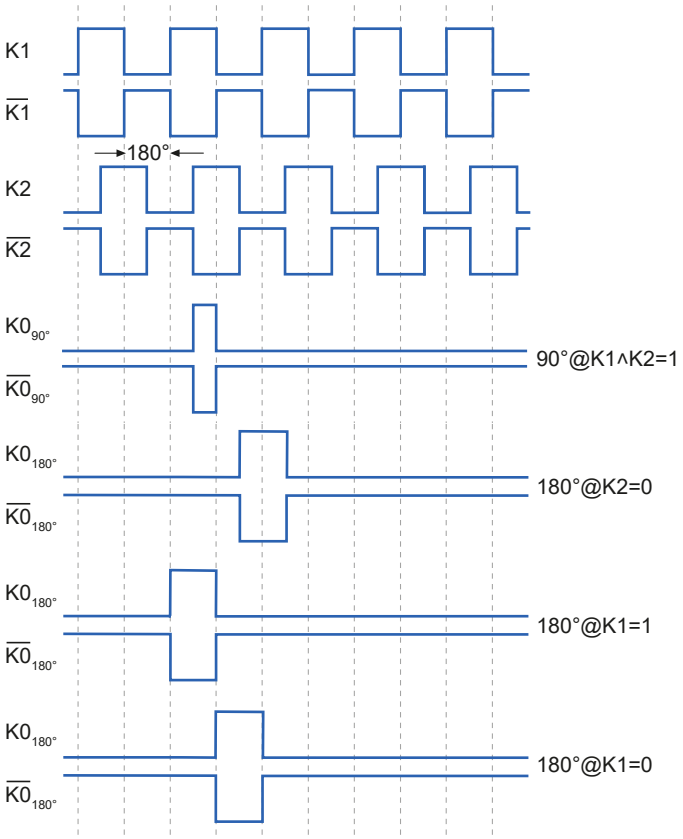
Terminal assignment



Terminal significance

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

Output signals

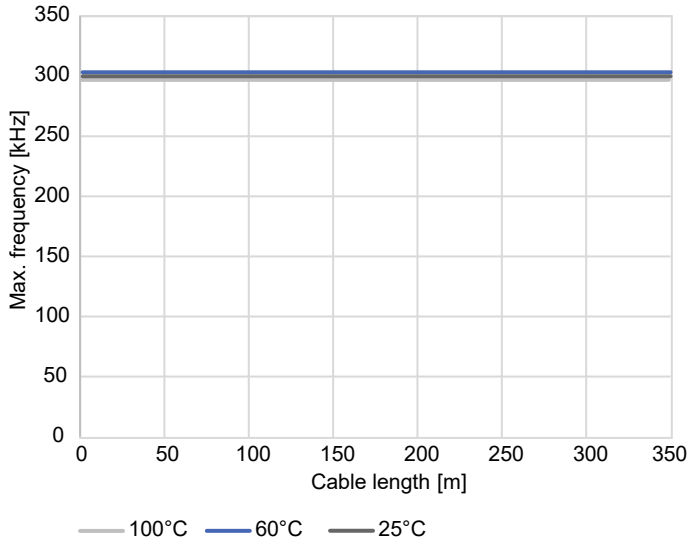


With positive direction of rotation / clockwise, with view on the encoder shaft

HOG1060

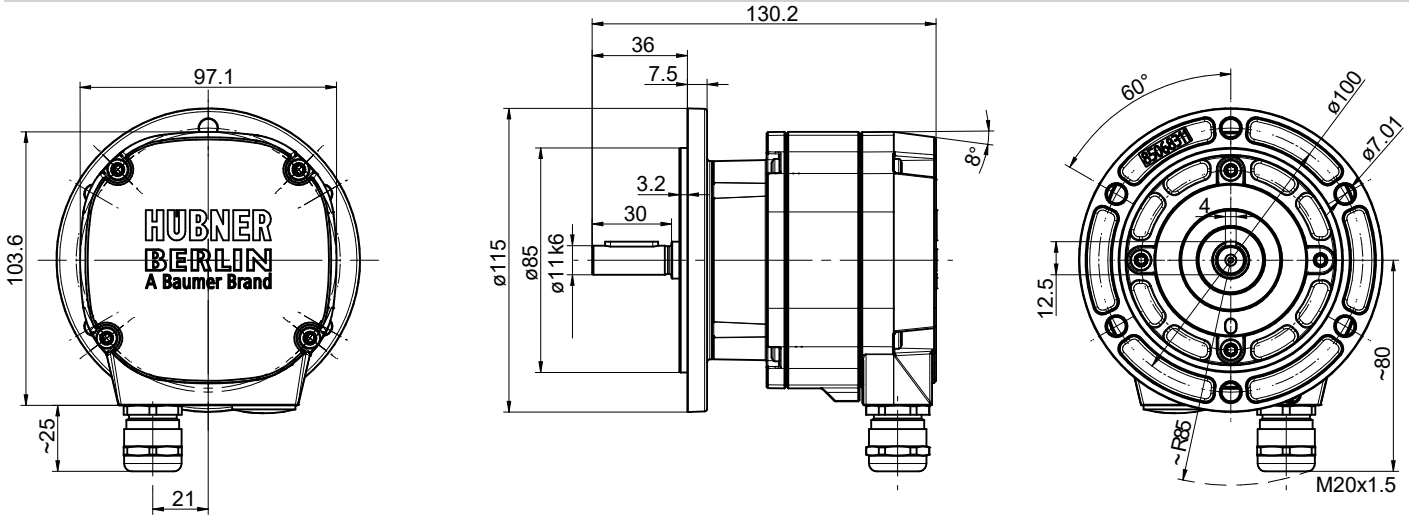
High-performant incremental HeavyDuty encoders for demanding machinery and asynchronous drives

Derating



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

Dimensions

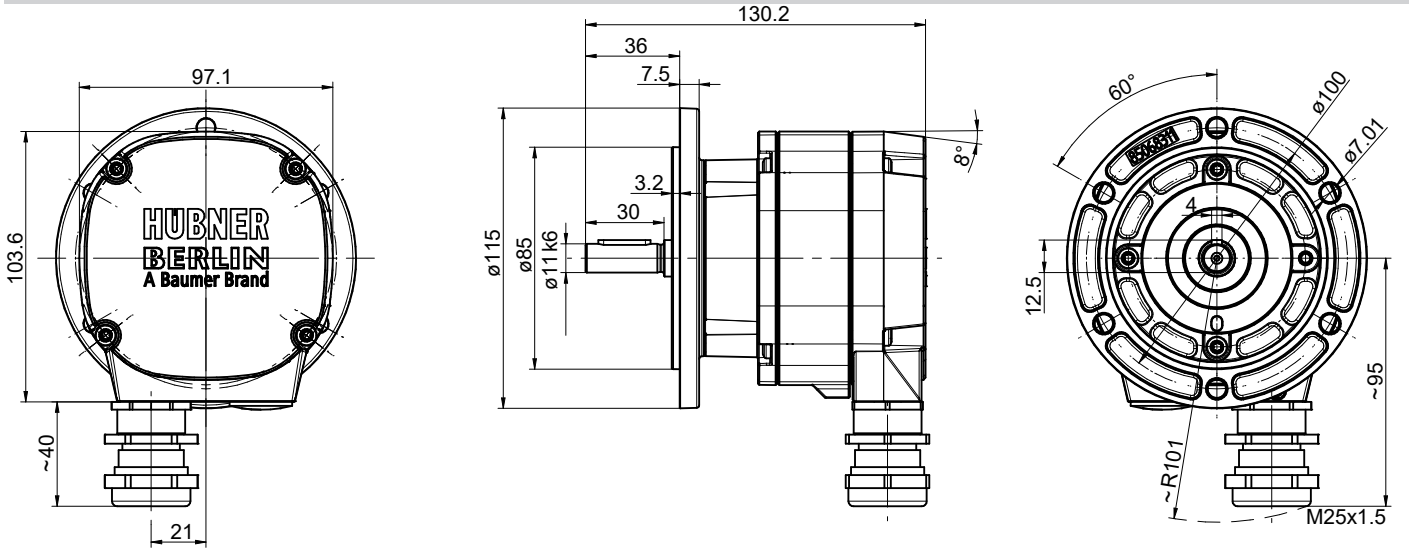


Solid shaft, cable gland M20

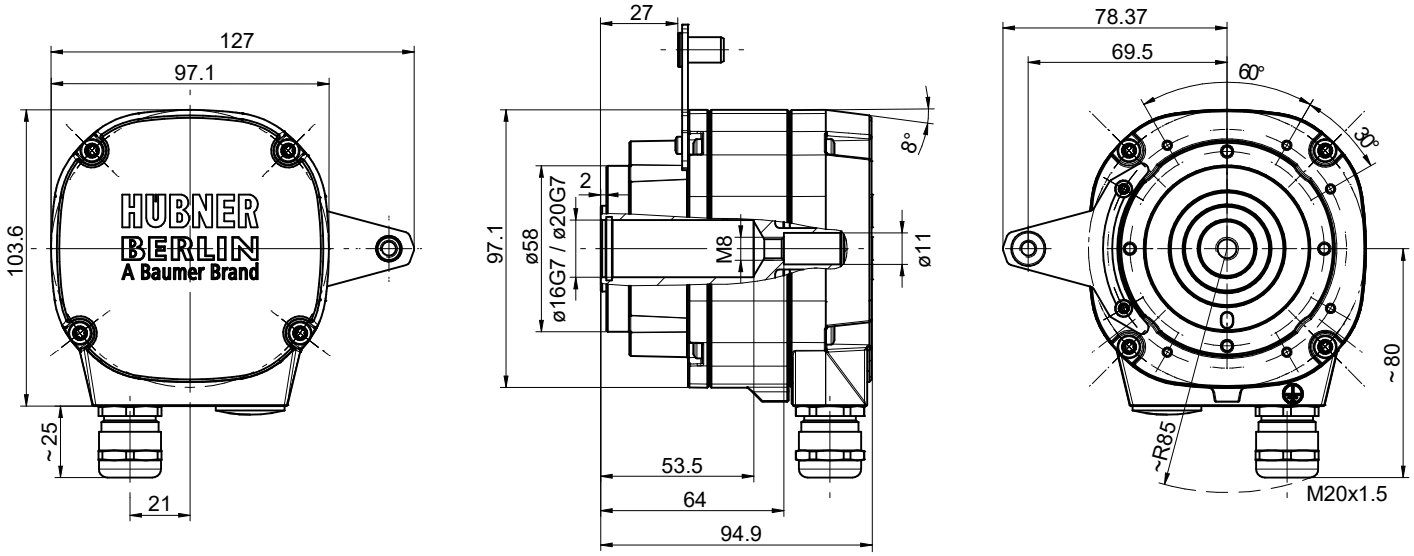
HOG1060

High-performant incremental HeavyDuty encoders for demanding machinery and asynchronous drives

Dimensions



Solid shaft, cable gland M25

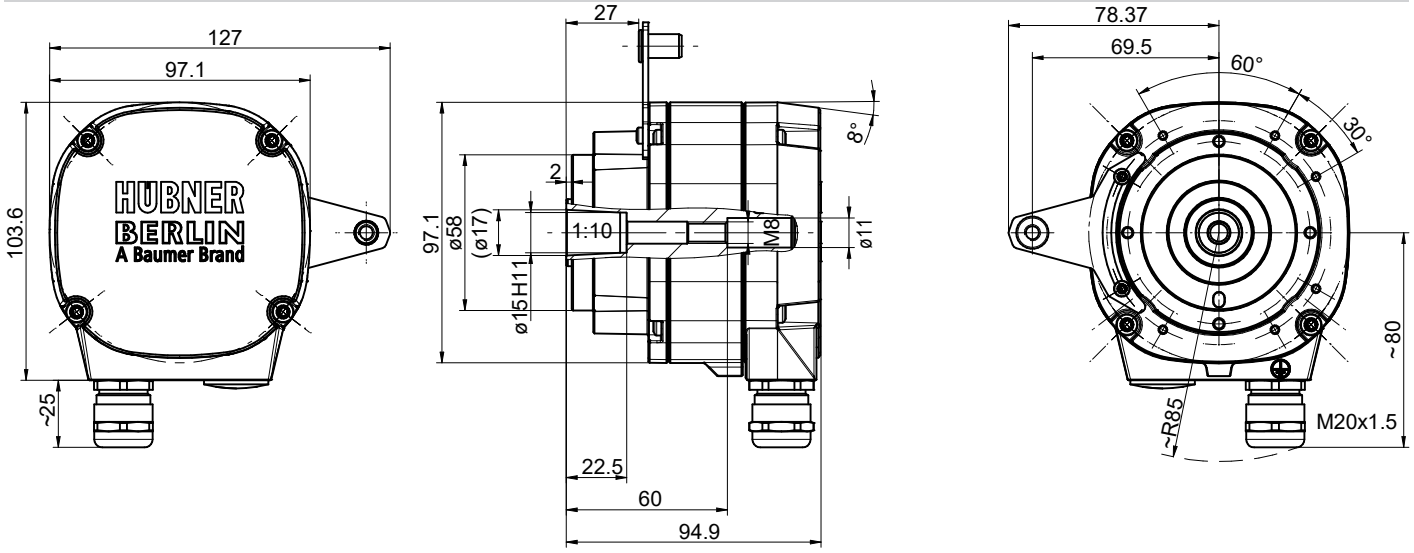


Blind hollow shaft, cable gland M20 (torque plate can be mounted at different positions)

HOG1060

High-performant incremental HeavyDuty encoders for demanding machinery and asynchronous drives

Dimensions



Cone shaft, cable gland M20 (torque plate can be mounted at different positions)

HOG1060

High-performant incremental HeavyDuty encoders for demanding machinery and asynchronous drives

Ordering reference

Product	Shaft	Pulses per revolution, output	Connection	Comment	Material number
HOG1060	Solid shaft ø11 mm	1024, HTL-P	1 x Cable gland M20	Manipulation proof	EHOG1060-11731268
			1 x Cable gland M25	Manipulation proof	EHOG1060-11731269
		2048, HTL-P	1 x Cable gland M20	Manipulation proof	EHOG1060-11731270
			1 x Cable gland M25	Manipulation proof	EHOG1060-11731271
		Parameterization at factory[1)]	1 x Cable gland M20	Manipulation proof	EHOG1060-11731272
			1 x Cable gland M25	Manipulation proof	EHOG1060-11731273
		Parameterization & monitoring at customer	1 x Cable gland M20	SMART	EHOG1060-11731274
			1 x Cable gland M25	SMART	EHOG1060-11731275
	Blind hollow shaft ø16G7 mm	1024, HTL-P	1 x Cable gland M20	Manipulation proof	EHOG1060-11731276
		2048, HTL-P	1 x Cable gland M20	Manipulation proof	EHOG1060-11731277
		Parameterization at factory[1)]	1 x Cable gland M20	Manipulation proof	EHOG1060-11731278
		Parameterization & monitoring at customer	1 x Cable gland M20	SMART	EHOG1060-11731279
	Blind hollow shaft ø20G7 mm	1024, HTL-P	1 x Cable gland M20	Manipulation proof	EHOG1060-11731280
		2048, HTL-P	1 x Cable gland M20	Manipulation proof	EHOG1060-11731281
		Parameterization at factory[1)]	1 x Cable gland M20	Manipulation proof	EHOG1060-11731282
		Parameterization & monitoring at customer	1 x Cable gland M20	SMART	EHOG1060-11731283
	Cone shaft ø17 mm	1024, HTL-P	1 x Cable gland M20	Manipulation proof	EHOG1060-11731284
		2048, HTL-P	1 x Cable gland M20	Manipulation proof	EHOG1060-11731285
		Parameterization at factory[1)]	1 x Cable gland M20	Manipulation proof	EHOG1060-11731286
		Parameterization & monitoring at customer	1 x Cable gland M20	SMART	EHOG1060-11731287

1) Please choose 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 EHOG1060 - 11731272: 5000 ppr, TTL, 180°, K2=0