Baumer
Passion for Sensors

Incremental encoders

POG 9

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

Overview

- Encoder with solid shaft ø11 mm
- Optical sensing method
- EURO flange B10
- Very high resistance to shock
- Output stage HTL or TTL
- TTL output driver for cable length up to 550 m



HTL TTL® B10® EURO FLANSCH 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°
Sensing method	Optical
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
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	Terminal box
Weight approx.	1,4 kg

Optional

- Function control with EMS (Enhanced Monitoring System)
- Second shaft end

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2020-02-18

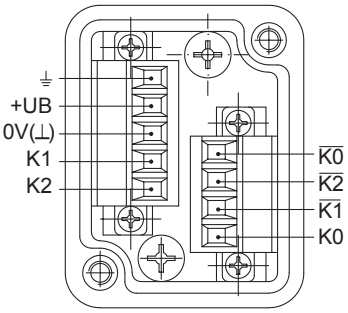
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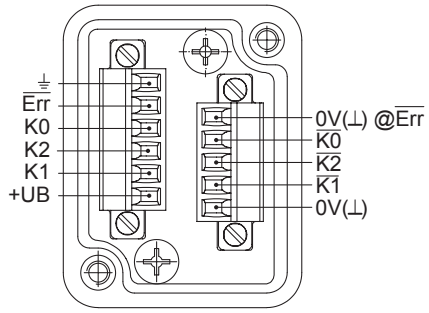
300…5000 pulses per revolution

Terminal assignment

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



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

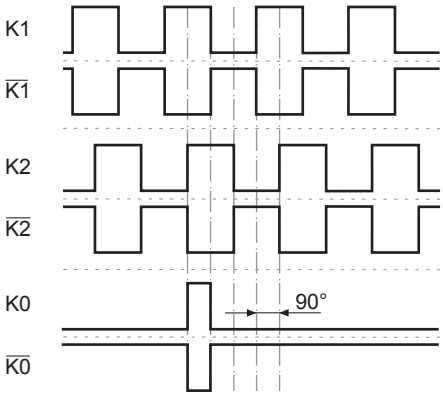


Terminal significance

+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)

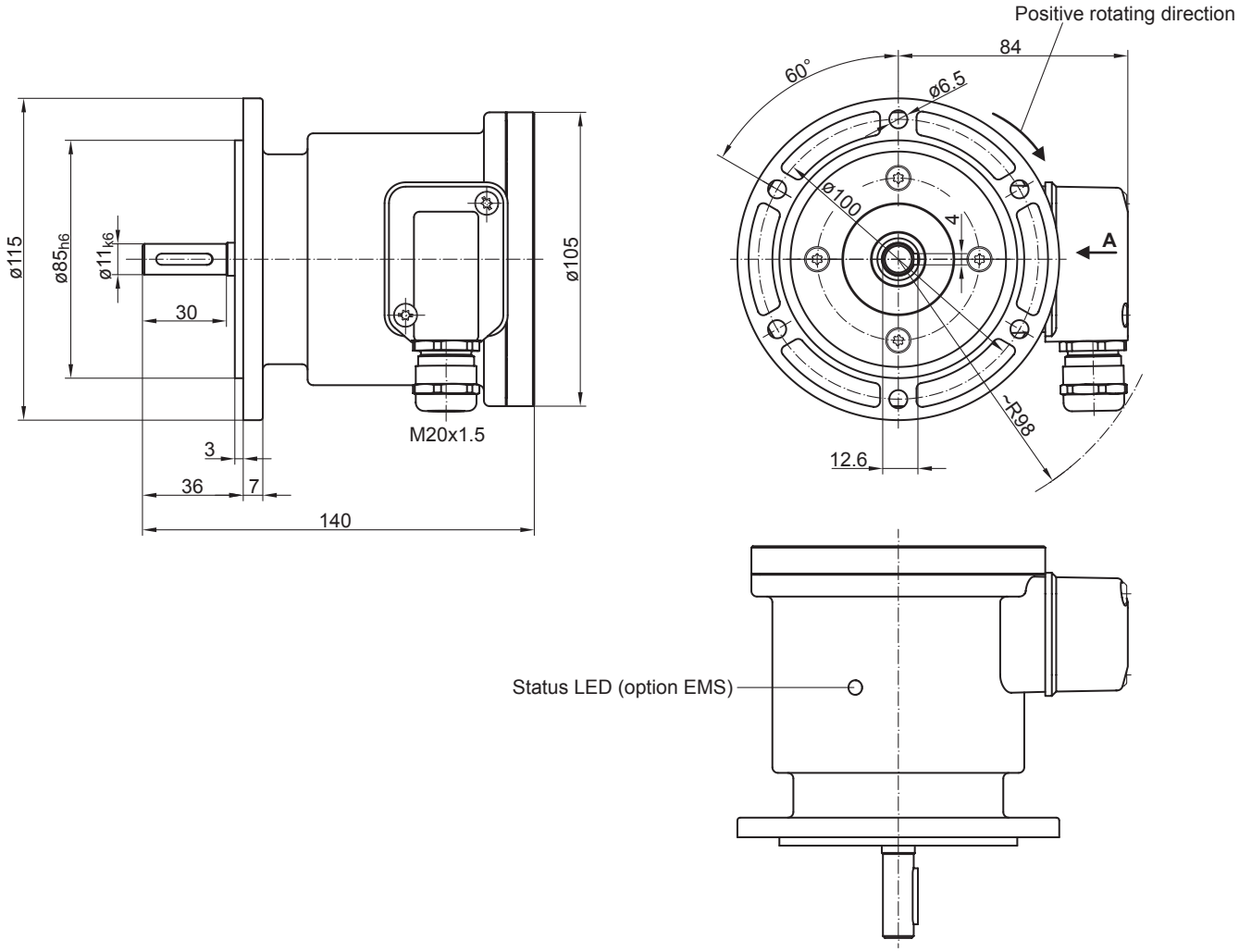
* Only at rotating device

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Dimensions



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Ordering reference

	POG9	##	DN	####	###
Product					
Incremental encoder	POG9				
EMS - Enhanced Monitoring System					
Without EMS					
With EMS		.2			
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

(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 with a power pack

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