

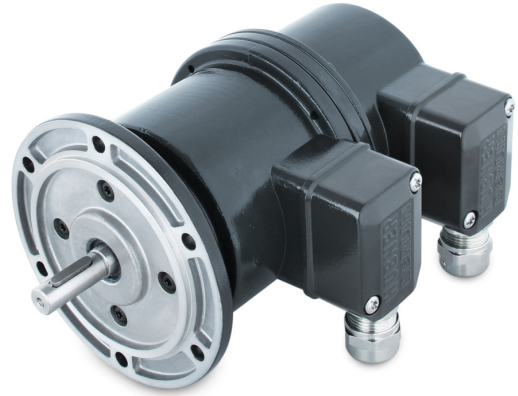
POG 9 G

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 $\varnothing 11$ mm



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	$90^\circ \pm 20^\circ$
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)	$\varnothing 115$ 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 die-cast Shaft: stainless steel
Operating temperature	$-30...+100^\circ\text{C}$ $-25...+100^\circ\text{C}$ (>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	2x terminal box
Weight approx.	2 kg

Optional

- Function control with EMS (Enhanced Monitoring System)

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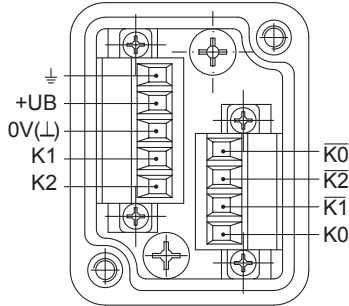
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Terminal assignment

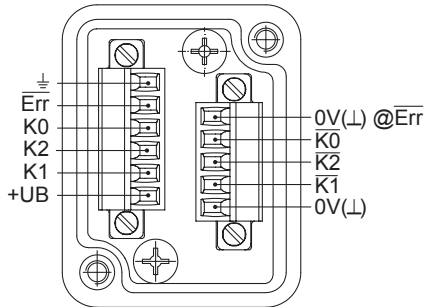
View A (see dimension)

Connecting terminal terminal box



Option EMS: View A (see dimension)

Connecting terminal terminal box



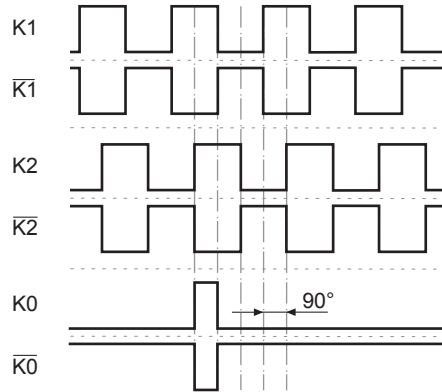
Terminal significance

+UB	Voltage supply
0V (L)	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: 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)

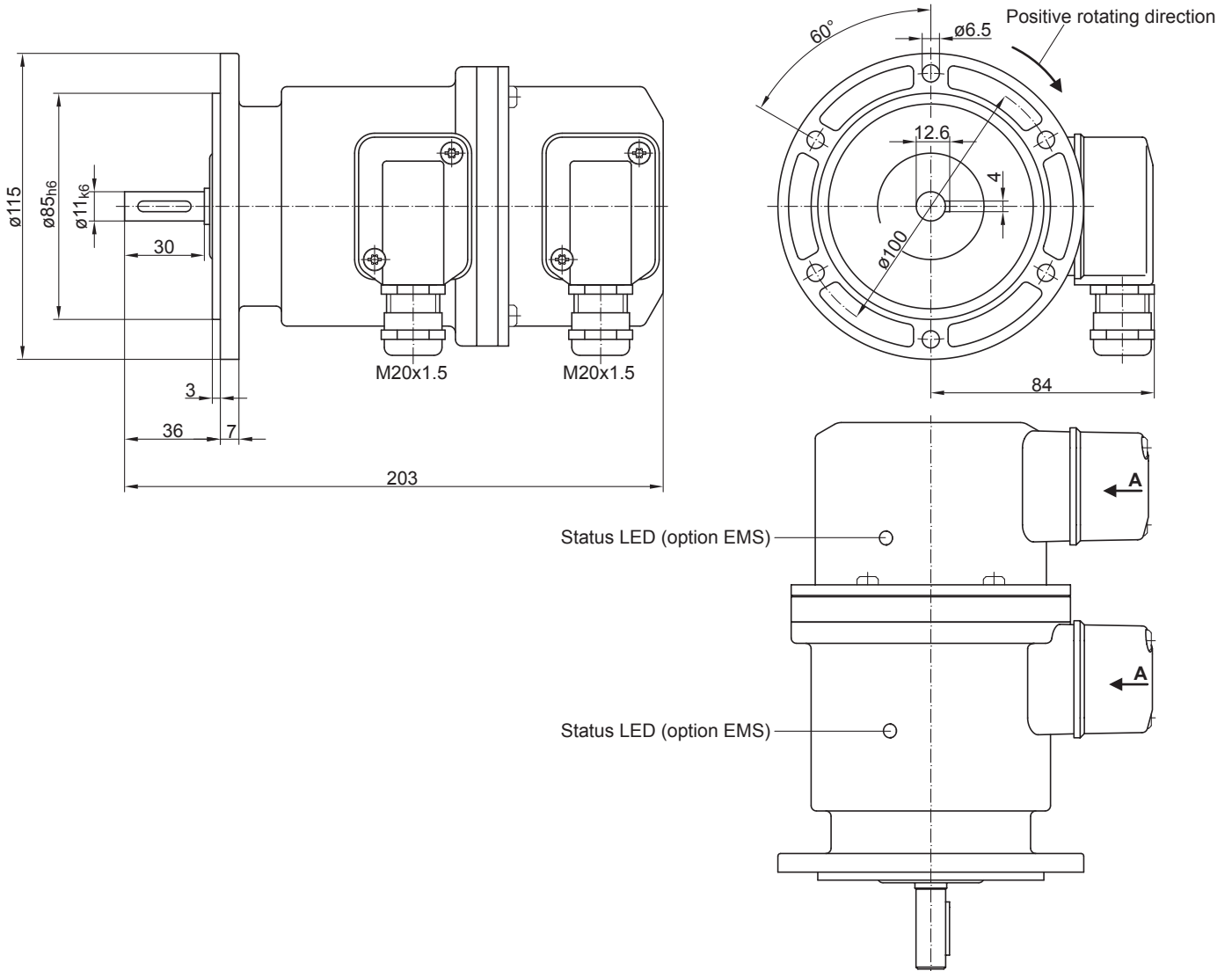
* Only at rotating device

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Dimensions



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Ordering reference

	POG9	##	G	DN	####	###	/	DN	####	###
Product	POG9									
Twin encoder										
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.

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)