Baumer
Passion for Sensors

Incremental encoders

POG 86

Solid shaft with EURO flange B10
500...5000 pulses per revolution

Overview

- Robust, compact housing
- Two bearings with large distance, one at each end
- High shaft load up to 350 N
- Shock resistant up to 300 g
- Highest operating speed 12000 rpm
- TTL output driver for cable length up to 550 m
- Terminal box, turn by 180°



HTL TTL® HÜBNER BERLIN A Baumer Brand

Technical data

Technical data - electrical ratings	
Voltage supply	9...30 VDC 5 VDC ±5 %
Consumption w/o load	≤100 mA
Pulses per revolution	500 … 5000
Phase shift	90 ° ±20°
Duty cycle	45…55 % 40…60 % (>3072 pulses)
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤170 kHz ≤300 kHz (on request)
Output signals	K1, K2, K0 + inverted Error output (option EMS)
Output stages	HTL-P (power linedriver) TTL/RS422
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE UL/CSA
Technical data - mechanical design	
Size (flange)	ø115 mm
Shaft type	ø11 mm solid shaft

Technical data - mechanical design	
Admitted shaft load	≤250 N axial ≤350 N radial
Flange	EURO flange B10
Protection DIN EN 60529	IP 56
Operating speed	≤12000 rpm (mechanical)
Operating torque typ.	2 Ncm
Rotor moment of inertia	200 gcm²
Material	Housing: aluminium, coated Shaft: stainless steel
Operating temperature	-40...+100 °C -25...+100 °C (>3072 pulses)
Resistance	IEC 60068-2-6 Vibration 10 g, 10...2000 Hz IEC 60068-2-27 Shock 300 g, 1 ms
Corrosion protection	IEC 60068-2-52 Salt mist for ambient conditions C4 according to ISO 12944-2
Explosion protection	II 3 G Ex nA IIC T4 Gc (gas) II 3 D Ex tc IIIB T135°C Dc (dust)
Connection	Terminal box
Weight approx.	1,4 kg

Optional

- Function control with EMS (Enhanced Monitoring System)

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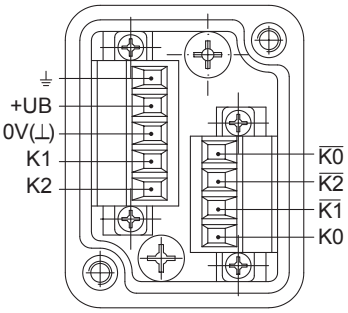
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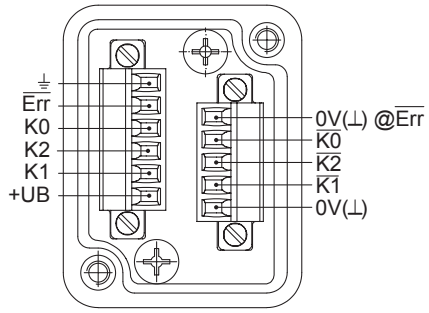
500...5000 pulses per revolution

Terminal assignment

View A *(see dimension)*
Connecting terminal terminal box



Option EMS: View A *(see dimension)*
Connecting terminal terminal box

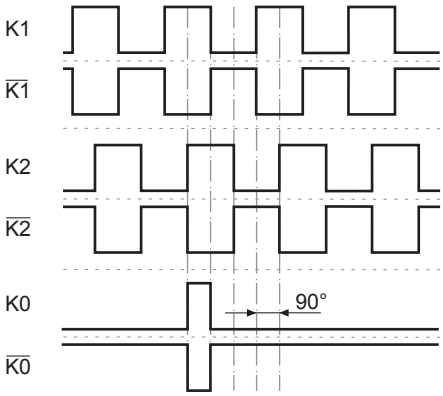


Terminal significance

+UB	Voltage supply
0V (⊥)	Ground
⏚	Earth ground (housing)
K1	Output signal channel 1
$\overline{K1}$	Output signal channel 1 inverted
K2	Output signal channel 2 (offset by 90° to channel 1)
$\overline{K2}$	Output signal channel 2 inverted
K0	Zero pulse (reference signal)
$\overline{K0}$	Zero pulse inverted
$\overline{Err}$	Error output (option EMS)

Output signals

HTL/TTL
At positive rotating direction *(see dimension)*



Option EMS (Enhanced Monitoring System): Status LED / error output

Flash light red*	Error of signal sequenze, zero pulse or pulses (Error output = HIGH-LOW alternation)
Red	Overload output transistors (Error output = LOW)
Flash light green	Device o.k., rotating (Error output = HIGH)
Green	Device o.k., stopped (Error output = HIGH)
No light	No voltage supply connection or wrong connection (Error output = LOW)

* Only at rotating device

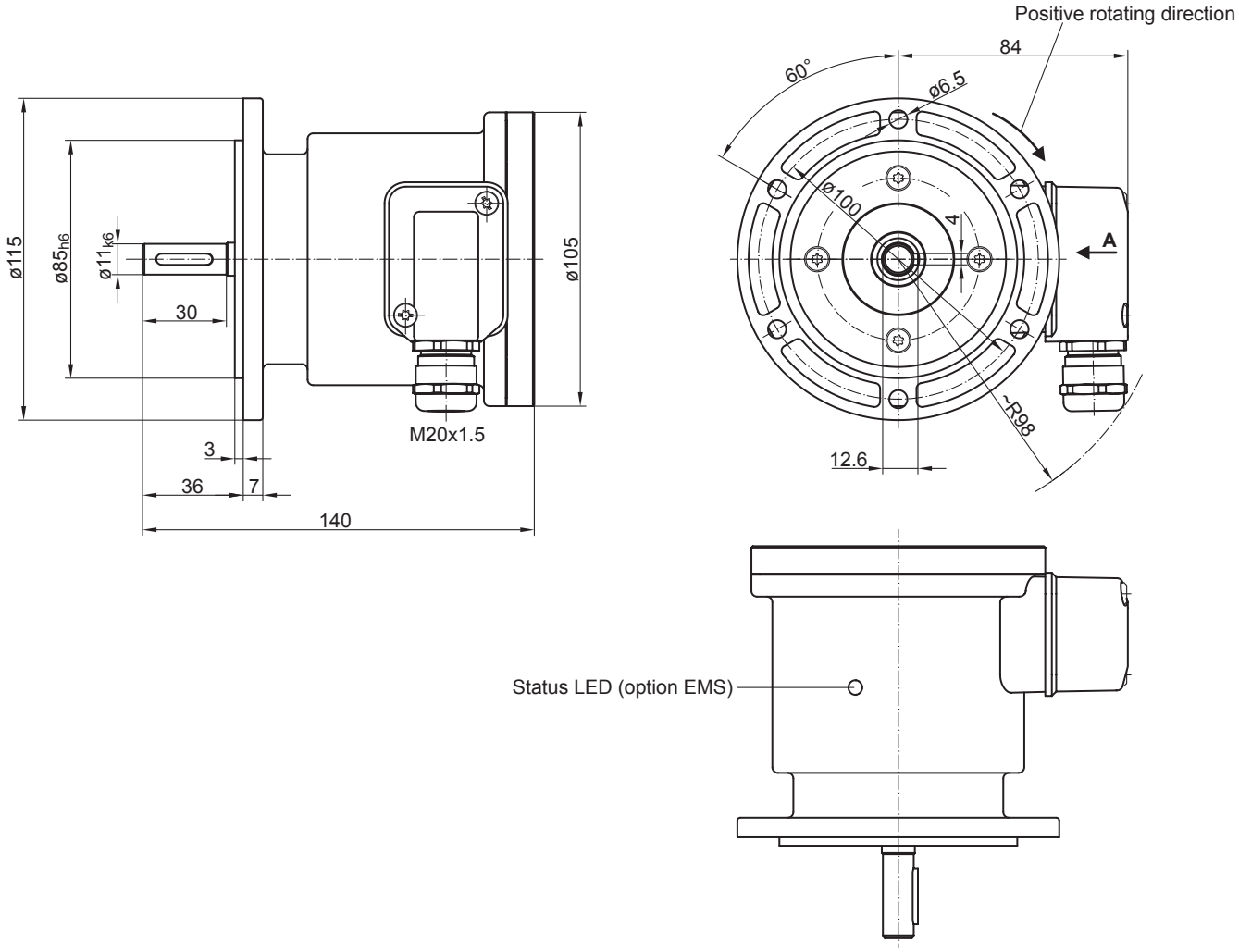
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Dimensions



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Ordering reference

	POG86	##	T	N	1	DN	####	###
Product								
Incremental encoder	POG86							
EMS - Enhanced Monitoring System								
Without EMS								
With EMS		.2						
Connection								
1x terminal box, radial			T					
Insulation								
Without				N				
Shaft diameter								
ø11 mm solid shaft					1			
Output signals								
K1, K2, K0						DN		
Pulse number(1)								
500							500	
512							512	
1000							1000	
1024							1024	
1250							1250	
2048							2048	
2500							2500	
3072							3072	
4096							4096	
5000							5000	
Voltage supply / output stage								
9...30 VDC / output stage HTL with inverted signals								I
5 VDC ±5 % / TTL								T
9...30 VDC / output stage TTL with inverted signals								R

(1) Other pulse numbers on request.

Accessories

Mounting accessories	
	Spring disk coupling K 35 (shaft ø6...12 mm)
	Spring disk coupling K 50 (shaft ø11...16 mm)
	Spring disk coupling K 60 (shaft ø11...22 mm)

Connectors and cables	
	Sensor cable for encoders HEK 8

Diagnostic accessories	
11075858	Analyzer for encoders HENQ 1100
11075880	Analyzer for encoders HENQ 1100 B

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