

Incremental encoders

Solid shaft with EURO flange B10

300...5000 pulses per revolution

POG 9



POG 9

Technical data - electrical ratings

Voltage supply	9...30 VDC 5 VDC \pm 5 %
Consumption w/o load	\leq 100 mA
Pulses per revolution	300...5000
Phase shift	90° \pm 20°
Scan ratio	40...60 %
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	\leq 120 kHz \leq 300 kHz (on request)
Output signals	K1, K2, K0 + inverted Error output (only EMS)
Output stages	HTL-P (power linedriver) TTL/RS422
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approvals	CE, UL approval / E256710

Features

- Encoder with solid shaft \varnothing 11 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 500 m

Optional

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

Technical data - mechanical design

Size (flange)	\varnothing 115 mm
Shaft type	\varnothing 11 mm solid shaft
Shaft loading	\leq 250 N axial \leq 350 N radial
Flange	EURO flange B10
Protection DIN EN 60529	IP 56
Operating speed	\leq 12000 rpm (mechanical)
Operating torque typ.	2 Ncm
Rotor moment of inertia	200 gcm ²
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	-30...+100 °C -25...+100 °C (>3072 pulses per revolution)
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 300 g, 1 ms
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

Subject to modification in technic and design. Errors and omissions excepted.

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Part number

Incremental encoder

POG9 **DN**

				Voltage supply / signals
			I	9...30 VDC / output circuit HTL with inverted signals
				TTL 5 VDC / output circuit TTL with inverted signals
			R	9...30 VDC / output circuit TTL with inverted signals
				<u>Pulse number - see table</u>
				<u>Output signals</u>
	DN			K1, K2, K0
				<u>EMS - Enhanced Monitoring System</u>
				Without EMS
			.2	With EMS

Pulse number

300	1000	2048	4096
500	1024	2500	5000
512	1200	3072	

Other pulse numbers on request.

Accessories

Connectors and cables

HEK 8 Sensor cable for encoders

Mounting accessories

K 35 Spring washer coupling
for solid shaft $\varnothing 6...12$ mm

K 50 Spring washer coupling
for solid shaft $\varnothing 11...16$ mm

K 60 Spring washer coupling
for solid shaft $\varnothing 11...22$ mm

Diagnostic accessories

HENQ 1100 Analyzer for encoders

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Incremental encoders

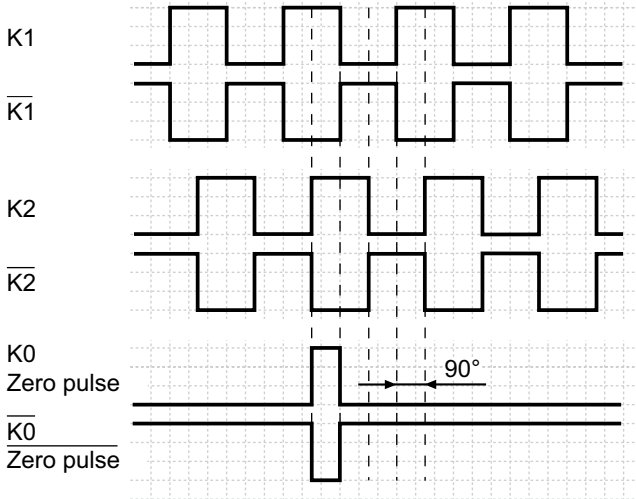
Solid shaft with EURO flange B10

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Output signals

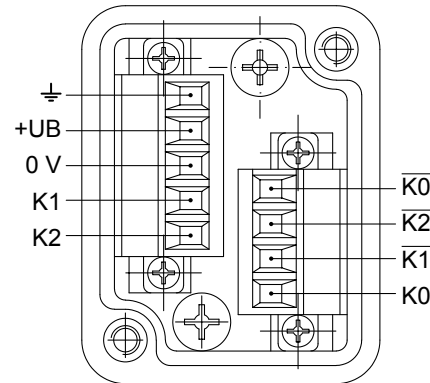
At positive rotating direction



Terminal assignment

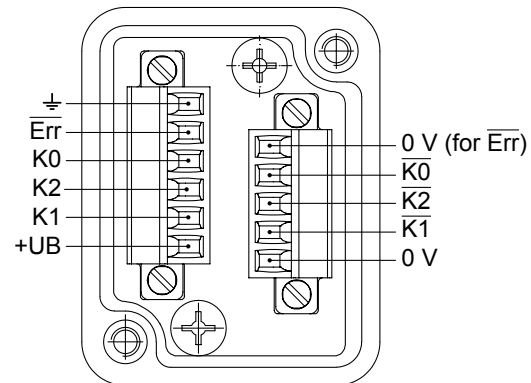
View A

Connecting terminal in terminal box



Option EMS: View A

Connecting terminal in terminal box



Option EMS: LED status / Error output

Flash light red*	Error of signal sequence, zero pulse or pulses (Error output = HIGH-LOW alternation)
Red	Overload output driver (Error output = LOW)
Flash light green	Encoder o.k., rotating (Error output = HIGH)
Green	Encoder o.k., stopped (Error output = HIGH)
No light	No output voltage connection or wrong connection (Error output = LOW)

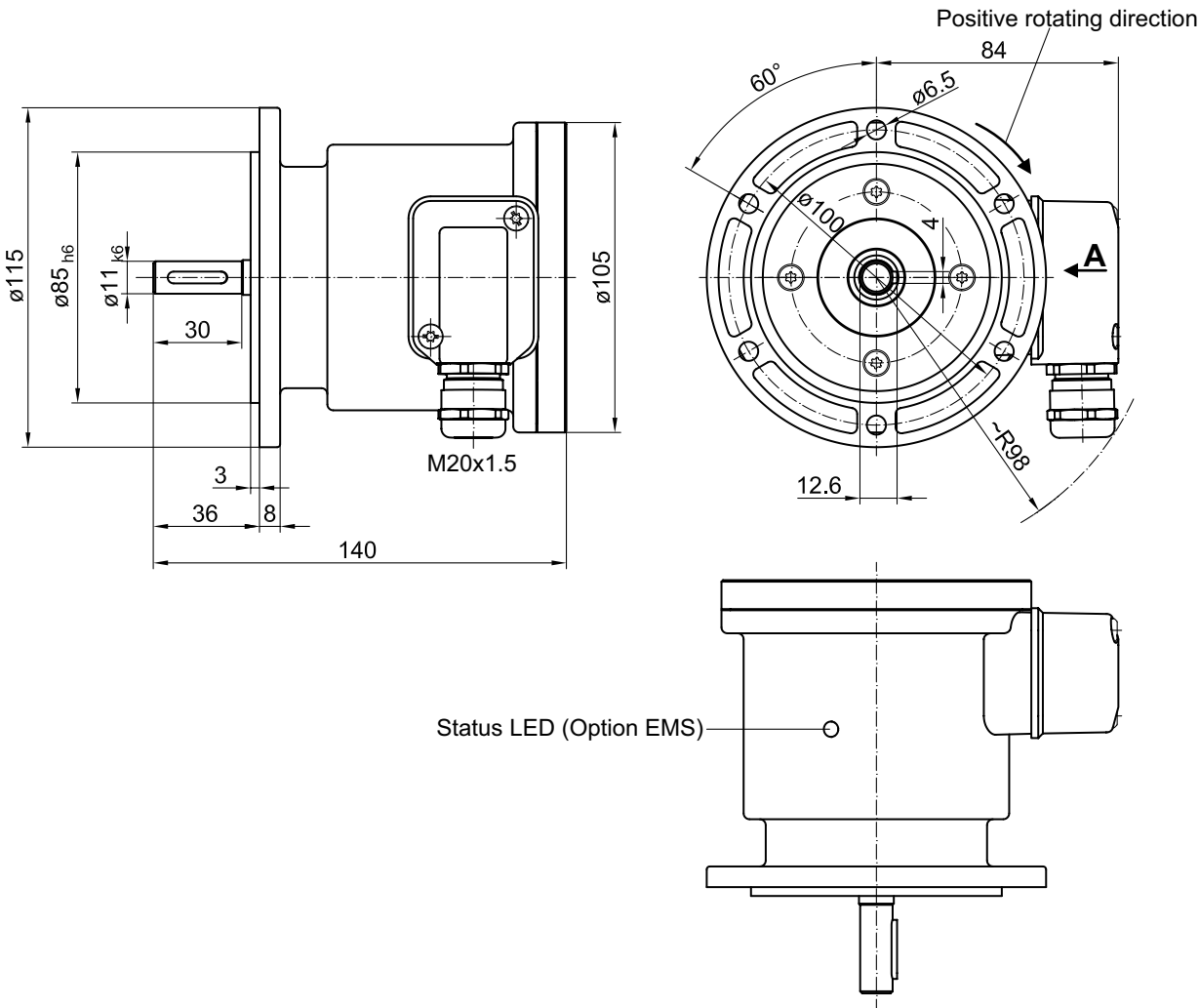
* Only at rotating encoder

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Dimensions



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