Baumer
Passion for Sensors

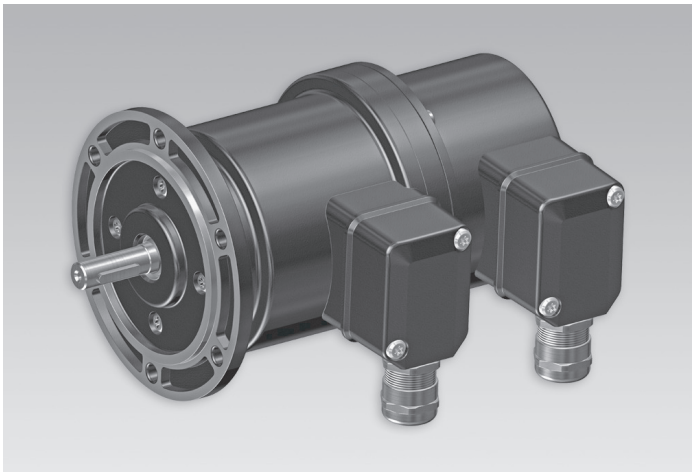
Incremental encoders - combination

POG 9 G

Twin encoder with two electrically separated systems
Solid shaft with EURO flange B10 300…5000 pulses per revolution

Overview

- Twin encoder featuring two separate systems
- TTL output driver for cable length up to 550 m
- Very high resistance to shock
- EURO flange B10 / solid shaft ø11 mm



HTL TTL® B10® EURO FLANGE 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	300 … 5000
Phase shift	90 ° ±20°
Duty cycle	40…60 %
Reference signal	Zero pulse, width 90°
Output frequency	≤120 kHz ≤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 approval / E217823
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 die-cast Shaft: stainless steel
Operating temperature	-30...+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	2x terminal box
Weight approx.	2 kg

Optional

- Function control with EMS (Enhanced Monitoring System)

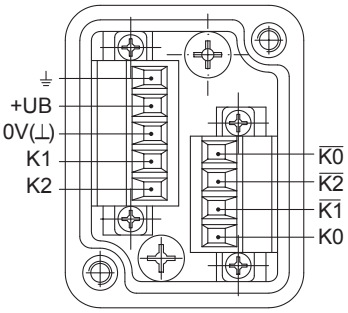
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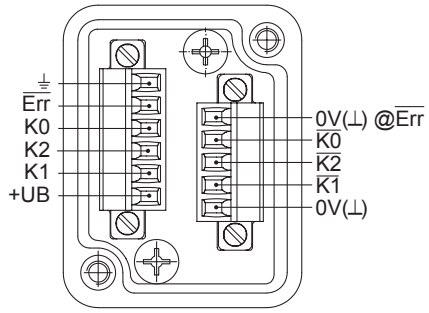
Twin encoder with two electrically separated systems
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Terminal assignment

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



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

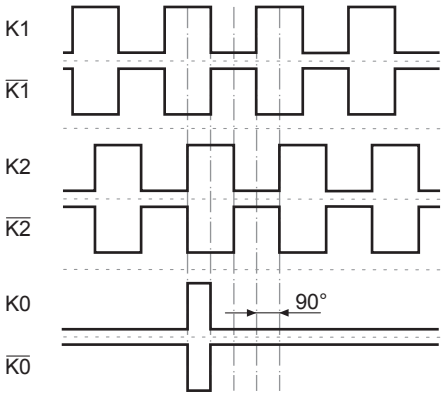


Terminal significance

+UB	Voltage supply
0V (⊥)	Ground
⏚	Earth ground (housing)
K1	Output signal channel 1
$\overline{K1}$	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

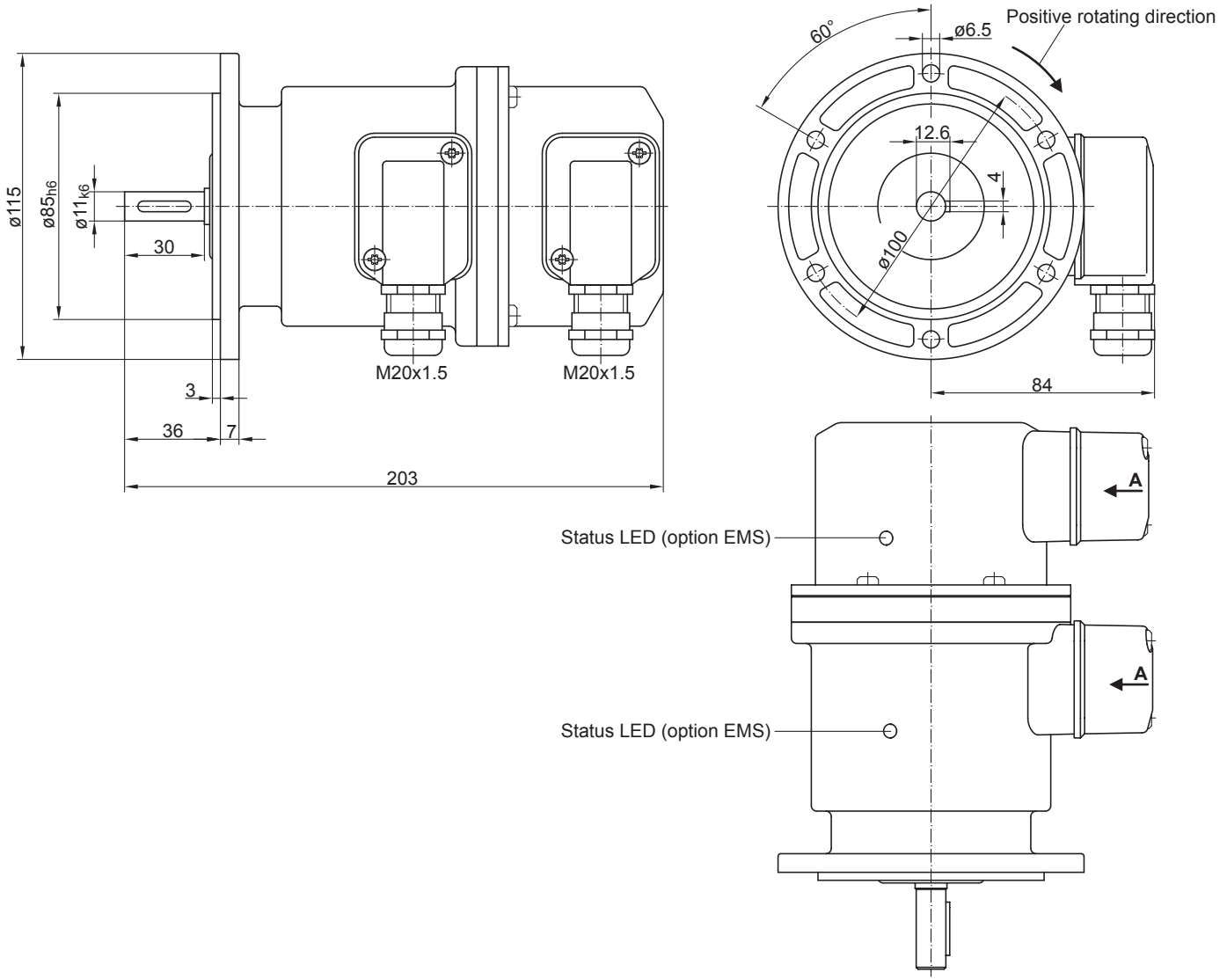
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POG 9 G

Twin encoder with two electrically separated systems

Solid shaft with EURO flange B10 300…5000 pulses per revolution

Dimensions



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Twin encoder with two electrically separated systems
Solid shaft with EURO flange B10 300…5000 pulses per revolution

Ordering reference

	POG9	##	G	DN	####	###	/	DN	####	###
Product										
Twin encoder	POG9									
EMS - Enhanced Monitoring System										
Without EMS										
With EMS		.2								
Redundant encoder										
With redundant encoder			G							
Output signals										
K1, K2, K0				DN						
Pulse number(1)										
300					300					
500					500					
512					512					
1000					1000					
1024					1024					
1200					1200					
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 / output stage TTL with inverted signals						TTL				
9...30 VDC / output stage TTL with inverted signals						R				
Output signals (G)										
K1, K2, K0								DN		
Pulse number (G)(1)										
300									300	
500									500	
512									512	
1000									1000	
1024									1024	
1200									1200	
2048									2048	
2500									2500	
3072									3072	
4096									4096	
5000									5000	
Voltage supply / output stage (G)										
9...30 VDC / output stage HTL with inverted signals										I
5 VDC / output stage TTL with inverted signals										TTL
9...30 VDC / output stage TTL with inverted signals										R

(1) Other pulse numbers on request.

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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 with a power pack

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