

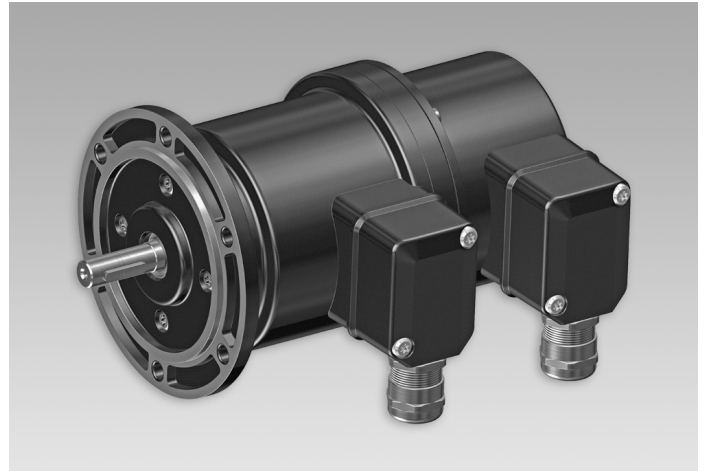
## POG 86 G

Twin encoder with two electrically separated systems

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

### Overview

- Twin encoder featuring two separate systems
- 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	$\leq 100$ 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 $90^\circ$
Output frequency	$\leq 120$ kHz $\leq 300$ kHz (on request)
Output signals	K1, K2, K0 + inverted Error output (option EMS)
Output stages	HTL-P (power linedriver) TTL/RS422
Sensing method	Optical
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE UL/CSA

#### Technical data - mechanical design

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

#### Technical data - mechanical design

Admitted shaft load	$\leq 250$ N axial $\leq 350$ N radial
Flange	EURO flange B10
Protection EN 60529	IP 56
Operating speed	$\leq 12000$ rpm (mechanical)
Operating torque typ.	2 Ncm
Rotor moment of inertia	200 gcm <sup>2</sup>
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 ec IIC T4 Gc (gas) II 3 D Ex tc IIIB T135°C Dc (dust) (only with option ATEX)
Connection	2x terminal box
Weight approx.	2 kg

### Optional

- Function control with EMS (Enhanced Monitoring System)

## POG 86 G

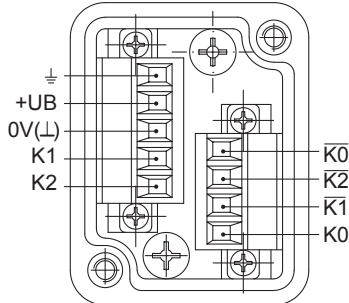
Twin encoder with two electrically separated systems

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

### Terminal assignment

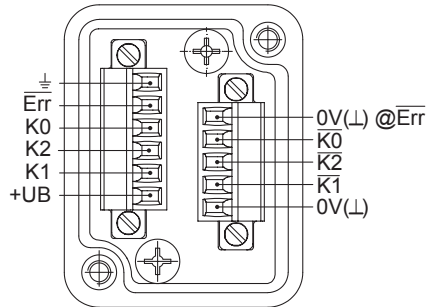
#### View A (see dimension)

Connecting terminal terminal box



#### Option EMS: View A (see dimension)

Connecting terminal terminal box



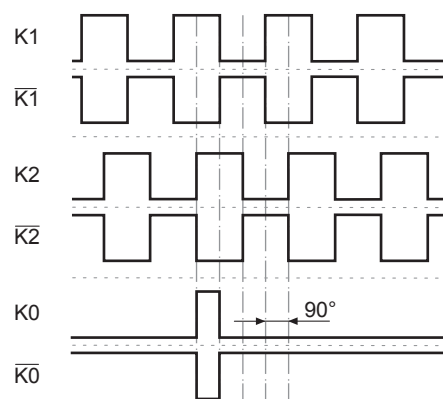
### Terminal significance

+UB	Voltage supply
0V (⊥)	Ground
⊥	Earth ground (housing)
K1	Output signal channel 1
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)

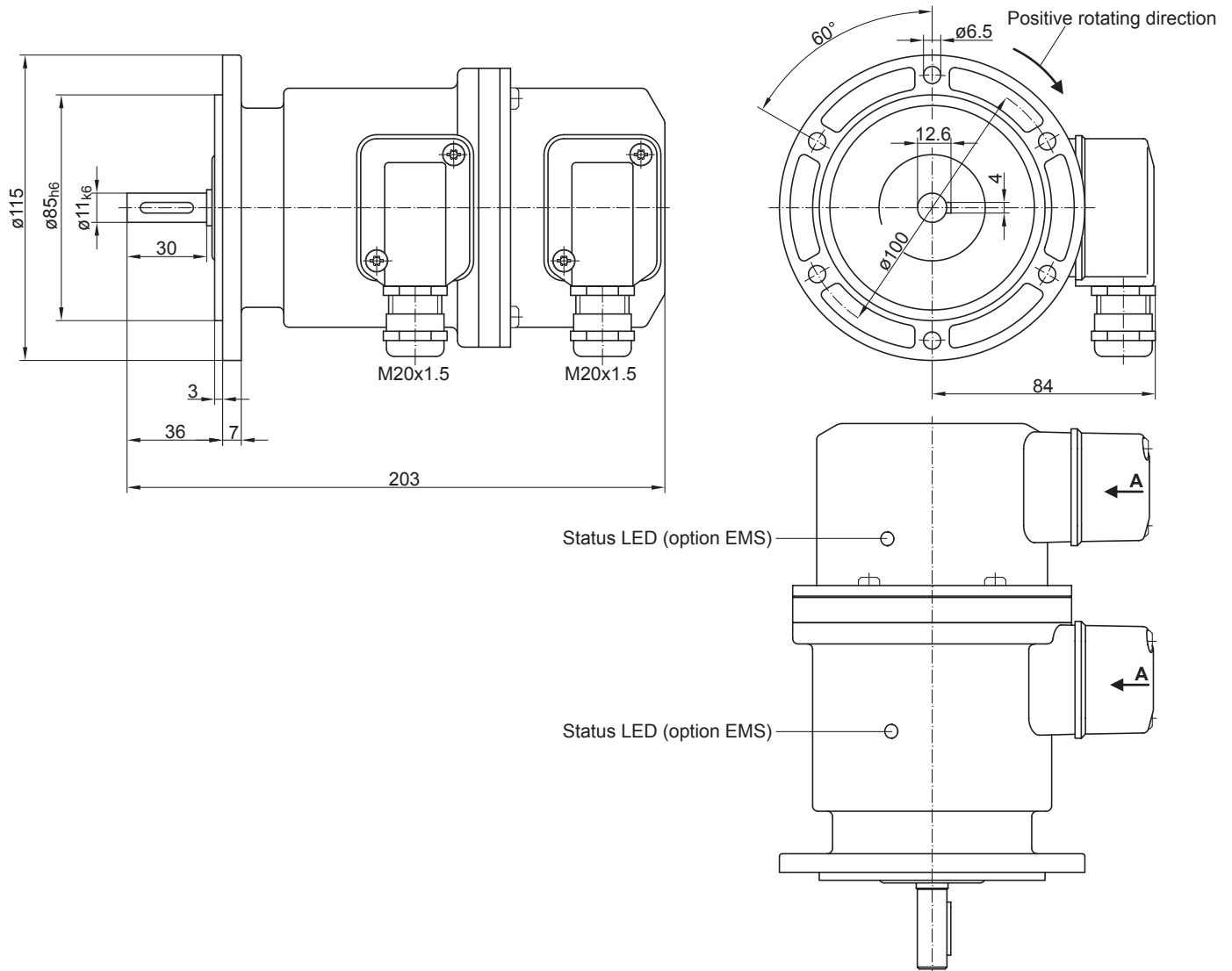
\* Only at rotating device

## POG 86 G

Twin encoder with two electrically separated systems

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

### Dimensions



## POG 86 G

Twin encoder with two electrically separated systems

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

### Ordering reference

	POG86	##	G	T	N	1	DN	####	###	DN	####	###
<b>Product</b>												
Twin encoder	POG86											
<b>EMS - Enhanced Monitoring System</b>												
Without EMS												
With EMS		.2										
<b>Redundant encoder</b>												
With redundant encoder			G									
<b>Connection</b>												
1x terminal box, radial				T								
<b>Insulation</b>												
Without					N							
<b>Shaft diameter</b>												
ø11 mm solid shaft						1						
<b>Output signals</b>												
K1, K2, K0							DN					
<b>Pulse number<sup>(1)</sup></b>												
500								500				
512								512				
1000								1000				
1024								1024				
1250								1250				
2048								2048				
2500								2500				
3072								3072				
4096								4096				
5000								5000				
<b>Voltage supply / output stage</b>												
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			
<b>Output signals (G)</b>												
K1, K2, K0										DN		
<b>Pulse number (G)<sup>(1)</sup></b>												
500											500	
512											512	
1000											1000	
1024											1024	
1250											1250	
2048											2048	
2500											2500	
3072											3072	
4096											4096	
5000											5000	
<b>Voltage supply / output stage (G)</b>												
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.

## POG 86 G

Twin encoder with two electrically separated systems

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

### Accessories

#### Mounting accessories

Spring disk coupling K 35 (shaft  $\varnothing$ 6...12 mm)Spring disk coupling K 50 (shaft  $\varnothing$ 11...16 mm)Spring disk coupling K 60 (shaft  $\varnothing$ 11...22 mm)

#### Diagnostic accessories

11075858 Analyzer for encoders HENQ 1100

11075880 Analyzer for encoders HENQ 1100 B