

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°



HUBNER
BERLIN
A Baumer Brand

Technical data

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC $\pm 5\%$
Consumption w/o load	≤ 100 mA
Pulses per revolution	500 ... 5000
Phase shift	$90^\circ \pm 20^\circ$
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 approval / E217823 / CSA

Technical data - mechanical design

Size (flange)	$\varnothing 115$ mm
Shaft type	$\varnothing 11$ mm solid shaft

Technical data - mechanical design

Admitted shaft load	≤ 250 N axial ≤ 350 N radial
Flange	EURO flange B10
Protection EN 60529	IP 56
Operating speed	≤ 12000 rpm (mechanical)
Operating torque typ.	2 Ncm
Rotor moment of inertia	200 gcm^2
Material	Housing: aluminium, coated Shaft: stainless steel
Operating temperature	$-40...+100^\circ\text{C}$ $-25...+100^\circ\text{C}$ (>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 ec IIC T4 Gc (gas) II 3 D Ex tc IIIB T135°C Dc (dust) (only with option ATEX)
Connection	Terminal box
Weight approx.	1.4 kg

Optional

- Function control with EMS (Enhanced Monitoring System)

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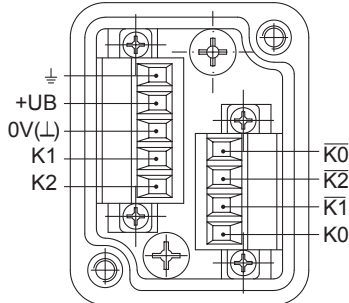
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Terminal assignment

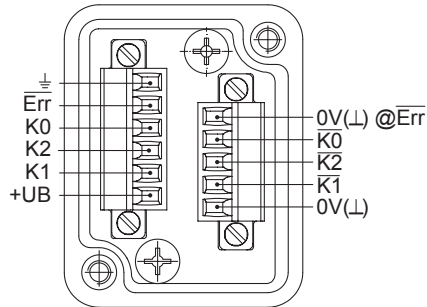
View A (see dimension)

Connecting terminal terminal box



Option EMS: View A (see dimension)

Connecting terminal terminal box



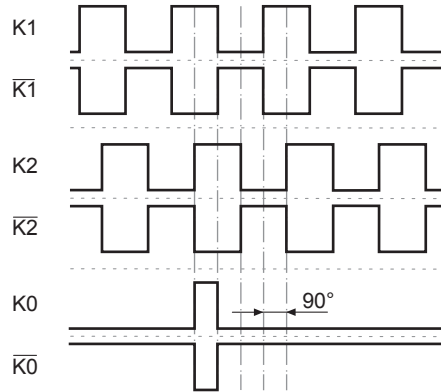
Terminal significance

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

Output signals

HTL/TTL

At positive rotating direction (see dimension)



Option EMS: Status LED / error output

Flash light red*	Error of signal sequence, 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)

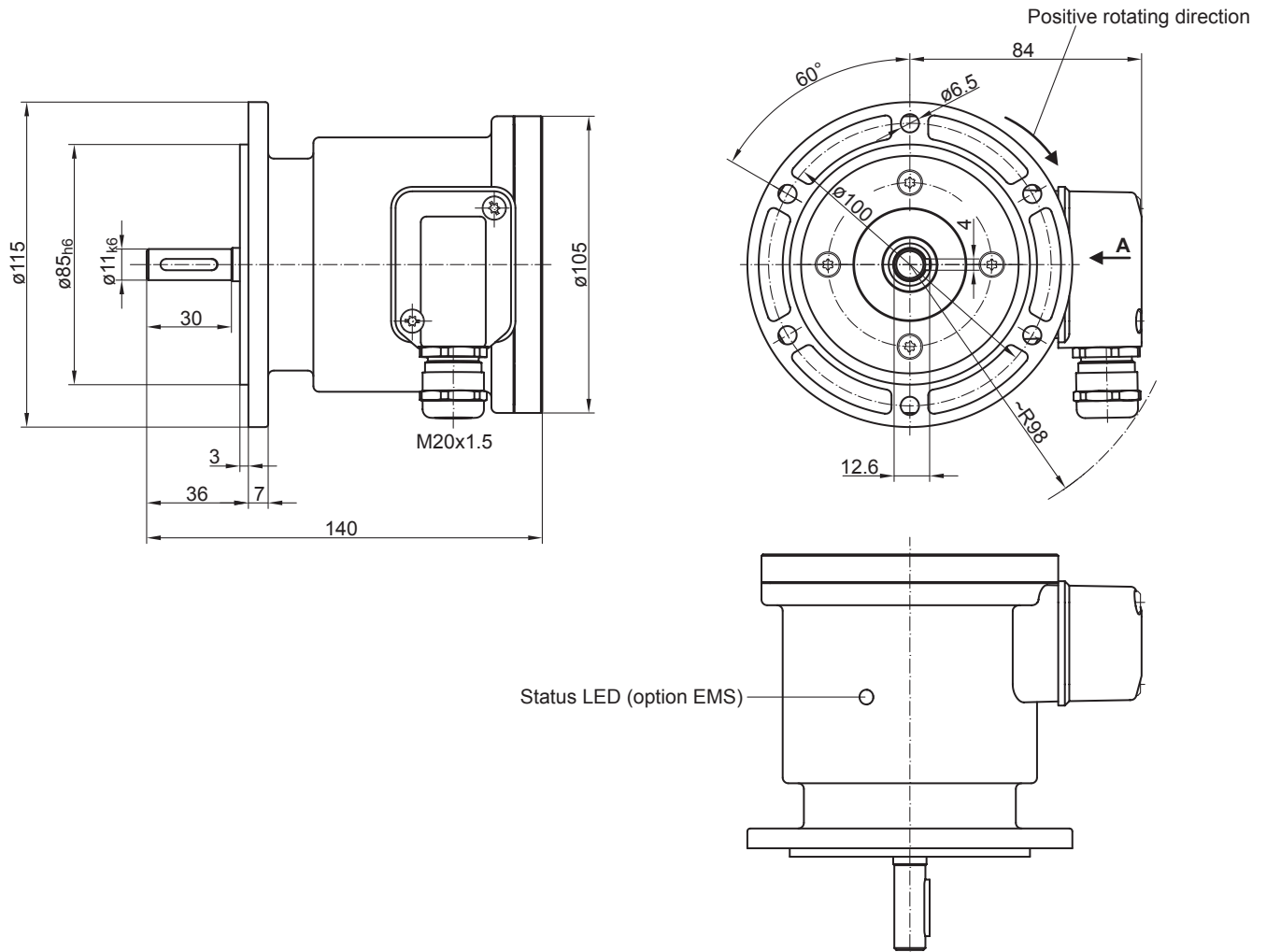
* Only at rotating device

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Dimensions



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Ordering reference

	POG86	.	#	T	N	1	DN	#####	#
Product	Incremental encoder								
	POG86								
EMS Enhanced Monitoring System									
With EMS			2						
Without EMS			-						
Connection									
Terminal box, radial, M20 cable gland for 5 - 13mm cable				T					
Shaft insulation									
No shaft insulation					N				
Shaft diameter									
Solid shaft Ø11 mm						1			
Output signals									
K1, K2, K0 inverted signals							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 / signals									
9...30 VDC / output stage HTL with inverted signals									I
5 VDC / output stage TTL with inverted signals									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)